

# ***Oakland City Planning Commission***

Case nos. PLN18229 / PLN18231 / PLN18230

**STAFF REPORT**

**June 20, 2018**

<b>Locations:</b>	<b>City street light pole in public right-of-way adjacent to:</b> 1) Case no. PLN18229; 2701 Telegraph Ave (APN: 009 068900203); General Plan: Community Commercial; Zoning: CC-2  2) Case no. PLN18231; 1103 8 <sup>TH</sup> St (APN: 004 002901001); General Plan: Urban Residential; Zoning: RU-2  3) Case no. PLN18230; 845 Market St (APN: 004 000706500); General Plan: Mixed Housing Type Residential; Zoning: RM-1  Council District: 3; Submitted: 5/29/18  <i>(See map on reverse)</i>
<b>Proposal:</b>	To consider requests for three (3) applications to install new "small cell site" Monopole Telecommunications Facilities on City light poles by attaching antenna and equipment.
<b>Applicant / Phone Number:</b>	Matt Yergovich / Vinculums (415) 596-3474
<b>Owner:</b>	City of Oakland
<b>Planning Permits Required:</b>	Major Conditional Use Permit & Regular Design Review with additional findings for Monopole Telecommunications Facility in/near Residential Zone
<b>Environmental Determination:</b>	Exempt, Section 15301 of the State CEQA Guidelines: Existing Facilities; Exempt, Section 15302: Replacement or Reconstruction; Exempt, Section 15303: New Construction of Small Structures; Section 15183: Projects Consistent with a Community Plan, General Plan or Zoning
<b>Historic Status:</b>	Non-historic property
<b>Action to be Taken:</b>	Approve with Conditions
<b>Finality of Decision:</b>	<i>Appealable to City Council</i>
<b>For Further Information:</b>	Contact case planner <b>Aubrey Rose AICP</b> at (510) 238-2071 or by email at <a href="mailto:arose@oaklandnet.com">arose@oaklandnet.com</a>

## **EXECUTIVE SUMMARY**

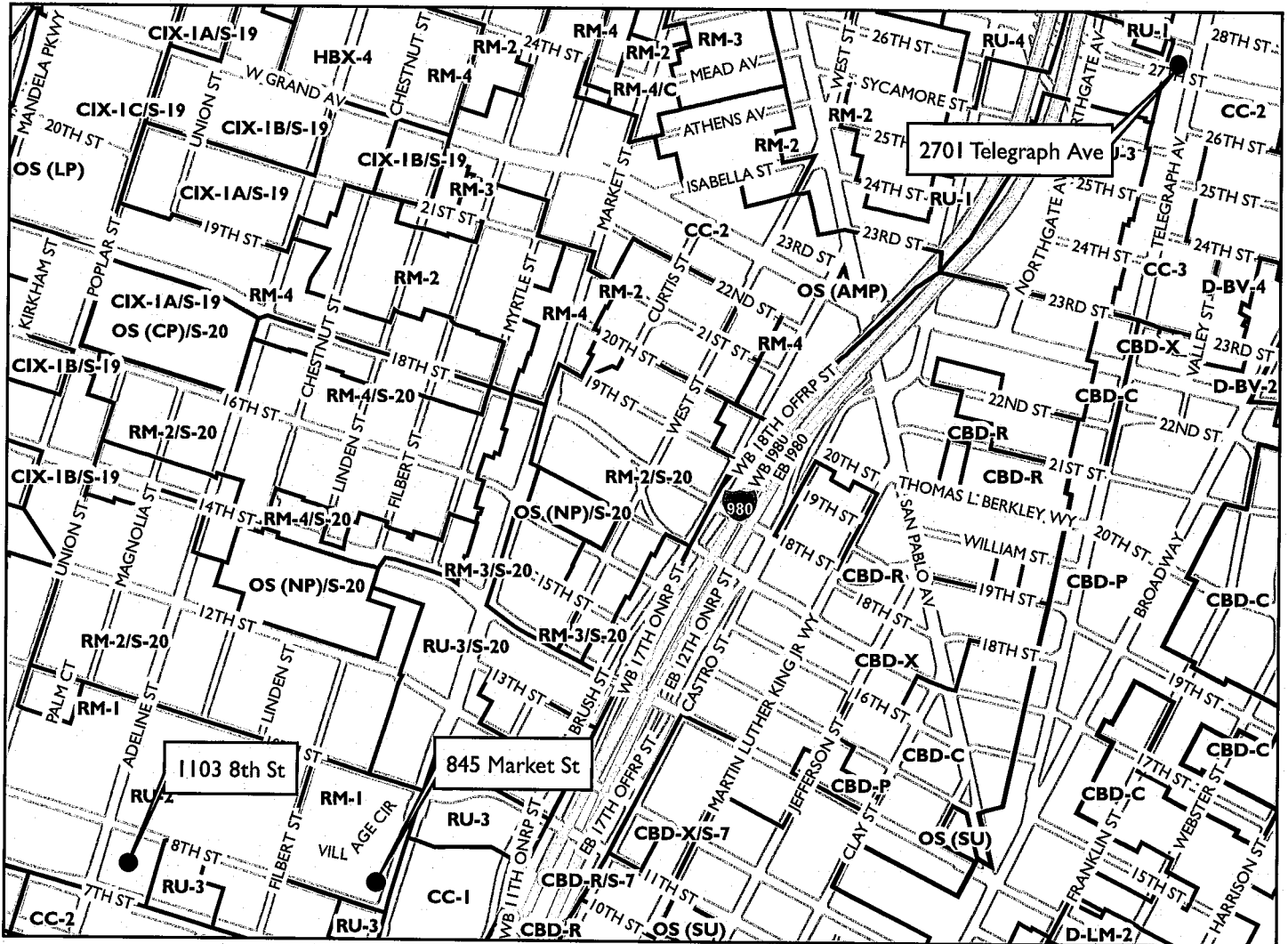
The applicant requests Planning Commission approval to establish three (3) small cell wireless telecommunication facility site on existing City street light poles located on the public right-of-way in residential and commercial districts. The project involves attaching one antenna within one shroud to the top of the pole and equipment mounted to the side of the pole, as described in the submitted plans, to enhance wireless services in those areas.

Regular Design Review and a Major Conditional Use Permit decided by the Planning Commission, each with additional findings, are required for the installation of a new Monopole Telecommunications Facility. The proposed projects, antenna and associated equipment, would be similar to other facilities around the City. The proposed telecommunication facility is therefore sited at appropriate locations and would not significantly increase negative visual impacts to adjacent properties including residences. The project meets all the required findings for approval of these three (3) small cell sites.

## **TELECOMMUNICATIONS BACKGROUND**



# CITY OF OAKLAND PLANNING COMMISSION



Case Files: PLN18229, PLN18231, PLN18230  
Applicant: Matt Yergovich / Vinculum  
Addresses: 2701 Telegraph Ave, 1103 8th St, 845 Market St  
Zones: CC-2, RU-2, RM-1



### **Limitations on Local Government Zoning Authority under the Telecommunications Act of 1996**

Section 704 of the Telecommunications Act of 1996 (TCA) provides federal standards for the siting of "Personal Wireless Services Facilities." "Personal Wireless Services" include all commercial mobile services (including personal communications services (PCS), cellular radio mobile services, and paging); unlicensed wireless services; and common carrier wireless exchange access services. Under Section 704, local zoning authority over personal wireless services is preserved such that the FCC is prevented from preempting local land use decisions; however, local government zoning decisions are still restricted by several provisions of federal law. Specifically:

- Under Section 253 of the TCA, no state or local regulation or other legal requirement can prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service.
- Further, Section 704 of the TCA imposes limitations on what local and state governments can do. Section 704 prohibits any state and local government action which unreasonably discriminates among personal wireless providers. Local governments must ensure that its wireless ordinance does not contain requirements in the form of regulatory terms or fees which may have the "effect" of prohibiting the placement, construction, or modification of personal wireless services.
- Section 704 also preempts any local zoning regulation purporting to regulate the placement, construction and modification of personal wireless service facilities on the basis, either directly or indirectly, on the environmental effects of radio frequency emissions (RF) of such facilities, which otherwise comply with Federal Communications Commission (FCC) standards in this regard. (See 47 U.S.C. Section 332(c)(7)(B)(iv) (1996)). This means that local authorities may not regulate the siting or construction of personal wireless facilities based on RF standards that are more stringent than those promulgated by the FCC.
- Section 704 mandates that local governments act upon personal wireless service facility siting applications to place, construct, or modify a facility within a reasonable time (See 47 U.S.C.332(c)(7)(B)(ii) and FCC Shot Clock ruling setting forth "reasonable time" standards for applications deemed complete).
- Section 704 also mandates that the FCC provide technical support to local governments in order to encourage them to make property, rights-of-way, and easements under their jurisdiction available for the placement of new spectrum-based telecommunications services. This proceeding is currently at the comment stage.

For more information on the FCC's jurisdiction in this area, consult the following:  
Competition & Infrastructure Policy Division (CIPD) of the Wireless Telecommunications Bureau, main division number: (202) 418-1310. <https://www.fcc.gov/general/competition-infrastructure-policy-division-wireless-telecommunications-bureau>

### **PROPERTY DESCRIPTION**

**Site # 1) Case no. PLN18229; 2701 Telegraph Avenue:** 26'-3" tall non-decorative ("cobra-head" style) City street light pole with two luminaires located in the median;

**Site # 2) Case no. PLN18231; 1103 8<sup>TH</sup> Street:** 26'-3" tall non-decorative ("cobra-head" style) City street light pole located in the sidewalk adjacent to a fenced open parking lot service a health clinic; and



**Site # 3) Case no. PLN18230; 845 Market Street:** 26'-3" tall non-decorative ("cobra-head" style) City street light pole with two luminaires located in the median.

## **PROJECT DESCRIPTION**

The sites are proposed for:

- Installation by top-mounting one 25-inch tall canister antennas within one shroud above the street light(s) to extend an additional 2'-3", to total 28'-6" in height;
- Installation of side-mounted equipment below the street light(s); and
- Paint the proposed antennas and associated equipment to match the pole.

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

## **SIMILAR CASES**

Records show that the Planning Commission has approved numerous Monopole Telecommunications Facilities requiring Design Review and Conditional Use Permits throughout the City since 2016.

## **GENERAL PLAN ANALYSIS**

Site # 1 is located in the Community Commercial area under the General Plan's Land Use and Transportation Element (LUTE). The intent of the area is: "to identify, create, maintain, and enhance areas suitable for a wide variety of commercial and institutional operations along the City's major corridors and in shopping districts or centers." Site # 2 is in the Urban Residential area. The intent of the area is: "to create, maintain, and enhance areas of the City that are appropriate for multi-unit, mid-rise or high-rise residential structures in locations with good access to transportation and other services." Site # 3 is in the Mixed Housing Type Residential area. The intent of the area is: "to create, maintain, and enhance residential areas typically located near the City's major arterials and characterized by a mix of single family homes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate."

The proposed telecommunication facilities would be mounted on existing City street light poles within the City of Oakland public right-of-way. The proposed unmanned wireless telecommunication facility would not adversely affect the characteristics of the neighborhood.

## **ZONING ANALYSIS**

Site # 1 is in the CC-2 Community Commercial Zone. Site # 2 is in the RU-2 Urban Residential Zone. Site # 3 is in the RM-1 Mixed Housing Type Residential Zone. Monopole Telecommunications Facilities on City light poles require a Conditional Use Permit and a Regular Design Review with additional findings; these permits are decided by the Planning Commission for sites located in or near to a residential zone. New wireless telecommunications facilities may also be subject to a Site Alternatives Analysis, Site Design Alternatives Analysis, and a satisfactory radio-frequency (RF) emissions report. Staff analyzes the proposal in consideration of these requirements in the 'Key Issues and Impacts' section of this report. Additionally, attachment to City infrastructure requires review by the City's Real Estate Department, Public Works Agency's Electrical Division, and Information Technology Department. Given customers increasing reliance upon cellular service for phone and Wi-Fi, the proposal for a Monopole Telecommunications Facility that is not adjacent to a primary living space or historic structure conforms to this intent.



## **ENVIRONMENTAL DETERMINATION**

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

## **KEY ISSUES AND IMPACTS**

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

### **17.128.080 Monopole Telecommunications Facilities.**

#### **A. General Development Standards for Monopole Telecommunications Facilities.**

**1. Applicant and owner shall allow other future wireless communications companies including public and quasi-public agencies using similar technology to collocate antenna equipment and facilities on the monopole unless specific technical or other constraints, subject to independent verification, at the applicant's expense, at the discretion of the City of Oakland Zoning Manager, prohibit said collocation. Applicant and other wireless carriers shall provide a mechanism for the construction and maintenance of shared facilities and infrastructure and shall provide for equitable sharing of cost in accordance with industry standards. Construction of future facilities shall not interrupt or interfere with the continuous operation of applicant's facilities.**

The proposal involves use of an existing City of Oakland metal street light pole that would remain available for future collocation purposes as practicable.

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

Recommended conditions of approval require painting and texturing the antenna and equipment to match the appearance of the metal pole. There is no equipment shelter or cabinet proposed; however, minimal equipment would be closely mounted onto the side of the metal pole.

**3. When a monopole is in a Residential Zone or adjacent to a residential use, it must be set back from the nearest residential lot line a distance at least equal to its total height.**

Two of the three sites are located in Residential Zones; none of the sites is located adjacent to a residential property.

**4. In all zones other than the D-CE-5, D-CE-6, IG, CIX-2, and IO Zones, the maximum height of Monopole Telecommunications Facilities and connecting appurtenances may be increased from the otherwise required maximum height to forty-five (45) feet upon the granting of a Conditional Use Permit (see Chapter 17.134 for the Conditional Use Permit Procedure).**

This requirement does not apply. The subject property is not located in any of the described zoning districts. Nonetheless, the facility would not exceed the height of 28'-6.



**5. In the D-CE-5, D-CE-6, CIX-2, and IO Zones, the maximum height of Monopole Telecommunications Facilities and connecting appurtenances may be increased from the otherwise required maximum height to eighty (80) feet upon the granting of a Conditional Use Permit (see Chapter 17.134 for the Conditional Use Permit Procedure).**

This requirement does not apply. The subject property is not located in any of the described zoning districts. Nonetheless, the facility would not exceed the height of 28'-6".

**6. In the IG Zone, the maximum height of Monopole Telecommunications Facilities and connecting appurtenances may reach a height of forty-five (45) feet. These facilities may reach a height of eighty (80) feet upon the granting of Regular Design Review approval (see Chapter 17.136 for the Design Review Procedure).**

This requirement does not apply. The subject property is not located in the described zoning district. Nonetheless, the facility would not exceed the height of 28'-6".

**7. The applicant shall submit written documentation demonstrating that the emissions from the proposed project are within the limits set by the Federal Communications Commission.**

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

**8. Antennas may not extend more than fifteen (15) feet above their supporting structure.**

The proposed antenna would project less than fifteen feet above the City light pole.

**17.128.110 Site location preferences.**

**New wireless facilities shall generally be located on the following properties or facilities in order of preference:**

- A. Co-located on an existing structure or facility with existing wireless antennas.**
- B. City-owned properties or other public or quasi-public facilities.**
- C. Existing commercial or industrial structures in Nonresidential Zones (excluding all HBX Zones and the D-CE-3 and D-CE-4 Zones).**
- D. Existing commercial or industrial structures in Residential Zones, HBX Zones, or the DCE-3 or D-CE-4 Zones.**
- E. Other Nonresidential uses in Residential Zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.**
- F. Residential uses in Nonresidential Zones (excluding all HBX Zones and the D-CE-3 and D-CE-4 Zones).**
- G. Residential uses in Residential Zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.**



Facilities locating on an A, B or C ranked preference do not require a site alternatives analysis. Facilities proposing to locate on a D through G ranked preference, inclusive, must submit a site alternatives analysis as part of the required application materials. A site alternatives analysis shall, at a minimum, consist of: a. The identification of all A, B and C ranked preference sites within one thousand (1,000) feet of the proposed location. If more than three (3) sites in each preference order exist, the three such closest to the proposed location shall be required. b. Written evidence indicating why each such identified alternative cannot be used. Such evidence shall be in sufficient detail that independent verification, at the applicant's expense, could be obtained if required by the City of Oakland Zoning Manager. Evidence should indicate if the reason an alternative was rejected was technical (e.g. incorrect height, interference from existing RF sources, inability to cover required area) or for other concerns (e.g. refusal to lease, inability to provide utilities).

A site alternatives analysis is not required because the proposal conforms to 'B' as it would be located on a public facility (City light pole). Nonetheless, the applicant has submitted an analysis which is attached to this report (Attachments C-D-E).

**17.128.120 Site design preferences.**

New wireless facilities shall generally be designed in the following order of preference:

- A. Building or structure mounted antennas completely concealed from view.
- B. Building or structure mounted antennas set back from roof edge, not visible from public right-of way.
- C. Building or structure mounted antennas below roof line (facade mount, pole mount) visible from public right-of-way, painted to match existing structure.
- D. Building or structure mounted antennas above roof line visible from public right-of-way.
- E. Monopoles.
- F. Towers.

Facilities designed to meet an A or B ranked preference do not require a site design alternatives analysis. Facilities designed to meet a C through F ranked preference, inclusive, must submit a site design alternatives analysis as part of the required application materials. A site design alternatives analysis shall, at a minimum, consist of: a. Written evidence indicating why each such higher preference design alternative cannot be used. Such evidence shall be in sufficient detail that independent verification could be obtained if required by the City of Oakland Zoning Manager. Evidence should indicate if the reason an alternative was rejected was technical (e.g. incorrect height, interference from existing RF sources, inability to cover required area) or for other concerns (e.g. inability to provide utilities, construction or structural impediments).

The proposal most closely conforms to 'E' (monopole) and the applicant has submitted a satisfactory site design alternatives analysis (Attachments C-D-E).

**17.128.130 Radio frequency emissions standards.**

The applicant for all wireless facilities, including requests for modifications to existing facilities, shall submit the following verifications:

- a. With the initial application, a RF emissions report, prepared by a licensed professional engineer or other expert, indicating that the proposed site will operate within the current acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.
- b. Prior to commencement of construction, a RF emissions report indicating the baseline RF emissions condition at the proposed site.



c. Prior to final building permit sign off, an RF emissions report indicating that the site is actually operating within the acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.

A satisfactory report is attached to this report (Attachments C-D-E).

Analysis

The proposed site design would not be situated on an historic or decorative pole or structure, would not create a view obstruction, and would not negatively impact a view from a primary living space such as a living room or bedroom window. Staff, therefore, finds the proposal to provide an essential service with a least-intrusive possible design. Draft conditions of approval stipulate that the components be painted and textured to match the metal pole in appearance for camouflaging.

In conclusion, staff recommends approval subject to recommended Conditions of Approval.

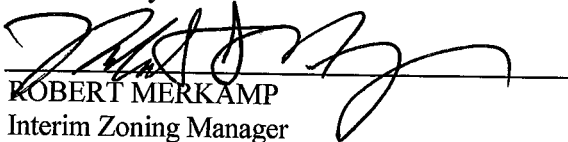
**RECOMMENDATIONS:**

1. Affirm staff's environmental determination.
2. Approve the Major Conditional Use Permit and Regular Design Review, subject to the attached Findings and Conditions of Approval.

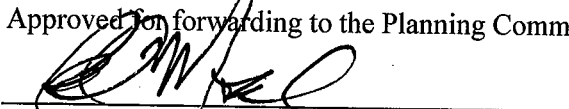
Prepared by:

  
AUBREY ROSE, AICP  
Planner III

Reviewed by:

  
ROBERT MERKAMP  
Interim Zoning Manager

Approved for forwarding to the Planning Commission:

  
ED MANASSE, Interim Deputy Director  
Planning Bureau

**ATTACHMENTS:**

- A. Findings
- B. Conditions of Approval
- C. Site # 1: Plans / Photo-Simulations / Site Analyses / RF Report / Proof of Posting
- D. Site # 2: Plans / Photo-Simulations / Site Analyses / RF Report / Proof of Posting
- E. Site # 3: Plans / Photo-Simulations / Site Analyses / RF Report / Proof of Posting



**ATTACHMENT A: FINDINGS**

This proposal meets the required findings under General Use Permit Criteria (OMC Sec. 17.134.050), Conditional Use Permit Criteria for Monopole Facilities (OMC Sec. 17.136.040 (A)), Regular Design Review Criteria for Nonresidential Facilities (OMC Sec. 17.136.050(B)), and Design Review Criteria for Monopole Telecommunications Facilities (OMC Sec. 17.128.070(B)), as set forth below. Required findings are shown in **bold type**; explanations as to why these findings can be made are in normal type.

**GENERAL USE PERMIT CRITERIA (OMC SEC. 17.134.050):**

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

The proposal is to establish a Monopole Telecommunications Facility in a residential or commercial zone by attaching to an existing City light pole. Attachment to an existing structure with smallest possible components painted and texturized to match the pole will be the least intrusive design. The project will enhance existing service for merchants, shoppers, residents, and visitors in the area.

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

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

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

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

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

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

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



Site # 1 is located in the Community Commercial area under the General Plan's Land Use and Transportation Element (LUTE). The intent of the area is: "to identify, create, maintain, and enhance areas suitable for a wide variety of commercial and institutional operations along the City's major corridors and in shopping districts or centers." Site # 2 is in the Urban Residential area. The intent of the area is: "to create, maintain, and enhance areas of the City that are appropriate for multi-unit, mid-rise or high-rise residential structures in locations with good access to transportation and other services." Site # 3 is in the Mixed Housing Type Residential area. The intent of the area is: "to create, maintain, and enhance residential areas typically located near the City's major arterials and characterized by a mix of single family homes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate." The proposed telecommunication facilities would be mounted on existing City street light poles within the City of Oakland public right-of-way. The proposed unmanned wireless telecommunication facility would not adversely affect the characteristics of the neighborhood.

**CONDITIONAL USE PERMIT CRITERIA FOR MONOPOLE FACILITIES (OMC SEC. 17.128.070(C))**

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

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

**2. Monopoles should not be located any closer than one thousand five hundred (1,500) feet from existing monopoles unless technologically required or visually preferable.**

Use of this pole precludes placement of a new pole with facility fronting an upper story residences at various viable sites in the surrounding area and is therefore "visually preferable."

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

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

**4. If a major conditional use permit is required, the Planning Director or the Planning Commission may request independent expert review regarding site location, collocation and facility configuration. Any party may request that the Planning Commission consider making such request for independent expert review.**

**a. If there is any objection to the appointment of an independent expert engineer, the applicant must notify the Planning Director within ten (10) days of the Commission request. The Commission will hear arguments regarding the need for the independent expert and the applicant's objection to having one appointed. The Commission will rule as to whether an independent expert should be appointed.**

**b. Should the Commission appoint an independent expert, the Commission will direct the Planning Director to pick an expert from a panel of licensed engineers, a list of which will be compiled, updated and maintained by the Planning Department.**

**c. No expert on the panel will be allowed to review any materials or investigate any application without first signing an agreement under penalty of perjury that the expert will keep confidential any and all information learned during the investigation of the application. No personnel currently employed by a telecommunication company are eligible for inclusion on the list.**



- d. An applicant may elect to keep confidential any proprietary information during the expert's investigation. However, if an applicant does so elect to keep confidential various items of proprietary information, that applicant may not introduce the confidential proprietary information for the first time before the Commission in support of the application.
- e. The Commission shall require that the independent expert prepare the report in a timely fashion so that it will be available to the public prior to any public hearing on the application.
- f. Should the Commission appoint an independent expert, the expert's fees will be paid by the applicant through the application fee, imposed by the City.

A Major Conditional Use Permit is required and the Planning Director or Planning Commission may therefore independent expert review in addition to that which is attached to this report.

**REGULAR DESIGN REVIEW CRITERIA FOR NON-RESIDENTIAL FACILITIES (OMC SEC. 17.136.050(B))**

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

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

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

The proposal will not create a view obstruction, will not be directly adjacent to a residential facility's primary living space windows, and will not be located on an historic or decorative structure.

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

The proposal will enhance essential services in a residential or commercial district.

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

The proposal will not be ground mounted.

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

This finding is inapplicable because the site is level.

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

This finding is met by this proposal as described in a previous section of this attachment.

**DESIGN REVIEW CRITERIA FOR MONOPOLE TELECOMMUNICATIONS FACILITIES (OMC SEC. 17.128.070(B))**

- 1. Collocation is to be encouraged when it will decrease visual impact and collocation is to be discouraged when it will increase negative visual impact.**



The project does not involve collocation as it involves the establishment of a new telecommunications facility; however, the project should not preclude any future proposals for location at the site.

**2. Monopoles should not be sited to create visual clutter or negatively affect specific views.**

The Monopole Facility is sited on existing infrastructure where it will not create clutter or negatively affect specific views. The view of the City street light from the adjacent story residence should remain of the pole below the antenna and above the equipment.

**3. Monopoles shall be screened from the public view wherever possible.**

The Monopole Facility will be camouflaged and texturized to match the appearance of the existing light pole that will host it. The City street light is not located adjacent to a residential facility

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

Recommended conditions of approval require painting and texturing the antenna and equipment to match the appearance of the metal pole. There is no equipment shelter or cabinet proposed, however minimal equipment would be closely mounted on the side of the metal pole.

**5. Site location and development shall preserve the preexisting character of the surrounding buildings and land uses and the zone district as much as possible. Wireless communication towers shall be integrated through location and design to blend in with the existing characteristics of the site to the extent practical. Existing on-site vegetation shall be preserved or improved, and disturbance of the existing topography shall be minimized, unless such disturbance would result in less visual impact of the site to the surrounding area.**

The proposed Monopole Facility will be placed in an existing non-decorative City light pole. This enables the preservation of character in the area and will not pose a negative visual impact as the proposal will be camouflaged to match the pole. There is no adjacent vegetation or topography.

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

The minimal clearance to the facility will reduce or eliminate public access.



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**Attachment B: Conditions of Approval**

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**1. Approved Use**

The project shall be constructed and operated in accordance with the authorized use as described in the approved application materials, **staff report** and the approved plans **dated October 6, 2017 and submitted May 29, 2018**, as amended by the following conditions of approval and mitigation measures, if applicable ("Conditions of Approval" or "Conditions").

**Three (3) approvals to install new "small cell site" Monopole Telecommunications Facilities on an existing City street light pole in public right-of-way (sidewalk) by attaching one antenna within a shroud to the top of the pole and equipment mounted to the side of the pole adjacent to:**

**Site # 1) Case no. PLN18229; 2701 Telegraph Avenue;**

**Site # 2) Case no. PLN18231; 1103 8<sup>TH</sup> Street; and**

**Site # 3) Case no. PLN18230; 845 Market Street.**

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

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

**3. Compliance with Other Requirements**

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

**4. Minor and Major Changes**

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



**5. Compliance with Conditions of Approval**

- a. The project applicant and property owner, including successors, (collectively referred to hereafter as the "project applicant" or "applicant") shall be responsible for compliance with all the Conditions of Approval and any recommendations contained in any submitted and approved technical report at his/her sole cost and expense, subject to review and approval by the City of Oakland.
- b. The City of Oakland reserves the right at any time during construction to require certification by a licensed professional at the project applicant's expense that the as-built project conforms to all applicable requirements, including but not limited to, approved maximum heights and minimum setbacks. Failure to construct the project in accordance with the Approval may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension, or other corrective action.
- c. Violation of any term, Condition, or project description relating to the Approval is unlawful, prohibited, and a violation of the Oakland Municipal Code. The City of Oakland reserves the right to initiate civil and/or criminal enforcement and/or abatement proceedings, or after notice and public hearing, to revoke the Approval or alter these Conditions if it is found that there is violation of any of the Conditions or the provisions of the Planning Code or Municipal Code, or the project operates as or causes a public nuisance. This provision is not intended to, nor does it, limit in any manner whatsoever the ability of the City to take appropriate enforcement actions. The project applicant shall be responsible for paying fees in accordance with the City's Master Fee Schedule for inspections conducted by the City or a City-designated third-party to investigate alleged violations of the Approval or Conditions.

**6. Signed Copy of the Approval/Conditions**

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

**7. Blight/Nuisances**

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

**8. Indemnification**

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



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

**9. Severability**

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

**10. Job Site Plans**

*Ongoing throughout demolition, grading, and/or construction*

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

**11. Special Inspector/Inspections, Independent Technical Review, Project Coordination and Monitoring**

The project applicant may be required to cover the full costs of independent third-party technical review and City monitoring and inspection, including without limitation, special inspector(s)/inspection(s) during times of extensive or specialized plan-check review or construction, and inspections of potential violations of the Conditions of Approval. The project applicant shall establish a deposit with the Bureau of Building, if directed by the Building Official, Director of City Planning, or designee, prior to the issuance of a construction-related permit and on an ongoing as-needed basis.

**12. Public Improvements**

The project applicant shall obtain all necessary permits/approvals, such as encroachment permits, obstruction permits, curb/gutter/sidewalk permits, and public improvement ("p-job") permits from the City for work in the public right-of-way, including but not limited to, streets, curbs, gutters, sidewalks, utilities, and fire hydrants. Prior to any work in the public right-of-way, the applicant shall submit plans for review and approval by the Bureau of Planning, the Bureau of Building, and other City departments as required. Public improvements shall be designed and installed to the satisfaction of the City.

**13. Construction Days/Hours**

Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours:

- a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m.
- b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday.



- c. No construction is allowed on Sunday or federal holidays.

Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

#### **PROJECT-SPECIFIC CONDITIONS**

##### **14. Emissions Report**

Requirement: A RF emissions report shall be submitted to the Planning Bureau indicating that the site is actually operating within the acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.

Requirement: Prior to a final inspection

When Required: Prior to final building permit inspection sign-off

Initial Approval: N/A

Monitoring/Inspection: N/A

##### **15. Camouflage**

Requirement: The antenna and equipment shall be painted, texturized, and maintained the same color and finish of the City light pole.

When Required: Prior to a final inspection

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

##### **16. Operational**

Requirement: Noise levels from the activity, property, or any mechanical equipment on site shall comply with the performance standards of Section 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the Planning and Zoning Division and Building Services.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building



**17. Graffiti Control**

**Requirement:**

- a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation:
- b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following:
  - i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system.
  - ii. For galvanized poles, covering with new paint to match the color of the surrounding surface.
  - iii. Replace pole numbers.

**When Required:** Ongoing

**Initial Approval:** N/A

**Monitoring/Inspection:** Bureau of Building



## PROJECT TEAM

## APPLICANT:

AT&T  
5001 Executive Parkway  
San Ramon, CA 94583

## ARCHITECT/ENGINEER:

Rodney Barnes  
Meridian Management LLC  
785 Oak Grove Road E2  
Suite 251  
Concord, CA 94518  
T 707.592.5924  
rodney@meridianmanagement.com

## ZONING CONTACT

Matt Yergovich  
Vinculum Services  
575 Lennon Lane  
Suite 125  
Walnut Creek, CA 94598  
T 415.596.3474  
myergo@gmail.com

## LEASING CONTACT:

Matt Yergovich  
Vinculum Services  
575 Lennon Lane  
Suite 125  
Walnut Creek, CA 94598  
T 415.596.3474  
myergo@gmail.com

## CONSTRUCTION MANAGER:

Vinculum Services  
575 Lennon Lane  
Suite 125  
Walnut Creek, CA 94598

## GENERAL NOTES

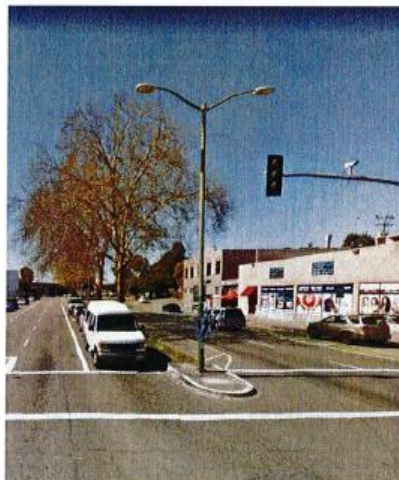
1. THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR THE AT&T WIRELESS NETWORK CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING METAL LIGHT POLE IN THE PUBLIC RIGHT-OF-WAY. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
2. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT DRAINAGE, NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.
3. CHANGES FROM THE APPROVED PLANS DURING THE COURSE OF CONSTRUCTION SHALL CAUSE CONSTRUCTION TO BE SUSPENDED UNTIL SUCH TIME AS THE PLANS CAN BE AMENDED BY THE DESIGNER AND SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL.

## CODE COMPLIANCE

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

- CALIFORNIA CODES
- 2016 CALIFORNIA BUILDING CODE
- 2016 CALIFORNIA MECHANICAL CODE
- 2016 CALIFORNIA PLUMBING CODE
- 2016 CALIFORNIA ELECTRIC CODE
- 2016 GREEN BUILDING CODE
- 2016 EDITION OF TITLE 24 ENERGY STANDARDS
- ANY LOCAL BUILDING CODE AMENDMENTS TO THE ABOVE
- CITY / COUNTY ORDINANCES
- CITY OF OAKLAND PUBLIC WORKS DEPARTMENT
- GENERAL ORDER 95 (JUNE 2009 EDITION)

## SITE IMAGE



AT&amp;T

5001 EXECUTIVE PARKWAY, SAN RAMON, CA 94583

## CRAN-RSFR-SF0K6-023

PACE ID:

ROW AT 2701 TELEGRAPH AVE, OAKLAND, CA 94612

COUNTY: ALAMEDA

SITE TYPE: METAL STREET LIGHT POLE

FA:14307065 HUB:19 USID:192871



## DRAWING SIGN-OFF

VINCULUMS

Signature

Date

SITE ACQUISITION:

PLANNING:

CONSTRUCTION:

MANAGEMENT:

AT&amp;T

Signature

Date

CONSTRUCTION:

REAL ESTATE:

RF ENGINEER:

EQUIPMENT ENGINEER:

MW ENG/TRANSPORT:

OWNER:

## PROJECT DESCRIPTION

THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR THE AT&T WIRELESS NETWORK CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING METAL LIGHT POLE IN THE PUBLIC RIGHT-OF-WAY.

## SCOPE OF WORK &amp; SITE COMPLETION CHECKLIST:

1. ANTENNA & ASSOCIATED EQUIPMENT BOXES: INSTALL A NEW TELECOMMUNICATION ANTENNA AND 2 EQUIPMENT BOXES ON AN EXISTING METAL LIGHT POLE
2. DURABLE PAINT: ANTENNAS, MOUNTING BRACKETS, CABLE, AND RADIO RELAY UNITS TO BE PAINTED TO MATCH THE EXISTING POLE USING A DURABLE PAINT (E.G. SHERWIN WILLIAMS, FRAZEE, KELLY MOORE, OR EQUIVALENT)
3. CABLE: CABLE TO BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS
4. LOGO REMOVAL: ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NOISE IDENTIFICATION), SHALL BE PAINTED OVER OR REMOVED, RAISED/DEPRESSED TEXT ON RRUS OR OTHER EQUIPMENT, IF PRESENT, TO BE SANDED OFF OR SIMILARLY REMOVED AND/OR FILLED
5. SIGNAGE: FCC MANDATED RF WARNING SIGNAGE SHALL FACE CLIMBING SPACE. OPTIONAL SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD BUILDING IF THERE IS NO WINDOW.
6. UTILITY LINES: PROPOSED UTILITY LINES BETWEEN EXISTING POINT OF CONNECTION TO BE IN CONDUIT INSIDE POLE

## SITE INFORMATION

OWNER: CITY OF OAKLAND

APPLICANT: AT&T  
5001 EXECUTIVE PARKWAY  
SAN RAMON, CA 94583

LATITUDE: 37.8162110 (NAD 83)

LONGITUDE: -122.2680960 (NAD 83)

GROUND ELEVATION: 30' AMSL

ADJACENT APN#: (IFO) 9-689-2-3

ZONING JURISDICTION: CITY OF OAKLAND

CURRENT ZONING: PUBLIC ROW

PROPOSED USE: UNMANNED TELECOMMUNICATIONS FACILITY

## DO NOT SCALE DRAWINGS

CONTRACTOR 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



AT&T Wireless  
5001 Executive Parkway  
San Ramon, CA 94583

Client:



Project Architect:



575 LENNON LANE  
SUITE 125  
WALNUT CREEK, CA 94598  
T 925.482.8500

Site Agent:

95% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SF0K6-023

PACE ID:

ROW AT 2701 TELEGRAPH AVE  
OAKLAND, CA 94612  
COUNTY: ALAMEDA

Site Name:

Professional Seal:

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Rev.	Date	Description
01	09/17/17	Zoning Docs 90%
02	10/06/17	Zoning Docs 95%

Project No.:

Date: 10/06/17 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

## TITLE SHEET

Sheet Title:

T.1

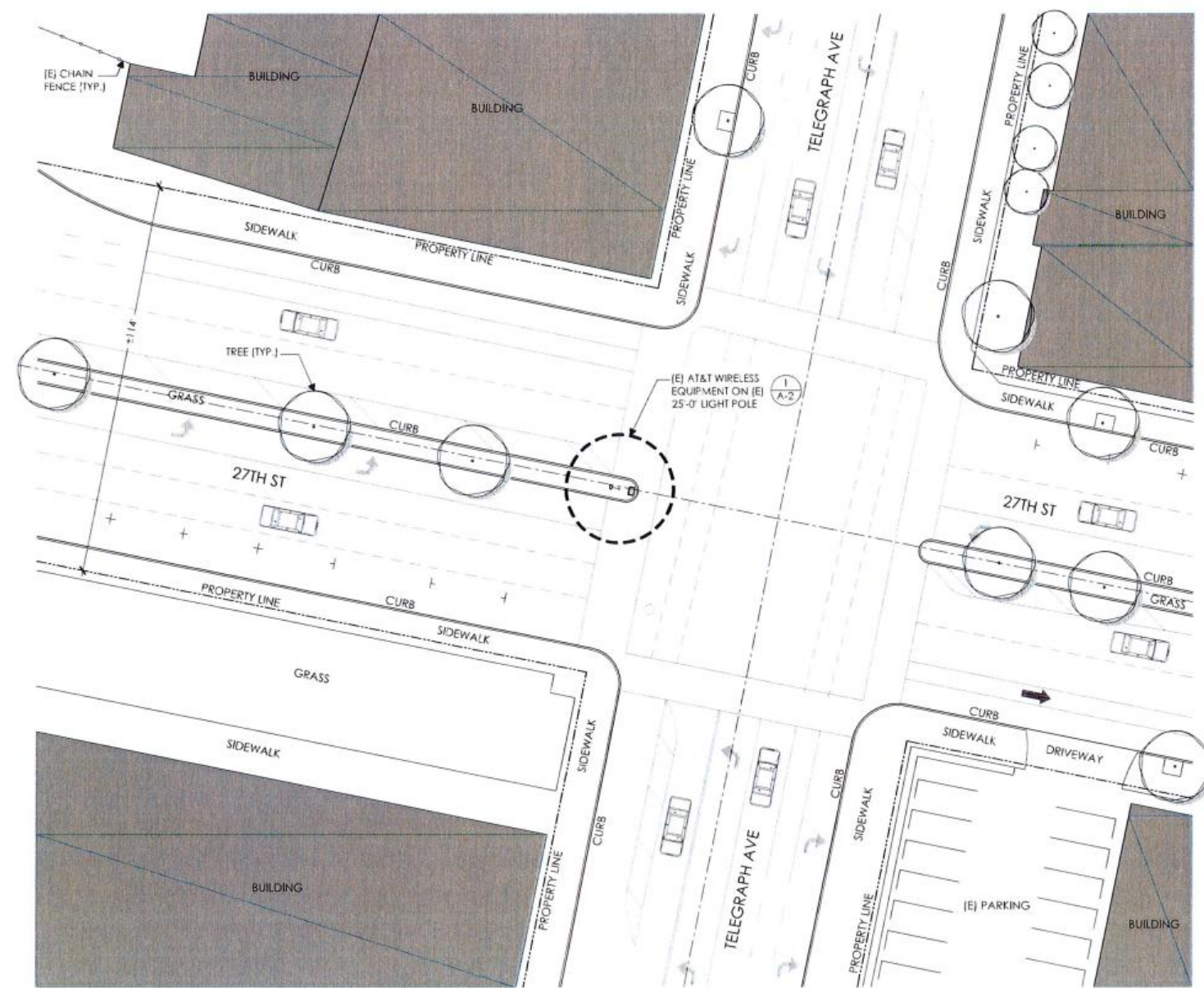
Sheet No.:

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NOTE:  
THIS SITE PLAN WAS GENERATED WITHOUT THE USE OF A SURVEY. PROPERTY LINES, RIGHT-OF-WAYS, POWER & TELCO UTILITY POINT CONNECTIONS/ROUTES AND EASEMENTS SHOWN ON THESE PLANS ARE ESTIMATED. ALL ITEMS AND DIMENSIONS SHOULD BE VERIFIED IN THE FIELD.

UNDERGROUND UTILITIES NOTE:  
THE LOCATIONS AND EXISTENCE OF ANY UNDERGROUND PIPES, STRUCTURES, OR CONDUITS SHOWN ON THIS PLAN WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THERE MAY BE EXISTING UTILITIES OTHER THAN THOSE SHOWN ON THIS PLAN. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT SHOWN ON THIS PLAN.

OVERALL SITE PLAN



AT&T Wireless  
5001 Executive Parkway  
San Ramon, CA 94583

Client:



Project Architect:



575 LENNON LANE  
SUITE 125  
WALNUT CREEK, CA 94598  
T 925.482.8500

Site Agent:

95% Zoning Drawings

Drawing Phase:

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Project No.:

Date: 10/06/17 Job No.:

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Designed By: JG Checked: RB

OVERALL SITE PLAN

Sheet Title:

A.1

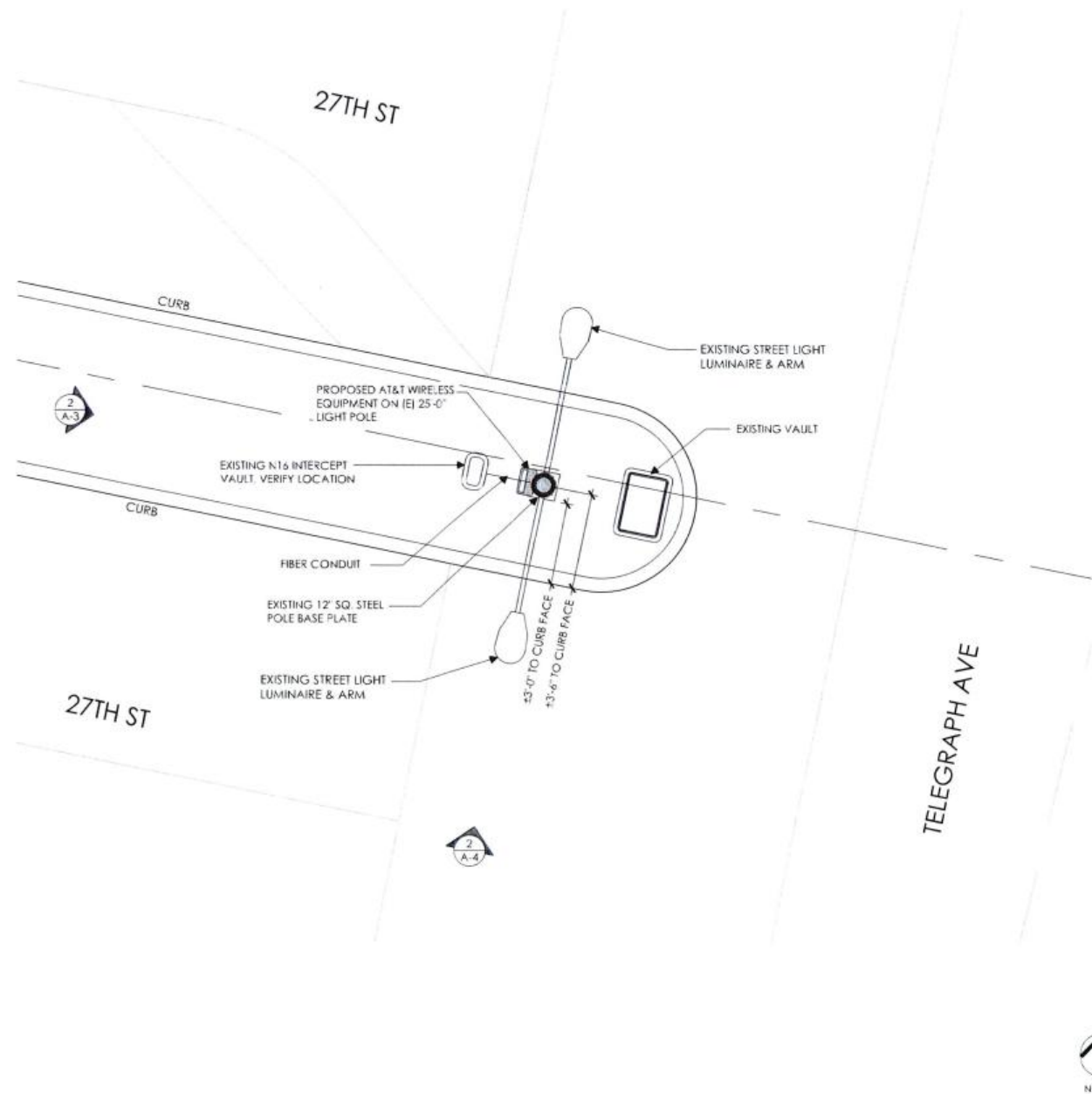
Sheet No.:

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# NOTES:

1. DURABLE PAINT: ANTENNAS, MOUNTING BRACKETS, CABLING, AND RADIO RELAY UNITS TO BE PAINTED TO MATCH THE EXISTING POLE USING A DURABLE PAINT (E.G. SHERWIN WILLIAMS, FRAZEE, KELLY MOORE, OR EQUIVALENT)
2. CABLING: CABLING TO BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS. ALL CABLING TO GROUND-MOUNTED BOXES AND ANTENNAS TO BE INSTALLED INSIDE POLE
3. LOGO REMOVAL: ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION), SHALL BE PAINTED OVER OR REMOVED. RAISED/DEPRESSED TEXT ON RRUS OR OTHER EQUIPMENT, IF PRESENT, TO BE SANDED OFF OR SIMILARLY REMOVED AND/OR FILLED
4. SIGNAGE: FCC MANDATED RF WARNING SIGNAGE SHALL FACE CLIMBING SPACE. OPTIONAL SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD BUILDING IF THERE IS NO WINDOW.



POLE PLAN ENLARGEMENT

16' 8' 0' 8' 16'

SCALE  
3/8" = 1'-0"

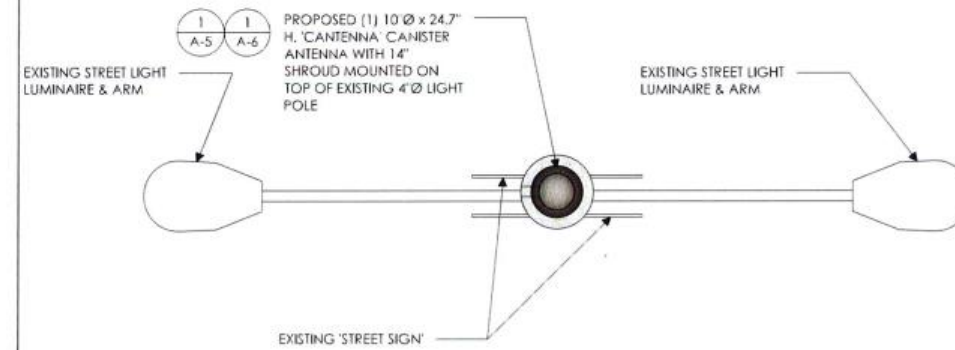
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EQUIPMENT ENLARGEMENT PLAN

16' 8' 0' 8' 16'

SCALE  
1" = 1'-0"

3



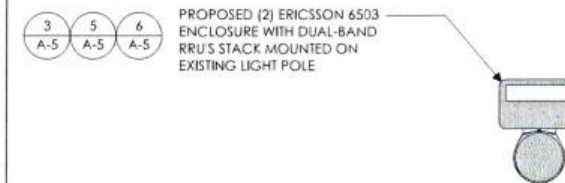
A. SECTION (CANISTER ANTENNA)

ANTENNA ENLARGEMENT PLAN

16' 8' 0' 8' 16'

SCALE  
1" = 1'-0"

2



B. SECTION (RRUS)



AT&T Wireless  
3001 Executive Parkway  
San Ramon, CA 94583

Client:



Project Architect:



575 LENNON LANE  
SUITE 125  
WALNUT CREEK, CA 94598  
T 925.482.8500

Site Agent:

95% Zoning Drawings

(E) LIGHT POLE  
Drawing Phase:

CRAN-RSFR-SF0K6-023

PAGE ID:  
ROW AT 2701 TELEGRAPH AVE  
OAKLAND, CA 94612  
COUNTY: ALAMEDA

Site Name:

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Date: 10/06/17 Job No.:

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Designed By: JG Checked: RB

POLE PLAN  
EQUIPMENT  
ENLARGEMENTS

Sheet Title:

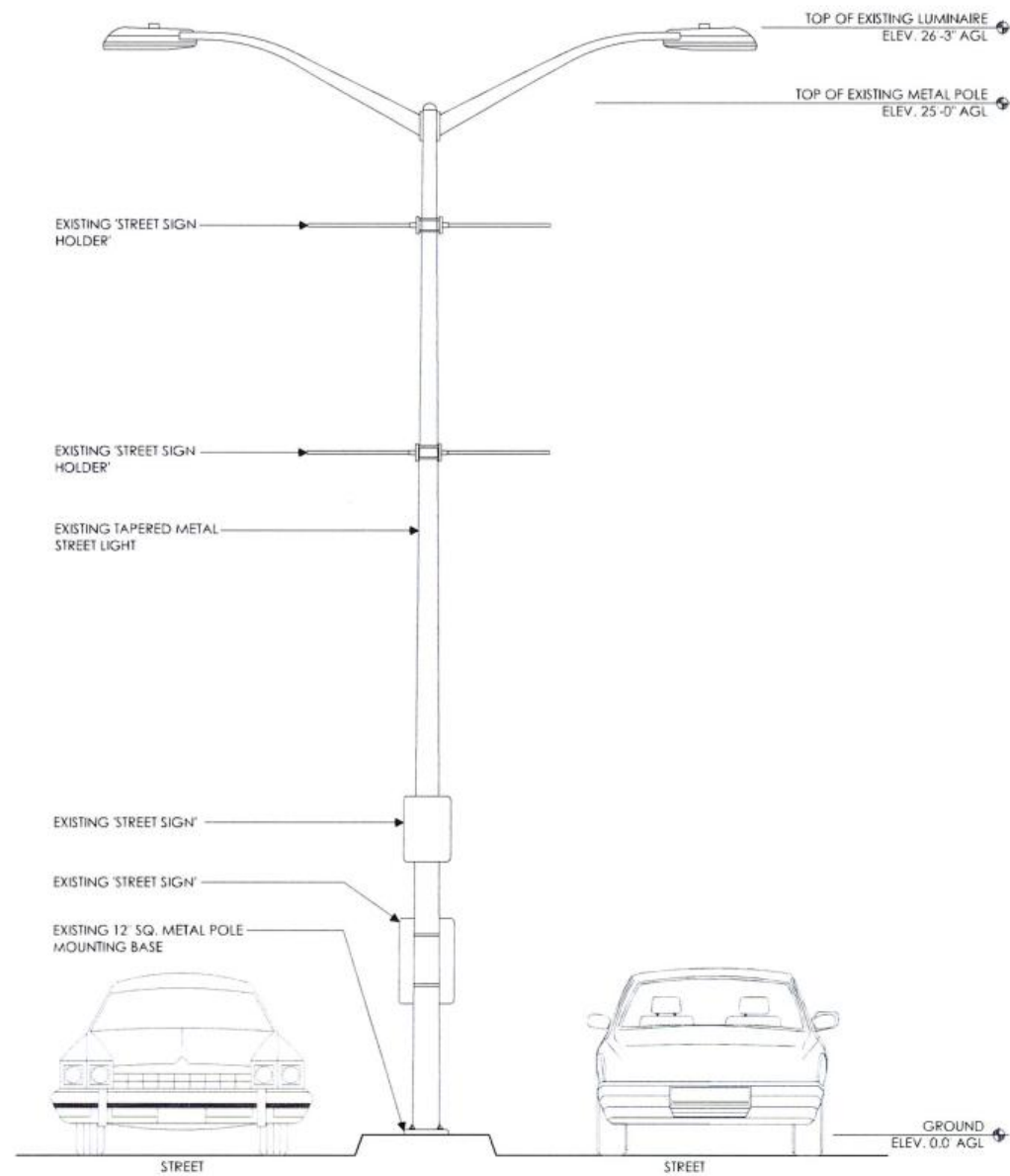
A.2

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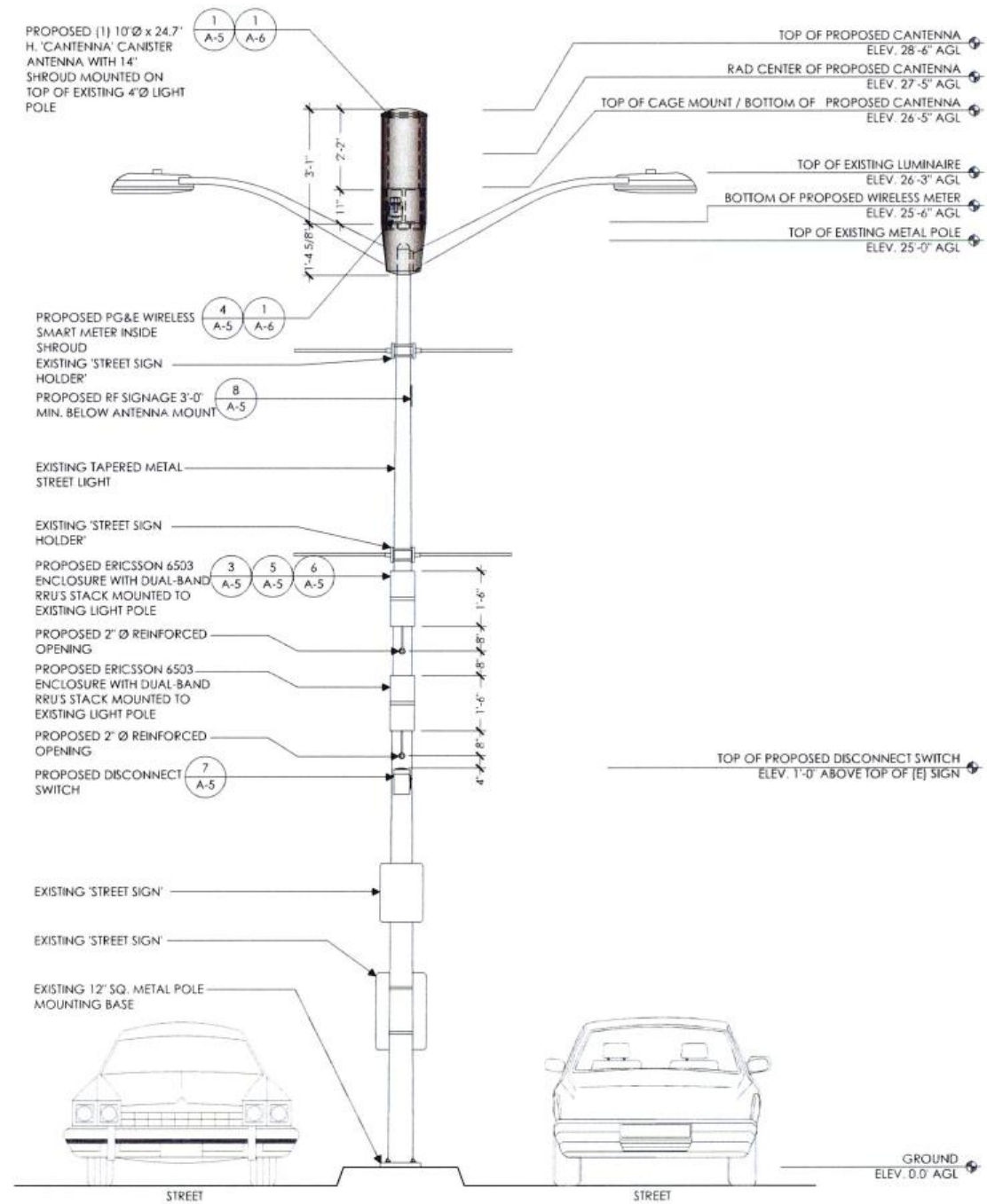
SCALE NOTE:  
IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE  
CORRECTLY, CHECK FOR REDUCTION OR  
ENLARGEMENT FROM ORIGINAL PLANS.



WEST ELEVATION - EXISTING

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

1



WEST ELEVATION - PROPOSED

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

2



AT&T Wireless  
5001 Executive Parkway  
San Ramon, CA 94583

Client:



Project Architect:



575 LENNON LANE  
SUITE 125  
WALNUT CREEK, CA 94598  
T 925.482.8500

Site Agent:

95% Zoning Drawings

Drawing Phase:

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ELEVATIONS

Sheet Title:

A.3

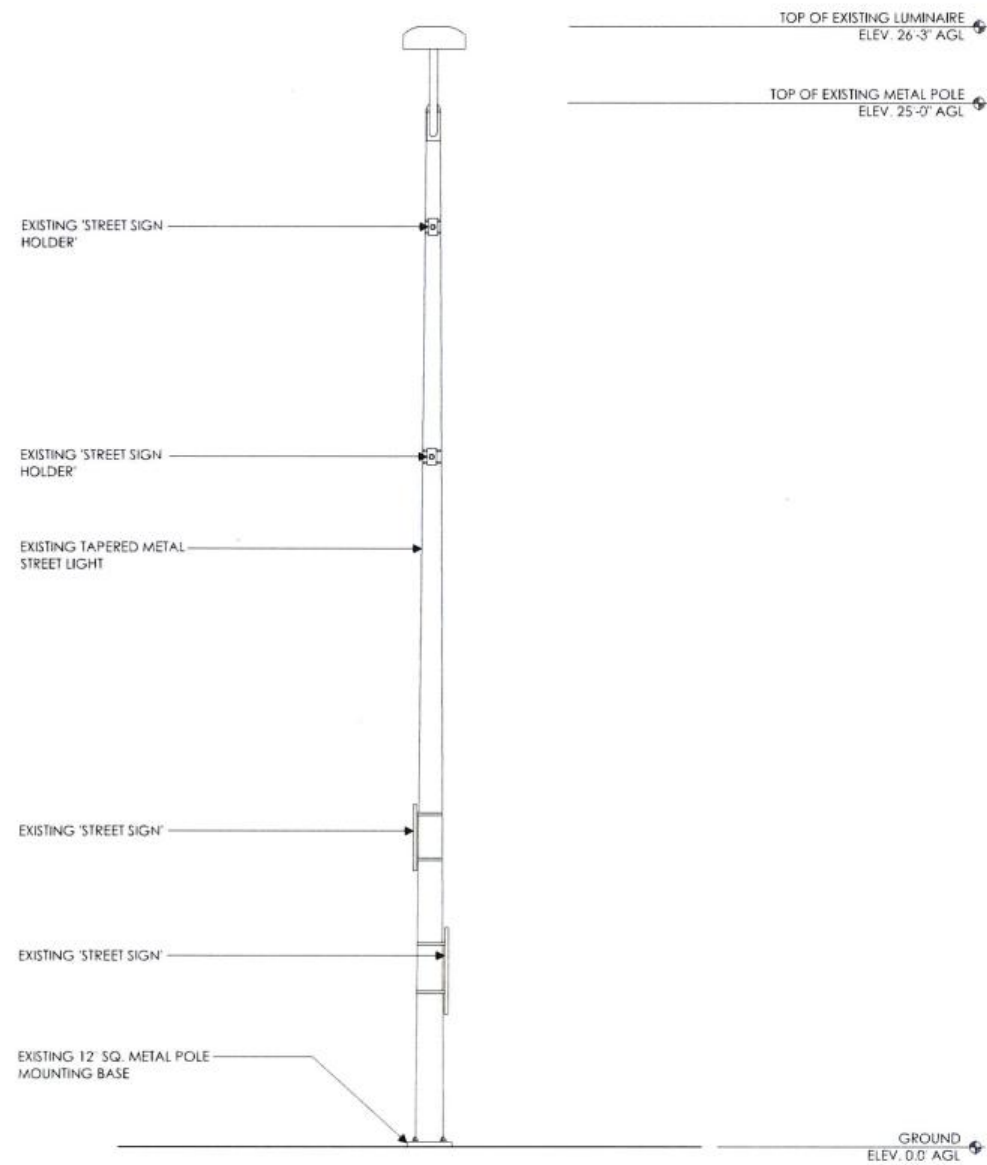
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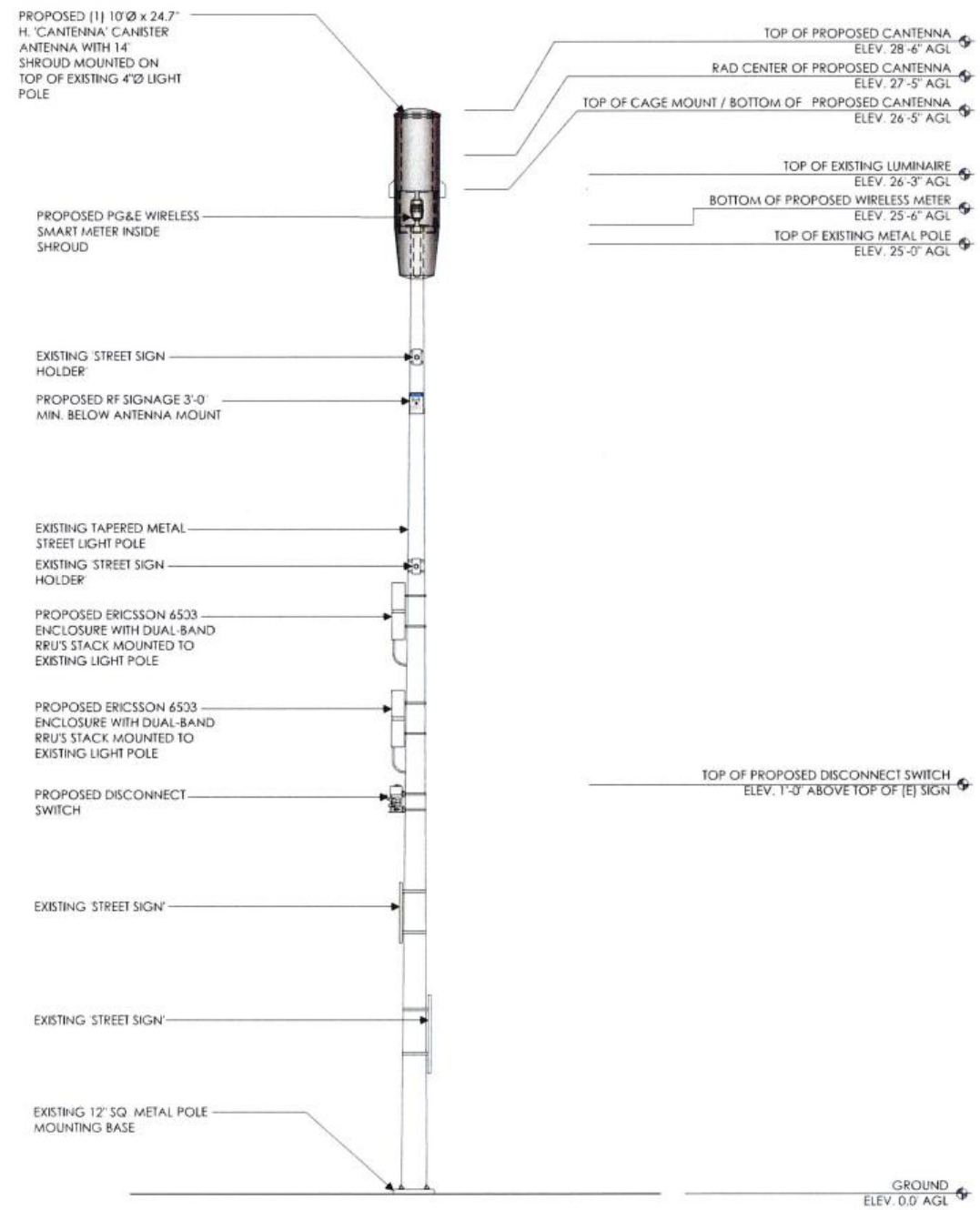


**SCALE NOTE:**

IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE  
CORRECTLY, CHECK FOR REDUCTION OR  
ENLARGEMENT FROM ORIGINAL PLANS.



**SOUTH ELEVATION - EXISTING**



**SOUTH ELEVATION - PROPOSED**



AT&T Wireless  
5001 Executive Parkway  
San Ramon, CA 94583

Client:



Project Architect:



375 LENNON LANE  
SUITE 125  
WALNUT CREEK, CA 94598  
T 925.482.8500

Site Agent:

**95% Zoning Drawings**

Drawing Phase:

**CRAN-RSFR-SFOK6-023**

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Designed By: JG Checked: RB

**ELEVATIONS**

Sheet Title:

**A.4**

Sheet No.:

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# AT&T CANISTER ANTENNA 'CAN-TENNA'

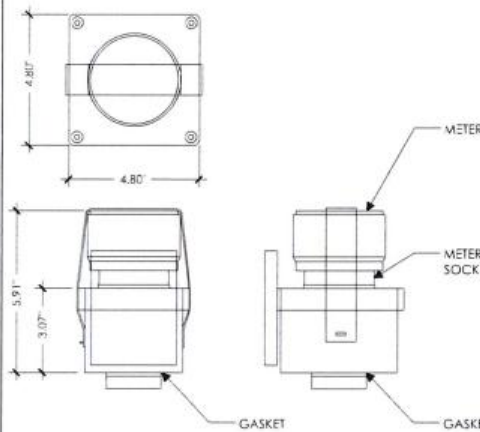
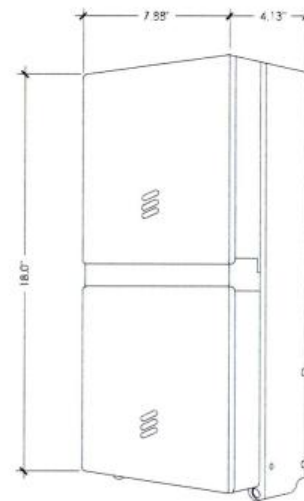
ANTENNA COLOR: LIGHT GRAY  
DIMENSIONS: 10.0"Ø x 24.7" TALL  
NET WEIGHT: 19.0 LBS



# ERICSSON 6503

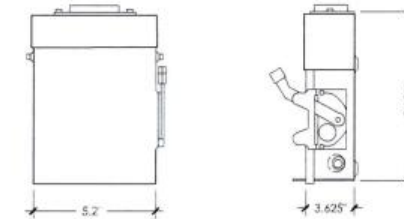
SINGLE BAND 2203:  
DUAL BAND RRU (2 - 2203'S):  
MAXIMUM POWER CONSUMPTION:  
2 TX / 2 RX (AWS OR PCS)  
4 TX / 4 RX (AWS OR PCS)  
<100W PER 2203 RADIO-  
±190W PER SINGLE-BAND 2203 RADIO  
±190W PER DUAL-BAND 2203 RRU

MAX FUSE RATING: 32A  
WIRE SIZE: #13 CU OR #8 ALU



# MURRAY LW002GRU SPECIFICATIONS

LOAD CENTER DEPTH: 3.625"  
LOAD CENTER WIDTH: 5.2"  
LOAD CENTER HEIGHT: 8.125"  
WEIGHT: 4.55 LB  
LOAD CENTER TYPE: MAIN LUG  
MOUNTING TYPE: PLUG IN  
NUMBER OF PHASES: 1  
NUMBER OF SPACES: 2  
VOLTAGE (VOLTS): 120/240  
INDOOR/OUTDOOR: OUTDOOR  
ELECTRICAL PRODUCT TYPE: LOAD CENTER



# 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)



AT&T Wireless  
5001 Executive Parkway  
San Ramon, CA 94583

Client:



Project Architect:



575 LENNON LANE  
SUITE 125  
WALNUT CREEK, CA 94598  
T 925.482.8500

Site Agent:

95% Zoning Drawings

Drawing Phase:

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Project No.:

Date: 10/06/17 Job No.:

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Designed By: JG Checked: RB

EQUIPMENT DETAILS

Sheet Title:

A.5

Sheet No.:

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ANTENNA DETAIL

1

6503 RRU ENCLOSURE

3

PG&E WIRELESS SMART METER

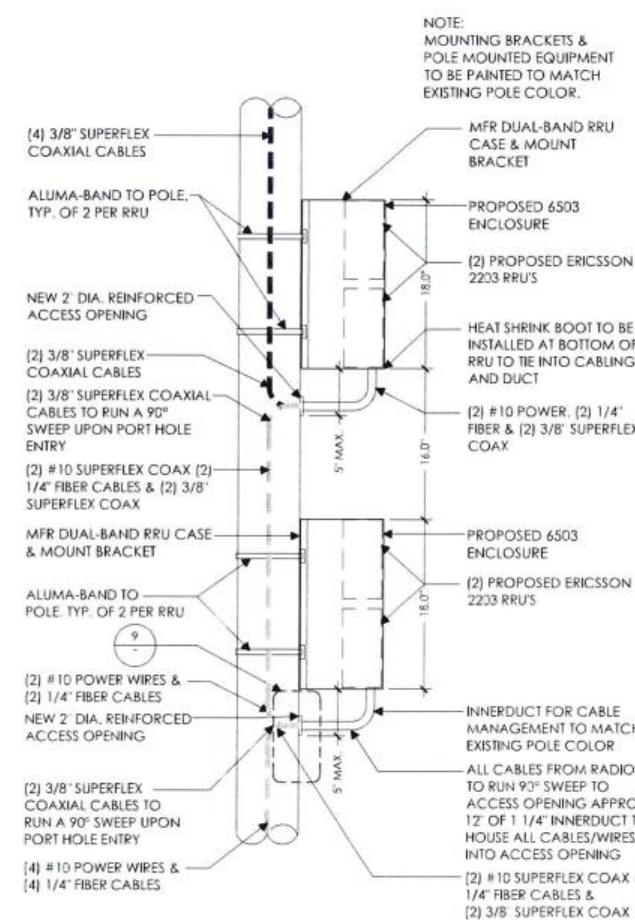
4

DISCONNECT SWITCH

7

NOTICE SIGNAGE

8

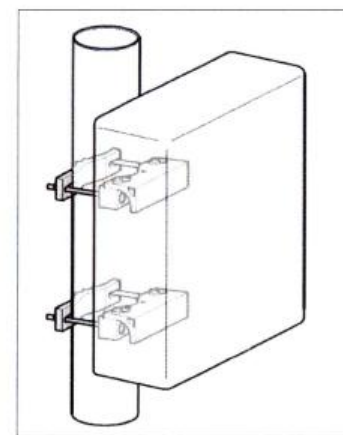
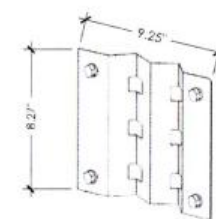
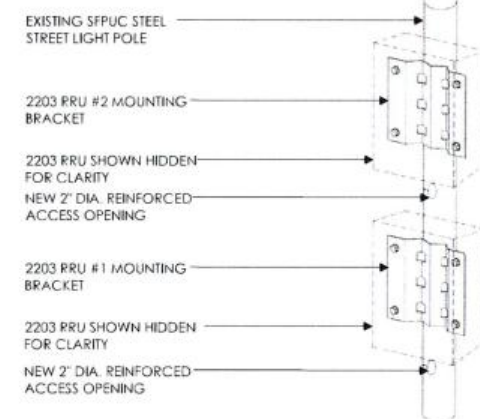


# Technical Specifications Radio 2203

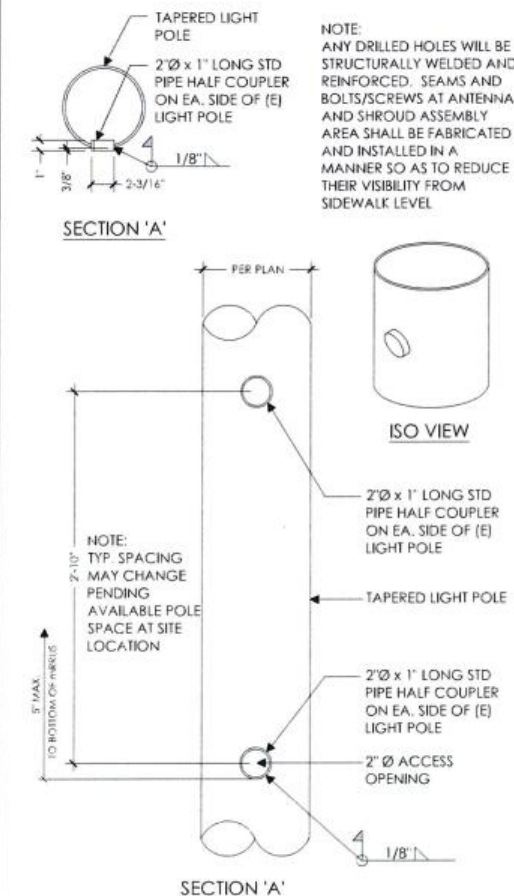
FREQUENCY BANDS	
Bands	3GPP Bands B1 (A/L), B3 (L), B3C (M/L), B6 (M/L), B7A (M/L), B5 (M/L), B20 (S), B12 (L), B13 (L) and B7 (L)
RF CAPACITY	
Carrier capacity WCDMA	Up to 4 carriers
Carrier capacity LTE	Up to 40 MHz
RF	B1, B3 and B7A 40 MHz; B20 25 and 40 MHz; B3C, B6, B5, B12 and B13 Full band
MIMO	Yes, 2T2R
Output power	Up to 2 x 5 W
INTERFACE SPECIFICATIONS	
Antenna Ports	2 x 4.3-10 (f)
CPIR	2 x 2.5/5/10 GHz (exchangeable SFP modules)
Optical indicators	6
External alarm	2
Field ground	1
MECHANICAL SPECIFICATIONS	
W x H x D	200 mm x 200 mm x 100 mm, including mounting bracket and esthetic front cover
Weight	< 4.5 kg
Volume	4 l
Mounting	Wall and pole mount
ELECTRICAL SPECIFICATIONS	
Power Supply	-48 VDC or 100-250 VAC
ENVIRONMENTAL SPECIFICATIONS	
Normal operating temp	-40 °C to +55 °C (cold start at -40 °C)
Relative Humidity	5-100%
Environment	Outdoor class with IP65



# ERICSSON 2203 RRU



5



DUAL BAND RRU MOUNT

2

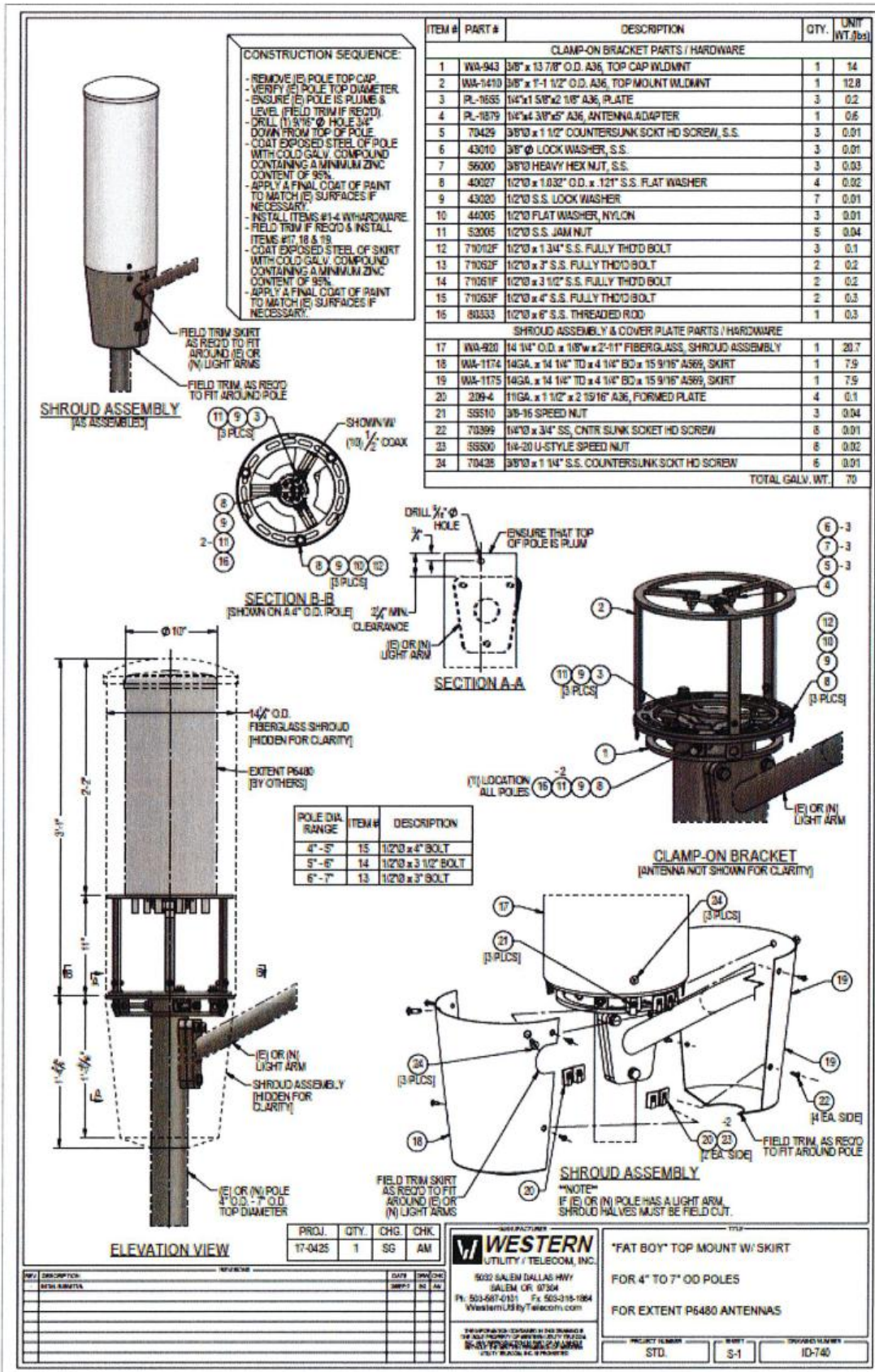
6503 RRU-POLE MOUNTING DETAILS

6

VERTICAL ACCESS PORT

9





AT&T Wireless  
3001 Executive Parkway  
San Ramon, CA 94583

Client:



Project Architect:



575 LENNON LANE  
SUITE 125  
WALNUT CREEK, CA 94598  
T 925.482.8500

Site Agent:

95% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SFOK6-023

PAGE ID:  
ROW AT 2701 TELEGRAPH AVE  
OAKLAND, CA 94612  
COUNTY: ALAMEDA

Site Name:

Professional Seal:

It is a violation of law for any person,  
unless they are acting under the direction  
of a licensed Professional  
Architect/Engineer, to alter this document.

Rev.	Date	Description
01	09/17/17	Zoning Drawg: 90%.
02	10/06/17	Zoning Drawg: 95%.

Project No.:

Date: 10/06/17 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

EQUIPMENT  
DETAILS

Sheet Title:

A.6

Sheet No.:

© Western Management LLC 2017



*Existing*



*view from 27th Street looking northeast at site*



**AT&T Wireless**

CRAN-RSFR-SF0K6-023

ROW at 2701 Telegraph Avenue, Oakland, CA

Photosims Produced on 9-22-2017

*Proposed*

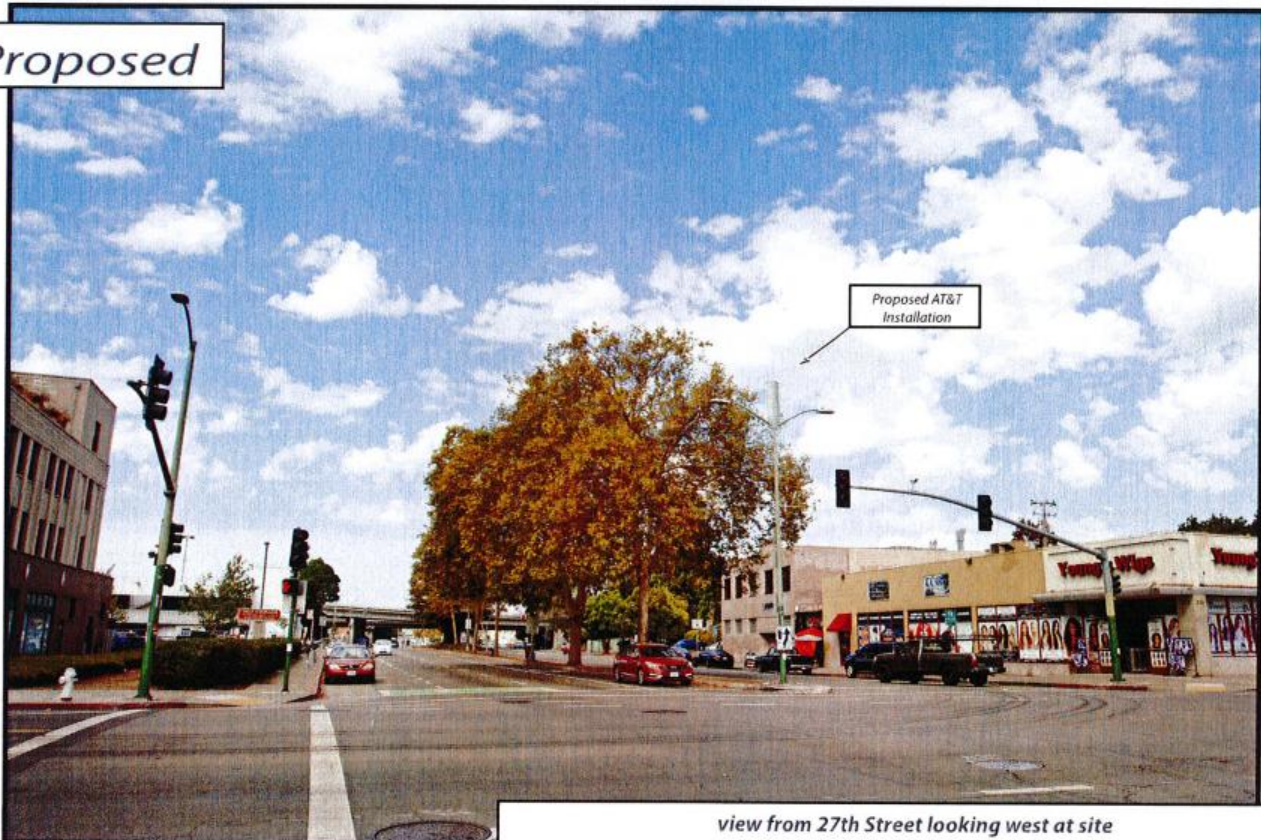




Existing



Proposed



view from 27th Street looking west at site

**AdvanceSim**  
Photo Simulation Solutions  
Contact: 925 | 202-8507



**AT&T Wireless**

CRAN-RSFR-SF0K6-023  
ROW at 2701 Telegraph Avenue, Oakland, CA  
Photosims Produced on 9-22-2017



## ALTERNATIVE DESIGN ANALYSIS



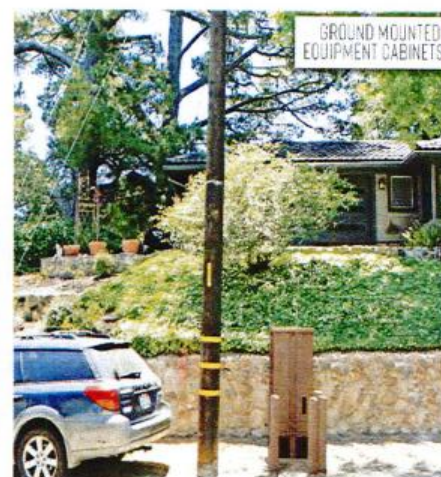
### Full-Sized Tower:

- Too big/bulky.
- Requires 300' sq. area.
- Does not nestle coverage/capacity.



### Shrouded Pole Equipment:

- Too big/bulky.
- Adds unnecessary equipment.
- Small cell equipment is already sleek.



### Equipment Cabinet:

- Too big/bulky.
- Adds unnecessary ROW equipment.
- Pole-mounted equipment blends in with pole.



# Alternative Site Analysis – SFOK6\_023



## Node 23A:

- Primary candidate
- Preferred due to adjacent commercial uses and for best meeting AT&T's RF needs.



## Node 23B:

- Potentially viable alternative
- Less preferred considering ornamental pole, presence of banners & signs.



## Node 23C:

- Potentially viable alternative
- Less preferred considering ornamental pole, presence of banners & signs.



**AT&T Mobility • Proposed Small Cell (No. CRAN-RSFR-SFOK6-023)**  
**2701 Telegraph Avenue • Oakland, California**

**Statement of Hammett & Edison, Inc., Consulting Engineers**

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of AT&T Mobility, a personal wireless telecommunications carrier, to evaluate its small cell (No. CRAN-RSFR-SFOK6-023) proposed to be sited in Oakland, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

**Executive Summary**

AT&T proposes to install an omnidirectional cylindrical antenna on a light pole sited in the public right-of-way at 2701 Telegraph Avenue in Oakland. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

**Prevailing Exposure Standards**

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

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5,000–80,000 MHz	5.00 mW/cm <sup>2</sup>	1.00 mW/cm <sup>2</sup>
BRS (Broadband Radio)	2,600	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.35	0.47
[most restrictive frequency range]	30–300	1.00	0.20

**General Facility Requirements**

Small cells typically consist of two distinct parts: the electronic transceivers (also called "radios") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are typically mounted on the support pole or placed in a cabinet at ground level, and they are connected to the antennas by coaxial cables. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means





**AT&T Mobility • Proposed Small Cell (No. CRAN-RSFR-SFOK6-023)**  
**2701 Telegraph Avenue • Oakland, California**

that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

**Computer Modeling Method**

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

**Site and Facility Description**

Based upon information provided by AT&T, including drawings by Meridian Management LLC, dated September 17, 2017, it is proposed to install one Galtronics Model P6480, 2-foot tall, omnidirectional cylindrical antenna, on top of an existing light pole sited in the public right-of-way at the east end of the median strip on 27th Street in Oakland, at the west side of the intersection with Telegraph Avenue. The antenna would employ no downtilt and would be mounted at an effective height of about 27½ feet above ground. The maximum effective radiated power in any direction would be 80 watts for PCS service. There are reported no other wireless telecommunications base stations at this site or nearby.

**Study Results**

For a person anywhere at ground, the maximum RF exposure level due to the proposed AT&T operation is calculated to be 0.0011 mW/cm<sup>2</sup>, which is 0.11% of the applicable public exposure limit. The maximum calculated level at any nearby building is 0.29% of the public exposure limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

**No Recommended Mitigation Measures**

Due to its mounting location and height, the AT&T antenna would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. The occupational limit is calculated to extend 4 inches from the antenna and, due to this short distance, the proposed operation is considered intrinsically compliant with that limit.



**AT&T Mobility • Proposed Small Cell (No. CRAN-RSFR-SF0K6-023)**  
**2701 Telegraph Avenue • Oakland, California**

**Conclusion**

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the small cell proposed by AT&T Mobility at 2701 Telegraph Avenue in Oakland, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating small cells.

**Authorship**

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



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

November 15, 2017

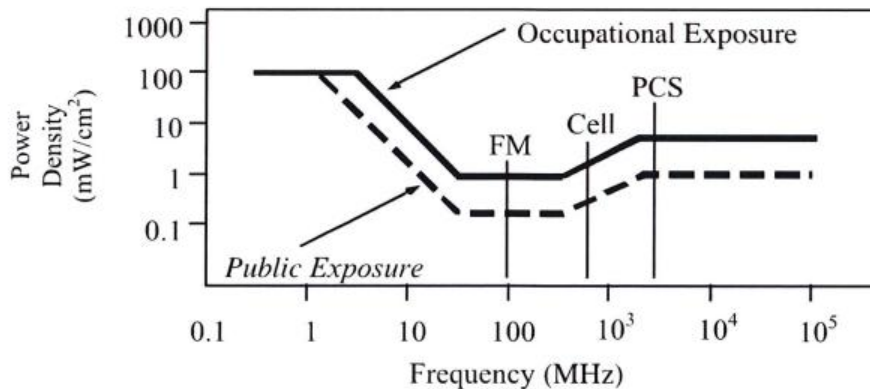


## FCC Radio Frequency Protection Guide

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

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

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



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





## RFR.CALC™ Calculation Methodology

### Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

#### Near Field.

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

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

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

where  $\theta_{BW}$  = half-power beamwidth of the antenna, in degrees, and

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

$D$  = distance from antenna, in meters,

$h$  = aperture height of the antenna, in meters, and

$\eta$  = aperture efficiency (unitless, typically 0.5-0.8).

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

#### Far Field.

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

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

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

RFF = relative field factor at the direction to the actual point of calculation, and

$D$  = distance from the center of radiation to the point of calculation, in meters.

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





## Utility Contact System Search

The Utility Contact System (UCS) is the Communications Division's database for the primary regulatory contact for each telephone corporation operating in California. The Communications Division sends important regulatory notices to the regulatory contact for each telephone corporation via e-mail, so it is important for primary regulatory contacts to update their UCS record if their e-mail address changes.

Telephone corporations may update UCS contact information using the form on the following page: [Carrier Reporting Requirements](#)

A description of the different utility types (granted authorities) are listed on the following page: [Utility Type Descriptions](#)

Search Utility Name		Search Utility Number 3060					Search	Clear		
Utility Name ▲	Alias (DBA Name)	Utility Number	Street Address	City	State	Zip	Phone Number	Email	Utility Type	CPCN Appro
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	430 BUSH STREET	SAN FRANCISCO	CA	94108	(415) 778-1299	att-regulatory-ca@att.com	CEC	12-21-1995
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	7405 GREENHAVEN DRIVE	SACRAMENTO	CA	95831	(800) 498-1912	west.region.oopsac@awsmail.att.com	CEC	12-21-1995
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	11760 US HIGHWAY ONE, WEST TOWER	NORTH PALM BEACH	FL	33048	770-240-8849		CEC	12-21-1995

[Save Search Results as CSV Spreadsheet](#)

[Comments & Feedback](#)



SOLICIT  
California Penal  
Code 647 (c)

REAL ESTATE Investor  
Seeking Students  
Unlimited Income Potential  
916-562-0358

PUBLIC NOTICE  
CITY OF OAKLAND

ATTACHMENT H  
3a



## PROJECT TEAM

## APPLICANT:

AT&T  
5001 Executive Parkway  
San Ramon, CA 94583

## ARCHITECT/ENGINEER:

Rodney Barnes  
Meridian Management LLC  
785 Oak Grove Road E2  
Suite 251  
Concord, CA 94518  
1.707.592.5924  
rodney@meridianmanagement.com

## ZONING CONTACT:

Matt Yergovich  
Vinculums Services  
575 Lennan Lane  
Suite 125  
Walnut Creek, CA 94598  
1.415.596.3474  
myetgo@gmail.com

## LEASING CONTACT:

Matt Yergovich  
Vinculums Services  
575 Lennan Lane  
Suite 125  
Walnut Creek, CA 94598  
1.415.596.3474  
myetgo@gmail.com

## CONSTRUCTION MANAGER:

Vinculums Services  
575 Lennan Lane  
Suite 125  
Walnut Creek, CA 94598

## GENERAL NOTES

1. THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR THE AT&T WIRELESS NETWORK, CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING METAL LIGHT POLE IN THE PUBLIC RIGHT-OF-WAY. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
2. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT DRAINAGE. NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.
3. CHANGES FROM THE APPROVED PLANS DURING THE COURSE OF CONSTRUCTION SHALL CAUSE CONSTRUCTION TO BE SUSPENDED UNTIL SUCH TIME AS THE PLANS CAN BE AMENDED BY THE DESIGNER AND SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL.

## CODE COMPLIANCE

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

- CALIFORNIA CODES
- 2016 CALIFORNIA BUILDING CODE
- 2016 CALIFORNIA MECHANICAL CODE
- 2016 CALIFORNIA PLUMBING CODE
- 2016 CALIFORNIA ELECTRIC CODE
- 2016 GREEN BUILDING CODE
- 2016 EDITION OF TITLE 24 ENERGY STANDARDS
- ANY LOCAL BUILDING CODE AMENDMENTS TO THE ABOVE
- CITY / COUNTY ORDINANCES
- CITY OF OAKLAND PUBLIC WORKS DEPARTMENT
- GENERAL ORDER 95 (JUNE 2009 EDITION)

## SITE IMAGE



# AT&T

5001 EXECUTIVE PARKWAY, SAN RAMON, CA 94583

## CRAN-RSFR-SF0K6-035

PAGE ID:

ROW AT 1103 8TH ST, OAKLAND, CA 94607

COUNTY: ALAMEDA

SITE TYPE: METAL STREET LIGHT POLE

FA:14307065 HUB:19 USID:192883



## DRIVING DIRECTIONS

FROM AT&T WIRELESS OFFICE AT 5001 EXECUTIVE PARKWAY, SAN RAMON, CA

1. Head north-east on Bishop Dr towards Sunset Dr
2. Turn right onto Sunset Dr
3. Use the right 2 lanes to turn right onto Bollinger Canyon Rd
4. Use the right 2 lanes to merge onto I-680 N via the slip road to Sacramento
5. Merge onto I-680 N
6. Use the right 2 lanes to take exit 46A for State Route 24 towards Oakland/Lafayette
7. Continue onto CA-24 W
8. Keep left at the fork to stay on CA-24 W
9. Continue onto I-980 W
10. Use the right lane to take exit 1C for 12th St
11. Use the right lane to merge onto Brush St
12. Continue straight to stay on Brush St
13. Turn right onto 7th St
14. Turn right at the 2nd cross street onto Filbert St
15. Turn left at the 1st cross street onto 8th St

## INDEX

T.1	TITLE SHEET
T.2	GENERAL NOTES, LEGEND, ABBREVIATIONS
A.1	OVERALL SITE PLAN
A.2	POLE PLAN, EQUIPMENT ENLARGEMENTS
A.3	ELEVATIONS
A.4	ELEVATIONS
A.5	EQUIPMENT DETAILS
A.6	EQUIPMENT DETAILS

## DRAWING SIGN-OFF

VINCULUMS

SITE ACQUISITION:

PLANNING:

CONSTRUCTION:

MANAGEMENT:

AT&T

CONSTRUCTION:

REAL ESTATE:

RF ENGINEER:

EQUIPMENT ENGINEER:

MW ENG/TRANSPORT:

OWNER:

Signature

Date

Signature

Date

## PROJECT DESCRIPTION

THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR THE AT&T WIRELESS NETWORK CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON A REPLACEMENT EXISTING SEMI-DECORATIVE METAL LIGHT POLE IN THE PUBLIC RIGHT-OF-WAY.

## SCOPE OF WORK &amp; SITE COMPLETION CHECKLIST:

1. ANTENNA & ASSOCIATED EQUIPMENT BOXES: INSTALL A NEW TELECOMMUNICATION ANTENNA AND 2 EQUIPMENT BOXES ON AN EXISTING METAL LIGHT POLE
2. DURABLE PAINT: ANTENNAS, MOUNTING BRACKETS, CABLES, AND RADIO RELAY UNITS TO BE PAINTED TO MATCH THE EXISTING POLE USING A DURABLE PAINT (E.G. SHERWIN WILLIAMS, FRAZER, KELLY MOORE, OR EQUIVALENT)
3. CABLEING: CABLEING TO BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS
4. LOGO REMOVAL: ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION), SHALL BE PAINTED OVER OR REMOVED. RAISED/DEPRESSED TEXT ON RRUS OR OTHER EQUIPMENT, IF PRESENT, TO BE SANDED OFF OR SIMILARLY REMOVED AND/OR FILLED
5. SIGNAGE: FCC MANDATED RF WARNING SIGNAGE SHALL FACE CLIMBING SPACE. OPTIONAL SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD BUILDING IF THERE IS NO WINDOW.
6. UTILITY LINES: PROPOSED UTILITY LINES BETWEEN EXISTING POINT OF CONNECTION TO BE IN CONDUIT INSIDE POLE

## SITE INFORMATION

OWNER:	CITY OF OAKLAND
APPLICANT:	AT&T 5001 EXECUTIVE PARKWAY SAN RAMON, CA 94583
LATITUDE:	37.8046300 (NAD 83)
LONGITUDE:	-122.2871200 (NAD 83)
GROUND ELEVATION:	20' AMSL
ADJACENT APN#:	(IFO) 4-29-10-1
ZONING JURISDICTION:	CITY OF OAKLAND
CURRENT ZONING:	PUBLIC ROW
PROPOSED USE:	UNMANNED TELECOMMUNICATIONS FACILITY

## DO NOT SCALE DRAWINGS

CONTRACTOR 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



AT&T Wireless  
5001 Executive Parkway  
San Ramon, CA 94583

Client:



Project Architect:



575 LENNAN LANE  
SUITE 125  
WALNUT CREEK, CA 94598  
1.925.482.8500

Site Agent:

95% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SF0K6-035

PAGE ID:  
ROW AT 1103 8TH ST  
OAKLAND, CA 94607  
COUNTY: ALAMEDA

Site Name:

Professional Seal:

It is a violation of law for any person, unless they are acting under the direction of a licensed Professional Architect/Engineer, to alter this document.

Rev.	Date	Description
01	09/21/17	Zoning Dwg 90%
02	10/06/17	Zoning Dwg 95%

Project No.:

Date: 10/06/17 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

## TITLE SHEET

Sheet Title:

# T.1

Sheet No.:

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- PLANS ARE INTENDED TO BE A GRAMMARICALLY OUTLINE ONLY UNLESS NOTED OTHERWISE THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL OBTAIN, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY FEEL NOT CLEARLY DERIVED OR INDICATED BY THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL CONTACT US (UNDERGROUND SERVICE ALERT) AT (800) 227-2652 FOR UTILITY LOCATIONS 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION, SITE WORK OR CONSTRUCTION.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE OR WHERE LOCAL CODE OR REGULATORY TAKE PRECEDENCE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CBC 17.0 REQUIREMENTS REGARDING EARTHQUAKE RESISTANCE FOR, BUT NOT LIMITED TO, FLOOR JOIST, CEILING GRID, INTERIOR PARTITIONS, AND MECHANICAL EQUIPMENT. ALL WORK MUST COMPLY WITH LOCAL EARTHQUAKE CODES AND REGULATIONS.
- REPRESENTATIONS OF TRUE NORTH OTHER THAN TRUE NORTH FOUND ON THE PLOT OF SURVEY DRAWINGS, SHALL NOT BE USED TO DETERMINE OR BEARING OF TRUE NORTH. THE CONTRACTOR SHALL RE-VERIFY THE TRUE NORTH ON THE PLOT OF SURVEY DRAWINGS AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND SHALL NOTIFY THE ARCHITECT / ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE CIVIL SURVEY. THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT / ENGINEER.
- THE BUILDING DEPARTMENT ISSUING THE PERMITS SHALL BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK, OR AS OTHERWISE STIPULATED BY THE CODE ENFORCEMENT OFFICIAL HAVING JURISDICTION.
- DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES UNLESS OTHERWISE NOTED.
- ALL EXISTING UTILITIES, FACILITIES, CONDITIONS, AND THEIR DIMENSIONS SHOWN ON THE PLAN HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ARCHITECT / ENGINEER AND THE OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR THE ACCURACY OF THE INFORMATION SHOWN ON THE PLANS, OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTORS SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.
- CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, BOTH HORIZONTAL AND VERTICALLY, PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHOULD 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.
- ALL PROPOSED 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.
- ANY DRAIN AND/OR PIELD BE ENCOUNTERED OR DISTURBED DURING CONSTRUCTION SHALL BE RETURNED TO ITS ORIGINAL CONDITION PRIOR TO COMPLETION OF FIELD, SITE 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 THE ARCHITECT / ENGINEER AT COMPLETION OF PROJECT.
- ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAD BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
- INCLUDE MISC. ITEMS PER AIAK WIRELESS SPECIFICATIONS.

1. PRIOR TO THE SUBMISSION OF THE BIDDING, SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR.
2. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
3. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION OF THE WORK. WORK SHALL BE SCHEDULED TO TAKE PLACE DURING THE LOW TRAFFIC PERIODS. ALL WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW, USUALLY IN LOW TRAFFIC PERIODS (AFTER MIDNIGHT).
4. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORK IS DONE AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL PROTECTIVE MEASURES ARE ADVISED TO BE WORN TO AVOID ANY DANGEROUS EXPOSURE LEVELS.
5. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF COAXIAL POWER AND TV CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELLER PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD PROPOSED TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
6. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER DEBRIS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

1. SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHP) FOR THE LOCATION.
2. THE EDITION OF THE AHP ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
3. SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:
  - AMERICAN CONCRETE INSTITUTE (ACI) 318: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
  - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) 360: STEEL CONSTRUCTION AND INTERPRETATION
  - TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F: STRUCTURAL STANDARD FOR STRUCTURAL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES
  - INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81: GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE AND EARTH RESISTANCE FOR USES OF A GROUND SYSTEM IEEE 1100 (1999) RECOMMENDED PRACTICES FOR POWERING AND GROUNDING OF ELECTRICAL EQUIPMENT
  - IEEE C62.41: RECOMMENDED PRACTICES FOR SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND HIGH SYSTEM EXPOSURE)
5. TIA 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS TELCORDIA GR-43 NETWORK EQUIPMENT-BUILDING SYSTEM (NBS), PHYSICAL PROTECTION
6. TELCORDIA GR-247 CENTRAL OFFICE POWER WIRING
7. TELCORDIA GR-1275 GENERAL INSTALLATION REQUIREMENTS
8. TELCORDIA GR-1553 COAXIAL CABLE CONNECTIONS
9. ANY AND ALL OTHER LOCAL & STATE LAWS AND REGULATIONS
10. FOR ANY CONFLICT BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

1. MAINTAIN 40" MINIMUM COVER FOR ALL ELECTRICAL CONDUITS.
2. MAINTAIN 30" MINIMUM COVER FOR ALL TELECOMMUNICATIONS CONDUITS.
3. MINIMUM 1" SAND SHADING BELOW CONDUITS AND 6" COVERING ON TOP OF CONDUITS REQUIRED.
4. ALL ELECTRICAL CONDUITS SHALL HAVE COVER COORDINATED WITH ANY POLE TRANSFORMER OR OTHER LOCATIONS WILL BE SUPPLY BACKFILLED.
5. IN ORDER TO SURVEY TO GRADE AND WELL TO 1'-1 1/2' FROM THE FACE OF THE CURB.
6. IMPORT SLURRY 18" FROM GRADE AND 90% COMPACTION NATIVE SOIL FOR BALANCE.
7. WARNING TAPE TO BE PLACED IN TRENCH 12" ABOVE ALL CONDUITS AND 4" RAINWATER TAPE ABOVE RINK.

1. 3/8" x 8" ROD, CAP WELD BELOW GRADE
2. GROUND TESTED AT 5 OHMS OR LESS
3. #5 GROUND AND BOND WIRE
4. GROUNDS 3' FROM POLE
5. PLACE 3 #10 GA WIRES FROM TESTED BREAKER TO PANO OR STRONG BOX
6. WOOD MOLING, STAPLED EVERY 3' AND AT EACH END.

1. ALL CONDUITS WILL BE HANDHELD AND EQUIPPED WITH 3/8" PULL ROPE
2. SCHEDULE 40 CONDUIT FOR UNDERGROUND USE
3. SCHEDULE 80 CONDUIT FOR RIGER USE
4. 2" GALVANIZED STEEL CONDUIT FOR ANY CONDUIT UNDER 3" STUB UP 10' THEN CONVERT TO SCHEDULE 80
5. CONVERT 4" CONDUIT TO 3" AT BASE OF POLE
6. CONTRACTOR TO STUB UP POLE 10' w/ 2" POWER CONDUIT. POWER COMPANY TO CONVERT FROM 3" STUB SCHEDULE 80 TO SCHEDULE 40 FROM TOP OF STUB UP
7. INSTALL STEPS PER POLE REQUIREMENTS

1. CABLE NOT TO IMPIDE 15 LAR SPACE OFF POLE FACE.
2. ALL CURVE STEPS NEED TO CONDUIT SASH HAVE EXTENDED STEPS.
3. NO HOT THREADS TO PROTRUDE MORE THAN 1/2".
4. ALL POLIS IN POLE LEFT FROM REARRANGEMENT OF CURVE STEPS TO BE REPEL
5. ALL CABLES UNDER ANTENNA ARM. ALL CABLES MUST TRAVEL ON THE INSIDE OR BOTTOM OF THE ARM. (NO CABLE ON TOP OF ARM)
6. USE 1/2" CONNECTOR AT CABLE CONNECTION FOR DOWN DOWN ANTENNAS.
7. CABLES CLAMPED TO SUPPORT CABLES AT CABLE CLAMP. 2 AT LEAST WIRE CABLES 1 TAGS ON BOTH SIDES OF ARMS.
8. USE 1/2" SASH ON CABLE ANTENNAS UNLESS OTHERWISE SPECIFIED.
9. PLACE GIPS ON ARMY OF SOUTHERN SHIP EXPOSURE AT MINIMUM 6" FROM TRANSIT ANTENNA WHICH IS 24" AWAY FROM CENTER OF POLE.
10. FILL VOID AROUND CABLE AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION.

	PROPOSED ANTENNA		GROUT OR PLASTER
	EXISTING ANTENNA		(B) BRICK
	GROUND ROD		(B) MASONRY
	GROUND BUS BAR		CONCRETE
	MECHANICAL GRND. CONN.		EARTH
	GROUND ACCESS WELL		GRAVEL
	ELECTRIC BOX		PLYWOOD
	TELEPHONE BOX		SAND
	LIGHT POLE		WOOD CONN.
	END MONUMENT		WOOD BLOCKING
	SPOT ELEVATION		STEEL
	SET POINT		CENTERLINE
	REVISION		PROPERTY/LEASE LINE
	GRID REFERENCE		MATCH LINE
	DETAIL REFERENCE		WORK POINT
	ELEVATION REFERENCE		GROUND CONDUCTOR
	SECTION REFERENCE		COAXIAL CABLE
			OVERHEAD SERVICE CONDUCTORS
			CHAIN LINK FENCING
			OVERHEAD TELEPHONE/POWER
			OVERHEAD TELEPHONE
			OVERHEAD POWER LINE
			POWER RUN

### LEGEND

	TELCO RUN		5/8" X 10'-0" CU GND ROD IN TEST WELL 32" MIN. BELOW GRADE
	POWER/TELCO RUN		CHEMICAL GROUND ROD (XII GROUND ROD)
	GROUNDING CONDUCTOR		SAW WELD CONNECTION
	GROUNDING CONDUCTOR		MECHANICAL CONNECTION
	CONDUIT UNDERGROUND		HALO GROUND CONNECTION
	FUSE, SIZE AND TYPE AS INDICATED		CIRCUIT BREAKER
	SAFETY SWITCH, 2P-240V-60A W/60A FUSES, NEMA 3R ENCLOSURE, SQ-D CATALOG NO. H222NHB		UTILITY METER BASE
	MANUAL TRANSFER SWITCH, 2P-240V-200A, NO FUSE NEMA 3R ENCLOSURE		TRANSFORMER
	LIGHTING FIXTURE, FLUORESCENT, 10.94" X 4'-0", 2/40W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #FWS42321		STEPDOWN TRANSFORMER
	LIGHTING FIXTURE, FLUORESCENT, 10.94" X 8'-0", 2/95W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #FWS42321		RECEPTACLE, 2P-3W-125V-15A, DUPLEX, GROUND TYPE, HUBBELL CATALOG #5362
	LIGHTING FIXTURE, HIGH PRESSURE SODIUM, 1/70W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #NRG-307 OR 1/50W, HUBBELL LIGHTING CATALOG #NRG-121		TOGGLE SWITCH, 1P-125V-15A, HUBBELL CATALOG #HBL 1201CN
	EXIT SIGN, THERMOPLASTIC LED, SINGLE FACE, UNIVERSAL MOUNTING, W/BATTERY PACK, HUBBELL LIGHTING CATALOG #FR8		TOGGLE SWITCH, 1P-120V-15A, WF
	COMBINATION, EXIT SIGN & EMERGENCY LIGHTING, HUBBELL LIGHTING CATALOG #PRC		IONIZATION SMOKE DETECTOR W/ALARM HORN & AUXILIARY CONTACT, 120 VAC, GENTEX PART NO. 7100F
	EMERGENCY LIGHTING, 2/50W, HUBBELL LIGHTING CATALOG #HE6-50-2-FY1		POLE
	LIGHTING FIXTURE, INCANDESCENT, 1/100W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #BRH-100-56-1		PROPOSED POLE MOUNTED XFMR
	LIGHTING FIXTURE, HALOGEN, QUARTZ, 1/300W, HUBBELL LIGHTING CATALOG #QL-505		(E) POLE MOUNTED XFMR
	LIGHTING FIXTURE, 1/175W, METAL HALIDE, HUBBELL CAT #MHC-0175H-335		PROPOSED PAD MOUNTED XFMR
	5/8" X 10'-0" CU GND ROD 32" MIN. BELOW GRADE		(E) PAD MOUNTED XFMR

## ABBREVIATIONS

[illegible]

AT&T Wireless  
5001 Executive Parkway  
San Ramon, CA 94583

Client:



Project Architect:



575 LENNON LANE  
SUITE 125  
WALNUT CREEK, CA 94598  
T 925.482.8500

Site Agent:

95% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SFOK6-035

PAGE ID:  
ROW AT 1103 8TH ST  
OAKLAND, CA 94607  
COUNTY: ALAMEDA

Site Name:

Professional Seal:

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Rev.	Date	Description
01	09/21/17	Zoning Dwg. 90%
02	10/06/17	Zoning Dwg. 95%

Project No.:

Date: 10/06/17 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG      Checked: RB

### GENERAL NOTES

LEGEND  
ABBREVIATIONS

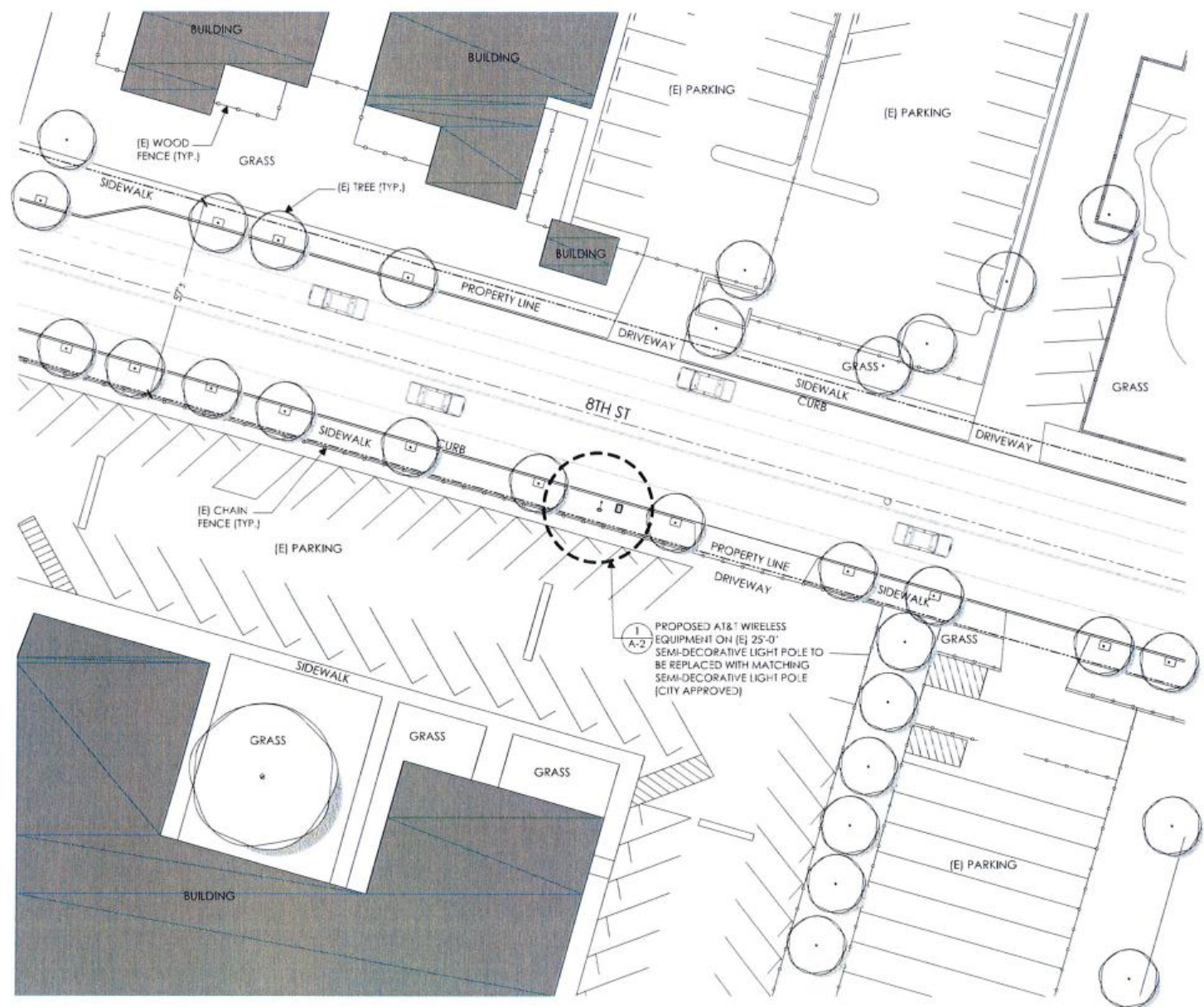
Sheet Title:

T.2

Sheet No.:

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NOTE:  
THIS SITE PLAN WAS GENERATED WITHOUT THE USE OF A SURVEY. PROPERTY LINES, RIGHT-OF-WAYS, POWER & TELCO UTILITY POINT CONNECTIONS/ROUTES AND EASEMENTS SHOWN ON THESE PLANS ARE ESTIMATED. ALL ITEMS AND DIMENSIONS SHOULD BE VERIFIED IN THE FIELD.

UNDERGROUND UTILITIES NOTE:  
THE LOCATIONS AND EXISTENCE OF ANY UNDERGROUND PIPES, STRUCTURES OR CONDUITS SHOWN ON THIS PLAN WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THERE MAY BE EXISTING UTILITIES OTHER THAN THOSE SHOWN ON THIS PLAN. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT SHOWN ON THIS PLAN.

OVERALL SITE PLAN



 **AT&T**  
AT&T Wireless  
3001 Executive Parkway  
San Ramon, CA 94583

Client:

 Meridian Management LLC  
785 Oak Grove Road E2  
Suite 251  
Concord, CA 94518  
T 925.572.5724  
www.meridianmanagement.com

Project Architect:

  
575 LENNON LANE  
SUITE 125  
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T 925.482.8500

Site Agent:

95% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SF06-035  
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02	10/06/17	Zoning Dwg 95%

Project No.:  
Date: 10/06/17 Job No.:  
Scale: AS SHOWN CAD File:  
Designed By: JG Checked: RB

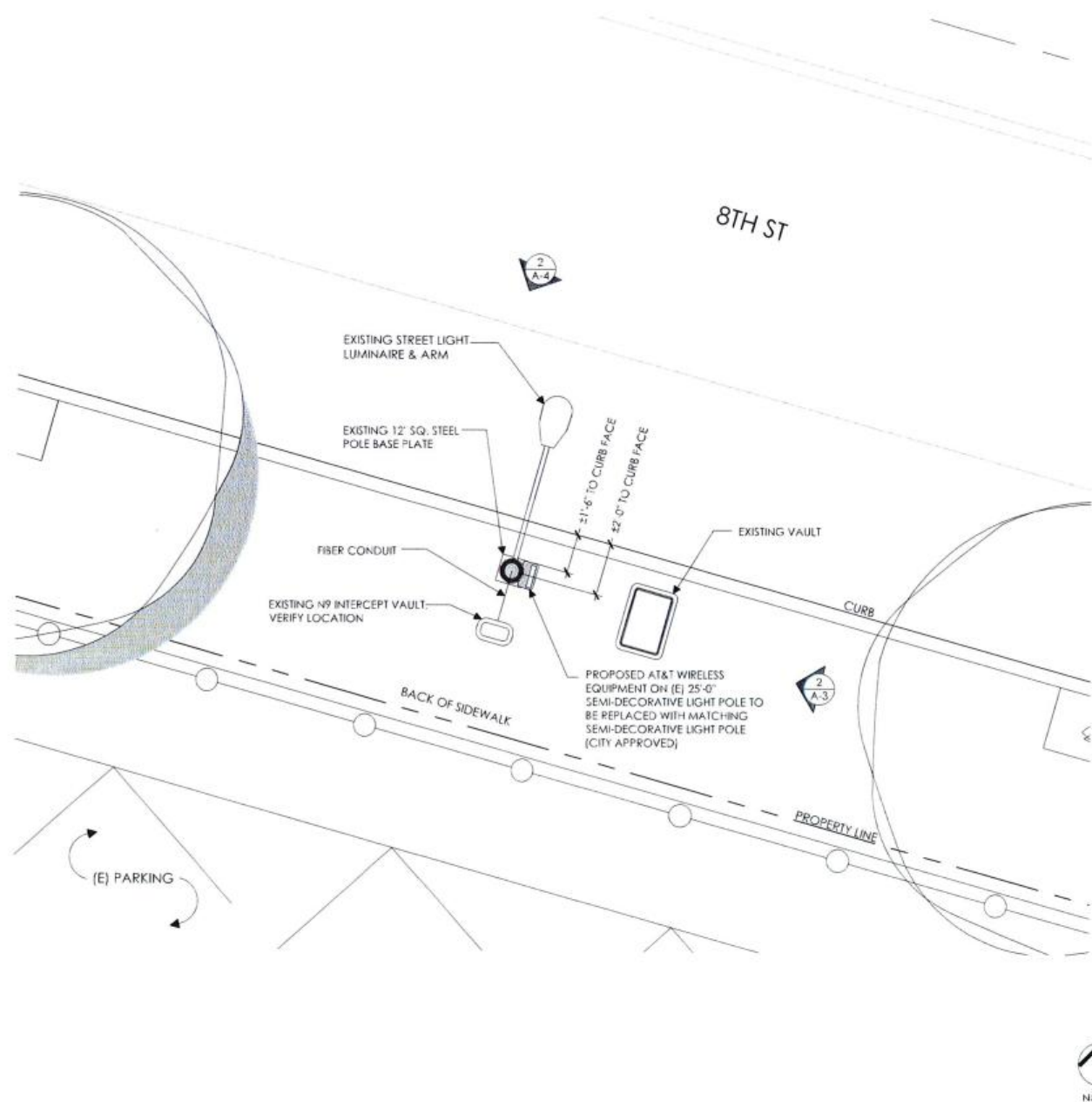
OVERALL SITE PLAN  
Sheet Title:  
**A.1**  
Sheet No.:

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# NOTES:

1. DURABLE PAINT: ANTENNAS, MOUNTING BRACKETS, CABLING, AND RADIO RELAY UNITS TO BE PAINTED TO MATCH THE EXISTING POLE USING A DURABLE PAINT (E.G. SHERWIN WILLIAMS, FRAZEE, KELLY MOORE, OR EQUIVALENT)
2. CABLING: CABLING TO BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS. ALL CABLING TO GROUND-MOUNTED BOXES AND ANTENNAS TO BE INSTALLED INSIDE POLE
3. LOGO REMOVAL: ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION), SHALL BE PAINTED OVER OR REMOVED. RAISED/DEPRESSED TEXT ON RRUS OR OTHER EQUIPMENT, IF PRESENT, TO BE SANDED OFF OR SIMILARLY REMOVED AND/OR FILLED
4. SIGNAGE: FCC MANDATED RF WARNING SIGNAGE SHALL FACE CLIMBING SPACE. OPTIONAL SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD BUILDING IF THERE IS NO WINDOW.



POLE PLAN ENLARGEMENT

16' 0" 8' 0" 16' 0"

SCALE  
3/8" = 1'-0"

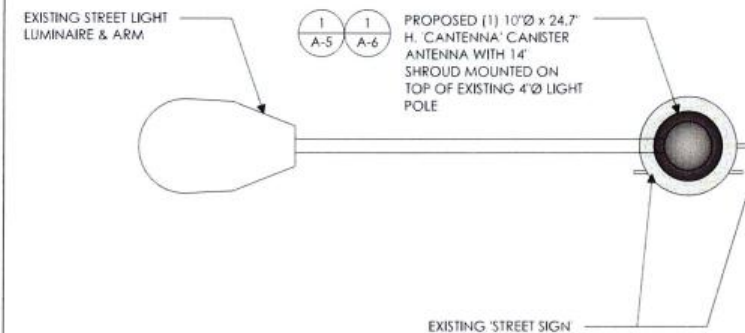
1

EQUIPMENT ENLARGEMENT PLAN

1' 6" 0" 6" 1'

SCALE  
1" = 1'-0"

3



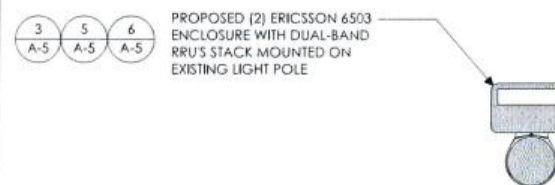
A. SECTION (CANISTER ANTENNA)

ANTENNA ENLARGEMENT PLAN

1' 6" 0" 6" 1'

SCALE  
1" = 1'-0"

2



B. SECTION (RRUS)



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Client:



Project Architect:



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SUITE 125  
WALNUT CREEK, CA 94598  
T 925.482.8500

Site Agent:

95% Zoning Drawings

(E) LIGHT POLE  
Drawing Phase:

CRAN-RSFR-SF0K6-035

PACE ID:  
ROW AT 1103 8TH ST  
OAKLAND, CA 94607  
COUNTY: ALAMEDA

Site Name:

Professional Seal:

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Rev.	Date	Description
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02	10/06/17	Zoning Docs 95%

Project No.:

Date: 10/06/17 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

POLE PLAN  
EQUIPMENT  
ENLARGEMENTS

Sheet Title:

A.2

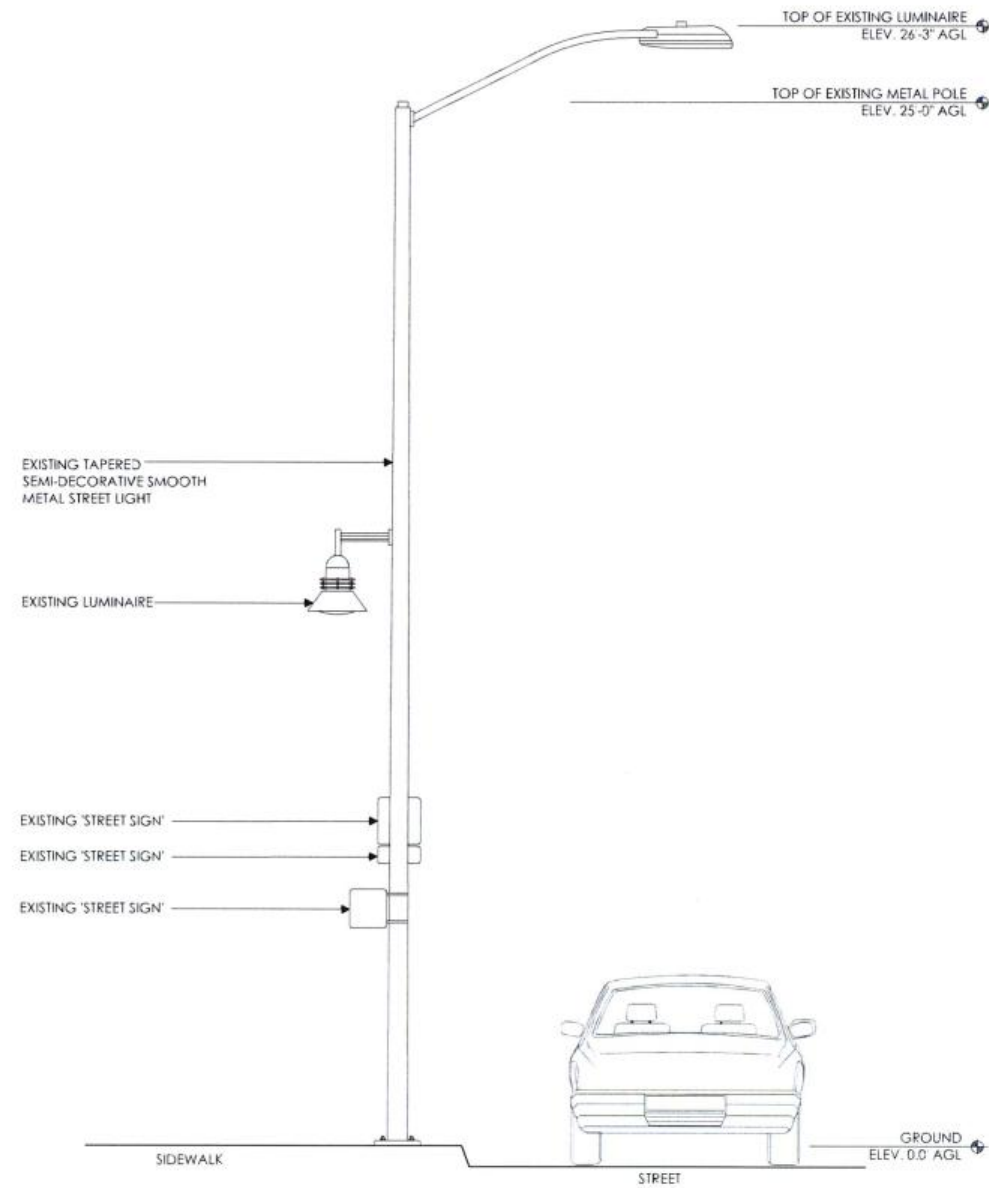
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# SCALE NOTE:

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CORRECTLY, CHECK FOR REDUCTION OR  
ENLARGEMENT FROM ORIGINAL PLANS.

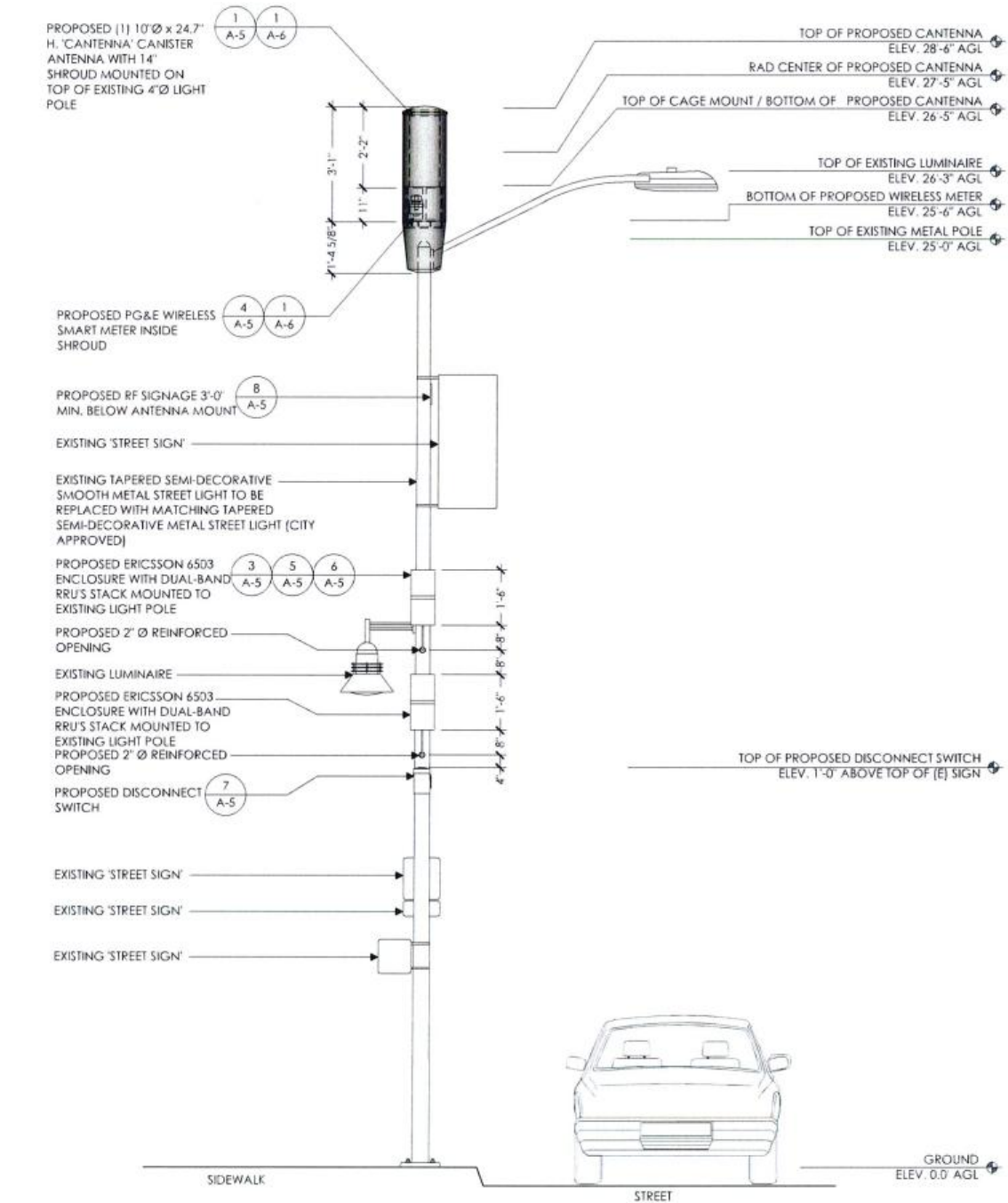


SOUTHEAST ELEVATION - EXISTING



SCALE  
1/2" = 1'-0"

1



SOUTHEAST ELEVATION - PROPOSED



SCALE  
1/2" = 1'-0"

2



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Designed By: JG Checked: RB

ELEVATIONS

Sheet Title:

A.3

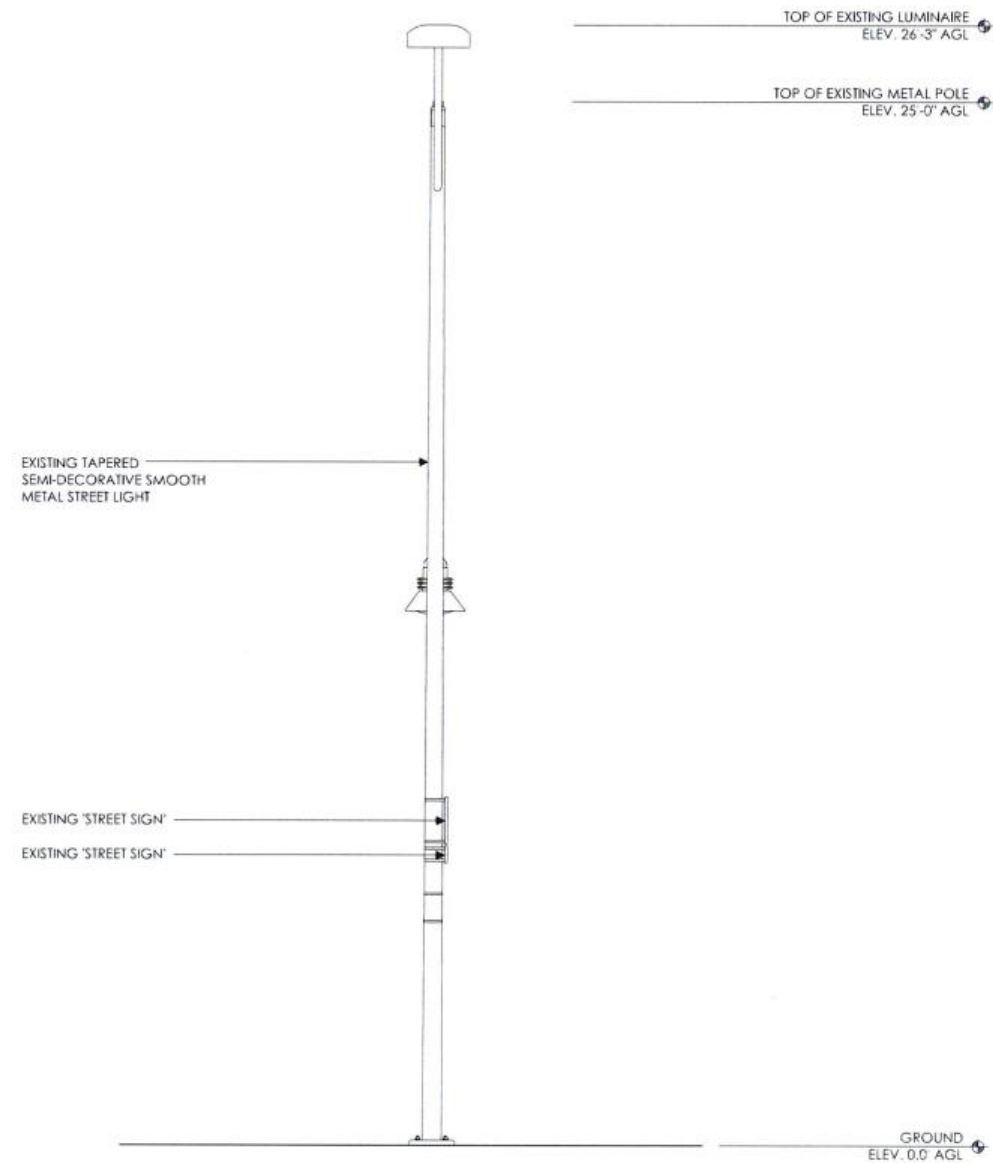
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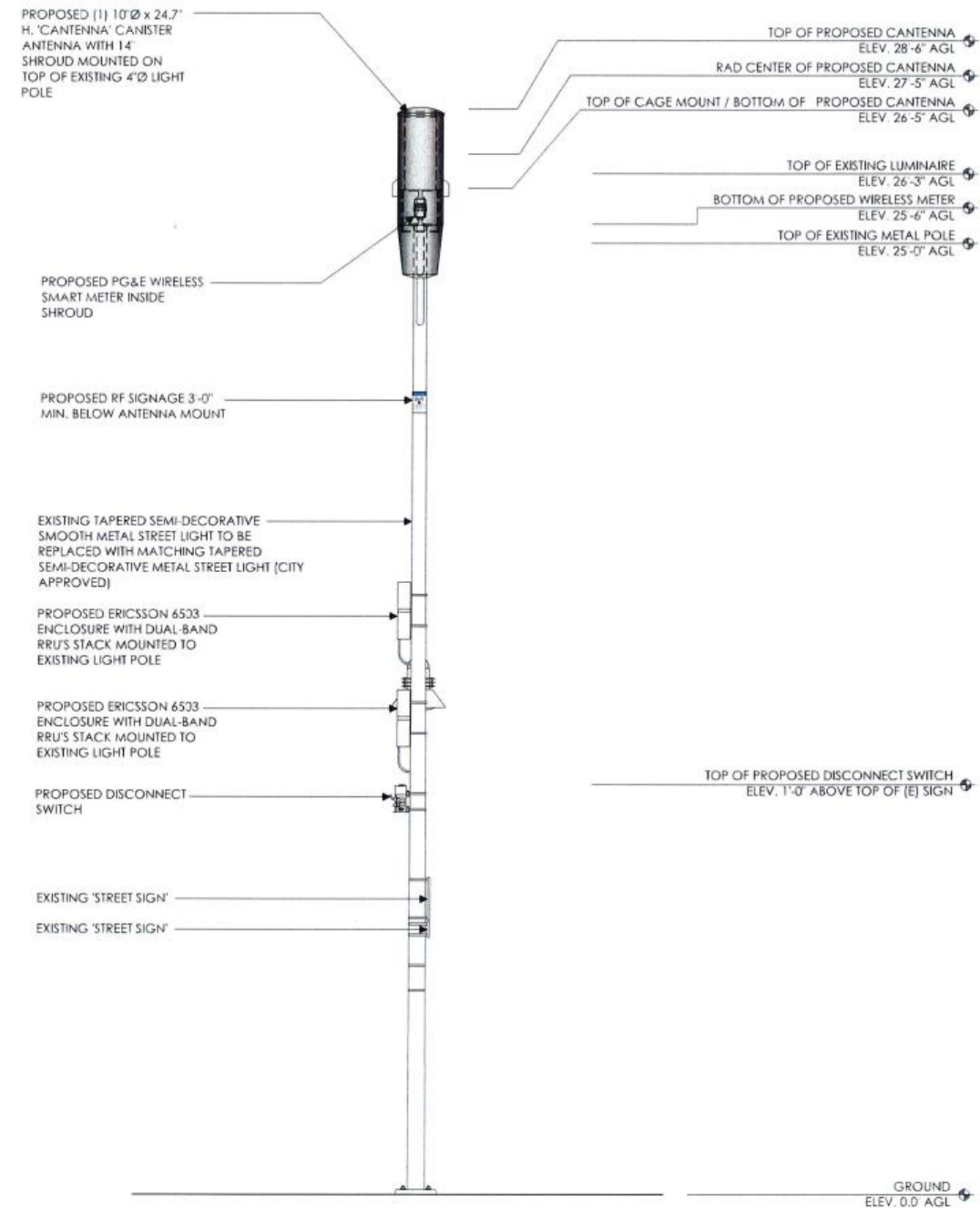


# SCALE NOTE:

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NORTHEAST ELEVATION - EXISTING



NORTHEAST ELEVATION - PROPOSED



AT&T Wireless  
5001 Executive Parkway  
San Ramon, CA 94583

Client:



Project Architect:



575 LENNON LANE  
SUITE 125  
WALNUT CREEK, CA 94598  
T 925.482.8580

Site Agent:

95% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SF06-035

PACE ID:  
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COUNTY: ALAMEDA

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ELEVATIONS

Sheet Title:

A.4

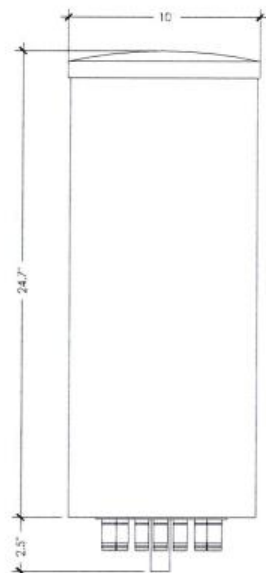
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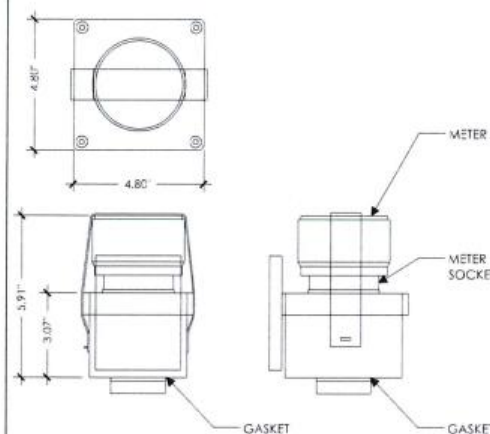
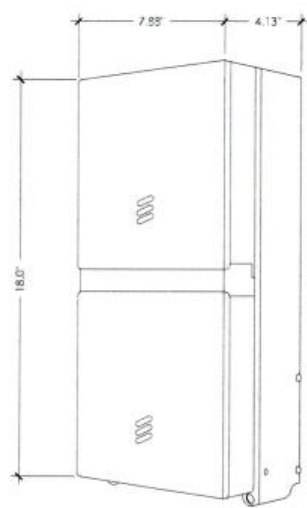
# AT&T CANISTER ANTENNA 'CAN-TENNA'

ANTENNA COLOR: LIGHT GRAY  
DIMENSIONS: 10.0"Ø x 24.7" TALL  
NET WEIGHT: 19.0 LBS



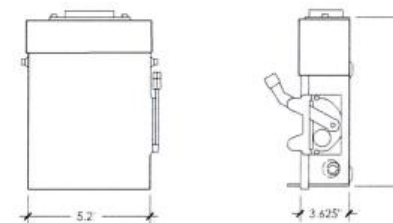
# ERICSSON 6503

SINGLE BAND 2203:  
DUAL BAND RRU (2 - 2203'S):  
MAXIMUM POWER CONSUMPTION:  
2 TX / 2 RX (AWS OR PCS)  
4 TX / 4 RX (AWS OR PCS)  
<100W PER 2203 RADIO-  
±95W PER SINGLE-BAND 2203 RADIO  
±190W PER DUAL-BAND 2203 RRU  
MAX FUSE RATING: 32A  
WIRE SIZE: #10 CU OR #8 ALU



# MURRAY LW002GRU SPECIFICATIONS

LOAD CENTER DEPTH: 3.625"  
LOAD CENTER WIDTH: 5.2"  
LOAD CENTER HEIGHT: 8.125"  
WEIGHT: 4.55 LB  
LOAD CENTER TYPE: MAIN LUG  
MAX AMPERAGE: 60  
MOUNTING TYPE: PLUG IN  
NUMBER OF PHASES: 1  
NUMBER OF SPACES: 2  
VOLTAGE (VOLTS): 120/240  
INDOOR/OUTDOOR: OUTDOOR  
ELECTRICAL PRODUCT TYPE: LOAD CENTER



# 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)



AT&T Wireless  
5001 Executive Parkway  
San Ramon, CA 94583

Client:



Project Architect:



575 LENNON LANE  
SUITE 125  
WALNUT CREEK, CA 94598  
T 925.482.8500

Site Agent:

95% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SF0K6-035

PACE ID:  
ROW AT 1103 8TH ST  
OAKLAND, CA 94607  
COUNTY: ALAMEDA

Site Name:

Professional Seal:

It is a violation of law for any person, unless they are acting under the direction of a licensed Professional Architect/Engineer, to alter this document.

Rev.	Date	Description
01	09/21/17	Zoning Docs 90%
02	10/06/17	Zoning Docs 95%

Project No.:

Date: 10/06/17 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

EQUIPMENT DETAILS

Sheet Title:

A.5

Sheet No.:

© Meridian Management LLC, 2017

ANTENNA DETAIL

1

6503 RRU ENCLOSURE

3

PG&E WIRELESS SMART METER

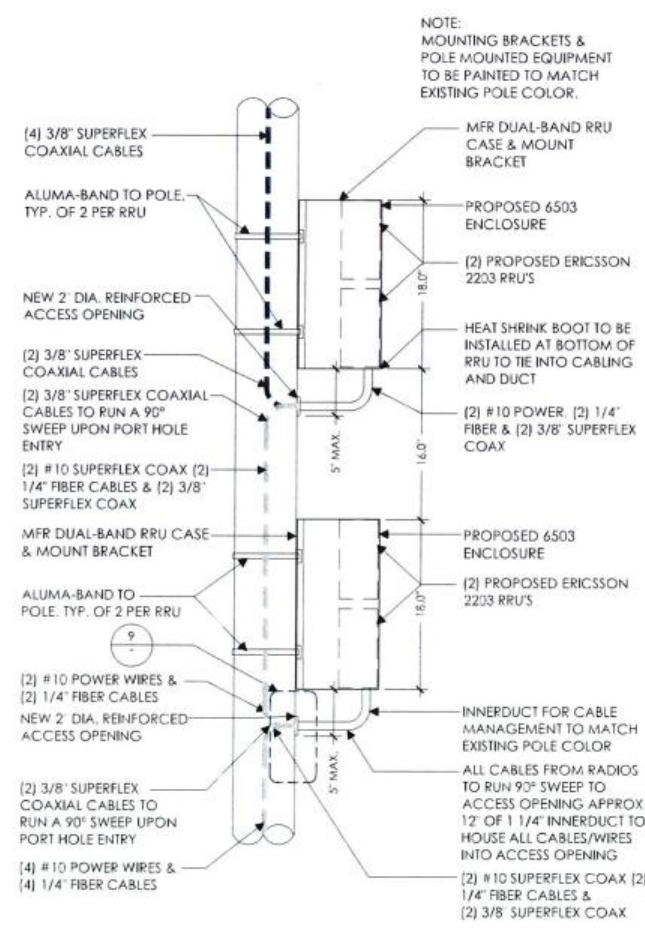
4

DISCONNECT SWITCH

7

NOTICE SIGNAGE

8



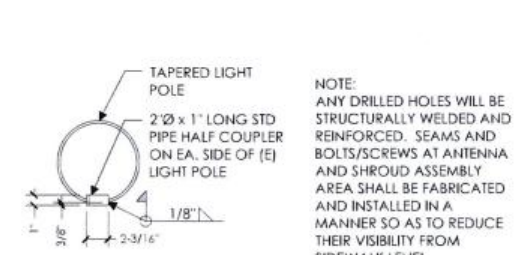
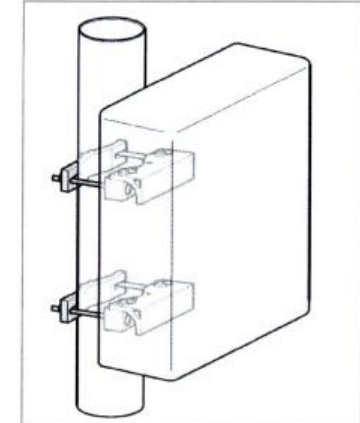
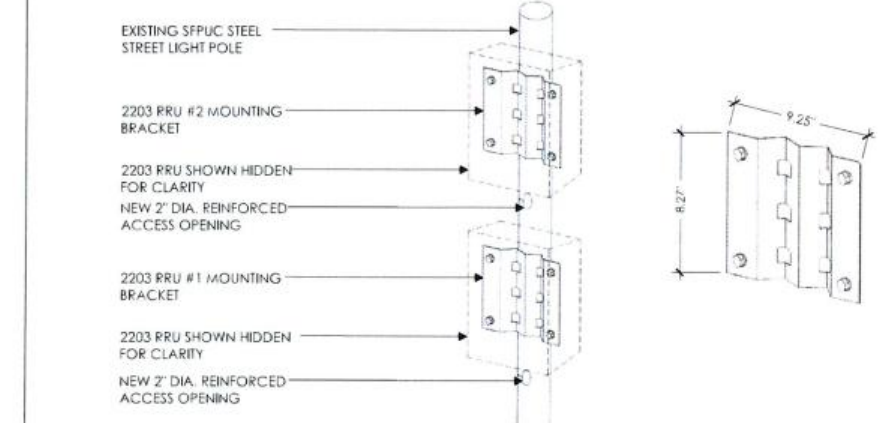
Technical Specifications Radio 2203

FREQUENCY BANDS	3GPP Bands B1 (W), B3 (L), B3C (W), B6 (W), B6A (W), B6 (W), B2020 (W), B12 (L), B13 (L) and B7 (L)
RF CAPACITY	Carrier capacity WCDMA: Up to 4 carriers Carrier capacity LTE: Up to 40 MHz B1, B3 and B6A 40 MHz, B2020 and B7 40 MHz, B3C, B6, B6, B12 and B13 Full band
MIMO	Yes, 2T2R Output power: Up to 2 x 5 W
INTERFACE SPECIFICATIONS	Antenna ports: 2 x 4.5-10 dB CPRI: 2 x 2.5/5/10 Gbps (exchangeable SFP modules) Optical indicators: 6 External alarm: 2 Field ground: 1
MECHANICAL SPECIFICATIONS	W x H x D: 200 mm x 200 mm x 100 mm, including mounting bracket and external front cover Weight: ~ 4.5 kg Volume: 4 L Mounting: Wall and pole mount
ELECTRICAL SPECIFICATIONS	Power Supply: -40 VDC to 100 - 250 VAC
ENVIRONMENTAL SPECIFICATIONS	Normal operating temp: -40 °C to +55 °C (cold start at -40 °C) Relative Humidity: 5 - 100% Environment: Outdoor class with IP65

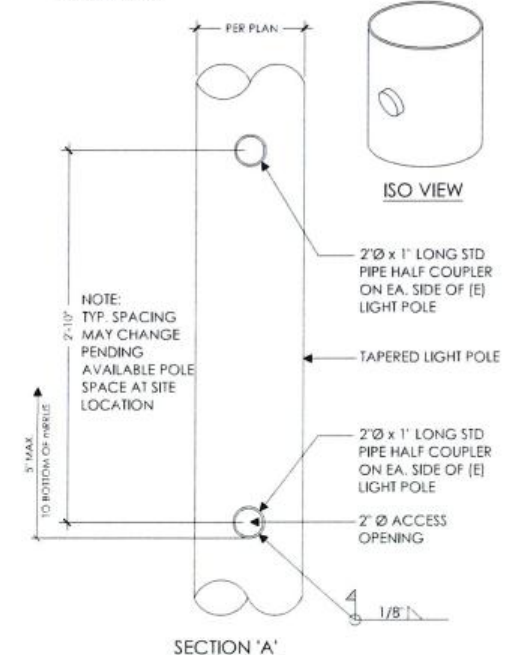


# ERICSSON 2203 RRU

5



# SECTION 'A'



# SECTION 'A'

DUAL BAND RRU MOUNT

2

6503 RRU-POLE MOUNTING DETAILS

6

VERTICAL ACCESS PORT

9





**MM**  
Meridian Management LLC  
785 Oak Grove Road E2  
Suite 251  
Concord, CA 94518  
T 707 592 5924  
[www.meridianmanagement.com](http://www.meridianmanagement.com)



575 LENNON LANE  
SUITE 125  
WALNUT CREEK, CA 94598  
T 925.482.8500

95% Zoning Drawings

CRAN-RSFR-SFOK6-035

PACE ID:  
ROW AT 1103 8TH ST  
OAKLAND, CA 94607  
COUNTY: ALAMEDA

Professional Seal:

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Rev.	Date	Description
01	09/21/17	Zoning Dwg's 90%.
02	10/06/17	Zoning Dwg's 95%.

Date: 10/06/17 Job No.:

Scale: AS SHOWN CAD File

Designed By: JG      Checked:

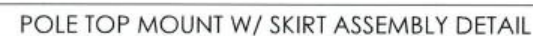
EQUIPMENT  
DETAILS

Sheet Title:

## A.6

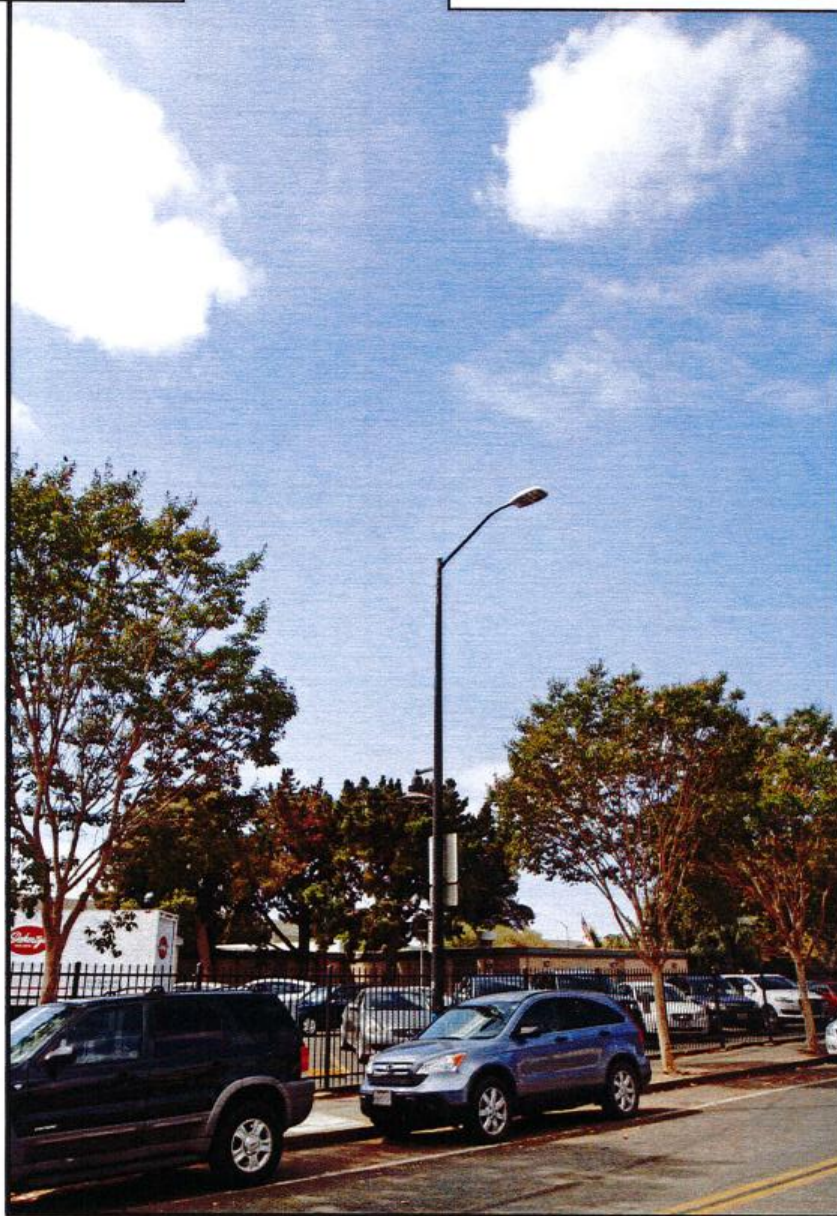
Sheet No.:

©Weldo or Mondragon LLC, 2013





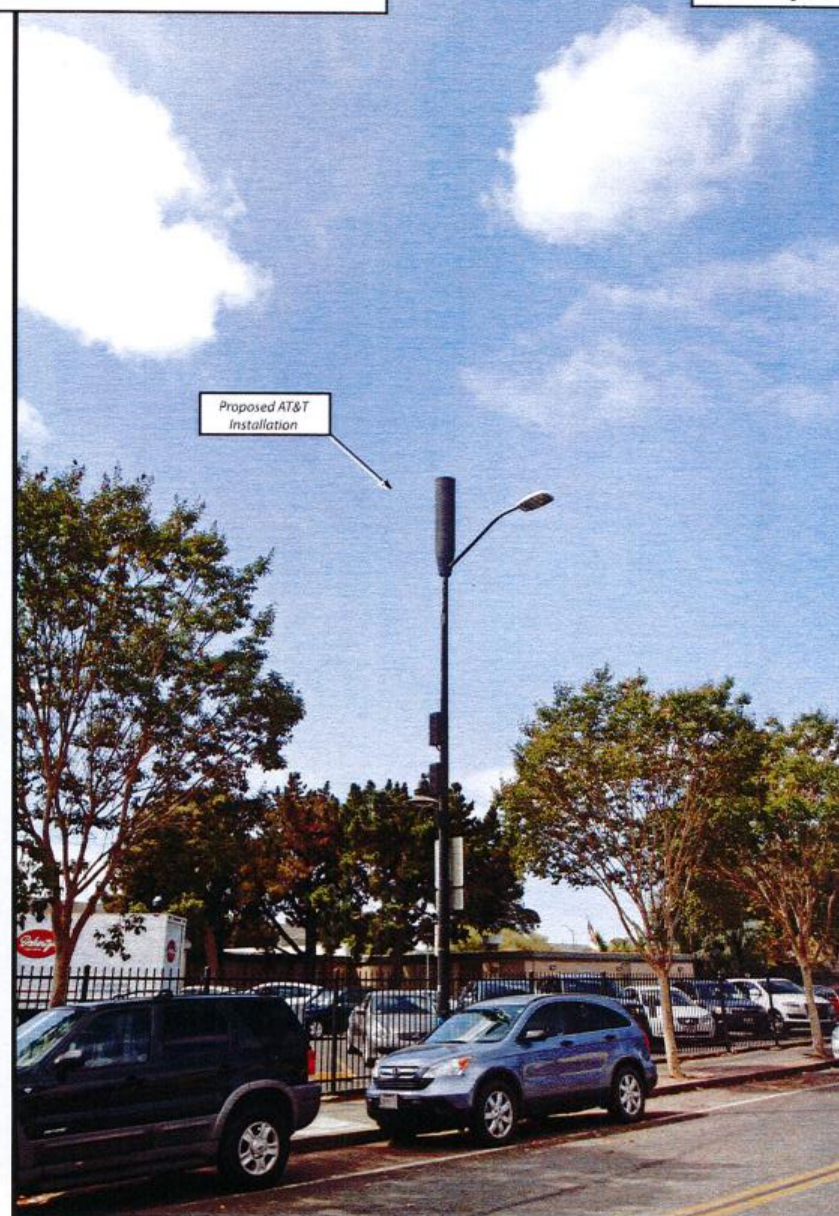
*Existing*



*view from 8th Street looking southwest at site*

CRAN-RSFR-SFOK6-035  
ROW at 1103 8th Street, Oakland, CA  
Photosims Produced on 9-25-2017

*Proposed*





*Existing*



*Proposed*



view from 8th Street looking southeast at site

**AdvanceSim**  
Photo Simulation Solutions  
Contact: 925 | 202-8507

 **AT&T Wireless**

CRAN-RSFR-SFOK6-035  
ROW at 1103 8th Street, Oakland, CA  
Photosims Produced on 9-25-2017



## ALTERNATIVE DESIGN ANALYSIS



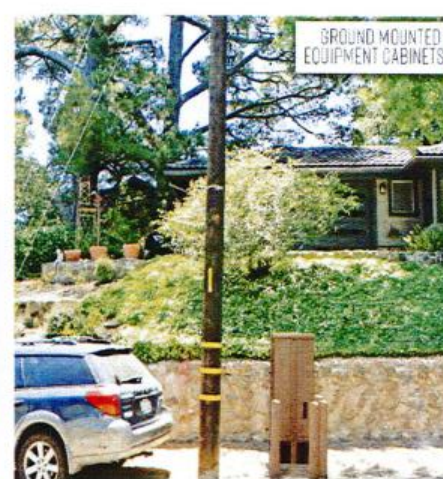
### Full-Sized Tower:

- Too big/bulky.
- Requires 300' sq. area.
- Does not nestle coverage/capacity.



### Shrouded Pole Equipment:

- Too big/bulky.
- Adds unnecessary equipment.
- Small cell equipment is already sleek.

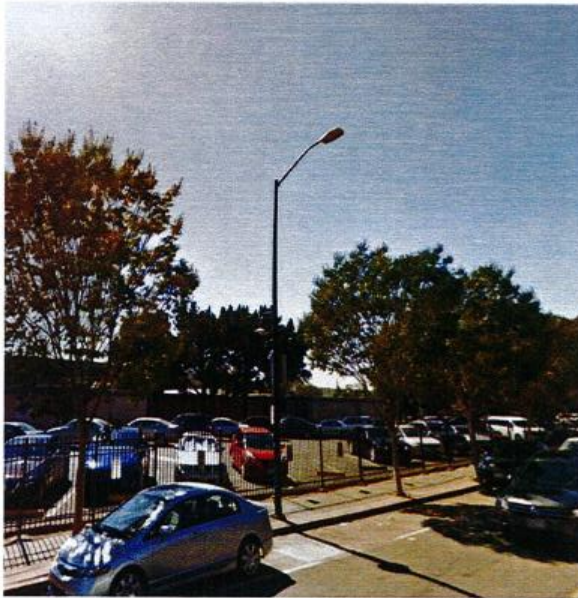


### Equipment Cabinet:

- Too big/bulky.
- Adds unnecessary ROW equipment.
- Pole-mounted equipment blends in with pole.



# Alternative Site Analysis – SFOK6\_035



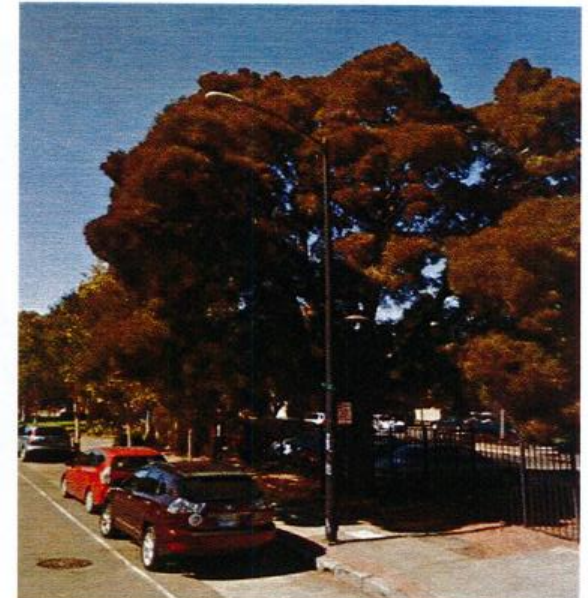
## Node 35A:

- Primary candidate
- Preferred due to location near parking lot and for best meeting AT&T's RF needs.



## Node 35B:

- Potentially viable alternative
- Less preferred due to proximity to apartment complex.



## Node 35C:

- Potentially viable alternative
- Less preferred as tree may partially block signal rendering making this site less desirable for RF.



**AT&T Mobility • Proposed Small Cell (No. CRAN-RSFR-SFOK6-035)**  
**1103 Eighth Street • Oakland, California**

**Statement of Hammett & Edison, Inc., Consulting Engineers**

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of AT&T Mobility, a personal wireless telecommunications carrier, to evaluate its small cell (No. CRAN-RSFR-SFOK6-035) proposed to be sited in Oakland, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

**Executive Summary**

AT&T proposes to install an omnidirectional cylindrical antenna on a light pole sited in the public right-of-way at 1103 Eighth Street in Oakland. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

**Prevailing Exposure Standards**

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

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5,000–80,000 MHz	5.00 mW/cm <sup>2</sup>	1.00 mW/cm <sup>2</sup>
BRS (Broadband Radio)	2,600	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.35	0.47
[most restrictive frequency range]	30–300	1.00	0.20

**General Facility Requirements**

Small cells typically consist of two distinct parts: the electronic transceivers (also called "radios") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are typically mounted on the support pole or placed in a cabinet at ground level, and they are connected to the antennas by coaxial cables. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means



**AT&T Mobility • Proposed Small Cell (No. CRAN-RSFR-SF0K6-035)**  
**1103 Eighth Street • Oakland, California**

that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

### **Computer Modeling Method**

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

### **Site and Facility Description**

Based upon information provided by AT&T, including drawings by Meridian Management LLC, dated September 21, 2017, it is proposed to install one Galtronics Model P6480, 2-foot tall, omnidirectional cylindrical antenna, on top of an existing light pole sited in the public right-of-way on the south side of Eighth Street, next to the parking lot for the building located at 700 Adeline Street. The antenna would employ no downtilt and would be mounted at an effective height of about 27½ feet above ground. The maximum effective radiated power in any direction would be 80 watts for PCS service. There are reported no other wireless telecommunications base stations at this site or nearby.

### **Study Results**

For a person anywhere at ground, the maximum RF exposure level due to the proposed AT&T operation is calculated to be 0.0011 mW/cm<sup>2</sup>, which is 0.11% of the applicable public exposure limit. The maximum calculated level at any nearby building is 0.40% of the public exposure limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

### **No Recommended Mitigation Measures**

Due to its mounting location and height, the AT&T antenna would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. The occupational limit is calculated to extend 4 inches from the antenna and, due to this short distance, the proposed operation is considered intrinsically compliant with that limit.





**AT&T Mobility • Proposed Small Cell (No. CRAN-RSFR-SF0K6-035)  
1103 Eighth Street • Oakland, California**

**Conclusion**

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the small cell proposed by AT&T Mobility at 1103 Eighth Street in Oakland, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating small cells.

**Authorship**

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



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

November 3, 2017



**HAMMETT & EDISON, INC.**  
CONSULTING ENGINEERS  
SAN FRANCISCO

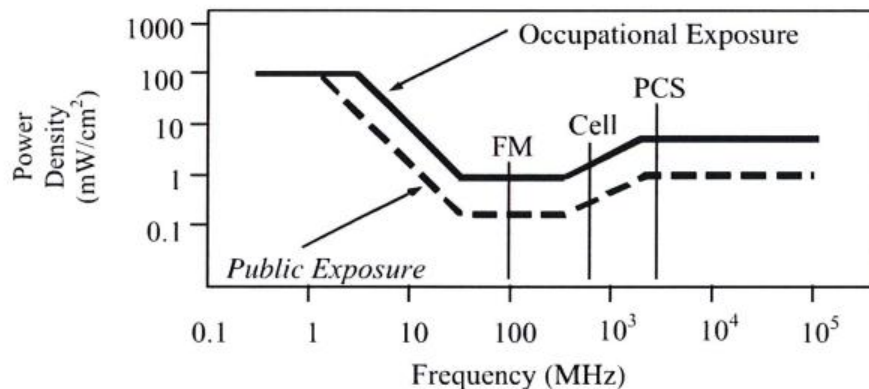


## FCC Radio Frequency Protection Guide

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

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

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



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



**HAMMETT & EDISON, INC.**  
CONSULTING ENGINEERS  
SAN FRANCISCO

FCC Guidelines  
Figure 1



## RFR.CALC™ Calculation Methodology

### Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

#### Near Field.

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

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

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

where  $\theta_{BW}$  = half-power beamwidth of the antenna, in degrees, and

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

$D$  = distance from antenna, in meters,

$h$  = aperture height of the antenna, in meters, and

$\eta$  = aperture efficiency (unitless, typically 0.5-0.8).

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

#### Far Field.

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

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

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

RFF = relative field factor at the direction to the actual point of calculation, and

$D$  = distance from the center of radiation to the point of calculation, in meters.

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





## Utility Contact System Search

The Utility Contact System (UCS) is the Communications Division's database for the primary regulatory contact for each telephone corporation operating in California. The Communications Division sends important regulatory notices to the regulatory contact for each telephone corporation via e-mail, so it is important for primary regulatory contacts to update their UCS record if their e-mail address changes.

Telephone corporations may update UCS contact information using the form on the following page: [Carrier Reporting Requirements](#)

A description of the different utility types (granted authorities) are listed on the following page: [Utility Type Descriptions](#)

Search Utility Name		Search Utility Number 3060					Search		Clear	
Utility Name ▲	Alias (DBA Name)	Utility Number	Street Address	City	State	Zip	Phone Number	Email	Utility Type	CPCN Appro
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	430 BUSH STREET	SAN FRANCISCO	CA	94108	(415) 778-1299	att-regulatory-ca@att.com	CEC	12-21-1995
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	7405 GREENHAVEN DRIVE	SACRAMENTO	CA	95831	(800) 498-1912	west.region.oopsac@awsmail.att.com	CEC	12-21-1995
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	11760 US HIGHWAY ONE, WEST TOWER	NORTH PALM BEACH	FL	33048	770-240-8849		CEC	12-21-1995

[Save Search Results as CSV Spreadsheet](#)

[Comments & Feedback](#)





ATTACHMENT H



## PROJECT TEAM

### APPLICANT:

AT&T  
5001 Executive Parkway  
San Ramon, CA 94583

### ARCHITECT/ENGINEER:

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Meridian Management LLC  
785 Oak Grove Road E2  
Suite 251  
Concord, CA 94518  
T 925.592.5924  
rodney@meridianmanagement.com

### ZONING CONTACT

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575 Lennon Lane  
Suite 125  
Walnut Creek, CA 94598  
T 415.596.3474  
myergo@gmail.com

### LEASING CONTACT:

Matt Yergovich  
Vinculums Services  
575 Lennon Lane  
Suite 125  
Walnut Creek, CA 94598  
T 415.596.3474  
myergo@gmail.com

### CONSTRUCTION MANAGER:

Vinculums Services  
575 Lennon Lane  
Suite 125  
Walnut Creek, CA 94598

## GENERAL NOTES

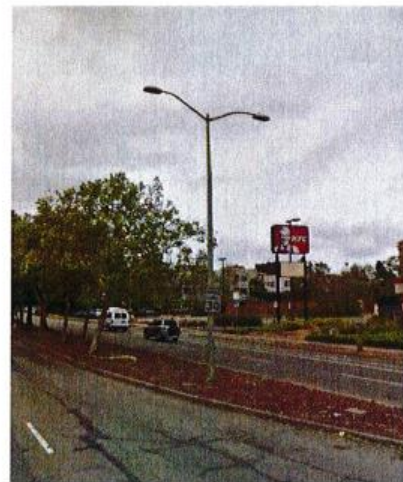
- THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR THE AT&T WIRELESS NETWORK CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING METAL LIGHT POLE IN THE PUBLIC RIGHT-OF-WAY. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
- A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT DRAINAGE. NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.
- CHANGES FROM THE APPROVED PLANS DURING THE COURSE OF CONSTRUCTION SHALL CAUSE CONSTRUCTION TO BE SUSPENDED UNTIL SUCH TIME AS THE PLANS CAN BE AMENDED BY THE DESIGNER AND SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL.

## CODE COMPLIANCE

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

- CALIFORNIA CODES
- 2016 CALIFORNIA BUILDING CODE
- 2016 CALIFORNIA MECHANICAL CODE
- 2016 CALIFORNIA PLUMBING CODE
- 2016 CALIFORNIA ELECTRIC CODE
- 2016 GREEN BUILDING CODE
- 2016 EDITION OF TITLE 24 ENERGY STANDARDS
- ANY LOCAL BUILDING CODE AMENDMENTS TO THE ABOVE
- CITY / COUNTY ORDINANCES
- CITY OF OAKLAND PUBLIC WORKS DEPARTMENT
- GENERAL ORDER 95 (JUNE 2009 EDITION)

## SITE IMAGE



5001 EXECUTIVE PARKWAY, SAN RAMON, CA 94583

## CRAN-RSFR-SF0K6-034

PAGE ID:

ROW AT 845 MARKET ST, OAKLAND, CA 94607

COUNTY: ALAMEDA

SITE TYPE: METAL STREET LIGHT POLE

FA:14307065 HUB:19 USID:192882



## DRIVING DIRECTIONS

FROM AT&T WIRELESS OFFICE AT 5001 EXECUTIVE PARKWAY, SAN RAMON, CA

- Head north-east on Bishop Dr towards Sunset Dr
- Turn right onto Sunset Dr
- Use the right 2 lanes to turn right onto Bollinger Canyon Rd
- Use the right 2 lanes to merge onto I-680 N via the slip road to Sacramento
- Merge onto I-680 N
- Use the right 2 lanes to take exit 46A for State Route 24 towards Oakland/Lafayette
- Continue onto CA-24 W
- Keep left at the fork to stay on CA-24 W
- Continue onto I-980 W
- Use the right lane to take exit 1C for 12th St
- Turn right onto 12th St
- Keep right to stay on 12th St
- Turn left onto Market St

## INDEX

T.1	TITLE SHEET
T.2	GENERAL NOTES, LEGEND, ABBREVIATIONS
A.1	OVERALL SITE PLAN
A.2	POLE PLAN, EQUIPMENT ENLARGEMENTS
A.3	ELEVATIONS
A.4	ELEVATIONS
A.5	EQUIPMENT DETAILS
A.6	EQUIPMENT DETAILS

## DRAWING SIGN-OFF



SITE ACQUISITION: \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

PLANNING: \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

CONSTRUCTION: \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

MANAGEMENT: \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_



CONSTRUCTION: \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

REAL ESTATE: \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

RF ENGINEER: \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

EQUIPMENT ENGINEER: \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

MW ENG/TRANSPORT: \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

OWNER: \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

## PROJECT DESCRIPTION

THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR THE AT&T WIRELESS NETWORK CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING METAL LIGHT POLE IN THE PUBLIC RIGHT-OF-WAY.

### SCOPE OF WORK & SITE COMPLETION CHECKLIST:

- ANTENNA & ASSOCIATED EQUIPMENT BOXES: INSTALL A NEW TELECOMMUNICATION ANTENNA AND 2 EQUIPMENT BOXES ON AN EXISTING METAL LIGHT POLE
- DURABLE PAINT: ANTENNAS, MOUNTING BRACKETS, CABLING, AND RADIO RELAY UNITS TO BE PAINTED TO MATCH THE EXISTING POLE USING A DURABLE PAINT (E.G. SHERWIN WILLIAMS, FRAZEE, KELLY MOORE, OR EQUIVALENT)
- CABLING: CABLING TO BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS
- LOGO REMOVAL: ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION), SHALL BE PAINTED OVER OR REMOVED. RAISED/DEPRESSED TEXT ON RRUS OR OTHER EQUIPMENT, IF PRESENT, TO BE SANDED OFF OR SIMILARLY REMOVED AND/OR FILLED
- SIGNAGE: FCC MANDATED RF WARNING SIGNAGE SHALL FACE CLIMBING SPACE. OPTIONAL SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD BUILDING IF THERE IS NO WINDOW.
- UTILITY LINES: PROPOSED UTILITY LINES BETWEEN EXISTING POINT OF CONNECTION TO BE IN CONDUIT INSIDE POLE

## SITE INFORMATION

OWNER: CITY OF OAKLAND  
APPLICANT: AT&T  
5001 EXECUTIVE PARKWAY  
SAN RAMON, CA 94583  
LATITUDE: 37.8041700 (NAD 83)  
LONGITUDE: -122.2824600 (NAD 83)  
GROUND ELEVATION: 22' AMSL  
ADJACENT APN#: (IFO) 4-7-64  
ZONING JURISDICTION: CITY OF OAKLAND  
CURRENT ZONING: PUBLIC ROW  
PROPOSED USE: UNMANNED TELECOMMUNICATIONS FACILITY

### DO NOT SCALE DRAWINGS

CONTRACTOR 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



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San Ramon, CA 94583

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Project Architect: \_\_\_\_\_



575 LENNON LANE  
SUITE 125  
WALNUT CREEK, CA 94598  
T 925.482.8500

Site Agent: \_\_\_\_\_

## 95% Zoning Drawings

Drawing Phase: \_\_\_\_\_

## CRAN-RSFR-SF0K6-034

PAGE ID:

ROW AT 845 MARKET ST,  
OAKLAND, CA 94607  
COUNTY: ALAMEDA

Site Name: \_\_\_\_\_

Professional Seal:

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Rev.	Date	Description
01	09/18/17	Zoning Dwg: 90%
02	10/06/17	Zoning Dwg: 95%

Project No.: \_\_\_\_\_

Date: 10/06/17 Job No.: \_\_\_\_\_

Scale: AS SHOWN CAD File: \_\_\_\_\_

Designed By: JG Checked: RB

## TITLE SHEET

Sheet Title: \_\_\_\_\_

T.1

Sheet No.: \_\_\_\_\_

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- PLANS ARE INTENDED TO BE A GRAMMATIC OUTLINE ONLY. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL OBTAIN, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL CONTACT USA (INDUSGARD) SERVICE ALERT AT (800) 297-2670 FOR TRUITY LOCATIONS 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION, SITE WORK OR CONSTRUCTION.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CODES / ORDINANCES REQUIREMENTS REGARDING EARTHQUAKE RESISTANCE FOR, BUT NOT LIMITED TO, PILING, LIGHT FIXTURES, CEILING GRID, INTERIOR PARTITIONS, AND MECHANICAL EQUIPMENT. ALL WORK MUST COMPLY WITH LOCAL EARTHQUAKE CODES AND REGULATIONS.
- REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWINGS, SHALL NOT BE USED TO DETERMINE OR ESTABLISHING OF TRUE NORTH. THE CONTRACTOR SHALL REPLY SOLELY ON THE PLOT OF SURVEY DRAWINGS AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND SHALL NOTIFY THE ARCHITECT / ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DETERMINED ON THE CIVIL SURVEY. THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT / ENGINEER.
- THE BUILDING DEPARTMENT ISSUING THE PERMITS SHALL BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK OR AS OTHERWISE STIPULATED BY THE CODE ENFORCEMENT OFFICIAL HAVING JURISDICTION.
- DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES UNLESS OTHERWISE NOTED.
- ALL EXISTING UTILITIES, FACILITIES, CONDITIONS, AND THEIR DIMENSIONS SHOWN ON THE PLAN HAVE BEEN PLOTTED FROM A AVAILABLE RECORDS (THE ARCHITECT / ENGINEER AND THE OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR THE ACCURACY OF THE INFORMATION SHOWN ON THE PLANS, OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT). CONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTORS SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.
- CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, BOTH HORIZONTAL AND VERTICALLY, PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHOULD 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.
- ALL PROPOSED 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.
- ANY DRAIN AND/OR FIELD TILE ENCOUNTERED / DISTURBED DURING CONSTRUCTION SHALL BE RETURNED TO ITS ORIGINAL CONDITION PRIOR TO COMPLETION OF WORK. SITE 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 THE ARCHITECT / ENGINEER AT COMPLETION OF PROJECT.
- ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC. SHALL BE PROPERLY LAD, BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
- INCLUDE MISC. ITEMS PER AT&T WIRELESS SPECIFICATIONS

1. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO DETERMINE THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONTRIBUTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
2. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONTRIBUTION DRAWINGS AND THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK BY ADDUCING WITH CONSTRUCTION.
3. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY ELECTRICAL WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
4. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUT DOWN PRIOR TO PERFORMING ANY TASK THAT COULD EXPOSE THE WORKERS TO HAZARDOUS PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORKED TO ALEP OF ANY DANGEROUS EXPOSURE LEVELS.
5. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND TV CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TV/CO PLAIN DRAWINGS. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD PROPOSED TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONVEY THE ACTUAL ROUTING WITH THE CONTRACTOR.
6. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS CABLES, CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. MATERIALS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

1. SUBCONTRACTORS SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AIA) FOR THE LOCATION.

2. THE EDITION OF THE AIA ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

3. SUBCONTRACTORS SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

4. AMERICAN CONCRETE INSTITUTE (ACI) 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE  
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION AND NINTH EDITION  
TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F STRUCTURAL STANDARD FOR STRUCTURAL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES  
INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81 GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE AND EARTH RESISTANCE OF A GROUND SYSTEM IEEE 1100 (WWW) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRICAL EQUIPMENT  
IEEE C62.41 RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND HIGH SYSTEM VOLTAGE)

5. TIA 568-C COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS TELECOMDA GR-63 NETWORK EQUIPMENT-BUILDING SYSTEM (NEBS) PHYSICAL PROTECTION  
TELECOMDA GR-347 CENTRAL OFFICE POWER WIRING  
TELECOMDA GR-1275 GENERAL INSTALLATION REQUIREMENTS  
TELECOMDA GR-1303 COAXIAL CABLE CONNECTIONS

6. ANY AND ALL OTHER LOCAL & STATE LAWS AND REGULATIONS

7. FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENT, THE MOST RESTRICTIVE SHALL GOVERN, WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

1. MAINTAIN 42" MINIMUM COVER FOR ALL ELECTRICAL CONDUITS.
2. MAINTAIN 30" MINIMUM COVER FOR ALL TELECOMMUNICATIONS CONDUITS.
3. MINIMUM 1" SLOPE SHADING BELOW CONDUITS AND 6" COVERING ON TOP OF CONDUITS REQUIRED.
4. ELECTRICAL CONDUITS SHALL BE COVERED BY A 150 LB. PER LINEAL FOOT TRANSFORMER OF OTHER LOCATIONS WILL BE SLURRY BACKFILLED.
5. IN STREET SLURRY TO GRADE AND WILL DOWN 1-1/2' FOR ALL CAP.
6. IN RST SLURRY 18" TO GRADE AND 1/2" 5% COMPACTION NATIVE SOIL FOR BALANCE.
7. WARNING TAPE TO BE PLACED IN TRENCH 12" ABOVE ALL CONDUITS AND 15" WARNING TAPE ABOVE KING.

1. SUB #5 RIGID WELD BELOW GRADE
2. GROUND TESTED AT 5 OHMS OR LESS
3. #5 GROUND AND BOND WIRE
4. GROUNDS 3' FROM POLE
5. PLACE 3 #1 GA WIRES FROM TESCO BREAKER TO PBND OR STRONG BOX
6. WOOD MOLING, STAPLED EVERY 2' AND AT EACH END.

1. ALL CONDUITS WILL BE HANDLED AND EQUIPPED WITH 3/8" PULL ROPE
2. SCHEDULE 40 CONDUIT FOR UNDERGROUND USE.
3. SCHEDULE 80 CONDUIT FOR RISER USE
4. 2" GALVANIZED STEEL CONDUIT FOR ANY CONDUIT UNDER 3" STUB UP 10' THEN CONVERT TO SCHEDULE 80
5. CONVERT 4" CONDUIT TO 3" AT BASE OF POLE
6. CONTRACTOR TO STUB UP POLE 10' w/ 3" POWER CONDUIT. POWER COMPANY TO CONVERT FROM 3" STUB SCHEDULE 80 TO 2" SCHEDULE 80 FROM TOP OF STUB UP.
7. INSTALL STEPS PER PG&E REQUIREMENTS

7. CABLE NOT TO IMPEDE 15 CM CLEAR SPACE OFF POLE FACE
8. ALL CLIMB STEPS TO BE CONDUCTED SHALL HAVE EXTENDED STEPS
9. NO BOLT THREADS TO PROTRUDE MORE THAN 1-1/2"
10. ALL HOLES IN POLE LEFT FROM REARRANGEMENT OF CLIMB STEPS TO BE REPELLED
11. NO SHORT SHEEPS DOWN ANTENNA ARM. ALL CABLES MUST TRAIL OFF ON THE INSIDE OR BOTTOM OF THE ARM (NO CABLE ON TOP OF ARM)
12. USE 90° CONNECTOR TO CABLE CONNECTION FOR DOWN DOWN ANTENNAS
13. SECURE CABLES TO SPLITTER CABLES AT EACH PLACE 2' APART BETWEEN CABLE 1' FROM BOTH SIDES OF ARM
14. USE 1/2" DIA. CABLE ON ANTENNAS unless OTHERWISE SPECIFIED
15. PLACE GPS ON ARM OF SOUTHERN; BY EXPOSURE AT VIBRATION 6" FROM TRANSIT ANTENNA WHICH IS 6" AWAY FROM CENTER OF POLE
16. FILL VOID AROUND CABLE AT JOINTS GROUNDING WITH FOAM SEALANT TO PREVENT WATER INTRUSION

	PROPOSED ANTENNA		GROUT OR PLASTER
	EXISTING ANTENNA		BRICK
	GROUND ROD		MASONRY
	GROUND BUS BAR		CONCRETE
	MECHANICAL GRND. CONN.		EARTH
	GROUND ACCESS WELL		GRAVEL
	ELECTRIC BOX		PLYWOOD
	TELEPHONE BOX		SAND
	LIGHT POLE		WOOD CONSTRUCTION
	END MONUMENT		WOOD BLOCKING
	SPOT ELEVATION		STEEL
	SET POINT		CENTERLINE
	REVISION		PROPERTY/LEASE LINE
	GRID REFERENCE		MATCH LINE
	DETAIL REFERENCE		WORK POINT
	ELEVATION REFERENCE		GROUND CONDUCTOR
	SECTION REFERENCE		COAXIAL CABLE
			OVERHEAD SERVICE CONDUCTORS
			CHAIN LINK FENCING
			OVERHEAD TELEPHONE/CABLE POWER
			OVERHEAD TELEPHONE LINE
			OVERHEAD POWER LINE
			POWER RUN

	TELCO RUN		5/8" X 10'-0" CU. GND ROD IN TEST WELL 30' MIN. BELOW GRADE
	POWER/TELCO RUN		CHEMICAL GROUND ROD (NOT GROUND ROD)
	GROUNDING CONDUCTOR		CADWELD CONNECTION
	GROUNDING CONDUCTOR		MECHANICAL CONNECTION
	CONDUIT UNDERGROUND		HALO GROUND CONNECTION
	FUSE SIZE AND TYPE AS INDICATED		CIRCUIT BREAKER
	SAFETY SWITCH, 2P-240V-60A W/60A FUSES, NEMA 3R ENCLOSURE, SQ D CATALOG NO. H222NRB		UTILITY METER BASE
	MANUAL TRANSFER SWITCH, 2P-240V-200A, NO FUSE NEMA 3R ENCLOSURE		TRANSFORMER
	LIGHTING FIXTURE, FLUORESCENT, 10.94" X 4'-0", 2/40W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #FWSW232		STEPDOWN TRANSFORMER
	LIGHTING FIXTURE, FLUORESCENT, 10.94" X 8'-0", 2/95W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #TWSM232T		RECEPTACLE, 2P-3W-125V-15A, DUPLEX GROUND TYPE, HUBBELL CATALOG #536
	LIGHTING FIXTURE, HIGH PRESSURE SODIUM, 1/70W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #NRG-307 OR 1/50W, HUBBELL LIGHTING CATALOG #NRG-121		TOGGLE SWITCH, 1P-125V-15A, HUBBELL CATALOG #HBL 1201CN
	EXIT SIGN, THERMOPLASTIC LED, SINGLE FACE, UNIVERSAL MOUNTING, W/BATTERY PACK, HUBBELL LIGHTING CATALOG #RPS		TOGGLE SWITCH, 1P-120V-15A, "WF"
	COMBINATION, EXIT SIGN & EMERGENCY LIGHTING, HUBBELL LIGHTING CATALOG #RPS		IONIZATION SMOKE DETECTOR W/LALARM HORN & AUXILIARY CONTACT, 120 VAC GENTEX PART NO. 7100F
	EMERGENCY LIGHTING, 2/50W, HUBBELL LIGHTING CATALOG #HEE-50-2-891		POLE
	LIGHTING FIXTURE, INCANDESCENT, 1/100W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #BRH-100-06-1		PROPOSED POLE MOUNTED XFMR
	LIGHTING FIXTURE, HALOGEN, QUARTZ, 1/300W, HUBBELL LIGHTING CATALOG #QI-505		(E) POLE MOUNTED XFMR
	LIGHTING FIXTURE, 1/175W, METAL HALIDE, HUBBELL CAT #MIC-0175-4-336		PROPOSED PAD MOUNTED XFMR
	5/8" X 10'-0" CU. GND ROD 30' MIN. BELOW GRADE		(E) PAD MOUNTED XFMR

[illegible]

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95% Zoning Drawings

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Rev.	Date	Description
01	09/18/17	Zoning Dwg. 90%
02	10/06/17	Zoning Dwg. 95%

Project No.:

Date: 10/06/17 Job No.:

Scale: AS SHOWN CAD File:

Decisional Bias	IC	Chickadee	RR
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PLANTING AND SOWING

GENERAL NOTES  
LEGEND  
ABBREVIATIONS

Sheet Title:

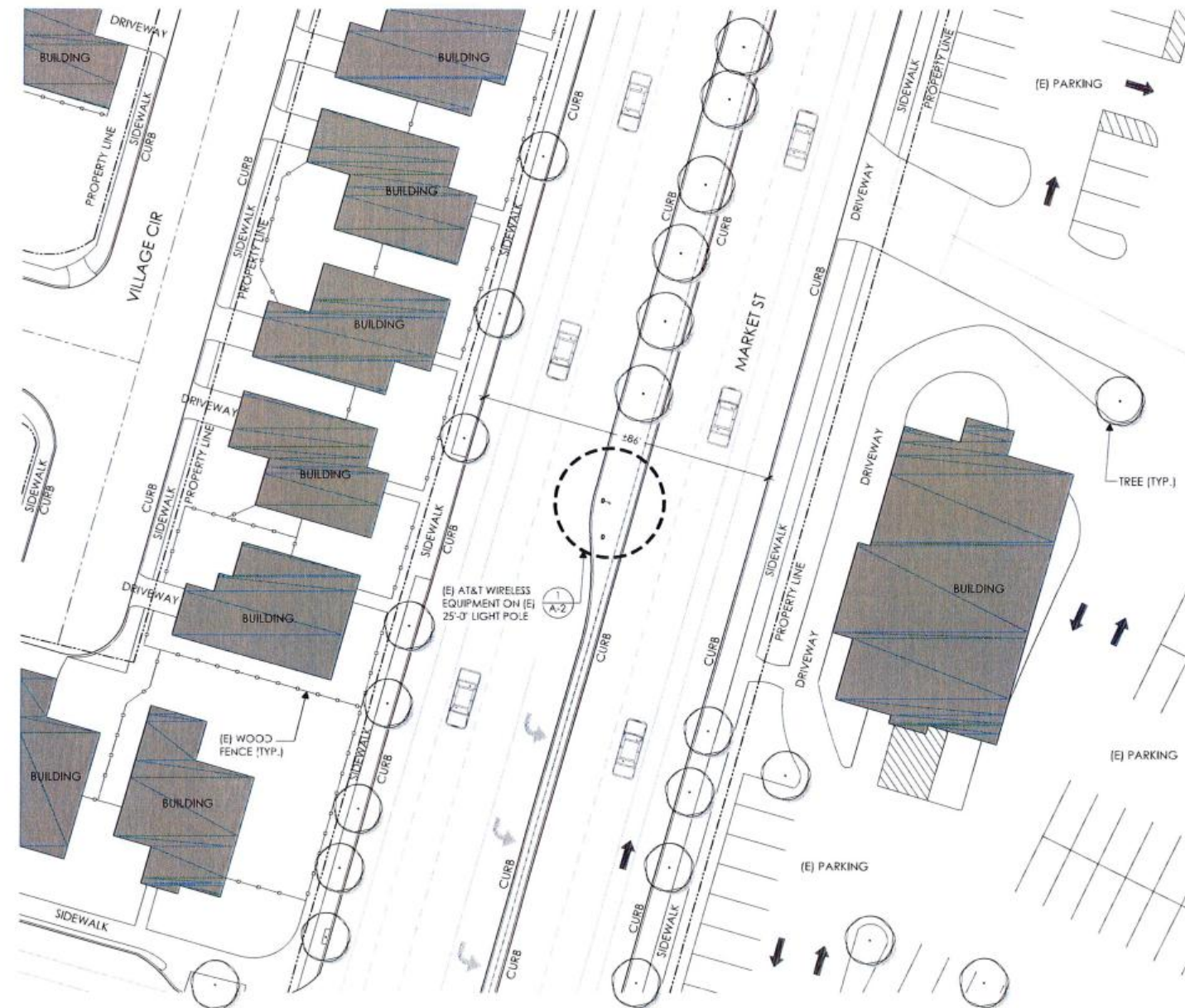
T.2

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LEGEND

## ABBREVIATIONS





NOTE:  
THIS SITE PLAN WAS GENERATED WITHOUT THE USE OF A SURVEY. PROPERTY LINES, RIGHT-OF-WAYS, POWER & TELCO UTILITY POINT CONNECTIONS/ROUTES AND EASEMENTS SHOWN ON THESE PLANS ARE ESTIMATED. ALL ITEMS AND DIMENSIONS SHOULD BE VERIFIED IN THE FIELD.

UNDERGROUND UTILITIES NOTE:  
THE LOCATIONS AND EXISTENCE OF ANY UNDERGROUND PIPES, STRUCTURES, OR CONDUITS SHOWN ON THIS PLAN WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THERE MAY BE EXISTING UTILITIES OTHER THAN THOSE SHOWN ON THIS PLAN. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT SHOWN ON THIS PLAN.



SCALE  
1" = 20'

1



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Project Architect:



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Site Agent:

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02	10/06/17	Zoning Diag 95%

Project No.:

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Designed By: JG Checked: RB

OVERALL SITE  
PLAN

Sheet Title:

A.1

Sheet No.:

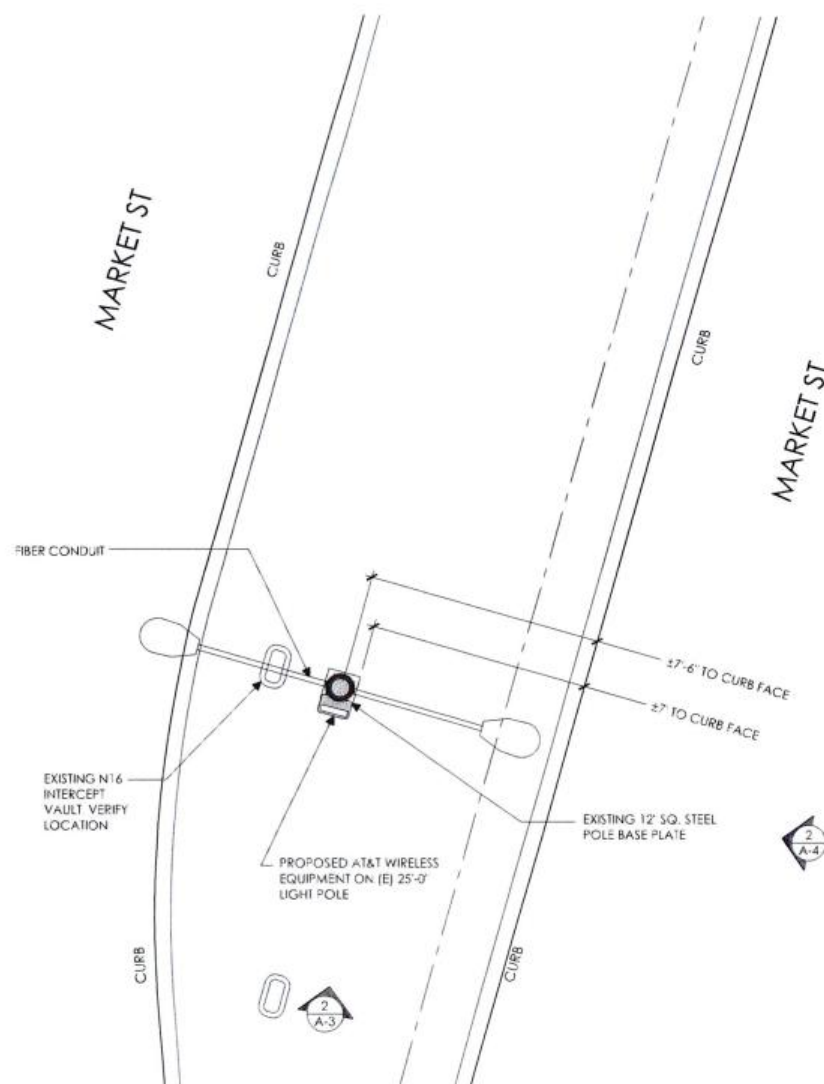
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OVERALL SITE PLAN



# NOTES:

1. DURABLE PAINT: ANTENNAS, MOUNTING BRACKETS, CABLING, AND RADIO RELAY UNITS TO BE PAINTED TO MATCH THE EXISTING POLE USING A DURABLE PAINT (E.G. SHERWIN WILLIAMS, FRAZEE, KELLY MOORE, OR EQUIVALENT)
2. CABLING: CABLING TO BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS. ALL CABLING TO GROUND-MOUNTED BOXES AND ANTENNAS TO BE INSTALLED INSIDE POLE
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4. SIGNAGE: FCC MANDATED RF WARNING SIGNAGE SHALL FACE CLIMBING SPACE. OPTIONAL SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD BUILDING IF THERE IS NO WINDOW.



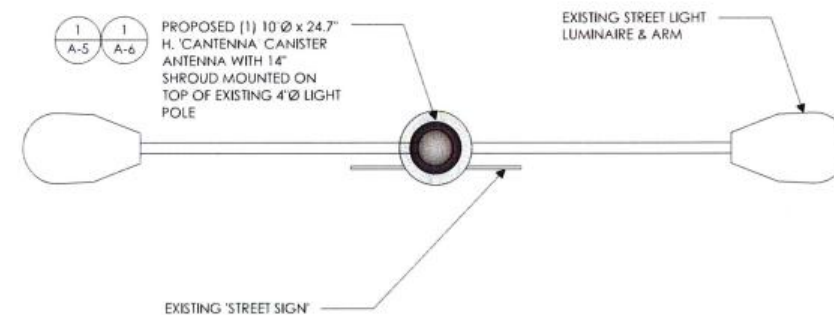
POLE PLAN ENLARGEMENT



SCALE  
3/8" = 1'-0"

1

EQUIPMENT ENLARGEMENT PLAN



A. SECTION (CANISTER ANTENNA)

ANTENNA ENLARGEMENT PLAN



SCALE  
1" = 1'-0"

2

PROPOSED (2) ERICSSON 6503 ENCLOSURE WITH DUAL-BAND RRUS STACK MOUNTED ON EXISTING LIGHT POLE



B. SECTION (RRUS)



SCALE  
1" = 1'-0"

3



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Site Agent:

95% Zoning Drawings

(E) LIGHT POLE  
Drawing Phase:

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POLE PLAN  
EQUIPMENT  
ENLARGEMENTS

Sheet Title:

A.2

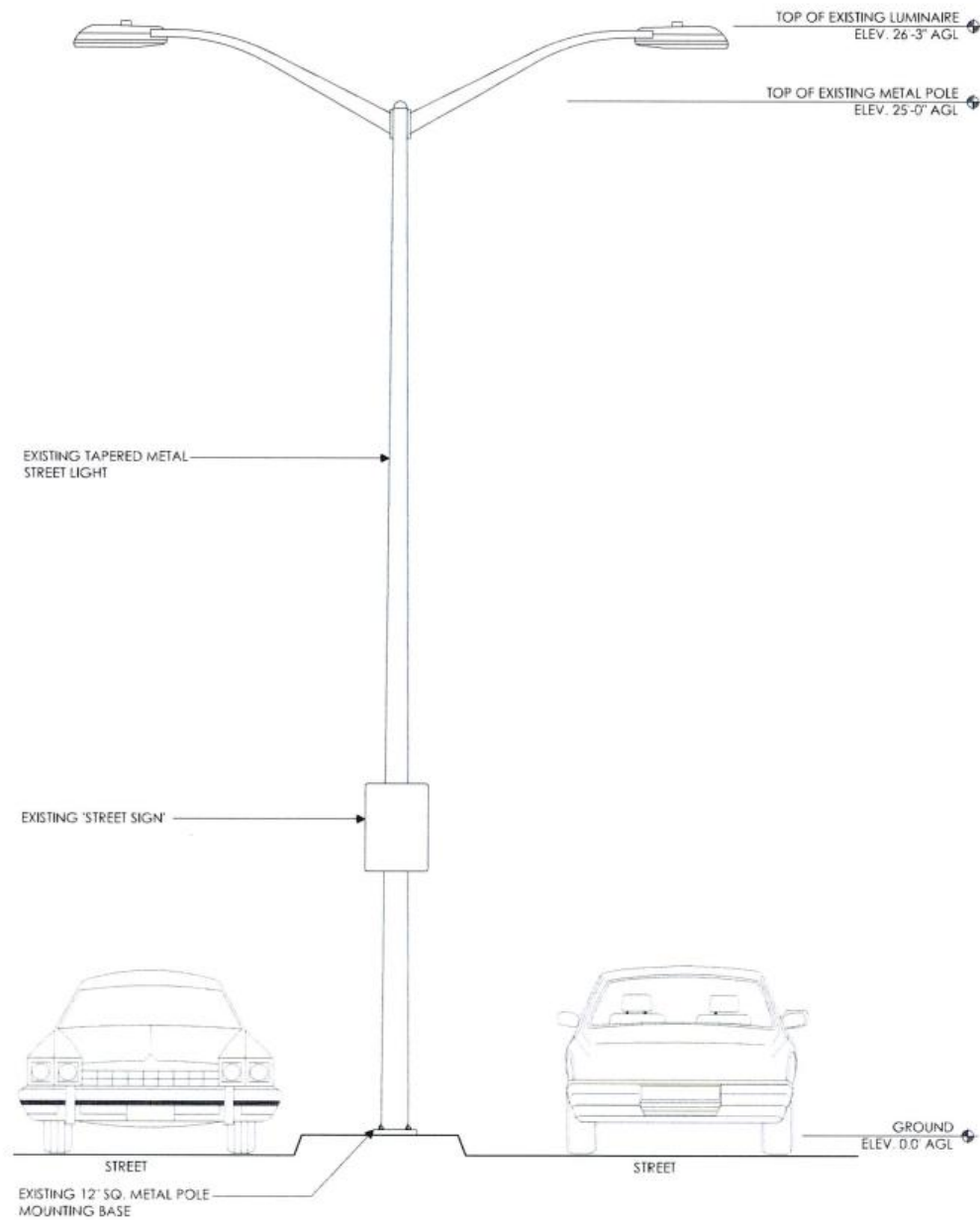
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SCALE NOTE:

IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.

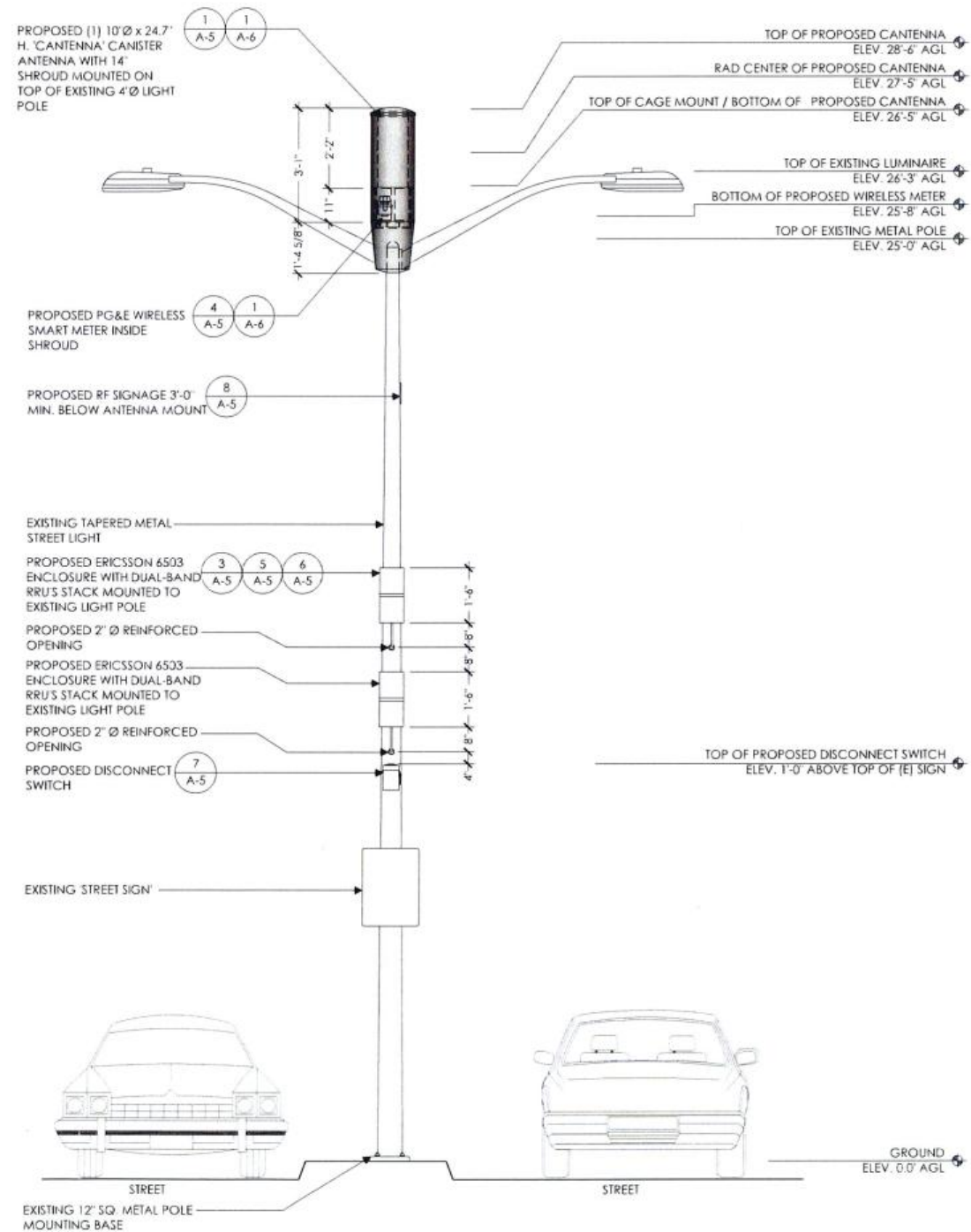


SOUTHWEST ELEVATION - EXISTING

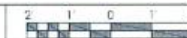


SCALE  
1/2" = 1'-0"

1



SOUTHWEST ELEVATION - PROPOSED



SCALE  
1/2" = 1'-0"

2



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ELEVATIONS

Sheet Title:

A.3

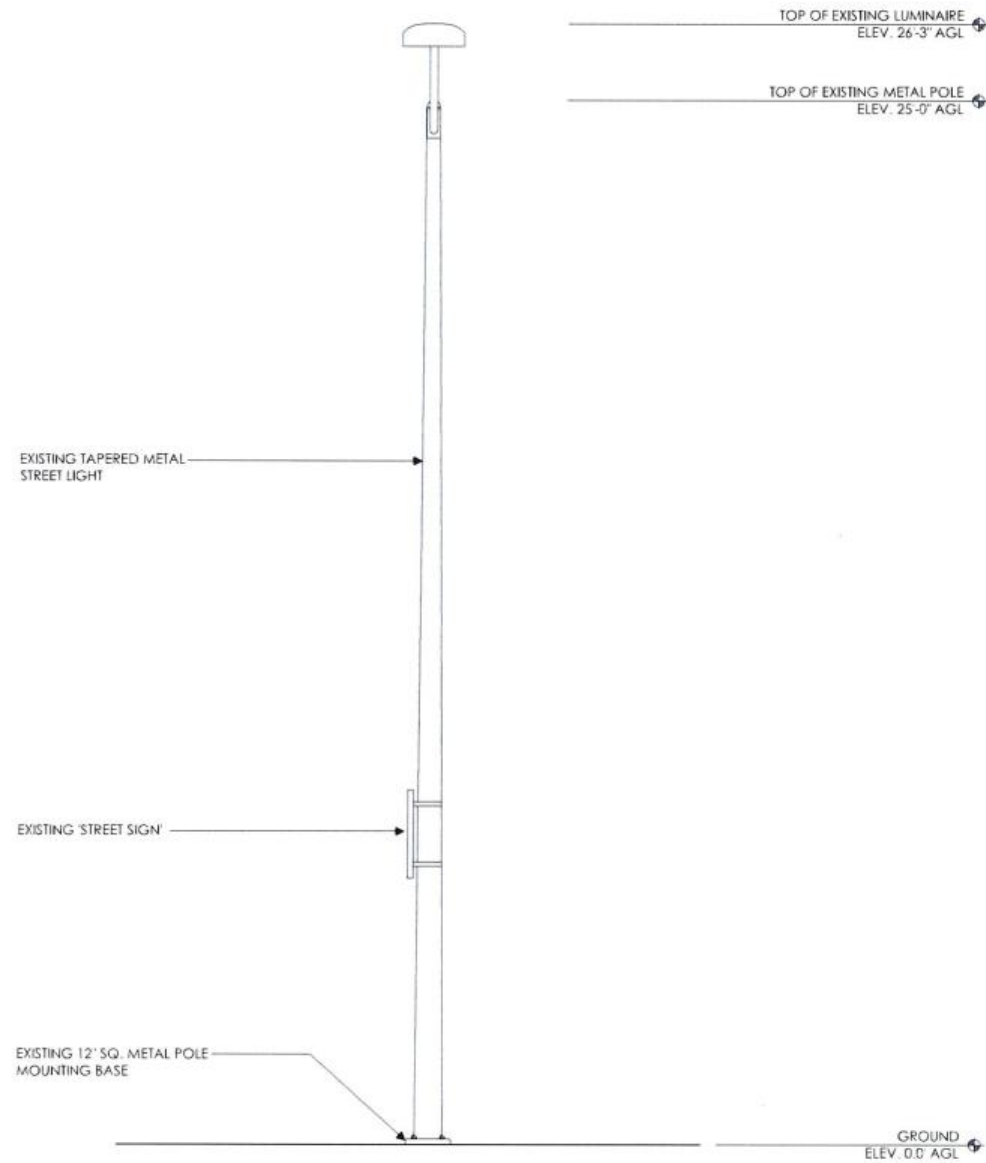
Sheet No.:

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**SCALE NOTE:**

IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.

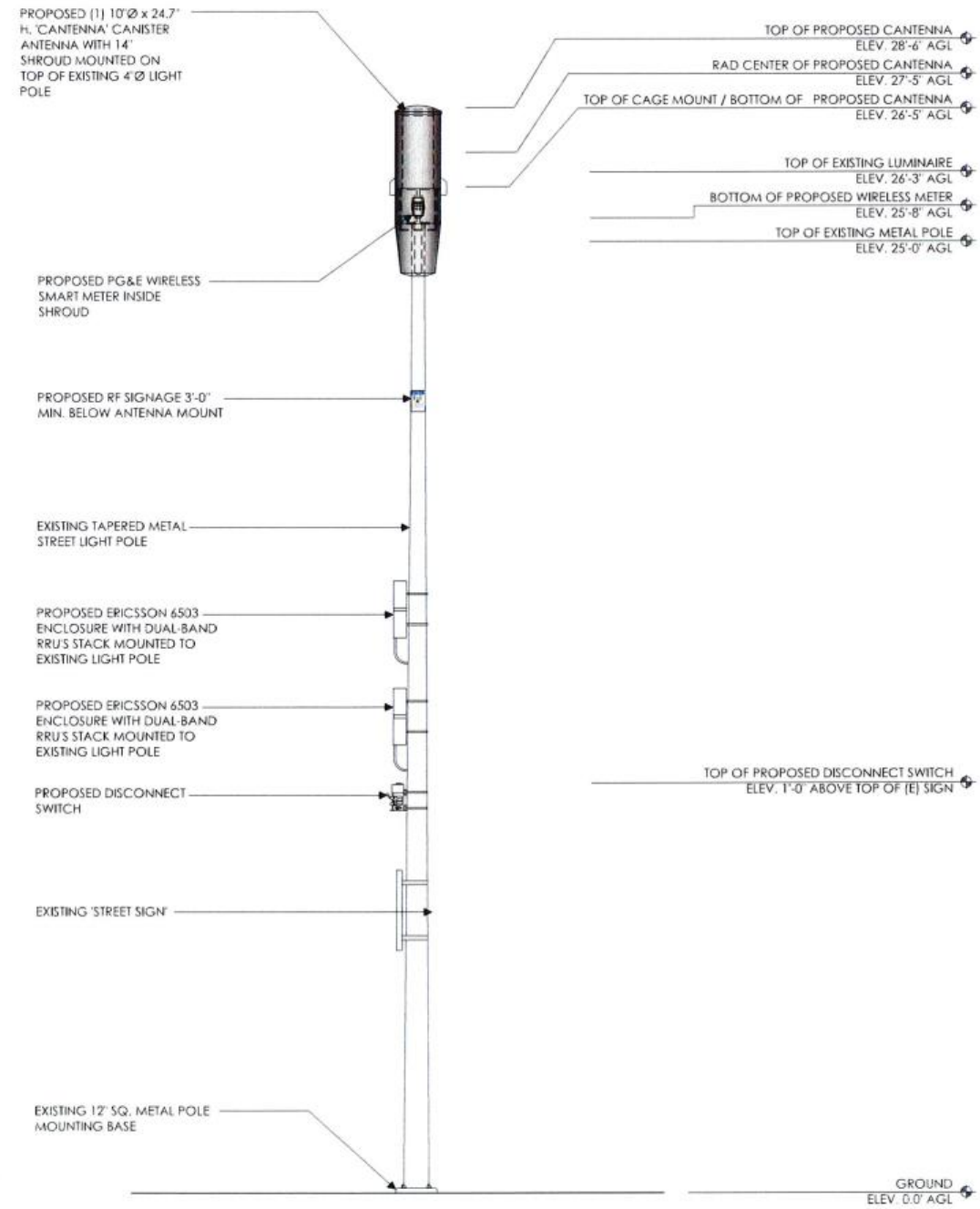


SOUTHEAST ELEVATION - EXISTING



SCALE  
1/2" = 1'-0"

1



SOUTHEAST ELEVATION - PROPOSED



SCALE  
1/2" = 1'-0"

2



AT&T Wireless  
5001 Executive Parkway  
San Ramon, CA 94583

Client:



Project Architect:



573 LENNON LANE  
SUITE 125  
WALNUT CREEK, CA 94598  
T 925.482.8500

Site Agent:

95% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SF0K6-034

PACE ID:  
ROW AT 845 MARKET ST.  
OAKLAND, CA 94607  
COUNTY: ALAMEDA

Site Name:

Professional Seal:

It is a violation of law for any person, unless they are acting under the direction of a licensed Professional Architect/Engineer, to alter this document.

Rev.	Date	Description
01	09/18/17	Zoning Dwg- 90%
02	10/06/17	Zoning Dwg- 95%

Project No.:

Date: 10/06/17 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

ELEVATIONS

Sheet Title:

A.4

Sheet No.:

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AT&T CANISTER ANTENNA 'CAN-TENNA'

ANTENNA COLOR: LIGHT GRAY

DIMENSIONS: 10.0"Ø x 24.7" TALL

NET WEIGHT: 19.0 LBS

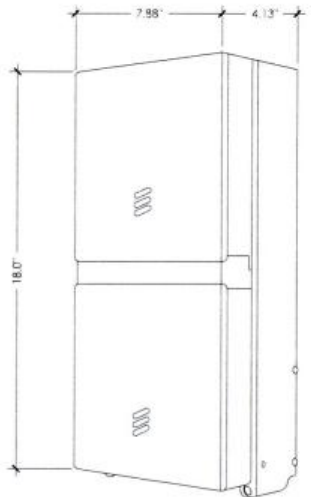


ERICSSON 6503

SINGLE BAND 2203:  
DUAL BAND RRU (2 - 2203'S):  
MAXIMUM POWER CONSUMPTION:  
±190W PER SINGLE-BAND 2203 RADIO  
±190W PER DUAL-BAND 2203 RRU

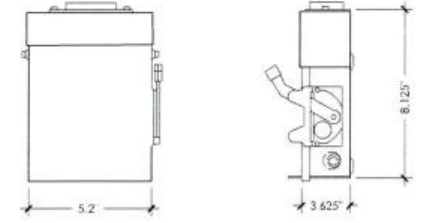
MAX FUSE RATING:  
WIRE SIZE:

32A  
#10 CU OR #8 ALU



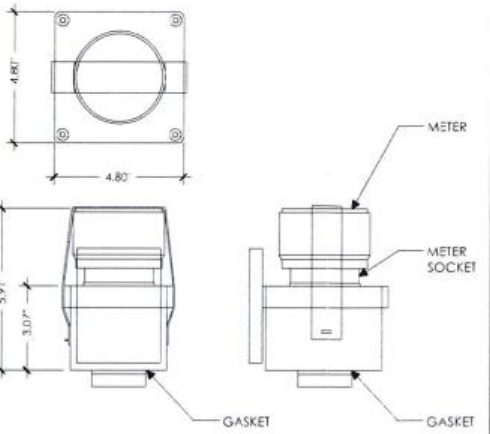
MURRAY LW002GRU SPECIFICATIONS

LOAD CENTER DEPTH: 3.625"  
LOAD CENTER WIDTH: 5.2"  
LOAD CENTER HEIGHT: 8.125"  
WEIGHT: 4.55 LB  
LOAD CENTER TYPE: MAIN LUG  
MOUNTING TYPE: PLUG IN  
NUMBER OF PHASES: 1  
VOLTAGE (VOLTS): 120/240  
INDOOR/OUTDOOR: OUTDOOR  
ELECTRICAL PRODUCT TYPE: LOAD CENTER

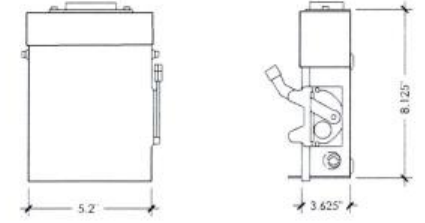


PG&E WIRELESS SMART METER

METER  
METER SOCKET  
GASKET  
GASKET



DISCONNECT SWITCH




NOTICE SIGNAGE

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(h)



ANTENNA DETAIL

1

6503 RRU ENCLOSURE

3

PG&E WIRELESS SMART METER

4

DISCONNECT SWITCH

7

NOTICE SIGNAGE

8

NOTE:  
MOUNTING BRACKETS &  
POLE MOUNTED EQUIPMENT  
TO BE PAINTED TO MATCH  
EXISTING POLE COLOR.

(4) 3/8" SUPERFLEX  
COAXIAL CABLES

ALUMA-BAND TO POLE,  
TYP. OF 2 PER RRU

NEW 2" DIA. REINFORCED  
ACCESS OPENING

(2) 3/8" SUPERFLEX  
COAXIAL CABLES

(2) 3/8" SUPERFLEX COAXIAL  
CABLES TO RUN A 90°  
SWEEP UPON PORT HOLE  
ENTRY

(2) #10 SUPERFLEX COAX (2)  
1/4" FIBER CABLES & (2) 3/8"  
SUPERFLEX COAX

MFR DUAL-BAND RRU CASE  
& MOUNT BRACKET

ALUMA-BAND TO  
POLE, TYP. OF 2 PER RRU

(2) #10 POWER WIRES &  
(2) 1/4" FIBER CABLES

NEW 2" DIA. REINFORCED  
ACCESS OPENING

(2) 3/8" SUPERFLEX  
COAXIAL CABLES TO  
RUN A 90° SWEEP UPON  
PORT HOLE ENTRY

(4) #10 POWER WIRES &  
(4) 1/4" FIBER CABLES

MFR DUAL-BAND RRU  
CASE & MOUNT BRACKET

PROPOSED 6503  
ENCLOSURE

(2) PROPOSED ERICSSON  
2203 RRU'S

HEAT SHRINK BOOT TO BE  
INSTALLED AT BOTTOM OF  
RRU TO TIE INTO CABLING  
AND DUCT

(2) #10 POWER, (2) 1/4"  
FIBER & (2) 3/8" SUPERFLEX  
COAX

PROPOSED 6503  
ENCLOSURE

(2) PROPOSED ERICSSON  
2203 RRU'S

INNERDUCT FOR CABLE  
MANAGEMENT TO MATCH  
EXISTING POLE COLOR

ALL CABLES FROM RADIOS  
TO RUN 90° SWEEP TO  
ACCESS OPENING APPROX.  
12" OF 1 1/4" INNERDUCT TO  
HOUSE ALL CABLES/WIRES  
INTO ACCESS OPENING

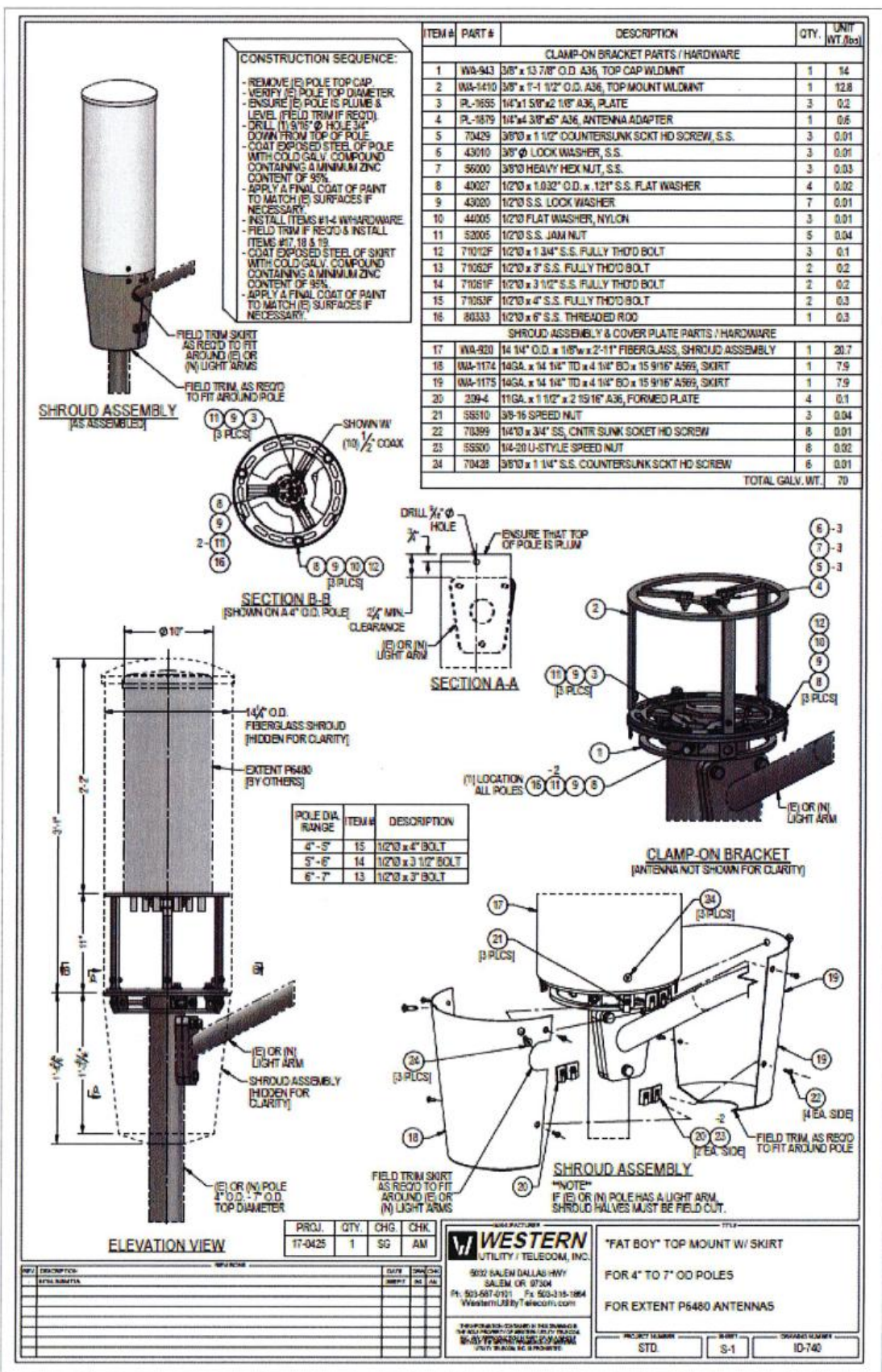
(2) #10 SUPERFLEX COAX (2)  
1/4" FIBER CABLES &  
(2) 3/8" SUPERFLEX COAX

Technical Specifications Radio 2203


FREQUENCY BANDS

Bands: 3GPP Bands B1 (21), B12 (11), B13 (11), B14 (11), B15 (11), B16 (11), B17 (11), B18 (11), B19 (11), B20 (11), B21 (11), B22 (11), B23 (11), B24 (11), B25 (11), B26 (11), B27 (11), B28 (11), B29 (11), B30 (11), B31 (11), B32 (11), B33 (11), B34 (11), B35 (11), B36 (11), B37 (11), B38 (11), B39 (11), B40 (11), B41 (11), B42 (11), B43 (11), B44 (11), B45 (11), B46 (11), B47 (11), B48 (11), B49 (11), B50 (11), B51 (11), B52 (11), B53 (11), B54 (11), B55 (11), B56 (11), B57 (11), B58 (11), B59 (11), B60 (11), B61 (11), B62 (11), B63 (11), B64 (11), B65 (11), B66 (11), B67 (11), B68 (11), B69 (11), B70 (11), B71 (11), B72 (11), B73 (11), B74 (11), B75 (11), B76 (11), B77 (11), B78 (11), B79 (11), B80 (11), B81 (11), B82 (11), B83 (11), B84 (11), B85 (11), B86 (11), B87 (11), B88 (11), B89 (11), B90 (11), B91 (11), B92 (11), B93 (11), B94 (11), B95 (11), B96 (11), B97 (11), B98 (11), B99 (11), B100 (11), B101 (11), B102 (11), B103 (11), B104 (11), B105 (11), B106 (11), B107 (11), B108 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POLE TOP MOUNT W/ SKIRT ASSEMBLY DETAIL




AT&T Wireless  
5001 Executive Parkway  
San Ramon, CA 94583

Client:



Mendon Management LLC  
785 Oak Grove Road #2  
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Concord, CA 94518  
T 925.594.5124  
www.mendonmanagement.com

Project Architect:



VINCULUMS  
575 LENNON LANE  
SUITE 125  
WALNUT CREEK, CA 94598  
T 925.482.8500

Site Agent:

95% Zoning Drawings

Drawing Phase:

CRAN-RSFR-SF0K6-034  
PACE ID:  
ROW AT 845 MARKET ST.  
OAKLAND, CA 94607  
COUNTY: ALAMEDA

Site Name:

Professional Seal:

It is a violation of law for any person, unless they are acting under the direction of a licensed Professional Architect/Engineer, to alter this document.

Rev.	Date	Description
01	09/18/17	Zoning Docs 90%.
02	10/06/17	Zoning Docs 95%.

Project No.:

Date: 10/06/17 Job No.:

Scale: AS SHOWN CAD File:

Designed By: JG Checked: RB

EQUIPMENT DETAILS

Sheet Title:

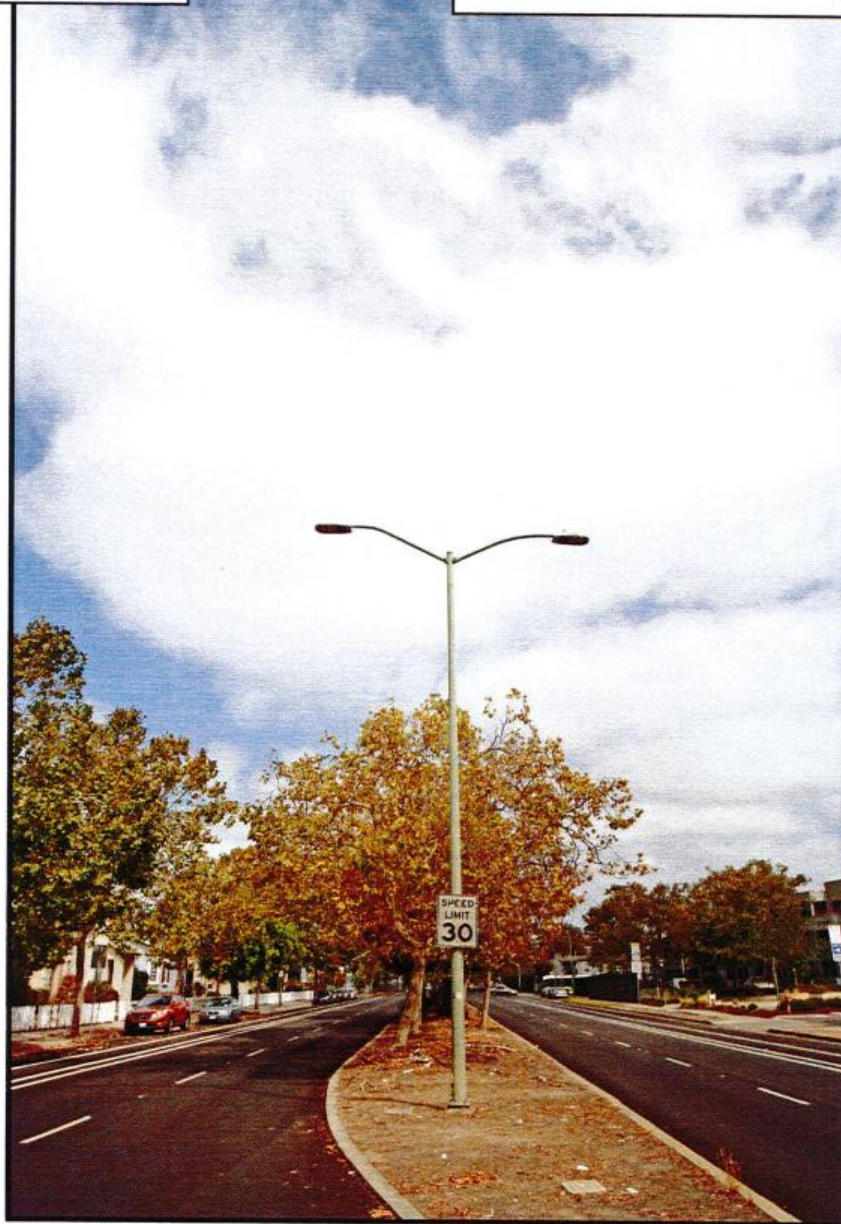
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Sheet No.:

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*Existing*



**AT&T Wireless**

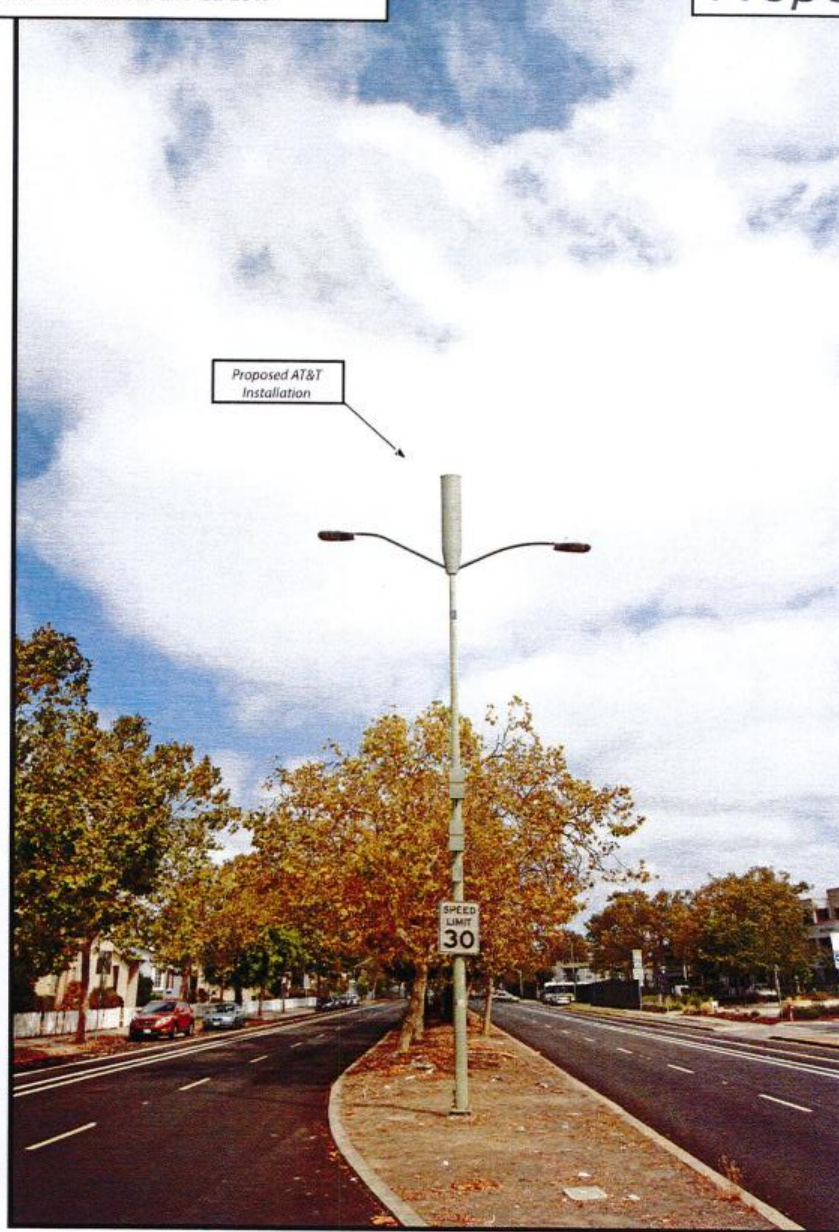
*view from Market Street looking north at site*

CRAN-RSFR-SFOK6-034

ROW at 845 Market Street, Oakland, CA

Photosims Produced on 9-22-2017

*Proposed*





*Existing*



*Proposed*



*view from Market Street looking southwest at site*

**AdvanceSim**  
Photo Simulation Solutions  
Contact: 925 | 202-8507

 **AT&T Wireless**

CRAN-RSFR-SF0K6-034  
ROW at 845 Market Street, Oakland, CA  
Photosims Produced on 9-22-2017



# Alternative Site Analysis – SFOK6\_034



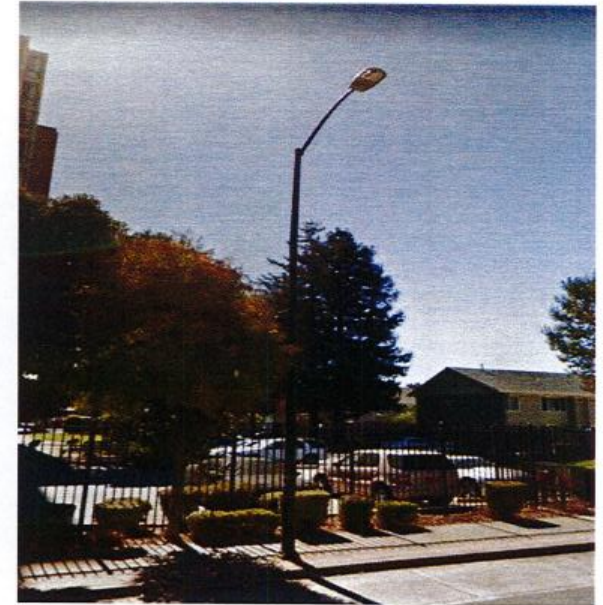
## Node 34A:

- Primary candidate
- Preferred due to adjacent commercial use and for best meeting AT&T's RF needs.



## Node 34B:

- Potentially viable alternative
- Less preferred as tree may partially block signal rendering making this site less desirable for RF.



## Node 34C:

- Potentially viable alternative
- Less preferred due to proximity to apartment complex.

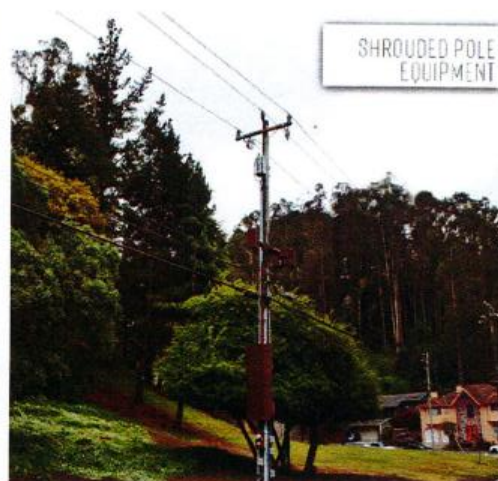


## ALTERNATIVE DESIGN ANALYSIS



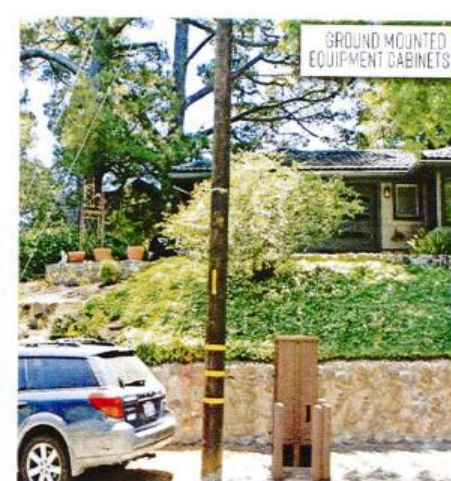
### Full-Sized Tower:

- Too big/bulky.
- Requires 300' sq. area.
- Does not nestle coverage/capacity.



### Shrouded Pole Equipment:

- Too big/bulky.
- Adds unnecessary equipment.
- Small cell equipment is already sleek.



### Equipment Cabinet:

- Too big/bulky.
- Adds unnecessary ROW equipment.
- Pole-mounted equipment blends in with pole.



**AT&T Mobility • Proposed Small Cell (No. CRAN-RSFR-SF0K6-034)**  
**845 Market Street • Oakland, California**

**Statement of Hammett & Edison, Inc., Consulting Engineers**

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of AT&T Mobility, a personal wireless telecommunications carrier, to evaluate its small cell (No. CRAN-RSFR-SF0K6-034) proposed to be sited in Oakland, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

**Executive Summary**

AT&T proposes to install an omnidirectional cylindrical antenna on a light pole sited in the public right-of-way at 845 Market Street in Oakland. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

**Prevailing Exposure Standards**

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

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5,000–80,000 MHz	5.00 mW/cm <sup>2</sup>	1.00 mW/cm <sup>2</sup>
BRS (Broadband Radio)	2,600	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.35	0.47
[most restrictive frequency range]	30–300	1.00	0.20

**General Facility Requirements**

Small cells typically consist of two distinct parts: the electronic transceivers (also called "radios") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are typically mounted on the support pole or placed in a cabinet at ground level, and they are connected to the antennas by coaxial cables. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means



**AT&T Mobility • Proposed Small Cell (No. CRAN-RSFR-SF0K6-034)**  
**845 Market Street • Oakland, California**

that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

### **Computer Modeling Method**

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

### **Site and Facility Description**

Based upon information provided by AT&T, including drawings by Meridian Management LLC, dated September 18, 2017, it is proposed to install one Galtronics Model P6480, 2-foot tall, omnidirectional cylindrical antenna, on top of an existing light pole sited at the median strip of Market Street, opposite the residence located at 845 Market Street. The antenna would employ no downtilt and would be mounted at an effective height of about 27½ feet above ground. The maximum effective radiated power in any direction would be 80 watts for PCS service. There are reported no other wireless telecommunications base stations at this site or nearby.

### **Study Results**

For a person anywhere at ground, the maximum RF exposure level due to the proposed AT&T operation is calculated to be 0.0011 mW/cm<sup>2</sup>, which is 0.11% of the applicable public exposure limit. The maximum calculated level at any nearby building is 0.18% of the public exposure limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

### **No Recommended Mitigation Measures**

Due to its mounting location and height, the AT&T antenna would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. The occupational limit is calculated to extend 4 inches from the antenna and, due to this short distance, the proposed operation is considered intrinsically compliant with that limit.





**AT&T Mobility • Proposed Small Cell (No. CRAN-RSFR-SF0K6-034)**  
**845 Market Street • Oakland, California**

**Conclusion**

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the small cell proposed by AT&T Mobility at 845 Market Street in Oakland, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating small cells.

**Authorship**

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



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

November 3, 2017



**HAMMETT & EDISON, INC.**  
CONSULTING ENGINEERS  
SAN FRANCISCO

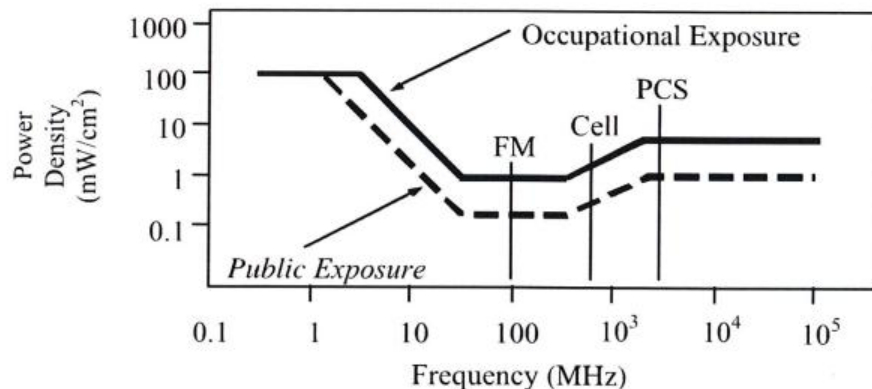


## FCC Radio Frequency Protection Guide

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

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

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



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



**HAMMETT & EDISON, INC.**  
CONSULTING ENGINEERS  
SAN FRANCISCO

FCC Guidelines  
Figure 1



## RFR.CALC™ Calculation Methodology

### Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

#### Near Field.

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

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

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

where  $\theta_{BW}$  = half-power beamwidth of the antenna, in degrees, and

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

$D$  = distance from antenna, in meters,

$h$  = aperture height of the antenna, in meters, and

$\eta$  = aperture efficiency (unitless, typically 0.5-0.8).

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

#### Far Field.

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

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

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

RFF = relative field factor at the direction to the actual point of calculation, and

$D$  = distance from the center of radiation to the point of calculation, in meters.

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





## Utility Contact System Search

The Utility Contact System (UCS) is the Communications Division's database for the primary regulatory contact for each telephone corporation operating in California. The Communications Division sends important regulatory notices to the regulatory contact for each telephone corporation via e-mail, so it is important for primary regulatory contacts to update their UCS record if their e-mail address changes.

Telephone corporations may update UCS contact information using the form on the following page: [Carrier Reporting Requirements](#)

A description of the different utility types (granted authorities) are listed on the following page: [Utility Type Descriptions](#)

Search Utility Name		Search Utility Number 3060					Search	Clear		
Utility Name ▲	Alias (DBA Name)	Utility Number	Street Address	City	State	Zip	Phone Number	Email	Utility Type	CPCN Appro
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	430 BUSH STREET	SAN FRANCISCO	CA	94108	(415) 778-1299	att-regulatory-ca@att.com	CEC	12-21-1995
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	7405 GREENHAVEN DRIVE	SACRAMENTO	CA	95831	(800) 498-1912	west.region.oopsac@awsmail.att.com	CEC	12-21-1995
New Cingular Wireless Pcs, LLC	CINGULAR WIRELESS	3060	11760 US HIGHWAY ONE, WEST TOWER	NORTH PALM BEACH	FL	33048	770-240-8849		CEC	12-21-1995

[Save Search Results as CSV Spreadsheet](#)

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ATTACHMENT H