Public Works Department - Engineering Division
One North San Antonio Road, Los Altos, California 94022-3087
Phone (650) 947-2780 Fax (650) 947-2732

ENCROACHMENT PERMIT No. E19-_____

APPLICATION
(To be completed by the applicant with a copy of detailed plan/drawing showing the proposed work):

LOCATION OF WORK: 33 Pine Ln

TYPE OF WORK: Install equipment on existing utility pole

CONTRACTOR: Ericsson, Delbert Butcher **PHONE #** 720-317-7282

OWNER: PG&E, Jwo Cheng **PHONE #** 650-515-9842

APPLICANT: AT&T Mobility (New Cingular Wireless PCS), Ivan Toews, SureSite Consulting, Agent **PHONE #** 949-278-2962

SPECIAL REQUIREMENTS (TO BE COMPLETED BY THE CITY):
Applicant must submit evidence of insurance coverage meeting the minimum requirements set forth in this permit including, without limitation, the General Requirements and exhibits attached hereto prior to issuance of this permit. The City of Los Altos approves this request subject to the "General Requirements" listed on the back of this page and the following indicated conditions:

- ☒ **Notify the City of Los Altos Engineering Division at (650) 947-2780 at least 2 business days prior to beginning any work in Downtown area or on collector and arterial roads. Work in the public right of way in other areas requires at least 1 business day notice prior to beginning of work. Final inspection shall be scheduled at least 1 business day prior by contacting City of Los Altos Engineering Division.**
- ☒ **A copy of this permit must be at job site for authorized representative of the City when requested or work may be terminated by the City until compliance with this requirement is met.**
- ☒ **The applicant shall notify the Los Altos Police Department at (650) 947-2770 and Fire Department, Santa Clara County at (408) 378-4010 at least 3 business days prior to any work in the traveled way section of a street.**
- ☐ **Applicant to construct Driveway/Walkway approach to the back of the existing rolled curb, without tying to the existing curb (cold joint).**
- ☐ **All work done in the City ROW shall comply with the City's Shoulder Paving Policy.**
- ☐ **Applicant shall provide adequate drainage with 3' wide AC swale (minimum of 4" AB plus 2" AC or 4" AC on compacted subbase is required) and conforms to existing street drainage.**
- ☐ **Contractor will be required to saw cut along the existing road pavement due to severe damaged edge.**
- ☐ **New sidewalk or curb shall be constructed per City Standards and connected to existing sidewalk or curb with #4, 16" long dowels @ 12"o.c. All saw cuts to be done at existing joints.**
- ☐ **Comments:** _____

Applicant has read and understands all the conditions; and agrees to all the conditions of this permit.

SIGNATURE OF APPLICANT: _____ **DATE:** _____

ISSUED BY: _____ **DATE:** _____
SIGNATURE

INSPECTED BY: _____ **FINAL INSPECTION DATE:** _____

ATTACHMENT:
☐ YES _____ **$196.00** **CREDIT** ☐ **CHECK** ☐ **CASH** ☐
☐ NO _____ | _____ **Provide Check # or type of credit (VS, MC, or D) and last 4 digits**

Distribution: **Original** – Inspector **Copies**: Applicant and Finance

PERMIT VALID FOR 60 DAYS
(See other side for General Requirements)

GENERAL REQUIREMENTS FOR ALL JOBS

A. To the fullest extent permitted by law, applicant shall defend, indemnify and hold City, the City Council, members of the City Council, its employees, representatives, agents and volunteers harmless from any and all suits, damages, costs, fees, claims, demands, causes of action, liabilities, losses expenses, damage or injury of any kind, in law or equity, to property or persons, including wrongful death and financial losses in any manner arising out of, pertaining to, or incident to any alleged acts, errors or omissions, or willful misconduct of applicant or applicant's officers, assistants, subcontractors, employees or agents in connection with this permit.

Applicant shall procure and maintain insurance as set forth in Exhibit B, attached hereto and incorporated herein by this reference, against claims for injury to persons or damage to property arising from or in connection with this permit.

B. Commencement of any work under this permit shall constitute acceptance of the conditions and requirements of this permit.

C. The City may require modifications to this permit as needed because of special field conditions.

D. **NO OTHER WORK**, other than specifically mentioned, is hereby authorized. A copy of this permit must be kept on the site of the work to be shown to any authorized representative of the City.

E. This permit does not authorize excavation and grading on private property. This permit does not release the applicant/permittee from liabilities contained in other agreements or contracts with the City, other agencies or persons.

F. This permit does not supersede or replace any permit that may be needed from other agencies. Proper permits must be obtained from State, County, and any other agency involved.

G. This permit is valid for **sixty (60) days** from the approval date unless otherwise noted.

H. Construction site signs, devices and lights shall be in accordance with Caltrans standards.

I. Use of a Flashing Arrow Panel is **MANDATORY** when work location is within a 35 MPH speed zone.

J. Traffic conditions and adequate protection of the public in the vicinity of the job site shall be the responsibility of the applicant. During construction activities, two-way traffic shall be maintained. A minimum of one traffic lane shall be kept passable and under the control of competent flag persons. At night, weekends, and holidays, a minimum of two 12-foot wide travel lanes shall be safe and passable.

K. Any damage to painted street pavement delineations, markings or reflectors and painted curbs shall be restored as approved by the Engineer.

L. Excavations within the asphalt street section shall be backfilled before leaving the work for the night, unless otherwise authorized by the City's representative. Temporary surfacing shall be placed on the trench surface overnight.

M. All trench backfill requires certified compaction test to 95% density or greater for each lift (Maximum lift of 12") or use Controlled Density Fill (CDF) as approved.

N. All work shall be performed in accordance with the latest issue of Cal O.S.H.A. Safety Orders. The City has not checked trench safety and trench safety is not implied with this permit.

O. Landscaping is **NOT** to be disturbed any more than absolutely necessary. Restoration shall be to property owner's satisfaction.

P. Drainage patterns during construction shall be maintained to insure that surface drainage is properly managed and surrounding areas are protected from damage. Restoration must be to grades necessary to maintain original condition and maintain proper drainage flow lines.

Q. Applicant/Permittee is responsible for complying with all applicable water quality standards adopted by the City, County, State or other jurisdictional or properly empowered regulatory agency.

R. All saw cut sludge/slurry should be immediately removed by means of a vacuum system.

EXHIBIT B
INSURANCE

CONTRACTOR shall provide its insurance broker(s)/agent(s) with a copy of these requirements and request that they provide Certificates of Insurance complete with copies of all required endorsements to: Project Manager, City of Los Altos, 1 N. San Antonio Road, Los Altos, CA 94022

Minimum Scope of Insurance

Coverage shall be *at least as broad as:*

1. **Commercial General Liability** (CGL): Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, with limits no less than **$1,000,000/$2,000,000 aggregate** per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit. CGL insurance must include coverage for the following:

    a. Bodily Injury and Property Damage
    b. Personal Injury/Advertising Injury
    c. Premises/Operations Liability
    d. Products/Completed Operations Liability
    e. Aggregate Limits that Apply per Project
    f. Explosion, Collapse and Underground (UCX) exclusion deleted
    g. Contractual Liability with respect to this Agreement
    h. Broad Form Property Damage
    i. Independent Consultants Coverage

    The policy shall contain no endorsements or provisions limiting coverage for (1) contractual liability; (2) cross liability exclusion for claims or suits by one insured against another; (3) products/completed operations liability; or (4) contain any other exclusion contrary to the Agreement.

2. **Automobile Liability:** Insurance Services Office Form Number CA 00 01 covering, Code 1 (any auto), or if CONSULTANT has no owned autos, Code 8 (hired) and 9 (non-owned), with limit no less than **$1,000,000** per accident for bodily injury and property damage.

3. **Workers' Compensation/Employer's Liability:** CONSULTANT certifies that it is aware of the provisions of Section 3700 of the California Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and it will comply with such provisions before commencing work under this Agreement. To the extent CONSULTANT has employees at any time during the term of this Agreement, at all times during the performance of the work under this Agreement CONSULTANT shall maintain insurance as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than **$1,000,000** per accident for bodily injury or disease.

4. **Professional Liability** (Errors and Omissions) Insurance appropriate to the CONSULTANT's profession, with limit no less than **$1,000,000** per occurrence or claim. This insurance shall be endorsed to include contractual liability applicable to this Agreement and shall be written on a policy form coverage specifically designed to protect against acts, errors or omissions of the CONSULTANT. "Covered Professional Services" as designed in the policy must specifically include work performed under this Agreement.

5. **Umbrella or Excess Liability: Umbrella or Excess Insurance.** If umbrella or an excess liability insurance policy is used to satisfy the minimum requirements for CGL or Automobile Liability

insurance coverage listed above, the umbrella or excess liability policies shall provide coverage at least as broad as specified for the underlying coverages and covering those insured in the underlying policies. Coverage shall be "pay on behalf," with defense costs payable in addition to policy limits. CONSULTANT shall provide a "follow form" endorsement or schedule of underlying coverage satisfactory to the CITY indicating that such coverage is subject to the same terms and conditions as the underlying liability policy.

6. The CITY, its officers, officials, employees, and volunteers are to be covered as additional insureds on the umbrella or excess policy with respect to liability arising out of work or operations performed by or on behalf of the CONSULTANT including materials, parts or equipment furnished in connection with such work or operations. If CONSULTANT maintains broader coverage, umbrella or excess coverage and/or higher limits than the minimums shown above, the CITY requires and shall be entitled to the broader coverage, umbrella or excess coverage and/or the higher limits maintained by CONSULTANT. Any available insurance proceeds in excess of the specified minimum limits of insurance and any other coverages shall be available to the CITY.

Other Insurance Provisions. The insurance policies are to contain, or be endorsed to contain, the following provisions:

Additional Insured Status. The CITY, its officers, officials, employees, and volunteers are to be covered as additional insureds on the CGL policy and the Automobile Liability policy, with endorsements under CG 20 10 10 01 and 20 37 10 01, or endorsements providing the exact same coverage, with respect to liability arising out of work or operations performed by or on behalf of the CONSULTANT including materials, parts or equipment furnished in connection with such work or operations.

Primary Coverage. For any claims related to this contract, the CONSULTANT's insurance coverage shall be primary insurance as respects the CITY, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the CITY, its officers, officials, employees, or volunteers shall be excess of the CONSULTANT's insurance and shall not contribute with it.

Notice of Cancellation. Each insurance policy required above shall be endorsed to state that coverage shall not be canceled except after thirty (30) days' prior written notice (10 days for non-payment) has been given to the CITY.

Waiver of Subrogation. CONSULTANT hereby grants to CITY a waiver of any right to subrogation which any insurer of said CONSULTANT may acquire against the CITY by virtue of the payment of any loss under such insurance. CONSULTANT agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the CITY has received a waiver of subrogation endorsement from the insurer.

Deductibles and Self-Insured Retentions. Any deductibles or self-insured retentions must be declared to and approved by the CITY. The CITY may require the CONSULTANT to provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention.

Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII, unless otherwise acceptable to the CITY.

Claims Made Policies. If any of the required policies provide claims-made coverage:

7. The Retroactive Date must be shown, and must be before the date of the contract or the beginning of contract work.

8. Insurance must be maintained and evidence of insurance must be provided ***for at least three (3) years after completion of the contract work.***

9. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the CONSULTANT must purchase "extended reporting" coverage for a minimum of ***three (3)*** years after completion of contract work.

Verification of Coverage. CONSULTANT shall furnish the CITY with original certificates and amendatory endorsements effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the CITY before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the CONSULTANT's obligation to provide them. The CITY reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

Special Risks or Circumstances. CITY reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

Public Works Department - Engineering Division
One North San Antonio Road, Los Altos, California 94022-3087
Phone (650) 947-2780 Fax (650) 947-2732

TEMPORARY LANE CLOSURE PERMIT LC19-_____

APPLICATION
(To be completed by the applicant with a copy of detailed drawing showing the proposed location(s)):

LOCATION: 33 Pine Ln
TYPE OF WORK: Install equipment on existing utility pole
DATE(S) REQUESTED: 3/21/2019
CONTRACTOR: Ericsson, Delbert Butcher **PHONE #** 720-317-7282
OWNER: PG&E, Jwo Cheng **PHONE #** 650-515-9842
APPLICANT: AT&T Mobility (New Cingular Wireless PCS), Ivan Toews, SureSite Consulting, Agent **PHONE #** 949-278-2962

SPECIAL REQUIREMENTS (TO BE COMPLETED BY THE CITY):
Applicant must submit evidence of insurance coverage meeting the minimum requirements set forth in this permit including, without limitation, the General Requirements and exhibits attached hereto prior to issuance of this permit. The City of Los Altos approves this request subject to the "General Requirements" listed on the back of this page and the following indicated conditions:

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- ☒ **A copy of this permit must be at job site for authorized representative of the City when requested or work may be terminated by the City until compliance with this requirement is met.**
- ☒ **The applicant shall notify the Los Altos Police Department at (650) 947-2770 and Fire Department, Santa Clara County at (408) 378-4010 at least 3 business days prior to any lane or road closure.**
- ☐ **Comments:**

Applicant has read and understands all the conditions; and agrees to all the conditions of this permit.

SIGNATURE OF APPLICANT: _____ **DATE:** _____
ISSUED BY: _____ **DATE:** _____
SIGNATURE
INSPECTED BY: _____ **FINAL INSPECTION DATE:** _____

APPLICATION FEE (includes the first day):	$ 505.00
0 additional days at $62/day:	$ -
TOTAL FEES:	**$ 505.00**

ATTACHMENT:
☒YES Traffic Control Plan
☐NO

CREDIT ☐ **CHECK** ☐ **CASH** ☐
Provide Check # or type of credit (VS, MC, or D) and last 4 digits

Distribution: **Original** – Inspector **Copies**: Applicant, Police Department, and Finance

PERMIT VALID FOR DAYS
See other side for General Requirements

GENERAL REQUIREMENTS FOR ALL JOBS

A. To the fullest extent permitted by law, applicant shall defend, indemnify and hold City, the City Council, members of the City Council, its employees, representatives, agents and volunteers harmless from any and all suits, damages, costs, fees, claims, demands, causes of action, liabilities, losses expenses, damage or injury of any kind, in law or equity, to property or persons, including wrongful death and financial losses in any manner arising out of, pertaining to, or incident to any alleged acts, errors or omissions, or willful misconduct of applicant or applicant's officers, assistants, subcontractors, employees or agents in connection with this permit.

Applicant shall procure and maintain insurance as set forth in Exhibit B, attached hereto and incorporated herein by this reference, against claims for injury to persons or damage to property arising from or in connection with this permit.

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E. This permit does not authorize any excavation and grading on private property. This permit does not release the applicant/permittee from liabilities contained in other agreements or contracts with the City, other agencies or persons.

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G. Construction site signs, devices and lights shall be in accordance with Caltrans standards.

H. Use of a Flashing Arrow Panel is MANDATORY when work location is within a 35 MPH speed zone.

I. Traffic conditions and adequate protection of the public in the vicinity of the stall(s) shall be the responsibility of the applicant. At night, weekends, and holidays, a minimum of two 12-foot wide travel lanes shall be safe and passable

J. Applicant/Permittee is responsible for complying with all applicable water quality standards adopted by the City, County, State or other jurisdictional or properly empowered regulatory agency.

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Special Risks or Circumstances. CITY reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

Radio Frequency Emissions Compliance Report For AT&T Mobility

Site Name:	**CRAN_RSFR_LOSA0_04**	**Site Structure Type:**	**Utility Pole**
Address:	**33 Pine Lane**	**Latitude:**	**37.39226**
	Los Altos, California	**Longitude:**	**-122.11507**
Report Date:	**October 26, 2018**	**Project:**	**New Build**

General Summary

AT&T Mobility has contracted Waterford Consultants, LLC to conduct a Radio Frequency Electromagnetic Compliance assessment of the proposed CRAN_RSFR_LOSA0_04 site located at 33 Pine Lane, Los Altos, California. This report contains information about the radio telecommunications equipment to be installed at this site and the surrounding environment with regard to RF Hazard compliance. This assessment is based on installation designs and operational parameters provided by AT&T Mobility.

The compliance framework is derived from the Federal Communications Commission (FCC) Rules and Regulations for preventing human exposure in excess of the applicable Maximum Permissible Exposure ("MPE") limits. At any location at this site, the power density resulting from each transmitter may be expressed as a percentage of the frequency-specific limits and added to determine if 100% of the exposure limit has been exceeded. The FCC Rules define two tiers of permissible exposure differentiated by the situation in which the exposure takes place and/or the status of the individuals who are subject to exposure. General Population / Uncontrolled exposure limits apply to those situations in which persons may not be aware of the presence of electromagnetic energy, where exposure is not employment-related, or where persons cannot exercise control over their exposure. Occupational / Controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment, have been made fully aware of the potential for exposure, and can exercise control over their exposure. Based on the criteria for these classifications, the FCC General Population limit is considered to be a level that is safe for continuous exposure time. The FCC General Population limit is 5 times more restrictive than the Occupational limits.

	Limits for General Population/ Uncontrolled Exposure		***Limits for Occupational/ Controlled Exposure***	
Frequency (MHz)	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
30-300	0.2	30	1	6
300-1500	f/1500	30	f/300	6
1500-100,000	1.0	30	5.0	6

f=Frequency (MHz)

In situations where the predicted MPE exceeds the General Population threshold in an accessible area as a result of emissions from multiple transmitters, FCC licensees that contribute greater than 5% of the aggregate MPE share responsibility for mitigation.

Based on the computational guidelines set forth in FCC OET Bulletin 65, Waterford Consultants, LLC has developed software to predict the overall Maximum Permissible Exposure possible at any particular location given the spatial orientation and operating parameters of multiple RF sources. These theoretical results represent worst-case predictions as emitters are assumed to be operating at 100% duty cycle.

For any area in excess of 100% General Population MPE, access controls with appropriate RF alerting signage must be put in place and maintained to restrict access to authorized personnel. Signage must be posted to be visible upon approach from any direction to provide notification of potential conditions within these areas. Subject to other site security requirements, occupational personnel should be trained in RF safety and equipped with personal protective equipment (e.g. RF personal monitor) designed for safe work in the vicinity of RF emitters. Controls such as physical barriers to entry imposed by locked doors, hatches and ladders or other access control mechanisms may be supplemented by alarms that alert the individual and notify site management of a breach in access control. Waterford Consultants, LLC recommends that any work activity in these designated areas or in front of any transmitting antennas be coordinated with all wireless tenants.

Analysis

AT&T Mobility proposes the following installation at this location:

- Install 1 KMW FX-OM2LIOH2 Cylindrical Antenna
- Install 1 4415 Radio
- Install 1 RRUS-11 Radio

The antenna will be mounted on a 35.8-foot Utility Pole with a centerline 44.1 feet above ground level. The antenna is quasi-omni directional and will radiate in all directions. The Effective Radiated Power (ERP) in any direction from all AT&T Mobility operations will not exceed 987 Watts. Other appurtenances such as GPS antennas, RRUs and hybrid cable are not sources of RF emissions. From this site, AT&T Mobility will enhance voice and data services to surrounding areas in licensed 700 and 1900 MHz bands. No other antennas are known to be operating in the vicinity of this site.

Power density decreases significantly with distance from any antenna. The quasi-omni directional antenna to be employed at this site is operating at relatively low power and mounting elevation, as documented, serves to reduce the potential to exceed MPE limits at any location other than directly in front of the antenna. For accessible areas at ground level, the maximum predicted power density level resulting from all AT&T Mobility operations is 0.4450% of the FCC General Population limits. Incident at adjacent buildings depicted in Figure 1, the maximum predicted power density level resulting from all AT&T Mobility operations is 0.5695% of the FCC General Population limits. The proposed operation will not expose members of the General Public to hazardous levels of RF energy and will not contribute to existing cumulative MPE levels on walkable surfaces at ground or at adjacent buildings by 5% of the General Population limits.

For areas on the pole that are predicted to exceed the General Population limits, Waterford Consultants, LLC recommends that AT&T Mobility post an RF alerting sign (Caution) on the pole 39 feet above ground level to be visible upon approach by authorized personnel to provide notification of potential conditions above this level. This recommendation is depicted in Figure 2. Any work activity in front of transmitting antennas should be coordinated with AT&T Mobility.

Figure 1: Antenna Locations

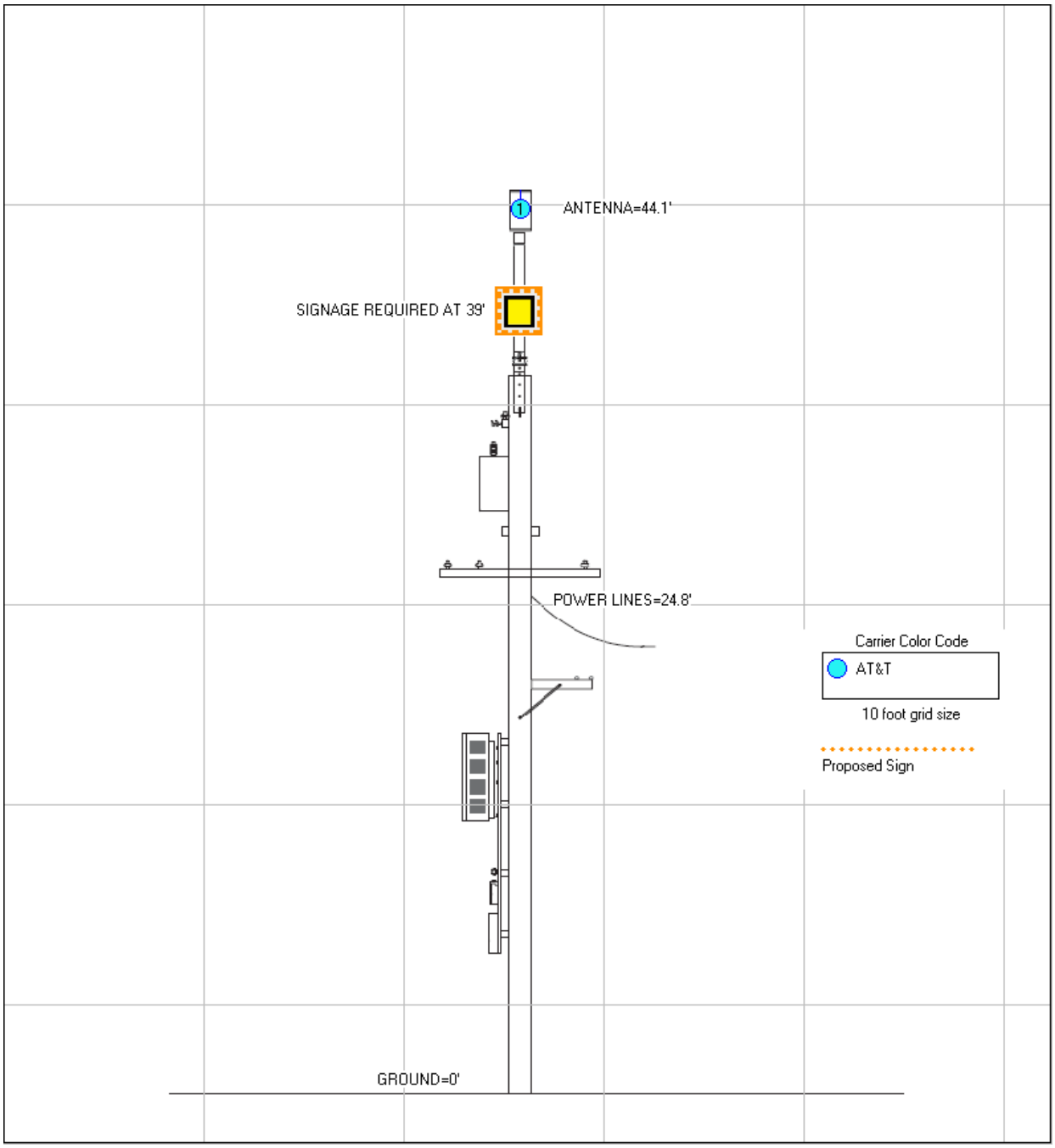


Figure 2: Mitigation Recommendations

Caution

Compliance Statement

Based on information provided by AT&T Mobility, predictive modeling and the mitigation action to be implemented by AT&T Mobility, the installation proposed by AT&T Mobility at 33 Pine Lane, Los Altos, California will be compliant with Radiofrequency Radiation Exposure Limits of 47 C.F.R. § 1.1307(b)(3) and 1.1310. RF alerting signage and restricting access to these areas to authorized personnel that have completed RF safety training is required for Occupational environment compliance.

Certification

I, David H. Kiser, am the reviewer and approver of this report and am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation, specifically in accordance with FCC's OET Bulletin 65. I have reviewed this Radio Frequency Exposure Assessment report and believe it to be both true and accurate to the best of my knowledge.

PRECISION DESIGN

October 31, 2018

Suresite for AT&T
36 Executive Park, Suite 210
Irvine, CA 92614

Subj: CRAN_RSFR_LOSA0_004

We have analyzed the wood pole at ROW adjacent to 33 Pine Lane, Los Altos, CA, 94022 (37.392256, -122.115053) using O-Calc Pro 5.03 Utility Pole software.

Data for the wood pole was obtained from a previous site walk and photographs on May 23, 2018, as well as Google Earth images. Proposed equipment is provided by our client. Based on our analysis the pole with proposed loading is at 57.2% capacity and may be **considered adequate to support the proposed loads.**

Please contact me if you have any questions.

Sincerely,

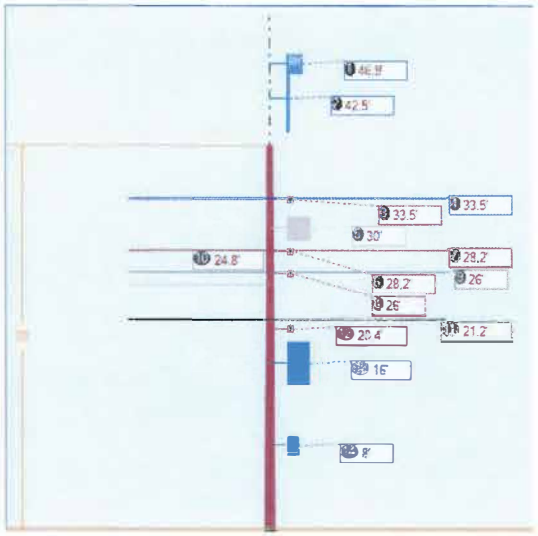
Bret McComb, P.E.

Attachments:

1. O-Calc Output: 5 pages
2. Pole Size Chart: 1 page

11768 Atwood Rd, Suite 20, Auburn, CA 95603 Tel: (530) 823-6546 bret@pdnd.com

Pole Num:	**CRAN_RSFR_LOSA0_04**	Pole Length / Class:	**45 / 4**	Code:	**GO 95**	Structure Type:	**Junction**
Aux Data 1	**Unset**	Species:	**DOUGLAS FIR**	NESC Rule:	**-**	Status	**Guy Wires Adequate**
Aux Data 2	**Unset**	Setting Depth (ft):	**6.00**	Construction Grade:	**B**	Pole Strength Factor:	**0.50**
Aux Data 3	**Unset**	G/L Circumference (in):	**35.00**	Loading District:	**Light**	Transverse Wind LF:	**1.00**
Aux Data 4	**Unset**	G/L Fiber Stress (psi):	**8,000**	Ice Thickness (in):	**0.00**	Wire Tension LF:	**1.00**
Aux Data 5	**Unset**	Allowable Stress (psi):	**3,894**	Wind Speed (mph):	**55.90**	Vertical LF:	**1.00**
Aux Data 6	**Unset**	Fiber Stress Ht. Reduc:	**No**	Wind Pressure (psf):	**8.00**		
Latitude:	**37.392256 Deg**	Longitude:		**-122.115053 Deg**		Elevation:	**116.3 Feet**



Pole Capacity Utilization (%) Crossarm allowance 300 lbs		Height (ft)	Wind Angle (deg)
Maximum	**57.2**	0.0	0.0
Groundline	**57.2**	0.0	0.0
Vertical	**2.7**	24.3	270.0

Pole Moments (ft-lb) Crossarm allowance 300 lbs		Load Angle (deg)	Wind Angle (deg)
Max Cap Util	**24,914**	2.9	0.0
Groundline	**24,914**	2.9	0.0
GL Allowable	**44,052**		

Guy System Component Summary				Load From Worst Wind Angle on Pole		Individual Maximum Load	
Description	**Lead Length (ft)**	**Lead Angle (deg)**	**Height (ft)**	**Nominal Capacity (%)**	**Wind Angle (deg)**	**Max Load Capacity (%)**	**Wind Angle (deg)**
▸ Anchor	171.0	90.0		**5.0**	0.0	**10.1**	270.0
• EHS 3/8 (Span/Head)			24.8	**6.5**	0.0	**13.1**	270.0
			System Capacity Summary:	**Adequate**		**Adequate**	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 2.9°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Powers	395	41.9	**11,967**	48.0	**27.2**	**1,028**	130	1	**1,029**	**26.4**
Comms	0	0.0	**90**	0.4	**0.2**	**8**	232	2	**10**	**0.3**
GuyBraces	59	6.3	**1,509**	6.1	**3.4**	**130**	23	0	**130**	**3.3**
GenericEquipments	120	12.8	**2,857**	11.5	**6.5**	**245**	213	2	**248**	**6.4**
PowerEquipments	40	4.2	**1,184**	4.8	**2.7**	**102**	640	7	**108**	**2.8**
Pole	231	24.5	**4,617**	18.5	**10.5**	**397**	1,035	11	**407**	**10.5**
Crossarms	57	6.0	**1,522**	6.1	**3.5**	**131**	219	2	**133**	**3.4**
Insulators	40	4.3	**1,168**	4.7	**2.7**	**100**	133	1	**102**	**2.6**
Pole Load	944	100.0	**24,914**	100.0	**56.6**	**2,140**	2,626	27	**2,167**	**55.6**
Pole Reserve Capacity			**19,138**		**43.4**	**1,754**			**1,727**	**44.4**

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 2.9°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
<Undefined>	712	75.5	**20,297**	81.5	**46.1**	**1,743**	1,591	16	**1,760**	**45.2**
Pole	231	24.5	**4,617**	18.5	**10.5**	**397**	1,035	11	**407**	**10.5**
Totals:	944	100.0	**24,914**	100.0	**56.6**	**2,140**	2,626	27	**2,167**	**55.6**

Detailed Load Components:

Power		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Secondary	TRIPLEX 6 AWG		28.25	27.61	0.5800	2.41	0.113	171.0	90.0	171.0	357	508	-3	933	1,438
Secondary	TRIPLEX 6 AWG		28.25	41.68	0.5800	2.41	0.113	171.0	90.0	171.0	357	508	-3	933	1,438
Secondary	TRIPLEX 6 AWG		28.25	27.61	0.5800	2.41	0.113	171.0	90.0	171.0	357	508	3	933	1,443
Secondary	TRIPLEX 6 AWG		28.25	41.68	0.5800	2.41	0.113	171.0	90.0	171.0	357	508	3	933	1,444
Secondary	TRIPLEX 6 AWG		28.25	27.61	0.5800	3.52	0.113	228.0	270.0	228.1	357	-508	-4	1,244	732
Secondary	TRIPLEX 6 AWG		28.25	41.68	0.5800	3.52	0.113	228.0	270.0	228.1	357	-508	-4	1,244	732
Secondary	TRIPLEX 6 AWG		28.25	41.68	0.5800	3.52	0.113	228.0	270.0	228.1	357	-508	4	1,244	740
Secondary	TRIPLEX 6 AWG		28.25	27.61	0.5800	3.52	0.113	228.0	270.0	228.1	357	-508	4	1,244	740
Primary	AAC 1 AWG 7 STRAND PANSY		33.50	30.11	0.3280	1.78	0.078	171.0	90.0	171.0	492	830	-2	626	1,453

Primary	AAC 1 AWG 7 STRAND PANSY	33.50	30.11	0.3280	1.78	0.078	171.0	90.0	171.0	492	830	2	626	1,457
Primary	AAC 1 AWG 7 STRAND PANSY	33.50	13.41	0.3280	2.69	0.078	228.0	270.0	228.0	492	-830	0	834	4
Primary	AAC 1 AWG 7 STRAND PANSY	33.50	32.86	0.3280	2.69	0.078	228.0	270.0	228.0	492	-830	2	834	7
Primary	AAC 1 AWG 7 STRAND PANSY	33.50	32.86	0.3280	2.69	0.078	228.0	270.0	228.0	492	-830	-3	834	2
										Totals:	**-830**	**0**	**12,459**	**11,629**

Comm		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Telco	TELE 1.0		26.00	35.68	1.0000	0.80	0.400	48.0	180.0	48.0	500	-12,984	0	0	-12,984
Telco	TELE 1.0		26.00	35.68	1.0000	0.80	0.400	48.0	180.0	48.0	500	-12,984	-1	0	-12,984
Telco	TELE 1.0		26.00	16.52	1.0000	0.80	0.400	48.0	180.0	48.0	500	-12,984	-2	0	-12,985
Telco	TELE 1.0		26.00	39.63	1.0000	3.43	0.400	153.0	0.0	153.1	500	12,984	5	0	12,989
Telco	TELE 1.0		26.00	39.63	1.0000	3.43	0.400	153.0	0.0	153.1	500	12,984	4	0	12,988
Telco	TELE 1.0		26.00	23.88	1.0000	3.43	0.400	153.0	0.0	153.1	500	12,984	8	0	12,991
CATV	CATV .50		21.23	40.47	0.5700	3.22	0.600	153.0	0.0	153.1	700	14,858	31	0	14,889
CATV	CATV .50		21.23	40.47	0.5700	0.63	0.600	48.0	180.0	48.0	700	-14,858	10	0	-14,848
CATV	CATV .50		21.23	25.75	0.5700	3.22	0.600	153.0	0.0	153.1	700	14,858	28	0	14,886
CATV	CATV .50		21.23	25.75	0.5700	0.21	0.600	18.0	180.0	18.0	700	-14,858	3	0	-14,855
											Totals:	**0**	**87**	**0**	**87**

GenericEquipment		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Cylinder	3" Dia 7' Steel Pipe		42.50	0.36	0.0	0.0	53.06	84.00	--	3.00	--	-2	594	593
Cylinder	Antenna-KMW FX-OM2LI OH2		46.94	1.14	0.0	0.0	20.00	24.00	--	16.00	--	2	906	907
Box	Housing For RRUs		16.00	12.66	270.0	0.0	130.00	53.00	16.00	--	23.00	-7	1,205	1,198
Box	100amp Meter		8.00	7.43	270.0	0.0	10.00	24.00	4.63	--	12.00	0	79	79
											Totals:	**-7**	**2,783**	**2,776**

PowerEquipment		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Transformer	1PH-50KVA		30.00	17.86	270.0	270.0	640.00	30.00	--	24.00	--	-48	1,198	1,151
											Totals:	**-48**	**1,198**	**1,151**

Crossarm		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Normal	CROSSARM 3-1/2 X 4-1/2 X 8		28.25	5.71	270.0	270.0	53.00	4.50	3.50	96.00	0	79	79

Normal	CROSSARM 3-1/2 X 4-1/2 X 6	33.50	5.41	270.0	270.0	40.00	4.50	3.50	72.00	-1	47	46
Normal	CROSSARM 3-1/2 X 4-1/2 X 7	26.00	5.83	0.0	0.0	46.00	4.50	3.50	84.00	22	872	895
Offset	ALLEY ARM 3-1/2 X 4-1/2 X 4	20.42	6.15	0.0	0.0	27.00	4.50	3.50	48.00	68	392	459
									Totals:	**89**	**1,390**	**1,479**

Insulator		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Suspension	Suspension 11.50"		28.25	-25.00	167.1	180.0	11.00	4.75	6.00	-22	45	22
Suspension	Suspension 11.50"		28.25	-40.00	171.9	180.0	11.00	4.75	6.00	-36	45	9
Suspension	Suspension 11.50"		28.25	25.00	12.9	180.0	11.00	4.75	6.00	23	45	68
Suspension	Suspension 11.50"		28.25	40.00	8.1	180.0	11.00	4.75	6.00	37	45	82
Suspension	Suspension 11.50"		28.25	-25.00	192.9	0.0	11.00	4.75	6.00	-23	45	21
Suspension	Suspension 11.50"		28.25	-40.00	188.1	0.0	11.00	4.75	6.00	-37	45	8
Suspension	Suspension 11.50"		28.25	40.00	351.9	0.0	11.00	4.75	6.00	36	45	81
Suspension	Suspension 11.50"		28.25	25.00	347.1	0.0	11.00	4.75	6.00	22	45	67
Deadend	Deadend 12.75"		33.50	-30.00	190.2	180.0	3.00	3.80	8.00	-7	57	49
Deadend	Deadend 12.75"		33.50	30.00	349.8	180.0	3.00	3.80	8.00	8	57	64
Deadend	Deadend 12.75"		33.50	0.00	270.0	0.0	3.00	3.80	8.00	0	57	56
Deadend	Deadend 12.75"		33.50	30.00	349.8	0.0	3.00	3.80	8.00	7	57	64
Deadend	Deadend 12.75"		33.50	-30.00	190.2	0.0	3.00	3.80	8.00	-8	57	49
Deadend	Deadend 12.75"		26.00	35.00	80.5	180.0	3.00	3.80	12.75	-1	70	69
Deadend	Deadend 12.75"		26.00	-35.00	279.5	180.0	3.00	3.80	12.75	-2	70	68
Deadend	Deadend 12.75"		26.00	-15.00	291.3	180.0	3.00	3.80	12.75	-2	70	68
Deadend	Deadend 12.75"		26.00	35.00	80.5	0.0	3.00	3.80	12.75	5	70	75
Deadend	Deadend 12.75"		26.00	-35.00	279.5	0.0	3.00	3.80	12.75	4	70	74
Deadend	Deadend 12.75"		26.00	-15.00	291.3	0.0	3.00	3.80	12.75	4	70	74
Pin	Pin Insulator - 5 kV		20.60	40.00	81.3	0.0	6.00	3.50	7.50	4	30	34
Pin	Pin Insulator - 5 kV		20.60	25.00	76.2	0.0	6.00	3.50	7.50	4	30	34
									Totals:	**16**	**1,120**	**1,135**

Guy Wire and Brace		Owner	Attach Height (ft)	End Height (ft)	Lead/Span Length (ft)	Wire Diameter (in)	Percent Solid (%)	Lead Angle (deg)	Incline Angle (deg)	Wire Weight (lbs/ft)	Rest Length (ft)	Stretch Length (in)
EHS 3/8	Span/Head		24.75	24.75	171.00	0.375	75.00	90.0	0.0	0.273	168.26	0.80

Guy Wire and Brace (Loads and Reactions)		Elastic Modulus (psi)	Rated Tensile Strength (lbs)	Guy Strength Factor	Allowable Tension (lbs)	Initial Tension (lbs)	Loaded Tension*[2] (lbs)	Maximum Tension[2] (lbs)	Applied Tension[3] (lbs)	Vertical Load (lbs)	Shear Load In Guy Dir (lbs)	Shear Load At Report Angle (lbs)	Moment at GL[3] (ft-lb)
EHS 3/8	Span/Head	2.30e+7	15,400	0.75	11,550	700	1,514	1,514	752	0	752	38	1,466
									Totals:	**0**	**752**	**38**	**1,466**

Anchor/Rod Load Summary	Owner	Rod Length AGL (in)	Lead Length (ft)	Lead Angle (deg)	Strength of Assembly (lbs)	Anchor/Rod Strength Factor	Allowable Load (lbs)	Max Load[2] (lbs)	Load at Pole MCU[3] (lbs)	Max Required Capacity[2] (%)
Anchor		30.00	171.00	90.0	20,000	0.75	15,000	1,514	752	10.1

Pole Buckling

Buckling Constant	Buckling Column Height* (ft)	Buckling Section Height (% Buckling Col. Hgt.)	Buckling Section Diameter (in)	Minimum Buckling Diameter at GL (in)	Diameter at Tip (in)	Diameter at GL (in)	Modulus of Elasticity (psi)	Pole Density (pcf)	Ice Density (pcf)	Pole Tip Height (ft)	Buckling Load Capacity at Height (lbs)	Buckling Load Applied at Height (lbs)	Buckling Load Factor of Safety
0.71	24.35	33.75	10.20	8.75	6.69	11.15	1.60e+6	60.00	57.00	39.00	97,896	**972.56**	**37.04**

DOUGLAS FIR POLE SIZING CHART												
Class	**H-6**	**H-5**	**H-4**	**H-3**	**H-2**	**H-1**	**1**	**2**	**3**	**4**	**5**	**6**
Minimum Circumference at Top (Inches)	39	37	35	33	31	29	27	25	23	21	19	17
Length of Pole (Feet)	**Minimum Circumference at 6 feet from Butt (Inches)**											
20	-	-	-	-	-	-	31.0	29.0	27.0	25.0	23.0	21.0
25	-	-	-	-	-	-	33.5	31.5	29.5	27.5	25.5	23.0
30	-	-	-	-	-	-	36.5	34.0	32.0	29.5	27.5	25.0
35	-	-	-	-	43.5	41.5	39.0	36.5	34.0	31.5	29.0	27.0
40	-	-	51.0	48.5	46.0	43.5	41.0	38.5	36.0	33.5	31.0	28.5
45	58.5	56.0	53.5	51.0	48.5	45.5	43.0	40.5	37.5	35.0	32.5	30.0
50	61.0	58.5	55.5	53.0	50.5	47.5	45.0	42.0	39.0	36.5	34.0	-
55	63.5	60.5	58.0	55.0	52.0	49.5	46.5	43.5	40.5	38.0	-	-
60	65.5	62.5	59.5	57.0	54.0	51.0	48.0	45.0	42.0	39.0	-	-
65	67.5	64.5	61.5	58.5	55.5	52.5	49.5	46.5	43.5	40.5	-	-
70	69.0	66.5	63.5	60.5	57.0	54.0	51.0	48.0	45.0	41.5	-	-
75	71.0	68.0	65.0	62.0	59.0	55.5	52.5	49.0	46.0	-	-	-
80	72.5	69.5	66.5	63.5	60.0	57.0	54.0	50.5	47.0	-	-	-
85	74.5	71.5	68.0	65.0	61.5	58.5	55.0	51.5	48.0	-	-	-
90	76.0	73.0	69.5	66.5	63.0	59.5	56.0	53.0	49.0	-	-	-
95	77.5	74.5	71.0	67.5	64.5	61.0	57.0	54.0	-	-	-	-
100	79.0	76.0	72.5	69.0	65.5	62.0	58.5	55.0	-	-	-	-
105	80.5	77.0	74.0	70.5	67.0	63.0	59.5	56.0	-	-	-	-
110	82.0	78.5	75.0	71.5	68.0	64.5	60.5	57.0	-	-	-	-
115	83.5	80.0	76.5	72.5	69.0	65.5	61.5	58.0	-	-	-	-
120	85.0	81.0	77.5	74.0	70.0	66.5	62.5	59.0	-	-	-	-
125*	86.0	82.5	78.5	75.0	71.0	67.5	63.5	59.5	-	-	-	-
	H-6	**H-5**	**H-4**	**H-3**	**H-2**	**H-1**	**1**	**2**	**3**	**4**	**5**	**6**

* 125' Availability: Untreated Only

CRAN_RSFR_LOSAO_04

33 Pine Lane Los Altos CA 94022

ARTISTIC engineering
AEsims.com
877.9AE.sims

View 1

Existing

Proposed Looking west along Pine Lane

Accuracy of photo simulation based upon information provided by project applicant.

Alternate Review

- ❑ AT&T proposed a node location near North San Antonio and Pine Lane
- ❑ Existing (traditional) cell sites are not suitable candidates for colocation as they do not meet network requirements
- ❑ Two alternate locations were considered

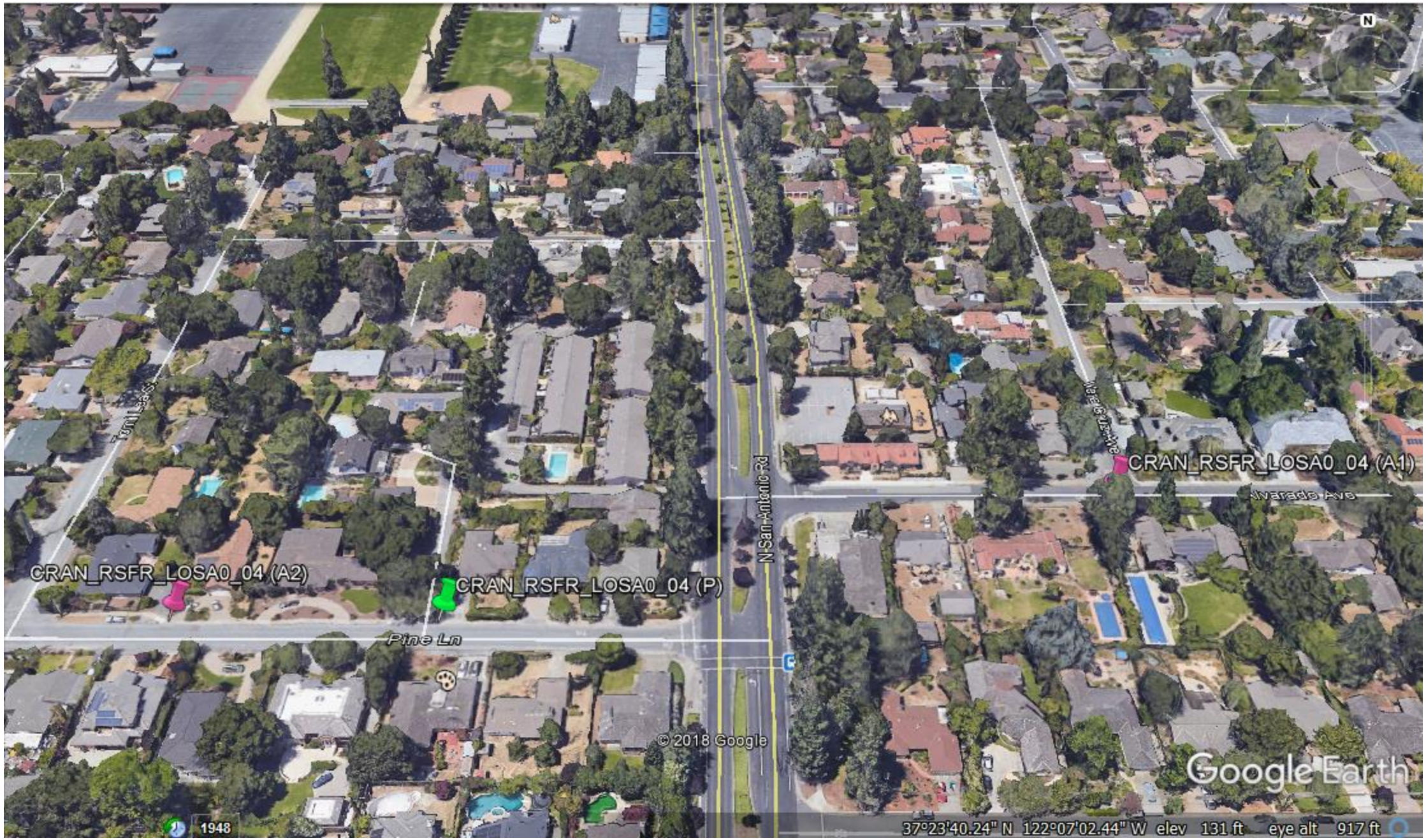
<u>Alternative Site Location (A1)</u>
This location is a wood utility pole located in the public ROW on the south side of Alvarado Avenue at the intersection of Vera Cruz Avenue

This pole is a possible candidate but has more pole top equipment and is less desirable due to network traffic needs

Alternative Site Location (A2)

This location is a wood utility pole located in the public ROW on the north side of Pine Lane near Tomi Lea Street

This pole is a possible candidate but is not ideal due to the fact that it has more pole top equipment, and potential climbing space or ground clearance issues


CRAN_RSFR_LOSA0_04 (A1)
CRAN_RSFR_LOSA0_04 (A2)
CRAN_RSFR_LOSA0_04 (P)
N San Antonio Rd
Pine Ln
Alvarado Ave
© 2018 Google
Google Earth
1948
37°23'40.24" N 122°07'02.44" W elev 131 ft eye alt 917 ft

AT&T Future Build-out Sites

Name	Address
LOSA0_01	141 Almond Ave
LOSA0_02	687 Linden Ave
LOSA0_03	421 Valencia
LOSA0_04	33 Pine
LOSA0_05	49 San Juan
LOSA0_06	791 Los Altos
LOSA0_07	98 Eleanor
LOSA0_08	182 Garland
LOSA0_09	491 Patrick Way
LOSA0_10	300 Los Altos Ave
LOSA0_11	130 Los Altos
LOSA0_12	356 Blue Oak
SJWE_007	5000 El Camino Real
SJWE_012	4294 El Camino Real

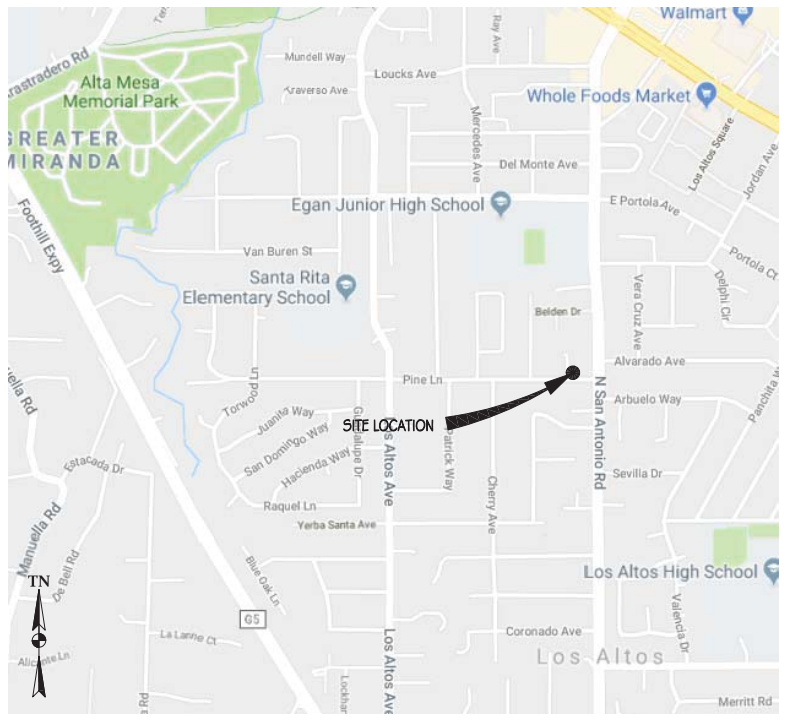
at&t

SITE ID:	CRAN_RSFR_LOSA0_04
SITE ADDRESS:	ROW ADJCT TO 33 PINE LN LOS ALTOS, CA, 94022
SITE TYPE:	PG&E POLE (PM# 114474135)
POLE OWNER:	PG&E
FA LOCATION:	12898152
USID:	TBD

SITE INFORMATION

APPLICANT:	AT&T MOBILITY 5001 EXECUTIVE PARKWAY SAN RAMON, CA 94583
AGENT:	SURESITE 36 EXECUTIVE PARK, SUITE 210 IRVINE, CA 92614
APN:	ADJCT TO 167-23-035
SITE ADDRESS:	ROW ADJCT TO 33 PINE LN LOS ALTOS, CA, 94022
COUNTY:	SANTA CLARA
LATITUDE:	37° 23' 32.12" N (37.3922600) NAD 83
LONGITUDE:	122° 06' 54.19" W (-122.1150700) NAD 83
GROUND ELEVATION:	±116.3' AMSL
ZONING:	PUBLIC ROW
ZONING JURISDICTION:	CITY OF LOS ALTOS
PG&E SAP ID:	100509246
STREET CLASSIFICATION:	LOCAL

VICINITY MAP



PROJECT TEAM

AGENT:
SURESITE
36 EXECUTIVE PARK, #210
IRVINE, CA 92614
(949) 278-2962
L.MEINERS@SURE-SITE.COM

PROJECT MANAGERS:
CHRIS JOHNSON
ERICSSON
6140 STONERIDGE MALL RD, SUITE 350
PLEASANTON, CA 94588
(408) 796-8443
CHRISTOPHER.JOHNSON@ERICSSON.COM

CONSTRUCTION MANAGER:
TBD

ARCHITECT/ENGINEER OF RECORD:
BRET McCOMB
PRECISION DESIGN & DRAFTING, INC
11768 ATWOOD ROAD, SUITE #20
AUBURN, CA 95603
(530) 823-6546
BRET@PDND.COM

RF MANAGER:
TBD

PROJECT DESCRIPTION

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

SCOPE OF WORK:

1. INSTALL (N) TELECOMMUNICATIONS EQUIPMENT BOXES ON AN (E) PG&E UTILITY POLE. EQUIPMENT IS TO BE INSTALLED ON GO95 COMPLIANT STANDOFF BRACKET & CONSISTS OF (1) ELECTRICAL METER, (1) LOAD CENTER/AC DISCONNECT, (1) CONCEALMENT BOX CONTAINING (1) RRU11 & (1) 4415 W/ PSU UNITS, & (2) DIPLEXERS, & (1) KMW FX-OM2L10H2 CYLINDRICAL ANTENNA.
2. ALL EQUIPMENT TO BE PAINTED TO MEET JURISDICTION APPROVAL.
3. UTILITY LINES BETWEEN (E) POINT OF CONNECTION & POLE TO BE UNDERGROUND AND/OR OVERHEAD.

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
T-2	GENERAL NOTES, LEGEND, & ABBREVIATIONS
A-1	SITE PLAN
A-2	EQUIPMENT PLAN & ANTENNA PLANS
A-3	ELEVATIONS
A-4	ELEVATIONS
A-5	DETAILS
A-6	DETAILS
E-1	SINGLE-LINE DIAGRAM & DETAILS
E-2	GROUNDING DIAGRAMS

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: 33 PINE LANE, LOS ALTOS, CA 94022

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	3.9	MI
6.	STAY ON I-680 S, FOLLOW SIGNS FOR I-580	17.5	MI
7.	TAKE EXIT 12 FOR MISSION BLVD TOWARD I-880	0.2	MI
8.	KEEP RIGHT AT FORK, FOLLOW SIGNS FOR CA-262 S/ MISSION BLVD	0.3	MI
9.	MERGE ONTO CA-262 S/ MISSION BLVD	0.6	MI
10.	TAKE EXIT ON LEFT TOWARD I-880 S/ SAN JOSE	0.9	MI
11.	MERGE ONTO I-880 S	3.1	MI
12.	TAKE CA-237 W EXIT TOWARD MTN VIEW	0.9	MI
13.	CONTINUE ON CA-237 W	8.4	MI
14.	KEEP LEFT TO CONTINUE ON CA-237 W/ SOUTHBAY FWY	0.5	MI
15.	TURN RIGHT ONTO EL CAMINO REAL	2.0	MI
16.	TURN RIGHT ONTO DISTEL DR	2.0	MI
17.	TURN RIGHT ONTO MARICH WAY	0.1	MI
18.	TURN LEFT ONTO PANCHILA WAY	0.2	MI
19.	TURN RIGHT ONTO ALVARADO AVE	0.3	MI
20.	TURN LEFT ONTO N SAN ANTONIO RD	213	FT
21.	TURN RIGHT ONTO PINE LN	207	FT

END AT: 33 PINE LANE, LOS ALTOS, CA 94022
ESTIMATED TIME: 18 MINS ESTIMATED DISTANCE: 10 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

SURESITE
wireless advance experts. small cell solutions.
36 EXECUTIVE PARK, SUITE 210
IRVINE, CA 92614

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
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_LOSA0_04

ROW ADJCT TO 33 PINE LN
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/05/18	CD 90%
	10/29/18	CD 100%

DRAWN BY:	IB/BL
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/29/18

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/IBC'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 SURVEYORS 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 HIGHER 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.

15. ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION OR SHTUDOWN SIGNAGE) OR PG&E REGULATIONS SHALL BE PAINTED OVER OR REMOVED. RAISED/DEPRESSED LOGOS OR TEXT ON EQUIPMENT (E.G. RRUS), IF PRESENT, TO BE SANDED OFF OR COVERED WITH STICKER, # THEN PAINTED OVER.

16. FCNDATED RF WAC WARNING SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD THE BUILDING IF THERE IS NO WINDOW.

17. ALL EQUIPMENT, INCLUDING ANTENNAS, MOUNTING/STANDOFF BRACKETS, POLE EXTENSIONS, CONDUIT, METER, AND RADIOS SHALL BE PAINTED MESA BROWN USING A DURABLE OUTDOOR PAINT.

18. CABLING SHALL BE MESA BROWN IN COLOR AND SHALL BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS, # SHALL BE HIDDEN FROM VIEW TO THE MAXIMUM EXTENT POSSIBLE.

19. SUPPORT EQUIPMENT (E.G. METERS, DISCONNECT SWITCH, ETC) TO BE CLUSTERED VERTICALLY AS CLOSE AS TECHNICALLY FEASIBLE ON POLE.

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 PDMD 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.

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	ARCHITECTURAL)
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
BTCW	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	GALVANIZED)
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
IGSB	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
P/C	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	THICKNESS)
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

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 #PRB
- COMBINATION, EXIT SIGN & EMERGENCY LIGHTING, HUBBELL LIGHTING CATALOG #PRC
- EMERGENCY LIGHTING, 2/50W, HUBBELL LIGHTING CATALOG #HEG-50-2-R91
- LIGHTING FIXTURE, INCANDESCENT, 1/100W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #DR1-100-CG-1
- LIGHTING FIXTURE, HALOGEN, QUARTZ, 1/300W, HUBBELL LIGHTING CATALOG #QL-505
- LIGHTING FIXTURE, 1/175W. METAL HALIDE, HUBBELL CAT #MIC-0175H-33G
- 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 XFMR
- (E) POLE MOUNTED XFMR
- (N) PAD MOUNTED XFMER
- (E) PAD MOUNTED XFMER

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C 69891
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_LOSAO_04

ROW ADJCT TO 33 PINE LN
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/05/18	CD 90%
	10/29/18	CD 100%

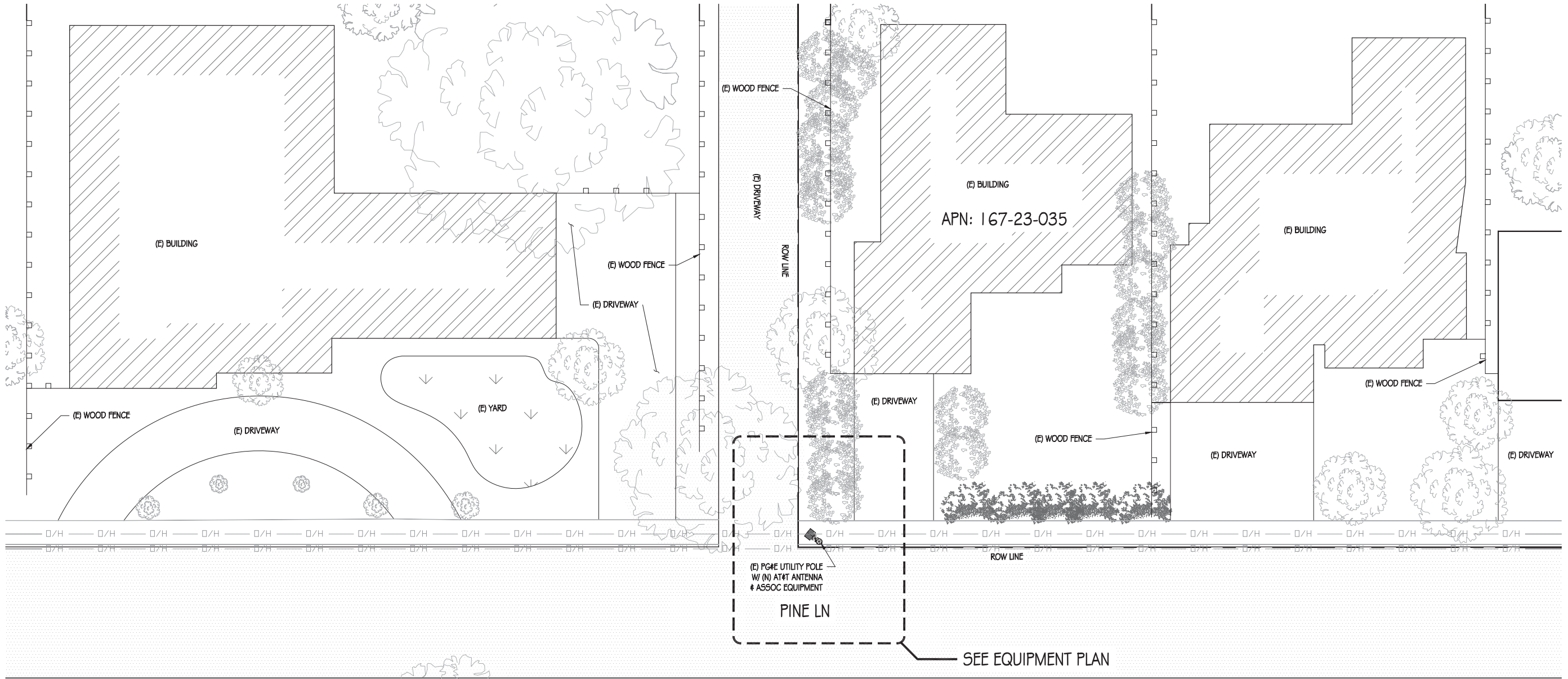
DRAWN BY:	IB/BL
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/29/18

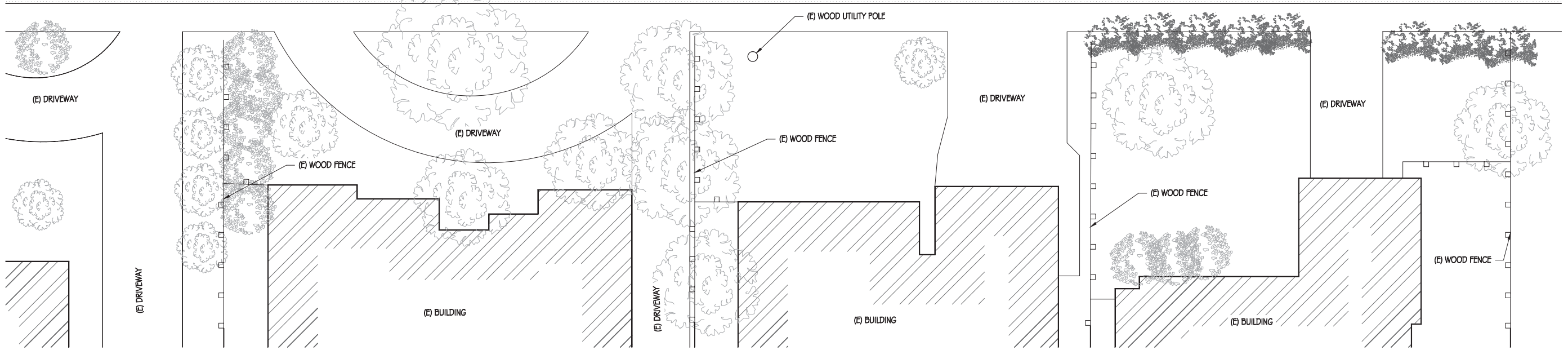
SHEET TITLE:

GENERAL NOTES, LEGEND, & ABBREVIATIONS

SHEET NUMBER

T-2





TN

SITE PLAN

1" = 10'

0 5' 10' 20' 30' 50'

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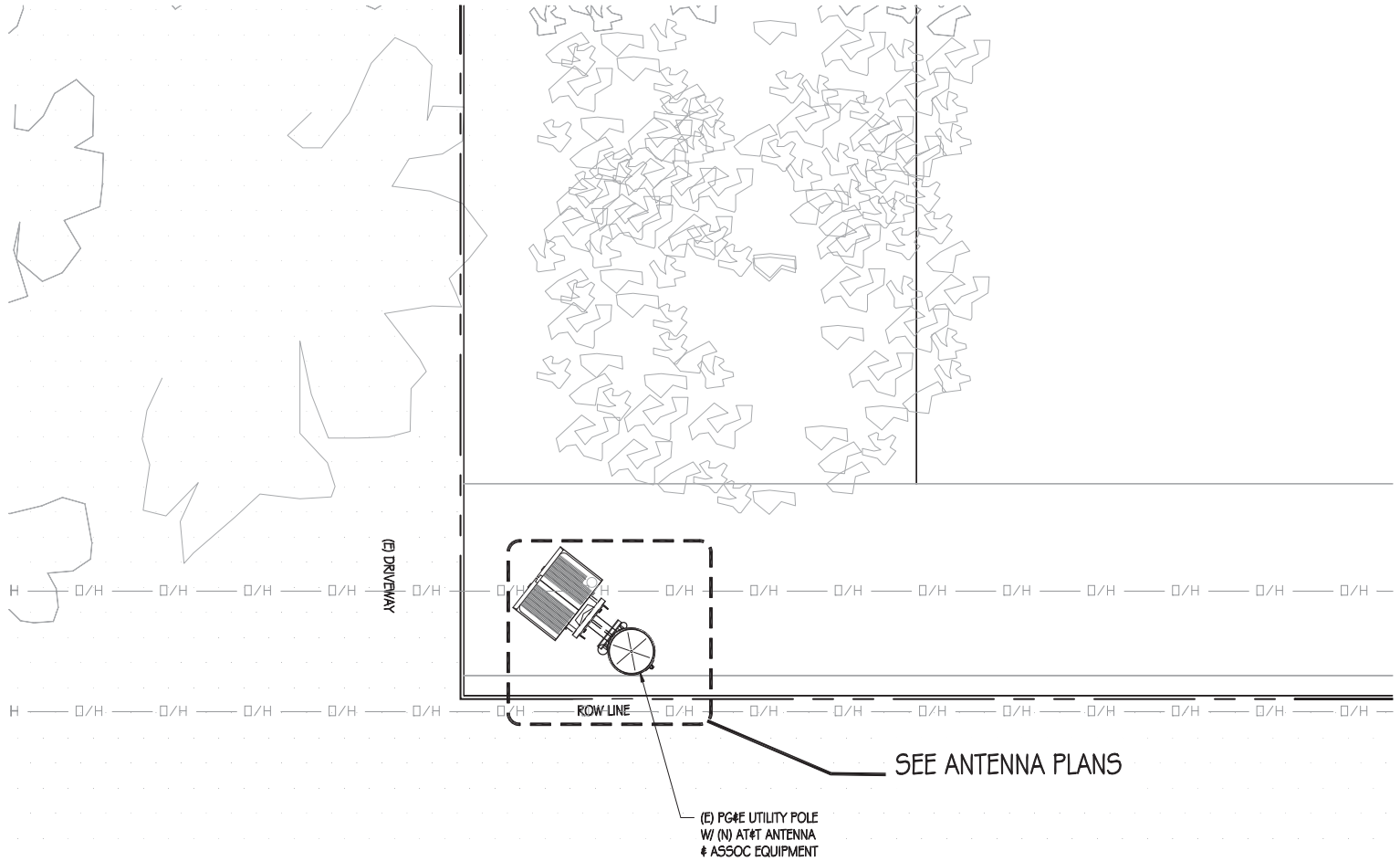
SHEET TITLE:

SITE PLAN

SHEET NUMBER

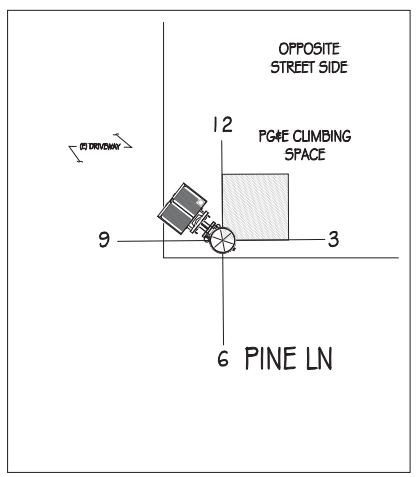
A-1

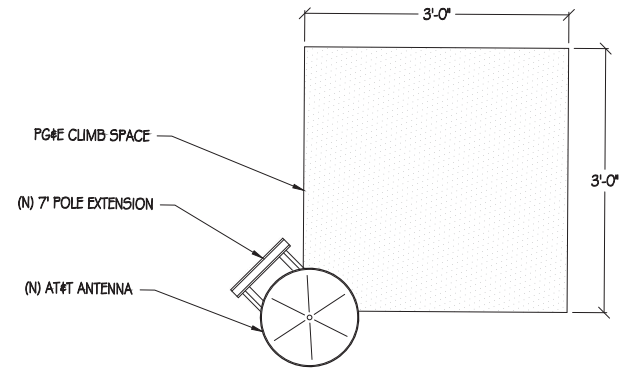


TN

EQUIPMENT PLAN

1/2"=1'

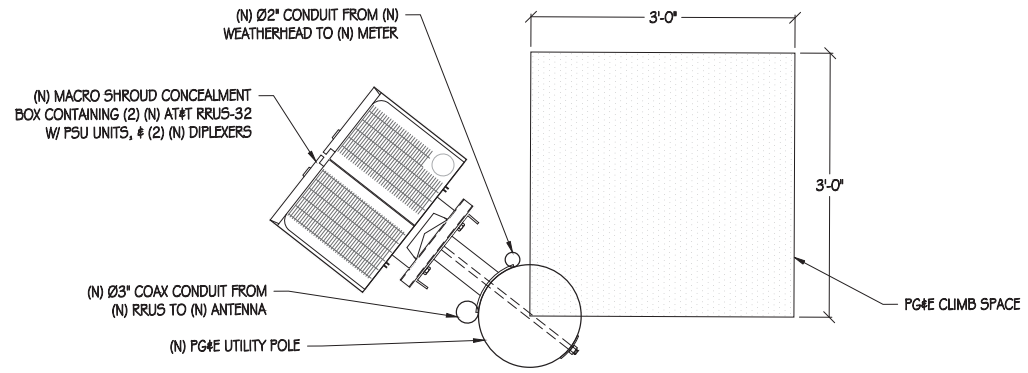




TN

ANTENNA PLAN

1"=1'

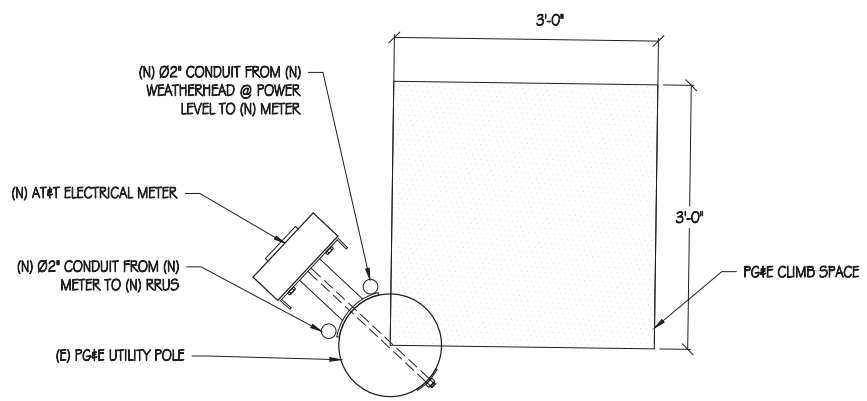


TN

RRU PLAN

1"=1'

NOTE: (E) CATV TO BE MOVED OUT OF CLIMBING SPACE



TN

ELECTRICAL METER PLAN

1"=1'

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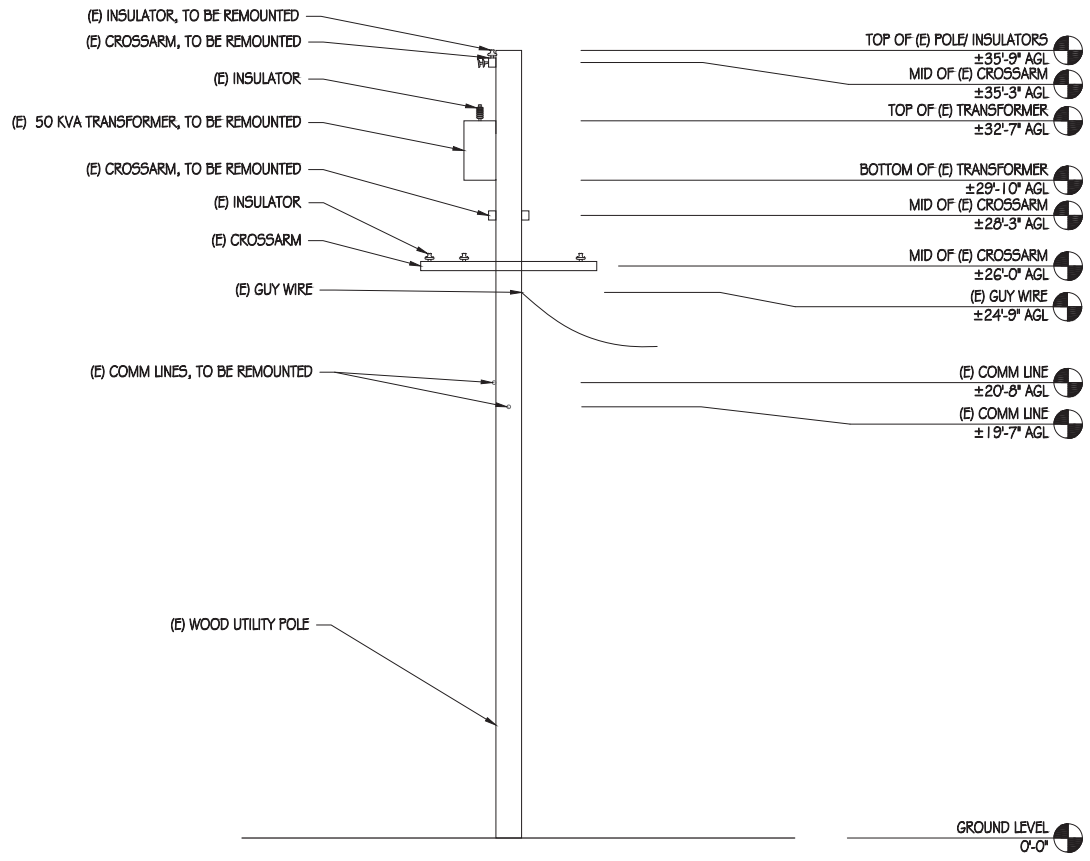
APPROVED BY:	B. McCOMB
DATE:	10/29/18

SHEET TITLE:

EQUIPMENT PLAN & ANTENNA PLANS

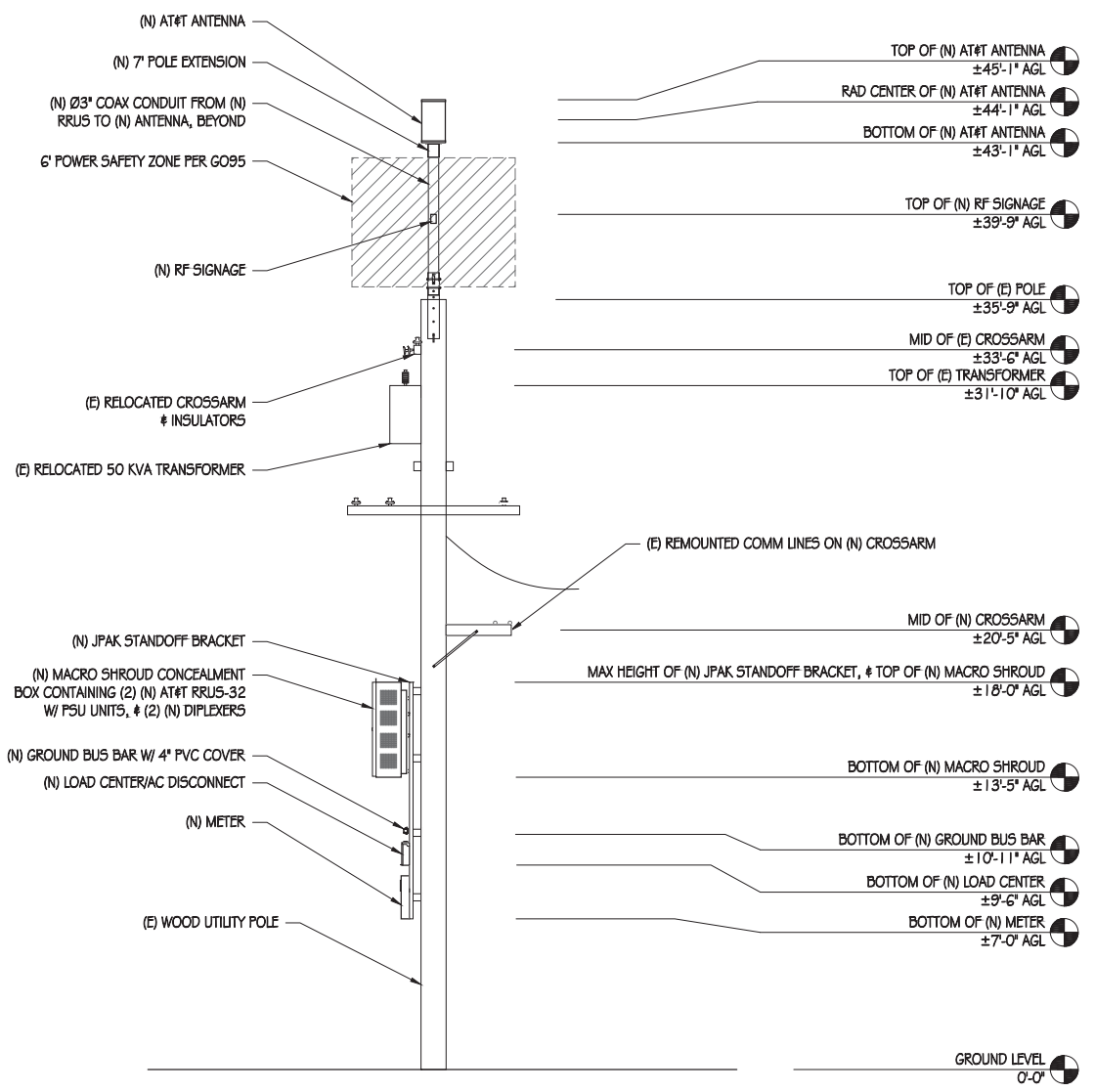
SHEET NUMBER

A-2



EXISTING SOUTH ELEVATION

1/4"= 1'-0"



NEW SOUTH ELEVATION

1/4"= 1'-0"

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

NOTE: (E) CATV TO BE MOVED OUT OF CLIMBING SPACE

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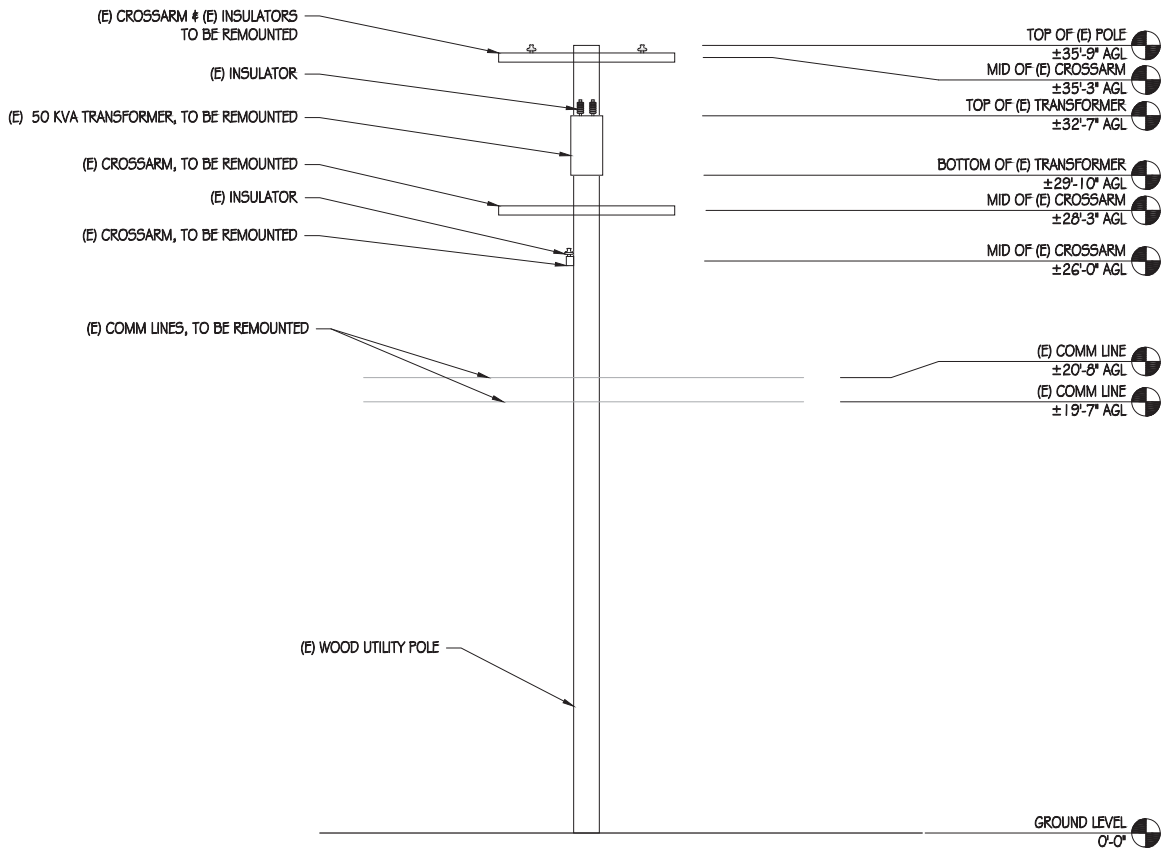
APPROVED BY:	B. McCOMB
DATE:	10/29/18

SHEET TITLE:

ELEVATIONS

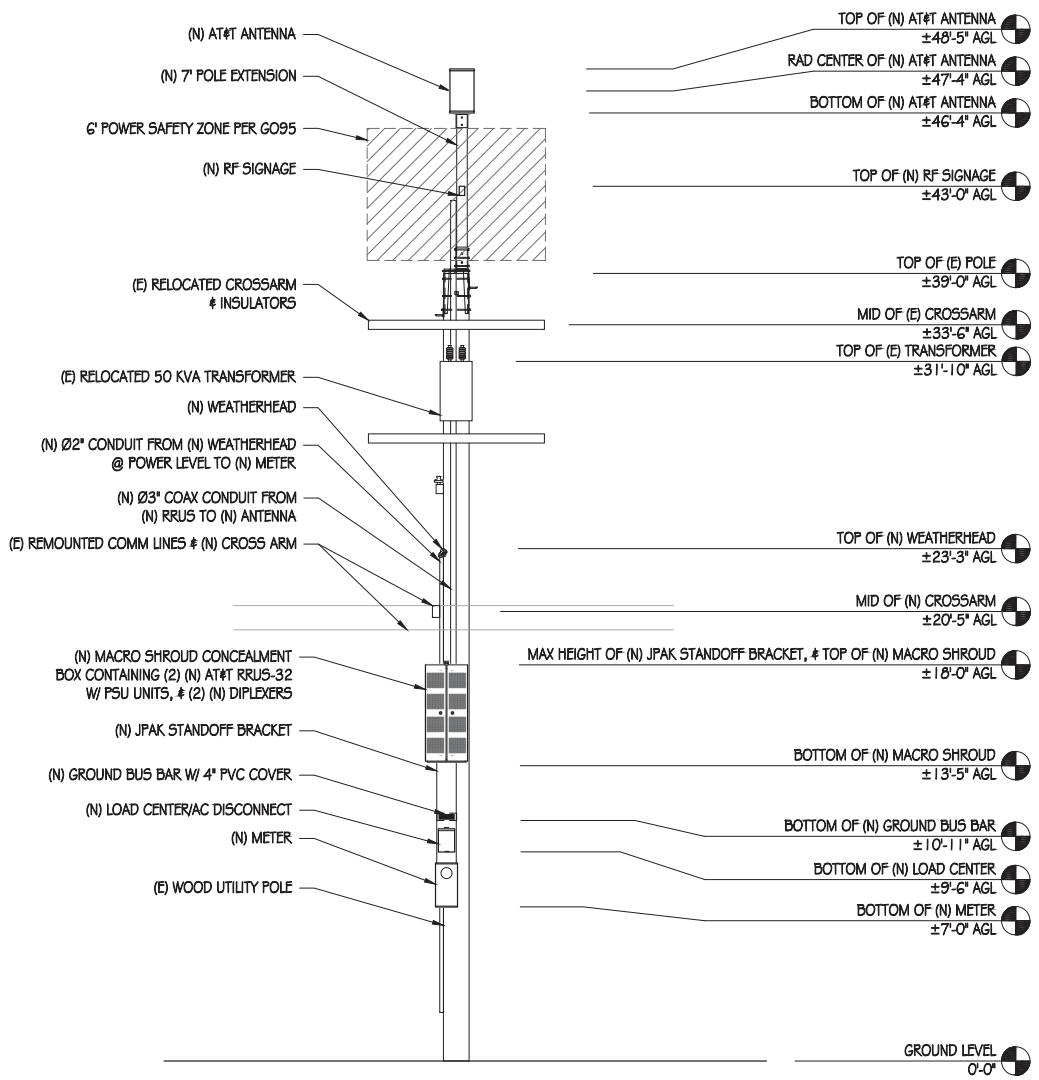
SHEET NUMBER

A-3



EXISTING WEST ELEVATION

1/4"= 1'-0"



NEW WEST ELEVATION

1/4"= 1'-0"

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

NOTE: (E) CATV TO BE MOVED OUT OF CLIMBING SPACE

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SHEET TITLE:

ELEVATIONS

SHEET NUMBER

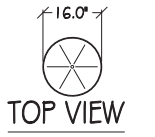
A-4

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.

KMW FX-OM2L10H2-06T

WIND AREA: 2.67 SQ FT
WEIGHT: 34.2 LBS
DIMENSIONS: Ø16.0" X 24.0" TALL
RF CONNECTORS: (12) 4.3-10 FEMALE

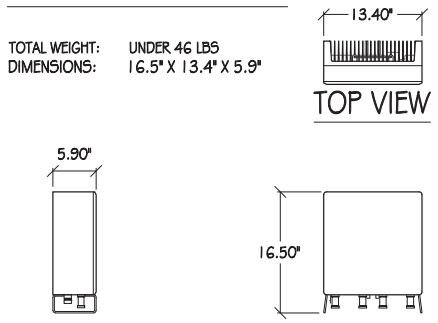


TOP VIEW
FRONT VIEW

1 ANTENNA
1/2"=1'

ERICSSON RRUS-4415

TOTAL WEIGHT: UNDER 46 LBS
DIMENSIONS: 16.5" X 13.4" X 5.9"

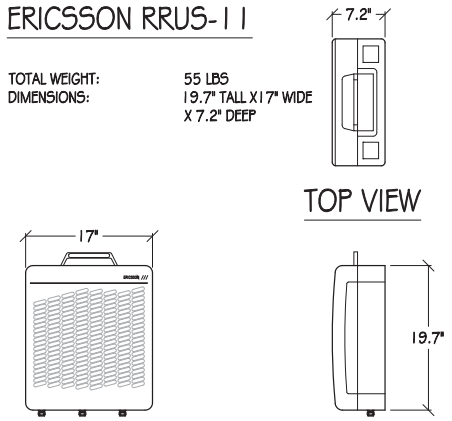


TOP VIEW
SIDE VIEW
FRONT VIEW

2 RRUS-4415 DETAIL
1"=1'

ERICSSON RRUS-11

TOTAL WEIGHT: 55 LBS
DIMENSIONS: 19.7" TALL X 17" WIDE X 7.2" DEEP

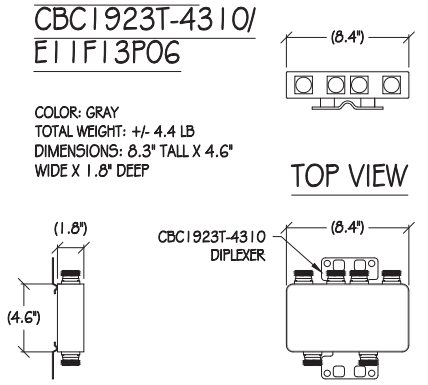


TOP VIEW
FRONT VIEW
SIDE VIEW

3 RRUS-11 DETAIL
1"=1'

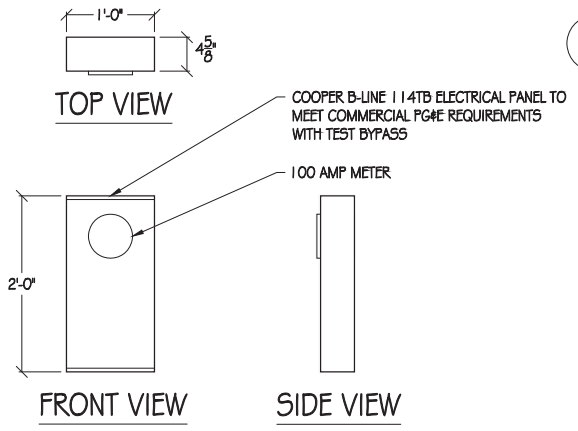
COMMSCOPE CBC1923T-4310/ E11F13P06

COLOR: GRAY
TOTAL WEIGHT: +/- 4.4 LB
DIMENSIONS: 8.3" TALL X 4.6" WIDE X 1.8" DEEP



TOP VIEW
SIDE VIEW
FRONT VIEW

4 DIPLEXER DETAIL
1"=6"

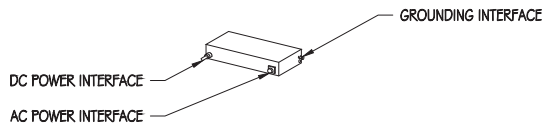


TOP VIEW
FRONT VIEW
SIDE VIEW

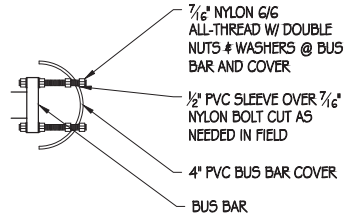
5 METER DETAIL
1"=1'

ERICSSON PSU AC 08

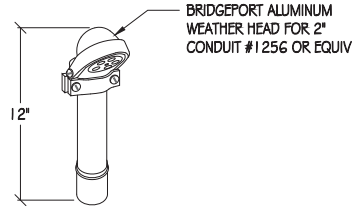
DIMENSIONS: 2.72" X 10.79" X 7.09"
WEIGHT: 11.46 LBS



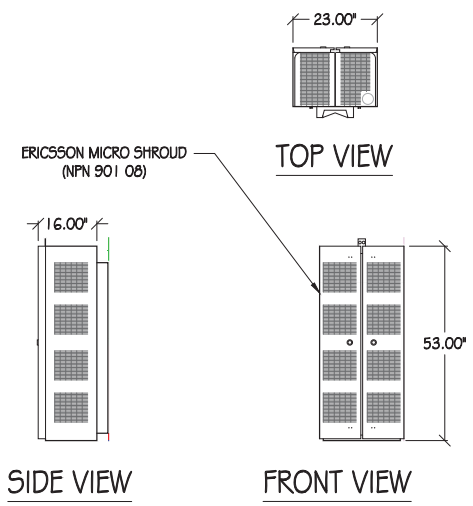
6 AC POWER MODULE
NTS



7 BUS BAR COVER
6"=1'

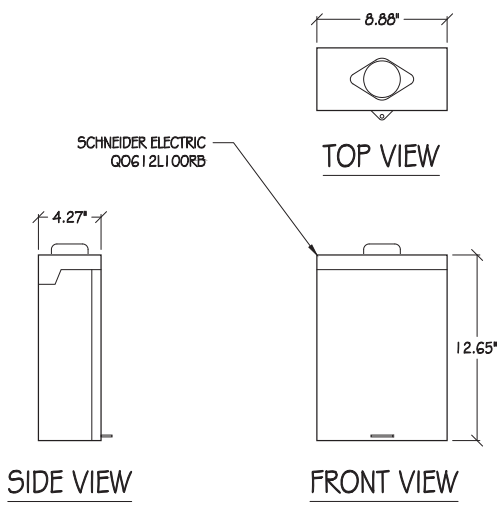


8 WEATHER HEAD
NTS



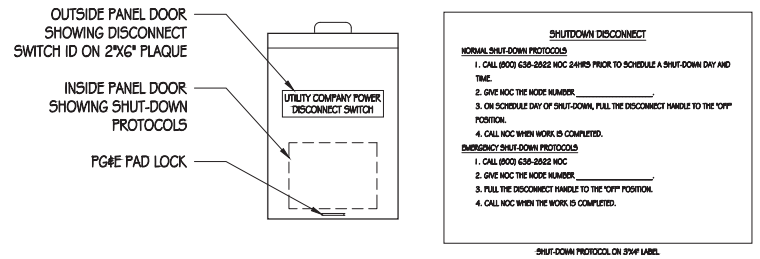
TOP VIEW
SIDE VIEW
FRONT VIEW

9 MICRO SHROUD CONCEALMENT
1/2"=1'



TOP VIEW
SIDE VIEW
FRONT VIEW

10 LOAD CENTER/AC DISCONNECT
1"=6"



SHUT-DOWN PROTOCOL ON 3"X4" LABEL

11 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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	10/29/18	CD 100%

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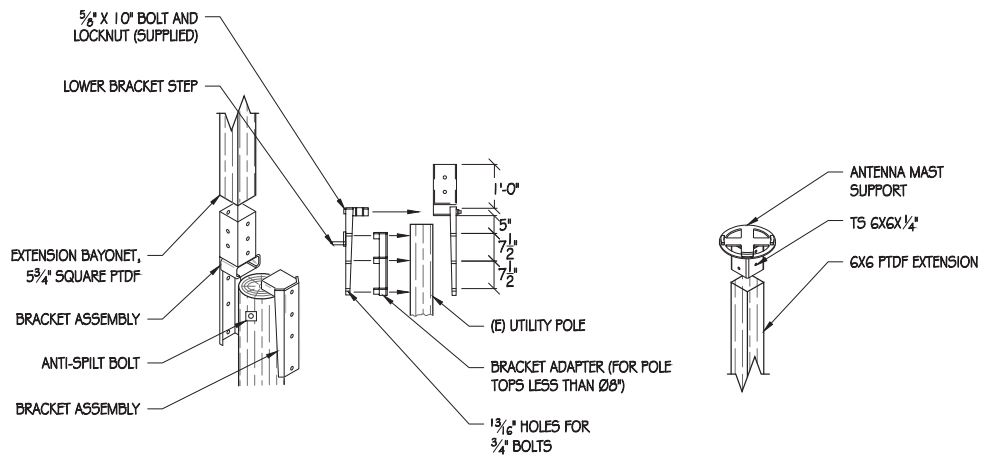
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/29/18
SHEET TITLE:	DETAILS
SHEET NUMBER	A-5

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.



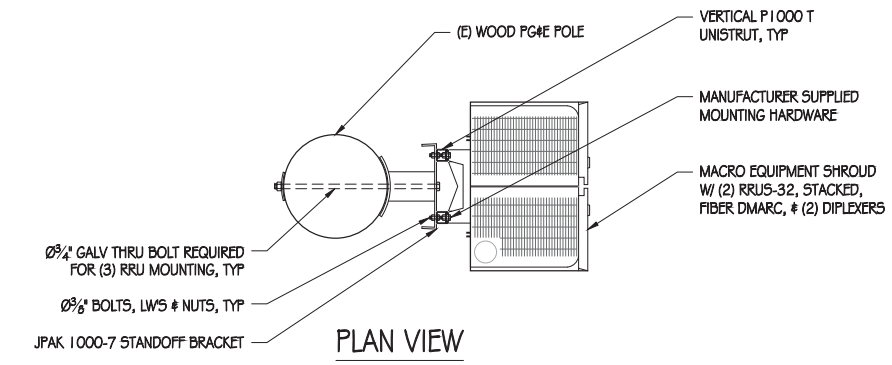
1 POLE TOP EXTENSION ASSEMBLY

1/2"=1'

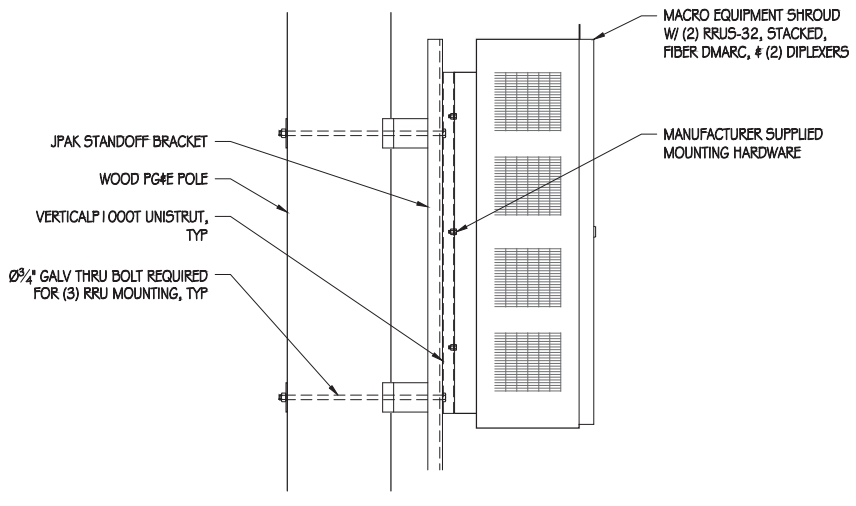
2 NOTICE SIGNAGE

NTS

NOTES:
NOTICE IS A VINYL STICKER ADHERED TO POLE



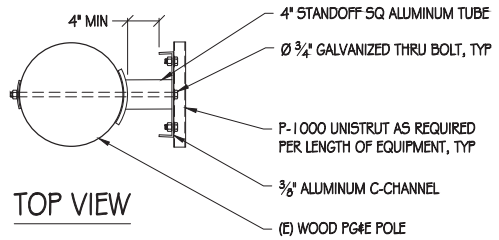
PLAN VIEW



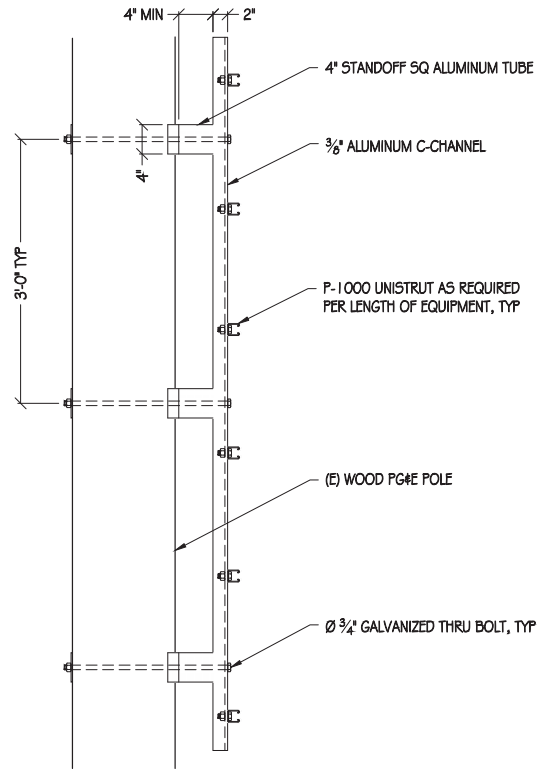
SIDE VIEW

3 RRU MOUNTING DETAIL

1"=1'



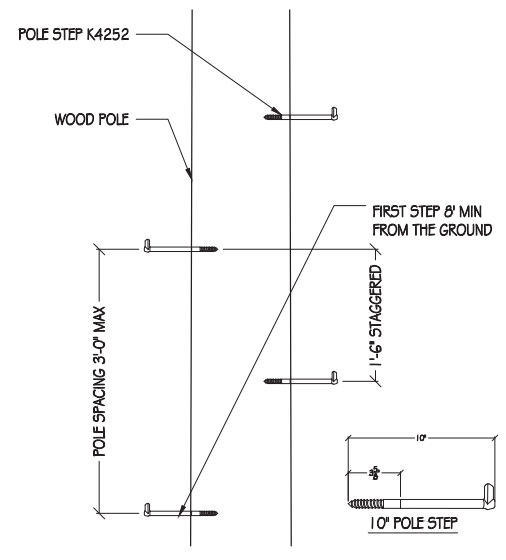
TOP VIEW



FRONT VIEW

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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REGISTERED PROFESSIONAL ENGINEER
BRET A. McCOMB
C 69891
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_LOSAO_04

ROW ADJCT TO 33 PINE LN
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/08/18	CD 90%
	10/29/18	CD 100%

DRAWN BY:	IB/BL
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/29/18

SHEET TITLE:

DETAILS

SHEET NUMBER

A-6

GENERAL ELECTRICAL NOTES:

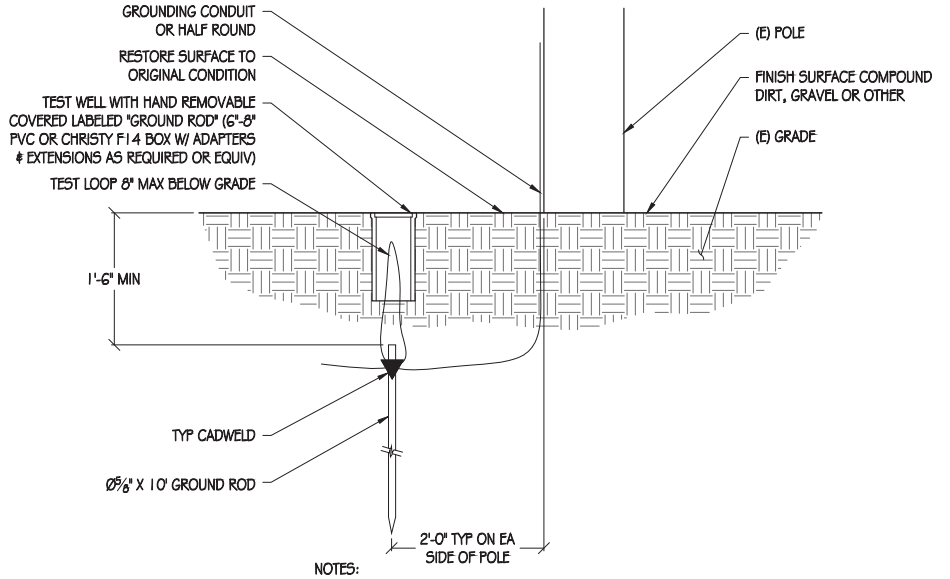
1. PROVIDE ALL ELECTRICAL WORK & MATERIALS AS SHOWN ON THE DWGS, AS CALLED FOR HEREIN, & AS IS NECESSARY TO FURNISH A COMPLETE INSTALLATION.
2. THE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ADOPTED CALIFORNIA ELECTRICAL CODE, STATE OF CALIFORNIA TITLE24, ALL OTHER APPLICABLE CODES 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.

LOAD SCHEDULE

MAKE/MODEL	QUANTITY	DESCRIPTION	DIMENSIONS	WEIGHT	TX/RX	MAX TRANSMIT POWER	W	kW
ERICSSON RRUS-32	2	RRU	27.0" X 12.0" X 7.0"	50.7 LBS	2T/2R	< 10W PER RRU	388.83	0.38883
NEMA 3R ENCLOSURE	1	DISCONNECT	12.7" X 8.9" X 4.3"	40 LBS (MAX)	N/A	N/A	N/A	N/A

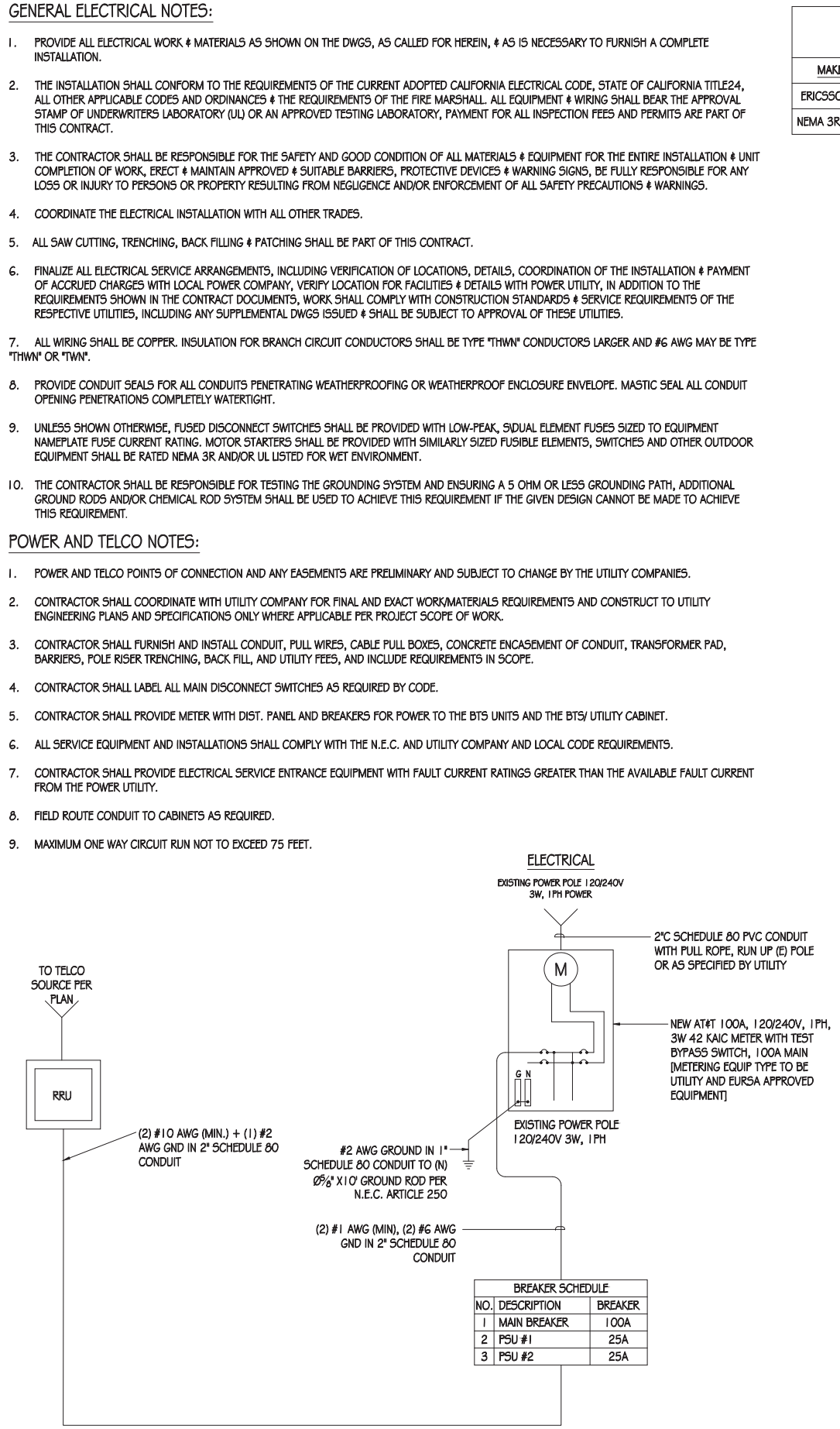


NOTES:

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

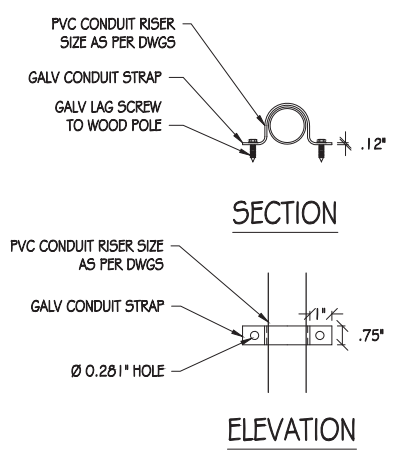
1 POLE GROUNDING DETAIL

NTS



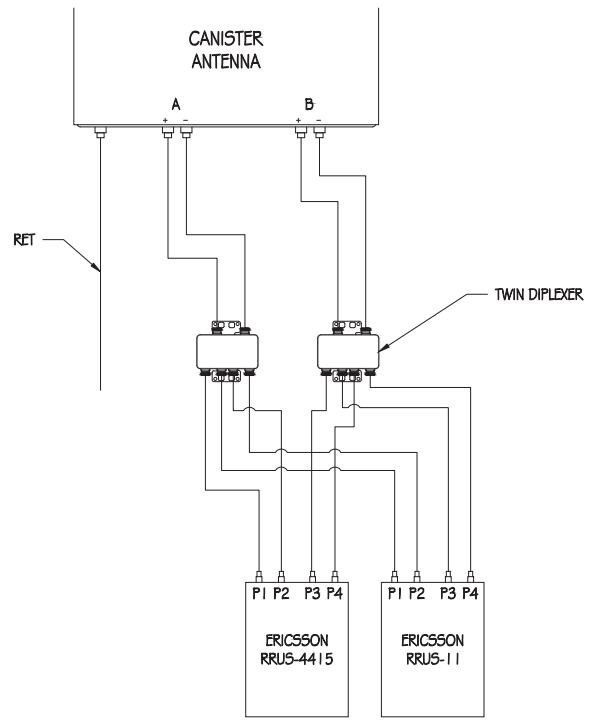
BREAKER SCHEDULE		
NO.	DESCRIPTION	BREAKER
1	MAIN BREAKER	100A
2	PSU #1	25A
3	PSU #2	25A

SINGLE-LINE DIAGRAM



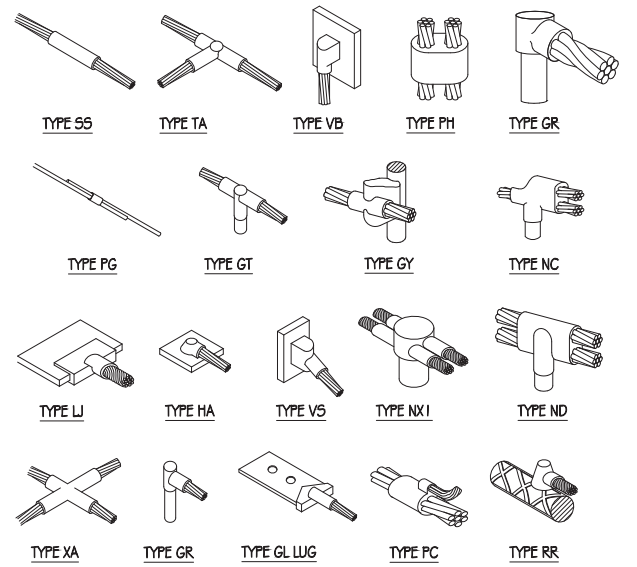
2 CONDUIT RISER DETAIL

NTS



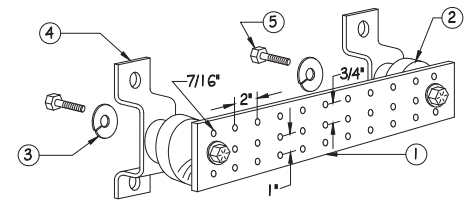
3 WIRE DIAGRAM DETAIL

NTS



4 EXOTHERMIC WELD DETAILS

NTS

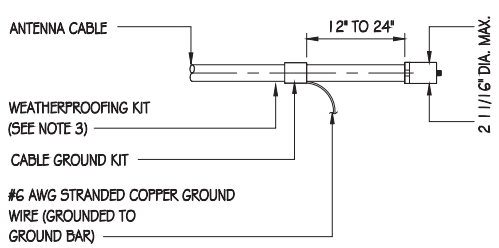


NOTES:

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.

5 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.)

6 GND KIT DETAIL

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CRAN_RSFR_LOSA0_04

ROW ADJCT TO 33 PINE LN
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	09/08/18	CD 90%
	10/29/18	CD 100%

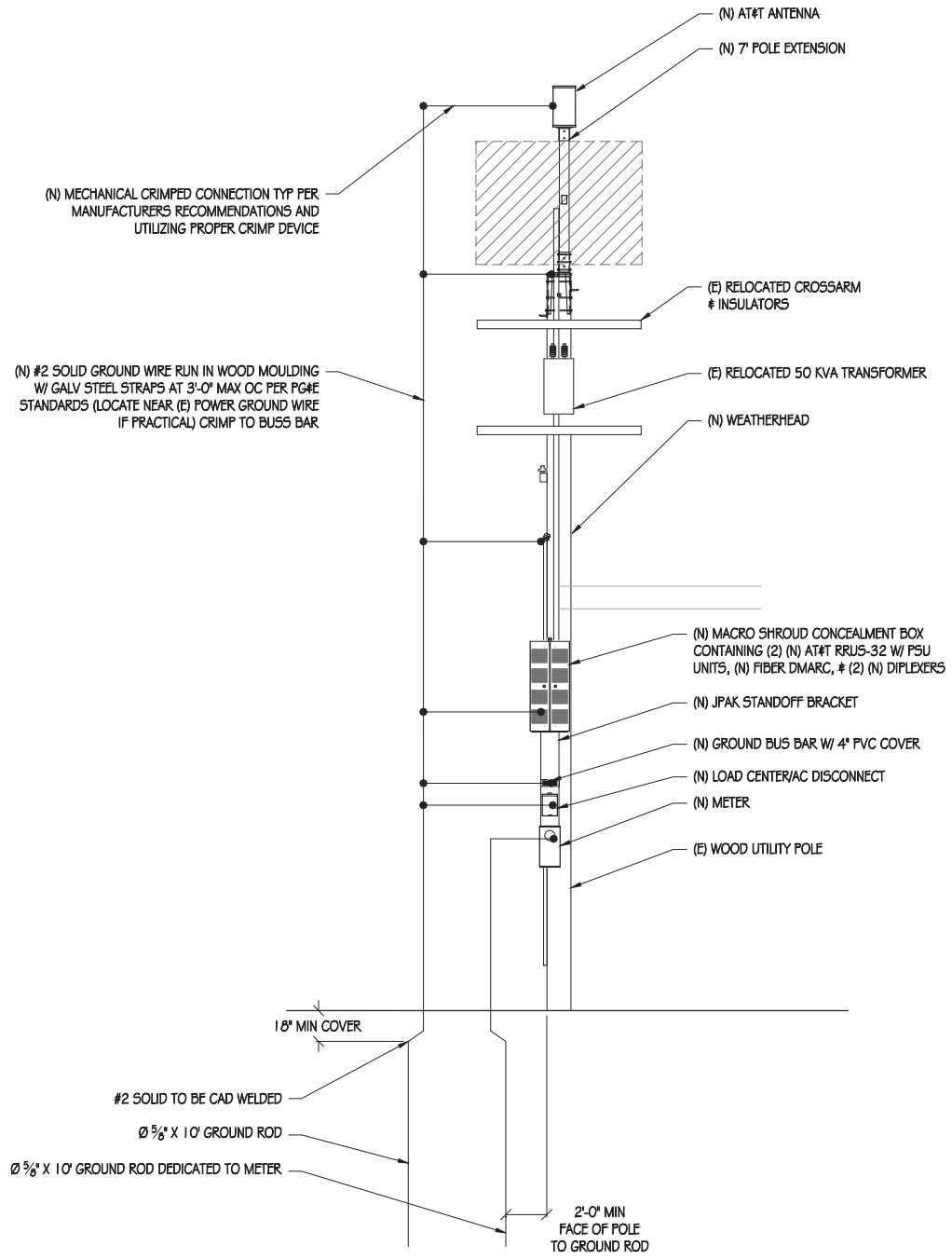
DRAWN BY:	IB/BL
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/29/18

SHEET TITLE:

SINGLE-LINE DIAGRAM & DETAILS

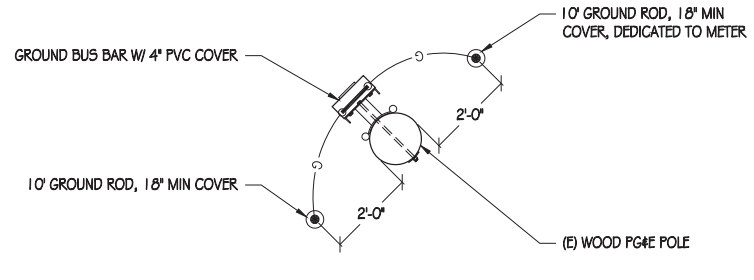
SHEET NUMBER

E-1



POLE GROUNDING DIAGRAM

NTS



TN

GROUNDING PLAN

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CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/29/18

SHEET TITLE:

GROUNDING DIAGRAMS

SHEET NUMBER

E-2

TRAFFIC CONTROL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING WORK ON A PUBLIC STREET TO INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS SHOWN HEREIN, AS WELL AS ANY ADDITIONAL TRAFFIC CONTROL DEVICES THAT MAY BE REQUIRED TO INSURE THE SAFE MOVEMENT OF TRAFFIC AND PEDESTRIANS THROUGH OR AROUND THE WORK AREA AND PROVIDE MAXIMUM PROTECTION AND SAFETY TO CONSTRUCTION WORKERS.
2. ALL DELINEATORS SHALL BE EQUIPPED WITH REFLECTORS AT NIGHT TIME.
3. THE CONTRACTOR SHALL NOTIFY THE CITY/COUNTY OF RECORD AND CALTRANS PERMIT INSPECTOR AT LEAST FIVE WORKING DAYS IN ADVANCE OF IMPLEMENTING ANY CONSTRUCTION DETOUR
4. ALL SIGNS, DELINEATORS, BARRICADES, ETC. AND THEIR INSTALLATION SHALL CONFIRM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) AND THE MUTCD CALIFORNIA SUPPLEMENT, STATE OF CALIFORNIA STANDARD SPECIFICATION, SPECIAL PROVISIONS, AND STAMPED PLANS.
5. THE CITY/COUNTY OF RECORDS AND CALTRANS RESERVE THE RIGHT TO OBSERVE THESE TRAFFIC CONTROL PLANS IN USE AND TO MAKE ANY NECESSARY CHANGES AS FIELD CONDITIONS WARRANT. ANY CHANGES SHALL SUPERSEDE THESE PLANS. EXACT LOCATION OF ALL EQUIPMENT AND TRAFFIC CONTROL DEVICES SHALL BE DETERMINED BY THE ENGINEER.
6. ALL TRAFFIC CONTROL DEVICES, STRIPES, MARKINGS, LEGENDS AND RAISED PAVEMENT MARKERS SHALL CONFIRM TO THE MUTCD AND THE CALIFORNIA SUPPLEMENT (LATEST EDITION), THE STATE OF CALIFORNIA STANDARD SPECIFICATION (LATEST EDITION), SPECIAL PROVISIONS, AND STAMPED PLANS.
7. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN THEIR PROPER POSITION AT ALL TIMES AND SHALL BE REPAIRED, REPLACED OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY.
8. ALL TRAFFIC LANES SHALL HAVE A MINIMUM OF 5 FEET CLEARANCE FROM OPEN EXCAVATION AND A MINIMUM OF 2 FEET FROM VERTICAL OBSTRUCTIONS.
9. CONTRACTOR SHALL PROVIDE FLAGGERS AS DEEMED NECESSARY BY THE CITY/COUNTY INSPECTOR OR CALTRANS PERMIT INSPECTOR.
10. ALL ADVANCE WARNING SIGNS SHALL BE EQUIPPED WITH FLAGS.
11. TRAFFIC SIGNALS SHALL REMAIN IN OPERATION AT ALL TIMES. SIGNAL OPERATION DURING EACH CONSTRUCTION PHASE SHALL BE COORDINATED WITH AND APPROVED BY THE CITY/COUNTY OF RECORD AND/OR CALTRANS INSPECTOR.
12. PLACE ADDITIONAL "LANE CLOSED", (C30) SIGNS ON TYPE II BARRICADES AT 100 FOOT INTERVALS THROUGHOUT EXTENDED WORK AREAS IN EACH LANE THAT IS CLOSED. INSTALL "OPEN TRENCH" (C27) SIGNS WHENEVER AN OPEN EXCAVATION AREA EXISTS ADJACENT TO THE TRAVELED WAY.
13. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE REMOVED FOLLOWING COMPLETION OF EACH CONSTRUCTION STAGE AND THE PERMANENT TRAFFIC CONTROL DEVICES SHALL BE RESTORED BY THE CONTRACTOR UPON COMPLETION OF PROJECT.
14. CONTRACTOR SHALL REPLACE/REPAIR ALL DAMAGED STRIPING AT THE END OF EACH WORKING DAY.
15. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN DISABILITY ACT AS RELATED TO PEDESTRIAN ACCESS AND SHALL MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES PER ADA REQUIREMENTS. SIDEWALK CLOSURE/DETOUR SHALL COMPLY WITH THE WATCH STANDARDS AND MUST OBTAIN APPROVAL FROM THE CITY/COUNTY OF RECORD.
16. CONTRACTOR SHALL COVER OR REMOVE ALL CONFLICTING SIGNS.
17. CONTRACTOR SHALL POST "SYMBOL" UNEVEN LANES, "STEEL PLATES AHEAD" OR "BUMP" SIGNS FOR PAVEMENT SURFACE DISRUPTIONS OF ½" OR GREATER. PAVEMENT DISRUPTIONS FOR 1" OR GREATER SHALL HAVE A BEVELED EDGE OF FOUR (4) HORIZONTAL TO ONE (1) VERTICAL.
18. CONTRACTOR SHALL INSTALL "CAUTION STEEL PLATES AHEAD" AND/OR "ROUGH ROAD" SIGNS IN ADVANCE OF STEEL PLATE BRIDGING.
19. WORK HOURS SHALL COMPLY WITH SMC 16.08.030.
20. RESIDENTS TO BE NOTIFIED OF DATES & TIMES OF CONSTRUCTIONS (2) WEEKS PRIOR TO THE START OF WORK.
21. A 5'-0" MIN. PEDESTRIAN CLEARANCE TO BE MAINTAINED AT EXISTING SIDEWALKS.

PERMIT NOTES - PLEASE NOTE THE FOLLOWING:

1. ANY WORK AT OR WITHIN 150 FEET OF A SIGNALIZED INTERSECTION MAY REQUIRE TRAFFIC CONTROL, PURSUANT TO SAN JOSE MUNICIPAL CODE SECTION 11.12.050, BY FLAGGER(S) OR CITY OF SAN JOSE POLICE OFFICER(S). THE NEED FOR FLAGGER(S) OR RESERVE POLICE OFFICER(S) WILL BE DETERMINED BASED ON SITE CONDITIONS. FLAGGER(S) SHALL BE SUFFICIENTLY TRAINED AND EQUIPPED IN ACCORDANCE WITH CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTION 1599. IN ADDITION, FLAGGERS SHALL BE CERTIFIED BY THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) OR THE NATIONAL SAFETY COUNCIL (NSC). THE DIRECTOR OF PUBLIC WORKS RESERVES THE RIGHT TO REQUIRE THE USE OF POLICE OFFICERS WHEN CONDITIONS WARRANT.
2. ANY WORK IN THE DOWNTOWN CORE AREA REQUIRES A MINIMUM 10 DAY NOTICE TO CITY OF SAN JOSE DOWNTOWN TRAFFIC OPERATIONS ENGINEER AT (408) 975-3719, PRIOR TO THE START OF WORK. SEE THE APPLICATION FORM TITLED "DOWNTOWN LANE CLOSURE REQUEST FORM".
3. ANY WORK NEAR VTA LIGHTRAIL REQUIRES A MINIMUM OF 3 WEEKS ADVANCE NOTICE TO VTA LIGHTRAIL OPERATIONS AT (408) 546-7608.
4. ANY WORK PROPOSING TO CLOSE A PARKING LANE WILL REQUIRE THAT "NO PARKING – TOW AWAY" SIGNS BE OBTAINED FROM THE DEPARTMENT OF TRANSPORTATION (408) 535-3850. IF THE PARKING LANE HAS CITY PARKING METERS, THEN ADDITIONAL FEES WILL BE DUE TO COMPENSATE THE CITY FOR LOST REVENUE. SEE THE APPLICATION FORM TITLED "TOW AWAY PERMIT".
5. ANY WORK PROPOSED ON A STREET DESIGNATED AS A STATE HIGHWAY WILL REQUIRE A PERMIT FROM CALTRANS. CONTACT JIM WONG AT (408) 452-7131.

TRAFFIC SYMBOL LEGEND

- TRAFFIC CONE
- TRAFFIC SIGN
- LANE DIRECTION
- ROAD WORK AHEAD — "ROAD WORK AHEAD" SIGN
- WORK AREA
- END ROAD WORK — "END ROAD WORK" SIGN
- "ARROW BOARD" SIGN
- SHARE THE ROAD — "SHARE THE ROAD" SIGN

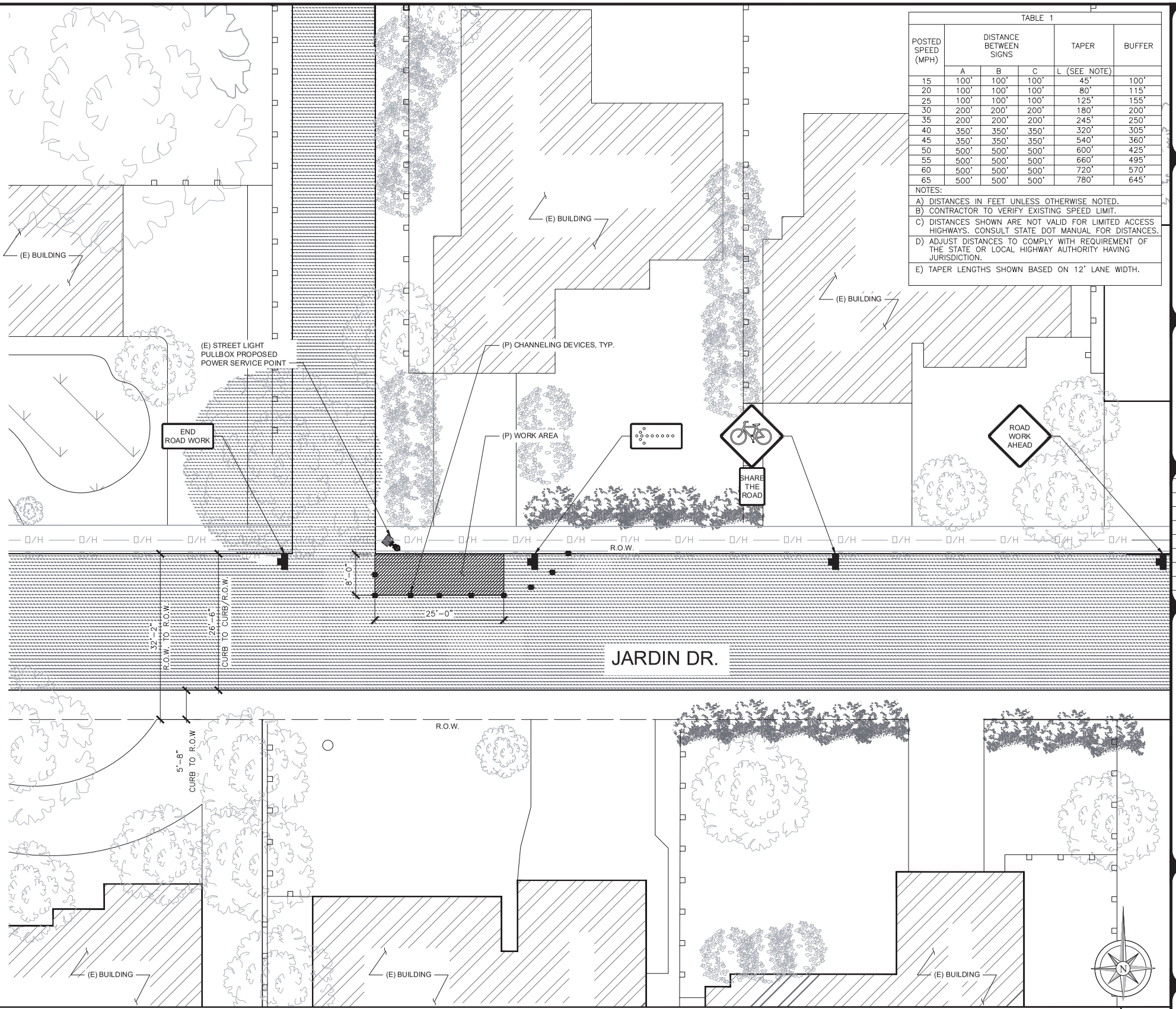


TABLE 1					
POSTED SPEED (MPH)	DISTANCE BETWEEN SIGNS			TAPER	BUFFER
	A	B	C	L (SEE NOTE)	
15	100'	100'	100'	45'	100'
20	100'	100'	100'	80'	115'
25	100'	100'	100'	125'	155'
30	200'	200'	200'	180'	200'
35	200'	200'	200'	245'	250'
40	350'	350'	350'	320'	305'
45	350'	350'	350'	540'	360'
50	500'	500'	500'	600'	425'
55	500'	500'	500'	660'	495'
60	500'	500'	500'	720'	570'
65	500'	500'	500'	780'	645'

NOTES:
A) DISTANCES IN FEET UNLESS OTHERWISE NOTED.
B) CONTRACTOR TO VERIFY EXISTING SPEED LIMIT.
C) DISTANCES SHOWN ARE NOT VALID FOR LIMITED ACCESS HIGHWAYS. CONSULT STATE DOT MANUAL FOR DISTANCES.
D) ADJUST DISTANCES TO COMPLY WITH REQUIREMENT OF THE STATE OR LOCAL HIGHWAY AUTHORITY HAVING JURISDICTION.
E) TAPER LENGTHS SHOWN BASED ON 12' LANE WIDTH.

24"x36" SCALE: 3/32" = 1'-0"
11"x17" SCALE: 3/64" = 1'-0"
8' 4' 0" 8'

TRAFFIC PLAN 1

SURESITE
36 EXECUTIVE PARK
SUITE 210
IRVINE, CA 92614

Date:	February 15, 2018
Scale:	Per Plan
Designed:	RC
Drawn:	RC
Checked:	ZLN
Proj. Engr:	ZLN
File:	

REV	DATE	DESCRIPTION	BY
A	1/31/19	90% CD	CSH

REVISIONS | DESIGN BY | DESIGN DATE | CITY APPR. | APPR. DATE

at&t
5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

ERICSSON
6140 STONERIDGE MALL MD
THIRD FLOOR
PLEASANTON, CA 94588

SURESITE
36 EXECUTIVE PARK
SUITE 210
IRVINE, CA 92614

CRAN-RSFR LOSAO_04
FA TBD
ROW ADJCT TO
33 PINE LN..
LOS ALTOS, CA 94022

SHEET TITLE
TRAFFIC PLAN

SHEET NUMBER
TR-1

REV. DATE JANUARY 29, 2018

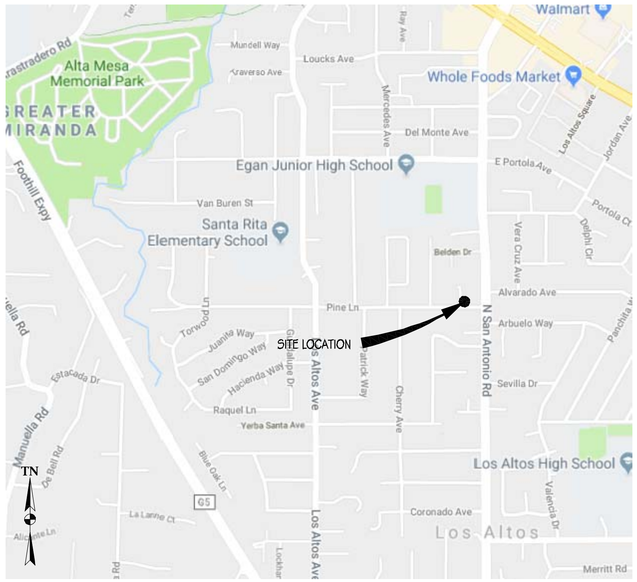
at&t

SITE ID:	CRAN_RSFR_LOSA0_04
SITE ADDRESS:	33 PINE LN LOS ALTOS, CA, 94022
PM#:	114474135
SITE TYPE:	PG&E POLE #TBD
POLE OWNER:	PG&E
FA LOCATION:	14816593
USID:	198298

SITE INFORMATION

APPLICANT:	AT&T MOBILITY 5001 EXECUTIVE PARKWAY SAN RAMON, CA 94583
AGENT:	SURESITE 36 EXECUTIVE PARK, SUITE 210 IRVINE, CA 92614
APN:	ADJCT TO 167-23-035
SITE ADDRESS:	33 PINE LN LOS ALTOS, CA, 94022
COUNTY:	SANTA CLARA
LATITUDE:	37° 23' 32.12" N (37.392256) NAD 83
LONGITUDE:	122° 06' 54.19" W (-122.115053) NAD 83
GROUND ELEVATION:	±116.3' AMSL
ZONING:	PUBLIC ROW
ZONING JURISDICTION:	CITY OF LOS ALTOS
PG&E SAP ID:	100509246
STREET CLASSIFICATION:	LOCAL

VICINITY MAP



PROJECT TEAM

AGENT:
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SAN JOSE, CA 95110
(949) 278-2962
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PROJECT MANAGERS:
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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 AN (E) PG&E UTILITY POLE IN THE PUBLIC RIGHT OF WAY.

SCOPE OF WORK:

1. INSTALL (N) TELECOMMUNICATIONS EQUIPMENT BOXES ON AN (E) PG&E UTILITY POLE. EQUIPMENT IS TO BE INSTALLED ON GO95 COMPLIANT STANDOFF BRACKET & CONSISTS OF (1) ELECTRICAL METER, (1) LOAD CENTER/AC DISCONNECT, (1) CONCEALMENT BOX CONTAINING (1) RRUS-4415 & (1) RRUS-11 W/ P5U UNITS, (2) DIPLEXERS, & (1) KMW FX-OM2L10H2-06T CYLINDRICAL ANTENNA.
2. ALL EQUIPMENT, EQUIPMENT MOUNTING, CONDUITS, AND APPURTENANCES TO BE PAINTED TO MEET JURISDICTION APPROVAL.
3. UTILITY LINES BETWEEN (E) POINT OF CONNECTION & POLE TO BE UNDERGROUND AND/OR OVERHEAD.
4. FIBER CONNECTION TO BE SECURE UNDER SEPARATE ENCROACHMENT PERMIT.

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
T-2	GENERAL NOTES, LEGEND, & ABBREVIATIONS
A-1	SITE PLAN
A-2	EQUIPMENT PLAN & ANTENNA PLANS
A-3	ELEVATIONS
A-4	ELEVATIONS
A-5	DETAILS
A-6	DETAILS
E-1	SINGLE-LINE DIAGRAM & DETAILS
E-2	GROUNDING DIAGRAMS

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: 33 PINE LANE, LOS ALTOS, CA 94022

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	3.9	MI
6.	STAY ON I-680 S, FOLLOW SIGNS FOR I-580	17.5	MI
7.	TAKE EXIT 12 FOR MISSION BLVD TOWARD I-880	0.2	MI
8.	KEEP RIGHT AT FORK, FOLLOW SIGNS FOR CA-262 S/ MISSION BLVD	0.3	MI
9.	MERGE ONTO CA-262 S/ MISSION BLVD	0.6	MI
10.	TAKE EXIT ON LEFT TOWARD I-880 S/ SAN JOSE	0.9	MI
11.	MERGE ONTO I-880 S	3.1	MI
12.	TAKE CA-237 W EXIT TOWARD MTN VIEW	0.9	MI
13.	CONTINUE ON CA-237 W	8.4	MI
14.	KEEP LEFT TO CONTINUE ON CA-237 W/ SOUTHBAY FWY	0.5	MI
15.	TURN RIGHT ONTO EL CAMINO REAL	2.0	MI
16.	TURN RIGHT ONTO DISTEL DR	2.0	MI
17.	TURN RIGHT ONTO MARICH WAY	0.1	MI
18.	TURN LEFT ONTO PANCHILA WAY	0.2	MI
19.	TURN RIGHT ONTO ALVARADO AVE	0.3	MI
20.	TURN LEFT ONTO N SAN ANTONIO RD	213	FT
21.	TURN RIGHT ONTO PINE LN	207	FT

END AT: 33 PINE LANE, LOS ALTOS, CA 94022
ESTIMATED TIME: 18 MINS ESTIMATED DISTANCE: 10 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

SURESITE
Infrastructure experts. Small cell leaders.
36 EXECUTIVE PARK, SUITE 210
IRVINE, CA 92614

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REGISTERED PROFESSIONAL ENGINEER
BRET A. McCOMB
C 69891
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_LOSA0_04

33 PINE LN
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/08/18	CD 90%
	07/25/19	CD 100%

DRAWN BY:	T.J. / B.L.
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	07/25/19

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 SURVEYORS 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 HIGHER 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.

15. ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION OR SHTUDOWN SIGNAGE) OR FGAE REGULATIONS SHALL BE PAINTED OVER OR REMOVED. RAISED/DEPRESSED LOGOS OR TEXT ON EQUIPMENT (E.G. RRUS), IF PRESENT, TO BE SANDED OFF OR COVERED WITH STICKER, & THEN PAINTED OVER.

16. FONDATED RF WAC MARNING SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD THE BUILDING IF THERE IS NO WINDOW.

17. ALL EQUIPMENT, INCLUDING ANTENNAS, MOUNTING/STANDOFF BRACKETS, POLE EXTENSIONS, CONDUIT, METER, AND RADIOS SHALL BE PAINTED "MESA BROWN" USING A DURABLE OUTDOOR PAINT.

18. CABLING SHALL BE MESA BROWN IN COLOR AND SHALL BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS, & SHALL BE HIDDEN FROM VIEW TO THE MAXIMUM EXTENT POSSIBLE.

19. SUPPORT EQUIPMENT (E.G. METERS, DISCONNECT SWITCH, ETC) TO BE CLUSTERED VERTICALLY AS CLOSE AS TECHNICALLY FEASIBLE ON POLE.

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 AND GROUNDING 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. #2 GROUND AND BOND WIRE.
4. GROUND 2' MIN 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, UNLESS OTHERWISE NOTED.

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. FILL VOID AROUND CABLES AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION.

ABBREVIATIONS

A	AMPERE
AB	ANCHOR BOLT
ABV	ABOVE
ACCA	ANTENNA CABLE COVER ASSEMBLY
ADDL	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
BTCW	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
HDG	HOT-DIP GALVANIZED)
HDR	HEADER
HGR	HANGER
HPS	HIGH PRESSURE SODIUM
HT	HEIGHT
ICGB	ISOLATED COPPER GROUND BUS5
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
P/C	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'L, (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	THICKNESS)
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

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", 240W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #WSW232T
- LIGHTING FIXTURE, FLUORESCENT, 10.94' x 8'-0", 295W, 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 HALIDE, 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 XFMR
- (E) POLE MOUNTED XFMR
- (N) PAD MOUNTED XFMER
- (E) PAD MOUNTED XFMER

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33 PINE LN
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/08/18	CD 90%
	07/25/19	CD 100%

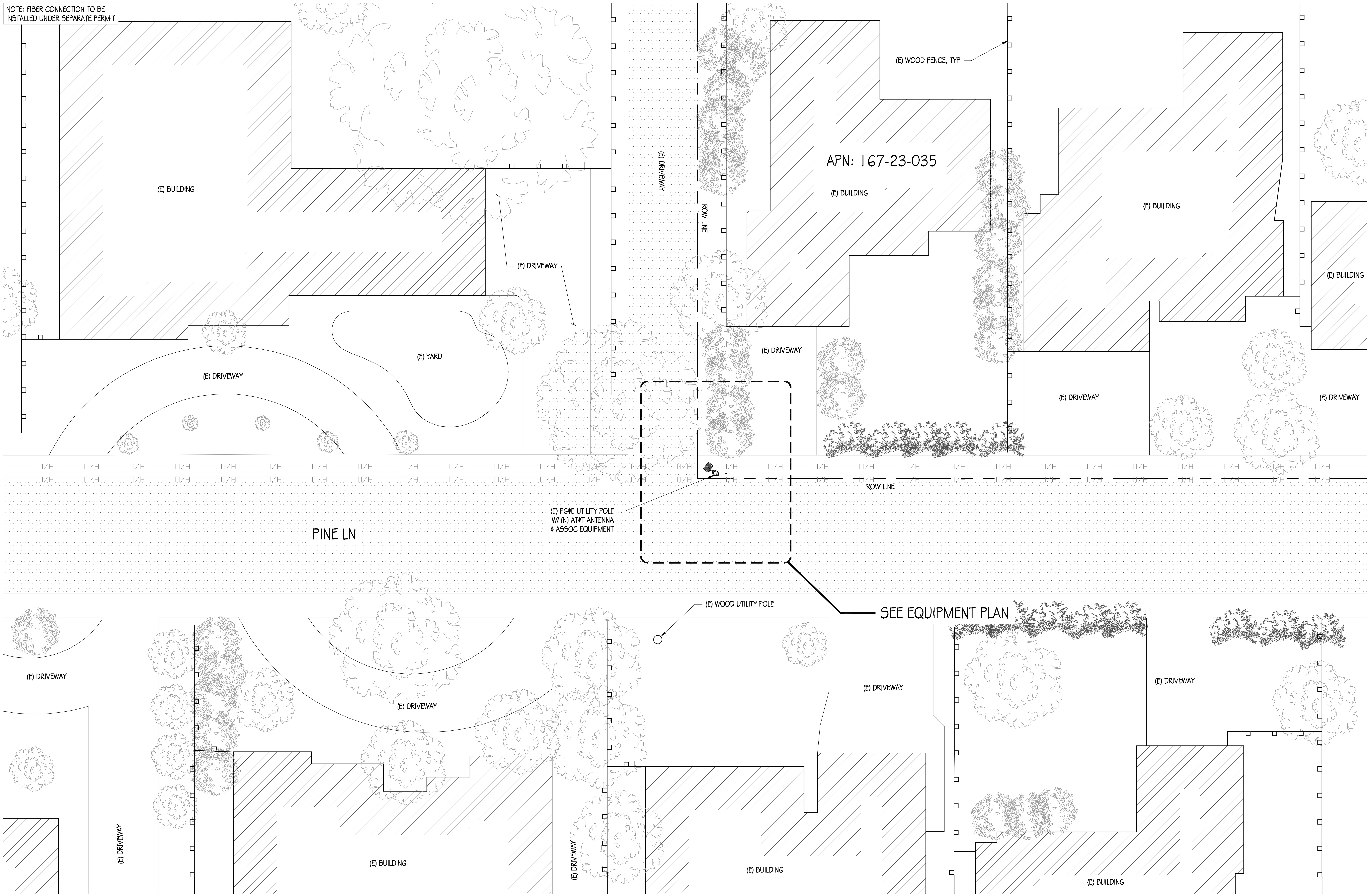
DRAWN BY:	T.J. / B.L.
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	07/25/19

SHEET TITLE:

GENERAL NOTES, LEGEND, & ABBREVIATIONS

SHEET NUMBER

T-2



SITE PLAN

1"=10'

0 5' 10' 20' 30' 50'

TN

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DATE:	07/25/19

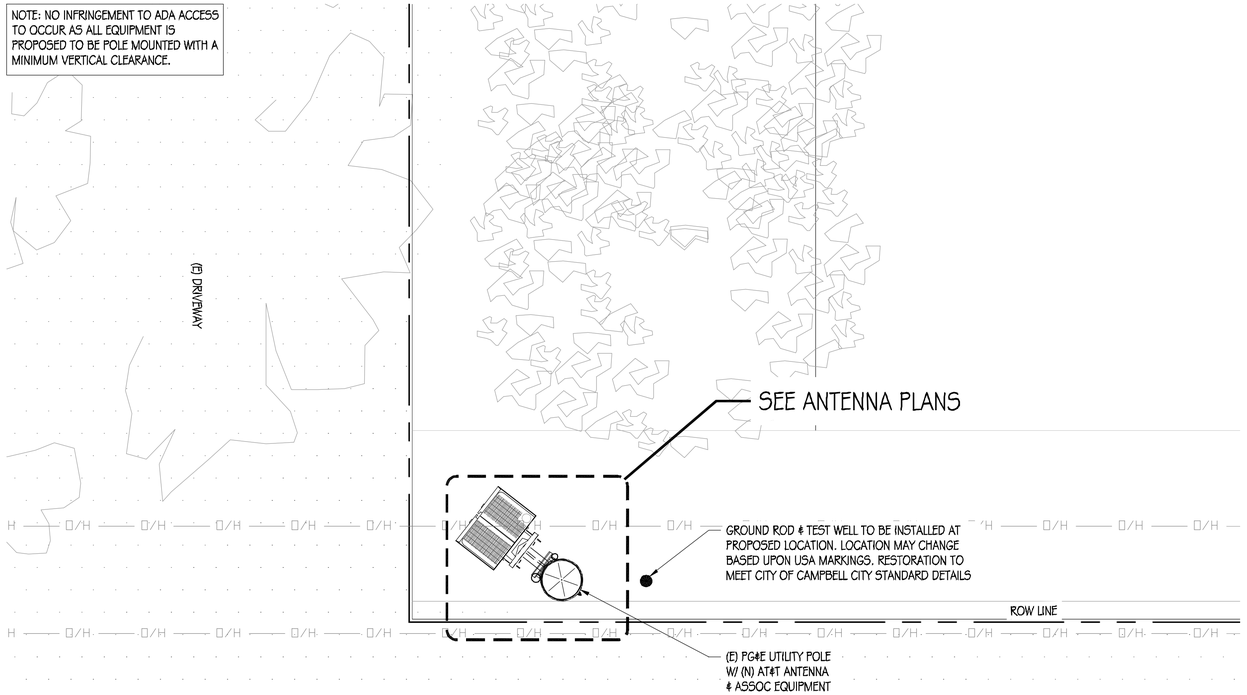
SHEET TITLE:

SITE PLAN

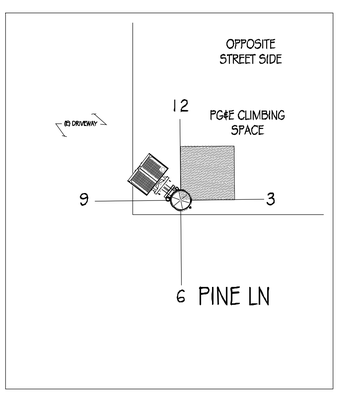
SHEET NUMBER

A-1

NOTE: NO INFRINGEMENT TO ADA ACCESS TO OCCUR AS ALL EQUIPMENT IS PROPOSED TO BE POLE MOUNTED WITH A MINIMUM VERTICAL CLEARANCE.



PINE LN

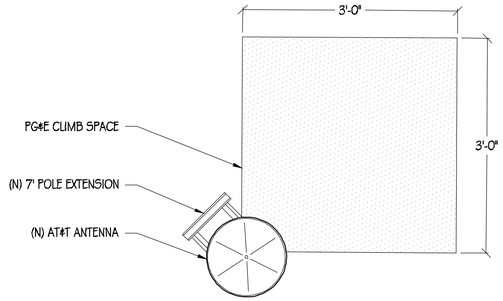


TN

EQUIPMENT PLAN

1/2"=1'

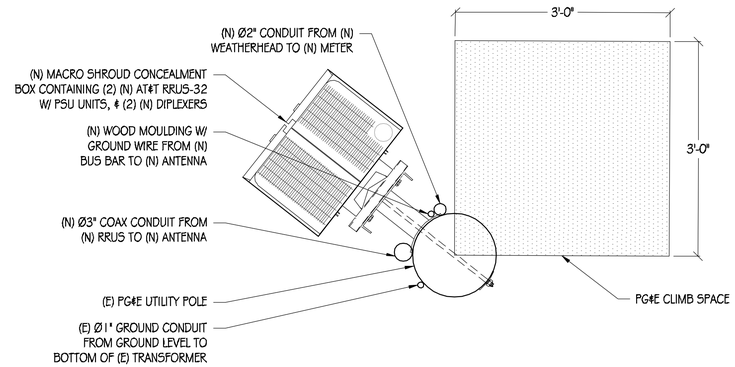
NOTE: FIBER CONNECTION TO BE INSTALLED UNDER SEPARATE PERMIT



TN

ANTENNA PLAN

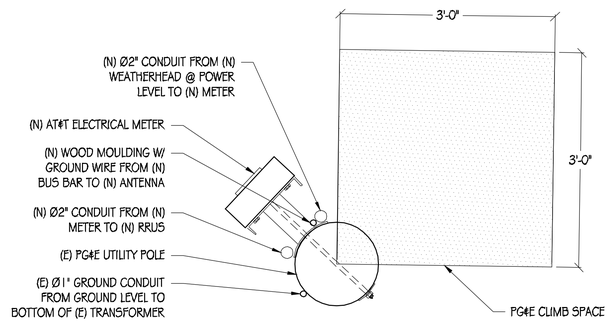
1"=1'



TN

RRU PLAN

1"=1'



TN

ELECTRICAL METER PLAN

1"=1'

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DATE:	07/25/19

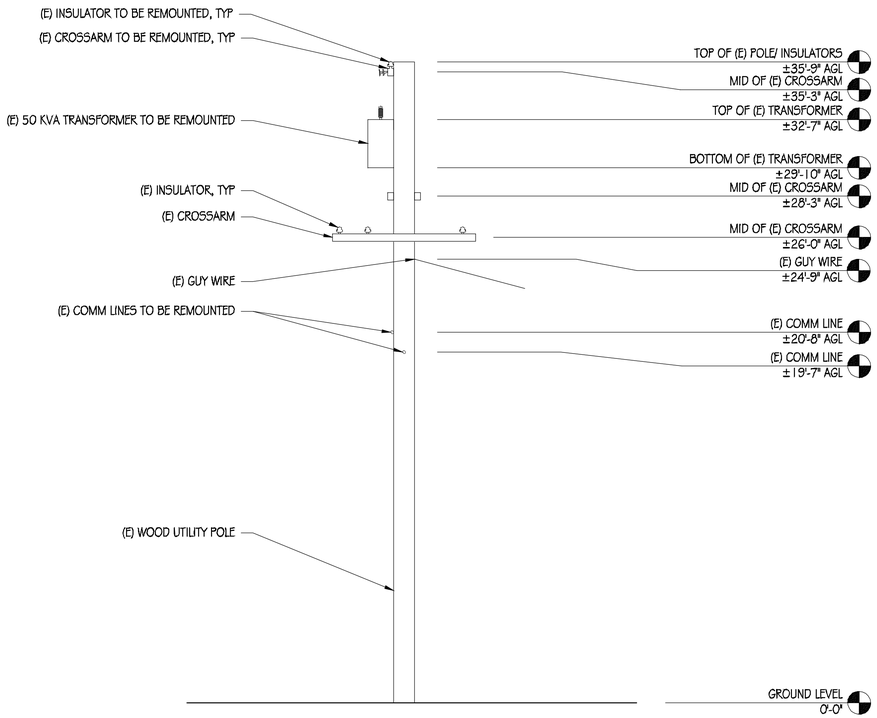
SHEET TITLE:

EQUIPMENT PLAN & ANTENNA PLANS

SHEET NUMBER

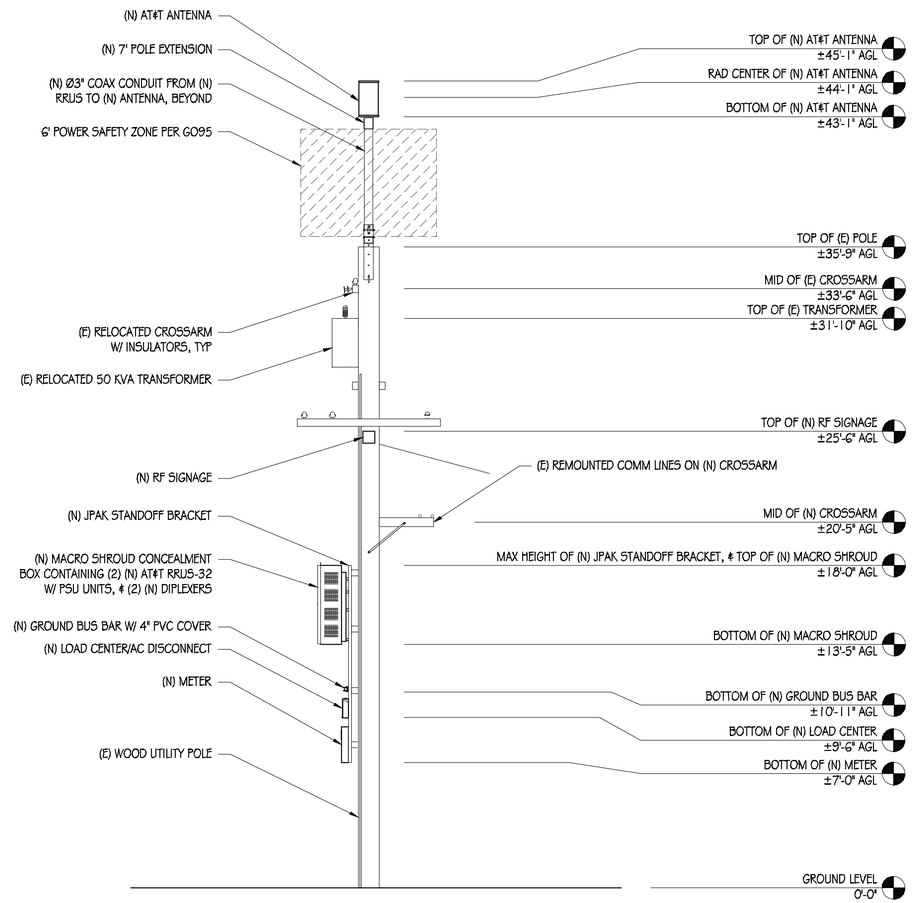
A-2

NOTE: FIBER CONNECTION TO BE INSTALLED UNDER SEPARATE PERMIT



EXISTING SOUTH ELEVATION

1/4"= 1'-0"



NEW SOUTH ELEVATION

1/4"= 1'-0"

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APPROVED BY:	B. McCOMB
DATE:	07/25/19

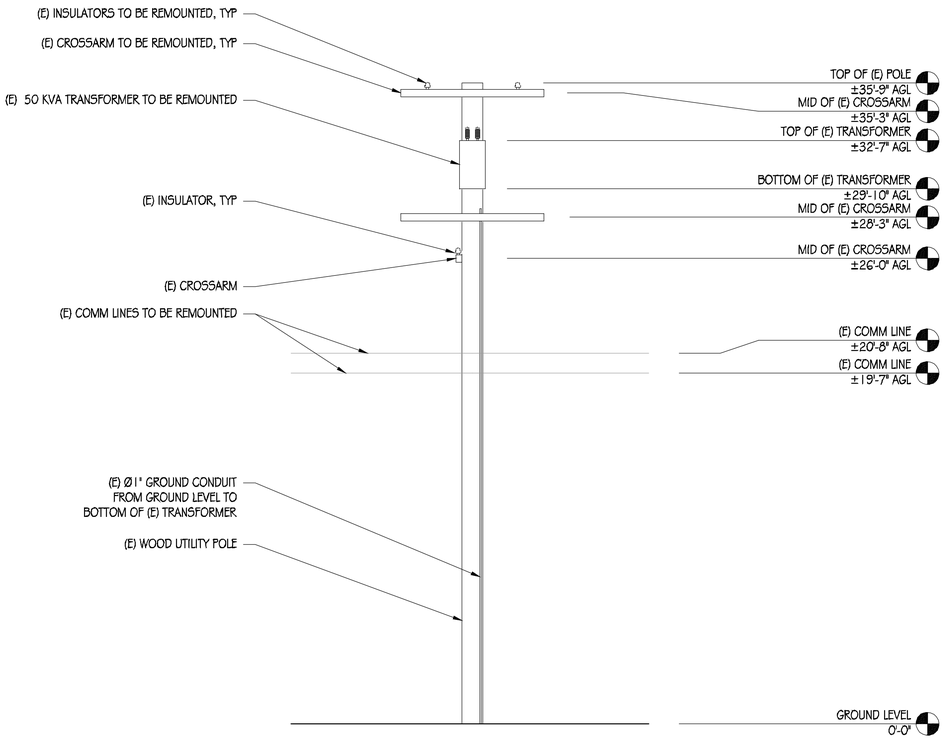
SHEET TITLE:

ELEVATIONS

SHEET NUMBER

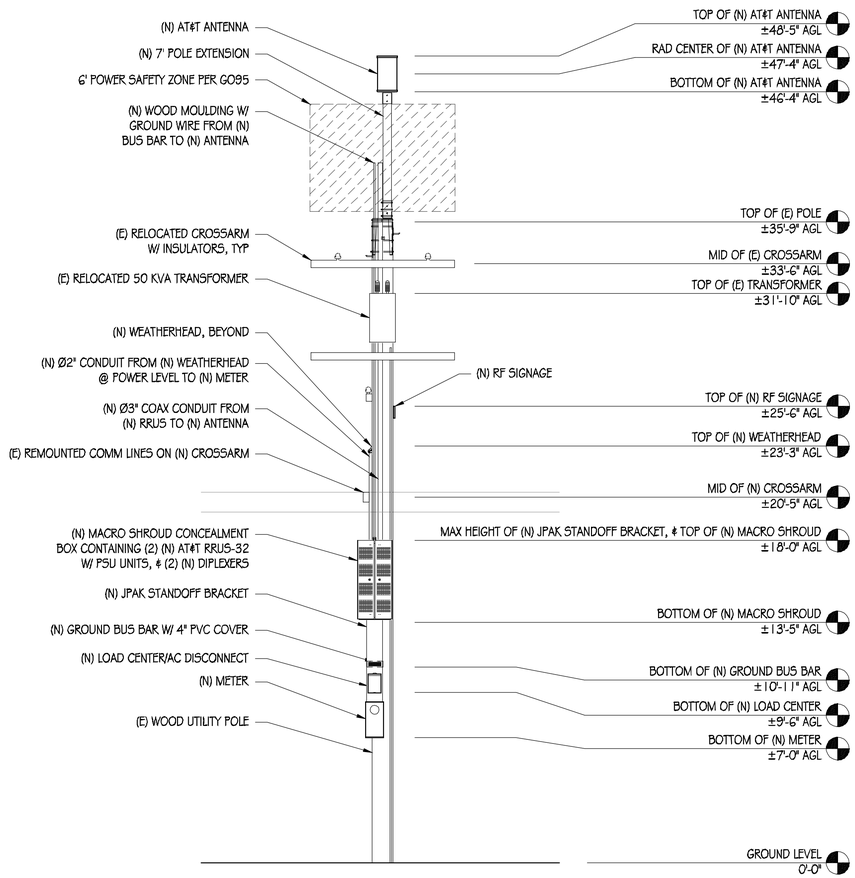
A-3

NOTE: FIBER CONNECTION TO BE INSTALLED UNDER SEPARATE PERMIT



EXISTING WEST ELEVATION

1/4"=1'-0"



NEW WEST ELEVATION

1/4"=1'-0"

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DATE:	07/25/19

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.

KMW FX-OM2L10H2-06T

WIND AREA:	2.67 SQ FT
WEIGHT:	34.2 LBS
DIMENSIONS:	Ø16.0" X 24.0" TALL
RF CONNECTORS:	(12) 4.3-10 FEMALE

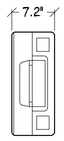
TOP VIEW

FRONT VIEW

1 ANTENNA
1/2"=1'

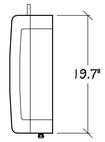
ERICSSON RRUS-11

TOTAL WEIGHT:	55 LBS
DIMENSIONS:	19.7" TALL X 17" WIDE X 7.2" DEEP



TOP VIEW

FRONT VIEW

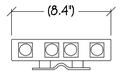


SIDE VIEW

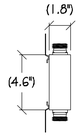
2 RRUS-11 DETAIL
1"=1'

COMMSCOPE CBC1923T-4310/ E11F13P06

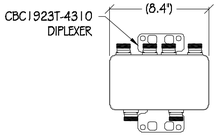
COLOR: GRAY
TOTAL WEIGHT: +/- 4.4 LB
DIMENSIONS: 8.3" TALL X 4.6" WIDE X 1.8" DEEP



TOP VIEW

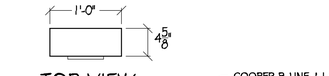


SIDE VIEW

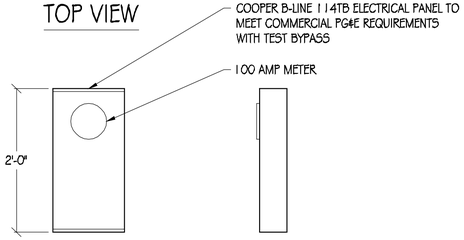


FRONT VIEW

3 DIPLEXER DETAIL
1"=6"



TOP VIEW

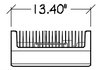


FRONT VIEW SIDE VIEW

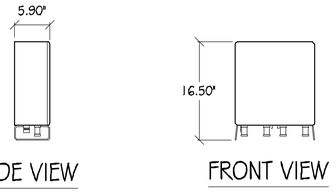
4 METER DETAIL
1"=1'

ERICSSON RRUS-4415

TOTAL WEIGHT:	UNDER 46 LBS
DIMENSIONS:	16.5" X 13.4" X 5.9"



TOP VIEW

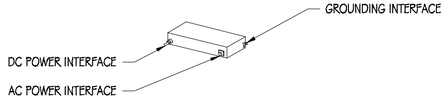


SIDE VIEW FRONT VIEW

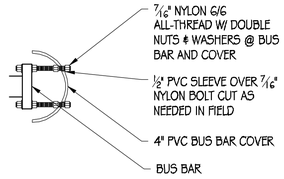
5 RRUS-4415 DETAIL
1"=1'

ERICSSON PSU AC 08

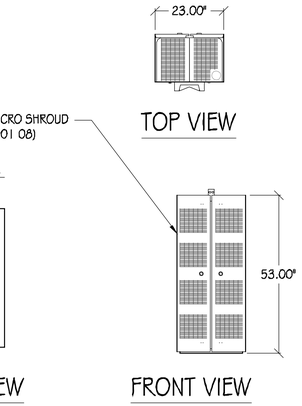
DIMENSIONS:	2.72" X 10.79" X 7.09"
WEIGHT:	11.46 LBS



6 AC POWER MODULE
NTS

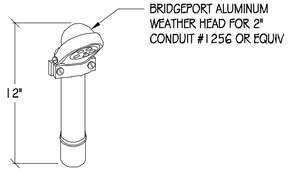


7 BUS BAR COVER
6"=1'

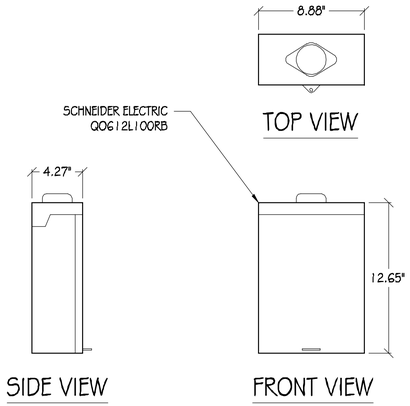


TOP VIEW SIDE VIEW FRONT VIEW

8 MICRO SHROUD CONCEALMENT
1/2"=1'

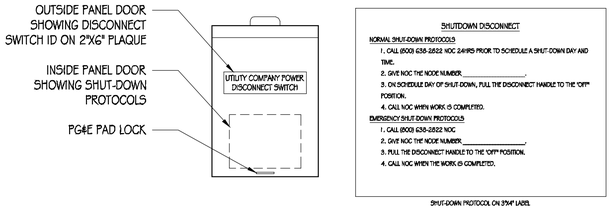


9 WEATHER HEAD
NTS



TOP VIEW SIDE VIEW FRONT VIEW

10 LOAD CENTER/AC DISCONNECT
1"=6"



11 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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APPROVED BY:	B. McCOMB
DATE:	07/25/19

SHEET TITLE:

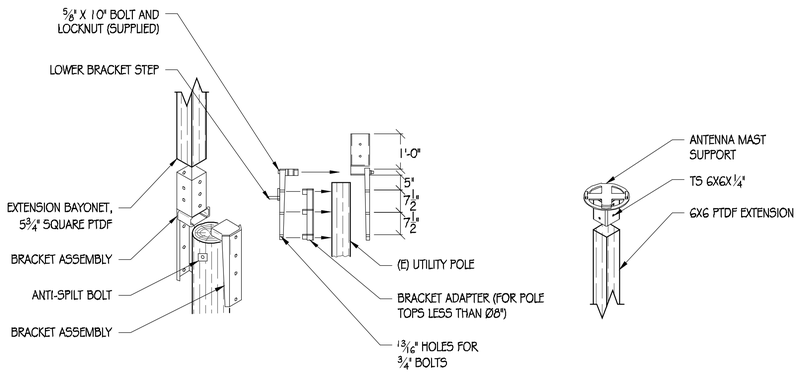
DETAILS

SHEET NUMBER

A-5

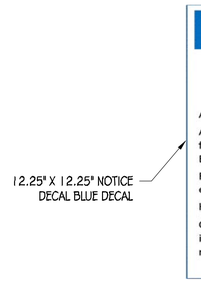
STRUCTURAL STEEL NOTES:

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 HDG 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 3/4"Ø (OR K, WHICHEVER IS LARGER) HOLE @ WEB/FLANGE INTERSECTION UNLESS NOTED OTHERWISE.



1 POLE TOP EXTENSION ASSEMBLY

1/2"=1'



NOTICE

AT&T operates antennas at this structure.

Above this point you are entering an area where radio frequency fields may exceed the FCC General Population Exposure Limits.

Follow safety guidelines for working in an RF environment.

Keep 3' feet away from the fronts of the antennas.

Contact AT&T at 800-638-2822 and follow their instructions prior to performing any maintenance or repairs above this point.

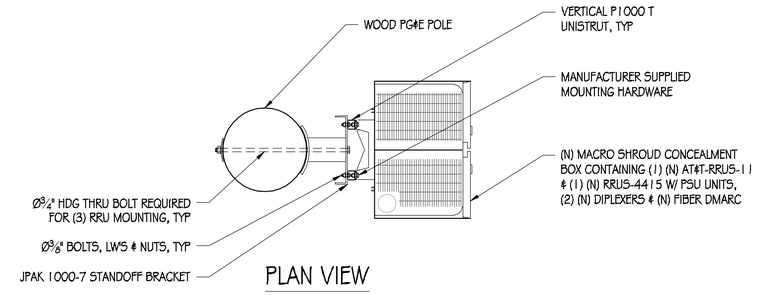
This is AT&T Site USID:_____

2 NOTICE SIGNAGE

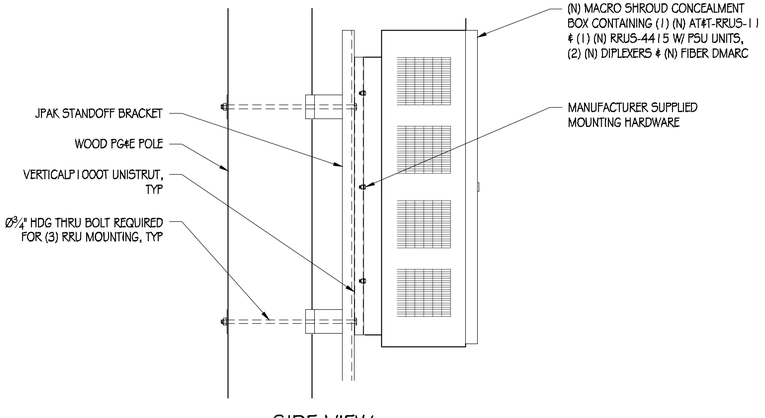
NTS

NOTES:

- SIGNAGE TO BE SCREWED DIRECTLY TO POLE AT ALL FOUR CORNERS.
- SIGNAGE TO BE PLACED A MINIMUM OF 2'-0" BELOW (N) ANTENNA



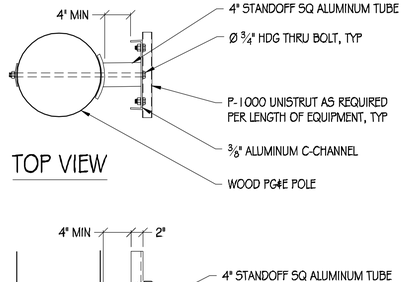
PLAN VIEW



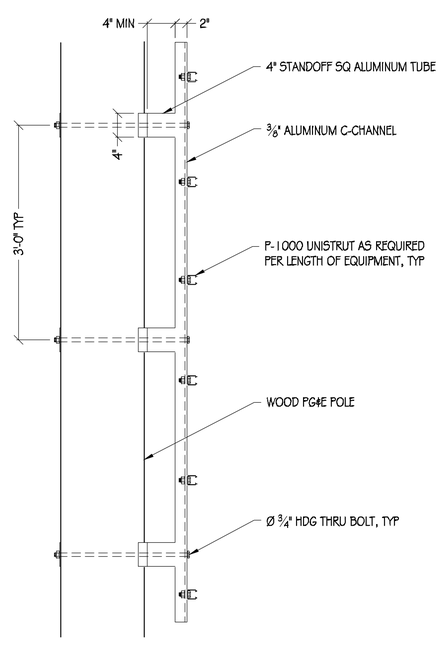
SIDE VIEW

3 RRU MOUNTING DETAIL

1"=1'



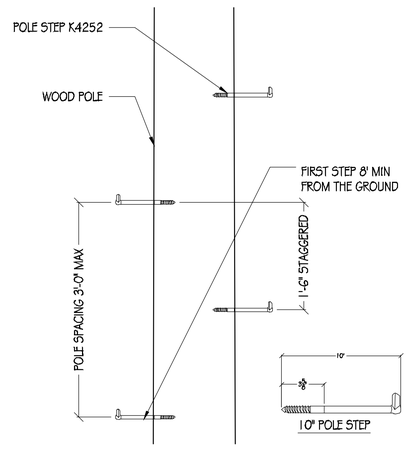
TOP VIEW



FRONT VIEW

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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REGISTERED PROFESSIONAL ENGINEER
BRET A. McCOMB
C 69891
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_LOSAO_04

33 PINE LN
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/08/18	CD 90%
	07/25/19	CD 100%

DRAWN BY:	T.J. / B.L.
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	07/25/19

SHEET TITLE:

DETAILS

SHEET NUMBER

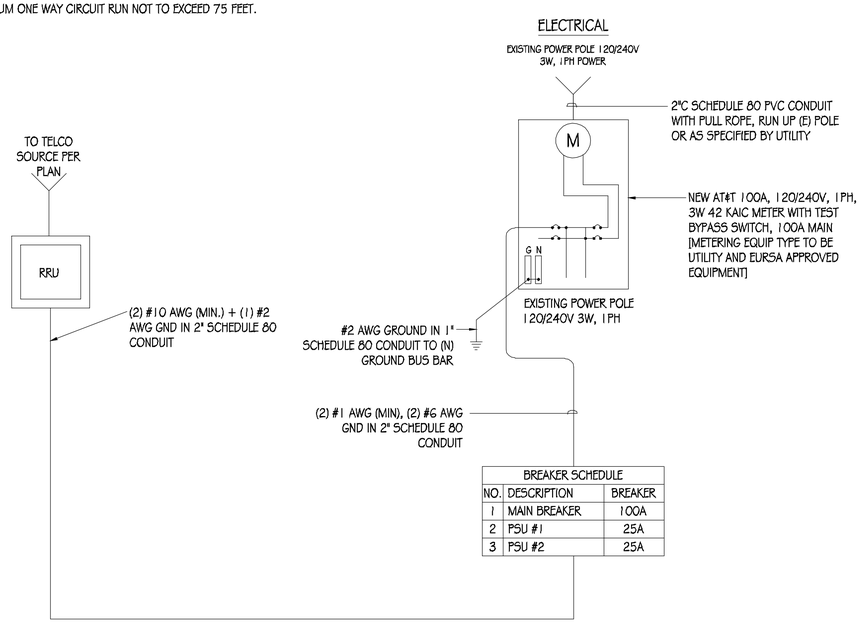
A-6

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 RESTORED PER CITY STANDARD DETAILS.
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.

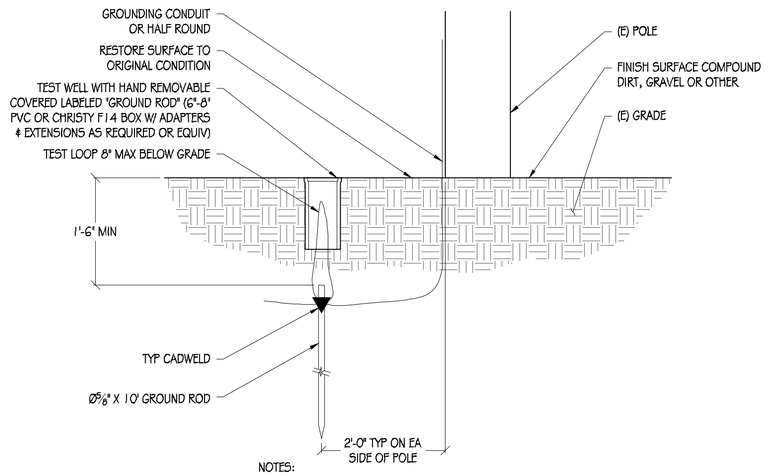


BREAKER SCHEDULE		
NO.	DESCRIPTION	BREAKER
1	MAIN BREAKER	100A
2	PSU #1	25A
3	PSU #2	25A

SINGLE-LINE DIAGRAM

LOAD SCHEDULE

MAKE/MODEL	QUANTITY	DESCRIPTION	DIMENSIONS	WEIGHT	TX/RX	MAX TRANSMIT POWER	W	kW
ERICSSON RRUS-4415	1	RRUS	16.5" X 13.4" X 5.9"	46 LBS	2T/2R	4 X 40W	670	0.67
ERICSSON RRUS-11	1	RRUS	19.7" X 17.0" X 7.2"	55 LBS	2T/2R	2 X 40W	520	0.52
NEMA 3R ENCLOSURE	1	DISCONNECT	12.7" X 8.9" X 4.3"	40 LBS (MAX)	N/A	N/A	N/A	N/A

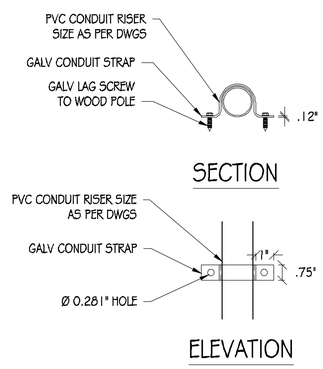


NOTES:

1. REMOVE & REPLACE SIDEWALK SECTION, RESTORATION TO MEET CITY STANDARD DETAILS
2. EXPOSED CONCRETE TO HAVE BROOM FINISH

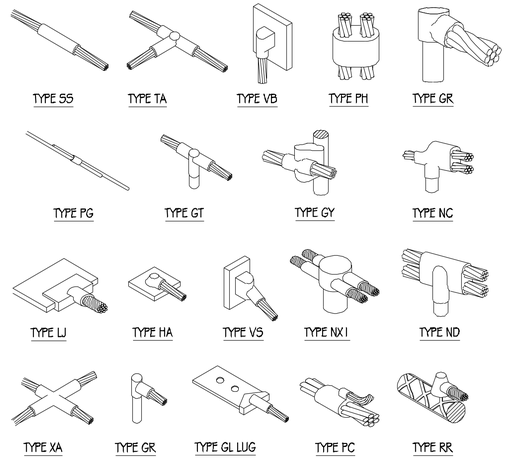
1 POLE GROUNDING DETAIL

NTS



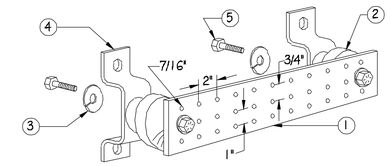
2 CONDUIT RISER DETAIL

NTS



3 EXOTHERMIC WELD DETAILS

NTS

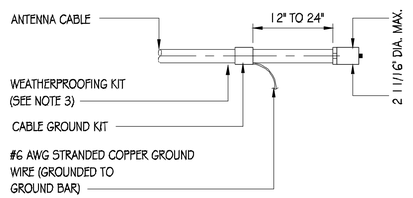


NOTES:

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

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

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C 69891
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_LOSA0_04

33 PINE LN
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/08/18	CD 90%
	07/25/19	CD 100%

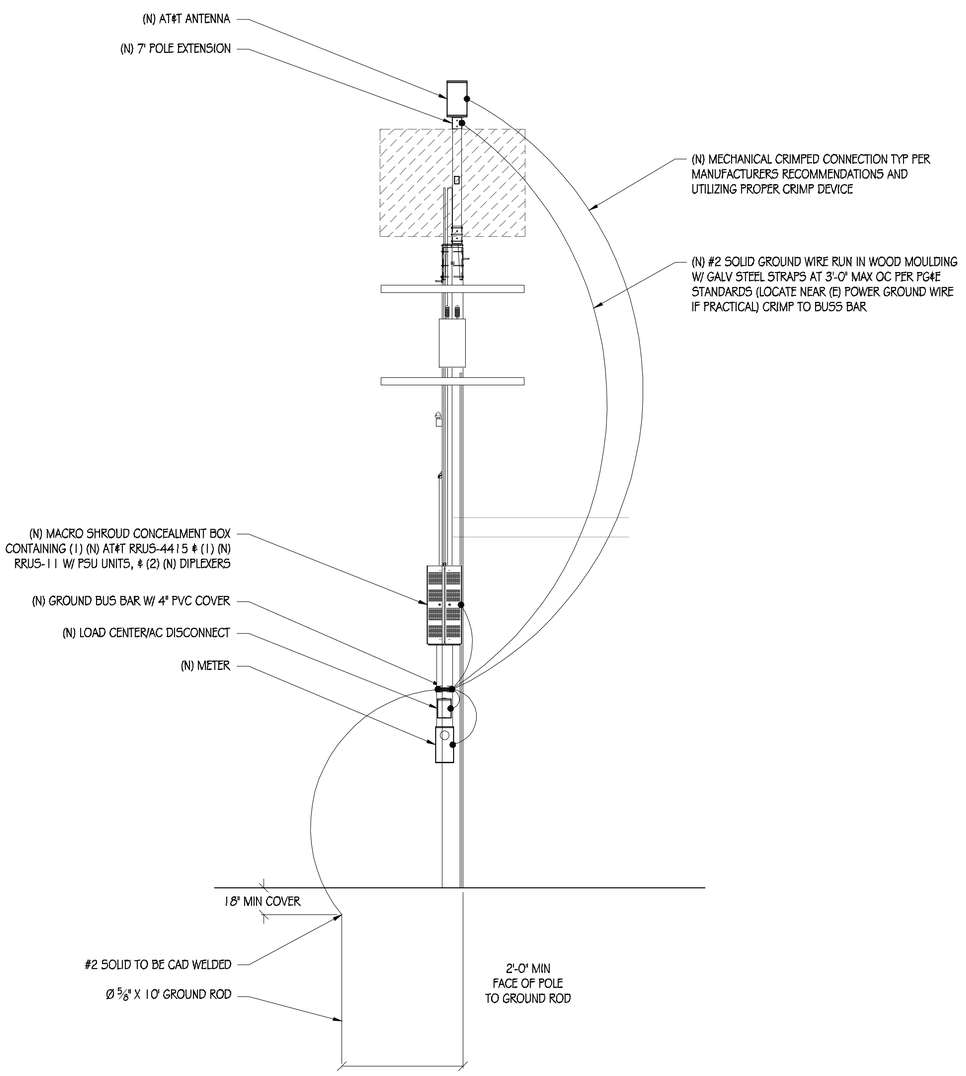
DRAWN BY:	T.J. / B.L.
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	07/25/19

SHEET TITLE:

SINGLE-LINE DIAGRAM & DETAILS

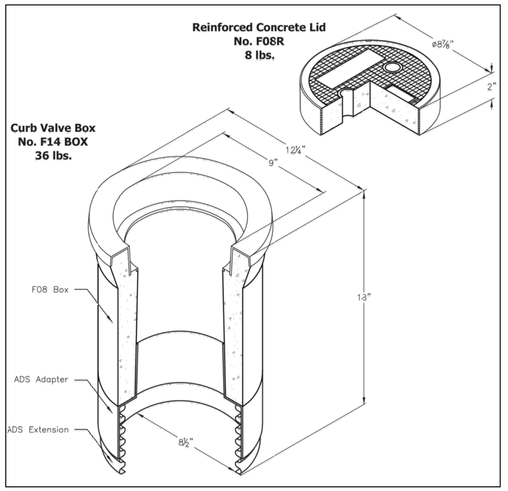
SHEET NUMBER

E-1



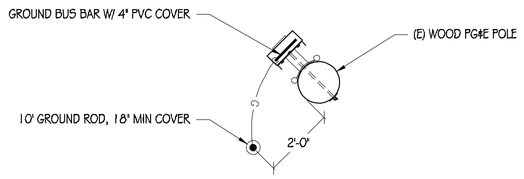
POLE GROUNDING DIAGRAM

NTS



1 TEST WELL DETAIL

NTS



TN

GROUNDING PLAN

NTS

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

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LOS ALTOS, CA 94022

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	07/25/19	CD 100%

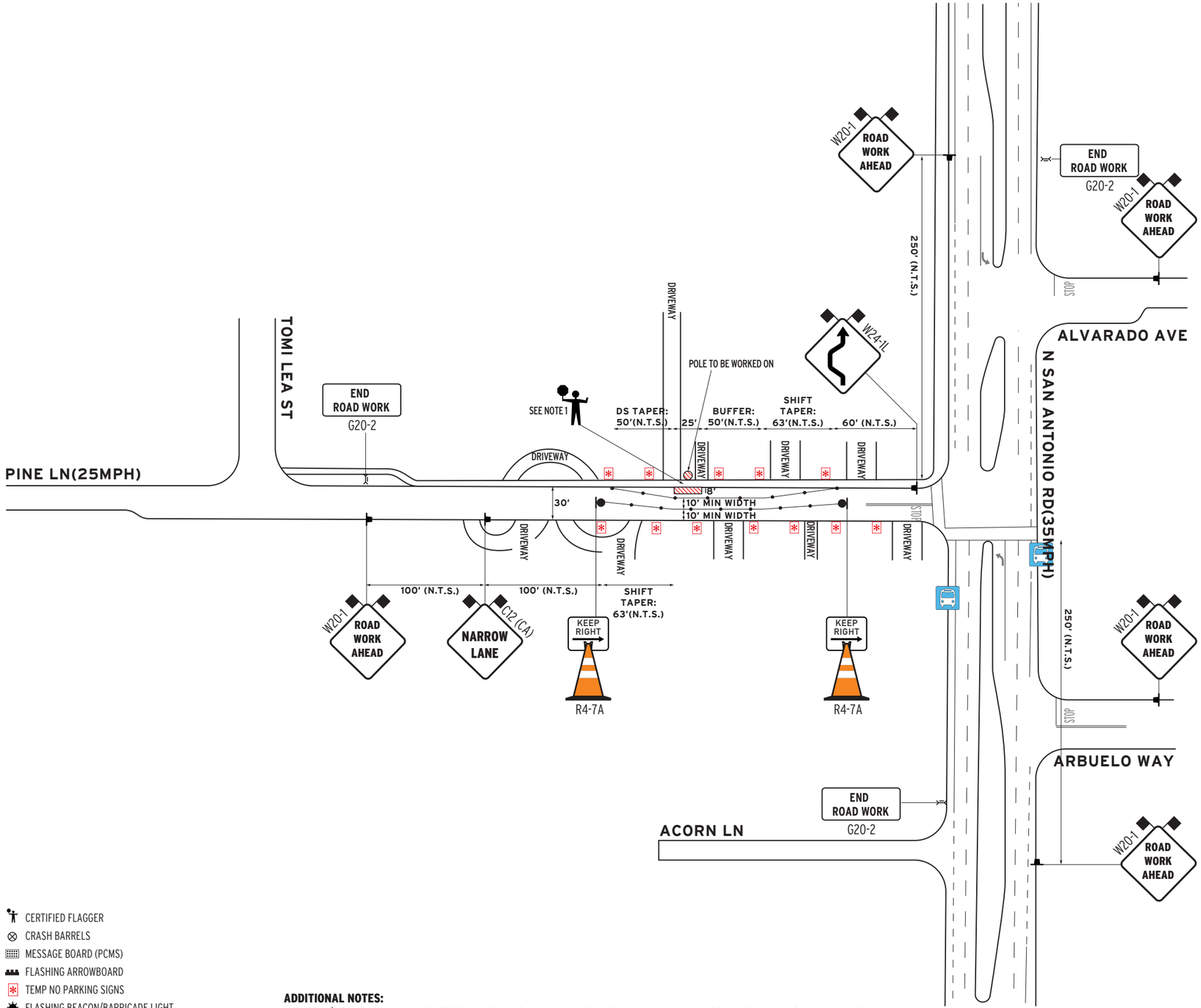
DRAWN BY:	T.J. / B.L.
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	07/25/19

SHEET TITLE:

GROUNDING DIAGRAMS

SHEET NUMBER

E-2



LEGEND:

- CHANNELIZING DEVICE
- TRAFFIC CONE W/CLIP ON SIGN
- SIGN
- WORK ZONE
- DIRECTION OF TRAFFIC
- TYPE 1 BARRICADE
- TYPE 1 BARRICADE W/SIGN
- TYPE 3 BARRICADE
- TYPE 3 BARRICADE W/SIGN
- CERTIFIED FLAGGER
- CRASH BARRELS
- MESSAGE BOARD (PCMS)
- FLASHING ARROWBOARD
- TEMP NO PARKING SIGNS
- FLASHING BEACON/BARRICADE LIGHT
- K-RAIL/WATER FILLED BARRIER
- PEDESTRIAN BARRICADE

ADDITIONAL NOTES:

1. FLAGGER/WORKER DEDICATED TO ASSIST PEDESTRIANS ALONG THE WORK ZONE WHEN SAFE TO DO SO DUE TO LIMITED SIDEWALK DETOUR.
2. ASSIST RESIDENTS WITH IN/OUT ACCESS TO DRIVEWAYS ALONG THE CLOSURE WHEN SAFE TO DO SO.
3. DISTANCE BETWEEN W24-1L AND SHIFT TAPER ADJUSTED IN ORDER TO KEEP SIGN ON PINE LN SO TO NOT IMPACT OR CONFUSE TRAFFIC ON N SAN ANTONIO RD.

*POST TEMPORARY NO PARKING SIGN ON TYPE 1 BARRICADE 72 HRS IN ADVANCED.

NOTE: Please contact B.A.T.S 72 hrs in advance in case if we are to install "TEMPORARY NO PARKING" signs.

PHASE 1
TEMP TRAFFIC CONTROL PLAN

NOTES

- Traffic control shall conform with the most current CAMUTCD part 6 and/or Caltrans Standards
- One lane of traffic in each direction and all high volume turning lanes shall be maintained at all times on all streets at a minimum lane width of 10 feet.
- Contractor shall notify local authorities once signs are posted.
- All advanced warning signs shall be equipped with 2 (18" orange flags)
- Certified Traffic Control Workers shall have Type II vests, work shoes, and hard hats.
- Temporary no parking signs shall be placed a min of 72 hrs prior of work.
- Driveways shall be monitored and maintained at all times during work hours.
- Distance between sign and work area will be determined on speed limit.
- Roadway shall not be opened until safe for public use. All open trenches must be plated or - backfilled prior to public usage.
- All Devices shall be removed when no longer required.

MUTCD TABLE 6C-1 — MEANING OF LETTER CODES ON TYPICAL APPLICATION DIAGRAMS

ROAD TYPE	DISTANCE BETWEEN SIGNS A	B	C
Urban (Low Speed) - 25 mph or less	100 ft	100 ft	100 ft
Urban (Low Speed) + 25 to 40 mph	250 ft	250 ft	250 ft
Urban (High Speed) + 40 mph	350 ft	350 ft	350 ft
Rural	500 ft	500 ft	500 ft
Expressway / Freeway	1,000 ft	1,500 ft	2,640 ft

COMPASS: N

SCALE: NOT TO SCALE

DATE REQSTD: 6-18-19

DATE COMPLTD: 6-25-19

PROJECT LOCATION: 33 PINE LN LOS ALTOS

JOB# LOSA0_04

PAGE# 1/1

REQUEST BY:
LANCE LEWIS
SURESITE
216-593-0400
484-895-5109
L.LEWIS@SURE-SITE.COM

B.A.T.S. TRAFFIC SOLUTIONS
AFTER HOURS EMERGENCY 510-299-5666
Drawn By: Andie Tonnu
CSLB# 917034
Office: 510-657-2543
Fax: 510-657-2544
44800 Industrial Drive Fremont, CA 94538
WWW.BATSTRAFFICSOLUTIONS.COM

LOSAO.004

CITY OF LOS ALTOS
DISTRIBUTED ANTENNA SYSTEMS FOR WIRELESS COMMUNICATIONS
ENCROACHMENT PERMIT REQUIREMENTS

Distributed, repeater, or microcell antenna wireless communication systems and facilities that are regulated by the California Public Utilities Commission as a public utility and determined to be exempt from Los Altos' zoning regulations and use permit application requirements, shall be allowed in the public right-of-way subject to the following Encroachment Permit requirements:

A. Antenna systems are encouraged along the city's arterial and collector streets. These facilities are allowed on local streets upon verification by a qualified electrical engineer licensed by the state of California representing the FCC licensee that using local streets is necessary to obtain capacity and coverage.

B. Antenna systems are permitted on joint utility poles at a height not to exceed 10 feet above the height of joint utility pole. Replacement joint utility poles are allowed in accordance with the Municipal Code; however, no net new joint utility poles or monopole antennas are allowed in the public right-of-way.

C. Antennae shall be designed to be as visually unobtrusive as possible, such as by housing the antenna in a single radome on top of joint utility pole, or by mounting the antenna directly on the joint utility pole in a streamline manner and painted to match the color of the utility pole.

D. All antenna systems equipment boxes including switches, computers, cooling, back up power, etc., shall be mounted to the utility pole and both the antenna and utility equipment shall be painted to match the color of the existing utility pole.

E. Only battery back up power systems shall be allowed. No generators shall be allowed.

F. All new fiber optic and metal cables shall be installed underground unless there are existing overhead cables that can be collocated.

G. Radiofrequency reports shall be provided for the facility's maximum planned operating power pursuant to the underlying FCC license.

H. Provide a build-out plan that to the extent known at the time of application identifying by physical address (or if none, by geographic description) all other sites, regardless of whether now constructed, proposed, or anticipated, which are under contract at the time of application, subject to contractual provisions related to confidentiality, that are to be interconnected with this project site. Disclose in technical detail the proposed method of interconnection. Confidential sites may be identified generally.

I. Disclose by licensee call sign all build-out requirements/obligations which have yet to be met of all wireless providers that the applicant is under contract to build in the City of Los Altos, and the known or estimated date when the remaining build-out requirements will be met.

J. Identify by name, title, company affiliation, work address, telephone number and extension, and email address the key person or persons most knowledgeable regarding this Project so that the City may contact them with questions regarding the Project:

ENCROACHMENT PERMIT APPLICATION

The applicant is hereby given temporary permission to construct and maintain wireless communication systems at 33 Pine Lane, as shown on the attached drawings. This permission shall cease at such time as the City Engineer determines that said improvements or the applicant's use thereof is detrimental to the City.

The above permission is given subject to the following conditions:

1. The applicant, their heirs, executors, administrators, successors, and assigns, agree to indemnify and hold harmless the City of Los Altos, its officers, and employees against all claims, liabilities, and losses arising out of construction, existence, and future abandonment/destruction of the subject wireless communication systems and all other associated appurtenances. In addition, the applicant shall be responsible for the repair of all damage to roadways, sidewalks, curb and gutter, sewer mains and laterals, traffic signals and conduits, street lights and conduits, irrigation systems including controllers and conduits, or landscaping resulting from the construction/abandonment of the work proposed to be completed under the conditions of this permit, and shall be responsible for repairing or replacing such damaged areas.

2. Construction and destruction/abandonment of the work may be done on weekdays or Saturdays. Weekday work shall be limited to the hours of 8:00 AM and 6:00 PM., except as noted in the lane closure restrictions described in Item 3. Saturday work shall be performed during the hours of 9:00 AM and 6:00 PM.

3. Traffic control and adequate protection of the public in the vicinity of the work site shall be the responsibility of the applicant. Lane closures shall conform to the requirements established in the State of California Traffic Manual, and the State Standard Plans and Specifications.

4. The applicant shall notify the three closest adjacent property owners to the installation and the three closest property owners directly across the street from the installation at least 10 days prior to commencement of any work. In addition, the applicant shall notify the City Communications Department at (650) 948-8223 of street/alley and lane closures at least 24 hours prior to any work. Furthermore, the contractor shall notify the city's Traffic Engineer at least 48 hours in advance of any excavations within 100 feet of any traffic signals.

5. Contractor shall positively locate by hand digging all traffic signal conduit and irrigation controller conduit adjacent to traffic signals. Any damage repair to signal equipment or irrigation controller equipment shall be completed by a qualified electrical contractor immediately at the contractor's expense, and before proceeding with any other work. Traffic signal detector loop replacement shall be replaced within 48 hours of being damaged. The contractor is encouraged to use the City's signal maintenance contractor, Bear Electric, for any traffic signal repair work at the contractor's expense.

6. Asphalt concrete section for trench backfill shall be a thickness equal to the existing pavement, or 4-inches thick minimum, whichever is greater.

7. Completed Certificates of Insurance naming the City of Los Altos, its elective and appointed boards, officers, agents and employees as additional insured must be completed and submitted to the City by the owner, prior to beginning any work in the public right of way. Insurance shall remain in force during the entire time that the public right-of-way facilities are in use and shall provide the above certificate to the City on an annual basis.

8. The applicant shall comply with the National Pollutant Discharge Elimination System Permit in effect at the time of the application, and shall continue to comply with the Permit as amended by the State Water Board from time to time.

9. The applicant understands that the City continues to pursue future utility undergrounding. In the event a pole or poles used by the applicant are selected for undergrounding or relocation of mounted utilities, the applicant will be required to remove all equipment placed on the pole at his/her expense. The applicant agrees that the City is not obligated to provide alternate space for applicant's use should removal of a facility be directed to accomplish utility undergrounding.

10. The applicant shall maintain the distributed antenna system in good repair at the discretion of the City Engineer.

11. The applicant shall remove the entire distributed antenna system structures within 90 days when such system is abandoned.

I hereby agree to the terms of this Encroachment Permit:

Laura Meiners, Site Dev Agent
Name/Title

SureSite Consulting
Company

Laura Meiners
Signature

7-30-19
Date

CERTIFIED NOTIFICATION LIST AFFIDAVIT

CITY OF LOS ALTOS
STATE OF CALIFORNIA
COUNTY OF SANTA CLARA

I, Robert Castro, hereby certify that the attached list contains the names and addresses of all persons to whom all property is assessed as they appear on the latest available assessment roll of the County within the area described on the attached notice and for a distance of two hundred fifty feet (250') from the exterior boundaries of the proposed Wireless Service Facility Site.

I, further certify that the attached list of occupants reflect all residential addresses within two hundred fifty feet (250') from the exterior boundaries of the proposed Wireless Service Facility Site.

I, certify under penalty of perjury that the foregoing is true and correct.

Robert Castro
Signature

June 21, 2019
Date the notices were mailed out

Location:

Public right of way near 33 Pine Lane

37.3922600, -122.1150700

CRAN_RSFR_LOSA0_04

1 167-23-016
MINYOUNG & KIM HYUNJEONG PARK
611 TOMI LEA ST
LOS ALTOS CA 94022

2 167-23-017
ROBERT B DAVIS
625 TOMI LEA ST
LOS ALTOS CA 94022

3 167-23-034
TONY LEE & FENG YIJIONG WERNER
23 PINE LN
LOS ALTOS CA 94022

4 167-23-035
LEONARD K PON
33 PINE LN
LOS ALTOS CA 94022

5 167-23-037
BENJAMIN HAO
1703 OCTAVIA ST
SAN FRANCISCO CA 94109

5 167-23-037
OCCUPANT
51 PINE LN
LOS ALTOS CA 94022

6 167-23-038
JAROSLAV & EMANUELA VA'VRA
67 PINE LN
LOS ALTOS CA 94022

7 167-23-093
RAMNEEK & SINGHEE PRIYAMVADA GUPTA
640 N SAN ANTONIO RD
LOS ALTOS CA 94022

8 167-23-094
YUK MING & LAI YU-MIEN KWOK
11 PINE LN
LOS ALTOS CA 94022

9 167-23-095
IRA FELDMAN
35 PINE LN
LOS ALTOS CA 94022

10 167-23-096
THOMAS W & BARBARA D MCCARTHY
39 PINE LN
LOS ALTOS CA 94022

11 167-23-104
ANAHITA AALAMI
1080 MORENO AVE
PALO ALTO CA 94303

11 167-23-104
OCCUPANT
652 N SAN ANTONIO RD
LOS ALTOS CA 94022

12 167-23-105
DAVID KRAUS
654 N SAN ANTONIO RD
LOS ALTOS CA 94022

13 167-23-115
HAL A & NANCY LONHART
660 N SAN ANTONIO RD
LOS ALTOS CA 94022

14 167-28-019
PAUL A & CATHARINE H ZANDER
86 PINE LN
LOS ALTOS CA 94022

15 167-28-020
JUNWEI & ZHANG HAIJING BAO
68 PINE LN
LOS ALTOS CA 94022

16 167-28-021
DAPHNE & WU GUOPING SANG
56 PINE LN
LOS ALTOS CA 94022

17 167-28-022
PINE FIFTY LLC
50 PINE LN
LOS ALTOS CA 94022

18 167-28-027
NEAL G ANDERSEN
552 SHOREBIRD CIR #1102
REDWOOD CITY CA 94065

18 167-28-027
OCCUPANT
17 ALMA CT
LOS ALTOS CA 94022

19 167-28-028
CHRISTOPHER J & GRIFFIN-WHITE MAURE WHITE
23 ALMA CT
LOS ALTOS CA 94022

20 167-28-075
DAVID A FITCH
10 PINE LN
LOS ALTOS CA 94022

21 167-28-077
ISAAC W & COZETTA G GUINN
36 PINE LN
LOS ALTOS CA 94022

22 167-28-078
GEORGE WANG
1135 MESTRES DR
PEBBLE BEACH CA 93953

22 167-28-078
OCCUPANT
24 PINE LN
LOS ALTOS CA 94022

23 167-28-113
EDWARD J & BERNS-BATCHELLER BATCHELLER
5 ACORN LN
LOS ALTOS CA 94022

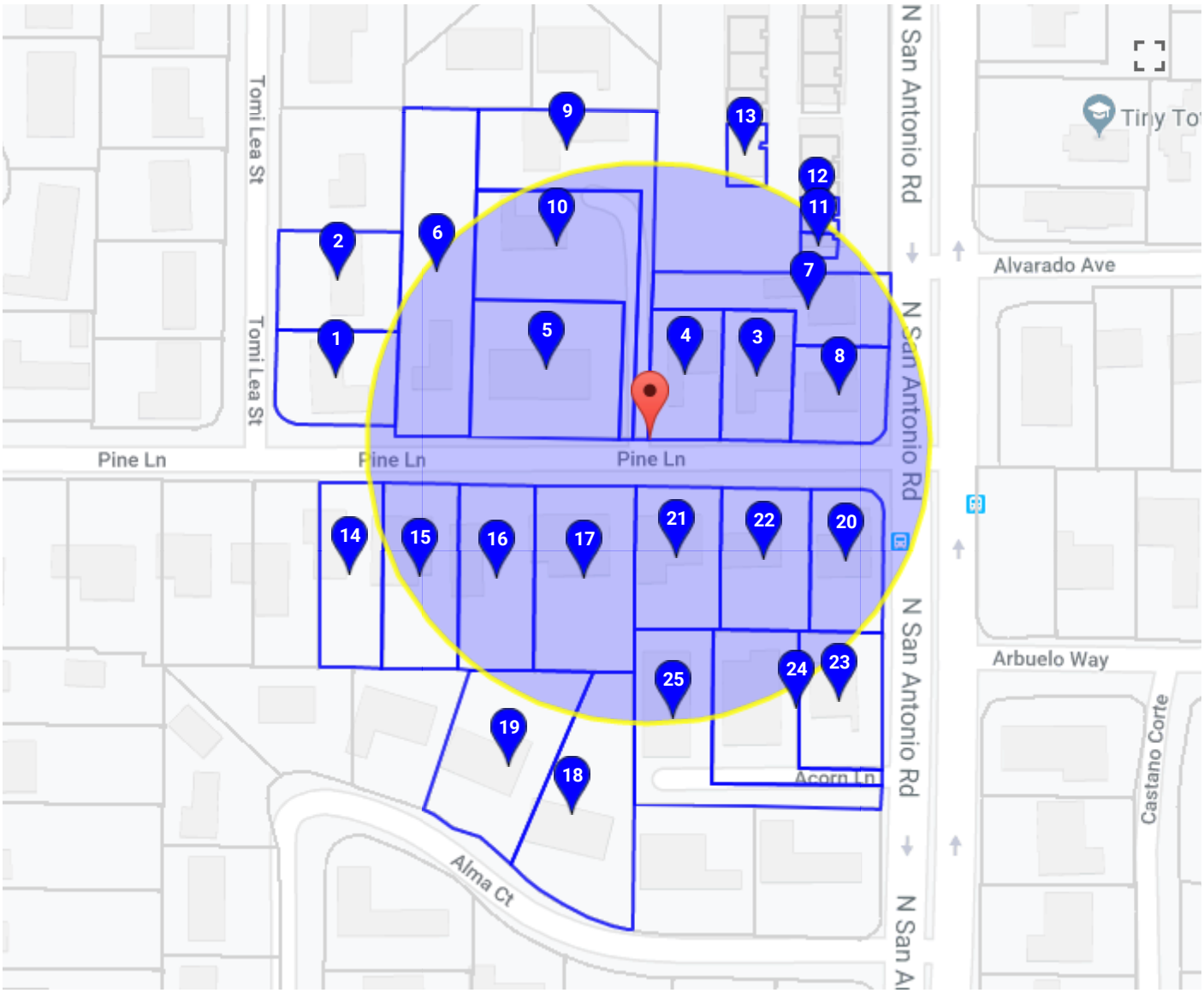
24 167-28-114
KAREN M & FRANCIS R CANO
11 ACORN LN
LOS ALTOS CA 94022

25 167-28-115
JAMES J & ZOE F CONROY
17 ACORN LN
LOS ALTOS CA 94022

IVAN TOEWS
SURESITE CONSULTING
2033 GATEWAY PL 6TH FLR
SAN JOSE CA 95110

CHRIS ELDRIDGE
ERICSSON
6140 STONERIDGE MALL ROAD SUITE 350
PLEASANTON CA 94588

CHRIS KERR
AT&T MOBILITY
5001 EXECUTIVE PARKWAY 4W750EE
SAN RAMON CA 94568


Tomi Lea St
Tomi Lea St
N San Antonio Rd
N San Antonio Rd
N San Antonio Rd
Pine Ln
Pine Ln
Pine Ln
Alvarado Ave
Arbuelo Way
Castano Corte
Acorn Ln
Alma Ct
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AT&T is working to improve wireless service in City of Los Altos!

June 10, 2019

Dear Neighbor,

AT&T Mobility proposes to install a state-of-the-art wireless communication small cell node facility on existing wood utility pole located in the City of Los Altos public right-of-way near 33 PINE LANE. The equipment to be initially installed includes one (1) antenna, two (2) radio units, and one (1) emergency power shut off. This equipment is designed to increase capacity in high demand areas and should increase wireless connection reliability for AT&T customers. See attached schematic for more information about the placement and size of equipment currently proposed to be installed. All equipment will be painted to match the pole.

This proposed small cell node is part of a greater network that will provide and enhance current cutting edge and future AT&T wireless voice and data service to the surrounding area, improving wireless capabilities and public safety connectivity. Although experiences with wireless services vary based on specific location and usage times, the wireless service proposed by this facility will help meet existing, fluctuating and future demands.

Map of Pole Location

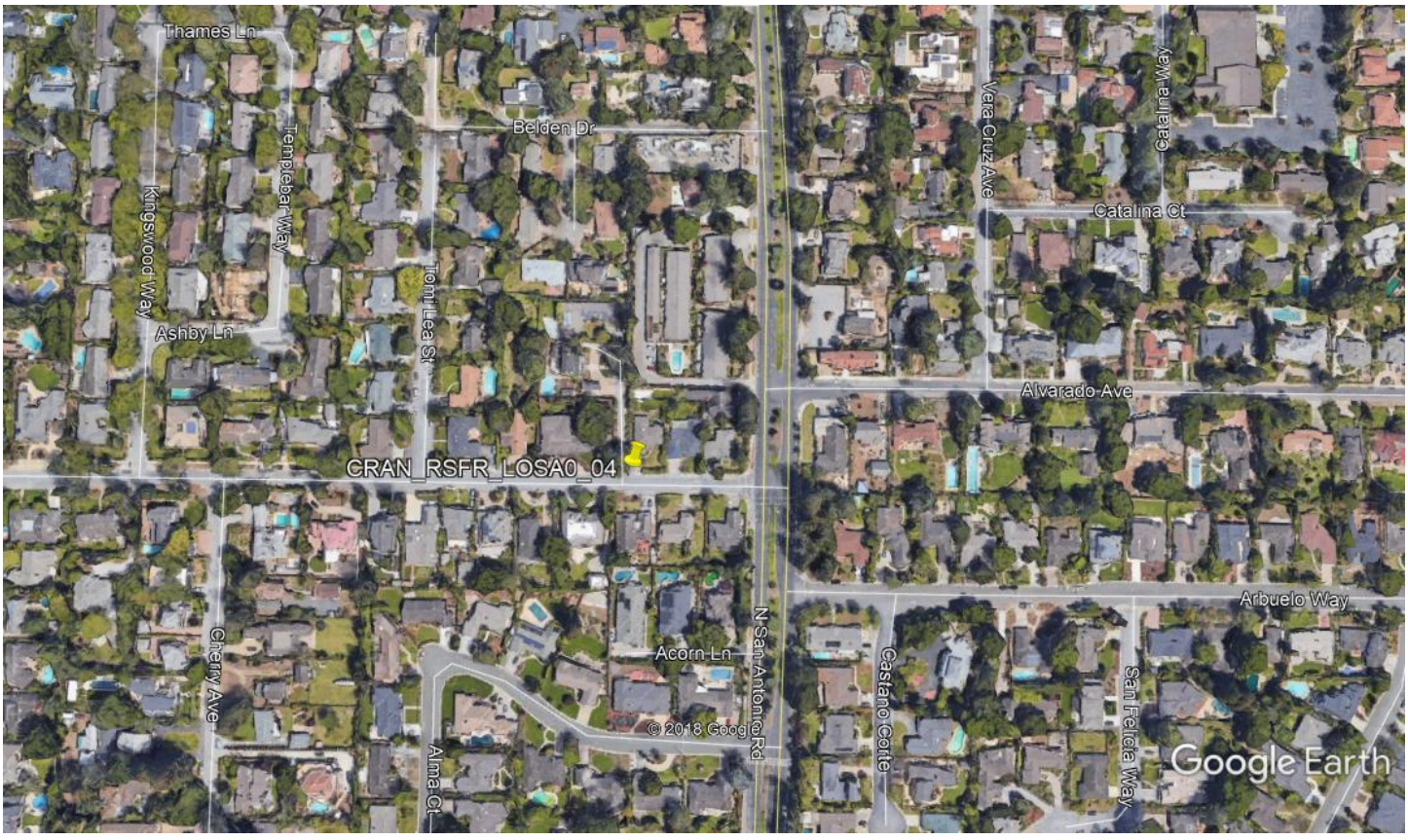


Photo of Existing Pole

Want to learn more?

Please contact AT&T's small cell project voice mailbox at 949-247-8686 or email escsd@sure-site.com should you have any comments or questions about the proposal.

Thank you.

Sincerely,

Angela Kung
AT&T Director - External Affairs

CRAN_RSFR_LOSAO_04

33 Pine Lane Los Altos CA 94022

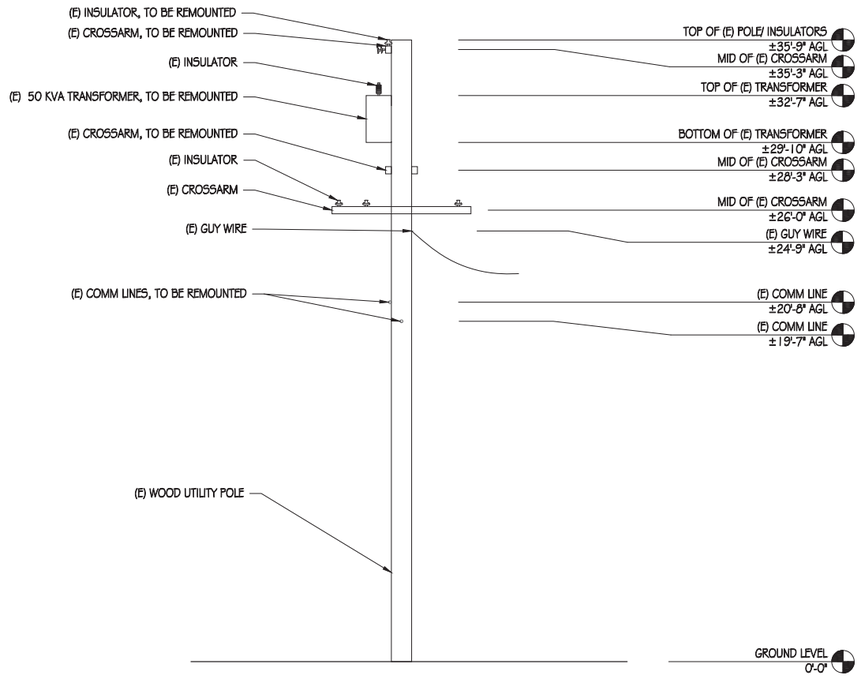
ARTISTIC engineering
AEsims.com
877.9AE.sims

View 1

Existing

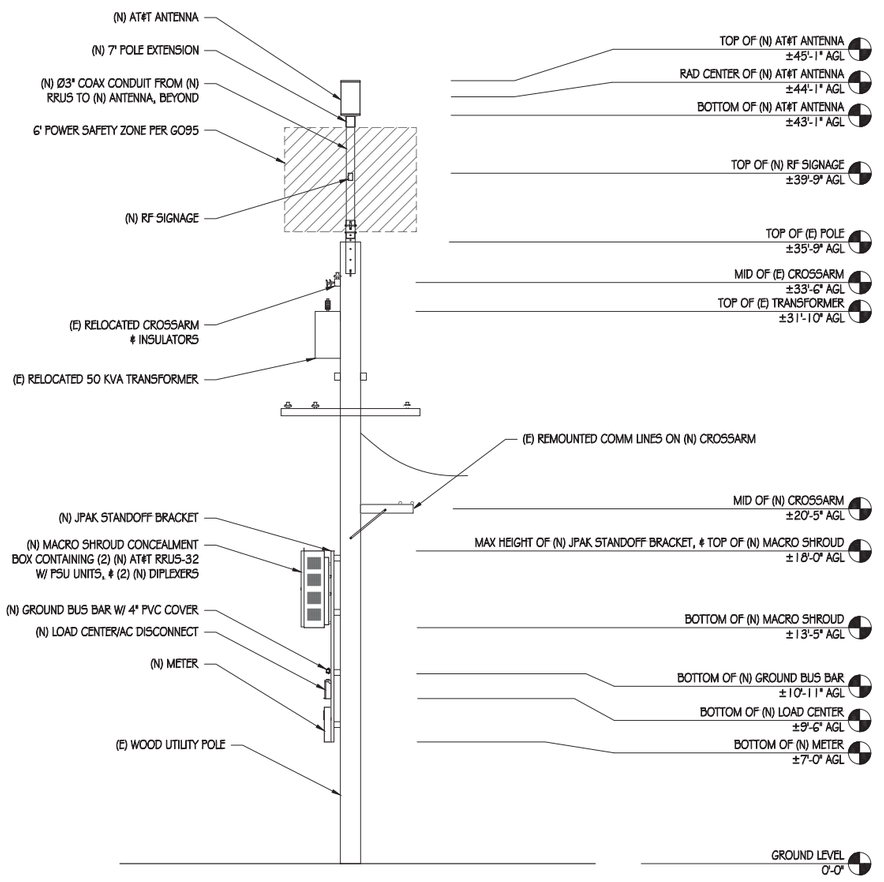
Proposed Looking west along Pine Lane

Accuracy of photo simulation based upon information provided by project applicant.



EXISTING SOUTH ELEVATION

1/4"= 1'-0"



NEW SOUTH ELEVATION

1/4"= 1'-0"

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

NOTE: (E) CATV TO BE MOVED OUT OF CLIMBING SPACE

at&t

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

SURESITE
Infrastructure experts. Smart cell solutions.
36 EXECUTIVE PARK, SUITE 210
IRVINE, CA 92614

PRECISION DESIGN & Drafting, INC.
Phone: (530) 823-6646 www.pdnd.com
11768 Atwood Rd, Suite 20 Auburn, CA 95603

REGISTERED PROFESSIONAL ENGINEER
BRETT A. McCOMB
C 69891
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_LOSA0_04

ROW ADJCT TO 33 PINE LN
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/08/18	CD 90%
	10/29/18	CD 100%

DRAWN BY:	IB/BL
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/29/18

SHEET TITLE:

ELEVATIONS

SHEET NUMBER

A-3

AT&T Mobility Radio Frequency Statement
Los Altos CA Small Cell Node 4

AT&T has experienced an unprecedented increase in mobile data use on its network since introduction of the iPhone in 2007. AT&T estimates that since introduction of the of the iPhone in 2007, mobile data usage has increased 470,000% on its network. AT&T forecasts its customers' growing demand for mobile data services to continue. The increased volume of data travels to and from customers' wireless devices and AT&T's wireless infrastructure over limited airwaves — radio frequency spectrum that AT&T licenses from the Federal Communications Commission ("FCC").

Spectrum is a finite resource and there are a limited number of airwaves capable and available for commercial use. Wireless carriers license those airwaves from the FCC. To ensure service quality, AT&T must knit together its spectrum assets to address customers' existing usage and forecasted demand for wireless services, and it must use its limited spectrum in an efficient manner.

AT&T uses high-band (i.e., 2300 MHz, 2100 MHz, and 1900 MHz) and low-band (i.e., 850 MHz and 700 MHz) spectrum to provide wireless service. Each spectrum band has different propagation characteristics and signal quality may vary due to noise or interference based on network characteristics at a given location. To address this dynamic environment, AT&T deploys multiple layers of its licensed spectrum and strives to bring its facilities closer to the customer. To address the existing and forecasted demand and to support 5G speeds in the near future, AT&T plans to deploy small cell facilities within public rights-of-way.

The service coverage gap is caused by inadequate infrastructure in the area. AT&T currently has existing sites in the broader geographical area but as Exhibit 1 illustrates, these existing sites do not provide sufficient high-band, in building LTE service in the gap area. To meet its coverage objectives, AT&T needs to construct a new wireless communications facility. In order to provide high-band LTE service coverage in this portion of the city, AT&T needs to place its small cell node along Pine Lane near Tomi Lea Street. Denial of this proposed facility would materially inhibit AT&Ts ability to provide and improve wireless services in this portion of the city. The proposed small cell facilities will help close gap in coverage and help address increasing data usage, voice, and other wireless services driven by smart phones and tablet usage. This node is part of an effort to fully deploy 4G LTE technology in the area. Specifically, the proposed facility will close this service gap and provide sufficient high-band 4G LTE, in building coverage for AT&T customers in the affected area. 4G LTE is capable of delivering speeds up to 10 times faster than industry – average 3G speeds. LTE technology also offers lower latency, or the

processing time it takes to move data through a network, such as how long it takes to start downloading a webpage or file once you've sent the request. Lower latency helps to improve the quality of personal wireless services. What's more, LTE uses spectrum more efficiently than other technologies, creating more space to carry data traffic and services and to deliver a better overall network experience.

The proposed node on a pole in the public rights-of-way at 33 Pine Lane is needed to close the high-band LTE service coverage in an area bordered roughly by May Lane to the north, Cherry Avenue to the west, Carriage Court to the south and Vera Cruz Avenue to the east. This portion of Los Altos is primarily residential neighborhoods with dozens of homes.

It is important to understand that service problems can and do occur for customers even in locations where the coverage maps on AT&T's "Coverage Viewer" website appear to indicate that coverage is available. As the legend to the Coverage Viewer maps indicates, these maps display approximate coverage. Actual coverage in an area may differ from the website map graphics, and it may be affected by such things as terrain, weather, network changes, foliage, buildings, construction, high-usage periods, customer equipment, and other factors.

It is also important to note that the signal losses, slow data rates, and other service problems can and do occur for customers even at times when certain other customers in the same vicinity may not experience any problems on AT&T's network. These problems can and do occur even when certain customers' wireless phones indicate coverage bars of signal strength on the handset. The bars of signal strength that individual customers can see on their wireless phones are an imprecise and slow-to-update estimate of service quality. In other words, a customer's wireless phone can show coverage bars of signal strength, but that customer will still, at times, be unable to initiate voice calls, complete calls, or download data reliably and without service interruptions due to service quality issues.

To determine where new equipment needs to be located for the provisioning of reliable service in any area, AT&T's radio frequency engineers rely on far more complex tools and data sources than just signal strength from individual phones. AT&T uses industry standard propagation tools to identify the areas in its network where signal strength is too weak to provide reliable in-building service quality. This information is developed from many sources including terrain and clutter databases that simulate the environment, traffic maps that simulate the density of users in the environment, and propagation models that simulate signal relative to interference in the presence of terrain and clutter variation. AT&T designs and builds its wireless network to ensure customers will receive reliable in-building service quality and data rates sufficient to stream video and complete calls. In-building service is critical as customers

increasingly use their mobile phones as their primary communication devices (more than 72% of American households rely primarily or exclusively on wireless telecommunications) and rely on their mobile phones to do more (E911, video streaming, GPS, web access, text, etc.). In fact, the FCC estimates that 70% of 911 calls are placed by people using wireless phones. And with AT&T's selection by FirstNet as the wireless service provider to build and manage the nationwide first responder wireless network, each new facility will help strengthen first responder communications.

Exhibit 1 is a map of the existing high -band LTE service coverage (without the proposed small cell node). It includes high-band LTE service coverage provided by other existing AT&T sites. The green shaded areas of the map depict acceptable in-building coverage. In-building coverage means customers are able to place or receive a call on the ground floor of a building. The yellow shaded areas depict areas within a signal strength range that provide acceptable in-vehicle service coverage. In these areas, an AT&T customer should be able to successfully place or receive a call within a vehicle. The lavender shading depicts areas within a signal strength range in which a customer might have difficulty receiving a consistently acceptable level of service. The quality of service experienced by any individual customer can differ greatly depending on whether that customer is indoors, outdoors, stationary, or in transit. Any area in yellow or lavender category is considered inadequate service coverage and constitutes a service coverage gap.

Exhibit 2 to this statement is a map that predicts high-band LTE service coverage based on signal strength in the vicinity if the proposed small cell node is constructed as proposed. As shown by this map, constructing the proposed small cell node here closes this significant service coverage gap.

My conclusions are based on my knowledge of the proposed small cell locations and with AT&T's wireless network in the surrounding area. I have a B.Sc. degree in Micro-Electronic System Design from University of Ulster, UK, am a Chartered Engineer, and have worked as an engineering expert in the wireless communications industry for more than 33 years.

Philip Dale

Philip B A Dale C Eng
AT&T Mobility Services LLC
Network, Planning & Engineering
RAN Design & RF Engineering
July 19, 2019

EXHIBIT 1

LTE 1900 Coverage without Small Cell LOSA0_04

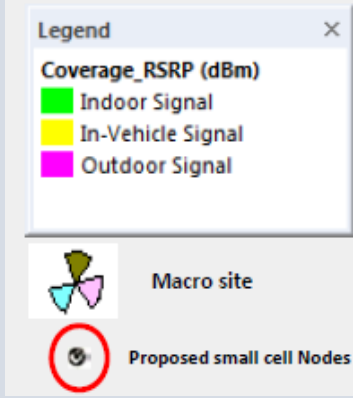
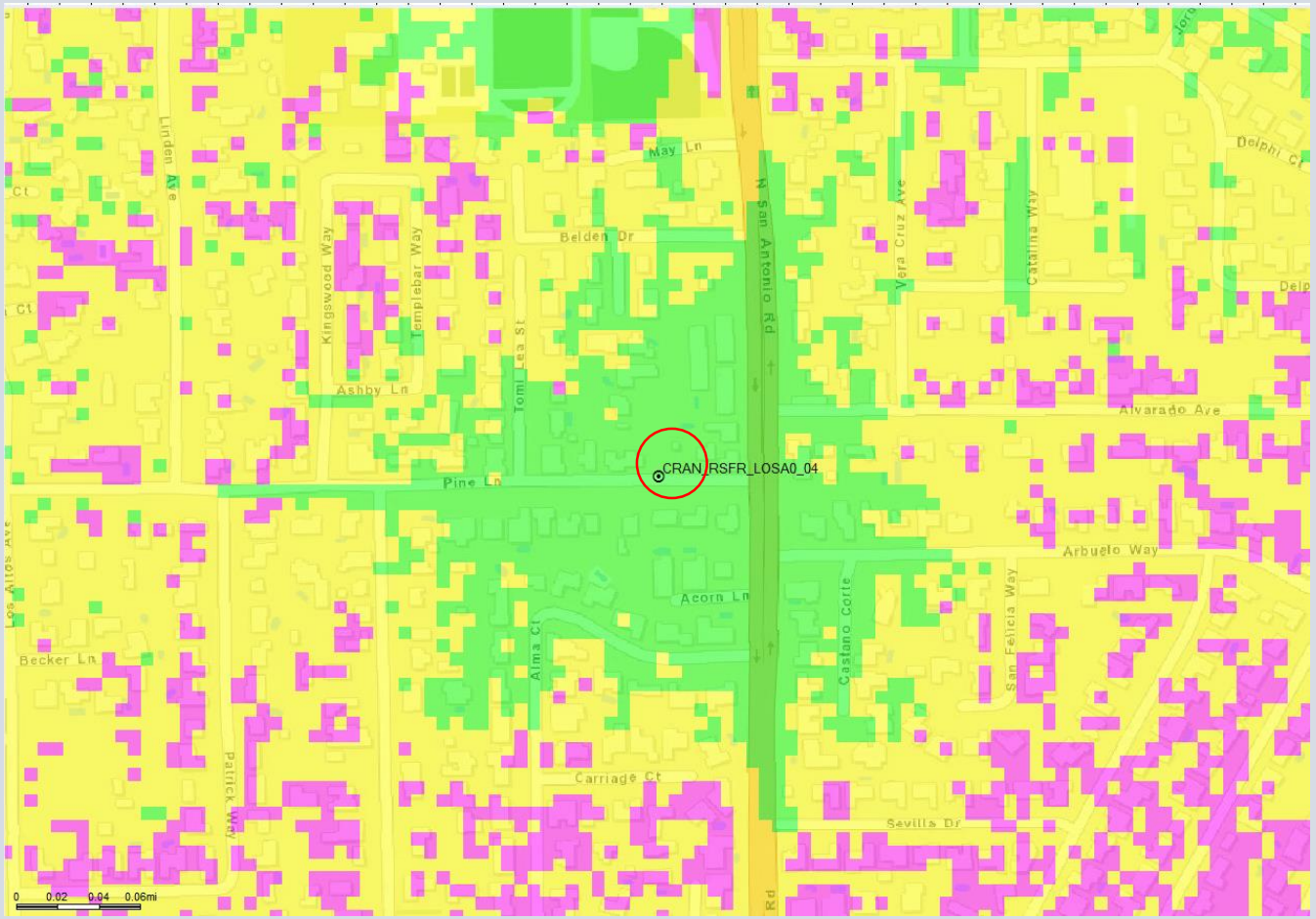
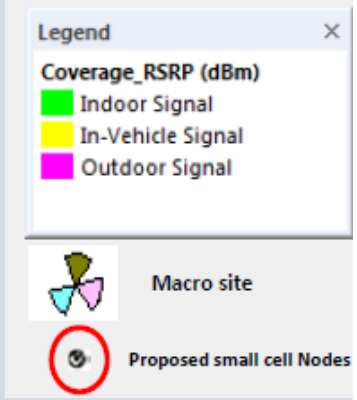


EXHIBIT 2

LTE 1900 Coverage with Small Cell LOSA0_04





Public Works Department - Engineering Division
One North San Antonio Road, Los Altos, California 94022-3087
Phone (650) 947-2780 Fax (650) 947-2732

ENCROACHMENT PERMIT No. E19-_____

APPLICATION
(To be completed by the applicant with a copy of detailed plan/drawing showing the proposed work):

LOCATION OF WORK: 49 San Juan Ct

TYPE OF WORK: Install equipment on new utility pole. (PG&E to perform pole replacement under separate excavation permit)

CONTRACTOR: Ericsson, Delbert Butcher **PHONE #** 720-317-7282

OWNER: PG&E, Jwo Cheng **PHONE #** 650-515-9842

APPLICANT: AT&T Mobility (New Cingular Wireless PCS), Ivan Toews, SureSite Consulting, Agent **PHONE #** 949-278-2962

SPECIAL REQUIREMENTS (TO BE COMPLETED BY THE CITY):
Applicant must submit evidence of insurance coverage meeting the minimum requirements set forth in this permit including, without limitation, the General Requirements and exhibits attached hereto prior to issuance of this permit. The City of Los Altos approves this request subject to the "General Requirements" listed on the back of this page and the following indicated conditions:

- ☒ **Notify the City of Los Altos Engineering Division at (650) 947-2780 at least 2 business days prior to beginning any work in Downtown area or on collector and arterial roads. Work in the public right of way in other areas requires at least 1 business day notice prior to beginning of work. Final inspection shall be scheduled at least 1 business day prior by contacting City of Los Altos Engineering Division.**
- ☒ **A copy of this permit must be at job site for authorized representative of the City when requested or work may be terminated by the City until compliance with this requirement is met.**
- ☒ **The applicant shall notify the Los Altos Police Department at (650) 947-2770 and Fire Department, Santa Clara County at (408) 378-4010 at least 3 business days prior to any work in the traveled way section of a street.**
- ☐ **Applicant to construct Driveway/Walkway approach to the back of the existing rolled curb, without tying to the existing curb (cold joint).**
- ☐ **All work done in the City ROW shall comply with the City's Shoulder Paving Policy.**
- ☐ **Applicant shall provide adequate drainage with 3' wide AC swale (minimum of 4" AB plus 2" AC or 4" AC on compacted subbase is required) and conforms to existing street drainage.**
- ☐ **Contractor will be required to saw cut along the existing road pavement due to severe damaged edge.**
- ☐ **New sidewalk or curb shall be constructed per City Standards and connected to existing sidewalk or curb with #4, 16" long dowels @ 12"o.c. All saw cuts to be done at existing joints.**
- ☐ **Comments:** _____

Applicant has read and understands all the conditions; and agrees to all the conditions of this permit.

SIGNATURE OF APPLICANT: _____ **DATE:** _____

ISSUED BY: _____ **DATE:** _____
SIGNATURE

INSPECTED BY: _____ **FINAL INSPECTION DATE:** _____

ATTACHMENT:
☐ YES _____ **$196.00** **CREDIT** ☐ **CHECK** ☐ **CASH** ☐
☐ NO _____ | _____ | **Provide Check # or type of credit (VS, MC, or D) and last 4 digits**

Distribution: **Original** – Inspector **Copies**: Applicant and Finance

PERMIT VALID FOR 60 DAYS
(See other side for General Requirements)

GENERAL REQUIREMENTS FOR ALL JOBS

A. To the fullest extent permitted by law, applicant shall defend, indemnify and hold City, the City Council, members of the City Council, its employees, representatives, agents and volunteers harmless from any and all suits, damages, costs, fees, claims, demands, causes of action, liabilities, losses expenses, damage or injury of any kind, in law or equity, to property or persons, including wrongful death and financial losses in any manner arising out of, pertaining to, or incident to any alleged acts, errors or omissions, or willful misconduct of applicant or applicant's officers, assistants, subcontractors, employees or agents in connection with this permit.

Applicant shall procure and maintain insurance as set forth in Exhibit B, attached hereto and incorporated herein by this reference, against claims for injury to persons or damage to property arising from or in connection with this permit.

B. Commencement of any work under this permit shall constitute acceptance of the conditions and requirements of this permit.

C. The City may require modifications to this permit as needed because of special field conditions.

D. **NO OTHER WORK**, other than specifically mentioned, is hereby authorized. A copy of this permit must be kept on the site of the work to be shown to any authorized representative of the City.

E. This permit does not authorize excavation and grading on private property. This permit does not release the applicant/permittee from liabilities contained in other agreements or contracts with the City, other agencies or persons.

F. This permit does not supersede or replace any permit that may be needed from other agencies. Proper permits must be obtained from State, County, and any other agency involved.

G. This permit is valid for **sixty (60) days** from the approval date unless otherwise noted.

H. Construction site signs, devices and lights shall be in accordance with Caltrans standards.

I. Use of a Flashing Arrow Panel is **MANDATORY** when work location is within a 35 MPH speed zone.

J. Traffic conditions and adequate protection of the public in the vicinity of the job site shall be the responsibility of the applicant. During construction activities, two-way traffic shall be maintained. A minimum of one traffic lane shall be kept passable and under the control of competent flag persons. At night, weekends, and holidays, a minimum of two 12-foot wide travel lanes shall be safe and passable.

K. Any damage to painted street pavement delineations, markings or reflectors and painted curbs shall be restored as approved by the Engineer.

L. Excavations within the asphalt street section shall be backfilled before leaving the work for the night, unless otherwise authorized by the City's representative. Temporary surfacing shall be placed on the trench surface overnight.

M. All trench backfill requires certified compaction test to 95% density or greater for each lift (Maximum lift of 12") or use Controlled Density Fill (CDF) as approved.

N. All work shall be performed in accordance with the latest issue of Cal O.S.H.A. Safety Orders. The City has not checked trench safety and trench safety is not implied with this permit.

O. Landscaping is **NOT** to be disturbed any more than absolutely necessary. Restoration shall be to property owner's satisfaction.

P. Drainage patterns during construction shall be maintained to insure that surface drainage is properly managed and surrounding areas are protected from damage. Restoration must be to grades necessary to maintain original condition and maintain proper drainage flow lines.

Q. Applicant/Permittee is responsible for complying with all applicable water quality standards adopted by the City, County, State or other jurisdictional or properly empowered regulatory agency.

R. All saw cut sludge/slurry should be immediately removed by means of a vacuum system.

EXHIBIT B
INSURANCE

CONTRACTOR shall provide its insurance broker(s)/agent(s) with a copy of these requirements and request that they provide Certificates of Insurance complete with copies of all required endorsements to: Project Manager, City of Los Altos, 1 N. San Antonio Road, Los Altos, CA 94022

Minimum Scope of Insurance

Coverage shall be *at least as broad as:*

1. **Commercial General Liability** (CGL): Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, with limits no less than **$1,000,000/$2,000,000 aggregate** per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit. CGL insurance must include coverage for the following:

    a. Bodily Injury and Property Damage
    b. Personal Injury/Advertising Injury
    c. Premises/Operations Liability
    d. Products/Completed Operations Liability
    e. Aggregate Limits that Apply per Project
    f. Explosion, Collapse and Underground (UCX) exclusion deleted
    g. Contractual Liability with respect to this Agreement
    h. Broad Form Property Damage
    i. Independent Consultants Coverage

    The policy shall contain no endorsements or provisions limiting coverage for (1) contractual liability; (2) cross liability exclusion for claims or suits by one insured against another; (3) products/completed operations liability; or (4) contain any other exclusion contrary to the Agreement.

2. **Automobile Liability:** Insurance Services Office Form Number CA 00 01 covering, Code 1 (any auto), or if CONSULTANT has no owned autos, Code 8 (hired) and 9 (non-owned), with limit no less than **$1,000,000** per accident for bodily injury and property damage.

3. **Workers' Compensation/Employer's Liability:** CONSULTANT certifies that it is aware of the provisions of Section 3700 of the California Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and it will comply with such provisions before commencing work under this Agreement. To the extent CONSULTANT has employees at any time during the term of this Agreement, at all times during the performance of the work under this Agreement CONSULTANT shall maintain insurance as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than **$1,000,000** per accident for bodily injury or disease.

4. **Professional Liability** (Errors and Omissions) Insurance appropriate to the CONSULTANT's profession, with limit no less than **$1,000,000** per occurrence or claim. This insurance shall be endorsed to include contractual liability applicable to this Agreement and shall be written on a policy form coverage specifically designed to protect against acts, errors or omissions of the CONSULTANT. "Covered Professional Services" as designed in the policy must specifically include work performed under this Agreement.

5. **Umbrella or Excess Liability: Umbrella or Excess Insurance.** If umbrella or an excess liability insurance policy is used to satisfy the minimum requirements for CGL or Automobile Liability

insurance coverage listed above, the umbrella or excess liability policies shall provide coverage at least as broad as specified for the underlying coverages and covering those insured in the underlying policies. Coverage shall be "pay on behalf," with defense costs payable in addition to policy limits. CONSULTANT shall provide a "follow form" endorsement or schedule of underlying coverage satisfactory to the CITY indicating that such coverage is subject to the same terms and conditions as the underlying liability policy.

6. The CITY, its officers, officials, employees, and volunteers are to be covered as additional insureds on the umbrella or excess policy with respect to liability arising out of work or operations performed by or on behalf of the CONSULTANT including materials, parts or equipment furnished in connection with such work or operations. If CONSULTANT maintains broader coverage, umbrella or excess coverage and/or higher limits than the minimums shown above, the CITY requires and shall be entitled to the broader coverage, umbrella or excess coverage and/or the higher limits maintained by CONSULTANT. Any available insurance proceeds in excess of the specified minimum limits of insurance and any other coverages shall be available to the CITY.

Other Insurance Provisions. The insurance policies are to contain, or be endorsed to contain, the following provisions:

Additional Insured Status. The CITY, its officers, officials, employees, and volunteers are to be covered as additional insureds on the CGL policy and the Automobile Liability policy, with endorsements under CG 20 10 10 01 and 20 37 10 01, or endorsements providing the exact same coverage, with respect to liability arising out of work or operations performed by or on behalf of the CONSULTANT including materials, parts or equipment furnished in connection with such work or operations.

Primary Coverage. For any claims related to this contract, the CONSULTANT's insurance coverage shall be primary insurance as respects the CITY, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the CITY, its officers, officials, employees, or volunteers shall be excess of the CONSULTANT's insurance and shall not contribute with it.

Notice of Cancellation. Each insurance policy required above shall be endorsed to state that coverage shall not be canceled except after thirty (30) days' prior written notice (10 days for non-payment) has been given to the CITY.

Waiver of Subrogation. CONSULTANT hereby grants to CITY a waiver of any right to subrogation which any insurer of said CONSULTANT may acquire against the CITY by virtue of the payment of any loss under such insurance. CONSULTANT agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the CITY has received a waiver of subrogation endorsement from the insurer.

Deductibles and Self-Insured Retentions. Any deductibles or self-insured retentions must be declared to and approved by the CITY. The CITY may require the CONSULTANT to provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention.

Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII, unless otherwise acceptable to the CITY.

Claims Made Policies. If any of the required policies provide claims-made coverage:

7. The Retroactive Date must be shown, and must be before the date of the contract or the beginning of contract work.

8. Insurance must be maintained and evidence of insurance must be provided ***for at least three (3) years after completion of the contract work.***

9. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the CONSULTANT must purchase "extended reporting" coverage for a minimum of ***three (3)*** years after completion of contract work.

Verification of Coverage. CONSULTANT shall furnish the CITY with original certificates and amendatory endorsements effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the CITY before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the CONSULTANT's obligation to provide them. The CITY reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

Special Risks or Circumstances. CITY reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

Public Works Department - Engineering Division
One North San Antonio Road, Los Altos, California 94022-3087
Phone (650) 947-2780 Fax (650) 947-2732

TEMPORARY LANE CLOSURE PERMIT LC19-_____

APPLICATION
(To be completed by the applicant with a copy of detailed drawing showing the proposed location(s)):

LOCATION: 49 San Juan Ct
TYPE OF WORK: Install equipment on new utility pole. (PG&E to perform pole replacement under separate excavation permit)
DATE(S) REQUESTED: 3/21/2019
CONTRACTOR: Ericsson, Delbert Butcher **PHONE #** 720-317-7282
OWNER: PG&E, Jwo Cheng **PHONE #** 650-515-9842
APPLICANT: AT&T Mobility (New Cingular Wireless PCS), Ivan Toews, SureSite Consulting, Agent **PHONE #** 949-278-2962

SPECIAL REQUIREMENTS (TO BE COMPLETED BY THE CITY):
Applicant must submit evidence of insurance coverage meeting the minimum requirements set forth in this permit including, without limitation, the General Requirements and exhibits attached hereto prior to issuance of this permit. The City of Los Altos approves this request subject to the "General Requirements" listed on the back of this page and the following indicated conditions:

- ☒ **Notify the City of Los Altos Engineering Division at (650) 947-2780 at least 2 business days prior to beginning any work in Downtown area or on collector and arterial roads. Work in the public right of way in other areas requires at least 1 business day notice prior to beginning of work. Final inspection shall be scheduled at least 1 business day prior by contacting City of Los Altos Engineering Division.**
- ☒ **A copy of this permit must be at job site for authorized representative of the City when requested or work may be terminated by the City until compliance with this requirement is met.**
- ☒ **The applicant shall notify the Los Altos Police Department at (650) 947-2770 and Fire Department, Santa Clara County at (408) 378-4010 at least 3 business days prior to any lane or road closure.**
- ☐ **Comments:**

Applicant has read and understands all the conditions; and agrees to all the conditions of this permit.

SIGNATURE OF APPLICANT: _____ **DATE:** _____
ISSUED BY: _____ **DATE:** _____
SIGNATURE
INSPECTED BY: _____ **FINAL INSPECTION DATE:** _____

APPLICATION FEE (includes the first day):	$ 505.00
0 additional days at $62/day:	$ -
TOTAL FEES:	**$ 505.00**

ATTACHMENT:
☒YES Traffic Control Plan
☐NO

CREDIT ☐ **CHECK** ☐ **CASH** ☐
Provide Check # or type of credit (VS, MC, or D) and last 4 digits

Distribution: **Original** – Inspector **Copies**: Applicant, Police Department, and Finance

PERMIT VALID FOR DAYS
See other side for General Requirements

GENERAL REQUIREMENTS FOR ALL JOBS

A. To the fullest extent permitted by law, applicant shall defend, indemnify and hold City, the City Council, members of the City Council, its employees, representatives, agents and volunteers harmless from any and all suits, damages, costs, fees, claims, demands, causes of action, liabilities, losses expenses, damage or injury of any kind, in law or equity, to property or persons, including wrongful death and financial losses in any manner arising out of, pertaining to, or incident to any alleged acts, errors or omissions, or willful misconduct of applicant or applicant's officers, assistants, subcontractors, employees or agents in connection with this permit.

Applicant shall procure and maintain insurance as set forth in Exhibit B, attached hereto and incorporated herein by this reference, against claims for injury to persons or damage to property arising from or in connection with this permit.

B. Commencement of any work under this permit shall constitute acceptance of the conditions and requirements of this permit.

C. The City may require modifications to this permit as needed because of special field conditions.

D. **NO OTHER WORK**, other than specifically mentioned, is hereby authorized. A copy of this permit must be kept on the site of the work to be shown to any authorized representative of the City.

E. This permit does not authorize any excavation and grading on private property. This permit does not release the applicant/permittee from liabilities contained in other agreements or contracts with the City, other agencies or persons.

F. This permit does not supersede or replace any permit that may be needed from other agencies. Proper permits must be obtained from State, County, and any other agency involved.

G. Construction site signs, devices and lights shall be in accordance with Caltrans standards.

H. Use of a Flashing Arrow Panel is MANDATORY when work location is within a 35 MPH speed zone.

I. Traffic conditions and adequate protection of the public in the vicinity of the stall(s) shall be the responsibility of the applicant. At night, weekends, and holidays, a minimum of two 12-foot wide travel lanes shall be safe and passable

J. Applicant/Permittee is responsible for complying with all applicable water quality standards adopted by the City, County, State or other jurisdictional or properly empowered regulatory agency.

EXHIBIT B
INSURANCE

CONTRACTOR shall provide its insurance broker(s)/agent(s) with a copy of these requirements and request that they provide Certificates of Insurance complete with copies of all required endorsements to: Project Manager, City of Los Altos, 1 N. San Antonio Road, Los Altos, CA 94022

Minimum Scope of Insurance

Coverage shall be *at least as broad as:*

CONSULTANT shall provide its insurance broker(s)/agent(s) with a copy of these requirements and request that they provide Certificates of Insurance complete with copies of all required endorsements to: **Project Manager**, **City of Los Altos, 1 N. San Antonio Road, Los Altos, CA 94022**

Minimum Scope of Insurance

Coverage shall be *at least as broad as:*

1. **Commercial General Liability** (CGL): Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, with limits no less than **$1,000,000/$2,000,000 aggregate** per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit. CGL insurance must include coverage for the following:

    a. Bodily Injury and Property Damage
    b. Personal Injury/Advertising Injury
    c. Premises/Operations Liability
    d. Products/Completed Operations Liability
    e. Aggregate Limits that Apply per Project
    f. Explosion, Collapse and Underground (UCX) exclusion deleted
    g. Contractual Liability with respect to this Agreement
    h. Broad Form Property Damage
    i. Independent Consultants Coverage

    The policy shall contain no endorsements or provisions limiting coverage for (1) contractual liability; (2) cross liability exclusion for claims or suits by one insured against another; (3) products/completed operations liability; or (4) contain any other exclusion contrary to the Agreement.

2. **Automobile Liability:** Insurance Services Office Form Number CA 00 01 covering, Code 1 (any auto), or if CONSULTANT has no owned autos, Code 8 (hired) and 9 (non-owned), with limit no less than **$1,000,000** per accident for bodily injury and property damage.

3. **Workers' Compensation/Employer's Liability:** CONSULTANT certifies that it is aware of the provisions of Section 3700 of the California Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and it will comply with such provisions before commencing work under this Agreement. To the extent CONSULTANT has employees at any time during the term of this Agreement, at all times during the performance of the work under this Agreement CONSULTANT shall maintain insurance as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than **$1,000,000** per accident for bodily injury or disease.

4. **Professional Liability** (Errors and Omissions) Insurance appropriate to the CONSULTANT's profession, with limit no less than **$1,000,000** per occurrence or claim. This insurance shall be endorsed to include contractual liability applicable to this Agreement and shall be written on a policy form coverage specifically designed to protect against acts, errors or omissions of the CONSULTANT. "Covered Professional Services" as designed in the policy must specifically include work performed under this Agreement.

5. **Umbrella or Excess Liability: Umbrella or Excess Insurance.** If umbrella or an excess liability insurance policy is used to satisfy the minimum requirements for CGL or Automobile Liability insurance coverage listed above, the umbrella or excess liability policies shall provide coverage at least as broad as specified for the underlying coverages and covering those insured in the underlying policies. Coverage shall be "pay on behalf," with defense costs payable in addition to policy limits. CONSULTANT shall provide a "follow form" endorsement or schedule of underlying coverage satisfactory to the CITY indicating that such coverage is subject to the same terms and conditions as the underlying liability policy.

6. The CITY, its officers, officials, employees, and volunteers are to be covered as additional insureds on the umbrella or excess policy with respect to liability arising out of work or operations performed by or on behalf of the CONSULTANT including materials, parts or equipment furnished in connection with such work or operations. If CONSULTANT maintains broader coverage, umbrella or excess coverage and/or higher limits than the minimums shown above, the CITY requires and shall be entitled to the broader coverage, umbrella or excess coverage and/or the higher limits maintained by CONSULTANT. Any available insurance proceeds in excess of the specified minimum limits of insurance and any other coverages shall be available to the CITY.

Other Insurance Provisions. The insurance policies are to contain, or be endorsed to contain, the following provisions:

Additional Insured Status. The CITY, its officers, officials, employees, and volunteers are to be covered as additional insureds on the CGL policy and the Automobile Liability policy, with endorsements under CG 20 10 10 01 and 20 37 10 01, or endorsements providing the exact same coverage, with respect to liability arising out of work or operations performed by or on behalf of the CONSULTANT including materials, parts or equipment furnished in connection with such work or operations.

Primary Coverage. For any claims related to this contract, the CONSULTANT's insurance coverage shall be primary insurance as respects the CITY, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the CITY, its officers, officials, employees, or volunteers shall be excess of the CONSULTANT's insurance and shall not contribute with it.

Notice of Cancellation. Each insurance policy required above shall be endorsed to state that coverage shall not be canceled except after thirty (30) days' prior written notice (10 days for non-payment) has been given to the CITY.

Waiver of Subrogation. CONSULTANT hereby grants to CITY a waiver of any right to subrogation which any insurer of said CONSULTANT may acquire against the CITY by virtue of the payment of any loss under such insurance. CONSULTANT agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the CITY has received a waiver of subrogation endorsement from the insurer.

Deductibles and Self-Insured Retentions. Any deductibles or self-insured retentions must be declared to and approved by the CITY. The CITY may require the CONSULTANT to provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention.

Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII, unless otherwise acceptable to the CITY.

Claims Made Policies. If any of the required policies provide claims-made coverage:

7. The Retroactive Date must be shown, and must be before the date of the contract or the beginning of contract work.

8. Insurance must be maintained and evidence of insurance must be provided *for at least three (3) years after completion of the contract work.*

9. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the CONSULTANT must purchase "extended reporting" coverage for a minimum of *three (3)* years after completion of contract work.

Verification of Coverage. CONSULTANT shall furnish the CITY with original certificates and amendatory endorsements effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the CITY before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the CONSULTANT's obligation to provide them. The CITY reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

Special Risks or Circumstances. CITY reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

Radio Frequency Emissions Compliance Report For AT&T Mobility

Site Name:	**CRAN_RSFR_LOSA0_05**	**Site Structure Type:**	**Utility Pole**
Address:	**49 San Juan Court**	**Latitude:**	**37.39588**
	Los Altos, California	**Longitude:**	**-122.11325**
Report Date:	**October 29, 2018**	**Project:**	**New Build**

General Summary

AT&T Mobility has contracted Waterford Consultants, LLC to conduct a Radio Frequency Electromagnetic Compliance assessment of the proposed CRAN_RSFR_LOSA0_05 site located at 49 San Juan Court, Los Altos, California. This report contains information about the radio telecommunications equipment to be installed at this site and the surrounding environment with regard to RF Hazard compliance. This assessment is based on installation designs and operational parameters provided by AT&T Mobility.

The compliance framework is derived from the Federal Communications Commission (FCC) Rules and Regulations for preventing human exposure in excess of the applicable Maximum Permissible Exposure ("MPE") limits. At any location at this site, the power density resulting from each transmitter may be expressed as a percentage of the frequency-specific limits and added to determine if 100% of the exposure limit has been exceeded. The FCC Rules define two tiers of permissible exposure differentiated by the situation in which the exposure takes place and/or the status of the individuals who are subject to exposure. General Population / Uncontrolled exposure limits apply to those situations in which persons may not be aware of the presence of electromagnetic energy, where exposure is not employment-related, or where persons cannot exercise control over their exposure. Occupational / Controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment, have been made fully aware of the potential for exposure, and can exercise control over their exposure. Based on the criteria for these classifications, the FCC General Population limit is considered to be a level that is safe for continuous exposure time. The FCC General Population limit is 5 times more restrictive than the Occupational limits.

	Limits for General Population/ Uncontrolled Exposure		***Limits for Occupational/ Controlled Exposure***	
Frequency (MHz)	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
30-300	0.2	30	1	6
300-1500	f/1500	30	f/300	6
1500-100,000	1.0	30	5.0	6

f=Frequency (MHz)

In situations where the predicted MPE exceeds the General Population threshold in an accessible area as a result of emissions from multiple transmitters, FCC licensees that contribute greater than 5% of the aggregate MPE share responsibility for mitigation.

Based on the computational guidelines set forth in FCC OET Bulletin 65, Waterford Consultants, LLC has developed software to predict the overall Maximum Permissible Exposure possible at any particular location given the spatial orientation and operating parameters of multiple RF sources. These theoretical results represent worst-case predictions as emitters are assumed to be operating at 100% duty cycle.

For any area in excess of 100% General Population MPE, access controls with appropriate RF alerting signage must be put in place and maintained to restrict access to authorized personnel. Signage must be posted to be visible upon approach from any direction to provide notification of potential conditions within these areas. Subject to other site security requirements, occupational personnel should be trained in RF safety and equipped with personal protective equipment (e.g. RF personal monitor) designed for safe work in the vicinity of RF emitters. Controls such as physical barriers to entry imposed by locked doors, hatches and ladders or other access control mechanisms may be supplemented by alarms that alert the individual and notify site management of a breach in access control. Waterford Consultants, LLC recommends that any work activity in these designated areas or in front of any transmitting antennas be coordinated with all wireless tenants.

Analysis

AT&T Mobility proposes the following installation at this location:

- Install 1 KMW FX-OM2LIOH2 Cylindrical Antenna
- Install 1 4415 Radio
- Install 1 RRUS-11 Radio

The antenna will be mounted on a 39-foot Utility Pole with a centerline 48.3 feet above ground level. The antenna is quasi-omnidirectional and will radiate in all directions. The Effective Radiated Power (ERP) in any direction from all AT&T Mobility operations will not exceed 987 Watts. Other appurtenances such as GPS antennas, RRUs and hybrid cable are not sources of RF emissions. From this site, AT&T Mobility will enhance voice and data services to surrounding areas in licensed 700 and 1900 MHz bands. No other antennas are known to be operating in the vicinity of this site.

Power density decreases significantly with distance from any antenna. The quasi-omnidirectional antenna to be employed at this site is operating at relatively low power and mounting elevation, as documented, serves to reduce the potential to exceed MPE limits at any location other than directly in front of the antenna. For accessible areas at ground level, the maximum predicted power density level resulting from all AT&T Mobility operations is 0.3610% of the FCC General Population limits. Incident at adjacent buildings depicted in Figure 1, the maximum predicted power density level resulting from all AT&T Mobility operations is 0.8600% of the FCC General Population limits. The proposed operation will not expose members of the General Public to hazardous levels of RF energy and will not contribute to existing cumulative MPE levels on walkable surfaces at ground or at adjacent buildings by 5% of the General Population limits.

For areas on the pole that are predicted to exceed the General Population limits, Waterford Consultants, LLC recommends that AT&T Mobility post an RF alerting sign (Caution) on the pole 43 feet above ground level to be visible upon approach by authorized personnel to provide notification of potential conditions above this level. This recommendation is depicted in Figure 2. Any work activity in front of transmitting antennas should be coordinated with AT&T Mobility.

Figure 1: Antenna Locations

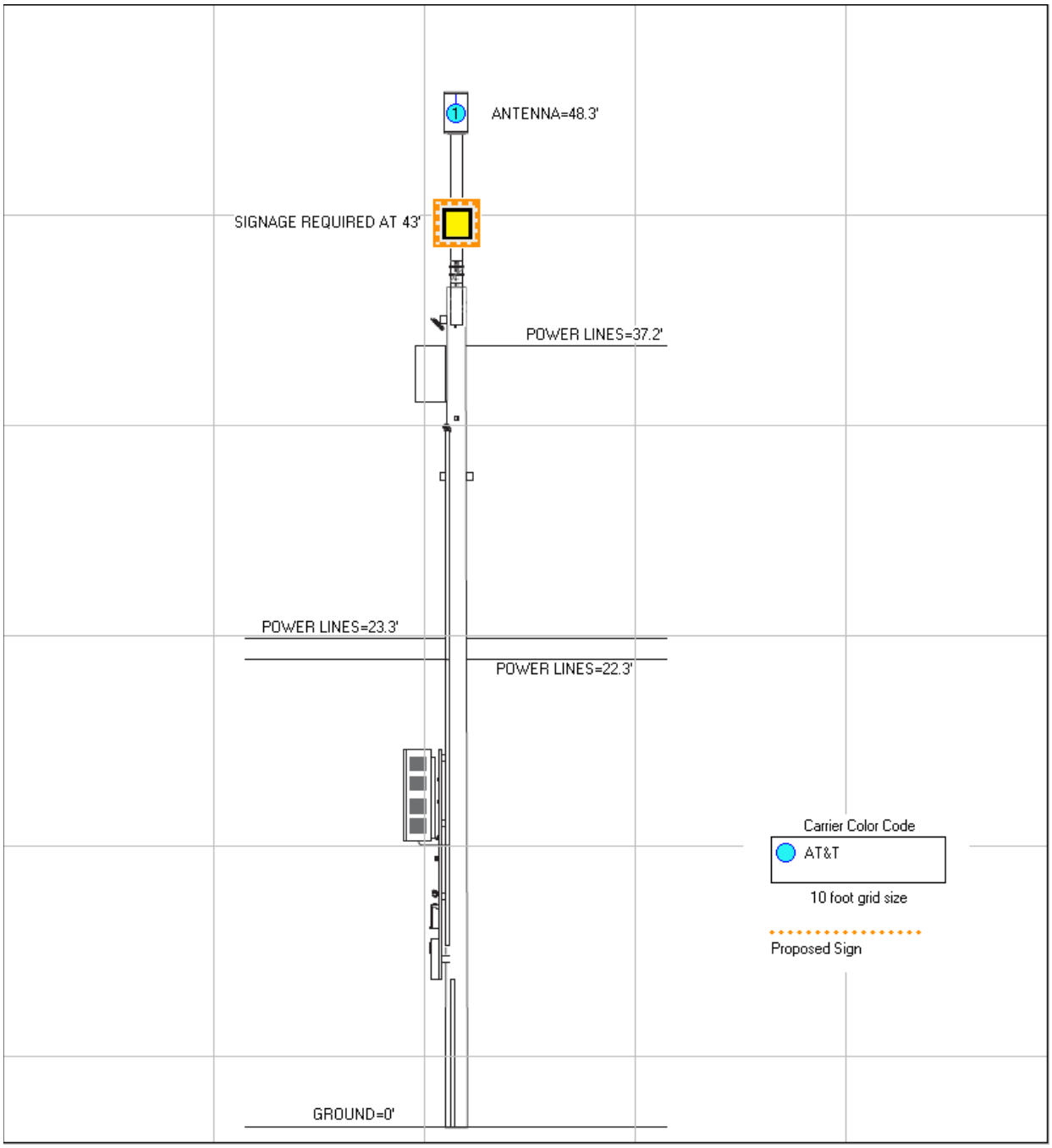


Figure 2: Mitigation Recommendations

Caution

Compliance Statement

Based on information provided by AT&T Mobility, predictive modeling and the mitigation action to be implemented by AT&T Mobility, the installation proposed by AT&T Mobility at 49 San Juan Court, Los Altos, California will be compliant with Radiofrequency Radiation Exposure Limits of 47 C.F.R. § 1.1307(b)(3) and 1.1310. RF alerting signage and restricting access to these areas to authorized personnel that have completed RF safety training is required for Occupational environment compliance.

Certification

I, David H. Kiser, am the reviewer and approver of this report and am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation, specifically in accordance with FCC's OET Bulletin 65. I have reviewed this Radio Frequency Exposure Assessment report and believe it to be both true and accurate to the best of my knowledge.

PRECISION DESIGN

October 26, 2018

Suresite for AT&T
36 Executive Park, Suite 210
Irvine, CA 92614

Subj: CRAN_RSFR_LOSA0_005

We have analyzed the wood pole at ROW adjacent to 49 San Juan Ct., Los Altos, CA 94022 (37.3958800, -122.1132500) using O-Calc Pro 5.03 Utility Pole software.

Data for the wood pole was obtained from a previous site walk and photographs on May 23, 2018, as well as Google Earth images. Proposed equipment is provided by our client. Based on our analysis the new pole with proposed loading is at 81.0% capacity and may be **considered adequate to support the proposed loads.**

Please contact me if you have any questions.

Sincerely,

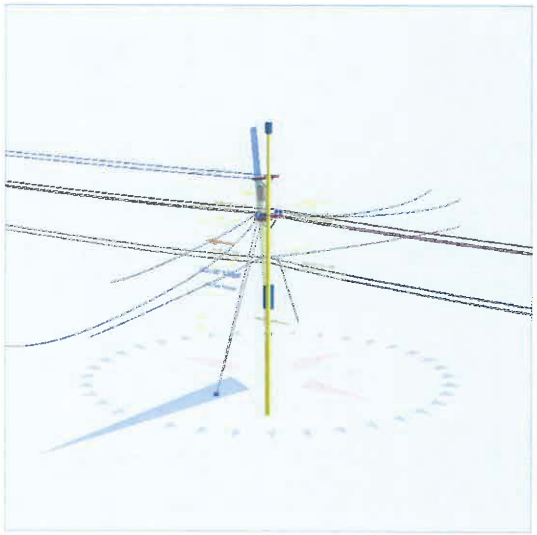
Bret McComb, P.E.

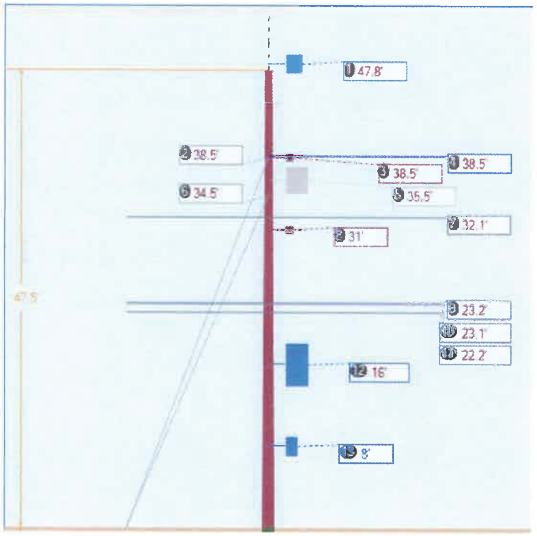
Attachments:

1. O-Calc Output: 4 pages
2. Pole Size Chart: 1 page

11768 Atwood Rd, Suite 20, Auburn, CA 95603 Tel: (530) 823-6546 bret@pdnd.com

Pole Num:	**CRAN_RSFR_LOSA0_05**	Pole Length / Class:	**55 / 3**	Code:	**GO 95**	Structure Type:	**Guyed Tangent**
Aux Data 1	**Unset**	Species:	**DOUGLAS FIR**	NESC Rule:	**-**	Status	**Guy Wires Adequate**
Aux Data 2	**Unset**	Setting Depth (ft):	**7.50**	Construction Grade:	**B**	Pole Strength Factor:	**0.50**
Aux Data 3	**Unset**	G/L Circumference (in):	**39.96**	Loading District:	**Light**	Transverse Wind LF:	**1.00**
Aux Data 4	**Unset**	G/L Fiber Stress (psi):	**8,000**	Ice Thickness (in):	**0.00**	Wire Tension LF:	**1.00**
Aux Data 5	**Unset**	Allowable Stress (psi):	**3,938**	Wind Speed (mph):	**55.90**	Vertical LF:	**1.00**
Aux Data 6	**Unset**	Fiber Stress Ht. Reduc:	**No**	Wind Pressure (psf):	**8.00**		
Latitude:	**37.395880 Deg**	Longitude:		**-122.113250 Deg**		Elevation:	**94.9 Feet**





Pole Capacity Utilization (%) Crossarm allowance 300 lbs		Height (ft)	Wind Angle (deg)
Maximum	81.0	0.0	90.0
Groundline	81.0	0.0	90.0
Vertical	1.7	24.9	180.0

Pole Moments (ft-lb) Crossarm allowance 300 lbs		Load Angle (deg)	Wind Angle (deg)
Max Cap Util	**53,379**	89.8	90.0
Groundline	**53,379**	89.8	90.0
GL Allowable	**66,317**		

Guy System Component Summary				Load From Worst Wind Angle on Pole		Individual Maximum Load	
Description	Lead Length (ft)	Lead Angle (deg)	Height (ft)	Nominal Capacity (%)	Wind Angle (deg)	Max Load Capacity (%)	Wind Angle (deg)
▸ Single - 14" - Soil Class 4	15.0	0.0		0.3	90.0	5.6	180.0
• HS 1/8 (Down)			38.5	3.2	90.0	62.2	180.0
• HS 1/8 (Down)			34.5	3.0	90.0	68.7	180.0
			System Capacity Summary:	Adequate		Adequate	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 89.8°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Powers	984	64.1	**37,872**	71.0	**57.1**	**2,250**	71	1	**2,250**	**57.1**
Comms	-67	-4.4	**-668**	-1.3	**-1.0**	**-40**	351	3	**-37**	**-0.9**
GuyBraces	4	0.3	**144**	0.3	**0.2**	**9**	59	0	**9**	**0.2**
PowerEquipments	42	2.7	**1,959**	3.7	**3.0**	**116**	335	3	**119**	**3.0**
GenericEquipments	131	8.5	**2,521**	4.7	**3.8**	**150**	160	1	**151**	**3.8**
Pole	317	20.7	**7,363**	13.8	**11.1**	**437**	1,599	13	**450**	**11.4**
Crossarms	101	6.6	**3,398**	6.4	**5.1**	**202**	138	1	**203**	**5.2**
Insulators	24	1.5	**790**	1.5	**1.2**	**47**	82	1	**48**	**1.2**
Pole Load	1,535	100.0	**53,379**	100.0	**80.5**	**3,171**	2,794	22	**3,193**	**81.1**
Pole Reserve Capacity			**12,938**		**19.5**	**767**			**745**	**18.9**

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 89.8°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
<Undefined>	1,218	79.3	**46,016**	86.2	**69.4**	**2,733**	1,196	9	**2,743**	**69.7**
Pole	317	20.7	**7,363**	13.8	**11.1**	**437**	1,599	13	**450**	**11.4**
Totals:	1,535	100.0	**53,379**	100.0	**80.5**	**3,171**	2,794	22	**3,193**	**81.1**

Detailed Load Components:

Power		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Primary	AAC 1 AWG 7 STRAND PANSY		38.50	40.55	0.3280	1.68	0.078	165.0	90.0	165.0	492	18,942	1	0	18,943
Primary	AAC 1 AWG 7 STRAND PANSY		38.50	40.55	0.3280	1.68	0.078	165.0	90.0	165.0	492	18,942	1	0	18,943
Secondary	TRIPLEX 6 AWG		32.15	36.56	0.5800	2.31	0.113	165.0	90.0	165.0	357	11,485	5	0	11,490
Secondary	TRIPLEX 6 AWG		32.15	36.56	0.5800	2.31	0.113	165.0	90.0	165.0	357	11,485	5	0	11,489
Secondary	TRIPLEX 6 AWG		32.15	20.98	0.5800	2.31	0.113	165.0	90.0	165.0	357	11,485	5	0	11,490
Secondary	TRIPLEX 6 AWG		32.15	20.98	0.5800	2.50	0.113	176.0	270.0	176.0	357	-11,485	-5	0	-11,490
Secondary	TRIPLEX 6 AWG		32.15	36.56	0.5800	2.50	0.113	176.0	270.0	176.0	357	-11,485	-5	0	-11,490
Secondary	TRIPLEX 6 AWG		32.15	36.56	0.5800	2.50	0.113	176.0	270.0	176.0	357	-11,485	-5	0	-11,490
											Totals:	**37,884**	**1**	**0**	**37,885**

Comm		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Telco	TELE 1.0		32.15	36.56	1.0000	1.30	0.400	35.0	5.0	35.2	50	142	9	373	524
Telco	TELE 1.0		32.15	36.56	1.0000	3.24	0.400	78.0	170.0	78.4	100	547	11	812	1,370
Telco	TELE 1.0		32.15	36.56	1.0000	2.32	0.400	66.0	180.0	66.3	100	-11	-11	708	687
Telco	TELE 1.0		32.15	36.56	1.0000	5.83	0.400	75.0	350.0	76.5	50	-273	-10	781	499
Telco	TELE 1.0		23.25	7.54	1.0000	3.13	0.400	165.0	90.0	165.1	800	18,600	0	0	18,600
Telco	TELE 1.0		23.11	25.16	1.0000	0.36	0.400	45.0	0.0	45.0	300	23	21	343	387
Telco	TELE 1.0		23.11	25.16	1.0000	0.87	0.400	73.0	180.0	73.0	400	-31	12	556	537
Telco	TELE 1.0		23.25	7.54	1.0000	3.41	0.400	176.0	270.0	176.1	800	-18,600	0	0	-18,600
Telco	TELE 1.0		23.10	25.16	1.0000	0.16	0.400	30.0	315.0	30.0	300	-4,763	-22	115	-4,670
Telco	TELE 1.0		22.25	7.60	1.0000	3.13	0.400	165.0	90.0	165.1	800	17,800	0	0	17,800
Telco	TELE 1.0		22.25	7.60	1.0000	3.41	0.400	176.0	270.0	176.1	800	-17,800	0	0	-17,800
											Totals:	**-4,366**	**11**	**3,686**	**-668**

PowerEquipment		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Transformer	1PH-15KVA		35.50	17.34	90.0	90.0	335.00	34.00	--	22.00	--	484	1,475	1,959
											Totals:	**484**	**1,475**	**1,959**

GenericEquipment		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Box	Housing For RRUs		16.00	13.45	315.0	0.0	130.00	53.00	16.00	--	23.00	-103	1,469	1,366
Box	100amp Meter		8.00	8.22	315.0	0.0	10.00	24.00	4.63	--	12.00	-5	142	137
Cylinder	Antenna-KMW FX-OM2LI OH2		47.75	0.35	0.0	0.0	20.00	24.00	--	16.00	--	0	1,019	1,019
											Totals:	**-108**	**2,629**	**2,522**

Crossarm		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Normal	CROSSARM 3-1/2 X 4-1/2 X 7		38.50	5.92	90.0	90.0	46.00	4.50	3.50	84.00	23	1,294	1,316
Normal	CROSSARM 3-1/2 X 4-1/2 X 7		31.00	6.35	90.0	90.0	46.00	4.50	3.50	84.00	0	2,083	2,083
										Totals:	**23**	**3,377**	**3,399**

Insulator		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Deadend	Deadend 12.75"		38.50	-36.00	9.3	0.0	3.00	3.80	12.75	5	104	108

Deadend	Deadend 12.75"	38.50	36.00	170.7	0.0	3.00	3.80	12.75	5	104	108
Post	Post Insulator - 15 kV	31.19	-36.00	10.0	0.0	11.00	4.75	11.50	6	96	101
Post	Post Insulator - 15 kV	31.19	36.00	170.0	0.0	11.00	4.75	11.50	6	96	101
Post	Post Insulator - 15 kV	31.19	-20.00	17.6	0.0	11.00	4.75	11.50	6	96	101
Post	Post Insulator - 15 kV	31.19	-20.00	342.4	180.0	11.00	4.75	11.50	-6	96	90
Post	Post Insulator - 15 kV	31.19	36.00	190.0	180.0	11.00	4.75	11.50	-6	96	90
Post	Post Insulator - 15 kV	31.19	-36.00	350.0	180.0	11.00	4.75	11.50	-6	96	90
Bolt	Single Bolt	23.25	0.00	180.0	180.0	5.00	3.00	0.00	0	0	0
Bolt	Single Bolt	22.25	0.00	180.0	180.0	5.00	3.00	0.00	0	0	0
								Totals:	**9**	**780**	**790**

Guy Wire and Brace		Owner	Attach Height (ft)	End Height (ft)	Lead/Span Length (ft)	Wire Diameter (in)	Percent Solid (%)	Lead Angle (deg)	Incline Angle (deg)	Wire Weight (lbs/ft)	Rest Length (ft)	Stretch Length (in)
HS 1/8	Down		38.50	0.00	15.00	0.125	75.00	0.0	68.5	0.032	48.28	0.09
HS 1/8	Down		34.50	0.00	15.00	0.125	75.00	0.0	66.3	0.032	44.48	0.08

Guy Wire and Brace (Loads and Reactions)		Elastic Modulus (psi)	Rated Tensile Strength (lbs)	Guy Strength Factor	Allowable Tension (lbs)	Initial Tension (lbs)	Loaded Tension*[2] (lbs)	Maximum Tension[2] (lbs)	Applied Tension[3] (lbs)	Vertical Load (lbs)	Shear Load In Guy Dir (lbs)	Shear Load At Report Angle (lbs)	Moment at GL[3] (ft-lb)
HS 1/8	Down	2.30e+7	1,330	0.75	998	700	620	620	32	29	12	0	79
HS 1/8	Down	2.30e+7	1,330	0.75	998	700	686	686	30	28	12	0	65
									Totals:	**57**	**24**	**0**	**144**

Anchor/Rod Load Summary	Owner	Rod Length AGL (in)	Lead Length (ft)	Lead Angle (deg)	Strength of Assembly (lbs)	Anchor/Rod Strength Factor	Allowable Load (lbs)	Max Load[2] (lbs)	Load at Pole MCU[3] (lbs)	Max Required Capacity[2] (%)
Single - 14" - Soil Class 4		0.00	15.00	0.0	31,000	0.75	23,250	1,306	62	5.6

Pole Buckling

Buckling Constant	Buckling Column Height* (ft)	Buckling Section Height (% Buckling Col. Hgt.)	Buckling Section Diameter (in)	Minimum Buckling Diameter at GL (in)	Diameter at Tip (in)	Diameter at GL (in)	Modulus of Elasticity (psi)	Pole Density (pcf)	Ice Density (pcf)	Pole Tip Height (ft)	Buckling Load Capacity at Height (lbs)	Buckling Load Applied at Height (lbs)	Buckling Load Factor of Safety
0.71	24.90	33.34	11.78	9.34	7.32	12.73	1.60e+6	60.00	57.00	47.50	166,577	**1643.82**	**58.82**

DOUGLAS FIR POLE SIZING CHART												
Class	**H-6**	**H-5**	**H-4**	**H-3**	**H-2**	**H-1**	**1**	**2**	**3**	**4**	**5**	**6**
Minimum Circumference at Top (Inches)	39	37	35	33	31	29	27	25	23	21	19	17
Length of Pole (Feet)	**Minimum Circumference at 6 feet from Butt (Inches)**											
20	-	-	-	-	-	-	31.0	29.0	27.0	25.0	23.0	21.0
25	-	-	-	-	-	-	33.5	31.5	29.5	27.5	25.5	23.0
30	-	-	-	-	-	-	36.5	34.0	32.0	29.5	27.5	25.0
35	-	-	-	-	43.5	41.5	39.0	36.5	34.0	31.5	29.0	27.0
40	-	-	51.0	48.5	46.0	43.5	41.0	38.5	36.0	33.5	31.0	28.5
45	58.5	56.0	53.5	51.0	48.5	45.5	43.0	40.5	37.5	35.0	32.5	30.0
50	61.0	58.5	55.5	53.0	50.5	47.5	45.0	42.0	39.0	36.5	34.0	-
55	63.5	60.5	58.0	55.0	52.0	49.5	46.5	43.5	40.5	38.0	-	-
60	65.5	62.5	59.5	57.0	54.0	51.0	48.0	45.0	42.0	39.0	-	-
65	67.5	64.5	61.5	58.5	55.5	52.5	49.5	46.5	43.5	40.5	-	-
70	69.0	66.5	63.5	60.5	57.0	54.0	51.0	48.0	45.0	41.5	-	-
75	71.0	68.0	65.0	62.0	59.0	55.5	52.5	49.0	46.0	-	-	-
80	72.5	69.5	66.5	63.5	60.0	57.0	54.0	50.5	47.0	-	-	-
85	74.5	71.5	68.0	65.0	61.5	58.5	55.0	51.5	48.0	-	-	-
90	76.0	73.0	69.5	66.5	63.0	59.5	56.0	53.0	49.0	-	-	-
95	77.5	74.5	71.0	67.5	64.5	61.0	57.0	54.0	-	-	-	-
100	79.0	76.0	72.5	69.0	65.5	62.0	58.5	55.0	-	-	-	-
105	80.5	77.0	74.0	70.5	67.0	63.0	59.5	56.0	-	-	-	-
110	82.0	78.5	75.0	71.5	68.0	64.5	60.5	57.0	-	-	-	-
115	83.5	80.0	76.5	72.5	69.0	65.5	61.5	58.0	-	-	-	-
120	85.0	81.0	77.5	74.0	70.0	66.5	62.5	59.0	-	-	-	-
125*	86.0	82.5	78.5	75.0	71.0	67.5	63.5	59.5	-	-	-	-
	H-6	**H-5**	**H-4**	**H-3**	**H-2**	**H-1**	**1**	**2**	**3**	**4**	**5**	**6**

* 125' Availability: Untreated Only

CRAN_RSFR_LOSAO_05

49 San Juan Court Los Altos CA 94022

ARTISTIC engineering
AEsims.com
877.9AE.sims

View 1

Existing

Proposed Looking northeast from San Juan Court

Accuracy of photo simulation based upon information provided by project applicant.

Alternate Review

- ❑ AT&T proposed a node location near North San Antonio Road and Jordan Avenue
- ❑ Existing (traditional) cell sites are not suitable candidates for colocation as they do not meet network requirements
- ❑ One alternate location was considered

<u>Alternative Site Location</u>
This location is a wood utility pole located in the public ROW on the north side of San Juan Court approximately 300 feet from Jordan Avenue

This pole is considered a possible candidate but is located farther away from the center of the preferred location as required by our network needs.


CRAN_RSFR_LOSA0_05 (P)
CRAN_RSFR_LOSA0_05 (A)
N San Antonio Rd
Juan Ct
Jordan Ave
© 2018 Google
Google Earth
1948
37°23'45.87" N 122°06'52.02" W elev 104 ft eye alt 803 ft

AT&T Future Build-out Sites

Name	Address
LOSA0_01	141 Almond Ave
LOSA0_02	687 Linden Ave
LOSA0_03	421 Valencia
LOSA0_04	33 Pine
LOSA0_05	49 San Juan
LOSA0_06	791 Los Altos
LOSA0_07	98 Eleanor
LOSA0_08	182 Garland
LOSA0_09	491 Patrick Way
LOSA0_10	300 Los Altos Ave
LOSA0_11	130 Los Altos
LOSA0_12	356 Blue Oak
SJWE_007	5000 El Camino Real
SJWE_012	4294 El Camino Real

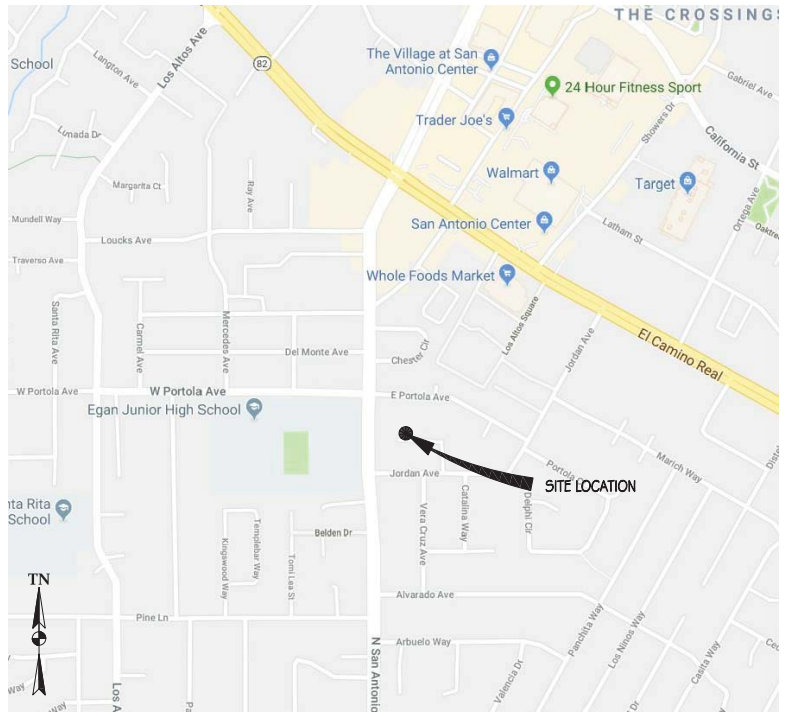
at&t

SITE ID:	CRAN_RSFR_LOSAO_05
SITE ADDRESS:	ROW ADJCT TO 49 SAN JUAN CT LOS ALTOS, CA 94022
SITE TYPE:	PG&E POLE (PM# 114474352)
POLE OWNER:	PG&E
FA LOCATION:	12898152
USID:	TBD

SITE INFORMATION

APPLICANT:	AT&T MOBILITY 5001 EXECUTIVE PARKWAY SAN RAMON, CA 94583
AGENT:	SURESITE 36 EXECUTIVE PARK, SUITE 210 IRVINE, CA 92614
APN:	ADJCT TO 170-13-045
SITE ADDRESS:	ROW ADJCT TO 49 SAN JUAN CT LOS ALTOS, CA 94022
COUNTY:	SANTA CLARA
LATITUDE:	37° 23' 45.20" N (37.3958889) NAD 83
LONGITUDE:	122° 06' 47.63" W (-122.1132306) NAD 83
GROUND ELEVATION:	±94.9' AMSL
ZONING:	PUBLIC ROW
ZONING JURISDICTION:	CITY OF LOS ALTOS
PG&E SAP ID:	100508817
STREET CLASSIFICATION:	LOCAL

VICINITY MAP



PROJECT TEAM

AGENT:
SURESITE
36 EXECUTIVE PARK, #210
IRVINE, CA 92614
(949) 278-2962
L.MEINERS@SURE-SITE.COM

PROJECT MANAGERS:
CHRIS JOHNSON
ERICSSON
6140 STONERIDGE MALL RD, SUITE 350
PLEASANTON, CA 94588
(408) 796-8443
CHRISTOPHER.JOHNSON@ERICSSON.COM

CONSTRUCTION MANAGER:
TBD

ARCHITECT/ENGINEER OF RECORD:
BRET McCOMB
PRECISION DESIGN & DRAFTING, INC
11768 ATWOOD ROAD, SUITE #20
AUBURN, CA 95603
(530) 823-6546
BRET@PDND.COM

RF MANAGER:
TBD

PROJECT DESCRIPTION

THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR AT&T WIRELESS CONSISTING OF THE INSTALLATION & OPERATION OF ANTENNAS & ASSOCIATED EQUIPMENT OF 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) LOAD CENTER/AC DISCONNECT, (1) CONCEALMENT BOX CONTAINING (1) RRUS-4415 & (1) RRUS-11 W/ PSU UNITS & (2) DIPLEXERS, & (1) KMW FX-OM2L10H2 CYLINDRICAL ANTENNA.
2. ALL EQUIPMENT TO BE PAINTED TO MEET JURISDICTION APPROVAL.
3. UTILITY LINES BETWEEN (E) POINT OF CONNECTION & POLE TO BE UNDERGROUND AND/OR OVERHEAD.

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
T-2	GENERAL NOTES, LEGEND, & ABBREVIATIONS
A-1	SITE PLAN
A-2	EQUIPMENT PLAN & ANTENNA PLANS
A-3	ELEVATIONS
A-4	ELEVATIONS
A-5	DETAILS
A-6	DETAILS
E-1	SINGLE-LINE DIAGRAM & DETAILS
E-2	GROUNDING DIAGRAMS
TR-1	TRAFFIC CONTROL PLAN

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: 49 SAN JUAN CT, LOS ALTOS, CA 94022

1.	HEAD NORTHEAST ON BISHOP DR TOWARD SUNSET DR	256	FT
2.	TURN RIGHT ONTO SUNSET DR	0.1	MI
3.	USE THE MIDDLE LANE TO TURN RIGHT ONTO BOLLINGER CANYON RD	0.3	MI
4.	USE THE RIGHT LANE TO MERGE ONTO I-680 S VIA THE RAMP TO SAN JOSE	0.3	MI
5.	MERGE ONTO I-680 S	21.5	MI
6.	TAKE EXIT 12 FOR MISSION BLVD/STATE ROUTE 262 TOWARD I-880	0.2	MI
7.	KEEP RIGHT AT THE FORK, FOLLOW SIGNS FOR MISSION BLVD W AND MERGE ONTO CA-262 S/MISSION BLVD	0.3	MI
8.	MERGE ONTO CA-262 S/MISSION BLVD	0.6	MI
9.	USE THE LEFT 2 LANES TO TAKE THE EXIT TOWARD INTERSTATE 880 S/SAN JOSE	0.9	MI
10.	MERGE ONTO I-880 S	3.1	MI
11.	USE THE RIGHT 2 LANES TO TAKE THE CA-237 W EXIT TOWARD MTN VIEW	0.9	MI
12.	CONTINUE ONTO CA-237 W	8.4	MI
13.	KEEP LEFT TO CONTINUE ON CA-237 W/SOUTHBAY FWY	0.5	MI
14.	TURN RIGHT ONTO EL CAMINO REAL	2.3	MI
15.	TURN LEFT ONTO JORDAN AVE	0.4	MI
16.	TURN RIGHT ONTO SAN JUAN CT	469	FT

END AT: 49 SAN JUAN CT, LOS ALTOS, CA 94022

ESTIMATED TIME: 50 MINS ESTIMATED DISTANCE: 39.9 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

SURESITE
smart cell access.
36 EXECUTIVE PARK, SUITE 210
IRVINE, CA 92614

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
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_LOSAO_05

ROW ADJCT TO 49 SAN JUAN CT
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	10/30/18	CD 90%

DRAWN BY:	T. JONES
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/30/18

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/IBC'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 SURVEYORS 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 HIGHER 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.

15. ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION OR SHTUDOWN SIGNAGE) OR PG#E REGULATIONS SHALL BE PAINTED OVER OR REMOVED. RAISED/DEPRESSED LOGOS OR TEXT ON EQUIPMENT (E.G. RRUS), IF PRESENT, TO BE SANDED OFF OR COVERED WITH STICKER, # THEN PAINTED OVER.

16. FONDATED RF WAC MARNING SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD THE BUILDING IF THERE IS NO WINDOW.

17. ALL EQUIPMENT, INCLUDING ANTENNAS, MOUNTING/STANDOFF BRACKETS, POLE EXTENSIONS, CONDUIT, METER, AND RADIOS SHALL BE PAINTED MESA BROWN USING A DURABLE OUTDOOR PAINT.

18. CABLING SHALL BE MESA BROWN IN COLOR AND SHALL BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS, # SHALL BE HIDDEN FROM VIEW TO THE MAXIMUM EXTENT POSSIBLE.

19. SUPPORT EQUIPMENT (E.G. METERS, DISCONNECT SWITCH, ETC) TO BE CLUSTERED VERTICALLY AS CLOSE AS TECHNICALLY FEASIBLE ON POLE.

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 PDMD 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.

ABBREVIATIONS

A	AMPERE
AB	ANCHOR BOLT
ABV	ABOVE
ACCA	ANTENNA CABLE COVER ASSEMBLY
ADDL	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
BTCW	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	GALVANIZED
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
IGSB	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
P/C	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	THICKNESS)
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
ℇ	PLATE

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 #PRB
- COMBINATION, EXIT SIGN & EMERGENCY LIGHTING, HUBBELL LIGHTING CATALOG #PRC
- EMERGENCY LIGHTING, 2/50W, HUBBELL LIGHTING CATALOG #HEG-50-2-R91
- LIGHTING FIXTURE, INCANDESCENT, 1/100W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #BRH-100-CG-1
- LIGHTING FIXTURE, HALOGEN, QUARTZ, 1/300W, HUBBELL LIGHTING CATALOG #QL-505
- LIGHTING FIXTURE, 1/175W. METAL HALIDE, HUBBELL CAT #MIC-0175H-33G
- 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 XFMR
- (E) POLE MOUNTED XFMR
- (N) PAD MOUNTED XFMER
- (E) PAD MOUNTED XFMER

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ROW ADJCT TO 49 SAN JUAN CT
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	10/30/18	CD 90%

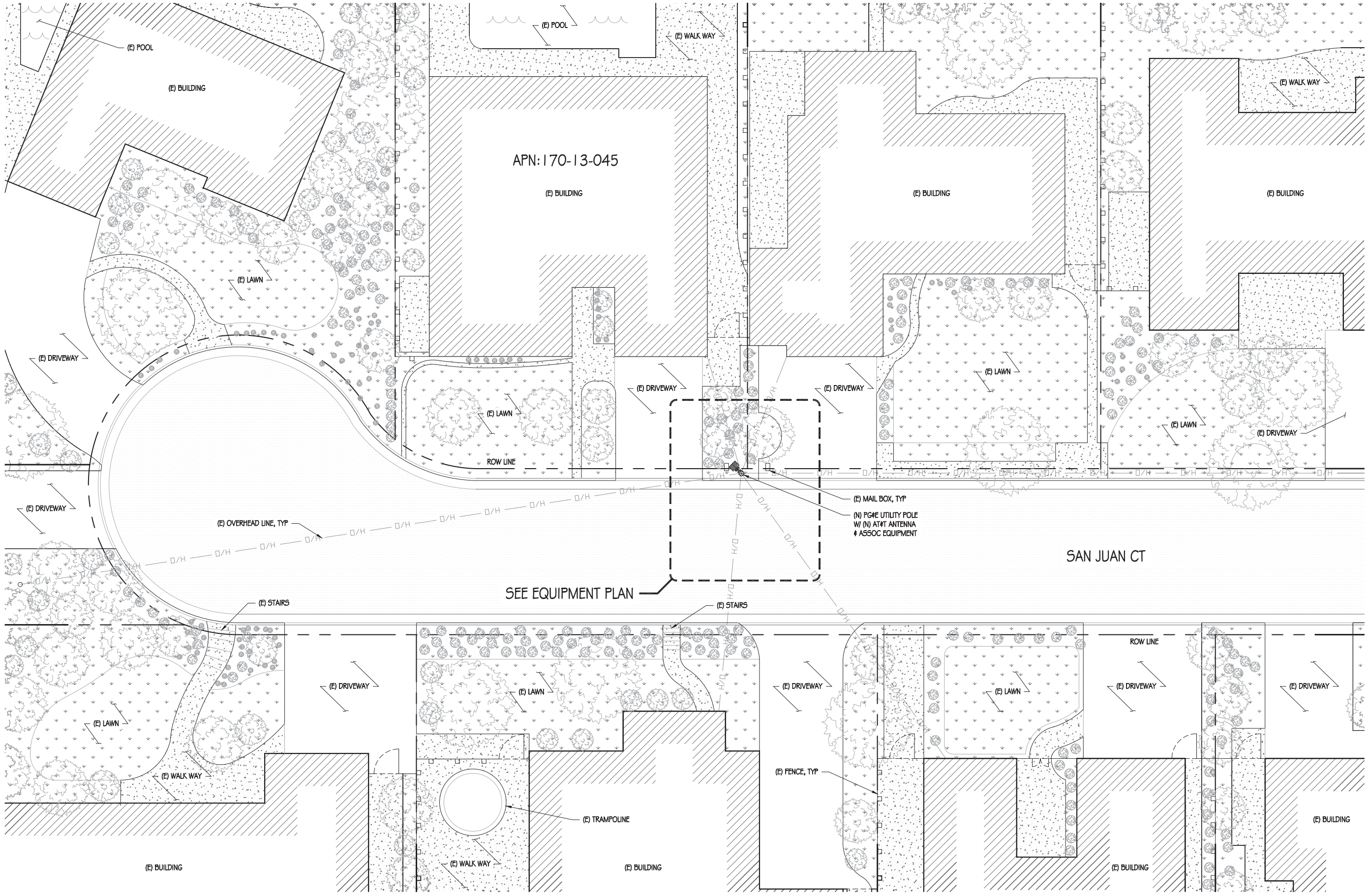
DRAWN BY:	T. JONES
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/30/18

SHEET TITLE:

GENERAL NOTES, LEGEND, & ABBREVIATIONS

SHEET NUMBER

T-2



TN

SITE PLAN

1"=10'

0 5' 10' 20' 30' 50'

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APPROVED BY:	B. McCOMB
DATE:	10/30/18

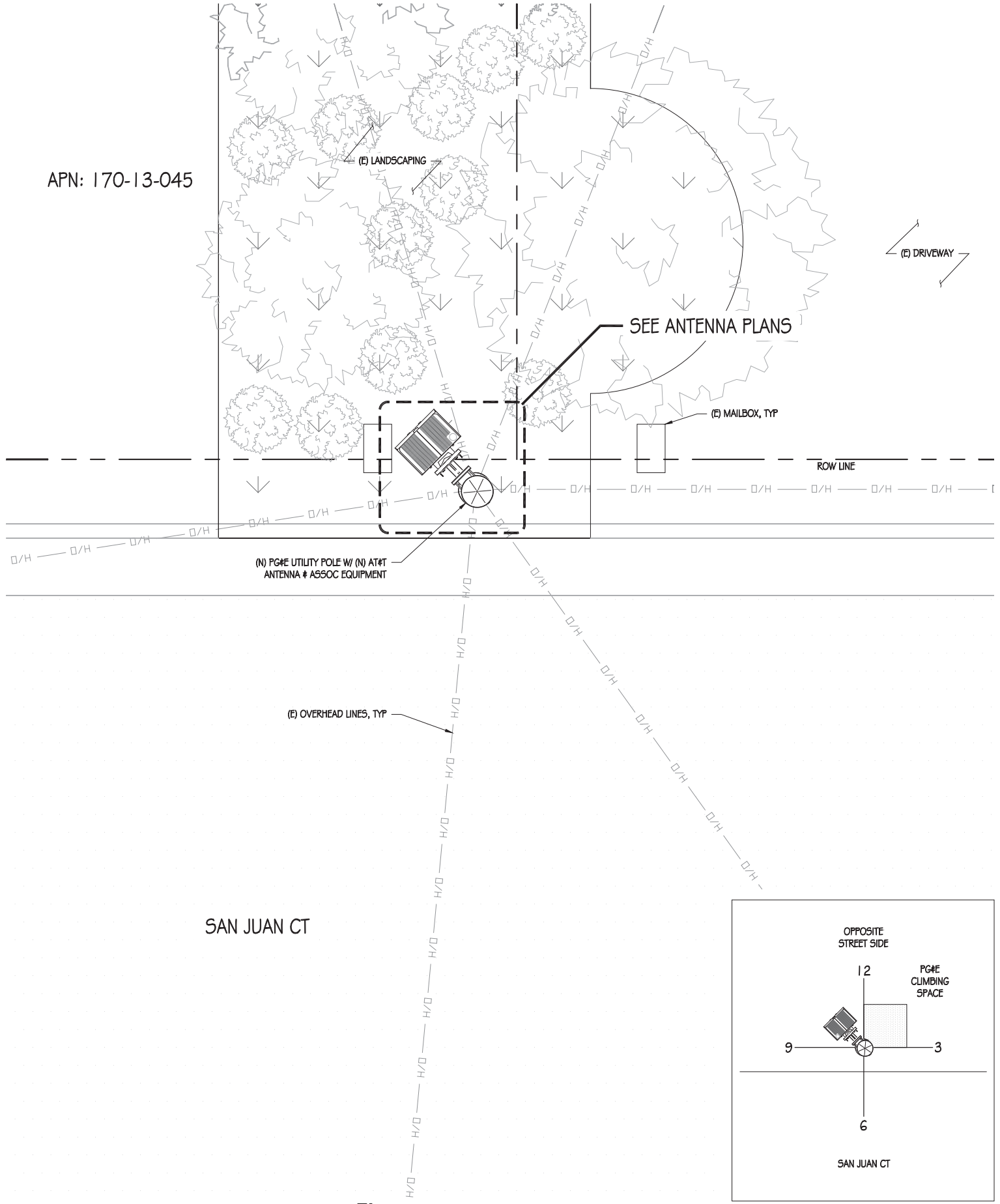
SHEET TITLE:

SITE PLAN

SHEET NUMBER

A-1

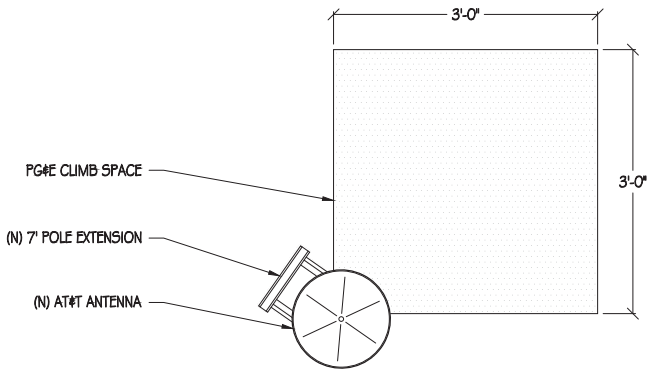
APN: 170-13-045



TN

EQUIPMENT PLAN

1/2"=1'



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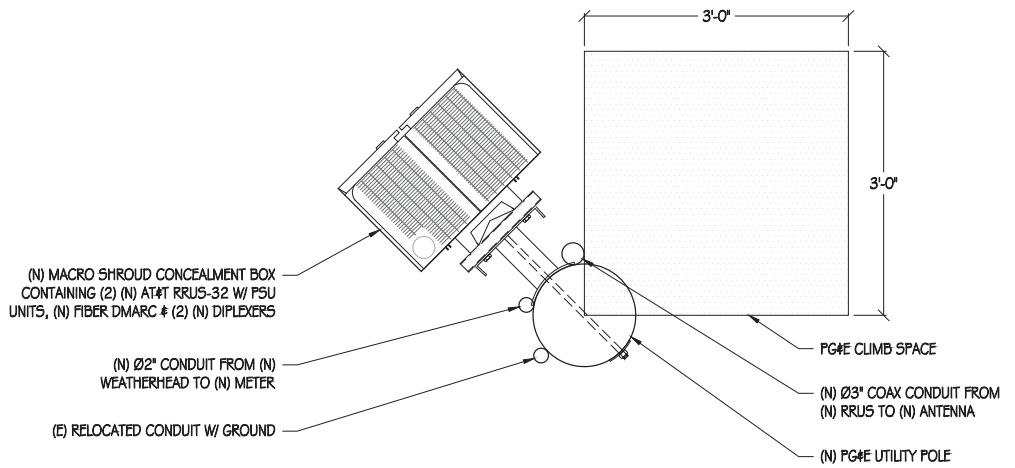
ANTENNA PLAN

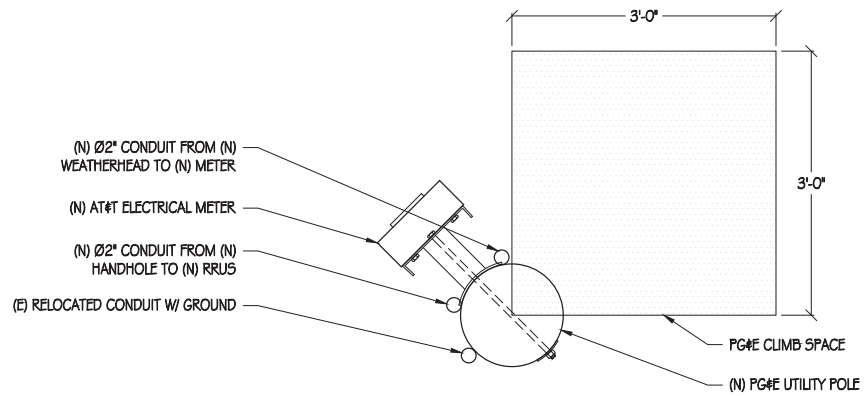
1"=1'



TN

RRU PLAN

1"=1'



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ELECTRICAL METER PLAN

1"=1'

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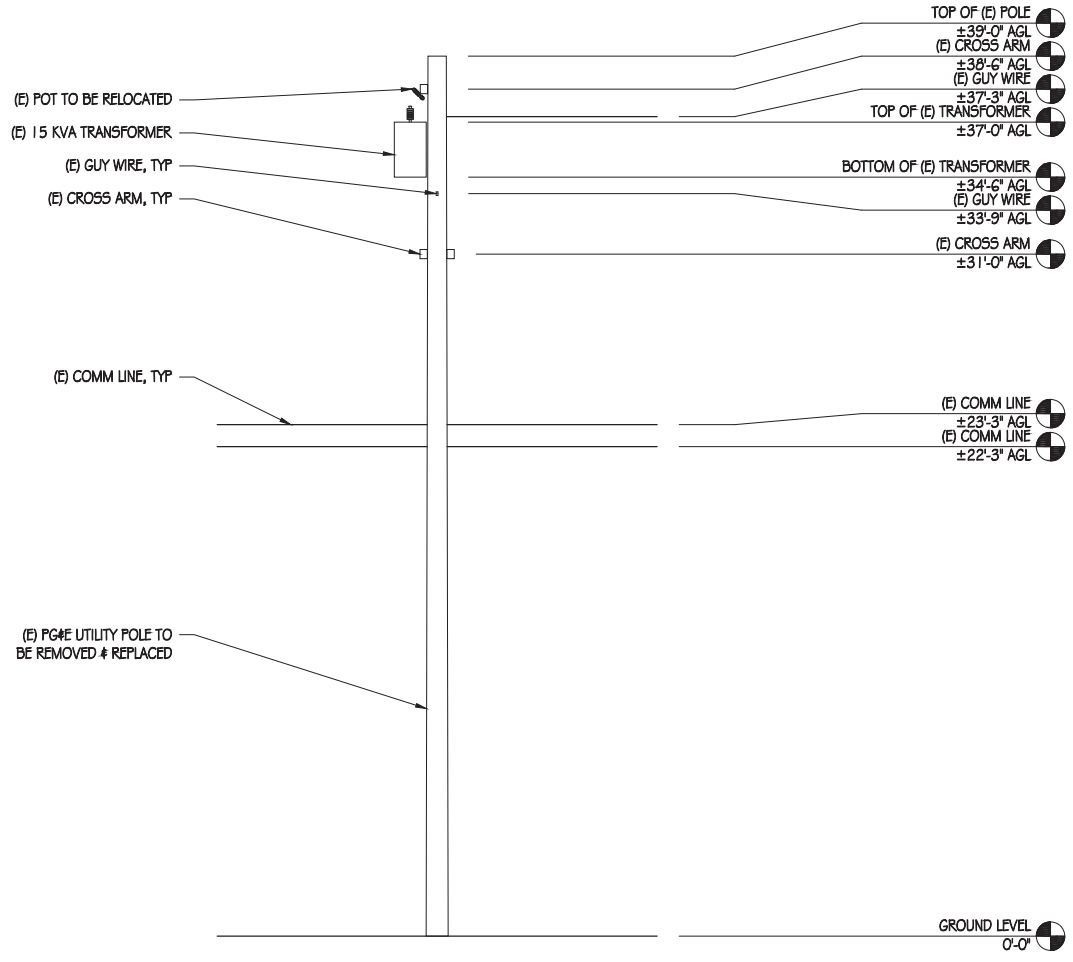
DATE:	10/30/18

SHEET TITLE:

EQUIPMENT PLAN & ANTENNA PLANS

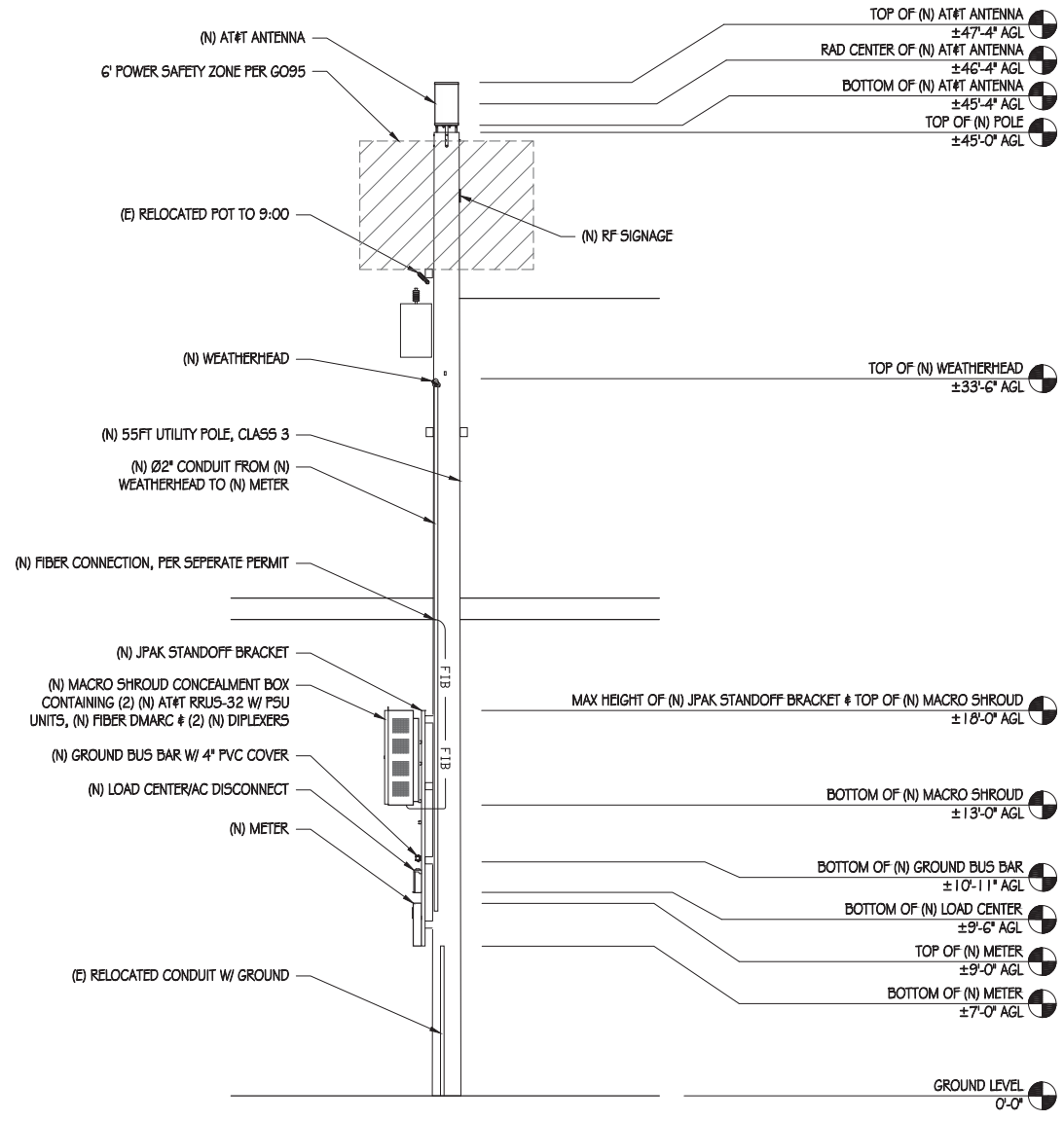
SHEET NUMBER

A-2



EXISTING NORTH ELEVATION

1/4"= 1'-0"



NEW NORTH ELEVATION

1/4"= 1'-0"

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

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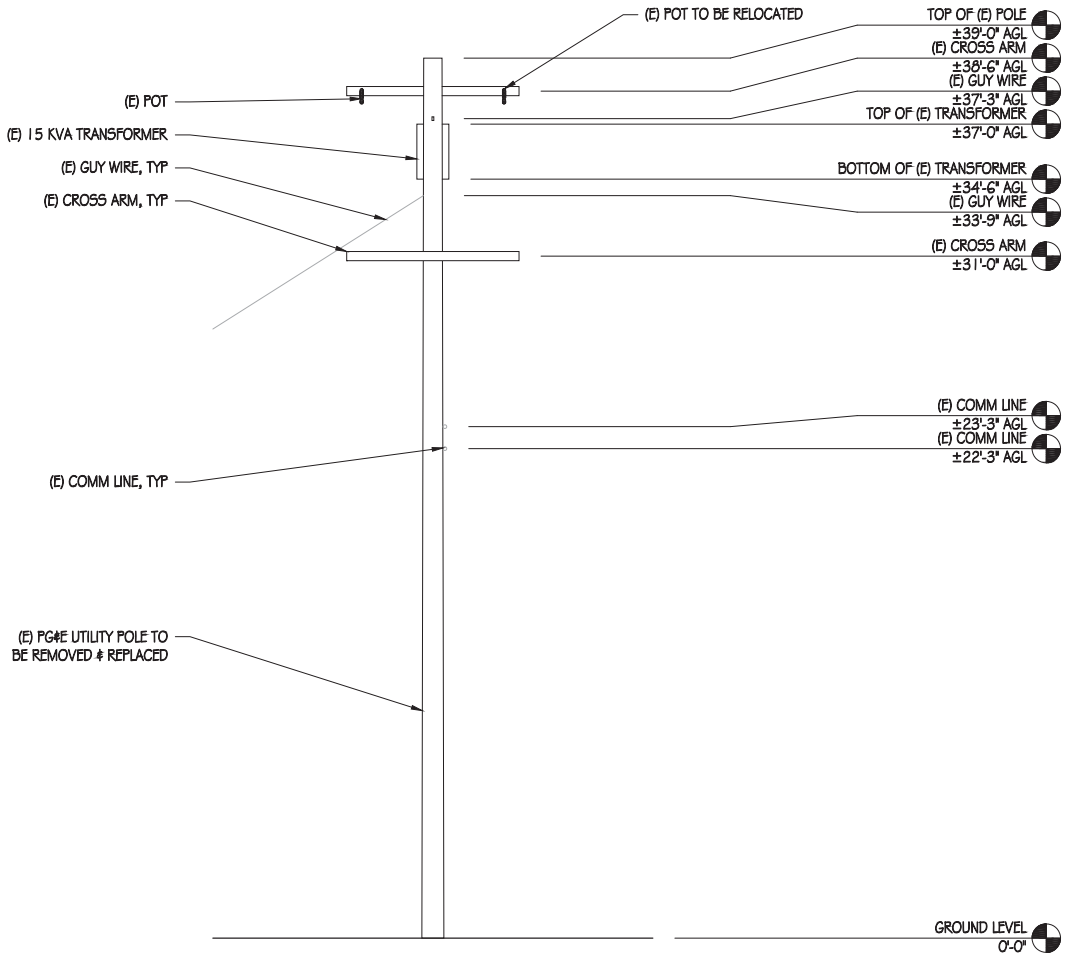
DATE:	10/30/18

SHEET TITLE:

ELEVATIONS

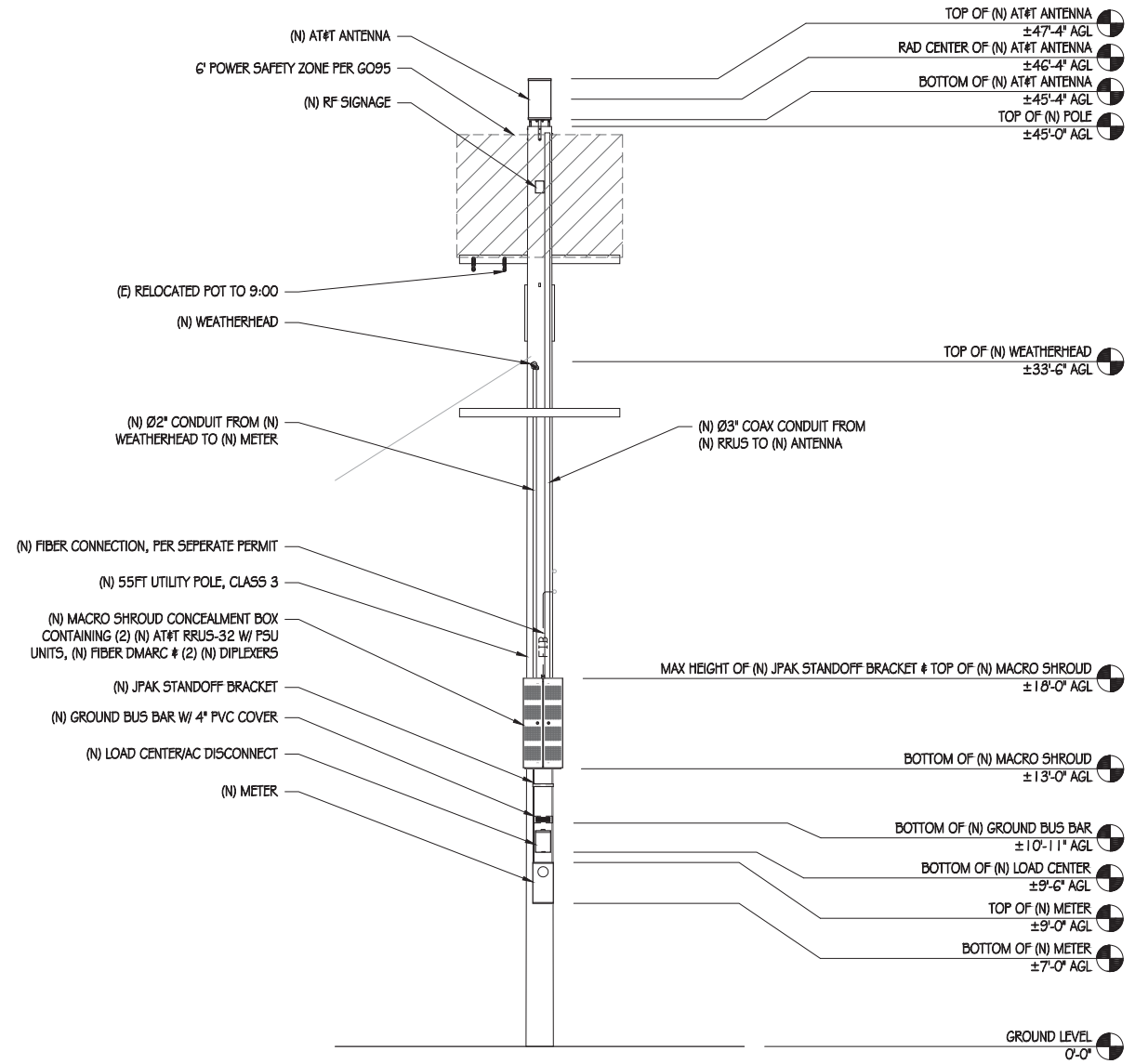
SHEET NUMBER

A-3



EXISTING EAST ELEVATION

1/4"=1'-0"



NEW EAST ELEVATION

1/4"=1'-0"

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

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DATE:	10/30/18

SHEET TITLE:

ELEVATIONS

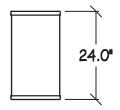
SHEET NUMBER

A-4

KMW FX-OM2L10H2-06T

WIND AREA:	2.67 SQ FT
WEIGHT:	34.2 LBS
DIMENSIONS:	Ø16.0" X 24.0" TALL
RF CONNECTORS:	(12) 4.3-10 FEMALE

TOP VIEW



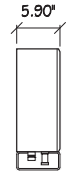
FRONT VIEW

1 ANTENNA
1/2"=1'

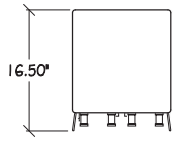
ERICSSON RRUS-4415

TOTAL WEIGHT:	UNDER 46 LBS
DIMENSIONS:	16.5" X 13.4" X 5.9"

TOP VIEW



SIDE VIEW

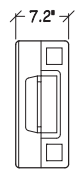


FRONT VIEW

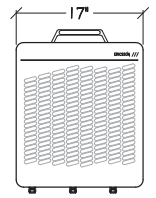
2 RRUS-4415 DETAIL
1"=1'

ERICSSON RRUS-11

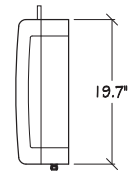
TOTAL WEIGHT:	55 LBS
DIMENSIONS:	19.7" TALL X 17" WIDE X 7.2" DEEP



TOP VIEW



FRONT VIEW

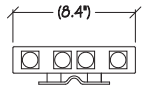


SIDE VIEW

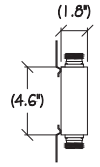
3 RRUS-11 DETAIL
1"=1'

COMMSCOPE CBC1923T-4310/ E11F13P06

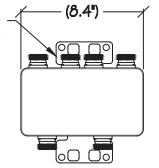
COLOR: GRAY
TOTAL WEIGHT: +/- 4.4 LB
DIMENSIONS: 8.3" TALL X 4.6" WIDE X 1.8" DEEP



TOP VIEW

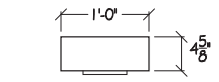


SIDE VIEW

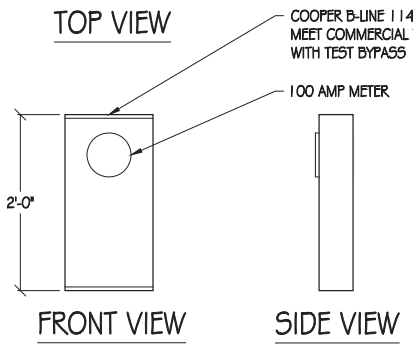


FRONT VIEW

4 DIPLEXER DETAIL
1"=6"

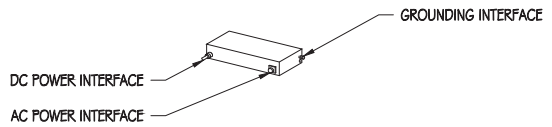


TOP VIEW

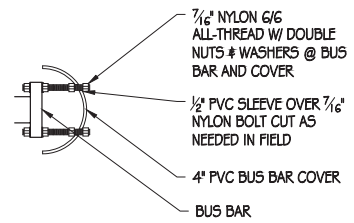


FRONT VIEW SIDE VIEW

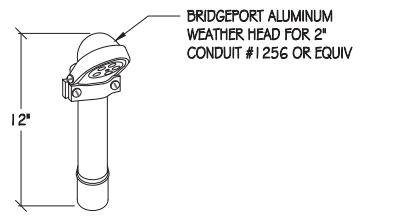
5 METER DETAIL
1"=1'



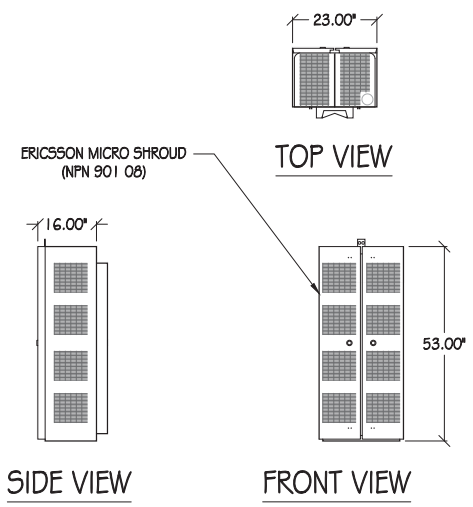
6 AC POWER MODULE
NTS



7 BUS BAR COVER
6"=1'

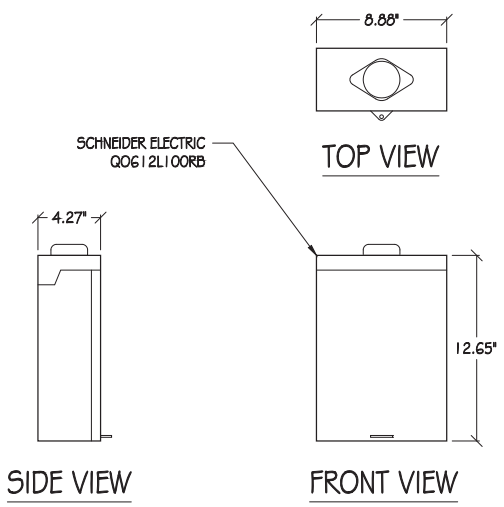


8 WEATHER HEAD
NTS



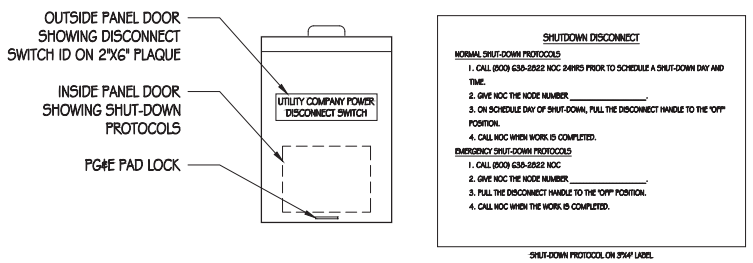
TOP VIEW SIDE VIEW FRONT VIEW

9 MICRO SHROUD CONCEALMENT
1/2"=1'



TOP VIEW SIDE VIEW FRONT VIEW

10 LOAD CENTER/AC DISCONNECT
1"=6"



11 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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SAN RAMON, CA 94583

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REGISTERED PROFESSIONAL ENGINEER
BRET A. McCOMB
C 69891
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_LOSA0_05

ROW ADJCT TO 49 SAN JUAN CT
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	10/30/18	CD 90%

DRAWN BY:	T. JONES
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/30/18

SHEET TITLE:

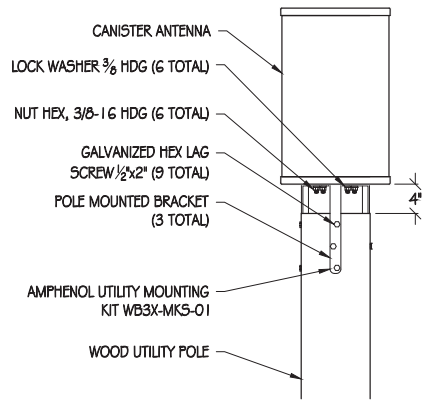
DETAILS

SHEET NUMBER

A-5

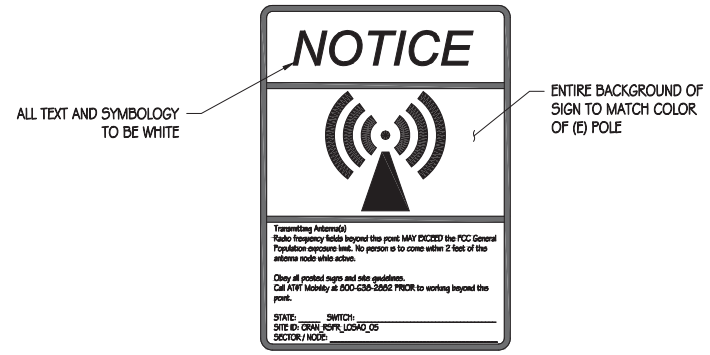
STRUCTURAL STEEL NOTES:

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 (T5 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 3/4Ø (OR K, WHICHEVER IS LARGER) HOLE @ WEB/FLANGE INTERSECTION UNLESS NOTED OTHERWISE.



1 POLE-TOP ANTENNA MOUNT DETAIL

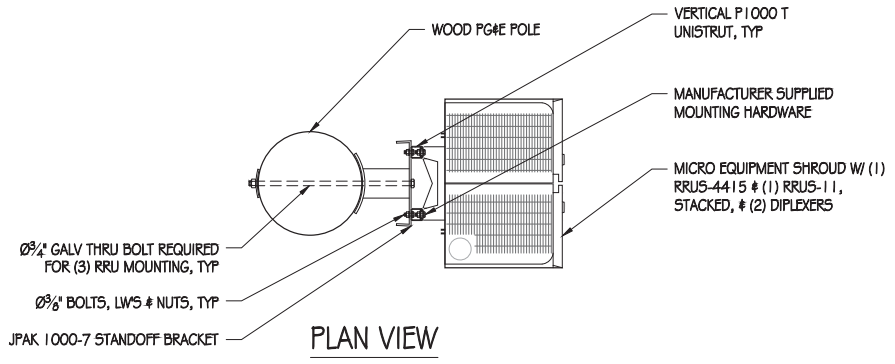
1"=1'



2 NOTICE SIGNAGE

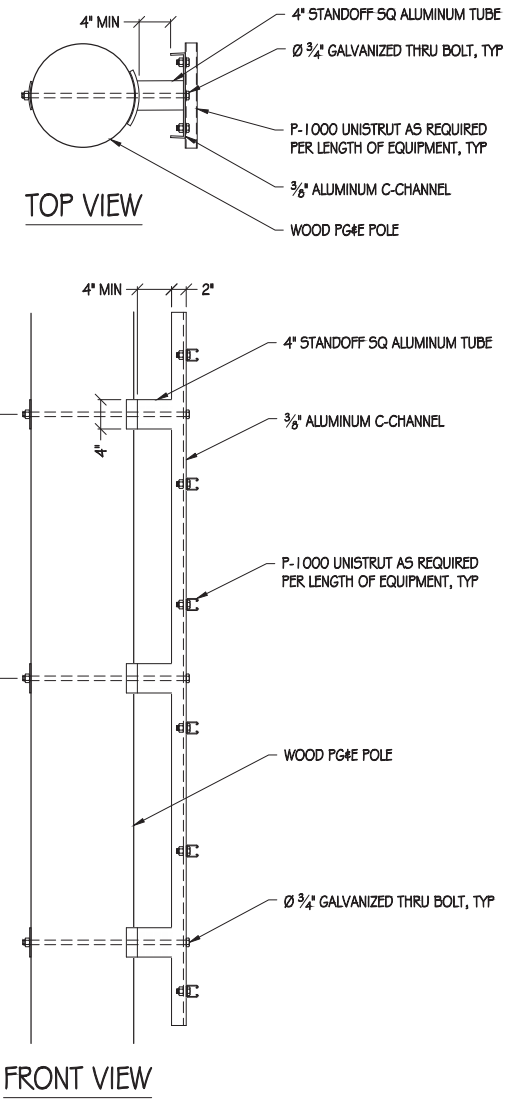
NTS

NOTES:
NOTICE IS A VINYL STICKER ADHERED TO POLE



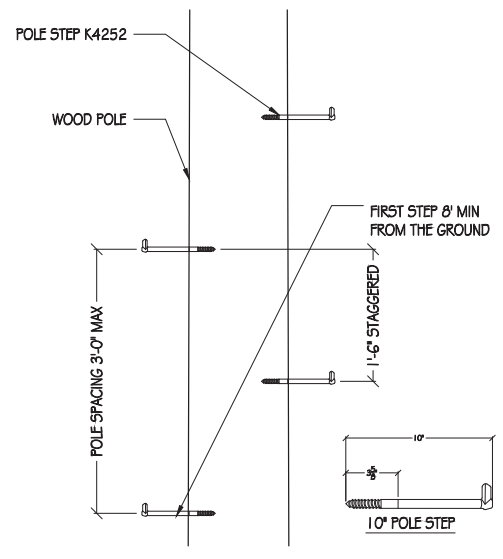
3 RRU MOUNTING DETAIL

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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APPROVED BY:	B. McCOMB
DATE:	10/30/18

SHEET TITLE:

DETAILS

SHEET NUMBER

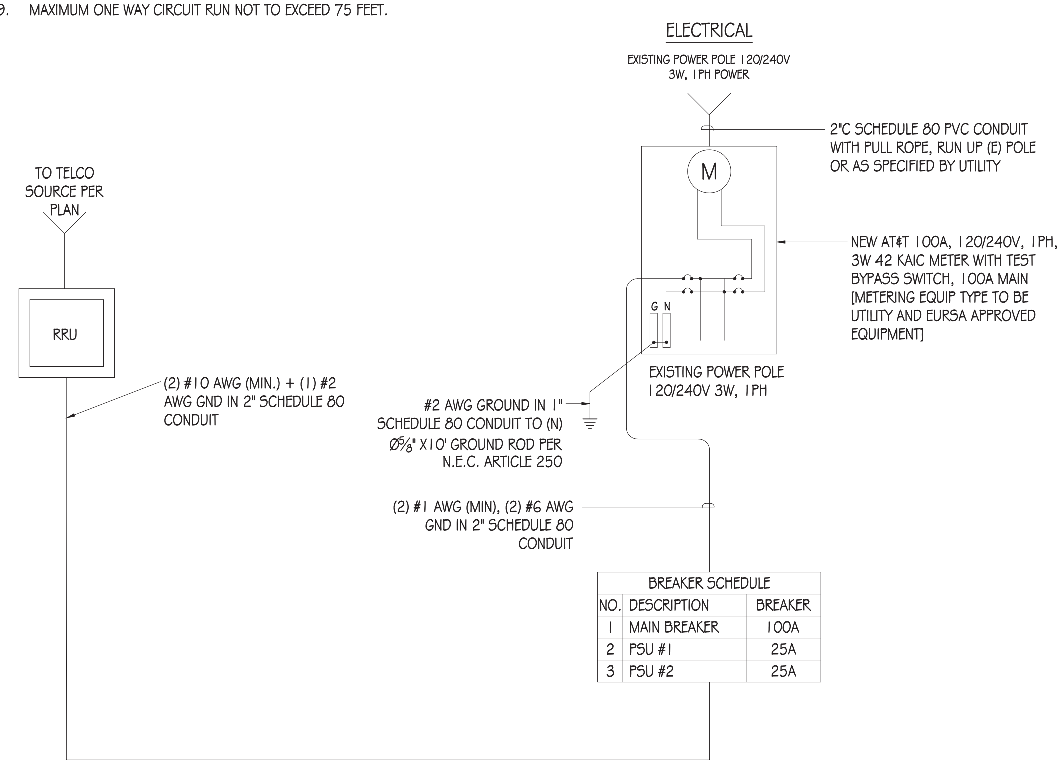
A-6

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, S\DUAL 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.



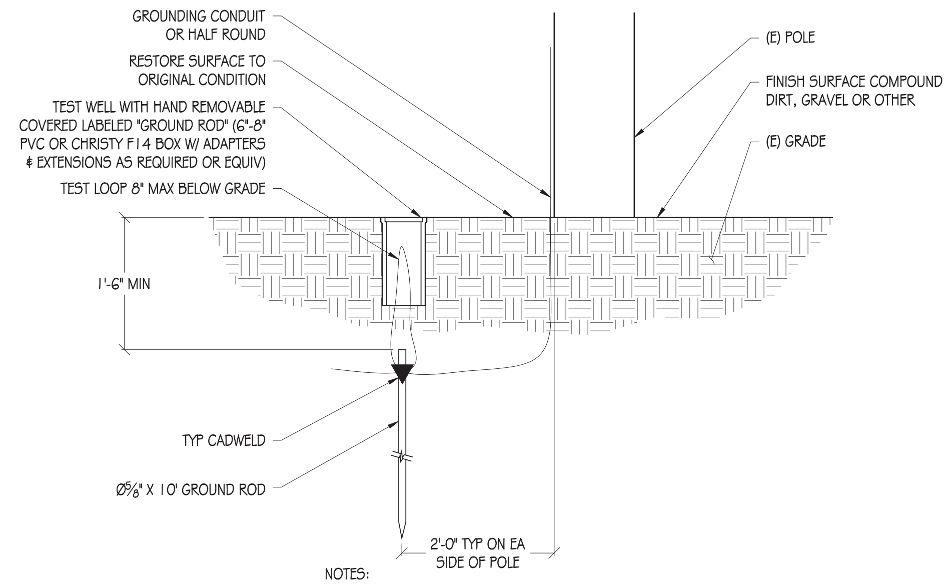
ELECTRICAL
EXISTING POWER POLE 120/240V 3W, 1PH POWER
2"C SCHEDULE 80 PVC CONDUIT WITH PULL ROPE, RUN UP (E) POLE OR AS SPECIFIED BY UTILITY
NEW AT&T 100A, 120/240V, 1PH, 3W 42 KAIC METER WITH TEST BYPASS SWITCH, 100A MAIN [METERING EQUIP TYPE TO BE UTILITY AND EURSA APPROVED EQUIPMENT]
M
G N
EXISTING POWER POLE 120/240V 3W, 1PH
TO TELCO SOURCE PER PLAN
RRU
(2) #10 AWG (MIN.) + (1) #2 AWG GND IN 2" SCHEDULE 80 CONDUIT
#2 AWG GROUND IN 1" SCHEDULE 80 CONDUIT TO (N) Ø5/8" X10' GROUND ROD PER N.E.C. ARTICLE 250
(2) #1 AWG (MIN), (2) #6 AWG GND IN 2" SCHEDULE 80 CONDUIT

BREAKER SCHEDULE		
NO.	DESCRIPTION	BREAKER
1	MAIN BREAKER	100A
2	PSU #1	25A
3	PSU #2	25A

SINGLE-LINE DIAGRAM

LOAD SCHEDULE

MAKE/MODEL	QUANTITY	DESCRIPTION	DIMENSIONS	WEIGHT	TX/RX	MAX TRANSMIT POWER	W	kW
ERICSSON RRUS-4415	1	RRUS	16.5" X 13.4" X 5.9"	46 LBS	2T/2R	4 X 40W	670	0.67
ERICSSON RRUS-11	1	RRUS	19.7" X 17.0" X 7.2"	55 LBS	2T/2R	2 X 40W	520	0.52
NEMA 3R ENCLOSURE	1	DISCONNECT	12.7" X 8.9" X 4.3"	40 LBS (MAX)	N/A	N/A	N/A	N/A

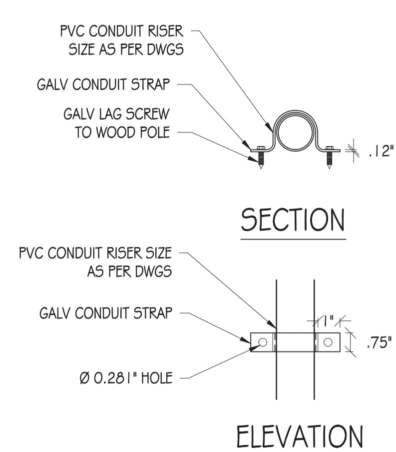


GROUNDING CONDUIT OR HALF ROUND
RESTORE SURFACE TO ORIGINAL CONDITION
TEST WELL WITH HAND REMOVABLE COVERED LABELED "GROUND ROD" (6"-8" PVC OR CHRISTY F14 BOX W/ ADAPTERS & EXTENSIONS AS REQUIRED OR EQUIV)
TEST LOOP 8" MAX BELOW GRADE
1'-6" MIN
TYP CADWELD
Ø5/8" X 10' GROUND ROD
(E) POLE
FINISH SURFACE COMPOUND DIRT, GRAVEL OR OTHER
(E) GRADE
2'-0" TYP ON EA SIDE OF POLE

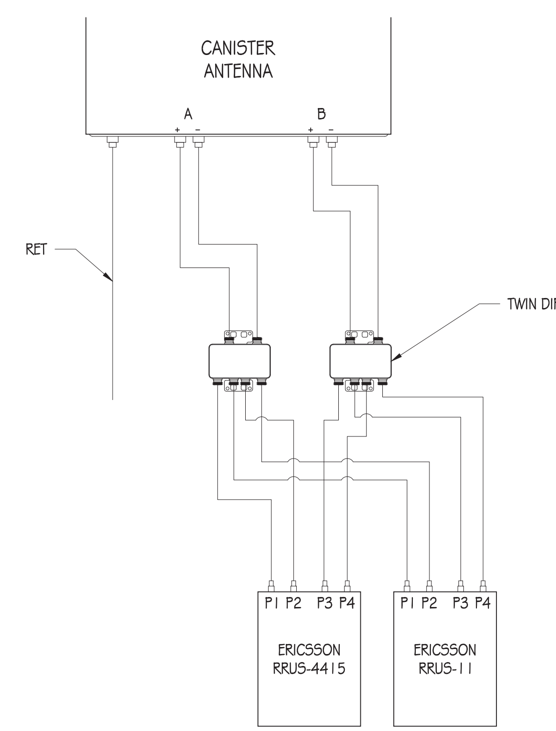
NOTES:

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

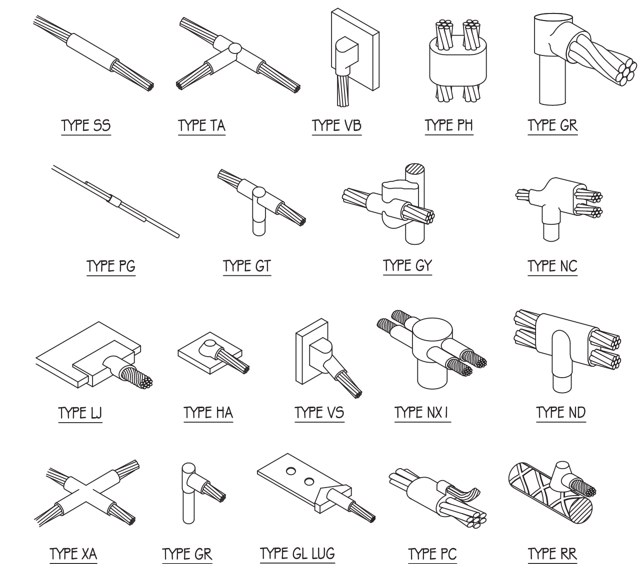
1 POLE GROUNDING DETAIL
NTS



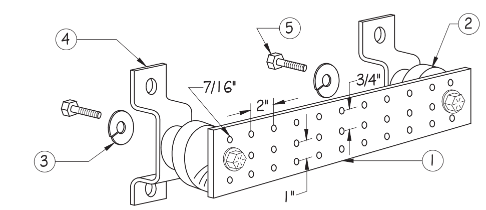
2 CONDUIT RISER DETAIL
NTS



3 WIRE DIAGRAM DETAIL
NTS



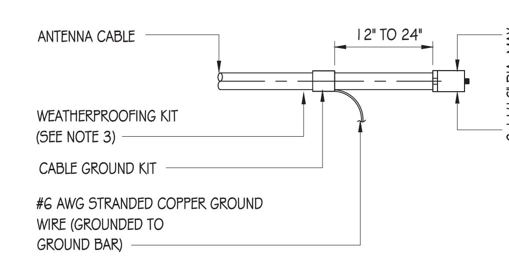
4 EXOTHERMIC WELD DETAILS
NTS



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.

5 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.)

6 GND KIT DETAIL
NTS

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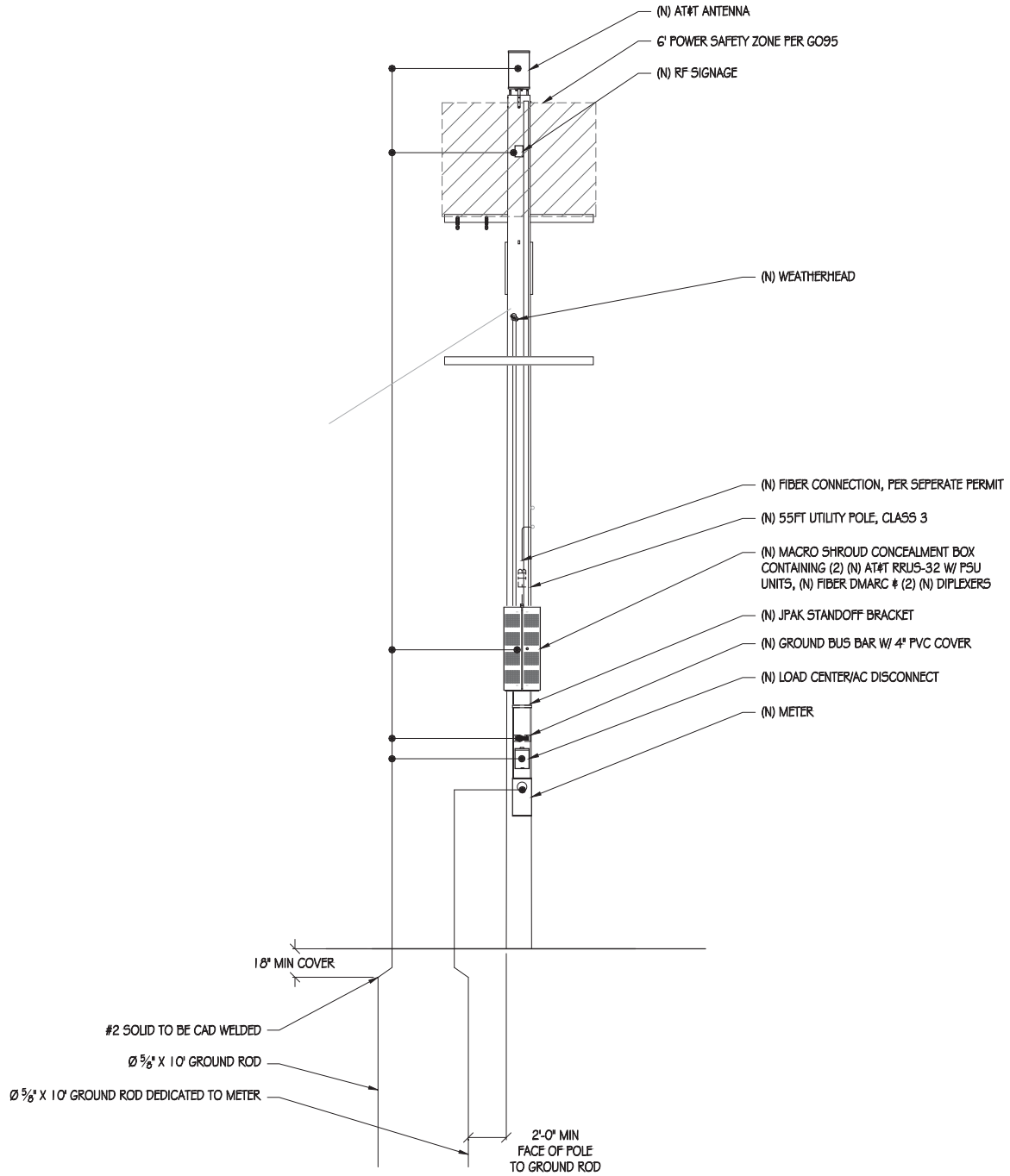
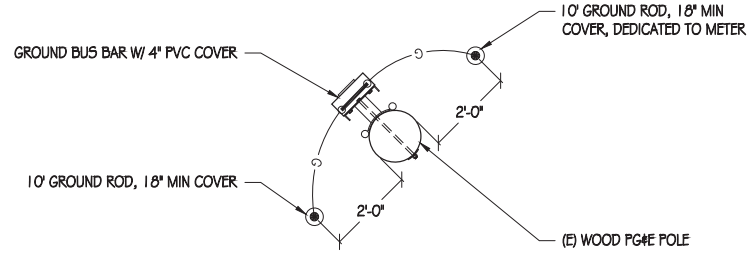
SHEET TITLE:
SINGLE-LINE DIAGRAM & DETAILS

SHEET NUMBER
E-1



POLE GROUNDING DIAGRAM

NTS



TN

GROUNDING PLAN

NTS

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

SUREsite connect
Infrastructure experts. Smart cell solutions.
36 EXECUTIVE PARK, SUITE 210
IRVINE, CA 92614

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
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_LOSA0_05

ROW ADJCT TO 49 SAN JUAN CT
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION	
	10/30/18	CD 90%	

DRAWN BY:	T. JONES
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/30/18

SHEET TITLE:

GROUNDING DIAGRAMS

SHEET NUMBER

E-2

TRAFFIC CONTROL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING WORK ON A PUBLIC STREET TO INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS SHOWN HEREIN, AS WELL AS ANY ADDITIONAL TRAFFIC CONTROL DEVICES THAT MAY BE REQUIRED TO INSURE THE SAFE MOVEMENT OF TRAFFIC AND PEDESTRIANS THROUGH OR AROUND THE WORK AREA AND PROVIDE MAXIMUM PROTECTION AND SAFETY TO CONSTRUCTION WORKERS.
2. ALL DELINEATORS SHALL BE EQUIPPED WITH REFLECTORS AT NIGHT TIME.
3. THE CONTRACTOR SHALL NOTIFY THE CITY/COUNTY OF RECORD AND CALTRANS PERMIT INSPECTOR AT LEAST FIVE WORKING DAYS IN ADVANCE OF IMPLEMENTING ANY CONSTRUCTION DETOUR
4. ALL SIGNS, DELINEATORS, BARRICADES, ETC. AND THEIR INSTALLATION SHALL CONFIRM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) AND THE MUTCD CALIFORNIA SUPPLEMENT, STATE OF CALIFORNIA STANDARD SPECIFICATION, SPECIAL PROVISIONS, AND STAMPED PLANS.
5. THE CITY/COUNTY OF RECORDS AND CALTRANS RESERVE THE RIGHT TO OBSERVE THESE TRAFFIC CONTROL PLANS IN USE AND TO MAKE ANY NECESSARY CHANGES AS FIELD CONDITIONS WARRANT. ANY CHANGES SHALL SUPERSEDE THESE PLANS. EXACT LOCATION OF ALL EQUIPMENT AND TRAFFIC CONTROL DEVICES SHALL BE DETERMINED BY THE ENGINEER.
6. ALL TRAFFIC CONTROL DEVICES, STRIPES, MARKINGS, LEGENDS AND RAISED PAVEMENT MARKERS SHALL CONFIRM TO THE MUTCD AND THE CALIFORNIA SUPPLEMENT (LATEST EDITION), THE STATE OF CALIFORNIA STANDARD SPECIFICATION (LATEST EDITION), SPECIAL PROVISIONS, AND STAMPED PLANS.
7. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN THEIR PROPER POSITION AT ALL TIMES AND SHALL BE REPAIRED, REPLACED OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY.
8. ALL TRAFFIC LANES SHALL HAVE A MINIMUM OF 5 FEET CLEARANCE FROM OPEN EXCAVATION AND A MINIMUM OF 2 FEET FROM VERTICAL OBSTRUCTIONS.
9. CONTRACTOR SHALL PROVIDE FLAGGERS AS DEEMED NECESSARY BY THE CITY/COUNTY INSPECTOR OR CALTRANS PERMIT INSPECTOR.
10. ALL ADVANCE WARNING SIGNS SHALL BE EQUIPPED WITH FLAGS.
11. TRAFFIC SIGNALS SHALL REMAIN IN OPERATION AT ALL TIMES. SIGNAL OPERATION DURING EACH CONSTRUCTION PHASE SHALL BE COORDINATED WITH AND APPROVED BY THE CITY/COUNTY OF RECORD AND/OR CALTRANS INSPECTOR.
12. PLACE ADDITIONAL "LANE CLOSED", (C30) SIGNS ON TYPE II BARRICADES AT 100 FOOT INTERVALS THROUGHOUT EXTENDED WORK AREAS IN EACH LANE THAT IS CLOSED. INSTALL "OPEN TRENCH" (C27) SIGNS WHENEVER AN OPEN EXCAVATION AREA EXISTS ADJACENT TO THE TRAVELED WAY.
13. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE REMOVED FOLLOWING COMPLETION OF EACH CONSTRUCTION STAGE AND THE PERMANENT TRAFFIC CONTROL DEVICES SHALL BE RESTORED BY THE CONTRACTOR UPON COMPLETION OF PROJECT.
14. CONTRACTOR SHALL REPLACE/REPAIR ALL DAMAGED STRIPING AT THE END OF EACH WORKING DAY.
15. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN DISABILITY ACT AS RELATED TO PEDESTRIAN ACCESS AND SHALL MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES PER ADA REQUIREMENTS. SIDEWALK CLOSURE/DETOUR SHALL COMPLY WITH THE WATCH STANDARDS AND MUST OBTAIN APPROVAL FROM THE CITY/COUNTY OF RECORD.
16. CONTRACTOR SHALL COVER OR REMOVE ALL CONFLICTING SIGNS.
17. CONTRACTOR SHALL POST "SYMBOL" UNEVEN LANES, "STEEL PLATES AHEAD" OR "BUMP" SIGNS FOR PAVEMENT SURFACE DISRUPTIONS OF ½" OR GREATER. PAVEMENT DISRUPTIONS FOR 1" OR GREATER SHALL HAVE A BEVELED EDGE OF FOUR (4) HORIZONTAL TO ONE (1) VERTICAL.
18. CONTRACTOR SHALL INSTALL "CAUTION STEEL PLATES AHEAD" AND/OR "ROUGH ROAD" SIGNS IN ADVANCE OF STEEL PLATE BRIDGING.
19. WORK HOURS SHALL COMPLY WITH SMC 16.08.030.
20. RESIDENTS TO BE NOTIFIED OF DATES & TIMES OF CONSTRUCTIONS (2) WEEKS PRIOR TO THE START OF WORK.
21. A 5'-0" MIN. PEDESTRIAN CLEARANCE TO BE MAINTAINED AT EXISTING SIDEWALKS.

PERMIT NOTES - PLEASE NOTE THE FOLLOWING:

1. ANY WORK AT OR WITHIN 150 FEET OF A SIGNALIZED INTERSECTION MAY REQUIRE TRAFFIC CONTROL, PURSUANT TO SAN JOSE MUNICIPAL CODE SECTION 11.12.050, BY FLAGGER(S) OR CITY OF SAN JOSE POLICE OFFICER(S). THE NEED FOR FLAGGER(S) OR RESERVE POLICE OFFICER(S) WILL BE DETERMINED BASED ON SITE CONDITIONS. FLAGGER(S) SHALL BE SUFFICIENTLY TRAINED AND EQUIPPED IN ACCORDANCE WITH CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTION 1599. IN ADDITION, FLAGGERS SHALL BE CERTIFIED BY THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) OR THE NATIONAL SAFETY COUNCIL (NSC). THE DIRECTOR OF PUBLIC WORKS RESERVES THE RIGHT TO REQUIRE THE USE OF POLICE OFFICERS WHEN CONDITIONS WARRANT.
2. ANY WORK IN THE DOWNTOWN CORE AREA REQUIRES A MINIMUM 10 DAY NOTICE TO CITY OF SAN JOSE DOWNTOWN TRAFFIC OPERATIONS ENGINEER AT (408) 975-3719, PRIOR TO THE START OF WORK. SEE THE APPLICATION FORM TITLED "DOWNTOWN LANE CLOSURE REQUEST FORM".
3. ANY WORK NEAR VTA LIGHTRAIL REQUIRES A MINIMUM OF 3 WEEKS ADVANCE NOTICE TO VTA LIGHTRAIL OPERATIONS AT (408) 546-7608.
4. ANY WORK PROPOSING TO CLOSE A PARKING LANE WILL REQUIRE THAT "NO PARKING – TOW AWAY" SIGNS BE OBTAINED FROM THE DEPARTMENT OF TRANSPORTATION (408) 535-3850. IF THE PARKING LANE HAS CITY PARKING METERS, THEN ADDITIONAL FEES WILL BE DUE TO COMPENSATE THE CITY FOR LOST REVENUE. SEE THE APPLICATION FORM TITLED "TOW AWAY PERMIT".
5. ANY WORK PROPOSED ON A STREET DESIGNATED AS A STATE HIGHWAY WILL REQUIRE A PERMIT FROM CALTRANS. CONTACT JIM WONG AT (408) 452-7131.

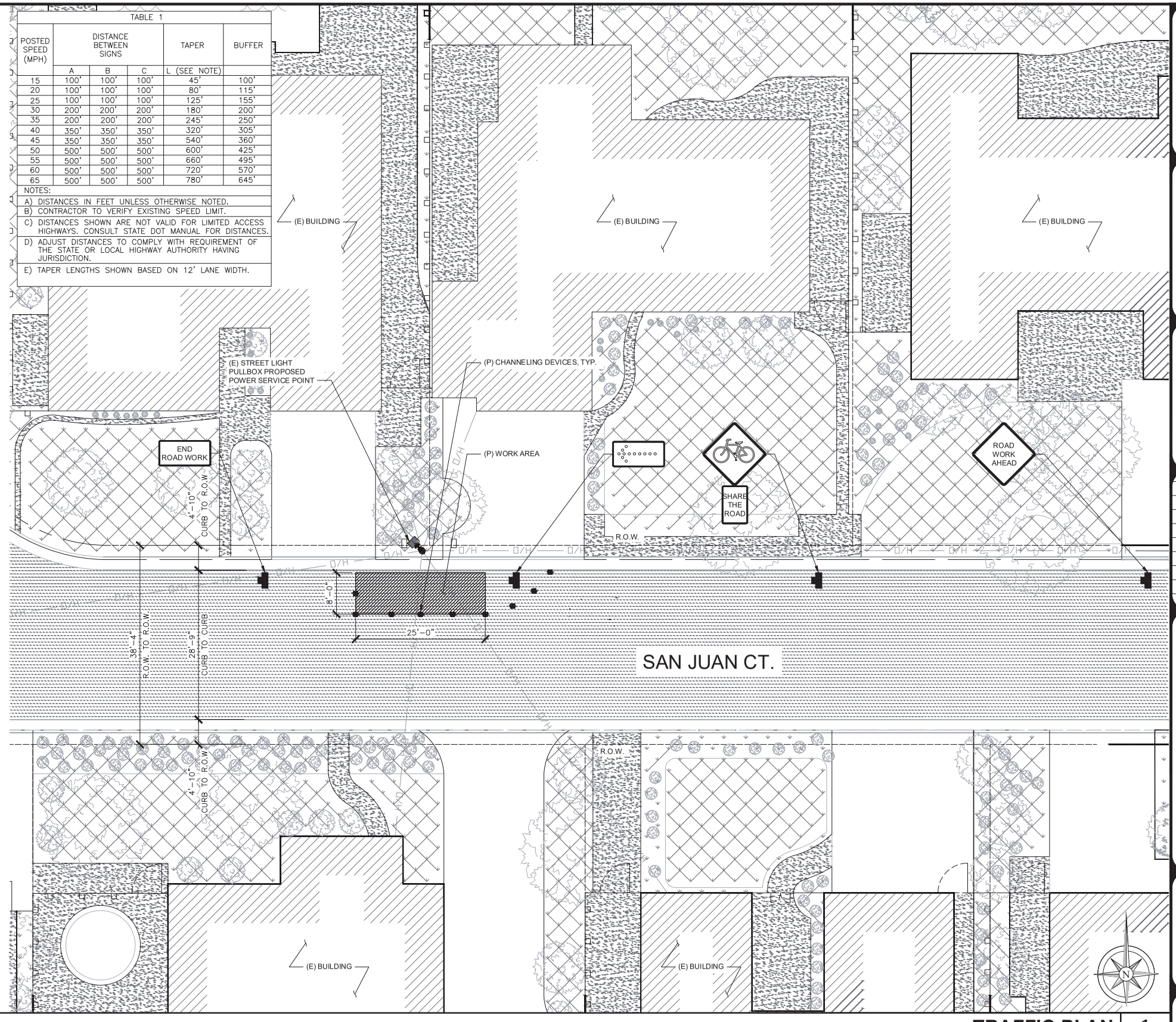
TRAFFIC SYMBOL LEGEND

- TRAFFIC CONE
- TRAFFIC SIGN
- LANE DIRECTION
- ROAD WORK AHEAD — "ROAD WORK AHEAD" SIGN
- "ARROW BOARD" SIGN
- SHARE THE ROAD — "SHARE THE ROAD" SIGN
- WORK AREA
- END ROAD WORK — "END ROAD WORK" SIGN

TABLE 1					
POSTED SPEED (MPH)	DISTANCE BETWEEN SIGNS			TAPER	BUFFER
	A	B	C	L (SEE NOTE)	
15	100'	100'	100'	45'	100'
20	100'	100'	100'	80'	115'
25	100'	100'	100'	125'	155'
30	200'	200'	200'	180'	200'
35	200'	200'	200'	245'	250'
40	350'	350'	350'	320'	305'
45	350'	350'	350'	540'	360'
50	500'	500'	500'	600'	425'
55	500'	500'	500'	660'	495'
60	500'	500'	500'	720'	570'
65	500'	500'	500'	780'	645'

NOTES:

A) DISTANCES IN FEET UNLESS OTHERWISE NOTED.
B) CONTRACTOR TO VERIFY EXISTING SPEED LIMIT.
C) DISTANCES SHOWN ARE NOT VALID FOR LIMITED ACCESS HIGHWAYS. CONSULT STATE DOT MANUAL FOR DISTANCES.
D) ADJUST DISTANCES TO COMPLY WITH REQUIREMENT OF THE STATE OR LOCAL HIGHWAY AUTHORITY HAVING JURISDICTION.
E) TAPER LENGTHS SHOWN BASED ON 12' LANE WIDTH.



24"x36" SCALE: 3/32" = 1'-0"
11"x17" SCALE: 3/64" = 1'-0"
8' 4' 0" 8'

TRAFFIC PLAN 1

at&t
5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

ERICSSON
6140 STONERIDGE MALL MD
THIRD FLOOR
PLEASANTON, CA 94588

SURESITE
36 EXECUTIVE PARK
SUITE 210
IRVINE, CA 92614

REV	DATE	DESCRIPTION	BY
A	1/31/19	90% CD	CSH

SURESITE
36 EXECUTIVE PARK
SUITE 210
IRVINE, CA 92614

Date:	February 15, 2018
Scale:	Per Plan
Designed:	RC
Drawn:	RC
Checked:	ZLN
Proj. Engr:	ZLN
File:	

	REVISIONS	DESIGN BY	DESIGN DATE	CITY APPR.	APPR. DATE

CRAN-RSFR LOSAO_05
FA TBD
ROW ADJCT TO
49 SAN JUAN CT.
LOS ALTOS, CA 94022

SHEET TITLE
TRAFFIC PLAN

SHEET NUMBER
TR-1

REV. DATE JANUARY 29, 2018

SITE ID: CRAN_RSFR_LOSAO_05

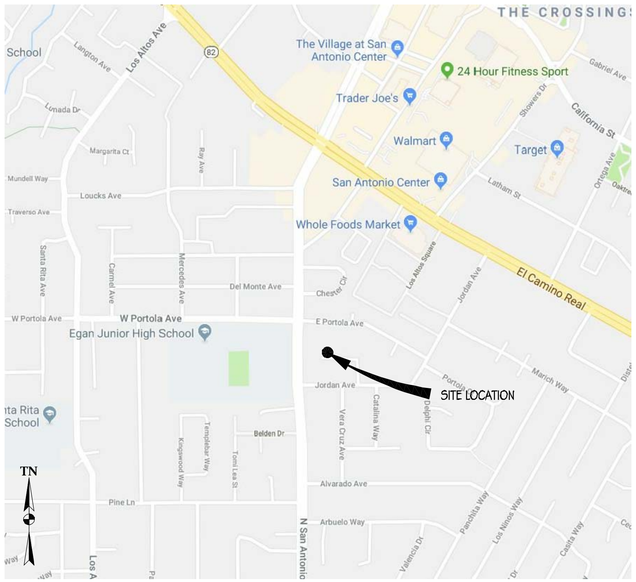
SITE ADDRESS: 49 SAN JUAN CT
LOS ALTOS, CA 94022

PM#: 114474352
SITE TYPE: BRAND NEW PG&E POLE #TBD
POLE OWNER: PG&E
FA LOCATION: 14816594
USID: 198295

SITE INFORMATION

APPLICANT:	AT&T MOBILITY 5001 EXECUTIVE PARKWAY SAN RAMON, CA 94583
AGENT:	SURESITE 36 EXECUTIVE PARK, SUITE 210 IRVINE, CA 92614
APN:	ADJCT TO 170-13-045
SITE ADDRESS:	49 SAN JUAN CT LOS ALTOS, CA 94022
COUNTY:	SANTA CLARA
LATITUDE:	37° 23' 45.20" N (37.3958889) NAD 83
LONGITUDE:	122° 06' 47.63" W (-122.113230 6) NAD 83
GROUND ELEVATION:	±94.9' AMSL
ZONING:	PUBLIC ROW
ZONING JURISDICTION:	CITY OF LOS ALTOS
PG&E SAP ID:	10050881 7
STREET CLASSIFICATION:	LOCAL

VICINITY MAP



PROJECT TEAM

AGENT:
SURESITE
2033 GATEWAY PLACE, 6TH FLOOR
SAN JOSE, CA 95110
(949) 278-2962
L.MEINERS@SURE-SITE.COM

PROJECT MANAGERS:
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ERICSSON
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PLEASANTON, CA 94588
(408) 796-8443
CHRISTOPHER.JOHNSON@ERICSSON.COM

ARCHITECT/ENGINEER OF RECORD:
BRET McCOMB
PRECISION DESIGN & DRAFTING, INC
11768 ATWOOD ROAD, SUITE #20
AUBURN, CA 95603
(530) 823-6546
BRET@PDND.COM

CONSTRUCTION MANAGER:
DELBERT BUTCHER
ERICSSON
6140 STONERIDGE MALL ROAD, SUITE 350
PLEASANTON, CA 94588
(720) 317-7282

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) LOAD CENTER/AC DISCONNECT, (1) CONCEALMENT BOX CONTAINING (1) RRUS-4415 & (1) RRUS-11 W/ P5U UNITS, (2) DIPLEXERS, & (1) KMW FX-OM2L10H2-06T CYLINDRICAL ANTENNA.
2. ALL EQUIPMENT, EQUIPMENT MOUNTING, CONDUITS, AND APPURTENANCES TO BE PAINTED TO MEET JURISDICTION APPROVAL.
3. UTILITY LINES BETWEEN (E) POINT OF CONNECTION & POLE TO BE UNDERGROUND AND/OR OVERHEAD.
4. FIBER CONNECTION TO BE SECURE UNDER SEPARATE ENCROACHMENT PERMIT.

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
T-2	GENERAL NOTES, LEGEND, & ABBREVIATIONS
A-1	SITE PLAN
A-2	EQUIPMENT PLAN & ANTENNA PLANS
A-3	ELEVATIONS
A-4	ELEVATIONS
A-5	DETAILS
A-6	DETAILS
E-1	SINGLE-LINE DIAGRAM & DETAILS
E-2	GROUNDING DIAGRAMS
TR-1	TRAFFIC CONTROL PLAN

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: 49 SAN JUAN CT, LOS ALTOS, CA 94022

1.	HEAD NORTHEAST ON BISHOP DR TOWARD SUNSET DR	256	FT
2.	TURN RIGHT ONTO SUNSET DR	0.1	MI
3.	USE THE MIDDLE LANE TO TURN RIGHT ONTO BOLLINGER CANYON RD	0.3	MI
4.	USE THE RIGHT LANE TO MERGE ONTO I-680 S VIA THE RAMP TO SAN JOSE	0.3	MI
5.	MERGE ONTO I-680 S	21.5	MI
6.	TAKE EXIT 12 FOR MISSION BLVD/STATE ROUTE 262 TOWARD I-880	0.2	MI
7.	KEEP RIGHT AT THE FORK, FOLLOW SIGNS FOR MISSION BLVD W AND MERGE ONTO CA-262 S/MISSION BLVD	0.3	MI
8.	MERGE ONTO CA-262 S/MISSION BLVD	0.6	MI
9.	USE THE LEFT 2 LANES TO TAKE THE EXIT TOWARD INTERSTATE 880 S/SAN JOSE	0.9	MI
10.	MERGE ONTO I-880 S	3.1	MI
11.	USE THE RIGHT 2 LANES TO TAKE THE CA-237 W EXIT TOWARD MTN VIEW	0.9	MI
12.	CONTINUE ONTO CA-237 W	8.4	MI
13.	KEEP LEFT TO CONTINUE ON CA-237 W/SOUTHBAY FWY	0.5	MI
14.	TURN RIGHT ONTO EL CAMINO REAL	2.3	MI
15.	TURN LEFT ONTO JORDAN AVE	0.4	MI
16.	TURN RIGHT ONTO SAN JUAN CT	469	FT

END AT: 49 SAN JUAN CT, LOS ALTOS, CA 94022

ESTIMATED TIME: 50 MINS ESTIMATED DISTANCE: 39.9 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
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SAN RAMON, CA 94583

SURESITE
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CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_LOSAO_05

49 SAN JUAN CT
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	10/30/18	CD 90%
	07/25/19	CD 100%

DRAWN BY:	T. JONES
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	07/25/19

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 SURVEYORS 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 HIGHER 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 ENCOUNTEREDY 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.

15. ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION OR SHTUDOWN SIGNAGE) OR FCAE REGULATIONS SHALL BE PAINTED OVER OR REMOVED. RAISED/DEPRESSED LOGOS OR TEXT ON EQUIPMENT (E.G. RRUS), IF PRESENT, TO BE SANDED OFF OR COVERED WITH STICKER, & THEN PAINTED OVER.

16. FONDATED RF WAC MARNING SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD THE BUILDING IF THERE IS NO WINDOW.

17. ALL EQUIPMENT, INCLUDING ANTENNAS, MOUNTING/STANDOFF BRACKETS, POLE EXTENSIONS, CONDUIT, METER, AND RADIOS SHALL BE PAINTED "MESA BROWN" USING A DURABLE OUTDOOR PAINT.

18. CABLING SHALL BE MESA BROWN IN COLOR AND SHALL BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS, & SHALL BE HIDDEN FROM VIEW TO THE MAXIMUM EXTENT POSSIBLE.

19. SUPPORT EQUIPMENT (E.G. METERS, DISCONNECT SWITCH, ETC) TO BE CLUSTERED VERTICALLY AS CLOSE AS TECHNICALLY FEASIBLE ON POLE.

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 AND GROUNDING 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. #2 GROUND AND BOND WIRE.
4. GROUND 2' MIN 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, UNLESS OTHERWISE NOTED.

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. FILL VOID AROUND CABLES AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION.

ABBREVIATIONS

A	AMPERE
AB	ANCHOR BOLT
ABV	ABOVE
ACCA	ANTENNA CABLE COVER ASSEMBLY
ADDL	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
BTCW	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
HDG	HOT-DIP GALVANIZE(D)
HDR	HEADER
HGR	HANGER
HPS	HIGH PRESSURE SODIUM
HT	HEIGHT
ICGB	ISOLATED COPPER GROUND BUS5
IN, (")	INCH(ES)
INT	INTERIOR
LB, (#)	POUND(S)
LAG	LAG BOLTS
LF	LINEAR FEET (FOOT)
LTH	LENGTH
L	LONGITUDINAL)
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
P/C	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	SAFE
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

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", 240W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #WSW232T
- LIGHTING FIXTURE, FLUORESCENT, 10.94" x 8'-0", 295W, 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 HALIDE, 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 XFMR
- (E) POLE MOUNTED XFMR
- (N) PAD MOUNTED XFMER
- (E) PAD MOUNTED XFMER

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49 SAN JUAN CT
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	10/30/18	CD 90%
	07/25/19	CD 100%

DRAWN BY:	T. JONES
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	07/25/19

SHEET TITLE:

GENERAL NOTES, LEGEND, & ABBREVIATIONS

SHEET NUMBER

T-2

NOTE: FIBER CONNECTION TO BE INSTALLED UNDER SEPARATE PERMIT

(E) POOL

(E) BUILDING

(E) POOL

(E) WALK WAY

APN:170-13-045

(E) BUILDING

(E) BUILDING

(E) WALK WAY

(E) BUILDING

(E) LAWN

(E) DRIVEWAY

(E) LAWN

(E) DRIVEWAY

(E) DRIVEWAY

(E) LAWN

(E) LAWN

(E) DRIVEWAY

ROW LINE

(E) DRIVEWAY

(E) MAIL BOX, TYP

(N) PG&E UTILITY POLE W/ (N) AT&T ANTENNA & ASSOC EQUIPMENT

(E) OVERHEAD LINE, TYP

SAN JUAN CT

SEE EQUIPMENT PLAN

(E) STAIRS

(E) STAIRS

ROW LINE

(E) DRIVEWAY

(E) LAWN

(E) DRIVEWAY

(E) LAWN

(E) DRIVEWAY

(E) LAWN

(E) FENCE, TYP

(E) WALK WAY

(E) TRAMPOLINE

(E) BUILDING

(E) WALK WAY

(E) BUILDING

(E) BUILDING

(E) BUILDING

TN

SITE PLAN

1"=10'

0 5' 10' 20' 30' 50'

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SHEET TITLE:

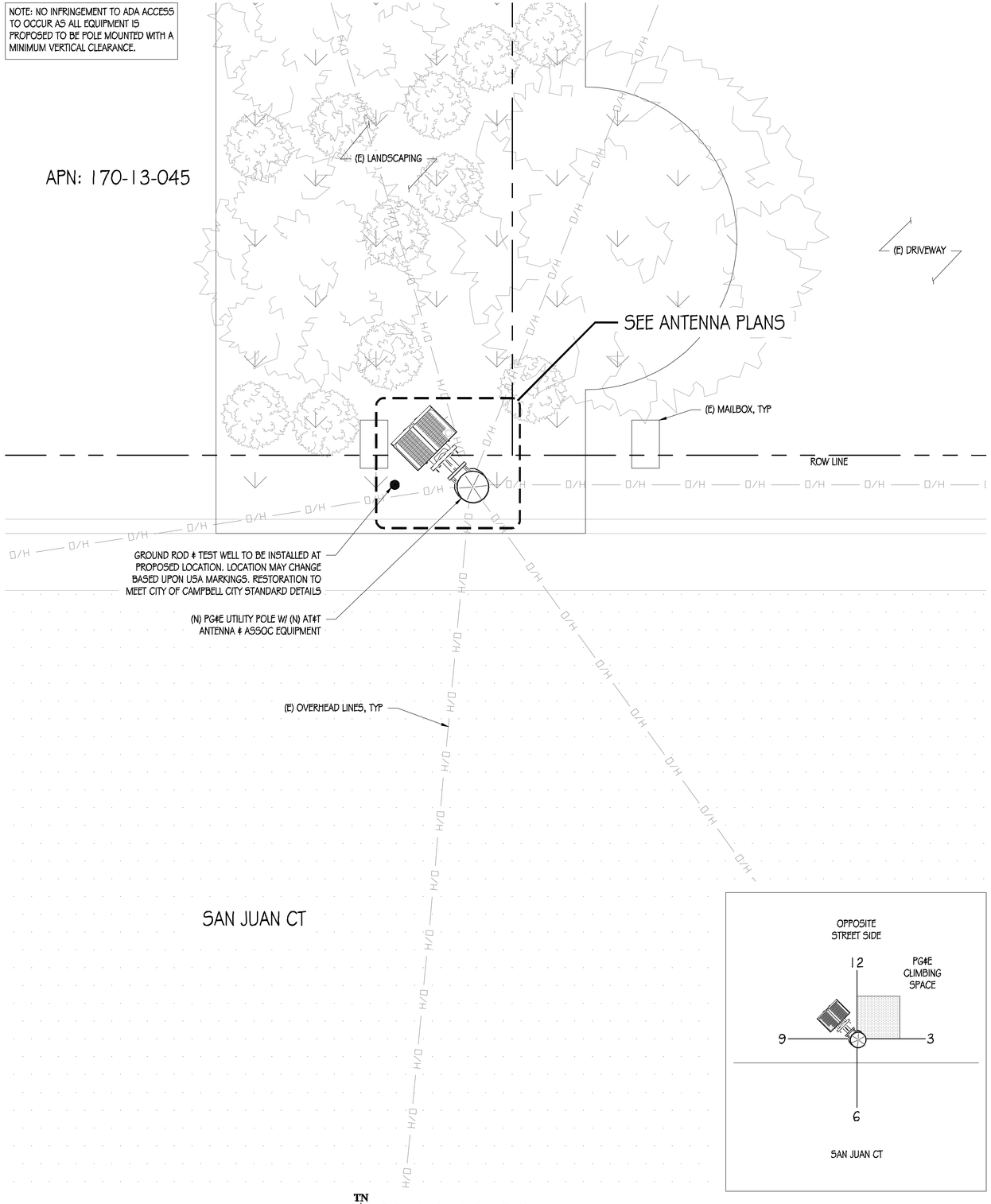
SITE PLAN

SHEET NUMBER

A-1

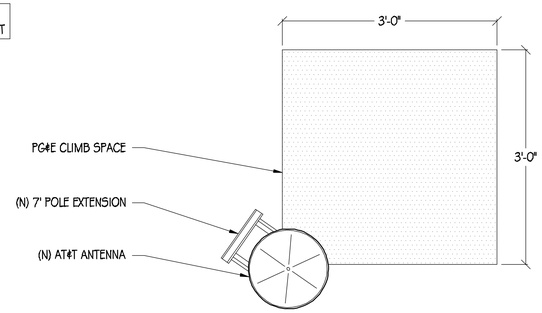
NOTE: NO INFRINGEMENT TO ADA ACCESS TO OCCUR AS ALL EQUIPMENT IS PROPOSED TO BE POLE MOUNTED WITH A MINIMUM VERTICAL CLEARANCE.

APN: 170-13-045

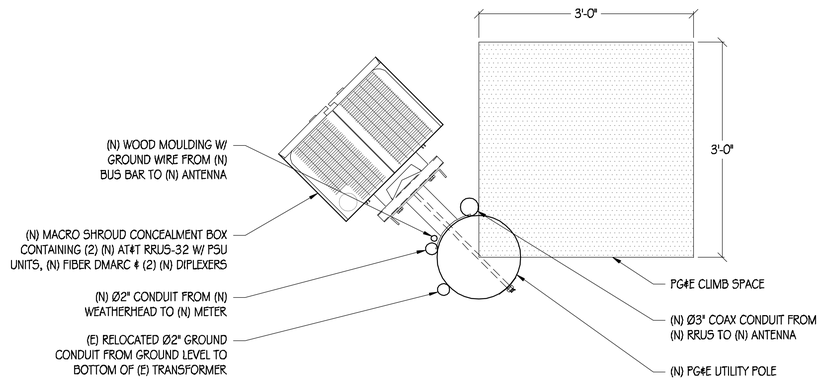


EQUIPMENT PLAN
1/2"=1'

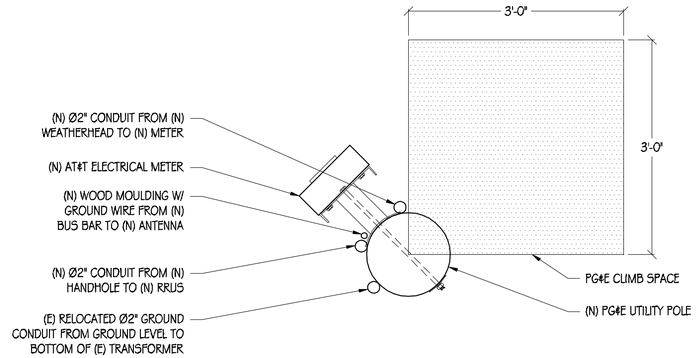
NOTE: FIBER CONNECTION TO BE INSTALLED UNDER SEPARATE PERMIT



ANTENNA PLAN
1"=1'



RRU PLAN
1"=1'



ELECTRICAL METER PLAN
1"=1'

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DATE:	07/25/19

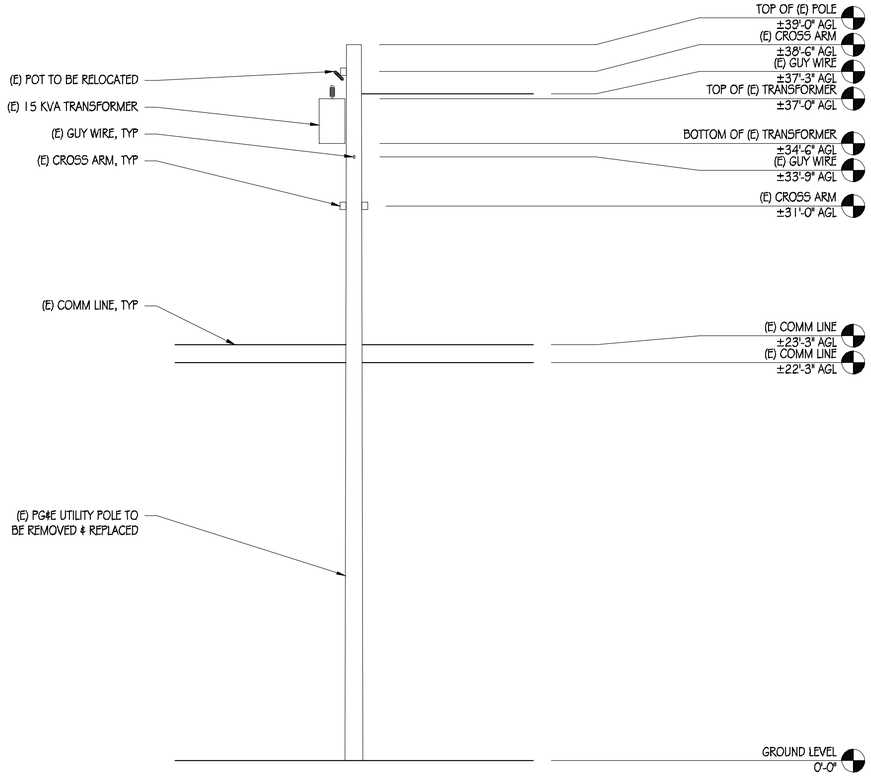
SHEET TITLE:

EQUIPMENT PLAN & ANTENNA PLANS

SHEET NUMBER

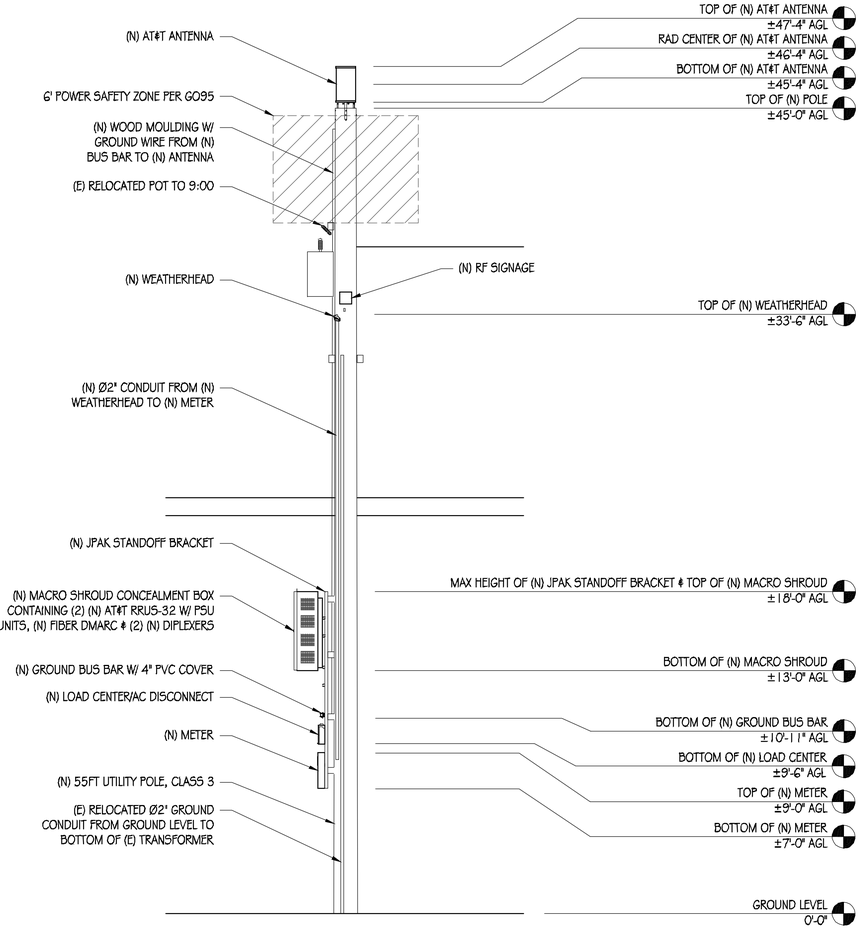
A-2

NOTE: FIBER CONNECTION TO BE INSTALLED UNDER SEPARATE PERMIT



EXISTING NORTH ELEVATION

1/4"= 1'-0"



NEW NORTH ELEVATION

1/4"= 1'-0"

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APPROVED BY:	B. McCOMB
DATE:	07/25/19

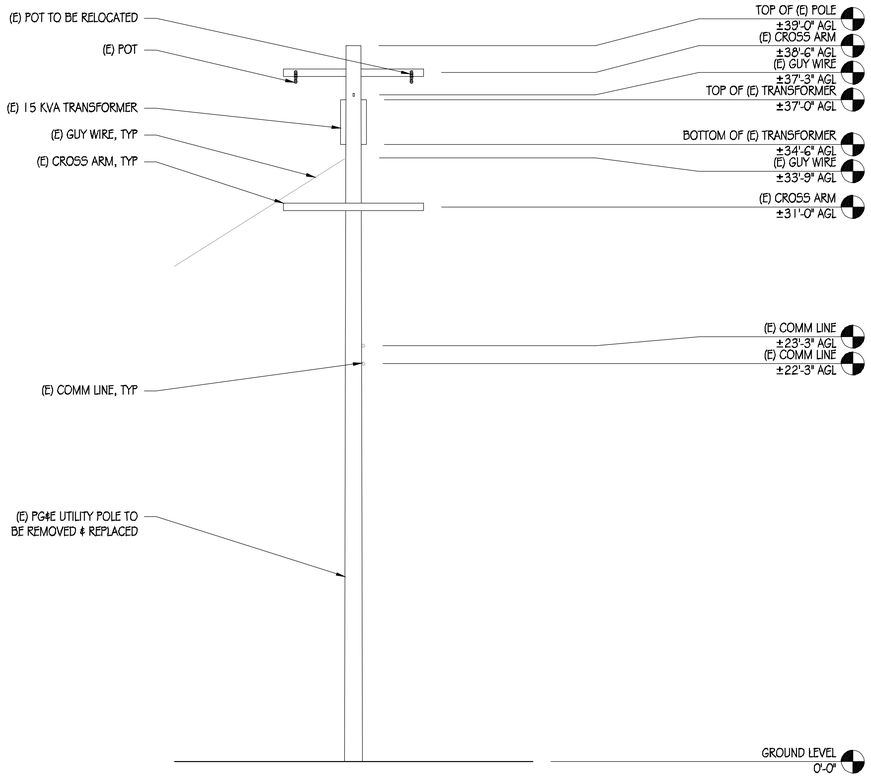
SHEET TITLE:

ELEVATIONS

SHEET NUMBER

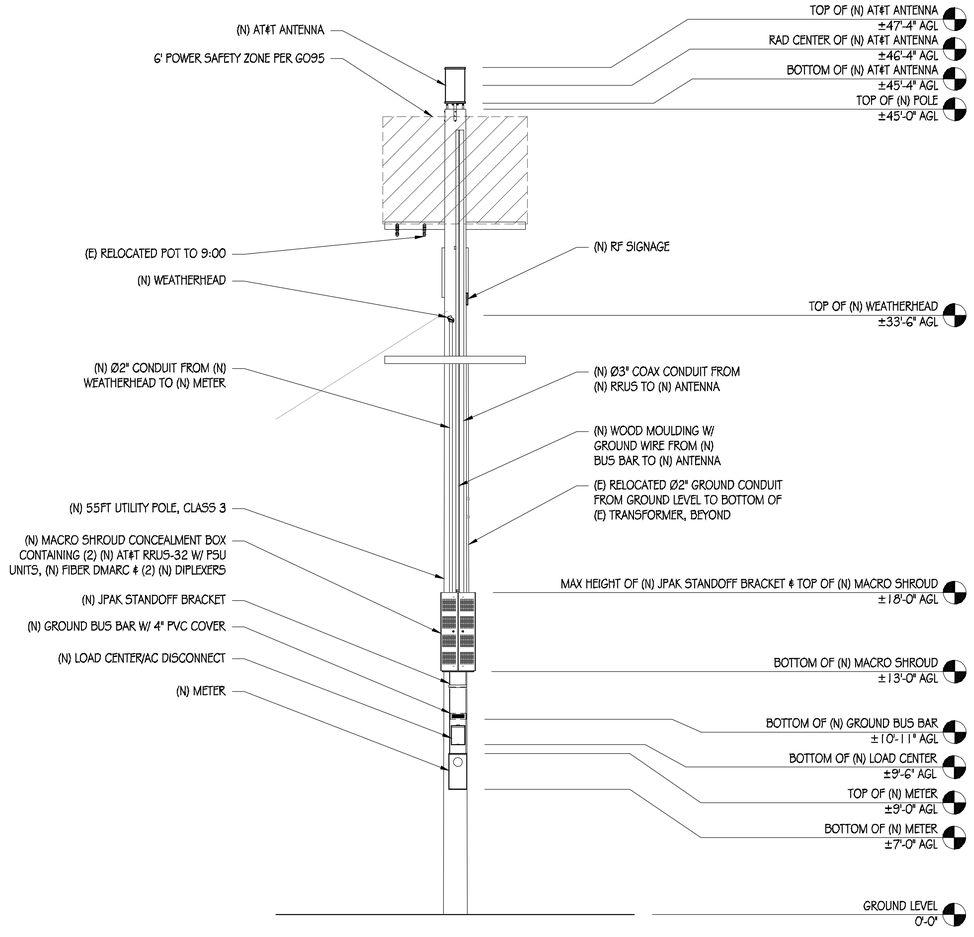
A-3

NOTE: FIBER CONNECTION TO BE INSTALLED UNDER SEPARATE PERMIT



EXISTING EAST ELEVATION

1/4"=1'-0"



NEW EAST ELEVATION

1/4"=1'-0"

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APPROVED BY:	B. McCOMB
DATE:	07/25/19

SHEET TITLE:

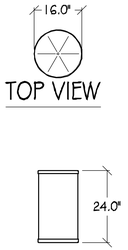
ELEVATIONS

SHEET NUMBER

A-4

KMW FX-OM2L10H2-06T

WIND AREA: 2.67 SQ FT
WEIGHT: 34.2 LBS
DIMENSIONS: Ø16.0" X 24.0" TALL
RF CONNECTORS: (12) 4.3-10 FEMALE



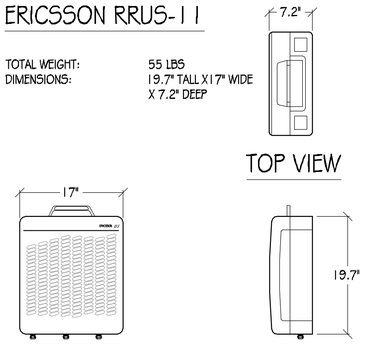
TOP VIEW

FRONT VIEW

1 ANTENNA
1/2"=1'

ERICSSON RRUS-11

TOTAL WEIGHT: 55 LBS
DIMENSIONS: 19.7" TALL X 17" WIDE X 7.2" DEEP



TOP VIEW

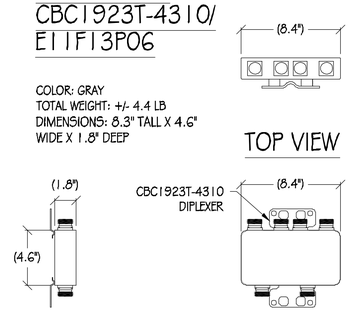
FRONT VIEW

SIDE VIEW

2 RRUS-11 DETAIL
1"=1'

COMMSCOPE CBC1923T-4310/ E11F13P06

COLOR: GRAY
TOTAL WEIGHT: +/- 4.4 LB
DIMENSIONS: 8.3" TALL X 4.6" WIDE X 1.8" DEEP

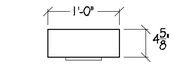


TOP VIEW

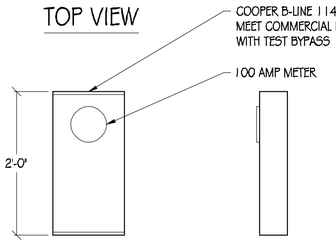
SIDE VIEW

FRONT VIEW

3 DIPLEXER DETAIL
1"=6"



TOP VIEW



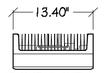
FRONT VIEW

SIDE VIEW

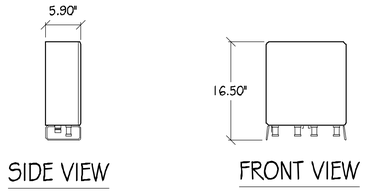
4 METER DETAIL
1"=1'

ERICSSON RRUS-4415

TOTAL WEIGHT: UNDER 46 LBS
DIMENSIONS: 16.5" X 13.4" X 5.9"



TOP VIEW



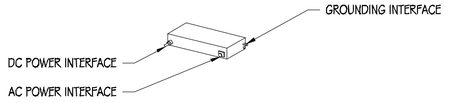
SIDE VIEW

FRONT VIEW

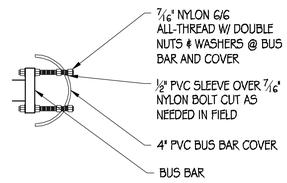
5 RRUS-4415 DETAIL
1"=1'

ERICSSON PSU AC 08

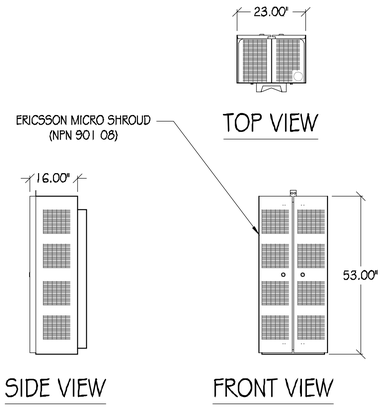
DIMENSIONS: 2.72" X 10.79" X 7.09"
WEIGHT: 11.46 LBS



6 AC POWER MODULE
NTS



7 BUS BAR COVER
6"=1'

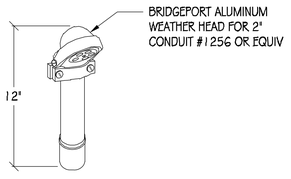


TOP VIEW

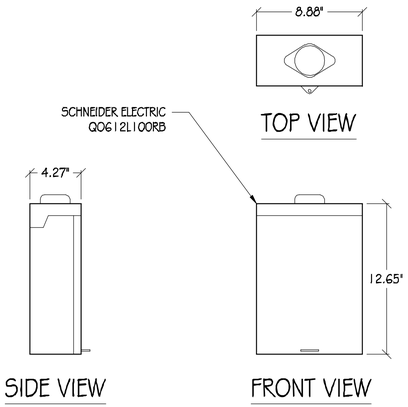
SIDE VIEW

FRONT VIEW

8 MICRO SHROUD CONCEALMENT
1/2"=1'



9 WEATHER HEAD
NTS

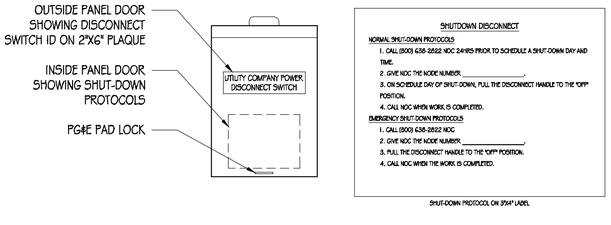


TOP VIEW

SIDE VIEW

FRONT VIEW

10 LOAD CENTER/AC DISCONNECT
1"=6"



11 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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CRAN_RSFR_LOSA0_05

49 SAN JUAN CT
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	10/30/18	CD 90%
	07/25/19	CD 100%

DRAWN BY:	T. JONES
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	07/25/19

SHEET TITLE:

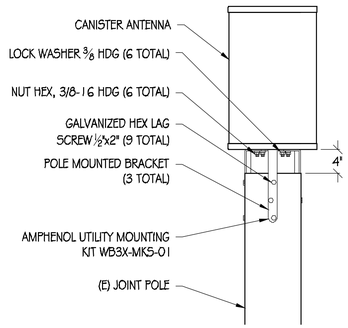
DETAILS

SHEET NUMBER

A-5

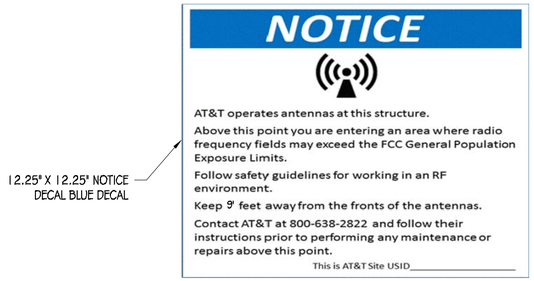
STRUCTURAL STEEL NOTES:

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 HDG 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 3/4"Ø (OR K, WHICHEVER IS LARGER) HOLE @ WEB/FLANGE INTERSECTION UNLESS NOTED OTHERWISE.



1 POLE-TOP ANTENNA MOUNT DETAIL

1"=1'

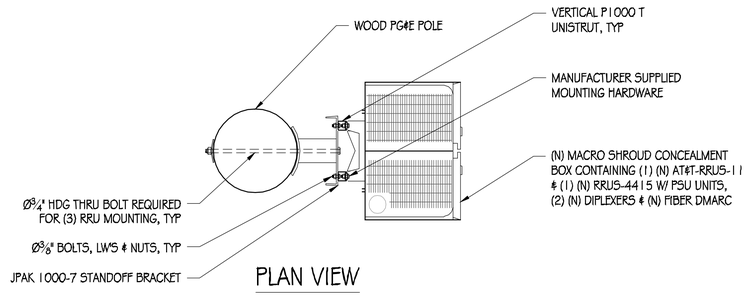


2 NOTICE SIGNAGE

NTS

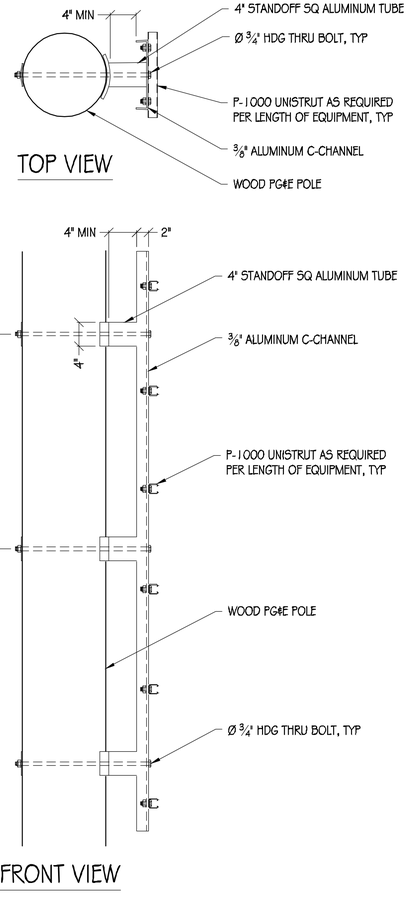
NOTES:

- SIGNAGE TO BE SCREWED DIRECTLY TO POLE AT ALL FOUR CORNERS.
- SIGNAGE TO BE PLACED A MINIMUM OF 2'-0" BELOW (N) ANTENNA



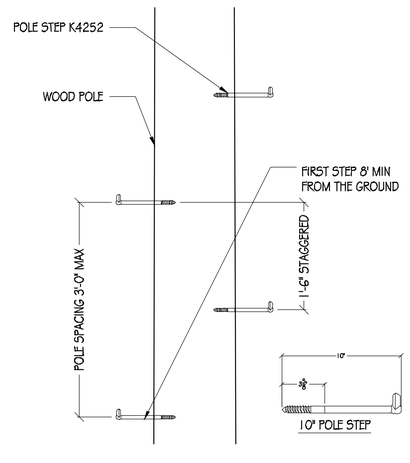
3 RRU MOUNTING DETAIL

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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CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	07/25/19

SHEET TITLE:

DETAILS

SHEET NUMBER

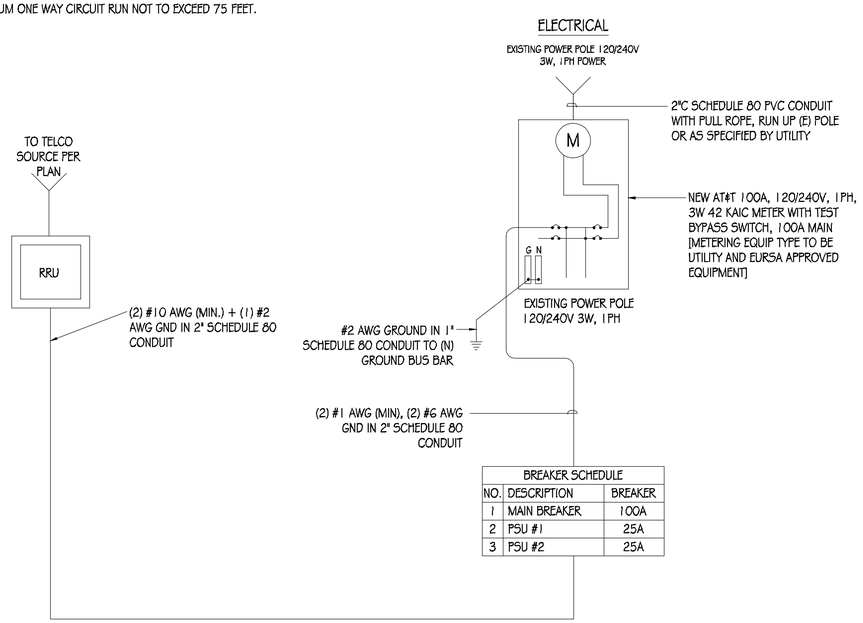
A-6

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 RESTORED PER CITY STANDARD DETAILS.
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.

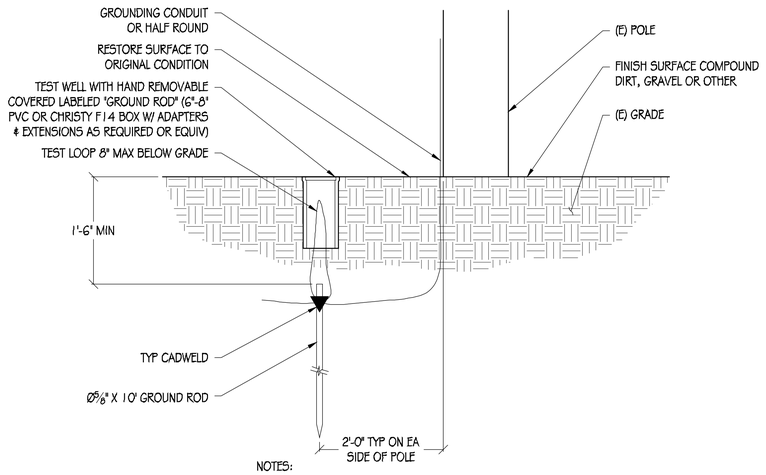


BREAKER SCHEDULE		
NO.	DESCRIPTION	BREAKER
1	MAIN BREAKER	100A
2	PSU #1	25A
3	PSU #2	25A

SINGLE-LINE DIAGRAM

LOAD SCHEDULE

MAKE/MODEL	QUANTITY	DESCRIPTION	DIMENSIONS	WEIGHT	TX/RX	MAX TRANSMIT POWER	W	kW
ERICSSON RRUS-4415	1	RRUS	16.5" X 13.4" X 5.9"	46 LBS	2T/2R	4 X 40W	670	0.67
ERICSSON RRUS-11	1	RRUS	19.7" X 17.0" X 7.2"	55 LBS	2T/2R	2 X 40W	520	0.52
NEMA 3R ENCLOSURE	1	DISCONNECT	12.7" X 8.9" X 4.3"	40 LBS (MAX)	N/A	N/A	N/A	N/A

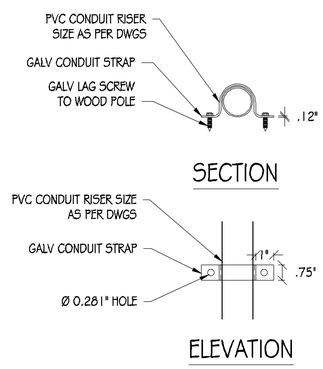


NOTES:

1. REMOVE & REPLACE SIDEWALK SECTION, RESTORATION TO MEET CITY STANDARD DETAILS
2. EXPOSED CONCRETE TO HAVE BROOM FINISH

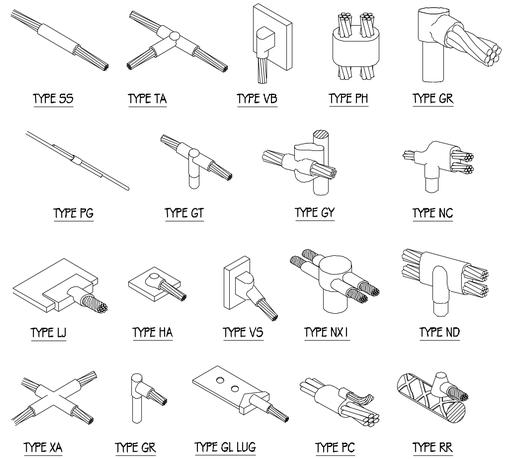
1 POLE GROUNDING DETAIL

NTS



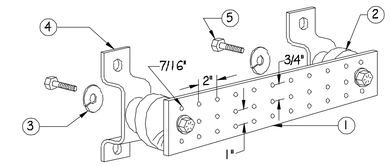
2 CONDUIT RISER DETAIL

NTS



3 EXOTHERMIC WELD DETAILS

NTS

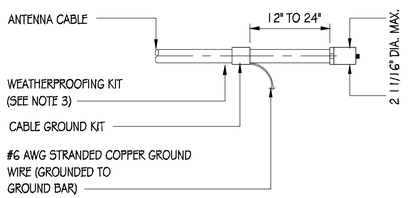


NOTES:

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

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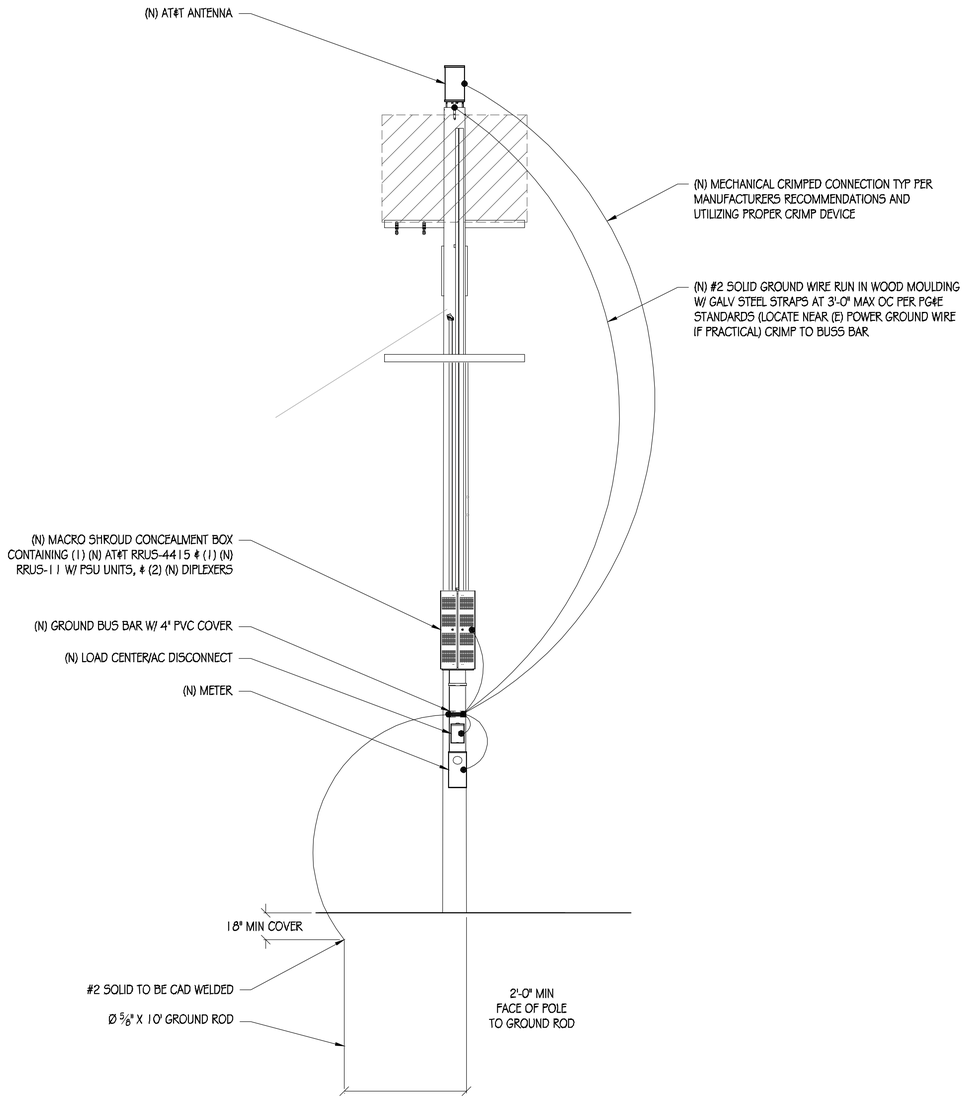
APPROVED BY:	B. McCOMB
DATE:	07/25/19

SHEET TITLE:

SINGLE-LINE DIAGRAM & DETAILS

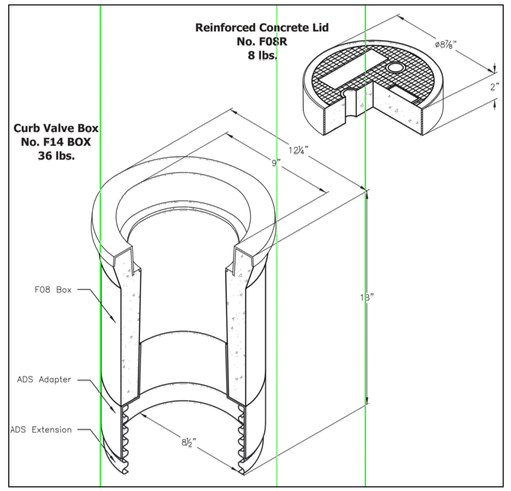
SHEET NUMBER

E-1



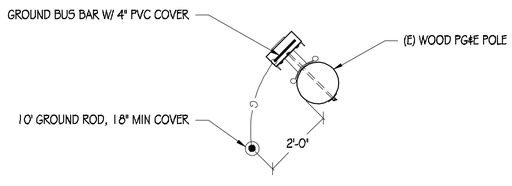
POLE GROUNDING DIAGRAM

NTS



1 TEST WELL DETAIL

NTS



TN

GROUNDING PLAN

NTS

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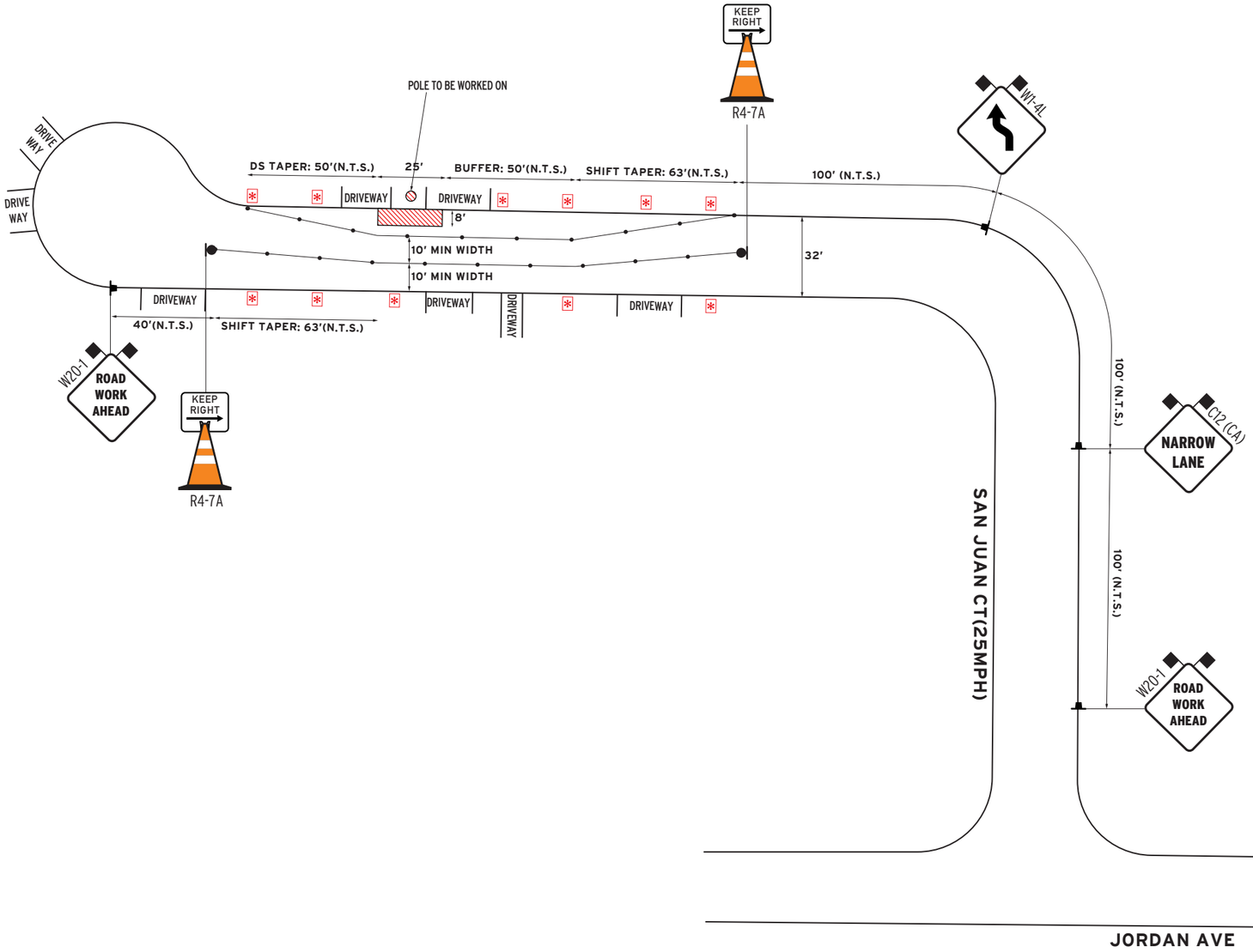
SHEET TITLE:

GROUNDING DIAGRAMS

SHEET NUMBER

E-2



LEGEND:

- CHANNELIZING DEVICE
- TRAFFIC CONE W/CLIP ON SIGN
- SIGN
- WORK ZONE
- DIRECTION OF TRAFFIC
- TYPE 1 BARRICADE
- TYPE 1 BARRICADE W/SIGN
- TYPE 3 BARRICADE
- TYPE 3 BARRICADE W/SIGN
- CERTIFIED FLAGGER
- CRASH BARRELS
- MESSAGE BOARD (PCMS)
- FLASHING ARROWBOARD
- TEMP NO PARKING SIGNS
- FLASHING BEACON/BARRICADE LIGHT
- K-RAIL/WATER FILLED BARRIER
- PEDESTRIAN BARRICADE

ADDITIONAL NOTES:

1. ASSIST RESIDENTS WITH IN/OUT ACCESS TO DRIVEWAYS ALONG THE CLOSURE WHEN SAFE TO DO SO.

*POST TEMPORARY NO PARKING SIGN ON TYPE 1 BARRICADE 72 HRS IN ADVANCED.

NOTE: Please contact B.A.T.S 72 hrs in advance in case if we are to install "TEMPORARY NO PARKING" signs.

PHASE 1
TEMP TRAFFIC CONTROL PLAN

NOTES

- Traffic control shall conform with the most current CAMUTCD part 6 and/or Caltrans Standards
- One lane of traffic in each direction and all high volume turning lanes shall be maintained at all times on all streets at a minimum lane width of 10 feet.
- Contractor shall notify local authorities once signs are posted.
- All advanced warning signs shall be equipped with 2 (18" orange flags)
- Certified Traffic Control Workers shall have Type II vests, work shoes, and hard hats.
- Temporary no parking signs shall be placed a min of 72 hrs prior of work.
- Driveways shall be monitored and maintained at all times during work hours.
- Distance between sign and work area will be determined on speed limit.
- Roadway shall not be opened until safe for public use. All open trenches must be plated or backfilled prior to public usage.
- All Devices shall be removed when no longer required.

MUTCD TABLE 6C-1 — MEANING OF LETTER CODES ON TYPICAL APPLICATION DIAGRAMS

ROAD TYPE	DISTANCE BETWEEN SIGNS		
	A	B	C
Urban (Low Speed) - 25 mph or less	100 ft	100 ft	100 ft
Urban (Low Speed) + 25 to 40 mph	250 ft	250 ft	250 ft
Urban (High Speed) + 40 mph	350 ft	350 ft	350 ft
Rural	500 ft	500 ft	500 ft
Expressway / Freeway	1,000 ft	1,500 ft	2,640 ft

COMPASS:

SCALE: NOT TO SCALE

DATE REQSTD: 6-18-19

DATE COMPLTD: 6-26-19

PROJECT LOCATION: 49 SAN JUAN CT LOS ALTOS

JOB# LOSA0_05

PAGE# 1/1

REQUEST BY:
LANCE LEWIS
SURESITE
216-593-0400
484-895-5109
L.LEWIS@SURE-SITE.COM

AFTER HOURS EMERGENCY 510-299-5666

Drawn By: Andie Tonnu
CSLB# 917034
Office: 510-657-2543
Fax: 510-657-2544
44800 Industrial Drive Fremont, CA 94538
WWW.BATSTRAFFICSOLUTIONS.COM

B.A.T.S. TRAFFIC SOLUTIONS

LOSAO-005

CITY OF LOS ALTOS
DISTRIBUTED ANTENNA SYSTEMS FOR WIRELESS COMMUNICATIONS
ENCROACHMENT PERMIT REQUIREMENTS

Distributed, repeater, or microcell antenna wireless communication systems and facilities that are regulated by the California Public Utilities Commission as a public utility and determined to be exempt from Los Altos' zoning regulations and use permit application requirements, shall be allowed in the public right-of-way subject to the following Encroachment Permit requirements:

A. Antenna systems are encouraged along the city's arterial and collector streets. These facilities are allowed on local streets upon verification by a qualified electrical engineer licensed by the state of California representing the FCC licensee that using local streets is necessary to obtain capacity and coverage.

B. Antenna systems are permitted on joint utility poles at a height not to exceed 10 feet above the height of joint utility pole. Replacement joint utility poles are allowed in accordance with the Municipal Code; however, no net new joint utility poles or monopole antennas are allowed in the public right-of-way.

C. Antennae shall be designed to be as visually unobtrusive as possible, such as by housing the antenna in a single radome on top of joint utility pole, or by mounting the antenna directly on the joint utility pole in a streamline manner and painted to match the color of the utility pole.

D. All antenna systems equipment boxes including switches, computers, cooling, back up power, etc., shall be mounted to the utility pole and both the antenna and utility equipment shall be painted to match the color of the existing utility pole.

E. Only battery back up power systems shall be allowed. No generators shall be allowed.

F. All new fiber optic and metal cables shall be installed underground unless there are existing overhead cables that can be collocated.

G. Radiofrequency reports shall be provided for the facility's maximum planned operating power pursuant to the underlying FCC license.

H. Provide a build-out plan that to the extent known at the time of application identifying by physical address (or if none, by geographic description) all other sites, regardless of whether now constructed, proposed, or anticipated, which are under contract at the time of application, subject to contractual provisions related to confidentiality, that are to be interconnected with this project site. Disclose in technical detail the proposed method of interconnection. Confidential sites may be identified generally.

I. Disclose by licensee call sign all build-out requirements/obligations which have yet to be met of all wireless providers that the applicant is under contract to build in the City of Los Altos, and the known or estimated date when the remaining build-out requirements will be met.

J. Identify by name, title, company affiliation, work address, telephone number and extension, and email address the key person or persons most knowledgeable regarding this Project so that the City may contact them with questions regarding the Project:

ENCROACHMENT PERMIT APPLICATION

The applicant is hereby given temporary permission to construct and maintain wireless communication systems at 49 San Juan Court, as shown on the attached drawings. This permission shall cease at such time as the City Engineer determines that said improvements or the applicant's use thereof is detrimental to the City.

The above permission is given subject to the following conditions:

1. The applicant, their heirs, executors, administrators, successors, and assigns, agree to indemnify and hold harmless the City of Los Altos, its officers, and employees against all claims, liabilities, and losses arising out of construction, existence, and future abandonment/destruction of the subject wireless communication systems and all other associated appurtenances. In addition, the applicant shall be responsible for the repair of all damage to roadways, sidewalks, curb and gutter, sewer mains and laterals, traffic signals and conduits, street lights and conduits, irrigation systems including controllers and conduits, or landscaping resulting from the construction/abandonment of the work proposed to be completed under the conditions of this permit, and shall be responsible for repairing or replacing such damaged areas.

2. Construction and destruction/abandonment of the work may be done on weekdays or Saturdays. Weekday work shall be limited to the hours of 8:00 AM and 6:00 PM., except as noted in the lane closure restrictions described in Item 3. Saturday work shall be performed during the hours of 9:00 AM and 6:00 PM.

3. Traffic control and adequate protection of the public in the vicinity of the work site shall be the responsibility of the applicant. Lane closures shall conform to the requirements established in the State of California Traffic Manual, and the State Standard Plans and Specifications.

4. The applicant shall notify the three closest adjacent property owners to the installation and the three closest property owners directly across the street from the installation at least 10 days prior to commencement of any work. In addition, the applicant shall notify the City Communications Department at (650) 948-8223 of street/alley and lane closures at least 24 hours prior to any work. Furthermore, the contractor shall notify the city's Traffic Engineer at least 48 hours in advance of any excavations within 100 feet of any traffic signals.

5. Contractor shall positively locate by hand digging all traffic signal conduit and irrigation controller conduit adjacent to traffic signals. Any damage repair to signal equipment or irrigation controller equipment shall be completed by a qualified electrical contractor immediately at the contractor's expense, and before proceeding with any other work. Traffic signal detector loop replacement shall be replaced within 48 hours of being damaged. The contractor is encouraged to use the City's signal maintenance contractor, Bear Electric, for any traffic signal repair work at the contractor's expense.

6. Asphalt concrete section for trench backfill shall be a thickness equal to the existing pavement, or 4-inches thick minimum, whichever is greater.

7. Completed Certificates of Insurance naming the City of Los Altos, its elective and appointed boards, officers, agents and employees as additional insured must be completed and submitted to the City by the owner, prior to beginning any work in the public right of way. Insurance shall remain in force during the entire time that the public right-of-way facilities are in use and shall provide the above certificate to the City on an annual basis.

8. The applicant shall comply with the National Pollutant Discharge Elimination System Permit in effect at the time of the application, and shall continue to comply with the Permit as amended by the State Water Board from time to time.

9. The applicant understands that the City continues to pursue future utility undergrounding. In the event a pole or poles used by the applicant are selected for undergrounding or relocation of mounted utilities, the applicant will be required to remove all equipment placed on the pole at his/her expense. The applicant agrees that the City is not obligated to provide alternate space for applicant's use should removal of a facility be directed to accomplish utility undergrounding.

10. The applicant shall maintain the distributed antenna system in good repair at the discretion of the City Engineer.

11. The applicant shall remove the entire distributed antenna system structures within 90 days when such system is abandoned.

I hereby agree to the terms of this Encroachment Permit:

Laura Meiners, Site Dev Agent
Name/Title

Sure Site Consulting
Company

Laura Meiners
Signature

7-30-19
Date

CERTIFIED NOTIFICATION LIST AFFIDAVIT

CITY OF LOS ALTOS
STATE OF CALIFORNIA
COUNTY OF SANTA CLARA

I, Robert Castro, hereby certify that the attached list contains the names and addresses of all persons to whom all property is assessed as they appear on the latest available assessment roll of the County within the area described on the attached notice and for a distance of two hundred fifty feet (250') from the exterior boundaries of the proposed Wireless Service Facility Site.

I, further certify that the attached list of occupants reflect all residential addresses within two hundred fifty feet (250') from the exterior boundaries of the proposed Wireless Service Facility Site.

I, certify under penalty of perjury that the foregoing is true and correct.

Robert Castro
Signature

June 21, 2019
Date the notices were mailed out

Location:

Public right of way near 49 San Juan Court

37.3958800, -122.1132500

CRAN_RSFR_LOSA0_05

1 170-13-017
HENRY A SOWIZRAL
16023 NE 58TH CT
REDMOND WA 98052

1 170-13-017
OCCUPANT
16 E PORTOLA AVE
LOS ALTOS CA 94022

2 170-13-018
BIN & YU JING QIN
737 LOMA VERDE AVE #3
PALO ALTO CA 94303

2 170-13-018
OCCUPANT
32 E PORTOLA AVE
LOS ALTOS CA 94022

3 170-13-019
GELENA SIGANEVICH
42 E PORTOLA AVE
LOS ALTOS CA 94022

4 170-13-020
ALAN E & SKODA HANA LOH
50 E PORTOLA AVE
LOS ALTOS CA 94022

5 170-13-022
DAVID & SARAH ZIEGLER
80 E PORTOLA AVE
LOS ALTOS CA 94022

6 170-13-041
PHYLLIS E GRAME
99 SAN JUAN CT
LOS ALTOS CA 94022

7 170-13-042
ABDOLREZA & SARTIPI NADIA
RAISSINIA
85 SAN JUAN CT
LOS ALTOS CA 94022

8 170-13-043
PETER H & JULIE R MAHOWALD
71 SAN JUAN CT
LOS ALTOS CA 94022

9 170-13-044
PATRICIA A DENSMORE
57 SAN JUAN CT
LOS ALTOS CA 94022

10 170-13-045
ALBERT C & MARIE L SMITH
43 SAN JUAN CT
LOS ALTOS CA 94022

11 170-13-046
DAVID F X & CAROL A MURRAY
29 SAN JUAN CT
LOS ALTOS CA 94022

12 170-13-047
JEANINE VALADEZ
15 SAN JUAN CT
LOS ALTOS CA 94022

13 170-13-052
STEVEN & BERNADETTE HOUTCHENS
130 SAN JUAN CT
LOS ALTOS CA 94022

14 170-13-053
GEORGE & MARYANN KONTON
144 SAN JUAN CT
LOS ALTOS CA 94022

15 170-13-054
HAREESH BHAT
55 JORDAN AVE
LOS ALTOS CA 94022

16 170-13-073
MARYAM IMAM
25 JORDAN AVE
LOS ALTOS CA 94022

17 170-13-074
HU ALBERT L TRUSTEE
41 JORDAN AVE
LOS ALTOS CA 94022

18 170-13-060
MURALI B & PRIYA DHARAN
32 SAN JUAN CT
LOS ALTOS CA 94022

19 170-13-061
JIE & ZHANG ZHONG MA
42 SAN JUAN CT
LOS ALTOS CA 94022

20 170-13-062
LADAN & BAGHERI RAMIN KAZERONI
66 SAN JUAN CT
LOS ALTOS CA 94022

21 170-13-064
WILLY J & HELEN S LAURIKS
111 VIA CONCHA
APTOS CA 95003

21 170-13-064
OCCUPANT
747 N SAN ANTONIO RD
LOS ALTOS CA 94022

22 170-13-065
AMOL H & ASMITA A WANKHEDE
757 N SAN ANTONIO RD
LOS ALTOS CA 94022

23 170-13-066
ROBERT G MATHEWS
785 N SAN ANTONIO RD
LOS ALTOS CA 94022

24 170-13-071
JOSHUA & LEE FANYEE SCHACHTER
60 E PORTOLA AVE
LOS ALTOS CA 94022

25 170-13-072
LIANG & LI RUOYU XUE
2190 KLASSEN WAY
SAN JOSE CA 95131

25 170-13-072
OCCUPANT
70 E PORTOLA AVE
LOS ALTOS CA 94022

IVAN TOEWS
SURESITE CONSULTING
2033 GATEWAY PL 6TH FLR
SAN JOSE CA 95110

CHRIS ELDRIDGE
ERICSSON
6140 STONERIDGE MALL ROAD SUITE 350
PLEASANTON CA 94588

CHRIS KERR
AT&T MOBILITY
5001 EXECUTIVE PARKWAY 4W750EE
SAN RAMON CA 94568


E Portola Ave
E Portola Ave
E Portola Ave
Pico Ln
Los Altos Square
N San Antonio Rd
N San Antonio Rd
N San
Nela Ln
San Juan Ct
San Juan Ct
Jordan Ave
Jordan Ave
Jordan Ave
Vera Cruz Ave
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AT&T is working to improve wireless service in City of Los Altos!

June 10, 2019

Dear Neighbor,

AT&T Mobility proposes to install a state-of-the-art wireless communication small cell node facility on existing wood utility pole located in the City of Los Altos public right-of-way near 49 SAN JUAN COURT. The equipment to be initially installed includes one (1) antenna, two (2) radio units, and one (1) emergency power shut off. This equipment is designed to increase capacity in high demand areas and should increase wireless connection reliability for AT&T customers. See attached schematic for more information about the placement and size of equipment currently proposed to be installed. All equipment will be painted to match the pole.

This proposed small cell node is part of a greater network that will provide and enhance current cutting edge and future AT&T wireless voice and data service to the surrounding area, improving wireless capabilities and public safety connectivity. Although experiences with wireless services vary based on specific location and usage times, the wireless service proposed by this facility will help meet existing, fluctuating and future demands.

Map of Pole Location

Photo of Existing Pole

Want to learn more?

Please contact AT&T's small cell project voice mailbox at 949-247-8686 or email escsd@sure-site.com should you have any comments or questions about the proposal.

Thank you.

Sincerely,

Angela Kung
AT&T Director - External Affairs

CRAN_RSFR_LOSAO_05

49 San Juan Court Los Altos CA 94022

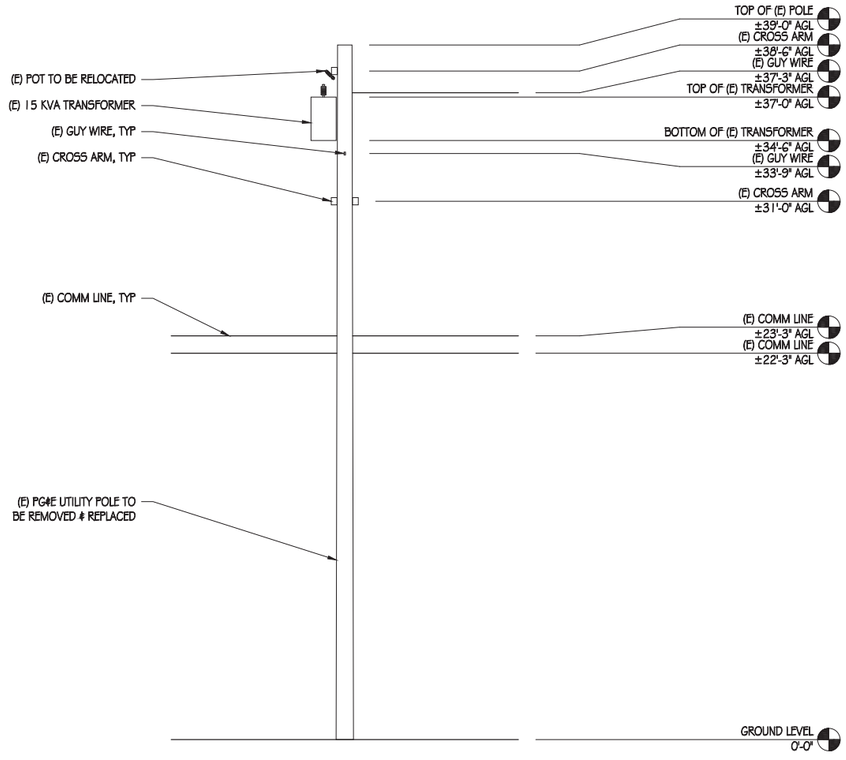
ARTISTIC engineering
AEsims.com
877.9AE.sims

View 1

Existing

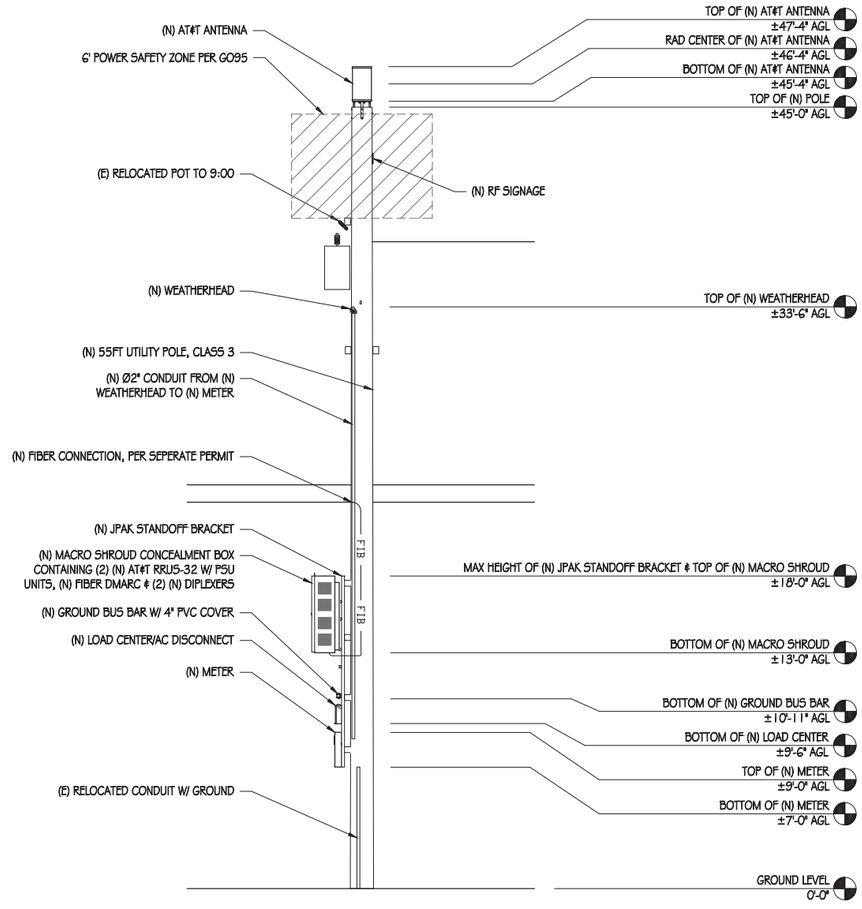
Proposed Looking northeast from San Juan Court

Accuracy of photo simulation based upon information provided by project applicant.



EXISTING NORTH ELEVATION

1/4"= 1'-0"



NEW NORTH ELEVATION

1/4"= 1'-0"

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

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

SURESITE
smart.site.experts. smart.cell.solutions.
36 EXECUTIVE PARK, SUITE 210
IRVINE, CA 92614

PRECISION DESIGN & Drafting, INC.
Phone: (530) 823-6646 www.pdnd.com
11768 Atwood Rd, Suite 20 Auburn, CA 95603

REGISTERED PROFESSIONAL ENGINEER
BRET A. McCOMB
C 69891
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_LOSA0_05

ROW ADJCT TO 49 SAN JUAN CT
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	10/30/18	CD 90%

DRAWN BY:	T. JONES
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/30/18

SHEET TITLE:

ELEVATIONS

SHEET NUMBER

A-3

AT&T Mobility Radio Frequency Statement
Los Altos CA Small Cell Node 5

AT&T has experienced an unprecedented increase in mobile data use on its network since introduction of the iPhone in 2007. AT&T estimates that since introduction of the of the iPhone in 2007, mobile data usage has increased 470,000% on its network. AT&T forecasts its customers' growing demand for mobile data services to continue. The increased volume of data travels to and from customers' wireless devices and AT&T's wireless infrastructure over limited airwaves — radio frequency spectrum that AT&T licenses from the Federal Communications Commission ("FCC").

Spectrum is a finite resource and there are a limited number of airwaves capable and available for commercial use. Wireless carriers license those airwaves from the FCC. To ensure service quality, AT&T must knit together its spectrum assets to address customers' existing usage and forecasted demand for wireless services, and it must use its limited spectrum in an efficient manner.

AT&T uses high-band (i.e., 2300 MHz, 2100 MHz, and 1900 MHz) and low-band (i.e., 850 MHz and 700 MHz) spectrum to provide wireless service. Each spectrum band has different propagation characteristics and signal quality may vary due to noise or interference based on network characteristics at a given location. To address this dynamic environment, AT&T deploys multiple layers of its licensed spectrum and strives to bring its facilities closer to the customer. To address the existing and forecasted demand and to support 5G speeds in the near future, AT&T plans to deploy small cell facilities within public rights-of-way.

The service coverage gap is caused by inadequate infrastructure in the area. AT&T currently has existing sites in the broader geographical area but as Exhibit I illustrates, these existing sites do not provide sufficient high-band, in building LTE service in the gap area. To meet its coverage objectives, AT&T needs to construct a new wireless communications facility. In order to provide high-band LTE service coverage in this portion of the city, AT&T needs to place its small cell node towards the end of San Juan Courtt. Denial of this proposed facility would materially inhibit AT&Ts ability to provide and improve wireless services in this portion of the city. The proposed small cell facilities will help close gap in coverage and help address increasing data usage, voice, and other wireless services driven by smart phones and tablet usage. This node is part of an effort to fully deploy 4G LTE technology in the area. Specifically, the proposed facility will close this service gap and provide sufficient high-band 4G LTE, in building coverage for AT&T customers in the affected area. 4G LTE is capable of delivering speeds up to 10 times faster than industry – average 3G speeds. LTE technology also offers lower latency, or the

processing time it takes to move data through a network, such as how long it takes to start downloading a webpage or file once you've sent the request. Lower latency helps to improve the quality of personal wireless services. What's more, LTE uses spectrum more efficiently than other technologies, creating more space to carry data traffic and services and to deliver a better overall network experience.

The proposed node on a pole in the public rights-of-way at 49 San Juan Court is needed to close the high-band LTE service coverage in an area bordered roughly by East Portola Avenue to the north, Nela Lane to the west, Catalina Court to the south and Egan Junior high School to the east. This portion of Los Altos is primarily residential neighborhoods with dozens of homes and a Junior High school.

It is important to understand that service problems can and do occur for customers even in locations where the coverage maps on AT&T's "Coverage Viewer" website appear to indicate that coverage is available. As the legend to the Coverage Viewer maps indicates, these maps display approximate coverage. Actual coverage in an area may differ from the website map graphics, and it may be affected by such things as terrain, weather, network changes, foliage, buildings, construction, high-usage periods, customer equipment, and other factors.

It is also important to note that the signal losses, slow data rates, and other service problems can and do occur for customers even at times when certain other customers in the same vicinity may not experience any problems on AT&T's network. These problems can and do occur even when certain customers' wireless phones indicate coverage bars of signal strength on the handset. The bars of signal strength that individual customers can see on their wireless phones are an imprecise and slow-to-update estimate of service quality. In other words, a customer's wireless phone can show coverage bars of signal strength, but that customer will still, at times, be unable to initiate voice calls, complete calls, or download data reliably and without service interruptions due to service quality issues.

To determine where new equipment needs to be located for the provisioning of reliable service in any area, AT&T's radio frequency engineers rely on far more complex tools and data sources than just signal strength from individual phones. AT&T uses industry standard propagation tools to identify the areas in its network where signal strength is too weak to provide reliable in-building service quality. This information is developed from many sources including terrain and clutter databases that simulate the environment, traffic maps that simulate the density of users in the environment, and propagation models that simulate signal relative to interference in the presence of terrain and clutter variation. AT&T designs and builds its wireless network to ensure customers will receive reliable in-building service quality and data rates sufficient to stream video and complete calls. In-building service is critical as customers

increasingly use their mobile phones as their primary communication devices (more than 72% of American households rely primarily or exclusively on wireless telecommunications) and rely on their mobile phones to do more (E911, video streaming, GPS, web access, text, etc.). In fact, the FCC estimates that 70% of 911 calls are placed by people using wireless phones. And with AT&T's selection by FirstNet as the wireless service provider to build and manage the nationwide first responder wireless network, each new facility will help strengthen first responder communications.

Exhibit 1 is a map of the existing high -band LTE service coverage (without the proposed small cell node). It includes high-band LTE service coverage provided by other existing AT&T sites. The green shaded areas of the map depict acceptable in-building coverage. In-building coverage means customers are able to place or receive a call on the ground floor of a building. The yellow shaded areas depict areas within a signal strength range that provide acceptable in-vehicle service coverage. In these areas, an AT&T customer should be able to successfully place or receive a call within a vehicle. The lavender shading depicts areas within a signal strength range in which a customer might have difficulty receiving a consistently acceptable level of service. The quality of service experienced by any individual customer can differ greatly depending on whether that customer is indoors, outdoors, stationary, or in transit. Any area in yellow or lavender category is considered inadequate service coverage and constitutes a service coverage gap.

Exhibit 2 to this statement is a map that predicts high-band LTE service coverage based on signal strength in the vicinity if the proposed small cell node is constructed as proposed. As shown by this map, constructing the proposed small cell node here closes this significant service coverage gap.

My conclusions are based on my knowledge of the proposed small cell locations and with AT&T's wireless network in the surrounding area. I have a B.Sc. degree in Micro-Electronic System Design from University of Ulster, UK, am a Chartered Engineer, and have worked as an engineering expert in the wireless communications industry for more than 33 years.

Philip Dale

Philip B A Dale C Eng
AT&T Mobility Services LLC
Network, Planning & Engineering
RAN Design & RF Engineering
July 19, 2019

EXHIBIT 1

LTE 1900 Coverage without Small Cell LOSA0_05

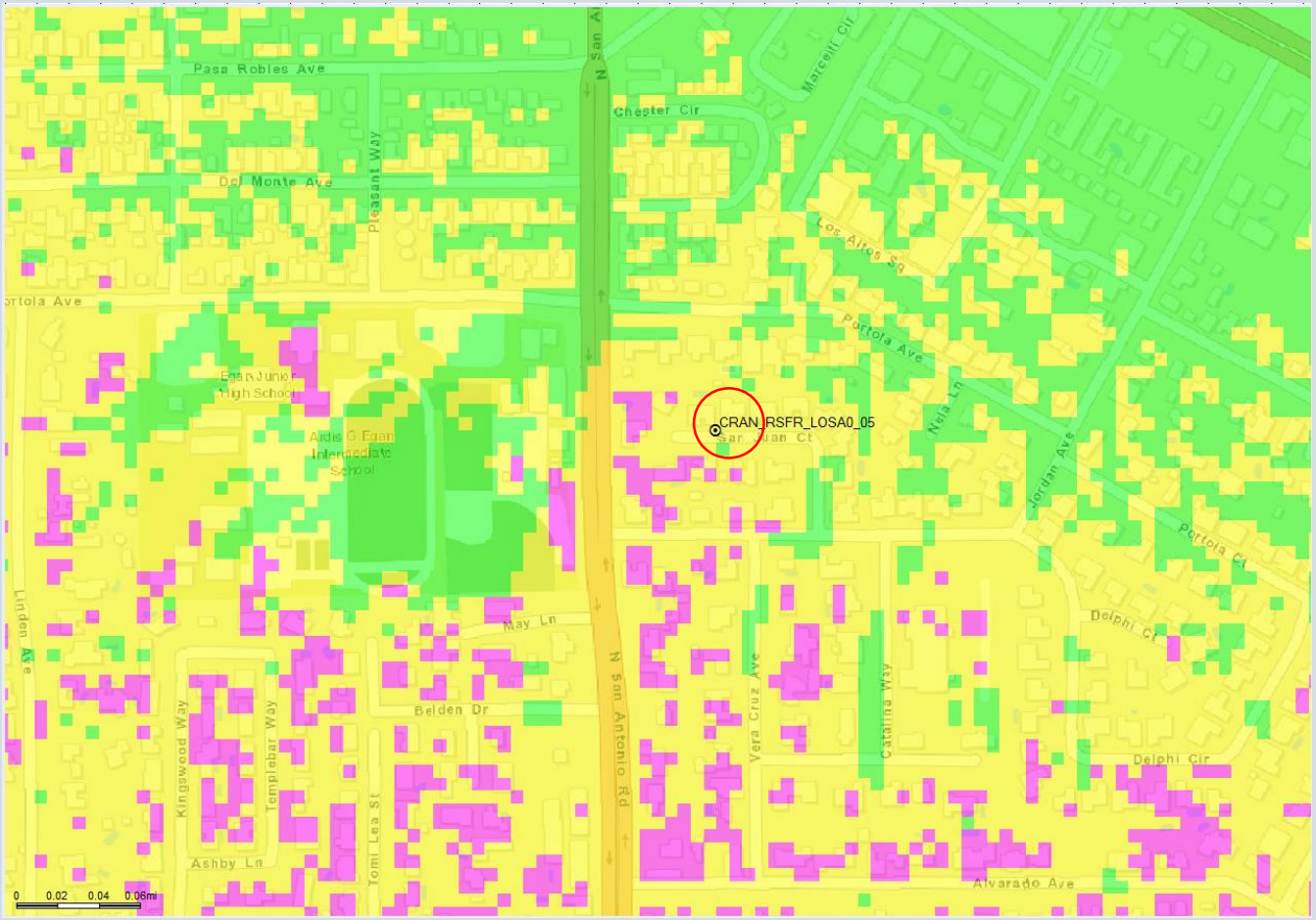
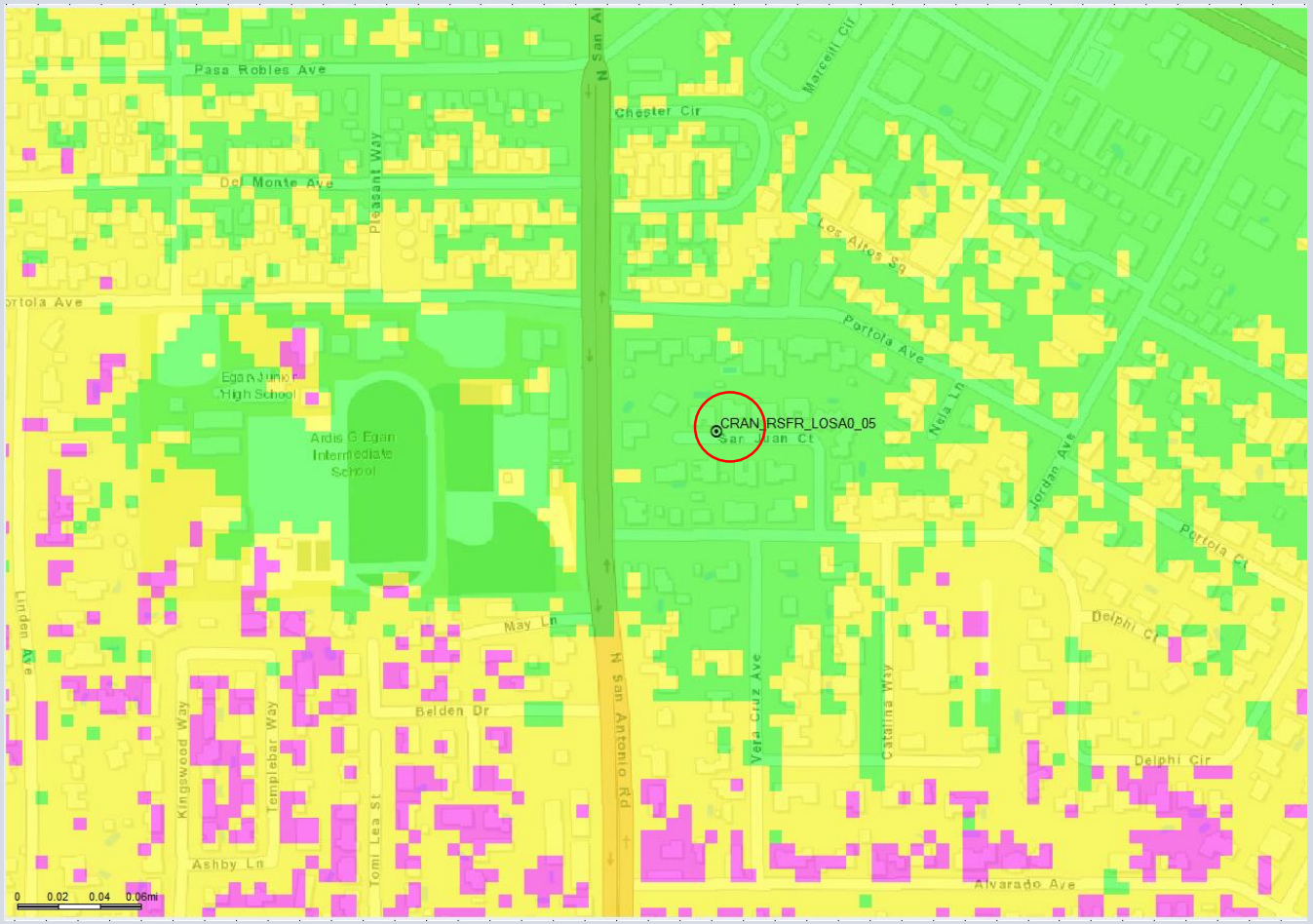


EXHIBIT 2

LTE 1900 Coverage with Small Cell LOSA0_05



Public Works Department - Engineering Division
One North San Antonio Road, Los Altos, California 94022-3087
Phone (650) 947-2780 Fax (650) 947-2732

ENCROACHMENT PERMIT No. E19-_____

APPLICATION
(To be completed by the applicant with a copy of detailed plan/drawing showing the proposed work):

LOCATION OF WORK: 791 Los Altos Ave

TYPE OF WORK: Install equipment on new utility pole. (PG&E to perform pole replacement under separate excavation permit)

CONTRACTOR: Ericsson, Delbert Butcher **PHONE #** 720-317-7282

OWNER: PG&E, Jwo Cheng **PHONE #** 650-515-9842

APPLICANT: AT&T Mobility (New Cingular Wireless PCS), Ivan Toews, SureSite Consulting, Agent **PHONE #** 949-278-2962

SPECIAL REQUIREMENTS (TO BE COMPLETED BY THE CITY):
Applicant must submit evidence of insurance coverage meeting the minimum requirements set forth in this permit including, without limitation, the General Requirements and exhibits attached hereto prior to issuance of this permit. The City of Los Altos approves this request subject to the "General Requirements" listed on the back of this page and the following indicated conditions:

- ☒ **Notify the City of Los Altos Engineering Division at (650) 947-2780 at least 2 business days prior to beginning any work in Downtown area or on collector and arterial roads. Work in the public right of way in other areas requires at least 1 business day notice prior to beginning of work. Final inspection shall be scheduled at least 1 business day prior by contacting City of Los Altos Engineering Division.**
- ☒ **A copy of this permit must be at job site for authorized representative of the City when requested or work may be terminated by the City until compliance with this requirement is met.**
- ☒ **The applicant shall notify the Los Altos Police Department at (650) 947-2770 and Fire Department, Santa Clara County at (408) 378-4010 at least 3 business days prior to any work in the traveled way section of a street.**
- ☐ **Applicant to construct Driveway/Walkway approach to the back of the existing rolled curb, without tying to the existing curb (cold joint).**
- ☐ **All work done in the City ROW shall comply with the City's Shoulder Paving Policy.**
- ☐ **Applicant shall provide adequate drainage with 3' wide AC swale (minimum of 4" AB plus 2" AC or 4" AC on compacted subbase is required) and conforms to existing street drainage.**
- ☐ **Contractor will be required to saw cut along the existing road pavement due to severe damaged edge.**
- ☐ **New sidewalk or curb shall be constructed per City Standards and connected to existing sidewalk or curb with #4, 16" long dowels @ 12"o.c. All saw cuts to be done at existing joints.**
- ☐ **Comments:** _____

Applicant has read and understands all the conditions; and agrees to all the conditions of this permit.

SIGNATURE OF APPLICANT: _____ **DATE:** _____

ISSUED BY: _____ **DATE:** _____
SIGNATURE

INSPECTED BY: _____ **FINAL INSPECTION DATE:** _____

ATTACHMENT:
☐ YES _____ **$196.00** **CREDIT** ☐ **CHECK** ☐ **CASH** ☐
☐ NO _____ | _____ | **Provide Check # or type of credit (VS, MC, or D) and last 4 digits**

Distribution: **Original** – Inspector **Copies**: Applicant and Finance

PERMIT VALID FOR 60 DAYS
(See other side for General Requirements)

GENERAL REQUIREMENTS FOR ALL JOBS

A. To the fullest extent permitted by law, applicant shall defend, indemnify and hold City, the City Council, members of the City Council, its employees, representatives, agents and volunteers harmless from any and all suits, damages, costs, fees, claims, demands, causes of action, liabilities, losses expenses, damage or injury of any kind, in law or equity, to property or persons, including wrongful death and financial losses in any manner arising out of, pertaining to, or incident to any alleged acts, errors or omissions, or willful misconduct of applicant or applicant's officers, assistants, subcontractors, employees or agents in connection with this permit.

Applicant shall procure and maintain insurance as set forth in Exhibit B, attached hereto and incorporated herein by this reference, against claims for injury to persons or damage to property arising from or in connection with this permit.

B. Commencement of any work under this permit shall constitute acceptance of the conditions and requirements of this permit.

C. The City may require modifications to this permit as needed because of special field conditions.

D. **NO OTHER WORK**, other than specifically mentioned, is hereby authorized. A copy of this permit must be kept on the site of the work to be shown to any authorized representative of the City.

E. This permit does not authorize excavation and grading on private property. This permit does not release the applicant/permittee from liabilities contained in other agreements or contracts with the City, other agencies or persons.

F. This permit does not supersede or replace any permit that may be needed from other agencies. Proper permits must be obtained from State, County, and any other agency involved.

G. This permit is valid for **sixty (60) days** from the approval date unless otherwise noted.

H. Construction site signs, devices and lights shall be in accordance with Caltrans standards.

I. Use of a Flashing Arrow Panel is **MANDATORY** when work location is within a 35 MPH speed zone.

J. Traffic conditions and adequate protection of the public in the vicinity of the job site shall be the responsibility of the applicant. During construction activities, two-way traffic shall be maintained. A minimum of one traffic lane shall be kept passable and under the control of competent flag persons. At night, weekends, and holidays, a minimum of two 12-foot wide travel lanes shall be safe and passable.

K. Any damage to painted street pavement delineations, markings or reflectors and painted curbs shall be restored as approved by the Engineer.

L. Excavations within the asphalt street section shall be backfilled before leaving the work for the night, unless otherwise authorized by the City's representative. Temporary surfacing shall be placed on the trench surface overnight.

M. All trench backfill requires certified compaction test to 95% density or greater for each lift (Maximum lift of 12") or use Controlled Density Fill (CDF) as approved.

N. All work shall be performed in accordance with the latest issue of Cal O.S.H.A. Safety Orders. The City has not checked trench safety and trench safety is not implied with this permit.

O. Landscaping is **NOT** to be disturbed any more than absolutely necessary. Restoration shall be to property owner's satisfaction.

P. Drainage patterns during construction shall be maintained to insure that surface drainage is properly managed and surrounding areas are protected from damage. Restoration must be to grades necessary to maintain original condition and maintain proper drainage flow lines.

Q. Applicant/Permittee is responsible for complying with all applicable water quality standards adopted by the City, County, State or other jurisdictional or properly empowered regulatory agency.

R. All saw cut sludge/slurry should be immediately removed by means of a vacuum system.

EXHIBIT B
INSURANCE

CONTRACTOR shall provide its insurance broker(s)/agent(s) with a copy of these requirements and request that they provide Certificates of Insurance complete with copies of all required endorsements to: Project Manager, City of Los Altos, 1 N. San Antonio Road, Los Altos, CA 94022

Minimum Scope of Insurance

Coverage shall be *at least as broad as:*

1. **Commercial General Liability** (CGL): Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, with limits no less than **$1,000,000/$2,000,000 aggregate** per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit. CGL insurance must include coverage for the following:

    a. Bodily Injury and Property Damage
    b. Personal Injury/Advertising Injury
    c. Premises/Operations Liability
    d. Products/Completed Operations Liability
    e. Aggregate Limits that Apply per Project
    f. Explosion, Collapse and Underground (UCX) exclusion deleted
    g. Contractual Liability with respect to this Agreement
    h. Broad Form Property Damage
    i. Independent Consultants Coverage

    The policy shall contain no endorsements or provisions limiting coverage for (1) contractual liability; (2) cross liability exclusion for claims or suits by one insured against another; (3) products/completed operations liability; or (4) contain any other exclusion contrary to the Agreement.

2. **Automobile Liability:** Insurance Services Office Form Number CA 00 01 covering, Code 1 (any auto), or if CONSULTANT has no owned autos, Code 8 (hired) and 9 (non-owned), with limit no less than **$1,000,000** per accident for bodily injury and property damage.

3. **Workers' Compensation/Employer's Liability:** CONSULTANT certifies that it is aware of the provisions of Section 3700 of the California Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and it will comply with such provisions before commencing work under this Agreement. To the extent CONSULTANT has employees at any time during the term of this Agreement, at all times during the performance of the work under this Agreement CONSULTANT shall maintain insurance as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than **$1,000,000** per accident for bodily injury or disease.

4. **Professional Liability** (Errors and Omissions) Insurance appropriate to the CONSULTANT's profession, with limit no less than **$1,000,000** per occurrence or claim. This insurance shall be endorsed to include contractual liability applicable to this Agreement and shall be written on a policy form coverage specifically designed to protect against acts, errors or omissions of the CONSULTANT. "Covered Professional Services" as designed in the policy must specifically include work performed under this Agreement.

5. **Umbrella or Excess Liability: Umbrella or Excess Insurance.** If umbrella or an excess liability insurance policy is used to satisfy the minimum requirements for CGL or Automobile Liability

insurance coverage listed above, the umbrella or excess liability policies shall provide coverage at least as broad as specified for the underlying coverages and covering those insured in the underlying policies. Coverage shall be "pay on behalf," with defense costs payable in addition to policy limits. CONSULTANT shall provide a "follow form" endorsement or schedule of underlying coverage satisfactory to the CITY indicating that such coverage is subject to the same terms and conditions as the underlying liability policy.

6. The CITY, its officers, officials, employees, and volunteers are to be covered as additional insureds on the umbrella or excess policy with respect to liability arising out of work or operations performed by or on behalf of the CONSULTANT including materials, parts or equipment furnished in connection with such work or operations. If CONSULTANT maintains broader coverage, umbrella or excess coverage and/or higher limits than the minimums shown above, the CITY requires and shall be entitled to the broader coverage, umbrella or excess coverage and/or the higher limits maintained by CONSULTANT. Any available insurance proceeds in excess of the specified minimum limits of insurance and any other coverages shall be available to the CITY.

Other Insurance Provisions. The insurance policies are to contain, or be endorsed to contain, the following provisions:

Additional Insured Status. The CITY, its officers, officials, employees, and volunteers are to be covered as additional insureds on the CGL policy and the Automobile Liability policy, with endorsements under CG 20 10 10 01 and 20 37 10 01, or endorsements providing the exact same coverage, with respect to liability arising out of work or operations performed by or on behalf of the CONSULTANT including materials, parts or equipment furnished in connection with such work or operations.

Primary Coverage. For any claims related to this contract, the CONSULTANT's insurance coverage shall be primary insurance as respects the CITY, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the CITY, its officers, officials, employees, or volunteers shall be excess of the CONSULTANT's insurance and shall not contribute with it.

Notice of Cancellation. Each insurance policy required above shall be endorsed to state that coverage shall not be canceled except after thirty (30) days' prior written notice (10 days for non-payment) has been given to the CITY.

Waiver of Subrogation. CONSULTANT hereby grants to CITY a waiver of any right to subrogation which any insurer of said CONSULTANT may acquire against the CITY by virtue of the payment of any loss under such insurance. CONSULTANT agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the CITY has received a waiver of subrogation endorsement from the insurer.

Deductibles and Self-Insured Retentions. Any deductibles or self-insured retentions must be declared to and approved by the CITY. The CITY may require the CONSULTANT to provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention.

Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII, unless otherwise acceptable to the CITY.

Claims Made Policies. If any of the required policies provide claims-made coverage:

7. The Retroactive Date must be shown, and must be before the date of the contract or the beginning of contract work.

8. Insurance must be maintained and evidence of insurance must be provided ***for at least three (3) years after completion of the contract work.***

9. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the CONSULTANT must purchase "extended reporting" coverage for a minimum of ***three (3)*** years after completion of contract work.

Verification of Coverage. CONSULTANT shall furnish the CITY with original certificates and amendatory endorsements effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the CITY before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the CONSULTANT's obligation to provide them. The CITY reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

Special Risks or Circumstances. CITY reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

Public Works Department - Engineering Division
One North San Antonio Road, Los Altos, California 94022-3087
Phone (650) 947-2780 Fax (650) 947-2732

TEMPORARY LANE CLOSURE PERMIT LC19-_____

APPLICATION
(To be completed by the applicant with a copy of detailed drawing showing the proposed location(s)):

LOCATION: 791 Los Altos Ave
TYPE OF WORK: Install equipment on new utility pole. (PG&E to perform pole replacement under separate excavation permit)
DATE(S) REQUESTED: 3/21/2019
CONTRACTOR: Ericsson, Delbert Butcher **PHONE #** 720-317-7282
OWNER: PG&E, Jwo Cheng **PHONE #** 650-515-9842
APPLICANT: AT&T Mobility (New Cingular Wireless PCS), Ivan Toews, SureSite Consulting, Agent **PHONE #** 949-278-2962

SPECIAL REQUIREMENTS (TO BE COMPLETED BY THE CITY):
Applicant must submit evidence of insurance coverage meeting the minimum requirements set forth in this permit including, without limitation, the General Requirements and exhibits attached hereto prior to issuance of this permit. The City of Los Altos approves this request subject to the "General Requirements" listed on the back of this page and the following indicated conditions:

- ☒ **Notify the City of Los Altos Engineering Division at (650) 947-2780 at least 2 business days prior to beginning any work in Downtown area or on collector and arterial roads. Work in the public right of way in other areas requires at least 1 business day notice prior to beginning of work. Final inspection shall be scheduled at least 1 business day prior by contacting City of Los Altos Engineering Division.**
- ☒ **A copy of this permit must be at job site for authorized representative of the City when requested or work may be terminated by the City until compliance with this requirement is met.**
- ☒ **The applicant shall notify the Los Altos Police Department at (650) 947-2770 and Fire Department, Santa Clara County at (408) 378-4010 at least 3 business days prior to any lane or road closure.**
- ☐ **Comments:**

Applicant has read and understands all the conditions; and agrees to all the conditions of this permit.

SIGNATURE OF APPLICANT: _____ **DATE:** _____
ISSUED BY: _____ **DATE:** _____
SIGNATURE
INSPECTED BY: _____ **FINAL INSPECTION DATE:** _____

APPLICATION FEE (includes the first day):	$ 505.00
0 additional days at $62/day:	$ -
TOTAL FEES:	**$ 505.00**

ATTACHMENT:
☒YES Traffic Control Plan
☐NO

CREDIT ☐ **CHECK** ☐ **CASH** ☐
Provide Check # or type of credit (VS, MC, or D) and last 4 digits

Distribution: **Original** – Inspector **Copies**: Applicant, Police Department, and Finance

PERMIT VALID FOR DAYS
See other side for General Requirements

GENERAL REQUIREMENTS FOR ALL JOBS

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Applicant shall procure and maintain insurance as set forth in Exhibit B, attached hereto and incorporated herein by this reference, against claims for injury to persons or damage to property arising from or in connection with this permit.

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I. Traffic conditions and adequate protection of the public in the vicinity of the stall(s) shall be the responsibility of the applicant. At night, weekends, and holidays, a minimum of two 12-foot wide travel lanes shall be safe and passable

J. Applicant/Permittee is responsible for complying with all applicable water quality standards adopted by the City, County, State or other jurisdictional or properly empowered regulatory agency.

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Special Risks or Circumstances. CITY reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

Radio Frequency Emissions Compliance Report For AT&T Mobility

Site Name:	**CRAN_RSFR_LOSA0_06**	**Site Structure Type:**	**Utility Pole**
Address:	**791 Los Altos Avenue**	**Latitude:**	**37.396761**
	Los Altos , California	**Longitude:**	**-122.121247**
Report Date:	**October 29, 2018**	**Project:**	**New Build**

General Summary

AT&T Mobility has contracted Waterford Consultants, LLC to conduct a Radio Frequency Electromagnetic Compliance assessment of the proposed CRAN_RSFR_LOSA0_06 site located at 791 Los Altos Avenue, Los Altos , California. This report contains information about the radio telecommunications equipment to be installed at this site and the surrounding environment with regard to RF Hazard compliance. This assessment is based on installation designs and operational parameters provided by AT&T Mobility.

The compliance framework is derived from the Federal Communications Commission (FCC) Rules and Regulations for preventing human exposure in excess of the applicable Maximum Permissible Exposure ("MPE") limits. At any location at this site, the power density resulting from each transmitter may be expressed as a percentage of the frequency-specific limits and added to determine if 100% of the exposure limit has been exceeded. The FCC Rules define two tiers of permissible exposure differentiated by the situation in which the exposure takes place and/or the status of the individuals who are subject to exposure. General Population / Uncontrolled exposure limits apply to those situations in which persons may not be aware of the presence of electromagnetic energy, where exposure is not employment-related, or where persons cannot exercise control over their exposure. Occupational / Controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment, have been made fully aware of the potential for exposure, and can exercise control over their exposure. Based on the criteria for these classifications, the FCC General Population limit is considered to be a level that is safe for continuous exposure time. The FCC General Population limit is 5 times more restrictive than the Occupational limits.

	Limits for General Population/ Uncontrolled Exposure		***Limits for Occupational/ Controlled Exposure***	
Frequency (MHz)	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
30-300	0.2	30	1	6
300-1500	f/1500	30	f/300	6
1500-100,000	1.0	30	5.0	6

f=Frequency (MHz)

In situations where the predicted MPE exceeds the General Population threshold in an accessible area as a result of emissions from multiple transmitters, FCC licensees that contribute greater than 5% of the aggregate MPE share responsibility for mitigation.

Based on the computational guidelines set forth in FCC OET Bulletin 65, Waterford Consultants, LLC has developed software to predict the overall Maximum Permissible Exposure possible at any particular location given the spatial orientation and operating parameters of multiple RF sources. These theoretical results represent worst-case predictions as emitters are assumed to be operating at 100% duty cycle.

For any area in excess of 100% General Population MPE, access controls with appropriate RF alerting signage must be put in place and maintained to restrict access to authorized personnel. Signage must be posted to be visible upon approach from any direction to provide notification of potential conditions within these areas. Subject to other site security requirements, occupational personnel should be trained in RF safety and equipped with personal protective equipment (e.g. RF personal monitor) designed for safe work in the vicinity of RF emitters. Controls such as physical barriers to entry imposed by locked doors, hatches and ladders or other access control mechanisms may be supplemented by alarms that alert the individual and notify site management of a breach in access control. Waterford Consultants, LLC recommends that any work activity in these designated areas or in front of any transmitting antennas be coordinated with all wireless tenants.

Analysis

AT&T Mobility proposes the following installation at this location:

- Install 1 KMW FX-OM2LIOH2 Cylindrical Antenna
- Install 1 4415 Radio
- Install 1 RRUS-11 Radio

The antenna will be mounted on a 38.4-foot Utility Pole with a centerline 46.6 feet above ground level. The antenna is quasi-omnidirectional and will radiate in all directions. The Effective Radiated Power (ERP) in any direction from all AT&T Mobility operations will not exceed 987 Watts. Other appurtenances such as GPS antennas, RRUs and hybrid cable are not sources of RF emissions. From this site, AT&T Mobility will enhance voice and data services to surrounding areas in licensed 700 and 1900 MHz bands. No other antennas are known to be operating in the vicinity of this site.

Power density decreases significantly with distance from any antenna. The quasi-omnidirectional antenna to be employed at this site is operating at relatively low power and mounting elevation, as documented, serves to reduce the potential to exceed MPE limits at any location other than directly in front of the antenna. For accessible areas at ground level, the maximum predicted power density level resulting from all AT&T Mobility operations is 0.3945% of the FCC General Population limits. Incident at adjacent buildings depicted in Figure 1, the maximum predicted power density level resulting from all AT&T Mobility operations is 0.9775% of the FCC General Population limits. The proposed operation will not expose members of the General Public to hazardous levels of RF energy and will not contribute to existing cumulative MPE levels on walkable surfaces at ground or at adjacent buildings by 5% of the General Population limits.

For areas on the pole that are predicted to exceed the General Population limits, Waterford Consultants, LLC recommends that AT&T Mobility post an RF alerting sign (Caution) on the pole 41 feet above ground level to be visible upon approach by authorized personnel to provide notification of potential conditions above this level. This recommendation is depicted in Figure 2. Any work activity in front of transmitting antennas should be coordinated with AT&T Mobility.

Figure 1: Antenna Locations

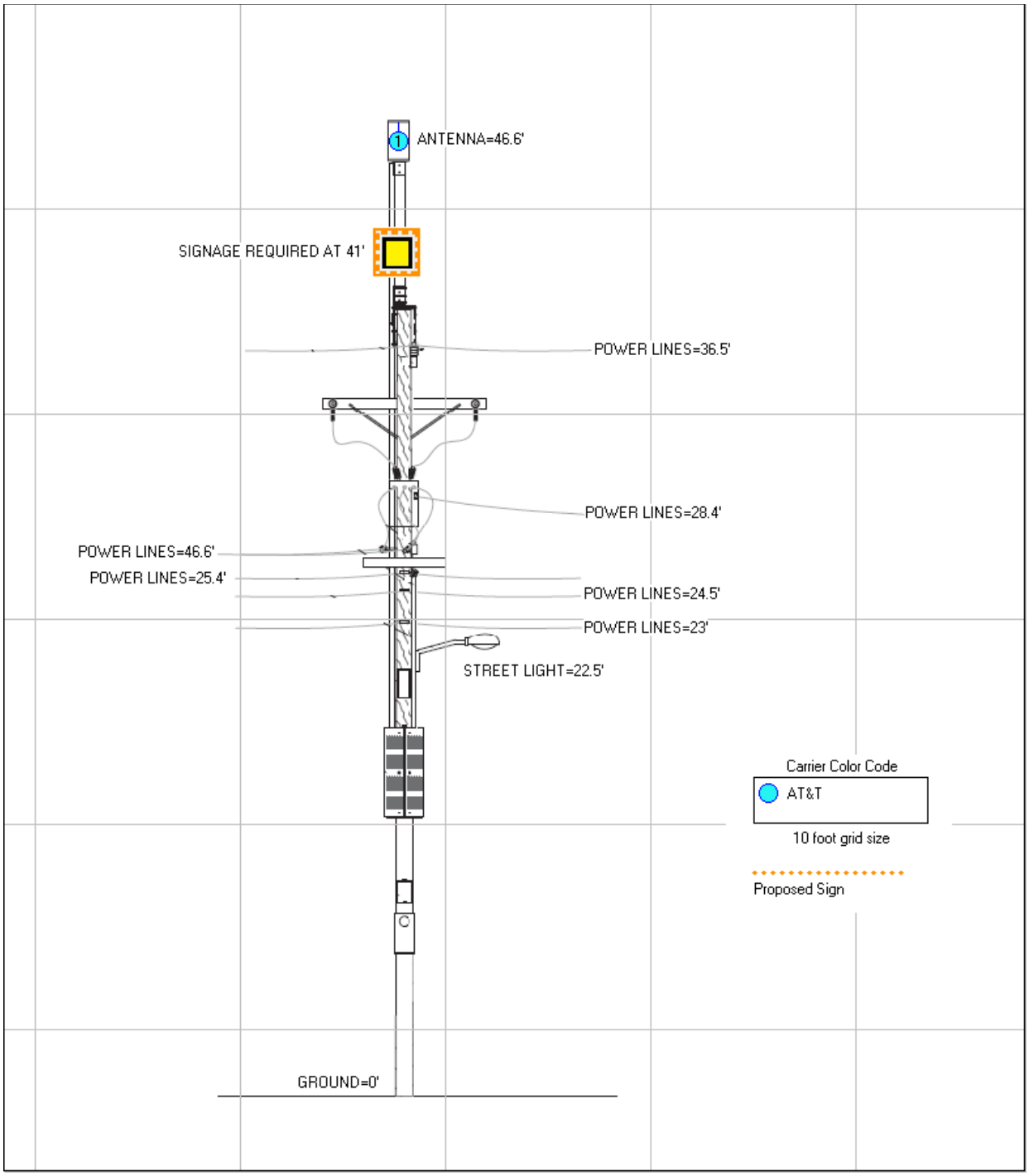


Figure 2: Mitigation Recommendations

Caution

Compliance Statement

Based on information provided by AT&T Mobility, predictive modeling and the mitigation action to be implemented by AT&T Mobility, the installation proposed by AT&T Mobility at 791 Los Altos Avenue, Los Altos , California will be compliant with Radiofrequency Radiation Exposure Limits of 47 C.F.R. § 1.1307(b)(3) and 1.1310. RF alerting signage and restricting access to these areas to authorized personnel that have completed RF safety training is required for Occupational environment compliance.

Certification

I, David H. Kiser, am the reviewer and approver of this report and am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation, specifically in accordance with FCC's OET Bulletin 65. I have reviewed this Radio Frequency Exposure Assessment report and believe it to be both true and accurate to the best of my knowledge.

PRECISION DESIGN

October 25, 2018

Suresite for AT&T
36 Executive Park, Suite 210
Irvine, CA 92614

Subj: CRAN_RSFR_LOSA0_006

We have analyzed the wood pole at ROW adjacent to 791 Los Altos Avenue, Los Altos, CA 94022 (37.3967610, -122.1212470) using O-Calc Pro 5.03 Utility Pole software.

Data for the wood pole was obtained from a previous site walk and photographs on May 23, 2018, as well as Google Earth images. Proposed equipment is provided by our client. Based on our analysis the pole with proposed loading is at 41.0% capacity and may be **considered adequate to support the proposed loads.**

Please contact me if you have any questions.

Sincerely,

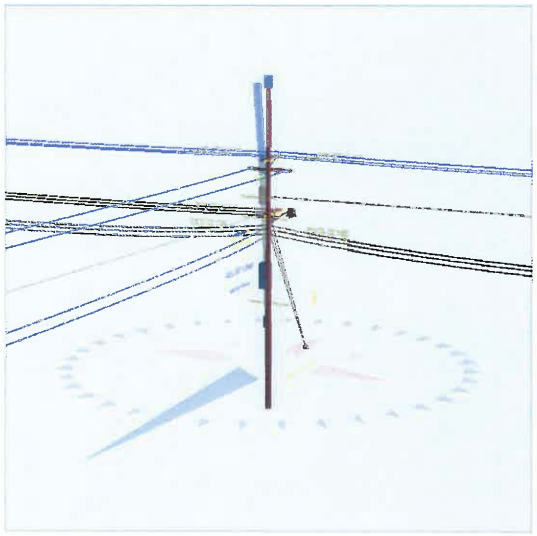
Bret McComb, P.E.

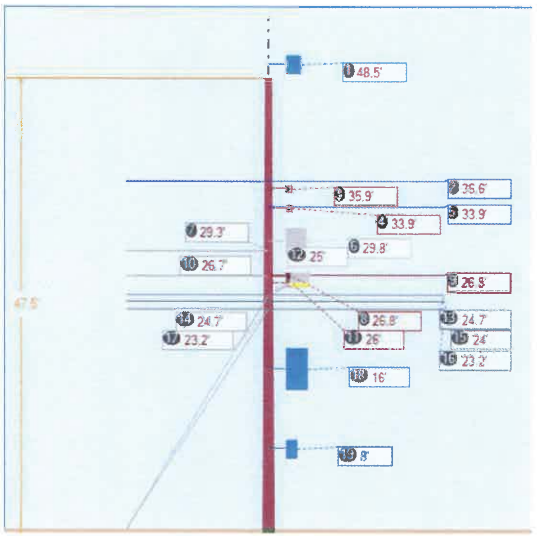
Attachments:

1. O-Calc Output: 6 pages
2. Pole Size Chart: 1 page

11768 Atwood Rd, Suite 20, Auburn, CA 95603 Tel: (530) 823-6546 bret@pdnd.com

Pole Num:	**CRAN_RSFR_LOSA0_06**	Pole Length / Class:	**55 / 3**	Code:	**GO 95**	Structure Type:	**Guyed Tangent**
Aux Data 1	**Unset**	Species:	**DOUGLAS FIR**	NESC Rule:	**-**	Status	**Guy Wires Adequate**
Aux Data 2	**Unset**	Setting Depth (ft):	**7.50**	Construction Grade:	**B**	Pole Strength Factor:	**0.50**
Aux Data 3	**Unset**	G/L Circumference (in):	**39.96**	Loading District:	**Light**	Transverse Wind LF:	**1.00**
Aux Data 4	**Unset**	G/L Fiber Stress (psi):	**8,000**	Ice Thickness (in):	**0.00**	Wire Tension LF:	**1.00**
Aux Data 5	**Unset**	Allowable Stress (psi):	**3,929**	Wind Speed (mph):	**55.90**	Vertical LF:	**1.00**
Aux Data 6	**Unset**	Fiber Stress Ht. Reduc:	**No**	Wind Pressure (psf):	**8.00**		
Latitude:	**37.396761 Deg**	Longitude:		**-122.121247 Deg**		Elevation:	**99.9 Feet**





Pole Capacity Utilization (%) Crossarm allowance 300 lbs		Height (ft)	Wind Angle (deg)
Maximum	**41.0**	27.0	355.6
Groundline	**12.7**	0.0	88.6
Vertical	**5.4**	24.6	90.0

Pole Moments (ft-lb) Crossarm allowance 300 lbs		Load Angle (deg)	Wind Angle (deg)
Max Cap Util	**11,086**	347.8	355.6
Groundline	**5,379**	70.7	88.6
GL Allowable	**66,167**		

Guy System Component Summary				Load From Worst Wind Angle on Pole		Individual Maximum Load	
Description	**Lead Length (ft)**	**Lead Angle (deg)**	**Height (ft)**	**Nominal Capacity (%)**	**Wind Angle (deg)**	**Max Load Capacity (%)**	**Wind Angle (deg)**
▸ Anchor	190.0	270.0		**5.9**	355.6	**10.2**	90.0
• EHS 3/8 (Span/Head)			29.3	**7.7**	355.6	**13.2**	90.0
▸ Anchor	200.0	0.0		**0.0**	355.6	**0.0**	0.0
• EHS 3/8 (Span/Head)			26.7	**0.0**	355.6	**0.0**	0.0
▸ Single - 14" - Soil Class 4	15.0	180.0		**31.4**	355.6	**31.5**	0.0
• HS 9/32 (Down)			26.7	**58.1**	355.6	**58.1**	0.0
• HS 9/32 (Down)			24.7	**49.9**	355.6	**49.9**	0.0
• HS 9/32 (Down)			23.2	**44.3**	355.6	**44.3**	0.0
			System Capacity Summary:	**Adequate**		**Adequate**	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 70.7°										
	Shear Load* (lbs)	**Applied Load (%)**	**Bending Moment (ft-lb)**	**Applied Moment (%)**	**Pole Capacity (%)**	**Bending Stress (+/- psi)**	**Vertical Load (lbs)**	**Vertical Stress (psi)**	**Total Stress (psi)**	**Pole Capacity (%)**
Powers	1,807	873.6	**39,522**	734.7	**59.7**	**3,029**	85	1	**3,029**	**77.1**
Comms	286	138.1	**5,286**	98.3	**8.0**	**405**	292	2	**407**	**10.4**
GuyBraces	-2,052	-992.1	**-42,482**	-789.8	**-64.2**	**-3,256**	6,371	50	**-3,205**	**-81.6**
PowerEquipments	11	5.2	**372**	6.9	**0.6**	**29**	335	3	**31**	**0.8**
GenericEquipments	43	21.0	**667**	12.4	**1.0**	**51**	160	1	**52**	**1.3**
Pole	82	39.4	**1,467**	27.3	**2.2**	**112**	1,599	13	**125**	**3.2**
Crossarms	20	9.8	**420**	7.8	**0.6**	**32**	215	2	**34**	**0.9**
Streetlights	6	2.8	**20**	0.4	**0.0**	**2**	45	0	**2**	**0.0**
Insulators	5	2.3	**107**	2.0	**0.2**	**8**	73	1	**9**	**0.2**
Pole Load	207	100.0	**5,379**	100.0	**8.1**	**412**	9,175	72	**484**	**12.3**
Pole Reserve Capacity			**60,788**		**91.9**	**3,517**			**3,444**	**87.7**

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 70.7°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
<Undefined>	125	60.6	**3,912**	72.7	**5.9**	**300**	7,576	60	**359**	**9.1**
Pole	82	39.4	**1,467**	27.3	**2.2**	**112**	1,599	13	**125**	**3.2**
Totals:	207	100.0	**5,379**	100.0	**8.1**	**412**	9,175	72	**484**	**12.3**

Detailed Load Components:

Power		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Primary	AAC 1 AWG 7 STRAND PANSY		36.60	16.18	0.3280	1.65	0.078	164.0	90.0	164.0	500	17,283	0	216	17,499
Primary	AAC 1 AWG 7 STRAND PANSY		36.60	16.18	0.3280	2.03	0.078	190.0	270.0	190.0	500	-17,283	0	250	-17,034
Primary	AAC 1 AWG 7 STRAND PANSY		36.60	40.46	0.3280	1.65	0.078	164.0	90.0	164.0	500	17,283	4	216	17,504
Primary	AAC 1 AWG 7 STRAND PANSY		36.60	40.46	0.3280	2.03	0.078	190.0	270.0	190.0	500	-17,283	5	250	-17,029
Primary	AAC 1 AWG 7 STRAND PANSY		36.60	40.46	0.3280	1.65	0.078	164.0	90.0	164.0	500	17,283	-10	216	17,489
Primary	AAC 1 AWG 7 STRAND PANSY		36.60	40.46	0.3280	2.03	0.078	190.0	270.0	190.0	500	-17,283	-12	250	-17,045
Primary	AAC 1 AWG 7 STRAND PANSY		33.92	40.54	0.3280	2.21	0.078	200.0	0.0	200.0	492	5,506	-3	-53	5,450
Primary	AAC 1 AWG 7 STRAND PANSY		33.92	40.54	0.3280	2.21	0.078	200.0	0.0	200.0	492	5,506	3	-53	5,456
Secondary	TRIPLEX 6 AWG		26.75	6.16	0.5800	2.10	0.113	164.0	90.0	164.0	500	12,626	4	279	12,908
Secondary	TRIPLEX 6 AWG		26.75	40.47	0.5800	2.10	0.113	164.0	90.0	164.0	500	12,626	2	279	12,907
Secondary	TRIPLEX 6 AWG		26.75	40.47	0.5800	2.10	0.113	164.0	90.0	164.0	500	12,626	-1	279	12,904
											Totals:	**48,890**	**-9**	**2,129**	**51,010**

Comm		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Telco	TELE 1.0		24.67	7.46	1.0000	4.32	0.400	164.0	90.0	164.3	400	9,315	7	444	9,766
Telco	TELE 1.0		24.67	7.46	1.0000	4.77	0.400	190.0	270.0	190.2	500	-11,644	8	514	-11,122
Telco	TELE 1.0		24.67	7.46	1.0000	4.32	0.400	200.0	0.0	200.1	700	5,697	-23	-118	5,556
Telco	TELE 1.0		23.17	7.54	1.0000	4.32	0.400	164.0	90.0	164.3	400	8,749	7	417	9,172
Telco	TELE 1.0		23.17	7.54	1.0000	4.77	0.400	190.0	270.0	190.2	500	-10,936	8	483	-10,445
Telco	TELE 1.0		23.17	7.54	1.0000	4.32	0.400	200.0	0.0	200.1	700	5,351	-24	-111	5,216
Telco	TELE 1.0		24.00	7.50	1.0000	4.32	0.400	164.0	90.0	164.3	400	9,062	7	432	9,501

Telco	TELE 1.0	24.00	7.50	1.0000	4.77	0.400	190.0	270.0	190.2	500	-11,328	8	500	-10,820
										Totals:	**4,267**	**-3**	**2,559**	**6,823**

PowerEquipment		**Owner**	**Height (ft)**	**Horiz. Offset (in)**	**Offset Angle (deg)**	**Rotate Angle (deg)**	**Unit Weight (lbs)**	**Unit Height (in)**	**Unit Depth (in)**	**Unit Diameter (in)**	**Unit Length (in)**	**Offset Moment* (ft-lb)**	**Wind Moment* (ft-lb)**	**Moment at GL* (ft-lb)**
Transformer	1PH-15KVA		29.75	17.67	0.0	0.0	335.00	34.00	--	22.00	--	163	318	480
											Totals:	**163**	**318**	**480**

GenericEquipment		**Owner**	**Height (ft)**	**Horiz. Offset (in)**	**Offset Angle (deg)**	**Rotate Angle (deg)**	**Unit Weight (lbs)**	**Unit Height (in)**	**Unit Depth (in)**	**Unit Diameter (in)**	**Unit Length (in)**	**Offset Moment* (ft-lb)**	**Wind Moment* (ft-lb)**	**Moment at GL* (ft-lb)**
Box	Housing For RRUs		16.00	13.45	0.0	0.0	130.00	53.00	16.00	--	23.00	48	484	532
Box	100amp Meter		8.00	8.22	0.0	0.0	10.00	24.00	4.63	--	12.00	2	62	64
Cylinder	Antenna-KMW FX-OM2LI OH2		48.50	0.40	0.0	0.0	20.00	24.00	--	16.00	--	0	266	266
											Totals:	**50**	**811**	**861**

Crossarm		**Owner**	**Height (ft)**	**Horiz. Offset (in)**	**Offset Angle (deg)**	**Rotate Angle (deg)**	**Unit Weight (lbs)**	**Unit Height (in)**	**Unit Depth (in)**	**Unit Length (in)**	**Offset Moment* (ft-lb)**	**Wind Moment* (ft-lb)**	**Moment at GL* (ft-lb)**
Normal	CROSSARM 3-1/2 X 4-1/2 X 8		35.92	6.07	270.0	270.0	53.00	4.50	3.50	96.00	-25	-83	-108
Normal	CROSSARM 3-1/2 X 4-1/2 X 8		33.92	6.18	180.0	180.0	53.00	4.50	3.50	96.00	-9	425	416
Normal	CROSSARM 3-1/2 X 4-1/2 X 8		26.75	6.59	270.0	270.0	53.00	4.50	3.50	96.00	-27	-62	-89
Normal	CROSSARM 3-1/2 X 4-1/2 X 4		26.00	6.63	0.0	0.0	28.00	4.50	3.50	48.00	5	162	167
Normal	CROSSARM 3-1/2 X 4-1/2 X 4		26.00	6.63	180.0	180.0	28.00	4.50	3.50	48.00	-5	162	157
										Totals:	**-62**	**604**	**542**

Streetlight		**Owner**	**Height (ft)**	**Horiz. Offset (in)**	**Offset Angle (deg)**	**Rotate Angle (deg)**	**Unit Weight (lbs)**	**Unit Height (in)**	**Unit Depth (in)**	**Unit Diameter (in)**	**Unit Length (in)**	**Offset Moment* (ft-lb)**	**Wind Moment* (ft-lb)**	**Moment at GL* (ft-lb)**
General	Streetlight - 3 ft. Arm		25.00	4.94	270.0	270.0	45.00	24.00	20.00	3.00	36.00	-120	146	25
											Totals:	**-120**	**146**	**25**

Insulator		**Owner**	**Height (ft)**	**Horiz. Offset (in)**	**Offset Angle (deg)**	**Rotate Angle (deg)**	**Unit Weight (lbs)**	**Unit Diameter (in)**	**Unit Length (in)**	**Offset Moment* (ft-lb)**	**Wind Moment* (ft-lb)**	**Moment at GL* (ft-lb)**
Post	Post Insulator - 15 kV		36.10	15.00	338.0	0.0	11.00	4.75	6.00	-1	15	14
Post	Post Insulator - 15 kV		36.10	40.00	351.4	0.0	11.00	4.75	6.00	7	15	22
Post	Post Insulator - 15 kV		36.10	-40.00	188.6	0.0	11.00	4.75	6.00	-17	15	-3
Deadend	Deadend 12.75"		33.92	40.00	261.2	180.0	3.00	3.80	12.75	-9	23	15
Deadend	Deadend 12.75"		33.92	-40.00	98.8	180.0	3.00	3.80	12.75	10	23	33

Deadend	Deadend 12.75"	26.75	0.00	270.0	180.0	3.00	3.80	12.75	1	19	20
Deadend	Deadend 12.75"	26.75	40.00	350.6	180.0	3.00	3.80	12.75	5	19	23
Deadend	Deadend 12.75"	26.75	-40.00	189.4	180.0	3.00	3.80	12.75	-2	19	17
Bolt	Single Bolt	24.67	0.00	0.0	0.0	5.00	3.00	0.00	1	0	1
Bolt	Single Bolt	24.67	0.00	270.0	270.0	5.00	3.00	0.00	-3	0	-3
Bolt	Single Bolt	23.17	0.00	0.0	0.0	5.00	3.00	0.00	1	0	1
Bolt	Single Bolt	23.17	0.00	270.0	270.0	5.00	3.00	0.00	-3	0	-3
Bolt	Single Bolt	24.00	0.00	0.0	0.0	5.00	3.00	0.00	1	0	1
								Totals:	**-9**	**147**	**138**

Guy Wire and Brace		Owner	Attach Height (ft)	End Height (ft)	Lead/Span Length (ft)	Wire Diameter (in)	Percent Solid (%)	Lead Angle (deg)	Incline Angle (deg)	Wire Weight (lbs/ft)	Rest Length (ft)	Stretch Length (in)
EHS 3/8	Span/Head		29.33	29.33	190.00	0.375	75.00	270.0	0.0	0.273	187.26	1.05
EHS 3/8	Span/Head		26.67	26.67	200.00	0.375	75.00	0.0	0.0	0.273	197.24	0.00
HS 9/32	Down		26.67	0.00	15.00	0.281	75.00	180.0	60.4	0.164	37.15	1.16
HS 9/32	Down		24.67	0.00	15.00	0.281	75.00	180.0	58.5	0.164	35.32	0.95
HS 9/32	Down		23.17	0.00	15.00	0.281	75.00	180.0	56.9	0.164	33.96	0.81

Guy Wire and Brace (Loads and Reactions)		Elastic Modulus (psi)	Rated Tensile Strength (lbs)	Guy Strength Factor	Allowable Tension (lbs)	Initial Tension (lbs)	Loaded Tension*[2] (lbs)	Maximum Tension[2] (lbs)	Applied Tension[3] (lbs)	Vertical Load (lbs)	Shear Load In Guy Dir (lbs)	Shear Load At Report Angle (lbs)	Moment at GL[3] (ft-lb)
EHS 3/8	Span/Head	2.30e+7	15,400	0.75	11,550	700	1,522	1,522	888	0	888	-838	-24,394
EHS 3/8	Span/Head	2.30e+7	15,400	0.75	11,550	700	0	0	0	0	0	0	-39
HS 9/32	Down	2.30e+7	6,400	0.75	4,800	700	2,790	2,790	2,788	2,425	1,376	-454	-11,794
HS 9/32	Down	2.30e+7	6,400	0.75	4,800	700	2,396	2,396	2,394	2,041	1,251	-413	-9,930
HS 9/32	Down	2.30e+7	6,400	0.75	4,800	700	2,129	2,129	2,127	1,781	1,162	-383	-8,672
									Totals:	**6,247**	**4,676**	**-2,088**	**-54,830**

Anchor/Rod Load Summary	Owner	Rod Length AGL (in)	Lead Length (ft)	Lead Angle (deg)	Strength of Assembly (lbs)	Anchor/Rod Strength Factor	Allowable Load (lbs)	Max Load[2] (lbs)	Load at Pole MCU[3] (lbs)	Max Required Capacity[2] (%)
Anchor		30.00	190.00	270.0	20,000	0.75	15,000	1,522	888	10.1
Anchor		30.00	200.00	0.0	20,000	0.75	15,000	0	0	0.0
Single - 14" - Soil Class 4		0.00	15.00	180.0	31,000	0.75	23,250	7,312	7,306	31.5

Pole Buckling

Buckling Constant	Buckling Column Height* (ft)	Buckling Section Height (% Buckling Col. Hgt.)	Buckling Section Diameter (in)	Minimum Buckling Diameter at GL (in)	Diameter at Tip (in)	Diameter at GL (in)	Modulus of Elasticity (psi)	Pole Density (pcf)	Ice Density (pcf)	Pole Tip Height (ft)	Buckling Load Capacity at Height (lbs)	Buckling Load Applied at Height (lbs)	Buckling Load Factor of Safety
0.71	24.63	33.30	11.79	16.29	7.32	12.73	1.60e+6	60.00	57.00	47.50	170,998	**1699.06**	**18.52**

DOUGLAS FIR POLE SIZING CHART												
Class	**H-6**	**H-5**	**H-4**	**H-3**	**H-2**	**H-1**	**1**	**2**	**3**	**4**	**5**	**6**
Minimum Circumference at Top (Inches)	39	37	35	33	31	29	27	25	23	21	19	17
Length of Pole (Feet)	**Minimum Circumference at 6 feet from Butt (Inches)**											
20	-	-	-	-	-	-	31.0	29.0	27.0	25.0	23.0	21.0
25	-	-	-	-	-	-	33.5	31.5	29.5	27.5	25.5	23.0
30	-	-	-	-	-	-	36.5	34.0	32.0	29.5	27.5	25.0
35	-	-	-	-	43.5	41.5	39.0	36.5	34.0	31.5	29.0	27.0
40	-	-	51.0	48.5	46.0	43.5	41.0	38.5	36.0	33.5	31.0	28.5
45	58.5	56.0	53.5	51.0	48.5	45.5	43.0	40.5	37.5	35.0	32.5	30.0
50	61.0	58.5	55.5	53.0	50.5	47.5	45.0	42.0	39.0	36.5	34.0	-
55	63.5	60.5	58.0	55.0	52.0	49.5	46.5	43.5	40.5	38.0	-	-
60	65.5	62.5	59.5	57.0	54.0	51.0	48.0	45.0	42.0	39.0	-	-
65	67.5	64.5	61.5	58.5	55.5	52.5	49.5	46.5	43.5	40.5	-	-
70	69.0	66.5	63.5	60.5	57.0	54.0	51.0	48.0	45.0	41.5	-	-
75	71.0	68.0	65.0	62.0	59.0	55.5	52.5	49.0	46.0	-	-	-
80	72.5	69.5	66.5	63.5	60.0	57.0	54.0	50.5	47.0	-	-	-
85	74.5	71.5	68.0	65.0	61.5	58.5	55.0	51.5	48.0	-	-	-
90	76.0	73.0	69.5	66.5	63.0	59.5	56.0	53.0	49.0	-	-	-
95	77.5	74.5	71.0	67.5	64.5	61.0	57.0	54.0	-	-	-	-
100	79.0	76.0	72.5	69.0	65.5	62.0	58.5	55.0	-	-	-	-
105	80.5	77.0	74.0	70.5	67.0	63.0	59.5	56.0	-	-	-	-
110	82.0	78.5	75.0	71.5	68.0	64.5	60.5	57.0	-	-	-	-
115	83.5	80.0	76.5	72.5	69.0	65.5	61.5	58.0	-	-	-	-
120	85.0	81.0	77.5	74.0	70.0	66.5	62.5	59.0	-	-	-	-
125*	86.0	82.5	78.5	75.0	71.0	67.5	63.5	59.5	-	-	-	-
	H-6	**H-5**	**H-4**	**H-3**	**H-2**	**H-1**	**1**	**2**	**3**	**4**	**5**	**6**

* 125' Availability: Untreated Only

CRAN_RSFR_LOSAO_06

791 Los Altos Avenue Los Altos CA 94022

ARTISTIC engineering
AEsims.com
877.9AE.sims

View 1

Existing

Proposed Looking west from Portola Avenue

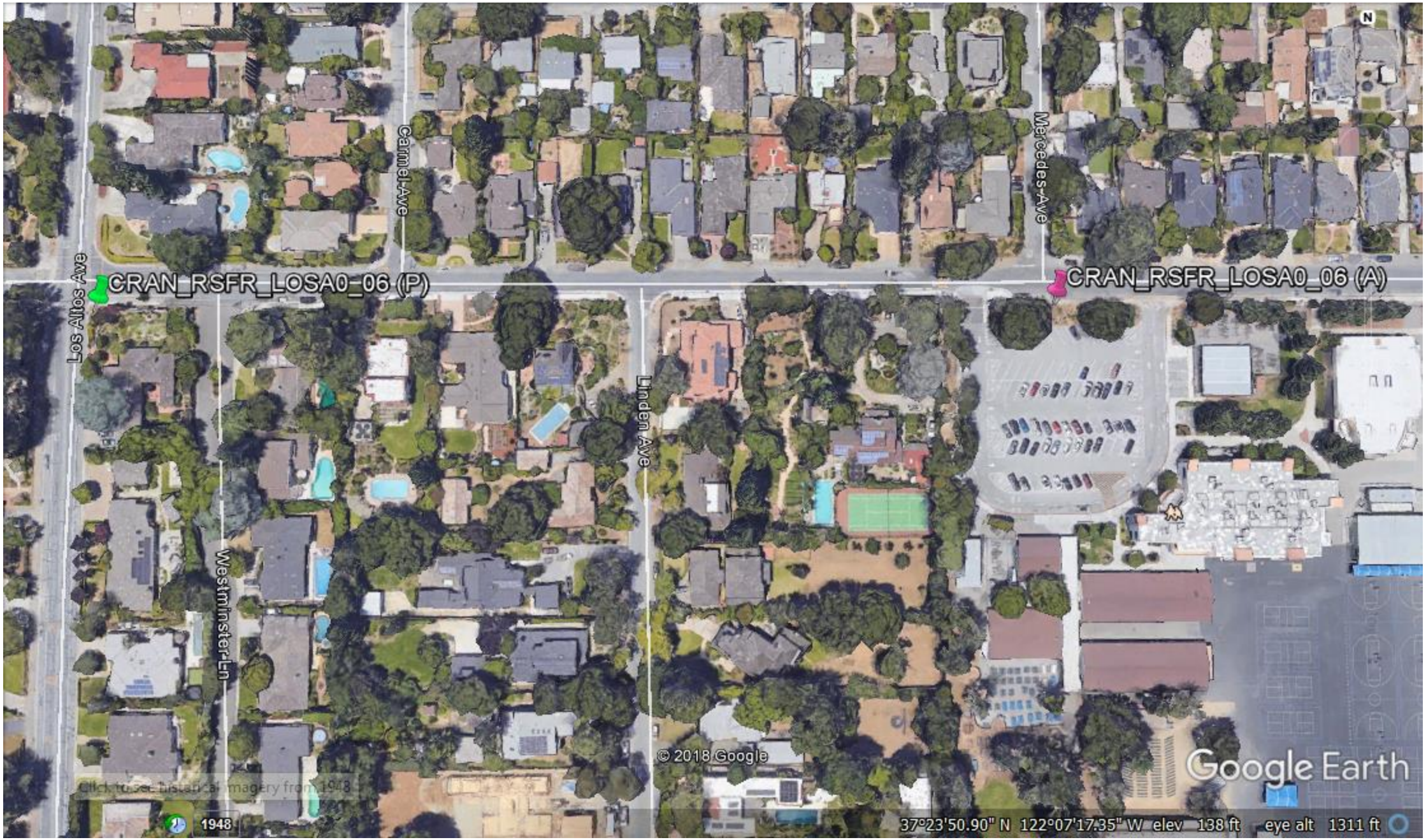
Accuracy of photo simulation based upon information provided by project applicant.

Alternate Review

- ❑ AT&T proposed a node location near West Portola Avenue and Linden Avenue
- ❑ Existing (traditional) cell sites are not suitable candidates for colocation as they do not meet network requirements
- ❑ One alternate location was considered

<u>Alternative Site Location</u>
This location is a wood utility pole located in the public ROW on the south side of West Portola Avenue where it intersects with Mercedes Avenue

This pole is considered a possible candidate but is located farther away from the center of the preferred location as required by our network needs. In addition, it is adjacent to a school.


Carmel Ave
Mercedes Ave
Los Altos Ave
CRAN_RSFR_LOSA0_06 (P)
CRAN_RSFR_LOSA0_06 (A)
Linden Ave
Westminster Ln
© 2018 Google
Google Earth
Click to see historical imagery from 1948
1948
37°23'50.90" N 122°07'17.35" W elev 138 ft eye alt 1311 ft

AT&T Future Build-out Sites

Name	Address
LOSA0_01	141 Almond Ave
LOSA0_02	687 Linden Ave
LOSA0_03	421 Valencia
LOSA0_04	33 Pine
LOSA0_05	49 San Juan
LOSA0_06	791 Los Altos
LOSA0_07	98 Eleanor
LOSA0_08	182 Garland
LOSA0_09	491 Patrick Way
LOSA0_10	300 Los Altos Ave
LOSA0_11	130 Los Altos
LOSA0_12	356 Blue Oak
SJWE_007	5000 El Camino Real
SJWE_012	4294 El Camino Real

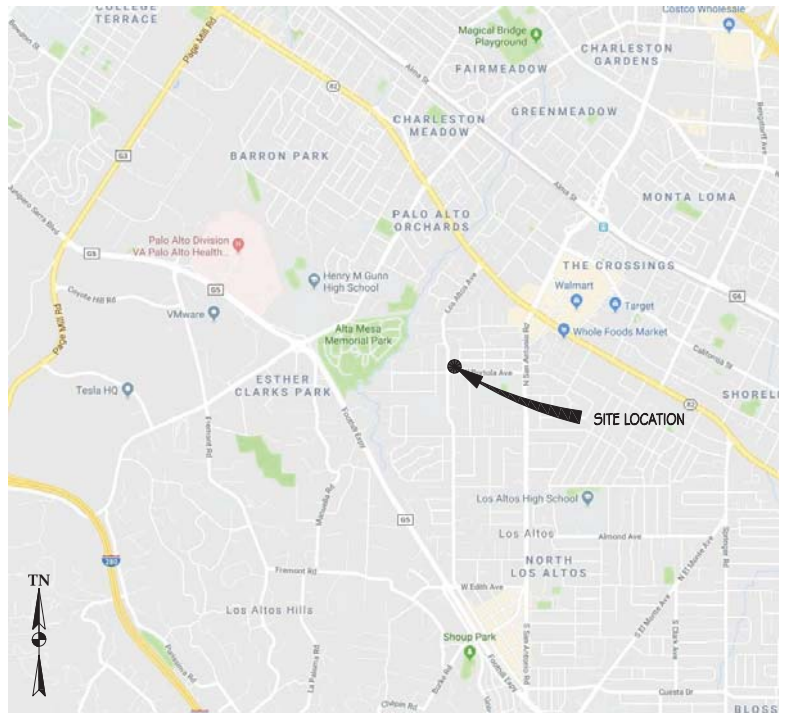
at&t

SITE ID:	CRAN_RSFR_LOSA0_06
SITE ADDRESS:	ROW ADJCT TO 791 LOS ALTOS AVE LOS ALTOS, CA 94022
SITE TYPE:	PG&E POLE (PM# 114474404)
POLE OWNER:	PG&E
FA LOCATION:	12898152
USID:	TBD

SITE INFORMATION

APPLICANT:	AT&T MOBILITY 5001 EXECUTIVE PARKWAY SAN RAMON, CA 94583
AGENT:	SURESITE 36 EXECUTIVE PARK, SUITE 210 IRVINE, CA 92614
APN:	ADJCT TO 167-21-034
SITE ADDRESS:	ROW ADJCT TO 791 LOS ALTOS AVE LOS ALTOS, CA 94022
COUNTY:	SANTA CLARA
LATITUDE:	37° 23' 48.39" N (37.3967610) NAD 83
LONGITUDE:	122° 07' 16.43" W (-122.1212470) NAD 83
GROUND ELEVATION:	±99.9' AMSL
ZONING:	PUBLIC ROW
ZONING JURISDICTION:	LOS ALTOS
PG&E SAP ID:	100508715
STREET CLASSIFICATION:	LOCAL COLLECTOR

VICINITY MAP



PROJECT TEAM

AGENT:
SURESITE
36 EXECUTIVE PARK, #210
IRVINE, CA 92614
(949) 278-2962
L.MEINERS@SURE-SITE.COM

PROJECT MANAGERS:
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6140 STONERIDGE MALL RD, SUITE 350
PLEASANTON, CA 94588
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CHRISTOPHER.JOHNSON@ERICSSON.COM

CONSTRUCTION MANAGER:
TBD

ARCHITECT/ENGINEER OF RECORD:
BRET McCOMB
PRECISION DESIGN & DRAFTING, INC
11768 ATWOOD ROAD, SUITE #20
AUBURN, CA 95603
(530) 823-6546
BRET@PDND.COM

RF MANAGER:
TBD

PROJECT DESCRIPTION

THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR AT&T WIRELESS CONSISTING OF THE INSTALLATION & OPERATION OF ANTENNAS & ASSOCIATED EQUIPMENT OF 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) LOAD CENTER/AC DISCONNECT, (1) CONCEALMENT BOX CONTAINING (1) RRU11 & (1) 4415 W/ PSU UNITS, (2) DIPLEXERS, & (1) KMW FX-OM2L10H2 CYLINDRICAL ANTENNA.
2. ALL EQUIPMENT TO BE PAINTED TO MEET JURISDICTION APPROVAL.
3. UTILITY LINES BETWEEN (E) POINT OF CONNECTION & POLE TO BE UNDERGROUND AND/OR OVERHEAD.

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
T-2	GENERAL NOTES, LEGEND, & ABBREVIATIONS
A-1	SITE PLAN
A-2	EQUIPMENT PLAN & ANTENNA PLANS
A-3	ELEVATIONS
A-4	ELEVATIONS
A-5	DETAILS
A-6	DETAILS
E-1	SINGLE-LINE DIAGRAM & DETAILS
E-2	GROUNDING DIAGRAMS
TR-1	TRAFFIC CONTROL PLAN

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: 791 LOS ALTOS AVE, LOS ALTOS, CA 94022

1.	HEAD NORTHEAST ON BISHOP DR TOWARD SUNSET DR	256	FT
2.	TURN RIGHT ONTO SUNSET DR	0.1	MI
3.	USE THE MIDDLE LANE TO TURN RIGHT ONTO BOLLING CANYON RD	0.3	MI
4.	USE THE RIGHT LANE TO MERGE ONTO I-680 S VIA THE RAMP TO SAN JOSE	0.3	MI
5.	MERGE ONTO I-680 S	3.9	MI
6.	CONTINUE STRAIGHT TO STAY ON I-680 S	17.5	MI
7.	TAKE EXIT 12 FOR MISSION BLVD/STATE ROUTE 262 TOWARD I-880	0.2	MI
8.	KEEP RIGHT AT THE FORK, FOLLOW SIGNS FOR MISSION LVD W MERGE ONTO CA-262	0.3	MI
9.	MERGE ONTO CA-262 S/MISSION BLVD	0.6	MI
10.	USE THE LEFT 2 LANES TO TAKE THE EXIT TOWARD I-880 S/SAN JOSE	0.9	MI
11.	MERGE ONTO I-880 S	3.1	MI
12.	USE THE RIGHT 2 LANES TO TAKE THE CA-237 W EXIT TOWARD MTN VIEW	0.9	MI
13.	CONTINUE ONTO CA-237 W	8.4	MI
14.	KEEP LEFT TO CONTINUE ON CA-237 W/SOUTHBAY FWY	0.5	MI
15.	TURN RIGHT ONTO EL CAMINO REAL	2.3	MI
16.	TURN LEFT ONTO JORDAN AVE	0.2	MI
17.	TURN RIGHT ONTO E PORTOLA AVE	0.6	MI

END AT: 791 LOS ALTOS AVE, LOS ALTOS, CA 94022

ESTIMATED TIME: 48 MINS ESTIMATED DISTANCE: 40 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

SURESITE
wireless advance experts. smart cell access.
36 EXECUTIVE PARK, SUITE 210
IRVINE, CA 92614

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_LOSA0_06

ROW ADJCT TO 791 LOS ALTOS AVE
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/13/18	CD 90%
	10/29/18	CD 100%

DRAWN BY:	O. REDDISH
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/29/18
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 SURVEYORS 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 HIGHER 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.

15. ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION OR SHTUDOWN SIGNAGE) OR PG&E REGULATIONS SHALL BE PAINTED OVER OR REMOVED. RAISED/DEPRESSED LOGOS OR TEXT ON EQUIPMENT (E.G. RRUS), IF PRESENT, TO BE SANDED OFF OR COVERED WITH STICKER, & THEN PAINTED OVER.

16. FONDATED RF WAC MARNING SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD THE BUILDING IF THERE IS NO WINDOW.

17. ALL EQUIPMENT, INCLUDING ANTENNAS, MOUNTING/STANDOFF BRACKETS, POLE EXTENSIONS, CONDUIT, METER, AND RADIOS SHALL BE PAINTED MESA BROWN USING A DURABLE OUTDOOR PAINT.

18. CABLING SHALL BE MESA BROWN IN COLOR AND SHALL BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS, & SHALL BE HIDDEN FROM VIEW TO THE MAXIMUM EXTENT POSSIBLE.

19. SUPPORT EQUIPMENT (E.G. METERS, DISCONNECT SWITCH, ETC) TO BE CLUSTERED VERTICALLY AS CLOSE AS TECHNICALLY FEASIBLE ON POLE.

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 PDMD 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.

ABBREVIATIONS

A	AMPERE
AB	ANCHOR BOLT
ABV	ABOVE
ACCA	ANTENNA CABLE COVER ASSEMBLY
ADDL	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
BTCW	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	GALVANIZED
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
IGSB	ISOLATED COPPER GROUND BUSS
IN, (")	INCH(ES)
INT	INTERIOR
LB, (#)	POUND(S)
LAG	LAG BOLTS
LF	LINEAR FEET (FOOT)
LTH	LENGTH
L	LONGITUDINAL)
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	THICKNESS)
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

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 #WRG-307 OR 1/50W, HUBBELL LIGHTING CATALOG #WRG-121
- EXIT SIGN, THERMOPLASTIC LED, SINGLE FACE, UNIVERSAL MOUNTING, W/BATTERY PACK, HUBBELL LIGHTING CATALOG #PRB
- COMBINATION, EXIT SIGN & EMERGENCY LIGHTING, HUBBELL LIGHTING CATALOG #PRC
- EMERGENCY LIGHTING, 2/50W, HUBBELL LIGHTING CATALOG #HEG-50-2-R91
- LIGHTING FIXTURE, INCANDESCENT, 1/100W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #RR1-100-CG-1
- LIGHTING FIXTURE, HALOGEN, QUARTZ, 1/300W, HUBBELL LIGHTING CATALOG #QL-505
- LIGHTING FIXTURE, 1/175W. METAL HALIDE, 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

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CRAN_RSFR_LOSAO_06

ROW ADJCT TO 791 LOS ALTOS AVE
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/13/18	CD 90%
	10/29/18	CD 100%

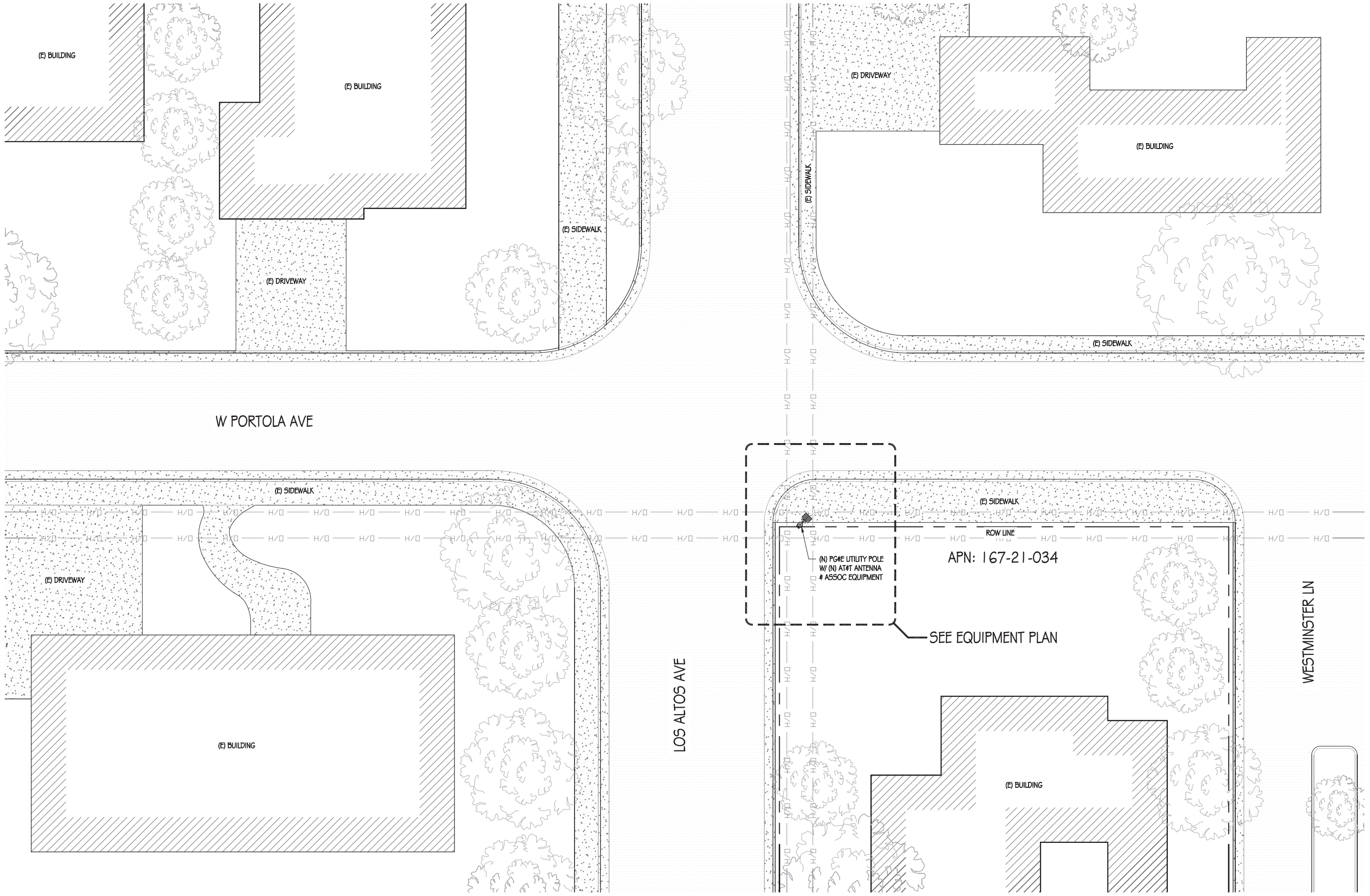
DRAWN BY:	O. REDDISH
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/29/18

SHEET TITLE:

GENERAL NOTES, LEGEND, & ABBREVIATIONS

SHEET NUMBER

T-2



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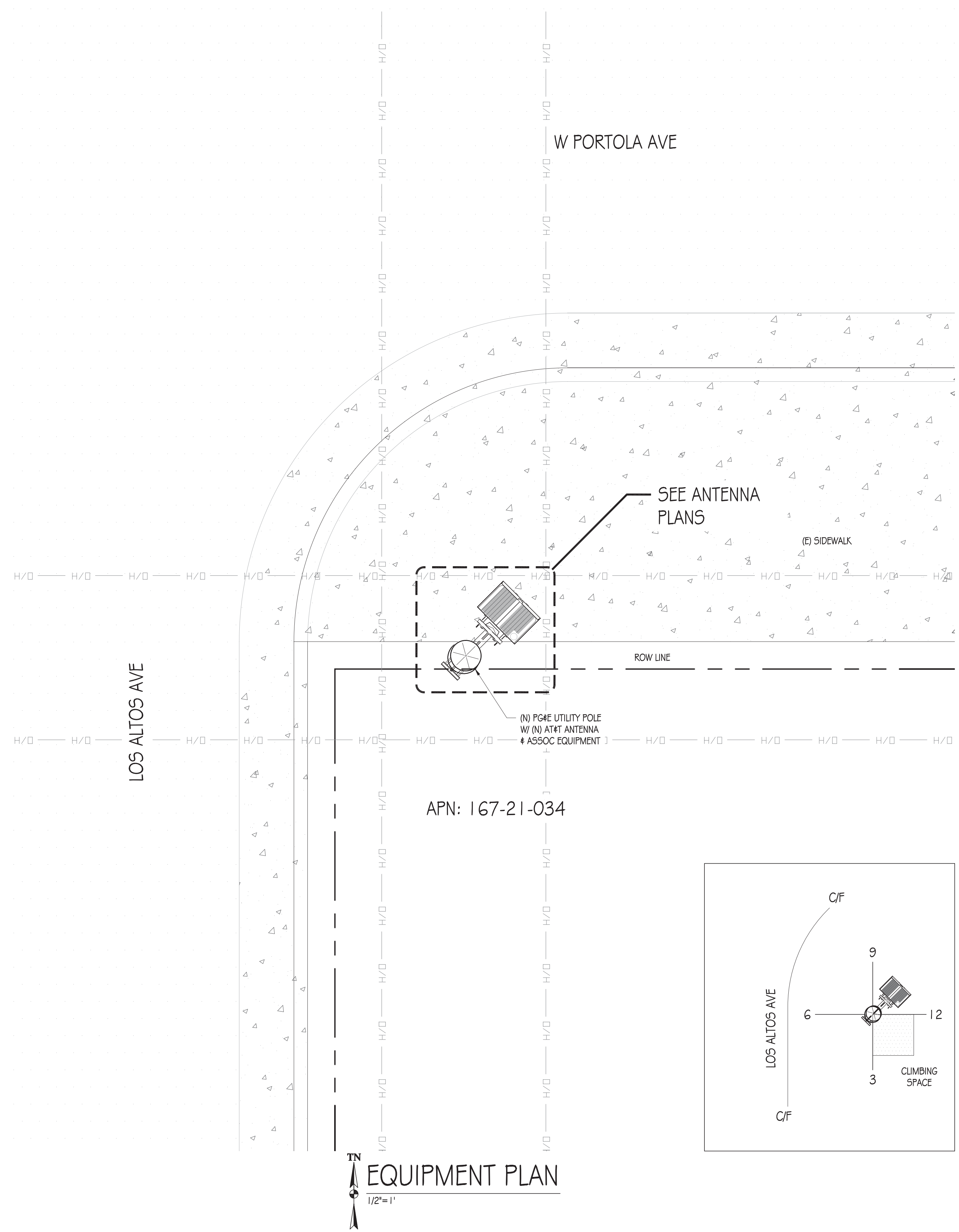
SHEET TITLE:

SITE PLAN

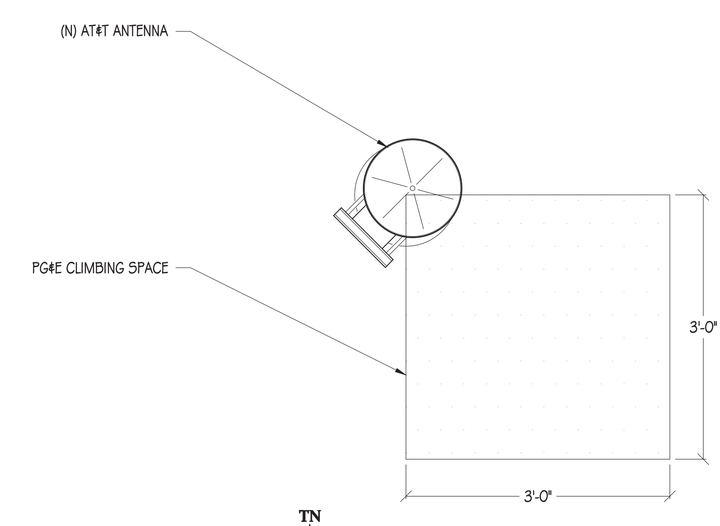
SHEET NUMBER

A-1



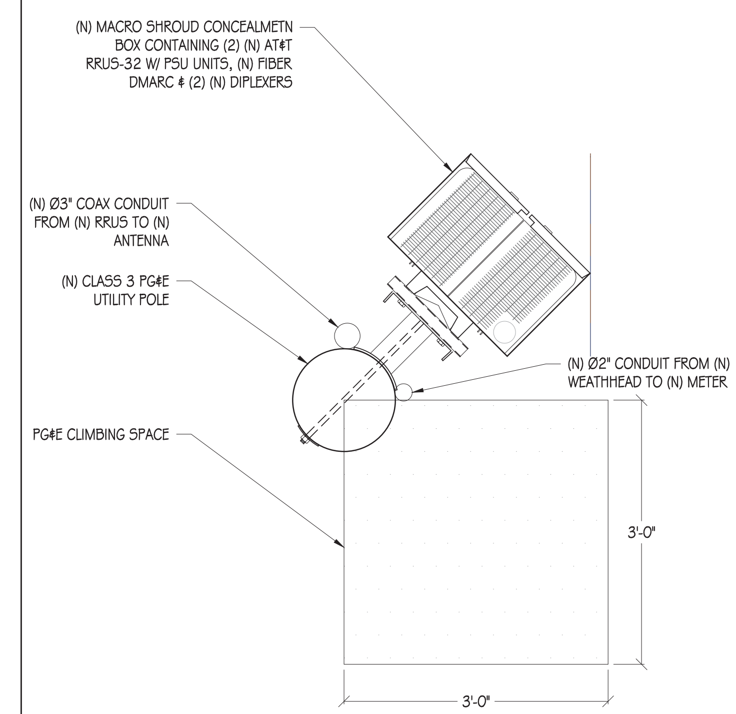
EQUIPMENT PLAN

1/2"= 1'



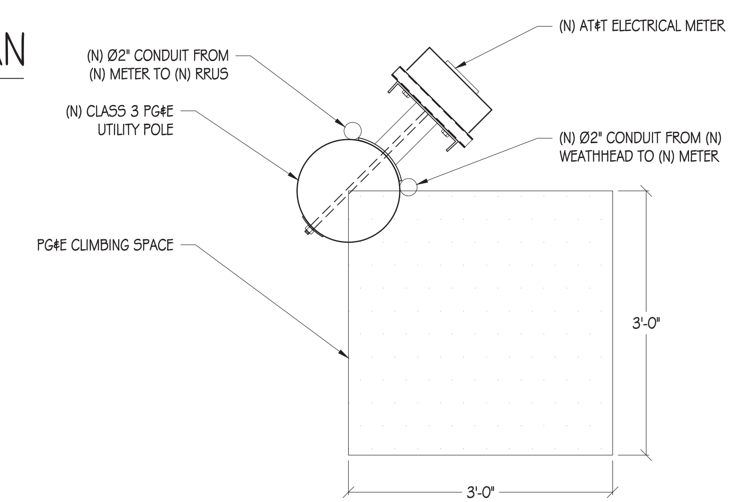
ANTENNA PLAN

1"= 1'



RRH PLAN

1"= 1'



ELECTRICAL METER PLAN

1"= 1'

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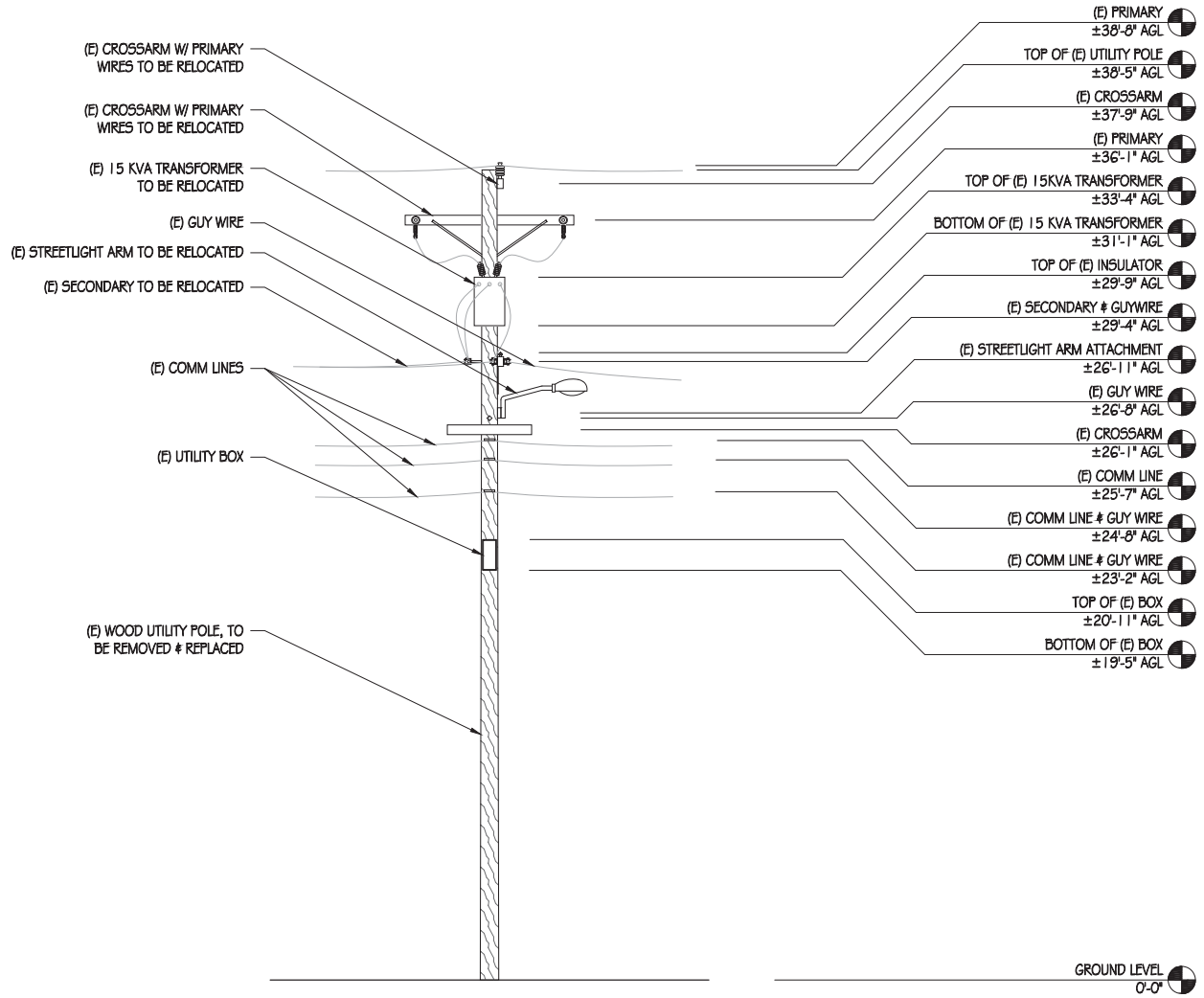
APPROVED BY:	B. McCOMB
DATE:	10/29/18

SHEET TITLE:

EQUIPMENT PLAN & ANTENNA PLANS

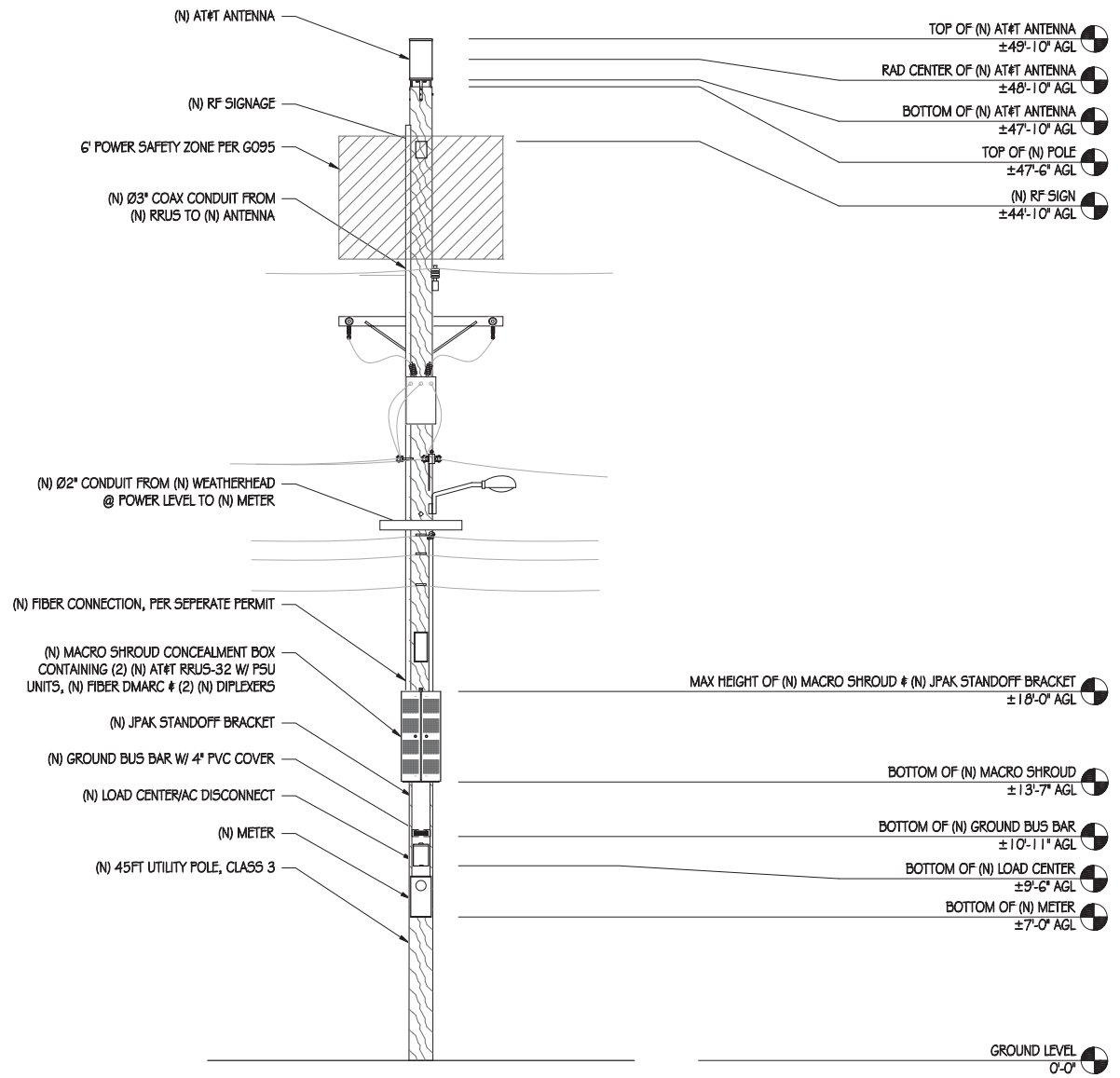
SHEET NUMBER

A-2



EXISTING NORTH ELEVATION

1/4"= 1'-0"



NEW NORTH ELEVATION

1/4"= 1'-0"

NOTE: ALL (N) EQUIPMENT TO BE PAINTED MESA BROWN
NOTE: ALL (E) EQUIPMENT TO BE REMOUNTED AT SAME ELEVATION ON (N) POLE

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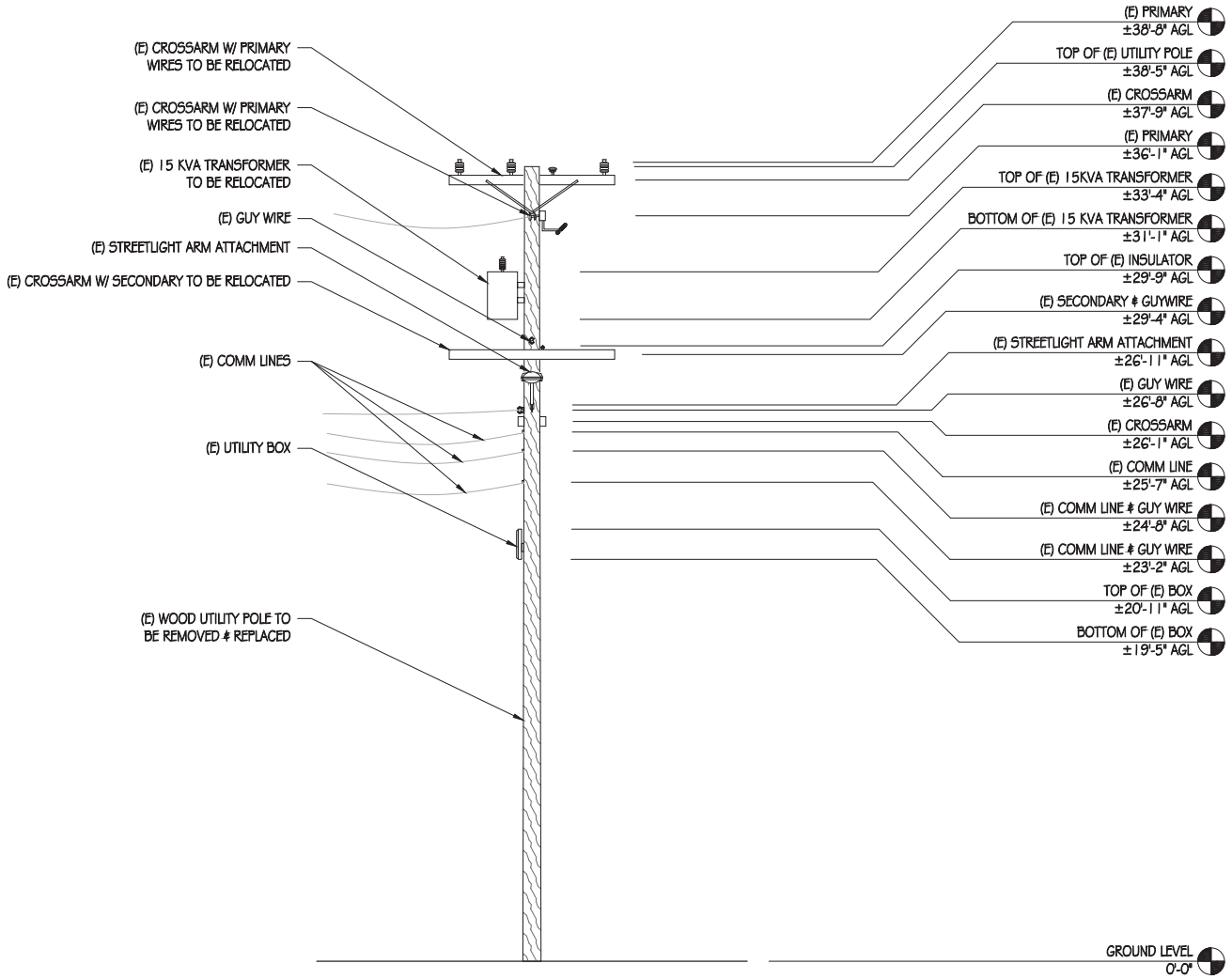
DATE:	10/29/18

SHEET TITLE:

ELEVATIONS

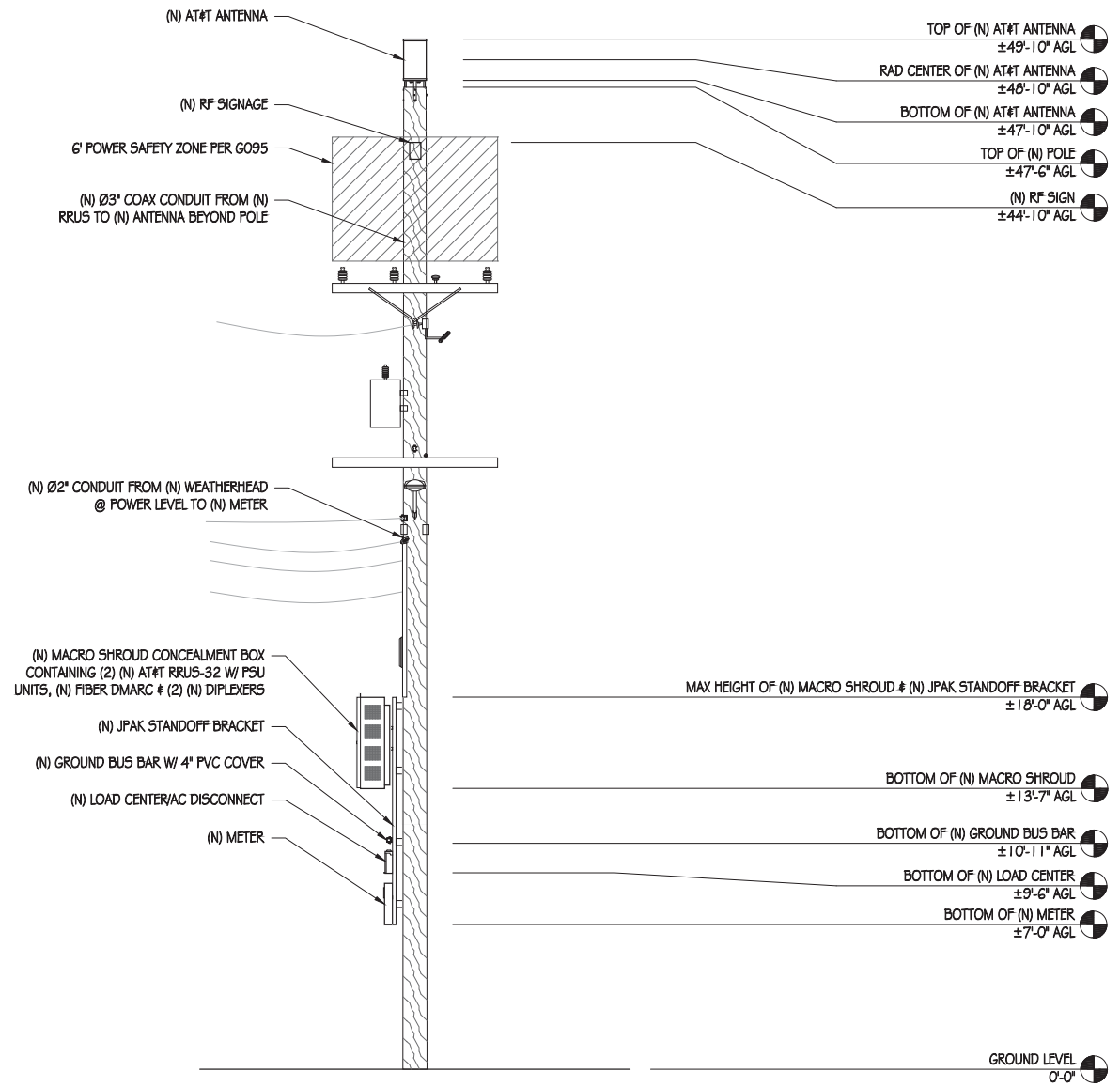
SHEET NUMBER

A-3



EXISTING WEST ELEVATION

1/4"=1'-0"



NEW WEST ELEVATION

1/4"=1'-0"

NOTE: ALL (N) EQUIPMENT TO BE PAINTED MESA BROWN
NOTE: ALL (E) EQUIPMENT TO BE REMOUNTED AT SAME ELEVATION ON (N) POLE

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APPROVED BY:	B. McCOMB
DATE:	10/29/18

SHEET TITLE:

ELEVATIONS

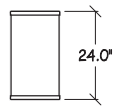
SHEET NUMBER

A-4

KMW FX-OM2L10H2-06T

WIND AREA:	2.67 SQ FT
WEIGHT:	34.2 LBS
DIMENSIONS:	Ø16.0" X 24.0" TALL
RF CONNECTORS:	(12) 4.3-10 FEMALE

TOP VIEW



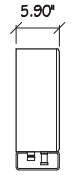
FRONT VIEW

1 ANTENNA
1/2"=1'

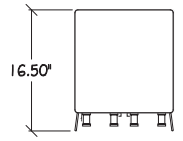
ERICSSON RRUS-4415

TOTAL WEIGHT:	UNDER 46 LBS
DIMENSIONS:	16.5" X 13.4" X 5.9"

TOP VIEW



SIDE VIEW

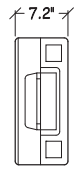


FRONT VIEW

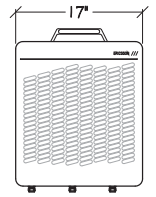
2 RRUS-4415 DETAIL
1"=1'

ERICSSON RRUS-11

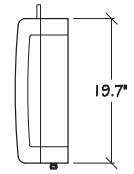
TOTAL WEIGHT:	55 LBS
DIMENSIONS:	19.7" TALL X 17" WIDE X 7.2" DEEP



TOP VIEW



FRONT VIEW

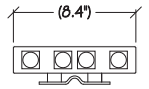


SIDE VIEW

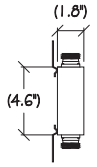
3 RRUS-11 DETAIL
1"=1'

COMMSCOPE CBC1923T-4310/ E11F13P06

COLOR: GRAY
TOTAL WEIGHT: +/- 4.4 LB
DIMENSIONS: 8.3" TALL X 4.6" WIDE X 1.8" DEEP

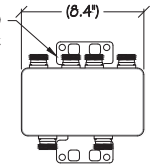


TOP VIEW



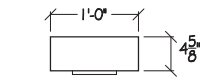
SIDE VIEW

CBC1923T-4310 DIPLEXER

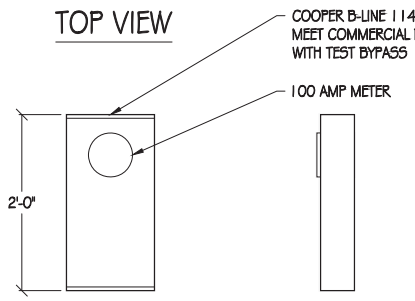


FRONT VIEW

4 DIPLEXER DETAIL
1"=6"



TOP VIEW

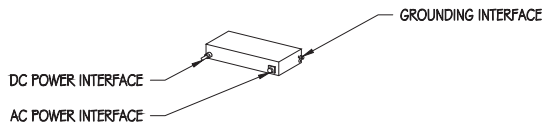


FRONT VIEW SIDE VIEW

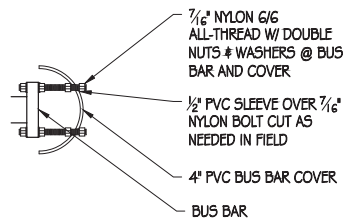
5 METER DETAIL
1"=1'

ERICSSON PSU AC 08

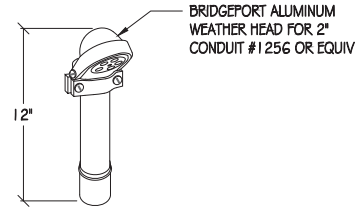
DIMENSIONS:	2.72" X 10.79" X 7.09"
WEIGHT:	11.46 LBS



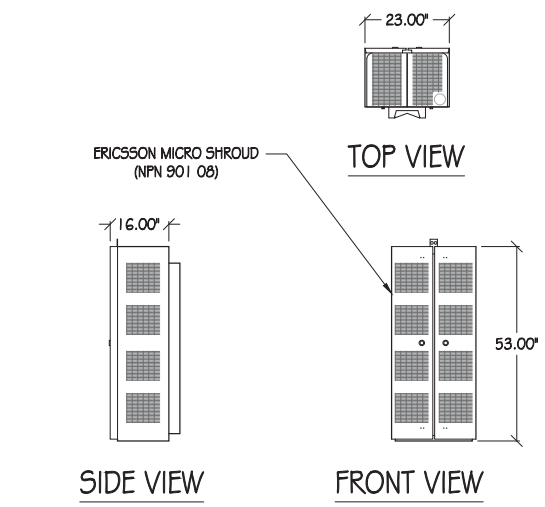
6 AC POWER MODULE
NTS



7 BUS BAR COVER
6"=1'

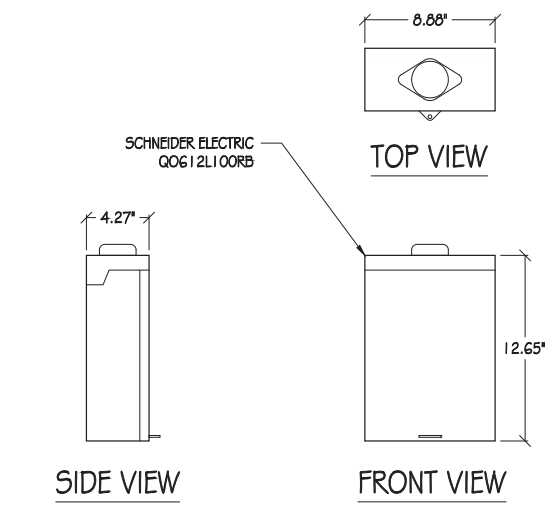


8 WEATHER HEAD
NTS



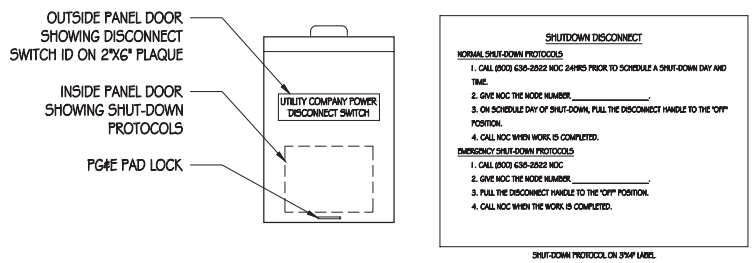
TOP VIEW SIDE VIEW FRONT VIEW

9 MICRO SHROUD CONCEALMENT
1/2"=1'



TOP VIEW SIDE VIEW FRONT VIEW

10 LOAD CENTER/AC DISCONNECT
1"=6"



11 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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APPROVED BY:	B. McCOMB
DATE:	10/29/18

SHEET TITLE:

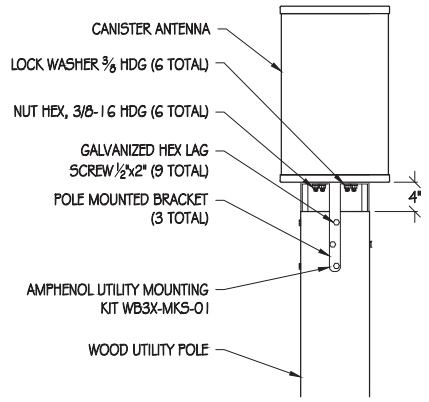
DETAILS

SHEET NUMBER

A-5

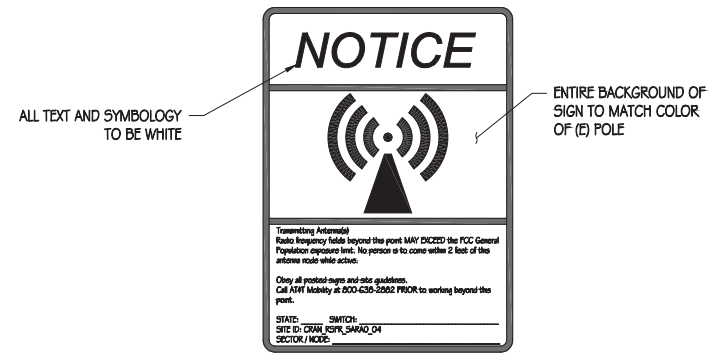
STRUCTURAL STEEL NOTES:

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 3/4"Ø (OR K, WHICHEVER IS LARGER) HOLE @ WEB/FLANGE INTERSECTION UNLESS NOTED OTHERWISE.



1 POLE-TOP ANTENNA MOUNT DETAIL

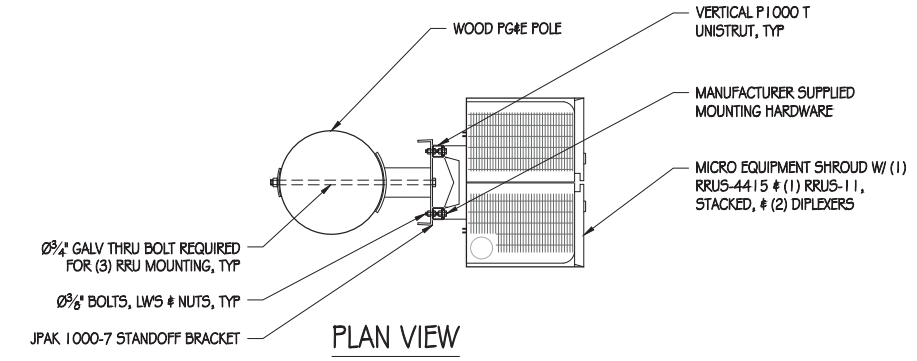
1"=1'



2 NOTICE SIGNAGE

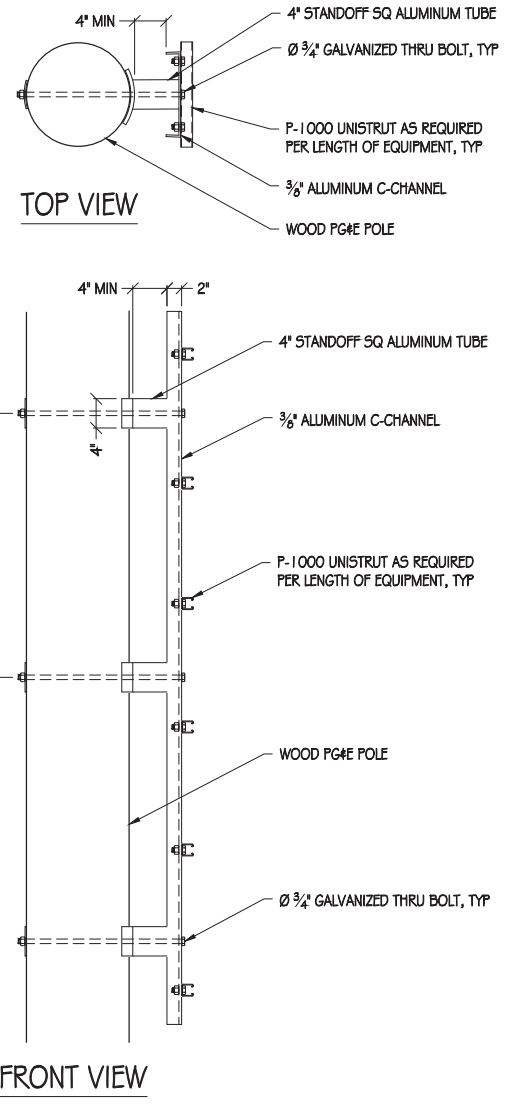
NTS

NOTES:
NOTICE IS A VINYL STICKER ADHERED TO POLE



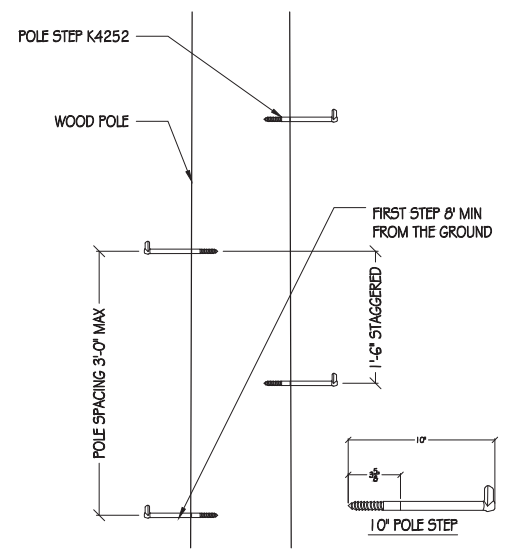
3 RRU MOUNTING DETAIL

1"=1'



4 JPAK STANDOFF DETAIL

1"=1'



5 POLE STEP

1"=1'

NOTE: POLE STEP TO BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS

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

CRAN_RSFR_LOSAO_06

ROW ADJCT TO 791 LOS ALTOS AVE
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/13/18	CD 90%
	10/29/18	CD 100%

DRAWN BY:	O. REDDISH
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/29/18

SHEET TITLE:

DETAILS

SHEET NUMBER

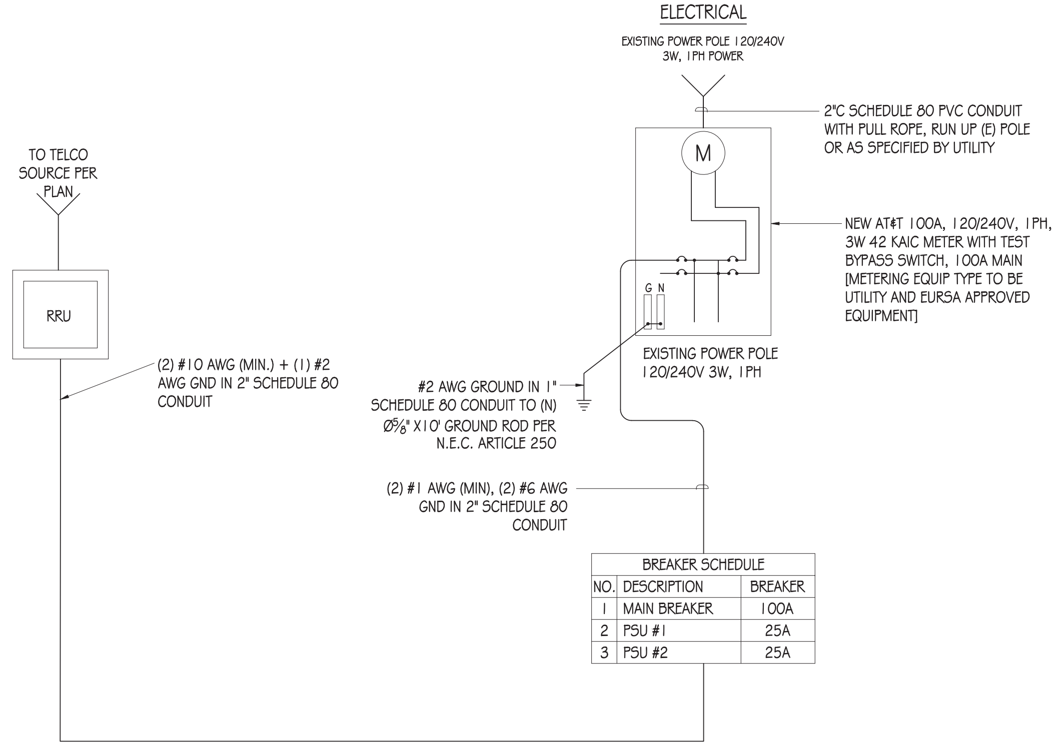
A-6

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.

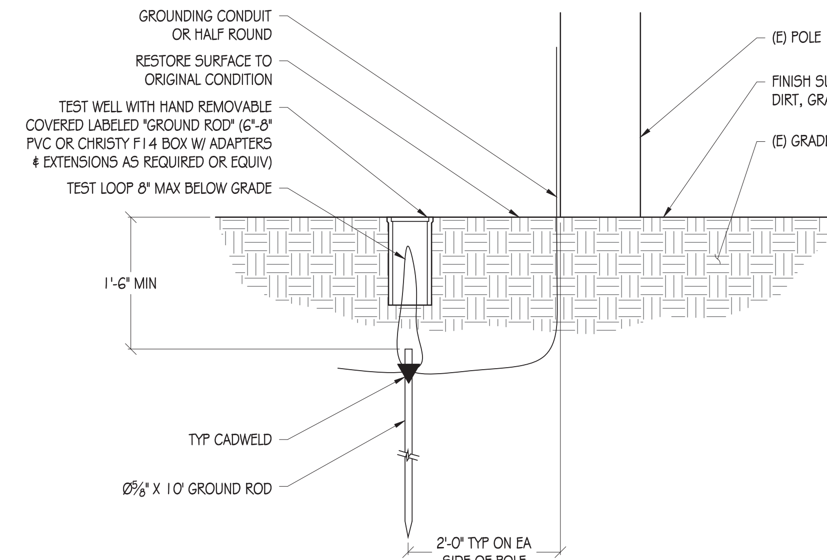

ELECTRICAL
EXISTING POWER POLE 120/240V 3W, 1PH POWER
2"C SCHEDULE 80 PVC CONDUIT WITH PULL ROPE, RUN UP (E) POLE OR AS SPECIFIED BY UTILITY
M
NEW AT&T 100A, 120/240V, 1PH, 3W 42 KAIC METER WITH TEST BYPASS SWITCH, 100A MAIN [METERING EQUIP TYPE TO BE UTILITY AND EURSA APPROVED EQUIPMENT]
G N
EXISTING POWER POLE 120/240V 3W, 1PH
TO TELCO SOURCE PER PLAN
RRU
(2) #10 AWG (MIN.) + (1) #2 AWG GND IN 2" SCHEDULE 80 CONDUIT
#2 AWG GROUND IN 1" SCHEDULE 80 CONDUIT TO (N) Ø5/8" X10' GROUND ROD PER N.E.C. ARTICLE 250
(2) #1 AWG (MIN), (2) #6 AWG GND IN 2" SCHEDULE 80 CONDUIT

BREAKER SCHEDULE		
NO.	DESCRIPTION	BREAKER
1	MAIN BREAKER	100A
2	PSU #1	25A
3	PSU #2	25A

SINGLE-LINE DIAGRAM

LOAD SCHEDULE

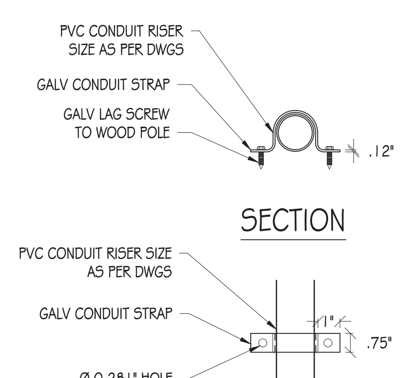
MAKE/MODEL	QUANTITY	DESCRIPTION	DIMENSIONS	WEIGHT	TX/RX	MAX TRANSMIT POWER	W	kW
ERICSSON RRUS-4415	1	RRUS	16.5" X 13.4" X 5.9"	46 LBS	2T/2R	4 X 40W	670	0.67
ERICSSON RRUS-11	1	RRUS	19.7" X 17.0" X 7.2"	55 LBS	2T/2R	2 X 40W	520	0.52
NEMA 3R ENCLOSURE	1	DISCONNECT	12.7" X 8.9" X 4.3"	40 LBS (MAX)	N/A	N/A	N/A	N/A


GROUNDING CONDUIT OR HALF ROUND
RESTORE SURFACE TO ORIGINAL CONDITION
TEST WELL WITH HAND REMOVABLE COVERED LABELED "GROUND ROD" (6"-8" PVC OR CHRISTY F14 BOX W/ ADAPTERS & EXTENSIONS AS REQUIRED OR EQUIV)
TEST LOOP 8" MAX BELOW GRADE
1'-6" MIN
TYP CADWELD
Ø5/8" X 10' GROUND ROD
(E) POLE
FINISH SURFACE COMPOUND DIRT, GRAVEL OR OTHER
(E) GRADE
2'-0" TYP ON EA SIDE OF POLE

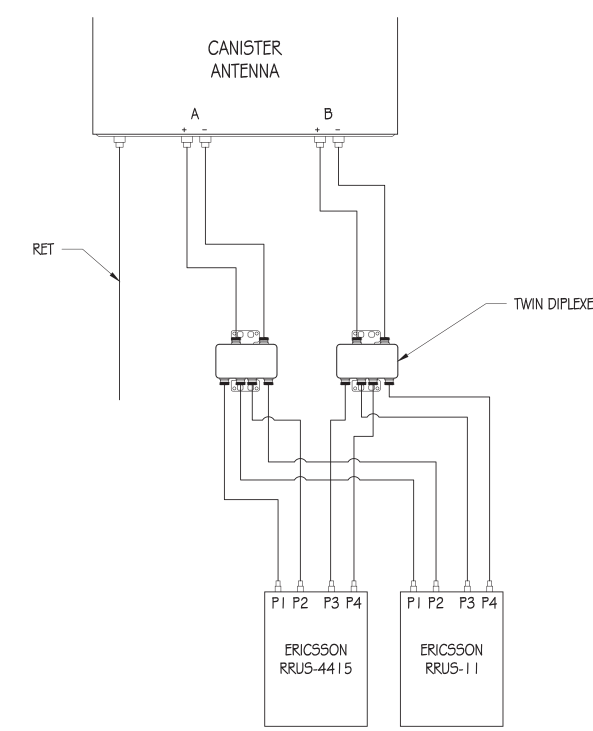
NOTES:

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

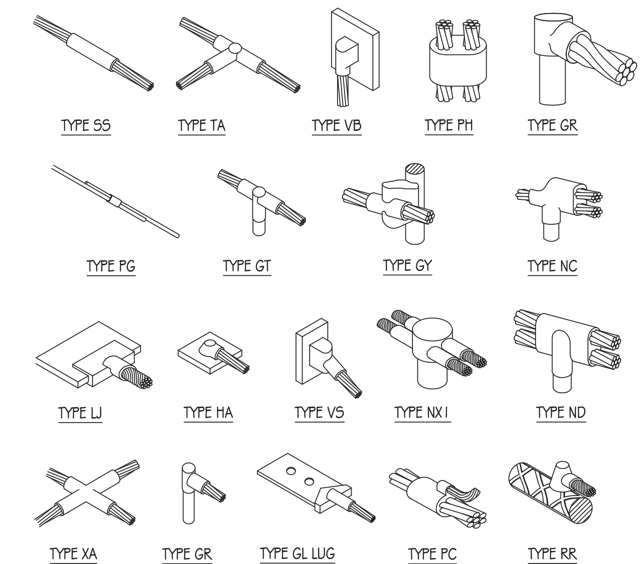
1 POLE GROUNDING DETAIL
NTS



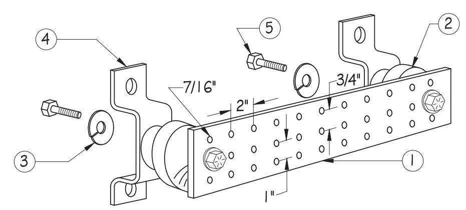
2 CONDUIT RISER DETAIL
NTS



3 WIRE DIAGRAM DETAIL
NTS



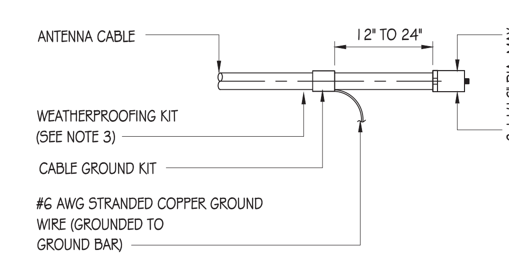
4 EXOTHERMIC WELD DETAILS
NTS



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.

5 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.)

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

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ROW ADJCT TO 791 LOS ALTOS AVE
LOS ALTOS, CA 94022

ISSUE STATUS		
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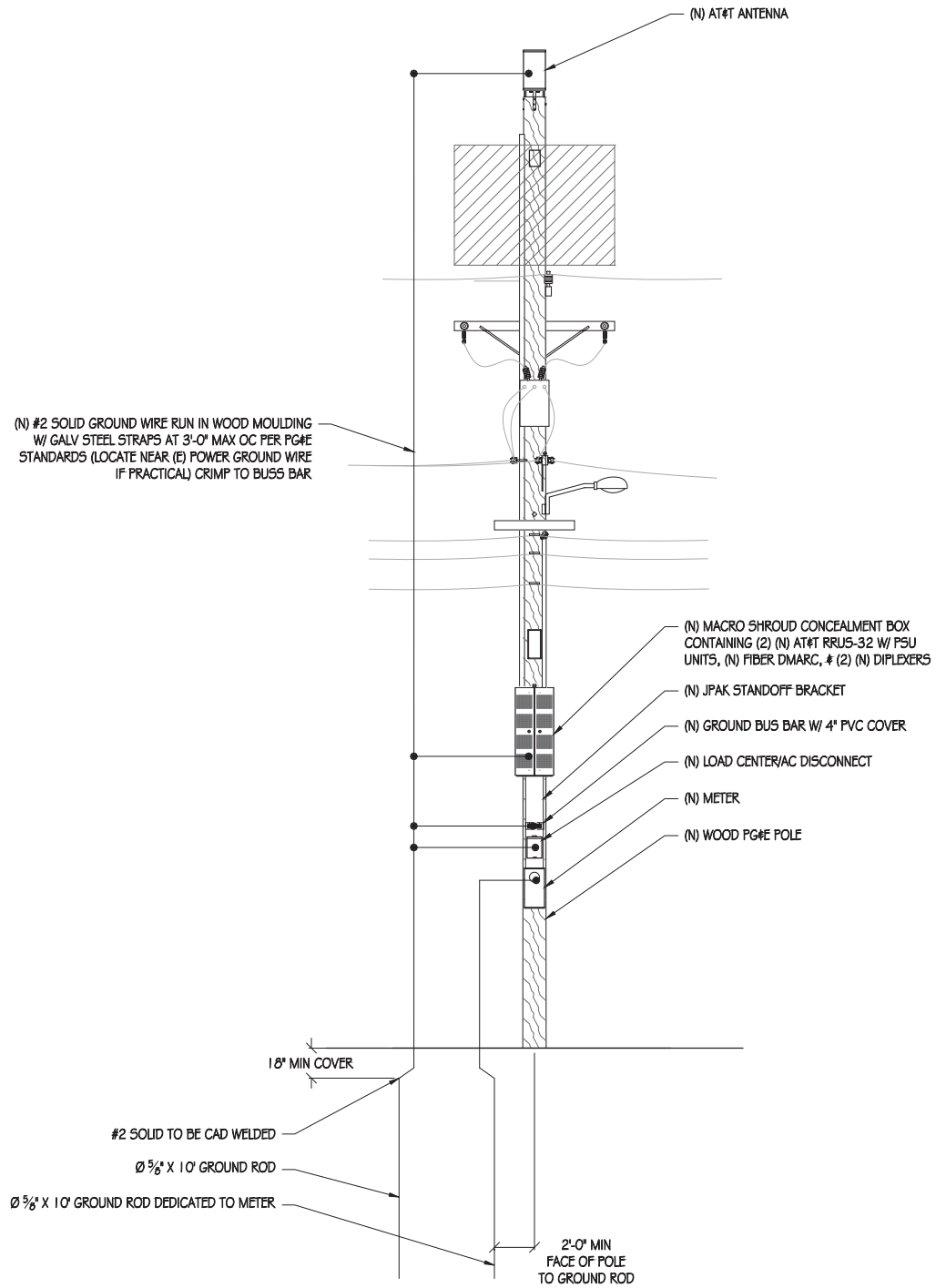
	06/13/18	CD 90%
	10/29/18	CD 100%

DRAWN BY: O. REDDISH
CHECKED BY: T. DiCARLO
APPROVED BY: B. McCOMB
DATE: 10/29/18

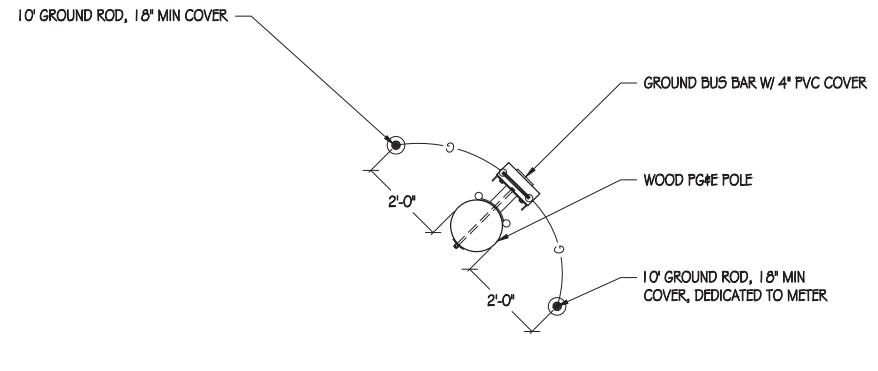
SHEET TITLE:
SINGLE-LINE DIAGRAM & DETAILS

SHEET NUMBER
E-1



POLE GROUNDING DIAGRAM

NTS



TN

GROUNDING PLAN

NTS

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CIVIL
STATE OF CALIFORNIA

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DRAWN BY:	O. REDDISH
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/29/18

SHEET TITLE:

GROUNDING DIAGRAMS

SHEET NUMBER

E-2

TRAFFIC CONTROL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING WORK ON A PUBLIC STREET TO INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS SHOWN HEREIN, AS WELL AS ANY ADDITIONAL TRAFFIC CONTROL DEVICES THAT MAY BE REQUIRED TO INSURE THE SAFE MOVEMENT OF TRAFFIC AND PEDESTRIANS THROUGH OR AROUND THE WORK AREA AND PROVIDE MAXIMUM PROTECTION AND SAFETY TO CONSTRUCTION WORKERS.
2. ALL DELINEATORS SHALL BE EQUIPPED WITH REFLECTORS AT NIGHT TIME.
3. THE CONTRACTOR SHALL NOTIFY THE CITY/COUNTY OF RECORD AND CALTRANS PERMIT INSPECTOR AT LEAST FIVE WORKING DAYS IN ADVANCE OF IMPLEMENTING ANY CONSTRUCTION DETOUR
4. ALL SIGNS, DELINEATORS, BARRICADES, ETC. AND THEIR INSTALLATION SHALL CONFIRM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) AND THE MUTCD CALIFORNIA SUPPLEMENT, STATE OF CALIFORNIA STANDARD SPECIFICATION, SPECIAL PROVISIONS, AND STAMPED PLANS.
5. THE CITY/COUNTY OF RECORDS AND CALTRANS RESERVE THE RIGHT TO OBSERVE THESE TRAFFIC CONTROL PLANS IN USE AND TO MAKE ANY NECESSARY CHANGES AS FIELD CONDITIONS WARRANT. ANY CHANGES SHALL SUPERSEDE THESE PLANS. EXACT LOCATION OF ALL EQUIPMENT AND TRAFFIC CONTROL DEVICES SHALL BE DETERMINED BY THE ENGINEER.
6. ALL TRAFFIC CONTROL DEVICES, STRIPES, MARKINGS, LEGENDS AND RAISED PAVEMENT MARKERS SHALL CONFIRM TO THE MUTCD AND THE CALIFORNIA SUPPLEMENT (LATEST EDITION), THE STATE OF CALIFORNIA STANDARD SPECIFICATION (LATEST EDITION), SPECIAL PROVISIONS, AND STAMPED PLANS.
7. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN THEIR PROPER POSITION AT ALL TIMES AND SHALL BE REPAIRED, REPLACED OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY.
8. ALL TRAFFIC LANES SHALL HAVE A MINIMUM OF 5 FEET CLEARANCE FROM OPEN EXCAVATION AND A MINIMUM OF 2 FEET FROM VERTICAL OBSTRUCTIONS.
9. CONTRACTOR SHALL PROVIDE FLAGGERS AS DEEMED NECESSARY BY THE CITY/COUNTY INSPECTOR OR CALTRANS PERMIT INSPECTOR.
10. ALL ADVANCE WARNING SIGNS SHALL BE EQUIPPED WITH FLAGS.
11. TRAFFIC SIGNALS SHALL REMAIN IN OPERATION AT ALL TIMES. SIGNAL OPERATION DURING EACH CONSTRUCTION PHASE SHALL BE COORDINATED WITH AND APPROVED BY THE CITY/COUNTY OF RECORD AND/OR CALTRANS INSPECTOR.
12. PLACE ADDITIONAL "LANE CLOSED", (C30) SIGNS ON TYPE II BARRICADES AT 100 FOOT INTERVALS THROUGHOUT EXTENDED WORK AREAS IN EACH LANE THAT IS CLOSED. INSTALL "OPEN TRENCH" (C27) SIGNS WHENEVER AN OPEN EXCAVATION AREA EXISTS ADJACENT TO THE TRAVELED WAY.
13. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE REMOVED FOLLOWING COMPLETION OF EACH CONSTRUCTION STAGE AND THE PERMANENT TRAFFIC CONTROL DEVICES SHALL BE RESTORED BY THE CONTRACTOR UPON COMPLETION OF PROJECT.
14. CONTRACTOR SHALL REPLACE/REPAIR ALL DAMAGED STRIPING AT THE END OF EACH WORKING DAY.
15. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN DISABILITY ACT AS RELATED TO PEDESTRIAN ACCESS AND SHALL MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES PER ADA REQUIREMENTS. SIDEWALK CLOSURE/DETOUR SHALL COMPLY WITH THE WATCH STANDARDS AND MUST OBTAIN APPROVAL FROM THE CITY/COUNTY OF RECORD.
16. CONTRACTOR SHALL COVER OR REMOVE ALL CONFLICTING SIGNS.
17. CONTRACTOR SHALL POST "SYMBOL" UNEVEN LANES, "STEEL PLATES AHEAD" OR "BUMP" SIGNS FOR PAVEMENT SURFACE DISRUPTIONS OF 2" OR GREATER. PAVEMENT DISRUPTIONS FOR 1" OR GREATER SHALL HAVE A BEVELED EDGE OF FOUR (4) HORIZONTAL TO ONE (1) VERTICAL.
18. CONTRACTOR SHALL INSTALL "CAUTION STEEL PLATES AHEAD" AND/OR "ROUGH ROAD" SIGNS IN ADVANCE OF STEEL PLATE BRIDGING.
19. WORK HOURS SHALL COMPLY WITH SMC 16.08.030.
20. RESIDENTS TO BE NOTIFIED OF DATES & TIMES OF CONSTRUCTIONS (2) WEEKS PRIOR TO THE START OF WORK.
21. A 5'-0" MIN. PEDESTRIAN CLEARANCE TO BE MAINTAINED AT EXISTING SIDEWALKS.

PERMIT NOTES - PLEASE NOTE THE FOLLOWING:

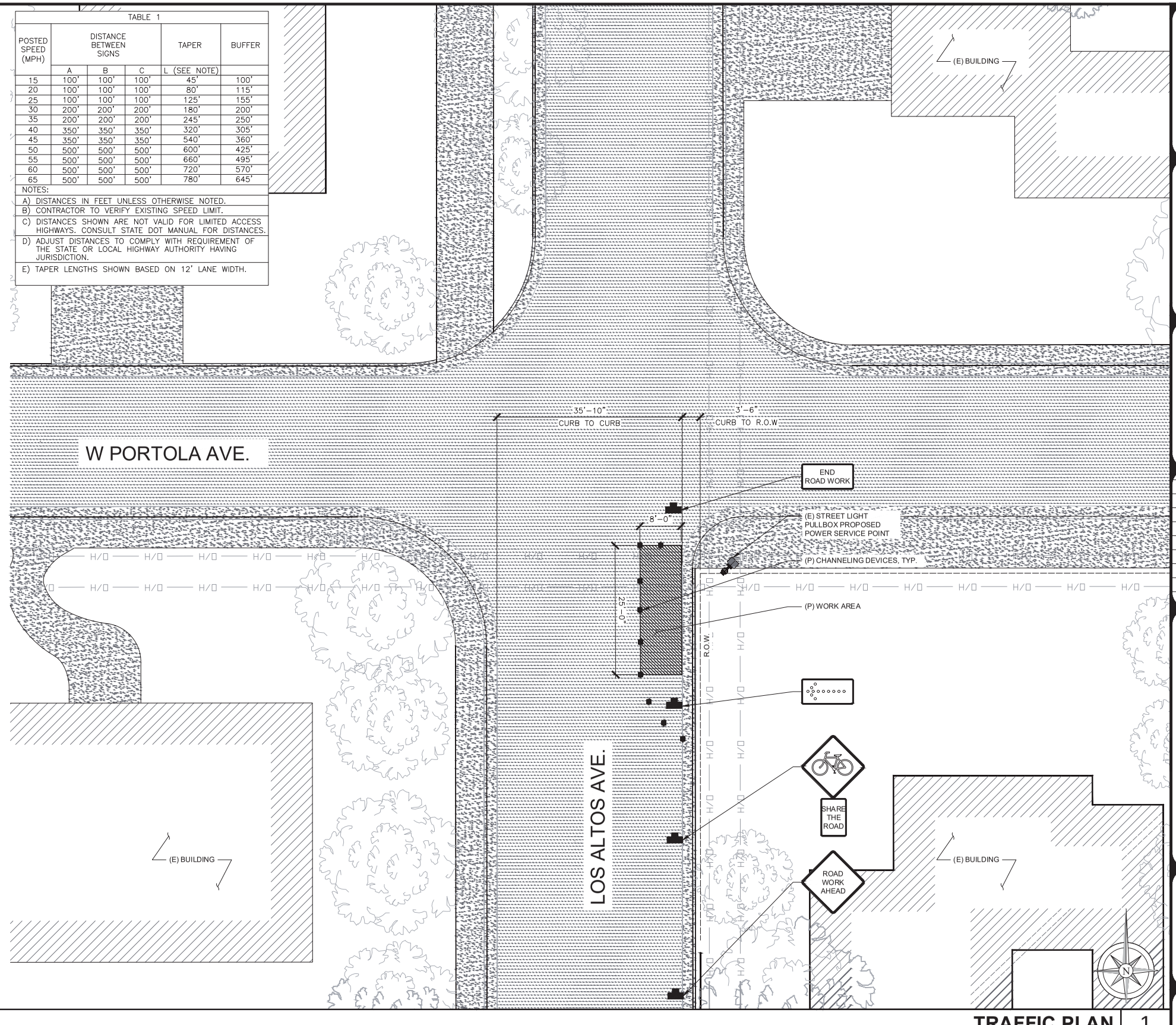
1. ANY WORK AT OR WITHIN 150 FEET OF A SIGNALIZED INTERSECTION MAY REQUIRE TRAFFIC CONTROL, PURSUANT TO SAN JOSE MUNICIPAL CODE SECTION 11.12.050, BY FLAGGER(S) OR CITY OF SAN JOSE POLICE OFFICER(S). THE NEED FOR FLAGGER(S) OR RESERVE POLICE OFFICER(S) WILL BE DETERMINED BASED ON SITE CONDITIONS. FLAGGER(S) SHALL BE SUFFICIENTLY TRAINED AND EQUIPPED IN ACCORDANCE WITH CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTION 1599. IN ADDITION, FLAGGERS SHALL BE CERTIFIED BY THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) OR THE NATIONAL SAFETY COUNCIL (NSC). THE DIRECTOR OF PUBLIC WORKS RESERVES THE RIGHT TO REQUIRE THE USE OF POLICE OFFICERS WHEN CONDITIONS WARRANT.
2. ANY WORK IN THE DOWNTOWN CORE AREA REQUIRES A MINIMUM 10 DAY NOTICE TO CITY OF SAN JOSE DOWNTOWN TRAFFIC OPERATIONS ENGINEER AT (408) 975-3719, PRIOR TO THE START OF WORK. SEE THE APPLICATION FORM TITLED "DOWNTOWN LANE CLOSURE REQUEST FORM".
3. ANY WORK NEAR VTA LIGHTRAIL REQUIRES A MINIMUM OF 3 WEEKS ADVANCE NOTICE TO VTA LIGHTRAIL OPERATIONS AT (408) 546-7608.
4. ANY WORK PROPOSING TO CLOSE A PARKING LANE WILL REQUIRE THAT "NO PARKING – TOW AWAY" SIGNS BE OBTAINED FROM THE DEPARTMENT OF TRANSPORTATION (408) 535-3850. IF THE PARKING LANE HAS CITY PARKING METERS, THEN ADDITIONAL FEES WILL BE DUE TO COMPENSATE THE CITY FOR LOST REVENUE. SEE THE APPLICATION FORM TITLED "TOW AWAY PERMIT".
5. ANY WORK PROPOSED ON A STREET DESIGNATED AS A STATE HIGHWAY WILL REQUIRE A PERMIT FROM CALTRANS. CONTACT JIM WONG AT (408) 452-7131.

TABLE 1

POSTED SPEED (MPH)	DISTANCE BETWEEN SIGNS			TAPER	BUFFER
	A	B	C	L (SEE NOTE)	
15	100'	100'	100'	45'	100'
20	100'	100'	100'	80'	115'
25	100'	100'	100'	125'	155'
30	200'	200'	200'	180'	200'
35	200'	200'	200'	245'	250'
40	350'	350'	350'	320'	305'
45	350'	350'	350'	540'	360'
50	500'	500'	500'	600'	425'
55	500'	500'	500'	660'	495'
60	500'	500'	500'	720'	570'
65	500'	500'	500'	780'	645'

NOTES:

A) DISTANCES IN FEET UNLESS OTHERWISE NOTED.
B) CONTRACTOR TO VERIFY EXISTING SPEED LIMIT.
C) DISTANCES SHOWN ARE NOT VALID FOR LIMITED ACCESS HIGHWAYS. CONSULT STATE DOT MANUAL FOR DISTANCES.
D) ADJUST DISTANCES TO COMPLY WITH REQUIREMENT OF THE STATE OR LOCAL HIGHWAY AUTHORITY HAVING JURISDICTION.
E) TAPER LENGTHS SHOWN BASED ON 12' LANE WIDTH.



TRAFFIC SYMBOL LEGEND

- TRAFFIC CONE
- TRAFFIC SIGN
- LANE DIRECTION
- ROAD WORK AHEAD — "ROAD WORK AHEAD" SIGN
- WORK AREA
- END ROAD WORK — "END ROAD WORK" SIGN
- "ARROW BOARD" SIGN
- "SHARE THE ROAD" SIGN (SHARE THE ROAD)

24"x36" SCALE: 3/32" = 1'-0"
11"x17" SCALE: 3/64" = 1'-0"
8' 4' 0" 8'

TRAFFIC PLAN 1

at&t
5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

ERICSSON
6140 STONERIDGE MALL MD
THIRD FLOOR
PLEASANTON, CA 94588

SURESITE
36 EXECUTIVE PARK
SUITE 210
IRVINE, CA 92614

REV	DATE	DESCRIPTION	BY
A	1/31/19	90% CD	CSH

CRAN-RSFR LOSAO_06
FA TBD
ROW ADJCT TO
791 LOS ALTOS AVE.
LOS ALTOS, CA 94022

SHEET TITLE
TRAFFIC PLAN

SHEET NUMBER
TR-1

SURESITE
36 EXECUTIVE PARK
SUITE 210
IRVINE, CA 92614

Date:	February 15, 2018
Scale:	Per Plan
Designed:	RC
Drawn:	RC
Checked:	ZLN
Proj. Engr:	ZLN
File:	

	REVISIONS	DESIGN BY	DESIGN DATE	CITY APPR.	APPR. DATE

REV. DATE JANUARY 29, 2018

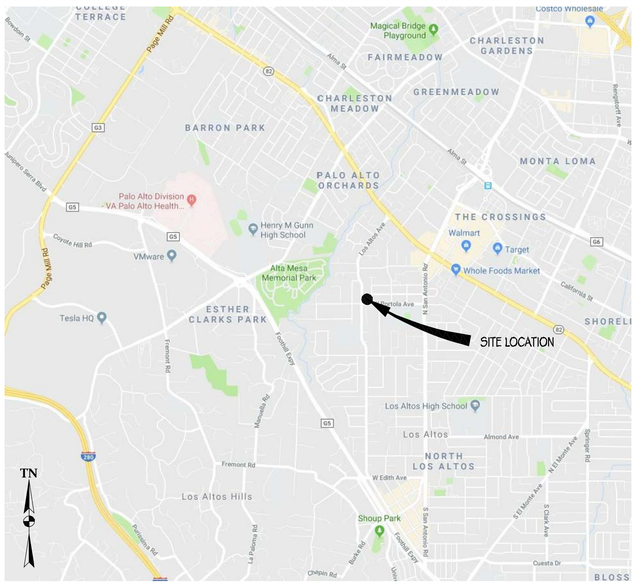
at&t

SITE ID:	CRAN_RSFR_LOSA0_06
SITE ADDRESS:	791 LOS ALTOS AVE LOS ALTOS, CA 94022
PM#:	114474404
SITE TYPE:	BRAND NEW PG&E POLE #TBD
POLE OWNER:	PG&E
FA LOCATION:	14816595
USID:	198300

SITE INFORMATION

APPLICANT:	AT&T MOBILITY 5001 EXECUTIVE PARKWAY SAN RAMON, CA 94583
AGENT:	SURESITE 36 EXECUTIVE PARK, SUITE 210 IRVINE, CA 92614
APN:	ADJCT TO 167-21-034
SITE ADDRESS:	791 LOS ALTOS AVE LOS ALTOS, CA 94022
COUNTY:	SANTA CLARA
LATITUDE:	37° 23' 48.39" N (37.396775) NAD 83
LONGITUDE:	122° 07' 16.43" W (-122.121231) NAD 83
GROUND ELEVATION:	±99.9' AMSL
ZONING:	PUBLIC ROW
ZONING JURISDICTION:	LOS ALTOS
PG&E SAP ID:	10050815
STREET CLASSIFICATION:	LOCAL COLLECTOR

VICINITY MAP



PROJECT TEAM

AGENT:
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ARCHITECT/ENGINEER OF RECORD:
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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) LOAD CENTER/AC DISCONNECT, (1) CONCEALMENT BOX CONTAINING (1) RRUS-4415 & (1) RRUS-11 W/ P5U UNITS, (2) DIPLEXERS, & (1) KMW FX-OM2L10H2-06T CYLINDRICAL ANTENNA.
2. ALL EQUIPMENT, EQUIPMENT MOUNTING, CONDUITS, AND APPURTENANCES TO BE PAINTED TO MEET JURISDICTION APPROVAL.
3. UTILITY LINES BETWEEN (E) POINT OF CONNECTION & POLE TO BE UNDERGROUND AND/OR OVERHEAD.
4. FIBER CONNECTION TO BE SECURE UNDER SEPARATE ENCROACHMENT PERMIT.

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
T-2	GENERAL NOTES, LEGEND, & ABBREVIATIONS
A-1	SITE PLAN
A-2	EQUIPMENT PLAN & ANTENNA PLANS
A-3	ELEVATIONS
A-4	ELEVATIONS
A-5	DETAILS
A-6	DETAILS
E-1	SINGLE-LINE DIAGRAM & DETAILS
E-2	GROUNDING DIAGRAMS
TR-1	TRAFFIC CONTROL PLAN

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: 791 LOS ALTOS AVE, LOS ALTOS, CA 94022

1.	HEAD NORTHEAST ON BISHOP DR TOWARD SUNSET DR	256	FT
2.	TURN RIGHT ONTO SUNSET DR	0.1	MI
3.	USE THE MIDDLE LANE TO TURN RIGHT ONTO BOLLING CANYON RD	0.3	MI
4.	USE THE RIGHT LANE TO MERGE ONTO I-680 S VIA THE RAMP TO SAN JOSE	0.3	MI
5.	MERGE ONTO I-680 S	3.9	MI
6.	CONTINUE STRAIGHT TO STAY ON I-680 S	17.5	MI
7.	TAKE EXIT 12 FOR MISSION BLVD/STATE ROUTE 262 TOWARD I-880	0.2	MI
8.	KEEP RIGHT AT THE FORK, FOLLOW SIGNS FOR MISSION LVD W MERGE ONTO CA-262	0.3	MI
9.	MERGE ONTO CA-262 S/MISSION BLVD	0.6	MI
10.	USE THE LEFT 2 LANES TO TAKE THE EXIT TOWARD I-880 S/SAN JOSE	0.9	MI
11.	MERGE ONTO I-880 S	3.1	MI
12.	USE THE RIGHT 2 LANES TO TAKE THE CA-237 W EXIT TOWARD MTN VIEW	0.9	MI
13.	CONTINUE ONTO CA-237 W	8.4	MI
14.	KEEP LEFT TO CONTINUE ON CA-237 W/SOUTHBAY FWY	0.5	MI
15.	TURN RIGHT ONTO EL CAMINO REAL	2.3	MI
16.	TURN LEFT ONTO JORDAN AVE	0.2	MI
17.	TURN RIGHT ONTO E PORTOLA AVE	0.6	MI

END AT: 791 LOS ALTOS AVE, LOS ALTOS, CA 94022

ESTIMATED TIME: 48 MINS ESTIMATED DISTANCE: 40 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

SURESITE
Infrastructure experts. Small cell locators.
36 EXECUTIVE PARK, SUITE 210
IRVINE, CA 92614

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REGISTERED PROFESSIONAL ENGINEER
BRET A. McCOMB
C 69891
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_LOSA0_06

791 LOS ALTOS AVE
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/13/18	CD 90%
	07/25/19	CD 100%

DRAWN BY:	T. JONES
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	07/25/19
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 SURVEYORS 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 HIGHER 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.

15. ALL EQUIPMENT LOGOS, OTHER THAN THOSE REQUIRED BY REGULATION (E.G. NODE IDENTIFICATION OR SHTUDOWN SIGNAGE) OR FCAE REGULATIONS SHALL BE PAINTED OVER OR REMOVED. RAISED/DEPRESSED LOGOS OR TEXT ON EQUIPMENT (E.G. RRUS), IF PRESENT, TO BE SANDED OFF OR COVERED WITH STICKER, & THEN PAINTED OVER.

16. FONDATED RF WAC MARNING SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD THE BUILDING IF THERE IS NO WINDOW.

17. ALL EQUIPMENT, INCLUDING ANTENNAS, MOUNTING/STANDOFF BRACKETS, POLE EXTENSIONS, CONDUIT, METER, AND RADIOS SHALL BE PAINTED "MESA BROWN" USING A DURABLE OUTDOOR PAINT.

18. CABLING SHALL BE MESA BROWN IN COLOR AND SHALL BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS, & SHALL BE HIDDEN FROM VIEW TO THE MAXIMUM EXTENT POSSIBLE.

19. SUPPORT EQUIPMENT (E.G. METERS, DISCONNECT SWITCH, ETC) TO BE CLUSTERED VERTICALLY AS CLOSE AS TECHNICALLY FEASIBLE ON POLE.

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 AND GROUNDING 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. #2 GROUND AND BOND WIRE.
4. GROUND 2' MIN 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, UNLESS OTHERWISE NOTED.

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. FILL VOID AROUND CABLES AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION.

ABBREVIATIONS

A	AMPERE
AB	ANCHOR BOLT
ABV	ABOVE
ACCA	ANTENNA CABLE COVER ASSEMBLY
ADDL	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
BTCW	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
HDG	HOT-DIP GALVANIZE(D)
HDR	HEADER
HGR	HANGER
HPS	HIGH PRESSURE SODIUM
HT	HEIGHT
ICGB	ISOLATED COPPER GROUND BUS5
IN, (")	INCH(ES)
INT	INTERIOR
LB, (#)	POUND(S)
LAG	LAG BOLTS
LF	LINEAR FEET (FOOT)
LTH	LENGTH
L	LONGITUDINAL)
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
P/C	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

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", 240W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #WSW232T
- LIGHTING FIXTURE, FLUORESCENT, 10.94" x 8'-0", 295W, SURFACE MOUNTING TYPE, HUBBELL LIGHTING CATALOG #TWSM232T
- LIGHTING FIXTURE, HIGH PRESSURE SODIUM, 170W, WALL MOUNTING TYPE, HUBBELL LIGHTING CATALOG #NRG-307 OR 150W, 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 HALIDE, 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 XFMR
- (E) POLE MOUNTED XFMR
- (N) PAD MOUNTED XFMER
- (E) PAD MOUNTED XFMER

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791 LOS ALTOS AVE
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/13/18	CD 90%
	07/25/19	CD 100%

DRAWN BY:	T. JONES
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	07/25/19

SHEET TITLE:

GENERAL NOTES, LEGEND, & ABBREVIATIONS

SHEET NUMBER

T-2

NOTE: FIBER CONNECTION TO BE INSTALLED UNDER SEPARATE PERMIT

(E) BUILDING

(E) BUILDING

(E) SIDEWALK

(E) DRIVEWAY

W PORTOLA AVE

(E) DRIVEWAY

(E) SIDEWALK

(E) BUILDING

(E) SIDEWALK

(E) SIDEWALK

(E) DRIVEWAY

(E) BUILDING

LOS ALTOS AVE

ROW LINE

APN: 167-21-034

(N) PG&E UTILITY POLE W/ (N) AT&T ANTENNA & ASSOC EQUIPMENT

SEE EQUIPMENT PLAN

(E) BUILDING

WESTMINSTER LN

TN

SITE PLAN

1" = 10'

0 5' 10' 20' 30' 50'

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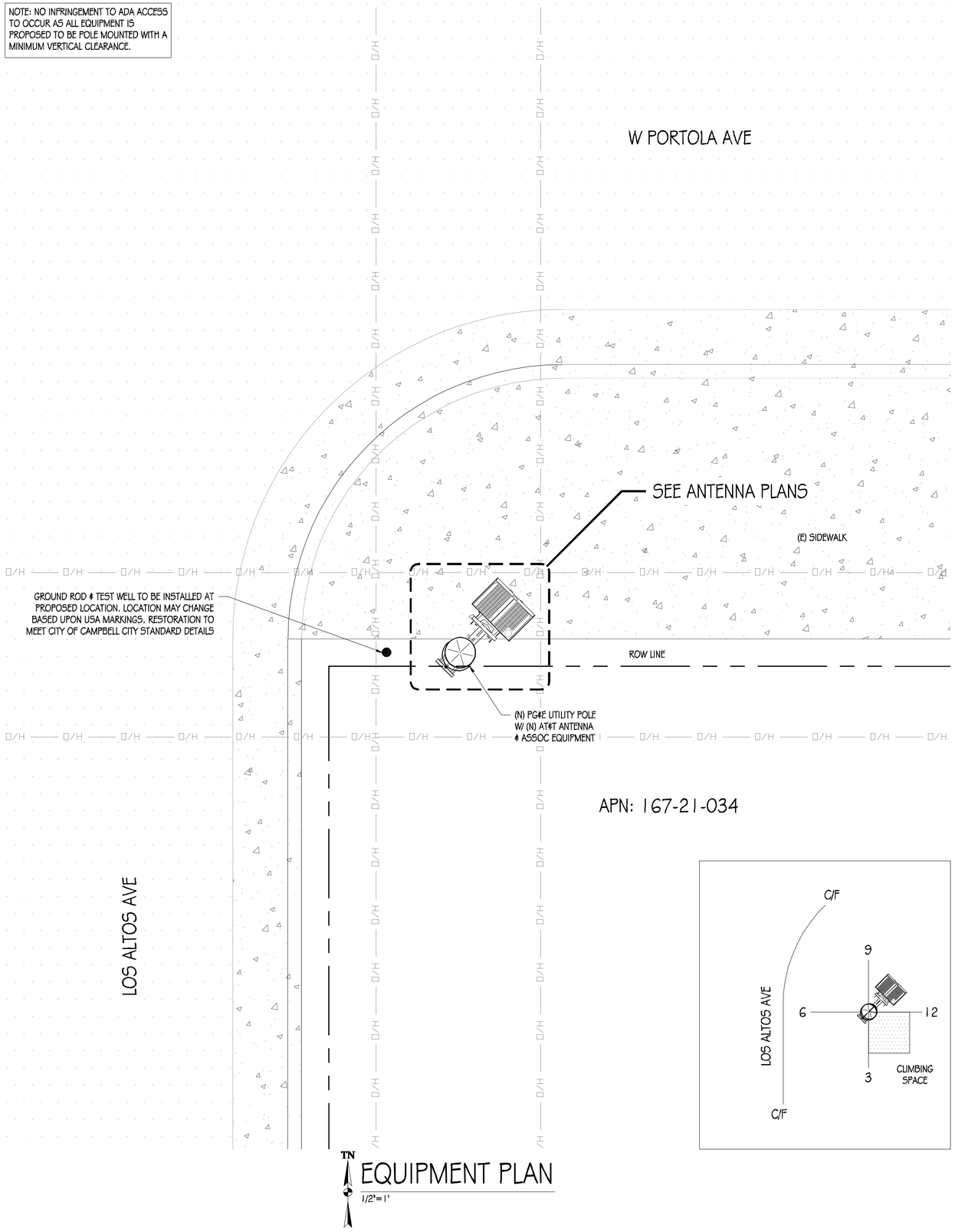
SHEET TITLE:

SITE PLAN

SHEET NUMBER

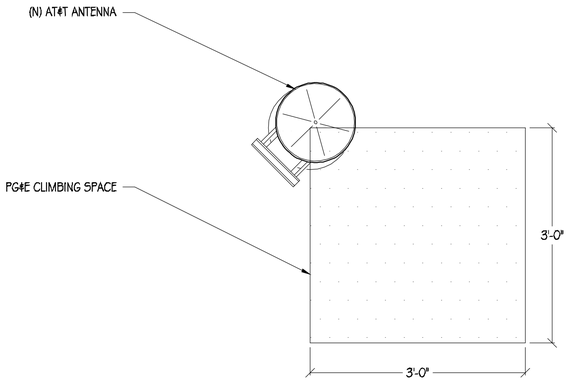
A-1

NOTE: NO INFRINGEMENT TO ADA ACCESS TO OCCUR AS ALL EQUIPMENT IS PROPOSED TO BE POLE MOUNTED WITH A MINIMUM VERTICAL CLEARANCE.

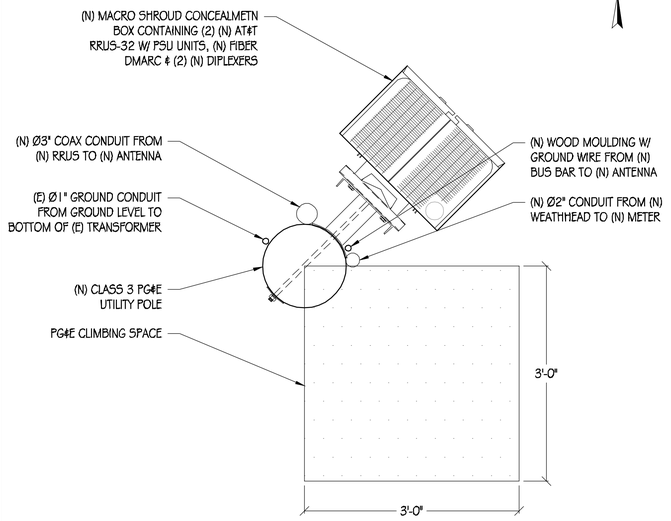


TN
EQUIPMENT PLAN
1/2"=1'

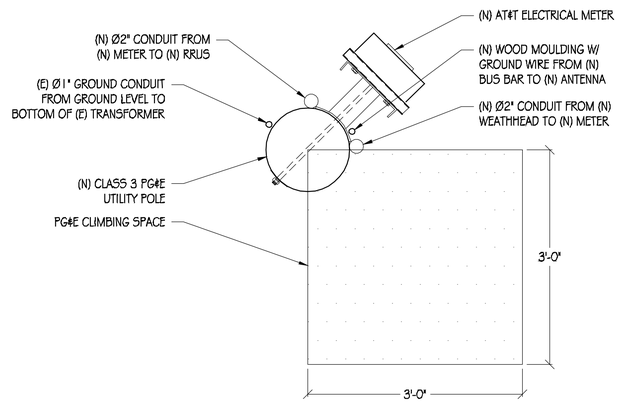
NOTE: FIBER CONNECTION TO BE INSTALLED UNDER SEPARATE PERMIT



TN
ANTENNA PLAN
1"=1'



TN
RRH PLAN
1"=1'



TN
ELECTRICAL METER PLAN
1"=1'

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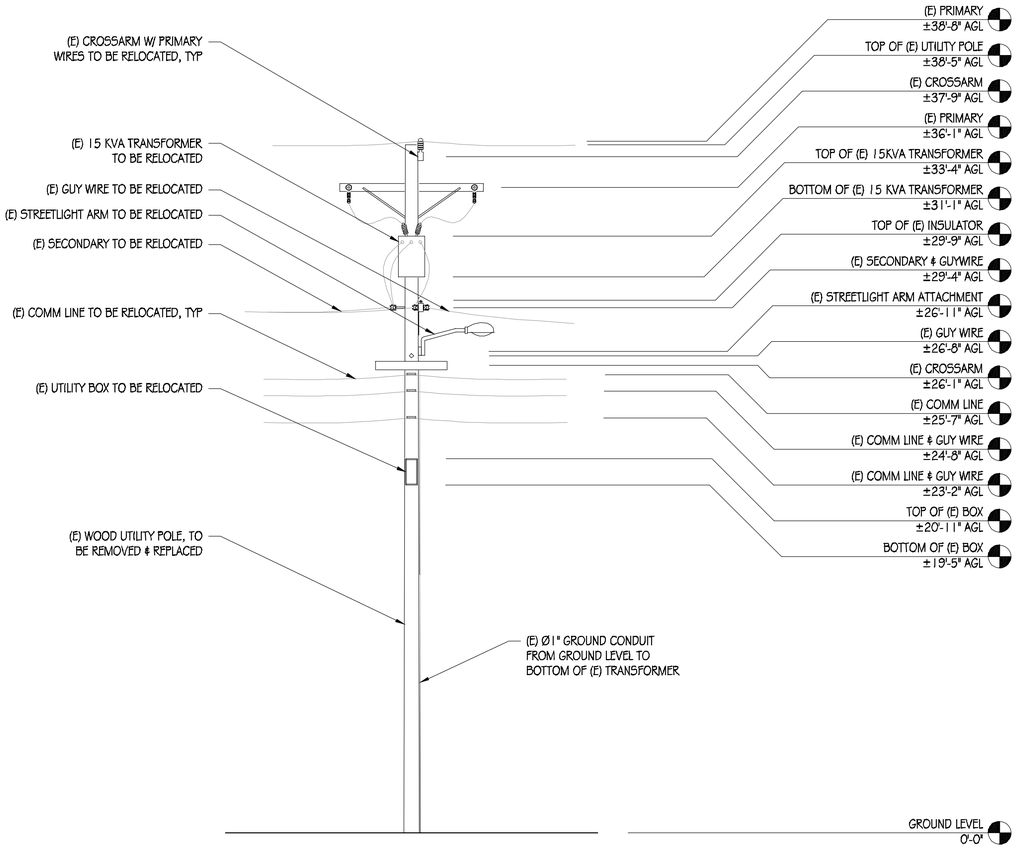
DATE:	07/25/19

SHEET TITLE:
EQUIPMENT PLAN & ANTENNA PLANS

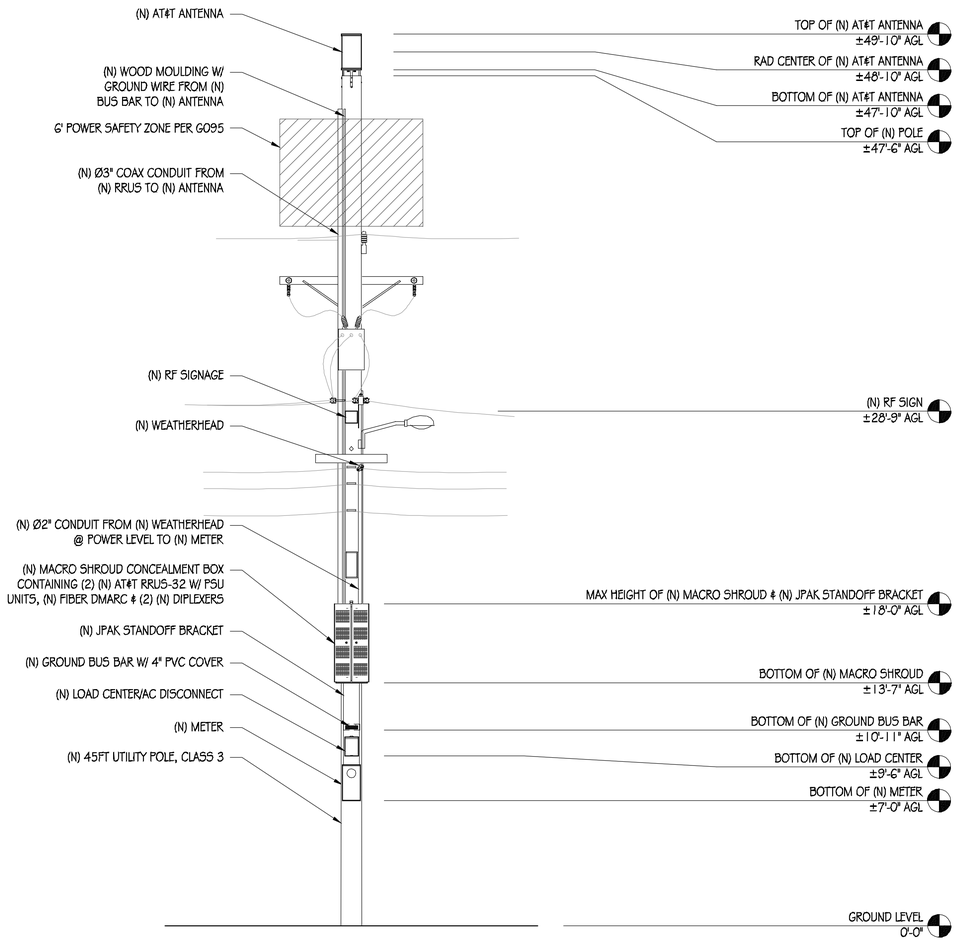
SHEET NUMBER
A-2

NOTE: FIBER CONNECTION TO BE INSTALLED UNDER SEPARATE PERMIT



EXISTING NORTH ELEVATION

1/4"=1'-0"



NEW NORTH ELEVATION

1/4"=1'-0"

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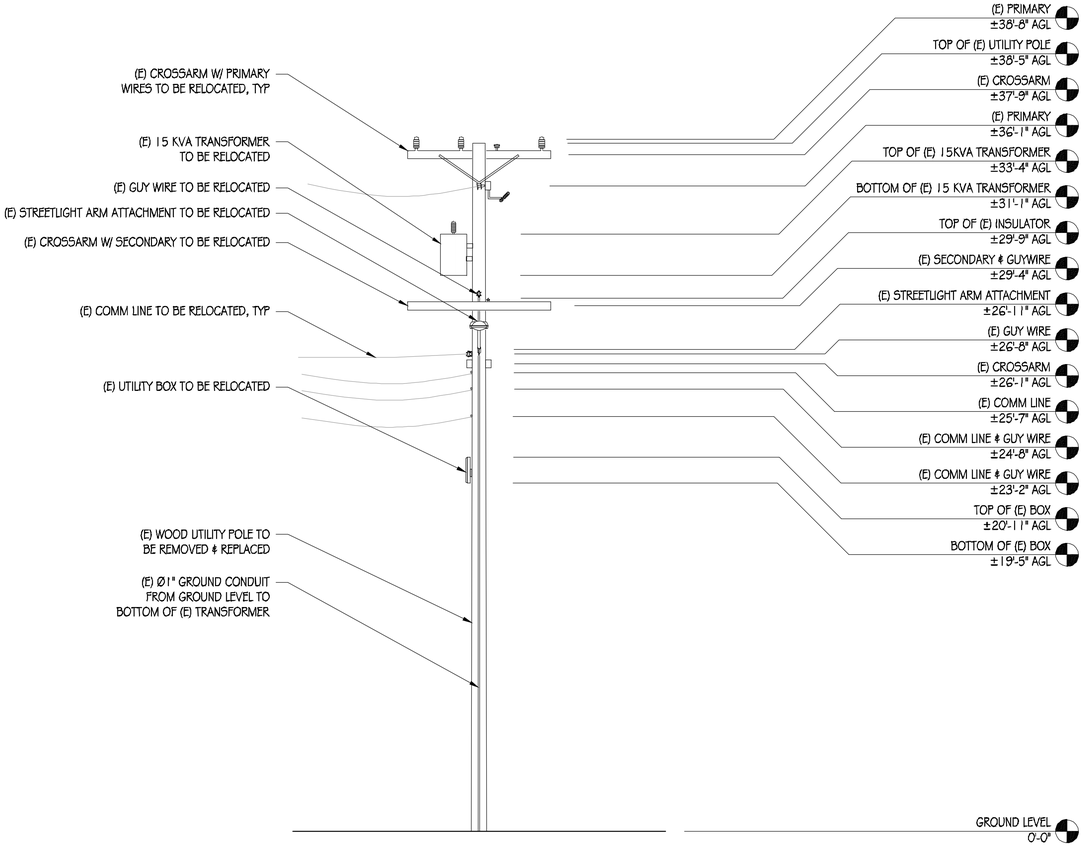
SHEET TITLE:

ELEVATIONS

SHEET NUMBER

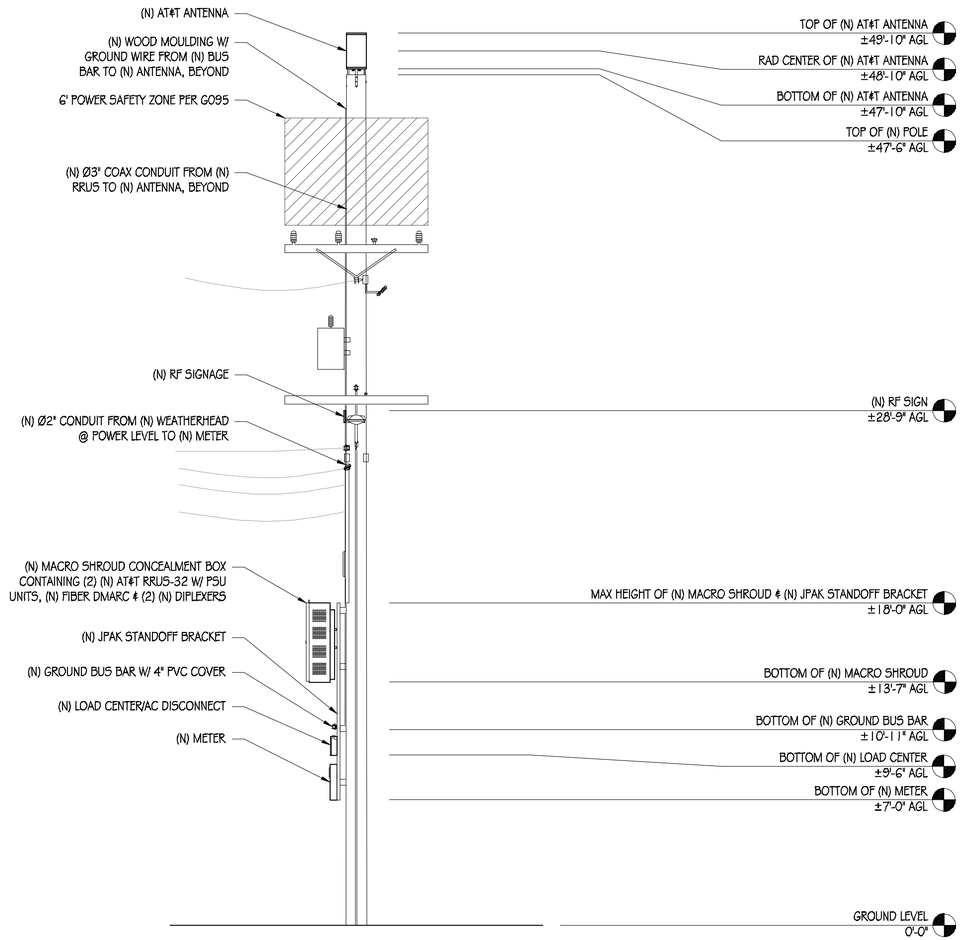
A-3

NOTE: FIBER CONNECTION TO BE INSTALLED UNDER SEPARATE PERMIT



EXISTING WEST ELEVATION

1/4"=1'-0"



NEW WEST ELEVATION

1/4"=1'-0"

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SHEET TITLE:

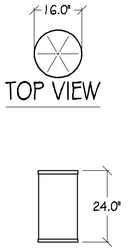
ELEVATIONS

SHEET NUMBER

A-4

KMW FX-OM2L10H2-06T

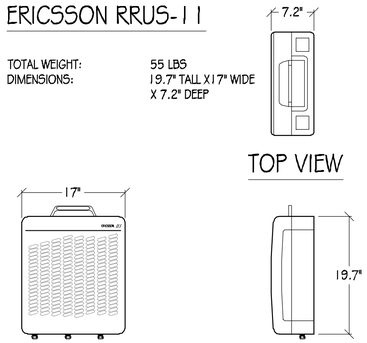
WIND AREA: 2.67 SQ FT
WEIGHT: 34.2 LBS
DIMENSIONS: Ø16.0" X 24.0" TALL
RF CONNECTORS: (12) 4.3-10 FEMALE



1 ANTENNA
1/2"=1'

ERICSSON RRUS-11

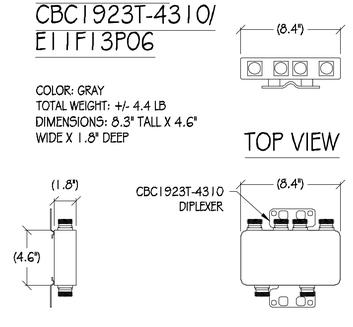
TOTAL WEIGHT: 55 LBS
DIMENSIONS: 19.7" TALL X 17" WIDE X 7.2" DEEP



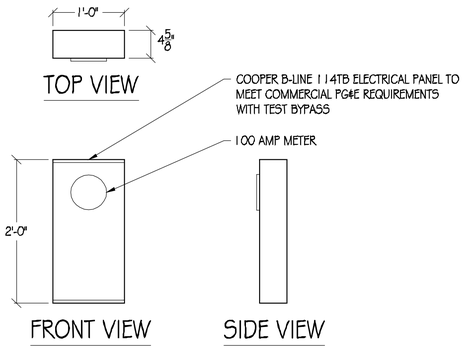
2 RRUS-11 DETAIL
1"=1'

COMMSCOPE CBC1923T-43I0/ E11F13P06

COLOR: GRAY
TOTAL WEIGHT: +/- 4.4 LB
DIMENSIONS: 8.3" TALL X 4.6" WIDE X 1.8" DEEP



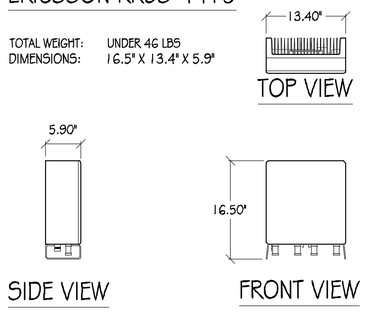
3 DIPLEXER DETAIL
1"=6"



4 METER DETAIL
1"=1'

ERICSSON RRUS-4415

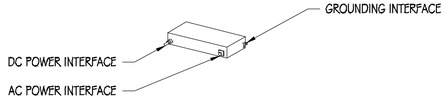
TOTAL WEIGHT: UNDER 46 LBS
DIMENSIONS: 16.5" X 13.4" X 5.9"



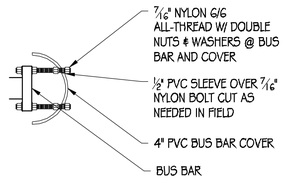
5 RRUS-4415 DETAIL
1"=1'

ERICSSON PSU AC 08

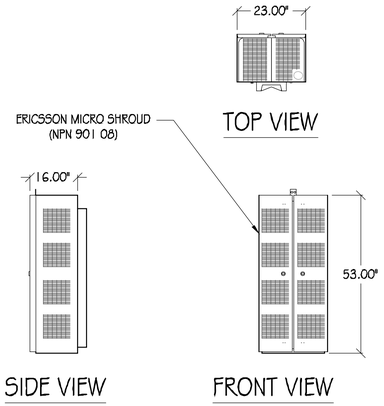
DIMENSIONS: 2.72" X 10.79" X 7.09"
WEIGHT: 11.46 LBS



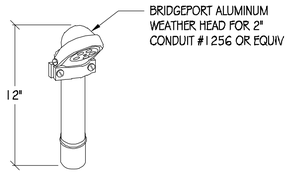
6 AC POWER MODULE
NTS



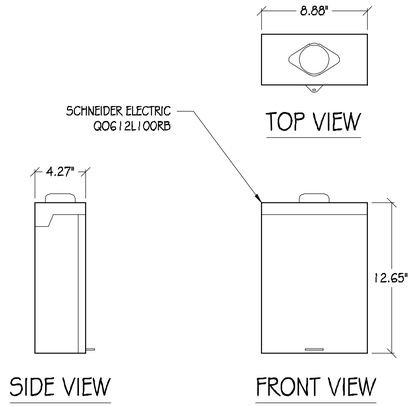
7 BUS BAR COVER
6"=1'



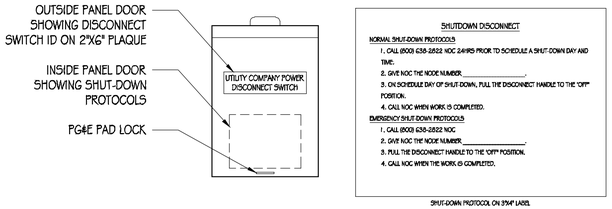
8 MICRO SHROUD CONCEALMENT
1/2"=1'



9 WEATHER HEAD
NTS



10 LOAD CENTER/AC DISCONNECT
1"=6"



11 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:

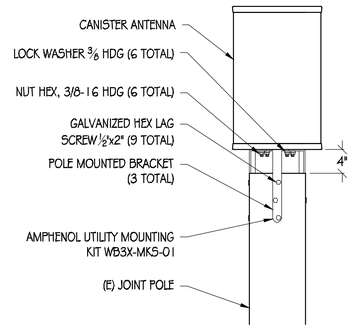
DETAILS

SHEET NUMBER

A-5

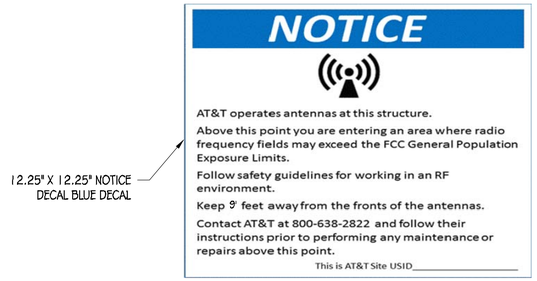
STRUCTURAL STEEL NOTES:

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 HDG 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 3/4"Ø (OR K, WHICHEVER IS LARGER) HOLE @ WEB/FLANGE INTERSECTION UNLESS NOTED OTHERWISE.



1 POLE-TOP ANTENNA MOUNT DETAIL

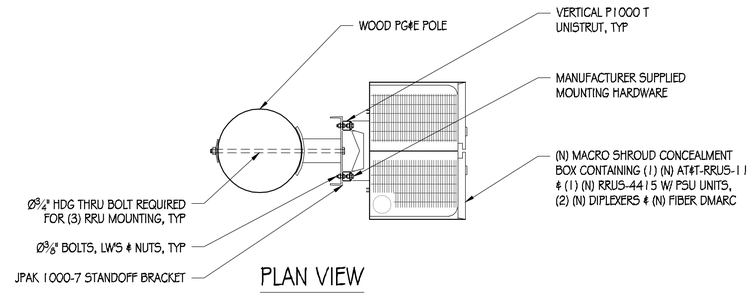
1"=1'



2 NOTICE SIGNAGE

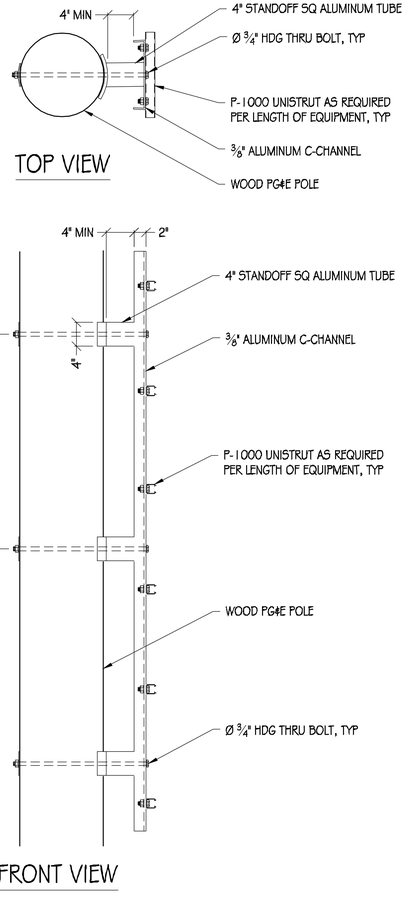
NTS

NOTES:
- SIGNAGE TO BE SCREWED DIRECTLY TO POLE AT ALL FOUR CORNERS.
- SIGNAGE TO BE PLACED A MINIMUM OF 2'-0" BELOW (N) ANTENNA



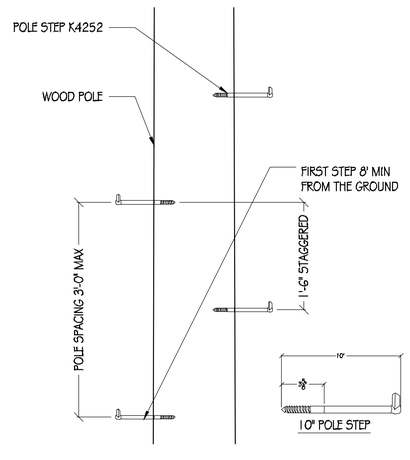
3 RRU MOUNTING DETAIL

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 TITLE:

DETAILS

SHEET NUMBER

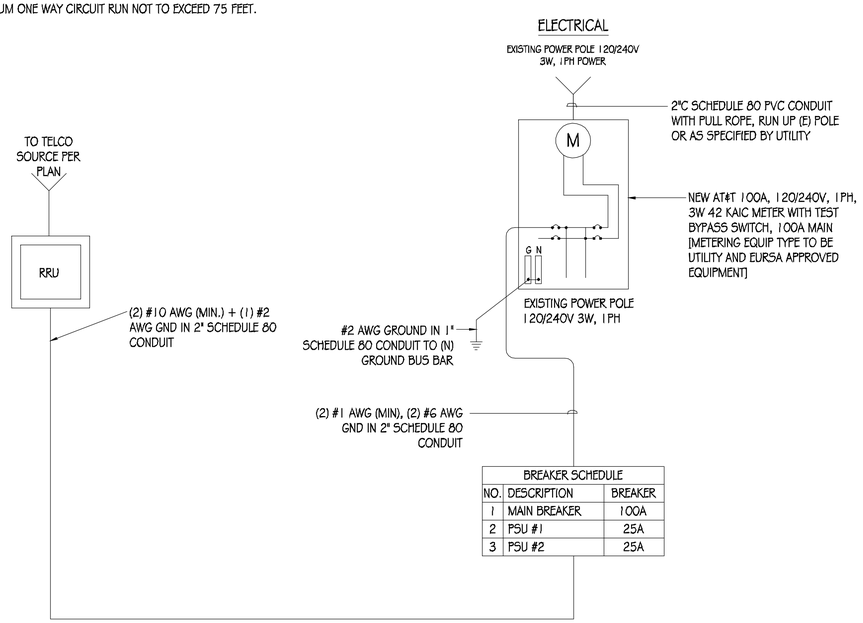
A-6

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 RESTORED PER CITY STANDARD DETAILS.
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.

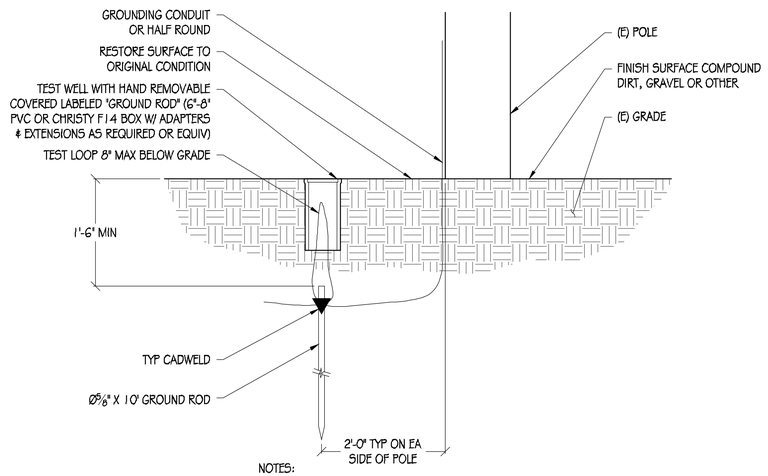


BREAKER SCHEDULE		
NO.	DESCRIPTION	BREAKER
1	MAIN BREAKER	100A
2	PSU #1	25A
3	PSU #2	25A

SINGLE-LINE DIAGRAM

LOAD SCHEDULE

MAKE/MODEL	QUANTITY	DESCRIPTION	DIMENSIONS	WEIGHT	TX/RX	MAX TRANSMIT POWER	W	kW
ERICSSON RRUS-4415	1	RRUS	16.5" X 13.4" X 5.9"	46 LBS	2T/2R	4 X 40W	670	0.67
ERICSSON RRUS-11	1	RRUS	19.7" X 17.0" X 7.2"	55 LBS	2T/2R	2 X 40W	520	0.52
NEMA 3R ENCLOSURE	1	DISCONNECT	12.7" X 8.9" X 4.3"	40 LBS (MAX)	N/A	N/A	N/A	N/A

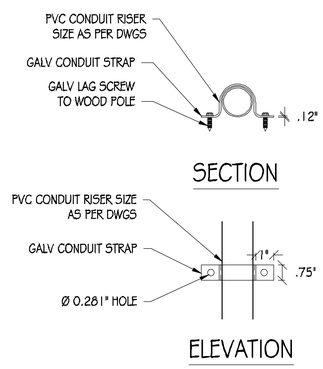


NOTES:

1. REMOVE & REPLACE SIDEWALK SECTION, RESTORATION TO MEET CITY STANDARD DETAILS
2. EXPOSED CONCRETE TO HAVE BROOM FINISH

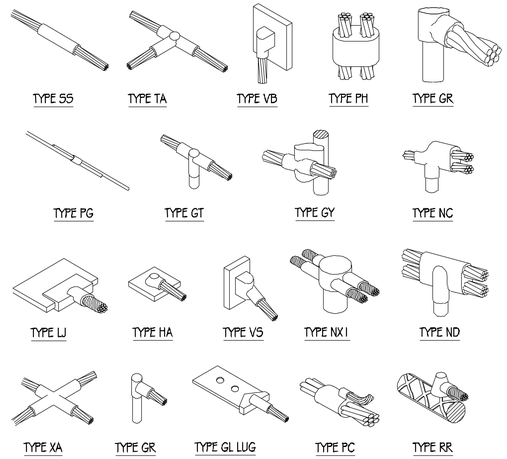
1 POLE GROUNDING DETAIL

NTS



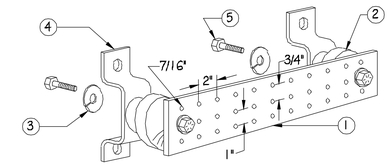
2 CONDUIT RISER DETAIL

NTS



3 EXOTHERMIC WELD DETAILS

NTS

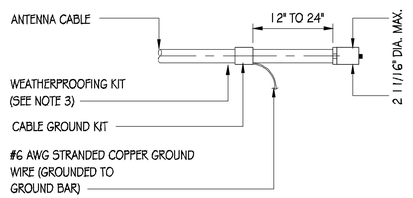


NOTES:

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

SURESITE
Infrastructure experts. Small cell routers.
36 EXECUTIVE PARK, SUITE 210
IRVINE, CA 92614

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
CIVIL
STATE OF CALIFORNIA

CRAN_RSFR_LOSAO_06

791 LOS ALTOS AVE
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/13/18	CD 90%
	07/25/19	CD 100%

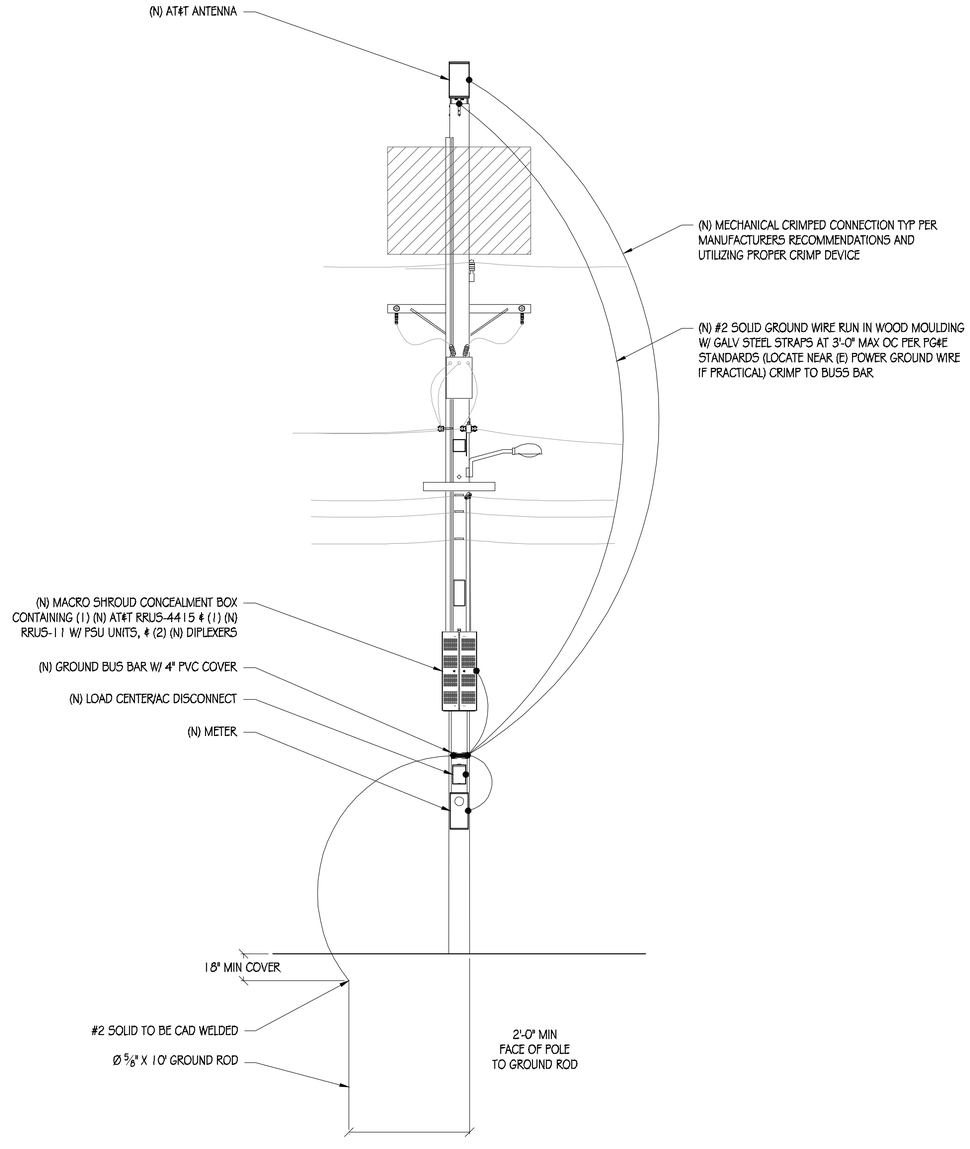
DRAWN BY:	T. JONES
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	07/25/19

SHEET TITLE:

SINGLE-LINE DIAGRAM & DETAILS

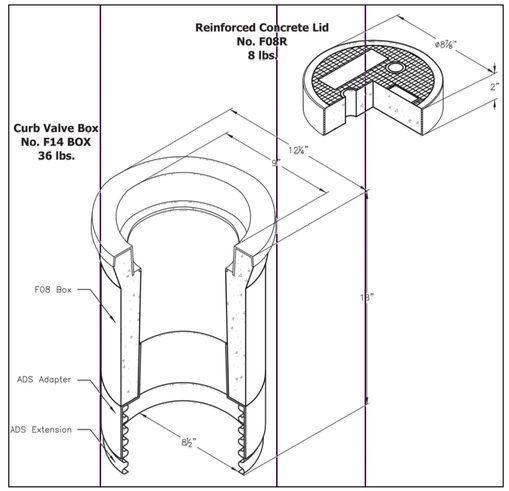
SHEET NUMBER

E-1



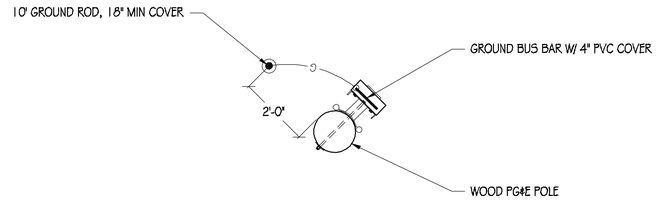
POLE GROUNDING DIAGRAM

NTS



1 TEST WELL DETAIL

NTS



TN

GROUNDING PLAN

NTS

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

SURESITE
Infrastructure experts. Small cell leaders.
36 EXECUTIVE PARK, SUITE 210
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791 LOS ALTOS AVE
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/13/18	CD 90%
	07/25/19	CD 100%

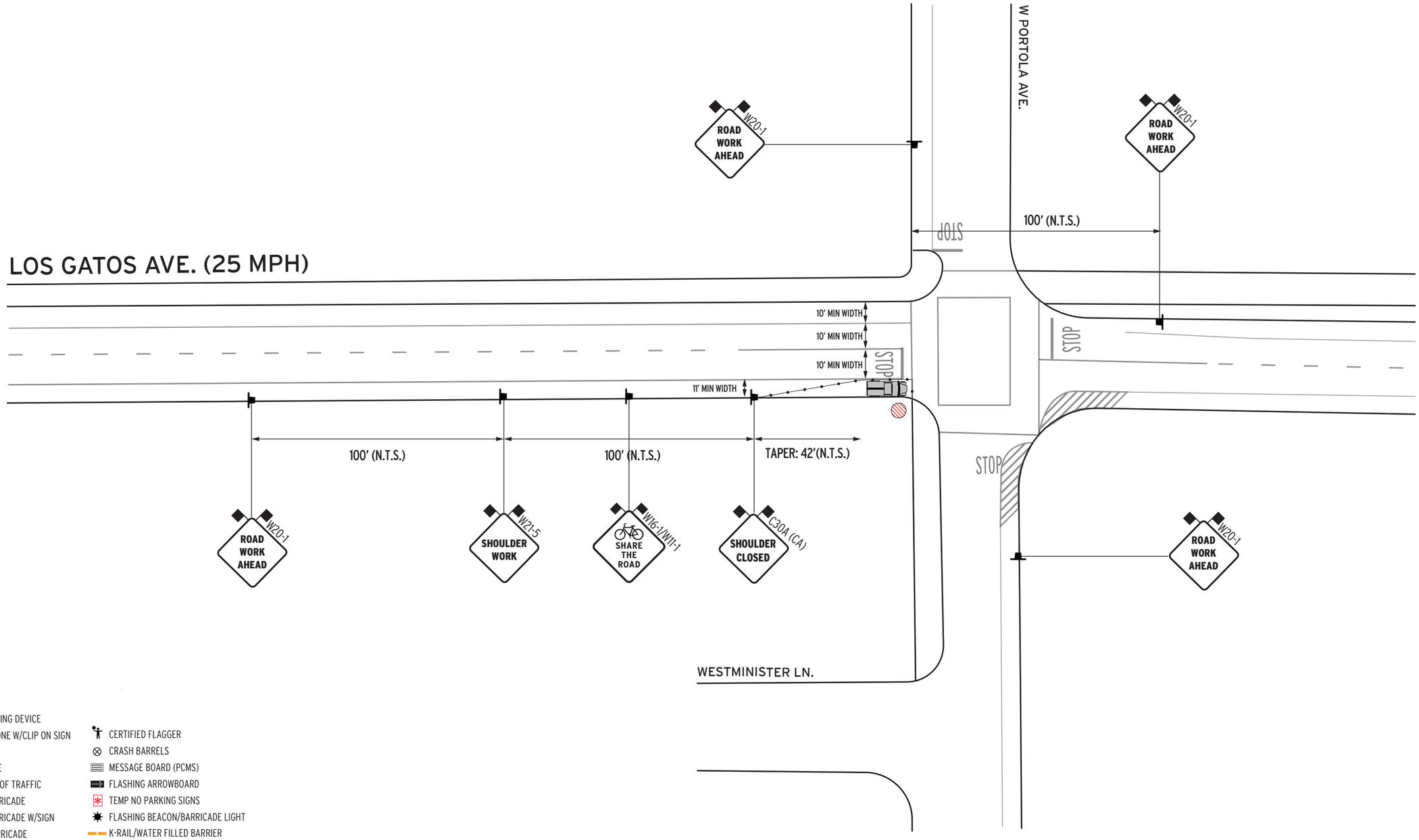
DRAWN BY:	T. JONES
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	07/25/19

SHEET TITLE:

GROUNDING DIAGRAMS

SHEET NUMBER

E-2



LEGEND:

- CHANNELIZING DEVICE
- TRAFFIC CONE W/CLIP ON SIGN
- SIGN
- WORK ZONE
- DIRECTION OF TRAFFIC
- TYPE 1 BARRICADE
- TYPE 1 BARRICADE W/SIGN
- TYPE 3 BARRICADE
- TYPE 3 BARRICADE W/SIGN
- CERTIFIED FLAGGER
- CRASH BARRELS
- MESSAGE BOARD (PCMS)
- FLASHING ARROWBOARD
- TEMP NO PARKING SIGNS
- FLASHING BEACON/BARRICADE LIGHT
- K-RAIL/WATER FILLED BARRIER
- PEDESTRIAN BARRICADE

PLAN-1
TEMP TRAFFIC CONTROL PLAN

NOTES

- Traffic control shall conform with MUTCD and/or Caltrans Standards section 6 dated 2014.
- One lane of traffic in each direction and all high volume turning lanes shall be maintained at all times on all streets at a minimum lane width of 10 feet.
- Contractor shall notify local authorities once signs are posted.
- All advanced warning signs shall be equipped with 2 (18" orange flags)
- Certified Traffic Control Workers shall have Type II vests, work shoes, and hard hats.
- Temporary no parking signs shall be placed a min of 72 hrs prior of work.
- Driveways shall be monitored and maintained at all times during work hours.
- Distance between sign and work area will be determined on speed limit.
- Roadway shall not be opened until safe for public use. All open trenches must be plated or - backfilled prior to public usage.
- All Devices shall be removed when no longer required.

MUTCD TABLE 6C-1 — MEANING OF LETTER CODES ON TYPICAL APPLICATION DIAGRAMS

ROAD TYPE	DISTANCE BETWEEN SIGNS		
	A	B	C
Urban (Low Speed) - 25 mph or less	100 ft	100 ft	100 ft
Urban (Low Speed) + 25 to 40 mph	250 ft	250 ft	250 ft
Urban (High Speed) + 40 mph	350 ft	350 ft	350 ft
Rural	500 ft	500 ft	500 ft
Expressway / Freeway	1,000 ft	1,500 ft	2,640 ft

COMPASS:

SCALE: NOT TO SCALE

DATE REQSTD: 6-19-19

DATE COMPLTD: 6-20-19

PROJECT LOCATION: 791 LOS GATOS AVE. LOS ALTOS

JOB# LOSA0_06

PAGE# 1/1

REQUEST BY:
LANCE LEWIS
SURESITE
484-895-5109
L.LEWIS@SURE-SITE.COM

AFTER HOURS EMERGENCY
510-299-5666

Drawn By:
Lindsy Hunt
CSLB# 917034
Office: 510-657-2543
Fax: 510-657-2544
44800 Industrial Drive Fremont, CA 94538
WWW.BATSTRAFFICSOLUTIONS.COM
B.A.T.S. TRAFFIC SOLUTIONS

LosAO_006

City of Los Altos
Distributed Antenna Systems for Wireless Communications
Encroachment Permit Requirements

Distributed, repeater, or microcell antenna wireless communication systems and facilities that are regulated by the California Public Utilities Commission as a public utility and determined to be exempt from Los Altos' zoning regulations and use permit application requirements, shall be allowed in the public right-of-way subject to the following Encroachment Permit requirements:

A. Antenna systems are encouraged along the city's arterial and collector streets. These facilities are allowed on local streets upon verification by a qualified electrical engineer licensed by the state of California representing the FCC licensee that using local streets is necessary to obtain capacity and coverage.

B. Antenna systems are permitted on joint utility poles at a height not to exceed 10 feet above the height of joint utility pole. Replacement joint utility poles are allowed in accordance with the Municipal Code; however, no net new joint utility poles or monopole antennas are allowed in the public right-of-way.

C. Antennae shall be designed to be as visually unobtrusive as possible, such as by housing the antenna in a single radome on top of joint utility pole, or by mounting the antenna directly on the joint utility pole in a streamline manner and painted to match the color of the utility pole.

D. All antenna systems equipment boxes including switches, computers, cooling, back up power, etc., shall be mounted to the utility pole and both the antenna and utility equipment shall be painted to match the color of the existing utility pole.

E. Only battery back up power systems shall be allowed. No generators shall be allowed.

F. All new fiber optic and metal cables shall be installed underground unless there are existing overhead cables that can be collocated.

G. Radiofrequency reports shall be provided for the facility's maximum planned operating power pursuant to the underlying FCC license.

H. Provide a build-out plan that to the extent known at the time of application identifying by physical address (or if none, by geographic description) all other sites, regardless of whether now constructed, proposed, or anticipated, which are under contract at the time of application, subject to contractual provisions related to confidentiality, that are to be interconnected with this project site. Disclose in technical detail the proposed method of interconnection. Confidential sites may be identified generally.

I. Disclose by licensee call sign all build-out requirements/obligations which have yet to be met of all wireless providers that the applicant is under contract to build in the City of Los Altos, and the known or estimated date when the remaining build-out requirements will be met.

J. Identify by name, title, company affiliation, work address, telephone number and extension, and email address the key person or persons most knowledgeable regarding this Project so that the City may contact them with questions regarding the Project:

ENCROACHMENT PERMIT APPLICATION

The applicant is hereby given temporary permission to construct and maintain wireless communication systems at 791 Los Altos Avenue, as shown on the attached drawings. This permission shall cease at such time as the City Engineer determines that said improvements or the applicant's use thereof is detrimental to the City.

The above permission is given subject to the following conditions:

1. The applicant, their heirs, executors, administrators, successors, and assigns, agree to indemnify and hold harmless the City of Los Altos, its officers, and employees against all claims, liabilities, and losses arising out of construction, existence, and future abandonment/destruction of the subject wireless communication systems and all other associated appurtenances. In addition, the applicant shall be responsible for the repair of all damage to roadways, sidewalks, curb and gutter, sewer mains and laterals, traffic signals and conduits, street lights and conduits, irrigation systems including controllers and conduits, or landscaping resulting from the construction/abandonment of the work proposed to be completed under the conditions of this permit, and shall be responsible for repairing or replacing such damaged areas.

2. Construction and destruction/abandonment of the work may be done on weekdays or Saturdays. Weekday work shall be limited to the hours of 8:00 AM and 6:00 PM., except as noted in the lane closure restrictions described in Item 3. Saturday work shall be performed during the hours of 9:00 AM and 6:00 PM.

3. Traffic control and adequate protection of the public in the vicinity of the work site shall be the responsibility of the applicant. Lane closures shall conform to the requirements established in the State of California Traffic Manual, and the State Standard Plans and Specifications.

4. The applicant shall notify the three closest adjacent property owners to the installation and the three closest property owners directly across the street from the installation at least 10 days prior to commencement of any work. In addition, the applicant shall notify the City Communications Department at (650) 948-8223 of street/alley and lane closures at least 24 hours prior to any work. Furthermore, the contractor shall notify the city's Traffic Engineer at least 48 hours in advance of any excavations within 100 feet of any traffic signals.

5. Contractor shall positively locate by hand digging all traffic signal conduit and irrigation controller conduit adjacent to traffic signals. Any damage repair to signal equipment or irrigation controller equipment shall be completed by a qualified electrical contractor immediately at the contractor's expense, and before proceeding with any other work. Traffic signal detector loop replacement shall be replaced within 48 hours of being damaged. The contractor is encouraged to use the City's signal maintenance contractor, Bear Electric, for any traffic signal repair work at the contractor's expense.

6. Asphalt concrete section for trench backfill shall be a thickness equal to the existing pavement, or 4-inches thick minimum, whichever is greater.

7. Completed Certificates of Insurance naming the City of Los Altos, its elective and appointed boards, officers, agents and employees as additional insured must be completed and submitted to the City by the owner, prior to beginning any work in the public right of way. Insurance shall remain in force during the entire time that the public right-of-way facilities are in use and shall provide the above certificate to the City on an annual basis.

8. The applicant shall comply with the National Pollutant Discharge Elimination System Permit in effect at the time of the application, and shall continue to comply with the Permit as amended by the State Water Board from time to time.

9. The applicant understands that the City continues to pursue future utility undergrounding. In the event a pole or poles used by the applicant are selected for undergrounding or relocation of mounted utilities, the applicant will be required to remove all equipment placed on the pole at his/her expense. The applicant agrees that the City is not obligated to provide alternate space for applicant's use should removal of a facility be directed to accomplish utility undergrounding.

10. The applicant shall maintain the distributed antenna system in good repair at the discretion of the City Engineer.

11. The applicant shall remove the entire distributed antenna system structures within 90 days when such system is abandoned.

I hereby agree to the terms of this Encroachment Permit:

Laura Meiners, Site Dev Agent
Name/Title

Sure Site Consulting
Company

Laura Meiners
Signature

7-30-19
Date

CERTIFIED NOTIFICATION LIST AFFIDAVIT

CITY OF LOS ALTOS
STATE OF CALIFORNIA
COUNTY OF SANTA CLARA

I, Robert Castro, hereby certify that the attached list contains the names and addresses of all persons to whom all property is assessed as they appear on the latest available assessment roll of the County within the area described on the attached notice and for a distance of two hundred fifty feet (250') from the exterior boundaries of the proposed Wireless Service Facility Site.

I, further certify that the attached list of occupants reflect all residential addresses within two hundred fifty feet (250') from the exterior boundaries of the proposed Wireless Service Facility Site.

I, certify under penalty of perjury that the foregoing is true and correct.

Robert Castro

Signature

June 21, 2019

Date the notices were mailed out

Location:

Public right of way near 791 Los Altos Avenue

37.3967610, -122.1212470

CRAN_RSFR_LOSA0_06

1 167-18-049
DAVE R & DIANE M BEATTY
826 CARMEL AVE
LOS ALTOS CA 94022

2 167-18-050
SANTHOSH M & KALIA SHALINI SRINIVASAN
818 CARMEL AVE
LOS ALTOS CA 94022

3 167-18-051
OANH H HANLEY
808 CARMEL AVE
LOS ALTOS CA 94022

4 167-18-052
YU & LIU TIANYUN CHANG
800 CARMEL AVE
LOS ALTOS CA 94022

5 167-18-067
BRYAN & ZHAO LING LI
829 SANTA RITA AVE
LOS ALTOS CA 94022

6 167-18-073
ROBERT M & JACOBS PEGGY RICHARDSON
PO BOX 1075
MOUNTAIN VIEW CA 94042

6 167-18-073
OCCUPANT
830 LOS ALTOS AVE
LOS ALTOS CA 94022

7 167-18-080
AGU & WU YU DU
4681 BLUE RIDGE DR
SAN JOSE CA 95129

7 167-18-080
OCCUPANT
315 W PORTOLA AVE
LOS ALTOS CA 94022

8 167-18-081
GENE & HUI WENDY CHOY
821 LOS ALTOS AVE
LOS ALTOS CA 94022

9 167-18-082
BRENT M SAPIRO
831 LOS ALTOS AVE
LOS ALTOS CA 94022

10 167-18-085
MICHAEL C & CATHERINE H LIU
666 KINGSWOOD WAY
LOS ALTOS CA 94022

10 167-18-085
OCCUPANT
345 W PORTOLA AVE
LOS ALTOS CA 94022

11 167-18-086
ZHIHAO & HU XIN ZHENG
3305 POMERADO WAY
SAN JOSE CA 95135

11 167-18-086
OCCUPANT
359 W PORTOLA AVE
LOS ALTOS CA 94022

12 167-18-087
SETH PHILIP LESLIE
817 SANTA RITA AVE
LOS ALTOS CA 94022

13 167-21-006
DROR & TESSEL MARIANNA SNEH
2778 GASPAR CT
PALO ALTO CA 94306

13 167-21-006
OCCUPANT
366 W PORTOLA AVE
LOS ALTOS CA 94022

14 167-21-007
HAKIM & SHAHLA ALY
340 W PORTOLA AVE
LOS ALTOS CA 94022

15 167-21-008
AJIT K & KISHORE ANITA VERMA
780 LOS ALTOS AVE
LOS ALTOS CA 94022

16 167-21-009
WUGANG & WU TIAN ZHAO
772 LOS ALTOS AVE
LOS ALTOS CA 94022

17 167-21-019
IDEC SYSTEMS & CONTROLS CORP
1175 ELKO DR
SUNNYVALE CA 94089

17 167-21-019
OCCUPANT
777 LOS ALTOS AVE
LOS ALTOS CA 94022

18 167-21-023
JEFFREY A & HAY-KAUFMAN MARTHA KAUFMAN
280 W PORTOLA AVE
LOS ALTOS CA 94022

19 167-21-034
MARK H & PATRICIA A GOODMAN
791 LOS ALTOS AVE
LOS ALTOS CA 94022

20 167-21-046
JAIN FAMILY TRUST
771 WESTMINSTER LN
LOS ALTOS CA 94022

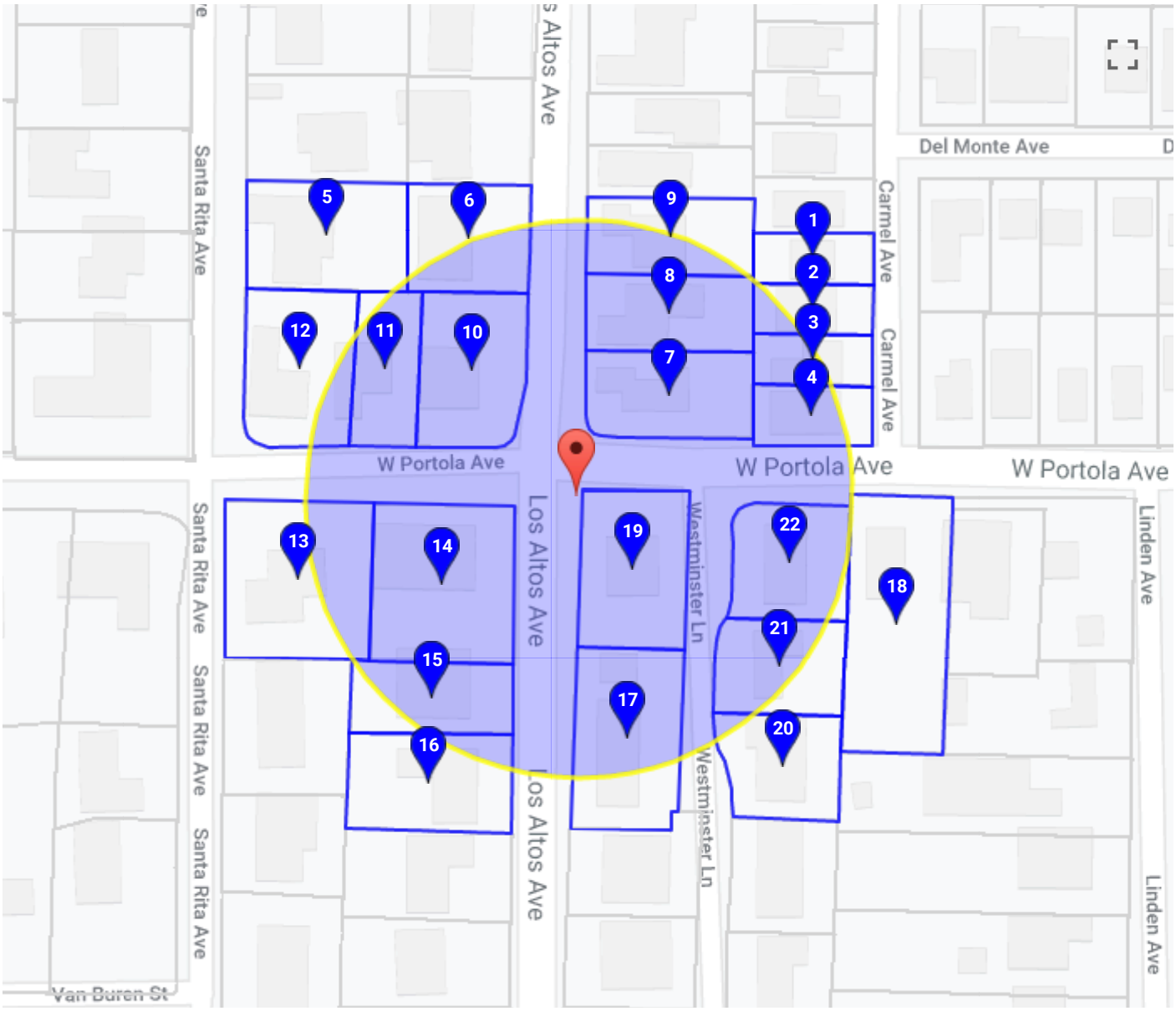
21 167-21-047
NANDA KISHORE
781 WESTMINSTER LN
LOS ALTOS CA 94022

22 167-21-048
JOHN B & SANDRA A PARKES
791 WESTMINSTER LN
LOS ALTOS CA 94022

IVAN TOEWS
SURESITE CONSULTING
2033 GATEWAY PL 6TH FLR
SAN JOSE CA 95110

CHRIS ELDRIDGE
ERICSSON
6140 STONERIDGE MALL ROAD SUITE 350
PLEASANTON CA 94588

CHRIS KERR
AT&T MOBILITY
5001 EXECUTIVE PARKWAY 4W750EE
SAN RAMON CA 94568


Del Monte Ave
Carmel Ave
Carmel Ave
W Portola Ave
W Portola Ave
W Portola Ave
Los Altos Ave
Los Altos Ave
Los Altos Ave
Westminster Ln
Westminster Ln
Santa Rita Ave
Santa Rita Ave
Santa Rita Ave
Santa Rita Ave
Linden Ave
Linden Ave
Van Buren St
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22

AT&T is working to improve wireless service in City of Los Altos!

June 10, 2019

Dear Neighbor,

AT&T Mobility proposes to install a state-of-the-art wireless communication small cell node facility on existing wood utility pole located in the City of Los Altos public right-of-way near 791 LOS ALTOS AVENUE. The equipment to be initially installed includes one (1) antenna, two (2) radio units, and one (1) emergency power shut off. This equipment is designed to increase capacity in high demand areas and should increase wireless connection reliability for AT&T customers. See attached schematic for more information about the placement and size of equipment currently proposed to be installed. All equipment will be painted to match the pole.

This proposed small cell node is part of a greater network that will provide and enhance current cutting edge and future AT&T wireless voice and data service to the surrounding area, improving wireless capabilities and public safety connectivity. Although experiences with wireless services vary based on specific location and usage times, the wireless service proposed by this facility will help meet existing, fluctuating and future demands.

Map of Pole Location

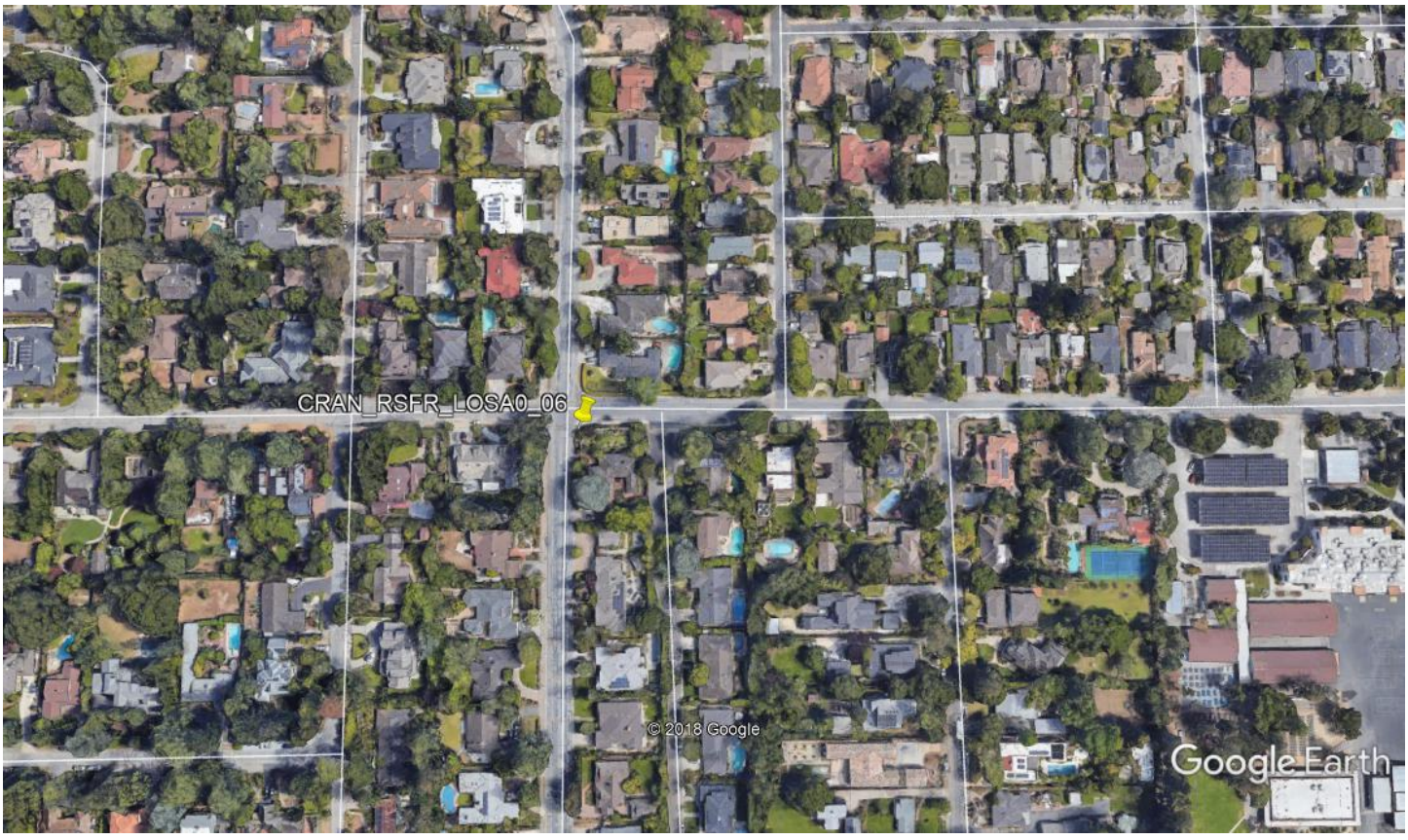


Photo of Existing Pole

Want to learn more?

Please contact AT&T's small cell project voice mailbox at 949-247-8686 or email escsd@sure-site.com should you have any comments or questions about the proposal.

Thank you.

Sincerely,

Angela Kung
AT&T Director - External Affairs

CRAN_RSFR_LOSAO_06

791 Los Altos Avenue Los Altos CA 94022

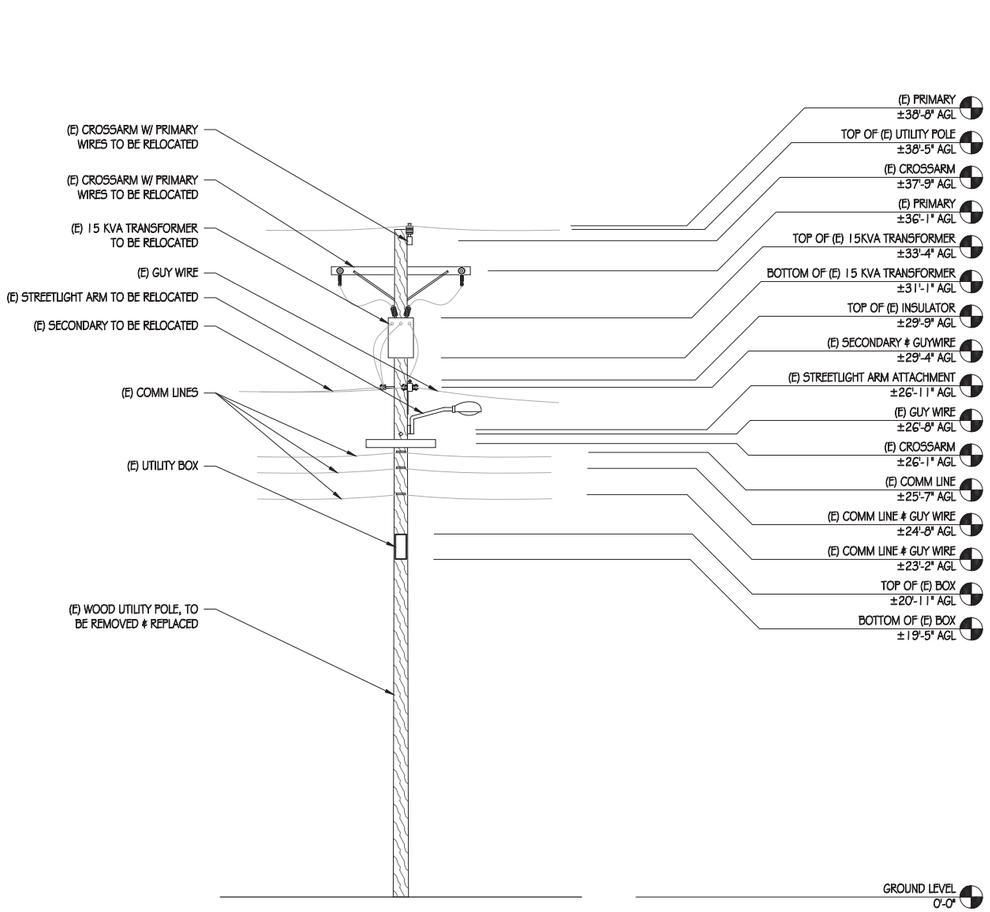
ARTISTIC engineering
AEsims.com
877.9AE.sims

View 1

Existing

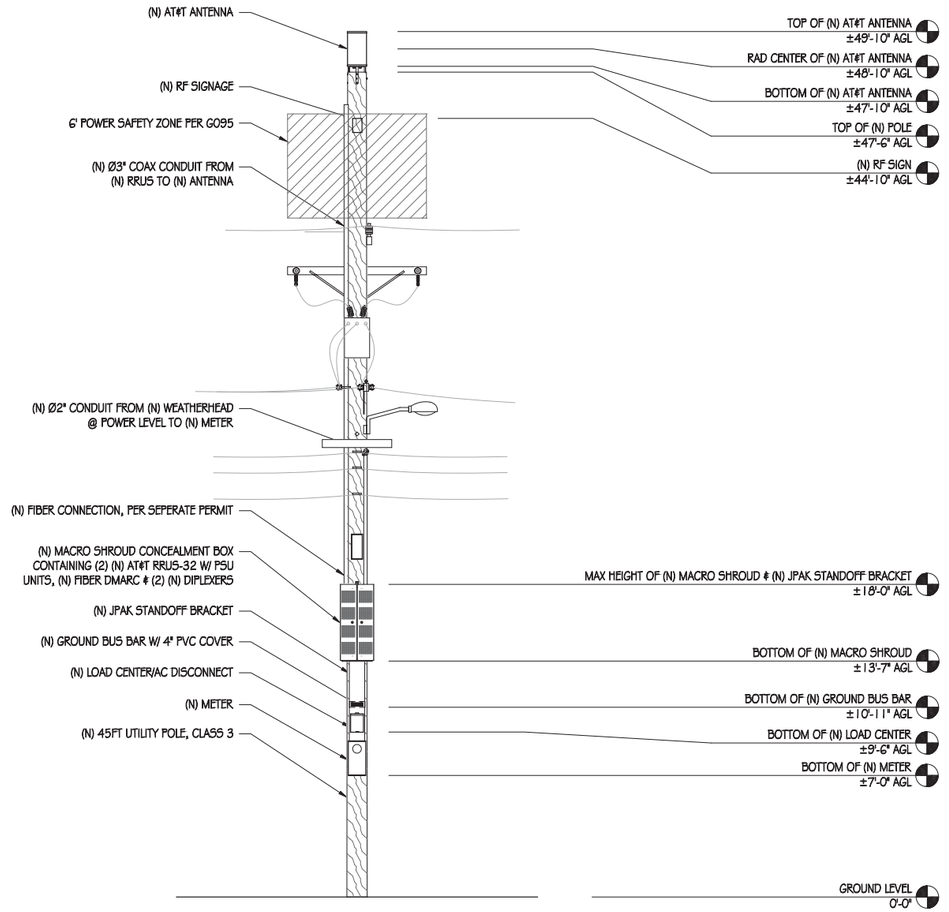
Proposed Looking west from Portola Avenue

Accuracy of photo simulation based upon information provided by project applicant.



EXISTING NORTH ELEVATION

1/4"= 1'-0"



NEW NORTH ELEVATION

1/4"= 1'-0"

NOTE: ALL (N) EQUIPMENT TO BE PAINTED MESA BROWN
NOTE: ALL (E) EQUIPMENT TO BE REMOUNTED AT SAME ELEVATION ON (N) POLE

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

SURESITE
infrastructure experts. smart cell solutions.
36 EXECUTIVE PARK, SUITE 210
IRVINE, CA 92614

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_LOSA0_06

ROW ADJCT TO 791 LOS ALTOS AVE
LOS ALTOS, CA 94022

ISSUE STATUS

△	DATE	DESCRIPTION
	06/13/18	CD 90%
	10/29/18	CD 100%

DRAWN BY:	O. REDDISH
CHECKED BY:	T. DiCARLO
APPROVED BY:	B. McCOMB
DATE:	10/29/18

SHEET TITLE:

ELEVATIONS

SHEET NUMBER

A-3

AT&T Mobility Radio Frequency Statement
Los Altos CA Small Cell Node 6

AT&T has experienced an unprecedented increase in mobile data use on its network since introduction of the iPhone in 2007. AT&T estimates that since introduction of the of the iPhone in 2007, mobile data usage has increased 470,000% on its network. AT&T forecasts its customers' growing demand for mobile data services to continue. The increased volume of data travels to and from customers' wireless devices and AT&T's wireless infrastructure over limited airwaves — radio frequency spectrum that AT&T licenses from the Federal Communications Commission ("FCC").

Spectrum is a finite resource and there are a limited number of airwaves capable and available for commercial use. Wireless carriers license those airwaves from the FCC. To ensure service quality, AT&T must knit together its spectrum assets to address customers' existing usage and forecasted demand for wireless services, and it must use its limited spectrum in an efficient manner.

AT&T uses high-band (i.e., 2300 MHz, 2100 MHz, and 1900 MHz) and low-band (i.e., 850 MHz and 700 MHz) spectrum to provide wireless service. Each spectrum band has different propagation characteristics and signal quality may vary due to noise or interference based on network characteristics at a given location. To address this dynamic environment, AT&T deploys multiple layers of its licensed spectrum and strives to bring its facilities closer to the customer. To address the existing and forecasted demand and to support 5G speeds in the near future, AT&T plans to deploy small cell facilities within public rights-of-way.

The service coverage gap is caused by inadequate infrastructure in the area. AT&T currently has existing sites in the broader geographical area but as Exhibit 1 illustrates, these existing sites do not provide sufficient high-band, in building LTE service in the gap area. To meet its coverage objectives, AT&T needs to construct a new wireless communications facility. In order to provide high-band LTE service coverage in this portion of the city, AT&T needs to place its small cell node along Los Altos Avenue near W Portola Avenue. Denial of this proposed facility would materially inhibit AT&Ts ability to provide and improve wireless services in this portion of the city. The proposed small cell facilities will help close gap in coverage and help address increasing data usage, voice, and other wireless services driven by smart phones and tablet usage. This node is part of an effort to fully deploy 4G LTE technology in the area. Specifically, the proposed facility will close this service gap and provide sufficient high-band 4G LTE, in building coverage for AT&T customers in the affected area. 4G LTE is capable of delivering speeds up to 10 times faster than industry – average 3G speeds. LTE technology also offers lower latency, or the processing time it takes to move data through a network, such as how long it takes to

start downloading a webpage or file once you've sent the request. Lower latency helps to improve the quality of personal wireless services. What's more, LTE uses spectrum more efficiently than other technologies, creating more space to carry data traffic and services and to deliver a better overall network experience.

The proposed node on a pole in the public rights-of-way at 791 Los Altos Avenue is needed to close the high-band LTE service coverage in an area bordered roughly by Pasa Robles Avenue to the north, Laverne Way to the west, Van Buren Street to the south and Mercedes Avenue to the east. This portion of Los Altos is primarily residential neighborhoods with dozens of homes.

It is important to understand that service problems can and do occur for customers even in locations where the coverage maps on AT&T's "Coverage Viewer" website appear to indicate that coverage is available. As the legend to the Coverage Viewer maps indicates, these maps display approximate coverage. Actual coverage in an area may differ from the website map graphics, and it may be affected by such things as terrain, weather, network changes, foliage, buildings, construction, high-usage periods, customer equipment, and other factors.

It is also important to note that the signal losses, slow data rates, and other service problems can and do occur for customers even at times when certain other customers in the same vicinity may not experience any problems on AT&T's network. These problems can and do occur even when certain customers' wireless phones indicate coverage bars of signal strength on the handset. The bars of signal strength that individual customers can see on their wireless phones are an imprecise and slow-to-update estimate of service quality. In other words, a customer's wireless phone can show coverage bars of signal strength, but that customer will still, at times, be unable to initiate voice calls, complete calls, or download data reliably and without service interruptions due to service quality issues.

To determine where new equipment needs to be located for the provisioning of reliable service in any area, AT&T's radio frequency engineers rely on far more complex tools and data sources than just signal strength from individual phones. AT&T uses industry standard propagation tools to identify the areas in its network where signal strength is too weak to provide reliable in-building service quality. This information is developed from many sources including terrain and clutter databases that simulate the environment, traffic maps that simulate the density of users in the environment, and propagation models that simulate signal relative to interference in the presence of terrain and clutter variation. AT&T designs and builds its wireless network to ensure customers will receive reliable in-building service quality and data rates sufficient to stream video and complete calls. In-building service is critical as customers

increasingly use their mobile phones as their primary communication devices (more than 72% of American households rely primarily or exclusively on wireless telecommunications) and rely on their mobile phones to do more (E911, video streaming, GPS, web access, text, etc.). In fact, the FCC estimates that 70% of 911 calls are placed by people using wireless phones. And with AT&T's selection by FirstNet as the wireless service provider to build and manage the nationwide first responder wireless network, each new facility will help strengthen first responder communications.

Exhibit 1 is a map of the existing high -band LTE service coverage (without the proposed small cell node). It includes high-band LTE service coverage provided by other existing AT&T sites. The green shaded areas of the map depict acceptable in-building coverage. In-building coverage means customers are able to place or receive a call on the ground floor of a building. The yellow shaded areas depict areas within a signal strength range that provide acceptable in-vehicle service coverage. In these areas, an AT&T customer should be able to successfully place or receive a call within a vehicle. The lavender shading depicts areas within a signal strength range in which a customer might have difficulty receiving a consistently acceptable level of service. The quality of service experienced by any individual customer can differ greatly depending on whether that customer is indoors, outdoors, stationary, or in transit. Any area in yellow or lavender category is considered inadequate service coverage and constitutes a service coverage gap.

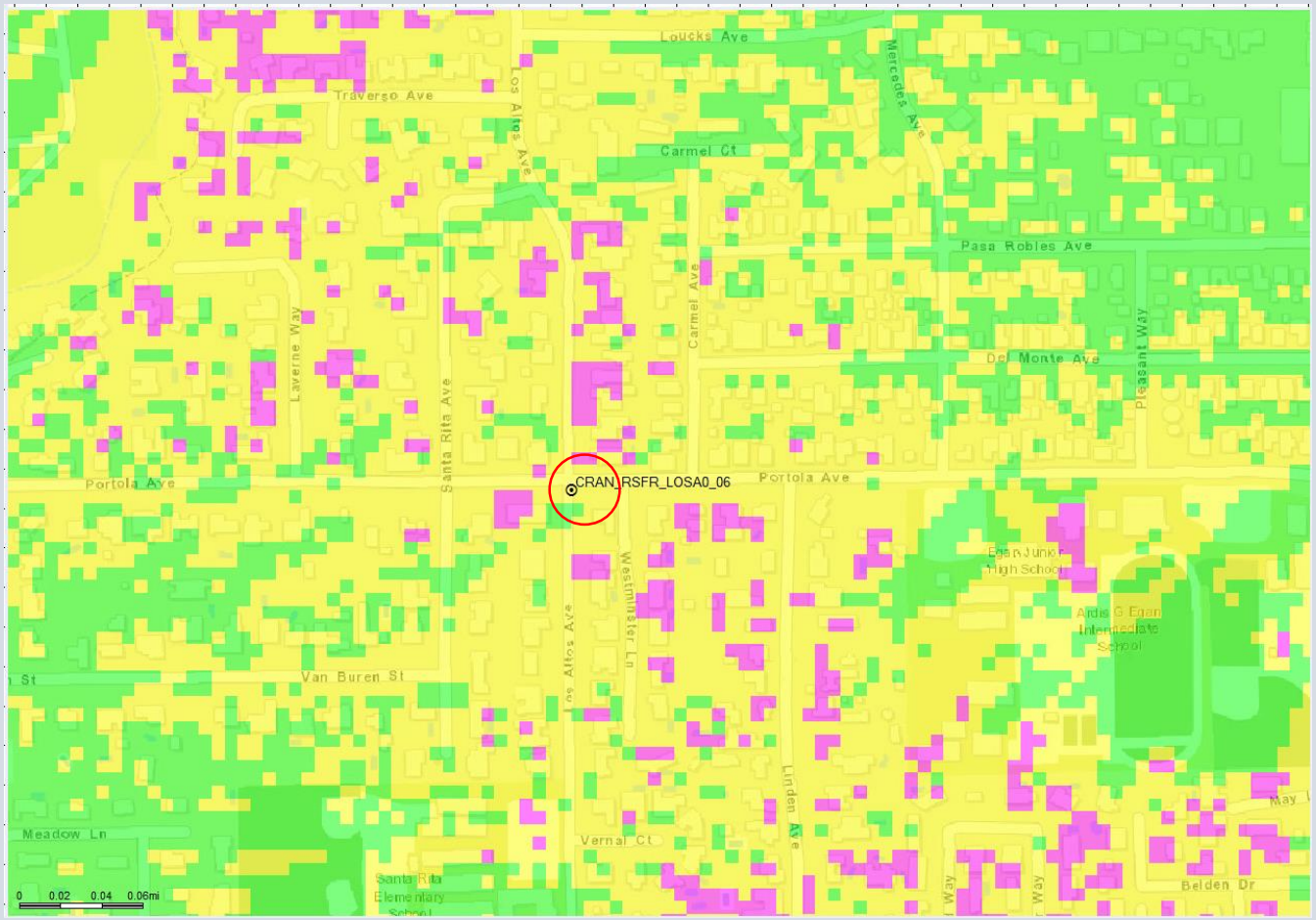
Exhibit 2 to this statement is a map that predicts high-band LTE service coverage based on signal strength in the vicinity if the proposed small cell node is constructed as proposed. As shown by this map, constructing the proposed small cell node here closes this significant service coverage gap.

My conclusions are based on my knowledge of the proposed small cell locations and with AT&T's wireless network in the surrounding area. I have a B.Sc. degree in Micro-Electronic System Design from University of Ulster, UK, am a Chartered Engineer, and have worked as an engineering expert in the wireless communications industry for more than 33 years.

Philip B A Dale C Eng
AT&T Mobility Services LLC
Network, Planning & Engineering
RAN Design & RF Engineering
July 19, 2019

EXHIBIT 1

LTE 1900 Coverage without Small Cell LOSA0_06



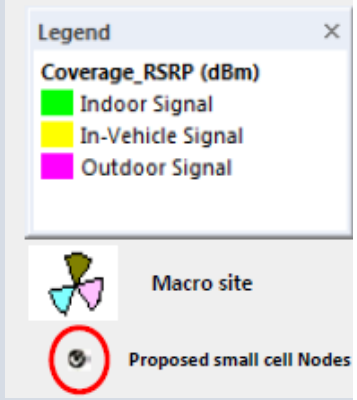


EXHIBIT 2

LTE 1900 Coverage with Small Cell LOSA0_06