COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: September 20, 2018

TO: Zoning Hearing Officer

FROM: Planning Staff

SUBJECT: Consideration of a Use Permit, pursuant to Sections 6500 and 6510 of the San Mateo County Zoning Regulations, to install a new wireless telecommunication facility on a replacement joint utility pole located in the Sand Hill Road public right-of-way across from 675 Manzanita Way in the unincorporated Stanford Lands area of San Mateo County.

County File Number: PLN 2018-00126 (Modus Corporation for AT&T)

PROPOSAL

The applicant proposes to replace an existing joint utility pole located in the public right-of-way and to install a new wireless telecommunication facility on the replacement pole. The project consists of replacing the existing 45-foot tall pole with a new 50-foot 11-inch tall pole. The applicant then proposes to place a 2-foot tall cylindrical antenna on top of the new pole, which will result in a maximum height of 53 feet 3 inches. Additionally, two remote radio units (RRU) and associated hardware will be mounted near the bottom of the pole. No grading or tree removal activities are proposed.

RECOMMENDATION

That the Zoning Hearing Officer approve the Use Permit, County File Number PLN 2018-00126, by making the required findings and adopting the conditions of approval as listed in Attachment A.

BACKGROUND

Report Prepared By: Angela Chavez, Project Planner, 650/599-7217

Applicant: Caitlin McLester for Modus Corp on behalf of AT&T Wireless

Land Owner: Public Right-of-Way

Pole Owner: Joint Pole Association (JPA)/California Public Utilities Commission (CPUC)

Sphere-of-Influence: Woodside

Existing Land Use: Utility Pole in the Public Right-of-Way

Location: Sand Hill Road Public Right-of-Way (across the road from 675 Manzanita Way), Stanford Lands

APN: Public Right-of-Way in front of 074-490-020

Existing Zoning: R-E/S-11 (Residential Estates/1-5 acres minimum parcel size)

General Plan Designation: Institutional/General Open Space/Future Study/Urban

Flood Zone: The project site is located in Flood Zone X as defined by FEMA (Community Panel Number 06081C0311E, dated October 16, 2012), which is an area of minimal flood hazard.

Environmental Evaluation: The project is categorically exempt under provisions of Class 3, Section 15303, of the California Environmental Quality Act (CEQA) Guidelines for construction of a new small structure and installation of small new equipment and a facility in a small structure.

Setting: The project site is located at the southern point of the intersection of Whiskey Hill Road and Sand Hill Road in the unincorporated Stanford Lands area. The parcels to the north are developed with single-family residential development while the parcels to the south are largely undeveloped with the exception of the Stanford linear accelerator lab which is located on the parcel immediately to the east.

Chronology:

Date		Action
March 29, 2018	-	Use permit application, the subject of this application, submitted.
July 25, 2018	-	Application deemed complete.
September 20, 2018	-	ZHO Public Hearing date.

DISCUSSION

A. KEY ISSUES

1. Compliance with the General Plan

Staff has determined that the project complies with all applicable County General Plan policies, specifically:

Visual Quality Policies

Policy 4.21 (*Utility Structures*) requires minimizing adverse visual impacts generated by utility structures. The project site is located within the public right-of-way along a residential street in a single-family residentially zoned district. The existing pole currently stands at 45 feet 5 inches above grade and the project proposes to replace the existing pole and increase the overall height by 7 feet 10 inches. The additional height is required in order to provide the minimum 6 feet of clearance between the proposed antenna and the existing power lines as required by California Public Utilities Commission General Order 95 (GO95) engineering requirements. While the proposed antenna reaches a maximum height of 53 feet 3 inches, all of the associated equipment is mounted lower on the utility pole between 7 and 18 feet above grade. The new pole will be located in the same location as the existing pole. There are existing trees that line the roadway in the vicinity of the pole which provide minimal screening as both the existing pole and the proposed modifications exceed the height of the tree canopy. However, the proposed antenna is cylindrical in shape in keeping with the profile of the utility pole and all proposed equipment is designed to attach directly to the pole which aids in minimizing the visual bulk of the additions to the pole. To ensure visual impacts are minimized, the equipment clusters will be similar in scale and appearance to equipment typically found on utility poles and will be painted brown to match the wood material of the joint utility pole.

2. Compliance with the Zoning Regulations

The proposed project site is within the public right-of-way in the R-E/S-11 (Residential Estates/1-5 acre minimum parcel size) Zoning District. The zoning district standards, with the exception of height, are not applicable since the site is located within the public right-of-way.

The maximum height allowed in the R-E/S-11 Zoning District is 36 feet. The proposed project will consist of one small cell antenna at the top of a new pole and ancillary pole mounted equipment. The existing pole is currently over the maximum allowed height by 9 feet 5 inches for a maximum height of 45 feet 5 inches. The project proposes to add an additional 7 feet 10 inches to the total height of the replacement pole to accommodate the pole top antenna. The additional height is due to General Order No. 95 (GO95), mandated by the California Public Utilities Commission, which requires all cellular antennas to be at least 6 feet from adjacent power supply lines. The replacement pole meets the height necessary to continue the power line service with the additional height which allows for the 6 feet of required separation between the power lines and the antenna. While this results in 53 feet 3 inches, which exceeds the 28 feet zoning height limit set by the zoning district, State regulations supersede local regulations in this situation.

Section 6512.2.l.2 (*Development And Design Standards For New Wireless Telecommunication Facilities That Are Not Co-Location Facilities*) of the San Mateo County Zoning Regulations states, in any Residential (R) District, that no monopole or antenna shall exceed the maximum height for structures allowed in that district, except that new equipment on an existing facility in the public right-of-way shall be allowed to exceed the maximum height for structures allowed in that district by 10% of the height of the existing facility, or by 5 feet, whichever is less. The new equipment for this wireless facility will not be in compliance with this section. However, due to GO95, the project has been specially designed to meet the State's safety requirements to meet the minimum clearance of 6 feet. Therefore, the proposed project adheres to this section to the best of its ability.

3. Compliance with the Wireless Telecommunication Facilities Ordinance

Staff has reviewed the project against the provisions of the Wireless Telecommunication Facilities (WTF) Ordinance and determined that the project complies with the applicable standards discussed below:

a. Development and Design Standards

Section 6512.2.A states that new wireless telecommunication facilities shall be prohibited in a Sensitive Habitat, as defined by Policy 1.8 of the General Plan (*Definition of Sensitive Habitats*) for facilities proposed outside of the Coastal Zone.

The project is not located in a sensitive habitat, as defined by Policy 1.8 of the General Plan.

Section 6512.2.B prohibits new wireless telecommunication facilities from being located in areas zoned Residential (R), unless the applicant demonstrates that a review has been conducted of other options and no other sites or combination of sites allow feasible service or adequate capacity and coverage.

The proposed facility will be located on a joint utility pole within the public right-of-way in the R-E/S-11 Zoning District. The proposed location was chosen in an effort to adequately provide AT&T wireless voice and data coverage to the surrounding area. Small cell facilities such as the proposed site are not meant to increase the coverage area but to assist with unloading traffic from the macro site network. This increases data speed and decreases dropped calls. Because of this, they are placed in specific locations of need to service a specific community. Further, while the proposed site is located within a district zoned for residential development the existing residences are largely located on the opposite side of Sand Hill Road with the roadway providing a buffer between the uses. The proposed site is located

adjacent to lands owned by Stanford University and utilized as part of the Linear Accelerator research site.

In the AT&T Site Analysis (see Attachment E), the applicant has identified and researched alternative sites. The radius of the map provided is smaller than 2.5 miles because small cell technology requires the sites to be much closer together than the larger macro sites. Because of this, a larger radius would not be an accurate representation of AT&T's site analysis process. Four other alternative sites were identified but were ruled out as viable proposed sites due to location (i.e. too far from target service area), inadequate space on the existing pole, and/or impacts to adjacent property owners.

Among the researched locations, the proposed location is the least intrusive and will fill the coverage gap necessary to provide adequate wireless and data coverage.

Section 6512.2.C prohibits new wireless telecommunication facilities to be located in areas where co-location on existing facilities would provide equivalent coverage with less environmental impacts.

The applicant was unable to identify any existing wireless facilities within a 2.5-mile radius that would either allow co-location or provide coverage to the target area. Though monopoles and cellular towers exist within a 2.5-mile radius, these alternative sites are not feasible due to their location outside of the proposed small cell network and their inability to increase network capacity and coverage.

Section 6512.2.D requires new wireless telecommunication facilities to be constructed so as to accommodate co-location, and must be made available for co-location.

Future co-locations are technically feasible as long as the proposed facilities comply with California Public Utilities Commission General Order 95 (GO95) engineering requirements. This proposed facility will be a pole-top mounted facility and, thus, cannot be co-located per PG&E GO95 requirements. Therefore, the applicant does not expect future co-locations.

Sections 6512.2.E and F seek to minimize and mitigate visual impacts from public views by siting new facilities outside of public views, using natural vegetation for screening, painting equipment to blend with existing landscaping, and designing the facility to blend in with the surrounding environment.

The proposed facility includes one canister antenna located at a maximum height of 53 feet 5 inches above grade, mounted to the top

of a replacement joint utility pole located in the public right-of-way. In an effort to minimize visual impacts, the antenna and proposed equipment shall be painted a non-reflective brown color to match the utility pole. No trees or vegetation are proposed for removal.

Section 6512.2.G requires that the exterior of wireless telecommunication facilities be constructed of non-reflective materials.

The proposed facility will be constructed of non-reflective materials. As discussed in the section above, the facility will be painted a non-reflective brown color to match the brown wood material of the joint utility pole.

Section 6512.2.H requires that wireless telecommunication facilities comply with all the requirements of the underlying zoning district, including, but not limited to, setbacks, Design Review in the DR district(s), Architectural Review in designated Scenic Corridors, and Coastal Development Permit regulations in the CZ or CD zones.

As discussed in Section A.2, Compliance with the Zoning Regulations, the existing and proposed replacement joint utility pole, where the proposed facility is to be located, are situated in the public right-of-way and are not subject to the R-E/S-11 Zoning District development standards for setbacks; compliance with the applicable height standard is discussed below. As discussed in Section 2, Compliance with Zoning Regulations, the proposed facility complies as much as is reasonably possible. The project site is not located within a Design Review, Architectural Review, or Coastal Development district.

Section 6512.2.I.2 states that new equipment located on existing facilities in the public right-of-way in any Residential (R) District, shall be allowed to exceed the maximum height for structures allowed in that district by 10% of the height of the existing facility, or by 5 feet, whichever is less.

The maximum height allowed in the R-E/S-11 Zoning District is 36 feet. The proposed project involves installing a new wireless telecommunication facility on a replacement joint utility pole. As discussed in Section A.2, the proposed facility must comply with CPUC GO95 clearance regulations which requires at least 6 feet of clearance between the power lines and equipment for the wireless telecommunication facility. The replacement pole provides the height necessary to continue to support the overhead power lines and the required 6 feet of separation. Given this, the project is as nearly in compliance as is reasonably possible.

b. Performance Standards

The proposed project meets the required standards of Section 6512.3 (*Performance Standards for New Wireless Telecommunication Facilities That Are Not Co-Location Facilities*) for lighting, licensing, provision of a permanent power source, timely removal of the facility, and visual resource protection. There is no lighting proposed, proper licenses will be obtained from both the Federal Communications Commission (FCC) and the California Public Utilities Commission (CPUC), power for the facility will be provided by PG&E, visual impact will be minimal, and conditions of approval will require maintenance and/or removal of the facility when it is no longer in operation. Furthermore, road access to the proposed project site is existing and no noise exceeding the standards per San Mateo County's Noise Ordinance will be produced. Conditions of Approval Nos. 8-19 were added to ensure compliance with the performance standards of this section (see Attachment A).

4. Compliance with the Use Permit Findings

For the use permit to be approved by the Zoning Hearing Officer, the following findings must be made:

a. **That the establishment, maintenance, and/or conducting of the use will not, under the circumstances of this particular case, be detrimental to the public welfare or injurious to property or improvements in said neighborhood.**

Cellular communications facilities, such as the proposed project, require the submittal and review of a radio frequency (RF) report to ensure that the RF emissions from the proposed antenna do not exceed the Federal Communications Commission's public exposure limits. The applicant submitted a radio frequency report prepared by Hammett & Edison, Inc., dated March 21, 2018, confirming that the proposed facility will comply with the prevailing standards for limiting public exposure to radio frequency energy and thus, will not cause a significant impact on the environment. The report states that the maximum RF level at ground level is calculated to be 0.66% of the applicable public exposure limit. The maximum calculated level at the second-floor elevation of the nearby building is calculated to be 0.42% 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. Due to the location of the mounted antenna, it will not be accessible to the general public and therefore no mitigation measures are necessary to comply with the FCC public exposure guidelines. To ensure compliance with occupational exposure limitations, staff has included a condition of approval, as recommended by Hammett &

Edison, Inc., for the posting of explanatory warning signs on the pole below the antennas, readily visible from any angle of approach to persons who may need to work within the area (see Attachment A).

Furthermore, the proposed facility will be unmanned at all times, and be serviced only once a year by an AT&T technician. The proposed facility will not generate significant traffic, noise, or intensification of use of the site.

With the discussion above, staff has determined that the proposed project will not have a negative environmental, health, or visual impact on persons or property within the project vicinity.

b. **That this telecommunication facility is necessary for the public health, safety, convenience, or welfare of the community.**

Staff has determined that installation of a cellular facility at the proposed location will allow for increased clarity, range, and capacity of the existing cellular network and will enhance services for the public. The proposed facility is the least intrusive option available to expand AT&T's network capacity and service coverage in this area of Stanford Lands. The proposed facility does not result in a new pole location and will add small equipment without disturbing the character of the neighborhood. As part of the project's review a referral was sent to the Town of Woodside as the project site is located within its sphere of influence. The Town provided recommended conditions of approval to ensure consistency with similar uses located within the Town's boundaries. The recommended conditions are similar to the application requirements and standard conditions of approval for projects located within the unincorporated portions of the County with the exception of one item which has been added as Condition of Approval No. 20.

B. ENVIRONMENTAL REVIEW

This project is categorically exempt pursuant to Section 15303, Class 3, of the California Environmental Quality Act (CEQA) related to the construction of a new, small structure and installation of small new equipment and a facility in a small structure.

C. REVIEWING AGENCIES

San Mateo County Building Inspection Section
San Mateo County Department of Public Works
Woodside Fire Protection District
Town of Woodside

ATTACHMENTS

A. Recommended Findings and Conditions of Approval
B. Vicinity Map
C. Project Plans
D. Photo Simulations
E. Alternative Site Analysis
F. Radio Frequency Radiation Report prepared by Hammett & Edison, Inc., dated June 14, 2018

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County of San Mateo - Planning and Building Department

ATTACHMENT A

Attachment A

County of San Mateo
Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN 2018-00126 Hearing Date: September 20, 2018

Prepared By: Angela Chavez, Project Planner For Adoption By: Zoning Hearing Officer

RECOMMENDED FINDINGS

Regarding the Environmental Review, Find:

1. That this project is categorically exempt from environmental review, per Class 3, Section 15303, of the California Environmental Quality Act (CEQA) Guidelines for construction of a new, small structure and installation of small new equipment and a facility in a small structure.

Regarding the Use Permits, Find:

2. That the establishment, maintenance, and/or conducting of the use will not, under the circumstances of this particular case, be detrimental to the public welfare or injurious to the property or improvements in said neighborhood because the project will meet current Federal Communications Commission (FCC) standards as shown in the radio frequency radiation report and has been conditioned to maintain a valid FCC and California Public Utilities Commission (CPUC) license.

3. That this telecommunication facility is necessary for the public health, safety, convenience, or welfare of the community in that installing a cellular facility at this location will provide increased and improved cellular coverage in the area for residents, commuters, and emergency personnel.

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

1. This approval applies only to the proposal, documents, and plans described in this report and submitted to and approved by the Zoning Hearing Officer on September 20, 2018. Minor revisions or modifications may be approved by the Community Development Director if they are consistent with the intent of and in substantial conformance with this approval.

2. This use permit shall be for the proposed project only. Any change or change in intensity of use shall require an amendment to the use permit. Amendments to

this use permit require an application for amendment, payment of applicable fees, and consideration at a public hearing.

3. This permit shall be valid for ten (10) years until September 20, 2028. If the applicant seeks to renew this permit, renewal shall be applied for six (6) months prior to expiration with the Planning and Building Department and shall be accompanied by the renewal application and fee applicable at that time. Renewal of this permit shall be considered at a public hearing.

4. The applicant shall paint the antenna, conduit, and equipment boxes a non-reflective brown color to match the utility pole. Two copies of each color samples shall be submitted to the Current Planning Section at the time of application for an encroachment permit. Color verification will be confirmed by the Current Planning Section prior to a final inspection for the encroachment permit.

5. During project construction, the applicant shall, pursuant to Chapter 4.100 of the San Mateo County Ordinance Code, minimize the transport and discharge of stormwater runoff from the construction site into storm drain systems by:

    a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.

    b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.

    c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.

    d. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.

    e. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.

    f. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

    g. Performing clearing and earth-moving activities only during dry weather.

    h. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.

i. Limiting construction access routes and stabilizing designated access points.

j. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.

k. The contractor shall train and provide instruction to all employees and subcontractors regarding the construction Best Management Practices.

6. This permit does not allow for the removal of any trees. Any tree removal will require a separate permitting process.

7. The applicant shall not enter into a contract with the landowner or lessee which reserves for one company exclusive use of structures on this site for telecommunication facilities.

8. The wireless telecommunication facility shall not be lighted or marked unless required by the Federal Communications Commission (FCC) or the Federal Aviation Administration (FAA).

9. The applicant shall file, receive, and maintain all necessary licenses and registrations from the Federal Communications Commission, the California Public Utilities Commission (CPUC), and any other applicable regulatory bodies prior to initiating the operation of this facility. The applicant shall supply the Planning and Building Department with evidence of each of these licenses and registrations. If any required license is ever revoked, the applicant shall inform the Planning and Building Department of the revocation within ten (10) days of receiving notice of such revocation.

10. Once a use permit is obtained, the applicant shall obtain an encroachment permit and build in accordance with the approved plans.

11. The project's final inspection approval shall be dependent upon the applicant obtaining a permanent and operable power connection from the applicable energy provider.

12. The wireless telecommunication facility and all equipment associated with it shall be removed in its entirety by the applicant within ninety (90) days if the FCC and/or CPUC license and registration are revoked or the facility is abandoned or no longer needed, and the sites shall be restored to blend with the surrounding area. The owner and/or operator of the wireless telecommunication facility shall notify the Planning Department upon abandonment of the facility. Restoration shall be completed within two (2) months of the removal of the facility.

13. This wireless telecommunication facility shall be maintained by the permittee(s) and subsequent owners in a manner that implements visual resource protection requirements of Sections 6512.2.E and F (e.g., landscape maintenance and painting), as well as all other applicable zoning standards and permit conditions.

14. Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m., weekdays and 9:00 a.m. to 5:00 p.m., Saturdays. Said activities are prohibited on Sundays, Thanksgiving, and Christmas (San Mateo Ordinance Code Section 4.88.360).

15. The use of diesel generators or any other emergency backup energy source shall comply with the San Mateo County Noise Ordinance.

16. If technically practical and without creating any interruption in commercial service caused by electronic magnetic interference (EMI), floor space, tower space, and/or rack space for equipment in a wireless telecommunication facility shall be made available to the County for public safety communication use.

17. To reduce the impact of construction activities within the public right-of-way and/or on neighboring properties, the applicant shall ensure that no construction-related vehicles impede through traffic along Sand Hill Road or other public right-of-ways.

18. To reduce the impact of potential traffic hazards from service visits to the facility, the applicant shall ensure that no vehicles related to the service and/or maintenance of the cellular facility impede through traffic along Monterey Avenue or other public right-of-ways.

19. Explanatory signs are required to be posted at the antennas and/or on the pole below the antennas, readily visible from any angle of approach to persons who might need to work within the project area.

20. The facility shall be maintained in good working condition and to the visual standards established at the time of approval over the life of this permit. The facility and surrounding area shall remain free from trash, debris, litter, graffiti, and other forms of vandalism. Any damage shall be repaired as soon as is practicable, and in no instance more than ten (10) calendar days from the time of notification by the County or after discovery by the permit holder.

Department of Public Works

21. No proposed construction work within the public right-of-way shall begin until County requirements for the issuance of an encroachment permit, including review of the plans, have been met and an encroachment permit issued. The applicant shall contact a Department of Public Works inspector 48 hours prior to commencing work in the public right-of-way.

Woodside Fire Protection District

22. The address shall be clearly posted and visible from the street with minimum of 4-inch sized numbers on a contrasting background.

23. No combustible materials shall be located within 5 feet of the cell site.

24. All signage shall be approved by Woodside Fire Protection District prior to posting.

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County of San Mateo - Planning and Building Department

ATTACHMENT B

San Mateo County

Location Map

0.07 0 0.04 0.07 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

1: 2,256

County of San Mateo - Planning and Building Department

ATTACHMENT C

at&t

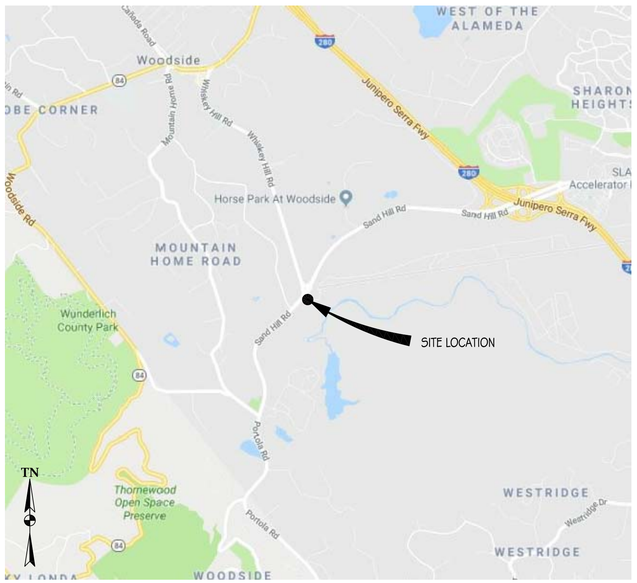
SITE ID: CRAN_RSFR_SAJO1_009
SITE ADDRESS: ROW ADJCT TO SAND HILL ROAD
MENLO PARK, CA 94028

SITE TYPE: PG&E UTILITY POLE
POLE OWNER: JOINT POLE AUTHORITY (JPA)

SITE INFORMATION

APPLICANT:	AT&T MOBILITY 5001 EXECUTIVE PARKWAY SAN RAMON, CA 94583
AGENT:	MODUS, INC 240 STOCKTON STREET, 3RD FLOOR SAN FRANCISCO, CA 94108
APN:	ADJCT TO 074-460-230
SITE ADDRESS:	ROW ADJCT TO SAND HILL ROAD MENLO PARK, CA 94028
COUNTY:	SAN MATEO
LATITUDE:	37° 24' 41.63" N (37.411564) NAD 83
LONGITUDE:	122° 14' 26.33" W (-122.240647) NAD 83
GROUND ELEVATION:	±293.95' AMSL
ZONING:	PUBLIC ROW
ZONING JURISDICTION:	SAN MATEO COUNTY

VICINITY MAP



PROJECT TEAM

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PROJECT DESCRIPTION

THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR AT&T WIRELESS CONSISTING OF THE INSTALLATION & OPERATION OF ANTENNAS & ASSOCIATED EQUIPMENT ON A (N) PG&E UTILITY POLE IN THE PUBLIC RIGHT OF WAY.

SCOPE OF WORK:

1. INSTALL (N) TELECOMMUNICATIONS EQUIPMENT BOXES ON A (N) PG&E UTILITY POLE. EQUIPMENT IS TO BE INSTALLED ON GO95 COMPLIANT STANDOFF BRACKET & CONSISTS OF (1) ELECTRICAL METER, (1) FIBER DMARC CABINET, (1) LOAD CENTER/AC DISCONNECT, (1) RRUS-32 & (1) RRUS-11, BOTH W/ PSU UNITS, & (1) CYLINDRICAL ANTENNA.
2. REMOVE (E) PG&E UTILITY POLE & REPLACE W/ (N) 60FT CLASS 3 UTILITY POLE.
3. ALL EQUIPMENT TO BE PAINTED TO MEET JURISDICTION APPROVAL.
4. UTILITY LINES BETWEEN (E) POINT OF CONNECTION & POLE TO BE UNDERGROUND AND/OR OVERHEAD.

DRAWING INDEX

CODE COMPLIANCE

CONSTRUCTION WORKS & MATERIALS MUST COMPLY WITH ALL APPLICABLE NATIONAL, STATE & LOCAL CODES AS ADOPTED BY LOCAL JURISDICTION, INCLUDING BUT NOT LIMITED TO:

1. 2016 CALIFORNIA ADMINISTRATIVE CODE (INCL. TITLES 24 & 25)
2. 2016 CALIFORNIA BUILDING CODE
3. 2016 CALIFORNIA ELECTRICAL CODE
4. 2016 CALIFORNIA MECHANICAL CODE
5. 2016 CALIFORNIA PLUMBING CODE
6. 2016 CALIFORNIA FIRE CODE
7. LOCAL BUILDING CODES
8. CITY/COUNTY ORDINANCES
9. ANSI/EIA-TIA-222-G

HANDICAP REQUIREMENTS

THIS FACILITY IS UNMANNED & NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS & REQUIREMENTS ARE NOT REQUIRED IN ACCORDANCE WITH CALIFORNIA STATE ADMINISTRATIVE CODE, TITLE 24 PART 2, SECTION 1105B.3.4.2, EXCEPTION 1

DRIVING DIRECTIONS

DIRECTIONS FROM AT&T WIRELESS WALNUT CREEK OFFICE

FROM: 5001 EXECUTIVE PARKWAY, SAN RAMON, CA 94583
TO: SAND HILL ROAD, MENLO PARK, CA 94028

1.	HEAD NORTHEAST ON BISHOP DR TOWARD SUNSET DR	256	FT
2.	TURN RIGHT ONTO SUNSET DR	0.1	MI
3.	TURN RIGHT ONTO BOLLINGER CANYON RD	0.3	MI
4.	MERGE ONTO I-680 S VIA THE RAMP TO SAN JOSE	0.3	MI
5.	MERGE ONTO I-680 S	4.2	MI
6.	TAKE EXIT 30B TO MERGE ONTO I-580 W TOWARD DUBLIN/OAKLAND	10.0	MI
7.	KEEP LEFT AT THE FORK TO CONTINUE ON I-238 N, FOLLOW SIGNS FOR I-880	1.6	MI
8.	TAKE EXIT 1GA FOR INTERSTATE 880 S TOWARD SAN JOSE/SAN MATEO BRIDGE	1.0	MI
9.	MERGE ONTO I-880 S	3.2	MI
10.	TAKE EXIT 27 TO MERGE ONTO CA-92 W TOWARD SAN MATEO BRIDGE/JACKSON ST	17.8	MI
11.	TAKE EXIT 8 FOR I-280 N/I-280 S TOWARD SAN JOSE/SAN FRANCISCO	0.1	MI
12.	KEEP LEFT AT THE FORK TO CONTINUE ON EXIT 8A, FOLLOW SIGNS FOR INTERSTATE 280 S/ SAN JOSE AND MERGE ONTO I-280 S	7.9	MI
13.	TAKE EXIT 25 FOR CA-84/WOODSIDE ROAD	0.2	MI
14.	TURN RIGHT ONTO CA-84 W/WOODSIDE RD (SIGNS FOR CANADA ROAD)	0.8	MI
15.	TURN LEFT ONTO MOUNTAIN HOME RD	0.4	MI
16.	TURN LEFT ONTO MANZANITA WAY	0.2	MI
17.	TURN LEFT TO STAY ON MANZANITA WAY	1.0	MI
18.	TURN LEFT ONTO SAND HILL RD	472	FT

END AT: SAND HILL ROAD, MENLO PARK, CA 94028

ESTIMATED TIME: 54 MINS ESTIMATED DISTANCE: 49.5 MI

At all services & grounding trenches, provide " WARNING" tape at 12" below grade.

CALL
"CALL BEFORE YOU DIG"
811/800-227-2600
NATIONWIDE UNDERGROUND SERVICE ALERT

ADMINISTRATIVE REQUIREMENTS

CONTRACTOR SHALL VERIFY ALL PLANS & (E) DIMENSIONS & 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 IF USING 11" X 17" PLOT, DRAWINGS WILL BE HALF SCALE.

at&t
AT&T MOBILITY
5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

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240 STOCKTON STREET, 3RD FLOOR
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11768 Atwood Rd. Suite 20 Auburn, CA 95603

REGISTERED PROFESSIONAL ENGINEER
BRET A. McCOMB
C 69891
EXP 09-30-18
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_SAJO1_009

ROW ADJCT TO SAND HILL ROAD
MENLO PARK, CA 94028

ISSUE STATUS

△	DATE	DESCRIPTION
	02/08/18	CD 90%
	05/02/18	CD 100%

DRAWN BY:	T. DiCARLO
CHECKED BY:	B. McCOMB
APPROVED BY:	B. McCOMB
DATE:	05/02/18

SHEET TITLE:
TITLE SHEET

SHEET NUMBER
T-1

GENERAL CONSTRUCTION NOTES

1. PLANS ARE INTENDED TO BE DIAGRAMMATIC 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.

2. THE CONTRACTOR SHALL OBTAIN, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.

3. CONTRACTOR SHALL CONTACT USA (UNDERGROUND SERVICE ALERT) AT (800) 227-2600, FOR UTILITY LOCATIONS, 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION, SITE WORK OR CONSTRUCTION.

4. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.

5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CBC/UBC'S REQUIREMENTS REGARDING EARTHQUAKE RESISTANCE, FOR, BUT NOT LIMITED TO, PIPING, FIXTURES, CEILING GRID, INTERIOR PARTITIONS, AND MECHANICAL EQUIPMENT. ALL WORK MUST COMPLY WITH LOCAL EARTHQUAKE CODES AND REGULATIONS.

6. REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWINGS, SHALL NOT BE USED TO IDENTIFY OR ESTABLISH BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF SURVEY DRAWING 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 IS ANY DISCREPANCY IS FOUND BETWEEN THE CARIOUS 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.

7. 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.

8. DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.

9. 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.

10. 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 PREFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT/ ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT HISHER OWN RISK AND EXPENSE.

11. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK.

12. ANY DRAIN AND/OR FIELD TILE ENCOUNTERED/ DISRUPTED DURING CONSTRUCTION SHALL BE RETURNED TO ITS ORIGINAL CONDITION PRIOR TO COMPLETION OF WORK. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON "AS-BUILT" DRAWINGS BY GENERAL CONTRACTOR, AND ISSUED TO THE ARCHITECT/ ENGINEER AT COMPLETION OF PROJECT.

13. ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC, SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.

14. INCLUDE MISC ITEMS PER AT&T WIRELESS SPECIFICATIONS.

GENERAL NOTES FOR EXISTING CELL SITES

1. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR 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 CONTRACTOR.

2. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. CONTRACTOR 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 CONTRACTOR 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 SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

5. CONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. CONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. CONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.

6. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

APPLICABLE CODES, REGULATIONS, AND STANDARDS

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

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

3. CONTRACTORS 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), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
   -TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARD FOR STRUCTURAL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES
   -INSTITUTION FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM IEEE (1999) 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 EXPOSURE")

4. TIA 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS AND TELCORDIA GR-63 NETWORK EQUIPMENT-BUILDING SYSTEM (NEBS): PHYSICAL PROTECTION
   TELCORDIA GR-347 CENTRAL OFFICE POWER WIRING
   TELCORDIA GR-1275 GENERAL INSTALLATION REQUIREMENTS
   TELCORDIA GR-1503 COAXIAL CABLE CONNECTIONS

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

6. FOR ANY CONFLICTS 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 SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

GENERAL TRENCHING NOTES

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 FROM POWER COMPANY FROM ANY POLE, TRANSFORMER OR OTHER LOCATIONS WILL BE SLURRY BACKFILLED.
5. IN STREET SLURRY TO GRADE AND MILL DOWN 1-1/2" FOR AC CAP.
6. IN DIRT SLURRY 18" FROM GRADE AND FILL 95% COMPACTION NATIVE SOIL FOR BALANCE
7. WARNING TAPE TO BE PLACED IN TRENCH 12" ABOVE ALL CONDUITS AND #18 WARNING TAPE ABOVE RING.

GENERAL GROUNDING NOTES

1. 5/8" x 10' ROD, CAD 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 TESCO BREAKER TO PBMD OR STRONG BOX.
6. WOOD MOULDING, STAPLED EVERY 3" AND AT EACH END.

GENERAL CONDUIT NOTES

1. ALL CONDUITS WILL BE MANDRELED 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.

TYPICAL R.O.W. POLE CONSTRUCTION NOTES

1. CABLE NOT TO IMPEDE 15' CLEAR SPACE OFF POLE FACE.
2. ALL CLIMB STEPS NEXT TO CONDUIT SHALL HAVE EXTENDED STEPS.
3. NO BOLT THREADS TO PROTRUDE MORE THAN 1-1/2"
4. ALL HOLES IN POLE LEFT FROM REARRANGEMENT OF CLIMBERS TO BE FILLED.
5. 90° SHORT SWEEPS UNDER ANTENNA ARM, ALL CABLES MUST TRANSITION ON THE INSIDE OR BOTTOM OF THE ARM (NO CABLE ON TOP OF ARM).
6. USE 90° CONNECTOR AT CABLE CONNECTION FOR OMNI DOWN ANTENNAS.
7. USE CABLE CLAMPS TO SECURE CABLE TO ARMS, PLACE 2" T-MOBILE CABLE I.D. TAGS ON BOTH SIDES OF ARMS.
8. USE 1/2" DIA. CABLE ON ANTENNAS UNLESS OTHERWISE SPECIFIED.
9. PLACE GPS ON ARM OF SOUTHERN SKY EXPOSURE AT MINIMUM 6' FROM TRANSMIT ANTENNA WHICH IS 24" AWAY FROM CENTER OF POLE.
10. FILL VOID AROUND CABLES AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION.

SYMBOLS LEGEND

- NEW ANTENNA
- EXISTING ANTENNA
- GROUND ROD
- GROUND BUSS BAR
- MECHANICAL GRND. CONN.
- GROUND ACCESS WELL
- ELECTRIC BOX
- TELEPHONE BOX
- LIGHT POLE
- FND. MONUMENT
- SPOT ELEVATION
- SET POINT
- REVISION
- GRID REFERENCE
- DETAIL REFERENCE
- ELEVATION REFERENCE
- SECTION REFERENCE
- GROUT OR PLASTER
- (E) BRICK
- (E) MASONRY
- CONCRETE
- EARTH
- GRAVEL
- PLYWOOD
- SAND
- WOOD CONT.
- WOOD BLOCKING
- STEEL
- CENTERLINE
- PROPERTY/LEASE LINE
- MATCH LINE
- WORK POINT
- GROUND CONDUCTOR
- COAXIAL CABLE
- OVERHEAD SERVICE CONDUCTORS
- CHAIN LINK FENCING
- OVERHEAD TELEPHONE/OVERHEAD POWER
- OVERHEAD TELEPHONE LINE
- OVERHEAD POWER LINE
- POWER RUN
- TELCO RUN
- POWER/TELCO RUN
- GROUNDING CONDUCTOR
- GROUNDING CONDUCTOR
- CONDUIT UNDERGROUND
- FUSE, SIZE AND TYPE AS INDICATED.
- SAFETY SWITCH, 2P-240V-60A W/60A FUSES, NEMA 3R ENCLOSURE, SQ D CATALOG NO. H222NRB
- MANUAL TRANSFER SWITCH, 2P-240V-200A, NO FUSE, NEMA 3R ENCLOSURE
- LIGHTING FIXTURE, FLUORESCENT, 10.94" x 4'-0", 2/40W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #WSW232T
- LIGHTING FIXTURE, FLUORESCENT, 10.94" x 8'-0", 2/95W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #TWSM232T
- LIGHTING FIXTURE, HIGH PRESSURE SODIUM, 1/70W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #NRG-307 OR 1/50W, HUBBELL LIGHTING CATALOG #NRG-121
- EXIT SIGN, THERMOPLASTIC LED, SINGLE FACE, UNIVERSAL MOUNTING, W/BATTERY PACK, HUBBELL LIGHTING CATALOG #FRB
- COMBINATION, EXIT SIGN & EMERGENCY LIGHTING, HUBBELL LIGHTING CATALOG #FRC
- EMERGENCY LIGHTING, 2/50W, HUBBELL LIGHTING CATALOG #HEG-50-2-R91
- LIGHTING FIXTURE, INCANDESCENT, 1/100W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #BRH-100-06-1
- LIGHTING FIXTURE, HALOGEN, QUARTZ, 1/300W, HUBBELL LIGHTING CATALOG #QL-505
- LIGHTING FIXTURE, 1/175W. METAL HAUDE, HUBBELL CAT #MIC-0175H-336
- 5/8" X 10'-0" ,CU. GND ROD 18" MIN. BELOW GRADE.
- 5/8" X 10'-0" ,CU. GND ROD IN TEST WELL 18" MIN. BELOW GRADE.
- CHEMICAL GROUND ROD (KIT GROUND ROD)
- CADWELD CONNECTION
- MECHANICAL CONNECTION
- HALO GROUND CONNECTION
- CIRCUIT BREAKER
- UTILITY METER BASE
- TRANSFORMER
- STEP-DOWN TRANSFORMER
- RECEPTACLE, 2P-3W-125V-15A, DUPLEX, GROUND TYPE, HUBBELL CATALOG #5362
- TOGGLE SWITCH, 1P-125V-15A, HUBBELL CATALOG #HBL 1201CN
- TOGGLE SWITCH, 1P-120V-15A, "WP"
- IONIZATION SMOKE DETECTOR W/ALARM HORN & AUXILIARY CONTACT, 120 VAC, GENTEX PART NO. 7100F
- POLE
- (N) POLE MOUNTED XFMER
- (E) POLE MOUNTED XFMR
- (N) PAD MOUNTED XFMER
- (E) PAD MOUNTED XFMER

ABBREVIATIONS

A	AMPERE
AB	ANCHOR BOLT
ABV	ABOVE
ACCA	ANTENNA CABLE COVER ASSEMBLY
ADD'L	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
ALUM	ALUMINUM
ALT	ALTERNATE
ANT	ANTENNA
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)
AT	AMPERE TRIP
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BD	BOARD
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BN	BOUNDARY NAILING
BR	BRANCH
BRKR	BREAKER
BTGW	BARE TINNED COPPER WIRE
BTS	BASE TRANSMISSION SYSTEM
BOF	BOTTOM OF FOOTING
BU	BACK-UP CABINET
C	CONDUIT
CAB	CABINET
CANT	CANTILEVER(ED)
CB	CIRCUIT BREAKER
CIP	CAST IN PLACE
CKT	CIRCUIT
CLG	CEILING
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION(OR)
CONST	CONSTRUCTION
CONT	CONTINUOUS
d	PENNY (NAILS)
DBL	DOUBLE
DEM	DEMAND
DEPT	DEPARTMENT
DF	DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DWG	DRAWING(S)
DWL	DOWEL(S)
EA	EACH
EGR	EMERGENCY GENERATOR RECEPTACLE
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMT	ELECTRICAL METALLIC TUBING
EN	EDGE NAIL
ENCL	ENCLOSURE
ENG	ENGINEER
EQ	EQUAL
EXIST, (E)	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FAB	FABRICATION(OR)
FAC	FACTOR
FA	FIRE ALARM
FF	FINISH FLOOR
FG	FINISH GRADE
FIN	FINISH(ED)
FLR	FLOOR
FLUOR	FLUORESCENT
FDN	FOUNDATION
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FOW	FACE OF WALL
FS	FINISH SURFACE
FT, (')	FOOT (FEET)
FTG	FOOTING
FU	FUSE
G	GROUND
GR	GROWTH (CABINET)
GA	GAUGE
GEN	GENERATOR
GALV	GALVANIZE(D)
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GLB	GLUE LAMINATED BEAM
GND	GROUND
GPS	GLOBAL POSITIONING SYSTEM
GRND	GROUND
HDBC	HARD DRAWN COPPER WIRE
HDR	HEADER
HGR	HANGER
HPS	HIGH PRESSURE SODIUM
HT	HEIGHT
ICGB	ISOLATED COPPER GROUND BUSS
IN, (")	INCH(ES)
INT	INTERIOR
LB, (#)	POUND(S)
LAG	LAG BOLTS
LF	LINEAR FEET (FOOT)
LTH	LENGTH
L	LONG(ITUDINAL)
LPS	LOW PRESSURE SODIUM
MAS	MASONRY
MAX	MAXIMUM
MB	MACHINE BOLT
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MTS	MANUAL TRANSFER SWITCH
N	NEUTRAL
(N)	NEW
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
NO, (#)	NUMBER
NTS	NOT TO SCALE
OH	OVERHEAD
OC	ON CENTER
OPNG	OPENING
P	POLE
PC	PRECAST CONCRETE
PCS	PERSONAL COMMUNICATION SERVICES
PH	PHASE
PLY	PLYWOOD
PNLBD	PANELBOARD
PPC	POWER PROTECTION CABINET
PRC	PRIMARY RADIO CABINET
PRI	PRIMARY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PWR	POWER (CABINET)
QTY	QUANTITY
RAD, (R)	RADIUS
RCPT	RECEPTACLE
REF	REFERENCE
REINF	REINFORCEMENT(ING)
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL
SAF	SAFETY
SCH	SCHEDULE
SDBC	SOFT DRAWN BARE COPPER
SEC	SECONDARY
SHT	SHEET
SIM	SIMILAR
SN	SOLID NEUTRAL
SPEC	SPECIFICATION(S)
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUC	STRUCTURAL
SURF	SURFACE
SW	SWITCH
TEL	TELEPHONE
TEMP	TEMPORARY
THK	THICK(NESS)
TN	TOE NAIL
TOA	TOP OF ANTENNA
TOC	TOP OF CURB
TOF	TOP OF FOUNDATION
TOP	TOP OF PLATE (PARAPET)
TOS	TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UG	UNDER GROUND
UL	UNDERWRITERS LABORATORY INC.
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VAC	VOLT ALTERNATING CURRENT
VIF	VERIFY IN FIELD
W	WATT OR WIRE
WD	WIDE(WIDTH)
W/	WITH
W/O	WITHOUT
WD	WOOD
WP	WEATHERPROOF
WT	WEIGHT
XFER	TRANSFER
XFMR	TRANSFORMER
XLPE	CROSS-LINK POLYETHYLENE
℄	CENTERLINE
℄	PLATE

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REGISTERED PROFESSIONAL ENGINEER
BRET A. McCOMB
C 69891
EXP 09-30-18
CIVIL
STATE OF CALIFORNIA

CRAN_R5FR_SAJO1_009

ROW ADJCT TO SAND HILL ROAD
MENLO PARK, CA 94028

ISSUE STATUS

△	DATE	DESCRIPTION
	02/08/18	CD 90%
	05/02/18	CD 100%

DRAWN BY:	T. DiCARLO
CHECKED BY:	B. McCOMB
APPROVED BY:	B. McCOMB
DATE:	05/02/18

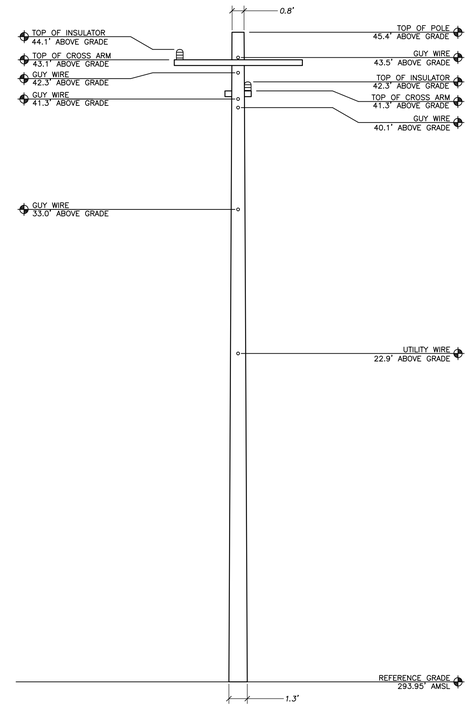
SHEET TITLE:

GENERAL NOTES, LEGEND, & ABBREVIATIONS

SHEET NUMBER

T-2

2 SITE PLAN
SCALE: 1"=10'



3 WOODEN UTILITY POLE ELEVATION
SCALE: 1"=10'

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 inch = 10ft.

BOUNDARY AND TITLE INFORMATION

THIS MAP IS A GRAPHIC DEPICTION OF DATA COMPILED FROM MAPS AND VARIOUS OTHER INFORMATION. IT IS NOT A BOUNDARY SURVEY. THIS MAP IS A TOPOGRAPHIC MAP SHOWING PROPERTY LINES PLOTTED FROM SAID RECORD DATA AND BEST FIT ONTO EXISTING IMPROVEMENTS. THE LIMITS OF TOPOGRAPHIC DATA AND/OR IMPROVEMENTS GATHERED AND DEPICTED ARE LIMITED TO THE CONTRACTUAL SCOPE FOR THIS PROJECT. NO MONUMENTS WERE SET OR WILL BE SET. NO TITLE RESEARCH WAS PERFORMED BY OMNI DESIGN GROUP INC. PROPERTY LINE LOCATION COULD POSSIBLY SHIFT FROM LOCATIONS SHOWN HEREON SHOULD A BOUNDARY SURVEY BE PERFORMED. LOCATIONS OF EXISTING FEATURES RELATIVE TO PROPERTY LINES THEREFORE ARE APPROXIMATE

DATUM:

HORIZONTAL & VERTICAL DATUMS SHOWN ON THESE PLANS WERE OBTAINED FROM GPS OBSERVATIONS USING CALIFORNIA REAL TIME NETWORK "CRTN".

BASIS OF BEARINGS

THE BEARINGS ARE BASED UPON CALIFORNIA COORDINATE SYSTEM, ZONE 3, NAD 83

BENCHMARK:

THE ELEVATIONS ARE BASED UPON NAVD 88

NOTES:

1. DATE OF SURVEY: 10/23/17
2. NO UNDERGROUND UTILITIES WERE LOCATED.
3. ADDRESS(S) AND ASSESSOR PARCEL NUMBER(S) "APN" WERE OBTAINED USING THE COUNTY OF SAN MATEO'S GIS WEBSITE. OMNI DESIGN GROUP, INC. ASSUMES NO LIABILITY FOR INFORMATION OBTAINED.

LEGEND

AC = ASPHALTIC CONCRETE
EP = EDGE OF PAVEMENT
FL = FLOWLINE
FS = FINISHED SURFACE
GD = GROUND ELEVATION
TC = TOP OF CURB
AGL = ABOVE GRADE LEVEL
AMSL = ABOVE MEAN SEA LEVEL

1 BOUNDARY & LEGAL DESCRIPTIONS
SCALE: NONE

at&t
2600 CAMINO RAMON
4TH FLOOR, WEST WING
SAN RAMON, CA 94583

PROJECT INFORMATION:

SAJ01 009

SAND HILL RD
MENLO PARK, CA

CURRENT ISSUE DATE:

11/28/17

ISSUED FOR:

100% SURVEY

REV.:	DATE:	DESCRIPTION:	BY:

COORDINATING ARCHITECT:

omni DESIGN GROUP
Architecture
Civil Engineering
Surveying
Telecommunications
711 Tank Farm Road, Suite 100
San Luis Obispo, California 93401
Phone: (805) 544-9700
www.omnidesigngroup.com
email: omni@odgslo.com

SEAL:

PROFESSIONAL LAND SURVEYOR
DAVID A. MARCHELL
EXP. 12-31-18
NO. PLS6375
STATE OF CALIFORNIA

CONSULTANT:

Modus, Inc.
240 Stockton Street, 3rd Floor
San Francisco, CA 94108

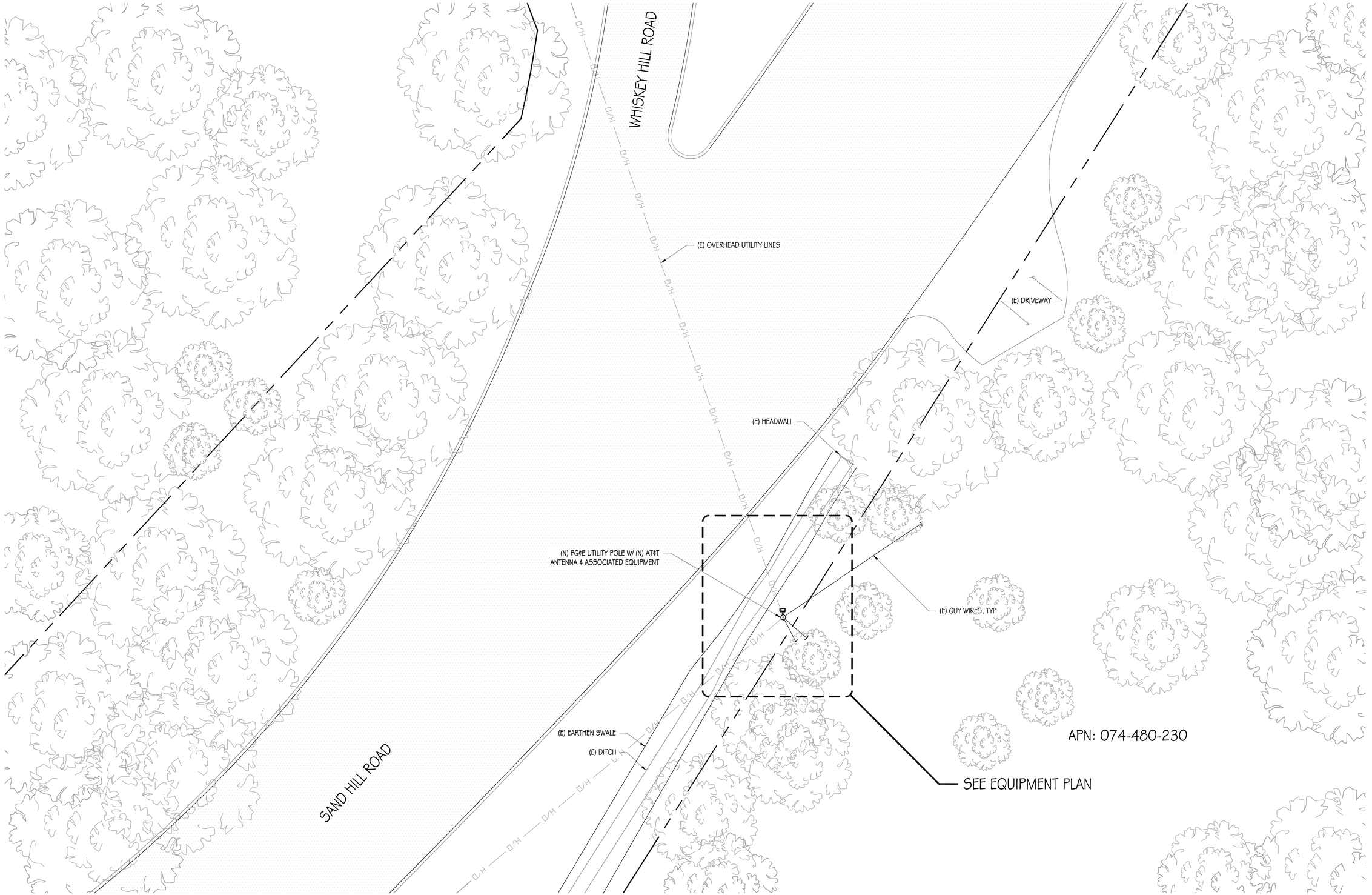
DRAWN BY:	CHK.:	APV.:
DB/SH	DM	DM

SHEET TITLE:

SITE PLAN

SHEET NUMBER: C-1

REVISION: 1180-199



SITE PLAN

1"=10'

0 5' 10' 20' 30' 50'

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5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

MODUS

240 STOCKTON STREET, 3RD FLOOR
SAN FRANCISCO, CA 94108

PRECISION DESIGN & Drafting, INC.
Phone: (530) 823-6546 www.pdnd.com
11768 Atwood Rd. Suite 20 Auburn, CA 95603

REGISTERED PROFESSIONAL ENGINEER
BRET A. McCOMB
C 69891
EXP 09-30-18
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_SAJO1_009

ROW ADJCT TO SAND HILL ROAD
MENLO PARK, CA 94028

ISSUE STATUS

△	DATE	DESCRIPTION
	02/08/18	CD 90%
	05/02/18	CD 100%

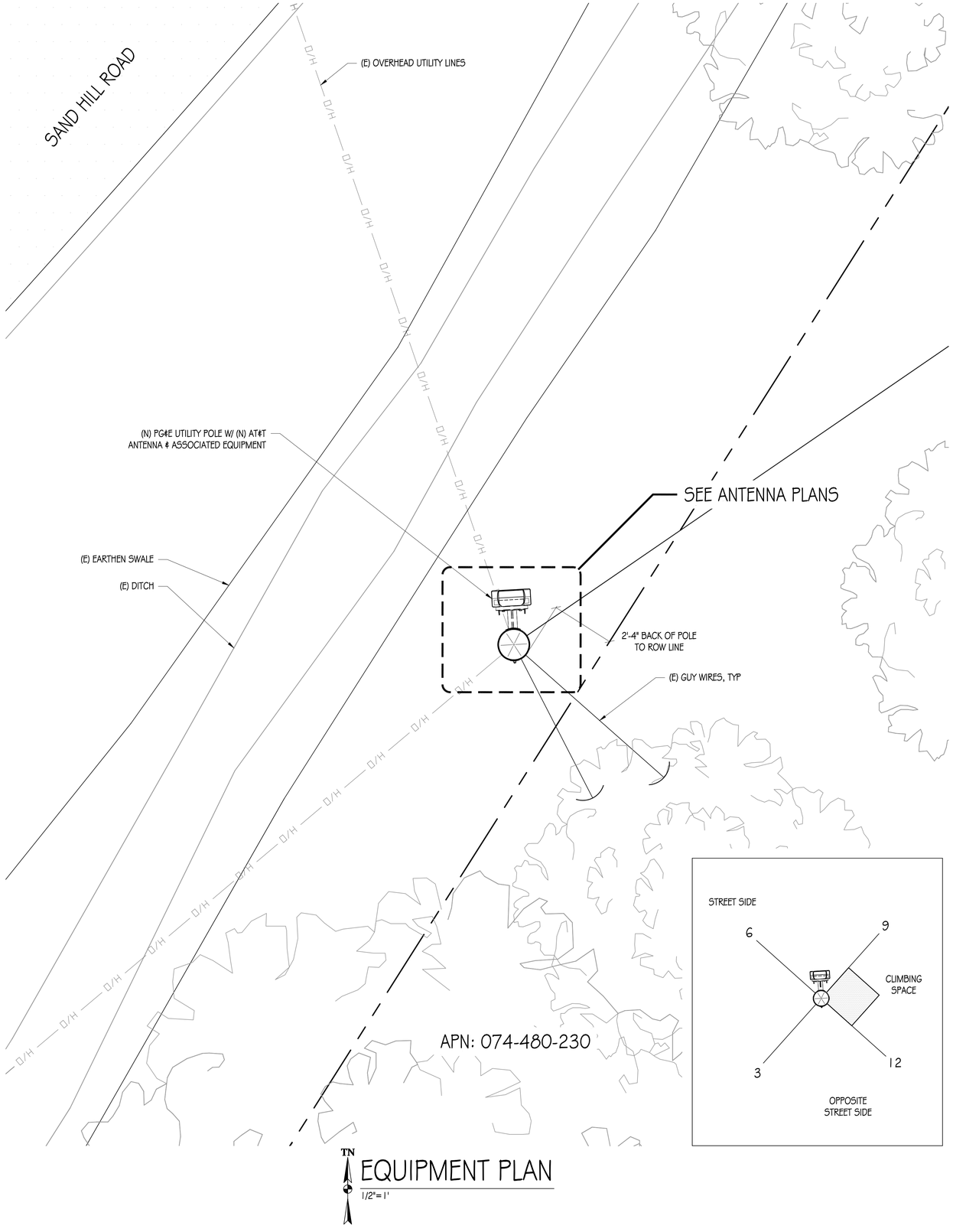
DRAWN BY:	T. DiCARLO
CHECKED BY:	B. McCOMB
APPROVED BY:	B. McCOMB
DATE:	05/02/18

SHEET TITLE:

SITE PLAN

SHEET NUMBER

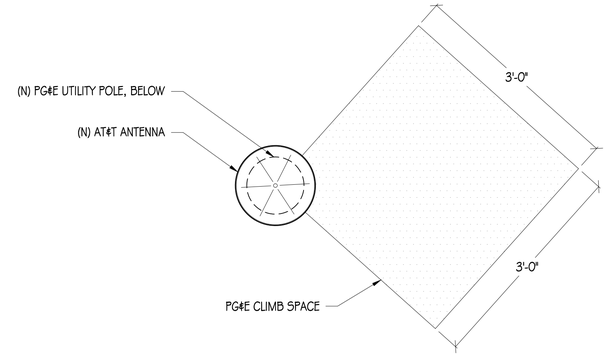
A-1



TN

EQUIPMENT PLAN

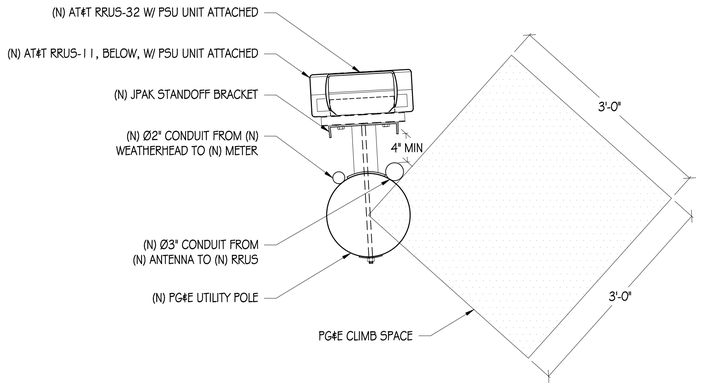
1/2"=1'



TN

ANTENNA PLAN

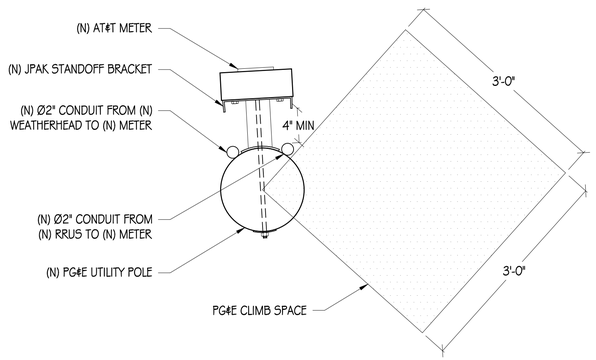
1"=1'



TN

RRU PLAN

1"=1'



TN

ELECTRICAL METER PLAN

1"=1'

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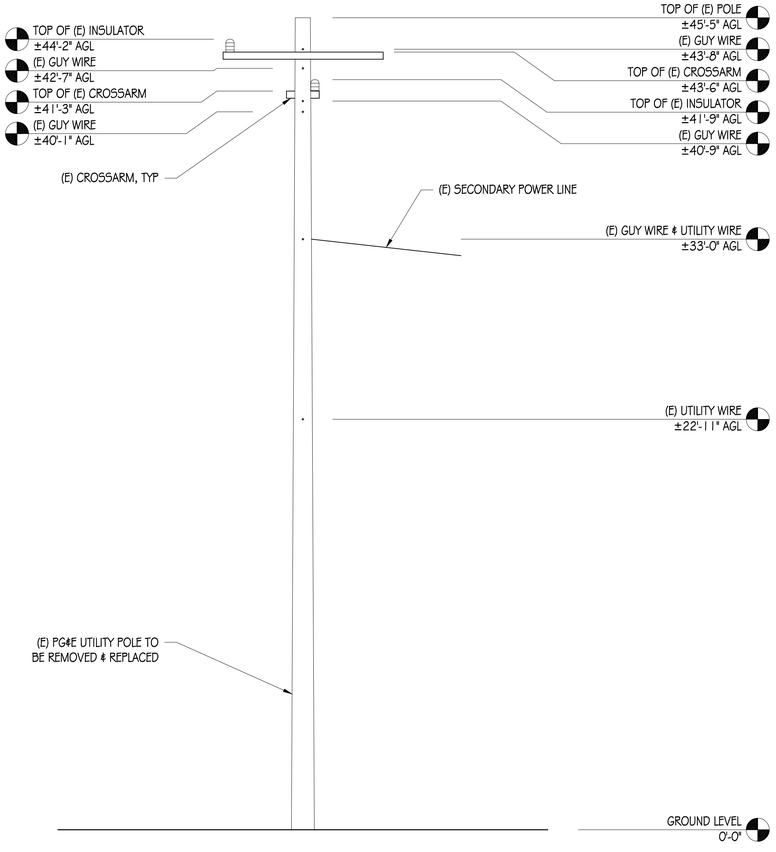
SHEET TITLE:

EQUIPMENT PLAN & ANTENNA PLANS

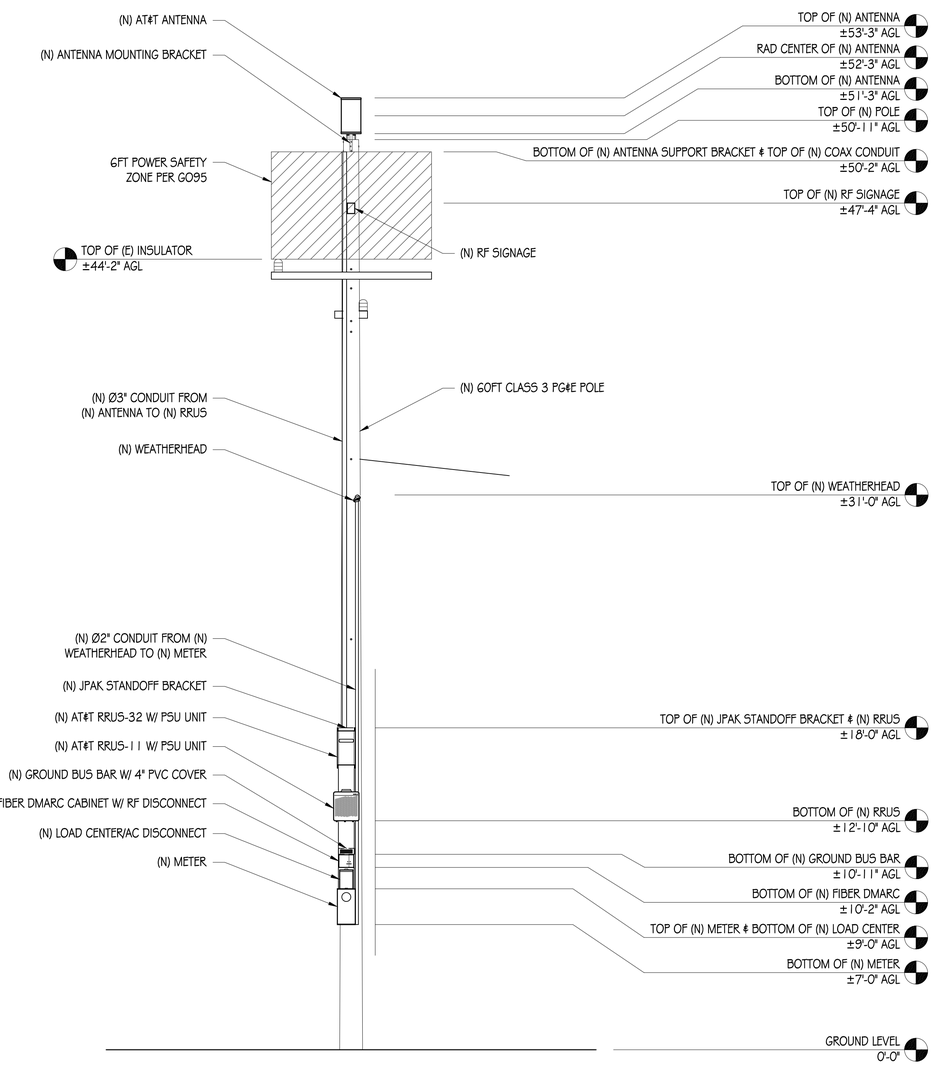
SHEET NUMBER

A-2



EXISTING NORTHWEST ELEVATION

1/4"=1'-0"



NEW NORTHWEST ELEVATION

1/4"=1'-0"

NOTE: ALL (N) EQUIPMENT TO BE PAINTED MESA BROWN

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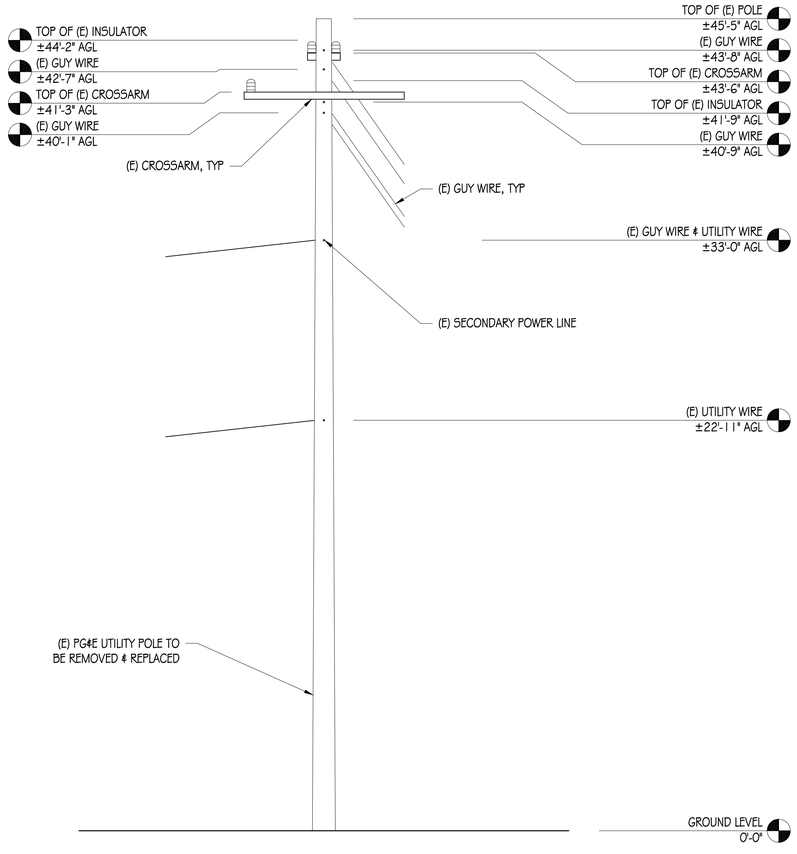
SHEET TITLE:

ELEVATIONS

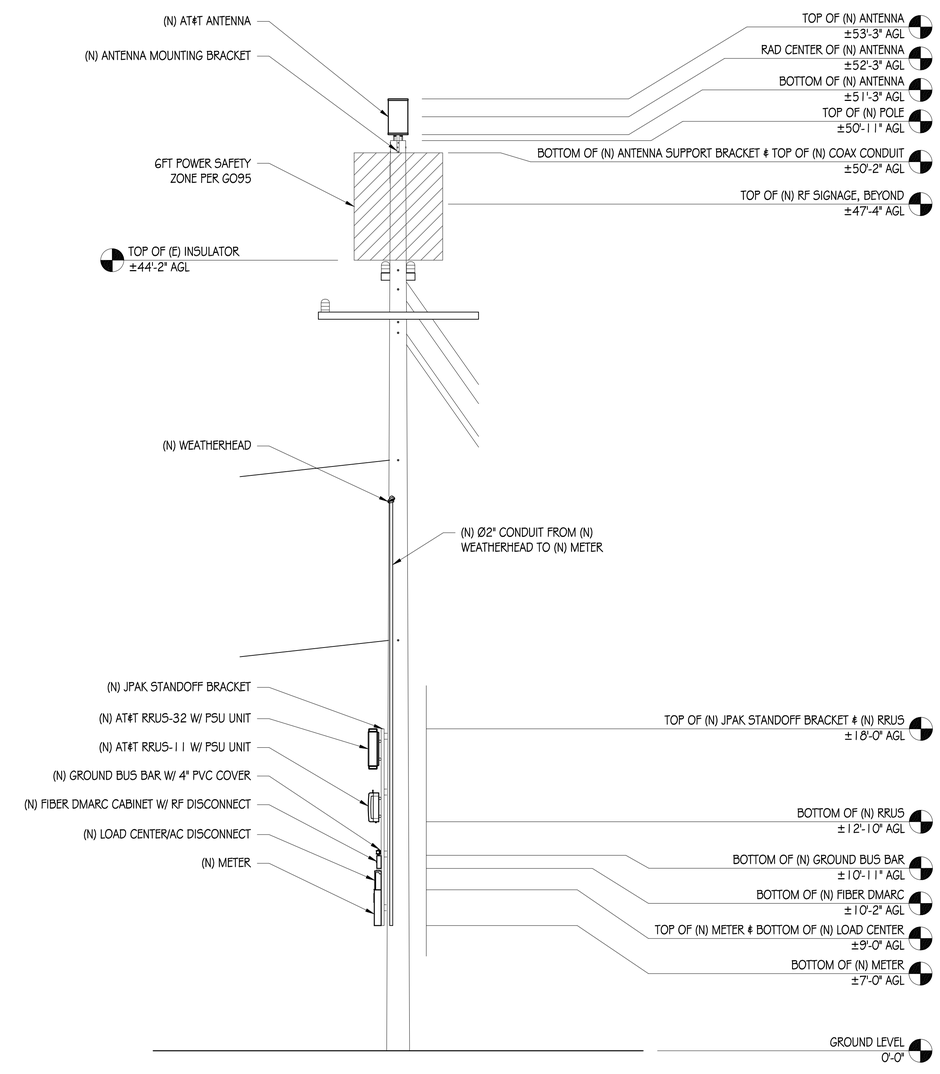
SHEET NUMBER

A-3



EXISTING SOUTHWEST ELEVATION

1/4"=1'-0"



NEW SOUTHWEST ELEVATION

1/4"=1'-0"

NOTE: ALL (N) EQUIPMENT TO BE PAINTED MESA BROWN

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DATE:	05/02/18

SHEET TITLE:

ELEVATIONS

SHEET NUMBER

A-4

POLE-TOP EXTENSION NOTES:

1. THIS UNIT MEETS GENERAL ORDER (G.O.) 95 REQUIREMENTS FOR STRENGTH IN CLASS 6 POLES AND THEREFORE MAY BE USED TO SUPPORT EQUIPMENT ON THESE CLASSES OF POLES. IT MAY BE USED ON LARGER CLASS POLES, BUT MAY NOT BE USED TO SUPPORT EQUIPMENT ON THEM.

2. THE UNIT MAY BE GUYED.

3. THE BRACKET IS MADE TO FIT POLES WITH DIAMETERS OF 8"-11". THEREFORE, DEPENDING UPON THE ACTUAL POLE-TOP DIAMETER, TO FIT POLES OF CLASS 3 AND SMALLER, A BRACKET ADAPTER MAY BE REQUIRED.

4. UNITS ARE SUPPLIED WITH THE WOOD BAYONET ASSEMBLED.

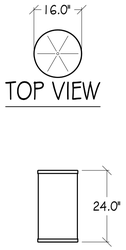
5. A POLE STEP KIT IS REQUIRED.

6. ATTACH THE BRACKET ASSEMBLY ACROSS THE LINE DIRECTION WITH THE CROSS ARM.

7. ALL DETAILS SHOWN ON THIS PAGE ARE FOR REFERENCE ONLY. THE POLE-TOP EXTENSION AND ANTENNA MOUNTING SYSTEMS ARE PER UTILITY COMPANY STANDARDS AND ARE SUBJECT TO CHANGE AT THEIR DISCRETION. BOTH THE POLE-TOP EXTENSION AND ANTENNA MOUNTING SYSTEM SHALL BE INSTALLED BY THE UTILITY COMPANY.

CANISTER ANTENNA

WIND AREA:	2.38 SQ FT
WEIGHT:	TBD
DIMENSIONS:	Ø16.0" X 24.0" TALL
RF CONNECTORS:	(12) 4.3-10 FEMALE



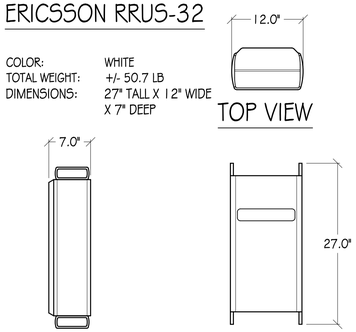
TOP VIEW

FRONT VIEW

1 ANTENNA
1/2"=1'

ERICSSON RRUS-32

COLOR:	WHITE
TOTAL WEIGHT:	+/- 50.7 LB
DIMENSIONS:	27" TALL X 12" WIDE X 7" DEEP



TOP VIEW

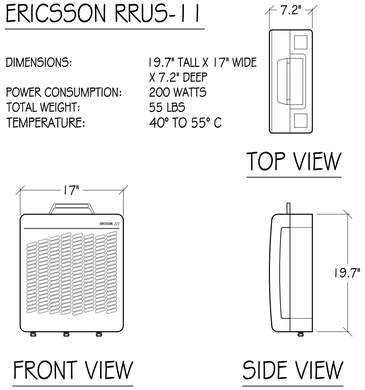
SIDE VIEW

FRONT VIEW

2 RRUS-32
1"=1'

ERICSSON RRUS-11

DIMENSIONS:	19.7" TALL X 17" WIDE X 7.2" DEEP
POWER CONSUMPTION:	200 WATTS
TOTAL WEIGHT:	55 LBS
TEMPERATURE:	40° TO 55° C

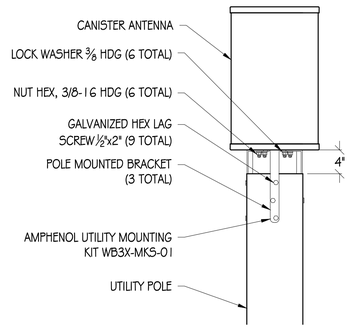


TOP VIEW

FRONT VIEW

SIDE VIEW

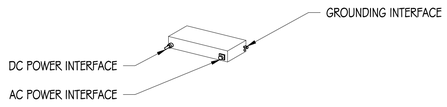
3 RRUS-11 DETAIL
1"=1'



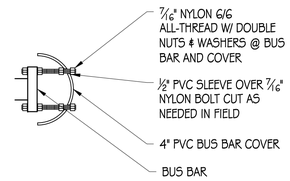
4 POLE-TOP ANTENNA MOUNT DETAIL
1"=1'

ERICSSON PSU AC 08

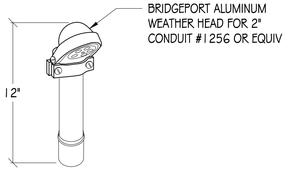
DIMENSIONS:	2.72" X 10.79" X 7.09"
WEIGHT:	11.46 LBS



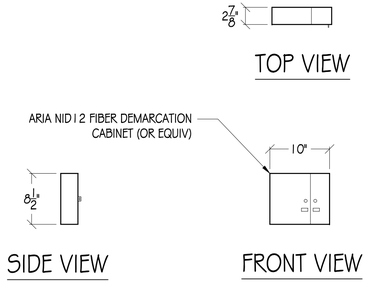
5 AC POWER MODULE
NTS



6 BUS BAR COVER
6"=1'



7 WEATHER HEAD
NTS

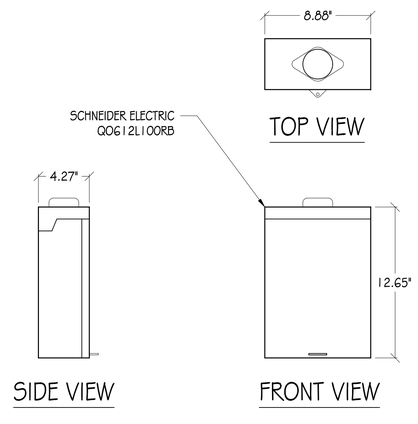


TOP VIEW

SIDE VIEW

FRONT VIEW

8 ARIA NID12 FIBER DMARC
1"=1'

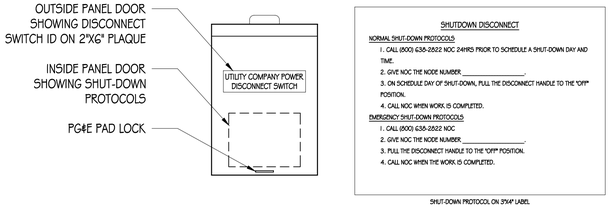


TOP VIEW

SIDE VIEW

FRONT VIEW

9 LOAD CENTER/AC DISCONNECT
1"=6"



SHUT-DOWN PROTOCOL ON 5"X4" LABEL

10 DISCONNECT SIGNAGE
3"=1'

NOTES:
1. SITE ID WILL BE SWITCH #, SITE # & SITE NAME
2. SIGN PROVIDED BY GC MOUNTED TO OUTSIDE OF SERVICE DISCONNECT

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SHEET TITLE:

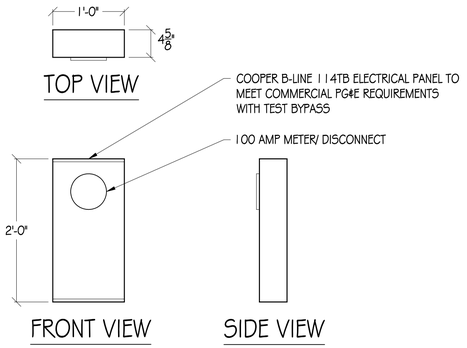
DETAILS

SHEET NUMBER

A-5

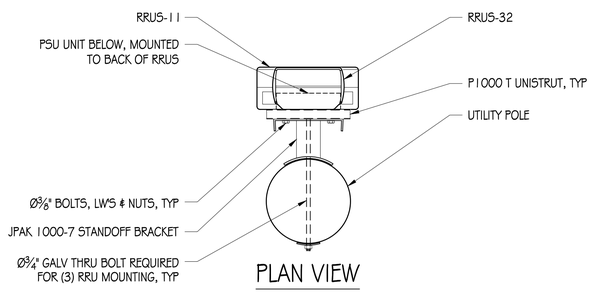
STRUCTURAL STEEL NOTES:

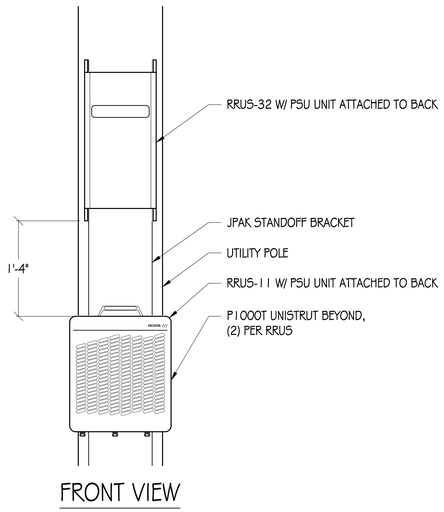
1. ALL STEEL CONSTRUCTION INCLUDING FABRICATION, ERECTION AND MATERIALS SHALL COMPLY WITH ALL REQUIREMENTS OF THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AND THE 2016 CBC.
2. ALL STRUCTURAL STEEL SHALL BE ASTM A36 UNLESS OTHERWISE NOTED. ALL WF (WIDE FLANGE) & WT (TEE) SHAPES TO BE ASTM A992 (F_y=50,000 PSI) UNLESS NOTED OTHERWISE. ALL STRUCTURAL TUBING (TS OR HSS) SHALL BE ASTM A500 GRADE B (F_y=46,000 PSI). ALL STEEL PIPE SHALL BE ASTM A53 (TYPE E OR S, GRADE B (F_y=35,000 PSI)) SCHEDULE 40 WITH OUTSIDE DIAMETERS GIVEN UNLESS OTHERWISE NOTED.
3. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND SHALL CONFORM TO AISC & AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC SPECIFICATION. PAINTED SURFACES SHALL BE TOUCHED UP.
4. ALL WELDING SHALL BE PERFORMED BY QUALIFIED, CERTIFIED WELDERS.
5. BOLTS SHALL BE GALVANIZED ASTM A325 MINIMUM. BOLTED CONNECTIONS SHALL BE BEARING TYPE. SEE PLANS FOR LOCATION, NUMBER, & SIZE OF BOLTS. SPECIAL INSPECTION NOT REQUIRED U.O.N.
6. THREADED RODS SHALL BE ASTM F593 CW 304/316 STAINLESS STEEL . BOLTED CONNECTIONS SHALL BE BEARING TYPE. SEE PLANS FOR LOCATION, NUMBER, & SIZE OF BOLTS.
7. ALL HOLES FOR BOLTED CONNECTIONS SHALL BE 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER. USE STANDARD AISC GAGE AND PITCH FOR BOLTS EXCEPT AS NOTED OTHERWISE. HOLES FOR ANCHOR BOLTS IN BASE PLATES MAY BE AISC "OVERSIZE" HOLES WHERE ACCOMPANIED BY OVERSIZED HARDENED HDG WASHERS.
8. ALL SHOP FABRICATED STEEL STRUCTURAL MEMBERS FOR EXTERIOR USE SHALL BE HOT DIP GALVANIZED PER ASTM A123 AFTER FABRICATION & PAINTED PER CUSTOMER SPECIFICATIONS AS REQUIRED. STEEL FOR INTERIOR USE SHALL BE SHOP COAT OR GALVANIZED & PAINTED PER PLAN.
9. ALL FIELD FABRICATED GALVANIZED STEEL THAT IS CUT, GROUND, DRILLED, WELDED OR DAMAGED SHALL BE TREATED WITH "ZINC RICH" COLD GALVANIZING SPRAY OR COATING. NO RAW STEEL SHALL BE EXPOSED.
10. AT ALL WEB STIFFENER PLATES LEAVE ¾"Ø (OR K, WHICHEVER IS LARGER) HOLE @ WEB/FLANGE INTERSECTION UNLESS NOTED OTHERWISE.



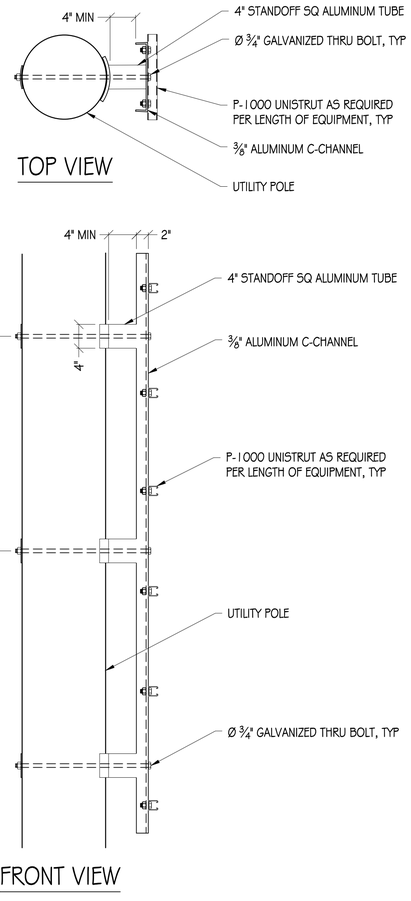
1 METER DETAIL
1"= 1'

2 NOTICE SIGNAGE
NTS

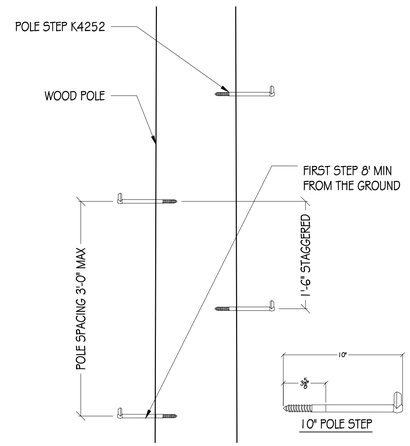




3 RRU MOUNTING DETAIL
1"= 1'



4 JPAK STANDOFF DETAIL
1"= 1'



5 POLE STEP
1"= 1'
NOTE: POLE STEP TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS

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SHEET NUMBER

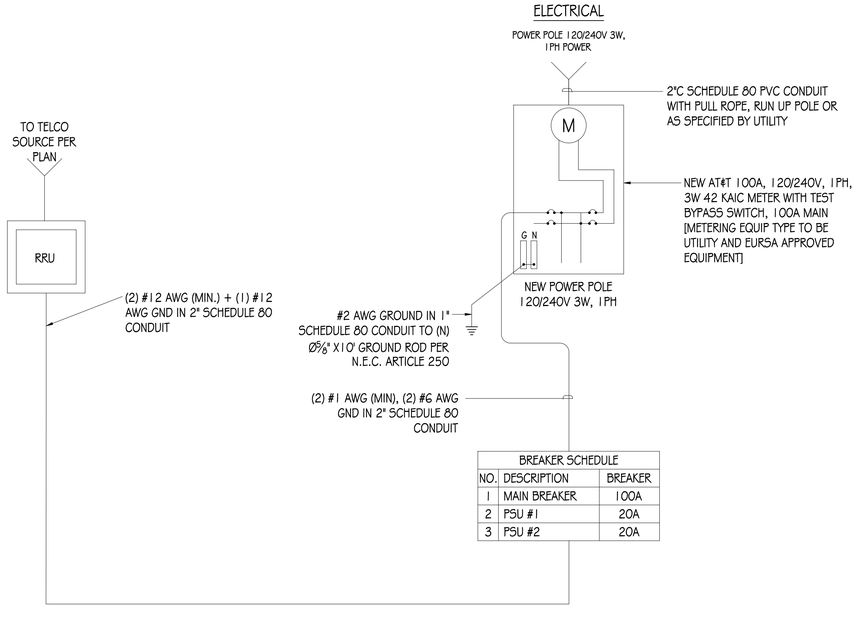
A-6

GENERAL ELECTRICAL NOTES:

1. PROVIDE ALL ELECTRICAL WORK & MATERIALS AS SHOWN ON THE DWGS, AS CALLED FOR HEREIN, & AS IS NECESSARY TO FURNISH A COMPLETE INSTALLATION.
2. THE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ADOPTED CALIFORNIA ELECTRICAL CODE, STATE OF CALIFORNIA TITLE24, ALL OTHER APPLICABLE CODES AND ORDINANCES & THE REQUIREMENTS OF THE FIRE MARSHALL. ALL EQUIPMENT & WIRING SHALL BEAR THE APPROVAL STAMP OF UNDERWRITERS LABORATORY (UL) OR AN APPROVED TESTING LABORATORY, PAYMENT FOR ALL INSPECTION FEES AND PERMITS ARE PART OF THIS CONTRACT.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY AND GOOD CONDITION OF ALL MATERIALS & EQUIPMENT FOR THE ENTIRE INSTALLATION & UNIT COMPLETION OF WORK, ERECT & MAINTAIN APPROVED & SUITABLE BARRIERS, PROTECTIVE DEVICES & WARNING SIGNS, BE FULLY RESPONSIBLE FOR ANY LOSS OR INJURY TO PERSONS OR PROPERTY RESULTING FROM NEGLIGENCE AND/OR ENFORCEMENT OF ALL SAFETY PRECAUTIONS & WARNINGS.
4. COORDINATE THE ELECTRICAL INSTALLATION WITH ALL OTHER TRADES.
5. ALL SAW CUTTING, TRENCHING, BACK FILLING & PATCHING SHALL BE PART OF THIS CONTRACT.
6. FINALIZE ALL ELECTRICAL SERVICE ARRANGEMENTS, INCLUDING VERIFICATION OF LOCATIONS, DETAILS, COORDINATION OF THE INSTALLATION & PAYMENT OF ACCRUED CHARGES WITH LOCAL POWER COMPANY, VERIFY LOCATION FOR FACILITIES & DETAILS WITH POWER UTILITY, IN ADDITION TO THE REQUIREMENTS SHOWN IN THE CONTRACT DOCUMENTS, WORK SHALL COMPLY WITH CONSTRUCTION STANDARDS & SERVICE REQUIREMENTS OF THE RESPECTIVE UTILITIES, INCLUDING ANY SUPPLEMENTAL DWGS ISSUED & SHALL BE SUBJECT TO APPROVAL OF THESE UTILITIES.
7. ALL WIRING SHALL BE COPPER. INSULATION FOR BRANCH CIRCUIT CONDUCTORS SHALL BE TYPE "THWN" CONDUCTORS LARGER AND #6 AWG MAY BE TYPE "THWN" OR "TWN".
8. PROVIDE CONDUIT SEALS FOR ALL CONDUITS PENETRATING WEATHERPROOFING OR WEATHERPROOF ENCLOSURE ENVELOPE. MASTIC SEAL ALL CONDUIT OPENING PENETRATIONS COMPLETELY WATERTIGHT.
9. UNLESS SHOWN OTHERWISE, FUSED DISCONNECT SWITCHES SHALL BE PROVIDED WITH LOW-PEAK, SIDUAL ELEMENT FUSES SIZED TO EQUIPMENT NAMEPLATE FUSE CURRENT RATING. MOTOR STARTERS SHALL BE PROVIDED WITH SIMILARLY SIZED FUSIBLE ELEMENTS, SWITCHES AND OTHER OUTDOOR EQUIPMENT SHALL BE RATED NEMA 3R AND/OR UL LISTED FOR WET ENVIRONMENT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING THE GROUNDING SYSTEM AND ENSURING A 5 OHM OR LESS GROUNDING PATH, ADDITIONAL GROUND RODS AND/OR CHEMICAL ROD SYSTEM SHALL BE USED TO ACHIEVE THIS REQUIREMENT IF THE GIVEN DESIGN CANNOT BE MADE TO ACHIEVE THIS REQUIREMENT.

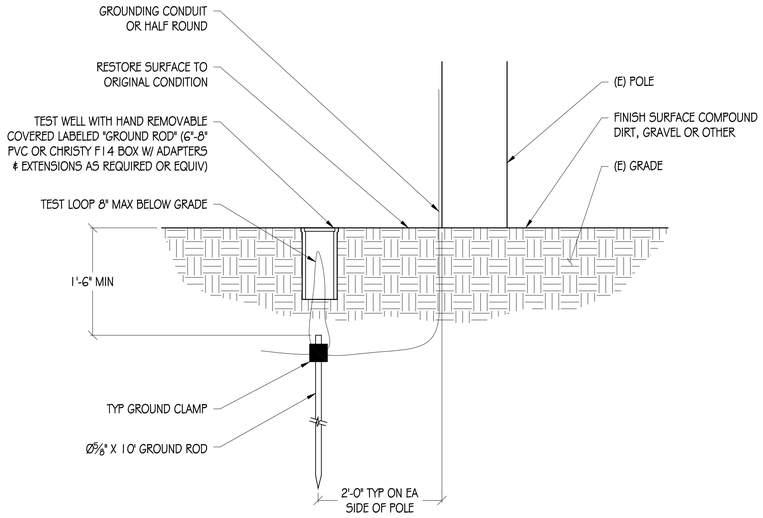
POWER AND TELCO NOTES:

1. POWER AND TELCO POINTS OF CONNECTION AND ANY EASEMENTS ARE PRELIMINARY AND SUBJECT TO CHANGE BY THE UTILITY COMPANIES.
2. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY FOR FINAL AND EXACT WORK/MATERIALS REQUIREMENTS AND CONSTRUCT TO UTILITY ENGINEERING PLANS AND SPECIFICATIONS ONLY WHERE APPLICABLE PER PROJECT SCOPE OF WORK.
3. CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT, PULL WIRES, CABLE PULL BOXES, CONCRETE ENCASEMENT OF CONDUIT, TRANSFORMER PAD, BARRIERS, POLE RISER TRENCHING, BACK FILL, AND UTILITY FEES, AND INCLUDE REQUIREMENTS IN SCOPE.
4. CONTRACTOR SHALL LABEL ALL MAIN DISCONNECT SWITCHES AS REQUIRED BY CODE.
5. CONTRACTOR SHALL PROVIDE METER WITH DIST. PANEL AND BREAKERS FOR POWER TO THE BTS UNITS AND THE BTS/ UTILITY CABINET.
6. ALL SERVICE EQUIPMENT AND INSTALLATIONS SHALL COMPLY WITH THE N.E.C. AND UTILITY COMPANY AND LOCAL CODE REQUIREMENTS.
7. CONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE ENTRANCE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.
8. FIELD ROUTE CONDUIT TO CABINETS AS REQUIRED.
9. MAXIMUM ONE WAY CIRCUIT RUN NOT TO EXCEED 75 FEET.



BREAKER SCHEDULE		
NO.	DESCRIPTION	BREAKER
1	MAIN BREAKER	100A
2	PSU #1	20A
3	PSU #2	20A

SINGLE-LINE DIAGRAM

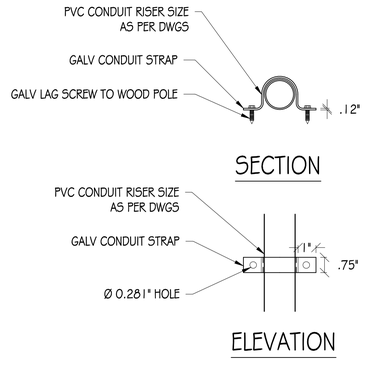


NOTES:

1. IF GROUND ROD IS INSTALLED ON SIDEWALK AREA, CORE DRILL SIDEWALK PRIOR TO INSTALLING INSPECTION WELL
2. EXPOSED CONCRETE TO HAVE BROOM FINISH

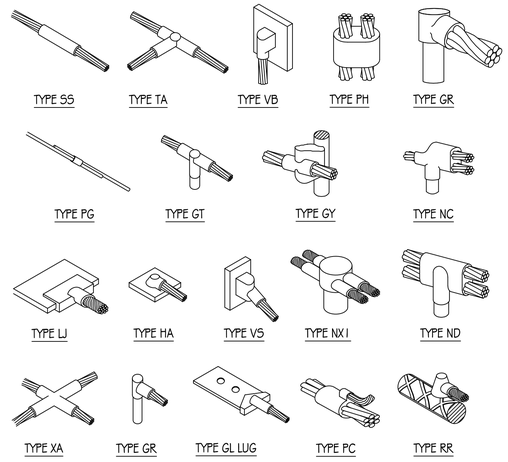
1 POLE GROUNDING DETAIL

NTS



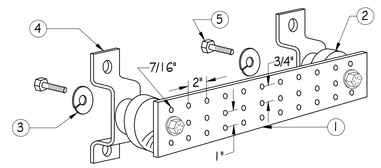
2 CONDUIT RISER DETAIL

NTS



3 EXOTHERMIC WELD DETAILS

NTS

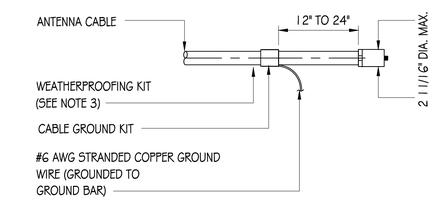


NOTES:

1. GALVANIZED STEEL GROUND BAR, HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION. (ACTUAL GROUND BAR SIZE WILL VARY BASED ON NUMBER OF GROUND CONNECTIONS)
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4 OR APPROVED EQUAL
3. 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO., CAT. NO. 3015-8 OR APPROVED EQUAL
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO., CAT NO. A-6056 OR APPROVED EQUAL
5. 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO., CAT NO. 3012-1 OR APPROVED EQUAL
6. INSULATORS SHALL BE ELIMINATED WHEN BONDING DIRECTLY TO TOWER/MONOPINE STRUCTURE. CONNECTION TO TOWER/MONOPINE STRUCTURE SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

4 GROUND BAR DETAIL

NTS



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE (TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.)

5 GND KIT DETAIL

NTS

at&t
AT&T MOBILITY
5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

MODUS
240 STOCKTON STREET, 3RD FLOOR
SAN FRANCISCO, CA 94108

PRECISION DESIGN & Drafting, INC.
Phone: (530) 823-6546 www.pdnd.com
11768 Atwood Rd. Suite 20 Auburn, CA 95603

REGISTERED PROFESSIONAL ENGINEER
BRET A. McCOMB
C 69891
EXP 09-30-18
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_SAJO1_009

ROW ADJCT TO SAND HILL ROAD
MENLO PARK, CA 94028

ISSUE STATUS

△	DATE	DESCRIPTION
	02/08/18	CD 90%
	05/02/18	CD 100%

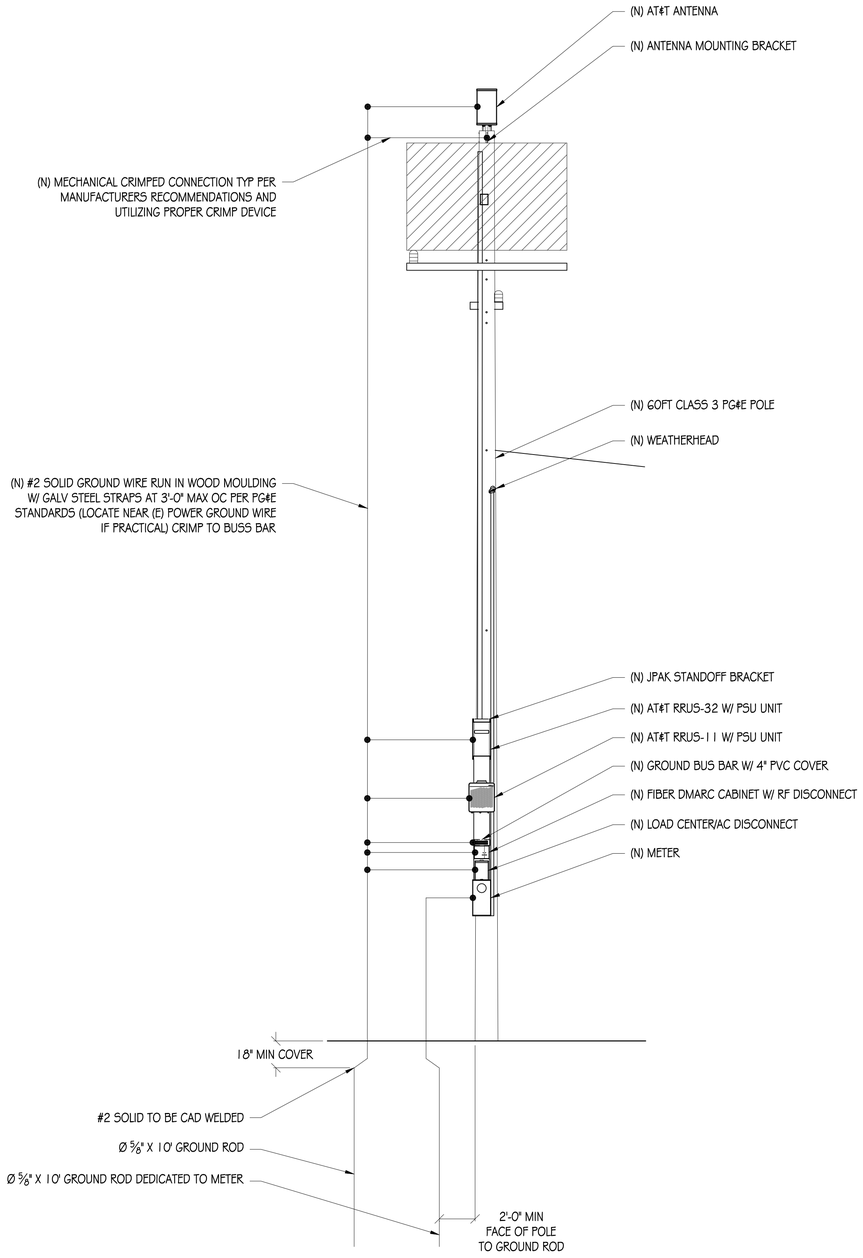
DRAWN BY:	T. DiCARLO
CHECKED BY:	B. McCOMB
APPROVED BY:	B. McCOMB
DATE:	05/02/18

SHEET TITLE:

SINGLE-LINE DIAGRAM & DETAILS

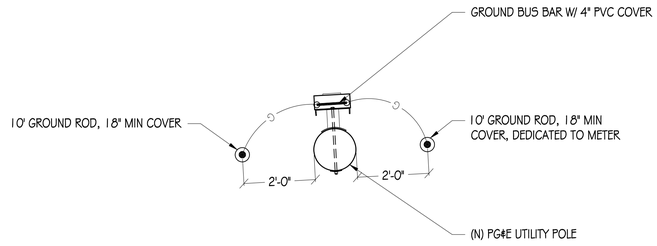
SHEET NUMBER

E-1



POLE GROUNDING DIAGRAM

NTS



TN

GROUNDING PLAN

NTS

at&t
AT&T MOBILITY
5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

MODUS
240 STOCKTON STREET, 3RD FLOOR
SAN FRANCISCO, CA 94108

PRECISION DESIGN & Drafting, INC.
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EXP 09-30-18
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STATE OF CALIFORNIA

CRAN_RSFR_SAJ01_009

ROW ADJCT TO SAND HILL ROAD
MENLO PARK, CA 94028

ISSUE STATUS

△	DATE	DESCRIPTION	
	02/08/18	CD 90%	
	05/02/18	CD 100%	

DRAWN BY:	T. DiCARLO
CHECKED BY:	B. McCOMB
APPROVED BY:	B. McCOMB
DATE:	05/02/18

SHEET TITLE:

GROUNDING DIAGRAMS

SHEET NUMBER

E-2

County of San Mateo - Planning and Building Department

ATTACHMENT D

Existing

03.29.2018

at&t

CRAN_RSFR_SAJO1_009
ROW adjacent to Sand Hill Rd, Menlo Park, CA 94028

Proposed

Photo simulation as seen looking south across Sand Hill Road

Existing

03.29.2018

at&t

CRAN_RSFR_SAJO1_009
ROW adjacent to Sand Hill Rd, Menlo Park, CA 94028

Proposed

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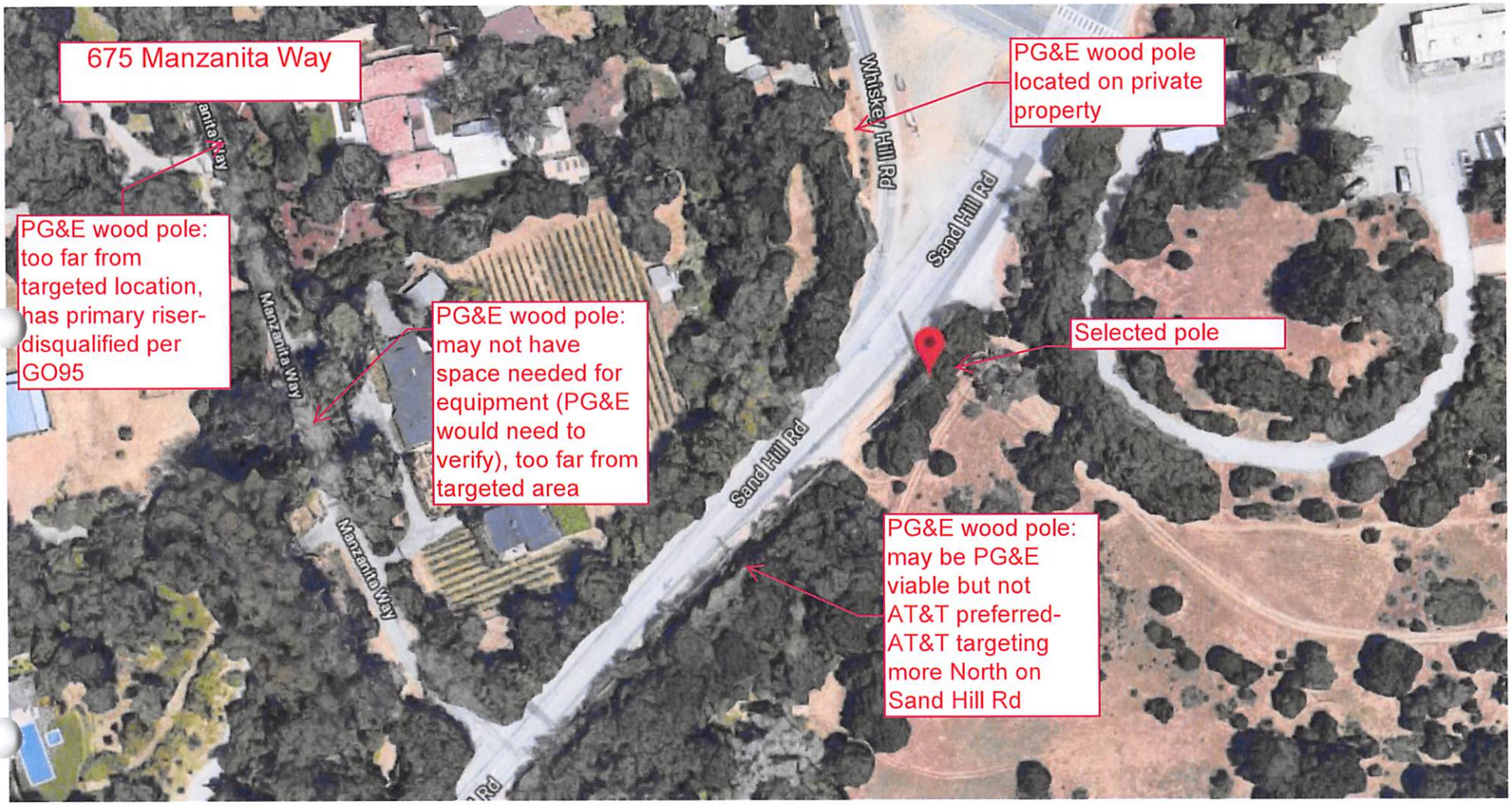
Photo simulation as seen looking northeast across Sand Hill Road

County of San Mateo - Planning and Building Department

ATTACHMENT E



PLN 2018-00126

County of San Mateo - Planning and Building Department

ATTACHMENT F

AT&T Mobility • Proposed DAS Node (Site No. CRAN_RSFR_SAJO1_009)
Sand Hill Road • Menlo Park, 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 the addition of Node No. CRAN_RSFR_SAJO1_009 to be added to the AT&T distributed antenna system ("DAS") near Menlo Park, 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 utility pole sited in the public right-of-way at the intersection of Whiskey Hill Road and Sand Hill Road in unincorporated San Mateo County, near Menlo Park. 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^2	1.00 mW/cm^2
WiFi (and unlicensed uses)	2–6	5.00	1.00
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

Power line frequencies (60 Hz) are well below the applicable range of these standards, and there is considered to be no compounding effect from simultaneous exposure to power line and radio frequency fields.

General Facility Requirements

Wireless nodes typically consist of two distinct parts: the electronic transceivers (also called "radios" or "channels") that are connected to a central "hub" (which in turn are connected to the traditional

wired telephone lines), and the passive antenna(s) that send the wireless signals created by the radios out to be received by individual subscriber units. The radios are often located on the same pole as the antennas and 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 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 Precision Design & Drafting, Inc., dated May 2, 2018, it is proposed to install one KMW Model FX-OM2L10H2, 2-foot tall, omnidirectional cylindrical antenna, on top of a new utility pole to replace the existing utility pole sited in the public right-of-way southeast of the intersection of Whiskey Hill Road and Sand Hill Road in unincorporated San Mateo County, near Menlo Park. The antenna would employ up to 2° downtilt and would be mounted at an effective height of about 52 feet above ground. The maximum effective radiated power in any direction would be 880 watts, representing simultaneous operation at 740 watts for PCS and 140 watts for 700 MHz 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 0.0051 mW/cm^2, which is 0.66% of the applicable public exposure limit. The maximum calculated level at any nearby building is 0.42% 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.

Recommended Mitigation Measures

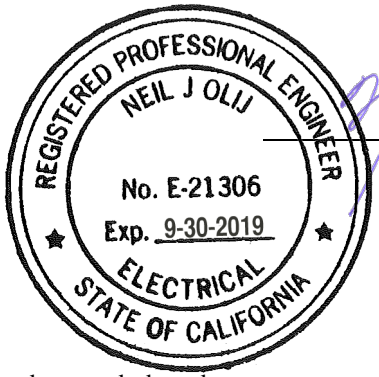
Due to its mounting location and height, the AT&T antenna would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, it is recommended that appropriate RF safety training be provided to all authorized personnel who have access to the antenna. No access within 5 feet at the same height as the antenna, such as might occur during certain maintenance activities on the pole, should be allowed while the node is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. It is recommended that an explanatory sign* be posted at the antenna and/or on the pole below the antenna, readily visible from any angle of approach to persons who might need to work within that distance.

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the node proposed by AT&T Mobility on Sand Hill Road near Menlo Park, 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 nodes.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration No. E-21306, which expires on September 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.



Neil J. Olij, P.E.
707/996-5200

June 14, 2018

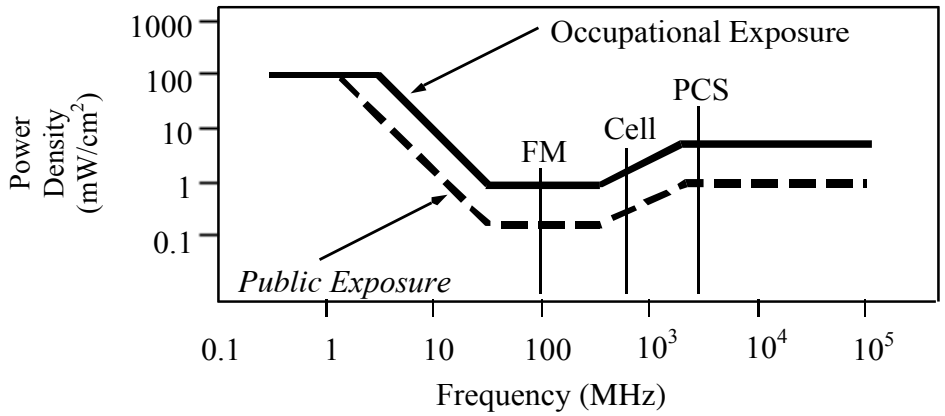
* Signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (*e.g.*, a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning or health authority, or appropriate professionals may be required. Signage may also need to comply with the requirements of California Public Utilities Commission General Order No. 95.

FCC Radio Frequency Protection Guide

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

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

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



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

RFR.CALC™ Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

Near Field.

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

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

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

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

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

Far Field.

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

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

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

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