



SF PALO ALTO 023
ROW ACROSS FROM 305 COWPER ST
& ADJACENT TO 482 EVERETT
PALO ALTO, CA

DIRECTIONS FROM 695 RIVER OAKS PARKWAY, SAN JOSE CA 95124:

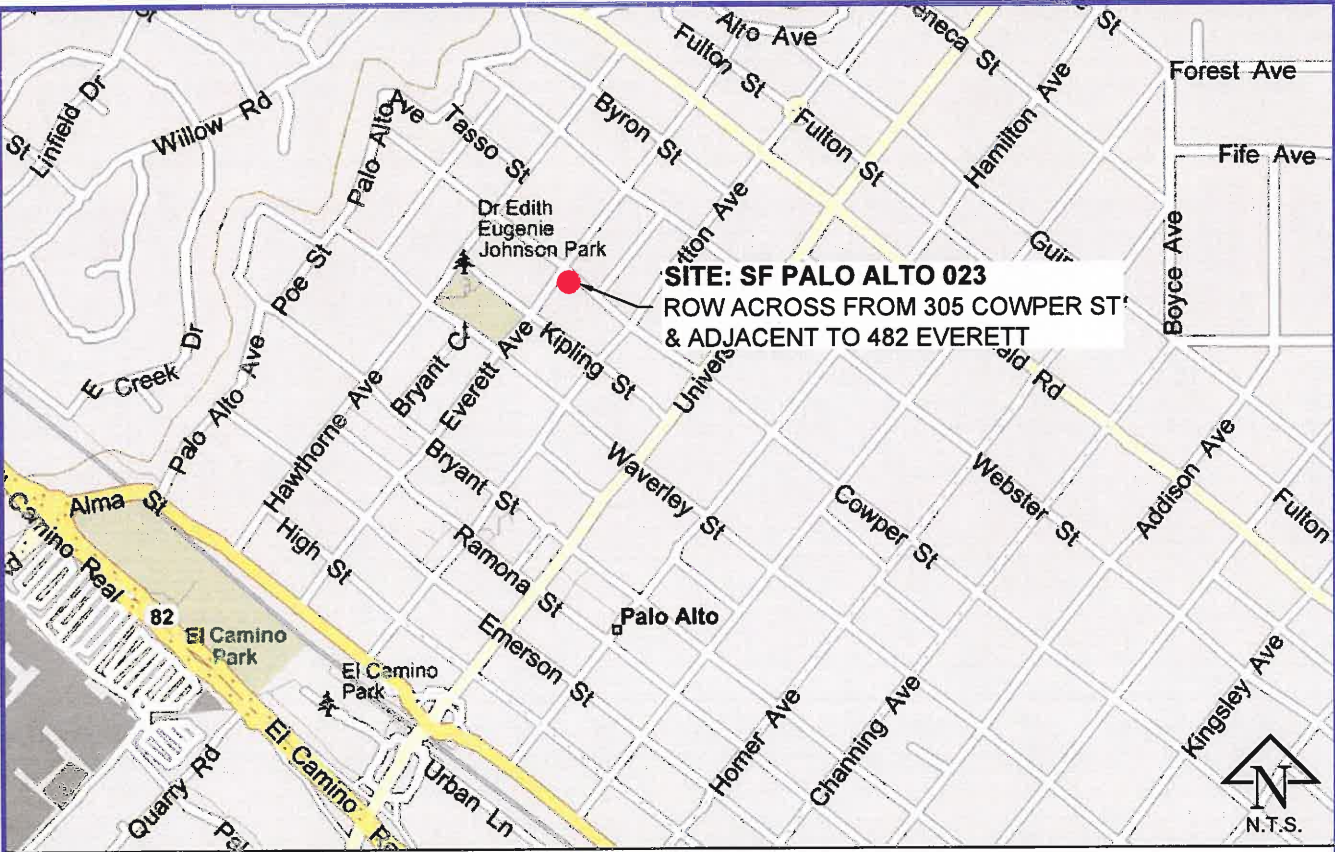
HEAD NORTHEAST ON RIVER OAKS PARKWAY TOWARD VILLAGE CENTER DR, TURN LEFT ONTO VILLAGE CENTER DR, TURN LEFT ONTO RESEARCH PL, TURN RIGHT AT THE 1ST CROSS STREET ONTO MONTAGUE EXPRESSWAY, SLIGHT RIGHT TO MERGE ONTO US-101 N TOWARD SAN FRANCISCO, MERGE ONTO US-101 N, USE 2ND FROM THE RIGHT LANE TO TAKE EXIT 403 TO MERGE ONTO UNIVERSITY AVE, MERGE ONTO UNIVERSITY AVE, TURN RIGHT ONTO MIDDLEFIELD RD, TURN LEFT AT THE 2ND CROSS STREET ONTO EVERETT AVE, TURN LEFT AT THE 3RD CROSS STREET ONTO COWPER STREET. WOOD POLE NODE IS ON THE RIGHT.

DRIVING DIRECTIONS

1. STREET USE PERMIT SHALL BE OBTAINED BY CONTRACTOR PRIOR TO COMMENCING WORK.
2. ALL WORK TO BE CONDUCTED IN THE RIGHT OF WAY.
3. ALL DISTURBED LANDSCAPING SHALL BE REPLACED TO SIMILAR EXISTING CONDITION.
4. ANY SIDEWALK CLOSURE SHALL BE COORDINATED WITH THE CITY AND PROPER SIGNING WILL BE PLACED.
5. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON PRIVATE PROPERTY OR BLOCK ACCESS TO PRIVATE PROPERTY.
6. CLEANUP OF SITE WILL BE COMPLETED EACH EVENING AND THE SITE WILL BE RETURNED TO EXISTING CONDITIONS AT THE COMPLETION OF CONSTRUCTION AT EACH SITE.

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

GENERAL CONTRACTOR NOTES



VICINITY MAP

SHEET NUMBER:	DESCRIPTION
C-1	TITLE SHEET
C-2	CONDITIONS OF APPROVAL
C-3	CONDITIONS OF APPROVAL
D-1	DETAILS & NOTES
D-2	DETAILS & NOTES
D-3	DETAILS & NOTES
D-4	DETAILS & NOTES
D-5	DETAILS & NOTES
D-6	DETAILS & NOTES
D-7	DETAILS & NOTES
T1.1	SPECIAL TREE PROTECTION INSTRUCTION SHEET
T1.2	SPECIAL TREE PROTECTION INSTRUCTION SHEET
T1.3	SPECIAL TREE PROTECTION INSTRUCTION SHEET
T1.4	SPECIAL TREE PROTECTION INSTRUCTION SHEET
P-1	PHOTOS
P-2	PHOTOSIM
P-3	PROFILE
P-4	PROFILE
SP-1	SITE PLAN
SP-2	ENLARGED SITE PLAN
OC-1	O'CALCS
T01	TRAFFIC CONTROL
T02	TRAFFIC CONTROL

SHEET INDEX

CROWN CASTLE TO INSTALL THE FOLLOWING:

- INSTALL NEW VGR.
- INSTALL NEW POWER DISCONNECT BOX ON STANDOFF BRACKET AT 8'-0" TO 8'-9".
- INSTALL NEW WTR ENCLOSURE ON STANDOFF BRACKET AT 8'-6" TO 10'-6".
- INSTALL NEW STANDOFF BRACKET KIT WITH (1) RRUS-11 AT 11'-0" TO 12'-5".
- INSTALL NEW RRUS BRACKET KIT WITH (2) RRUS-32 AT 13'-0" TO 16'-3".
- TRANSFER AT&T TO 23'-0" FROM STUB POLE.
- LOWER CATV TO 25'-0"; EXISTING HEIGHT AT 26'-8".
- LOWER EXISTING COMM TO 26'-0"; EXISTING HEIGHT AT 28'-11".
- INSTALL NEW CROWN CASTLE FIBER AT 27'-0".
- INSTALL 1" SCHEDULE 80 POWER RISER (BEHIND COMM RISER).
- INSTALL STANDOFF BRACKET (TYP.).
- INSTALL 3'-6" POLE MOUNTED EXTENSION & (1) NEW 48" AMPHENOL ANTENNA MODEL #CUUT360X12F124S0 WITH CUSTOM SHROUD CONCEALMENT COVER.
- INSTALL NOTICE & CAUTION SIGNS.
- ALL EQUIPMENT SHALL BE PAINTED TO MATCH TEXTURE AND COLOR.
- NO GROUND DISTURBANCE NECESSARY.

PROJECT SUMMARY

PROJECT MANAGER:

CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
JOHN GRIFFITHS
(408) 468-5524
JOHN.GRIFFITHS@CROWNCastle.COM

NODE ENGINEER:

COASTAL COMMUNICATIONS
5841 EDISON PL, STE. 200
CARLSBAD, CA 92008
TODD THREW
(760) 929-0910 ext. 101
TODD@COASTALCOMMINC.COM

PROJECT TEAM

SF PALO ALTO 023
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



PROPRIETARY INFORMATION

THE INFORMATION CONTAINED IN THIS SET OF DRAWINGS IS PROPRIETARY AND CONFIDENTIAL TO VERIZON. ANY USE OR DISCLOSURE OTHER THAN AS IT RELATES TO VERIZON IS STRICTLY PROHIBITED.



1-800-227-2600
CALL AT
LEAST TWO
DAYS BEFORE
YOU DIG

UNDERGROUND SERVICE ALERT
TICKET #

ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
ROW ACROSS FROM 305 COWPER ST & ADJACENT TO 482 EVERETT
PALO ALTO, CA
37.449812/-122.161695

TITLE SHEET

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
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SHEET NO.
C-1

PENDING C.O.A .

SF PALO ALTO 023
PALO ALTO

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VZW366241CA

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CONDITIONS OF
APPROVAL

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
SHEET NO. C-2		

Applicant shall comply with the following comments/requirements.

1. Applicant shall install new street lighting poles with new foundations that are identical to the existing poles. New street lighting poles shall be installed as close as possible to the existing street lighting poles. Applicant shall ensure to maintain present illumination level on the streets.

2. Receptacles on street lights need to be pre-wired and mounted on the top of the street light. The receptacles shall be wired into the secondary voltage source and not the street light circuit.

3. New street lighting pole's drawing is approved. Applicant shall replace the existing street lighting poles with identical poles. If there is any deviation then it must be approved by Utilities Engineering prior to installation.

4. Locations for new street lighting poles shall be as close as possible to the existing street lighting poles. No street or location shall be left dark. After removal of existing street pole/s, new street lighting poles shall be installed and energized as soon as possible. Applicant to coordinate with Scott Yahne (650-444-8823) our Street Lighting Supervisor prior to making any electric connection/s.

5. An inner duct of adequate size shall be installed inside the street lighting poles so to keep antenna wiring separate from street lighting circuits. Power to the antenna or any other equipment mounted on the street lighting pole shall be tapped from the designated secondary electric service point and not from the street lighting circuit.

6. If the street lighting pole gets knocked down, the City shall replace the pole but the City shall not be responsible for any damages to the antenna or any other equipment mounted on the street lighting pole/s.

7. Applicant has submitted certified structural calculations pertaining to equipment loading on the new street lighting poles.

8. Utility's Engineer has reviewed applicant's proposed fiber infrastructure and confirmed acceptance as long as applicant maintains required clearances and protect our distribution lines.

9. Voltage at all the locations identified for applicant's equipment installation may not be. Applicant shall accept the voltage available at the closest location. Applicant shall be responsible for installing additional substructure per City's standards and specifications, if required.

10. Applicant shall contact Utilities Engineering (650-566-4535) prior to entering any energized box or vault.

11. Applicant shall install substructure per City's standard and specifications and maintain required clearances as shown on the City's standard drawings. The City's Underground Electric Inspector will inspect the substructure for electric utility. Applicant must contact Underground Electric Inspector at 650-496-6936 or his designated representative for scheduling an inspection prior to back filling the trench.

12. Applicant shall pot hole and locate underground facilities prior to trenching or boring. Applicant must contact USA (800-227-2600) and have underground facilities marked prior to excavation/trenching or boring.

13. At few locations, proposed trenching/boring route conflicts with our existing high voltage distribution lines, boxes/vaults etc. Extreme caution must be exercised to protect our utility lines and associated substructures.

14. Applicant shall protect existing underground utilities. Applicant has not submitted any trench profile as requested by Utilities. Hence, applicant shall bore/ trench at his/her risk. Applicant will be solely responsible for any damages caused during the construction.

15. Street opening permits shall be obtained from Public Works Engineering (PWE) Department prior to trenching or boring.

16. Traffic control plans must be submitted to Transportation Department and approval must be obtained prior to lane closures. Construction hours shall be per Transportation Department's requirements.

17. Applicant shall contact the Public Works Engineering (PWE) Department (650-566-4535) and obtain electric permit and cost estimate for each location. Any changes made to the original design or to the designated electric service point/s shall be coordinated with the PWE Department. Applicant must pay all fees/cost estimates prior to final service connections.

ANTENNA CAUTION SIGN

ANTENNA SIGNAGE:
ON WOOD POLES - SIGN ON ALUMINUM WITH SS SCREW TO THE POLE
ON METAL POLES - ADHESIVE VINYL OR PLACARD STRAPPED WITH SS TIES
ON CONCRETE / COMPOSITE - PLACARD STRAPPED WITH SS TIES
SIGN PLACEMENT:
AFFIX TO THE STRUCTURE ON OR JUST BELOW THE ANTENNA(S)
SIZE APPROX. 8" x 5"



A SCALE
N.T.S.

ANTENNA NOTICE SIGN

ANTENNA SIGNAGE:
ON WOOD POLES - SIGN ON ALUMINUM WITH SS SCREWS TO THE POLE
ON METAL POLES - ADHESIVE VINYL OR PLACARD STRAPPED WITH SS TIES
ON CONCRETE / COMPOSITE - PLACARD STRAPPED WITH SS TIES
SIGN PLACEMENT:
AFFIX TO THE STRUCTURE NEAR THE BOTTOM OF POLE OR ON THE SHROUD



B SCALE
N.T.S.

**SF PALO ALTO 023
PALO ALTO**

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



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**CONDITIONS OF
APPROVAL**

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
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SHEET NO.
C-3

LEGEND

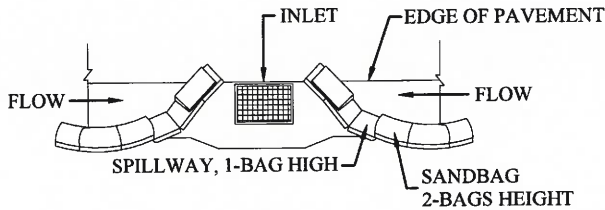
SYMBOL	DESCRIPTION
	PROPOSED
	2 X 3 VAULT
	CABINET
	PCC SIDEWALK
	TRENCH AND FIBER CONDUIT (PVT)
	DIRECTIONAL BORING
	BORE PIT
	EXISTING
	EXISTING STREET LIGHT
	EXISTING VAULT HANDHOLE
	EXISTING MAILBOX
	EXISTING TREE
	EXISTING TREE WELL
	STATION POINTS (100' INCREMENTS)
	EXISTING CURB RAMP
	EXISTING CURB & GUTTER
	EXISTING FACE OF BUILDING
	EXISTING PARKING STRIPING
	EXISTING RIGHT OF WAY
	EXISTING CENTERLINE
	EXISTING WATER LINE
	EXISTING WATER LATERAL
	EXISTING SEWER LINE
	EXISTING SEWER LATERAL
	EXISTING GAS LINE
	EXISTING GAS LATERAL
	EXISTING STORM DRAIN LINE
	STREET CURRENTLY UNDER CONSTRUCTION

EROSION AND SEDIMENT CONTROL NOTES:

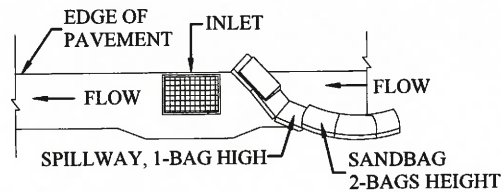
TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

- ALL REQUIREMENTS OF THE CITY "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED PUBLIC IMPROVEMENTS CONSISTENT WITH THE EROSION CONTROL PLAN AND/OR WATER POLLUTION CONTROL PLAN (WPCP), IF APPLICABLE.
- FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
- THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
- EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON.
- THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
- THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
- ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED IMPROVEMENT PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
- ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
- THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER/DEVELOPER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

STORMDRAIN INLET PROTECTION



TYPICAL PROTECTION FOR INLET WITH OPPOSING FLOW DIRECTIONS



TYPICAL PROTECTION FOR INLET WITH SINGLE FLOW DIRECTION

NOTES:

- INTENDED FOR SHORT - TERM USE.
- USE TO INHIBIT NON - STORM WATER FLOW.
- ALLOW FOR PROPER MAINTENANCE AND CLEANUP.
- BAGS MUST BE REMOVED AFTER ADJACENT OPERATION IS COMPLETED.
- NOT APPLICABLE IN AREAS WITH HIGH SILTS AND CLAYS WITHOUT FILTER FABRIC.

NOTES:

- CONTRACTOR TO POTHOLE ALL UTILITY CROSSINGS.
- CONTRACTOR TO PLACE SANDBAGS AROUND ANY/ALL STORM DRAIN INLETS TO PREVENT CONTAMINATED WATER.
- SPOILS PILE WILL BE COVERED AND CONTAINED AND STREET WILL BE SWEEPED AND CLEANED AS NEEDED.
- CONTRACTOR TO REPAIR DAMAGED PUBLIC IMPROVEMENTS TO THE SATISFACTION OF THE CITY ENGINEER.
- C&G TO BE PROTECTED IN PLACE. SIDEWALK TO BE REPLACED TO THE SATISFACTION OF THE CITY ENGINEER.
- THE CONTRACTOR SHALL RESTORE THE ROADWAY BACK TO ITS ORIGINAL CONDITION SATISFACTORY TO THE CITY ENGINEER INCLUDING, BUT NOT LIMITED TO PAVING, STRIPING, BIKE LANES, PAVEMENT LEGENDS, SIGNS, AND TRAFFIC LOOP DETECTORS.
- SIDEWALK SHALL BE RESTORED/REPLACED PER CITY STANDARD DRAWINGS.
- PEDESTRIAN RAMP WILL NOT BE DISTURBED.

ROW GROUND CONSTRUCTION NOTES:

- GROUND CONSTRUCTION TO REMOVE/CLEAN ALL DEBRIS, NAILS, STAPLES, OR NON-USED VERTICALS OFF THE POLE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MUNICIPAL, COUNTY, STATE, FEDERAL, GO95 AND GO128 STANDARDS AND REGULATIONS.
- CALL USA 48 HOURS PRIOR TO EXCAVATING AT (800) 227-2600 OR 811.
- ALL LANDSCAPING TO BE RESTORED TO ORIGINAL CONDITION OR BETTER.
- ALL EQUIPMENT TO BE BONDED.
- METERING CABINET REQUIRES 36" CLEARANCE AT DOOR OPENING.
- CAULK CABINET BASE AT PAD.

NORMAL LOCATION OF UNDERGROUND UTILITIES NOTES:

- LOCATION AND DEPTH OF EXISTING AND PROPOSED UTILITIES MUST BE PROVIDED BY THE SUBDIVIDER AND SHOWN ON ANY PLANS SUBMITTED TO THE DEPT. OF PUBLIC WORKS FOR APPROVAL.
- CHANGES MAY BE PERMITTED BY THE DEPT. OF PUBLIC WORKS IN CASES OF CONFLICTING FACILITIES.
- CONFLICTS BETWEEN UTILITY COMPANIES FACILITIES, EXISTING AND PROPOSED, MUST BE MUTUALLY RESOLVED BY THE UTILITY COMPANIES.
- FOR COMMERCIAL SIDEWALKS, THE FIRE HYDRANT SHALL BE PLACED WITHIN THE SIDEWALK 1'-6" BEHIND FACE OF CURB.
- MAXIMUM 2" DIAMETER GAS MAINS MAY BE PLACED IN JOINT UTILITIES TRENCH SUBJECT TO APPROVAL OF CITY ENGINEER (IN TRACTS).

GENERAL CONTRACTOR NOTES:

- STREET USE PERMIT SHALL BE OBTAINED BY CONTRACTOR PRIOR TO COMMENCING WORK.
- ALL WORK TO BE CONDUCTED IN THE RIGHT OF WAY.
- ALL DISTURBED LANDSCAPING SHALL BE REPLACED TO SIMILAR EXISTING CONDITION.
- ANY SIDEWALK CLOSURE SHALL BE COORDINATED WITH THE CITY AND PROPER SIGNING WILL BE PLACED.
- NO MATERIALS OR EQUIPMENT SHALL BE STORED ON PRIVATE PROPERTY OR BLOCK ACCESS TO PRIVATE PROPERTY.
- CLEANUP OF SITE WILL BE COMPLETED EACH EVENING AND THE SITE WILL BE RETURNED TO EXISTING CONDITIONS AT THE COMPLETION OF CONSTRUCTION AT EACH SITE.

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

CALIFORNIA STATE CODE COMPLIANCE:

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

- CALIFORNIA ADMINISTRATIVE CODE (INCLUDING TITLES 24 & 25) 2016
- 2016 CALIFORNIA BUILDING CODES WHICH ADOPTS THE 2016 UBC, 2016 UMC, 2016 UPC AND THE 2016 NEC.
- BUILDING OFFICIALS & CODE ADMINISTRATORS (BOCA)
- 2016 CALIFORNIA MECHANICAL CODE
- ANSI/EIA-222-F LIFE SAFETY CODE NFPA-101
- 2016 CALIFORNIA PLUMBING CODE
- 2016 CALIFORNIA ELECTRICAL CODE
- 2016 LOCAL BUILDING CODE
- CITY/COUNTY ORDINANCES

ACCESSIBILITY REQUIREMENTS:

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS DO NOT APPLY IN ACCORDANCE WITH THE 2010 CALIFORNIA BUILDING CODE.

FCC NOTE:

THIS WIRELESS COMMUNICATION FACILITY COMPLIES WITH FEDERAL STANDARDS FOR RADIO FREQUENCY IN ACCORDANCE WITH THE TELECOMMUNICATION ACT OF 1996 AND SUBSEQUENT AMENDMENTS AND ANY OTHER REQUIREMENTS IMPOSED BY STATE OR FEDERAL REGULATORY AGENCIES.

CITY OF PALO ALTO UTILITIES ENGINEERING NOTES:

- APPLICANT SHALL TAP ELECTRIC SERVICE TO THE SMALL CELL DISTRIBUTED ANTENNA SYSTEM FROM THE LOCATIONS JOINTLY IDENTIFIED DURING THE FIELD INVESTIGATION.
- SERVICE VOLTAGE TO ALL THE PROPOSED LOCATIONS MAY NOT BE THE SAME. APPLICANT SHALL DESIGN THEIR SYSTEM TO OPERATE AT THE AVAILABLE VOLTAGE IN THE VICINITY.
- IF BRAND NEW POLES NEED TO BE INSTALLED FOR APPLICANT'S SYSTEM THEN THE POLES MUST MATCH EXISTING POLES IN THE DOWN TOWN AREA.
- AFTER EXCAVATION IS COMPLETED ON THE PUBLIC RIGHT OF WAY, EXISTING STREETS INCLUDING SIDEWALKS/ CURB/ GUTTER OR ANY DECORATIVE PATHS MUST BE BROUGHT TO ITS ORIGINAL CONDITION AND MUST BE APPROVED BY PUBLIC WORKS ENGINEERING DEPARTMENT'S INSPECTOR. POTHOLING MUST BE DONE AND ALL THE UTILITIES MUST BE IDENTIFIED PRIOR TO COMMENCING EXCAVATION.
- EXCAVATION AND RESTORATION WORK MUST BE IN COMPLIANCE WITH PUBLIC WORKS ENGINEERING STANDARDS AND SPECIFICATIONS THAT ARE AVAILABLE ON THE FOLLOWING WEBSITE:
<http://www.cityofpaloalto.org/news/displaynews.asp?NewsID=1834&TargetID=145>
- APPLICANTS SHALL BE RESPONSIBLE FOR MAINTAINING THEIR SYSTEM INCLUDING SUBSTRUCTURE. IN CASE OF KNOCK DOWNS, THE CITY WILL RE-INSTALL ITS STREET LIGHTING POLES BUT **NOT** APPLICANT'S EQUIPMENT ON OR OFF THE POLE.
- A FIELD MEETING IS RECOMMENDED WITH UTILITIES ENGINEERING PRIOR TO COMMENCING THE WORK.
- PLANS SHALL INCLUDE A NOTE: CONTRACTOR TREE INSPECTION REQUIREMENTS: MODIFIED TYPE III TRUNK WRAPPING SHALL BE VERIFIED BY URBAN FORESTRY PRIOR TO ANY WORK IN THE VICINITY. FOR EACH TREE SITE WRAPPED FOR PROTECTION WITHIN 15' OF ANY WORK ZONE OR CONCRETE FORM SECTION, A BILLABLE TREE INSPECTION BY URBAN FORESTRY (650-496-5953, 24-HOUR ADVANCE IS REQUIRED) SHALL BE COMPLETED PRIOR TO DEMOLITION, DRILLING, EXCAVATING, FORMING OR STREET LIGHT ACTIVITY. CONTRACTOR SHALL ARRANGE PAYMENTS AT THE DEVELOPMENT CENTER, 285 HAMILTON AVE, PALO ALTO, CA.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITIES DEPARTMENT 650/329-2413 OR 650/496-6982 IF THE EXISTING WATER, WASTEWATER OR GAS MAINS ARE DISTURBED OR DAMAGED. A QUALIFIED CONTRACTOR MAY PERFORM REPAIRS ON CITY WATER AND WASTEWATER MAINS UNDER THE DIRECT SUPERVISION OF THE WGW UTILITIES INSPECTOR. FOR WATER REPAIRS ALL THE DISINFECTION REQUIREMENTS OF THE WGW UTILITY STANDARDS AND THESE CONDITIONS SHALL BE ADHERED TO. ALL REPAIRS TO THE CITY GAS SYSTEM MUST BE PERFORMED BY THE CITY OF PALO ALTO UTILITIES.
- NO WATER VALVES OR OTHER FACILITIES OWNED BY UTILITIES DEPARTMENT SHALL BE OPERATED FOR ANY PURPOSE BY THE APPLICANT'S CONTRACTOR. ALL REQUIRED OPERATION WILL ONLY BE PERFORMED BY AUTHORIZED UTILITIES DEPARTMENT PERSONNEL. WATER VALVES MAY BE OPERATED BY THE CONTRACTOR UNDER THE DIRECT SUPERVISION OF THE WGW UTILITIES INSPECTOR. THE APPLICANT'S CONTRACTOR SHALL NOTIFY THE UTILITIES DEPARTMENT NOT LESS THAN FORTY-EIGHT (48) HOURS IN ADVANCE OF THE TIME THAT SUCH OPERATION IS REQUIRED.

SF PALO ALTO 023 PALO ALTO

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VZW366241CA

CLIENT:



PREPARED BY:



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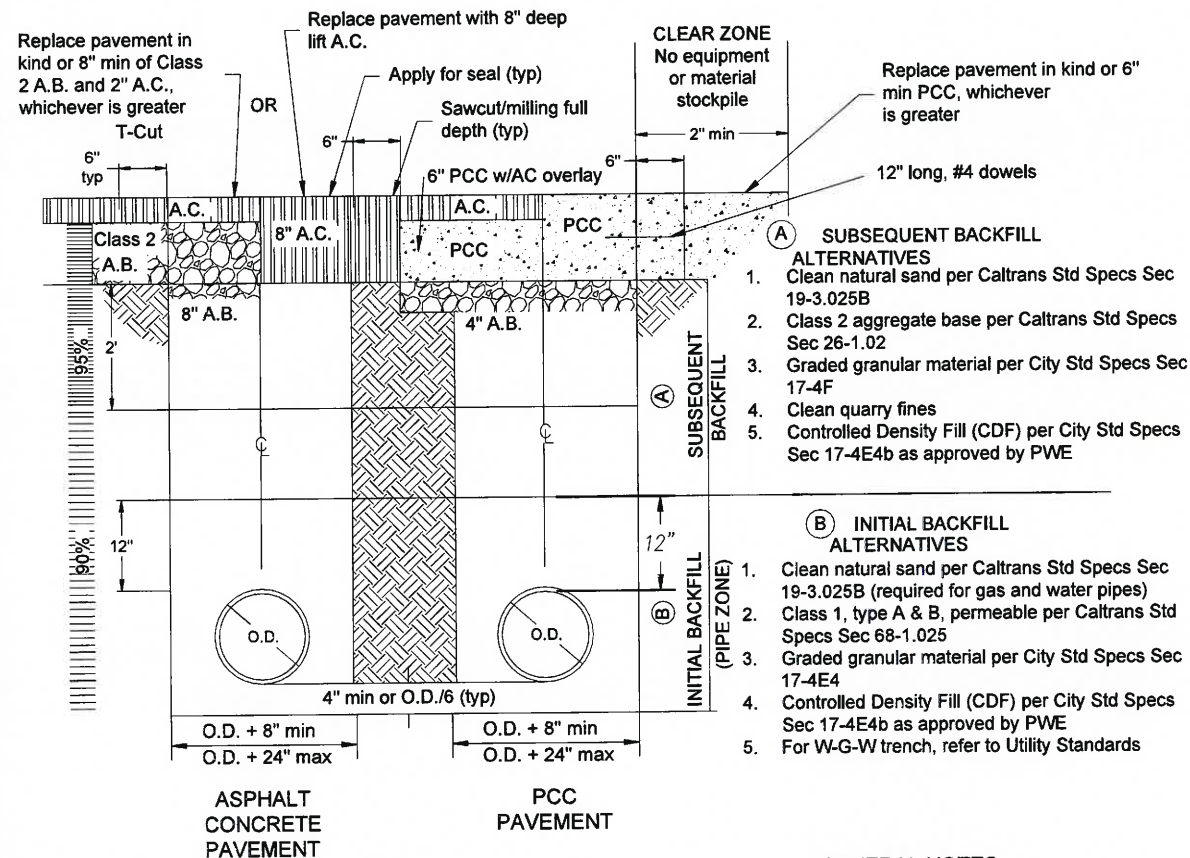


SITE NAME & ADDRESS:
ROW ACROSS FROM 305 COWPER
ST & ADJACENT TO 482 EVERETT
PALO ALTO, CA
37.449812/-122.161695

DETAILS & NOTES

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
SHEET NO. D-1		

CITY OF PALO ALTO
STANDARD
(DRAWING NO. 401)
TRENCHES
TYPICAL CROSS-SECTIONS
N.T.S.



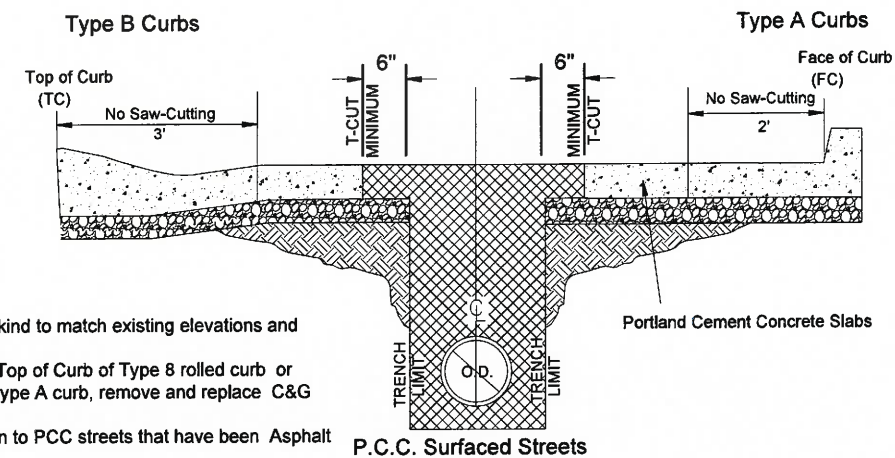
GENERAL NOTES

- PCC shall contain a minimum of 6 sacks concrete with a desired 28-day strength of 3,500 PSI
- Extend T-cut to lip of Gutter per City Std Specs 17-G
- Refer to City Std Dwg 403 for trench limits of restoration
- Match existing AC thickness on PCC overlays

JETTING NOTES

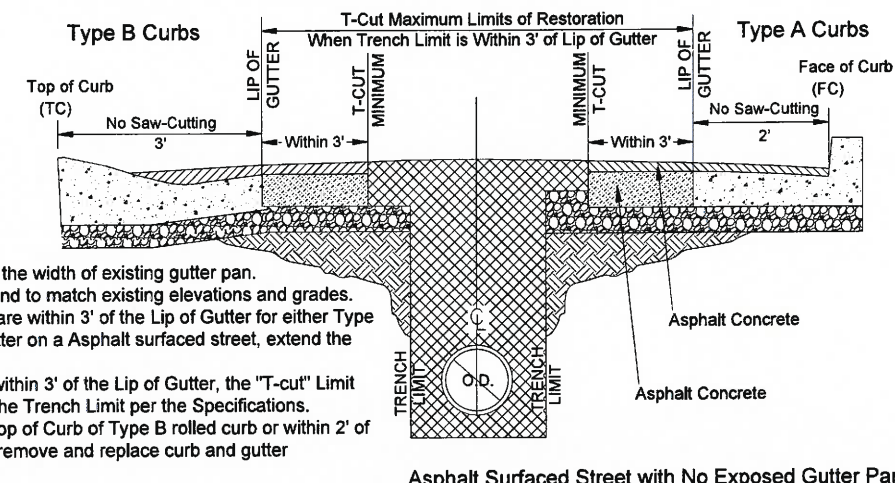
- IMPROVED AREAS
 - INITIAL BACKFILL- jetting of sand OK
 - SUBSEQUENT BACKFILL-jetting of sand subject to approval of City Engineer, except for top 2 ft, which must be mechanically compacted
- UNIMPROVED AREA: jetting of sand OK
- WHEN JETTING IS PERMITTED:
 - Excess water shall be collected at low points and removed by pumping
 - Sand to be jetted shall be placed in lifts no thicker than 4 ft
 - Jetting shall be performed at intervals along the trench not to exceed 6 ft

CITY OF PALO ALTO STANDARD
(DRAWING NO. 403)
TRENCHES
LIMITS OF RESTORATION
N.T.S.



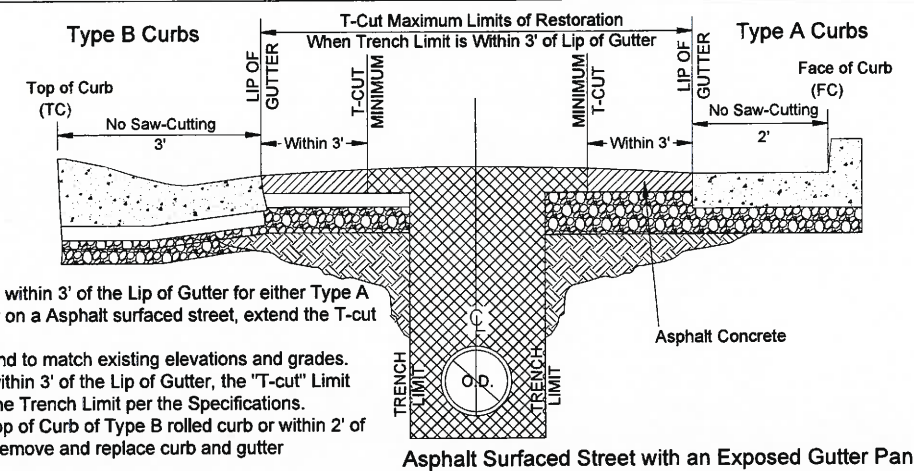
NOTES

- Restore all materials in kind to match existing elevations and grades.
- If Sawcut is within 3' of Top of Curb of Type B rolled curb or within 2' of the face of Type A curb, remove and replace C&G monolithically.
- These notes also pertain to PCC streets that have been Asphalt overlaid.



NOTES

- Remove asphalt to verify the width of existing gutter pan.
- Restore all materials in kind to match existing elevations and grades.
- When "Trench Limits" is are within 3' of the Lip of Gutter for either Type A or Type B curb and gutter on a Asphalt surfaced street, extend the T-cut to the Lip of Gutter.
- If "Trench Limit" is NOT within 3' of the Lip of Gutter, the "T-cut" Limit shall be located 6" from the Trench Limit per the Specifications.
- If Sawcut is within 3' of Top of Curb of Type B rolled curb or within 2' of the face of Type A curb, remove and replace curb and gutter monolithically.



NOTES

- When "Trench Limits" are within 3' of the Lip of Gutter for either Type A or Type B curb and gutter on a Asphalt surfaced street, extend the T-cut to the Lip of Gutter.
- Restore all materials in kind to match existing elevations and grades.
- If "Trench Limit" is NOT within 3' of the Lip of Gutter, the "T-cut" Limit shall be located 6" from the Trench Limit per the Specifications.
- If Sawcut is within 3' of Top of Curb of Type B rolled curb or within 2' of the face of Type A curb, remove and replace curb and gutter monolithically.

SF PALO ALTO 023
PALO ALTO
CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Coastal Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcommc.com

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TICKET #

ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
ROW ACROSS FROM 305 COWPER
ST & ADJACENT TO 482 EVERETT
PALO ALTO, CA
37.449812/-122.161695

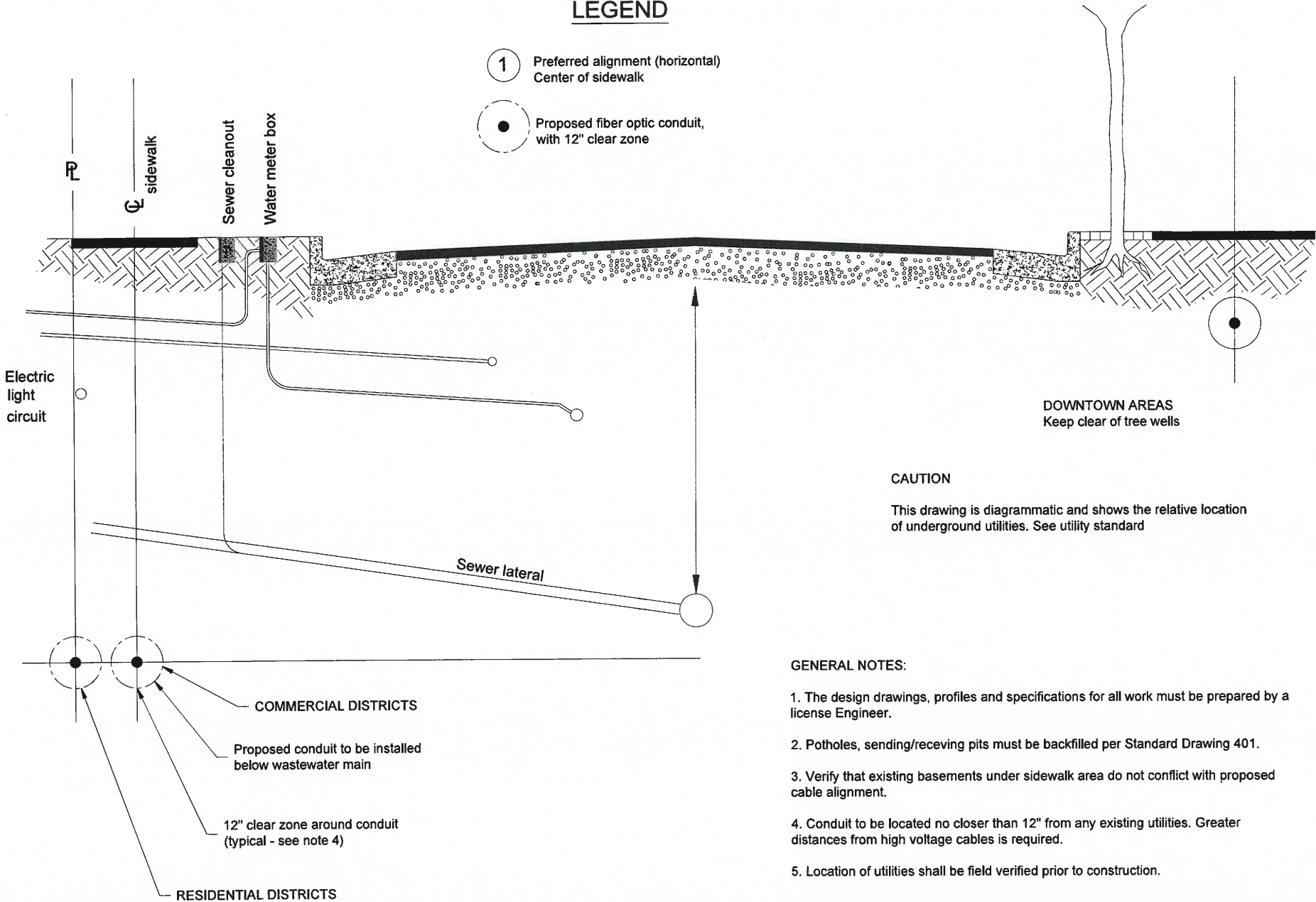
DETAILS & NOTES

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
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SHEET NO.
D-2

CITY OF PALO ALTO STANDARD
(DRAWING NO. 402)
CONDUIT LOCATION DETAIL
TELECOMMUNICATIONS
N.T.S.

LEGEND



- GENERAL NOTES:
1. The design drawings, profiles and specifications for all work must be prepared by a license Engineer.
 2. Potholes, sending/receiving pits must be backfilled per Standard Drawing 401.
 3. Verify that existing basements under sidewalk area do not conflict with proposed cable alignment.
 4. Conduit to be located no closer than 12" from any existing utilities. Greater distances from high voltage cables is required.
 5. Location of utilities shall be field verified prior to construction.

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PALO ALTO

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SHEET NO.
D-3

CUUT360X12F124s0

Electrical Characteristics	Low Band		High Bands #1 and #2			
	696-960 MHz		(2x) 1695-2700 MHz			
Frequency Bands (MHz)	696-806	806-960	1695-1880	1850-1990	1920-2200	2300-2700
Polarization	±45°		(2x) ±45°			
Horizontal Beamwidth	360°	360°	360°	360°	360°	360°
Vertical Beamwidth	20°	15°	7.5°	7.0°	6.5°	6.0°
Gain	5.5 dBi	6.0 dBi	9.0 dBi	9.5 dBi	10.0 dBi	10.3 dBi
Electrical Downtilt (°)	(x) 0, 2, 4, 6, 8, 10, 12		(y) 0, 4, 8, 12			
Impedance	50Ω		50Ω			
VSWR	≤ 1.5:1		≤ 1.5:1			
Upper Sidelobe Suppression	> 15 dB		> 15 dB			
Isolation Between Ports	20 dB		25 dB			
IM3 (2x20W carrier)	< -153 dBc		< -153 dBc			
Input Power	(2x) 500 W		(4x) 300 W			
Diplexed	No					
Number of Sectors / Sector Spacing	3 Sectors / Pseudo Omni					
Lightning Protection	Direct Ground					
Mechanical Characteristics						
Antenna Dimensions (Height x Diameter)	1219 x 371 mm			48.0 x 14.6 in		
Weight without Mounting Bracket Kit	17.3 kg			38.1 lbs		
Antenna Volume	0.13 m³			4.7 ft³		
Survival Wind Speed	200 km/hr			125 mph		
Wind Area	0.47 m²			5.0 ft²		
Wind Load (160 km/hr or 100 mph)	391 N			88 lbf		



7

SCALE
N.T.S.

WB3X-MKS-01

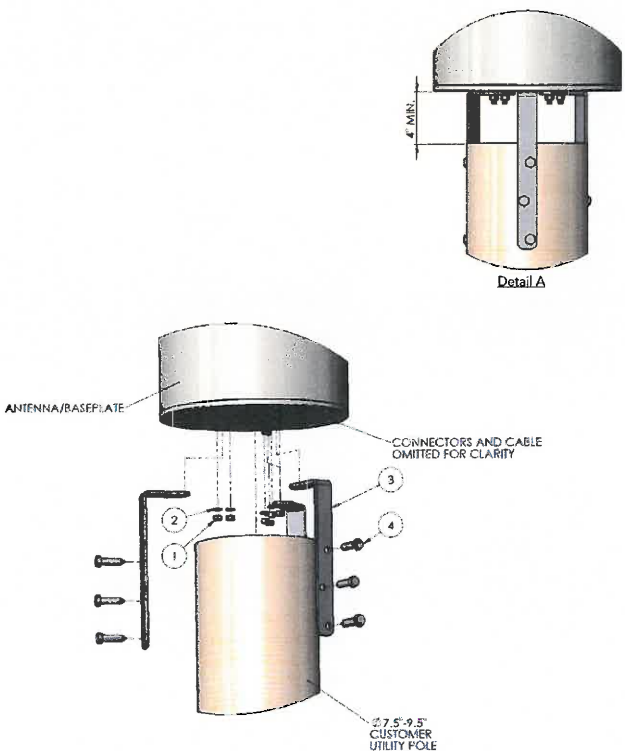
Utility Pole Mounting Kit for Cylindrical Antennas

Mounting Instructions

- Step 1 Attach pole mount brackets (Item 3) to antenna/base plate using fasteners (Items 1 and 2). Tighten to 15 N-m (11 ft-lb).
- Step 2 Attach pole mount brackets (Item 3)/antenna assembly to customer utility pole using lag screws (Item 4).
- Step 3 Make all electrical connections weatherproof with self-amalgamating tape.

Parts List	Description	Quantity
Item 1	Nut Hex, 3/8-16 HDG	6
Item 2	Lock Washer 3/8 HDG	6
Item 3	Pole Mount Bracket	3
Item 4	Galvanized Hex Lag Screw (1/2 x 2" Long)	9
Mechanical Characteristics		
Weight	2.7 kg (6 lbs)	

ANTENNA MOUNT
TYPICAL SECTION: N.T.S.



8

SCALE
N.T.S.

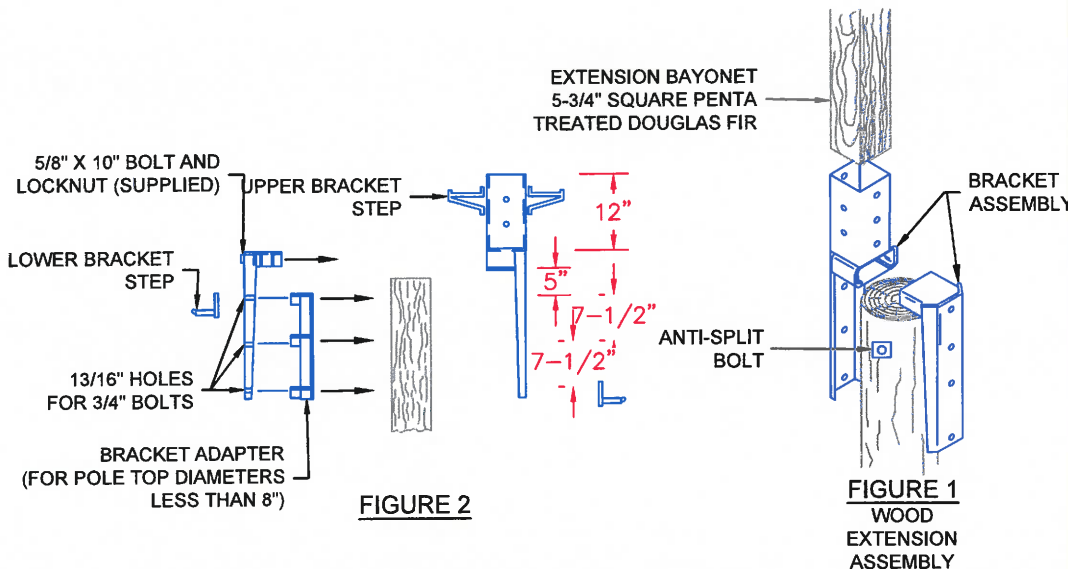
NOTES

- THE UNIT MEETS G.O. 95 REQUIREMENTS FOR STRENGTH IN CLASS 3 THROUGH 6 POLES AND THEREFORE MAY BE USED TO SUPPORT EQUIPMENT ON THESE CLASS POLES. IT MAY BE USED ON LARGER CLASS POLES, BUT MAY NOT SUPPORT EQUIPMENT ON THEM.
- THE UNIT MAY BE GUYED.
- THE BRACKET IS MADE TO FIT POLES WITH DIAMETERS OF 8" TO 11". THEREFORE, DEPENDING UPON ACTUAL POLE DIAMETER, TO FIT POLES OF CLASS AND SMALLER, A BRACKET ADAPTER MAY BE REQUIRED.
- UNITS ARE SUPPLIED WITH THE WOOD BAYONET ASSEMBLED.
- A POLE STEP KIT IS REQUIRED.

FIGURE 2
BRACKET ASSEMBLY AND BRACKET ADAPTER

TABLE 1	BILL OF MATERIALS	
DESCRIPTION		
5' EXTENSION ASSEMBLY	180219	
6' EXTENSION ASSEMBLY	180220	
7' EXTENSION ASSEMBLY	180221	
BRACKET ADAPTER	180222	
3/4" X 10" MACHINE BOLTS	192412	
POLE STEP KIT (2 UPPER, 2 LOWER)	180011	

POLE TOP EXTENSION
TYPICAL SECTION: N.T.S.

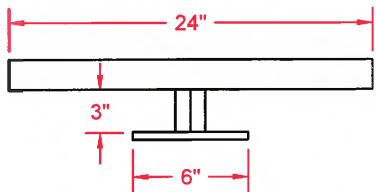
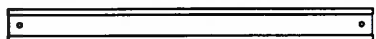


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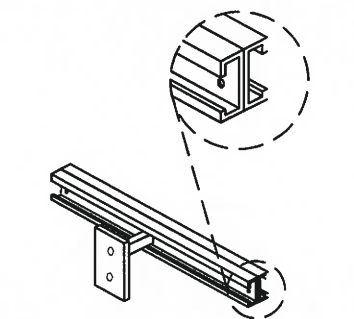
SCALE
N.T.S.

STANDOFF BRACKET

FRONT VIEW OF STAND OFF BRACKET:



TOP VIEW STAND OFF BRACKET:



3D VIEW OF STAND OFF BRACKET:

10

SCALE
N.T.S.

SF PALO ALTO 023
PALO ALTO

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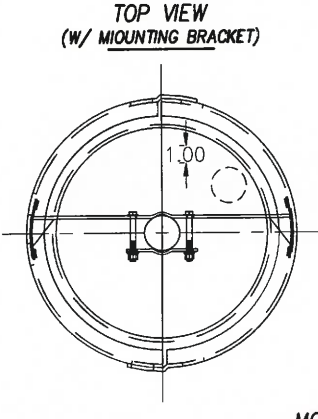
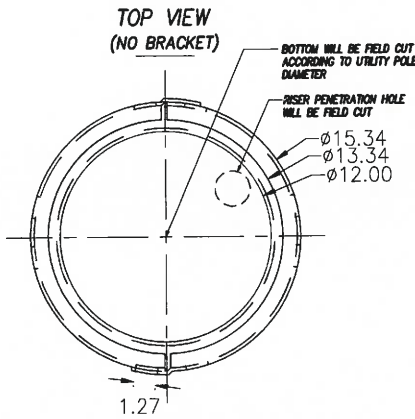
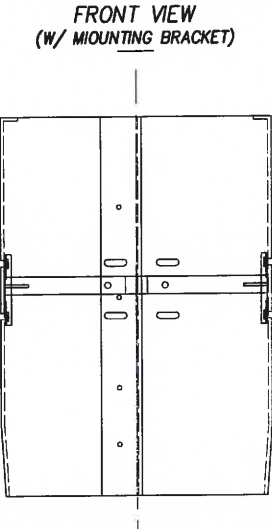
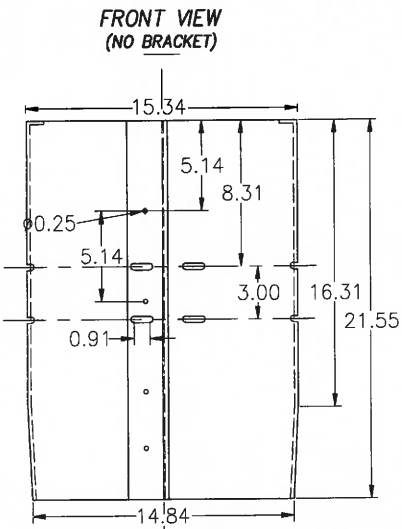
SITE NAME & ADDRESS:
ROW ACROSS FROM 305 COWPER
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DETAILS & NOTES

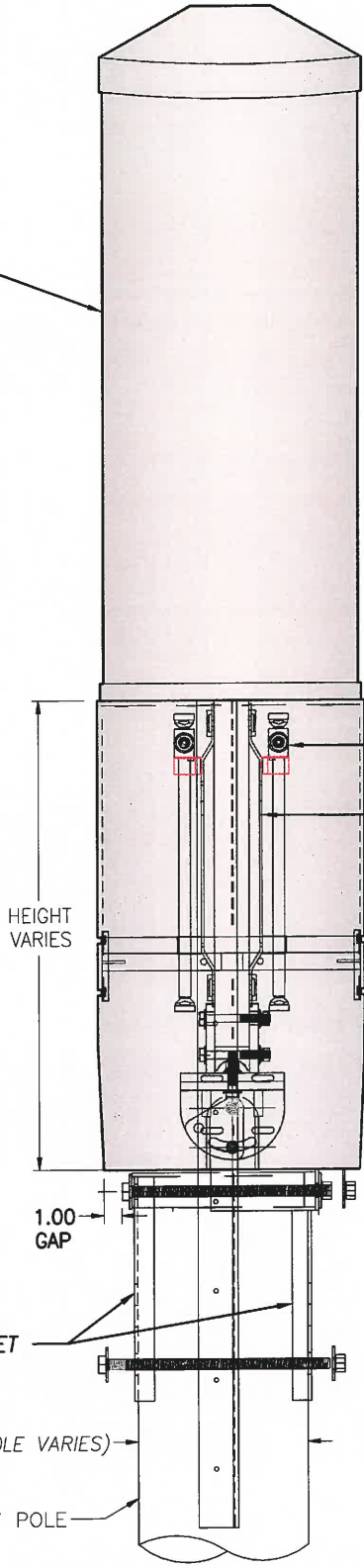
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SHEET NO.
D-5

CONCEALMENT COVER
TYPICAL SECTION: N.T.S.



CYLINDER ANTENNA



MICROLAB 2-WAY SPLITTER

SPLITTER BRACKET

CUSTOM SHROUD TO FULLY ENCASE EQUIPMENT & MOUNTS
MINUS ANY CONNECTION POINT TO THE WOOD POLE

HEIGHT
VARIES

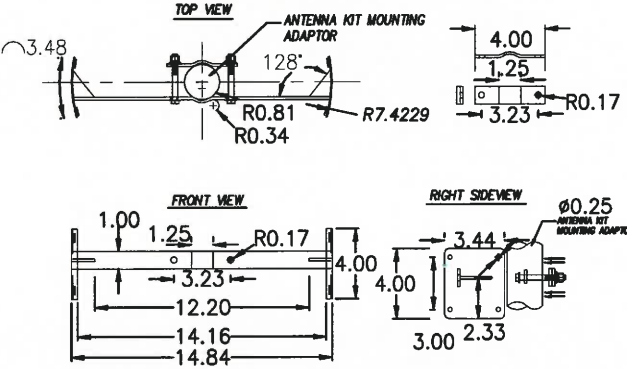
MOUNTING BRACKET

(DIA. POLE VARIES)

UTILITY POLE

NOTE: PAINT ANTENNA AND
CUSTOM CONCEALMENT
SHROUD TO MATCH POLE.

RADOME MOUNTING COMPONENTS



- NOTE:
1. CONCEALMENT COVER CAN BE ADJUSTED IN LENGTH TO PASS GROUND INSPECTION.
 2. SHROUD SHALL BE CONSTRUCTED OF 1/4" ABS PLASTIC.
 3. ALL MEASUREMENTS ARE IN INCHES.
 4. THE RISERS DO NOT CONNECT OR GO INTO THE ANTENNA SHROUD.
 5. THERE WILL BE A GAP (UP TO 6") FROM THE TOP OF THE RISER TO THE BOTTOM OF THE SHROUD.

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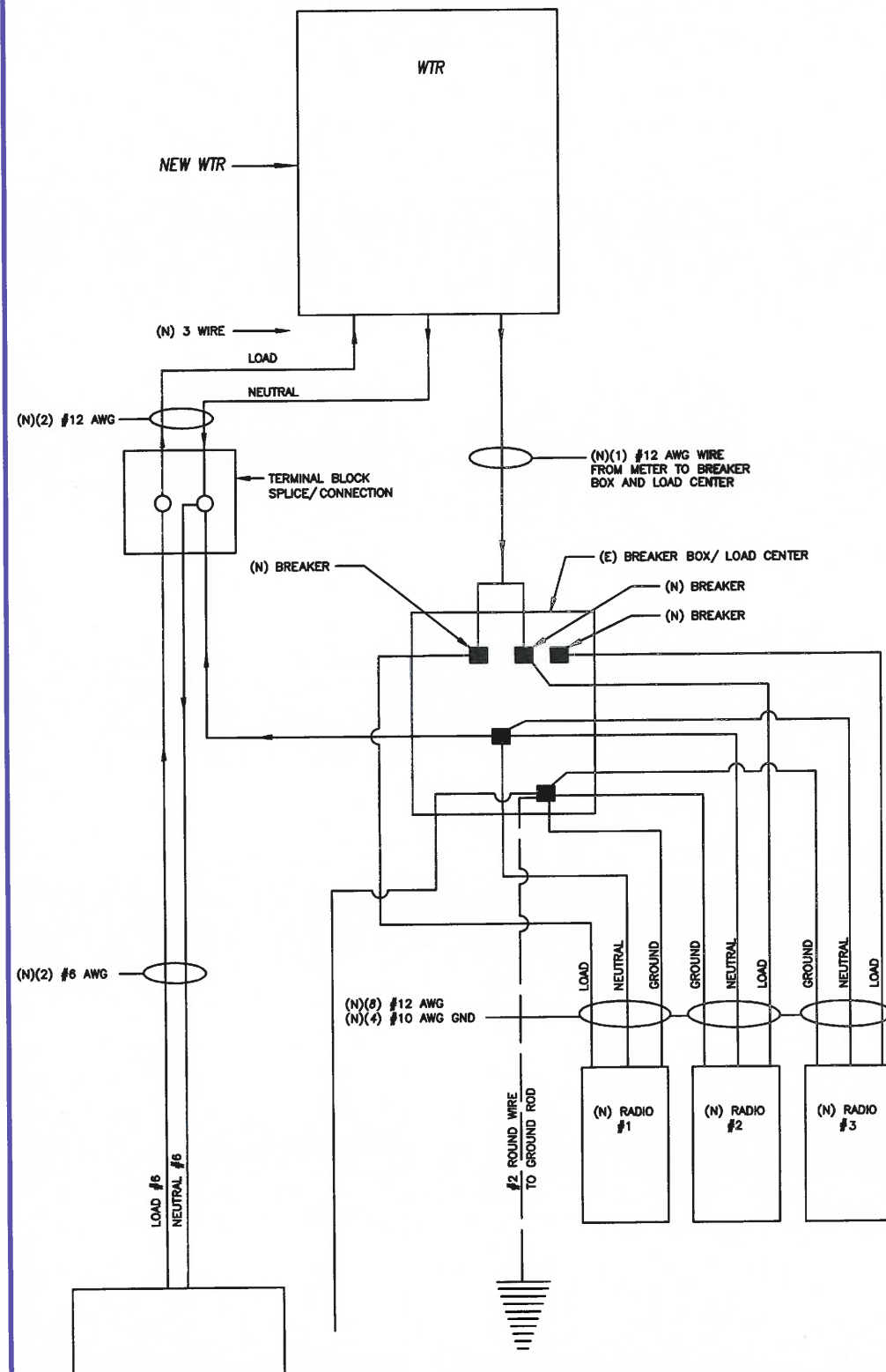
REGISTERED PROFESSIONAL ENGINEER
JERRY L. MCMILLAN
No. C42590
Exp. 03-31-20
CIVIL
STATE OF CALIFORNIA

SITE NAME & ADDRESS:
ROW ACROSS FROM 305 COWPER
ST & ADJACENT TO 482 EVERETT
PALO ALTO, CA
37.449812/-122.161695

DETAILS & NOTES

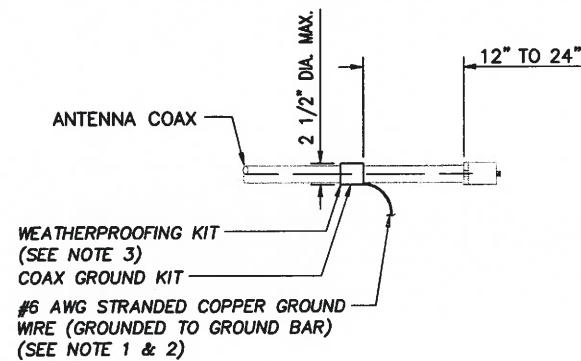
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SHEET NO. D-6		

SINGLE LINE DIAGRAM



12 SCALE N.T.S.

CONNECTION OF COAX GROUND KIT TO ANTENNA COAX

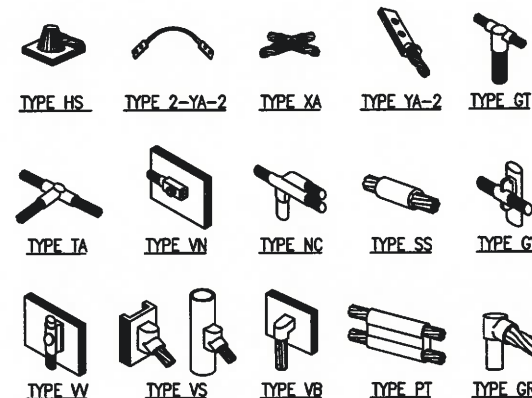


NOTES:

1. DO NOT INSTALL COAX GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PARK NUMBER AS SUPPLIED OR RECOMMENDED BY COAX MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

13 SCALE N.T.S.

WELD CONNECTION DETAILS

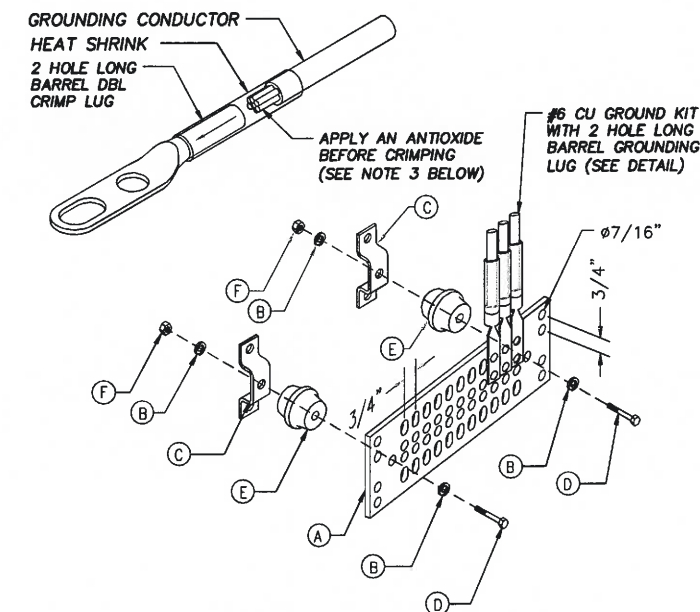


NOTE:

ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH PROJECT MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.

14 SCALE N.T.S.

TYPICAL GROUND BAR



NOTES:

1. CRIMP (COMPRESSION) TYPE TWO HOLE BOLTED TONGUE CONNECTORS SHALL BE USED TO TERMINATE STRANDED GROUNDING CONDUCTORS. THE CONNECTORS SHALL BE TIN PLATED COPPER, LONG BARREL LUG, AND SHALL BE LISTED FOR THEIR INTENDED USE BY AN NRTL.
2. CRIMP TYPE CONNECTORS USED ON SOLID CONDUCTORS MUST BE LISTED BY AN NRTL FOR USE ON SOLID CONDUCTORS, AND MUST BE CRIMPED WITH THE DIES SPECIFIED BY THE MANUFACTURER OF THE CONNECTOR. USE A HYDRAULIC CRIMPING TOOL.
3. WIRES SHALL BE INSERTED THE ENTIRE LENGTH OF THE LUG. ENSURE COAX OUTER INSULATION IS SNUG TO LUG BARREL. PROVIDE AN ANTIOXIDE COMPOUND ON THE CONDUCTOR BEFORE CRIMPING (NO OX). INSTALL A TRANSPARENT HEAT SHRINK INSULATING TUBING ALONG THE ENTIRE LENGTH OF THE CRIMP.
4. USE #6 AWG STRANDED-THOMAS & BETTS 455578 OR EQUIVALENT.

PARTS LIST		PARTS LIST	
A	COPPER GROUND BAR, USE STYLE "I" GTI TELECOM, INC. OR EQUAL (ACTUAL GROUND BAR SIZE WILL VARY BASED ON NUMBER OF GROUND CONNECTIONS)	C	WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR EQUAL
		D	5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR EQUAL
B	5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8 OR EQUAL	E	INSULATORS SHALL BE INSTALLED
		F	5/8-11 NUT

15 SCALE N.T.S.

SF PALO ALTO 023 PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



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ST & ADJACENT TO 482 EVERETT
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DETAILS & NOTES

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SHEET NO.
D-7

CITY OF PALO ALTO
TREE PROTECTION - IT'S PART OF THE PLAN!
Make sure your crews and subs do the job right!

Fenced enclosures around trees are essential to protect them by keeping the foliage canopy and branching structure clear from contact by equipment, materials and activities, preserving roots and soil conditions in an intact and non-compacted state, and identifying the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved. An approved tree protection report must be added to this sheet when project activity occurs within the TPZ of a regulated tree. For detailed information on Palo Alto's regulated trees and protection during development, review the City Tree Technical Manual (TTM) found at www.cityofpaloalto.org/trees/.



TREE DISCLOSURE STATEMENT

CITY OF PALO ALTO
Planning Division, 250 Hamilton Avenue
Palo Alto, CA 94301
(650) 329-2441
<http://www.cityofpaloalto.org>

Palo Alto Municipal Code, Chapter 8.10.040, requires disclosure and protection of certain trees located on private and public property, and that they be shown on submitted and approved site plans. A completed *tree disclosure statement* must accompany all permit applications that include exterior work, all demolition or grading permit applications, or other development activity.

PROPERTY ADDRESS: Right of way across from 305 Cowper St & adjacent to 482 Everett, Palo Alto, CA

Are there Regulated¹ trees on or adjacent to the property? ☒ YES ☐ NO (If no, proceed to Section 4)

[Sections 1- 4 MUST be completed by the applicant. Please circle and/or check where applicable.]

1. Where are the trees? Check those that apply. (Plans must be submitted showing all trees over 4" diameter)

- ☐ On the property
☐ On adjacent property overhanging the project site
☒ In the City planter strip or right-of-way easement within 30' of property line (Street Trees)*

*Street trees¹ require special protection by a fenced enclosure, per the attached instructions. Prior to receiving any permit, you must provide an authorized Street Tree Protection Verification form. Contact Public Works Operations at (650) 496-5953 for inspection of type I, II or III fencing (see attached Detail #605) required for all street trees.

2. Are there any Protected¹ or Designated¹ Trees? YES (Check where applicable) ☒ NO

- ☐ Protected Tree (s)
☐ Designated Tree (s)
☐ On or overhanging the property

3. Is there activity or grading within the dripline? (radius 10 times the trunk diameter) of these trees? ☒ YES ☐ NO

If Yes, a *Tree Preservation Report* must be prepared by an ISA certified arborist and submitted for staff review (see TTM², Section 6.25). Attach this report to Sheet T-1, "Tree Protection, its Part of the Plan!", per Site Plan Requirements.

4. Are the Site Plan Requirements** completed? ☒ YES ☐ NO

**Plans. Protection of Regulated trees during development require the following: (1) Plans must show the measured trunk diameter and canopy dripline; (2) Plans must denote, as a bold dashed line, a fenced enclosure area out to the dripline, per Sheet T-1 and Detail #605 - <http://www.cityofpaloalto.org/trees/forms.htm> (See also TTM², Section 2.15 for area to be fenced)

I, the undersigned, agree to the conditions of this disclosure. I understand that knowingly or negligently providing false or misleading information in response to this disclosure requirement constitutes a violation of the Palo Alto Municipal Code Section 8.10.040, which can lead to criminal and/or civil legal action.

Signature: [Signature] Print: Rockelle Swanson Date: 11/29/2017
(Prop. Owner or Agent)

FOR STAFF USE:

Protective Fencing
Sections 5-6 must be completed by staff for the issuance of any development permit (demolition, grading or building permit).

5. Protected Trees. The specified tree fencing is in place. A written statement is attached verifying that protective fencing is correctly in place around protected and/or designated trees. YES NO
(N/A if there are no protected trees, check here ☐)

6. Street Trees. A signed Public Works Street Tree Protection Verification form is attached. YES NO
(N/A if there are no street trees, check here ☐)

¹ Regulated Trees - a) Street trees - trees on public property; b) Protected trees - Coast Live Oaks or Valley Oaks which are 11.5" in diameter or larger, Coast Redwoods which are 18" in diameter or larger, when measured 54" above natural grade; and Heritage trees are trees designated by City Council; and c) Designated Trees - commercial or non-residential property trees, which are part of an approved landscape plan.

² Palo Alto Tree Technical Manual (TTM) contains instructions for all requirements on this form, available at www.cityofpaloalto.org/trees/technical-manual.html

Tree technical Manual

To purchase the tree Technical Manual

June, 2001 First Edition

View by section:

- o Table of Contents (PDF, 87KB)
- o Intent and Purpose (PDF, 1.05MB)
- o Introduction - Use of Manual (PDF, 1.05MB)
- o Section 1.0 - Definitions (PDF, 96KB)
- o Section 2.0 - Protection of Trees During Construction (PDF, 259KB)
- o Section 3.0 - Removal, Replacement & Planting of Trees (PDF, 117KB)
- o Section 4.0 - Hazardous Trees (PDF, 105KB)
- o Section 5.0 - Tree Maintenance Guidelines (PDF, 110KB)
- o Section 6.0 - Tree Reports (PDF, 84KB)

View ALL sections:

- o Tree Technical Manual - Full (PDF, 1.84MB)

APPENDICES

- A. Palo Alto Municipal Code Chapter 8.10, Tree Preservation & Management Regulations
B: Tree City - USA
C: ISA Hazard Evaluation Form
D: List of Inherent Failure Patterns for Selected Species (Reference source) E: ISA Tree Pruning Guidelines (PDF, 1.85MB)
F: Tree Care Safety Standards, ANSI Z133.1-1994 (Reference source)
G: Pruning Performance Standards, ANSI A300-1995 (Reference source) H: Tree Planting Details, Diagram 504 & 505 I: Tree Disclosure Statement
J: Palo Alto Standard Tree Protection Instructions

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SPECIAL TREE PROTECTION
INSTRUCTION SHEET

DRAWN BY: BW DRAFT DATE: 02/12/18 APPROVED BY: TT

SHEET NO. T1.1

CITY OF PALO ALTO
TREE PROTECTION - IT'S PART OF THE PLAN!
Make sure your crews and subs do the job right!

Fenced enclosures around trees are essential to protect them by keeping the foliage canopy and branching structure clear from contact by equipment, materials and activities, preserving roots and soil conditions in an intact and non-compacted state, and identifying the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved. An approved tree protection report must be added to this sheet when project activity occurs within the TPZ of a regulated tree. For detailed information on Palo Alto's regulated trees and protection during development, review the City Tree Technical Manual (TTM) found at www.cityofpaloalto.org/trees/.

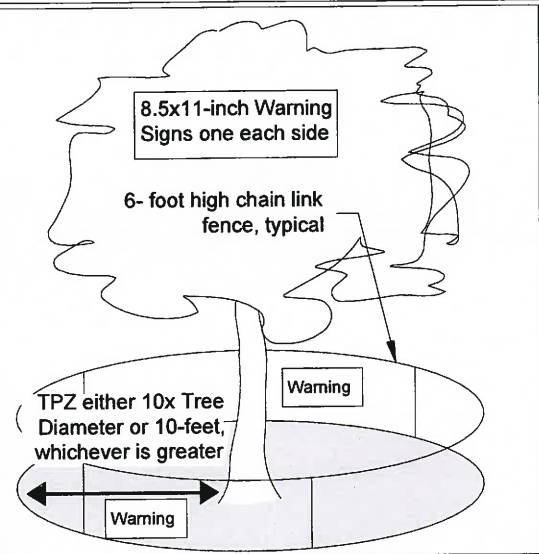


For written specifications associated with illustrations below, see Public Works Specifications Section 31

Detailed specifications are found in the Palo Alto Tree Technical Manual (TTM) (www.cityofpaloalto.org/trees/)

Tree Protection (TPZ) shown in gray (radius of TPZ equals 10-times the diameter of the tree or 10-feet, whichever is greater).

- Restricted activity area – see Tree Technical Manual Sec 2.15(E).
- Restricted trenching area – see Tree Technical Manual Sec 2.20(C-D), any proposed trench or form work within TPZ of a protected tree requires approval from Public Works Operations. Call 650-496-5953.



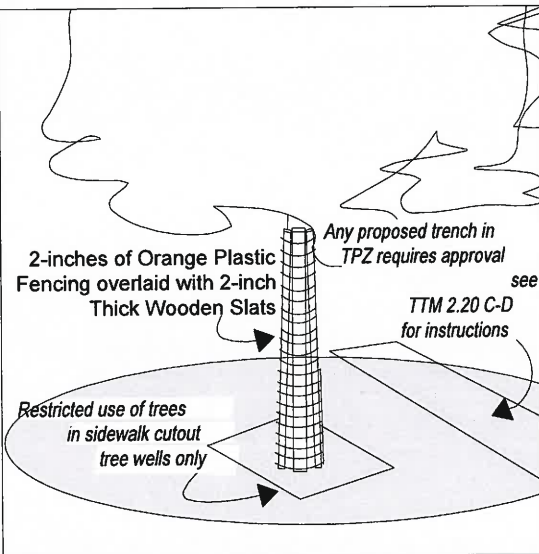
Type I Tree Protection

For all Ordinance Protected & Designated trees, as detailed in the site specific tree preservation report (TPR) prepared by the applicant's project arborist as diagramed on the plans.

Note: Ordinance Protected & Designated Trees. Issuance of a permit requires applicant's project arborist written verification Type I is installed correctly according to the plans and Tree Preservation Report

Any inadvertent sidewalk or curb replacement or trenching requires approval

Type II Tree Protection



Note: Street Trees. Issuance of a permit requires Public Works Operations inspection and signed approval on the Street Tree Verification (STV) form provided.

Type III Tree Protection

(to be used only with approval of Public Works Operations)

Tree fencing is required and shall be erected before demolition, grading or construction begins.



**PALO ALTO
STREET TREE PROTECTION INSTRUCTIONS
-SECTION 31-**

- Tree protection has three primary functions, 1) to keep the foliage canopy and branching structure clear from contact by equipment, materials and activities; 2) to preserve roots and soil conditions in an intact and non-compacted state and 3) to identify the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved.
- The Tree Protection Zone (TPZ) is a restricted area around the base of the tree with a radius of ten-times the diameter of the tree's trunk or ten feet, whichever is greater, enclosed by fencing.

31-2 Reference Documents

- Detail 605- illustration of situations described below.
- Tree Technical Manual (TTM) Forms (<http://www.cityofpaloalto.org/trees/>)
- Trenching Restriction Zones (TTM, Section 2.20(C))
- Arborist Reporting Protocol (TTM, Section 6.30)
- Site Plan Requirements (TTM, Section 6.35)
- Tree Disclosure Statement (TTM, Appendix J)
- Street Tree Verification (STV) Form (<http://www.cityofpaloalto.org/trees/forms>)

31-3 Execution

- Type I Tree Protection: The fence shall enclose the entire TPZ of the tree(s) to be protected throughout the life of the construction project. In some parking areas, if fencing is located on paving or concrete that will not be demolished, then the posts may be supported by an appropriate grade level concrete base, if approved by Public Works Operations.
- Type II Tree Protection: For trees situated within a planting strip, only the planting strip and yard side of the TPZ shall be enclosed with the required chain link protective fencing in order to keep the sidewalk and street open for public use.
- Type III Tree Protection: To be used only with approval of Public Works Operations. Trees situated in a tree well or sidewalk planter pit, shall be wrapped with 2-inches of orange plastic fencing from the ground to the first branch and overlaid with 2-inch thick wooden slats bound securely (slats shall not be allowed to dig into the bark). During installation of the plastic fencing, caution shall be used to avoid damaging any branches. Major limbs may also require plastic fencing as directed by the City Arborist.
- Size, type and area to be fenced. All trees to be preserved shall be protected with six (6') foot high chain link fences. Fences are to be mounted on two-inch diameter galvanized iron posts, driven into the ground to a depth of at least 2-feet at no more than 10-foot spacing. Fencing shall extend to the outer branching, unless specifically approved on the STV Form.
- 'Warning' signs. A warning sign shall be weather proof and prominently displayed on each fence at 20-foot intervals. The sign shall be minimum 8.5-inches x 11-inches and clearly state in half inch tall letters: "WARNING - Tree Protection Zone - This fence shall not be removed and is subject to a fine according to PAMC Section 8.10.110."
- Duration. Tree fencing shall be erected before demolition; grading or construction begins and remain in place until final inspection of the project, except for work specifically allowed in the TPZ. Work or soil disturbance in the TPZ requires approval by the project arborist or City Arborist (in the case of work around Street Trees). Excavations within the public right of way require a Street Work Permit from Public Works.
- During construction
 - All neighbors' trees that overhang the project site shall be protected from impact of any kind.
 - The applicant shall be responsible for the repair or replacement plus penalty of any publicly owned trees that are damaged during the course of construction, pursuant to Section 8.04.070 of the Palo Alto Municipal Code.
 - The following tree preservation measures apply to all trees to be retained:
 - No storage of material, topsoil, vehicles or equipment shall be permitted within the TPZ.
 - The ground under and around the tree canopy area shall not be altered.
 - Trees to be retained shall be irrigated, aerated and maintained as necessary to ensure survival.

END OF SECTION

City of Palo Alto 2004 Standard Drawings and Specifications
Street Tree Verification of Protection, PWE, Section 31

Revised 08/06

**SF PALO ALTO 023
PALO ALTO**

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



PROPRIETARY INFORMATION

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DAYS BEFORE
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TICKET #

ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
ROW ACROSS FROM 305 COWPER
ST & ADJACENT TO 482 EVERETT
PALO ALTO, CA

37.449812/-122.161695

**SPECIAL TREE PROTECTION
INSTRUCTION SHEET**

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
-----------------	-------------------------	--------------------

SHEET NO.

T1.2

CITY OF PALO ALTO
TREE PROTECTION - IT'S PART OF THE PLAN!
Make sure your crews and subs do the job right!

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Table 2-2 Palo Alto Tree Technical Manual
ARBORIST INSPECTION SCHEDULE

All Checked Items Apply to this project:

- ☒ Inspection of Protective Tree Fencing. The Street Tree Verification Form shall be signed by the City Arborist. For other Protected Trees, the project arborist shall provide a written statement with a photograph verifying that he has conducted a field inspection of the trees and that the protective tree fencing is in place prior to issuance of a demolition, grading, or building permit. (see Verification of Tree Protection, Section 1.39).
- ☒ Pre-Construction Meeting. Prior to commencement of construction, the applicant or contractor shall conduct a pre-construction meeting to discuss tree protection with the job site superintendent, grading equipment operators, project arborist, City Arborist, and, if a city maintained irrigation system exists, the Parks Manager (Contact 650-496-6962).
- ☐ Inspection of Rough Grading. The project arborist shall perform an inspection during the course of rough grading ACROSS FROM the TPZ to ensure trees will not be injured by compaction, cut or fill, drainage and trenching, and if required, inspect aeration systems, tree wells, drains and special paving. The contractor shall provide the project arborist at least 48 hours advance notice of such activity.
- ☐ Monthly Inspections. The project arborist shall perform a monthly activity inspection to monitor and advise for conditions and tree health. The City Arborist shall be in receipt of the activity report during the first week of each calendar month or, immediately if there are any revisions to the approved plans or protection measures. Fax to (650) 329-2154. (see Monthly Inspection Report, Section 1.17).
- ☐ Special activity within the Tree Protection Zone. Work in this area (TPZ - described in #7 below) requires the direct onsite supervision of the project arborist (see Trenching, Excavation and Equipment, Section 2.20 C).
- ☐ Landscape Architect Inspection. For discretionary development projects, prior to temporary or final occupancy the applicant or contractor shall arrange for the Landscape Architect to perform an on site inspection of all plant stock, quality of the materials and planting (see Quality, Section 5.20.1 A) and that the irrigation is functioning consistent with the approved construction plans. The City shall be in receipt of written verification of Landscape Architect approval prior to scheduling the final inspection, unless otherwise approved.
- ☐ Other (please describe) _____



City of Palo Alto
Tree Department
Public Works Operations
PO Box 10250 Palo Alto, CA 94303
6501496-5953 FAX: 6501852-9289
treeprotection@CityofPaloAlto.org

Verification of
Street Tree Protection

Applicant Instruction: Complete upper portion of this form. Mail or FAX this form along with the signed tree Disclosure Statement to Public Works Dept. Public Works Tree Staff will inspect and notify applicant.

APPLICATION DATE:	
ADDRESS/LOCATION OF STREET TREES TO BE PROTECTED:	
APPLICANT'S NAME:	
APPLICANT'S ADDRESS:	
APPLICANT'S TELEPHONE & FAX NUMBERS:	

This section to be filled out by City Tree Staff

1. The Street Trees at the above address(es) are adequately protected. The type of protection used is:	YES NO *If NO, go to #2 below
Inspected by:	
Date of Inspection:	

2. The Street Trees at the above address are NOT adequately protected. The following modifications are required:	
Indicate how the required modifications were communicated to the applicant.	

Subsequent Inspection

Street trees at above address were found to be adequately protected: inspected by:	YES NO *If NO, indicate in "Notes" below the disposition of case.
Date of Inspection:	

Notes: List City street trees by species, site, condition and type of tree protection installed. Also note if pictures were taken. Use back of sheet if necessary.	
--	--

Return approved sheet to Applicant for demolition or building permit issuance.
S:PWD/OPS/Tree/DS/St TreeProtect

5/1706

SF PALO ALTO 023
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



PROPRIETARY INFORMATION

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ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
ROW ACROSS FROM 305 COWPER
ST & ADJACENT TO 482 EVERETT
PALO ALTO, CA
37.449812/-122.161695

SPECIAL TREE PROTECTION
INSTRUCTION SHEET

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
-----------------	-------------------------	--------------------

SHEET NO.
T1.3

CITY OF PALO ALTO
TREE PROTECTION - IT'S PART OF THE PLAN!
Make sure your crews and subs do the job right!

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ADDENDUM 11

Arborist Firm Data Here
City of Palo Alto Tree Technical Manual
RCA/ISA Certified Arborist #WE-000
email: _____
Contact Cell #: _____

Monthly Tree Activity Report- Construction Site

Inspection Date: _____	Site Address: _____	Contractor- Main Site Contact Information	#1: Job site superintendent Company: _____ Email: _____ Job site: _____ Office: _____ Cell: _____ Mail: _____
Inspection # _____	Palo Alto, CA	Also present: _____	• _____ • _____
Distribution: _____	1. City of Palo Alto 2. Others	Attn: Dave Dockter	Dave.dockter@cityofpaloalto.org 650-329-2440

Provide the requested minimum information with each report, customize as necessary. To be completed by project site arborist. Send monthly to city arborist at above address until project completion. Use additional sheets as needed.

- Assignment Activity (Demolition/grading/sewer/trenching/foundation/list relevant visits)
 - Pre-construction meeting requirement with sub-contractors
 - Inspect to verify that tree protection measures are in place
 - Determine if field adjustments, watering or plan revisions may be needed
- Field Observations (general site-wide and list by individual tree number)
 - Tree Protection Fences (TPF) are...
 - Trenching has/will occur
- Action Items (list site-wide, by tree number and date to be satisfied) and Date Due
 - Tree Protection Fence (TPF) needs adjusting (tree # x, x, x)
 - Root zone buffer material (wood chips) can be installed next
 - Schedule sewer trench, foundation dig with...
- Photographs (use often)
- Tree location Map (mandatory 8.5 x 11 sheet)
- Recommendations, notes or monitor items for projects/staff/schedule
- Past visits (list carry-over items satisfied/still outstanding)

Respectfully submitted,

Project site arborist
Consultant contact information (Include email, cell #, and mailing)

Enter date CPA Monthly Tree activity Report: Type site address here

---WARNING---
Tree Protection Zone

This fencing shall not be removed
without City Arborist approval
(650-496-5953)

Removal without permission is
subject to a \$500 fine per day*

*Palo Alto Municipal Code Section 8.10.110

City of Palo Alto Tree Protection Instructions are located at
<http://www.cityofpaloalto.ca.us/trees/technical-manual.html>

SPECIAL INSTRUCTIONS

PLANNING DEPARTMENT

TREE PROTECTION INSPECTIONS MANDATORY

PAMC 8.10 PROTECTED TREES. CONTRACTOR SHALL ENSURE PROJECT SITE ARBORIST IS PERFORMING REQUIRED TREE INSPECTION AND SITE MONITORING. PROVIDE WRITTEN MONTHLY TREE ACTIVITY REPORTS TO THE PLANNING DEPARTMENT LANDSCAPE REVIEW STAFF BEGINNING 14 DAYS AFTER BUILDING PERMIT ISSUANCE.

BUILDING PERMIT DATE: _____

DATE OF 1ST TREE ACTIVITY REPORT: _____

CITY STAFF: _____

REPORTING DETAILS OF THE MONTHLY TREE ACTIVITY REPORT SHALL CONFORM TO SHEET T-1 FORMAT. VERIFY THAT ALL TREE PROTECTION MEASURES ARE IMPLEMENTED AND WILL INCLUDE ALL CONTRACTOR ACTIVITY, SCHEDULED OR UNSCHEDULED, WITHIN A TREE A TREE PROTECTION ROOT ZONE. NON-COMPLIANCE IS SUBJECT TO VIOLATION OF PAMC 8.10.080. REFERENCE: PALO ALTO TREE TECHNICAL MANUAL, SECTION 2.00 AND ADDENDUM 11.

ALL OTHER TREE-RELATED REPORTS SHALL BE ADDED USING
ADDITIONAL "T" SHEETS AS NEEDED.

SF PALO ALTO 023
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



PROPRIETARY INFORMATION

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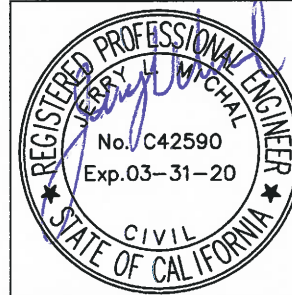
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ZONING SUBMITTAL 03/03/18

ZONING COMMENTS 04/12/18

REVISION / ISSUE DATE



SITE NAME & ADDRESS:
ROW ACROSS FROM 305 COWPER
ST & ADJACENT TO 482 EVERETT
PALO ALTO, CA

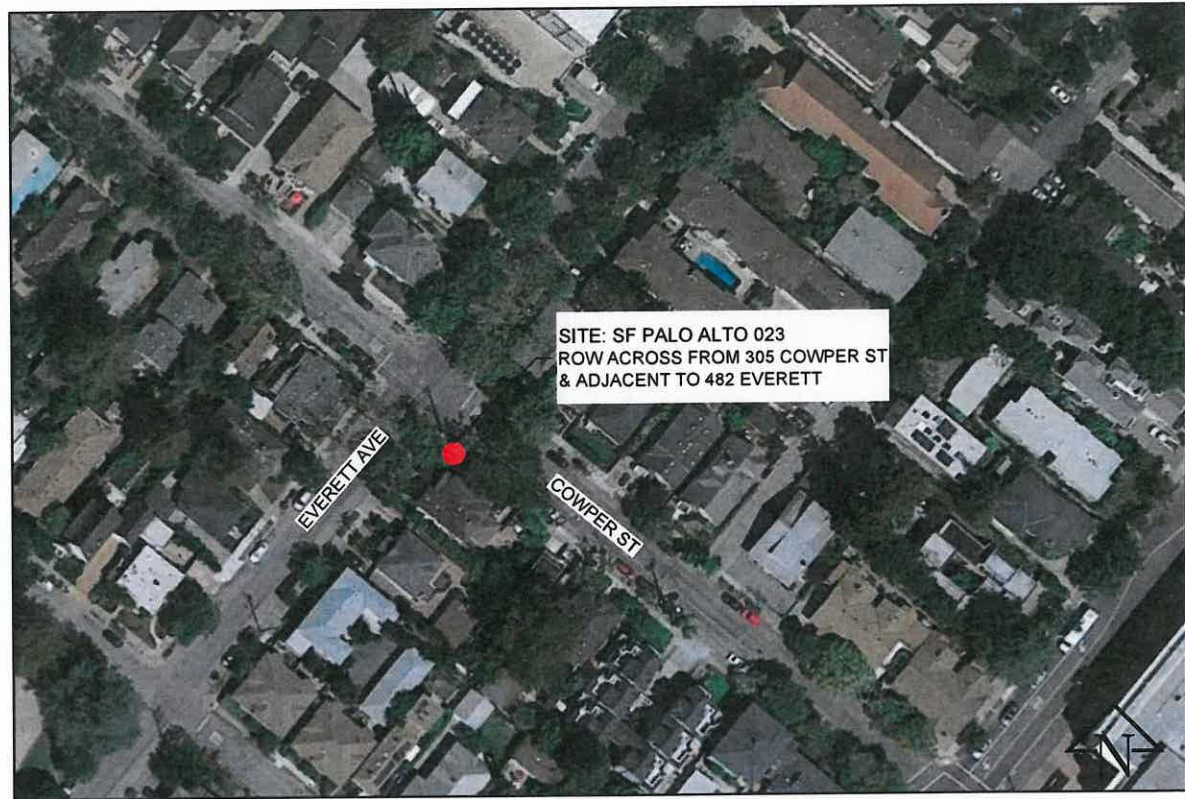
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SPECIAL TREE PROTECTION
INSTRUCTION SHEET

DRAWN BY: BW DRAFT DATE: 02/12/18 APPROVED BY: TT

SHEET NO.

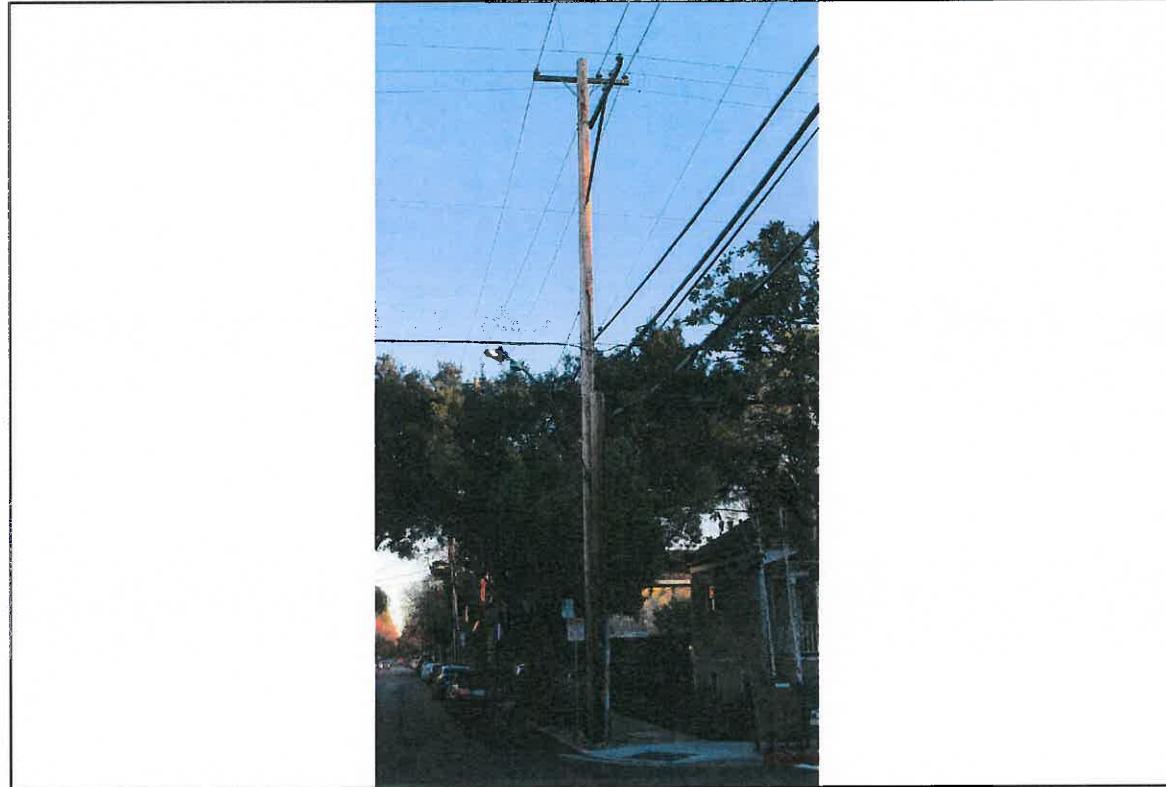
T1.4



A KEY MAP



C 12 O'CLOCK VIEW



B 9 O'CLOCK VIEW



D 3 O'CLOCK VIEW

**SF PALO ALTO 023
PALO ALTO**

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



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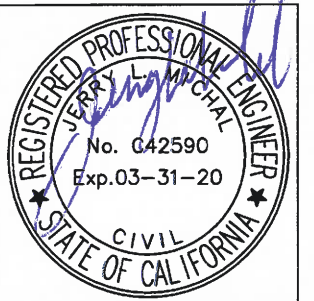
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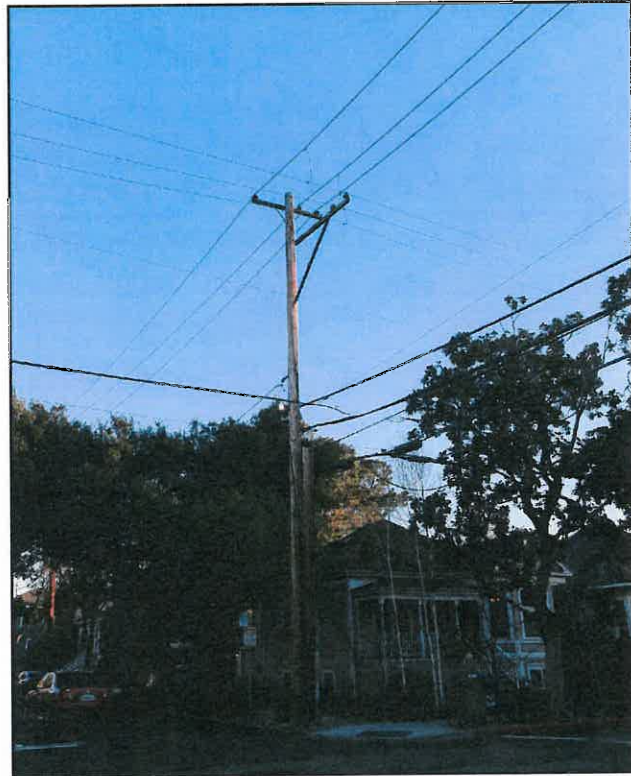
37.449812/-122.161695

PHOTOS

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SHEET NO.

P-1

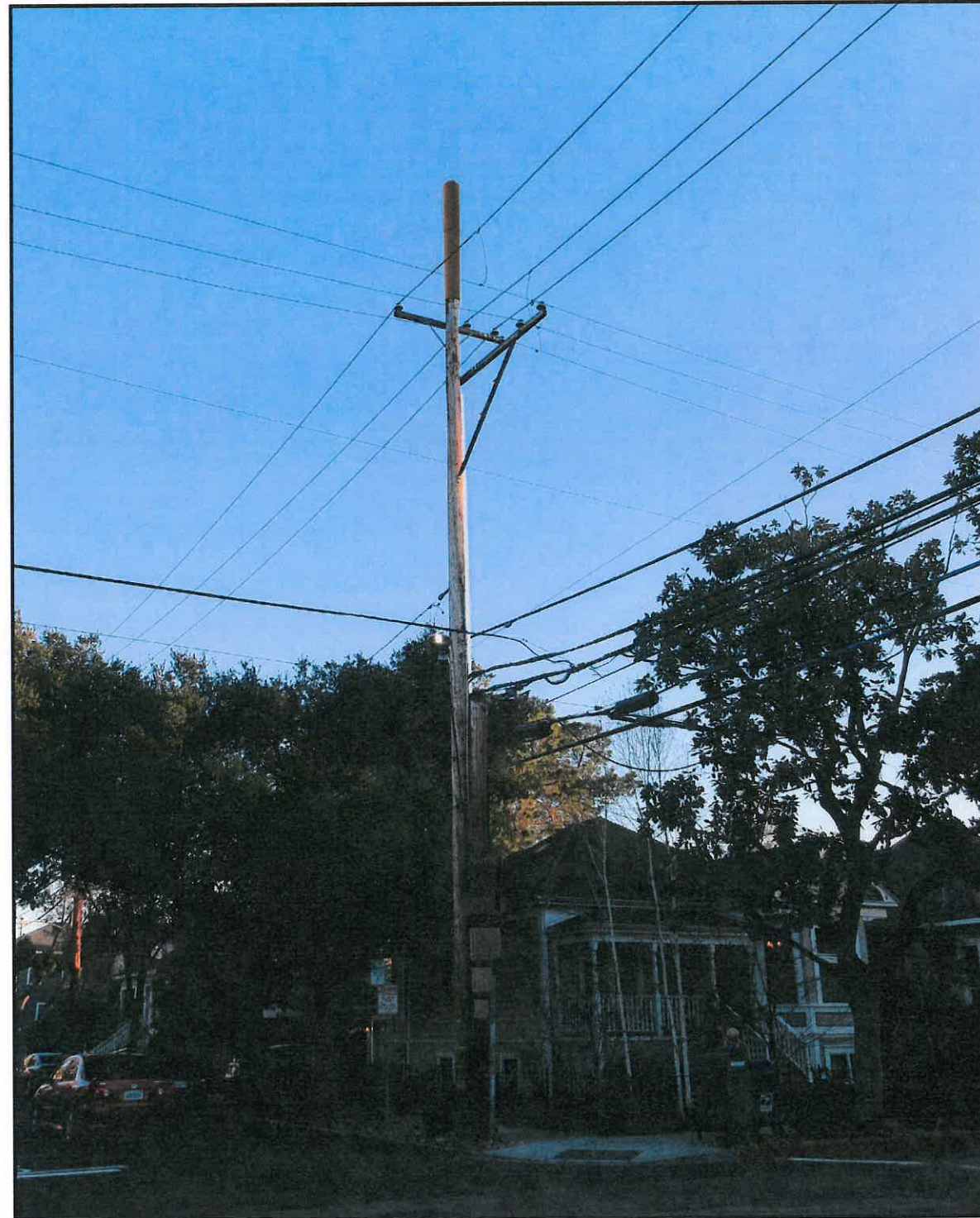


Existing Site



Vicinity Map

SF PALO ALTO 023
 ROW ACROSS FROM
 305 COWPER ST &
 ADJACENT TO
 482 EVERETT
 PALO ALTO, CA



Proposed Site

SF PALO ALTO 023
PALO ALTO

CROWN CASTLE PROJECT NO.
 VZW366241CA

CLIENT:

 695 RIVER OAKS PARKWAY
 SAN JOSE, CA 95134
 www.crowncastle.com

PREPARED BY:

 5841 EDISON PLACE, SUITE 200
 CARLSBAD, CA 92008
 PHONE: (760) 929-0910
 FAX: (760) 929-0936
 www.coastalcomm.com

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 37.449812/-122.161695

PHOTOSIM

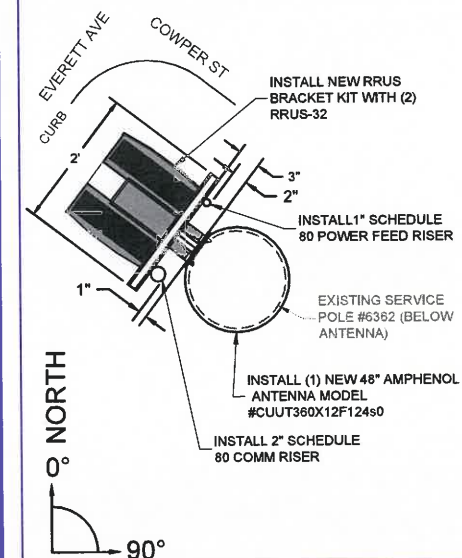
DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
SHEET NO. P-2		

POLE # 6350
TOP OF EXISTING POLE: 52' 9" A.G.L. (60' POLE)
TOP OF ANTENNA(S): 62'-1"
RAD CENTER: 60'-1"
AZIMUTH(S): OMNI
PROFILE VIEW: 12 O' CLOCK ELEVATION

A NOTES

- INSTALL NEW VGR.
- INSTALL NEW POWER DISCONNECT BOX ON STANDOFF BRACKET AT 8'-0" TO 8'-9".
- INSTALL NEW WTR ENCLOSURE ON STANDOFF BRACKET AT 9'-6" TO 10'-6".
- INSTALL NEW STANDOFF BRACKET KIT WITH (1) RRUS-11 AT 11'-0" TO 12'-5".
- INSTALL NEW RRUS BRACKET KIT WITH (2) RRUS-32 AT 13'-0" TO 16'-3".
- TRANSFER AT&T TO 23'-0" FROM STUB POLE.
- LOWER CATV TO 25'-0"; EXISTING HEIGHT AT 26'-8".
- LOWER EXISTING COMM TO 26'-0"; EXISTING HEIGHT AT 28'-11".
- INSTALL NEW CROWN CASTLE FIBER AT 27'-0".
- INSTALL 1" SCHEDULE 80 POWER RISER (BEHIND COMM RISER).
- INSTALL STANDOFF BRACKET (TYP.).
- INSTALL 3'-6" POLE MOUNTED EXTENSION & (1) NEW 48" AMPHENOL ANTENNA MODEL #CUUT360X12F124S0 WITH CUSTOM SHROUD CONCEALMENT COVER.
- ALL EQUIPMENT SHALL BE PAINTED TO MATCH TEXTURE AND COLOR.
- NO GROUND DISTURBANCE NECESSARY.

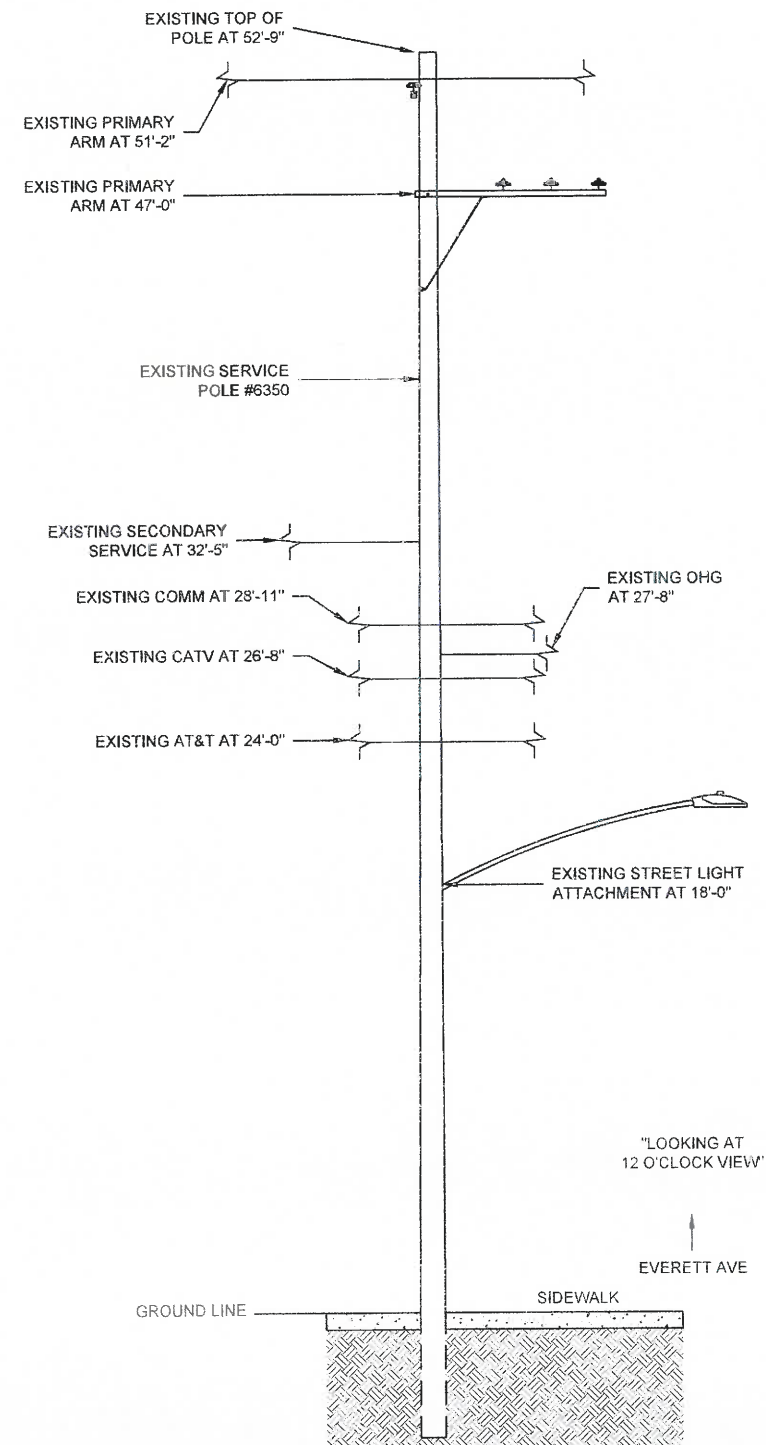
B CONSTRUCTION NOTES



C TOP VIEW

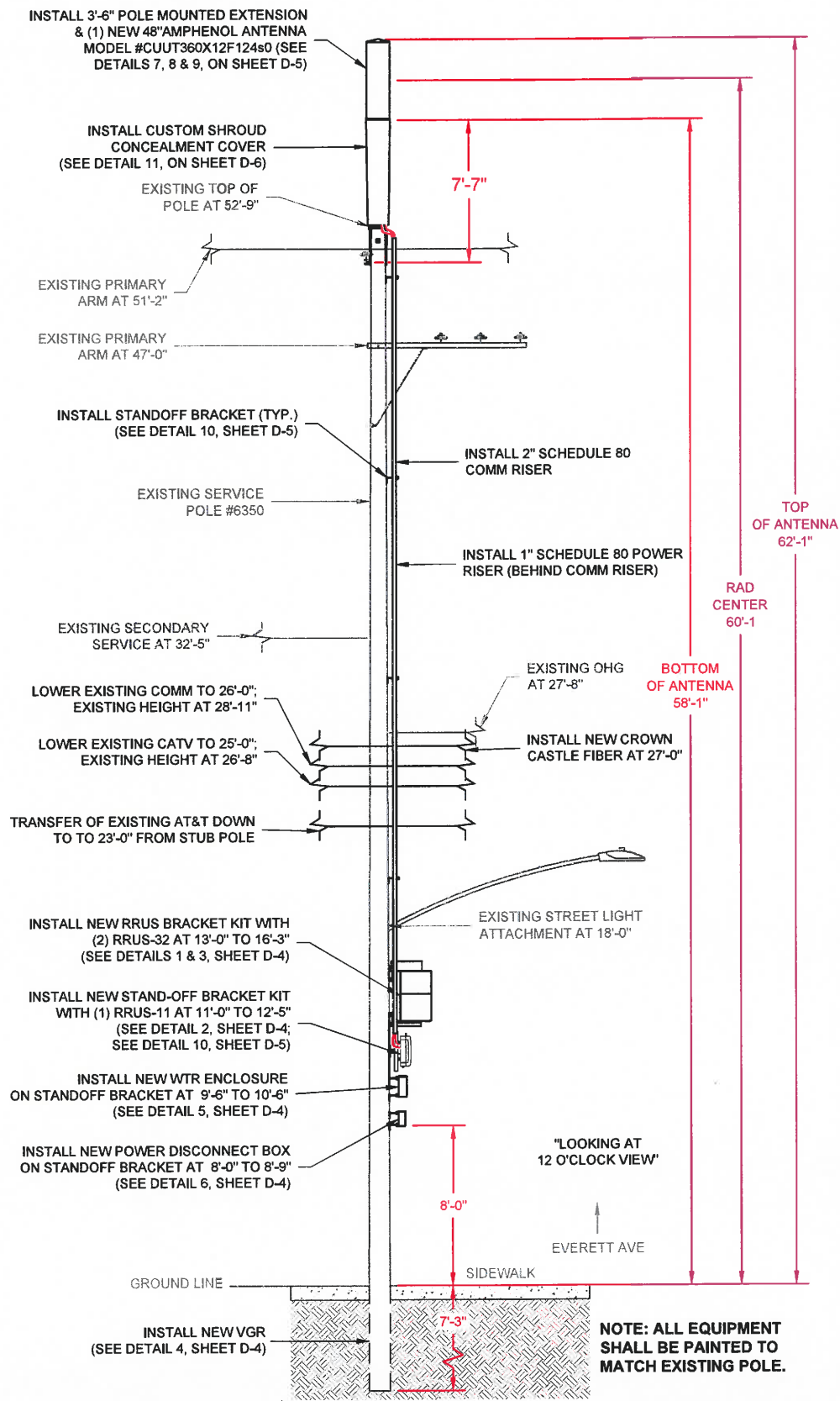
N.T.S.

NOTE: ANY REARRANGMENT OF EXISTING EQUIPMENT PER GO95



D EXISTING - 12 O'CLOCK ELEVATION

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



E PROPOSED - 12 O'CLOCK ELEVATION

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

**SF PALO ALTO 023
PALO ALTO**

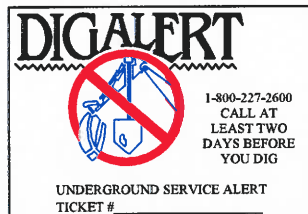
CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Coastal Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
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SITE NAME & ADDRESS:
ROW ACROSS FROM 305 COWPER ST & ADJACENT TO 482 EVERETT PALO ALTO, CA
37.449812/-122.161695

**POLE PROFILE
12 O'CLOCK ELEVATION**

DRAWN BY:	DRAFT DATE:	APPROVED BY:
BW	02/12/18	TT

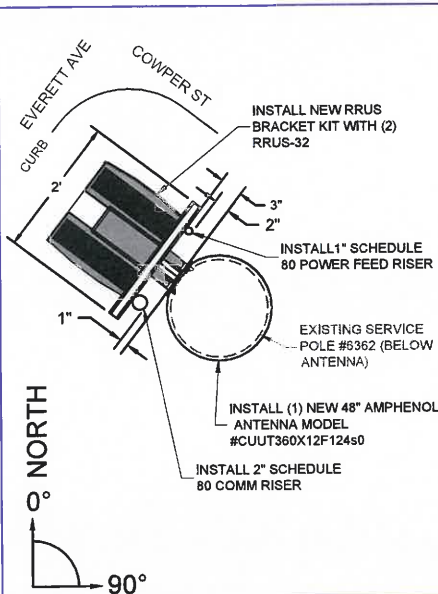
SHEET NO.
P-3

POLE # 6350
TOP OF EXISTING POLE: 52' 9" A.G.L. (60' POLE)
TOP OF ANTENNA(S): 62'-1"
RAD CENTER: 60'-1"
AZIMUTH(S): OMNI
PROFILE VIEW: 9 O' CLOCK ELEVATION

E PROFILE NOTES

- INSTALL NEW VGR.
- INSTALL NEW POWER DISCONNECT BOX ON STANDOFF BRACKET AT 8'-0" TO 8'-9".
- INSTALL NEW WTR ENCLOSURE ON STANDOFF BRACKET AT 9'-6" TO 10'-6".
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- INSTALL NEW CROWN CASTLE FIBER AT 27'-0".
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- INSTALL STANDOFF BRACKET (TYP.).
- INSTALL 3'-6" POLE MOUNTED EXTENSION & (1) NEW 48" AMPHENOL ANTENNA MODEL #CUUT360X12F124S0 WITH CUSTOM SHROUD CONCEALMENT COVER.
- INSTALL NOTICE & CAUTION SIGNS.
- ALL EQUIPMENT SHALL BE PAINTED TO MATCH TEXTURE AND COLOR.
- NO GROUND DISTURBANCE NECESSARY.

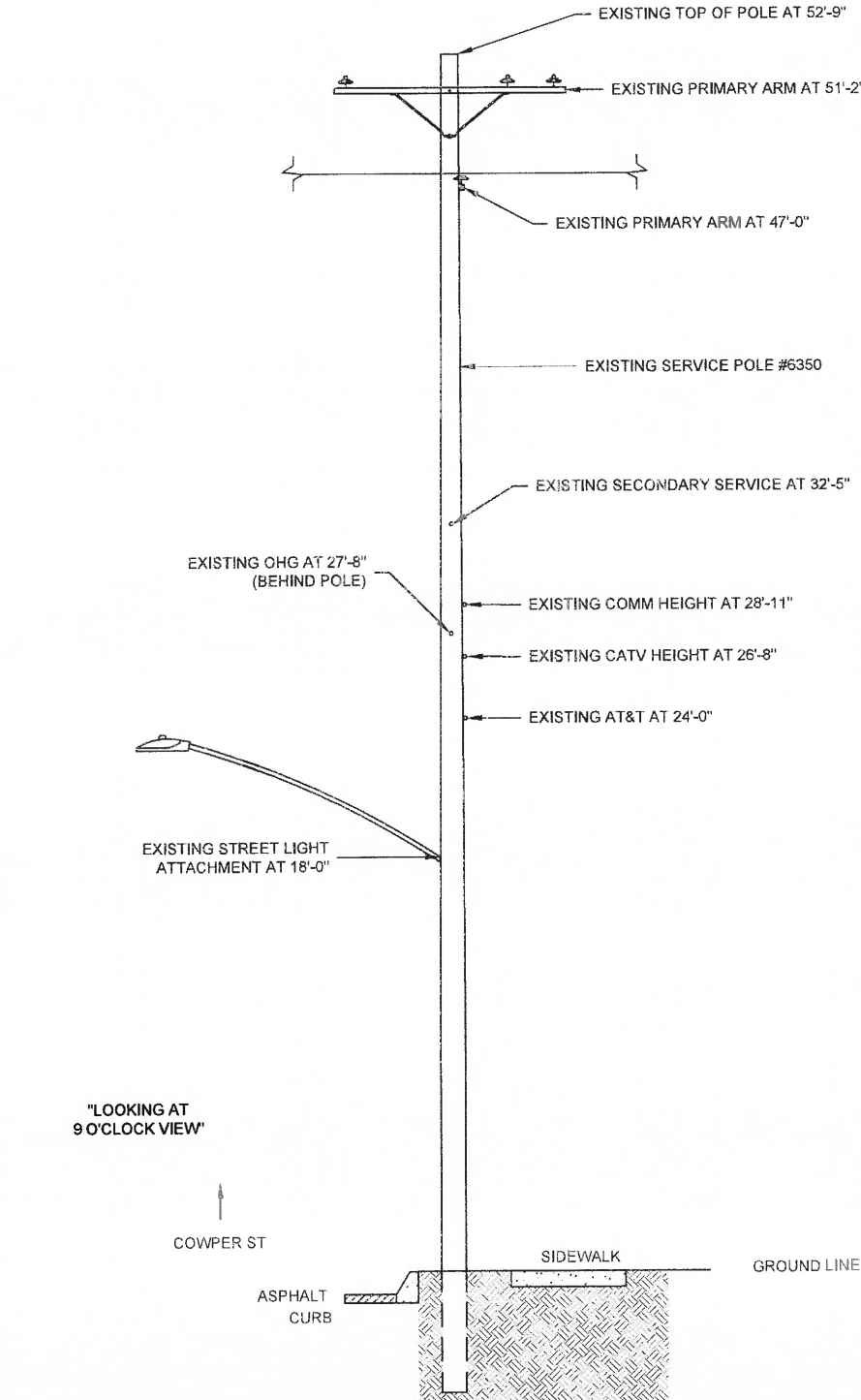
F CONSTRUCTION NOTES



G TOP VIEW

N.T.S.

NOTE: ANY REARRANGMENT OF EXISTING EQUIPMENT PER G095

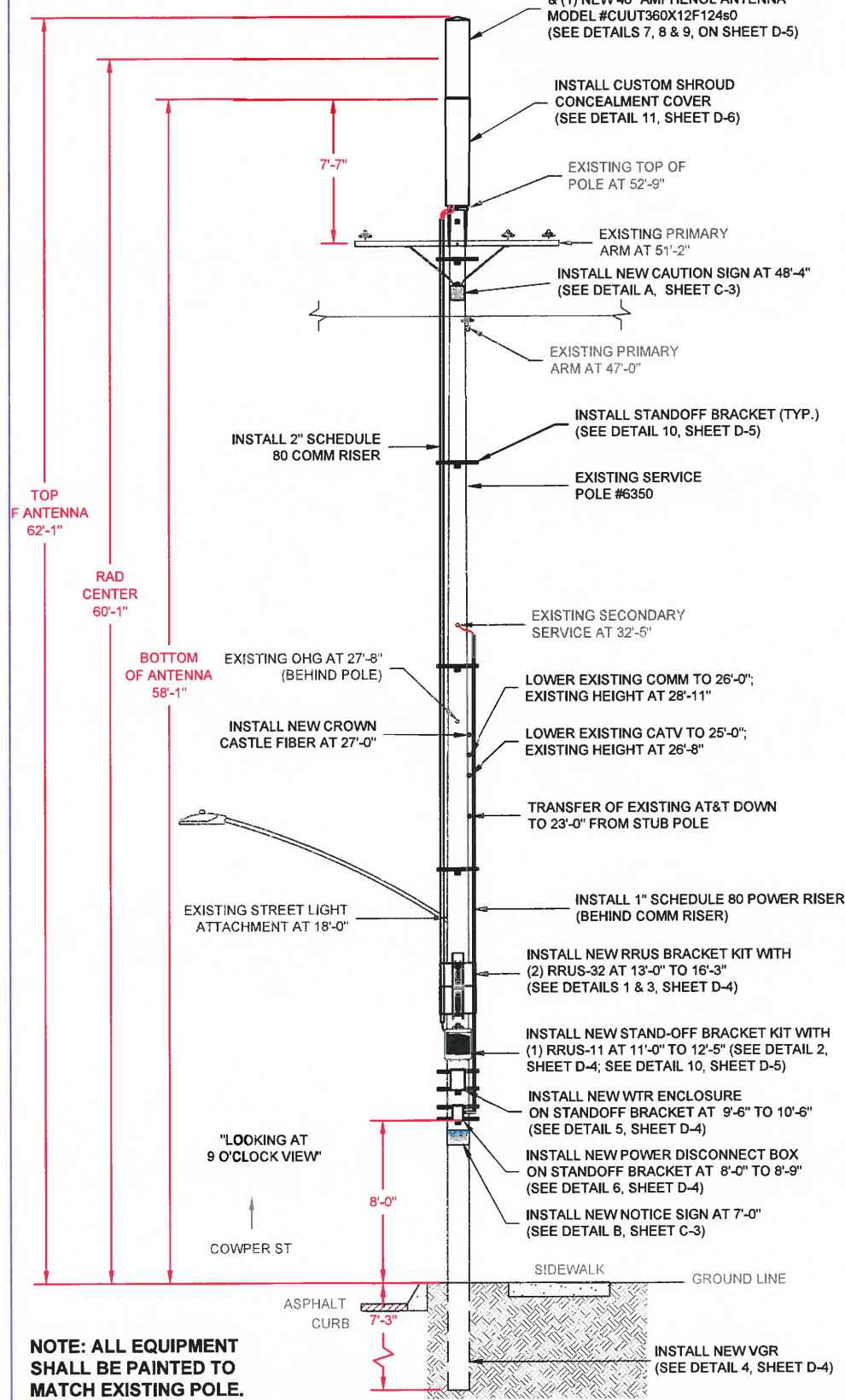


H EXISTING - 9 O'CLOCK ELEVATION

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

I PROPOSED - 9 O'CLOCK ELEVATION

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



NOTE: ALL EQUIPMENT SHALL BE PAINTED TO MATCH EXISTING POLE.

**SF PALO ALTO 023
PALO ALTO**

CROWN CASTLE PROJECT NO.
VZW366241CA

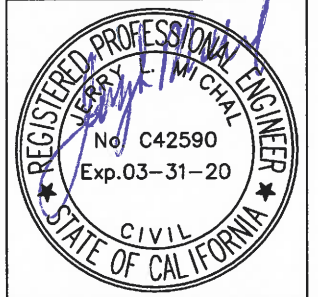
CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Coastal Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcomminc.com

PROPRIETARY INFORMATION
THE INFORMATION CONTAINED IN THIS SET OF DRAWINGS IS PROPRIETARY AND CONFIDENTIAL TO VERIZON. ANY USE OR DISCLOSURE OTHER THAN AS IT RELATES TO VERIZON IS STRICTLY PROHIBITED.

DIGALERT
1-800-227-2600
CALL AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
TICKET #

ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
ROW ACROSS FROM 305 COWPER ST & ADJACENT TO 482 EVERETT PALO ALTO, CA
37.449812/-122.161695

**POLE PROFILE
9 O'CLOCK ELEVATION**

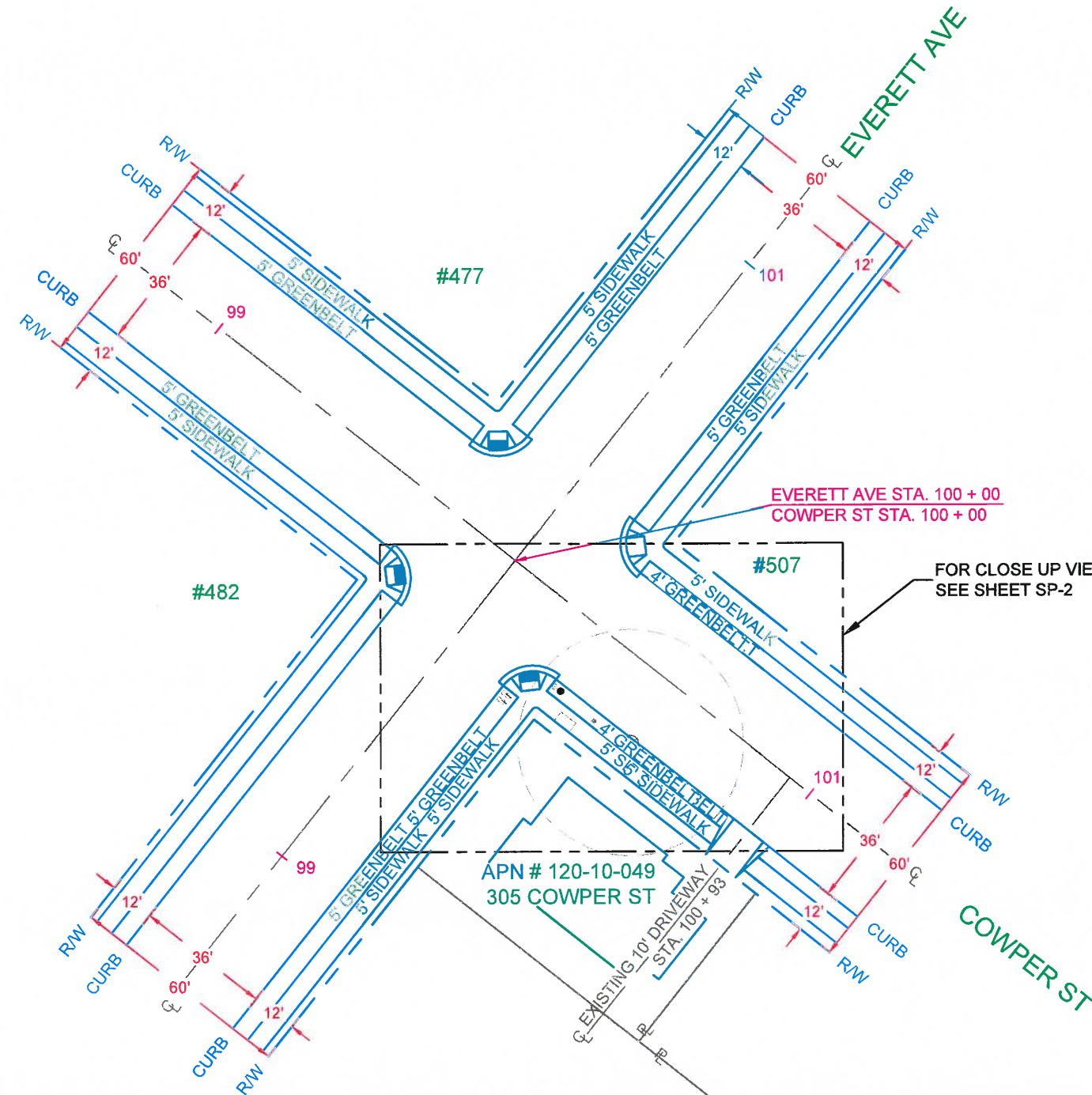
DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
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SHEET NO.
P-4

NO GROUND DISTURBANCE
NECESSARY

TREE PROTECTION IS REQUIRED
AND SHALL BE ERECTED
AROUND ANY TREE WITHIN 15' OF
IMPROVEMENTS OR WORK ZONE
BEFORE CONSTRUCTION BEGINS.
REFER TO SHEETS T1.1 - T1.4.

IN CASE OF ENCOUNTERING
MASSIVE / EXTENSIVE TREE
ROOTS AROUND WORK AREA
DURING CONSTRUCTION,
CONTACT CITY OF PALO ALTO
ARBORIST AT (650) 496-5953 FOR
FURTHER GUIDANCE &
SUPERVISION



NORTH



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

SF PALO ALTO 023
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

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SAN JOSE, CA 95134
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ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
ROW ACROSS FROM 305 COWPER
ST & ADJACENT TO 482 EVERETT
PALO ALTO, CA
37.449812/-122.161695

SITE PLAN

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
SHEET NO. SP-1		

EXISTING TREE TABLE							
PALO ALTO TREE #	SPECIES:	COMMON NAME:	GROW SPACE:	TRUNK DIA. AT BREAST HT.:	PROTECTION LINE:	DISTANCE TO CONST.	PROTECTION MEASURES REQUIRED
1	CINAMMOMUM CAMPHORA	CAMPHOR	GREENBELT	36 INCHES	3' x 10' = 30'-0"	0'-0"	YES

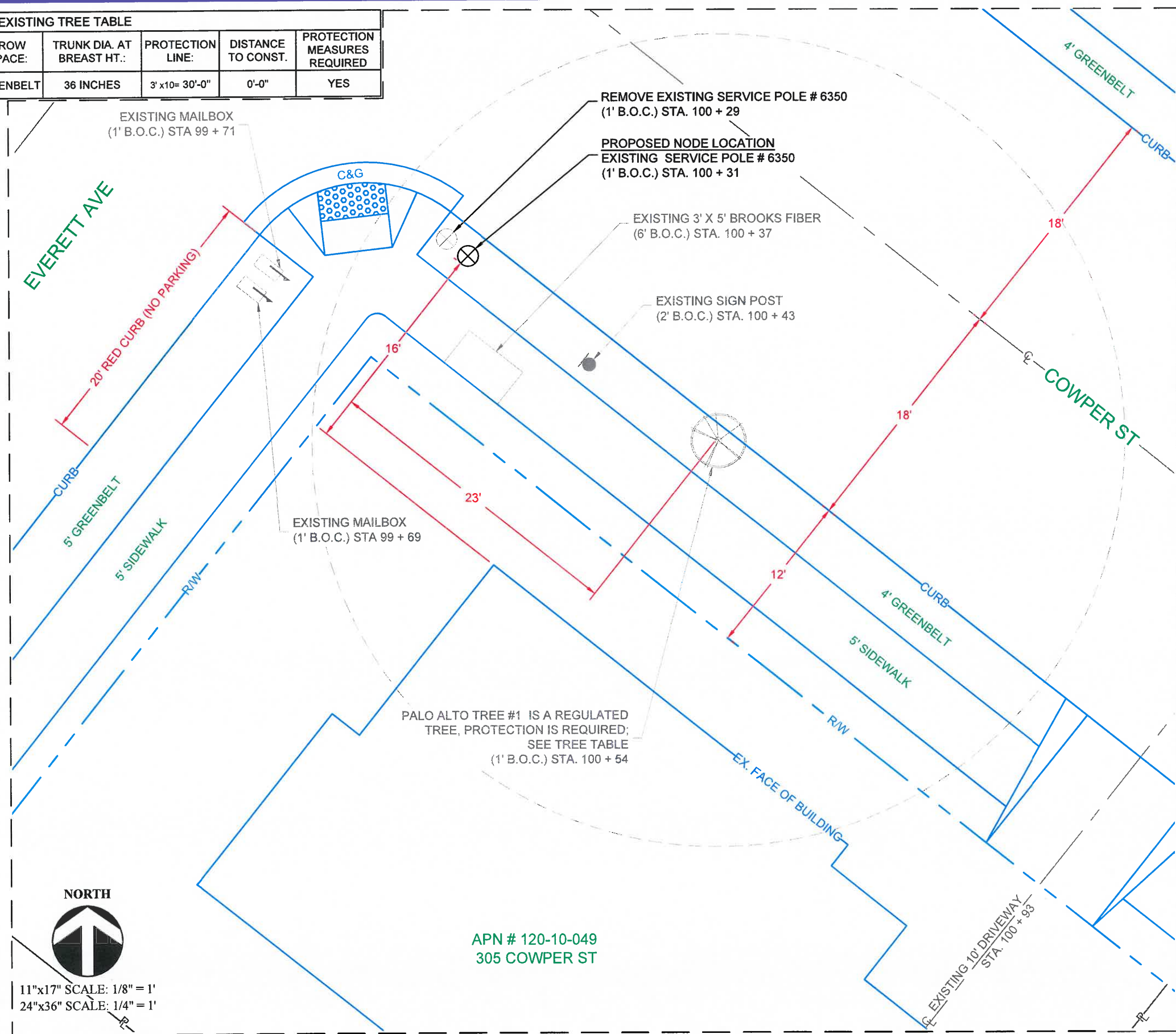
NODE COORDINATES	
LATITUDE:	37.449812
LONGITUDE:	-122.161695

NO GROUND DISTURBANCE NECESSARY

TREE PROTECTION IS REQUIRED AND SHALL BE ERECTED AROUND ANY TREE WITHIN 15' OF IMPROVEMENTS OR WORK ZONE BEFORE CONSTRUCTION BEGINS. REFER TO SHEETS T1.1 - T1.4.

IN CASE OF ENCOUNTERING MASSIVE / EXTENSIVE TREE ROOTS AROUND WORK AREA DURING CONSTRUCTION, CONTACT CITY OF PALO ALTO ARBORIST AT (650) 496-5953 FOR FURTHER GUIDANCE & SUPERVISION

ALL EQUIPMENT SHALL BE PAINTED TO MATCH EXISTING POLE



SF PALO ALTO 023
PALO ALTO
CROWN CASTLE PROJECT NO.
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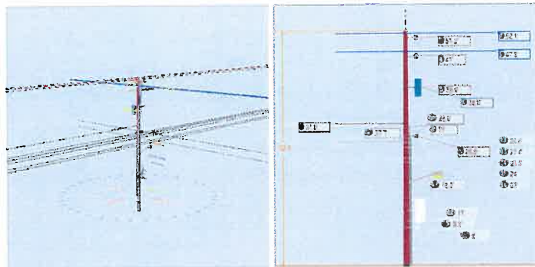


SITE NAME & ADDRESS:
ROW ACROSS FROM 305 COWPER ST & ADJACENT TO 482 EVERETT PALO ALTO, CA
37.449812/-122.161695

ENLARGED PLAN

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
SHEET NO. SP-2		

Pole Num:	6350	Pole Length / Class:	60 / 2	Code:	GO 95	Structure Type:	Junction
Aux Data 1	SFPA023-SFO	Species:	DOUGLAS FIR	GO 95 Rule:	At Replace (Existing)	Pole Strength Factor:	0.38
Aux Data 2	Unset	Setting Depth (ft):	7.25	Construction Grade:	A	Transverse Wind LF:	1.00
Aux Data 3	Unset	G/L Circumference (in):	44.54	Loading District:	Light	Wire Tension LF:	1.00
Aux Data 4	Unset	G/L Fiber Stress (psi):	8,000	Ice Thickness (in):	0.00	Vertical LF:	1.00
Aux Data 5	Unset	Allowable Stress (psi):	2,871	Wind Speed (mph):	55.90	Bending Factor of Safety:	3.85
Aux Data 6	Unset	Fiber Stress Ht. Reduc:	No	Wind Pressure (psf):	8.00	Vertical Factor of Safety:	126.98
Latitude:	0.000000 Deg		Longitude:	0.000000 Deg		Elevation:	0 Feet



Pole Capacity Utilization (%)	Height (ft)	Wind Angle (deg)
Crossarm allowance 300 lbs		
Maximum	69.3	0.0
Groundline	69.3	0.0
Vertical	2.1	25.9

Pole Moments (ft-lb)	Load Angle (deg)	Wind Angle (deg)
Crossarm allowance 300 lbs		
Max Cap Util	45,822	96.4
Groundline	45,822	96.4
GL Allowable	66,929	

Guy System Component Summary				Load From Worst Wind Angle on Pole		Individual Maximum Load	
Description	Load Length (ft)	Lead Angle (deg)	Height (ft)	Nominal Capacity (%)	Wind Angle (deg)	Max Load Capacity (%)	Wind Angle (deg)
Guy Pole	120.0	0.0		4.4	92.7	8.8	180.0
EHS 1/4 (Span/Head)			27.7	13.3	92.7	28.3	180.0
System Capacity Summary:				Adequate		Adequate	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 96.4°										
	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	282	18.0	12,305	27.2	18.4	528	204	1	529	18.4
Comms	584	37.3	15,291	33.8	22.9	656	439	3	659	22.9
GuyBraces	-65	-4.1	-1,790	-4.0	-2.7	-77	7	0	-77	-2.7
GenericEquipments	134	8.5	2,491	5.5	3.7	107	379	2	109	3.8
Pole	388	24.8	9,283	20.5	13.9	398	2,170	14	412	14.3
Crossarms	112	7.1	4,957	11.0	7.4	213	186	1	214	7.4
Streetlights	29	1.8	505	1.1	0.8	22	45	0	22	0.8
Risers	90	5.8	1,613	3.6	2.4	69	255	2	71	2.5
Insulators	13	0.8	613	1.4	0.9	26	68	0	27	0.9
Pole Load	1,567	100.0	45,268	100.0	67.6	1,942	3,753	24	1,966	68.5
Pole Reserve Capacity			21,661		32.4	929			906	31.5

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 96.4°										
	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>	407	25.9	17,858	39.5	26.7	766	433	3	769	26.8
CC	223	14.2	5,050	11.2	7.6	217	436	3	219	7.6
Catv	100	6.4	2,659	5.9	4.0	114	83	1	115	4.0
Telco	224	14.3	5,332	11.8	8.0	229	218	1	230	8.0
Comm	262	16.7	6,370	14.1	9.5	273	362	2	276	9.6
PWR	-36	-2.3	-1,286	-2.8	-1.9	-55	52	0	-55	-1.9
Pole	368	24.8	9,283	20.5	13.9	398	2,170	14	412	14.3
Totals:	1,567	100.0	45,268	100.0	67.6	1,942	3,753	24	1,966	68.5

Detailed Load Components:													
Power	Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Seg 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)	Moment at GL* (ft-lb)
Secondary	#2 Alum. Triplex	31.75	7.47	0.7700	1.48	0.270	100.0	180.0	100.0	760	2,702	1	809
Primary	397.5 ACSR	52.11	48.37	0.7830	0.83	0.520	100.0	180.0	100.0	3,000	17,519	-102	1,351
Primary	397.5 ACSR	52.11	48.37	0.7830	0.85	0.520	120.0	0.0	120.0	3,000	-17,519	-122	1,621
Primary	397.5 ACSR	52.11	24.73	0.7830	0.63	0.520	100.0	180.0	100.0	3,000	17,519	-50	1,351
Primary	397.5 ACSR	52.11	24.73	0.7830	0.85	0.520	120.0	0.0	120.0	3,000	-17,519	-60	1,821
Primary	397.5 ACSR	52.11	48.37	0.7830	0.63	0.520	100.0	180.0	100.0	3,000	17,519	105	1,351
Primary	397.5 ACSR	52.11	48.37	0.7830	0.85	0.520	120.0	0.0	120.0	3,000	-17,519	126	1,821
Primary	397.5 ACSR	52.11	48.37	0.7830	0.85	0.520	120.0	0.0	120.0	3,000	-17,519	-126	1,821
Primary	#6 CU	47.95	108.18	0.2010	0.10	0.083	58.0	270.0	58.0	482	-22,970	-4	1
Primary	#6 CU	47.95	108.18	0.2010	0.26	0.083	92.0	90.0	92.0	482	-22,970	-3	1
Primary	#6 CU	47.95	84.23	0.2010	0.10	0.083	58.0	270.0	58.0	482	-22,970	-5	2
Primary	#6 CU	47.95	84.23	0.2010	0.26	0.083	92.0	90.0	92.0	482	-22,970	-3	1
Primary	#6 CU	47.95	96.20	0.2010	0.10	0.083	58.0	270.0	58.0	482	-22,970	-5	2
Primary	#6 CU	47.95	96.20	0.2010	0.26	0.083	92.0	90.0	92.0	482	-22,970	-3	1
Totals:										2,762	-129	9,732	12,395

Comm	Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Seg 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)
Overlashed Bundle	1/4" Strand	CC	28.41	7.91	0.2500	0.71	0.121	120.0	0.0	120.0	1,500	-4,773	5	688
Telco	216-320 Count fiber	CC	28.36	7.91	1.0000		0.350	120.0	0.0	120.0			14	687
Overlashed Bundle	1/4" Strand	CC	28.41	7.91	0.2500	0.49	0.121	100.0	180.0	100.0	1,500	4,773	4	574
Telco	216-320 Count fiber	CC	28.36	7.91	1.0000		0.350	100.0	180.0	100.0			11	573
Overlashed Bundle	1/4" Strand	Catv	26.33	8.04	0.2500	0.64	0.121	120.0	0.0	120.0	1,500	-4,423	5	479
CATV	500 COAX	Catv	26.29	8.04	0.5000		0.150	120.0	0.0	120.0			6	479
CATV	500 COAX	Catv	26.25	8.04	0.5000		0.150	120.0	0.0	120.0			6	478
Overlashed Bundle	1/4" Strand	Catv	28.15	144.22	0.2500	0.37	0.121	92.0	90.0	92.0	1,500	35,077	0	2
CATV	500 COAX	Catv	28.11	144.22	0.5000		0.150	92.0	90.0	92.0			-5	2
CATV	500 COAX	Catv	26.06	144.22	0.5000		0.150	92.0	90.0	92.0			-5	2
Overlashed Bundle	1/4" Strand	Catv	26.15	144.22	0.2500	0.15	0.121	58.0	270.0	58.0	1,500	-35,077	0	1
CATV	500 COAX	Catv	26.11	144.22	0.5000		0.150	58.0	270.0	58.0			-3	1
CATV	500 COAX	Catv	26.06	144.22	0.5000		0.150	58.0	270.0	58.0			-3	1
Overlashed Bundle	1/4" Strand	Catv	26.33	8.04	0.2500	0.44	0.121	100.0	180.0	100.0	1,500	4,423	4	399
CATV	500 COAX	Catv	26.29	8.04	0.5000		0.150	100.0	180.0	100.0			5	399
CATV	500 COAX	Catv	26.25	8.04	0.5000		0.150	100.0	180.0	100.0			5	398
Overlashed Bundle	1/4" Strand	Telco	23.00	8.23	0.3130	1.15	0.104	120.0	0.0	120.0	1,500	-3,964	4	700
Telco	TELE 1.25	Telco	22.94	8.23	1.2500		0.600	120.0	0.0	120.0			25	699
Overlashed Bundle	1/4" Strand	Telco	22.90	144.24	0.3130	0.69	0.104	92.0	90.0	92.0	1,500	30,719	0	3
Telco	TELE 1.25	Telco	22.84	144.24	1.2500		0.600	92.0	90.0	92.0			-18	3
Overlashed Bundle	1/4" Strand	Telco	22.90	144.24	0.3130	0.29	0.104	58.0	270.0	58.0	1,500	-30,719	0	2
Telco	TELE 1.25	Telco	22.84	144.24	1.2500		0.600	58.0	270.0	58.0			-12	2
Overlashed Bundle	1/4" Strand	Telco	23.00	8.23	0.3130	0.82	0.104	100.0	180.0	100.0	1,500	3,964	4	584
Telco	TELE 1.25	Telco	22.94	8.23	1.2500		0.600	100.0	180.0	100.0			20	582
Overlashed Bundle	1/4" Strand	Telco	24.00	8.17	0.3130	1.15	0.104	120.0	0.0	120.0	1,500	-4,032	4	731
Telco	TELE 1.25	Telco	23.94	8.17	1.2500		0.600	120.0	0.0	120.0			24	729
Overlashed Bundle	1/4" Strand	Telco	24.00	8.17	0.3130	0.82	0.104	100.0	180.0	100.0	1,500	4,032	4	809
Telco	TELE 1.25	Telco	23.94	8.17	1.2500		0.600	100.0	180.0	100.0			20	808
Overlashed Bundle	1/4" Strand	Comm	27.41	7.97	0.2500	1.34	0.121	120.0	0.0	120.0	1,500	-4,805	5	854
Telco	TELE 1.0	Comm	27.35	7.97	1.0000		0.400	120.0	0.0	120.0			16	852
Telco	TELE 1.0	Comm	27.27	7.97	1.0000		0.400	120.0	0.0	120.0			16	850
Overlashed Bundle	1/4" Strand	Comm	27.41	7.97	0.2500	0.94	0.121	100.0	180.0	100.0	1,500	4,805	4	712
Telco	TELE 1.0	Comm	27.35	7.97	1.0000		0.400	100.0	180.0	100.0			13	710
Telco	TELE 1.0	Comm	27.27	7.97	1.0000		0.400	100.0	180.0	100.0			13	708
Totals:											0	191	15,100	15,291

Generic Equipment													
	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	MUSH-41	CC	11.00	17.44	0.0	0.0	315.00	60.00	16.00	21.74	-51	938	887
Box	WTR	CC	9.50	12.53	0.0	0.0	15.00	12.00	6.00	12.00	-2	61	59
Box	Disconnect	CC	8.00	11.62	0.0	0.0	11.00	9.00	4.00	6.00	-1	26	24
Cylinder	CUUT360X12F83s0	CC	38.83	32.10	180.0	0.0	38.10	46.00	14.60	11	1,509	1,520	
Totals:											-43	2,533	2,491

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	CROSS ARM 3.75 x 5.75		51.16	5.95	180.0	180.0	58.00	5.75	3.75	120.00	3	114	117
Offset	CROSS ARM 3.75 x 5.75		47.00	8.19	270.0	270.0	58.00	5.75	3.75	120.00	215	2,862	3,077
Normal	4" Guard Arm		28.91	7.26	90.0	90.0	30.00	4.75	3.75	48.00	18	582	800
Normal	CROSSARM 3-1/2 X 4-1/2 X 6		39.91	8.61	90.0	90.0	40.00	4.50	3.75	72.00	22	1,141	1,163
Totals:											258	-4,999	4,957

TRAFFIC CONTROL PLAN GENERAL NOTES:

1. WORK HOURS TO BE RESTRICTED TO _____ TO _____ UNLESS APPROVED OTHERWISE.
2. PEDESTRIAN CONTROLS WILL BE PROVIDED AS SHOWN.
3. PEDESTRIANS SHALL BE PROTECTED FROM ENTERING THE EXCAVATION BY PHYSICAL BARRIERS DESIGNED, INSTALLED, AND MAINTAINED TO THE SATISFACTION OF THE CITY ENGINEER.
4. TEMPORARY "NO PARKING/TOW AWAY" SIGNS STATING THE DATE AND TIME OF PROHIBITION WILL BE POSTED 72 HOURS PRIOR TO COMMENCING WORK. CALL POLICE DISPATCH TO VALIDATE POSTING.
5. ACCESS WILL BE MAINTAINED TO ALL DRIVEWAYS UNLESS OTHER ARRANGEMENTS ARE MADE.
6. TRENCHES MUST BE BACKFILLED OR PLATED DURING NON-WORKING HOURS UNLESS K-RAIL BARRIERS ARE PROVIDED. K-RAIL IS APPROVED ONLY WHEN SPECIFICALLY SHOWN ON THE APPROVED TRAFFIC CONTROL PLAN. PLATES SHALL HAVE CLEATS AND COLD MIX AT THE EDGES AS APPROVED BY THE INSPECTOR.
7. STRIPING WILL BE REPLACED BY THE CONTRACTOR WITHIN 24 HOURS, IF REMOVED OR DAMAGED.
8. WORK THAT DISTURBS NORMAL TRAFFIC SIGNAL TIMING OPERATIONS SHALL BE COORDINATED WITH THE CITY. CONTACT PUBLIC WORKS DEPARTMENT 72 HOURS PRIOR TO COMMENCING WORK.
9. TRAFFIC SIGNALS SHALL REMAIN FULLY ACTUATED AT ALL TIMES, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR HIS/HER REPRESENTATIVE. IF TRAFFIC SIGNAL LOOP DETECTORS ARE RENDERED INOPERATIVE BY THE PROPOSED WORK, VIDEO DETECTION SHALL BE USED TO PROVIDE ACTUATION.
10. FLAGGERS SHALL BE EQUIPPED WITH A WHITE HARD HAT, AN ORANGE VEST, AND A "STOP/SLOW" PADDLE ON A 5 FOOT STAFF.
11. ALL TRAFFIC CONTROL DEVICES MUST BE MAINTAINED 24 HOURS A DAY, 7 DAYS PER WEEK, BY THE CONTRACTOR.
12. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2014 EDITION.
13. TRAFFIC CONTROL PLAN SUBMITTALS ARE REQUIRED FOR EACH PHASE OF THE WORK IN THE DETAIL, FORMAT, AND QUALITY ILLUSTRATED ON THIS SHEET.
14. ALL TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM VIEW OR COVERED WHEN NOT IN USE.
15. THE CITY ENGINEER OR HIS/HER REPRESENTATIVE HAS THE AUTHORITY TO INITIATE FIELD CHANGES TO INSURE PUBLIC SAFETY.
16. ALL WORK AFFECTING BUS STOPS SHALL BE COORDINATED WITH CITY'S TRANSIT DISTRICT. CONTRACTOR SHALL CALL TRANSIT DISTRICT AT LEAST 72 HOURS IN ADVANCE OF STARTING WORK.
17. CHANGEABLE MESSAGE SIGNS SHALL BE USED IN ADVANCE OF TRAFFIC CONTROL ON MAJOR AND PRIME ARTERIALS, UNLESS OTHERWISE APPROVED. THESE SIGNS SHALL BE SHOWN ON THE TRAFFIC CONTROL PLAN.

SIGNAGE NOTES:

1. AT LEAST ONE PERSON SHALL BE ASSIGNED TO FULL TIME MAINTENANCE OF TRAFFIC CONTROL DEVICES ON ALL NIGHT LANE CLOSURES.
2. ALL WARNING SIGNS FOR NIGHT LANE CLOSURES SHALL BE ILLUMINATED OR REFLECTORIZED AS SPECIFIED IN THE SPECIFICATIONS.
3. ALL ADVANCE WARNING SIGN INSTALLATIONS SHALL BE EQUIPPED WITH FLAGS FOR DAYTIME CLOSURES OF ALL MAJOR AND PRIME ARTERIALS. FLASHING BEACONS SHALL BE USED DURING NIGHT LANE CLOSURES.
4. A G20-2 "END ROAD WORK" SIGN SHALL BE PLACED AT THE END OF THE LANE CLOSURE UNLESS THE END OF THE WORK AREA IS OBVIOUS, OR ENDS WITHIN A LARGER PROJECT LIMITS.
5. ALL CONES USED FOR NIGHT LANE CLOSURES SHALL BE ILLUMINATED TRAFFIC CONES OR FITTED WITH 13" REFLECTIVE SLEEVES.
6. FLASHING ARROW SIGNS SHALL BE USED PER CA MUTCD 2014 EDITION. SILENT TYPE SHALL BE USED IN RESIDENTIAL AREAS.
7. THE MAXIMUM SPACING BETWEEN CONES SHALL BE THE WORK AREA'S SPEED LIMIT.
8. ADDITIONAL ADVANCE FLAGGERS SHALL BE REQUIRED WHEN TRAFFIC QUEUES DEVELOP. FLAGGER STATIONS FOR WORK AT NIGHT SHALL BE ILLUMINATED AS NOTED IN SECTION 6G.20 OF THE MUTCD.
9. ALL REQUIRED SIGNS THAT ARE TO BE LEFT IN PLACE OVER A WEEKEND OR HOLIDAY SHALL BE POST MOUNTED.
10. CONSTRUCTION AREA TRAFFIC CONTROL DEVICES SHALL MEET THE PROVISIONS OF 2014 CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

SIGN LEGEND

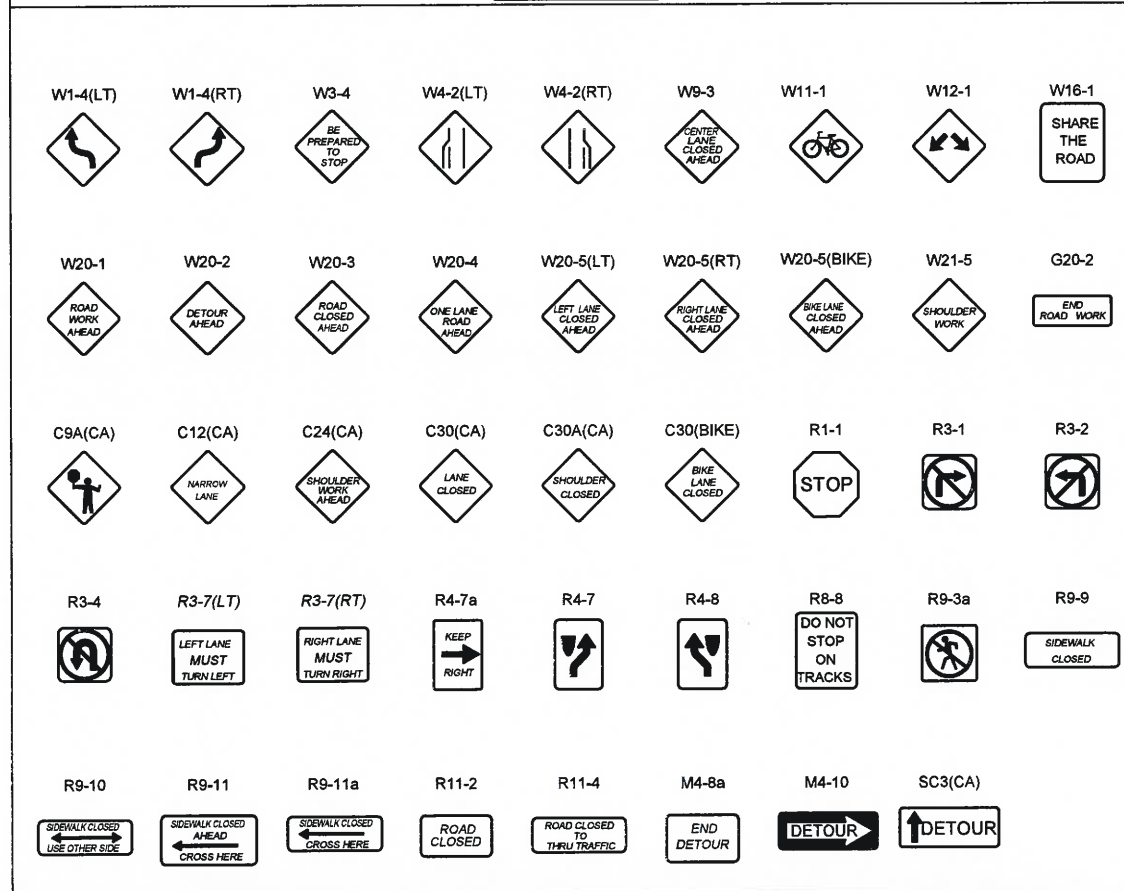


Table 6C-1. Recommended Advance Warning Sign Minimum Spacing

Road Type	Distance Between Signs*		
	A	B	C
Urban (low speed) – 25 mph or less	100 ft	100 ft	100 ft
Urban (high speed) – more than 25 mph to 40 mph	250 ft	250 ft	250 ft
Urban (high speed) – more than 40 mph	350 ft	350 ft	350 ft
Rural	500 ft	500 ft	500 ft
Expressway / Freeway	1,000 ft	1,000 ft	1,000 ft

- * Speed category to be determined by the highway agency.
 ** The column headings A, B, and C are the dimensions shown in Figures 6H-1 through 6H-46. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The "first sign" is the sign in a three-sign series that is closest to the TTC zone. The "third sign" is the sign that is furthest upstream from the TTC zone.)

LEGEND			
	DIRECTION OF TRAVEL		FLAG TREE
	PAVEMENT ARROW		FLASHING ARROW BOARD
	PORTABLE SIGN		TRAFFIC SIGNAL
	TRAFFIC CONE / DELINEATOR		K-RAIL (TYPE 50 CONCRETE BARRIER)
	TYPE II BARRICADE		CHANGEABLE MESSAGE SIGN
	TYPE III BARRICADE		FLAGGER
	WORK AREA		DRIVEWAY

Table 6C-2. Stopping Sight Distance as a Function of Speed on Level Roads.
 (Used as suggested longitudinal buffer space length or location for flagger station)

Speed*	Distance
20 mph	115 feet
25 mph	155 feet
30 mph	200 feet
35 mph	250 feet
40 mph	305 feet
45 mph	360 feet
50 mph	425 feet
55 mph	495 feet
60 mph	570 feet
65 mph	645 feet
70 mph	730 feet
75 mph	820 feet

- * Posted speed, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph.

Table 6C-3 (CA). Taper Length Criteria for Temporary Traffic Control Zones (for 12 feet Offset Width)

Speed* (mph)	Minimum Taper Length** for Width of Offset 12 feet (w)			
	Merging L (feet)	Shifting L/2 (feet)	Shoulder L/3 (feet)	Down Stream (feet)**
20	80	40	27	50
25	125	63	42	50
30	180	90	60	50
35	245	123	82	50
40	320	160	107	50
45	540	270	180	50
50	600	300	200	50
55	660	330	220	50
60	720	360	240	50
65	780	390	260	50
70	840	420	280	50

- * - Posted speed limit, off peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph.
 ** - For other offsets use the following merging taper length formula for L:
 For speeds of 40 mph or less, $L = WS^2/60$
 For speeds of 45 mph or more, $L = WS$
 Where L = taper length in feet
 W = width of offset in feet
 S = posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph.
 *** - Maximum downstream taper length is 100 feet. See Section 6C.08.



Jerry L. Michal
 JERRY L. MICHAL R.C.E. NO. C 42590 EXP. 03-31-20

10-23-18
 DATE

OWNER / DEVELOPER:

CROWN CASTLE

685 RIVER OAKS PARKWAY
 SAN JOSE, CA 95134
 www.crowncastle.com

PLANS PREPARED BY:

Communications

TRAFFIC ENGINEERING
 2000 E. 14TH AVE., STE. 200
 SAN JOSE, CA 95128
 PH: (408) 922-0010
 FX: (408) 922-0038

CITY OF:

PALO ALTO

JOHN GRIFFITHS
 PROJECT MANAGER

VZM366241CA-SFPA023-SFO TC
 FILE NAME

305 COMPER ST & 482 EVERETT

PROJECT NUMBER:
 VZM366241CA-SFPA023

PAGE GRID:
 1/23/17

CHECK BY: GD

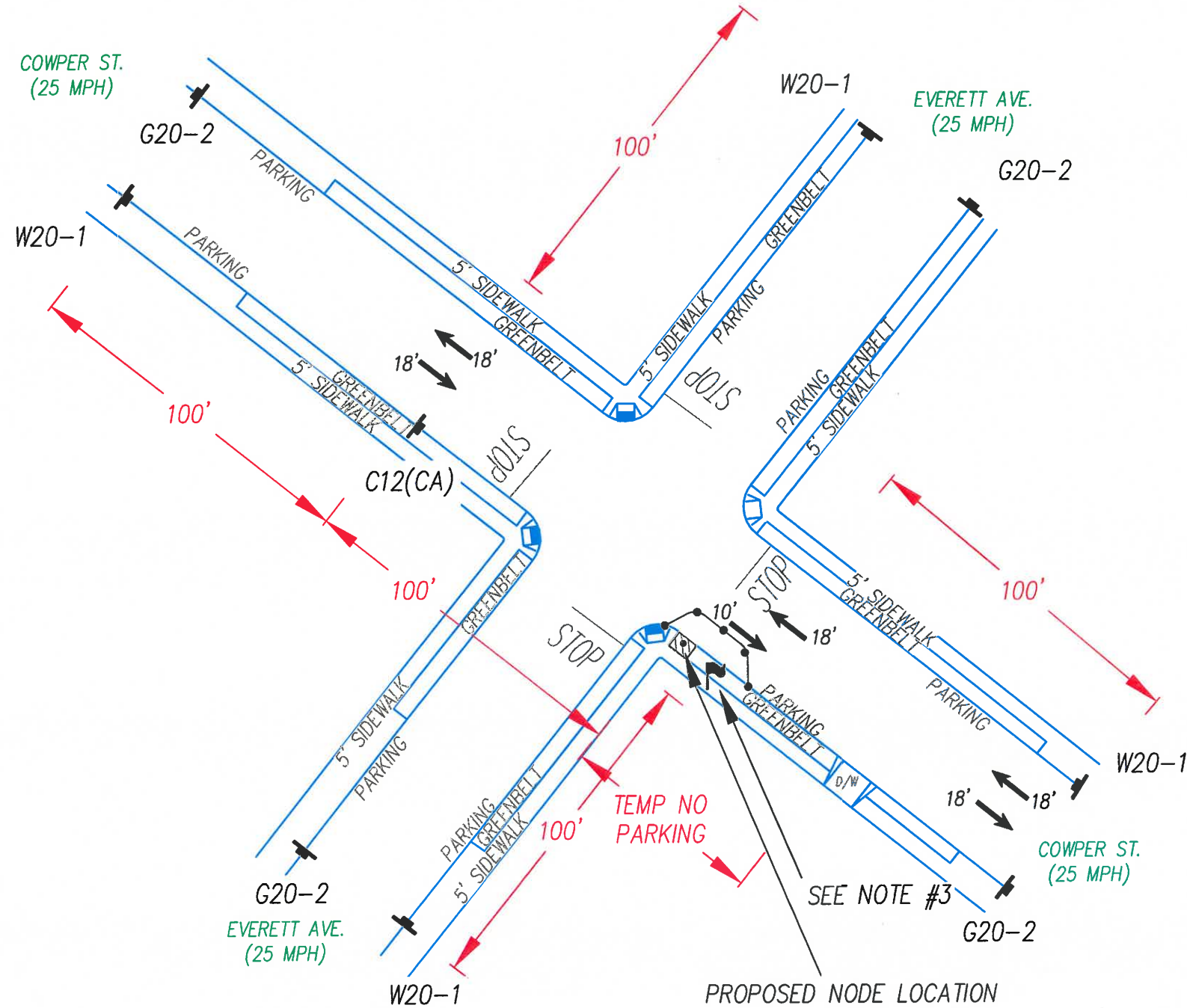
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SHEET NO.: 701 OF 702

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES.
2. W20-1 & G20-2 SHALL BE PLACED ON AFFECTED CROSS STREETS ACCORDING TO THE SPEED LIMIT OF THE CROSS STREET.
3. FLAGGER SHALL ASSIST PEDESTRIANS THROUGH WORK AREA.

PHASE 1



OWNER / DEVELOPER:		CROWN CASTLE 680 JERRY OAKS PARKWAY SAN JOSE, CA 95124 www.crowncastle.com	
PLANS PREPARED BY:		Communications Telecommunications Engineering 5641 ENSLOW PLACE, STE. 200 CARLSBAD, CA 92008 PH: (760) 929-0910 FX: (760) 929-0638	
CITY OF:		PALO ALTO	
PROJECT NUMBER:		VZM366241CA-SFTP023-SFO IC	
PAGE GRID:		VZM366241CA-SFTP023	
DATE:		1/23/17	
CHECK BY:		GD	
DRAWN BY:		VY	
SHEET NO.:		T02 OF T02	
PROJECT MANAGER:		JOHN GRIFFITHS	
FILE NAME:		VZM366241CA-SFTP023-SFO IC	



SF PALO ALTO 024
ROW ADJACENT TO
243 HAWTHORNE AVE
PALO ALTO, CA

DIRECTIONS FROM 695 RIVER OAKS PARKWAY, SAN JOSE CA 95124:

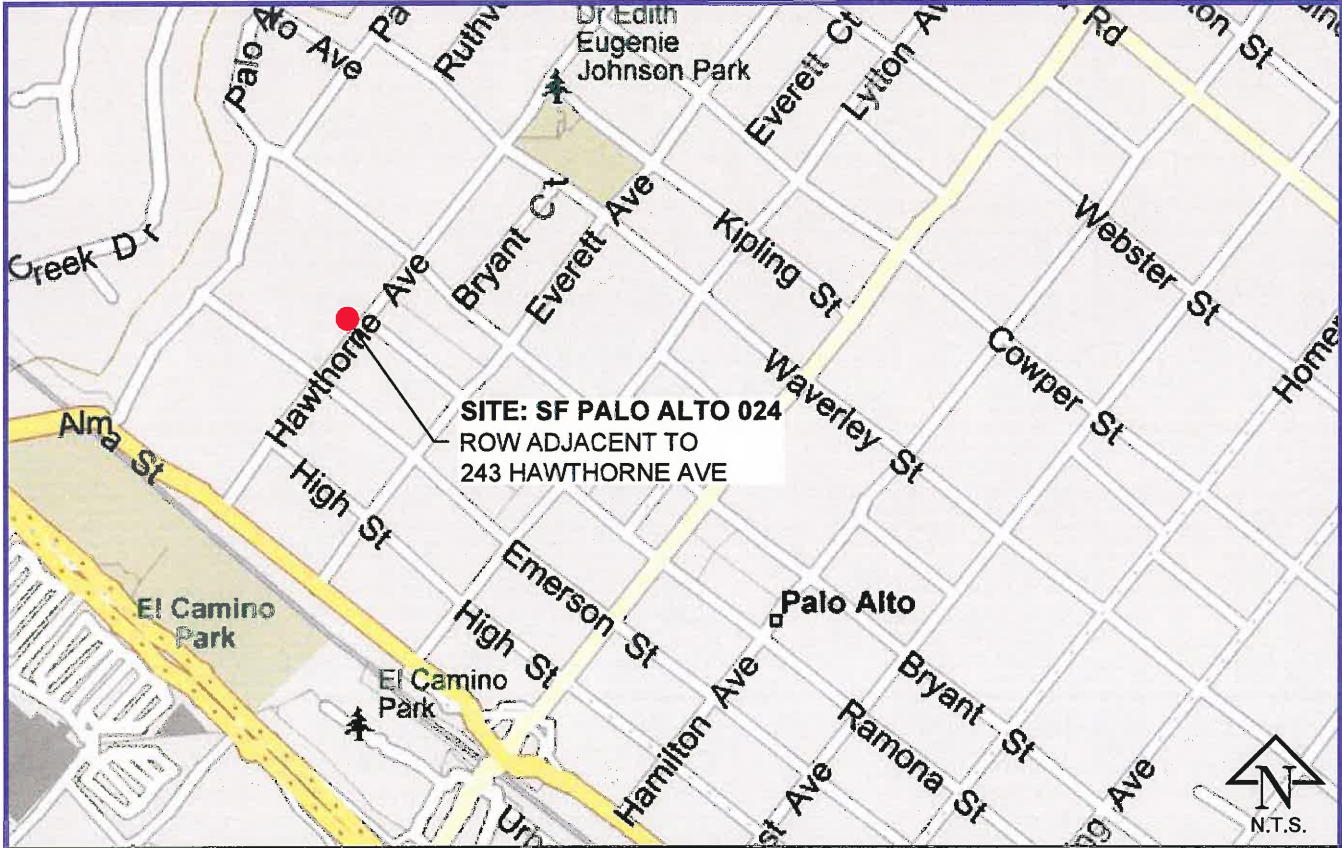
HEAD NORTHEAST ON RIVER OAKS PARKWAY TOWARD VILLAGE CENTER DR, TURN LEFT ONTO VILLAGE CENTER DR, TURN LEFT ONTO RESEARCH PL, TURN RIGHT AT THE 1ST CROSS STREET ONTO MONTAGUE EXPRESSWAY, SLIGHT RIGHT TO MERGE ONTO US-101 N TOWARD SAN FRANCISCO, MERGE ONTO US-101 N, USE 2ND FROM THE RIGHT LANE TO TAKE EXIT 403 TO MERGE ONTO UNIVERSITY AVE, MERGE ONTO UNIVERSITY AVE, TURN RIGHT ONTO MIDDLEFIELD RD, TURN LEFT AT THE 2ND CROSS STREET ONTO EVERETT AVE, TURN LEFT AT THE 3RD CROSS STREET ONTO COWPER STREET. WOOD POLE NODE IS ON THE RIGHT.

DRIVING DIRECTIONS

- STREET USE PERMIT SHALL BE OBTAINED BY CONTRACTOR PRIOR TO COMMENCING WORK.
- ALL WORK TO BE CONDUCTED IN THE RIGHT OF WAY.
- ALL DISTURBED LANDSCAPING SHALL BE REPLACED TO SIMILAR EXISTING CONDITION.
- ANY SIDEWALK CLOSURE SHALL BE COORDINATED WITH THE CITY AND PROPER SIGNING WILL BE PLACED.
- NO MATERIALS OR EQUIPMENT SHALL BE STORED ON PRIVATE PROPERTY OR BLOCK ACCESS TO PRIVATE PROPERTY.
- CLEANUP OF SITE WILL BE COMPLETED EACH EVENING AND THE SITE WILL BE RETURNED TO EXISTING CONDITIONS AT THE COMPLETION OF CONSTRUCTION AT EACH SITE.

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

GENERAL CONTRACTOR NOTES



VICINITY MAP

SHEET NUMBER:	DESCRIPTION
C-1	TITLE SHEET
C-2	CONDITIONS OF APPROVAL
C-3	CONDITIONS OF APPROVAL
D-1	DETAILS & NOTES
D-2	DETAILS & NOTES
D-3	DETAILS & NOTES
D-4	DETAILS & NOTES
D-5	DETAILS & NOTES
D-6	DETAILS & NOTES
D-7	DETAILS & NOTES
T1.1	SPECIAL TREE PROTECTION INSTRUCTION SHEET
T1.2	SPECIAL TREE PROTECTION INSTRUCTION SHEET
T1.3	SPECIAL TREE PROTECTION INSTRUCTION SHEET
T1.4	SPECIAL TREE PROTECTION INSTRUCTION SHEET
P-1	PHOTOS
P-2	PHOTOSIM
P-3	PROFILE
P-4	PROFILE
SP-1	SITE PLAN
SP-2	ENLARGED SITE PLAN
OC-1	O'CALCS
T01	TRAFFIC CONTROL
T02	TRAFFIC CONTROL

SHEET INDEX

CROWN CASTLE TO INSTALL THE FOLLOWING:

- INSTALL VGR.
- INSTALL NEW POWER DISCONNECT BOX ON STANDOFF BRACKET AT 8'-0" TO 8'-9".
- INSTALL NEW WTR ENCLOSURE ON STANDOFF BRACKET AT 9'-6" TO 10'-6".
- INSTALL NEW RRUS BRACKET WITH (1) RRUS-11 11'-0" TO 12'-5".
- INSTALL NEW RRUS BRACKET KIT WITH (2) RRUS-32 AT 13'-0" TO 16'-3".
- INSTALL CROWN CASTLE FIBER AT 24'-3".
- INSTALL STANDOFF BRACKET(TYP.).
- INSTALL 3'-6" POLE MOUNTED EXTENSION & (1) NEW 48" AMPHENOL ANTENNA MODEL #CUUT360X12F124s0 WITH CUSTOM SHROUD CONCEALMENT COVER.
- INSTALL NOTICE & CAUTION SIGNS.
- ALL EQUIPMENT SHALL BE PAINTED TO MATCH TEXTURE AND COLOR.
- NO GROUND DISTURBANCE NECESSARY.

PROJECT SUMMARY

PROJECT MANAGER:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
JOHN GRIFFITHS
(408) 468-5524
JOHN.GRIFFITHS@CROWNCastle.COM

NODE ENGINEER:
COASTAL COMMUNICATIONS
5841 EDISON PL, STE. 200
CARLSBAD, CA 92008
TODD THREW
(760) 929-0910 ext. 101
TODD@COASTALCOMMINC.COM

PROJECT TEAM

SF PALO ALTO 024
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



PROPRIETARY INFORMATION

THE INFORMATION CONTAINED IN THIS SET OF DRAWINGS IS PROPRIETARY AND CONFIDENTIAL TO VERIZON. ANY USE OR DISCLOSURE OTHER THAN AS IT RELATES TO VERIZON IS STRICTLY PROHIBITED.



1-800-227-2600
CALL AT
LEAST TWO
DAYS BEFORE
YOU DIG

UNDERGROUND SERVICE ALERT
TICKET #

ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
ROW ADJACENT TO 243
HAWTHORNE AVE
PALO ALTO, CA
37.447708/-122.166031

TITLE SHEET

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
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SHEET NO.
C-1

PENDING C.O.A .

SF PALO ALTO 024
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:

 **CROWN
CASTLE**
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

 **Coastal Communications**
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
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FAX: (760) 929-0936
www.coastalcommunc.com

PROPRIETARY INFORMATION

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DIGALERT



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SITE NAME & ADDRESS:
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PALO ALTO, CA
37.447708/-122.166031

CONDITIONS OF
APPROVAL

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
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SHEET NO.
C-2

Applicant shall comply with the following comments/requirements.

1. Applicant shall install new street lighting poles with new foundations that are identical to the existing poles. New street lighting poles shall be installed as close as possible to the existing street lighting poles. Applicant shall ensure to maintain present illumination level on the streets.

2. Receptacles on street lights need to be pre-wired and mounted on the top of the street light. The receptacles shall be wired into the secondary voltage source and not the street light circuit.

3. New street lighting pole's drawing is approved. Applicant shall replace the existing street lighting poles with identical poles. If there is any deviation then it must be approved by Utilities Engineering prior to installation.

4. Locations for new street lighting poles shall be as close as possible to the existing street lighting poles. No street or location shall be left dark. After removal of existing street pole/s, new street lighting poles shall be installed and energized as soon as possible. Applicant to coordinate with Scott Yahne (650-444-8823) our Street Lighting Supervisor prior to making any electric connection/s.

5. An inner duct of adequate size shall be installed inside the street lighting poles so to keep antenna wiring separate from street lighting circuits. Power to the antenna or any other equipment mounted on the street lighting pole shall be tapped from the designated secondary electric service point and not from the street lighting circuit.

6. If the street lighting pole gets knocked down, the City shall replace the pole but the City shall not be responsible for any damages to the antenna or any other equipment mounted on the street lighting pole/s.

7. Applicant has submitted certified structural calculations pertaining to equipment loading on the new street lighting poles.

8. Utility's Engineer has reviewed applicant's proposed fiber infrastructure and confirmed acceptance as long as applicant maintains required clearances and protect our distribution lines.

9. Voltage at all the locations identified for applicant's equipment installation may not be. Applicant shall accept the voltage available at the closest location. Applicant shall be responsible for installing additional substructure per City's standards and specifications, if required.

10. Applicant shall contact Utilities Engineering (650-566-4535) prior to entering any energized box or vault.

11. Applicant shall install substructure per City's standard and specifications and maintain required clearances as shown on the City's standard drawings. The City's Underground Electric Inspector will inspect the substructure for electric utility. Applicant must contact Underground Electric Inspector at 650-496-6936 or his designated representative for scheduling an inspection prior to back filling the trench.

12. Applicant shall pot hole and locate underground facilities prior to trenching or boring. Applicant must contact USA (800-227-2600) and have underground facilities marked prior to excavation/trenching or boring.

13. At few locations, proposed trenching/boring route conflicts with our existing high voltage distribution lines, boxes/vaults etc. Extreme caution must be exercised to protect our utility lines and associated substructures.

14. Applicant shall protect existing underground utilities. Applicant has not submitted any trench profile as requested by Utilities. Hence, applicant shall bore/ trench at his/her risk. Applicant will be solely responsible for any damages caused during the construction.

15. Street opening permits shall be obtained from Public Works Engineering (PWE) Department prior to trenching or boring.

16. Traffic control plans must be submitted to Transportation Department and approval must be obtained prior to lane closures. Construction hours shall be per Transportation Department's requirements.

17. Applicant shall contact the Public Works Engineering (PWE) Department (650-566-4535) and obtain electric permit and cost estimate for each location. Any changes made to the original design or to the designated electric service point/s shall be coordinated with the PWE Department. Applicant must pay all fees/cost estimates prior to final service connections.

ANTENNA CAUTION SIGN

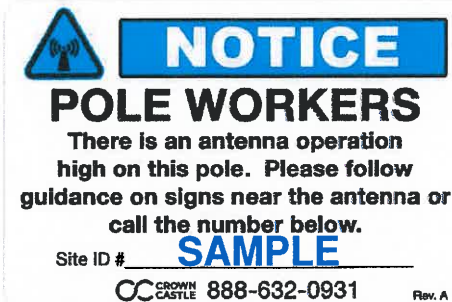
ANTENNA SIGNAGE:
ON WOOD POLES - SIGN ON ALUMINUM WITH SS SCREW TO THE POLE
ON METAL POLES - ADHESIVE VINYL OR PLACARD STRAPPED WITH SS TIES
ON CONCRETE / COMPOSITE - PLACARD STRAPPED WITH SS TIES
SIGN PLACEMENT:
AFFIX TO THE STRUCTURE ON OR JUST BELOW THE ANTENNA(S)
SIZE APPROX. 8" x 5"



A SCALE
N.T.S.

ANTENNA NOTICE SIGN

ANTENNA SIGNAGE:
ON WOOD POLES - SIGN ON ALUMINUM WITH SS SCREWS TO THE POLE
ON METAL POLES - ADHESIVE VINYL OR PLACARD STRAPPED WITH SS TIES
ON CONCRETE / COMPOSITE - PLACARD STRAPPED WITH SS TIES
SIGN PLACEMENT:
AFFIX TO THE STRUCTURE NEAR THE BOTTOM OF POLE OR ON THE SHROUD



B SCALE
N.T.S.

SF PALO ALTO 024 PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



PROPRIETARY INFORMATION

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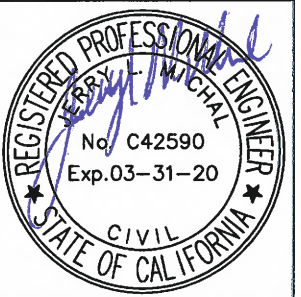
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CALL AT
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DAYS BEFORE
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UNDERGROUND SERVICE ALERT
TICKET #

ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
ROW ADJACENT TO 243
HAWTHORNE AVE
PALO ALTO, CA
37.447708/-122.166031

CONDITIONS OF APPROVAL

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
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SHEET NO.
C-3

LEGEND

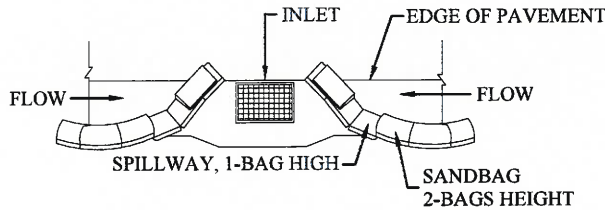
SYMBOL	DESCRIPTION
	PROPOSED
	2 X 3 VAULT
	CABINET
	PCC SIDEWALK
	TRENCH AND FIBER CONDUIT (PVT)
	DIRECTIONAL BORING
	BORE PIT
	EXISTING
	EXISTING STREET LIGHT
	EXISTING VAULT HANDLE
	EXISTING MAILBOX
	EXISTING TREE
	EXISTING TREE WELL
	STATION POINTS (10' INCREMENTS)
	EXISTING CURB RAMP
	EXISTING CURB & GUTTER
	EXISTING FACE OF BUILDING
	EXISTING PARKING STRIPES
	EXISTING RIGHT OF WAY
	EXISTING CENTERLINE
	EXISTING WATER LINE
	EXISTING WATER LATERAL
	EXISTING SEWER LINE
	EXISTING SEWER LATERAL
	EXISTING GAS LINE
	EXISTING GAS LATERAL
	EXISTING STORM DRAIN LINE
	STREET CURB CUT UNDER MAJOR STREET

EROSION AND SEDIMENT CONTROL NOTES:

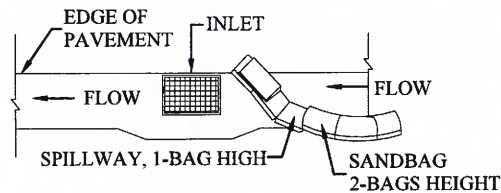
TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

- ALL REQUIREMENTS OF THE CITY "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED PUBLIC IMPROVEMENTS CONSISTENT WITH THE EROSION CONTROL PLAN AND/OR WATER POLLUTION CONTROL PLAN (WPCP), IF APPLICABLE.
- FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
- THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
- EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON.
- THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
- THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
- ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED IMPROVEMENT PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
- ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
- THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER/DEVELOPER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

STORMDRAIN INLET PROTECTION



TYPICAL PROTECTION FOR INLET WITH OPPOSING FLOW DIRECTIONS



TYPICAL PROTECTION FOR INLET WITH SINGLE FLOW DIRECTION

NOTES:

- INTENDED FOR SHORT - TERM USE.
- USE TO INHIBIT NON - STORM WATER FLOW.
- ALLOW FOR PROPER MAINTENANCE AND CLEANUP.
- BAGS MUST BE REMOVED AFTER ADJACENT OPERATION IS COMPLETED.
- NOT APPLICABLE IN AREAS WITH HIGH SILTS AND CLAYS WITHOUT FILTER FABRIC.

NOTES:

- CONTRACTOR TO POTHOLE ALL UTILITY CROSSINGS.
- CONTRACTOR TO PLACE SANDBAGS AROUND ANY/ALL STORM DRAIN INLETS TO PREVENT CONTAMINATED WATER.
- SPOILS PILE WILL BE COVERED AND CONTAINED AND STREET WILL BE SWEEPED AND CLEANED AS NEEDED.
- CONTRACTOR TO REPAIR DAMAGED PUBLIC IMPROVEMENTS TO THE SATISFACTION OF THE CITY ENGINEER.
- C&G TO BE PROTECTED IN PLACE. SIDEWALK TO BE REPLACED TO THE SATISFACTION OF THE CITY ENGINEER.
- THE CONTRACTOR SHALL RESTORE THE ROADWAY BACK TO ITS ORIGINAL CONDITION SATISFACTORY TO THE CITY ENGINEER INCLUDING, BUT NOT LIMITED TO PAVING, STRIPING, BIKE LANES, PAVEMENT LEGENDS, SIGNS, AND TRAFFIC LOOP DETECTORS.
- SIDEWALK SHALL BE RESTORED/REPLACED PER CITY STANDARD DRAWINGS.
- PEDESTRIAN RAMP WILL NOT BE DISTURBED.

ROW GROUND CONSTRUCTION NOTES:

- GROUND CONSTRUCTION TO REMOVE/CLEAN ALL DEBRIS, NAILS, STAPLES, OR NON-USED VERTICALS OFF THE POLE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MUNICIPAL, COUNTY, STATE, FEDERAL, GO95 AND GO128 STANDARDS AND REGULATIONS.
- CALL USA 48 HOURS PRIOR TO EXCAVATING AT (800) 227-2600 OR 811.
- ALL LANDSCAPING TO BE RESTORED TO ORIGINAL CONDITION OR BETTER.
- ALL EQUIPMENT TO BE BONDED.
- METERING CABINET REQUIRES 36" CLEARANCE AT DOOR OPENING.
- CAULK CABINET BASE AT PAD.

NORMAL LOCATION OF UNDERGROUND UTILITIES NOTES:

- LOCATION AND DEPTH OF EXISTING AND PROPOSED UTILITIES MUST BE PROVIDED BY THE SUBDIVIDER AND SHOWN ON ANY PLANS SUBMITTED TO THE DEPT. OF PUBLIC WORKS FOR APPROVAL.
- CHANGES MAY BE PERMITTED BY THE DEPT. OF PUBLIC WORKS IN CASES OF CONFLICTING FACILITIES.
- CONFLICTS BETWEEN UTILITY COMPANIES FACILITIES, EXISTING AND PROPOSED, MUST BE MUTUALLY RESOLVED BY THE UTILITY COMPANIES.
- FOR COMMERCIAL SIDEWALKS, THE FIRE HYDRANT SHALL BE PLACED WITHIN THE SIDEWALK 1'-6" BEHIND FACE OF CURB.
- MAXIMUM 2" DIAMETER GAS MAINS MAY BE PLACED IN JOINT UTILITIES TRENCH SUBJECT TO APPROVAL OF CITY ENGINEER (IN TRACTS).

GENERAL CONTRACTOR NOTES:

- STREET USE PERMIT SHALL BE OBTAINED BY CONTRACTOR PRIOR TO COMMENCING WORK.
- ALL WORK TO BE CONDUCTED IN THE RIGHT OF WAY.
- ALL DISTURBED LANDSCAPING SHALL BE REPLACED TO SIMILAR EXISTING CONDITION.
- ANY SIDEWALK CLOSURE SHALL BE COORDINATED WITH THE CITY AND PROPER SIGNING WILL BE PLACED.
- NO MATERIALS OR EQUIPMENT SHALL BE STORED ON PRIVATE PROPERTY OR BLOCK ACCESS TO PRIVATE PROPERTY.
- CLEANUP OF SITE WILL BE COMPLETED EACH EVENING AND THE SITE WILL BE RETURNED TO EXISTING CONDITIONS AT THE COMPLETION OF CONSTRUCTION AT EACH SITE.

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

CALIFORNIA STATE CODE COMPLIANCE:

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

- CALIFORNIA ADMINISTRATIVE CODE (INCLUDING TITLES 24 & 25) 2016
- 2016 CALIFORNIA BUILDING CODES WHICH ADOPTS THE 2016 UBC, 2016 UMC, 2016 UPC AND THE 2016 NEC.
- BUILDING OFFICIALS & CODE ADMINISTRATORS (BOCA)
- 2016 CALIFORNIA MECHANICAL CODE
- ANSI/EIA-222-F LIFE SAFETY CODE NFPA-101
- 2016 CALIFORNIA PLUMBING CODE
- 2016 CALIFORNIA ELECTRICAL CODE
- 2016 LOCAL BUILDING CODE
- CITY/COUNTY ORDINANCES

ACCESSIBILITY REQUIREMENTS:

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS DO NOT APPLY IN ACCORDANCE WITH THE 2010 CALIFORNIA BUILDING CODE.

FCC NOTE:

THIS WIRELESS COMMUNICATION FACILITY COMPLIES WITH FEDERAL STANDARDS FOR RADIO FREQUENCY IN ACCORDANCE WITH THE TELECOMMUNICATION ACT OF 1996 AND SUBSEQUENT AMENDMENTS AND ANY OTHER REQUIREMENTS IMPOSED BY STATE OR FEDERAL REGULATORY AGENCIES.

CITY OF PALO ALTO UTILITIES ENGINEERING NOTES:

- APPLICANT SHALL TAP ELECTRIC SERVICE TO THE SMALL CELL DISTRIBUTED ANTENNA SYSTEM FROM THE LOCATIONS JOINTLY IDENTIFIED DURING THE FIELD INVESTIGATION.
- SERVICE VOLTAGE TO ALL THE PROPOSED LOCATIONS MAY NOT BE THE SAME. APPLICANT SHALL DESIGN THEIR SYSTEM TO OPERATE AT THE AVAILABLE VOLTAGE IN THE VICINITY.
- IF BRAND NEW POLES NEED TO BE INSTALLED FOR APPLICANT'S SYSTEM THEN THE POLES MUST MATCH EXISTING POLES IN THE DOWN TOWN AREA.
- AFTER EXCAVATION IS COMPLETED ON THE PUBLIC RIGHT OF WAY, EXISTING STREETS INCLUDING SIDEWALKS/ CURB/ GUTTER OR ANY DECORATIVE PATHS MUST BE BROUGHT TO ITS ORIGINAL CONDITION AND MUST BE APPROVED BY PUBLIC WORKS ENGINEERING DEPARTMENT'S INSPECTOR. POTHOLING MUST BE DONE AND ALL THE UTILITIES MUST BE IDENTIFIED PRIOR TO COMMENCING EXCAVATION.
- EXCAVATION AND RESTORATION WORK MUST BE IN COMPLIANCE WITH PUBLIC WORKS ENGINEERING STANDARDS AND SPECIFICATIONS THAT ARE AVAILABLE ON THE FOLLOWING WEBSITE:
<http://www.cityofpaloalto.org/news/displaynews.asp?NewsID=1834&TargetID=145>
- APPLICANTS SHALL BE RESPONSIBLE FOR MAINTAINING THEIR SYSTEM INCLUDING SUBSTRUCTURE. IN CASE OF KNOCK DOWNS, THE CITY WILL RE-INSTALL ITS STREET LIGHTING POLES BUT **NOT** APPLICANT'S EQUIPMENT ON OR OFF THE POLE.
- A FIELD MEETING IS RECOMMENDED WITH UTILITIES ENGINEERING PRIOR TO COMMENCING THE WORK.
- PLANS SHALL INCLUDE A NOTE: **CONTRACTOR TREE INSPECTION REQUIREMENTS:** MODIFIED TYPE III TRUNK WRAPPING SHALL BE VERIFIED BY URBAN FORESTRY PRIOR TO ANY WORK IN THE VICINITY. FOR EACH TREE SITE WRAPPED FOR PROTECTION WITHIN 15' OF ANY WORK ZONE OR CONCRETE FORM SECTION, A BILLABLE TREE INSPECTION BY URBAN FORESTRY (650-496-5953, 24-HOUR ADVANCE IS REQUIRED) SHALL BE COMPLETED PRIOR TO DEMOLITION, DRILLING, EXCAVATING, FORMING OR STREET LIGHT ACTIVITY. CONTRACTOR SHALL ARRANGE PAYMENTS AT THE DEVELOPMENT CENTER, 285 HAMILTON AVE, PALO ALTO, CA.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITIES DEPARTMENT 650/329-2413 OR 650/496-6982 IF THE EXISTING WATER, WASTEWATER OR GAS MAINS ARE DISTURBED OR DAMAGED. A QUALIFIED CONTRACTOR MAY PERFORM REPAIRS ON CITY WATER AND WASTEWATER MAINS UNDER THE DIRECT SUPERVISION OF THE WGW UTILITIES INSPECTOR. FOR WATER REPAIRS ALL THE DISINFECTION REQUIREMENTS OF THE WGW UTILITY STANDARDS AND THESE CONDITIONS SHALL BE ADHERED TO. ALL REPAIRS TO THE CITY GAS SYSTEM MUST BE PERFORMED BY THE CITY OF PALO ALTO UTILITIES.
- NO WATER VALVES OR OTHER FACILITIES OWNED BY UTILITIES DEPARTMENT SHALL BE OPERATED FOR ANY PURPOSE BY THE APPLICANT'S CONTRACTOR. ALL REQUIRED OPERATION WILL ONLY BE PERFORMED BY AUTHORIZED UTILITIES DEPARTMENT PERSONNEL. WATER VALVES MAY BE OPERATED BY THE CONTRACTOR UNDER THE DIRECT SUPERVISION OF THE WGW UTILITIES INSPECTOR. THE APPLICANT'S CONTRACTOR SHALL NOTIFY THE UTILITIES DEPARTMENT NOT LESS THAN FORTY-EIGHT (48) HOURS IN ADVANCE OF THE TIME THAT SUCH OPERATION IS REQUIRED.

SF PALO ALTO 024 PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



PROPRIETARY INFORMATION

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ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
**ROW ADJACENT TO 243
HAWTHORNE AVE
PALO ALTO, CA**
37.447708/-122.166031

DETAILS & NOTES

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
SHEET NO. D-1		

The diagram illustrates the construction of a trench through two types of pavement: Asphalt Concrete Pavement and PCC Pavement. The trench is defined by a T-Cut on the left and a CLEAR ZONE on the right. The backfill is divided into two main sections: SUBSEQUENT BACKFILL (top) and INITIAL BACKFILL (bottom, labeled PIPE ZONE). The trench width is specified as 4" min or O.D./6 (typ). The depth of the trench is 8" deep lift A.C. for asphalt concrete and 6" deep lift A.C. for PCC. The backfill materials are specified as Class 2 A.B. and 2" A.C. for asphalt concrete, and 6" PCC w/AC overlay and PCC for PCC pavement. The backfill is compacted to 95% density. The diagram also shows the placement of 12" long, #4 dowels and the application of seal (typ) and sawcut/milling full depth (typ). The trench is shown with a 6" typ width and a 2" min width. The backfill is shown with a 6" typ width and a 2" min width. The trench is shown with a 6" typ width and a 2" min width. The backfill is shown with a 6" typ width and a 2" min width.

Replace pavement in kind or 8" min of Class 2 A.B. and 2" A.C., whichever is greater

OR

Replace pavement with 8" deep lift A.C.

Apply for seal (typ)

Sawcut/milling full depth (typ)

6" PCC w/AC overlay

6" typ

2" min

Replace pavement in kind or 6" min PCC, whichever is greater

12" long, #4 dowels

T-Cut

CLEAR ZONE
No equipment or material stockpile

Class 2 A.B.

8" A.C.

8" A.C.

8" A.B.

4" A.B.

2"

95%

12"

O.D.

4" min or O.D./6 (typ)

O.D. + 8" min

O.D. + 24" max

O.D. + 8" min

O.D. + 24" max

ASPHALT CONCRETE PAVEMENT

PCC PAVEMENT

(A) SUBSEQUENT BACKFILL ALTERNATIVES

1. Clean natural sand per Caltrans Std Specs Sec 19-3.025B
2. Class 2 aggregate base per Caltrans Std Specs Sec 26-1.02
3. Graded granular material per City Std Specs Sec 17-4F
4. Clean quarry fines
5. Controlled Density Fill (CDF) per City Std Specs Sec 17-4E4b as approved by PWE

(B) INITIAL BACKFILL ALTERNATIVES (PIPE ZONE)

1. Clean natural sand per Caltrans Std Specs Sec 19-3.025B (required for gas and water pipes)
2. Class 1, type A & B, permeable per Caltrans Std Specs Sec 68-1.025
3. Graded granular material per City Std Specs Sec 17-4E4
4. Controlled Density Fill (CDF) per City Std Specs Sec 17-4E4b as approved by PWE
5. For W-G-W trench, refer to Utility Standards

1. PCC shall contain a minimum of 6 sacks concrete with a desired 28-day strength of 3,500 PSI
2. Extend T-cut to lip of Gutter per City Std Specs 17-G
3. Refer to City Std Dwg 403 for trench limits of restoration
4. Match existing AC thickness on PCC overlays

1. **IMPROVED AREAS**
 - a. **INITIAL BACKFILL-** jetting of sand OK
 - b. **SUBSEQUENT BACKFILL-**jetting of sand subject to approval of City Engineer, except for top 2 ft, which must be mechanically compacted
2. **UNIMPROVED AREA:** jetting of sand OK
3. **WHEN JETTING IS PERMITTED:**
 - a. Excess water shall be collected at low points and removed by pumping
 - b. Sand to be jetted shall be placed in lifts no thicker than 4 ft
 - c. Jetting shall be performed at intervals along the trench not to exceed 6 ft

The diagram illustrates a trench cross-section with the following details:

- Top of Curb (TC):** The top edge of the curb on the left side.
- No Saw-Cutting:** A dimension of 3' is shown for the left curb, and 2' is shown for the right curb.
- 6" T-CUT MINIMUM:** Two vertical dimensions of 6" are shown, indicating the minimum width of the trench cut.
- Face of Curb (FC):** The face of the curb on the right side.
- Portland Cement Concrete Slabs:** The slabs are shown on either side of the trench, with a hatched pattern indicating the concrete.
- TRENCH LIMIT:** Two vertical lines mark the limits of the trench.
- C.O.D.:** A circular feature with "C.O.D." (Center of Driveway) written inside, located at the bottom center of the trench.
- Top of Curb of Type 8 rolled curb or Type A curb, remove and replace C&G:** A label indicating the removal and replacement of the curb and gutter.
- Asphalt to P.C.C. Streets that have been:** A label indicating the removal and replacement of the asphalt surface.
- P.C.C. Surfaced Streets:** A label indicating the removal and replacement of the Portland Cement Concrete (P.C.C.) surface.

1. Restore all materials in kind to match existing elevations and grades.
2. If Sawcut is within 3' of Top of Curb of Type 8 rolled curb or within 2' of the face of Type A curb, remove and replace C&G monolithically.
3. These notes also pertain to PCC streets that have been Asphalt overlaid.

Type B Curbs

Top of Curb (TC)

No Saw-Cutting 3'

LIP OF GUTTER

When Trench Limit is Within 3' of Lip of Gutter

T-CUT MINIMUM

Type A Curbs

Face of Curb (FC)

No Saw-Cutting 2'

LIP OF GUTTER

MINIMUM T-CUT

Within 3'

Asphalt Concrete

Asphalt Concrete

TRENCH LIMIT

TRENCH LIMIT

O.D.

Asphalt Surface Street with No Exposed Gutter Pan

1. Remove asphalt to verify the width of existing gutter pan.
2. Restore all materials in kind to match existing elevations and grades.
3. When "Trench Limits" is are within 3' of the Lip of Gutter for either Type A or Type B curb and gutter on a Asphalt surfaced street, extend the T-cut to the Lip of Gutter.
4. If "Trench Limit" is NOT within 3' of the Lip of Gutter, the "T-cut" Limit shall be located 6" from the Trench Limit per the Specifications.
5. If Sawcut is within 3' of Top of Curb of Type B rolled curb or within 2' of the face of Type A curb, remove and replace curb and gutter monolithically.

Type B Curbs

T-Cut Maximum Limits of Restoration

Type A Curbs

When Trench Limit is Within 3' of Lip of Gutter

LIP OF GUTTER

T-CUT MINIMUM

MINIMUM T-CUT

LIP OF GUTTER

Face of Curb (FC)

No Saw-Cutting 3'

Within 3'

No Saw-Cutting 2'

Within 3'

Asphalt Concrete

TRENCH LIMIT

TRENCH LIMIT

O.D.

Asphalt Surfaced Street with an Exposed Gutter

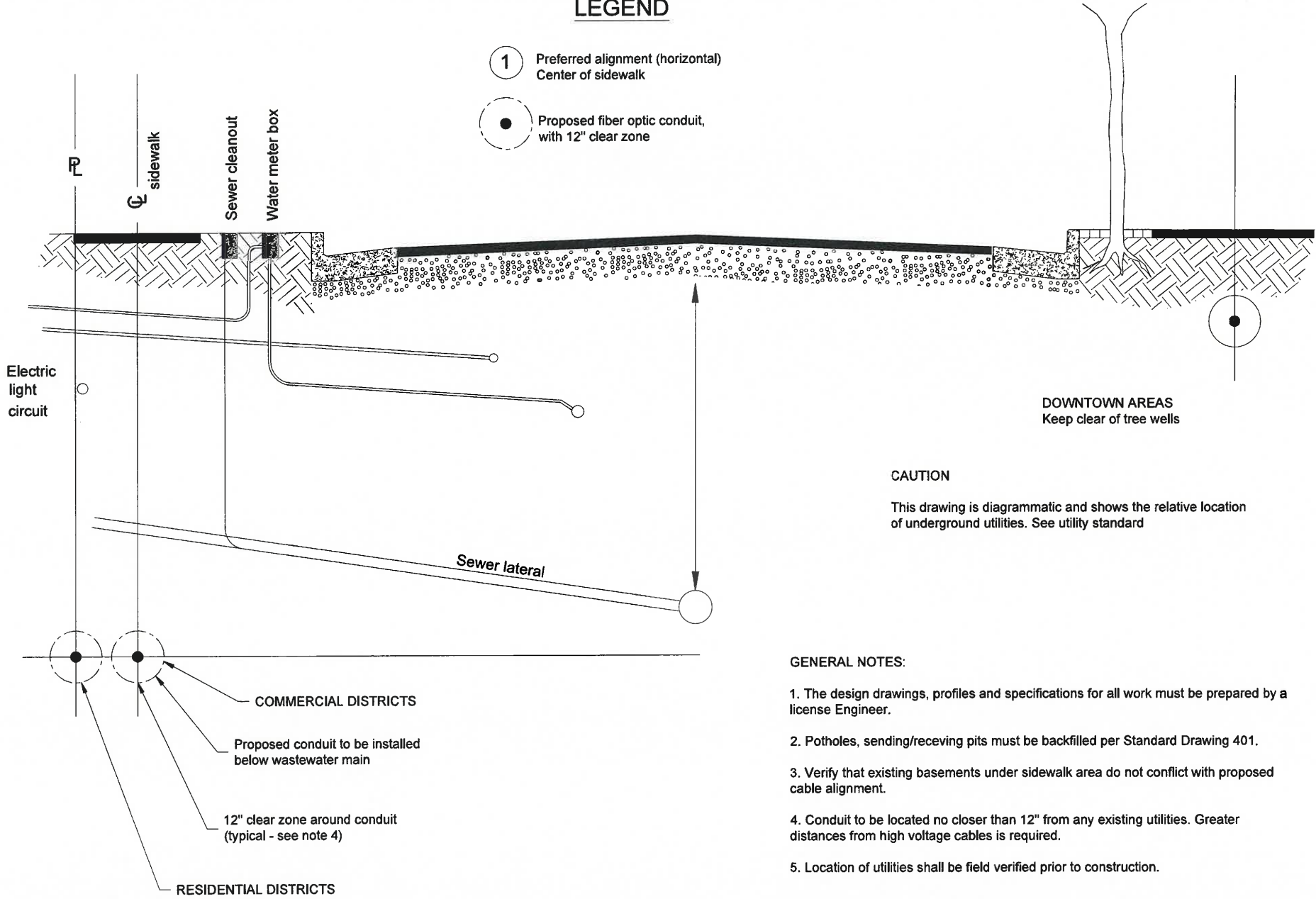
1. When "Trench Limits" are within 3' of the Lip of Gutter for either Type A or Type B curb and gutter on a Asphalt surfaced street, extend the T-cut to the Lip of Gutter.
2. Restore all materials in kind to match existing elevations and grades.
3. If "Trench Limit" is NOT within 3' of the Lip of Gutter, the "T-cut" Limit shall be located 6" from the Trench Limit per the Specifications.
4. If Sawcut is within 3' of Top of Curb of Type B rolled curb or within 2' of the face of Type A curb, remove and replace curb and gutter monolithically.

D-2

CITY OF PALO ALTO STANDARD
(DRAWING NO. 402)
CONDUIT LOCATION DETAIL
TELECOMMUNICATIONS
N.T.S.

LEGEND

- 1 Preferred alignment (horizontal)
Center of sidewalk
- Proposed fiber optic conduit,
with 12" clear zone



- GENERAL NOTES:
1. The design drawings, profiles and specifications for all work must be prepared by a license Engineer.
 2. Potholes, sending/receiving pits must be backfilled per Standard Drawing 401.
 3. Verify that existing basements under sidewalk area do not conflict with proposed cable alignment.
 4. Conduit to be located no closer than 12" from any existing utilities. Greater distances from high voltage cables is required.
 5. Location of utilities shall be field verified prior to construction.

SF PALO ALTO 024
PALO ALTO
CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Coastal Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
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FAX: (760) 929-0936
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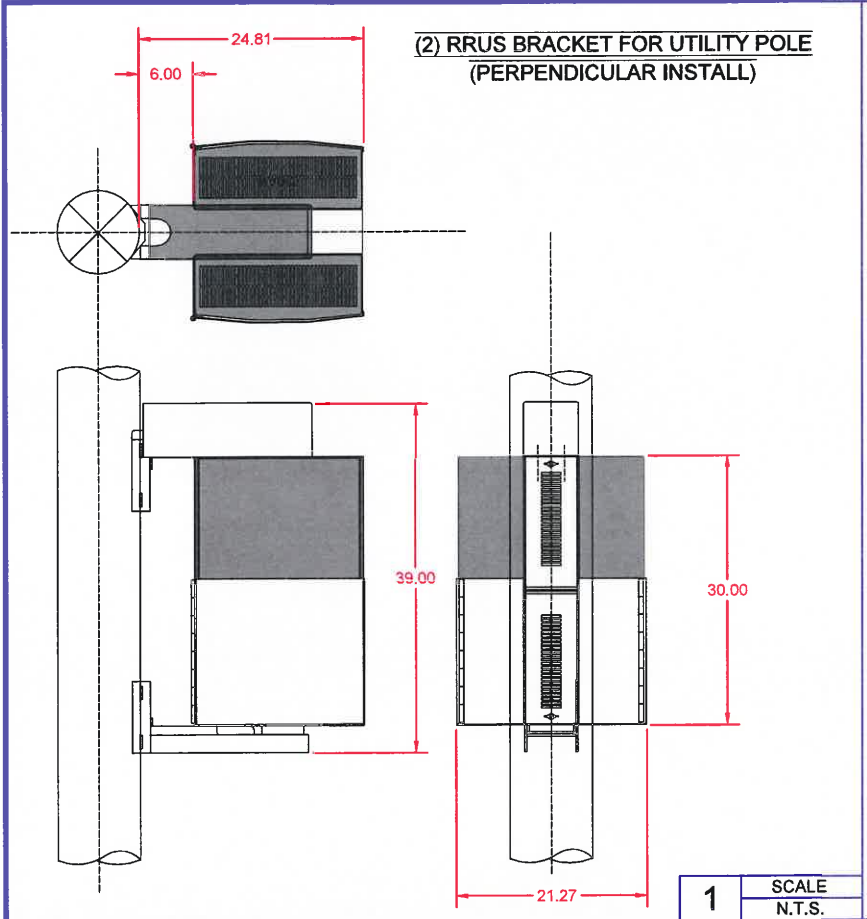
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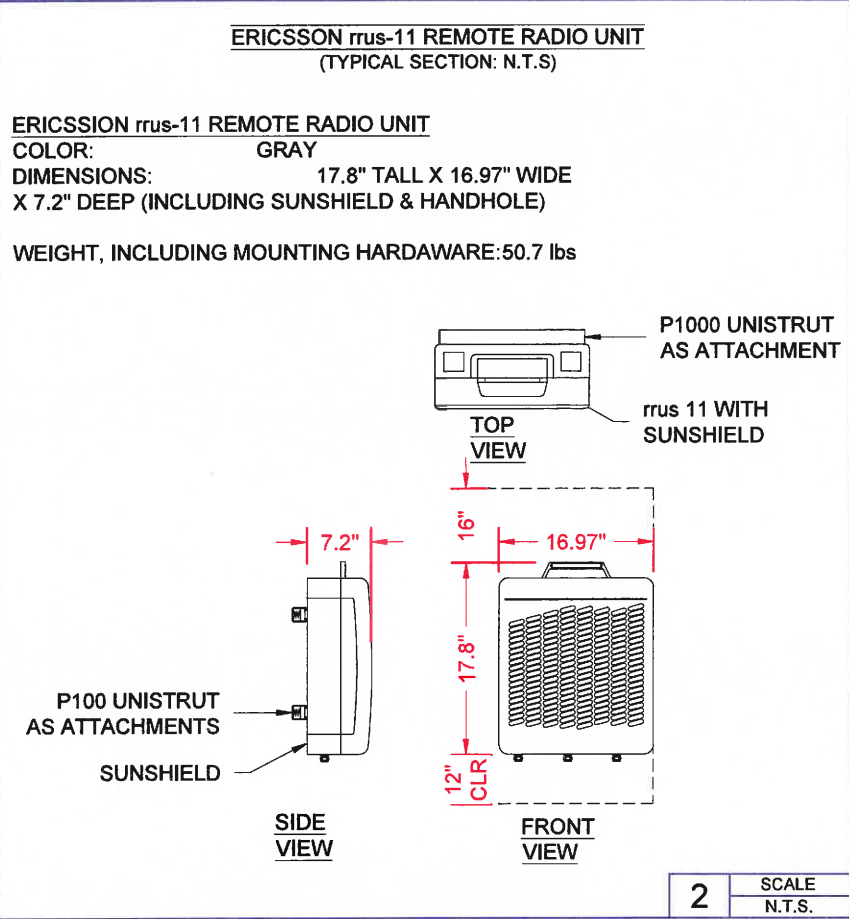
SITE NAME & ADDRESS:
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DETAILS & NOTES

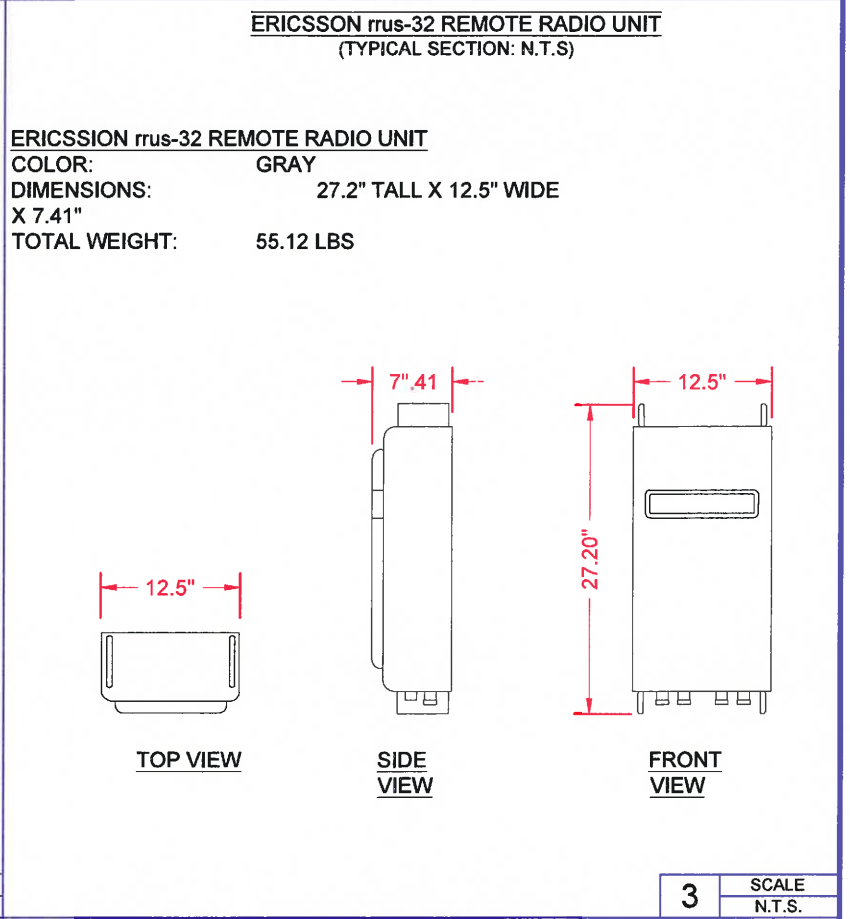
DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
SHEET NO. D-3		



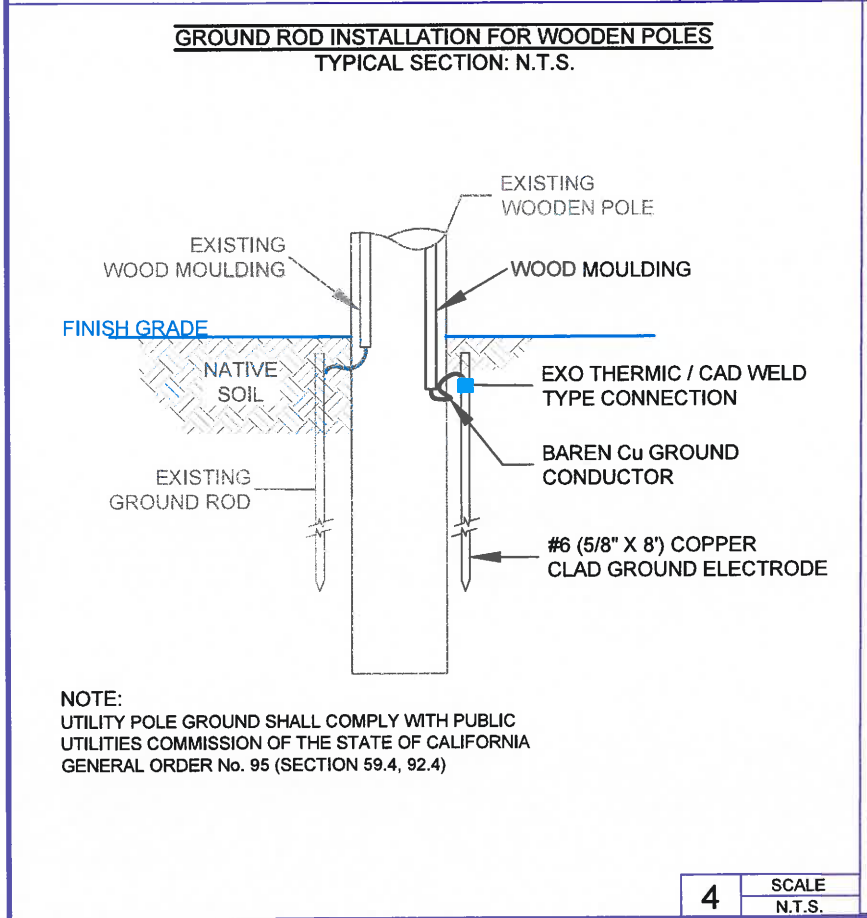
1 SCALE N.T.S.



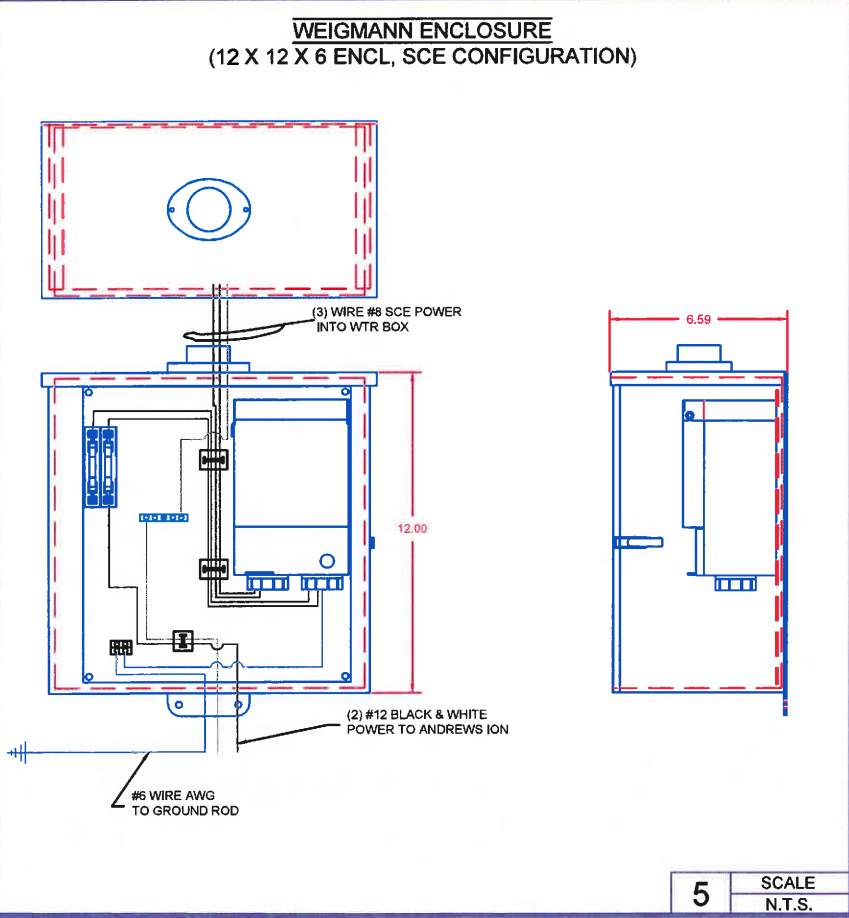
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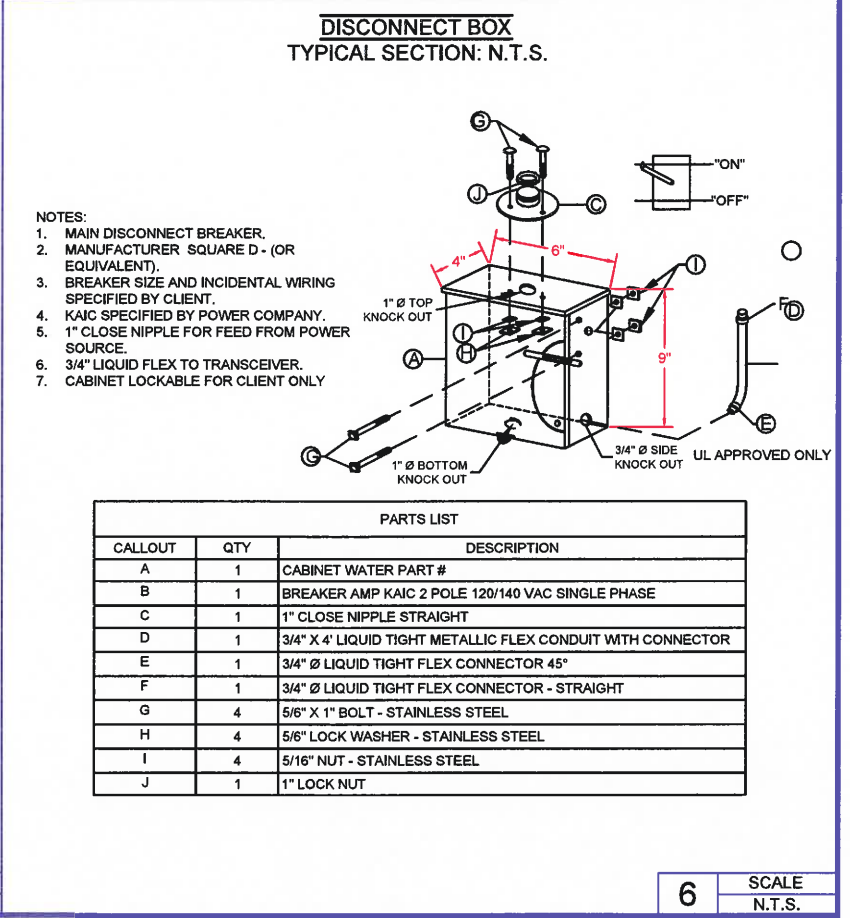
3 SCALE N.T.S.



4 SCALE N.T.S.



5 SCALE N.T.S.



6 SCALE N.T.S.

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PALO ALTO
CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Coastal Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
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REGISTERED PROFESSIONAL ENGINEER
JERRY L. MICHAEL
No. C42590
Exp. 03-31-20
CIVIL
STATE OF CALIFORNIA

SITE NAME & ADDRESS:
ROW ADJACENT TO 243
HAWTHORNE AVE
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DETAILS & NOTES

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SHEET NO.
D-4

CUUT360X12F124s0

Electrical Characteristics	Low Band		High Bands #1 and #2			
	696-960 MHz		(2x) 1695-2700 MHz			
	696-806	806-960	1695-1880	1850-1990	1920-2200	2300-2700
Frequency Bands (MHz)						
Polarization	±45°		(2x) ±45°			
Horizontal Beamwidth	360°	360°	360°	360°	360°	360°
Vertical Beamwidth	20°	15°	7.5°	7.0°	6.5°	6.0°
Gain	5.5 dBi	6.0 dBi	9.0 dBi	9.5 dBi	10.0 dBi	10.3 dBi
Electrical Downtilt (°)	(x) 0, 2, 4, 6, 8, 10, 12		(y) 0, 4, 8, 12			
Impedance	50Ω		50Ω			
VSWR	≤ 1.5:1		≤ 1.5:1			
Upper Sidelobe Suppression	> 15 dB		> 15 dB			
Isolation Between Ports	20 dB		25 dB			
IM3 (2x20W carrier)	< -153 dBc		< -153 dBc			
Input Power	(2x) 500 W		(4x) 300 W			
Diplexed	No					
Number of Sectors / Sector Spacing	3 Sectors / Pseudo Omni					
Lightning Protection	Direct Ground					
Mechanical Characteristics						
Antenna Dimensions (Height x Diameter)	1219 x 371 mm			48.0 x 14.6 in		
Weight without Mounting Bracket Kit	17.3 kg			38.1 lbs		
Antenna Volume	0.13 m³			4.7 ft³		
Survival Wind Speed	200 km/hr			125 mph		
Wind Area	0.47 m²			5.0 ft²		
Wind Load (160 km/hr or 100 mph)	391 N			88 lbf		



7

SCALE
N.T.S.

WB3X-MKS-01

Utility Pole Mounting Kit for Cylindrical Antennas

Mounting Instructions

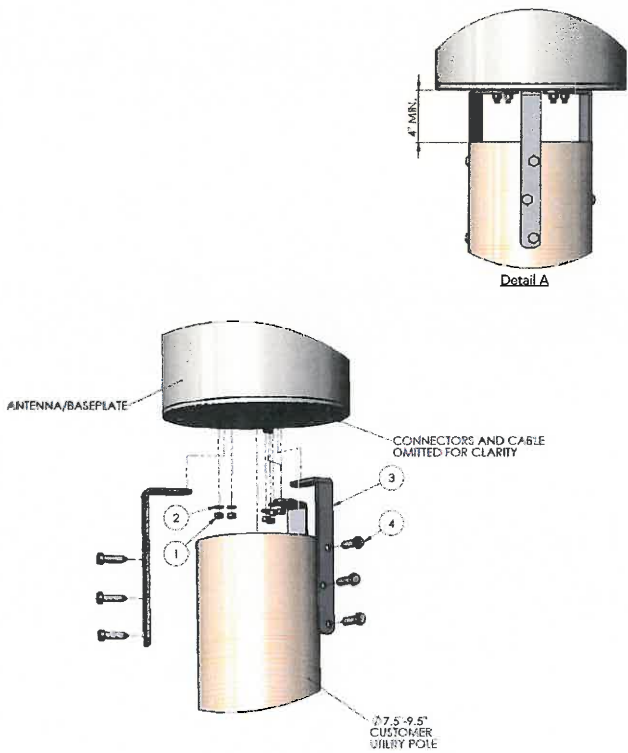
- Step 1 Attach pole mount brackets (Item 3) to antenna/base plate using fasteners (Items 1 and 2). Tighten to 15 N-m (11 ft-lb).
- Step 2 Attach pole mount brackets (Item 3)/antenna assembly to customer utility pole using lag screws (Item 4).
- Step 3 Make all electrical connections weatherproof with self-amalgamating tape.

Parts List	Description	Quantity
Item 1	Nut Hex, 3/8-16 HDG	6
Item 2	Lock Washer 3/8 HDG	6
Item 3	Pole Mount Bracket	3
Item 4	Galvanized Hex Lag Screw (1/2 x 2" Long)	9

Mechanical Characteristics

Weight	2.7 kg (6 lbs)
--------	----------------

ANTENNA MOUNT
TYPICAL SECTION: N.T.S.



8

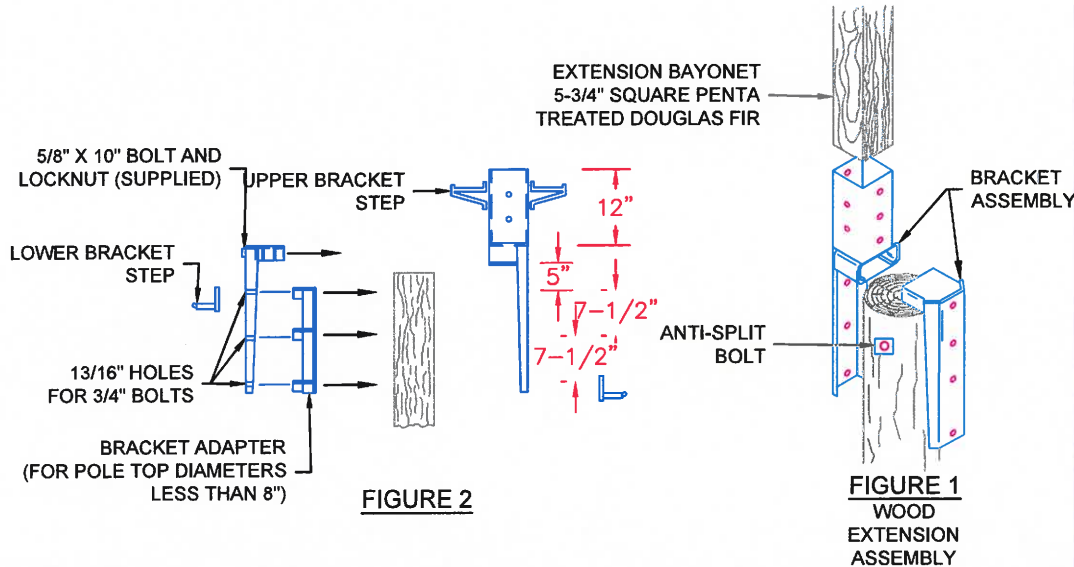
SCALE
N.T.S.

NOTES

1. THE UNIT MEETS G.O. 95 REQUIREMENTS FOR STRENGTH IN CLASS 3 THROUGH 6 POLES AND THEREFORE MAY BE USED TO SUPPORT EQUIPMENT ON THESE CLASS POLES. IT MAY BE USED ON LARGER CLASS POLES, BUT MAY NOT SUPPORT EQUIPMENT ON THEM.
2. THE UNIT MAY BE GUYED.
3. THE BRACKET IS MADE TO FIT POLES WITH DIAMETERS OF 8" TO 11". THEREFORE, DEPENDING UPON ACTUAL POLE DIAMETER, TO FIT POLES OF CLASS AND SMALLER, A BRACKET ADAPTER MAY BE REQUIRED.
4. UNITS ARE SUPPLIED WITH THE WOOD BAYONET ASSEMBLED.
5. A POLE STEP KIT IS REQUIRED.

FIGURE 2
BRACKET ASSEMBLY AND BRACKET ADAPTER

TABLE 1	BILL OF MATERIALS
DESCRIPTION	
5' EXTENSION ASSEMBLY	180219
6' EXTENSION ASSEMBLY	180220
7' EXTENSION ASSEMBLY	180221
BRACKET ADAPTER	180222
3/4" X 10" MACHINE BOLTS	192412
POLE STEP KIT (2 UPPER, 2 LOWER)	180011

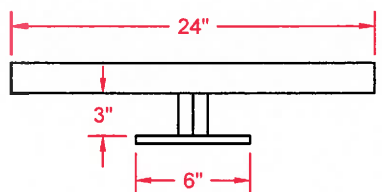
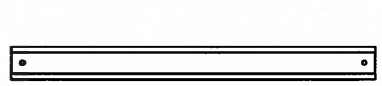


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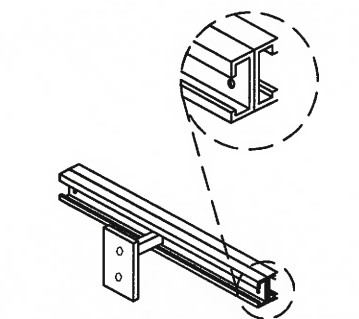
SCALE
N.T.S.

STANDOFF BRACKET

FRONT VIEW OF STAND OFF BRACKET:



TOP VIEW STAND OFF BRACKET:



3D VIEW OF STAND OFF BRACKET:

10

SCALE
N.T.S.

SF PALO ALTO 024
PALO ALTO

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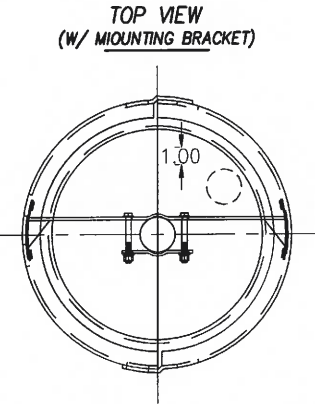
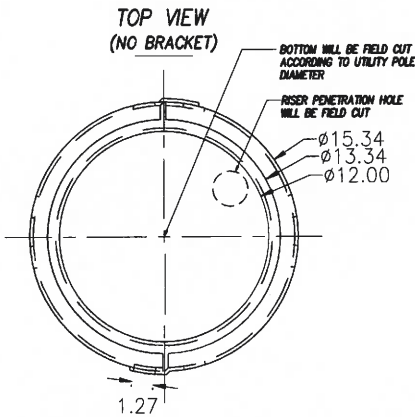
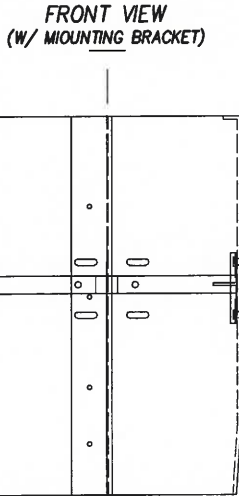
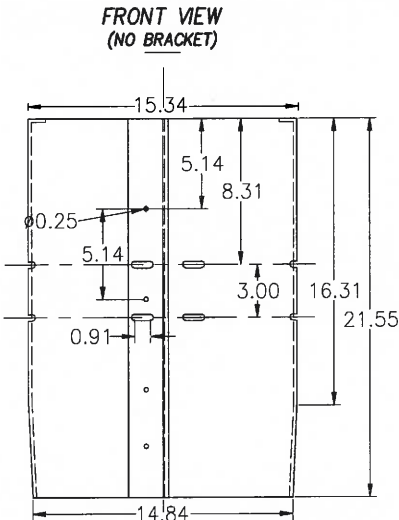
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DETAILS & NOTES

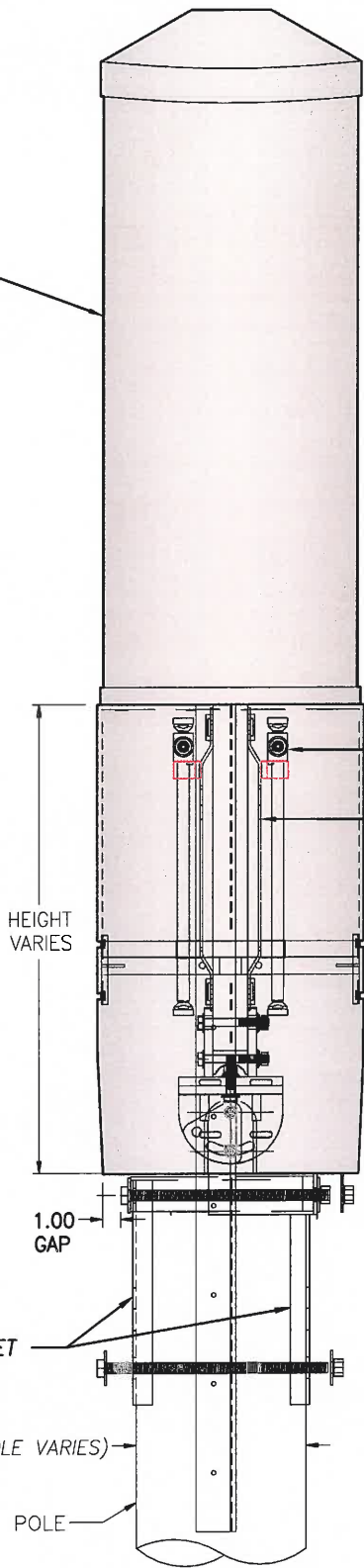
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BW	02/12/18	TT

SHEET NO.
D-5

CONCEALMENT COVER
TYPICAL SECTION: N.T.S.



CYLINDER ANTENNA



MICROLAB 2-WAY SPLITTER

SPLITTER BRACKET

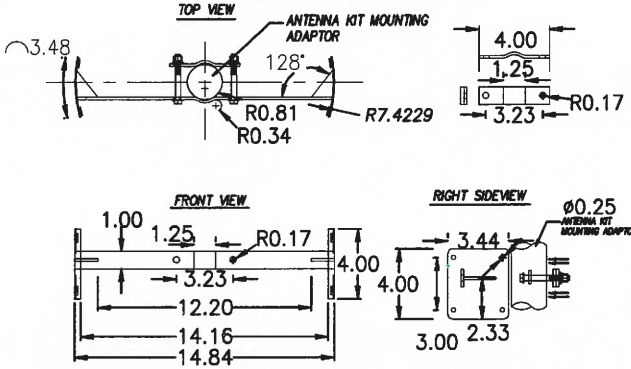
CUSTOM SHROUD TO FULLY ENCASE EQUIPMENT & MOUNTS
MINUS ANY CONNECTION POINT TO THE WOOD POLE

MOUNTING BRACKET

(DIA. POLE VARIES)

UTILITY POLE

RADOME MOUNTING COMPONENTS



NOTE: PAINT ANTENNA AND
CUSTOM CONCEALMENT
SHROUD TO MATCH POLE.

- NOTE:
1. CONCEALMENT COVER CAN BE ADJUSTED IN LENGTH TO PASS GROUND INSPECTION.
 2. SHROUD SHALL BE CONSTRUCTED OF 1/4" ABS PLASTIC.
 3. ALL MEASUREMENTS ARE IN INCHES.
 4. THE RISERS DO NOT CONNECT OR GO INTO THE ANTENNA SHROUD.
 5. THERE WILL BE A GAP (UP TO 6") FROM THE TOP OF THE RISER TO THE BOTTOM OF THE SHROUD.

SF PALO ALTO 024
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Coastal Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcomm.com

PROPRIETARY INFORMATION

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UNDERGROUND SERVICE ALERT
TICKET #

ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



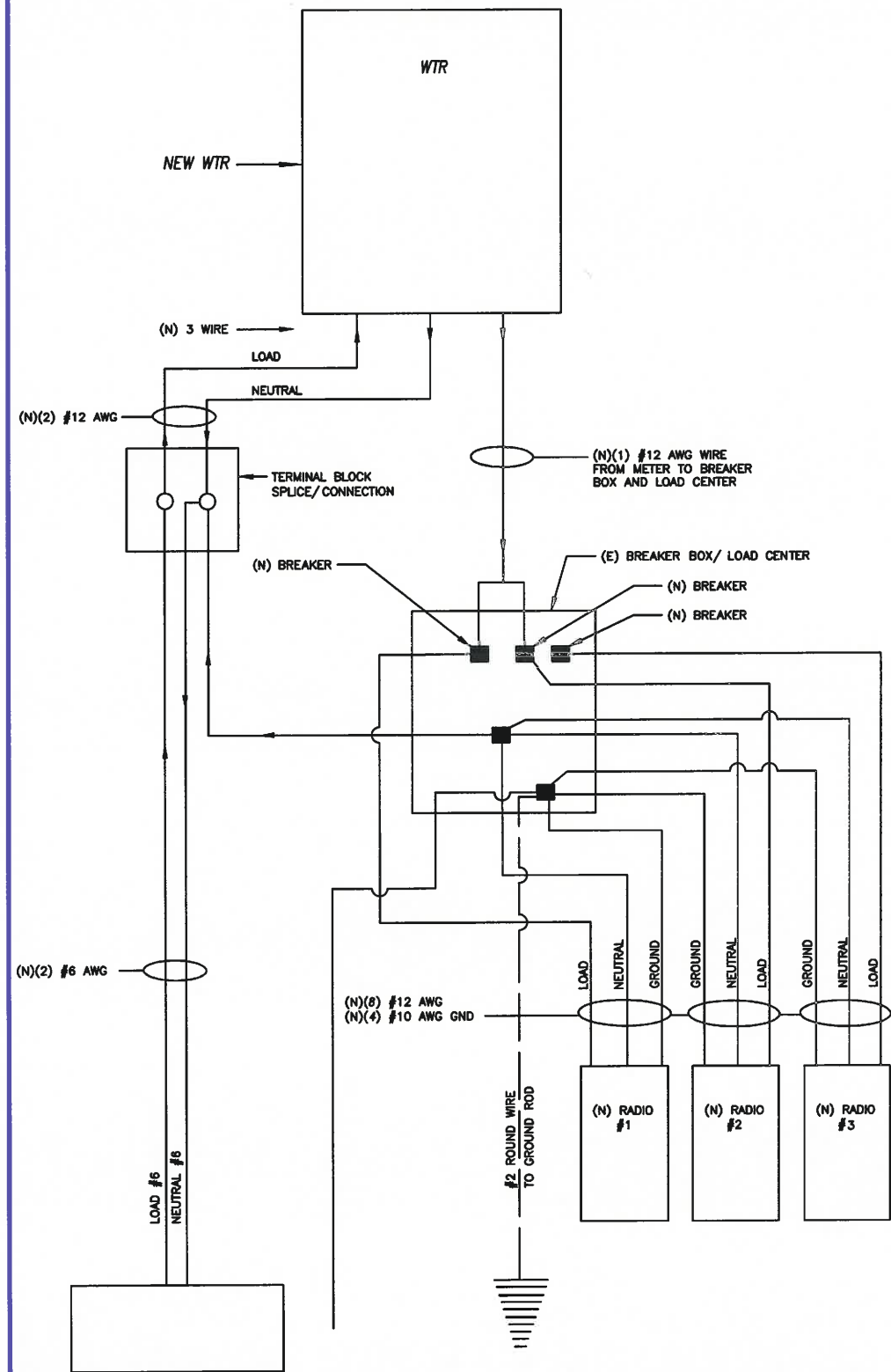
SITE NAME & ADDRESS:
ROW ADJACENT TO 243
HAWTHORNE AVE
PALO ALTO, CA
37.447708/-122.166031

DETAILS & NOTES

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
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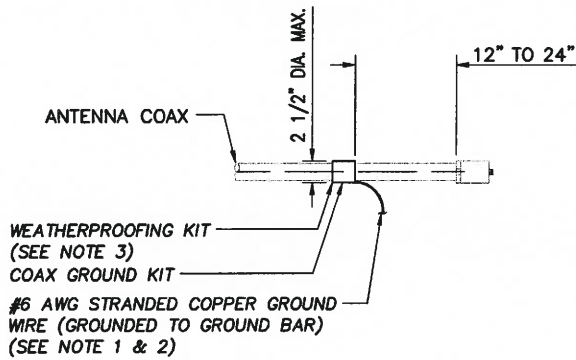
SHEET NO.
D-6

SINGLE LINE DIAGRAM



11 SCALE
N.T.S.

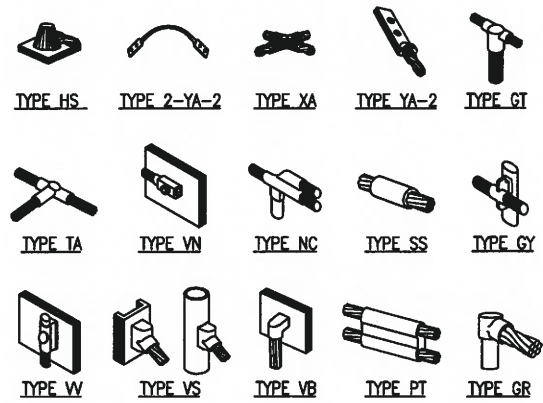
CONNECTION OF COAX GROUND KIT
TO ANTENNA COAX



- NOTES:
- DO NOT INSTALL COAX GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 - GROUNDING KIT SHALL BE TYPE AND PARK NUMBER AS SUPPLIED OR RECOMMENDED BY COAX MANUFACTURER.
 - WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

12 SCALE
N.T.S.

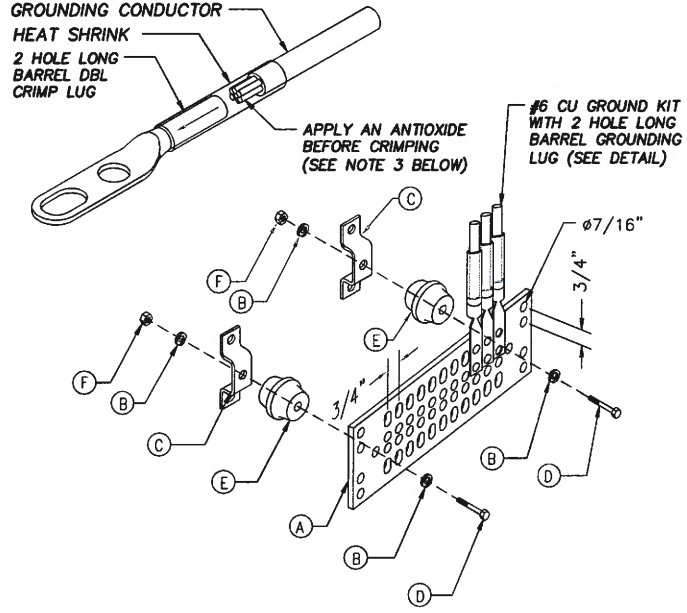
WELD CONNECTION DETAILS



NOTE:
ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH PROJECT MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.

13 SCALE
N.T.S.

TYPICAL GROUND BAR



- NOTES:
- CRIMP (COMPRESSION) TYPE TWO HOLE BOLTED TONGUE CONNECTORS SHALL BE USED TO TERMINATE STRANDED GROUNDING CONDUCTORS. THE CONNECTORS SHALL BE TIN PLATED COPPER, LONG BARREL LUG, AND SHALL BE LISTED FOR THEIR INTENDED USE BY AN NRTL.
 - CRIMP TYPE CONNECTORS USED ON SOLID CONDUCTORS MUST BE LISTED BY AN NRTL FOR USE ON SOLID CONDUCTORS, AND MUST BE CRIMPED WITH THE DIES SPECIFIED BY THE MANUFACTURER OF THE CONNECTOR. USE A HYDRAULIC CRIMPING TOOL.
 - WIRES SHALL BE INSERTED THE ENTIRE LENGTH OF THE LUG. ENSURE COAX OUTER INSULATION IS SNUG TO LUG BARREL. PROVIDE AN ANTIOXIDE COMPOUND ON THE CONDUCTOR BEFORE CRIMPING (NO OX). INSTALL A TRANSPARENT HEAT SHRINK INSULATING TUBING ALONG THE ENTIRE LENGTH OF THE CRIMP.
 - USE #6 AWG STRANDED-THOMAS & BETTS 455578 OR EQUIVALENT.

PARTS LIST		PARTS LIST	
A	COPPER GROUND BAR, USE STYLE "I" GTI TELECOM, INC. OR EQUAL (ACTUAL GROUND BAR SIZE WILL VARY BASED ON NUMBER OF GROUND CONNECTIONS)	C	WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR EQUAL
	5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8 OR EQUAL	D	5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR EQUAL
B		E	INSULATORS SHALL BE INSTALLED
		F	5/8-11 NUT

14 SCALE
N.T.S.

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PALO ALTO

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SITE NAME & ADDRESS:
ROW ADJACENT TO 243
HAWTHORNE AVE
PALO ALTO, CA
37.447708/-122.166031

DETAILS & NOTES

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
-----------------	-------------------------	--------------------

SHEET NO.
D-7

CITY OF PALO ALTO
TREE PROTECTION - IT'S PART OF THE PLAN!
Make sure your crews and subs do the job right!

Fenced enclosures around trees are essential to protect them by keeping the foliage canopy and branching structure clear from contact by equipment, materials and activities, preserving roots and soil conditions in an intact and non-compacted state, and identifying the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved. An approved tree protection report must be added to this sheet when project activity occurs within the TPZ of a regulated tree. For detailed information on Palo Alto's regulated trees and protection during development, review the City Tree Technical Manual (TTM) found at www.cityofpaloalto.org/trees/.



TREE DISCLOSURE STATEMENT

CITY OF PALO ALTO
Planning Division, 250 Hamilton Avenue
Palo Alto, CA 94301
(650) 329-2441
<http://www.cityofpaloalto.org>

Palo Alto Municipal Code, Chapter 8.10.040, requires disclosure and protection of certain trees located on private and public property, and that they be shown on submitted and approved site plans. A completed *tree disclosure statement* must accompany all permit applications that include exterior work, all demolition or grading permit applications, or other development activity.

PROPERTY ADDRESS: Right of way adjacent to 243 Hawthorne Ave, Palo Alto, CA

Are there Regulated¹ trees on or adjacent to the property? ☒ YES ☐ NO (If no, proceed to Section 4)

[Sections 1- 4 MUST be completed by the applicant. Please circle and/or check where applicable.]

1. Where are the trees? Check those that apply. (Plans must be submitted showing all trees over 4" diameter)

- ☐ On the property
☒ On adjacent property overhanging the project site
☒ In the City planter strip or right-of-way easement within 30' of property line (Street Trees)*

*Street trees¹ require special protection by a fenced enclosure, per the attached instructions. Prior to receiving any permit, you must provide an authorized Street Tree Protection Verification form. Contact Public Works Operations at (650) 496-5953 for inspection of type I, II or III fencing (see attached Detail #605) required for all street trees.

2. Are there any Protected¹ or Designated¹ Trees? ☒ YES (Check where applicable) ☐ NO

- ☒ Protected Tree (s)
☐ Designated Tree (s)
☒ On or overhanging the property

3. Is there activity or grading within the dripline? (radius 10 times the trunk diameter) of these trees? ☒ YES ☐ NO

If Yes, a **Tree Preservation Report** must be prepared by an ISA certified arborist and submitted for staff review (see TTM², Section 6.25). Attach this report to Sheet T-1, "Tree Protection, its Part of the Plan!", per Site Plan Requirements.

4. Are the Site Plan Requirements** completed? ☒ YES ☐ NO

**Plans. Protection of Regulated trees during development require the following: (1) Plans must show the measured trunk diameter and canopy dripline; (2) Plans must denote, as a bold dashed line, a fenced enclosure area out to the dripline, per Sheet T-1 and Detail #605 -

<http://www.cityofpaloalto.org/trees/forms.htm> (See also TTM², Section 2.15 for area to be fenced)

I, the undersigned, agree to the conditions of this disclosure. I understand that knowingly or negligently providing false or misleading information in response to this disclosure requirement constitutes a violation of the Palo Alto Municipal Code Section 8.10.040, which can lead to criminal and/or civil legal action.

Signature: [Signature]
(Prop. Owner or Agent)

Print: Rochelle Swanson

Date: 11/29/2013

FOR STAFF USE:

Protective Fencing

Sections 5-6 must be completed by staff for the issuance of any development permit (demolition, grading or building permit).

5. Protected Trees. The specified tree fencing is in place. A written statement is attached verifying that protective fencing is correctly in place around protected and/or designated trees.
(N/A if there are no protected trees, check here ☐)

YES NO

6. Street Trees. A signed Public Works Street Tree Protection Verification form is attached.
(N/A if there are no street trees, check here ☐)

YES NO

¹ Regulated Trees – a) Street trees – trees on public property; b) Protected trees – Coast Live Oaks or Valley Oaks which are 11.5" in diameter or larger, Coast Redwoods which are 18" in diameter or larger, when measured 54" above natural grade; and Heritage trees are trees designated by City Council; and c) Designated Trees – commercial or non-residential property trees, which are part of an approved landscape plan.

² Palo Alto Tree Technical Manual (TTM) contains instructions for all requirements on this form, available at www.cityofpaloalto.org/trees/technical-manual.htm

Tree technical Manual

To purchase the tree Technical Manual

June, 2001 First Edition

View by section:

- o Table of Contents (PDF, 87KB)
- o Intent and Purpose (PDF, 1.05MB)
- o Introduction - Use of Manual (PDF, 1.05MB)
- o Section 1.0 - Definitions (PDF, 96KB)
- o Section 2.0 - Protection of Trees During Construction (PDF, 259KB)
- o Section 3.0 - Removal, Replacement & Planting of Trees (PDF, 117KB)
- o Section 4.0 - Hazardous Trees (PDF, 105KB)
- o Section 5.0 - Tree Maintenance Guidelines (PDF, 110KB)
- o Section 6.0 - Tree Reports (PDF, 84KB)

View ALL sections:

- o Tree Technical Manual - Full (PDF, 1.84MB)

APPENDICES

- A. Palo Alto Municipal Code Chapter 8.10, Tree Preservation & Management Regulations
B: Tree City - USA
C: ISA Hazard Evaluation Form
D: List of Inherent Failure Patterns for Selected Species (Reference source) E: ISA Tree Pruning Guidelines (PDF, 1.85MB)
F: Tree Care Safety Standards, ANSI Z133.1-1994 (Reference source)
G: Pruning Performance Standards, ANSI A300-1995 (Reference source) H: Tree Planting Details, Diagram 504 & 505 I: Tree Disclosure Statement
J: Palo Alto Standard Tree Protection Instructions

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PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



PROPRIETARY INFORMATION

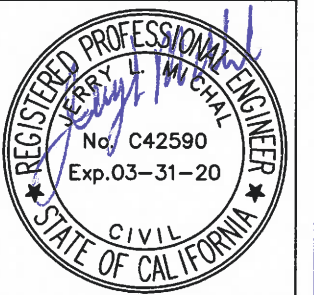
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SITE NAME & ADDRESS:
ROW ADJACENT TO 243
HAWTHORNE AVE
PALO ALTO, CA

37.447708/-122.166031

SPECIAL TREE PROTECTION
INSTRUCTION SHEET

DRAWN BY: BW DRAFT DATE: 02/12/18 APPROVED BY: TT

SHEET NO.

T1.1

CITY OF PALO ALTO
TREE PROTECTION - IT'S PART OF THE PLAN!
Make sure your crews and subs do the job right!

Fenced enclosures around trees are essential to protect them by keeping the foliage canopy and branching structure clear from contact by equipment, materials and activities, preserving roots and soil conditions in an intact and non-compacted state, and identifying the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved. An approved tree protection report must be added to this sheet when project activity occurs within the TPZ of a regulated tree. For detailed information on Palo Alto's regulated trees and protection during development, review the City Tree Technical Manual (TTM) found at www.cityofpaloalto.org/trees/.

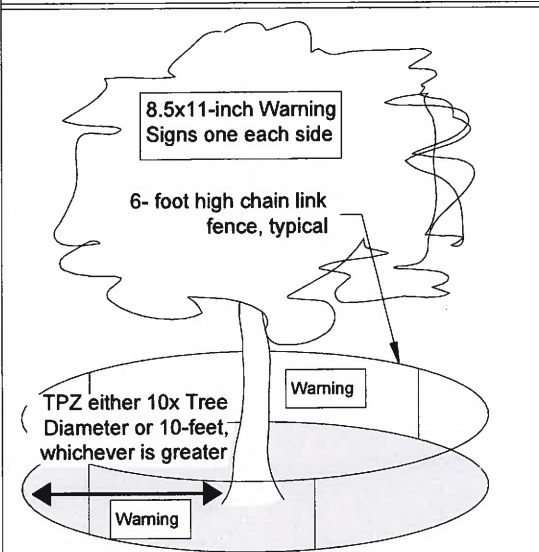


For written specifications associated with illustrations below, see Public Works Specifications Section 31

Detailed specifications are found in the Palo Alto Tree Technical Manual (TTM) (www.cityofpaloalto.org/trees/)

Tree Protection (TPZ) shown in gray (radius of TPZ equals 10-times the diameter of the tree or 10-feet, whichever is greater).

- Restricted activity area – see Tree Technical Manual Sec 2.15(E).
- Restricted trenching area – see Tree Technical Manual Sec 2.20(C-D), any proposed trench or form work within TPZ of a protected tree requires approval from Public Works Operations. Call 650-496-5953.



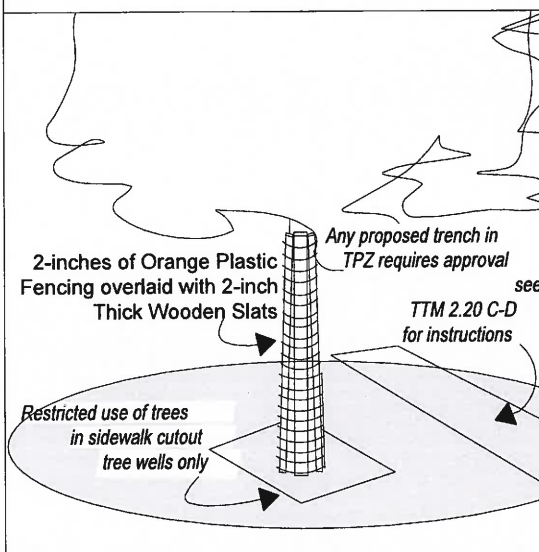
Type I Tree Protection

For all Ordinance Protected & Designated trees, as detailed in the site specific tree preservation report (TPR) prepared by the applicant's project arborist as diagramed on the plans.

Note: Ordinance Protected & Designated Trees. Issuance of a permit requires applicant's project arborist written verification Type I is installed correctly according to the plans and Tree Preservation Report

Any inadvertent sidewalk or curb replacement or trenching requires approval

Type II Tree Protection



Note: Street Trees. Issuance of a permit requires Public Works Operations inspection and signed approval on the Street Tree Verification (STV) form provided.

Type III Tree Protection

(to be used only with approval of Public Works Operations)

Tree fencing is required and shall be erected before demolition, grading or construction begins.



PALO ALTO STREET TREE PROTECTION INSTRUCTIONS --SECTION 31--

- Tree protection has three primary functions, 1) to keep the foliage canopy and branching structure clear from contact by equipment, materials and activities; 2) to preserve roots and soil conditions in an intact and non-compacted state and 3) to identify the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved.
- The Tree Protection Zone (TPZ) is a restricted area around the base of the tree with a radius of ten-times the diameter of the tree's trunk or ten feet; whichever is greater, enclosed by fencing.

31-2 Reference Documents

- Detail 605- illustration of situations described below.
- Tree Technical Manual (TTM) Forms (<http://www.cityofpaloalto.org/trees/>)
- Trenching Restriction Zones (TTM, Section 2.20(C))
- Arborist Reporting Protocol (TTM, Section 6.30)
- Site Plan Requirements (TTM, Section 6.35)
- Tree Disclosure Statement (TTM, Appendix J)
- Street Tree Verification (STV) Form (<http://www.cityofpaloalto.org/trees/forms>)

31-3 Execution

- Type I Tree Protection: The fence shall enclose the entire TPZ of the tree(s) to be protected throughout the life of the construction project. In some parking areas, if fencing is located on paving or concrete that will not be demolished, then the posts may be supported by an appropriate grade level concrete base, if approved by Public Works Operations.
- Type II Tree Protection: For trees situated within a planting strip, only the planting strip and yard side of the TPZ shall be enclosed with the required chain link protective fencing in order to keep the sidewalk and street open for public use.
- Type III Tree Protection: To be used only with approval of Public Works Operations. Trees situated in a tree well or sidewalk planter pit, shall be wrapped with 2-inches of orange plastic fencing from the ground to the first branch and overlaid with 2-inch thick wooden slats bound securely (slats shall not be allowed to dig into the bark). During installation of the plastic fencing, caution shall be used to avoid damaging any branches. Major limbs may also require plastic fencing as directed by the City Arborist.
- Size, type and area to be fenced. All trees to be preserved shall be protected with six (6') foot high chain link fences. Fences are to be mounted on two-inch diameter galvanized iron posts, driven into the ground to a depth of at least 2-feet at no more than 10-foot spacing. Fencing shall extend to the outer branching, unless specifically approved on the STV Form.
- 'Warning' signs. A warning sign shall be weather proof and prominently displayed on each fence at 20-foot intervals. The sign shall be minimum 8.5-inches x 11-inches and clearly state in half inch tall letters: "WARNING - Tree Protection Zone - This fence shall not be removed and is subject to a fine according to PAMC Section 8.10.110."
- Duration. Tree fencing shall be erected before demolition; grading or construction begins and remain in place until final inspection of the project, except for work specifically allowed in the TPZ. Work or soil disturbance in the TPZ requires approval by the project arborist or City Arborist (in the case of work around Street Trees). Excavations within the public right of way require a Street Work Permit from Public Works.
- During construction
 - All neighbors' trees that overhang the project site shall be protected from impact of any kind.
 - The applicant shall be responsible for the repair or replacement plus penalty of any publicly owned trees that are damaged during the course of construction, pursuant to Section 8.04.070 of the Palo Alto Municipal Code.
 - The following tree preservation measures apply to all trees to be retained:
 - No storage of material, topsoil, vehicles or equipment shall be permitted within the TPZ.
 - The ground under and around the tree canopy area shall not be altered.
 - Trees to be retained shall be irrigated, aerated and maintained as necessary to ensure survival.

END OF SECTION

City of Palo Alto 2004 Standard Drawings and Specifications
Street Tree Verification of Protection, PWE, Section 31

Revised 08/06

SF PALO ALTO 024
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:

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37.447708/-122.166031

SPECIAL TREE PROTECTION INSTRUCTION SHEET

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
-----------------	-------------------------	--------------------

SHEET NO.

T1.2

CITY OF PALO ALTO
TREE PROTECTION - IT'S PART OF THE PLAN!
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Table 2-2 Palo Alto Tree Technical Manual
ARBORIST INSPECTION SCHEDULE

All Checked Items Apply to this project:

- ☒ **Inspection of Protective Tree Fencing.** The Street Tree Verification Form shall be signed by the City Arborist. For other Protected Trees, the project arborist shall provide a written statement with a photograph verifying that he has conducted a field inspection of the trees and that the protective tree fencing is in place prior to issuance of a demolition, grading, or building permit. (see Verification of Tree Protection, Section 1.39).
- ☒ **Pre-Construction Meeting.** Prior to commencement of construction, the applicant or contractor shall conduct a pre-construction meeting to discuss tree protection with the job site superintendent, grading equipment operators, project arborist, City Arborist, and, if a city maintained irrigation system exists, the Parks Manager (Contact 650-496-6962).
- ☐ **Inspection of Rough Grading.** The project arborist shall perform an inspection during the course of rough grading ACROSS FROM the TPZ to ensure trees will not be injured by compaction, cut or fill, drainage and trenching, and if required, inspect aeration systems, tree wells, drains and special paving. The contractor shall provide the project arborist at least 48 hours advance notice of such activity.
- ☐ **Monthly Inspections.** The project arborist shall perform a monthly activity inspection to monitor and advise for conditions and tree health. The City Arborist shall be in receipt of the activity report during the first week of each calendar month or, immediately if there are any revisions to the approved plans or protection measures. Fax to (650) 329-2154. (see Monthly Inspection Report, Section 1.17).
- ☐ **Special activity within the Tree Protection Zone.** Work in this area (TPZ - described in #7 below) requires the direct onsite supervision of the project arborist (see Trenching, Excavation and Equipment, Section 2.20 C).
- ☐ **Landscape Architect Inspection.** For discretionary development projects, prior to temporary or final occupancy the applicant or contractor shall arrange for the Landscape Architect to perform an on site inspection of all plant stock, quality of the materials and planting (see Quality, Section 5.20.1 A) and that the irrigation is functioning consistent with the approved construction plans. The City shall be in receipt of written verification of Landscape Architect approval prior to scheduling the final inspection, unless otherwise approved.
- ☐ **Other (please describe)** _____



City of Palo Alto
Tree Department
Public Works Operations
PO Box 10250 Palo Alto, CA 94303
6501496-5953 FAX: 6501852-9289
treeprotection@CityofPaloAlto.org

Verification of
Street Tree Protection

Applicant Instruction: Complete upper portion of this form. Mail or FAX this form along with the signed tree Disclosure Statement to Public Works Dept. Public Works Tree Staff will inspect and notify applicant.

APPLICATION DATE:	
ADDRESS/LOCATION OF STREET TREES TO BE PROTECTED:	
APPLICANT'S NAME:	
APPLICANT'S ADDRESS:	
APPLICANT'S TELEPHONE & FAX NUMBERS:	

This section to be filled out by City Tree Staff

1. The Street Trees at the above address(es) are adequately protected. The type of protection used is:	YES NO *If NO, go to #2 below
Inspected by:	
Date of Inspection:	

2. The Street Trees at the above address are NOT adequately protected. The following modifications are required:	
Indicate how the required modifications were communicated to the applicant.	

Subsequent Inspection

Street trees at above address were found to be adequately protected: inspected by:	YES NO *If NO, indicate in "Notes" below the disposition of case.
Date of Inspection:	

Notes: List City street trees by species, site, condition and type of tree protection installed. Also note if pictures were taken. Use back of sheet if necessary.	
--	--

Return approved sheet to Applicant for demolition or building permit issuance.
S:PWD/OPS/Tree/DS/St TreeProtect

5/1706

SF PALO ALTO 024
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



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SPECIAL TREE PROTECTION
INSTRUCTION SHEET

DRAWN BY: BW DRAFT DATE: 02/12/18 APPROVED BY: TT

SHEET NO. T1.3

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Arborist Firm Data Here
City of Palo Alto Tree Technical Manual
ADDENDUM 11
email: RCA/ISA Certified Arborist #WE-000
Contact Cell #:

Monthly Tree Activity Report- Construction Site			
Inspection Date:	Site Address:	Contractor- Main Site Contact Information	#1: Job site superintendent Company: Email: Job site: Office: Cell: Mail:
Inspection #	Palo Alto, CA	Also present:	
Distribution:	1. City of Palo Alto 2. Others	Attn: Dave Dockter	Dave.dockter@cityofpaloalto.org 650-329-2440

Provide the requested minimum information with each report, customize as necessary. To be completed by project site arborist. Send monthly to city arborist at above address until project completion. Use additional sheets as needed.

- Assignment Activity (Demolition/grading/sewer/trenching/foundation/list relevant visits)
 - Pre-construction meeting requirement with sub-contractors
 - Inspect to verify that tree protection measures are in place
 - Determine if field adjustments, watering or plan revisions may be needed
- Field Observations (general site-wide and list by individual tree number)
 - Tree Protection Fences (TPF) are...
 - Trenching has/will occur
- Action Items (list site-wide, by tree number and date to be satisfied) and Date Due
 - Tree Protection Fence (TPF) needs adjusting (tree # x, x, x)
 - Root zone buffer material (wood chips) can be installed next
 - Schedule sewer trench, foundation dig with...
- Photographs (use often)
- Tree location Map (mandatory 8.5 x 11 sheet)
- Recommendations, notes or monitor items for projects/staff/schedule
- Past visits (list carry-over items satisfied/still outstanding)

Respectfully submitted,

Project site arborist
Consultant contact information (Include email, cell #, and mailing)

Enter date CPA Monthly Tree activity Report: Type site address here

---WARNING---
Tree Protection Zone

This fencing shall not be removed
without City Arborist approval
(650-496-5953)

Removal without permission is
subject to a \$500 fine per day*

*Palo Alto Municipal Code Section 8.10.110

City of Palo Alto Tree Protection Instructions are located at
<http://www.cityofpaloalto.ca.us/trees/technical-manual.html>

SPECIAL INSTRUCTIONS

PLANNING DEPARTMENT

TREE PROTECTION INSPECTIONS MANDATORY

PAMC 8.10 PROTECTED TREES. CONTRACTOR SHALL ENSURE PROJECT SITE ARBORIST IS PERFORMING REQUIRED TREE INSPECTION AND SITE MONITORING. PROVIDE WRITTEN MONTHLY TREE ACTIVITY REPORTS TO THE PLANNING DEPARTMENT LANDSCAPE REVIEW STAFF BEGINNING 14 DAYS AFTER BUILDING PERMIT ISSUANCE.

BUILDING PERMIT DATE: _____

DATE OF 1ST TREE ACTIVITY REPORT: _____

CITY STAFF: _____

REPORTING DETAILS OF THE MONTHLY TREE ACTIVITY REPORT SHALL CONFORM TO SHEET T-1 FORMAT, VERIFY THAT ALL TREE PROTECTION MEASURES ARE IMPLEMENTED AND WILL INCLUDE ALL CONTRACTOR ACTIVITY, SCHEDULED OR UNSCHEDULED, WITHIN A TREE A TREE PROTECTION ROOT ZONE. NON-COMPLIANCE IS SUBJECT TO VIOLATION OF PAMC 8.10.080. REFERENCE: PALO ALTO TREE TECHNICAL MANUAL, SECTION 2.00 AND ADDENDUM 11.

ALL OTHER TREE-RELATED REPORTS SHALL BE ADDED USING
ADDITIONAL "T" SHEETS AS NEEDED.

SF PALO ALTO 024
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



PROPRIETARY INFORMATION

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DIGALERT



1-800-227-2600
CALL AT
LEAST TWO
DAYS BEFORE
YOU DIG

UNDERGROUND SERVICE ALERT
TICKET #

ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



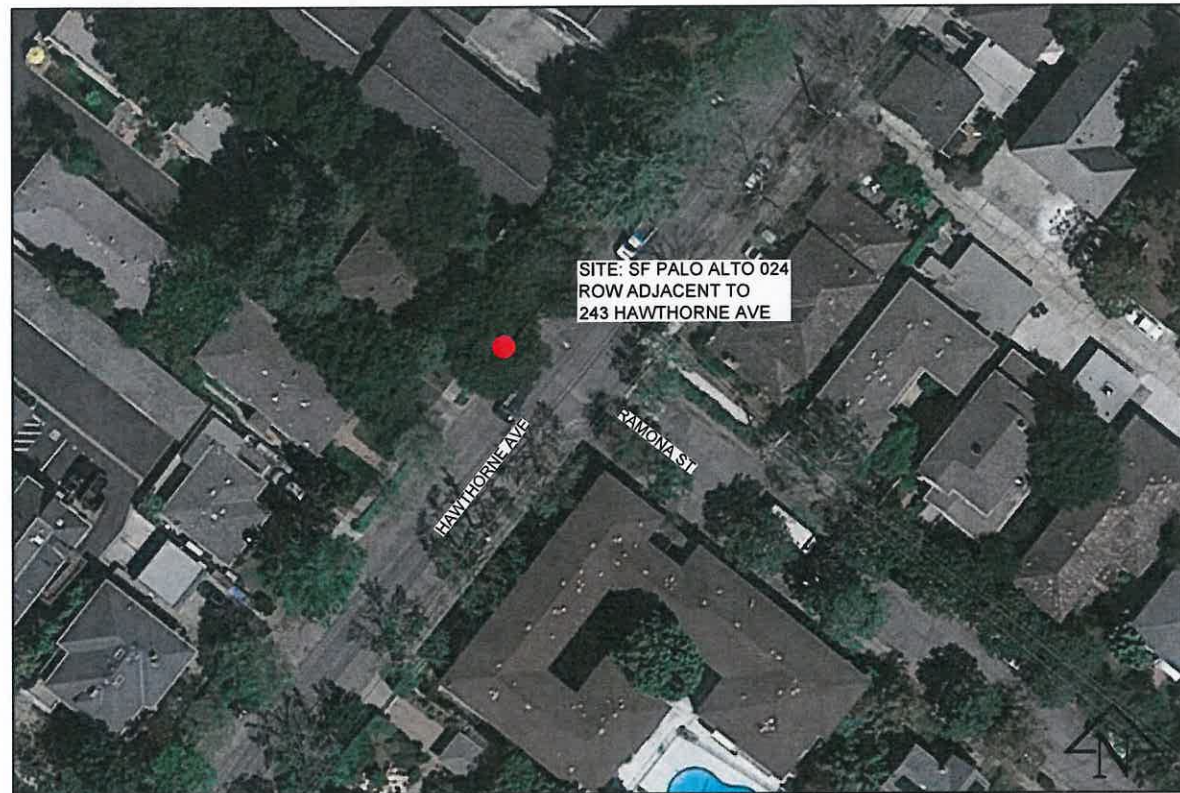
SITE NAME & ADDRESS:
ROW ADJACENT TO 243
HAWTHORNE AVE
PALO ALTO, CA
37.447708/-122.166031

SPECIAL TREE PROTECTION
INSTRUCTION SHEET

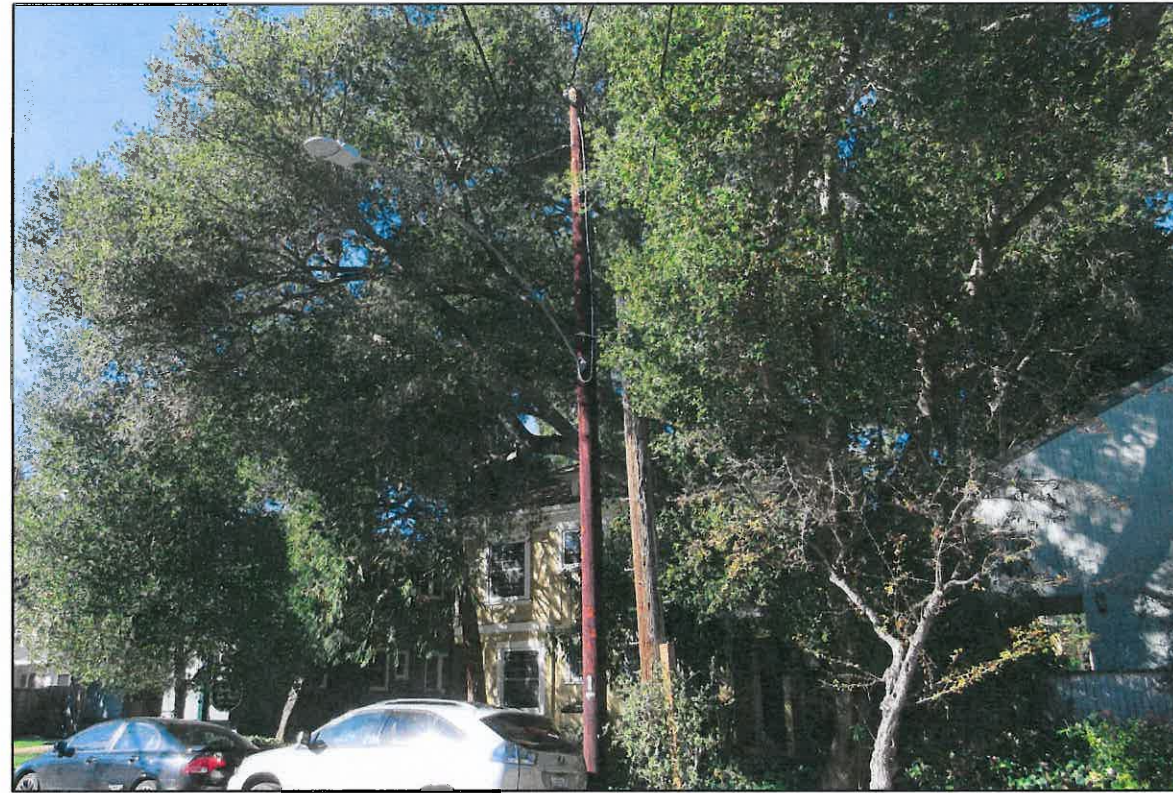
DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
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SHEET NO.

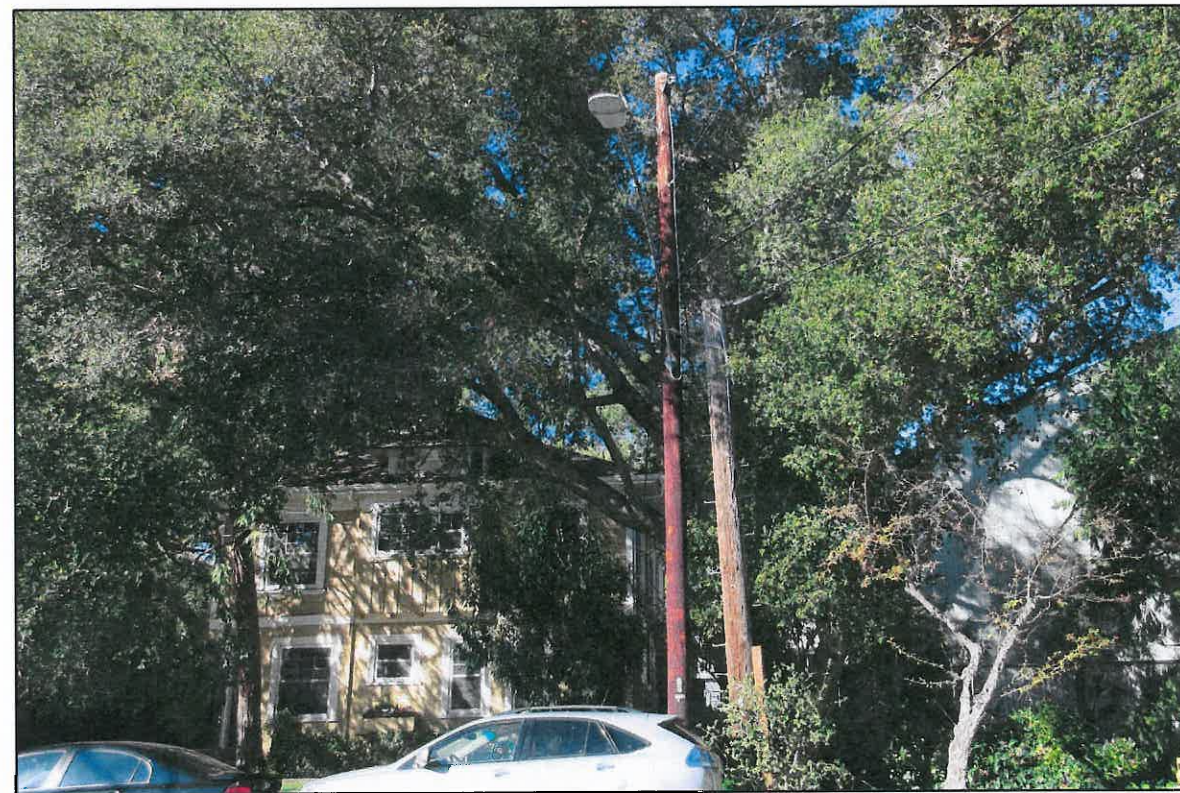
T1.4



A KEY MAP



B 9 O'CLOCK VIEW



C 12 O'CLOCK VIEW



D 3 O'CLOCK VIEW

**SF PALO ALTO 024
PALO ALTO**

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:

**CROWN
CASTLE**
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

Coastal Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcomminc.com

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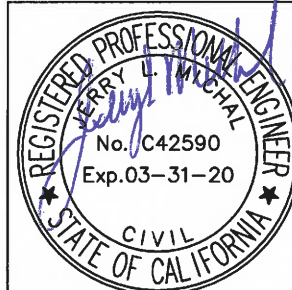
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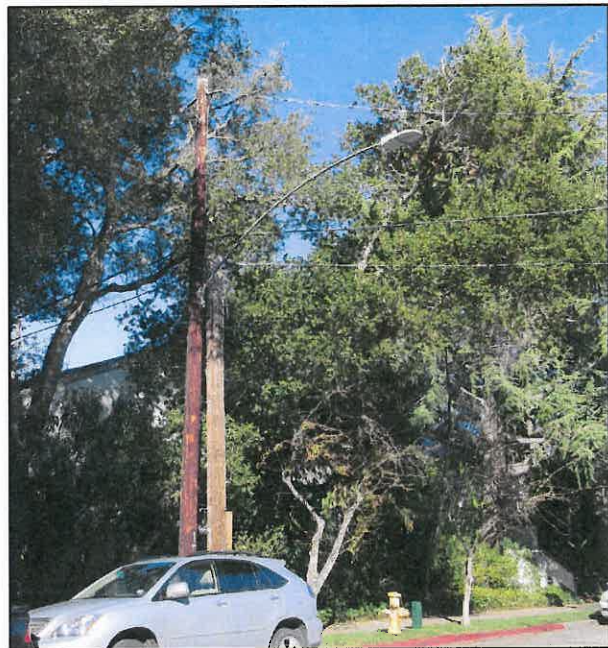


SITE NAME & ADDRESS:
**ROW ADJACENT TO 243
HAWTHORNE AVE
PALO ALTO, CA**
37.447708/-122.166031

PHOTOS

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
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SHEET NO.
P-1

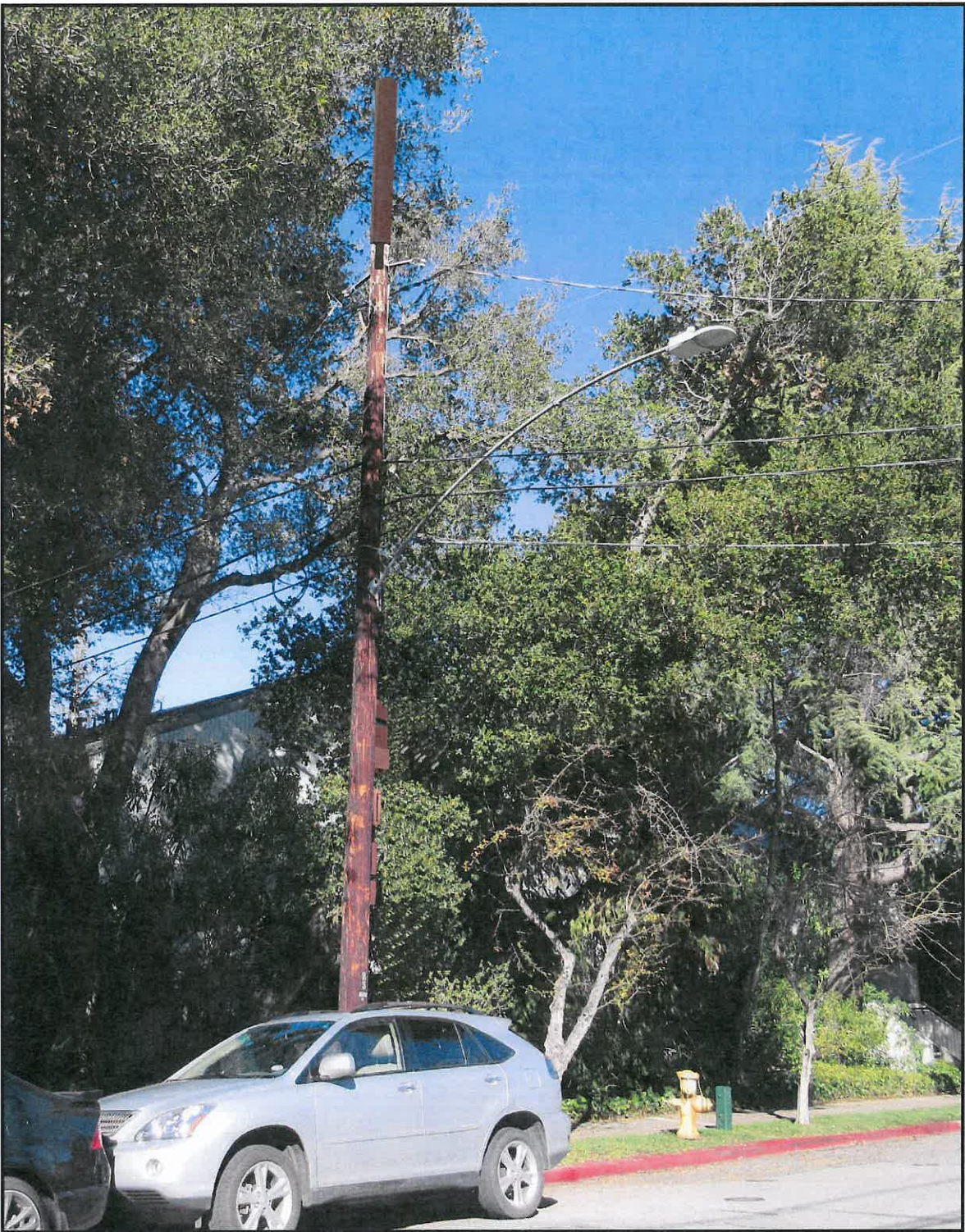


Existing Site



Vicinity Map

SF PALO ALTO 024
ROW ADJACENT TO
243 HAWWTHORNE AVE
PALO ALTO, CA



Proposed Site

SF PALO ALTO 024
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



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PALO ALTO, CA
37.447708/-122.166031

PHOTOSIM

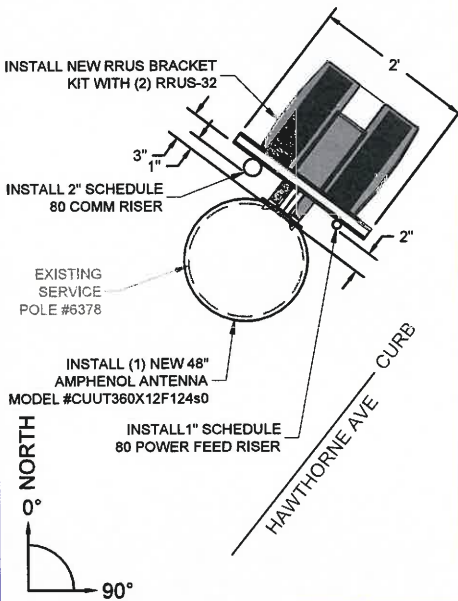
DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
SHEET NO. P-2		

POLE # 6378
TOP OF EXISTING POLE: 33' 10" AGL (40' POLE)
TOP OF ANTENNA(S): 42'-10"
RAD CENTER: 40'-10"
AZIMUTH(S): OMNI°
PROFILE VIEW: 9 O' CLOCK ELEVATION

A NOTES

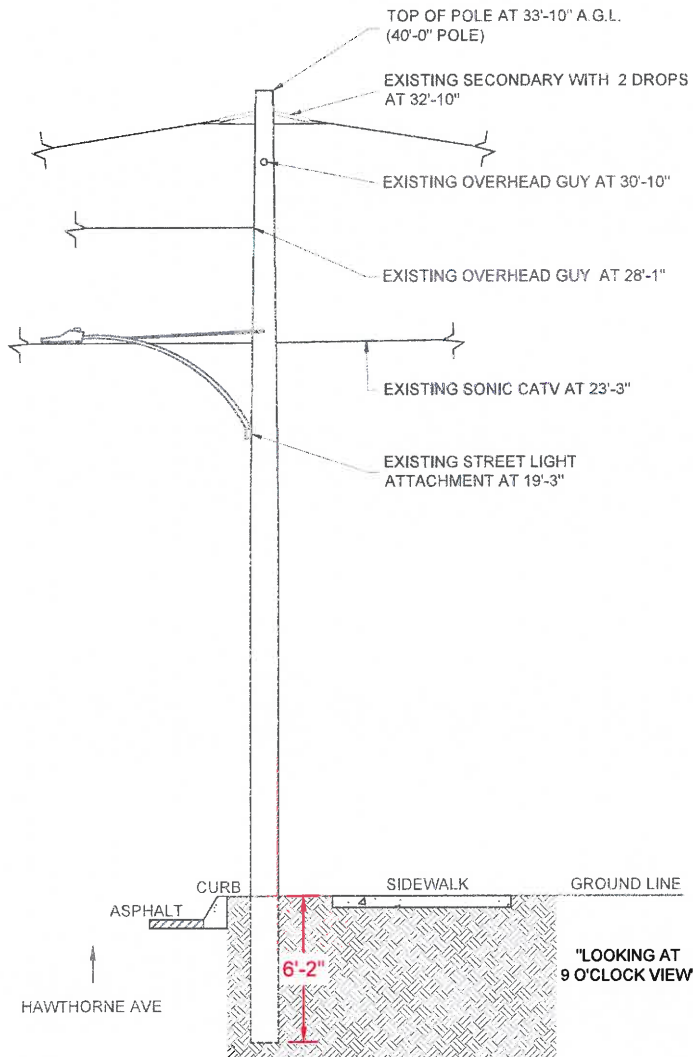
- INSTALL VGR.
- INSTALL NEW POWER DISCONNECT BOX ON STANDOFF BRACKET AT 8'-0" TO 8'-9".
- INSTALL NEW WTR ENCLOSURE ON STANDOFF BRACKET AT 9'-6" TO 10'-6".
- INSTALL NEW RRUS BRACKET WITH (2) RRUS-32 13'-0" TO 12'-5".
- INSTALL NEW RRUS BRACKET KIT WITH (2) RRUS-32 AT 13'-0" TO 16'-3".
- INSTALL CROWN CASTLE FIBER AT 24'-3".
- INSTALL STANDOFF BRACKET(TYP.).
- INSTALL 3'-6" POLE MOUNTED EXTENSION & (1) NEW 48" AMPHENOL ANTENNA MODEL #CUUT360X12F124S0 WITH CUSTOM SHROUD CONCEALMENT COVER.
- INSTALL NOTICE & CAUTION SIGNS.
- ALL EQUIPMENT SHALL BE PAINTED TO MATCH TEXTURE AND COLOR.
- NO GROUND DISTURBANCE NECESSARY.

B CONSTRUCTION NOTES



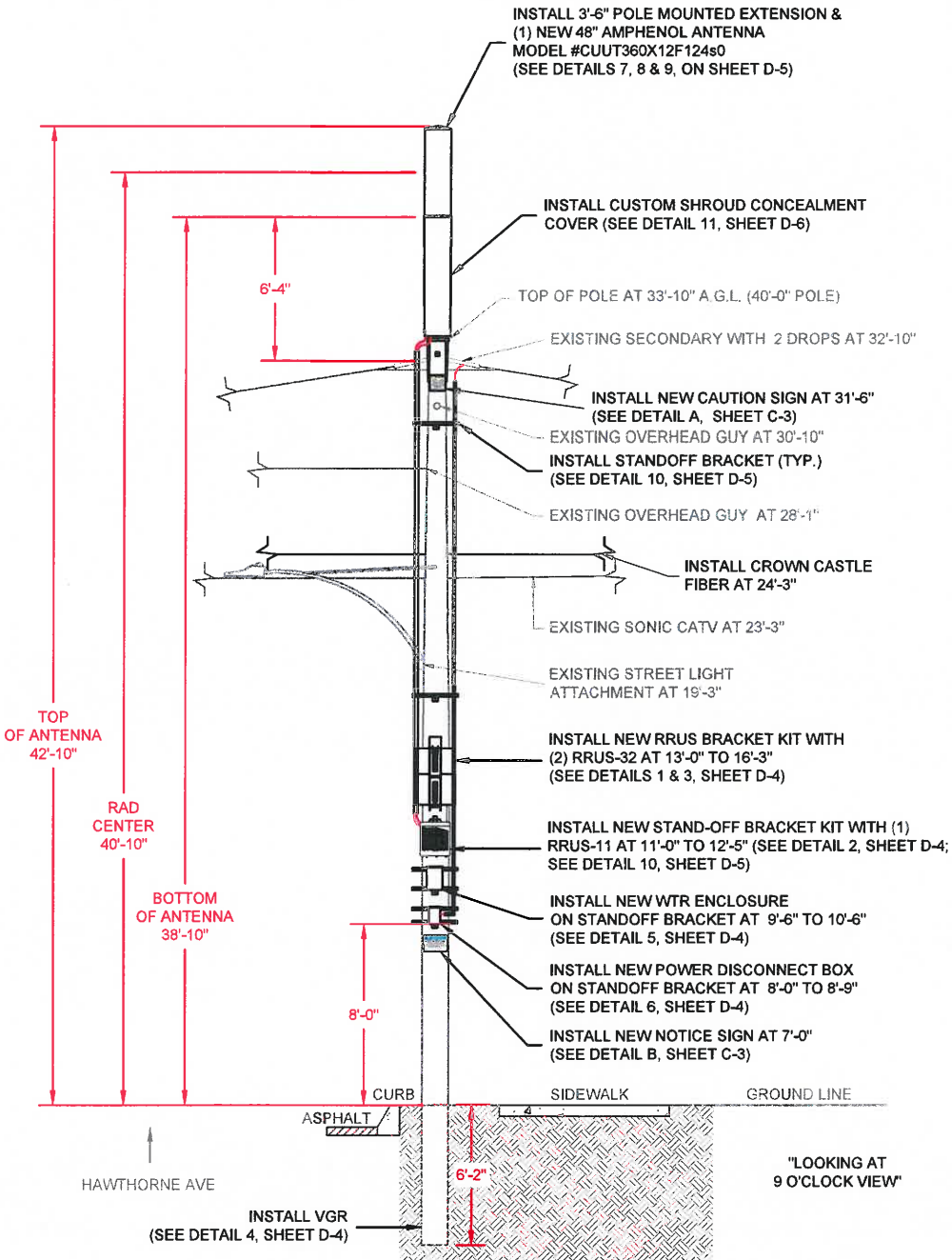
C TOP VIEW

N.T.S.



D EXISTING - 9 O'CLOCK ELEVATION

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



E PROPOSED - 9 O'CLOCK ELEVATION

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

NOTE: ALL EQUIPMENT SHALL BE PAINTED TO MATCH EXISTING POLE.

SF PALO ALTO 024
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

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CARLSBAD, CA 92008
PHONE: (760) 929-0910
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SITE NAME & ADDRESS:
ROW ADJACENT TO 243
HAWTHORNE AVE
PALO ALTO, CA
37.447708/-122.166031

PROFILE

DRAWN BY:	DRAFT DATE:	APPROVED BY:
BW	02/12/18	TT

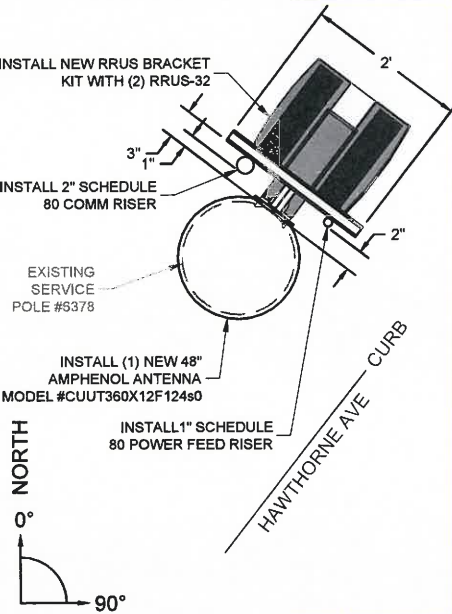
SHEET NO.
P-3

POLE # 6378
TOP OF EXISTING POLE: 33' 10" A.G.L. (40' POLE)
TOP OF ANTENNA(S): 42'-10"
RAD CENTER: 40'-10"
AZIMUTH(S): OMNI°
PROFILE VIEW: 3 O' CLOCK ELEVATION

F NOTES

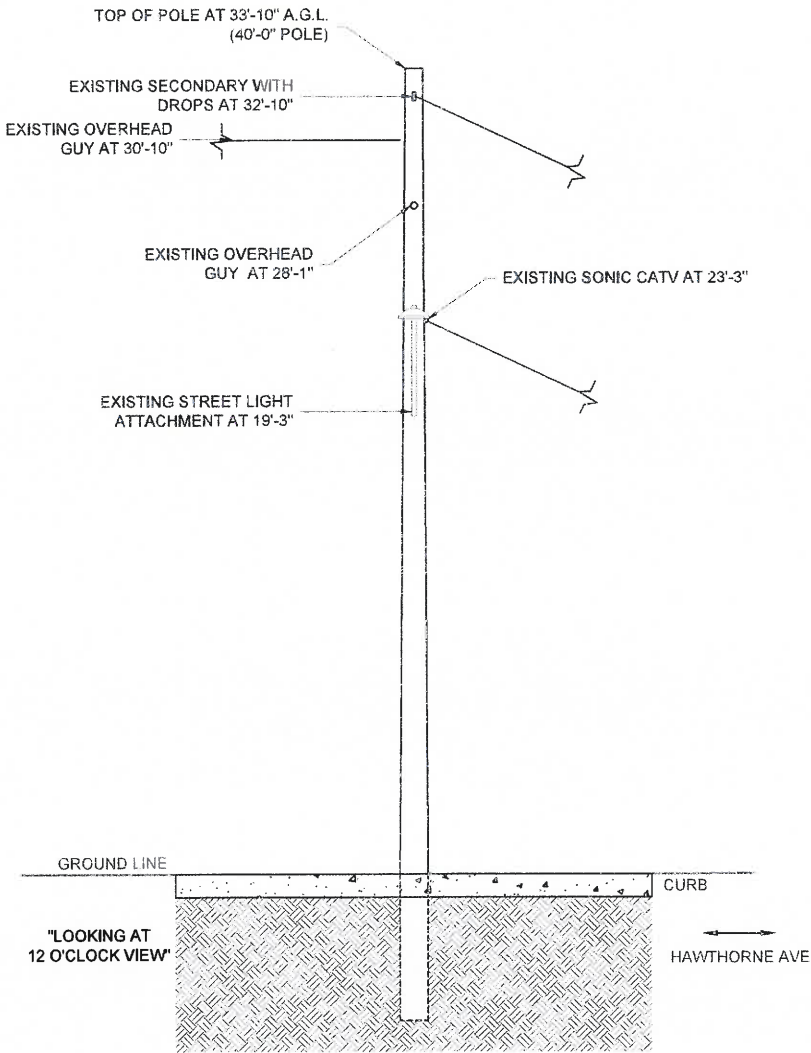
- INSTALL VGR.
- INSTALL NEW POWER DISCONNECT BOX ON STANDOFF BRACKET AT 8'-0" TO 8'-9".
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- ALL EQUIPMENT SHALL BE PAINTED TO MATCH TEXTURE AND COLOR.
- NO GROUND DISTURBANCE NECESSARY.

G CONSTRUCTION NOTES



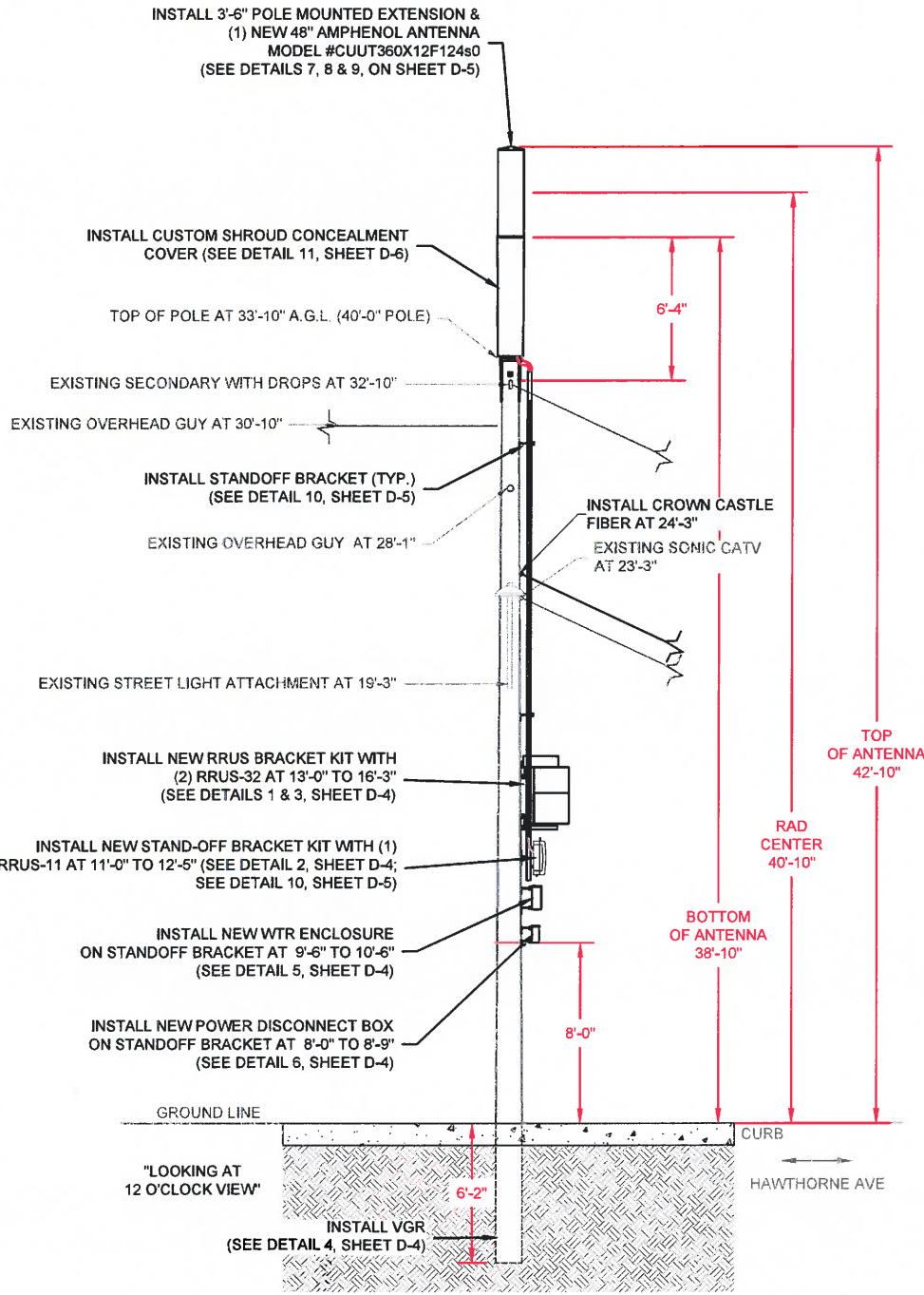
H TOP VIEW

N.T.S.



I EXISTING - 3 O'CLOCK ELEVATION

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



J PROPOSED - 3 O'CLOCK ELEVATION

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

NOTE: ALL EQUIPMENT
SHALL BE PAINTED TO
MATCH EXISTING POLE.

SF PALO ALTO 024
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

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SAN JOSE, CA 95134
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SITE NAME & ADDRESS:
ROW ADJACENT TO 243
HAWTHORNE AVE
PALO ALTO, CA
37.447708/-122.166031

PROFILE

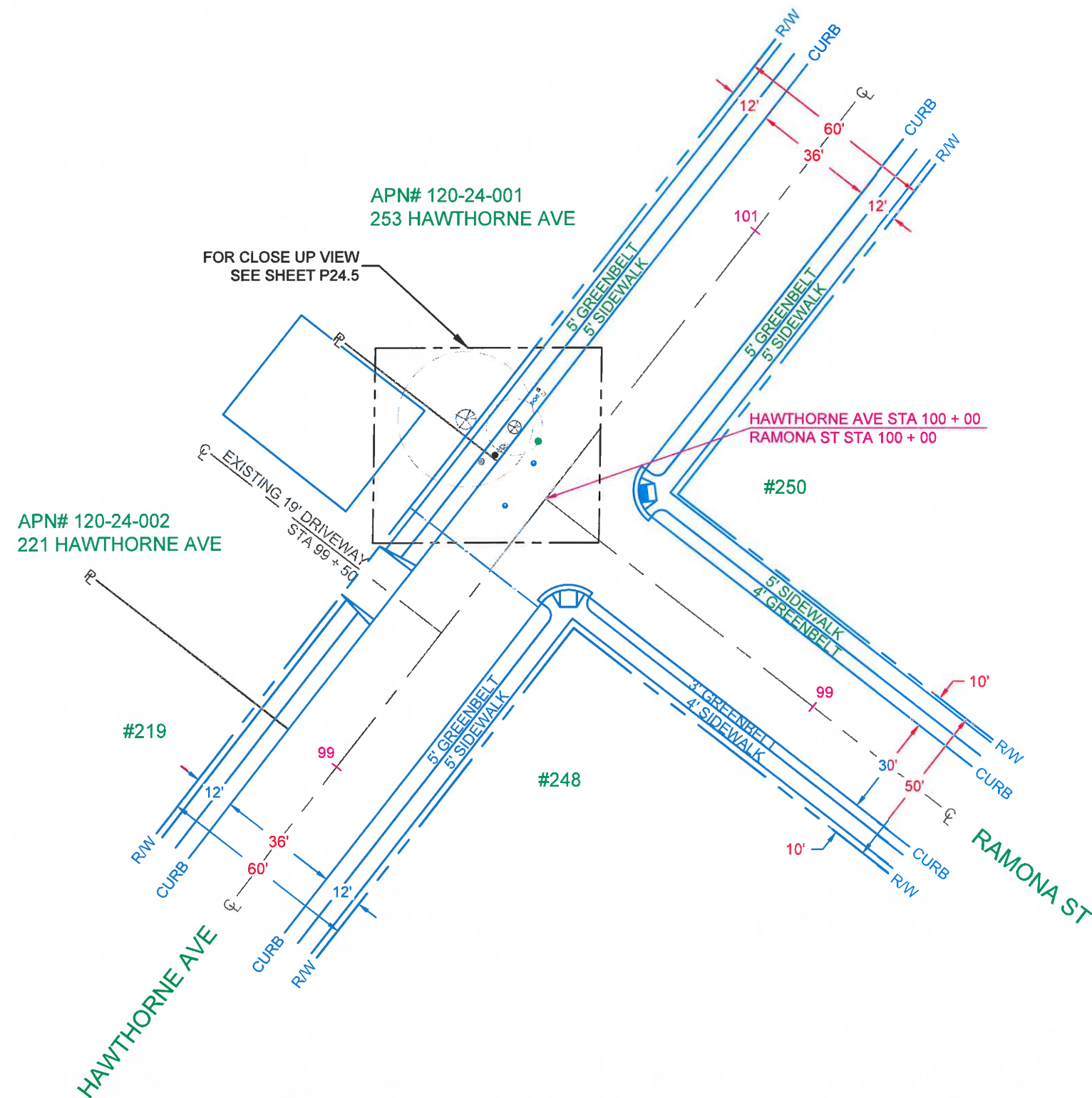
DRAWN BY:	DRAFT DATE:	APPROVED BY:
BW	02/12/18	TT

SHEET NO.
P-4

NO GROUND DISTURBANCE
NECESSARY

TREE PROTECTION IS REQUIRED
AND SHALL BE ERECTED
AROUND ANY TREE WITHIN 15' OF
IMPROVEMENTS OR WORK ZONE
BEFORE CONSTRUCTION BEGINS.
REFER TO SHEETS T1.1 - T1.4.

IN CASE OF ENCOUNTERING
MASSIVE / EXTENSIVE TREE
ROOTS AROUND WORK AREA
DURING CONSTRUCTION,
CONTACT CITY OF PALO ALTO
ARBORIST AT (650) 496-5953 FOR
FURTHER GUIDANCE &
SUPERVISION



NORTH



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

SF PALO ALTO 024
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

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SITE NAME & ADDRESS:
ROW ADJACENT TO 243
HAWTHORNE AVE
PALO ALTO, CA
37.447708/-122.166031

SITE PLAN

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
SHEET NO. SP-1		

EXISTING TREE TABLE							
PALO ALTO TREE #	SPECIES:	COMMON NAME:	GROW SPACE:	TRUNK DIA. AT BREAST HT.:	PROTECTION LINE:	DISTANCE TO CONST.	PROTECTION MEASURES REQUIRED
1	QUERCUS ILEX	HOLLY	GREENBELT	2 INCHES	.167 x10= 1'-8"	0'-0"	YES
2	QUERCUS AGRIFOLIA	COASTAL OAK	GREENBELT	10 INCHES	.833 x10= 8'-4"	1'-0"	NO
3	QUERCUS AGRIFOLIA	COASTAL LIVE OAK	PRIVATE YARD	24 INCHES	2' x10= 20'-0"	0'-0"	YES

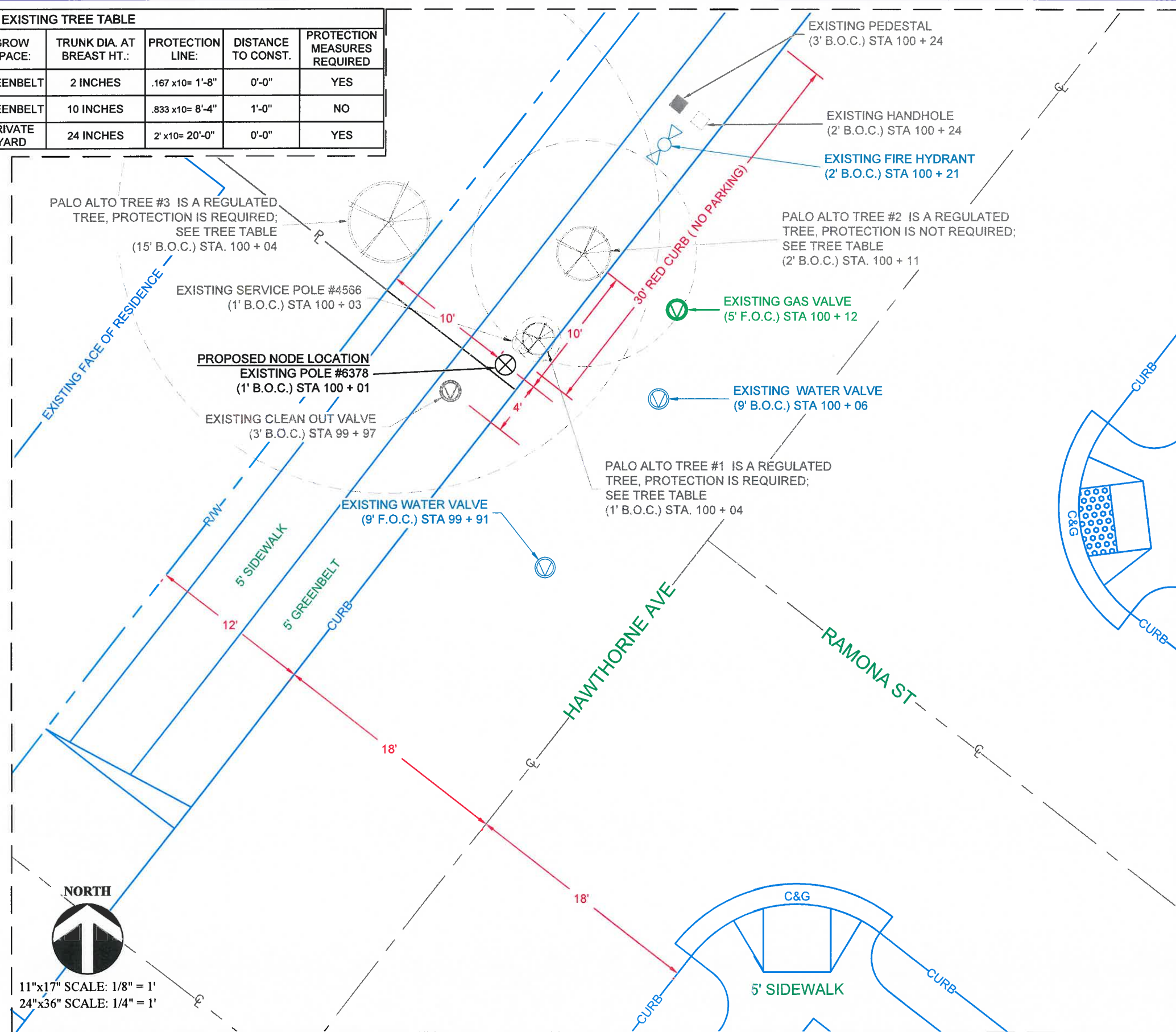
NODE COORDINATES	
LATITUDE:	37.447708
LONGITUDE:	-122.166031

NO GROUND DISTURBANCE NECESSARY

TREE PROTECTION IS REQUIRED AND SHALL BE ERECTED AROUND ANY TREE WITHIN 15' OF IMPROVEMENTS OR WORK ZONE BEFORE CONSTRUCTION BEGINS. REFER TO SHEETS T1.1 - T1.4.

IN CASE OF ENCOUNTERING MASSIVE / EXTENSIVE TREE ROOTS AROUND WORK AREA DURING CONSTRUCTION, CONTACT CITY OF PALO ALTO ARBORIST AT (650) 496-5953 FOR FURTHER GUIDANCE & SUPERVISION

ALL EQUIPMENT SHALL BE PAINTED TO MATCH EXISTING POLE



SF PALO ALTO 024
PALO ALTO
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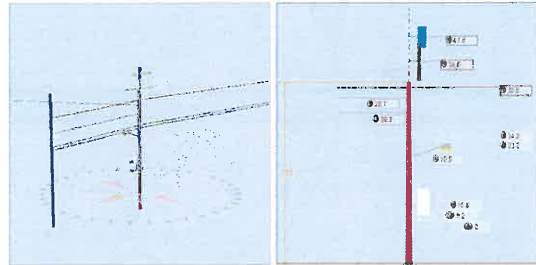
REGISTERED PROFESSIONAL ENGINEER
JERRY L. MICHAL
No. C42590
Exp. 03-31-20
CIVIL
STATE OF CALIFORNIA

SITE NAME & ADDRESS
ROW ADJACENT TO 243
HAWTHORNE AVE
PALO ALTO, CA
37.447708/-122.166031

ENLARGED PLAN

DRAWN BY: BW	DRAFT DATE: 02/12/18	APPROVED BY: TT
SHEET NO. SP-2		

Pole Num:	6378	Pole Length / Class:	40 / 3	Code:	GO 95	Structure Type:	Angle
Aux Data 1	SFPA024-SFO	Species:	DOUGLAS FIR	GO 95 Rule:	At Replace (Existing)	Pole Strength Factor:	0.38
Aux Data 2	Unset	Setting Depth (ft):	6.16	Construction Grade:	A	Transverse Wind LF:	1.00
Aux Data 3	Unset	G/L Circumference (in):	35.94	Loading District:	Light	Wire Tension LF:	1.00
Aux Data 4	Unset	G/L Fiber Stress (psi):	8,000	Ice Thickness (in):	0.00	Vertical LF:	1.00
Aux Data 5	Unset	Allowable Stress (psi):	2,996	Wind Speed (mph):	55.90	Bending Factor of Safety:	4.70
Aux Data 6	Unset	Fiber Stress Ht. Reduc:	No	Wind Pressure (psf):	8.00	Vertical Factor of Safety:	296.30
Latitude:	0.000000 Deg		Longitude:	0.000000 Deg		Elevation:	0 Feet



Pole Capacity Utilization (%)	Height (ft)	Wind Angle (deg)
Crossarm allowance 300 lbs		
Maximum	58.8	0.0
Groundline	58.8	0.0
Vertical	0.9	17.3

Pole Moments (ft-lb)	Load Angle (deg)	Wind Angle (deg)
Crossarm allowance 300 lbs		
Max Cap Util	20,638	136.3
Groundline	20,638	136.3
GL Allowable	36,694	

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)
Guy Pole	87.0	240.0		4.3	136.3	5.8	70.0
EHS 1/4 (Span/Head)			30.8	12.9	136.3	17.7	70.0
Guy Pole	45.0	170.0		0.0	136.3	0.7	320.0
EHS 1/4 (Span/Head)			28.1	0.0	136.3	2.0	320.0
System Capacity Summary:				Adequate		Adequate	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 138.7°										
	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	171	19.9	5,601	29.7	15.3	457	40	0	458	15.3
Comms	375	43.7	8,941	47.4	24.4	730	82	1	731	24.4
GuyBraces	-117	-13.6	-3,607	-19.1	-8.8	-295	8	0	-294	-8.8
GenericEquipments	151	17.6	2,519	13.3	6.9	206	379	4	209	7.0
Pole	211	24.6	3,316	17.6	9.0	271	990	10	280	9.4
Crossarms	37	4.3	1,357	7.2	3.7	111	28	0	111	3.7
Streelights	29	3.3	731	3.9	2.0	60	45	0	60	2.0
Insulators	1	0.1	23	0.1	0.1	2	12	0	2	0.1
Pole Load	858	100.0	18,879	100.0	51.5	1,541	1,584	15	1,557	52.0
Pole Reserve Capacity			17,815		48.6	1,455			1,439	48.0

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 138.7°										
	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>	171	20.0	5,620	29.8	15.3	459	42	0	459	15.3
CC	337	39.3	7,039	37.3	19.2	575	427	4	579	19.3
Calv	190	22.1	4,424	23.4	12.1	361	44	0	362	12.1
PWR	-88	-10.3	-2,877	-15.2	-7.8	-235	53	1	-234	-7.8
Pole	211	24.6	3,316	17.6	9.0	271	990	10	280	9.4
Power	37	4.3	1,357	7.2	3.7	111	28	0	111	3.7
Totals:	858	100.0	18,879	100.0	51.5	1,541	1,584	15	1,557	52.0

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)
Secondary	1/0 Al Triplex	32.83	5.97	0.9800	0.82	0.431	45.0	170.0	45.0	1,415	38,706	4	139
Secondary	1/0 Al Triplex	32.83	5.97	0.9800	2.15	0.431	139.0	0.0	139.0	1,415	-34,915	-11	679
Totals:										4,791	-3	818	5,601

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)
Overlashed Bundle	1/4" Strand	CC	24.25	6.74	0.2500	0.94	0.121	139.0	0.0	139.0	1,500	-27,339	3	312
Telco	216-320 Count fiber	CC	24.20	6.74	1.0000		0.350	139.0	0.0	139.0		9	312	-27,024
Overlashed Bundle	1/4" Strand	CC	24.25	6.74	0.2500	0.10	0.121	45.0	170.0	45.0	1,500	31,090	1	64
Telco	216-320 Count fiber	CC	24.20	6.74	1.0000		0.350	45.0	170.0	45.0		3	64	31,155
Overlashed Bundle	1/4" Strand	Calv	23.25	6.81	0.2500	0.85	0.121	139.0	0.0	139.0	1,500	-26,212	3	225
CATV	500 COAX	Calv	23.21	6.81	0.5000		0.150	139.0	0.0	139.0		4	224	-25,984
CATV	500 COAX	Calv	23.17	6.81	0.5000		0.150	139.0	0.0	139.0		4	224	228
Overlashed Bundle	1/4" Strand	Calv	23.25	6.81	0.2500	0.09	0.121	45.0	170.0	45.0	1,500	29,808	1	46
CATV	500 COAX	Calv	23.21	6.81	0.5000		0.150	45.0	170.0	45.0		1	46	29,855
CATV	500 COAX	Calv	23.17	6.81	0.5000		0.150	45.0	170.0	45.0		1	46	47
Totals:										7,348	31	1,583	5,941	

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	MUSH-41	CC	10.75	16.07	270.0	0.0	315.00	60.00	16.00	-	21.74	-278	1,066
Box	WTR	CC	9.25	11.16	270.0	0.0	15.00	12.00	6.00	-	12.00	-9	86
Box	Disconnect	CC	8.00	10.23	270.0	0.0	11.00	9.00	4.00	-	6.00	-5	31
Cylinder	CUUT360X12F83e0	CC	41.83	0.47	90.0	0.0	38.10	48.00	-	14.60	-	1	1,827
Totals:										-293	2,811	2,519	

Crossarm	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)
Pole Extension	Pole Top Bayonet Extension	Power	36.84	0.35	90.0	90.0	28.00	84.00	3.75	3.96	1	1,356	1,357
Totals:										1	1,356	1,357	

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	Street Light with 6' Mast Arm	PWR	19.83	4.51	180.0	180.0	45.00	30.00	20.00	3.00	72.50	163	568
Totals:										163	568	731	

Insulator	Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Spool	Spool Insulator - 20 kV		32.83	0.00	180.0	90.0	1.00	2.50	2.12	0	10	10
Spool	Spool Insulator - 20 kV		32.83	0.00	0.0	270.0	1.00	2.50	2.12	0	10	9
Boil	Three Bolt Clamp	CC	24.25	0.00	90.0	0.0	5.00	3.00	0.00	2	0	2
Boil	Three Bolt Clamp	Calv	23.25	0.00	90.0	0.0	5.00	3.00	0.00	2	0	2
Totals:										4	19	23

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 1/4	Span/Head	PWR	30.83	30.83	87.00	0.25	75.00	240.0	0.0	0.121	84.18
EHS 1/4	Span/Head	PWR	28.08	28.08	45.00	0.25	75.00	170.0	0.0	0.121	42.17

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* (lbs)	Maximum Tension* (lbs)	Applied Tension* (lbs)	Vertical Load (lbs)	Shear Load in Guy Dir (lbs)	Shear Load At Report Angle (lbs)	Moment at GL* (ft-lb)
EHS 1/4	Span/Head	2.30e+7	5,650	0.75	4,688	700	882	882	642	0	642	-125
EHS 1/4	Span/Head	2.30e+7	5,650	0.75	4,688	700	99	99	0	0	0	54
Totals:										0	642	-125

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* (lbs)	Load at Pole MCP* (lbs)	Max Required Capacity* (%)
Guy Pole		30.00	87.00	240.0	20,000	0.75	15,000	882	642	5.8
Guy Pole		30.00	45.00	170.0	20,000	0.75	15,000	99	0	0.7

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	17.27	32.76	10.75	6.26	7.32	11.45	1.60e+6	60.00	57.00	33.84	180,463	1,584	113.94

SF PALO ALTO 024

PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



PROPRIETARY INFORMATION

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TICKET #

ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
ROW ADJACENT TO 243
HAWTHORNE AVE
PALO ALTO, CA
37.447708/-122.166031

O'CALCS

DRAWN BY:	DRAFT DATE:	APPROVED BY:
BW	02/12/18	TT

SHEET NO.
OC-1

TRAFFIC CONTROL PLAN GENERAL NOTES:

1. WORK HOURS TO BE RESTRICTED TO _____ TO _____ UNLESS APPROVED OTHERWISE.
2. PEDESTRIAN CONTROLS WILL BE PROVIDED AS SHOWN.
3. PEDESTRIANS SHALL BE PROTECTED FROM ENTERING THE EXCAVATION BY PHYSICAL BARRIERS DESIGNED, INSTALLED, AND MAINTAINED TO THE SATISFACTION OF THE CITY ENGINEER.
4. TEMPORARY "NO PARKING/TOW AWAY" SIGNS STATING THE DATE AND TIME OF PROHIBITION WILL BE POSTED 72 HOURS PRIOR TO COMMENCING WORK. CALL POLICE DISPATCH TO VALIDATE POSTING.
5. ACCESS WILL BE MAINTAINED TO ALL DRIVEWAYS UNLESS OTHER ARRANGEMENTS ARE MADE.
6. TRENCHES MUST BE BACKFILLED OR PLATED DURING NON-WORKING HOURS UNLESS K-RAIL BARRIERS ARE PROVIDED. K-RAIL IS APPROVED ONLY WHEN SPECIFICALLY SHOWN ON THE APPROVED TRAFFIC CONTROL PLAN. PLATES SHALL HAVE CLEATS AND COLD MIX AT THE EDGES AS APPROVED BY THE INSPECTOR.
7. STRIPING WILL BE REPLACED BY THE CONTRACTOR WITHIN 24 HOURS, IF REMOVED OR DAMAGED.
8. WORK THAT DISTURBS NORMAL TRAFFIC SIGNAL TIMING OPERATIONS SHALL BE COORDINATED WITH THE CITY. CONTACT PUBLIC WORKS DEPARTMENT 72 HOURS PRIOR TO COMMENCING WORK.
9. TRAFFIC SIGNALS SHALL REMAIN FULLY ACTUATED AT ALL TIMES, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR HIS/HER REPRESENTATIVE. IF TRAFFIC SIGNAL LOOP DETECTORS ARE RENDERED INOPERATIVE BY THE PROPOSED WORK, VIDEO DETECTION SHALL BE USED TO PROVIDE ACTUATION.
10. FLAGGERS SHALL BE EQUIPPED WITH A WHITE HARD HAT, AN ORANGE VEST, AND A "STOP/SLOW" PADDLE ON A 5 FOOT STAFF.
11. ALL TRAFFIC CONTROL DEVICES MUST BE MAINTAINED 24 HOURS A DAY, 7 DAYS PER WEEK, BY THE CONTRACTOR.
12. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2014 EDITION.
13. TRAFFIC CONTROL PLAN SUBMITTALS ARE REQUIRED FOR EACH PHASE OF THE WORK IN THE DETAIL, FORMAT, AND QUALITY ILLUSTRATED ON THIS SHEET.
14. ALL TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM VIEW OR COVERED WHEN NOT IN USE.
15. THE CITY ENGINEER OR HIS/HER REPRESENTATIVE HAS THE AUTHORITY TO INITIATE FIELD CHANGES TO INSURE PUBLIC SAFETY.
16. ALL WORK AFFECTING BUS STOPS SHALL BE COORDINATED WITH CITY'S TRANSIT DISTRICT. CONTRACTOR SHALL CALL TRANSIT DISTRICT AT LEAST 72 HOURS IN ADVANCE OF STARTING WORK.
17. CHANGEABLE MESSAGE SIGNS SHALL BE USED IN ADVANCE OF TRAFFIC CONTROL ON MAJOR AND PRIME ARTERIALS, UNLESS OTHERWISE APPROVED. THESE SIGNS SHALL BE SHOWN ON THE TRAFFIC CONTROL PLAN.

SIGNAGE NOTES:

1. AT LEAST ONE PERSON SHALL BE ASSIGNED TO FULL TIME MAINTENANCE OF TRAFFIC CONTROL DEVICES ON ALL NIGHT LANE CLOSURES.
2. ALL WARNING SIGNS FOR NIGHT LANE CLOSURES SHALL BE ILLUMINATED OR REFLECTORIZED AS SPECIFIED IN THE SPECIFICATIONS.
3. ALL ADVANCE WARNING SIGN INSTALLATIONS SHALL BE EQUIPPED WITH FLAGS FOR DAYTIME CLOSURES OF ALL MAJOR AND PRIME ARTERIALS. FLASHING BEACONS SHALL BE USED DURING NIGHT LANE CLOSURES.
4. A G20-2 "END ROAD WORK" SIGN SHALL BE PLACED AT THE END OF THE LANE CLOSURE UNLESS THE END OF THE WORK AREA IS OBVIOUS, OR ENDS WITHIN A LARGER PROJECT LIMITS.
5. ALL CONES USED FOR NIGHT LANE CLOSURES SHALL BE ILLUMINATED TRAFFIC CONES OR FITTED WITH 13" REFLECTIVE SLEEVES.
6. FLASHING ARROW SIGNS SHALL BE USED PER CA MUTCD 2014 EDITION. SILENT TYPE SHALL BE USED IN RESIDENTIAL AREAS.
7. THE MAXIMUM SPACING BETWEEN CONES SHALL BE THE WORK AREA'S SPEED LIMIT.
8. ADDITIONAL ADVANCE FLAGGERS SHALL BE REQUIRED WHEN TRAFFIC QUEUES DEVELOP. FLAGGER STATIONS FOR WORK AT NIGHT SHALL BE ILLUMINATED AS NOTED IN SECTION 6G.20 OF THE MUTCD.
9. ALL REQUIRED SIGNS THAT ARE TO BE LEFT IN PLACE OVER A WEEKEND OR HOLIDAY SHALL BE POST MOUNTED.
10. CONSTRUCTION AREA TRAFFIC CONTROL DEVICES SHALL MEET THE PROVISIONS OF 2014 CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

SIGN LEGEND

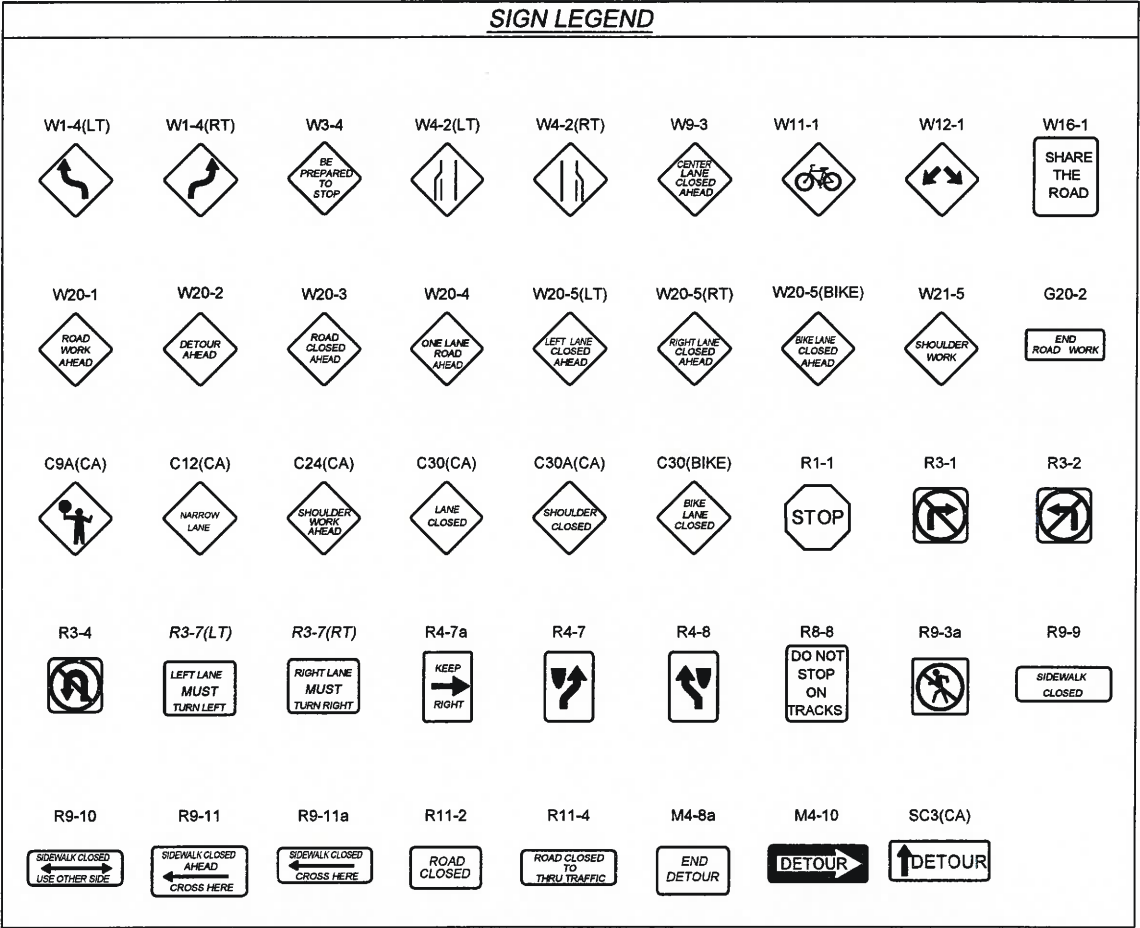


Table 6C-1. Recommended Advance Warning Sign Minimum Spacing

Road Type	Distance Between Signs*		
	A	B	C
Urban (low speed) – 25 mph or less	100 ft	100 ft	100 ft
Urban (high speed) – more than 25 mph to 40 mph	250 ft	250 ft	250 ft
Urban (high speed) – more than 40 mph	350 ft	350 ft	350 ft
Rural	500 ft	500 ft	500 ft
Expressway / Freeway	1,000 ft	1,000 ft	1,000 ft

* Speed category to be determined by the highway agency.
** The column headings A,B, and C are the dimensions shown in Figures 6H-1 through 6H-46. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The "first sign" is the sign in a three-sign series that is closest to the TTC zone. The "third sign is the sign that is furthest upstream from the TTC zone.)

LEGEND			
	DIRECTION OF TRAVEL		FLAG TREE
	PAVEMENT ARROW		FLASHING ARROW BOARD
	PORTABLE SIGN		TRAFFIC SIGNAL
	TRAFFIC CONE / DELINEATOR		K-RAIL (TYPE 50 CONCRETE BARRIER)
	TYPE II BARRICADE		CHANGEABLE MESSAGE SIGN
	TYPE III BARRICADE		FLAGGER
	WORK AREA		DRIVEWAY

Table 6C-2. Stopping Sight Distance as a Function of Speed on Level Roads.
(Used as suggested longitudinal buffer space length or location for flagger station)

Speed*	Distance
20 mph	115 feet
25 mph	155 feet
30 mph	200 feet
35 mph	250 feet
40 mph	305 feet
45 mph	360 feet
50 mph	425 feet
55 mph	495 feet
60 mph	570 feet
65 mph	645 feet
70 mph	730 feet
75 mph	820 feet

* Posted speed, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph.

Table 6C-3 (CA). Taper Length Criteria for Temporary Traffic Control Zones (for 12 feet Offset Width)

Speed* S (mph)	Minimum Taper Length** for Width of Offset 12 feet (w)			
	Merging L (feet)	Shifting L/2 (feet)	Shoulder L/3 (feet)	Down Stream (feet)**
20	80	40	27	50
25	125	63	42	50
30	180	90	60	50
35	245	123	82	50
40	320	160	107	50
45	540	270	180	50
50	600	300	200	50
55	660	330	220	50
60	720	360	240	50
65	780	390	260	50
70	840	420	280	50

* - Posted speed limit, off peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph.
** - For other offsets use the following merging taper length formula for L:
For speeds of 40 mph or less, $L = WS^2/60$
For speeds of 45 mph or more, $L = WS$
Where L = taper length in feet
W = width of offset in feet
S = posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph.
*** - Maximum downstream taper length is 100 feet. See Section 6C.08.



Jerry L. Michal
R.C.E. NO. C 42590
EXP. 03-31-20
10-23-18
DATE

OWNER / DEVELOPER:

CROWN CASTLE

685 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncc.com

PLANS PREPARED BY:

Coastal Communications

Telecommunications Engineering
5841 EDISON PLACE, STE. 200
CARLSBAD, CA 92008
PH: (760) 929-0070
FX: (760) 929-0035

CITY OF:

PALO ALTO

PROJECT NUMBER:
JOHN GRIFFITHS

PROJECT MANAGER:
VZWS66241CA-SFPA024-SFO TC

FILE NAME:

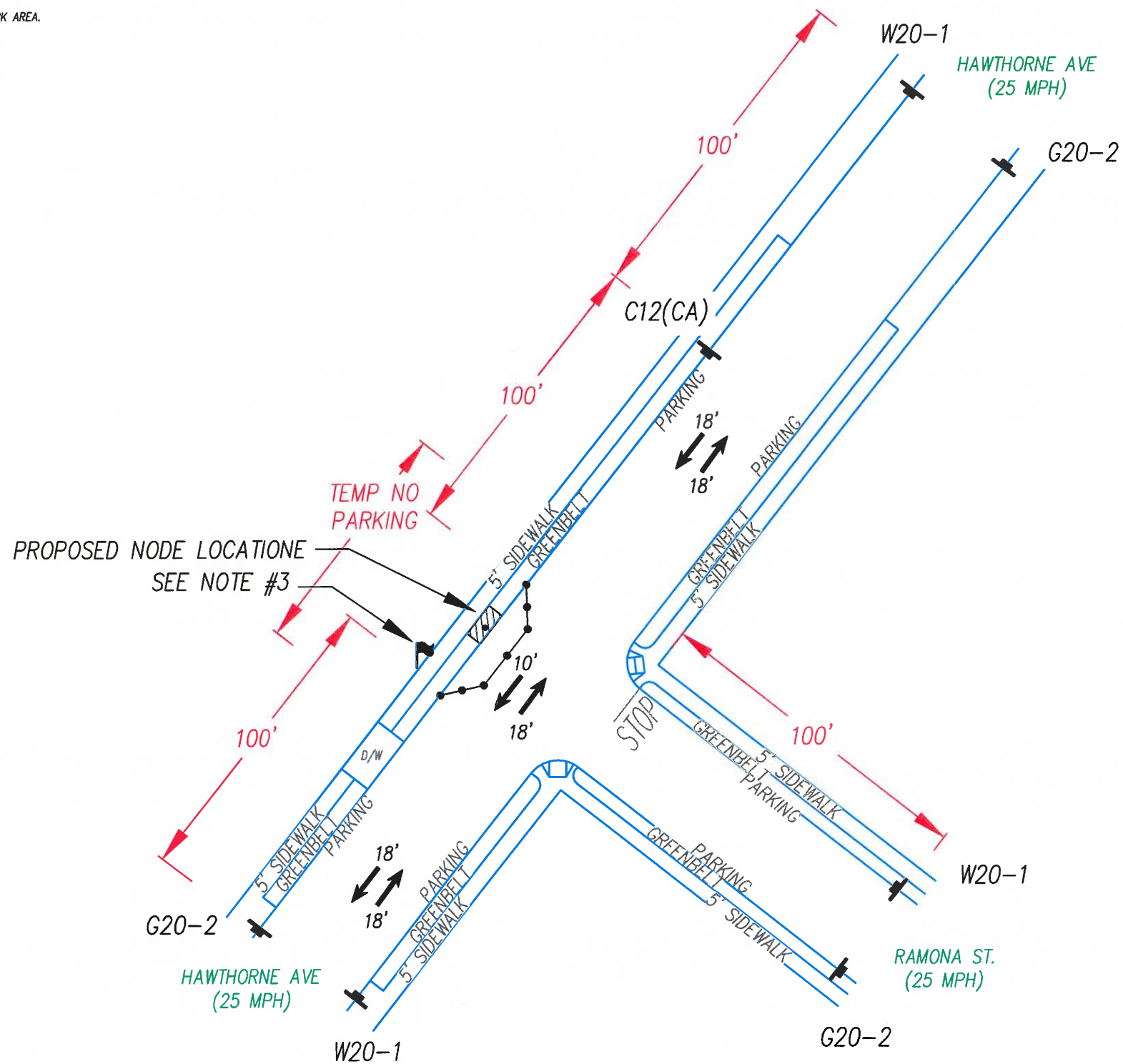
243 HAWTHORNE AVE

PAGE GRID:
DATE: 1/23/17
CHECK BY: GD
DRAWN BY: VY
SHEET NO.: T01 OF T02

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES.
2. W20-1 & G20-2 SHALL BE PLACED ON AFFECTED CROSS STREETS ACCORDING TO THE SPEED LIMIT OF THE CROSS STREET.
3. FLAGGER SHALL ASSIST PEDESTRIANS THROUGH WORK AREA.

PHASE 1



Jerry L. Michal
JERRY L. MICHAL R.C.E. NO. C 42590 EXP. 03-31-20

10-23-18
DATE

OWNER / DEVELOPER:
CROWN CASTLE
665 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PLANS PREPARED BY:
Coastal Communications
Traffic Engineering
2000 RIVER OAKS PARKWAY, STE. 200
SAN JOSE, CA 95134
PH: (760) 829-0010
FX: (760) 829-0036

DCA/PT
1-800-277-2800
CALL AT LEAST TWO HOURS BEFORE THE JOB
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TICKET #

CITY OF: PALO ALTO
JOHN GRIFFITHS
PROJECT MANAGER
VZW366241CA-SFPA024-SFO TC
FILE NAME

243 HAWTHORNE AVE
PROJECT NUMBER: VZW366241CA-SFPA024
PAGE GRID: 1/23/17
CHECK BY: GD
DRAWN BY: VY
SHEET NO.: T02 OF T02



SF PALO ALTO 032
ROW ADJACENT TO
201 HIGH ST
PALO ALTO, CA

DIRECTIONS FROM 695 RIVER OAKS PARKWAY, SAN JOSE CA 95124:

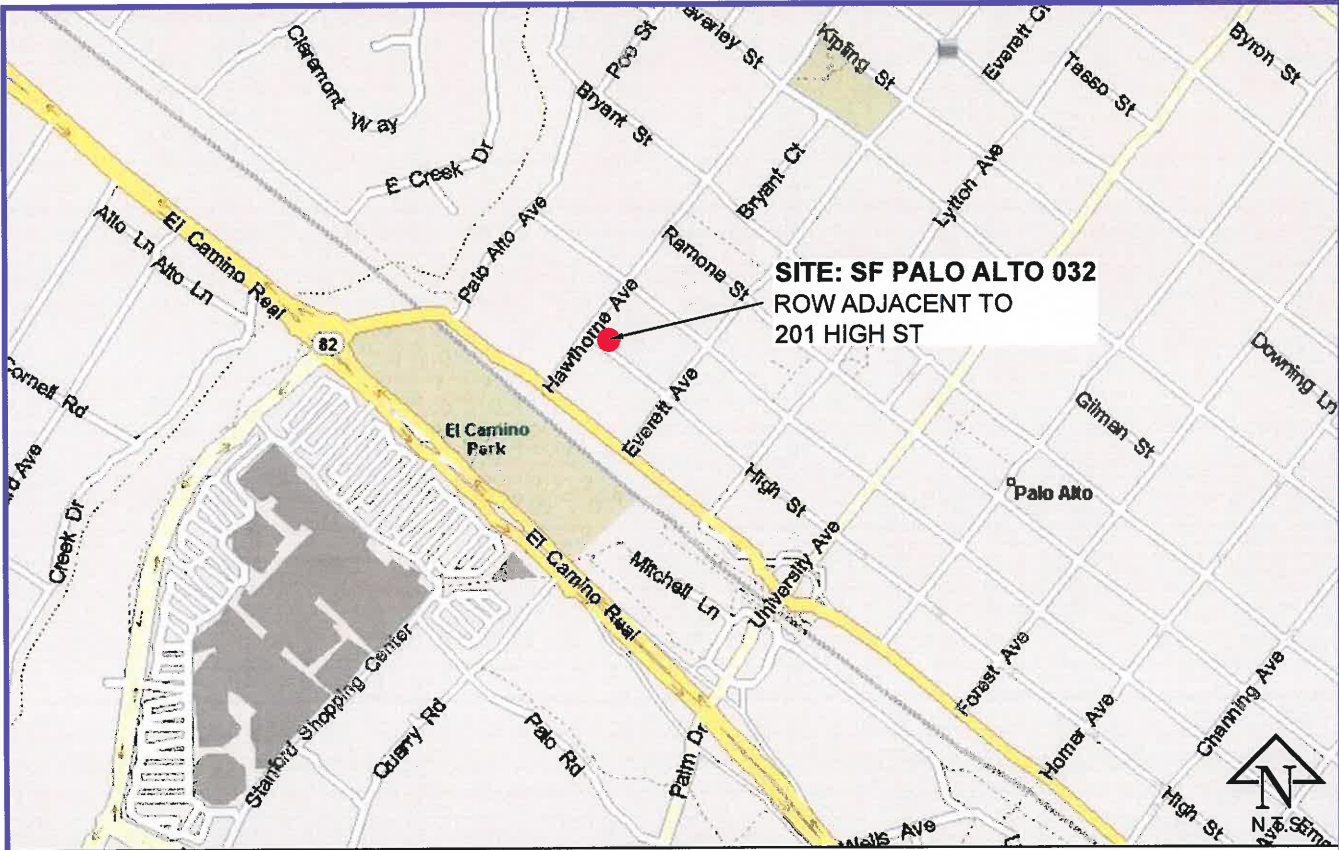
HEAD NORTHEAST ON RIVER OAKS PARKWAY TOWARD VILLAGE CENTER DR, TURN LEFT ONTO VILLAGE CENTER DR, TURN LEFT ONTO RESEARCH PL, TURN RIGHT AT THE 1ST CROSS STREET ONTO MONTAGUE EXPRESSWAY, SLIGHT RIGHT TO MERGE ONTO US-101 N TOWARD SAN FRANCISCO, MERGE ONTO US-101 N, TAKE EXIT 402 FOR EMBARCADERO RD, KEEP LEFT, FOLLOW SIGNS EMBARCADERO RD W. AND MERGE ONTO EMBARCADERO RD, SLIGHT RIGHT TO STAY ON EMBARCADERO RD, TURN RIGHT ONTO ALMA ST, TURN RIGHT ONTO HAWTHORNE AVE. WOOD POLE NODE IS ON THE LEFT.

DRIVING DIRECTIONS

- STREET USE PERMIT SHALL BE OBTAINED BY CONTRACTOR PRIOR TO COMMENCING WORK.
- ALL WORK TO BE CONDUCTED IN THE RIGHT OF WAY.
- ALL DISTURBED LANDSCAPING SHALL BE REPLACED TO SIMILAR EXISTING CONDITION.
- ANY SIDEWALK CLOSURE SHALL BE COORDINATED WITH THE CITY AND PROPER SIGNING WILL BE PLACED.
- NO MATERIALS OR EQUIPMENT SHALL BE STORED ON PRIVATE PROPERTY OR BLOCK ACCESS TO PRIVATE PROPERTY.
- CLEANUP OF SITE WILL BE COMPLETED EACH EVENING AND THE SITE WILL BE RETURNED TO EXISTING CONDITIONS AT THE COMPLETION OF CONSTRUCTION AT EACH SITE.

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

GENERAL CONTRACTOR NOTES



VICINITY MAP

SHEET NUMBER:	DESCRIPTION
C-1	TITLE SHEET
C-2	CONDITIONS OF APPROVAL
C-3	CONDITIONS OF APPROVAL
D-1	DETAILS & NOTES
D-2	DETAILS & NOTES
D-3	DETAILS & NOTES
D-4	DETAILS & NOTES
D-5	DETAILS & NOTES
D-6	DETAILS & NOTES
D-7	DETAILS & NOTES
T1.1	SPECIAL TREE PROTECTION INSTRUCTION SHEET
T1.2	SPECIAL TREE PROTECTION INSTRUCTION SHEET
T1.3	SPECIAL TREE PROTECTION INSTRUCTION SHEET
T1.4	SPECIAL TREE PROTECTION INSTRUCTION SHEET
P-1	PHOTOS
P-2	PHOTOSIM
P-3	PROFILE
P-4	PROFILE
SP-1	SITE PLAN
SP-2	ENLARGED SITE PLAN
OC-1	O'CALCS
T01	TRAFFIC CONTROL
T02	TRAFFIC CONTROL

SHEET INDEX

CROWN CASTLE TO INSTALL THE FOLLOWING:

- INSTALL NEW VGR.
- INSTALL NEW POWER DISCONNECT BOX ON STANDOFF BRACKET AT 8'-0" TO 8'-9".
- INSTALL NEW WTR ENCLOSURE ON STANDOFF BRACKET AT 9'-6" TO 10'-6".
- INSTALL NEW STANDOFF BRACKET KIT WITH (1) RRUS-11 AT 11'-0" TO 12'-5".
- INSTALL NEW RRUS BRACKET KIT WITH (2) RRUS-32 AT 16'-3".
- INSTALL NEW 2" SCHEDULE 80 COMM RISER.
- INSTALL NEW CROWN CASTLE FIBER AT 24'-9".
- INSTALL NEW GUARD ARM AT 25'-2".
- INSTALL NEW 1" SCHEDULE 80 POWER RISER.
- INSTALL 4'-8" POLE MOUNTED EXTENSION & (1) NEW 48" AMPHENOL ANTENNA MODEL #CUUT360X12F124s0 WITH CUSTOM SHROUD CONCEALMENT COVER.
- INSTALL NOTICE & CAUTION SIGNS.
- ALL EQUIPMENT SHALL BE PAINTED TO MATCH TEXTURE AND COLOR.
- NO GROUND DISTURBANCE NECESSARY.

PROJECT SUMMARY

PROJECT MANAGER:

CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
JOHN GRIFFITHS
(408) 468-5524
JOHN.GRIFFITHS@CROWNCastle.COM

NODE ENGINEER:

COASTAL COMMUNICATIONS
5841 EDISON PL, STE. 200
CARLSBAD, CA 92008
TODD THREW
(760) 929-0910 ext. 101
TODD@COASTALCOMMINC.COM

PROJECT TEAM

SF PALO ALTO 032
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



PROPRIETARY INFORMATION

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UNDERGROUND SERVICE ALERT
TICKET #

ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:

ROW ADJACENT TO 201 HIGH ST
PALO ALTO, CA

37.446382/-122.166954

TITLE SHEET

DRAWN BY: BW	DRAFT DATE: 02/13/18	APPROVED BY: TT
-----------------	-------------------------	--------------------

SHEET NO.

C-1

PENDING C.O.A .

SF PALO ALTO 032
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



PROPRIETARY INFORMATION

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TICKET #

ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
ROW ADJACENT TO 201 HIGH ST
PALO ALTO, CA
37.446382/-122.166954

CONDITIONS OF
APPROVAL

DRAWN BY: BW	DRAFT DATE: 02/13/18	APPROVED BY: TT
-----------------	-------------------------	--------------------

SHEET NO.
C-2

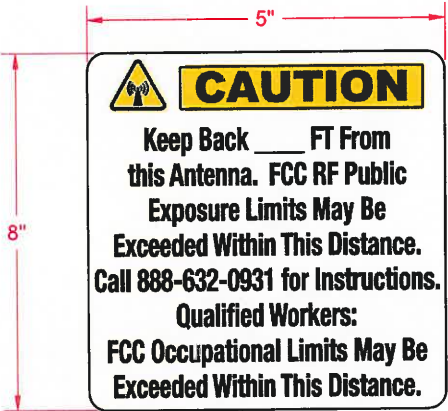
Applicant shall comply with the following comments/requirements.

1. Applicant shall install new street lighting poles with new foundations that are identical to the existing poles. New street lighting poles shall be installed as close as possible to the existing street lighting poles. Applicant shall ensure to maintain present illumination level on the streets.
2. Receptacles on street lights need to be pre-wired and mounted on the top of the street light. The receptacles shall be wired into the secondary voltage source and not the street light circuit.
3. New street lighting pole's drawing is approved. Applicant shall replace the existing street lighting poles with identical poles. If there is any deviation then it must be approved by Utilities Engineering prior to installation.
4. Locations for new street lighting poles shall be as close as possible to the existing street lighting poles. No street or location shall be left dark. After removal of existing street pole/s, new street lighting poles shall be installed and energized as soon as possible. Applicant to coordinate with Scott Yahne (650-444-8823) our Street Lighting Supervisor prior to making any electric connection/s.
5. An inner duct of adequate size shall be installed inside the street lighting poles so to keep antenna wiring separate from street lighting circuits. Power to the antenna or any other equipment mounted on the street lighting pole shall be tapped from the designated secondary electric service point and not from the street lighting circuit.
6. If the street lighting pole gets knocked down, the City shall replace the pole but the City shall not be responsible for any damages to the antenna or any other equipment mounted on the street lighting pole/s.
7. Applicant has submitted certified structural calculations pertaining to equipment loading on the new street lighting poles.

8. Utility's Engineer has reviewed applicant's proposed fiber infrastructure and confirmed acceptance as long as applicant maintains required clearances and protect our distribution lines.
9. Voltage at all the locations identified for applicant's equipment installation may not be. Applicant shall accept the voltage available at the closest location. Applicant shall be responsible for installing additional substructure per City's standards and specifications, if required.
10. Applicant shall contact Utilities Engineering (650-566-4535) prior to entering any energized box or vault.
11. Applicant shall install substructure per City's standard and specifications and maintain required clearances as shown on the City's standard drawings. The City's Underground Electric Inspector will inspect the substructure for electric utility. Applicant must contact Underground Electric Inspector at 650-496-6936 or his designated representative for scheduling an inspection prior to back filling the trench.
12. Applicant shall pot hole and locate underground facilities prior to trenching or boring. Applicant must contact USA (800-227-2600) and have underground facilities marked prior to excavation/trenching or boring.
13. At few locations, proposed trenching/boring route conflicts with our existing high voltage distribution lines, boxes/vaults etc. Extreme caution must be exercised to protect our utility lines and associated substructures.
14. Applicant shall protect existing underground utilities. Applicant has not submitted any trench profile as requested by Utilities. Hence, applicant shall bore/ trench at his/her risk. Applicant will be solely responsible for any damages caused during the construction.
15. Street opening permits shall be obtained from Public Works Engineering (PWE) Department prior to trenching or boring.
16. Traffic control plans must be submitted to Transportation Department and approval must be obtained prior to lane closures. Construction hours shall be per Transportation Department's requirements.
17. Applicant shall contact the Public Works Engineering (PWE) Department (650-566-4535) and obtain electric permit and cost estimate for each location. Any changes made to the original design or to the designated electric service point/s shall be coordinated with the PWE Department. Applicant must pay all fees/cost estimates prior to final service connections.

ANTENNA CAUTION SIGN

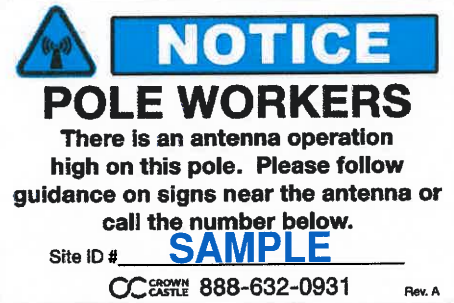
ANTENNA SIGNAGE:
ON WOOD POLES - SIGN ON ALUMINUM WITH SS SCREW TO THE POLE
ON METAL POLES - ADHESIVE VINYL OR PLACARD STRAPPED WITH SS TIES
ON CONCRETE / COMPOSITE - PLACARD STRAPPED WITH SS TIES
SIGN PLACEMENT:
AFFIX TO THE STRUCTURE ON OR JUST BELOW THE ANTENNA(S)
SIZE APPROX. 8" x 5"



A SCALE
N.T.S.

ANTENNA NOTICE SIGN

ANTENNA SIGNAGE:
ON WOOD POLES - SIGN ON ALUMINUM WITH SS SCREWS TO THE POLE
ON METAL POLES - ADHESIVE VINYL OR PLACARD STRAPPED WITH SS TIES
ON CONCRETE / COMPOSITE - PLACARD STRAPPED WITH SS TIES
SIGN PLACEMENT:
AFFIX TO THE STRUCTURE NEAR THE BOTTOM OF POLE OR ON THE SHROUD



B SCALE
N.T.S.

SF PALO ALTO 032
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



PROPRIETARY INFORMATION

THE INFORMATION CONTAINED IN THIS SET OF DRAWINGS IS PROPRIETARY AND CONFIDENTIAL TO VERIZON. ANY USE OR DISCLOSURE OTHER THAN AS IT RELATES TO VERIZON IS STRICTLY PROHIBITED.

DIGALERT



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CALL AT
LEAST TWO
DAYS BEFORE
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UNDERGROUND SERVICE ALERT
TICKET #

ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
ROW ADJACENT TO 201 HIGH ST
PALO ALTO, CA
37.446382/-122.166954

CONDITIONS OF
APPROVAL

DRAWN BY: BW	DRAFT DATE: 02/13/18	APPROVED BY: TT
-----------------	-------------------------	--------------------

SHEET NO.
C-3

LEGEND	
SYMBOL	DESCRIPTION
PROPOSED	
	2 X 3' VAULT
	CABINET
	PCC SIDEWALK
	TRENCH AND FIBER CONDUIT (PVT)
	DIRECTIONAL BORING
	BORE PIT
EXISTING	
	EXISTING STREET LIGHT
	EXISTING VAULT HANDHOLE
	EXISTING MAILBOX
	EXISTING TREE
	EXISTING TREE WELL
	STATION POINTS (100' INCREMENTS)
	EXISTING CURB RAMP
	C&G EXISTING CURB & GUTTER
	EXISTING FACE OF BUILDING
	EXISTING PARKING STRIPING
	EXISTING RIGHT OF WAY
	EXISTING CENTER LINE
	EXISTING WATER LINE
	EXISTING WATER LATERAL
	EXISTING SEWER LINE
	EXISTING SEWER LATERAL
	EXISTING GAS LINE
	EXISTING GAS LATERAL
	EXISTING STORM DRAIN LINE
	STREET CURRENTLY UNDER MODIFICATION

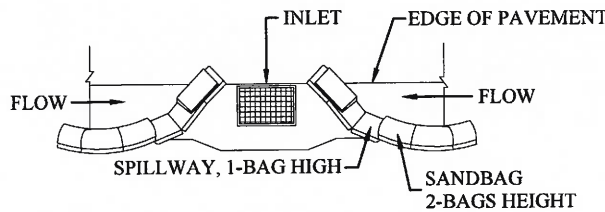
ABBREVIATIONS	
A/C	ASPHALT CURB
B.O.C.	BACK OF CURB
B/EOP	BACK OF EDGE OF PAVEMENT
C&G	CURB & GUTTER
CL	CENTERLINE
EX.	EXISTING
EOP	EDGE OF PAVEMENT
F.O.C.	FACE OF CURB
F/EOP	FACE OF EDGE OF PAVEMENT
PL	PROPERTY LINE
R/W	RIGHT OF WAY
S/B	SUBDIVISION BOUNDARY

EROSION AND SEDIMENT CONTROL NOTES:

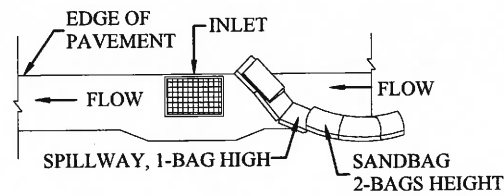
TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

- ALL REQUIREMENTS OF THE CITY "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED PUBLIC IMPROVEMENTS CONSISTENT WITH THE EROSION CONTROL PLAN AND/OR WATER POLLUTION CONTROL PLAN (WPCP), IF APPLICABLE.
- FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
- THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
- EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON.
- THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
- THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
- ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED IMPROVEMENT PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
- ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
- THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER/DEVELOPER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

STORMDRAIN INLET PROTECTION



TYPICAL PROTECTION FOR INLET WITH OPPOSING FLOW DIRECTIONS



TYPICAL PROTECTION FOR INLET WITH SINGLE FLOW DIRECTION

- NOTES:**
- INTENDED FOR SHORT - TERM USE.
 - USE TO INHIBIT NON - STORM WATER FLOW.
 - ALLOW FOR PROPER MAINTENANCE AND CLEANUP.
 - BAGS MUST BE REMOVED AFTER ADJACENT OPERATION IS COMPLETED.
 - NOT APPLICABLE IN AREAS WITH HIGH SILTS AND CLAYS WITHOUT FILTER FABRIC.

NOTES:

- CONTRACTOR TO POTHOLE ALL UTILITY CROSSINGS.
- CONTRACTOR TO PLACE SANDBAGS AROUND ANY/ALL STORM DRAIN INLETS TO PREVENT CONTAMINATED WATER.
- SPOILS PILE WILL BE COVERED AND CONTAINED AND STREET WILL BE SWEEPED AND CLEANED AS NEEDED.
- CONTRACTOR TO REPAIR DAMAGED PUBLIC IMPROVEMENTS TO THE SATISFACTION OF THE CITY ENGINEER.
- C&G TO BE PROTECTED IN PLACE. SIDEWALK TO BE REPLACED TO THE SATISFACTION OF THE CITY ENGINEER.
- THE CONTRACTOR SHALL RESTORE THE ROADWAY BACK TO ITS ORIGINAL CONDITION SATISFACTORY TO THE CITY ENGINEER INCLUDING, BUT NOT LIMITED TO PAVING, STRIPING, BIKE LANES, PAVEMENT LEGENDS, SIGNS, AND TRAFFIC LOOP DETECTORS.
- SIDEWALK SHALL BE RESTORED/REPLACED PER CITY STANDARD DRAWINGS.
- PEDESTRIAN RAMP WILL NOT BE DISTURBED.

ROW GROUND CONSTRUCTION NOTES:

- GROUND CONSTRUCTION TO REMOVE/CLEAN ALL DEBRIS, NAILS, STAPLES, OR NON-USED VERTICALS OFF THE POLE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MUNICIPAL, COUNTY, STATE, FEDERAL, GO95 AND GO128 STANDARDS AND REGULATIONS.
- CALL USA 48 HOURS PRIOR TO EXCAVATING AT (800) 227-2600 OR 811.
- ALL LANDSCAPING TO BE RESTORED TO ORIGINAL CONDITION OR BETTER.
- ALL EQUIPMENT TO BE BONDED.
- METERING CABINET REQUIRES 36" CLEARANCE AT DOOR OPENING.
- CAULK CABINET BASE AT PAD.

NORMAL LOCATION OF UNDERGROUND UTILITIES NOTES:

- LOCATION AND DEPTH OF EXISTING AND PROPOSED UTILITIES MUST BE PROVIDED BY THE SUBDIVIDER AND SHOWN ON ANY PLANS SUBMITTED TO THE DEPT. OF PUBLIC WORKS FOR APPROVAL.
- CHANGES MAY BE PERMITTED BY THE DEPT. OF PUBLIC WORKS IN CASES OF CONFLICTING FACILITIES.
- CONFLICTS BETWEEN UTILITY COMPANIES FACILITIES, EXISTING AND PROPOSED, MUST BE MUTUALLY RESOLVED BY THE UTILITY COMPANIES.
- FOR COMMERCIAL SIDEWALKS, THE FIRE HYDRANT SHALL BE PLACED WITHIN THE SIDEWALK 1'-6" BEHIND FACE OF CURB.
- MAXIMUM 2" DIAMETER GAS MAINS MAY BE PLACED IN JOINT UTILITIES TRENCH SUBJECT TO APPROVAL OF CITY ENGINEER (IN TRACTS).

GENERAL CONTRACTOR NOTES:

- STREET USE PERMIT SHALL BE OBTAINED BY CONTRACTOR PRIOR TO COMMENCING WORK.
- ALL WORK TO BE CONDUCTED IN THE RIGHT OF WAY.
- ALL DISTURBED LANDSCAPING SHALL BE REPLACED TO SIMILAR EXISTING CONDITION.
- ANY SIDEWALK CLOSURE SHALL BE COORDINATED WITH THE CITY AND PROPER SIGNING WILL BE PLACED.
- NO MATERIALS OR EQUIPMENT SHALL BE STORED ON PRIVATE PROPERTY OR BLOCK ACCESS TO PRIVATE PROPERTY.
- CLEANUP OF SITE WILL BE COMPLETED EACH EVENING AND THE SITE WILL BE RETURNED TO EXISTING CONDITIONS AT THE COMPLETION OF CONSTRUCTION AT EACH SITE.

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

CALIFORNIA STATE CODE COMPLIANCE:

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

- CALIFORNIA ADMINISTRATIVE CODE (INCLUDING TITLES 24 & 25) 2016
- 2016 CALIFORNIA BUILDING CODES WHICH ADOPTS THE 2016 UBC, 2016 UMC, 2016 UPC AND THE 2016 NEC.
- BUILDING OFFICIALS & CODE ADMINISTRATORS (BOCA)
- 2016 CALIFORNIA MECHANICAL CODE
- ANSI/EIA-222-F LIFE SAFETY CODE NFPA-101
- 2016 CALIFORNIA PLUMBING CODE
- 2016 CALIFORNIA ELECTRICAL CODE
- 2016 LOCAL BUILDING CODE
- CITY/COUNTY ORDINANCES

ACCESSIBILITY REQUIREMENTS:
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS DO NOT APPLY IN ACCORDANCE WITH THE 2010 CALIFORNIA BUILDING CODE.

FCC NOTE:
THIS WIRELESS COMMUNICATION FACILITY COMPLIES WITH FEDERAL STANDARDS FOR RADIO FREQUENCY IN ACCORDANCE WITH THE TELECOMMUNICATION ACT OF 1996 AND SUBSEQUENT AMENDMENTS AND ANY OTHER REQUIREMENTS IMPOSED BY STATE OR FEDERAL REGULATORY AGENCIES.

CITY OF PALO ALTO UTILITIES ENGINEERING NOTES:

- APPLICANT SHALL TAP ELECTRIC SERVICE TO THE SMALL CELL DISTRIBUTED ANTENNA SYSTEM FROM THE LOCATIONS JOINTLY IDENTIFIED DURING THE FIELD INVESTIGATION.
- SERVICE VOLTAGE TO ALL THE PROPOSED LOCATIONS MAY NOT BE THE SAME. APPLICANT SHALL DESIGN THEIR SYSTEM TO OPERATE AT THE AVAILABLE VOLTAGE IN THE VICINITY.
- IF BRAND NEW POLES NEED TO BE INSTALLED FOR APPLICANT'S SYSTEM THEN THE POLES MUST MATCH EXISTING POLES IN THE DOWN TOWN AREA.
- AFTER EXCAVATION IS COMPLETED ON THE PUBLIC RIGHT OF WAY, EXISTING STREETS INCLUDING SIDEWALKS/ CURB/ GUTTER OR ANY DECORATIVE PATHS MUST BE BROUGHT TO ITS ORIGINAL CONDITION AND MUST BE APPROVED BY PUBLIC WORKS ENGINEERING DEPARTMENT'S INSPECTOR. POTHOLING MUST BE DONE AND ALL THE UTILITIES MUST BE IDENTIFIED PRIOR TO COMMENCING EXCAVATION.
- EXCAVATION AND RESTORATION WORK MUST BE IN COMPLIANCE WITH PUBLIC WORKS ENGINEERING STANDARDS AND SPECIFICATIONS THAT ARE AVAILABLE ON THE FOLLOWING WEBSITE:
<http://www.cityofpaloalto.org/news/displaynews.asp?NewsID=1834&TargetID=145>
- APPLICANTS SHALL BE RESPONSIBLE FOR MAINTAINING THEIR SYSTEM INCLUDING SUBSTRUCTURE. IN CASE OF KNOCK DOWNS, THE CITY WILL RE-INSTALL ITS STREET LIGHTING POLES BUT **NOT** APPLICANT'S EQUIPMENT ON OR OFF THE POLE.
- A FIELD MEETING IS RECOMMENDED WITH UTILITIES ENGINEERING PRIOR TO COMMENCING THE WORK.
- PLANS SHALL INCLUDE A NOTE: **CONTRACTOR TREE INSPECTION REQUIREMENTS:** MODIFIED TYPE III TRUNK WRAPPING SHALL BE VERIFIED BY URBAN FORESTRY PRIOR TO ANY WORK IN THE VICINITY. FOR EACH TREE SITE WRAPPED FOR PROTECTION WITHIN 15' OF ANY WORK ZONE OR CONCRETE FORM SECTION, A BILL ABLE TREE INSPECTION BY URBAN FORESTRY (650-496-5953, 24-HOUR ADVANCE IS REQUIRED) SHALL BE COMPLETED PRIOR TO DEMOLITION, DRILLING, EXCAVATING, FORMING OR STREET LIGHT ACTIVITY. CONTRACTOR SHALL ARRANGE PAYMENTS AT THE DEVELOPMENT CENTER, 285 HAMILTON AVE, PALO ALTO, CA.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITIES DEPARTMENT 650/329-2413 OR 650/496-6982 IF THE EXISTING WATER, WASTEWATER OR GAS MAINS ARE DISTURBED OR DAMAGED. A QUALIFIED CONTRACTOR MAY PERFORM REPAIRS ON CITY WATER AND WASTEWATER MAINS UNDER THE DIRECT SUPERVISION OF THE WGW UTILITIES INSPECTOR. FOR WATER REPAIRS ALL THE DISINFECTION REQUIREMENTS OF THE WGW UTILITY STANDARDS AND THESE CONDITIONS SHALL BE ADHERED TO. ALL REPAIRS TO THE CITY GAS SYSTEM MUST BE PERFORMED BY THE CITY OF PALO ALTO UTILITIES.
- NO WATER VALVES OR OTHER FACILITIES OWNED BY UTILITIES DEPARTMENT SHALL BE OPERATED FOR ANY PURPOSE BY THE APPLICANT'S CONTRACTOR. ALL REQUIRED OPERATION WILL ONLY BE PERFORMED BY AUTHORIZED UTILITIES DEPARTMENT PERSONNEL. WATER VALVES MAY BE OPERATED BY THE CONTRACTOR UNDER THE DIRECT SUPERVISION OF THE WGW UTILITIES INSPECTOR. THE APPLICANT'S CONTRACTOR SHALL NOTIFY THE UTILITIES DEPARTMENT NOT LESS THAN FORTY- EIGHT (48) HOURS IN ADVANCE OF THE TIME THAT SUCH OPERATION IS REQUIRED.

SF PALO ALTO 032 PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:

695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0956
www.coastalcomminc.com

PROPRIETARY INFORMATION

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UNDERGROUND SERVICE ALERT
TICKET #

ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
**ROW ADJACENT TO 201 HIGH ST
PALO ALTO, CA**
37.446382/-122.166954

DETAILS & NOTES

DRAWN BY: BW	DRAFT DATE: 02/13/18	APPROVED BY: TT
SHEET NO. D-1		

The diagram illustrates the construction of a trench for two types of pavement: Asphalt Concrete (A.C.) and Portland Cement Concrete (P.C.C.).

ASPHALT CONCRETE PAVEMENT:

- Replace pavement in kind or 8" min of Class 2 A.B. and 2" A.C., whichever is greater**
- T-Cut** (6" typ)
- OR**
- Replace pavement with 8" deep lift A.C.**
- Apply for seal (typ)** (6" width)
- Sawcut/milling full depth (typ)**
- 6" PCC w/AC overlay** (6" width)
- Class 2 A.B.** (2" thick)
- 8" A.C.** (8" thick)
- 8" A.B.** (8" thick)
- 95%** (compaction requirement)
- 12"** (height)
- O.D.** (Outside Diameter)
- 4" min or O.D./6 (typ)** (width)
- O.D. + 8" min** and **O.D. + 24" max** (widths)

PCC PAVEMENT:

- CLEAR ZONE** (No equipment or material stockpile)
- Replace pavement in kind or 6" min PCC, whichever is greater**
- 2" min** (width)
- 12" long, #4 dowels**
- 6"** (width)
- 6" PCC**
- 4" A.B.** (4" thick)
- 90%** (compaction requirement)
- 12"** (height)
- O.D.** (Outside Diameter)
- 4" min or O.D./6 (typ)** (width)
- O.D. + 8" min** and **O.D. + 24" max** (widths)

SUBSEQUENT BACKFILL ALTERNATIVES:

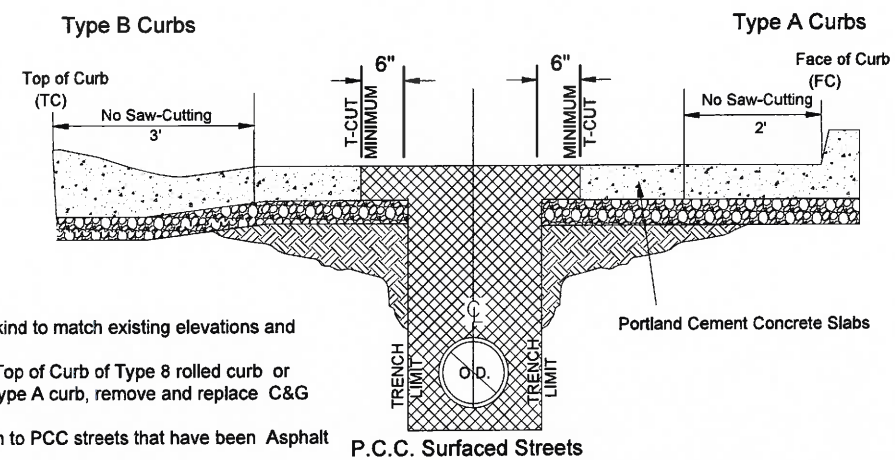
- Clean natural sand per Caltrans Std Specs Sec 19-3.025B
- Class 2 aggregate base per Caltrans Std Specs Sec 26-1.02
- Graded granular material per City Std Specs Sec 17-4F
- Clean quarry fines
- Controlled Density Fill (CDF) per City Std Specs Sec 17-4E4b as approved by PWE

INITIAL BACKFILL (PIPE ZONE) ALTERNATIVES:

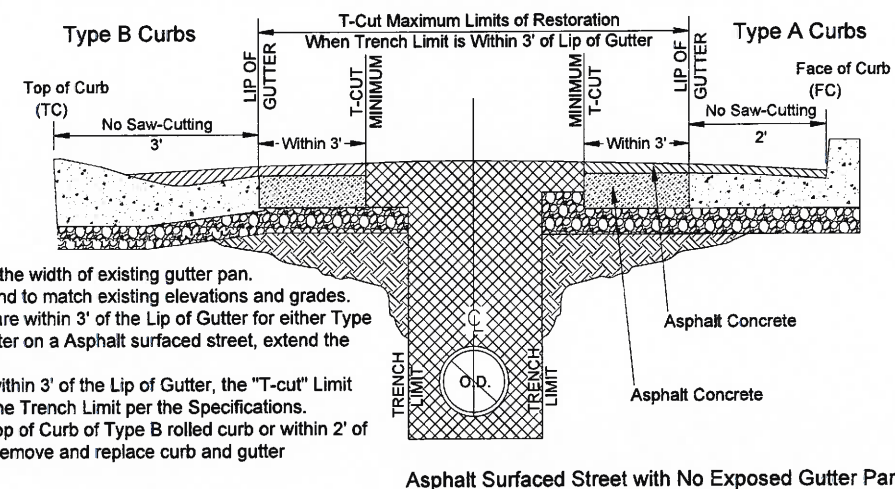
- Clean natural sand per Caltrans Std Specs Sec 19-3.025B (required for gas and water pipes)
- Class 1, type A & B, permeable per Caltrans Std Specs Sec 68-1.025
- Graded granular material per City Std Specs Sec 17-4E4
- Controlled Density Fill (CDF) per City Std Specs Sec 17-4E4b as approved by PWE
- For W-G-W trench, refer to Utility Standards

1. PCC shall contain a minimum of 6 sacks concrete with a desired 28-day strength of 3,500 PSI
2. Extend T-cut to lip of Gutter per City Std Specs 17-G
3. Refer to City Std Dwg 403 for trench limits of restoration
4. Match existing AC thickness on PCC overlays

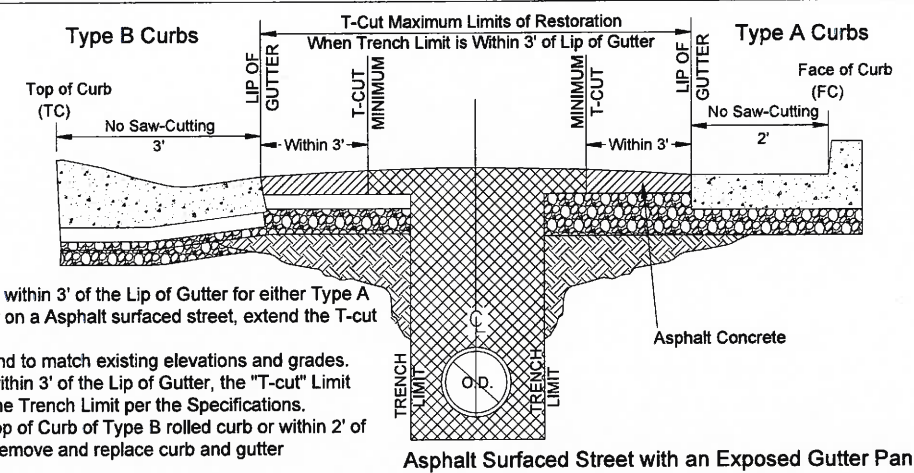
1. **IMPROVED AREAS**
 - a. **INITIAL BACKFILL-** jetting of sand OK
 - b. **SUBSEQUENT BACKFILL-**jetting of sand subject to approval of City Engineer, except for top 2 ft, which must be mechanically compacted
2. **UNIMPROVED AREA:** jetting of sand OK
3. **WHEN JETTING IS PERMITTED:**
 - a. Excess water shall be collected at low points and removed by pumping
 - b. Sand to be jetted shall be placed in lifts no thicker than 4 ft
 - c. Jetting shall be performed at intervals along the trench not to exceed 6 ft



1. Restore all materials in kind to match existing elevations and grades.
2. If Sawcut is within 3' of Top of Curb of Type 8 rolled curb or within 2' of the face of Type A curb, remove and replace C&G monolithically.
3. These notes also pertain to PCC streets that have been Asphalt overlaid.



1. Remove asphalt to verify the width of existing gutter pan.
2. Restore all materials in kind to match existing elevations and grades.
3. When "Trench Limits" is are within 3' of the Lip of Gutter for either Type A or Type B curb and gutter on a Asphalt surfaced street, extend the T-cut to the Lip of Gutter.
4. If "Trench Limit" is NOT within 3' of the Lip of Gutter, the "T-cut" Limit shall be located 6" from the Trench Limit per the Specifications.
5. If Sawcut is within 3' of Top of Curb of Type B rolled curb or within 2' of the face of Type A curb, remove and replace curb and gutter monolithically.



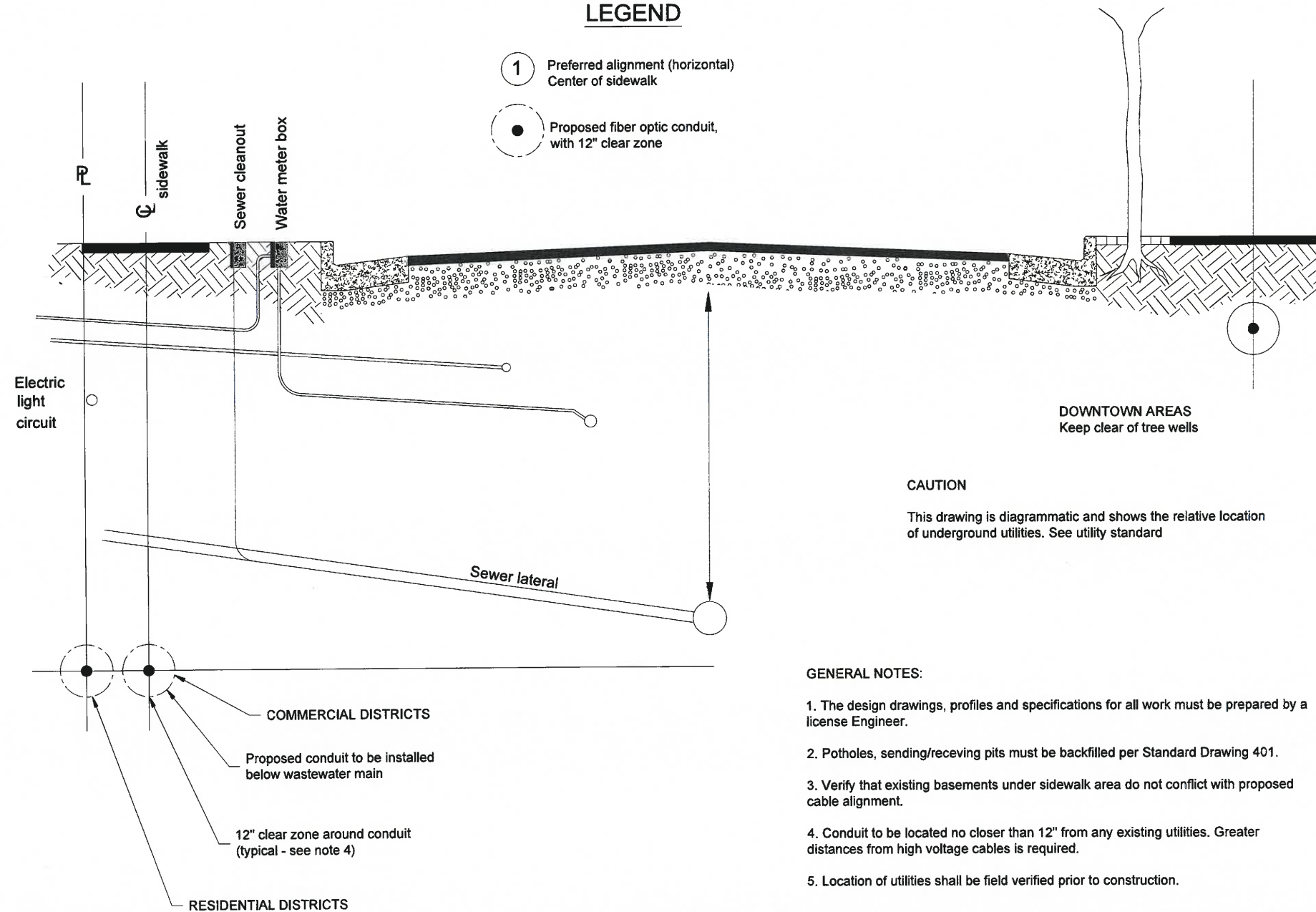
1. When "Trench Limits" are within 3' of the Lip of Gutter for either Type A or Type B curb and gutter on a Asphalt surfaced street, extend the T-curb to the Lip of Gutter.
2. Restore all materials in kind to match existing elevations and grades.
3. If "Trench Limit" is NOT within 3' of the Lip of Gutter, the "T-cut" Limit shall be located 6" from the Trench Limit per the Specifications.
4. If Sawcut is within 3' of Top of Curb of Type B rolled curb or within 2' of the face of Type A curb, remove and replace curb and gutter monolithically.

D-2

CITY OF PALO ALTO STANDARD
(DRAWING NO. 402)
CONDUIT LOCATION DETAIL
TELECOMMUNICATIONS
N.T.S.

LEGEND

- 1 Preferred alignment (horizontal)
Center of sidewalk
- Proposed fiber optic conduit,
with 12" clear zone



GENERAL NOTES:

1. The design drawings, profiles and specifications for all work must be prepared by a license Engineer.
2. Potholes, sending/receiving pits must be backfilled per Standard Drawing 401.
3. Verify that existing basements under sidewalk area do not conflict with proposed cable alignment.
4. Conduit to be located no closer than 12" from any existing utilities. Greater distances from high voltage cables is required.
5. Location of utilities shall be field verified prior to construction.

SF PALO ALTO 032
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



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SITE NAME & ADDRESS:
ROW ADJACENT TO 201 HIGH ST
PALO ALTO, CA
37.446382/-122.166954

DETAILS & NOTES

DRAWN BY: BW	DRAFT DATE: 02/13/18	APPROVED BY: TT
SHEET NO. D-3		

CUUT360X12F124s0

Electrical Characteristics	Low Band		High Bands #1 and #2			
	696-960 MHz		(2x) 1695-2700 MHz			
Frequency Bands (MHz)	696-806	806-960	1695-1880	1880-1990	1920-2200	2300-2700
Polarization	±45°		(2x) ±45°			
Horizontal Beamwidth	360°	360°	360°	360°	360°	360°
Vertical Beamwidth	20°	15°	7.5°	7.0°	6.5°	6.0°
Gain	5.5 dBi	6.0 dBi	9.0 dBi	9.5 dBi	10.0 dBi	10.3 dBi
Electrical Downtilt (°)	(4) 0, 2, 4, 6, 8, 10, 12		(4) 0, 4, 8, 12			
Impedance	50Ω		50Ω			
VSWR	≤ 1.5:1		≤ 1.5:1			
Upper Sidelobe Suppression	> 15 dB		> 15 dB			
Isolation Between Ports	20 dB		25 dB			
IM3 (2x20W carrier)	< -153 dBc		< -153 dBc			
Input Power	(2x) 500 W		(4x) 300 W			
Diplexed	No		No			
Number of Sectors / Sector Spacing	3 Sectors / Pseudo Omni		3 Sectors / Pseudo Omni			
Lightning Protection	Direct Ground		Direct Ground			

Mechanical Characteristics	
Antenna Dimensions (Height x Diameter)	1219 x 371 mm 48.0 x 14.6 in
Weight without Mounting Bracket Kit	17.3 kg 38.1 lbs
Antenna Volume	0.13 m³ 4.7 ft³
Survival Wind Speed	200 km/hr 125 mph
Wind Area	0.47 m² 5.0 ft²
Wind Load (160 km/hr or 100 mph)	391 N 88 lbf



7 SCALE N.T.S.

WB3X-MKS-01

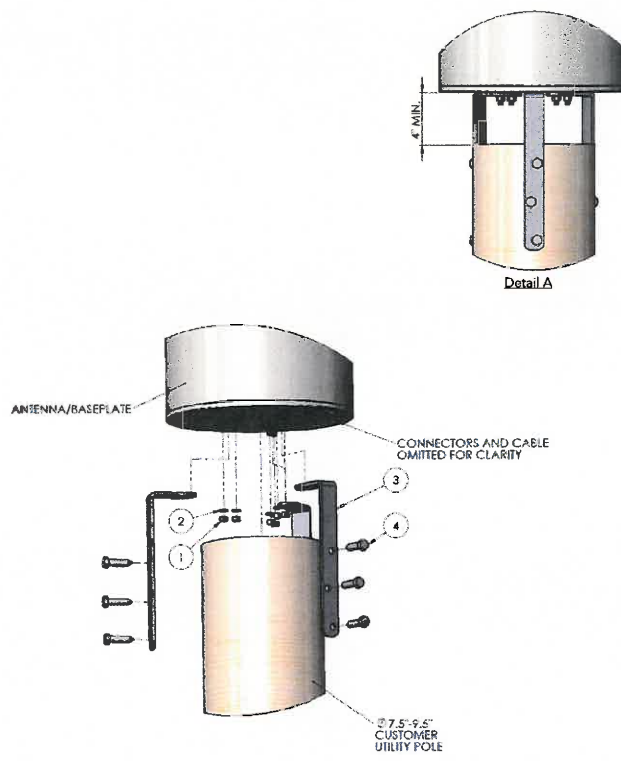
Utility Pole Mounting Kit for Cylindrical Antennas

Mounting Instructions		
Step 1	Attach pole mount brackets (Item 3) to antenna/base plate using fasteners (Items 1 and 2). Tighten to 15 N-m (11 ft-lb).	
Step 2	Attach pole mount brackets (Item 3)/antenna assembly to customer utility pole using lag screws (Item 4).	
Step 3	Make all electrical connections weatherproof with self-amalgamating tape.	

Parts List	Description	Quantity
Item 1	Nut Hex, 3/8-16 HDG	6
Item 2	Lock Washer 3/8 HDG	6
Item 3	Pole Mount Bracket	3
Item 4	Galvanized Hex Lag Screw (1/2 x 2" Long)	9

Mechanical Characteristics	
Weight	2.7 kg (6 lbs)

ANTENNA MOUNT
TYPICAL SECTION: N.T.S.



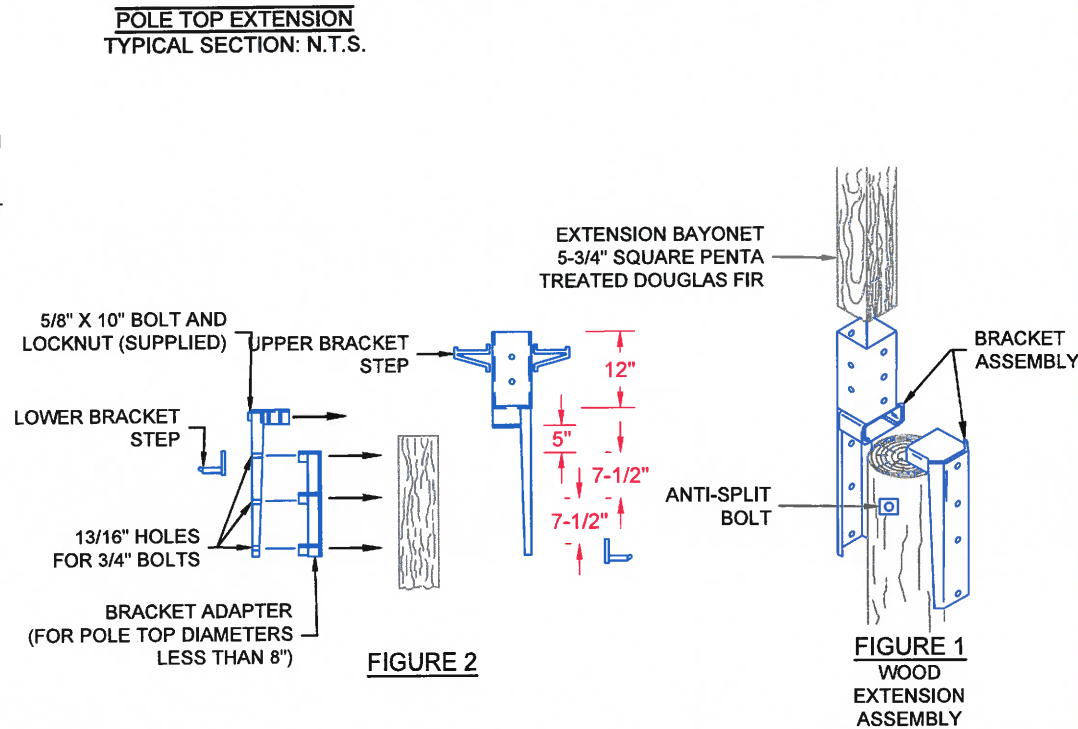
8 SCALE N.T.S.

NOTES

1. THE UNIT MEETS G.O. 95 REQUIREMENTS FOR STRENGTH IN CLASS 3 THROUGH 6 POLES AND THEREFORE MAY BE USED TO SUPPORT EQUIPMENT ON THESE CLASS POLES. IT MAY BE USED ON LARGER CLASS POLES, BUT MAY NOT SUPPORT EQUIPMENT ON THEM.
2. THE UNIT MAY BE GUYED.
3. THE BRACKET IS MADE TO FIT POLES WITH DIAMETERS OF 8" TO 11". THEREFORE, DEPENDING UPON ACTUAL POLE DIAMETER, TO FIT POLES OF CLASS AND SMALLER, A BRACKET ADAPTER MAY BE REQUIRED.
4. UNITS ARE SUPPLIED WITH THE WOOD BAYONET ASSEMBLED.
5. A POLE STEP KIT IS REQUIRED.

FIGURE 2
BRACKET ASSEMBLY AND BRACKET ADAPTER

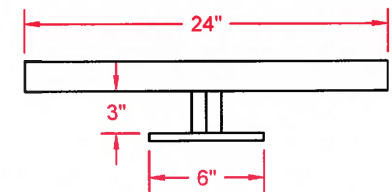
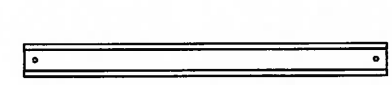
TABLE 1	BILL OF MATERIALS
DESCRIPTION	
5' EXTENSION ASSEMBLY	180219
6' EXTENSION ASSEMBLY	180220
7' EXTENSION ASSEMBLY	180221
BRACKET ADAPTER	180222
3/4" X 10" MACHINE BOLTS	192412
POLE STEP KIT (2 UPPER, 2 LOWER)	180011



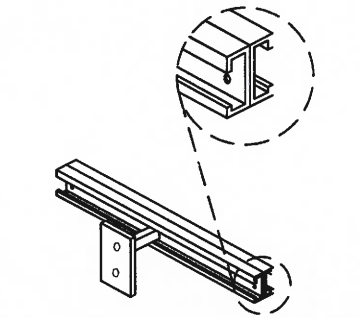
9 SCALE N.T.S.

STANDOFF BRACKET

FRONT VIEW OF STAND OFF BRACKET:



TOP VIEW STAND OFF BRACKET:



3D VIEW OF STAND OFF BRACKET:

10 SCALE N.T.S.

SF PALO ALTO 032
PALO ALTO
CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:
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695 RIVER OAKS PARKWAY
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www.crowncastle.com

PREPARED BY:
Coastal Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
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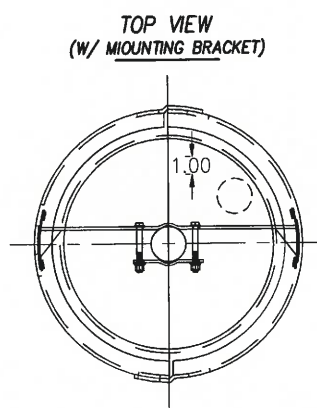
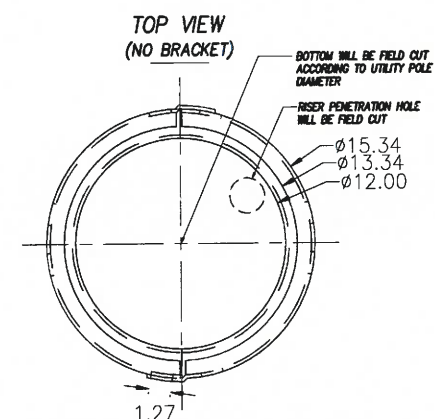
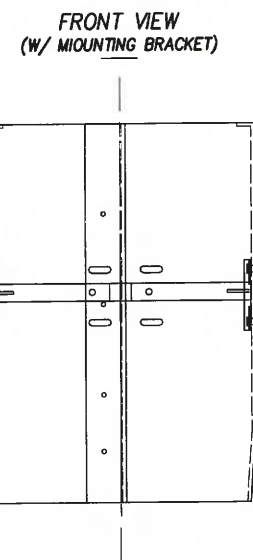
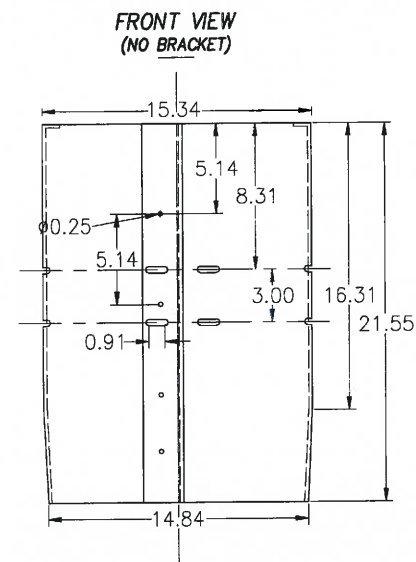
ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
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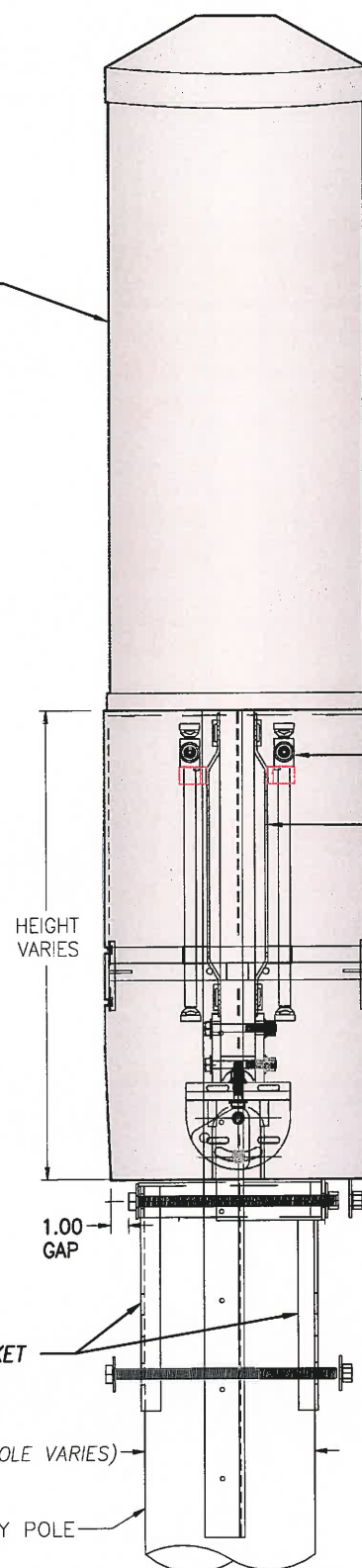
DETAILS & NOTES

DRAWN BY: BW	DRAFT DATE: 02/13/18	APPROVED BY: TT
SHEET NO. D-5		



CYLINDER ANTENNA

CONCEALMENT COVER
TYPICAL SECTION: N.T.S.



MICROLAB 2-WAY SPLITTER

SPLITTER BRACKET

CUSTOM SHROUD TO FULLY ENCASE EQUIPMENT & MOUNTS
MINUS ANY CONNECTION POINT TO THE WOOD POLE

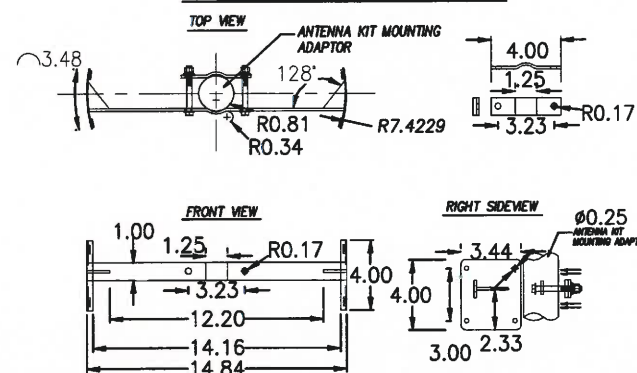
MOUNTING BRACKET

(DIA. POLE VARIES)

UTILITY POLE

NOTE: PAINT ANTENNA AND
CUSTOM CONCEALMENT
SHROUD TO MATCH POLE.

RADOME MOUNTING COMPONENTS



- NOTE:
1. CONCEALMENT COVER CAN BE ADJUSTED IN LENGTH TO PASS GROUND INSPECTION.
 2. SHROUD SHALL BE CONSTRUCTED OF 1/4" ABS PLASTIC.
 3. ALL MEASUREMENTS ARE IN INCHES.
 4. THE RISERS DO NOT CONNECT OR GO INTO THE ANTENNA SHROUD.
 5. THERE WILL BE A GAP (UP TO 6") FROM THE TOP OF THE RISER TO THE BOTTOM OF THE SHROUD.

11 SCALE
N.T.S.

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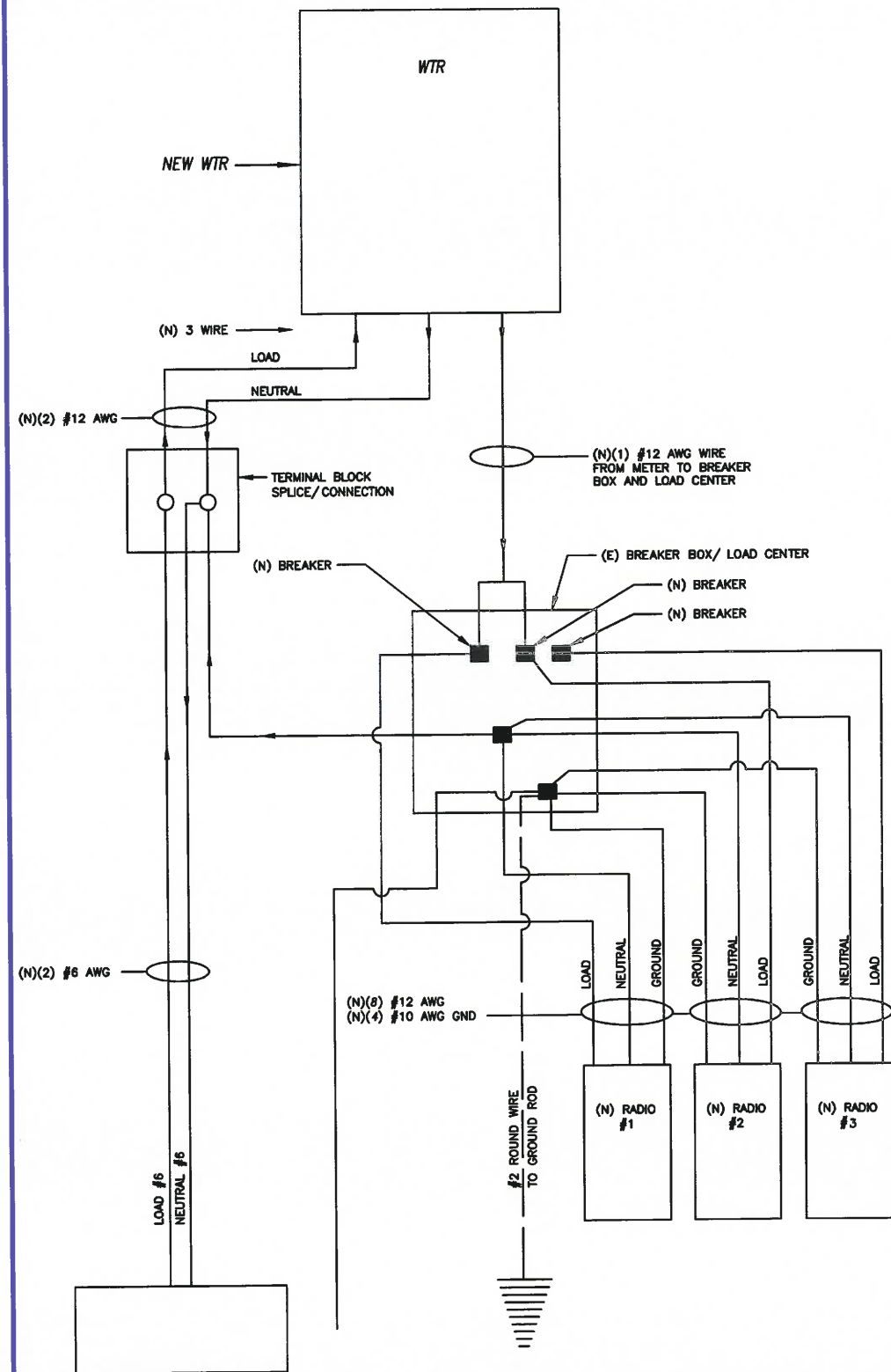
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37.446382/-122.166954

DETAILS & NOTES

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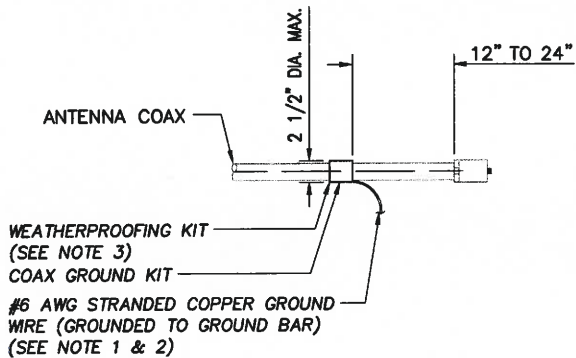
SHEET NO.
D-6

SINGLE LINE DIAGRAM



12 SCALE
N.T.S.

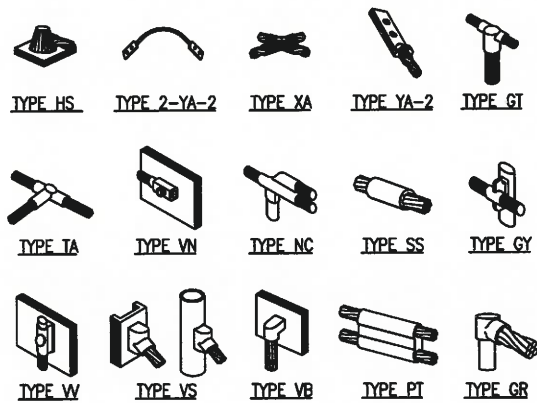
CONNECTION OF COAX GROUND KIT
TO ANTENNA COAX



- NOTES:
- DO NOT INSTALL COAX GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 - GROUNDING KIT SHALL BE TYPE AND PARK NUMBER AS SUPPLIED OR RECOMMENDED BY COAX MANUFACTURER.
 - WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

13 SCALE
N.T.S.

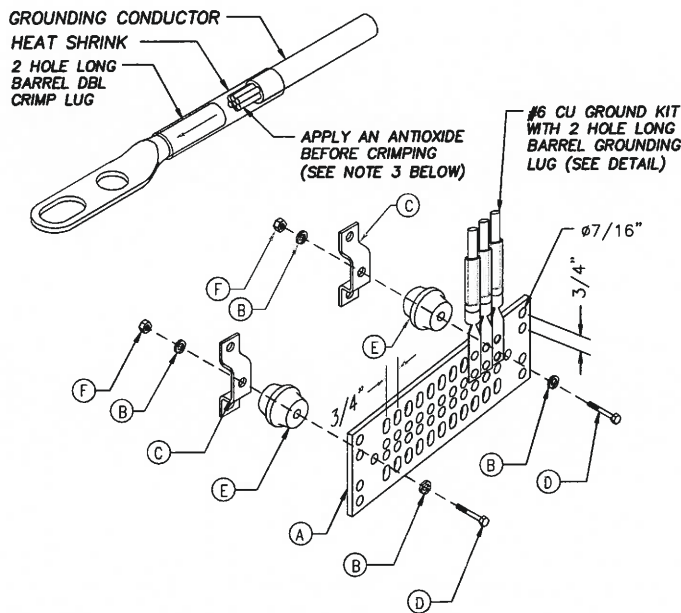
WELD CONNECTION DETAILS



NOTE:
ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH PROJECT MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.

14 SCALE
N.T.S.

TYPICAL GROUND BAR



- NOTES:
- CRIMP (COMPRESSION) TYPE TWO HOLE BOLTED TONGUE CONNECTORS SHALL BE USED TO TERMINATE STRANDED GROUNDING CONDUCTORS. THE CONNECTORS SHALL BE TIN PLATED COPPER, LONG BARREL LUG, AND SHALL BE LISTED FOR THEIR INTENDED USE BY AN NRTL.
 - CRIMP TYPE CONNECTORS USED ON SOLID CONDUCTORS MUST BE LISTED BY AN NRTL FOR USE ON SOLID CONDUCTORS, AND MUST BE CRIMPED WITH THE DIES SPECIFIED BY THE MANUFACTURER OF THE CONNECTOR. USE A HYDRAULIC CRIMPING TOOL.
 - WIRES SHALL BE INSERTED THE ENTIRE LENGTH OF THE LUG. ENSURE COAX OUTER INSULATION IS SNUG TO LUG BARREL. PROVIDE AN ANTIOXIDE COMPOUND ON THE CONDUCTOR BEFORE CRIMPING (NO OX). INSTALL A TRANSPARENT HEAT SHRINK INSULATING TUBING ALONG THE ENTIRE LENGTH OF THE CRIMP.
 - USE #6 AWG STRANDED-THOMAS & BETTS 455578 OR EQUIVALENT.

PARTS LIST		PARTS LIST	
A	COPPER GROUND BAR, USE STYLE "I" GTI TELECOM, INC. OR EQUAL (ACTUAL GROUND BAR SIZE WILL VARY BASED ON NUMBER OF GROUND CONNECTIONS)	C	WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR EQUAL
	5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR EQUAL	D	5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR EQUAL
B	5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8 OR EQUAL	E	INSULATORS SHALL BE INSTALLED
		F	5/8-11 NUT

15 SCALE
N.T.S.

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SITE NAME & ADDRESS:
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DETAILS & NOTES

DRAWN BY: BW
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APPROVED BY: TT
SHEET NO. D-7

CITY OF PALO ALTO
TREE PROTECTION - IT'S PART OF THE PLAN!
Make sure your crews and subs do the job right!

Fenced enclosures around trees are essential to protect them by keeping the foliage canopy and branching structure clear from contact by equipment, materials and activities, preserving roots and soil conditions in an intact and non-compacted state, and identifying the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved. An approved tree protection report must be added to this sheet when project activity occurs within the TPZ of a regulated tree. For detailed information on Palo Alto's regulated trees and protection during development, review the City Tree Technical Manual (TTM) found at www.cityofpaloalto.org/trees/.



TREE DISCLOSURE STATEMENT

CITY OF PALO ALTO
Planning Division, 250 Hamilton Avenue
Palo Alto, CA 94301
(650) 329-2441
<http://www.cityofpaloalto.org>

Palo Alto Municipal Code, Chapter 8.10.040, requires disclosure and protection of certain trees located on private and public property, and that they be shown on submitted and approved site plans. A completed *tree disclosure statement* must accompany all permit applications that include exterior work, all demolition or grading permit applications, or other development activity.

PROPERTY ADDRESS: Right of way adjacent to 201 High St, Palo Alto, CA

Are there Regulated¹ trees on or adjacent to the property? ☒ YES ☐ NO (If no, proceed to Section 4)

[Sections 1- 4 MUST be completed by the applicant. Please circle and/or check where applicable.]

1. Where are the trees? Check those that apply. (Plans must be submitted showing all trees over 4" diameter)

- ☐ On the property
☒ On adjacent property overhanging the project site
☒ In the City planter strip or right-of-way easement within 30' of property line (Street Trees)*

*Street trees¹ require special protection by a fenced enclosure, per the attached instructions. Prior to receiving any permit, you must provide an authorized Street Tree Protection Verification form. Contact Public Works Operations at (650) 496-5953 for inspection of type I, II or III fencing (see attached Detail #605) required for all street trees.

2. Are there any Protected¹ or Designated¹ Trees? YES (Check where applicable) ☒ NO

- ☐ Protected Tree (s)
☐ Designated Tree (s)
☐ On or overhanging the property

3. Is there activity or grading within the dripline? (radius 10 times the trunk diameter) of these trees? ☒ YES ☐ NO

If Yes, a **Tree Preservation Report** must be prepared by an ISA certified arborist and submitted for staff review (see TTM, Section 6.25). Attach this report to Sheet T-1, "Tree Protection, its Part of the Plan!", per Site Plan Requirements.

4. Are the Site Plan Requirements** completed? ☒ YES ☐ NO

**Plans. Protection of Regulated trees during development require the following: (1) Plans must show the measured trunk diameter and canopy dripline; (2) Plans must denote, as a bold dashed line, a fenced enclosure area out to the dripline, per Sheet T-1 and Detail #605 -

<http://www.cityofpaloalto.org/trees/forms.htm> (See also TTM, Section 2.15 for area to be fenced)

I, the undersigned, agree to the conditions of this disclosure. I understand that knowingly or negligently providing false or misleading information in response to this disclosure requirement constitutes a violation of the Palo Alto Municipal Code Section 8.10.040, which can lead to criminal and/or civil legal action.

Signature: [Signature] Print: Rochele Swanson Date: 11/29/2017
(Prop. Owner or Agent)

FOR STAFF USE:

Protective Fencing
Sections 5-6 must be completed by staff for the issuance of any development permit (demolition, grading or building permit).

5. **Protected Trees.** The specified tree fencing is in place. A written statement is attached verifying that protective fencing is correctly in place around protected and/or designated trees. YES NO
(N/A if there are no protected trees, check here ☐)

6. **Street Trees.** A signed Public Works Street Tree Protection Verification form is attached. YES NO
(N/A if there are no street trees, check here ☐)

¹ Regulated Trees -- a) Street trees -- trees on public property; b) Protected trees -- Coast Live Oaks or Valley Oaks which are 11.5" in diameter or larger, Coast Redwoods which are 18" in diameter or larger, when measured 54" above natural grade; and Heritage trees are trees designated by City Council; and c) Designated Trees -- commercial or non-residential property trees, which are part of an approved landscape plan.

² Palo Alto Tree Technical Manual (TTM) contains instructions for all requirements on this form, available at www.cityofpaloalto.org/trees/technical-manual.html

Tree technical Manual

To purchase the tree Technical Manual

June, 2001 First Edition

View by section:

- o Table of Contents (PDF, 87KB)
- o Intent and Purpose (PDF, 1.05MB)
- o Introduction - Use of Manual (PDF, 1.05MB)
- o Section 1.0 - Definitions (PDF, 96KB)
- o Section 2.0 - Protection of Trees During Construction (PDF, 259KB)
- o Section 3.0 - Removal, Replacement & Planting of Trees (PDF, 117KB)
- o Section 4.0 - Hazardous Trees (PDF, 105KB)
- o Section 5.0 - Tree Maintenance Guidelines (PDF, 110KB)
- o Section 6.0 - Tree Reports (PDF, 84KB)

View ALL sections:

- o Tree Technical Manual - Full (PDF, 1.84MB)

APPENDICES

- A. Palo Alto Municipal Code Chapter 8.10, Tree Preservation & Management Regulations
- B: Tree City - USA
- C: ISA Hazard Evaluation Form
- D: List of Inherent Failure Patterns for Selected Species (Reference source)
- E: ISA Tree Pruning Guidelines (PDF, 1.85MB)
- F: Tree Care Safety Standards, ANSI Z133.1-1994 (Reference source)
- G: Pruning Performance Standards, ANSI A300-1995 (Reference source)
- H: Tree Planting Details, Diagram 504 & 505
- I: Tree Disclosure Statement
- J: Palo Alto Standard Tree Protection Instructions

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PALO ALTO

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VZW366241CA

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SPECIAL TREE PROTECTION
INSTRUCTION SHEET

DRAWN BY: BW DRAFT DATE: 02/13/18 APPROVED BY: TT

SHEET NO.
T1.1

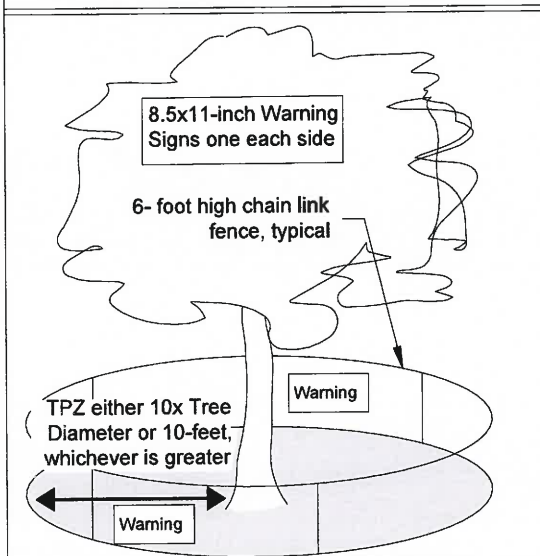
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Make sure your crews and subs do the job right!

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For written specifications associated with illustrations below, see Public Works Specifications Section 31
Detailed specifications are found in the Palo Alto Tree Technical Manual (TTM) (www.cityofpaloalto.org/trees/)

Tree Protection (TPZ) shown in gray (radius of TPZ equals 10-times the diameter of the tree or 10-feet, whichever is greater).

- Restricted activity area -- see Tree Technical Manual Sec 2.15(E).
- Restricted trenching area -- see Tree Technical Manual Sec 2.20(C-D), any proposed trench or form work within TPZ of a protected tree requires approval from Public Works Operations. Call 650-496-5953.



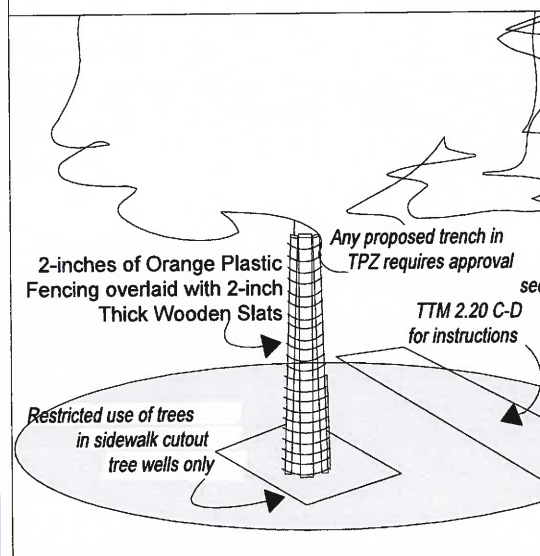
Type I Tree Protection

For all Ordinance Protected & Designated trees, as detailed in the site specific tree preservation report (TPR) prepared by the applicant's project arborist as diagramed on the plans.

Note: Ordinance Protected & Designated Trees. Issuance of a permit requires applicant's project arborist written verification Type I is installed correctly according to the plans and Tree Preservation Report

Any inadvertent sidewalk or curb replacement or trenching requires approval

Type II Tree Protection



Note: Street Trees. Issuance of a permit requires Public Works Operations inspection and signed approval on the Street Tree Verification (STV) form provided.

Type III Tree Protection

(to be used only with approval of Public Works Operations)

Tree fencing is required and shall be erected before demolition, grading or construction begins.



PALO ALTO STREET TREE PROTECTION INSTRUCTIONS -SECTION 31-

- Tree protection has three primary functions, 1) to keep the foliage canopy and branching structure clear from contact by equipment, materials and activities; 2) to preserve roots and soil conditions in an intact and non-compacted state and 3) to identify the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved.
- The Tree Protection Zone (TPZ) is a restricted area around the base of the tree with a radius of ten-times the diameter of the tree's trunk or ten feet; whichever is greater, enclosed by fencing.

31-2 Reference Documents

- Detail 605- illustration of situations described below.
- Tree Technical Manual (TTM) Forms (<http://www.cityofpaloalto.org/trees/>)
- Trenching Restriction Zones (TTM, Section 2.20(C))
- Arborist Reporting Protocol (TTM, Section 6.30)
- Site Plan Requirements (TTM, Section 6.35)
- Tree Disclosure Statement (TTM, Appendix J)
- Street Tree Verification (STV) Form (<http://www.cityofpaloalto.org/trees/forms>)

31-3 Execution

- Type I Tree Protection: The fence shall enclose the entire TPZ of the tree(s) to be protected throughout the life of the construction project. In some parking areas, if fencing is located on paving or concrete that will not be demolished, then the posts may be supported by an appropriate grade level concrete base, if approved by Public Works Operations.
- Type II Tree Protection: For trees situated within a planting strip, only the planting strip and yard side of the TPZ shall be enclosed with the required chain link protective fencing in order to keep the sidewalk and street open for public use.
- Type III Tree Protection: To be used only with approval of Public Works Operations. Trees situated in a tree well or sidewalk planter pit, shall be wrapped with 2-inches of orange plastic fencing from the ground to the first branch and overlaid with 2-inch thick wooden slats bound securely (slats shall not be allowed to dig into the bark). During installation of the plastic fencing, caution shall be used to avoid damaging any branches. Major limbs may also require plastic fencing as directed by the City Arborist.
- Size, type and area to be fenced. All trees to be preserved shall be protected with six (6') foot high chain link fences. Fences are to be mounted on two-inch diameter galvanized iron posts, driven into the ground to a depth of at least 2-feet at no more than 10-foot spacing. Fencing shall extend to the outer branching, unless specifically approved on the STV Form.
- 'Warning' signs. A warning sign shall be weather proof and prominently displayed on each fence at 20-foot intervals. The sign shall be minimum 8.5-inches x 11-inches and clearly state in half inch tall letters: "WARNING - Tree Protection Zone - This fence shall not be removed and is subject to a fine according to PAMC Section 8.10.110."
- Duration. Tree fencing shall be erected before demolition; grading or construction begins and remain in place until final inspection of the project, except for work specifically allowed in the TPZ. Work or soil disturbance in the TPZ requires approval by the project arborist or City Arborist (in the case of work around Street Trees). Excavations within the public right of way require a Street Work Permit from Public Works.
- During construction
 - All neighbors' trees that overhang the project site shall be protected from impact of any kind.
 - The applicant shall be responsible for the repair or replacement plus penalty of any publicly owned trees that are damaged during the course of construction, pursuant to Section 8.04.070 of the Palo Alto Municipal Code.
 - The following tree preservation measures apply to all trees to be retained:
 - No storage of material, topsoil, vehicles or equipment shall be permitted within the TPZ.
 - The ground under and around the tree canopy area shall not be altered.
 - Trees to be retained shall be irrigated, aerated and maintained as necessary to ensure survival.

END OF SECTION

City of Palo Alto 2004 Standard Drawings and Specifications
Street Tree Verification of Protection, PWE, Section 31

Revised 08/06

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SPECIAL TREE PROTECTION INSTRUCTION SHEET

DRAWN BY: BW	DRAFT DATE: 02/13/18	APPROVED BY: TT
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Table 2-2 Palo Alto Tree Technical Manual
ARBORIST INSPECTION SCHEDULE

All Checked Items Apply to this project:

- ☒ **Inspection of Protective Tree Fencing.** The Street Tree Verification Form shall be signed by the City Arborist. For other Protected Trees, the project arborist shall provide a written statement with a photograph verifying that he has conducted a field inspection of the trees and that the protective tree fencing is in place prior to issuance of a demolition, grading, or building permit. (see Verification of Tree Protection, Section 1.39).
- ☒ **Pre-Construction Meeting.** Prior to commencement of construction, the applicant or contractor shall conduct a pre-construction meeting to discuss tree protection with the job site superintendent, grading equipment operators, project arborist, City Arborist, and, if a city maintained irrigation system exists, the Parks Manager (Contact 650-496-6962).
- ☐ **Inspection of Rough Grading.** The project arborist shall perform an inspection during the course of rough grading ACROSS FROM the TPZ to ensure trees will not be injured by compaction, cut or fill, drainage and trenching, and if required, inspect aeration systems, tree wells, drains and special paving. The contractor shall provide the project arborist at least 48 hours advance notice of such activity.
- ☐ **Monthly Inspections.** The project arborist shall perform a monthly activity inspection to monitor and advise for conditions and tree health. The City Arborist shall be in receipt of the activity report during the first week of each calendar month or, immediately if there are any revisions to the approved plans or protection measures. Fax to (650) 329-2154. (see Monthly Inspection Report, Section 1.17).
- ☐ **Special activity within the Tree Protection Zone.** Work in this area (TPZ - described in #7 below) requires the direct onsite supervision of the project arborist (see Trenching, Excavation and Equipment, Section 2.20 C).
- ☐ **Landscape Architect Inspection.** For discretionary development projects, prior to temporary or final occupancy the applicant or contractor shall arrange for the Landscape Architect to perform an on site inspection of all plant stock, quality of the materials and planting (see Quality, Section 5.20.1 A) and that the irrigation is functioning consistent with the approved construction plans. The City shall be in receipt of written verification of Landscape Architect approval prior to scheduling the final inspection, unless otherwise approved.
- ☐ **Other (please describe)** _____



City of Palo Alto
Tree Department
Public Works Operations
PO Box 10250 Palo Alto, CA 94303
6501496-5953 FAX: 6501852-9289
treeprotection@CityofPaloAlto.org

Verification of
Street Tree Protection

Applicant Instruction: Complete upper portion of this form. Mail or FAX this form along with the signed tree Disclosure Statement to Public Works Dept. Public Works Tree Staff will inspect and notify applicant.

APPLICATION DATE:	
ADDRESS/LOCATION OF STREET TREES TO BE PROTECTED:	
APPLICANT'S NAME:	
APPLICANT'S ADDRESS:	
APPLICANT'S TELEPHONE & FAX NUMBERS:	

This section to be filled out by City Tree Staff

1. The Street Trees at the above address(es) are adequately protected. The type of protection used is:	YES NO *If NO, go to #2 below
Inspected by:	
Date of Inspection:	

2. The Street Trees at the above address are NOT adequately protected. The following modifications are required:	
Indicate how the required modifications were communicated to the applicant.	

Subsequent Inspection

Street trees at above address were found to be adequately protected: inspected by:	YES NO *If NO, indicate in "Notes" below the disposition of case.
Date of Inspection:	

Notes: List City street trees by species, site, condition and type of tree protection installed. Also note if pictures were taken. Use back of sheet if necessary.	
--	--

Return approved sheet to Applicant for demolition or building permit issuance.
S:PWD/OPS/Tree/DS/St TreeProtect

5/1706

SF PALO ALTO 032
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



PROPRIETARY INFORMATION

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TICKET #

ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
ROW ADJACENT TO 201 HIGH ST
PALO ALTO, CA
37.446382/-122.166954

SPECIAL TREE PROTECTION
INSTRUCTION SHEET

DRAWN BY: BW	DRAFT DATE: 02/13/18	APPROVED BY: TT
-----------------	-------------------------	--------------------

SHEET NO.
T1.3

CITY OF PALO ALTO
TREE PROTECTION - IT'S PART OF THE PLAN!
Make sure your crews and subs do the job right!

Fenced enclosures around trees are essential to protect them by keeping the foliage canopy and branching structure clear from contact by equipment, materials and activities, preserving roots and soil conditions in an intact and non-compacted state, and identifying the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved. An approved tree protection report must be added to this sheet when project activity occurs within the TPZ of a regulated tree. For detailed information on Palo Alto's regulated trees and protection during development, review the City Tree Technical Manual (TTM) found at www.cityofpaloalto.org/trees/.

ADDENDUM 11

Arborist Firm Data
Here

City of Palo Alto Tree
Technical Manual

email:
RCA/ISA Certified Arborist #WE-000
Contact Cell #:

Monthly Tree Activity Report- Construction Site

Inspection Date:	Site Address:	Contractor- Main Site Contact Information	#1: Job site superintendent Company: Email: Job site: Office: Cell: Mail:
Inspection #	Palo Alto, CA		
		Also present:	
Distribution:	1. City of Palo Alto 2. Others	Attn: Dave Dockter	Dave.dockter@cityofpaloalto.org 650-329-2440

Provide the requested minimum information with each report, customize as necessary. To be completed by project site arborist. Send monthly to city arborist at above address until project completion. Use additional sheets as needed.

- Assignment Activity (Demolition/grading/sewer/trenching/foundation/list relevant visits)
 - Pre-construction meeting requirement with sub-contractors
 - Inspect to verify that tree protection measures are in place
 - Determine if field adjustments, watering or plan revisions may be needed
- Field Observations (general site-wide and list by individual tree number)
 - Tree Protection Fences (TPF) are...
 - Trenching has/will occur
- Action Items (list site-wide, by tree number and date to be satisfied) and Date Due
 - Tree Protection Fence (TPF) needs adjusting (tree # x, x, x)
 - Root zone buffer material (wood chips) can be installed next
 - Schedule sewer trench, foundation dig with...
- Photographs (use often)
- Tree location Map (mandatory 8.5 x 11 sheet)
- Recommendations, notes or monitor items for projects/staff/schedule
- Past visits (list carry-over items satisfied/still outstanding)

Respectfully submitted,

Project site arborist
Consultant contact information (Include email, cell #, and mailing)

Enter date CPA Monthly Tree activity Report: Type site address here

---WARNING---
Tree Protection Zone

This fencing shall not be removed
without City Arborist approval
(650-496-5953)

Removal without permission is
subject to a \$500 fine per day*

*Palo Alto Municipal Code Section 8.10.110

City of Palo Alto Tree Protection Instructions are located at
<http://www.cityofpaloalto.ca.us/trees/technical-manual.html>

SPECIAL INSTRUCTIONS

PLANNING DEPARTMENT

TREE PROTECTION INSPECTIONS MANDATORY

PAMC 8.10 PROTECTED TREES. CONTRACTOR SHALL ENSURE PROJECT SITE ARBORIST IS PERFORMING REQUIRED TREE INSPECTION AND SITE MONITORING. PROVIDE WRITTEN MONTHLY TREE ACTIVITY REPORTS TO THE PLANNING DEPARTMENT LANDSCAPE REVIEW STAFF BEGINNING 14 DAYS AFTER BUILDING PERMIT ISSUANCE.

BUILDING PERMIT DATE: _____

DATE OF 1ST TREE ACTIVITY REPORT: _____

CITY STAFF: _____

REPORTING DETAILS OF THE MONTHLY TREE ACTIVITY REPORT SHALL CONFORM TO SHEET T-1 FORMAT, VERIFY THAT ALL TREE PROTECTION MEASURES ARE IMPLEMENTED AND WILL INCLUDE ALL CONTRACTOR ACTIVITY, SCHEDULED OR UNSCHEDULED, WITHIN A TREE A TREE PROTECTION ROOT ZONE. NON-COMPLIANCE IS SUBJECT TO VIOLATION OF PAMC 8.10.080. REFERENCE: PALO ALTO TREE TECHNICAL MANUAL, SECTION 2.00 AND ADDENDUM 11.

ALL OTHER TREE-RELATED REPORTS SHALL BE ADDED USING
ADDITIONAL "T" SHEETS AS NEEDED.

SF PALO ALTO 032
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



PROPRIETARY INFORMATION

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ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE

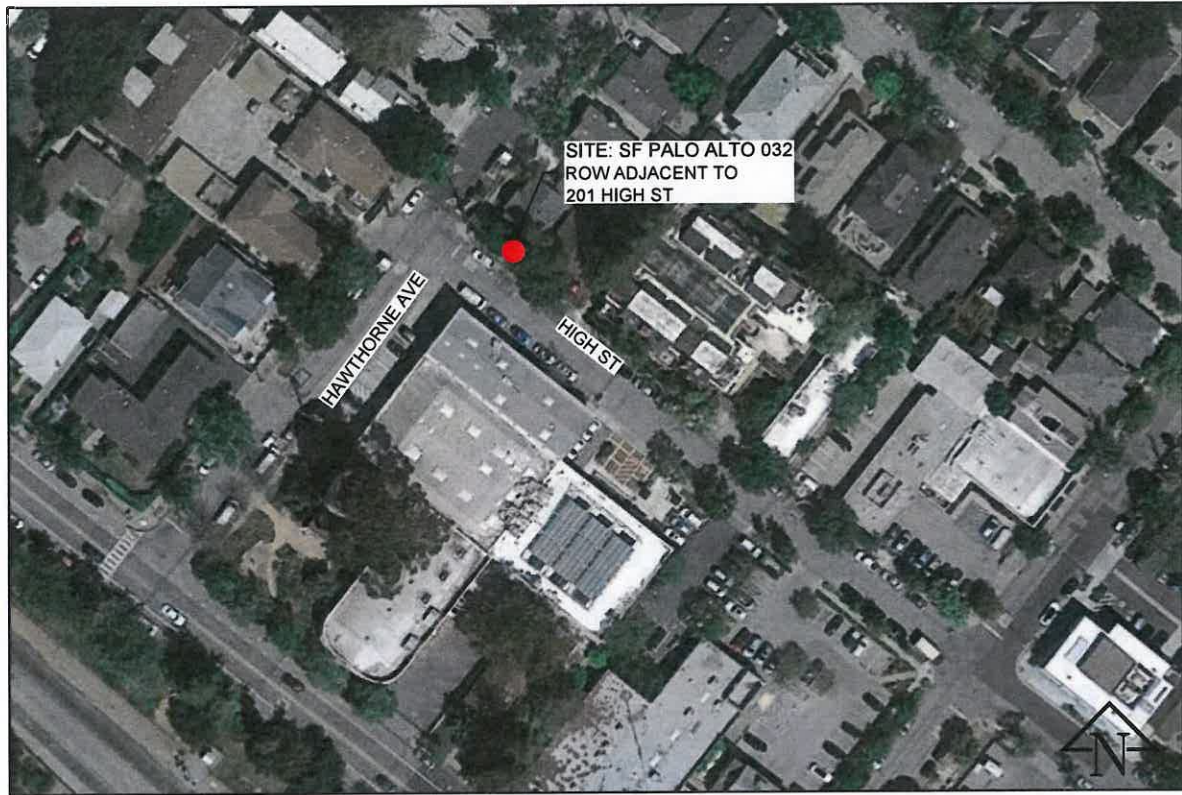


SITE NAME & ADDRESS:
ROW ADJACENT TO 201 HIGH ST
PALO ALTO, CA
37.446382/-122.166954

SPECIAL TREE PROTECTION
INSTRUCTION SHEET

DRAWN BY: BW	DRAFT DATE: 02/13/18	APPROVED BY: TT
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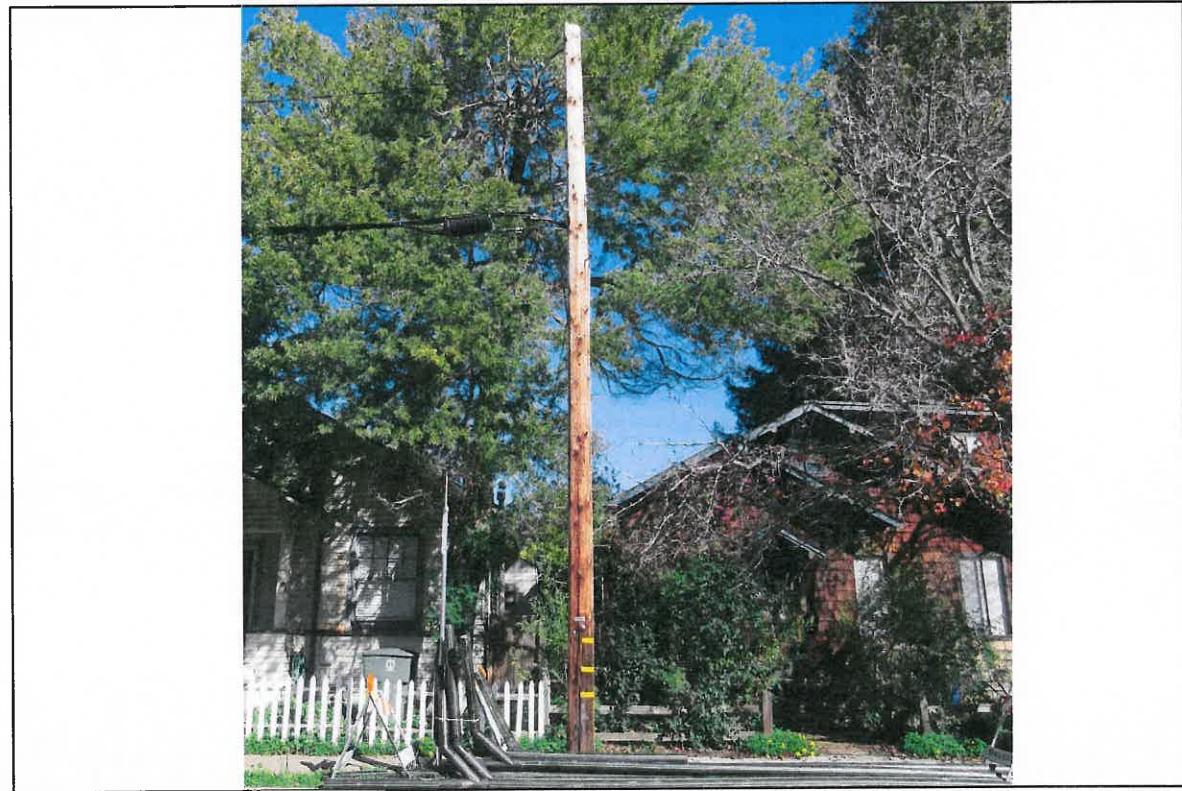
SHEET NO.
T1.4



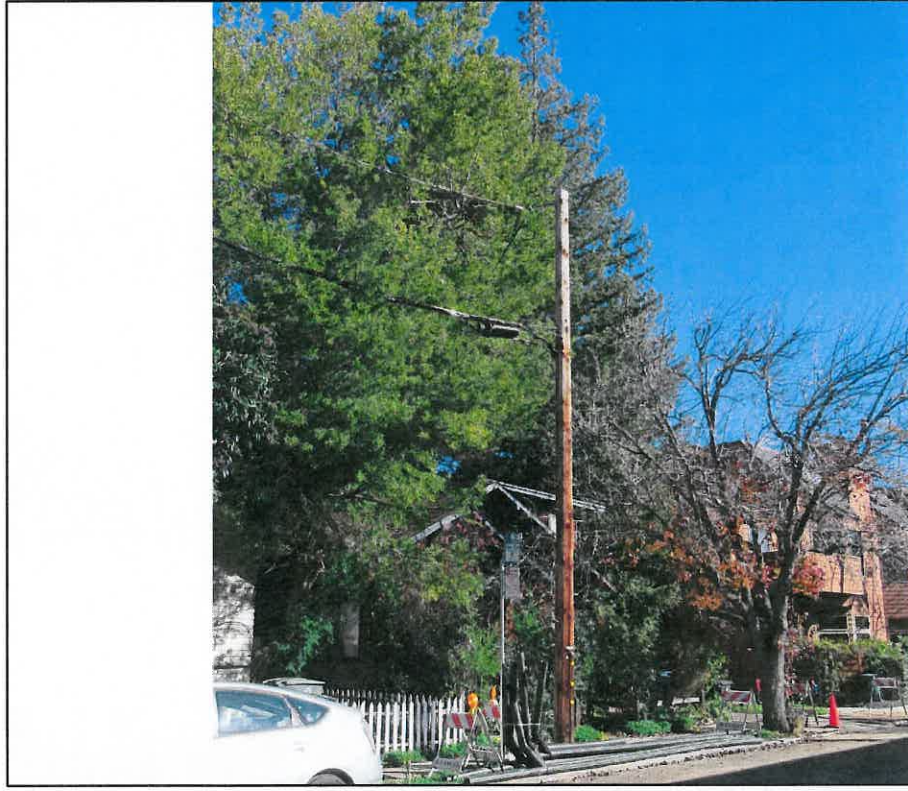
A KEY MAP



B 9 O'CLOCK VIEW



C 12 O'CLOCK VIEW



D 3 O'CLOCK VIEW

**SF PALO ALTO 032
PALO ALTO**

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:

**CROWN
CASTLE**
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:

Coastal Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcomminc.com

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37.446382/-122.166954

PHOTOS

DRAWN BY: BW	DRAFT DATE: 02/13/18	APPROVED BY: TT
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SHEET NO.
P-1



Existing Site



Vicinity Map

**SF PALO ALTO 032
ROW ADJACENT TO
201 HIGH ST
PALO ALTO, CA**



Proposed Site

**SF PALO ALTO 032
PALO ALTO**

CROWN CASTLE PROJECT NO.
VZW366241CA

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37.446382/-122.166954

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DRAWN BY: BW	DRAFT DATE: 02/13/18	APPROVED BY: TT
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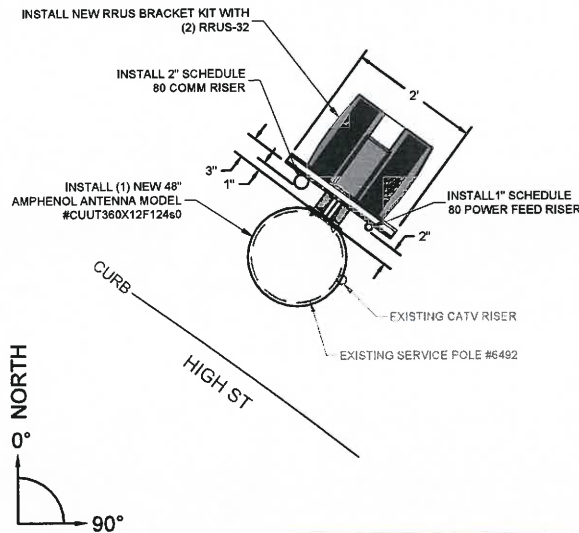
SHEET NO.
P-2

POLE # 6492
TOP OF EXISTING POLE: 32'-4" A.G.L. (40'-0" POLE)
TOP OF ANTENNA(S): 42'-8"
RAD CENTER: 40'-8"
AZIMUTH(S): OMNI
PROFILE VIEW: 3 O' CLOCK ELEVATION

A NOTES

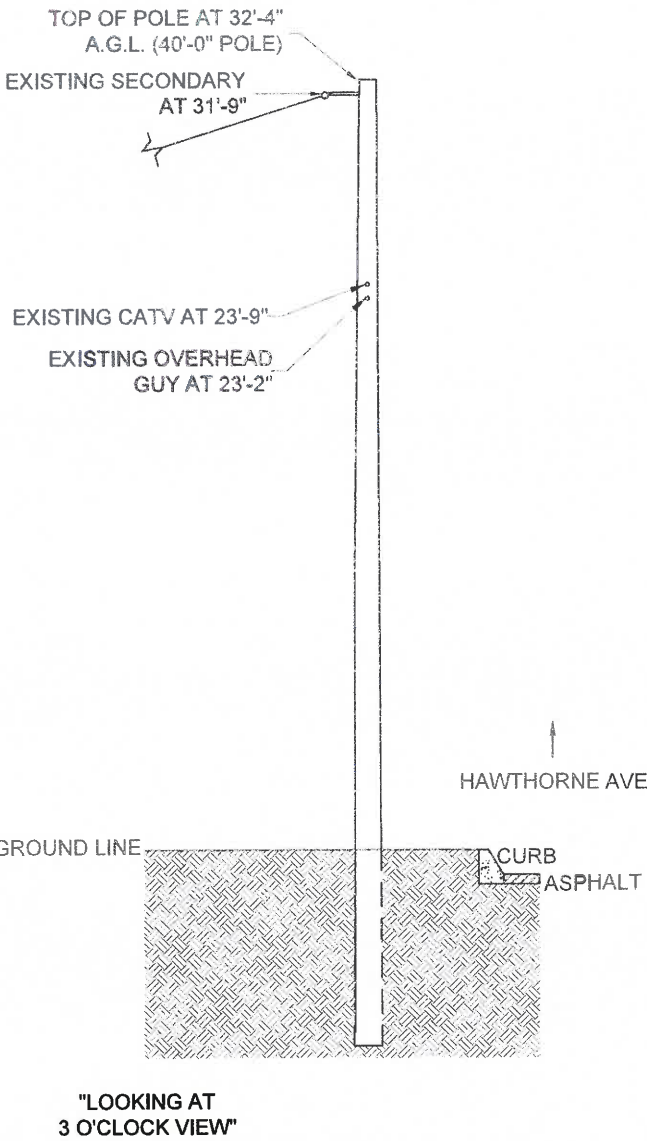
- INSTALL NEW VGR.
- INSTALL NEW POWER DISCONNECT BOX ON STANDOFF BRACKET AT 8'-0" TO 8'-9".
- INSTALL NEW WTR ENCLOSURE ON STANDOFF BRACKET AT 9'-6" TO 10'-6".
- INSTALL NEW STANDOFF BRACKET KIT WITH (1) RRUS-11 AT 11'-0" TO 12'-5".
- INSTALL NEW RRUS BRACKET KIT WITH (2) RRUS-32 AT 16'-3".
- INSTALL NEW 2" SCHEDULE 80 COMM RISER.
- INSTALL NEW CROWN CASTLE FIBER AT 24'-9".
- INSTALL NEW GUARD ARM AT 25'-2".
- INSTALL NEW 1" SCHEDULE 80 POWER RISER (BEHIND COMM RISER).
- INSTALL 4'-8" POLE MOUNTED EXTENSION & (1) NEW 48" AMPHENOL ANTENNA MODEL #CUUT360X12F124s0 WITH CUSTOM SHROUD CONCEALMENT COVER.
- ALL EQUIPMENT SHALL BE PAINTED TO MATCH TEXTURE AND COLOR.
- NO GROUND DISTURBANCE NECESSARY.

B CONSTRUCTION NOTES



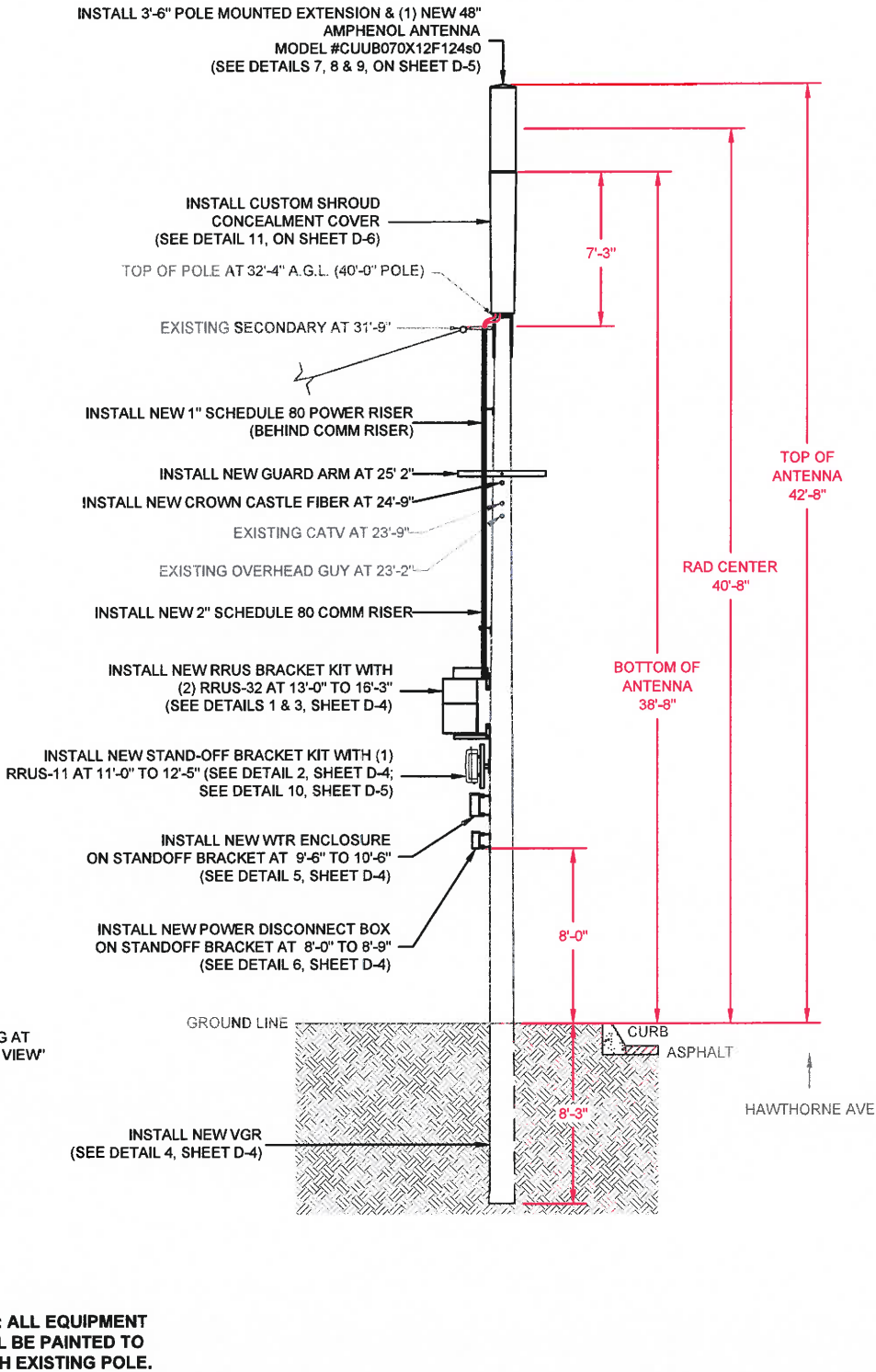
C TOP VIEW

N.T.S.



D EXISTING - 3 O'CLOCK ELEVATION

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



E PROPOSED - 3 O'CLOCK ELEVATION

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

SF PALO ALTO 032
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:
CROWN CASTLE
695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
www.crowncastle.com

PREPARED BY:
Coastal Communications
Telecommunications Engineering
5841 EDISON PLACE, SUITE 200
CARLSBAD, CA 92008
PHONE: (760) 929-0910
FAX: (760) 929-0936
www.coastalcomminc.com

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SITE NAME & ADDRESS:
ROW ADJACENT TO 201 HIGH ST
PALO ALTO, CA
37.446382/-122.166954

PROFILE

DRAWN BY: BW	DRAFT DATE: 02/13/18	APPROVED BY: TT
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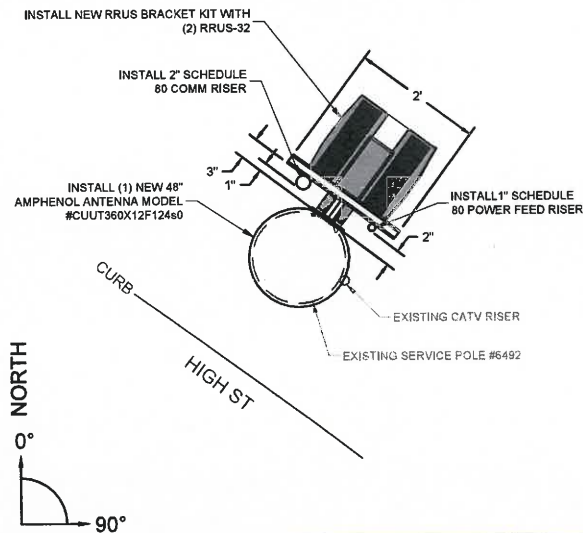
SHEET NO.
P-3

POLE # 6492
TOP OF EXISTING POLE: 32' 4" A.G.L. (40' 0" POLE)
TOP OF ANTENNA(S): 42'-8"
RAD CENTER: 40'-8"
AZIMUTH(S): OMNI
PROFILE VIEW: 6 O' CLOCK ELEVATION

F NOTES

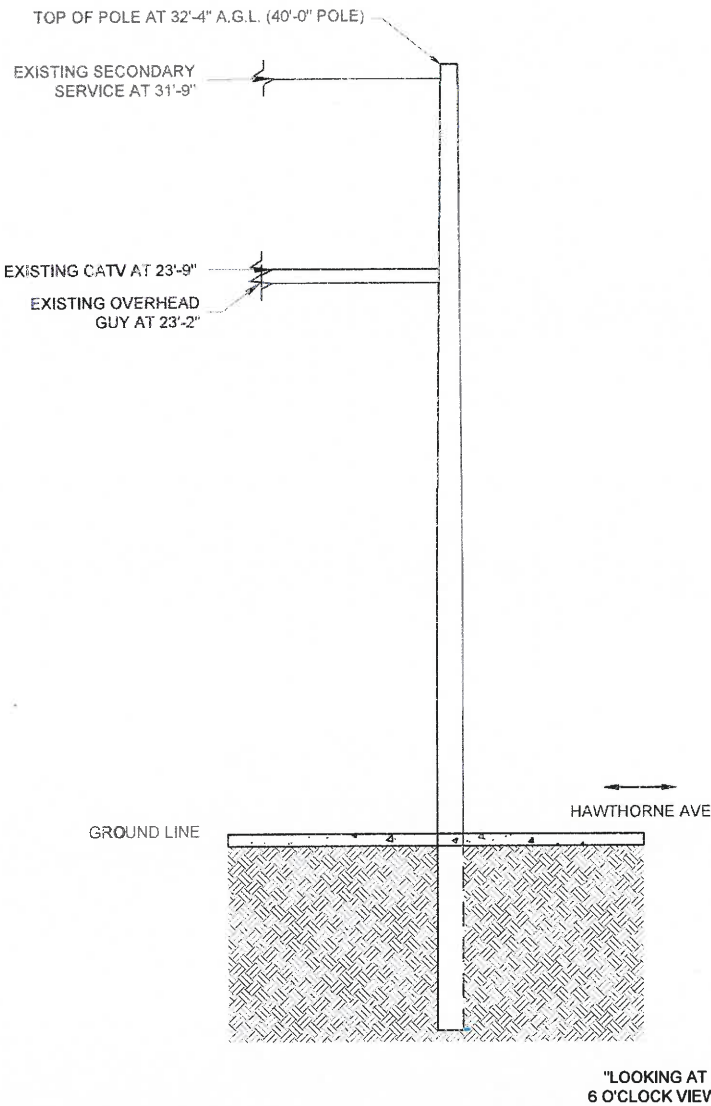
- INSTALL NEW VGR.
- INSTALL NEW POWER DISCONNECT BOX ON STANDOFF BRACKET AT 8'-0" TO 8'-9".
- INSTALL NEW WTR ENCLOSURE ON STANDOFF BRACKET AT 9'-6" TO 10'-6".
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- INSTALL NEW GUARD ARM AT 25'-2".
- INSTALL NEW 1" SCHEDULE 80 POWER RISER.
- INSTALL 4'-8" POLE MOUNTED EXTENSION & (1) NEW 48" AMPHENOL ANTENNA MODEL #CUUB070X12F124s0 WITH CUSTOM SHROUD CONCEALMENT COVER.
- INSTALL NOTICE & CAUTION SIGNS.
- ALL EQUIPMENT SHALL BE PAINTED TO MATCH TEXTURE AND COLOR.
- NO GROUND DISTURBANCE NECESSARY.

G CONSTRUCTION NOTES



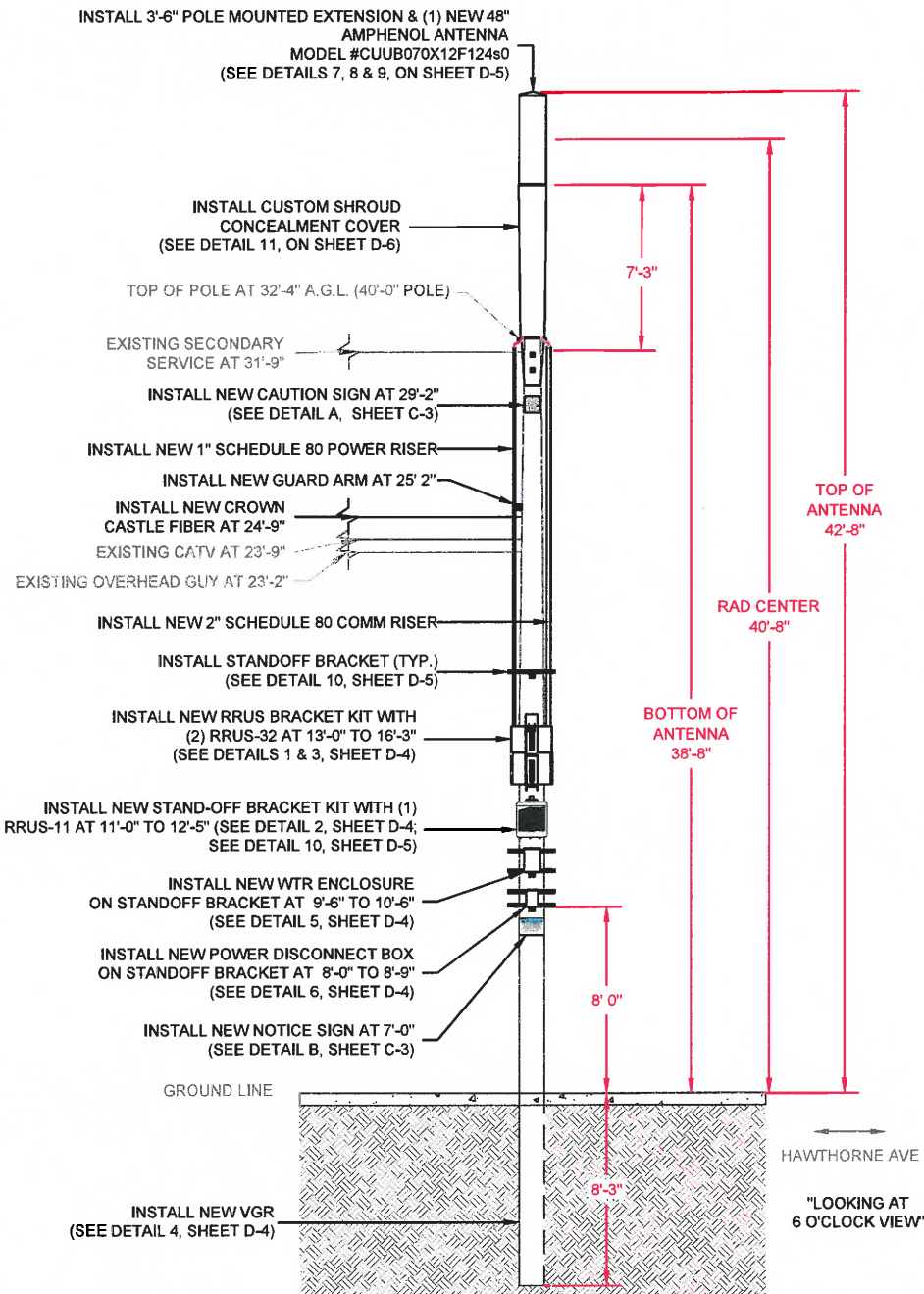
H TOP VIEW

N.T.S.



I EXISTING - 6 O'CLOCK ELEVATION

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



J PROPOSED - 6 O'CLOCK ELEVATION

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

SF PALO ALTO 032
PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



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ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
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PALO ALTO, CA
37.446382-122.166954

PROFILE

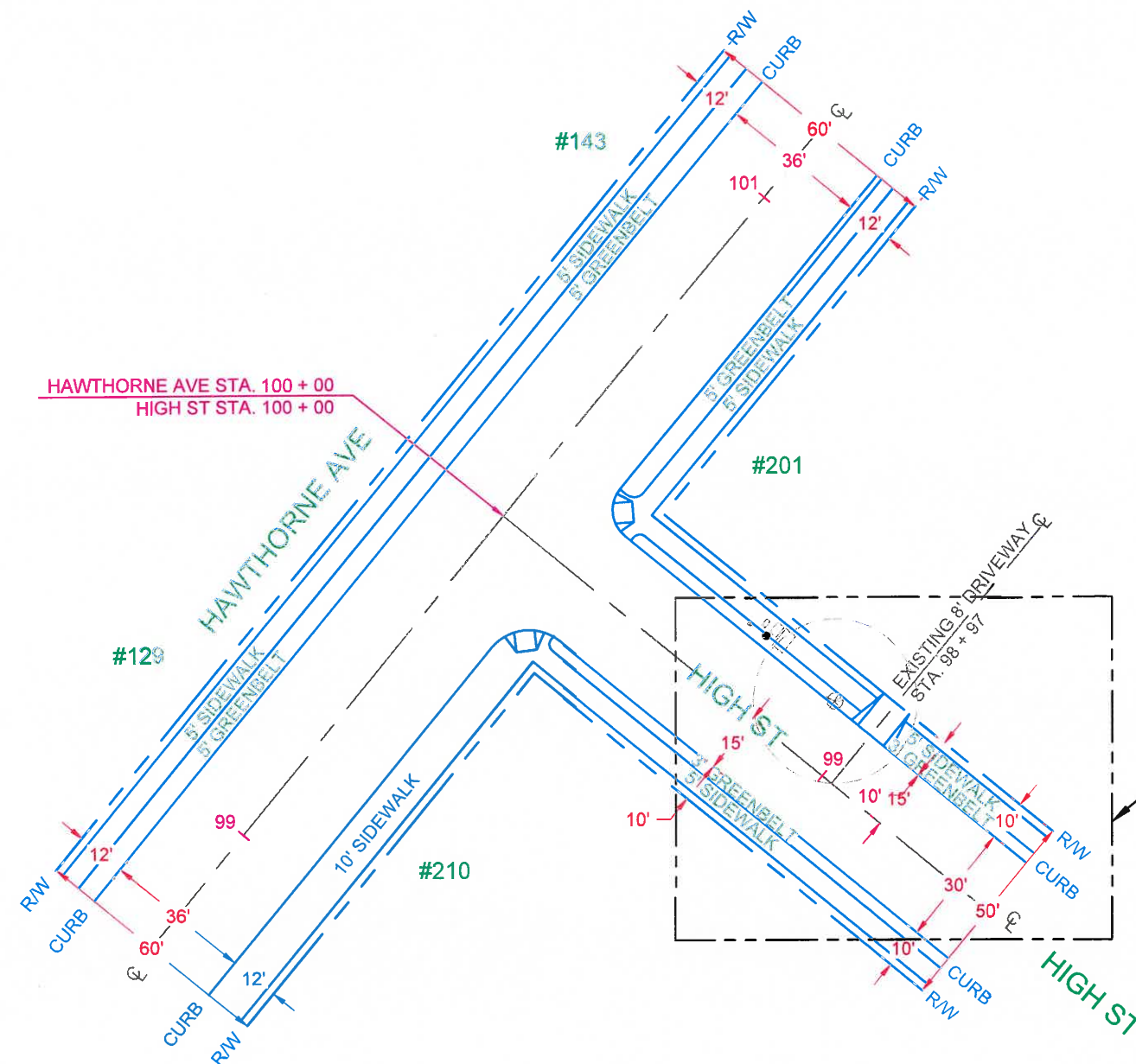
DRAWN BY:	DRAFT DATE:	APPROVED BY:
BW	02/13/18	TT

SHEET NO.

P-4

**TREE PROTECTION IS REQUIRED
AND SHALL BE ERRECTED
AROUND ANY TREE WITHIN 15' OF
IMPROVEMENTS OR WORK ZONE
BEFORE CONSTRUCTION BEGINS.
REFER TO SHEETS T1.1 - T1.4.**

**IN CASE OF ENCOUNTERING
MASSIVE / EXTENSIVE TREE
ROOTS AROUND WORK AREA
DURING CONSTRUCTION,
CONTACT CITY OF PALO ALTO
ARBORIST AT (650) 496-5953 FOR
FURTHER GUIDANCE &
SUPERVISION**



SP-1

EXISTING TREE TABLE							
PALO ALTO TREE #	SPECIES:	COMMON NAME:	GROW SPACE:	TRUNK DIA. AT BREAST HT.:	PROTECTION LINE:	DISTANCE TO CONST.	PROTECTION MEASURES REQUIRED
1	PYRUS CALLERYANA	CALLERY PEAR	GREENBELT	24 INCHES	2' x 10' = 20'-0"	2'-0"	NO

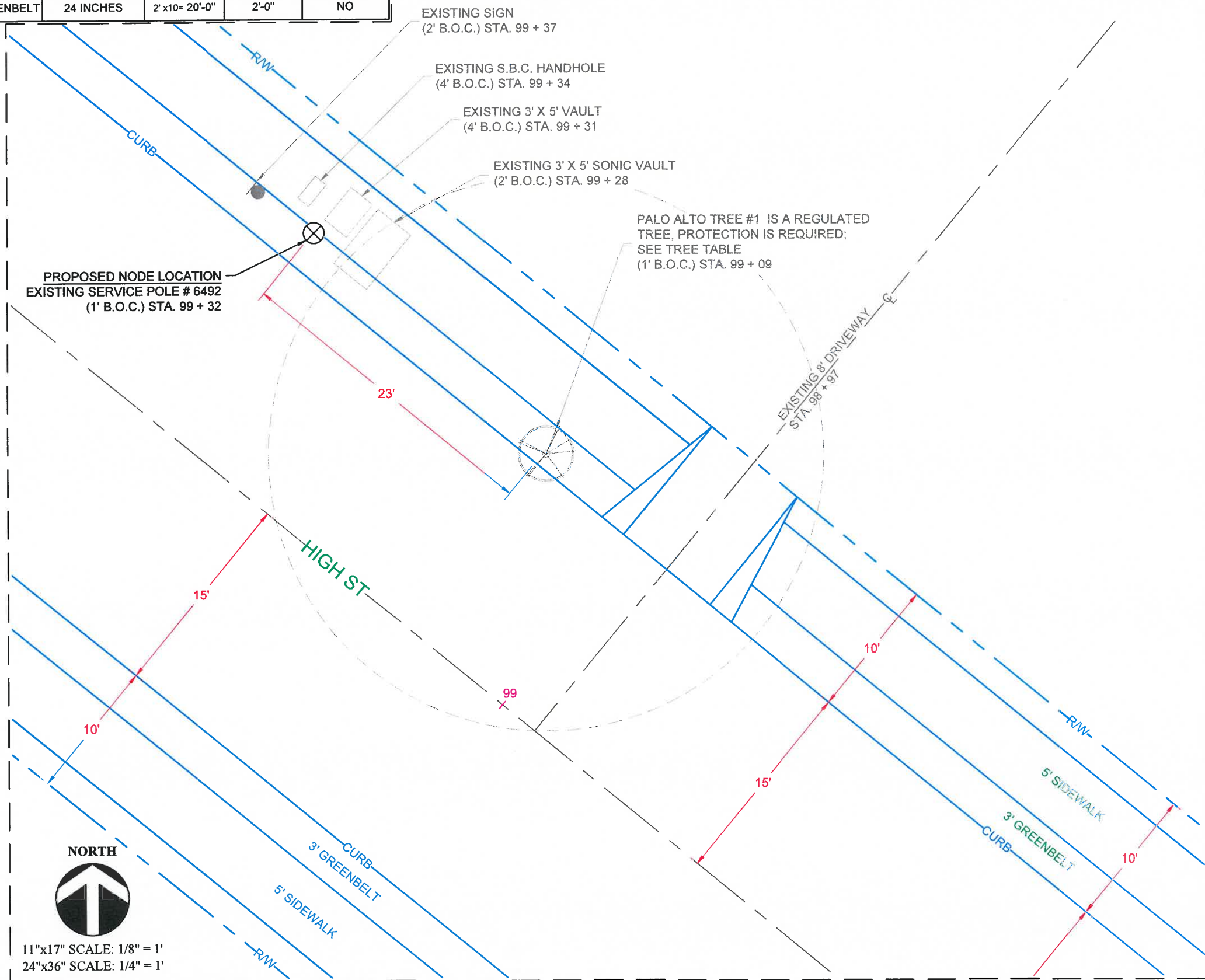
NODE COORDINATES	
LATITUDE:	37.446382
LONGITUDE:	-122.166954

NO GROUND DISTURBANCE NECESSARY

TREE PROTECTION IS REQUIRED AND SHALL BE ERECTED AROUND ANY TREE WITHIN 15' OF IMPROVEMENTS OR WORK ZONE BEFORE CONSTRUCTION BEGINS. REFER TO SHEETS T1.1 - T1.4.

IN CASE OF ENCOUNTERING MASSIVE / EXTENSIVE TREE ROOTS AROUND WORK AREA DURING CONSTRUCTION, CONTACT CITY OF PALO ALTO ARBORIST AT (650) 496-5953 FOR FURTHER GUIDANCE & SUPERVISION

ALL EQUIPMENT SHALL BE PAINTED TO MATCH EXISTING POLE



SF PALO ALTO 032

PALO ALTO

CROWN CASTLE PROJECT NO.

VZW366241CA

CLIENT:

CROWN CASTLE

695 RIVER OAKS PARKWAY

SAN JOSE, CA 95134

www.crowncastle.com

PREPARED BY:

Coastal Communications

Telecommunications Engineering

5841 EDISON PLACE, SUITE 200

CARLSBAD, CA 92008

PHONE: (760) 929-0910

FAX: (760) 929-0936

www.coastalcomm.com

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ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE

REGISTERED PROFESSIONAL ENGINEER

JERRY L. MICHAL

No. C42590

Exp. 03-31-20

CIVIL

STATE OF CALIFORNIA

SITE NAME & ADDRESS:

ROW ADJACENT TO 201 HIGH ST

PALO ALTO, CA

37.446382/-122.166954

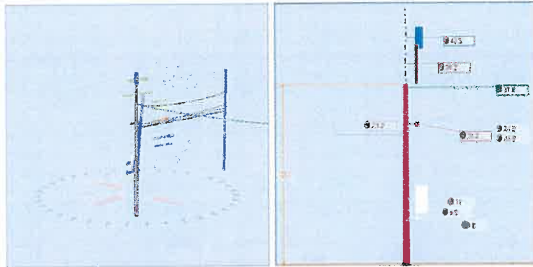
ENLARGED PLAN

DRAWN BY:	DRAFT DATE:	APPROVED BY:
BW	02/13/18	TT

SHEET NO.

SP-2

Pole Num:	6492	Pole Length / Class:	40 / 1	Code:	GO 95	Structure Type:	Angle
Aux Data 1	SFPA023-SFO	Species:	DOUGLAS FIR	GO 95 Rule:	At Replace (Existing)	Pole Strength Factor:	0.38
Aux Data 2	Unset	Setting Depth (ft):	7.68	Construction Grade:	A	Transverse Wind LF:	1.00
Aux Data 3	Unset	G/L Circumference (in):	40.32	Loading District:	Light	Wire Tension LF:	1.00
Aux Data 4	Unset	G/L Fiber Stress (psi):	8,000	Ice Thickness (in):	0.00	Vertical LF:	1.00
Aux Data 5	Unset	Allowable Stress (psi):	2,965	Wind Speed (mph):	55.90	Bending Factor of Safety:	5.56
Aux Data 6	Unset	Fiber Stress Ht. Reduc:	No	Wind Pressure (psf):	8.00	Vertical Factor of Safety:	533.33
Latitude:	0.000000 Deg		Longitude:	0.000000 Deg		Elevation:	0 Feet



Pole Capacity Utilization (%)	Height (ft)	Wind Angle (deg)
Crossarm allowance 300 lbs		
Maximum	48.0	0.0
Groundline	48.0	0.0
Vertical	0.5	16.0

Pole Moments (ft-lb)	Load Angle (deg)	Wind Angle (deg)
Crossarm allowance 300 lbs		
Max Cap Util	24,361	6.5
Groundline	24,361	6.5
GL Allowable	51,273	

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)
Guy Pole	49.0	0.0		0.0	7.7	0.0	0.0
EHS 1/4 (Span/Head)			23.2	0.0	7.7	0.0	0.0
System Capacity Summary:				Adequate		Adequate	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 6.5°										
	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	156	16.3	5,006	22.4	9.8	290	14	0	290	9.8
Comms	398	41.2	9,682	43.4	18.9	560	39	0	560	18.9
GuyBraces	1	0.1	24	0.1	0.1	1	3	0	1	0.0
GenericEquipments	134	13.9	2,549	11.4	5.0	147	379	3	150	5.1
Pole	231	23.9	3,488	15.6	6.8	202	1,231	10	211	7.1
Crossarms	45	4.6	1,555	7.0	3.0	90	58	0	90	3.0
Insulators	0	0.0	15	0.1	0.0	1	11	0	1	0.0
Pole Load	967	100.0	22,320	100.0	43.5	1,291	1,734	13	1,304	44.0
Pole Reserve Capacity			28,953		56.5	1,674			1,661	56.0

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 6.5°										
	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 (%)
Power	59	6.1	2,028	9.1	4.0	117	31	0	118	4.0
<Undefined>	142	14.6	4,498	20.2	8.8	260	12	0	260	8.8
CC	333	34.5	7,485	33.5	14.6	433	396	3	436	14.7
Catv	199	20.6	4,752	21.3	9.3	275	32	0	275	9.3
PWR	1	0.1	24	0.1	0.1	1	3	0	1	0.0
Pole	231	23.9	3,488	15.6	6.8	202	1,231	10	211	7.1
GA	2	0.2	45	0.2	0.1	3	30	0	3	0.1
Totals:	967	100.0	22,320	100.0	43.5	1,291	1,734	13	1,304	44.0

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)	Moment at GL* (ft-lb)
Service	TRIPLEX 6 AWG	31.75	6.59	0.5800	1.14	0.113	56.0	90.0	56.1	50	179	0	338
Secondary	10 Al Triplex	31.75	6.59	0.8900	1.22	0.431	49.0	0.0	49.3	142	4,480	1	4,489
Totals:										4,639	1	346	5,006

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)
Overhead Bundle	1/4" Strand	CC	24.75	7.29	0.2500	0.94	0.121	49.0	0.0	49.0	200	4,918	2	4
Telco	216-320 Count fiber	CC	24.70	7.29	1.0000	0.350	49.0	0.0	49.0	0.0	0.0	0.0	5	4
Overhead Bundle	1/4" Strand	Catv	23.75	7.36	0.2500	1.79	0.121	49.0	0.0	49.0	200	4,720	2	2
CATV	500 COAX	Catv	23.75	7.23	0.5000	0.150	49.0	0.0	49.0	0.0	0.0	0.0	2	2
CATV	500 COAX	Catv	23.75	7.50	0.5000	0.150	49.0	0.0	49.0	0.0	0.0	0.0	2	2
CATV	500 COAX	Catv	23.71	7.27	0.5000	0.150	49.0	0.0	49.0	0.0	0.0	0.0	2	2
CATV	540 COAX	Catv	23.70	7.47	0.5400	0.092	49.0	0.0	49.0	0.0	0.0	0.0	1	2
CATV	540 COAX	Catv	23.66	7.26	0.5400	0.062	49.0	0.0	49.0	0.0	0.0	0.0	1	2
CATV	540 COAX	Catv	23.66	7.48	0.5400	0.062	49.0	0.0	49.0	0.0	0.0	0.0	1	2
CATV	97-120 Count fiber	Catv	23.62	7.35	0.6500	0.262	49.0	0.0	49.0	0.0	0.0	0.0	4	2
Totals:										9,838	24	20	9,682	

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	MUSH-41	CC	11.00	16.70	270.0	0.0	315.00	60.00	16.00	—	21.74	-49	694
Box	WTR	CC	9.50	11.79	270.0	0.0	15.00	12.00	6.00	—	12.00	-2	62
Box	Disconnect	CC	8.00	10.89	270.0	0.0	11.00	9.00	4.00	—	5.00	-1	26
Cylinder	CUUT360X12F56s0	CC	40.33	1.07	90.0	0.0	38.10	48.00	—	14.60	0	1,570	1,570
Totals:											-52	2,601	2,549

Crossarm	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)
Pole Extension	Pole Top Bayonet Extension	Power	35.34	0.68	90.0	90.0	28.00	84.00	5.75	3.36	0	1,510	1,510
Normal	4' Guard Arm	GA	25.16	6.64	270.0	270.0	30.00	4.75	3.75	48.00	-2	47	45
Totals:											-2	1,507	1,555

Insulator	Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Spool	Spool Insulator - 20 kV		31.75	0.00	90.0	0.0	1.00	2.50	2.12	0	9	9
Bolt	Dead End Bolt	CC	24.75	0.00	0.0	0.0	5.00	3.00	0.00	3	0	3
Bolt	Dead End Bolt	Catv	23.75	0.00	0.0	0.0	5.00	3.00	0.00	3	0	3
Totals:										6	9	15

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 1/4	Span/Head	PWR	23.16	26.16	49.00	0.25	75.00	0.0	-3.5	0.121	46.18	0.00

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* (lbs)	Maximum Tension* (lbs)	Applied Tension* (lbs)	Vertical Load (lbs)	Shear Load In Guy Dir (lbs)	Shear Load At Report Angle (lbs)	Moment at GL* (ft-lb)
EHS 1/4	Span/Head	2,30e+7	8,850	0.75	4,988	700	0	0	0	0	0	24
Totals:										0	0	24

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* (lbs)	Load at Pole MCL* (lbs)	Max Required Capacity* (%)
Guy Pole	Power		30.00	49.00	0.0	20,000	0.75	15,000	0	0.0

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	16.00	32.45	12.15	6.36	8.60	12.84	1.60e+6	60.00	57.00	32.34	343,367	1,734	198.01

SF PALO ALTO 032 PALO ALTO

CROWN CASTLE PROJECT NO.
VZW366241CA

CLIENT:



PREPARED BY:



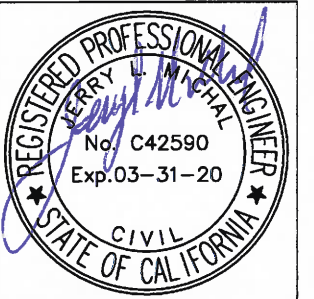
PROPRIETARY INFORMATION

THE INFORMATION CONTAINED IN THIS SET OF DRAWINGS IS PROPRIETARY AND CONFIDENTIAL TO VERIZON. ANY USE OR DISCLOSURE OTHER THAN AS IT RELATES TO VERIZON IS STRICTLY PROHIBITED.



UNDERGROUND SERVICE ALERT
TICKET #

ZONING SUBMITTAL	03/03/18
ZONING COMMENTS	04/12/18
REVISION / ISSUE	DATE



SITE NAME & ADDRESS:
ROW ADJACENT TO 201 HIGH ST
PALO ALTO, CA
37.446382/-122.166954

O'CALCS

DRAWN BY: BW	DRAFT DATE: 02/13/18	APPROVED BY: TT
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SHEET NO.
OC-1

TRAFFIC CONTROL PLAN GENERAL NOTES:

1. WORK HOURS TO BE RESTRICTED TO _____ TO _____ UNLESS APPROVED OTHERWISE.
2. PEDESTRIAN CONTROLS WILL BE PROVIDED AS SHOWN.
3. PEDESTRIANS SHALL BE PROTECTED FROM ENTERING THE EXCAVATION BY PHYSICAL BARRIERS DESIGNED, INSTALLED, AND MAINTAINED TO THE SATISFACTION OF THE CITY ENGINEER.
4. TEMPORARY "NO PARKING/TOW AWAY" SIGNS STATING THE DATE AND TIME OF PROHIBITION WILL BE POSTED 72 HOURS PRIOR TO COMMENCING WORK. CALL POLICE DISPATCH TO VALIDATE POSTING.
5. ACCESS WILL BE MAINTAINED TO ALL DRIVEWAYS UNLESS OTHER ARRANGEMENTS ARE MADE.
6. TRENCHES MUST BE BACKFILLED OR PLATED DURING NON-WORKING HOURS UNLESS K-RAIL BARRIERS ARE PROVIDED. K-RAIL IS APPROVED ONLY WHEN SPECIFICALLY SHOWN ON THE APPROVED TRAFFIC CONTROL PLAN. PLATES SHALL HAVE CLEATS AND COLD MIX AT THE EDGES AS APPROVED BY THE INSPECTOR.
7. STRIPING WILL BE REPLACED BY THE CONTRACTOR WITHIN 24 HOURS, IF REMOVED OR DAMAGED.
8. WORK THAT DISTURBS NORMAL TRAFFIC SIGNAL TIMING OPERATIONS SHALL BE COORDINATED WITH THE CITY. CONTACT PUBLIC WORKS DEPARTMENT 72 HOURS PRIOR TO COMMENCING WORK.
9. TRAFFIC SIGNALS SHALL REMAIN FULLY ACTUATED AT ALL TIMES, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR HIS/HER REPRESENTATIVE. IF TRAFFIC SIGNAL LOOP DETECTORS ARE RENDERED INOPERATIVE BY THE PROPOSED WORK, VIDEO DETECTION SHALL BE USED TO PROVIDE ACTUATION.
10. FLAGGERS SHALL BE EQUIPPED WITH A WHITE HARD HAT, AN ORANGE VEST, AND A "STOP/SLOW" PADDLE ON A 5 FOOT STAFF.
11. ALL TRAFFIC CONTROL DEVICES MUST BE MAINTAINED 24 HOURS A DAY, 7 DAYS PER WEEK, BY THE CONTRACTOR.
12. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2014 EDITION.
13. TRAFFIC CONTROL PLAN SUBMITTALS ARE REQUIRED FOR EACH PHASE OF THE WORK IN THE DETAIL, FORMAT, AND QUALITY ILLUSTRATED ON THIS SHEET.
14. ALL TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM VIEW OR COVERED WHEN NOT IN USE.
15. THE CITY ENGINEER OR HIS/HER REPRESENTATIVE HAS THE AUTHORITY TO INITIATE FIELD CHANGES TO INSURE PUBLIC SAFETY.
16. ALL WORK AFFECTING BUS STOPS SHALL BE COORDINATED WITH CITY'S TRANSIT DISTRICT. CONTRACTOR SHALL CALL TRANSIT DISTRICT AT LEAST 72 HOURS IN ADVANCE OF STARTING WORK.
17. CHANGEABLE MESSAGE SIGNS SHALL BE USED IN ADVANCE OF TRAFFIC CONTROL ON MAJOR AND PRIME ARTERIALS, UNLESS OTHERWISE APPROVED. THESE SIGNS SHALL BE SHOWN ON THE TRAFFIC CONTROL PLAN.

SIGNAGE NOTES:

1. AT LEAST ONE PERSON SHALL BE ASSIGNED TO FULL TIME MAINTENANCE OF TRAFFIC CONTROL DEVICES ON ALL NIGHT LANE CLOSURES.
2. ALL WARNING SIGNS FOR NIGHT LANE CLOSURES SHALL BE ILLUMINATED OR REFLECTORIZED AS SPECIFIED IN THE SPECIFICATIONS.
3. ALL ADVANCE WARNING SIGN INSTALLATIONS SHALL BE EQUIPPED WITH FLAGS FOR DAYTIME CLOSURES OF ALL MAJOR AND PRIME ARTERIALS. FLASHING BEACONS SHALL BE USED DURING NIGHT LANE CLOSURES.
4. A G20-2 "END ROAD WORK" SIGN SHALL BE PLACED AT THE END OF THE LANE CLOSURE UNLESS THE END OF THE WORK AREA IS OBVIOUS, OR ENDS WITHIN A LARGER PROJECT LIMITS.
5. ALL CONES USED FOR NIGHT LANE CLOSURES SHALL BE ILLUMINATED TRAFFIC CONES OR FITTED WITH 13" REFLECTIVE SLEEVES.
6. FLASHING ARROW SIGNS SHALL BE USED PER CA MUTCD 2014 EDITION. SILENT TYPE SHALL BE USED IN RESIDENTIAL AREAS.
7. THE MAXIMUM SPACING BETWEEN CONES SHALL BE THE WORK AREA'S SPEED LIMIT.
8. ADDITIONAL ADVANCE FLAGGERS SHALL BE REQUIRED WHEN TRAFFIC QUEUES DEVELOP. FLAGGER STATIONS FOR WORK AT NIGHT SHALL BE ILLUMINATED AS NOTED IN SECTION 6G.20 OF THE MUTCD.
9. ALL REQUIRED SIGNS THAT ARE TO BE LEFT IN PLACE OVER A WEEKEND OR HOLIDAY SHALL BE POST MOUNTED.
10. CONSTRUCTION AREA TRAFFIC CONTROL DEVICES SHALL MEET THE PROVISIONS OF 2014 CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

SIGN LEGEND

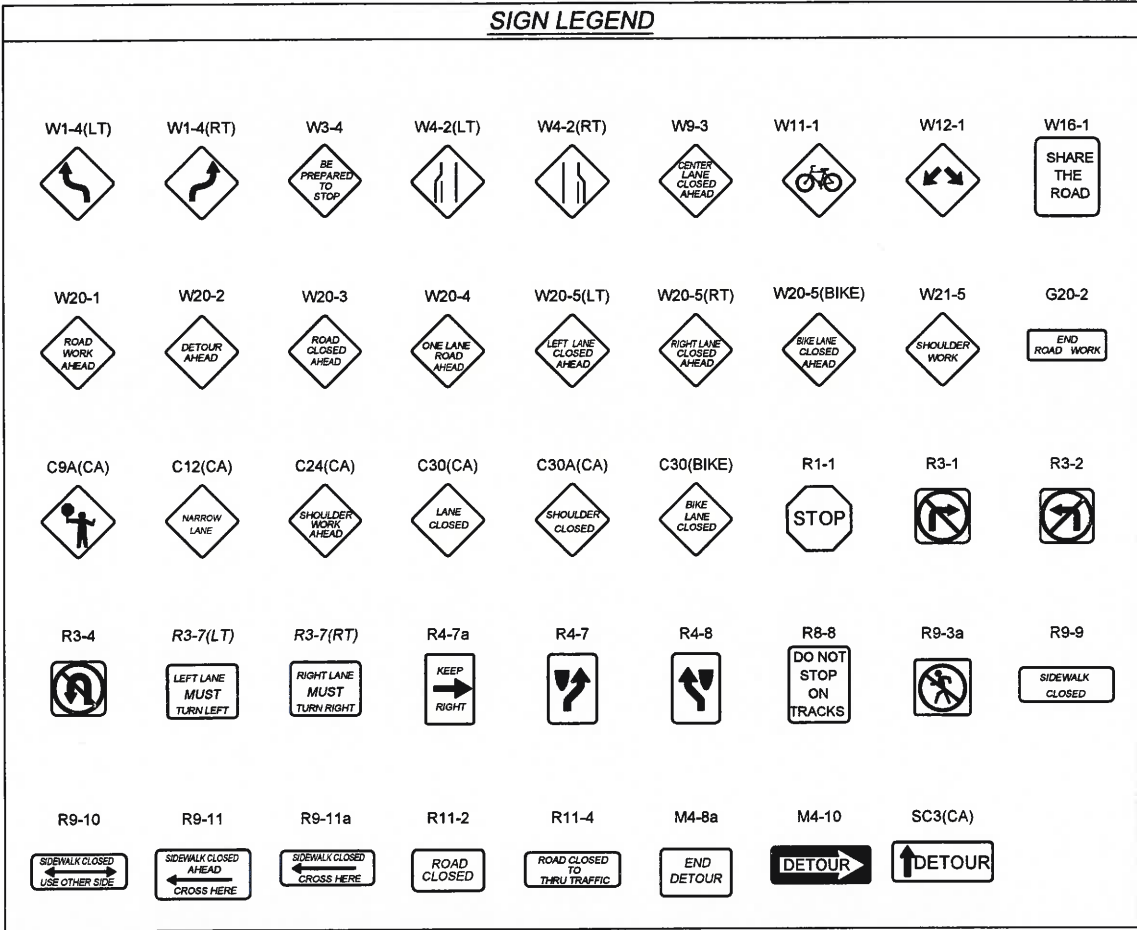


Table 6C-1. Recommended Advance Warning Sign Minimum Spacing

Road Type	Distance Between Signs*		
	A	B	C
Urban (low speed) – 25 mph or less	100 ft	100 ft	100 ft
Urban (high speed) – more than 25 mph to 40 mph	250 ft	250 ft	250 ft
Urban (high speed) – more than 40 mph	350 ft	350 ft	350 ft
Rural	500 ft	500 ft	500 ft
Expressway / Freeway	1,000 ft	1,000 ft	1,000 ft

* Speed category to be determined by the highway agency.
** The column headings A, B, and C are the dimensions shown in Figures 6H-1 through 6H-46. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The "first sign" is the sign in a three-sign series that is closest to the TTC zone. The "third sign" is the sign that is furthest upstream from the TTC zone.)

LEGEND			
	DIRECTION OF TRAVEL		FLAG TREE
	PAVEMENT ARROW		FLASHING ARROW BOARD
	PORTABLE SIGN		TRAFFIC SIGNAL
	TRAFFIC CONE / DELINEATOR		K-RAIL (TYPE 50 CONCRETE BARRIER)
	TYPE II BARRICADE		CHANGEABLE MESSAGE SIGN
	TYPE III BARRICADE		FLAGGER
	WORK AREA		DRIVEWAY

Table 6C-2. Stopping Sight Distance as a Function of Speed on Level Roads.
(Used as suggested longitudinal buffer space length or location for flagger station)

Speed*	Distance
20 mph	115 feet
25 mph	155 feet
30 mph	200 feet
35 mph	250 feet
40 mph	305 feet
45 mph	360 feet
50 mph	425 feet
55 mph	495 feet
60 mph	570 feet
65 mph	645 feet
70 mph	730 feet
75 mph	820 feet

* Posted speed, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph.

Table 6C-3 (CA). Taper Length Criteria for Temporary Traffic Control Zones (for 12 feet Offset Width)

Speed* S (mph)	Minimum Taper Length** for Width of Offset 12 feet (w)			
	Merging L (feet)	Shifting L/2 (feet)	Shoulder L/3 (feet)	Down Stream (feet)**
20	80	40	27	50
25	125	63	42	50
30	180	90	60	50
35	245	123	82	50
40	320	160	107	50
45	540	270	180	50
50	600	300	200	50
55	660	330	220	50
60	720	360	240	50
65	780	390	260	50
70	840	420	280	50

* - Posted speed limit, off peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph.
** - For other offsets use the following merging taper length formula for L:
For speeds of 40 mph or less, $L = WS^2/60$
For speeds of 45 mph or more, $L = WS$
Where L = taper length in feet
W = width of offset in feet
S = posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph.
*** - Maximum downstream taper length is 100 feet. See Section 6C.08.



Jerry L. Michal
R.C.E. NO. C 42590
EXP. 03-31-20

10-23-18
DATE

OWNER / DEVELOPER:

CROWN CASTLE

685 RIVER DAMS PARKWAY
SAN JOSE, CA 95134
www.crowncc.com

PLANS PREPARED BY:

Communications
Telecommunications Engineering
5941 ERSKINE PLACE, STE. 200
CARLSBAD, CA 92008
PH: (760) 929-0810
FX: (760) 929-0836

CITY OF:

PALO ALTO

JOHN GRIFFITHS
PROJECT MANAGER

VZM366241CA-SFP032-SFO-TC
FILE NAME

CITY OF:

201 HIGH ST

PROJECT NUMBER:
VZM366241CA-SFP032

PAGE GRID:
1/23/17

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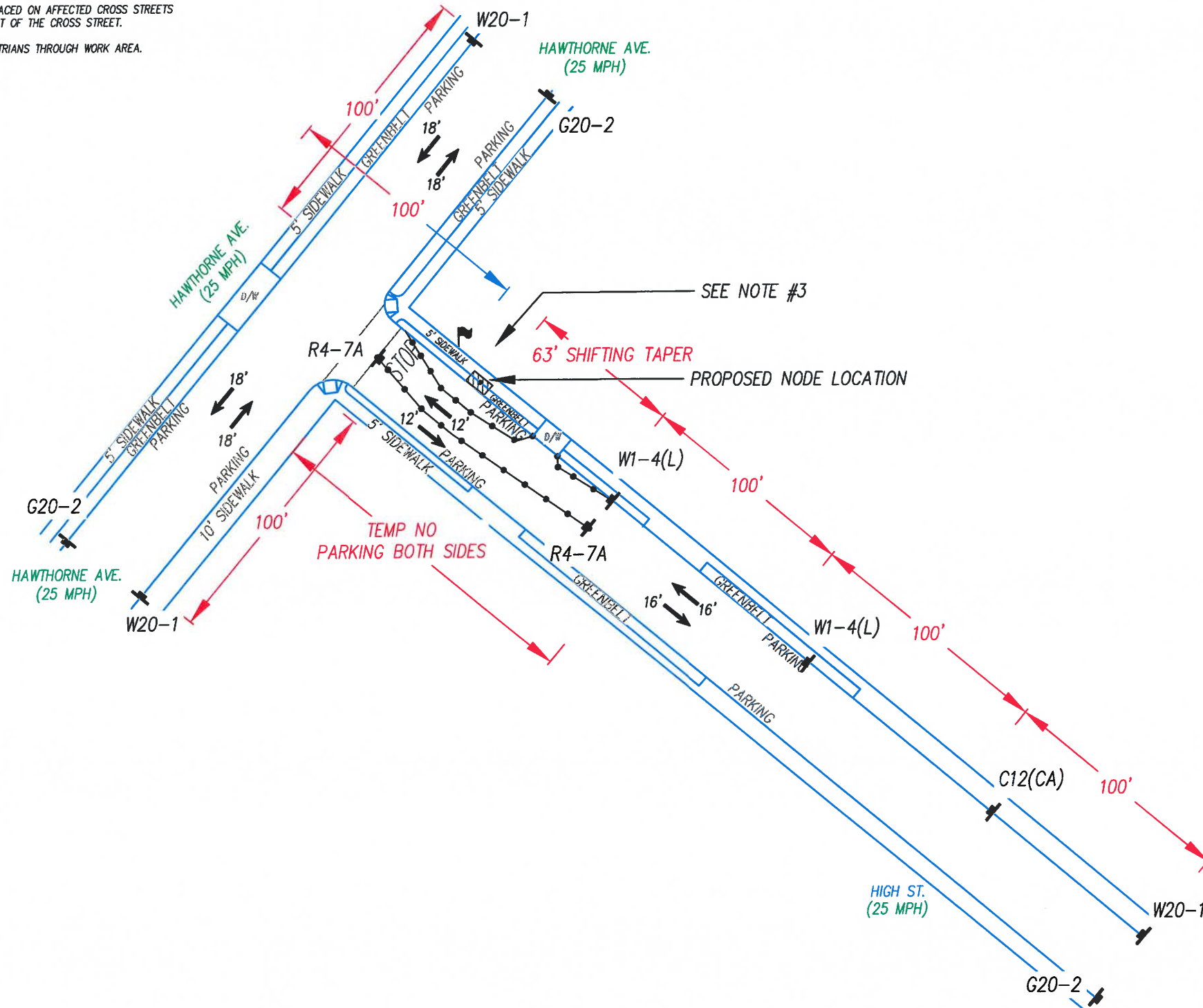
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T01 OF T02

NOTES:

1. CONTRACTOR TO MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES.
2. W20-1 & G20-2 SHALL BE PLACED ON AFFECTED CROSS STREETS ACCORDING TO THE SPEED LIMIT OF THE CROSS STREET.
3. FLAGGER SHALL ASSIST PEDESTRIANS THROUGH WORK AREA.

PHASE 1



Jerry L. Michal
JERRY L. MICHAL R.C.E. NO. C 42590 EXP. 03-31-20

10-23-18
DATE

OWNER / DEVELOPER: CROWN CASTLE 685 RIVER OAKS PARKWAY SAN JOSE, CA 95134 WWW.CROWNCASTLE.COM	
PLANS PREPARED BY: Coastal Communications Telecommunications Engineering 5841 ENSON PLACE, STE. 200 CARLSBAD, CA 92009 PH: (760) 929-0910 FX: (760) 929-0836	
DIALERT 1-800-227-2600 CALL AT LEAST TWO HOURS BEFORE THE JOB UNDERGROUND SERVICE ALERT TICKET #	
CITY OF:	PALO ALTO
PROJECT MANAGER:	JOHN GRIFFITHS
FILE NAME:	VZW366241CA-SFPA032-SFO_IC
PROJECT NUMBER:	VZW366241CA-SFPA032
PAGE GRID:	
DATE:	1/23/17
CHECK BY:	GD
DRAWN BY:	VY
SHEET NO.:	T02 OF T02