| SAMPLE F | PERMIT APPLICATION | | | | |
|---|---|--|--|--|--|
| Departr | nent of Public Works | | | | |
| Encroachment Permit Application | | | | | |
| | DERMIT # P2018-00231 | | | | |
| 0300 Torre Ave Eupertino, CA 95014-3255 | | | | | |
| X: (408) 777-3333 | Revised 9/2015 | | | | |
| Location of WorkPublic Right of Way Near 10465 | S De Anza Blvd Building Permit # N/A | | | | |
| Type of Work: check all that apply | | | | | |
| 🗌 Sidewalk 🛛 🗌 Driveway Approach 🔲 Curb & Gutt | er 📋 Street Light 🔲 Curb Ramp | | | | |
| 🔄 Paving 🔲 Utility Trench 🔲 Monitoring Well 🔲 F | 2001 🔲 Fiber Cable 🔲 News Rack | | | | |
| Other: Install new Verizon Wireless small cell site | e on a Cupertino streetlight pole | | | | |
| PERMITTEE: | CONTRACTOR: | | | | |
| Name: Verizon Wireless (c/o Modus Inc) | Name: Modus Inc | | | | |
| Address: 240 Stockton St, 3rd Floor | Address: 240 Stockton St 3rd Floor | | | | |
| San Francisco, CA 94108 | San Francisco, CA 94108 | | | | |
| 408-219-5442 | 24 hr Contact. Cal Bordonaro | | | | |
| -none: | 445 264 0000 | | | | |
| Start Date: 0/12/18 (100gil 101ecast) | 24 hr. Phone: 415-261-0000 | | | | |
| ¢ of Working days: | Contractor's Lic. No. : <u>C-997355</u> | | | | |
| | City Business Lic. No. :TBD (app filed) | | | | |
| ATTACH THE FOLLOWING TO APPLICATION: 1) Written Description of Work 2) Engineer's Cost Estimate 3) Detailed Traffic Control Plan including plan of exist and pavement markers) and signs 4) Project Plans and Specifications 5) Contractors Insurance Certificate (Insurance required) | ting pavement delineation (traffic stripes, pavement markings, rements listed on reverse) | | | | |
| Permittee Signature: <u>K-B</u> | Date: 2/8/18 | | | | |
| (CITY USE ONLY) | Expiration Date: 11/25/18 | | | | |
| Permit Fee \$ <u>1,500.00</u> Bond \$ <u>n/a</u> | Type of Bond: Cash Paper Certificate of Deposit | | | | |
| Receipt #: <u>n/a</u> | | | | | |
| Bond Retention Schedule <u>n/a</u> | | | | | |
| Approved By: <u>JoAnne Johnson</u> | Date: 5/25/18 | | | | |
| Inspected By: | — Date: | | | | |
| SEE REVERSE | FOR PERMIT CONDITIONS | | | | |
| | | | | | |

| SPECIAL CONDITIONS | | | | | |
|--|--|---------------------------------------|----------------|--|--|
| K Work hours limited to Monday - Friday: | 🗌 7:00 a.m. | X 9:30 AM | to | X 3:30 PM | 🗌 6:00 p.m. |
| K Work hours in pavement limited to: | 🗌 8:00 a.m. | X 9:30 AM | to | X 3:30 PM | ☐ 4:30 p.m. |
| Any violation of working hours shall result in | "STOP WORK" not | ice | | | |
| \fbox Two lanes of traffic to be maintained at all tir | nes | | | | |
| Permanent paving must be installed WITHIN | 5 WORKING DAY | /S after comp l eti | on | | |
| X Pavement delineation or signs damaged duri | ng construction s | hall be replaced i | in kind | | |
| X Pavment section shall match existing | | | | | |
| Slurry Seal is required to match existing pave | ment | | | | |
| All Trenching shall be backfilled to a minimur | m of 95% relative | compaction | | | |
| Trench plates in the travel way shall be traffic | rated, properly s | ecured and sha ll | be rec | essed upon reque | st |
| If trench is 3' or less from Lip of Gutter, contra | ctor sha ll repave | to Lip of Gutter. | | | |
| Jobsite shall be properly posted 48 hours in a utility performing work. All signs attached to bar | dvance. Barricado ricades must shov | es must bear the w the days and da | name ates w | and phone numb hen work wi ll be p | er (24 hour number) of the contractor or performed. Parking may not |
| be restricted on Saturday or Sunday. | | · | | | |
| X BMP Sheet Attached | | | | | |
| Potholes and bore pits shall be filled to grad | e with cutback at | end of each worl | k day: | | |
| Other | | | | | |

General Conditions

1) The Public Works Inspector of the City of Cupertino, (408) 777-3104, shall be notified at least 48 hours prior to beginning work in the public Right-of-Way or requesting inspection of work. After the work is completed, notify the Public Works Inspector to schedule a final inspection.

2) A copy of this permit must be kept on the job site.

3) The applicant shall notify County Communications, (408) 299-2501, at least 24 hours prior to any work in the traveled way section of a street. 4) Permittee shall employ construction best management practices which will prevent pollutants such as mud, silt, chemical residue, and washings from concrete saw-cutting from entering storm drains. Brochures are available at the Public Works counter.

5) The applicant agrees that if the encroachment for which this permit is issued which shall at any time in the future interfere with the use, repair, improvement, widening, or change of grade of any street, roadway, highway, sidewalk, curb, drain, or Right-of-Way, applicant or his successor or assigns, shall within 14 days after receipt of written notice from the Director of Public Works to do so, at its own expense either remove such encroachment subject to approval from the Director, or relocate to a site which may be designated by the Director. Any encroachment removed by the City will not be replaced.

6) It is further agreed that, commencing with the performance of the Work by the Permittee or his contractor and continuing until the completion of the maintenance of the Work, the Permittee shall indemnify, hold harmless and defend the City from and against any or all loss, cost, expense, damage or liability, or claim thereof, occasioned by or in any way whatsoever arising out of the performance or nonperformance of the Work or the negligence or willful misconduct of the Permittee or the Permittee's agents, employees and independent contractors, except to the extent any of the foregoing is caused by the sole negligence or willfull misconduct of the City or the City's agents, employees and independent contractors.

7) Should the Permittee provide services which are subject to the City's Franchise ordinance, Permittee agrees to pay any applicable City franchise fee.

8) This encroachment permit shall be terminable at the sole discretion of the City upon 30 days written notice to the Permittee.

9) The applicant's contractor shall carry at all times commercial general liability insurance with a combined single limit of \$1.0 million per occurrence; \$2.0 million aggregate; and provide a Certificate of Insurance and Endorsement naming the City as Additional Insured. Insurers must be licensed to do business within the State of California and have a current Best's Guide Rating of A, Class VII or better or that is otherwise acceptable to the City.

10) All work within the public Right of Way must be completed by a contractor who holds a current Class A or appropriate Class C license and a current City of Cupertino business license.

11) Permittee and Contractor shall comply with Chapter 11.32 of the Cupertino Municipal Code "Truck Traffic Routes". No person shall operate or drive any truck that exceeds a gross weight of three tons between the hours of 7:00 a.m and 9:30 am or 2:00 p.m and 4:00 p.m. on the following roadway segments:

a) any roadway which runs contiguous to and is within 500 feet of any public school grounds b) McClellan Road, between Stelling Road and Bubb Road.

Verīzonv



PROJECT DESCRIPTION

THE PROJECT INVOLVES THE INSTALLATI WIRELESS TELECOMMUNICATION FACILI ANTENNA AND ASSOCIATED EQUIPMENT CUPERTINO REPLACEMENT STEEL LIGHT RIGHT OF WAY. EXISTING POLE AND FOU REMOVED AND REPLACED WITH NEW STE CONCRETE FOUNDATION. EXISTING POLE DEMOLISHED TO A MINIMUM DEPTH BELO AND ABANDONED IN PLACE. **GENERAL SCOPE OF WORK**

- □ ANTENNA AND ASSOCIATED EQUIPM INSTALL A NEW CYLINDRICAL ANTEN ON A STEEL LIGHT POLE. INSTALLAT NEW CYLINDRICAL ANTENNA CONCE CONCEALMENT SHROUD AT TOP OF **RRUS EQUIPMENT CABINETS AND (1)** CENTER/ DISCONNECT MOUNTED TO ASSOCIATED POWER, FIBER AND COA ROUTED WITHIN LIGHT POLE.
- PAINT

ALL NEW EQUIPMENT AND MOUNTING SHALL BE PAINTED TO MATCH LIGHT ANTENNA SHROUD, MOUNTING BRAC SHROUD/ SWEEP, RRUS UNITS, RRUS BRACKETS AND LOAD CENTER.

- CABLING TO BE INSTALLED IN A TIGHT WITHOUT EXCESS CABLE LOOPS.
- □ SIGNAGE FCC MANDATED RF NOTICE/ WARNING SIGNAGE TO BE MOUNTED TO LIGHT REQUIREMENTS, THE CITY OF CUPER REQUIREMENTS, THE CALIFORNIA PU **COMMISION GENERAL ORDER 95 SEC** PACIFIC GAS AND ELECTRIC REQUIRE

PROJECT DESC

ARCHITECT

JAMES VACCARO ARCHITECT, INC. 411 DONDEE WAY, UNIT C PACIFICA, CA 94044 CONTACT: JAMES VACCARO, AIA CONTACT NUMBER: (415) 608-3670 FAX NUMBER: (415) 963-4471 EMAIL: JVACCARO@JVARCHITECT.COM SURVEYOR HAYES LAND SURVEYING AND MAPPING 2830 MADIGAN COURT

CONCORD, CA 94518 CONTACT: RICK HAYES CONTACT NUMBER: (925) 798-3591 EMAIL: RKSEYAH@COMCAST.NET STRUCTURAL ENGINEER

JEFFREY M. VAN DYKE, S.E. 1470 FELTA ROAD HEALDSBURG, CA 95448 CONTACT NUMBER: (707) 696-3721

EMAIL: JEFFREY@STRUCTURALENGINEER AGENT PROJECT MANAGER MODUS, INC.

240 STOCKTON STREET, 3RD FLOOR SAN FRANCISCO, CA 94108 CONTACT: KEVIN BOWYER PHONE: (408) 219-5442 EMAIL: KBOWYER@MODUS-CORP.COM



SITE NAME: SITE ID: **LOCATION CODE: ASSET ID: BADGE NUMBER: SERVICE ID:** SITE ADDRESS:

COUNTY:

SF_CUPER001 CPSC001 417709 **LTPL1004** 24431 4993063026 **PUBLIC ROW ADJACENT TO 10465 S. DE ANZA BOULEVARD CUPERTINO, CA 95014 SANTA CLARA COUNTY**

| | SILE LYPE: | | SIEEL LIGHI POLE | |
|--|--|--------------|---|------|
| | APPLICANT | SHEET NO. | SHEET TITLE | REV. |
| ON OF AN UNMANNED | VERIZON WIRELESS 2785 MITCHELL DRIVE, SUITE 9 | | | |
| | WALNUT CREEK, CA 94598 | | | 3 |
| | PHONE: (650) 759-1377 | | | 3 |
| EEL POLE AND FOUNDATION TO BE | EMAIL: JENNIFER.HAAS@VERIZONWIRELESS.COM | 1-3 | | 3 |
| W EXISTING GRADE | AGENT MODUS INC | C-1 | | 1 |
| | 240 STOCKTON STREET, 3RD FLOOR | A-1 | SITE PLAN, ENLARGED ANTENNA LAYOUT, ENLARGED EQUIPMENT LAYOUT | 3 |
| | CONTACT: KEVIN BOWYER | A-2.0 | ELEVATIONS | 3 |
| ON CONSISTS OF (1) | PHONE: (408) 219-5442 EMAIL: KBOWYER@MODUS-CORP.COM | A-2.1 | ELEVATIONS | 3 |
| ALED WITHIN NEW LIGHT POLE, (2) NEW | PROPERTY OWNER | A-3 | DETAILS | 3 |
| | CITY OF CUPERTINO | S-1 | STRUCTURAL NOTES, DETAILS | 3 |
| AXIAL CABLES | CUPERTINO CITY HALL 10300 TORRE AVENUE | S-2 | DETAILS | 3 |
| | CUPERTINO, CA 95014-3202 | EP-1 | SINGLE LINE DIAGRAM, EQUIPMENT GROUNDING DIAGRAM | 3 |
| | EMAIL: ENGINEERING@CUPERTINO.ORG | EP-2 | UTILITY PLAN, CONDUIT SCHEDULE, CIRCUIT DIAGRAM | 3 |
| POLE, INCLUDING | A.P.N.: ROW ADJACENT TO 359-17-019 | EP-3 | DETAILS | 3 |
| CKETS, CABLE S MOUNTING | OCCUPANCY TYPE: N/A-LIGHT POLE IN ROW | SP-1 | SPECIFICATIONS | 3 |
| | | SP-2 | SPECIFICATIONS | 3 |
| | ZONING DESIGNATION: HE4 | SP-3 | SPECIFICATIONS | 3 |
| T NEAT MANNER | LATITUDE (NAD 83): 37° 18' 58.99" N | | | |
| | LONGITUDE (NAD 83): 122° 01' 57.00" W | | | |
| G AND SHUT-DOWN | GROUND ELEVATION: ±248.6 AMSL | | | |
| POLE PER FCC | | | | |
| IBLIC UTILITIES | | | | |
| EMENTS. | | | | |
| RIPTION | PROJECT INFORMATION | | | |
| | | | | |
| | ALL WORK AND MATERIALS SHALL BE PERFORMED AND | | | |
| | INSTALLED IN ACCORDANCE WITH THE FOLLOWING CODES | | | |
| | NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT | | | |
| | WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES AND AUTHORITIES HAVING JURISDICTION. | | | |
| | | | | |
| | 2016 CALIFORNIA ADMINISTRATIVE CODE, TITLE 24 PART 1 2016 CALIFORNIA BUILDING CODE, TITLE 24 PART 2 | | | |
| | 2016 CALIFORNIA ELECTRICAL CODE, TITLE 24 PART 3 2016 CALIFORNIA MECHANICAL CODE, TITLE 24 PART 4 | | | |
| | 2016 CALIFORNIA PLUMBING CODE, TITLE 24 PART 5 2016 CALIFORNIA ENERGY CODE, TITLE 24 PART 6 | | | |
| | 2016 CALIFORNIA ENERGY CODE, TITLE 24 PART 0 2016 CALIFORNIA FIRE CODE, TITLE 24 PART 9 | | | |
| | ANSI/TIA-222-G 2018 NFPA 101, LIFE SAFETY CODE | | | |
| | 2017 NFPA 70, NATIONAL ELECTRICAL CODE 2016 NEPA 72, NATIONAL EIRE ALARM CODE | | | |
| | 2016 NFPA 13, SPRINKLER CODE | | | _ |
| | 2013 AASHTO LTS-6 STATE OF CALIFORNIA GENERAL ORDER NO. 128 | | | |
| RINGCONSULTING.COM | CITY/ COUNTY ORDINANCES AND CODES | | | |
| | | | | |
| | ACCESSIBILITY FACILITY IS UN-MANNED AND NOT FOR HUMAN REQUIREMENTS HABITATION DISABLED ACCESS NOT REQUIRED | | | |
| | IN ACCORDANCE WITH CALIFORNIA CODE OF | | | |
| | CHAPTER 11B, DIVISION 2, SECTION 11B-203.5. | | | |
| | | | | |
| | CODE COMPLIANCE | SH | EET INDEX | |
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| INSTITUTE CDB LOWATING GALV GALV GALV GALVALED APR AMTERINA CTRL CONTROL GC GRAB BAR APROX APPROXIMATE CW CUICKWISE GFCI GRUND FAULT CIRCUIT ARCH ARCHTECT C CV CUICKWISE GFCI GRUND FAULT CIRCUIT ARCH ARCHTECT C CV CVILNOER GUILAM GUILAM GUIDEL GUIDAM GUIDEL GUIDAM GUIDEL GUIDAM GUIDEL GUIDAM GUIDEL GUIDAM GUIDE GUIDAM GUIDEL GUIDAM GUIDEL GUIDAM GUIDEL GUIDAM GUIDAM <t< th=""><td>ANSI</td><td>STANDARDS</td><td>CT</td><td>CERAMIC TILE</td><td>GA GAL</td><td>GALLON</td></t<> | ANSI | STANDARDS | CT | CERAMIC TILE | GA GAL | GALLON |
| APA ANIENNA CTRL CONTROL GB GRADBAR APA AMERICAN PLYWOOD CU YO COPPER GEN GENERAL ONTRACTOR ARCHA ARCHA APROVITEGT CU YO CUSIC YARD GEN GEN GEN GEN ARCHA ARCHA ARCHA ARCHA MICHICAN SOCIETY OF CVL CVL CVINDER GUILLAM GUIDE LAMINATED WOOD ASHRA MAERICAN SOCIETY OF DE DEPTH GSM GALVANIZED SHEET METAI ASHRA MAERICAN SOCIETY OF DE DIFECT CURRENT GSM GALVANIZED SHEET METAI ASHRA CONDITIONING DE DEFT DEFAIL GVP BID GYPSUM BARATTEE ASIN ARCHITECTS DEFD DEFAIL GYP BID GYPSUM BARATTEE ASSN ASSOCIATION DF DOUGLAS FIR GYP BID GYPSUM BARATTEE ASSN ASSOCIATION DF DIAG DIAGONAL HDG HOTANITACTOR AUTO AUTOMATIC DIAG DIAGONAL HDG HOTANITACTOR ASSN ASSEMELY DIA DIAGONAL HDG HOTANITACTOR AVENUE DISC DISCONNECT HM HADDINARC ASSN <t< th=""><td>A N 17</td><td>INSTITUTE</td><td>CTG</td><td>COATING CENTER</td><td>GALV</td><td>GALVANIZED</td></t<> | A N 17 | INSTITUTE | CTG | COATING CENTER | GALV | GALVANIZED |
| ASSOCIATION CU YD CUBE VARD GFN GENERATOR GROUND AULT CIRCUIT ARCH APROXIMATE CY U YD CUBE VARD GFC GROUND AULT CIRCUIT ARCH ARCHITECT CY CY CLOCKWISE CULOKWISE GROUND AULT CIRCUIT ASER ARCH ARCHITECT OF CY CY CULORENT GSB GROUND AULT CIRCUIT ABHRE ANERICAN SOCIETY OF CHINAL DEPT MALL GSB GULLAM GLUED SHEET METAL BOARD AR CONTITONING ENGINEERS DEG DEG DEGREE GULLAM GLUALWISED SHEET METAL SUPPLEMENTAL DEPT DEPARTMENT GYP GGAUAWISED SHEET METAL SUPPLEMENTAL DEPT DEPARTMENT GYP GYP MID GULLAWISED SHEET METAL ASSN ASSOCIATION DEF DEFINITION SUPPLEMENTAL DEPT DEPARTMENT GYP GYP GOACAUNICATION ASSN ASSOCIETY OF DET DEFAIL GYP GYP MID HOTDIPPED GAUAWISED SHEET METAL ASSN ASSOCIETY FOR DA ASSN ASSOCIETY FOR DA ANTERICTIONS DET DETAIL GYP GYP MID GAUAWISED GAUAWISED ASSN ASSOCIETY FOR DA ANTERICTIONS DET DEFT DEFARIMENT CYP BD MATERIAS DIAG DIAGONAL HEX HON HOT DIPPED GAUAWISED ANTERIACTIONS DEFT DEFAIL ASSN ASSOCIETY FOR DA ANTERIACTIONS DEFT DEFTAIL GYP GYP MID GAUAWISED ANTERIACTIONS DEFT DEFTAIL GYP GYP MID CANADAS ASSN ASSOCIETY FOR DA ANTERIACTIONS DEFT DIFF DIFFERENCE HEX HEX HEX HEX ANTE ANTERIA DIVISION HEX HON HEX HEX HEX ANTE ANTERIA DIVISION HEX HON HEX AVE AVENUE DISC DISCONNECT HIM HOULDOWN METAL AVE AVENUE DISC DISCONNECT HIM HOULDOWN METAL AVE AVENUE DISC DISCONNECT HIM HOULDOWN ANTI AVE AZIMUTH DINC DA ANTERGAUGE DI NEGLIARACATION POINT HVXC HEATING AWERGAN WELDING DIA ANTERGAUGE DI STANCE HORIZ HORIZONTAL AVE AZIMUTH DINC DR DOWN HEAL AVE AZIMUTH CHING DA ANERGAUA DIVISION HIS HANTING AAD ANERICAN WINE GAUGE DI CONNECT HIM HOULDOWN AN AND ANTERNATIONAL BUILDING BATT BATTEN DACK DR DOWN HOULD HY HVXC HEATING AND BATT BATTEN DACK DR DOWN HOULD HY HVXC HEATING BATT BATTEN CONTER EACH HORIZ HOUNDAN HIS HANTEN BATT BATTEN CONTER ENCENTER BATT BATTEN CONTER ENCENTER BATT BATTEN CONTER ENCENTER BATT BATTEN CONTER ENCENTER BATT BATTEN CONTER ENCENTER HOUNDAND HIM HANDAND HIM HANDAND HIM HANDAND BUILT BUILTING CONTER ENCENTE | AN I APA | ANTENNA AMERICAN PLYWOOD | CTRL | CONTROL | GB GC | GENERAL CONTRACTOR |
| APPRUA APPRUA< | | ASSOCIATION | CU CU YD | CUPPER CUBIC YARD | GEN | |
| ASEC AMERICAN SOCIETY OF CYL CYLINDER CULINA GLUED LAMINATED WOOD ASHRAE AMERICAN SOCIETY OF D AND AIR CONDITIONING DE CONTRENT (MAIL) GSB GUYSLIM SHEATHING B DEPTH BATING, REFRIGERATING DD DIRECT CURRENT GSM GLALVANIZED SHEET METH AND AIR CONDITIONING DE DIRECT CURRENT GSM GLALVANIZED SHEET METH AND AIR CONDITIONING DE DE DIRECT CURRENT GSM GLALVANIZED SHEET METH MOBILE COMMUNICATION ASSI ARCHTECT'S DE DE DE DEREE MINITON ASSI ARCHTECT'S DE DE DE DE DE DIRECT CURRENT GYP GYPSUM BOARD ASSI ASSICLATION DE DE DE DE DIRECT CURRENT GYP GYPSUM BOARD ASSI ASSICLATION DE DE DE DE DIRECT CURRENT GYP GYPSUM BOARD ASSI ASSICLATION DE DE DE DIRECT CURRENT GYP GYPSUM BOARD ASSI ASSICLATION DE DE DE DIRECT CURRENT GYP GYPSUM BOARD ASSI ASSICLATION DE DE DIRECT HALL WW HARDWARE ASSI ASSICLATION DIF DOIGLAS FIR GYP GYPSUM BOARD ASSI ASSICLATION DIF DIRECT HALL WW HARDWARE TESTING AND MATERIALS DIM DIRECT HALL WW HARDWARE AVE AVENUE DISC DISCONNECT HUN HOLDOW METAL AVE AVENUE DISC DISCONNECT HUN HOLDOW METAL AVE AVENUE DISC DISCONNECT HUN HOLDOW METAL AVG AVERACE DIV DIVISION HIGH HORIZ HORIZONTAL AWG AMERICAN WIELDING DMARC DEMARCATION POINT HV/C HEATING BAT BACKTO BACK DR DOOR HYP HYP DIVISION HIGH STRENGTH AVE AZENUTH DR DISCONNECT HUN HUNC HEATING BAT BACKTO BACK DR DOOR HYP (DIVISION HIT HEIGHT AZZ AZIMUTH DR DISCONNECT HUN HUNC HEATING BAT BACKTO BACK DR DOOR HYP (DIVISION AIR CURLING BAT BACKTO BACK DR DOOR HYP (DIVISION AIR CURLING BAT BACKTO BACK DR DOOR HYP (DIVISION AIR CURLING BAT BACKTO BACK DR DOOR HAR CURLING AIR CONDITIONING BAT BACKTO BACK DR DOOR HAR CURLING AIR CURLING BAT BACKTO BACK BR DOOR HAR CURLING AIR CURLING BAT BACKTO BACK BR DOWNS STEM DI DINGROOM AIR CURLING BAT BACKTO RACK BR CONTRE FR EXTERNOR FINISH SYSTEM DI DI INSIDE DIMENSION BCC BOLTOVARD EFF EXTERNOR FINISH SYSTEM DI DI INSIDE CACE OF STUD BUND BOULDWARD EFF EXTERNOR FINISH SYSTEM DI DI INSIDE CACE OF STUD BUNC BOULDWARD EFF EXTERNOR FINISH SYSTEM DI DI INSIDE TACE OF STUD BUNC BOULDWARD EFF EXTERNOR F | APPROX | APPROXIMATE | CW | CLOCKWISE | GFCI | INTERRUPTER |
| ASHRE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AR CONDITIONING ENGINEERS BOARD GAUVANIZED SHEET METAL MARENCAN SOCIETY OF HEATING, REFRIGERATING AND AR CONDITIONING ENGINEERS BOARD GAUVANIZED SHEET METAL SUPPLEMENTAL DEF DEF DEF DEF DEF DEF DEF DEF DEF DEF | ASCE | AMERICAN SOCIETY OF | CYL d | CYLINDER PENNY (NAIL) | GLULAM | GLUED LAMINATED WOOD |
| HEATING, REFRIGERATING AND AR CONDITIONING DEC AND AR CONDITIONING DEC ASI ASI ARCHITECT'S SUPPLEMENTAL SUPPLEMENTAL SUPPLEMENTAL SUPPLEMENTAL SUPPLEMENTAL DEG DEGREE QUAR ASI ARCHITECT'S DEF DEF DEFATIMENT SUPPLEMENTAL DEM DEF DEFATIMENT SUPPLEMENTAL DEM DEF DEFATIMENT SUPPLEMENTAL DEM DEF DEFATIMENT SUPPLEMENTAL DEM DEF DEFATIMENT SUPPLEMENTAL DEM DEF DEFATIMENT SUPPLEMENTAL DEM DEF DEFATIMENT SUPPLEMENTAL DEM DEF DEFATIMENT SUPPLEMENTAL DEM DEF DEFATIMENT SUPPLEMENTAL DEM DEF DEFATIMENT SUPPLEMENTAL DEF DEF DEFATIMENT SUPPLEMENTAL DEM DEF DEFATIMENT SUPPLEMENTAL SUPPLEMENTAL DEM DEF DEFATIMENT SUPPLEMENTAL SUPPLEMENTAL SUPPLEMENTAL SUPPLEMENTAL DEF DEF DEFATIMENT SUPPLEMENTAL SUPPLEMENT SUPPLEMENT SUPPLEMENT SUPPLEMENT SUPPLEMENTER SUPPLEMENT SUPPLEM | ASHRAE | AMERICAN SOCIETY OF | D | | GSB | BOARD |
| AND AR CONDITIONING BEG ASI ARCHTECTS ARCHTERALS DIA DIAGONAL HEX HEX HEX HCHTERALS DIA DIAGONAL HEX HCHTERALS DIA DIAGONAL HEX HCHTERALS DIA DIAGONAL HEX HCHTERALS DIA DIAGONAL HEX HCHTERALS HCHTERALS DIA DIAGONAL HEX HCHTERALS HCHTERALS DIAGONAL HCHTERALS HCHTERALS HCHTERALS HCHTERALS ARCHTE | | HEATING, REFRIGERATING | DBL | DOUBLE DIRECT CURRENT | GSM | GALVANIZED SHEET METAL |
| ASI SUPPLEMENTAL NSTRUCTIONS DEG DEMOLITION (DEMOLISH) SUPPLEMENTAL DEMOLITION (DEMOLISH) SUPPLEMENTAL SUPPLEMENTAL SUPPLEMENTAL SUPPLEMENTAL NSTRUCTIONS GEG DEMOLITION (DEMOLISH) DET DEFAIL DEMOLITION (DEMOLISH) SUPPLEMENTAL SUPPLEMENT SUPP | | AND AIR CONDITIONING ENGINEERS | DEF | DEFINITION | GSIVI | MOBILE COMMUNICATION |
| SUPPLEMENTAL DEPT DEFAIL GYP BD GYP SUM GYP SUM ASSN ASSOCIATION DET DETAIL GYP BD GYP SUM BOARD ASST ASSEMELY DIA DUIGLAS FIR HDG HOG GYP SUM BOARD ASTM AMERICAN SOCIETY FOR DIAG DIAGE HEX HEXAGONAL HDW HARDWARE AUTO AUTOMATERIALS DIF DIFFERENCE HEX HEXAGONAL HEX HEXAGONAL AVE AVENDE DISC DISCONNECT HID HOLDOWN HER HARGER AVE AVERAGE DIST DISTANCE HORIZ HORZONTAL HORZONTAL AWG AMERICAN WIRE GAUGE DI DIV DIVISION HS HEGHT AWS AMERICAN WIRE GAUGE DI DOWN HS HEGHT HARC AWS AMERICAN WIRE GAUGE DI DOWN HS HEGHT HARC BAT BATTER DR DINING ROOM HS | ASI | ARCHITECT'S | DEG DEMO | DEGREE DEMOLITION (DEMOLISH) | GUAR | GUARANTEE |
| ASSN ASSCONTION DET DETAL CVP = C | | SUPPLEMENTAL | DEPT | DEPARTMENT | GYP GYP BD | GYPSUM GYPSUM BOARD |
| ASSY ASSEMBLY OF DIA DIAMETER HUG HOT DIPLO CALVANCED ASTM AMERICAN SOCIETY FOR DIAG DIAGONAL HEX HARDWARE TESTING AMERICAN SOCIETY FOR DIAG DIAGONAL HEX HARDWARE AND MATERIALS DIFF DIFFERENCE HOR HARDWARE AUTO AUTOMATIC DIM DIMENSION HUDN HOLDOWN AVE AVENUE DISC DISCONNECT HM HOLLON WETAL AVG AVERAGE DIST DISTANCE HORL HORLON HOLLON WETAL AVG AMERICAN WIRE GAUGE DIV DIVISION HS HIGH STRENGTH AWG AMERICAN WIRE GAUGE DIV DIVISION HT HUGH STRENG H AWG AMERICAN WIRE GAUGE DIV DIVISION HT HUGH STRENG H BAT BATTEN DS DOWN AMERICAN WELDING DMARC DEMARCTION POINT HVAC HEATING, VENTILATING BAT BATTERY DS DOWNSPOUT HVY HIGHWAY BATT BATTERY DS DOWNSPOUT HVY HIGHWAY BATT BATTERY DS DOWNSPOUT HVY HIGHWAY BAT BATTERY DS DOWNSPOUT HVY HIGHWAY BC BOARD EE E E EACH FACE ICC INTERNATIONAL BUILDING BD BOARD EF E EACH FACE ICC INTERNATIONAL BUILDING BD BOARD EFF EXTERIOR FINISH SYSTEM ID INSIDE DIAMETER BITUM BITUMINOUS EF E EXTERIOR FINISH SYSTEM ID INSIDE FACE OS DIAMETER BLLG BUILDING EFF EXTERIOR FINISH SYSTEM ID INSIDE FACE OF STUD BLT BUILT EFF EXTERIOR FINISH SYSTEM ID INSIDE FACE OF STUD BLT BUILT EFF EXTERIOR FINISH SYSTEM ID INSIDE FACE OF STUD BLT BUILT F EISE EXTERIOR FINISH SYSTEM ID INSIDE FACE OF STUD BLT BUILT EFF EXTERIOR FINISH SYSTEM ID INSIDE FACE OF STUD BLT BUILT F EISE EXTERIOR FINISH SYSTEM ID INSIDE FACE OF STUD BLT BUILT F EISE EXTERIOR FINISH SYSTEM ID INSIDE FACE OF STUD BLT BUILT F EFF CATERCO INSULATION IS AND MICLUDED BLT BUILT F EFF CATERCO INSULATION IN MAEDINATE BLK BLOCK F E EACH FACE ICC INCL INFORMATION BUR BEAM BAEMENT ELEM ELEVATION IN NOLLUMED INFORMATION BUR BUR BUILDING CODE FREE EACH FACE INSULATION INCLUDED BUR BUR BUR BUILDING CODE FREE EACH FACE INSULATION INCLUDED BUR BUR BUR BUILDING CODE FREE EACH FACE INSULATION INCLUDED BUT BOTTOM | ASSN | ASSOCIATION | DET DF | DETAIL DOUGLAS FIR | GYP | GYPSUM PLASTER |
| TESTINGDIAGDIAGONALHEXHEXAGONALAND MATERIALSDIFDIFFERNCEHGRHANGERAUTO MATICDISTDISTDISTANCEHGNHONLOWAVEAVERAGEDISTDISTANCEHMHOLLOW METALAVGAVERAGEDISTDISTANCEHMHORIZONTALAWGAMERICAN WIEDINGDMARCDEMARCATION POINTHVACHORIZONTALAWGAMERICAN WELDINGDMARCDEMARCATION POINTHVACHEATING, VENTILATINGAWGAMERICAN WELDINGDRDINING ROOMANDANDBATBATTENDRDOORHWYHGHWAYBATBATTENDSDOWNSPOUTHWDHYDRANTBCBOLT CIRCLEEEAEACHIBCINTERNATIONAL BUILDINGBCBOLT CIRCLEEEAEACHIBCINTERNATIONAL BUILDINGBDBOARDEFEXTERIOR FINISHIDINSIDE DAMETERIDBLGBULGBULGEFSEXTERIOR FINISH SYSTEMIDINSIDE DAMETERBLGBULGBULGEGREXTERIOR FINISH SYSTEMIDINSIDE DAMETERBLGBULGBULGEFSEXTERIOR FINISH SYSTEMIDINSIDE ACEC OF STUDBLKGBLOCKEGREMERECY EVATIONININCANDBURBACKINGEFSEXTERIOR FINISH SYSTEMIDINSIDE MAMEDIATEBURBUULGINGEGREMERECY EVATIONININCAND< | ASSY ASTM | ASSEMBLY AMERICAN SOCIETY FOR | DIA | DIAMETER | HDG HDW | HOT DIPPED GALVANIZED HARDWARE |
| AND AUTO AVE <b< th=""><td>, .e</td><td>TESTING</td><td>DIAG DIFF</td><td>DIAGONAL DIFFERENCE</td><td>HEX</td><td>HEXAGONAL</td></b<> | , . e | TESTING | DIAG DIFF | DIAGONAL DIFFERENCE | HEX | HEXAGONAL |
| AYEAVENUEDISCDISCONNECTHIMHOLLOW METALAVGAVERAGEDISCDISCONNECTHORIZHORIZONTALAWGAMERICAN WIRE GAUGEDIVDIVISIONHSHORIZAWGAMERICAN WELDINGDMARCDEMARCATION POINTHTHEIGHTAZAZMUTHDNDOWNHSHGH STRENGTHAZAZMUTHDNDOWNPOINTHVACHARCONDITIONINGBABACK TO BACKDRDOORHWYHIGHWAYBATBATTENDRDOORANDARCONDITIONINGBATBATTENDWGDRAWINGHAQINDOOR AIR QUALITYBCBETWEEN CENTERSEEASTIAQINDOOR AIR QUALITYBCBOUNDARYEFEACHIGCINTERNATIONAL BUILDINGBDBOARDEFEACH FACECOUNCILCODEBDRYBOUNDARYEFEACH FACEICCINTERNATIONAL CODEBLGBULGINGEFSEXTERIOR FINISHDINSIDE DIMENSIONBLGBUCKINGEFEACH FACECOUNCILINSIDE DIMENSIONBLGBULCINGEFSEXTERIOR FINISH SYSTEMDINSIDE DIMENSIONBLKBLOCKBLOGBLOGNFREQUENCY GENERATORIFINSIDE FACE OF STUDBLKBLOCKINGEIFSEXTERIOR FINSH SYSTEMDINSIDE DIMENSIONBLRBLUDBOULDINGEIFELASTELASTILUMINATIONBLRBLNG | AUTO | AND MATERIALS | DIM | DIMENSION | HGR HI DN | HANGER HOLDDOWN |
| AVG AVERAGE DV DV/SION HORIZ HORIZONIAL AWG AMERICAN WIRE GAUGE DV DV DEAD LOAD HS HGR TRENGTH AWS AMERICAN WELDING DN DEAD LOAD HT HEIGHT SOCIETY DNARC DEMARCATION POINT HVAC HEIGHT HIGH STRENGTH AZ AZIMUTH DN DOWN AND AND AND BB BACK TO BACK DR DINING ROOM AND AND AND BAT BATTEN DS DOWNSPOUT HWY HIGHWAY HIGHWAY BC BETWEEN CENTERS DWG DRAWING IAQ INDOOR AIR QUALITY BC BOARD EE EACH IBC INTERNATIONAL BUILDING BDP BOUNDARY EF EACH FACE ICC INSIDE DIAMETER BLG BUITUMINOUS EF EXTERIOR FINISH ID ID ID INSIDE DIMENSION BLG BUITUMINOUS EFS EXTERIOR FINISH SYSTEM ID INSIDE FACE INSIDE FACE BLT BUILT <td>AVE</td> <td>AVENUE</td> <td>DISC DIST</td> <td>DISCONNECT DISTANCE</td> <td>HM</td> <td>HOLLOW METAL</td> | AVE | AVENUE | DISC DIST | DISCONNECT DISTANCE | HM | HOLLOW METAL |
| AWSAMERICAN WELDING SOCIETYDLDEAD LOAD DMARCHTHEIGHT HEIGHTAVSAMERICAN WELDING SOCIETYDMARCATION POINT DNHTHEIGHT HEIGHTAZAZIMUTH BATDNDOWN DOWNAND AIR CONDITIONING AIR CONDITIONINGBATBATCEN BATTERYDRDOOR DOR DWGHWY HIGHWAYBATT BCBATTERYDSDOWNSPOUT DWGHYD HYD HYDRANT HYD HYDRANTBC BD BD BOARDEETTWEEN CENTERS E E BDRY BOUNDARYEE E EACH FACEIAQ ECC CODEINDOOR AIR QUALITY CODE CODEBC BDRY BUNDARYEF E E EACH FACEICC ECC COUNCILINTERNATIONAL BUILDING CODE COUNCILBLG BLG BLG BLK BLCG BLCG BLT BLK BLCOKEFS ESTERIOR FINISH SYSTEM AND FINISH SYSTEM FINISH SYSTEM BLG BLCG BLT BLK BLCOKID IDENTFICATION IFS INSIDE DIAMETER ID ID INSIDE DIAMETER ID ID INSIDE DIAMETER ID INSIDE FACE ID INSIDE FACE OF STUD INCAND INCANDE INCAND INCANDE INCAND INCANDESCENT INSIDE FACE OF STUD INT IN INCAND INCANDESCENT INSIDE FACE OF STUD INCAND INCANDESCENT INCAND INCAND INCANDESCENT ID INCAND INCANDESCENT ID ID INT INTERIOR | AVG AWG | AVERAGE AMERICAN WIRE GAUGE | DIV | DIVISION | HORIZ HS | HORIZONTAL HIGH STRENGTH |
| SOCIETYDATEDOWNHVACHEATING, VENTILATING ANDBXBACK TO BACKDRDOWNANDANDBATBATTENDRDORHWYHIGHWAYBATTBATTENDSDOWNSPOUTHWYHIGHWAYBCBETWEEN CENTERSEEASTIBCINTERNATIONAL BUILDINGBCBOLT CICLEEEEASTIBCINDOOR AIR QUALITYBCBOARDEEEACHIBCINTERNATIONAL BUILDINGBDBOARDEEEACH FACECODECOUNCILBDRYBOUNDARYEFEXTERIOR FINISHIDIDENTIFICATIONBLGBUILDINGEFSEXTERIOR FINISHIDINSIDE DIMENSIONBLGBULCOKINGEFSEXTERIOR FINISHIDINSIDE DIMENSIONBLGBULCOKINGEIFSEXTERIOR FINISH SYSTEMIDINSIDE DIMENSIONBLKBLOCKBOTEIFSEXTERIOR FINISH SYSTEMIDINSIDE FACE OF STUDBLTBUILTEIFSEXTERIOR FINISH SYSTEMIREDINCAND ECAC F STUDBLTBUTBOTBOTTOMELELVATIONININCHESBKBAGBEAMFINISH SYSTEMIILUMILLUMINATIONBWBOTBOTTOMELELASTELASTINCANDINCANDESCENTBWBOTH BOTTOMELASTELASTELASTINCANDINCANDESCENTBWBUILT-UP ROOFINGEMFELECT CUNAGNETICINSUL INSULATION <td>AWS</td> <td>AMERICAN WELDING</td> <td>DL DMARC</td> <td>DEAD LOAD</td> <td>HT</td> <td>HEIGHT</td> | AWS | AMERICAN WELDING | DL DMARC | DEAD LOAD | HT | HEIGHT |
| B/BBACK TO BACKDRDINING ROOMAIR CONDITIONINGBATBATTENDSDOORHWYHIGHWAYBATBATTERYDSDOWNSPOUTHWYHIGHWAYBCBETWEEN CENTERSEEASTIAQINDOOR AIR QUALITYBCBOLT CIRCLEEEASTIBCINTERNATIONAL BUILDINGBCBOLT CIRCLEEAEACHIBCINTERNATIONAL BUILDINGBDBOARDEEEACH FACECODECODEBDRYBOUNDARYEFEACH FACECOUNCILCOUNCILBKGBACKINGEFEXTERIOR FINISHIDIDENTIFICATIONBKGBLKGBLCKEGREMERGENCY GENERATORIDINSIDE DIAMETERBLKGBLOCKINGEIFSEXTERIOR INSULATIONIFSINSIDE FACE OF STUDBLTBUILTEIFSEXTERIOR INSULATIONIFSINSIDE FACE OF STUDBLTBUULTELELEVATIONIMEDIMMEDIATEBOTBOTTOMEIELECATIONINCHESIMCANDESCENTBRGBEARINGELASTELASTELASTOMERICINCANDESCENTBRKTBACKETELECELECTRICINFOINFORMATIONBURBUILTUP ROOFINGEMFELECTROMAGNETICINSUL ATIONBURBUILTUP ROOFINGEMFELECTROMAGNETICINSUL ATIONBURBURBUILTUP ROOFINGEMFELECTROMAGNETICINSUL INSULATIONBURBURBUILTUP ROOFINGEMF | Α7 | SOCIETY AZIMUTH | DN | DOWN | HVAC | HEATING, VENTILATING AND |
| BAT BATT BATTENBATTENDis Dis DOWNSPOUTHWY HWY HYDRANTBAT BCBATTEN BCDWG BETWEEN CENTERS BCDWG DWG DRAWINGDAWY HAQHYD HYDRANTBC BC BC BD BDARDBC BC BORY BOUNDARYE E EACH EACHE EACH EACH EACH EACH EACH EACH EACH EACH EACH EACH BC BDRY BOUNDARYE E EACH EACH EACH EACH EACH EACH EACH EACH EACH EACH BC | B/B | BACK TO BACK | DR DR | DINING ROOM | | AIR CONDITIONING |
| BCBetween centersDWGDRAWINGIAQINDOOR AIR QUALITYBCBOLT CIRCLEEEASTIAQINDOOR AIR QUALITYBCBOARDEAEACHIBCIINTERNATIONAL BUILDINGBDBOARDEAEACHIBCIINTERNATIONAL BUILDINGBDRYBOUNDARYEFEACH FACECODEBTUMBITUMINOUSEFEACH FACECOUNCILBKGBACKINGEFEXTERIOR FINISHIDBLGBUILDINGEFSEXTERIOR FINISH SYSTEMIDBLKBLOCKEGREMERGENCY GENERATORIDBLKBLOCKINGEFSEXTERIOR NISULATIONIFSBLKBLOCKEGREMERGENCY GENERATORIDBLKBLOCKEGREXTERIOR NISULATIONIFSBLKBLOCKEIFSEXTERIOR NISULATIONIFSBLKBLOCKIILUMINATIONIILUMINATIONBLKBLTBUILTEIFSEXTERIOR NISULATIONBLKBLCKBOTBOTTOMEJEXPANSION JOINTBOTBOTTOMEJELASTELASTINCANDBOTBOTTOMELELEVATIONINCAND ESCENTBRGBEARINGELASTELASTELASTINCANDBRGBETWEENELASTELASTELASTINCANDBVNBOTH WAYSENGRENGRERERINSUL ATIONBVBOTH WAYSENGRENGRERERISOINTERNATIONALCCCONTER | BAT BATT | BATTEN BATTERY | DS | DOWNSPOUT | HWY HYD | HIGHWAY HYDRANT |
| BCBOLT CIRCLEEAEACHIBCINTERNATIONAL BUILDING CODEBDBOARDEAEACHCODEBDRYBOUNDARYEEEACH FACECOUNCILBITUMBITUMINOUSEFEXTERIOR FINISHIDIDENTIFICATIONBKGBACKINGEFSEXTERIOR FINISHIDIDENTIFICATIONBLKBLOCKEGREMERGENCY GENERATORIDINSIDE DIAMETERBLKBLOCKINGEIFSEXTERIOR INSULATIONIFSINSIDE FACEBLKBLOCKINGEIFSEXTERIOR INSULATIONIFSINSIDE FACEBLTBUILTEIFSEXTERIOR INSULATIONIFSINSIDE FACEBLTBUILTEIFSEXTERIOR INSULATIONIFSINSIDE FACEBLTBUILTEIFSEXTERIOR INSULATIONIFSINSIDE FACEBLTBUILTEIFSEXTERIOR INSULATIONIFSINSIDE FACEBLTBUILTEIFSEXTERIOR INSULATIONINCANDESCENTBLKBOTBOTTOMELELEVATIONINCANDINCANDESCENTBRGBEARINGELASTELASTELASTILASTOMERICINCANDINSULATIONBVNBOTH WAYSENFELECELECTRICINFOINFORMATIONBURBULTU-UP ROOFINGEMFELECTROMAGNETICINSULINSULATIONBWBOTH WAYSENGRENGRENGRISOISOMETRICCCANNELENGRENGRENGRISOISOMETRIC <tr< th=""><td>BC</td><td>BETWEEN CENTERS</td><td>DWG F</td><td>DRAWING FAST</td><td>IAQ</td><td>INDOOR AIR QUALITY</td></tr<> | BC | BETWEEN CENTERS | DWG F | DRAWING FAST | IAQ | INDOOR AIR QUALITY |
| BDRYBOUNDARYEEEACH ENDICCINTERNATIONAL CODEBITUMBITUMINOUSEFEACH FACECOUNCILBKGBACKINGEFEXTERIOR FINISHIDIDSENTIFICATIONBLDSBUILDINGEFSEXTERIOR FINISH SYSTEMIDINSIDE DIAMETERBLKBLOCKEGREMERGENCY GENERATORIDINSIDE DIMENSIONBLKBLOCKINGEIFSEXTERIOR INSULATIONIFINSIDE FACEBLTBUILTEIFSEXTERIOR INSULATIONIFSINSIDE FACEBLTBUILTEIFSEXTERIOR INSULATIONIFSINSIDE FACEBLTBUILTEIFSEXTERIOR INSULATIONIFSINSIDE FACEBLTBUILTEIFSEXTERIOR INSULATIONINCANDINCANDBMBEAMEJEXPANSION JOINTININCHESBOTBOTTOMEJELASTOMERICINCANDINCANDESCENTBRGBEARINGELASTELASTOMERICINCANDINCANDESCENTBRTBASEMENTELECTELCTRICINCLINCLUDEDBURBUILT-UP ROOFINGEMFELCTROMAGNETICINSULINSUL ATIONBURBUILT-UP ROOFINGEMFELCTROMAGNETICINSULINSUE RADIUSCCHANNELENGRENGRENGINEERISOINTERNATIONALBURBUILT-UP ROOFINGEMFELCTROMAGNETICINSULINSUL ATIONBURBUILT-UP ROOFINGENGRENGRENGINEERISOISOMETRIC< | BC BD | BOLT CIRCLE BOARD | ĒA | EACH | IRC | IN LERNATIONAL BUILDING |
| BITUMBITUMINOUSEFEXTERIOR FINISHCOUNCILBKGBACKINGEFSEXTERIOR FINISHIDIDENTIFICATIONBLDGBUILDINGEFSEXTERIOR FINISH SYSTEMIDINSIDE DIAMETERBLKBLOCKEGREMERGENCY GENERATORIDINSIDE DIMENSIONBLKGBLOCKINGEIFSEXTERIOR FINISH SYSTEMIDINSIDE FACE OF STUDBLTBUILTEIFSEXTERIOR INSULATIONIFSINSIDE FACE OF STUDBLVDBOULEVARDFINISH SYSTEMILLUMILLUMINATIONBMBEAMEJEXPANSION JOINTININCANDBOTBOTTOMEJEXPANSION JOINTININCANDESCENTBRGBEARINGELELEVATIONINCANDINCANDESCENTBRTBRACKETELASTELASTELASTINFOINFORMATIONBWBOTH WAYSENGRENGRENGREUENCYINSULINSUL INSULATIONBURBUILT-UP ROOFINGEMFELCTRICINTERNATIONALSTANDARDSCCALIFORNIA BUILDINGENGRENGREISOINTERNATIONALCCDCONSTRUCTION CHANGEEPDMETHYLENEISOINTERNATIONALCDCOCCECOLIFORNIA BUILDINGEQUIPEQUIPMENTKTHOUSANDCDCONSTRUCTION CHANGEEQUIPEQUIPMENTKITHOUSANDCDCONSTRUCTION CHANGEEQUIPEQUIPMENTKTHOUSAND POUNDSCDCONSTRUCTION CHANGEEQUIPEQU | BDRY | BOUNDARY | EE FF | EACH END FACH FACF | ICC | INTERNATIONAL CODE |
| BLDGBUILDINGEFSEXTERIOR INISH SYSTEM EMERGENCY GENERATOR RECEPTACLEIDINSIDE DIAMETER IDBLKBLOCKINGEGREMERGENCY GENERATOR RECEPTACLEIDINSIDE DIAMETER IDBLKBLOCKINGEIFSEXTERIOR INSULATION ANDIFISIDE FACE OF STUD IFSBLVDBOULEVARDEIFSEXTERIOR INSULATION ANDIFSINSIDE FACE OF STUD INSIDE FACE OF STUDBMBEAMEJEXPANSION JOINT ELINCANDINCAND INCANDBRGBARINGELELEVATIONINCAND INCANDBRKTBRACKETELASTELASTINCAND INCANDBSMTBASEMENTELECELECTRIC ELECINCLINCLUDED INSULBUWBUILT-UP ROOFING BWEMFELECTROMAGNETIC FREQUENCYINTINTBUWBOTH WAYS C CENGRENGRENGRISOINTERNATIONAL STANDARDSCABCABINETEPPMETHYLENE POLYSTYRENE BOARDISOINTERNATIONAL STANDARDSCCDCONSTRUCTION CHANGE DIRECTIVEEQEQUIP EQUIVALENTISOISOMETRIC CODECCWCOUNTERCLOCKWISE CODEEQEQUIPMENTT EQUIVALENTKIT KIT KITCHEN KOKITCHEN KOCABBREVIATIONSEXCLEXCLUDEKIT KIT KITCHENBABBREVIATIONSEXCLEXCLUDEKIT KIT KITCHEN | BITUM BKG | BITUMINOUS BACKING | EF | EXTERIOR FINISH | ID | COUNCIL |
| BLKBLOCKEXAEXARECEPTACLEIDINSIDE DIMENSIONBLKGBLOCKINGRECEPTACLEIFINSIDE FACEINSIDE FACEBLTBUTEIFSEXTERIOR INSULATIONIFSINSIDE FACE OF STUDBLVDBOULEVARDFINISH SYSTEMILLUMILLUMINATIONBMBEAMEJEXPANSION JOINTINIMEDBOTBOTTOMEJEXPANSION JOINTININCANDESCENTBRGBEARINGELELEVATIONINCANDESCENTINCANDESCENTBRKTBRACKETELASTELASTOMERICINCLINCLUDEDBSMTBASEMENTELECELECTRICINFOINSULATIONBUWBOTH WAYSEMFELECTROMAGNETICINTINSULATIONBWBOTH WAYSENGRENGRENGINEERISOINTERNATIONALCCABINETCODECODESTANDARDSCODECODECDCONSTRUCTION CHANGEEQEQUIPEQUIPARENTISOISOMETRICCCDCONSTRUCTION CHANGEEQEQUIPEQUIPARENTISOISOMETRICCCWCOUNTERCLOCKWISEEQEQUIPARENTKTHOUSANDDOUSANDCDCONSTRUCTIONEQUIPEQUIPARENTKITKITCHENHOUSANDCOWCONSTRUCTIONEQUIPEQUIPARENTKOKNOCKOUTCOWCONSTRUCTIONEQUIPEQUIPARENTKITKITCHENDOCUMENTSEQUIPEQUIPARENTKOKNOCKOUT< | BLDG | BUILDING | EFS FGR | EXTERIOR FINISH SYSTEM | ID | INSIDE DIAMETER |
| BLTBUILTEIFSEXTERIOR INSULATIONIFSINSIDE FACE OF STUDBLVDBOULEVARDFINISH SYSTEMILLUMILLUMILLUMILLUMILLUMBMBEAMEJEXPANSION JOINTIMEDIMMEDIATEBOTBOTTOMELELEVATIONINCANDINCANDINCANDBRGBEARINGELELEVATIONINCANDINCANDESCENTBRKTBRACKETELASTELASTELASTINCANDINCANDBTWNBETWEENELECELECTRICINFOINFORMATIONBURBUILT-UP ROOFINGEMFELECTROMAGNETICINTINSULATIONBURBUILT-UP ROOFINGEMFELECTROMAGNETICINTINSULATIONBURBUILT-UP ROOFINGEMFELECTROMAGNETICINTINSULATIONBURBUILT-UP ROOFINGEMFELECTROMAGNETICINTINTERNATIONALBURBUILT-UP ROOFINGEMFELECTROMAGNETICINTINTERNATIONALCCHANNELENGRENGRERISOINTERNATIONALCCABINETEPAENVIRONMENTALSTANDARDSCODECBCCABINETEPDMETHYLENEISOISOMETRICCDCONSTRUCTION CHANGEEQEQUIPMENTKTHOUSANDCDCONSTRUCTIONEQUIPEQUIPMENTKTHOUSANDCDCONSTRUCTIONEXCLEXCLUDEKOKNOCKOUTABBREVIATIONSEXCLEXCLUDEKOKNOCKOUT <td>BLK BLKG</td> <td>BLOCK BLOCKING</td> <td>2011</td> <td>RECEPTACLE</td> <td>ID IF</td> <td>INSIDE DIMENSION</td> | BLK BLKG | BLOCK BLOCKING | 2011 | RECEPTACLE | ID IF | INSIDE DIMENSION |
| BLVDBOULEVARDFINISH SYSTEMILLUMILLUMINATIONBMBEAMEJEXPANSION JOINTIMEDIMMEDIATEBOTBOTTOMELELVATIONINCANDINCANDESCENTBRGBEARINGELELEVATIONINCANDINCANDESCENTBRKTBRACKETELASTELASTOMERICINCLINCLUDEDBSMTBASEMENTELECELECTRICINFOINFORMATIONBTWNBETWEENELEMELEMENTINSUL 3000000000000000000000000000000000000 | BLT | BUILT | EIFS | EXTERIOR INSULATION | IFS | INSIDE FACE OF STUD |
| BOT BOT BOT BRGBOTTOM BEARINGEJEXPANSION JOINT ELINCLUE INCANDBRG BRKT BRKT BRACKETBEARINGELELEVATION ELAST ELAST ELAST ELAST ELECTRIC ELECTRICINCL INCL INCL INCL INCLUDED INFO INFORMATION INSUL INSULATIONBTWN BUT-UP ROOFING BW BOTH WAYS C C CHANNEL C C CHANNELENGR ENGR ENGR ENGR ENGR ENGR ENGR ENGR ENGR ENGR ENGR ENGR ENGR C C CALIFORNIA BUILDING CCDENGR ENGR ENGR ENGR ENGR ENGR ENGR ENGR ENGR ENGR ENGR POLYSTYRENE BOARD POLYSTYRENE BOARD DIRECTIVE CODEISO INTERNATIONAL STANDARDS CODECCD CONSTRUCTION CHANGE CD CONSTRUCTION CDEQ EQUIV EQUIVALENT EQUIV EQUIVALENT EQUIV EQUIVALENT EQUIV EQUIVALENT EXCLISO ISOMETRIC ISO ISOMETRIC ISO ISOMETRICCCD CONSTRUCTION CD CONSTRUCTION CD CONSTRUCTION <td>BLVD BM</td> <td>BOULEVARD BEAM</td> <td></td> <td>FINISH SYSTEM</td> <td></td> <td>ILLUMINATION IMMEDIATE</td> | BLVD BM | BOULEVARD BEAM | | FINISH SYSTEM | | ILLUMINATION IMMEDIATE |
| BRGBEARINGELASTELASTINCANDINCANDESCENTBRKTBRACKETELASTELASTELASTOMERICINCLINCLUDEDBSMTBASEMENTELECELECTRICINFOINFORMATIONBTWNBETWEENELEMELEMENTINSULINSULATIONBURBUILT-UP ROOFINGEMFELECTROMAGNETICINTINTERIORBWBOTH WAYSENGRENGINEERISOINTERNATIONALCC CHANNELENGRENGINEERISOINTERNATIONALC TO CCENTER TO CENTEREPAENVIRONMENTALSTANDARDSCABCABINETEPDMETHYLENECODECODECABCALIFORNIA BUILDINGEQEQUALJ.BOXJUNCTION BOXCCDCONSTRUCTION CHANGEEQEQUIPEQUIPMENTKTHOUSANDCCWCOUNTERCLOCKWISEEQUIVEQUIVALENTKIPTHOUSAND POUNDSCDCONSTRUCTIONEXCLEXCLUDEKITKITCHENABBREVIATIONSEXCLEXCLUDEKOKNOCKOUT | BOT | BOTTOM | EJ FI | EXPANSION JOINT | IN | INCHES |
| BSMTBASEMENTELECELECELECTRICINFORMATIONBTWNBETWEENELEMELEMENTINFORMATIONBURBUILT-UP ROOFINGEMFELECTROMAGNETICINSULINSULATIONBWBOTH WAYSENGRENGRENGINEERISOINTERNATIONALCCHANNELENGRENGRENVIRONMENTALSTANDARDSC TO CCENTER TO CENTEREPAENVIRONMENTALSTANDARDSCABCABINETEPDMETHYLENEISOISOMETRICCDECODECODEPOLYSTYRENE BOARDJ-BOXJUNCTION BOXCCDCONSTRUCTION CHANGEEQEQUIPEQUIPMENTKTHOUSANDCCWCOUNTERCLOCKWISEEQUIVEQUIVALENTKIPTHOUSAND POUNDSCDCONSTRUCTIONEXCLEXCLUDEKITKITCHENBOREXCLUDEEXCLUDEKNOCKOUT | BRG BRKT | BEARING BRACKET | ELAST | ELASTOMERIC | INCAND INCI | INCANDESCENT |
| BIWNBEIWEENEMFELECTROMAGNETICINSULINSULATIONBURBUILT-UP ROOFINGEMFELECTROMAGNETICINTINTERIORBWBOTH WAYSENGRENGRENGINEERISOINTERNATIONALCCHANNELEPAENVIRONMENTALISOINTERNATIONALC TO CCENTER TO CENTEREPAENVIRONMENTALSTANDARDSCABCABINETEPDMETHYLENECODECODECBCCALIFORNIA BUILDINGEPDMETHYLENEJSOISOMETRICCCDCONSTRUCTION CHANGEEQEQUIPEQUIPMENTJSTJOISTDIRECTIVEDIRECTIVEEQUIVEQUIPMENTKTHOUSANDCDCONSTRUCTIONEQUIVEQUIVALENTKIPTHOUSAND POUNDSCDCONSTRUCTIONEXCLEXCLUDEKITKITCHENDOCUMENTSEXCLEXCLUDEKOKNOCKOUT | BSMT | BASEMENT | ELEC ELFM | ELECTRIC ELEMENT | INFO | INFORMATION |
| BWBOTH WAYSFREQUENCYINTINTERNOTBWBOTH WAYSENGRENGRENGINEERIRINSIDE RADIUSCC HANNELENGRENGINEERISOINTERNATIONALC TO CCENTER TO CENTEREPAENVIRONMENTALSTANDARDSCABCABINETEPDMETHYLENECODECODECBCCALIFORNIA BUILDINGEPDMETHYLENEISOISOMETRICCODECODEEQUIPEQUALJ-BOXJUNCTION BOXCCDCONSTRUCTION CHANGEEQEQUIPEQUIPMENTKTHOUSANDDIRECTIVEEQUIVEQUIVALENTKIPTHOUSAND POUNDSCDCONSTRUCTIONEWEACH WAYKITKITCHENDOCUMENTSEXCLEXCLUDEKOKNOCKOUT | BTWN BUR | BETWEEN BUII T-UP ROOFING | EMF | ELECTROMAGNETIC | INSUL INT | INSULATION INTERIOR |
| CCHANNELCHORALISOINTERNATIONALC TO CCENTER TO CENTEREPAENVIRONMENTALSTANDARDSCABCABINETPROTECTION AGENCYCODECBCCALIFORNIA BUILDINGEPDMETHYLENEISOISOMETRICCODECODEPOLYSTYRENE BOARDJ-BOXJUNCTION BOXCCDCONSTRUCTION CHANGEEQEQUIPEQUIPMENTKTHOUSANDDIRECTIVEDIRECTIVEEQUIVEQUIVALENTKIPTHOUSAND POUNDSCCWCOUNTERCLOCKWISEEWEACH WAYKITKITCHENDOCUMENTSEXCLEXCLUDEKOKNOCKOUT | BW | BOTH WAYS | FNGR | FREQUENCY FNGINEER | IR | INSIDE RADIUS |
| CAB CBCCABINET CBCPROTECTION AGENCYSTANDARDS CODECBCCALIFORNIA BUILDING CODEEPDMETHYLENE POLYSTYRENE BOARDISOISOMETRIC J-BOXCCDCONSTRUCTION CHANGE DIRECTIVEEQEQUAL EQUIPJSTJOIST JOISTCCWCOUNTERCLOCKWISE CONSTRUCTIONEQUIV EQUIVEQUIVALENT EXCLKIPTHOUSAND FOUNDSCDCONSTRUCTION CONSTRUCTION DOCUMENTSEW EXCLEACH WAY EXCLUDEKIT KOKITCHEN KO | C | CHANNEL | EPA | ENVIRONMENTAL | ISO | INTERNATIONAL STANDARDS |
| CBCCALIFORNIA BUILDINGLTUTLENC POLYSTYRENE BOARDISOISOMETRIC J-BOXCODECODEEQEQUALJUNCTION BOXCCDCONSTRUCTION CHANGEEQEQUIPEQUIPMENTKTHOUSANDDIRECTIVEEQUIVEQUIVALENTKTHOUSAND POUNDSCCWCOUNTERCLOCKWISEEWEACH WAYKIPTHOUSAND POUNDSCDCONSTRUCTIONEXCLEXCLUDEKITKITCHENDOCUMENTSEXCLEXCLUDEKOKNOCKOUT | CAB | CABINET | FDUM | PROTECTION AGENCY | | CODE |
| CCDCONSTRUCTION CHANGE DIRECTIVEEQEQUAL EQUIPJSTJOINT HOUSANDCCWCOUNTERCLOCKWISE CONSTRUCTION DOCUMENTSEQEQUIVEQUIVALENT EQUIVKIPTHOUSAND POUNDSCDCONSTRUCTION DOCUMENTSEWEACH WAY EXCLKITKITCHEN KOKNOCKOUT | CBC | CALIFORNIA BUILDING | | POLYSTYRENE BOARD | ISO ,I-ROX | |
| DIRECTIVE COUNTERCLOCKWISE CDEQUIF EQUIPMENT EQUIVKTHOUSAND | CCD | CONSTRUCTION CHANGE | | | JST | JOIST |
| CD CONSTRUCTION EW EACH WAY KIT KITCHEN DOCUMENTS EXCL EXCLUDE KO KNOCKOUT | | | EQUIV | EQUIVALENT | KID | THOUSAND THOUSAND POUNDS |
| DOCUMENTS KO KNOCKOUT | CD | CONSTRUCTION | EW | | KIT | KITCHEN |
| ABBREVIATIONS | | DOCUMENTS | | | KO | KNOCKOUT |
| | ABR | REVIATIONS | | | | |

| L | ANGLE | OPP OPT |
|-----------|--|-------------|
| | | OSHA |
| LAD | LAG BOLT | |
| LAM | LAMINATE | PAR |
| LAT | LATITUDE | PAR |
| LAV | | PART |
| LBS | POUND | PAT |
| LED | LIGHT EMITTING DIODE | PB PB |
| LF | LINEAR FEET | PED |
| LH | | PEN |
| LHS | LEFT HAND SIDE | PERF |
| LIN | LINEAR | PERIM |
| LKNT | | PERP |
| LKWASH | | PH |
| LLH | LONG LEG HORIZONTAL | PKWY |
| LLV | LONG LEG VERTICAL | PL Pl |
| | | PLAS |
| | LIQUID NATURAL GAS | PLAS |
| LONG | LONGITUDINAL | |
| LT | LIGHT | PLTWD |
| | | PNL |
| | | PO |
| LVD | LOUVERED | PPC |
| LVR | LOUVER | PRFFAB |
| MAINT | MAINTENANCE | PRELIM |
| MAN | MANUAL | PREP |
| MAX | MAXIMUM | PREV |
| MB | MACHINE BOLT | PROP |
| MC | | PSF |
| MDF | FIBREBOARD | |
| MECH | MECHANICAL | PSI |
| MED | MEDIUM | PT |
| | MEMBRANE | PT |
| MFR RFC | MANUFACTURER'S | PT |
| | RECOMMENDATION | PV |
| MHZ | MEGAHERTZ | FVC |
| MID | | PWR |
| MIRR | MIRROR | QC |
| MISC | MISCELLANEOUS | |
| MK | MARK | R |
| | | R |
| MLWK | MILLWORK | RB |
| MN | MAGNETIC NORTH | RCP |
| MOD | MODIFY | RD |
| MD RH | MODIFIED BITUMEN MOISTURE RESISTANT | REBAR |
| MS | MACHINE SCREW | REC |
| MSB | MAIN SWITCHBOARD | RECD |
| MTD | MOUNTED | RECT |
| MIG | MEETING | REF |
| MTL | METAL | REINF |
| MULL | MULLION | |
| MULT | MULTIPLE | REQD |
| | | RESIL |
| N | NORTH | REV |
| NA | NOT APPLICABLE | RF |
| NC | NOISE CRITERIA | RFI |
| | NEGATIVE NATIONAL FIRE | |
| | PROTECTION | RFP |
| | ASSOCIATION | RH RH |
| NFRC | NATIONAL FENESTRATION | RHR |
| | COUNCIL | RL |
| NIC | NOT IN CONTRACT | RM |
| NO | NUMBER | RND |
| NOM | NOMINAL | ROW |
| NORM | NOISE REDUCTION | RR |
| | COEFFICIENT | RRU |
| NRCA | NATIONAL ROOFING | RWD |
| | | S |
| NS | NO SCALE | SCH |
| NTP | NOTICE TO PROCEED | SD |
| NTS | NOT TO SCALE | SECT |
| U/ 0/0 | | SEL |
| 0 | OXYGEN | SEP |
| OC | ON CENTER | SF SLIT |
| 000 | OCCUPY | SHTHG |
| | OUTSIDE DIAMETER | SIM |
| OF/CI | OWNER FURNISHED/ | SJ |
| | CONTRACTOR INSTALLED | SK SKI T |
| OF/OI | OWNER FURNISHED/ | SLNT |
| OFS | OWNER INSTALLED | SLV |
| OPH | OPPOSITE HAND | SPEC |
| OPNG | OPENING | SPKLR |
| 01110 | | 20 |

OPPOSITE SQ FT OPTIONAL SQ IN OCCUPATIONAL SAFETY SS AND HEALTH ST ADMINISTRATION ST PARALLEL STC PARAPET PARTIAL STD PATTERN STL PANIC BAR STIF PULL BOX STOR PEDESTAL STR PENETRATE STRUCT PERFORATED SUB PERIMETER SUP PERMANENT SURR PERPENDICULAR SUSP PHASE SYM PARKWAY SYMM PLATE **PROPERTY LINE** T&B PLASTER T&G PLASTIC T&M PLATFORM ΤВ PLYWOOD TELCO PART NUMBER PANEL TEMP PURCHASE ORDER THERM POWER PROTECTION THK CABINET THRES PREFABRICATE(D) THRU PRELIMINARY TMA PREPARATION PREVIOUS ΤN PROJECT ТО PROPERTY TOC POUNDS PER SQUARE TOF FOOT TOF POUNDS PER SQUARE TOP INCH TOPO PAINT TOS POST TENSIONED TOW PRESSURE TREATED TRANS PHOTOVOLTAIC TRANS POLYVINYL CHLORIDE ΤS (PLASTIC) TYP POWER U QUALITY CONTROL QUANTITY UG QUALITY UL RADIUS THERMAL RESISTANCE UMTS RUBBER BASE **REFLECTED CEILING PLAN** ROAD UNO **ROOF DRAIN** REINFORCING STEEL BARS UON RECESSED RECEIVED UTIL RECEPTACLE UV RECTANGLE V REFERENCE VAR REINFORCE VCT REMOVABLE VENT REQUIRE VERT REQUIRED VIF RESILIENT VOC REVISION **RADIO FREQUENCY** VOLT **RESILIENT FLOORING** W **REQUEST FOR** W INFORMATION W/ REQUEST FOR PROPOSAL W/O **RIGHT HAND** W/W ROOF HATCH WC RIGHT HAND REVERSE WD **ROOF LEADER** WF BM ROOM WL ROUND WM ROUGH OPENING WO **RIGHT OF WAY** WP RAILROAD WP REMOTE RADIO UNIT WPM REDWOOD WR RAIN WATER LEADER WR SOUTH WRB SCHEDULE SMOKE DETECTOR WRM STRUCTURAL ENGINEER SECTION WΤ SELECT WWF SEPARATE WWM SQUARE FOOT (FEET) WWR SHEET SHEATHING X BRACE SIMILAR XFMR SCORED JOINT YD SKETCH SKYLIGHT SEALANT SLEEVE SPECIFICATION **SPRINKLER** SQUARE

SQUARE FOOT SQUARE INCH STAINLESS STEEL STAIRS STREET SOUND TRANSMISSION CLASS STANDARD STEEL STIFFENER STORAGE STRAIGHT STRUCTURAL SUBSTITUTE SUPPLEMENTARY SURROUND SUSPEND SYMBOL SYMMETRICAL TREAD TOP AND BOTTOM TONGUE AND GROOVE TIME AND MATERIALS THROUGH BOLT **TELECOMMUNICATIONS** COMPANY **TEMPORARY** THERMAL THICKNESS THRESHOLD THROUGH TOWER MOUNTED AMPLIFIER TRUE NORTH TOP OF TOP OF CONCRETE TOP OF FLOOR TOP OF FOOTING TOP OF PARAPET TOPOGRAPHY TOP OF SLAB TOP OF WALL TRANSPARENT TRANSFORMER TUBE STEEL TYPICAL HEAT TRANSFER COEFFICIENT UNDERGROUND UNDERWRITERS LABORATORIES UNIVERSAL MOBILE **TELECOMMUNICATIONS** SYSTEM UNLESS NOTED OTHERWISE UNLESS OTHERWISE NOTED UTILITY ULTRAVIOLET VOLT VARIES VINYL COMPOSITION TILE VENTILATION VERTICAL VERIFY IN FIELD VOLATILE ORGANIC COMPOUND VOLTAGE WEST WIDE WITH WITHOUT WALL TO WALL WATER CLOSET WOOD WIDE FLANGE BEAM WIND LOAD WIRE MESH WORK ORDER WATERPROOFING WEATHERPROOF WATERPROOF MEMBRANE WATER REPELLENT WATER RESISTANT WATER RESISTIVE BARRIER WATER RESISTANT MEMBRANE WEIGHT WELDED WIRE FABRIC WELDED WIRE MESH WELDED WIRE REINFORCEMENT CROSS BRACE TRANSFORMER YARD



General Notes

GENERAL NOTES

- 1. CONTRACTOR SHALL VERIFY AND COORDINATE ALL NEW AND EXISTING CONDITIONS AND DIMENSIONS AT JOB SITE FOR COMPARISON WITH DRAWINGS AND SPECIFICATIONS PRIOR TO BIDDING AND START OF CONSTRUCTION. IF ANY DISCREPANCIES, INCONSISTENCIES OR OMISSIONS ARE FOUND, THE ARCHITECT/ ENGINEER SHALL BE NOTIFIED, IN WRITING FOR CLARIFICATION PRIOR TO PROCEEDING WITH WORK.
- 2. DO NOT SCALE DRAWINGS. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ ENGINEER FOR CLARIFICATIONS. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND COORDINATED WITH ALL OF THE WORK OF ALL TRADES. IF DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ ENGINEER IN WRITING FOR CLARIFICATION BEFORE COMMENCEMENT OR RESUMPTION OF WORK.
- 3. ABBREVIATIONS THROUGHOUT THE PLANS ARE THOSE IN COMMON USE. NOTIFY THE ARCHITECT/ ENGINEER OF ANY ABBREVIATIONS IN QUESTION.
- 4. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
- 5. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE CODE AND REGULATIONS.
- 6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- 7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- 8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE ARCHITECT/ENGINEER.
- 9. LEGAL EXITS SHALL NOT BE BLOCKED AT ANYTIME.
- 10. TEMPORARY PEDESTRIAN PROTECTION SHALL BE PROVIDED AS REQUIRED BY LOCAL CODES.
- 11. THE ARCHITECT/ ENGINEER SHALL BE CONSULTED IN ANY/ ALL CASES WHERE CUTTING INTO AN EXISTING STRUCTURAL PORTION OF ANY STRUCTURE IS NECESSARY. PRIOR TO PROCEEDING WITH WORK.
- 12. CONTRACTOR SHALL VERIFY ACTUAL ROUTING OF CONDUIT, POWER AND FIBER CABLES. GROUND CABLES AS SHOWN. CONTRACTOR SHALL SHALL ADD NEW CONDUIT AS NECESSARY. CONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONSTRUCTION MANAGER.
- 13. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- 14. CLEAN UP AND DISPOSAL-REMOVE DEBRIS, RUBBISH AND WASTE MATERIAL FROM THE OWNER'S PROPERTY TO A LAWFUL/ LEGAL DISPOSAL AREA AND PAY ALL HAULING AND DUMPING COSTS. CONFORM TO PERTAINING FEDERAL, STATE AND LOCAL LAWS, REGULATIONS AND ORDERS UPON COMPLETION OF WORK ALL CONSTRUCTION AREAS SHALL BE LEFT CLEAN AND FREE FROM DEBRIS. CLEAN

ALL STAINS, PAINT SPOTS, DROPPINGS, AND OTHER BLEMISHES.

- 15. THE CONTRACTOR SHALL PROTECT ALL FINISH WORK AND SURFACES FROM DAMAGE DURING THE COURSE OF CONSTRUCTION AND SHALL REPLACE AND/ OR REPAIR ALL DAMAGED SURFACES CAUSED BY THE CONTRACTOR OR SUBCONTRACTOR PERSONNEL TO THE SATISFACTION OF THE OWNER.
- 16. PRIOR TO INSPECTION OF THE EXISTING FACILITY, THE CONTRACTOR MUST RECEIVE PERMISSION FOR SITE ACCESS FROM THE OWNER OR THE DESIGNATED REPRESENTATIVE.
- 17. WHEN IT IS NECESSARY TO INTERRUPT ANY EXISTING UTILITY SERVICE TO MAKE CORRECTIONS AND/ OR CONNECTION, A MINIMUM OF 48 HOURS ADVANCE NOTICE SHALL BE GIVEN TO THE OWNER. INTERRUPTIONS IN UTILITY SERVICES SHALL BE OF THE SHORTEST POSSIBLE DURATION AND SHALL BE APPROVED IN ADVANCE BY THE OWNER.
- 18. ALL CONTRACTORS PERFORMING WORK ON THE SITE SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING A REASONABLE AND PRUDENT SAFETY PROGRAM INCLUDING BUT NOT LIMITED TO THE ISOLATION OF WORK AREAS AND THE PROMPT REMOVAL OF ANY DEBRIS OR TOOLS WHICH MAY ENDANGER THE PUBLIC OR WORKERS.
- 19. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES BELOW GRADE AND RELATED SERVICE CONNECTIONS WITH THE RESPECTIVE UTILITY COMPANIES.
- 20. THE CONTRACTOR SHALL COORDINATE THE REMOVAL, ABANDONMENT, AND/ OR RELOCATION OF EXISTING UTILITIES ABOVE OR BELOW GRADE WITH THE RESPECTIVE UTILITY COMPANIES.
- 21. THE CONTRACTOR SHALL PERFORM ALL WORK WITHIN PUBLIC RIGHTS-OF-WAY ACCORDING TO LOCAL JURISDICTIONAL STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL OBTAIN PERMITS FROM APPROPRIATE AGENCIES.
- 22. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
- 23. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.
- 24. THE EXISTING SITE IS IN FULL OPERATION. ANY CONSTRUCTION WORK BY CONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK MUST BE COORDINATED WITH THE OWNER. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE WINDOW TO MINIMIZE DISTURBANCE.
- 25. THE ARCHITECT/ ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY SUBSTITUTIONS, INCLUDING CHANGES IN PRODUCTS, MATERIALS, EQUIPMENT AND DETAILS OF CONSTRUCTIONS FROM THOSE SHOWN. THE SUBSTITUTIONS PROCEDURES PER SPECIFICATIONS SECTION 01 25 00 SHALL BE FOLLOWED. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR PERFORMANCE AND ASSOCIATED COSTS FOR ANY SUBSTITUTION NOT APPROVED IN WRITING BY THE ARCHITECT/ ENGINEER PER SPECIFICATIONS SECTION 01 25 00.
- 26. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A/10-BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE WORK AREA DURING CONSTRUCTION.
- 27. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.
- 28. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL EQUIPMENT AND MATERIALS WHICH MUST INTERFACE AND COORDINATE WITH OTHERS, WHETHER DETAILED OR NOT.

| 1. | THE (|
|----|---------|
| | PERM |
| | 5'-0" [|
| | DESC |
| | |

32. ALL DISSIMILAR METALLIC MATERIALS SHALL BE EFFECTIVELY ISOLATED FROM EACH OTHER TO PREVENT GALVANIC ACTION, WHETHER DETAILED OR NOT.

33. ALL WOOD IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED WITH AN APPROVED PRESERVATIVE.

3

6

THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES AND CONDUCT UNDERGROUND UTILITY LOCATING AND MAPPING PRIOR TO THE START OF CONSTRUCTION.

ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONSTRUCTION MANAGER ONLY UPON APPROVAL OF SPECIFIC UTILITY OWNER. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES.

ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.

IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.

CONTRACTOR SHALL DETERMINE THE ACCURATE LOCATION OF EXISTING UNDERGROUND FACILITIES PRIOR TO ANY EXCAVATION.

CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY OWNER OF EXCAVATION DAMAGE AND TAKE STEPS TO MITIGATE DAMAGE AND/ OR ASSIST WITH REPAIR.

ASSIS CONT

 CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.

11. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH VERIZON WIRELESS AND AUTHORITY HAVE JURISDICTION SPECIFICATIONS FOR SITE SIGNAGE.

12. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

GENERAL NOTES 3 Concrete Notes

CONTRACTOR SHALL OBTAIN OSHA MITS FOR ANY VERTICAL EXCAVATION OVER DEEP INTO WHICH PERSONS MUST CEND.

Site Work Notes

SITE WORK NOTES

CONTRACTOR SHALL CEASE EXCAVATING IF UNIDENTIFIED UTILITIES ARE ENCOUNTERED.

CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BACKFILL AND OTHER PHYSICAL SUPPORT TO PROTECT UNDERGROUND UTILITIES.

CONCRETE NOTES

- 1. ALL POURED-IN-PLACE CONCRETE SHALL HAVE AN ULTIMATE COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED (DESIGN BASIS 2,500 PSI-NO SPECIAL INSPECTION REQUIRED). CEMENT TO BE TYPE II FROM TESTED STOCK PER ASTM C-150.
- 2. CONCRETE FORM TOLERANCES SHALL BE WITHIN THE STANDARDS SET BY THE AMERICAN CONCRETE INSTITUTE.
- 3. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS AND OTHER INSERTS SHALL BE SECURED IN POSITION AND INSPECTED BY THE LOCAL BUILDING DEPARTMENT INSPECTOR PRIOR TO THE POURING OF ANY CONCRETE.
- 4. NO PIPES OR DUCTS SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR LOCATIONS.
- 5. FORM EXPOSED CORNERS OF COLUMNS, BEAMS, WALLS, ETC. WITH 3/4 INCH CHAMFERS UNLESS DETAILED OTHERWISE.
- 6. PROVIDE LIGHT BROOM FINISH ON ALL EXPOSED CONCRETE UNLESS NOTED OTHERWISE.

Reinforcing Steel Notes

REINFORCING STEEL NOTES

- 1. REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60 U.O.N.
- 2. BARS SHALL BE CLEAN OF MUD, OIL OR OTHER COATINGS LIKELY TO IMPAIR BONDING.
- 3. ALL REINFORCING SHALL BE SECURED IN PLACE PRIOR TO PLACING CONCRETE OR GROUTING MASONRY.
- 4. REINFORCING STEEL SHALL BE SPLICED AS SHOWN OR NOTED. SPLICES AT OTHER LOCATIONS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER.

Steel Notes

STEEL NOTES

- 1. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A-36 AND SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS FOR THE DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST ADDITION.
- 2. BOLTS SHALL CONFORM TO ASTM A307, UNLESS NOTED OTHERWISE.
- 3. PIPE STEEL SHALL CONFORM TO ASTM A-53, GRADE B.
- 4. PLATES SHALL CONFORM TO ASTM A-36.
- ALL STEEL PERMANENTLY EXPOSED TO WEATHER, (INCLUDING NUTS, BOLTS, WASHERS) SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
- 6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.

5 Welding Notes

WELDING NOTES

- 1. THE QUALITY OF MATERIALS AND THE FABRICATION OF ALL WELDED CONNECTIONS SHALL BE IN CONFORMANCE WITH THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE, AWS D1.1 LATEST EDITION.
- 2. SPECIAL INSPECTION OF WELDING PER SECTION 1704 IS REQUIRED. A QUALIFIED AND CERTIFIED INSPECTOR SHALL BE PRESENT DURING SHOP AND FIELD WELDING OPERATIONS UNLESS OTHERWISE NOTED AND SHALL INSPECT ALL THE WORK AS REQUIRED BY AWS D1.1, SECTION 6.
- 3. SPECIAL INSPECTION NEED NOT BE CONTINUOUS FOR THE FOLLOWING ITEMS, PROVIDED THE MATERIAL, QUALIFICATIONS OF WELDING PROCEDURES AND WELDERS ARE VERIFIED PRIOR TO THE START OF WORK; PERIODIC INSPECTIONS MAY BE MADE OF WORK IN PROGESS AND A VISUAL INSPECTION OF ALL WELDS IS STILL REQUIRED.
- SINGLE-PASS FILLET WELDS NOT EXCEEDING 5/16 INCH.
- 4. INSPECTORS SHALL POSSESS AND BE FAMILIAR WITH THE APPROVED WELDING PROCEDURE SPECIFICATIONS (WPS).
- ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS USING PRE-QUALIFIED WELDING PROCEDURES.
- 6. THE INSPECTOR SHALL CONFIRM THE QUALIFICATION OF WELDERS, THE USE OF AWS QUALIFIED PROCEDURES, THE MANUFACTURER'S RECOMMENDED USE OF AUTOMATIC EQUIPMENT AND THE PROPER USE OF PREHEAT, IF REQUIRED.

7 Painting Notes

PAINTING NOTES

- 1. EXTRA MATERIALS: DELIVER TO OWNER 1 QUART OF EACH COLOR AND TYPE OF FINISH COAT PAINT USED ON PROJECT, IN CONTAINERS, PROPERLY LABELED AND SEALED.
- 2. MANUFACTURER SHALL BE TNEMEC COMPANY INCORPORATED, UNLESS NOTED OTHERWISE.
- 3. MATERIAL COMPATIBILITY: PROVIDE MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH SUBSTRATES.
- 4. FOR EACH COAT IN A PAINT SYSTEM, PROVIDE PRODUCTS RECOMMENDED IN WRITING BY MANUFACTURERS OF TOPCOAT FOR USE IN PAINT SYSTEM AND ON SUBSTRATE INDICATED.
- 5. REMOVE HARDWARE, AND SIMILAR ITEMS THAT ARE NOT TO BE PAINTED. MASK ITEMS THAT CANNOT BE REMOVED. REINSTALL ITEMS IN EACH AREA AFTER PAINTING IS COMPLETE.
- 6. CLEAN AND PREPARE SURFACES IN AN AREA BEFORE BEGINNING PAINTING IN THAT AREA. SCHEDULE PAINTING SO CLEANING OPERATIONS WILL NOT DAMAGE NEWLY PAINTED SURFACES.
- 7. APPLY PAINTS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 8. APPLY PAINTS TO PRODUCE SURFACE FILMS WITHOUT CLOUDINESS, SPOTTING, HOLIDAYS, LAPS, BRUSH MARKS, ROLLER TRACKING, RUNS, SAGS, ROPINESS, OR OTHER SURFACE IMPERFECTIONS. CUT IN SHARP LINES AND COLOR BREAKS.
- 9. IF UNDERCOATS OR OTHER CONDITIONS SHOW THROUGH TOPCOAT, APPLY ADDITIONAL COATS UNTIL CURED FILM HAS A UNIFORM PAINT FINISH, COLOR, AND APPEARANCE.
- 10. SEE SPECIFICATIONS SECTION 09 90 00 FOR PAINTING AND COATING SPECIFICATIONS.













| N) CONCEALMENT SHROUD ±35'-7" A.G.L. | | |
|--|---|--|
| AD CENTER OF (N) VERIZON ESS CYLINDRICAL ANTENNA +34'-3" A G I | | |
| | | (E) LUMINAIRE |
| | | |
| ±32'-0" A.G.L. + | | |
| TOP OF (N) LIGHT POLE +30'-2" A.G.L. | | |
| | | |
| | | |
| | | |
| | | l P |
| | | |
| | | |
| | | |
| | BRACKET, TYP. OF (3) TO BE REMOVED. PROVIDE WIND | |
| ±22'-1" A.G.L. + | SPILLING BANNER MOUNT, TYP. OF "BANNER FLEX" BY | <u></u> <u> </u> |
| | BANNER WORKS OF FLORIDA (800-438-0351) OR APPROVED FOUAL ON | |
| | REPLACEMENT POLE | |
| | | |
| CATED MOUNTING BRACKET | | |
| ±17'-0" A.G.L. ♥ | | |
| ATED MOUNTING BRACKET ±15'-3" A.G.L. | | <u> </u> |
| TOP OF (N) RRUS UNIT | | |
| TOP OF (N) SIGN | | |
| BOTTOM OF (N) SIGN | | |
| BOTTOM OF (N) RRUS UNIT | | |
| OAD CENTER/ DISCONNECT | | |
| OAD CENTER/ DISCONNECT | | |
| ±9-0 A.G.L. | | WRONG |
| | TO BE REMOVED. PROVIDE (N) SIGN ON | |
| | | |
| | (E) STEEL LIGHT POLE & | |
| | REMOVED & REPLACED | |
| | | |
| | (E) HAND | |
| | HOLE | Ø |
| (E) GRADE 0'-0" | (E) LANDSCAPING | (E) CONCRETE SIDEWALK |
| ANZA BOULEVARD | | ., |
| BE 7 GA. MODIFIED TYPE 15 POLE E ARM ASSEMBLY (ARM LENGTH | | |
| BE RELOCATED TO NEW POLE. SHALL BE ORIENTED | | |
| TING ROADWAY. (ISTING CONTROL JOINTS AS | | |
| OUNDATION AND PLACEMENT SIDEWALK IN KIND. | | |
| SCALE: <u>1' 2' 4'</u> 2 | EXISTING SOUTH ELEVATI | ON |



(E) GRADE 0'-0" MODIFIED OR REPRODUCED IN PART OR IN WHOLE WITHOUT PRIOR WRITTEN CONSENT. THESE PLANS ARE FORMATTED TO BE FULL-SIZE AT ARCH D 24"X36". COPYRIGHT 2016 JAMES VACCARO ARCHITECT, INC..

SOUTH DE ANZA BOULEVARD

| | | Δ-2 |
|----|---|-----|
| 4' | 1 | |

SHEET NUMBER

ELEVATIONS

| SCALE: | | | | 1 |
|------------|----|----|----|---|
| 1/2"=1'-0" | 1' | 2' | 4' | |

| ±35'-7" A.G.L. RAD CENTER OF (N) VERIZON WIRELESS CYLINDRICAL ANTENNA ±34'-3" A.G.L. (N) LED LUMINAIRE & CONTROLLER | (N) VERIZON WIRELESS CYLINDRICAL ANTENNA (CONCEALED WITHIN SHROUD) (N) FRP CONCEALMENT 7 8 A-3 A-3 A-3 A-3 A-3 A-3 A-3 A-3 | |
|--|---|--|
| TOP OF (N) LUMINAIRE | (N) VERIZON WIRELESS DIPLEXER (CONCEALED A-3 A-3) | ♦ TOP OF (E) LUMINAIRE ±31'-11" A.G.L. |
| TOP OF (N) LIGHT POLE ±30'-2" A.G.L. | WITHIN SHROUD) (N) WIRELESS METER (CONCEALED WITHIN SHROUD) (N) SHEET METAL (N) SHEET METAL SKIRT A-3 A-3 A-3 A-3 | TOP OF (E) LIGHT POLE ±30'-5" A.G.L. |
| | (N) VERIZON WIRELESS CAUTION SIGNAGE/ DECAL A-3 | |
| ELOCATED MOUNTING BRACKET ±22'-1" A.G.L. | (N) WIND SPILLING BANNER MOUNT, TYP. OF "BANNER FLEX" BY BANNER WORKS OF FLORIDA (800-438-0351) OR APPROVED EQUAL, TYP. OF (3) | |
| RELOCATED MOUNTING BRACKET ±17'-0" A.G.L. | | |
| ELOCATED MOUNTING BRACKET ±15'-3" A.G.L. | | |
| TOP OF (N) RRUS UNIT/ TOP OF (N) SIGN 13'-3" A.G.L. BOTTOM OF (N) RRUS UNIT 11'-4" A.G.L. | (N) SPEED CINIT SIGN (R2-1)- EED (N) VERIZON WIRELESS RRUS UNIT (BEHIND SIGN), TYP A-3 S-1 | |
| TOP OF RELOCATED SIGN/ BOTTOM OF (N) SIGN ±10'-9" A.G.L. TOP OF (N) LOAD CENTER/ DISCONNECT ±10'-0" A.G.L. | OF (2) TOTAL (N) VERIZON WIRELESS 1 2 CABLE SHROUD SEE (BEHIND SIGN) | |
| BOTTOM OF RELOCATED SIGN ±9'-3" A.G.L. BOTTOM OF (N) LOAD CENTER/ DISCONNECT ±9'-0" A.G.L. | RELOCATED "BIKE LANE" SIGN S-2 (N) VERIZON WIRELESS LOAD CENTER/ DISCONNECT (BEHIND/ OPPOSITE SIDE OF POLE) | ◆ <u>TOP OF (E) SIGN</u> ±8'-10" A.G.L. ◆ <u>BOTTOM OF (E) SIGN</u> ±7'-4" A.G.L. |
| | (N) STEEL LIGHT POLE | |
| (E) GRADE 0'-0" SOUTH DE ANZA BOULEVARD (E) CONCRETE SIDEWALK | (E) LANDSCAPING | • (E) GRADE 0'-0" SOUTH DE ANZA BOULEVARD |
| | (N) CONCRETE FOUNDATION (BY VALMONT | |







| JNDATION T | OPPING | SLAB |
|------------|--------|-------------|
|------------|--------|-------------|

Structural Notes

1. APPLICABLE CODES: 2016 CALIFORNIA BUILDING CODE (CBC), 2013 AASHTO LTS-6, TIA 222, REVISION G.

ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE, APPLICABLE AUTHORITY HAVING JURISDICTION CODES, AND REQUIREMENTS OF THE CITY OF CUPERTINO DEPARTMENT OF PUBLIC WORKS.

THE CITY OF CUPERTINO DEPARTMENT OF PUBLIC WORKS SHALL BE NOTIFIED PRIOR TO STARTING ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR **KEEPING THESE AGENCIES INFORMED OF THEIR SCHEDULE.**

GENERAL CONTRACTOR SHALL COMPARE STRUCTURAL DRAWINGS WITH DRAWINGS OF OTHER DISCIPLINES WITH REFERENCE TO MATERIALS, LAYOUT, DIMENSIONS AND ELEVATIONS BEFORE STARTING WORK, AND ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT AND ENGINEER FOR

THE DRAWINGS SHALL NOT BE SCALED. ALL WORK SHALL BE GOVERNED BY EXISTING FIELD DIMENSIONS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS SHOWN AND BRING DISCREPANCIES TO THE ATTENTION OF THE **ARCHITECT AND ENGINEER PRIOR TO PROCEEDING WITH THE WORK**

DETAILS OF CONSTRUCTION NOT INDICATED OR NOTED SHALL BE CONSIDERED OF THE SAME CHARACTER SHOWN FOR SIMILAR OR EXISTING CONSTRUCTION.

THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITY LINES AND CONNECTIONS INCLUDING SEWER, WATER, GAS, AND ELECTRIC SERVICES **BEFORE AND DURING THE WORK.**

8. CONTRACTOR SHALL COORDINATE THEIR WORK WITH CITY REQUIREMENTS.

DESIGN CODES: 2016 CBC, TIA 222 REVISION G, 2013 AASHTO LTS-6 SEISMIC IMPORTANCE FACTOR lp = 1.0 OCCUPANCY CATEGORY = II

MAPPED SPECTRAL RESPONSE:

S_s = 1.945g S₁ = 0.717g

SITE COEFFICIENT Fa = 1.00 SITE COEFFICIENT Fv = 1.50

WIND SPEED = 100 MPH (3-SECOND GUSTS) PER 2013 AASHTO LTS-6

10. CONTRACTOR SHALL SUBMIT STEEL SHOP DRAWINGS FOR REVIEW PRIOR TO

CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 3,000 PSI. DESIGN BASED ON 2,500 PSI (NO SPECIAL INSPECTION REQUIRED).

2. SLUMPS SHALL BE NOT LESS THAN 2" AND NOT EXCEED 4".

CONCRETE SHALL BE PLACED IN A CONTINUOUS OPERATION UNTIL THE SECTION IS COMPLETED BETWEEN PREDETERMINED CONSTRUCTION JOINTS. CONCRETE SHALL BE OF A CONSISTENCY TO PERMIT PLACING COMPLETELY AROUND **REINFORCING BARS AND AGAINST FORMS.**

EXPOSED SURFACES OF CONCRETE SHALL BE KEPT MOIST OR CURED BY PROTECTIVE COVERINGS APPLIED IN ACCORDANCE WITH MANUFACTURER'S

5. FORMS SHALL BE TIGHT, CLEAN AND WETTED BEFORE PLACING CONCRETE. **REINFORCING STEEL NOTES**

REINFORCING SHALL BE IN ACCORDANCE WITH ASTM A615, GRADE 40 FOR #4 AND SMALLER, GRADE 60 FOR #5 AND LARGER. TIE WIRES TO BE 18 GA, OR HEAVIER, BLACK ANNEALED.

2. REINFORCING BARS SHALL BE FREE FROM LOOSE RUST OR ANY OTHER COATING WHICH WILL REDUCE BOND.

3. REINFORCING BARS SHALL NOT BE BENT OR STRAIGHTENED IN A MANNER WHICH WILL DAMAGE THE MATERIAL, AND SHALL BE ACCURATELY PLACED AND

MORTAR BLOCKS OR OTHER APPROVED METHOD OF SUPPORT SHALL BE USED AT SLABS-ON-GRADE.

STRUCTURAL STEEL NOTES

| TRUCTURAL STEEL | ASTM A36, U.O.N. |
|-----------------|------------------------------|
| . PIPE | ASTM A53, GRADE B |
| STEEL | ASTM A500, GRADE B |
| OR BOLTS | ASTM F1554, GRADE 55 |
| INE BOLTS | ASTM A307 |
| GON NUTS | ASTM A194 2H OR ASTM A563 DH |
| ERS | ASTM F436 |
| | |

ALL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC STANDARDS BY A LICENSED FABRICATOR EMPLOYING CERTIFIED WELDERS.

WELDING SHALL CONFORM TO APPLICABLE SECTIONS OF LATEST AWS STRUCTURAL WELDING CODE AND SHALL BE DONE BY CERTIFIED WELDERS.

4. STEEL FABRICATOR SHALL OBTAIN THE ENGINEER'S APPROVAL OF G<CD'8F5K=B; G'DF=CF'HC': 56F=75H=CB"

ALL STRUCTURAL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED

SUPPLY AND INSTALL FASTENERS, FRAMING MEMBERS AND ANCHORS REQUIRED FOR MOUNTING AND ATTACHMENT OF EQUIPMENT.

REINFORCING RIM WELDING NOTES

WELDING SHALL BE PERFORMED BY AN AWS CERTIFIED WELDER. ALL WORK SHALL BE IN CONFORMANCE WITH THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE, AWS D1.1 LATEST EDITION.

PREPARE POLE SURFACE. GRIND SURFACE TO BE WELDED WITH A SILICON CARBIDE WHEEL PRIOR TO WELDING TO REMOVE GALVANIZING WHICH MAY OTHERWISE BE CONSUMED IN THE WELD METAL. APPLY ANTI-SPLATTER **COMPOUND AFTER GRINDING.**

MINIMIZE TEMPERATURE RISE ON THE INSIDE SURFACE OF THE LIGHT POLE AND VOLATILIZE ANY REMAINING ZINC WITHIN THE BASE METAL WITH MINIMUM

APPLY GALV-A-STICK ZINC COATING TO ALL UNPROTECTED SURFACES, UPON COMPLETION OF WELDING. APPLY SECOND COAT LAYER OF COLD GALVANIZING SPRAY COMPOUND CONTAINING A MINIMUM ZINC CONTENT OF 95%. APPLY A FINAL COAT OF TNEMEC EXTERIOR PAINT COATING TO MATCH POLE.

STRUCTURAL NOTES



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CLIENT

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



VERIZON WIRELESS 2785 MITCHELL DRIVE, SUITE 9

WALNUT CREEK, CA 94598

CONSULTANTS STRUCTURAL ENGINEER:

JEFFREY M. VAN DYKE, S.E. 1470 FELTA ROAD HEALDSBURG, CA 95448 CONTACT NUMBER: (707) 696-3721





| REV | DATE | ISSUE |
|-----|------------|------------------------|
| 1 | 10/18/2017 | 90% CONSTRUCTION |
| 2 | 2/6/2018 | 100% CONSTRUCTION |
| 3 | 3/26/2018 | 100% CONSTRUCTION REV. |
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THESE PLANS ARE INSTRUMENTS OF SERVICE AND ARE FOR THE CLIENT'S USE SOLELY WITH RESPECT TO THIS PROJECT. THESE PLANS SHALL NOT BE ALTERED, MODIFIED OR REPRODUCED IN PART OR IN WHOLE WITHOUT PRIOR WRITTEN CONSENT. THESE PLANS ARE FORMATTED TO BE FULL-SIZE AT ARCH D 24"X36". COPYRIGHT 2016 JAMES VACCARO ARCHITECT, INC.

SHEET TITLE

STRUCTURAL NOTES, DETAILS

SHEET NUMBER





EQUIPMENT GROUNDING DIAGRAM



SCALE: N.T.S

2

SINGLE LINE DIAGRAM

NOTES:

SHEET NOTES

- COMPLY WITH GOVERNING CODES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE. AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- COORDINATE WITH UTILITY COMPANY FOR SITE SPECIFIC WORK AND MATERIAL REQUIREMENTS PRIOR TO START OF CONSTRUCTION.
- PROVIDE ALL CONDUIT, PULL ROPES, PULL BOXES, CONCRETE ENCASEMENT(IF REQUIRED), BARRIERS, POLE RISERS, TRENCHING, BACKFILL, AS REQUIRED PER SITE SPECIFIC REQUIREMENTS.
- **OBTAIN PERMITS FROM AUTHORITIES HAVING** JURISDICTION REQUIRED TO PERFORM THE WORK, PRIOR TO START OF CONSTRUCTION.
- NOTIFY CONSTRUCTION MANAGER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED.
- PROVIDE SERVICE ENTRANCE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY PROVIDER.
- **REVIEW AND INSPECT EXISTING CONDITIONS, GROUNDING** SYSTEM AND LIGHTING PROTECTION SYSTEM FOR COMPLIANCE WITH THE AUTHORITY HAVING JURISDICTION, REPORT ANY ADVERSE FINDINGS TO THE CONSTRUCTION MANAGER PRIOR TO PROCEEDING.
- PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING FOR NEW GROUND ELECTRODE SYSTEMS. PROVIDE SUPPLEMENTAL GROUND ELECTRODES AS REQUIRED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
- ANTIOXIDANT COATINGS SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS
- 10. ALL WIRING METHODS SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE (CEC) AND UTILITY COMPANY REQUIREMENTS AND AUTHORITIES HAVING JURISDICTION.
- 11. ALL BENDS AND/ OR OFFSETS SHALL BE MADE WITH FACTORY SECTIONS USING APPROVED COUPLERS PER CEC REQUIREMENTS.
- 12. ALL EMPTY CONDUITS SHALL HAVE A $\frac{1}{4}$ " POLYPROPYLENE PULL ROPE PROVIDED INSIDE AND SEALED WITH A DUCT SEAL ON BOTH ENDS OF THE CONDUIT
- THE ENDS OF ALL CONDUITS INSTALLED SHALL BE SEALED WITH A DUCT SEAL
- 14. PROVIDE NEW METER AND DISCONNECT PER UTILITY COMPANY REQUIREMENTS.

SYMBOL LEGEND

| SYMBOL | NOTES |
|--------|---|
| F | FIBER OPTICAL CABLE |
| G | COPPER GROUND WIRE |
| | BRANCH CIRCUIT UNDERGROUND |
| | BRANCH CIRCUIT ABOVE GRADE |
| O | CONDUIT TURNED UP |
| • | CONDUIT TURNED DOWN |
| | CONDUIT STUBBED OUT |
| | CIRCUIT BREAKER |
| | FUSE |
| • | SPLICED WIRES |
| | FIBER OPTIC SPLICE PANEL |
| M | METER SOCKET PER UTILITY PROVIDER REQUIREMENTS |
| • | GROUND ROD |
| | MECHANICAL GROUND CONNECTION |
| | EXOTHERMIC WELD |

SCALE:

N.T.S







| REV | DATE | ISSUE |
|--|------------|------------------------|
| 1 | 10/18/2017 | 90% CONSTRUCTION |
| 2 | 2/6/2018 | 100% CONSTRUCTION |
| 3 | 3/26/2018 | 100% CONSTRUCTION REV. |
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| | | |
| THESE PLANS ARE INSTRUMENTS OF SERVICE AND ARE FOR THE CLIENT'S USE SOLELY WITH RESPECT TO THIS PROJECT. THESE PLANS SHALL NOT BE ALTERED, MODIFIED OR REPRODUCED IN PART OR IN WHOLE | | |

THOUT PRIOR WRITTEN CONSENT. THESE PLANS A FORMATTED TO BE FULL-SIZE AT ARCH D 24"X36". COPYRIGHT 2016 JAMES VACCARO ARCHITECT, INC SHEET TITLE

SINGLE LINE DIAGRAM EQUIPMENT **GROUNDING DIAGRAM**

EP-1

SHEET NUMBER



SHEET NOTES

- COMPLY WITH GOVERNING CODES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS.
- **OBTAIN PERMITS FROM AUTHORITIES HAVING** JURISDICTION REQUIRED TO PERFORM THE WORK. PRIOR TO START OF CONSTRUCTION.
- NOTIFY CONSTRUCTION MANAGER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED.
- PROVIDE SERVICE ENTRANCE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY PROVIDER.
- **REVIEW AND INSPECT EXISTING CONDITIONS, GROUNDING** SYSTEM AND LIGHTING PROTECTION SYSTEM FOR COMPLIANCE WITH THE AUTHORITY HAVING JURISDICTION. REPORT ANY ADVERSE FINDINGS TO THE CONSTRUCTION MANAGER PRIOR TO PROCEEDING.
- EXISTING UNDERGROUND WIRING, CONDUIT AND FUSE INFORMATION SHOWN IS BASED ON CLIENT PROVIDED INFORMATION AND BEST PRESENT KNOWLEDGE OF EXISTING CONDITIONS. WHERE CONDITIONS ARE UNCOVERED DURING CONSTRUCTION THAT DIFFER FROM WHAT IS SHOWN OR THAT REQUIRE MODIFICATION OF DETAILING SHOWN, SUCH DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
- ALL WIRING METHODS SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE (CEC), NFPA 70 AND APPLICABLE SECTIONS OF THE CITY OF CUPERTINO DEPARTMENT OF PUBLIC WORKS STANDARDS.
- A CITY OF CUPERTINO PUBLIC WORKS DEPARTMENT CONNECTION ORDER IS REQUIRED TO ENERGIZE ANY ELECTROLIER OR EQUIPMENT (PROVIDED BY THE CITY OF CUPERTINO AFTER COMPLETION AND INSPECTION FOR SUBMITTAL TO PACIFIC GAS AND ELECTRIC).
- CONTACT PACIFIC GAS AND ELECTRIC FOR ADDITIONAL REQUIREMENTS AND CONTACT THE CITY OF CUPERTINO PUBLIC WORKS DEPARTMENT FOR INSPECTIONS OF FOUNDATIONS FORTY EIGHT HOURS PRIOR TO FOUNDATION POURING AND ELECTRICAL INSPECTIONS.
- 10. THE CONTRACTOR SHALL SUPPLY TO THE CITY OF CUPERTINO FOR APPROVAL, MANUFACTURER'S SUBMITTALS FOR ALL NEW LUMINAIRES
- 11. ALL CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE
- 12. ALL OVERLOAD PROTECTION (FUSES) SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- 13. WHENEVER AN INSTALLATION IS NEAR ANY OVERHEAD WIRES/ CONDUCTORS, A CLEARANCE MUST BE OBTAINED FROM PACIFIC GAS AND ELECTRIC PRIOR TO INSTALLATION.

SHEET LEGEND

| SYMBOL | NOTES |
|--------|--|
| | CONDUIT DIAMETER CONDUIT APPROXIMATE LENGTH IN LINEAR FEET CONDUIT SCHEDULE MARK EXISTING, NEW, UNDEGROUND, SURFACE MOUNTED (E-EXISTING, N-NEW, U-UNDERGROUND, S-SURFACE MOUNTED) |
| SL# | — EXISTING N-9 BOX (STREET LIGHT VAULT)/ NUMBER |
| SL# | NEW N-16 BOX (STREET —LIGHT VAULT)/ NUMBER/ NEW VERIZON WIRELESS FIBER SPLICE PANEL LOCATION |
| PGE1 | |
| | |
| VZW P | VERIZON WIRELESS POWER POINT OF CONNECTION |
| VZW F | VERIZON WIRELESS FIBER DEMARC/ SPLICE PANEL / POINT OF CONNECTION |



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ARCHITECT, INC.



VERIZON WIRELESS 2785 MITCHELL DRIVE, SUITE 9 WALNUT CREEK, CA 94598

CONSULTANTS





| REV | DATE | ISSUE | | |
|---|---|------------------------|--|--|
| 1 | 10/18/2017 | 90% CONSTRUCTION | | |
| 2 | 2/6/2018 | 100% CONSTRUCTION | | |
| 3 | 3/26/2018 | 100% CONSTRUCTION REV. | | |
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| FOR TI PR(MOI WITHO FOI COP | FOR THE CLIENT'S USE SOLELY WITH RESPECT TO THIS PROJECT. THESE PLANS SHALL NOT BE ALTERED, MODIFIED OR REPRODUCED IN PART OR IN WHOLE WITHOUT PRIOR WRITTEN CONSENT. THESE PLANS ARE FORMATTED TO BE FULL-SIZE AT ARCH D 24"X36". COPYRIGHT 2016 JAMES VACCARO ARCHITECT. INC | | | |
| SHEET | SHEET TITLE | | | |
| UTILITY PLAN, CONDUIT SCHEDULE, CIRCUIT DIAGRAM | | | | |
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| EP-2 | | | | |



| REV | DATE | ISSUE | |
|-------|--|------------------------|--|
| 1 | 10/18/2017 | 90% CONSTRUCTION | |
| 2 | 2/6/2018 | 100% CONSTRUCTION | |
| 3 | 3/26/2018 | 100% CONSTRUCTION REV. | |
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| THESE | THESE PLANS ARE INSTRUMENTS OF SERVICE AND ARE | | |

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DETAILS

SHEET NUMBER

Division 1 **General Requirements**

SECTION 01 10 00 SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

- A. Project Summary: Project consists of installation of two new RRUS units, one load center distribution panel, one antenna and concealment cylinder and applicable utilities on a replacement City of Cupertino Street Light Pole in the Public Right of Way. Coaxial, Fiber and power lines to be routed internally within existing pole. Applicable required site/ FCC/ warning signage to be mounted to existing pole.
- B. Permits and Fees: Obtain and pay for permits from authorities having jurisdiction, fees, and utility company charges required to perform the work, prior to start of construction.
- C. Codes: Comply with applicable codes and regulations of authorities having jurisdiction.
- D. Dimensions: Verify dimensions indicated on drawings with field measurements prior to fabrication or ordering of materials. Do not scale drawings.
- E. Existing Conditions: Notify Construction Manager of existing conditions differing from those indicated on the drawings. Do not remove or alter structural components without prior written approval.
- F. Coordination: 1. Coordinate the work of all trades.

2. Verify location of utilities and existing conditions.

- G. Installation Requirements, General: 1. Inspect substrates and report unsatisfactory
- conditions in writing.
- 2. Do not proceed until unsatisfactory conditions have been corrected.
- 3. Take field measurements prior to fabrication. 4. Install materials in accordance with manufacturer's instructions and approved submittals.
- 1.2 DEFINITIONS:
- A. THE CONTRACT DOCUMENTS: The Contract Documents consist of the Agreement between the Company and the Contractor and consist of the Agreement, Conditions of the Contract, Drawings, Specifications, Addenda, and other documents listed in the agreement and modifications issued after the execution of the contract.
- B. THE CONTRACT: The Contract Documents that form the Contract for Construction, the Contract Documents shall not be construed to create a contractual relationship of any kind between the Contractor and the Architect or the Architect's consultants, between the Company and a subcontractor, between the Company and the Architect or the Architect's consultants or between any person o entities other than the Company and the Contractor.
- C. THE WORK: The construction and services required by the Contract Documents, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations.
- D. THE DRAWINGS: The Drawings are graphical and pictorial portions of the Contract Documents showing the design, location and dimensions of the work.
- E. THE SPECIFICATIONS: The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the work and performance of related services.
- F. THE COMPANY: Verizon Wireless
- G. ARCHITECT/ ENGINEER: synonymous with Architect & Engineer and "A&E". The Design Professional having responsibility for the design.
- H. CONTRACTOR: The Contractor is the person or entity identified as such in the agreement that shall perform and accomplish the work in accordance with the contract documents. the Contractor shall be lawfully licensed in the jurisdiction where the project is located.
- THIRD PARTY VENDOR OR AGENCY: A Vendor or Agency engaged separately by the Company, A&E, or Contractor to provide materials, test, inspections or to accomplish specific tasks related to related to the work.
- J. CFCI: Company furnished, Contractor installed.
- K. CONSTRUCTION MANAGER: Company's principal Agent in respect to the work. all project related communication and shall flow through Company's designated Construction Manager.
- L. MATCH EXISTING: Match existing as acceptable to the Company and Owner.
- M. PROVIDE: Furnish and install, complete with all necessary accessories, ready for intended use. Pay for all related costs.
- 1.3 INTENT:
- A. Drawings and specifications are intended to provide the basis for proper completion of the work suitable for the intended use of the Company. Anything not expressly set forth but which is reasonable implied or necessary for proper performance of the project shall be included.

1.4 WRITING STYLE:

- A. Specification are written in the imperative mode. Except where specifically intended otherwise, the subject of all imperative statements is the Contractor. For example, "Provide" means "Contractor shall provide and install".
- 1.5 CORRELATION OF THE CONTRACT DOCUMENTS:
- A. The Contract Documents are complementary, and what is required by one shall be binding as if required by all. Any discrepancies or conflicts shall be brought to the attention of the Construction Manager appointed to manage the project for the Company, in the form of a request for information (RFI), prior to the commencement of work.
- 1.6 SITE FAMILIARITY:
- The Contractor shall before commencing each portion of the work, carefully study and compare the various contract documents, as well as the information furnished by the Company, shall take field measurements of any existing conditions related to the work, and shall observe any conditions at the site affecting it. The Contractor shall promptly report any errors, inconsistencies or omissions discovered.

1.7 POINT OF CONTACT:

- A. Communication between the Contractor and the Company shall flow through the company's Construction Manager appointed to manage the project for the Company.
- 1.8 SUPERVISION AND CONSTRUCTION PROCEDURES:
- A. The Contractor shall supervise and direct the work. The Contractor shall be solely responsible for construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the Contract, unless the Contract Documents give other specific instructions. The Contractor shall be fully and solely responsible for the jobsite safety.
- 1.9 WORK RESTRICTIONS
- A. CONTRACTOR'S USE OF PREMISES: During construction Contractor will have limited use of site indicated. Contractor's use of premises is limited only by the company's right to perform work or employ other contractors on portions of project and as follows:
- 1. LIMITS: Limit site disturbance, including earthwork, clearing of vegetation, staging, storage of materials and equipment, waste storage and temporary facilities to the Company's lease parcel, unless otherwise permitted by the contract documents. 2. DRIVEWAYS, WALKWAYS, AND ENTRANCES: Keep
- driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. do not use these areas for parking or storage of materials.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 10 00

SECTION 01 25 00 SUBSTITUTION PROCEDURES PART 1 - GENERAL

- 1.1 SUBSTITUTION PROCEDURES
- A. Substitutions include changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
- 1. Submit requests within 3 days after the Notice of Award.
- 2. Identify product to be replaced and show compliance with requirements for substitutions. Include a detailed comparison of significant qualities of proposed substitution with those of the Work specified, a list of changes needed to other parts of the Work required to accommodate proposed substitution, and any proposed changes in the Contract Sum or the Contract Time should the substitution be accepted.
- C. Architect will review proposed substitutions and notify Contractor of their acceptance or rejection. If necessary, Architect will request additional information or documentation for evaluation.
- 1. Architect will notify Contractor of acceptance or rejection of proposed substitution within seven days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

D. Do not submit unapproved substitutions on Shop Drawings or other submittals. PART 2 - PRODUCTS (Not Used)

| / | |
|----------|----------------------|
| PART 3 - | EXECUTION (Not Used) |

END OF SECTION 01 25 00

Sections.

- a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
- A. Submit PDF electronic files of each submittal via email to Construction Manager and Architect unless otherwise indicated.

- 1. Dimensions and identification of products.
- 2. Fabrication and installation drawings and roughing-in and setting diagrams.
- 3. Notation of coordination requirements.
- 4. Notation of dimensions established by field measurement.
- and texture and for a comparison of these characteristics between submittal and actual component as delivered and installed. Include name of manufacturer and product name
- D. Samples: Submit Samples for review of kind, color, pattern, on label.
- A. Informational Submittals: Submit PDF electronic file of each submittal unless otherwise indicated.
- B. Qualification Data: Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- C. Product Certificates: Prepare written statements on
- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

SPECIFICATIONS

SECTION 01 30 00 ADMINISTRATIVE REQUIREMENTS PART 1 - GENERAL

1.1 PROJECT MANAGEMENT AND COORDINATION

A. Subcontract List: Submit a written summary identifying individuals or firms proposed for each portion of the Work.

- B. Key Personnel Names: Within 3 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. List e-mail addresses and telephone numbers.
- C. Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work.
- D. Requests for Information (RFIs): On discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI. Use forms acceptable to Architect and The Company.
- E. Schedule and conduct progress meetings at Project site at intervals designated by the Construction Manager. Notify Construction Manager and Architect of meeting dates and times. Require attendance of each subcontractor or other entity concerned with current progress or involved in
- planning, coordination, or performance of future activities. 1.2 SUBMITTAL ADMINISTRATIVE REQUIREMENTS
- A. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
- 1. Submit PDF electronic copy of each action submittal via email to Construction Manager and Architect.
- 2. Submit PDF electronic copy of each informational submittal via email to Construction Manager and Architect.
- 3. Architect will return submittals, without review received from sources other than Contractor or Construction Manager.
- B. Identify deviations from the Contract Documents on submittals.

PART 2 - PRODUCTS

- 2.1 SUBMITTAL PROCEDURES
- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification
- 4. Submit electronic submittals via email as PDF electronic

2.2 ACTION SUBMITTALS

- B. Product Data: Mark each copy to show applicable products and options. Include the following:
- 1. Manufacturer's written recommendations, product specifications, and installation instructions.
- 2. Compliance with specified standards and requirements.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data. Submit on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches. Include the following:

2.3 INFORMATIONAL SUBMITTALS

2.4 DELEGATED DESIGN SERVICES

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Construction Manager.

- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit three copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
- 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 SUBMITTAL REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Construction Manager.
- B. Architect will review each action submittal, make marks to indicate corrections or modifications required, will stamp each submittal with an action stamp, and will mark stamp appropriately to indicate action.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01 30 00

SECTION 01 40 00 QUALITY REQUIREMENTS PART 1 - GENERAL

- 1.1 SECTION REQUIREMENTS
- A. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
- B. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements, comply with the most stringent requirement. Refer uncertainties to Architect for a decision.
- C. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum. The actual installation may exceed the minimum within reasonable limits. Indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision.
- D. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
- 1. Date of issue.
- 2. Project title and number.
- 3. Name, address, and telephone number of testing agency.
- 4. Dates and locations of samples and tests or inspections.
- Names of individuals making tests and inspections.
- 6. Description of the Work and test and inspection method.
- 7. Identification of product and Specification Section.
- 8. Complete test or inspection data.
- 9. Complete test or inspection data.
- 10. Test and inspection results and an interpretation of test results
- 11. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
- 12. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
- 13. Name and signature of laboratory inspector.

regulations bearing on performance of the Work.

- 14. Recommendations on retesting and reinspecting. E. Permits, Licenses, and Certificates: For Company's records, submit copies of permits, licenses, certifications, inspection reports, notices, receipts for fee payments, and similar documents, established for compliance with standards and
- F. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated.
- G. Testing Agency Qualifications: An independent agency with the experience and capability to conduct testing and inspecting indicated; and where required by authorities having jurisdiction, that is acceptable to authorities.
- H. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide gualified personnel to perform required tests and inspections.

- 1. Notify Architect and Contractor of irregularities or deficiencies in the Work observed during performance of its services.
- 2. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
- 3. Do not perform any duties of Contractor.
- J. Associated Services: Cooperate with testing agencies and provide reasonable auxiliary services as requested. Provide the following:
- 1. Access to the Work.
- 2. Incidental labor and facilities necessary to facilitate tests and inspections.
- 3. Adequate guantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
- 4. Facilities for storage and field curing of test samples. 5. Security and protection for samples and for testing and

inspecting equipment.

- K. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
- 1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- L. Special Tests and Inspections: Engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction.
- PART 2 PRODUCTS (Not Used) PART 3 - EXECUTION
- 3.1 REPAIR AND PROTECTION
- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
- B. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

SECTION 01 42 00 REFERENCES PART 1 - GENERAL

- 1.1 GENERAL REQUIREMENTS
- A. Publication Dates: Comply with standards in effect as of date of the Contract documents unless otherwise indicated.
- B. Abbreviations and Acronyms: Where abbreviations and acronyms are used in specifications or other contract documents, they shall mean the recognized name of the entities in the following list. names are subject to change and are believed to be accurate and up-to-date as of the date of the contract documents.

| Α | Aluminum Association, Inc. (the) |
|------------|---|
| ASHTO | American Association of State Hi Transportation Officials |
| CI | American Concrete Institute |
| I | Asphalt Institute |
| IA | American Institute of Architects (|
| ISC | American Institute of Steel Const |
| ISI | American Iron and Steel Institute |
| NSI | American National Standards Ins |
| PA | Architectural Precast Association |
| SCE | American Society of Civil Engine |
| SCE/SEI | American Society of Civil Engine Engineering Institute(see ASCE) |
| STM | American Society For Testing and International |
| WS | American Welding Society |
| SI | Construction Specifications Instit |
| во | International Conference of Build |
| EA | Insulated Cable Engineers Assoc |
| EE | Institute of Electrical and Electron Engineers, Inc. (the) |
| SNA | Illuminating Engineering Society American |
| 6 0 | International Organization for Standardization Available from A |
| U | International Telecommunication |
| PI | Lightning Protection Institute |
| CA | Metal Construction Association |
| PI | Master Painters Institute |
| СТА | National Cable & Telecommunica Association |
| ECA | National Electrical Contractors As |
| | |

NFPA(National Fire Protection Association)

NEMA

NFPA

he) Highway and

ts (the) nstruction

nstitute ion

ineers

ineers/Structural and Materials

stitute (the) ilding Officials sociation, Inc. ronics

ety of North

ANSI on Union

ications

Association

National Electrical Manufacturers Association

SAE SAE International SCTE Society of Cable Telecommunications Engineers SEI/ASCE Structural Engineering Institute/American Society of Civil Engineers(see ASCE) SMACNA Sheet Metal and Air Conditioning **Contractors' National Association** SSPC The Society for Protective Coatings TIA/EIA **Telecommunications Industry**

Association/Electronic Industries Alliance UL Underwriters Laboratories Inc

PART 2 -PRODUCTS (NOT USED) PART 3 - EXECUTION (NOT USED) END OF SECTION 01 42 00

SECTION 01 60 00 PRODUCT REQUIREMENTS PART 1 - GENERAL

- 1.1 SECTION REQUIREMENTS
- A. The term "product" includes the terms "material, "equipment," "system," and terms of similar intent.
- B. Comparable Product Requests: Submit request fo consideration of each comparable product. Identify product or fabrication or installation method to be replaced.
- 1. Show compliance with requirements for comparable product requests.
- 2. Architect will review the proposed product and notify Contractor of its acceptance or rejection.
- C. Basis-of-Design Product Specification Submittal: Show compliance with requirements.
- D. Compatibility of Options: If Contractor is given option of selecting between two or more products, select product compatible with products previously selected.
- E. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss including theft. Comply with manufacturer's written instructions.
- 1. Schedule delivery to minimize storage at Project site and to prevent overcrowding of construction spaces.
- 2. Deliver products to Project site in manufacturer's original sealed container or packaging, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
- 3. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
- 4. Store materials in a manner that will not endanger Project structure or the Public.
- 5. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
- F. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

PART 2 - PRODUCTS

- 2.1 PRODUCT SELECTION PROCEDURES
- A. Provide products that comply with the Contract Documents are undamaged, and, unless otherwise indicated, are new at the time of installation.
- 1. Provide products complete with accessories, trim, finish, and other devices and components needed for a complete installation and the intended use and effect.
- 2. Where products are accompanied by the term "as selected," Architect will make selection.
- 3. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
- B. Where the following headings are used to list products or manufacturers, the Contractor's options for product selection are as follows:

1. Products:

a. Where requirements include "one of the following," provide one of the products listed that complies with requirements.

b. Where requirements do not include "one of the following," provide one of the products listed that complies with requirements or a comparable product.

2. Manufacturers:

- a. Where requirements include "one of the following, provide a product that complies with requirements by one of the listed manufacturers.
- b. Where requirements do not include "one of the following," provide a product that complies with requirements by one of the listed manufacturers or another manufacturer.

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CONSULTANTS

| REV | DATE | ISSUE |
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HEET TITLE

SPECIFICATIONS

HEET NUMBER

General Requirements Continued

- 3. Basis-of-Design Product: Provide the product named, or indicated on the Drawings, or a comparable product by one of the listed manufacturers.
- C. Where Specifications require "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
- D. Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

- A. Architect will consider Contractor's request for comparable product when the following conditions are satisfied:
- 1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
- 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications.
- 3. List of similar installations for completed projects, if requested.
- 4. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 60 00

SECTION 01 70 00 EXECUTION AND CLOSEOUT REQUIREMENTS

1.1 EXECUTION REQUIREMENTS

PART 1 - GENERAL

- A. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.
- 1.2 CLOSEOUT SUBMITTALS
- A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- B. Certified List of Incomplete Items: Final submittal at Final Completion.
- C. Record Drawings: Submit one set of marked-up record prints.
- D. Record Product Data: Submit one paper copy of each submittal.
- 1.3 SUBSTANTIAL COMPLETION PROCEDURES
- A. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
- B. Submittals Prior to Substantial Completion: Before requesting Substantial Completion inspection, complete the following:
- 1. Obtain and submit releases from authorities having jurisdiction permitting Company unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
- Submit closeout submittals specified in other sections, including project record documents, operation and maintenance manuals, similar final record information, warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
- 3. Submit maintenance material submittals specified in other sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Construction Manager.
- 4. Submit changeover information related to Company's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Before requesting Substantial Completion inspection, complete the following:
- 1. Advise Company of pending insurance changeover requirements
- 2. Make final changeover of any permanent locks and deliver keys to Company.
- 3. Complete startup and testing of systems and equipment. 4. Perform preventive maintenance on equipment used
- prior to Substantial Completion. 5. Advise Company of any changeover in utilities.
- 6. Participate with Company in conducting inspection and walkthrough.
- 7. Remove temporary facilities and controls.
- 8. Complete final cleaning requirements, including touchup painting.
- 9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Construction Manager will proceed with inspection or advise Contractor of unfulfilled requirements.

- 1.4 FINAL COMPLETION PROCEDURES
- A. Submittals Prior to Final Completion: Before requesting inspection for determining final completion, complete the following:
- 1. Submit certified copy of Substantial Completion inspection list of items to be completed or corrected (punch list). Certified copy of the list shall state that each item has been completed or otherwise resolved.
- Certificate of Insurance: Submit evidence of final, 2. continuing insurance coverage complying with insurance requirements.
- B. Submit a written request for final inspection for acceptance. On receipt of request, Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements.
- Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
- B. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
- 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

2.2 RECORD DRAWINGS

- A. Record Prints: Maintain a set of prints of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued. Mark to show actual installation where installation varies from that shown originally. Accurately record information in an acceptable drawing technique.
- 1. Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

PART 3 - EXECUTION

- 3.1 EXAMINATION AND PREPARATION
- Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
- Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance.
- 1. Verify compatibility with and suitability of substrates. 2. Examine roughing-in for electrical systems.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.
- D. Take field measurements as required to fit the Work properly. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication.
- E. Verify space requirements and dimensions of items shown diagrammatically on Drawings.

3.2 CONSTRUCTION LAYOUT AND FIELD ENGINEERING

A. Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks.

3.3 INSTALLATION

- A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
- 1. Make vertical work plumb and make horizontal work
- 2. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
- Maintain minimum headroom clearance of 96 inches in 3.
- occupied spaces and 90 inches in unoccupied spaces. B. Comply with manufacturer's written instructions and
- recommendations.
- C. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions.
- D. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed.
- Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place. Where size and type of attachments are not indicated, verify size and type required for load conditions.

indicated, mount components at heights directed by Construction Manager. F. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

construction.

3.5 CLEANING

Completion:

Division 2 Existing Conditions

1.1 SUMMARY

- PART 1 GENERAL
 - A. Items indicated to be removed and salvaged remain The Owner's property. Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner. Include fasteners or brackets.

SPECIFICATIONS

1. Mounting Heights: Where mounting heights are not

G. Use products, cleaners, and installation materials that are not considered hazardous.

3.4 CUTTING AND PATCHING

- A. Provide temporary support of work to be cut.
- C. Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.
- D. Cutting: Cut in-place construction using methods least likely to damage elements retained or adjoining
- 1. Cut holes and slots neatly to minimum size required. and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
- E. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
- 1. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction in a manner that will minimize evidence of patching and
- refinishing. 2. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats
- appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

- A. Clean Project site and work areas daily, including common areas. Dispose of materials lawfully. 1. Remove liquid spills promptly.
- 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as
- appropriate. 3. Remove debris from concealed spaces before enclosing the space.
- B. Complete the following cleaning operations before requesting inspection for certification of Substantial
- 1. Clean Project site, yard, and grounds, in areas disturbed by construction activities. Sweep paved areas; remove stains, spills, and foreign deposits.
- 2. Sweep paved areas broom clean. Remove spills, stains,
- and other foreign deposits.
- 3. Remove labels that are not permanent.
- 4. Clean exposed finishes to a dust-free condition, free of stains, films, and foreign substances.
- 5. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and foreign substances.

END OF SECTION 01 70 00

SECTION 02 30 00 SUBSURFACE INVESTIGATION PART 1- GENERAL

- A. Information: Information on the Drawings and in the specifications relating to subsurface conditions and existing utilities and structures is from information available from sources available to the Company's consultants. Such information is furnished only for the information and convenience of the Contractor, and the accuracy or completeness of this information is not guaranteed.
- PART 2 PRODUCTS (Not Used)
- PART 3 EXECUTION (Not Used)

END OF SECTION 02 30 00

SECTION 02 41 19 SELECTIVE DEMOLITION

1.1 SECTION REQUIREMENTS

- B. Predemolition Photographs: Show existing conditions of adjoining construction and site improvements. Submit before Work begins.
- C. It is not expected that hazardous materials will be encountered in the Work. If hazardous materials are encountered, do not disturb; immediately notify Construction Manager. Hazardous materials will be removed by Owner under a separate contract.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with EPA regulations and with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 DEMOLITION

- A. Maintain services/systems indicated to remain and protect them against damage during selective demolition operations. Before proceeding with demolition, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems.
- B. Locate, identify, shut off, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
- C. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- D. Protect existing finish work that is to remain.
- E. Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
- F. Provide temporary weather protection to prevent water leakage and damage to structure.
- G. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction.
- H. Remove demolition waste materials from Project site and legally dispose of them in an EPA-approved landfill. Do not burn demolished materials.
- I. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 02 41 19

Division 3

Concrete

SECTION 03 30 00 CAST-IN-PLACE CONCRETE PART 1 - GENERAL

- 1.1 SECTION REQUIREMENTS
- A. Submittals: concrete mix designs and submittals required by ACI 301.
- B. Ready-Mixed Concrete Producer Qualifications: ASTM C 94/C 94M.

PART 2 - PRODUCTS

- 2.1 PEFORMANCE REQUIREMENTS
- A. Comply with ACI 301, "Specification for Structural Concrete," and with ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."
- 2.2 MATERIALS
- A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
- B. Plain Steel Wire: ASTM A 82, as drawn.
- C. Portland Cement: ASTM C 150, Type I or II.
- D. Fly Ash: ASTM C 618, Class C or F.
- E. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.
- F. Aggregates: ASTM C 33, Class 3S.
- 1. Maximum Coarse-Aggregate Size: 1-1/2 inches nominal.
- G. Air-Entraining Admixture: ASTM C 260.
- H. Chemical Admixtures: ASTM C 494, water reducing. Do not use calcium chloride or admixtures containing calcium chloride.
- Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- J. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

- 2.3 CONCRETE MIXTURES
- I. Prepare design mixtures, proportioned ACI 301.
- J. Normal-Weight Concrete:
- 1. Minimum Compressive Strength: As Drawings.
- 2. Maximum Water-Cementitious Materials R
- 3. Slump Limit: 4 inches.
- 4. Air Content: Maintain within range ACI 301. Do not allow air content of receive troweled finishes to exceed 3 perc
- C. Measure, batch, mix, and deliver concrete ASTM C 94/C 94M.
- 1. When air temperature is above 90 deg F, and delivery time to 60 minutes.

PART 3 - EXECUTION

- 3.1 CONCRETING
- A. Construct formwork according to ACI 301 tolerances and surface irregularities within A of Class A, 1/8 inch for concrete exposed Class B, 1/4 inch for other concrete surfaces.
- B. Comply with CRSI's "Manual of Standard fabricating, placing, and supporting reinforcer
- C. Install construction, isolation, and contractio indicated. Install full-depth joint-filler strip joints.
- D. Place concrete in a continuous operation and using mechanical vibrating equipment.
- E. Protect concrete from physical damage, pres and reduced strength due to hot or cold w mixing, placing, and curing.
- F. Formed Surface Finish: Smooth-formed finis exposed to view, coated, or covered by wat other direct-applied material; rough-fo elsewhere.
- G. Slab Finishes: Comply with ACI 302.1R restraightening, and finishing operations surfaces. Do not wet concrete surfaces.
- I. Cure formed surfaces by moisture curing for davs
- J. Begin curing concrete slabs after finishing. continuously moist for at least seven days.
- L. Engage a testing agency to perform field tests test reports.
- M. Protect concrete from damage. Repair and p

DIVISION 4-NOT USED

PART 1 - GENERAL

PART 2 - PRODUCTS

2.1 METALS

2.2 GROUT

| | | | | _ | - JA | MES VACCARO |
|-----------|--|------------|---|--------------------|--|---|
| | | | | - | AR | CHITECT, INC. |
| 2.3 | CONCRETE MIXTURES | 2.3 | FABRICATION | | 411 P. | DONDEE WAY, UNIT C ACIFICA I CA I 94044 |
| I. | Prepare design mixtures, proportioned according to ACI 301. | Α. | General: Shear and punch metals cleanly and accurately. Remove burrs and ease exposed edges. Form bent-metal corners to smallest radius possible without impairing work. | | 415.608.30 INF(WW | O@JVARCHITECT.COM W.JVARCHITECT.COM |
| J. | Normal-Weight Concrete: 1. Minimum Compressive Strength: As Specified in | В. | Welding: Weld corners and seams continuously. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals. At | | | |
| | Drawings. 2. Maximum Water-Cementitious Materials Ratio: 0.50. | 2.4 | exposed connections, finish welds and surfaces smooth with contour of welded surface matching those adjacent. STEEL AND IRON FINISHES | | | m o D U S |
| | Slump Limit: 4 inches. Air Content: Maintain within range permitted by ACI 301. Do not allow air content of floor slabs to | А. В. | Hot-dip galvanize steel fabrications at exterior locations. Prepare uncoated ferrous metal surfaces to comply with | _ | Μ | IODUS, INC. |
| C. | receive troweled finishes to exceed 3 percent. Measure, batch, mix, and deliver concrete according to | | SSPC-SP 3, "Power Tool Cleaning," and paint with a fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79. | | 240 STOC SAN | FRANCISCO, CA 94108 |
| | ASTM C 94/C 94M.1. When air temperature is above 90 deg F, reduce mixing | PAR 3.1 | T 3 - EXECUTION INSTALLATION | | | rizon |
| | and delivery time to 60 minutes. | Α. | Provide anchorage devices and fasteners where needed to secure items to in-place construction. | | | |
| B.1 | CONCRETING | В. | Perform cutting, drilling, and fitting required for installing miscellaneous metal fabrications. Set metal fabrication accurately in location, alignment, and elevation; with edges | _ | VER | ZON WIRELESS |
| Α. | Construct formwork according to ACI 301 and maintain tolerances and surface irregularities within ACI 347R limits of Class A, 1/8 inch for concrete exposed to view and Class B, 1/4 inch for other concrete surfaces. | C. | and surfaces level, plumb, true, and free of rack. Fit exposed connections accurately together to form hairline joints or, where indicated, with uniform reveals and spaces for sealants and joint fillers | C | 2785 N WAL | AITCHELL DRIVE, SUITE 9 .NUT CREEK, CA 94598 NTS |
| В. | Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement. | D. | Coat concealed surfaces of aluminum that will come into contact with grout, concrete, masonry, wood, or dissimilar | | | |
| C. | Install construction, isolation, and contraction joints where indicated. Install full-depth joint-filler strips at isolation | EN | D OF SECTION 05 50 00 | | | |
| D. | Place concrete in a continuous operation and consolidate | DIV | ISIONS 6 THROUGH 8-NOT USED | | | |
| E. | Protect concrete from physical damage, premature drying, and reduced strength due to hot or cold weather during | 9 | Finishes | | | |
| F. | mixing, placing, and curing. Formed Surface Finish: Smooth-formed finish for concrete | SE PAR | CTION 09 90 00 PAINTING AND COATING | | 01 | UT TC EVAI ACEN |
| | exposed to view, coated, or covered by waterproofing or other direct-applied material; rough-formed finish elsewhere. | 1.1 A. | SECTION REQUIREMENTS Submittals: | | RO | |
| G. | Slab Finishes: Comply with ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces. | В. | Product Data. Extra Materials: Deliver to Company 1 quart of each color and type of finish coat paint used on project, in containers, | | D | ADJA 2A B 0, C/ 0, C/ 17-0, |
| I. | Cure formed surfaces by moisture curing for at least seven days. | PAR | properly labeled and sealed. T 2 - PRODUCTS | | D C C C | OW CICF 355 |
| J. | Begin curing concrete slabs after finishing. Keep concrete continuously moist for at least seven days. | 2.1 | PAINT | | | |
| L. | Engage a testing agency to perform field tests and to submit test reports. | Α. | Manufacturer-unless noted or otherwise in drawings or directed by Construction Manager: 1. Tnemec Company Incorporated | | S | N: PCU |
| М. | Protect concrete from damage. Repair and patch defective areas. | - | 2. Sherwin-Williams Company (The) | | | AF 102 |
| ENC | OF SECTION 03 30 00 | В. | compatible with one another and with substrates. | | | |
| DIV | SION 4-NOT USED | | For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated. | | | CENSED ARCHIT |
| 5 | Division 5 | C. | Colors: as noted/ designated in drawings. | | * | JAMES F. VACCARO C-33251 ★ |
| | Metals | PAR | T 3 - EXECUTION | | l' | 07-31-2019 RENEWAL DATE |
| | TION 05 50 00 METAL FABRICATIONS | 3.1 A. | PREPARATION Comply with recommendations in MPI's "MPI Architectural | | | |
| 1.1 | SECTION REQUIREMENTS | | Painting Specification Manual" applicable to substrates indicated. | REV 1 | 10/18/20 ² | 17 90% CONSTRUCTION |
| A. PAR | Submittals: Shop Drawings. | В. | Remove hardware and similar items that are not to be painted. Mask items that cannot be removed. reinstall items in each area after painting is complete. | 2 3 | 2/6/2018 3/26/201 | 3100% CONSTRUCTION8100% CONSTRUCTION REV. |
| 2.1 | METALS | C. | Clean and Prepare surfaces in an area before beginning painting in that area. schedule painting so cleaning | | | |
| Α. | Steel Plates, Shapes, and Bars: ASTM A 36/A 36M. | 3.2 | operations will not damage newly painted surfaces. | | | |
| В. С. | Steel Tubing: ASTM A 500. Steel Pipe: ASTM A 53, standard weight (Schedule 40). | э.z А. | Comply with recommendations in MPI's "MPI Architectural | THESE FOR T | E PLANS ARE HE CLIENT'S | INSTRUMENTS OF SERVICE AND ARE USE SOLELY WITH RESPECT TO THIS |
| 2.2 | GROUT | | Painting Specification Manual" applicable to substrates indicated. | PR MO WITHC | OJECT. THES DIFIED OR RE OUT PRIOR W | SE PLANS SHALL NOT BE ALTERED, EPRODUCED IN PART OR IN WHOLE (RITTEN CONSENT. THESE PLANS ARE |
| Α. | Nonshrink, Nonmetallic Grout: ASTM C 1107; recommended by manufacturer for exterior applications. | в. С. | Apply paints according to manufacturer's written instructions. | FO COP SHEET | RIVIATIED TO YRIGHT 2016 TITLE | D DE FULL-SIZE AT ARCH D 24"X36". D JAMES VACCARO ARCHITECT, INC |
| | | D. | Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. cut in sharp lines and color breaks. | | SPE | CIFICATIONS |
| | | | If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance. | SHFFT | NUMBFR | |
| | | | | | | |

SP-2

Finishes Continued

3.3 EXTERIOR PAINT APPLICATION SCHEDULE, UNLESS NOTED OTHERWISE IN DRAWINGS

- A. Antenna/ Radome Concealment:
- 1. DTM Acrylic Coating #B66 W100-Series (Finish), over DTM Bonding Primer #B66A50 (4.5-12.0 wet mils/ 2.0-5.0 dry mils).
- B. Load Center, Disconnect:
- 1. Pro Industrial Water Based Alkyd Urethane #B53W01251 (Finish), over Macropoxy 646 (Prime-2 coats).
- C. RRU Units:
- 1. Pro Industrial Water Based Alkyd Urethane #B53W01251 (Finish), over Macropoxy 646 (Prime-2 coats).
- D. Steel (Cable Shroud, Tube Assembly, Cable Sweep, Load Center/ RRU mounting components):
- 1. Tnemec UVX Series 750 (2.5 to 5.0 mils DFT) (Finish), Over Hi-Build Epoxoline II Series V69 (4.0 to 6.0 mils DFT) (Intermediate), Over Tneme-Zinc Series 90-97 (2.5 mils to 3.5 mils) (Prime) (9.0-14.5 total DFT).
- E. Stainless Steel Banding:
- 1. Tnemec Flouronar Series 1071V (semi-gloss) (2.0 to 3.0 mils DFT) (Finish), Over Endur-Shield Series 1075 (2.0 to 3.0 mils DFT) (Intermediate), Over Hi-Build Epoxoline II Series V69 (2.0 to 3.0 mils DFT) (Prime).
- **END OF SECTION 09 90 00**

10Division 10 **Specialties**

SECTION 10 14 00 SIGNAGE

PART 1 - GENERAL

- 1.1 SECTION REQUIREMENTS
- A. Submittals: Product Data.

PART 2 - PRODUCTS

- 2.1 SIGNS, GENERAL
- A. Regulatory Requirements: Comply with NFPA, FCC, ANSI and authority having jurisdiction.

2.2 PANEL SIGNS

Basis-of-Design Product: Product indicated on drawings, Project specific RF/ EMF report and Requirements of Authority Having Jurisdiction.

2.3 MATERIALS

- A. Applied Vinyl: die-cut characters from vinyl film of nominal thickness of 3 mils with pressure-sensitive adhesive backing, suitable for exterior applications.
- B. Electrical Components, devices, and accessories: listed and labeled as defined in nfpa 70, by a testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.
- PART 3 EXECUTION
- 3.1 INSTALLATION
- A. Locate signs where indicated or directed. Install signs level, plumb, and at heights indicated, with sign surfaces free from distortion and other defects in appearance.

END OF SECTION 10 14 00

DIVISIONS 11 THROUGH 25-NOT USED

26Division 26 Electrical SECTION 26 05 00 COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL

- 1.1 SECTION REQUIREMENTS
- A. Submittals:
- 1. Product Data.
- PART 2 PRODUCTS
- 2.1 PERFORMANCE REQUIREMENTS
- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NFPA 70.

2.2 RACEWAYS

A. Raceways:

- 1. EMT: ANSI C80.3 and UL 797. 2. IMC: ANSI C80.6, zinc-coated steel, with threaded fittings.
- 3. GRC: ANSI C80.1 and UL 6, hot-dip galvanized.
- 4. LFMC: UL 360, zinc-coated, flexible steel with sunlight-resistant and mineral-oil-resistant plastic jacket.
- 5. RNC: UL 621 and NEMA TC 2, Type EPC-40-PVC, with NEMA TC3 fittings.
- 6. Raceway Fittings: Specifically designed for raceway type used in Project.
- B. Handholes and Boxes for Exterior Underground Wiring:
- 1. Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel, fiberglass, or a combination of the
- 2. Comply with SCTE 77.
- 3. Configuration: Designed for flush burial with open bottom unless otherwise indicated.
- 4. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure and handhole location.
- 5. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
- 6. Cover Legend: Molded lettering, "STREET LIGHTING".
- 2.3 CONDUCTORS AND CABLES
- A. Conductors:
- 1. Comply with NEMA WC70.
- 2. Conductors, No. 10 AWG and Smaller: Solid or stranded copper.
- 3. Conductors, Larger Than No. 10 AWG: Stranded
- 4. Insulation: Thermoplastic, Type THHN-THWN or XHHW.
- 5. Wire Connectors and Splices: Units of size, ampacity rating, material, type, and class suitable for service indicated. B. Cable Type NM-B and Type NMC-B Cable: Comply with
- UL 719 with Type THHN/THWN conductors complying with UL 83.
- C. Cable Type SEU: Comply with UL 854 with Type THHN/THWN conductors complying with UL 83 or Type XHHW-2 conductors complying with UL 44.
- D. Cable Type UF-B: Comply with UL 493 with Type THHN/THWN conductors complying with UL 83.
- 2.4 GROUNDING MATERIALS
- A. Conductors: Solid for No. 8 AWG and smaller, and stranded for No. 6 AWG and larger unless otherwise indicated.
- 1. Insulated Conductors: tinned-copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
- 2. Bare, Solid-Copper Conductors: Comply with ASTM B 3. 3. Bare, Stranded-Copper Conductors: Comply with
- ASTM B 8. B. Ground Rods: Copper-clad steel, sectional type; 5/8 by 120 inches in diameter.
- C. Bolted Connectors for Conductors and Pipes: Copper or copper alloy, bolted pressure-type, with at least two bolts with clamp-type pipe connectors sized for pipe.
- D. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.
- 2.5 ELECTRICAL IDENTIFICATION MATERIALS
- Raceway Identification Materials: Self-adhesive, color-coding vinyl tape; flexible, preprinted, self-adhesive vinyl.
- B. Conductor Identification Materials: Color-Coding Conductor Tape: Self-adhesive vinyl tape 1 to 2 inches wide.
- C. Underground-Line Warning Tape: Permanent, bright-colored, continuous-printed, polyethylene tape with continuous metallic strip or core.
- D. Tape Markers for Wire: Vinyl or vinyl-cloth, self-adhesive, wraparound type with circuit identification legend machine printed by thermal transfer or equivalent process.
- E. Self-Adhesive Warning Labels: Factory printed, multicolor, pressure-sensitive adhesive labels, configured for display on front cover, door, or other access to equipment unless otherwise indicated.
- 2.6 SUPPORT AND ANCHORAGE COMPONENTS
- A. Raceway and Cable Supports: As described in NECA 1.
- B. Conduit and Cable Support Devices: Steel and malleable-iron hangers, clamps, and fittings.
- 2.7 SLEEVES FOR RACEWAYS AND CABLES
- A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.
- 2.8 GROUT
- A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining.

- E. Comply with NECA 1.
- 3.3 WIRING METHODS A. Service Entrance: Type THHN-THWN, single conductors in PART 1 - GENERAL raceway. 1.1 DESCRIPTION B. Exposed Feeders, Branch Circuits, and Class 1 Control Circuits, Including in Crawlspaces: Type THHN-THWN, single conductors in raceway connection of exterior luminaires, poles, and supports. C. Feeders and Branch Circuits Concealed in Ceilings, Walls, **1.2 RELATED WORK** Partitions, and Crawlspaces: Type THHN-THWN, single conductors in raceway. A.Section 26 05 00, COMMON WORK RESULTS FOR D. Feeders and Branch Circuits Concealed in Concrete, below ELECTRICAL Slabs-on-Grade, and underground: Type THHN-THWN, single conductors in raceway. 1.3 SUBMITTALS 3.4 GROUNDING A.Shop Drawings: A. Underground Grounding Conductors: Install bare copper 1. Clearly present sufficient information to determine conductor. Bury at least 24 inches below grade. compliance with drawings and specifications. B. Pipe and Equipment Grounding Conductor Terminations: Bolted
- C. Underground Connections: Welded. D. Connections to Structural Steel: Bolted. straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- E. Install grounding conductors routed along shortest and
- F. Install ground rods driven into ground until tops are 2 inches below final grade, or 4 inches above.
- G. Protect ground rods passing through concrete with a double wrapping of pressure-sensitive insulating tape. H. Make connections without exposing steel or damaging
- coating if any. Install bonding straps and jumpers in locations accessible for inspection and maintenance, except where routed
- through short lengths of conduit.
- J. Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
- K. Bond to equipment mounted on vibration isolation hangers and supports so vibration is not transmitted to rigidly mounted equipment.
- L. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, and at ground test wells.

1. Measure ground resistance not less than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.

SPECIFICATIONS

PART 3 - EXECUTION

- 3.1 GENERAL ELECTRICAL EQUIPMENT INSTALLATION REQUIREMENTS
- A. Install electrical equipment to provide for ease of disconnecting the equipment with minimum interference to other installations.
- B. Install electrical equipment to allow right of way for piping and conduit installed at required slope
- C. Install electrical equipment to ensure that connecting raceways, cables, wireways, cable trays, and busways are clear of obstructions and of the working and access space of other equipment.
- D. Install required supporting devices and set sleeves in cast-in-place concrete, masonry walls, and other structural components as they are constructed.
- 3.2 RACEWAY AND CABLE INSTALLATION
- A. Outdoor Raceways Applications:
- 1. Exposed or Concealed: IMC.
- 2. Underground, Single Run: GRC.
- 3. Boxes and Enclosures: Metallic, NEMA 250, Type 3R or Type 4.
- B. Install pull wires in empty raceways.

- 2. Perform tests by fall-of-potential method according to IEEE 81.
- 3. Report measured ground resistances that exceeds 5 ohms.
- 4. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Construction Manager promptly and include recommendations to reduce ground resistance.

3.5 IDENTIFICATION

- A. Power-Circuit Conductor Identification: For No. 3 AWG conductors and larger, at each location where observable,
- identify phase using color-coding conductor tape. B. Locations of Underground Lines: Identify with
- underground-line warning tape for power, lighting communication, and control wiring.
- C. Warning Labels for Enclosures for Power and Lighting: Comply with 29 CFR 1910.145; identify system voltage with black letters on an orange background. Apply to exterior of door, cover, or other access.
- D. Verify identity of each item before installing identification products.
- E. Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.
- F. Install system identification color banding for raceways and cables at 50-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.

- G. Color-Coding for Phase Identification, 600 V and Less: Ungrounded service feeder and branch-circuit conductors.
- 1. Colors for 208/120-V Circuits:
- a. Phase A: Black.
- b. Phase B: Red.
- c. Phase C: Blue.
- 2. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches from terminal points.
- H. Underground-Line Warning Tape: Continuous underground-line warning tape directly above line at 6 to 8 inches below finished grade.
- 3.6 SLEEVE AND SLEEVE-SEALS INSTALLATION
- A. Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.
- Cut sleeves to length for mounting flush with both wall surfaces. C. Size pipe sleeves to provide 1/4-inch annular clear space between sleeve and cable unless sleeve seal is to be

installed or unless seismic criteria require different

END OF SECTION 26 05 00

SECTION 26 56 13 LIGHTING POLES AND **STANDARDS**

clearance.

- This section specifies the furnishing, installation, and
- **1.4 DELIVERY, STORAGE, AND HANDLING**

Provide manufacturer's standard provisions for protecting pole finishes during transport, storage, and installation. Do not store poles on ground. Store poles so they are at least 12 inches above ground level and growing vegetation. Do not remove factory-applied pole wrappings until just before

installing pole. PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

Materials and equipment shall be in accordance with NEC, UL, ANSI, and as shown on the drawings and specified.

- 2.2 POLES
- A.General:
- 1. Poles shall be 7 guage round tapered steel Modified Type 15, as manufactured by Valmont and as shown on the
- drawings. Finish shall be hot-dip galvanized to ASTM A123. 2. Poles shall be anchor-bolt type designed for use with underground supply conductors. Poles shall have handhole having a minimum clear opening of 2.5 x 5 inches. Handhole covers shall be secured by stainless steel captive screws.
- 3. Provide a steel-grounding stud opposite handhole openings, designed to prevent electrolysis when used with copper wire.
- 4. Hardware and Accessories: All necessary hardware and specified accessories shall be the product of the pole manufacturer.
- B. Types:
- 1. Steel: Provide round tapered steel pole conforming to ASTM A595. Pole shall be hot-dip galvanized confirming to ASTM A123.
- 2.3 FOUNDATIONS FOR POLES
- A.Foundations shall be cast-in-place concrete, having 4,000 psi minimum 28-day compressive strength.
- B.Place concrete in spirally-wrapped treated paper forms for round foundations, and construct forms for square foundations.
- C. Anchor bolt assemblies and reinforcing of concrete
- foundations shall be as shown on the drawings. Anchor bolts shall be in a welded cage or properly positioned by the tiewire to stirrups.
- D.Prior to concrete pour, install conduits per Section 26 05 00. 2.4 LUMINAIRES
- A. Per UL 1598 and NEMA C136.17. Luminaires shall be weatherproof, heavy duty, outdoor types designed for efficient light utilization, adequate dissipation of lamp and ballast heat, and safe cleaning and relamping.

- B. Light distribution pattern types shall be as approved by The City of Cupertino Department of Public .
- C. Incorporate ballasts in the luminaire housing. D. Lenses shall be frame-mounted, heat-resistant, borosilicate glass, with prismatic refractors, unless otherwise specified by The City of Cupertino Department of Public Works. Use heat and aging-resistant, resilient gaskets to seal and cushion lenses and refractors in luminaire doors.
- E. Lamp sockets for high intensity discharge (H.I.D) fixture shall have locking-type porcelain enclosures in conformance to the applicable requirements of ANSI C81.61 and UL 496.
- F. Pre-wire internal components to terminal strips at the factory. G. Bracket-mounted luminaires shall have leveling provisions
- and clamp-type adjustable slip-fitters with locking screws. H. Materials shall be rustproof. Latches and fittings shall be non-ferrous metal.
- I. Provide manufacturer's standard finish.
- J. Luminaires shall carry factory labels, showing complete, specific lamp and ballast information.
- 2.5 LAMPS
- A. Install the proper lamps in luminaire installed.
- B. Lamps shall be general-service, outdoor lighting types. C. High-Pressure Sodium (HPS) Lamps: NEMA C78.42, CRI 21 (minimum), wattage as indicated. Lamps shall have minimum average rated life of 24,000 hours.
- D. LED sources shall meet the following requirements: 1. Operating temperature rating shall be between -40° F and
- 2. Correlated Color Temperature (CCT): as specified by The City of Cupertino.
- 3. Color Rendering Index (CRI): As specified by The City of Cupertino.
- 2.6 HIGH INTENSITY DISCHARGE BALLASTS
- A. Per NEMA C82.4 and UL 1029. Ballasts shall be encapsulated single-lamp, copper-wound, constant-wattage autotransformer type, designed to operate on the voltage system to which they are connected, and capable of open-circuit operation without reducing lamp life.
- B. Ballasts shall have individual overcurrent protection in each ungrounded supply conductor.
- C. Ballast shall have an allowable line voltage variations of 10%, with a maximum 20% lamp wattage regulation spread. D. Power factor shall be not less than 90%.
- E. Ballast shall have a minimum starting temperature of -22° F, and a normal ambient operating temperature of 104° F.
- 2.7 LED drivers A. LED drivers shall meet the following requirements: 1. Drivers shall have a minimum efficiency of 85%.

waveforms at 1-minute intervals with less

7. Total Harmonic Distortion (THD): 20%.

than 10% degradation in clamping voltage. "C

Low" waveforms are as defined in IEEE/ASNI

C62.41.2-2002, Scenario 1 Location Category C.

8. Comply with FCC Title 47 CFR Part 18 Non-consumer

9. Drivers shall be reduction of hazardous substances

drawings, and in accordance with manufacturer's

between conductor, jacket, or sheath, and the end of

2. Set anchor bolts according to anchor-bolt templates

position with the bracket arm in proper position for

metal poles, luminaires, mounting arms, brackets, and

other than copper, provide specially-treated or lined

connectors suitable and listed for this purpose.

furnished by the pole manufacturer.

2. Starting Temperature: -40° F.

6. Power Factor (PF): 0.90.

RFI/EMI Standards.

(ROHS)-compliant.

systems.

PART 3 - EXECUTION

recommendations.

B. Pole Foundations:

conduit.

pole.

3.2 GROUNDING

circuits

luminaire location.

C. Install lamps in each luminaire.

3.3 Acceptance Checks and Tests

END OF SECTION 26 56 13

3.1 INSTALLATION

2.8 EXISTING LIGHTING SYSTEMS

3. Input Voltage: 120 to 480 (±10%) V.

4. Power Supplies: Class I or II output

Verify operation after installing luminaires and energizing

Radio Frequency - Electromagnetic Energy (RF-EME) Jurisdictional Report

Site No. CPSC001 SF_CUPER001 10465 S. De Anza Boulevard Cupertino, California 95014 Santa Clara County 37° 18' 58.99" N, -122° 1' 57.00" W NAD83

> EBI Project No. 6218000319 January 23, 2018

Prepared for:

Verizon Wireless c/o Modus, LLC 240 Stockton Street San Francisco, CA 94108

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EXECUTIVE SUMMARY

Purpose of Report

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by Verizon Wireless to conduct radio frequency electromagnetic (RF-EME) modeling for Verizon Site CPSC001 located at 10465 S. De Anza Boulevard in Cupertino, California to determine RF-EME exposure levels from proposed Verizon wireless communications equipment at this site. As described in greater detail in Section 2.0 of this report, the Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) Limits for general public exposures and occupational exposures. This report summarizes the results of RF-EME modeling in relation to relevant FCC RF-EME compliance standards for limiting human exposure to RF-EME fields.

Statement of Compliance

A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits <u>and</u> there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

As presented in the sections below, based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antennas that exceed the FCC's occupational or general public exposure limits at this site. Additionally, there are areas where workers who may be elevated above the ground may be exposed to power densities greater than the occupational limits. Therefore, workers should be informed about the presence and locations of antennas and their associated fields.

At the nearest walking/working surfaces to the Verizon antennas, the maximum power density generated by the Verizon antennas is approximately **51.50** percent of the FCC's general public limit (**10.30** percent of the FCC's occupational limit).

The composite exposure level from all carriers on this site is approximately **51.50** percent of the FCC's general public limit (**10.30** percent of the FCC's occupational limit) at the nearest walking/working surface to each antenna.

Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes instructions to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.

I.0 INTRODUCTION

Radio frequency waves are electromagnetic waves from the portion of the electromagnetic spectrum at frequencies lower than visible light and microwaves. The wavelengths of radio waves range from thousands of meters to around 30 centimeters. These wavelengths correspond to frequencies as low as 3 cycles per seconds (or hertz [Hz]) to as high as one gigahertz (one billion cycles per second).

Personal Communication (PCS) facilities used by Verizon in this area operate within a frequency range of 1900-2100 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed a distance above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of in areas in the immediate vicinity of the antennas.

MPE limits do not represent levels where a health risk exists, since they are designed to provide a substantial margin of safety. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size or health.

2.0 SITE DESCRIPTION

| Verizon Antenna Information (proposed Configuration) | | | | | | | | | |
|--|--------------------|----------------------|------------------------------|---------|---------------|---------------------------------|----|----|-------------|
| Antenna # and Model | Frequency (MHz) | # of Transmitters | Transmit Power (Watts) | Azimuth | Gain (dBd) | Feet above Ground (CL) | х | Y | Z (feet) |
| AI Amphenol CUUT360X06F56 | 1900 2100 | 2 2 | 48.7 53.8 | 0° | 7.65 | 34.3 | 30 | 30 | 33.3 |
| BI Amphenol CUUT360X06F56 | 1900 2100 | 2 2 | 48.7 53.8 | 120° | 7.65 | 34.3 | 30 | 30 | 33.3 |
| CI Amphenol CUUT360X06F56 | 1900 2100 | 2 2 | 48.7 53.8 | 240° | 7.65 | 34.3 | 30 | 30 | 33.3 |

This project site includes one (1) wireless telecommunication antenna (at three sector locations) on a light pole located at 10465 S. De Anza Boulevard in Cupertino, California.

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general population/uncontrolled exposure limits for members of the general public that may be exposed to antenna fields. While access to this site is considered uncontrolled, the analysis has considered exposures with respect to both controlled and uncontrolled limits as an untrained worker may access adjacent rooftop locations. Additional information regarding controlled/uncontrolled exposure limits is provided in Section 3.0. Appendix B presents a site safety plan that provides a plan view of the light pole with antenna locations.

3.0 FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS

The FCC has established Maximum Permissible Exposure (MPE) limits for human exposure to Radiofrequency Electromagnetic (RF-EME) energy fields, based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc. (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general public/uncontrolled exposure limits for members of the general public.

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

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

Table I and Figure I (below), which are included within the FCC's OET Bulletin 65, summarize the MPE limits for RF emissions. These limits are designed to provide a substantial margin of safety. They vary by frequency to take into account the different types of equipment that may be in operation at a particular facility and are "time-averaged" limits to reflect different durations resulting from controlled and uncontrolled exposures.

The FCC's MPEs are measured in terms of power (mW) over a unit surface area (cm²). Known as the power density, the FCC has established an occupational MPE of 5 milliwatts per square centimeter (mW/cm²) and an uncontrolled MPE of 1 mW/cm² for equipment operating in the 1900 MHz frequency range. For the Verizon equipment operating at 700 MHz or 850 MHz, the FCC's occupational MPE is 2.83 mW/cm² and an uncontrolled MPE of 0.57 mW/cm². These limits are considered protective of these populations.

| Table I: Limits for Maximum Permissible Exposure (MPE) | | | | | | | | |
|--|---|---|-------------------------------|---|--|--|--|--|
| (A) Limits for Occupational/Controlled Exposure | | | | | | | | |
| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm²) | Averaging Time [E] ² , [H] ² , or S (minutes) | | | | |
| 0.3-3.0 | 614 | 1.63 | (100)* | 6 | | | | |
| 3.0-30 | l 842/f | 4.89/f | (900/f ²)* | 6 | | | | |
| 30-300 | 61.4 | 0.163 | 1.0 | 6 | | | | |
| 300-1,500 | | | f/300 | 6 | | | | |
| 1,500-100,000 | | | 5 | 6 | | | | |
| (B) Limits for General Public/Uncontrolled Exposure | | | | | | | | |
| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm²) | Averaging Time [E] ² , [H] ² , or S (minutes) | | | | |
| 0.3-1.34 | 614 | 1.63 | (100)* | 30 | | | | |
| 1.34-30 | 824/f | 2.19/f | (180/f ²)* | 30 | | | | |
| 30-300 | 27.5 | 0.073 | 0.2 | 30 | | | | |
| 300-1,500 | | | f/1,500 | 30 | | | | |
| 1,500-100,000 | | | 1.0 | 30 | | | | |

f = Frequency in (MHz)

* Plane-wave equivalent power density

Based on the above, the most restrictive thresholds for exposures of unlimited duration to RF energy for several personal wireless services are summarized below:

| Personal Wireless Service | Approximate Frequency | Occupational MPE | Public MPE |
|------------------------------|--------------------------|-------------------------|-------------------------|
| Personal Communication (PCS) | 1,950 MHz | 5.00 mW/cm ² | 1.00 mW/cm ² |
| Cellular Telephone | 870 MHz | 2.90 mW/cm ² | 0.58 mW/cm ² |
| Specialized Mobile Radio | 855 MHz | 2.85 mW/cm ² | 0.57 mW/cm ² |
| Most Restrictive Freq, Range | 30-300 MHz | I.00 mW/cm ² | 0.20 mW/cm ² |

MPE limits are designed to provide a substantial margin of safety. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

Personal Communication (PCS) facilities used by Verizon in this area operate within a frequency range of 1900-2100 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of areas directly in front of the antennas.

4.0 WORST-CASE PREDICTIVE MODELING

EBI has performed theoretical modeling using RoofView® software to estimate the worst-case power density at the site ground-level and nearby rooftops resulting from operation of the antennas. RoofView® is a widely-used predictive modeling program that has been developed by Richard Tell Associates to predict both near field and far field RF power density values for roof-top and tower telecommunications sites produced by vertical collinear antennas that are typically used in the cellular, PCS, paging and other communications services. The models utilize several operational specifications for different types of antennas to produce a plot of spatially-averaged power densities that can be expressed as a percentage of the applicable exposure limit.

The modeling is based on worst-case assumptions for the number of antennas and transmitter power. The modeling assumes a maximum 4-4-4 radio configuration for Sectors A, B and C, with a power level of 46.9 dbM (48.7 watts) per transmitter for the 1900 frequency and 47.3 dbM (53.8 watts) per transitter for the 2100 frequency, in order to provide a worst-case evaluation of predicted MPE levels. The assumptions used in the modeling are based upon information provided by Verizon, and information gathered from other sources. The parameters used for the modeling are summarized in the RoofView® export files presented in Appendix C.

There are no other wireless carriers with equipment installed at this site.

Based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed Verizon antennas that exceed the FCC's occupational or general public exposure limits at this site. At the nearest walking/working surfaces to the Verizon antennas, the maximum power density generated by the Verizon antennas is approximately 51.50 percent of the FCC's general public limit (10.30 percent of the FCC's occupational limit). The composite exposure level from all carriers on this site is approximately 51.50 percent of the FCC's general public limit (10.30 percent of the FCC's general public limit (10.30 percent of the FCC's general public limit (10.30 percent of the FCC's general public limit).

The Site Safety Plan also presents areas where Verizon Wireless antennas contribute greater than 5% of the applicable MPE limit for a site. A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

The inputs used in the modeling are summarized in the RoofView® export file presented in Appendix C. A graphical representation of the RoofView® modeling results is presented in Appendix B. It should be noted that RoofView is not suitable for modeling microwave dish antennas; however, these units are designed for point-to-point operations at the elevations of the installed equipment rather than ground level coverage.

5.0 MITIGATION/SITE CONTROL OPTIONS

EBI's modeling indicates that there are no areas in front of the Verizon antennas that exceed the FCC standards for occupational or general public exposure. All exposures above the FCC's safe limits require that individuals be elevated above the ground. In order to alert people accessing the light pole at ground level, yellow CAUTION signs are recommended for installation 9 feet below the antenna (24 feet above the ground). These signs must be placed in a conspicuous manner so that they are visible to any person approaching the light pole from any direction.

There are no barriers recommended on this site.

These protocols and recommended control measures have been summarized and included with a graphic representation of the antennas and associated signage and control areas in a RF-EME Site Safety Plan, which is included as Appendix B. Individuals and workers accessing the roof should be provided with a copy of the attached Site Safety Plan, made aware of the posted signage, and signify their understanding of the Site Safety Plan.

Implementation of the signage recommended in the Site Safety Plan and in this report will bring this site into compliance with the FCC's rules and regulations.

6.0 **SUMMARY AND CONCLUSIONS**

EBI has prepared a Radiofrequency – Electromagnetic Energy (RF-EME) Compliance Report for telecommunications equipment installed by Verizon Site Number CPSC001 located at 10465 S. De Anza Boulevard in Cupertino, California to determine worst-case predicted RF-EME exposure levels from wireless communications equipment installed at this site. This report summarizes the results of RF-EME modeling in relation to relevant Federal Communications Commission (FCC) RF-EME compliance standards for limiting human exposure to RF-EME fields.

As presented in the sections above, based on the FCC criteria, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antennas that exceed the FCC's occupational or general public exposure limits at this site. Workers should be informed about the presence and locations of antennas and their associated fields. Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes procedures to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.

7.0 LIMITATIONS

This report was prepared for the use of Verizon Wireless. It was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by EBI are based solely on the information provided by the client. The observations in this report are valid on the date of the investigation. Any additional information that becomes available concerning the site should be provided to EBI so that our conclusions may be revised and modified, if necessary. This report has been prepared in accordance with Standard Conditions for Engagement and authorized proposal, both of which are integral parts of this report. No other warranty, expressed or implied, is made.

Appendix A

Certifications

Preparer Certification

I, Jos Schorr, state that:

- I am an employee of EnviroBusiness Inc. (d/b/a EBI Consulting), which provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed RF-EME safety training, and I am aware of the potential hazards from RF-EME and would be classified "occupational" under the FCC regulations.
- I am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation.
- I have reviewed the data provided by the client and incorporated it into this Site Compliance Report such that the information contained in this report is true and accurate to the best of my knowledge.

Reviewed and Approved by:

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

Appendix B Radio Frequency Electromagnetic Energy Safety / Signage Plans



Verizon Signage Plan



| Sign Image | Description | Posting Instructions | Required Signage |
|--|---|---|---|
| A DOTICE (a) Burn Start Array (a) Burn Start Array (a) Burn Start Array (a) Burn Start (a) Burn | Notice To Workers Informational sign, used to notify workers that there are active antennas installed and provide guidelines for working in RF environments. | Not required | Not required |
| INFORMATION This is an ACCESS FOINT to an area with transmitting antennas. Internasional antennasional Internasional Internasional Internasional Internasional Internasional Internasional Internasional Internasion | NOC Information Sign Informational sign with NOC Phone Number and Base Transceiver Station (BTS) Number | Not required | Not required |
| NOTICE | Blue Notice Sign Used to alert individuals that they are entering an area where the power density emitted from transmitting antennas exceeds the FCC's maximum permissible exposure limit for the general public but is less than the occupational exposure limit. | Not required | Not required |
| | Yellow Caution Sign Used to alert individuals that they are entering an area where the power density emitted from transmitting antennas may exceed the FCC's maximum permissible exposure limit for the general public and the occupational exposure limit. | Securely post on opposite sides of the light pole in a manner conspicuous to all individuals entering thereon as indicated in the signage plan. | 2 signs on opposite sides of the pole 9 feet below the antenna (24 feet above ground level) |
| Generation of the second secon | Red Warning Sign Used to alert individuals that they are entering an area where the power density emitted from the transmitting is substantially above the FCC's maximum permissible limit for occupational exposure (greater than ten times the Occupational limit). | Not required | Not required |

Appendix C Roofview® Export File

Roof Max YRoof Max XMap Max YMap Max XY Offset X Offset Number of envelope

60 60 80 90 20 20 1 \$AE\$141:\$ \$AE\$141:\$CL\$200

StartSettingsData

Standard Method Uptime Scale Factc Low Thr Low Color Mid Thr Mid Color Hi Thr Hi Color Over Color Ap Ht Mult Ap Ht Method

4 2 1 1 100 1 500 4 5000 2 3 1.5 1

| StartAnte | en na Data | It is advis | able to prov | vide an ID | (ant 1) for a | III antennas | | | | | | | | | | | | | | | |
|-----------|------------|-------------|--------------|------------|---------------|--------------|-------|-------|--------|----------|------------|------|------|-----|-------|------|------|------|--------------|---------|------|
| | | (MHz) | Trans | Trans | Coax | Coax | Other | Input | Calc | | | (ft) | (ft) | (ft | :) | | (ft) | dBd | BWdth | Uptime | ON |
| ID | Name | Freq | Power | Count | Len | Туре | Loss | Power | Power | Mfg | Model | Х | Y | Z | | Туре | Aper | Gain | Pt Dir | Profile | flag |
| VZW A1 | LTE | 190 | 0 48.67 | 7 | 2 | | | | 97.35 | 4 Amphen | ol CUUT360 | X | 30 | 30 | 33.25 | | | 2 | 7.65 120;0 | | ON• |
| VZW A1 | LTE | 210 | 0 53.83 | 81 | 2 | | | | 107.66 | 2 Amphen | ol CUUT360 | X | 30 | 30 | 33.25 | | | 2 | 7.65 120;0 | | ON• |
| VZW B1 | LTE | 190 | 0 48.67 | 7 | 2 | | | | 97.35 | 4 Amphen | ol CUUT360 | X | 30 | 30 | 33.25 | | | 2 | 7.65 120;120 | | ON• |
| VZW B1 | LTE | 210 | 0 53.83 | 81 | 2 | | | | 107.66 | 2 Amphen | ol CUUT360 | X | 30 | 30 | 33.25 | | | 2 | 7.65 120;120 | | ON• |
| VZW C1 | LTE | 190 | 0 48.67 | 7 | 2 | | | | 97.35 | 4 Amphen | ol CUUT360 | X | 30 | 30 | 33.25 | | | 2 | 7.65 120;240 | | ON• |
| VZW C1 | LTE | 210 | 0 53.83 | 81 | 2 | | | | 107.66 | 2 Amphen | ol CUUT360 | X | 30 | 30 | 33.25 | | | 2 | 7.65 120;240 | | ON• |
| StartSym | bolData | | | | | | | | | | | | | | | | | | | | |

| Sym | Map Marke Roof X | Roof Y | Map Label | Description (notes for this table only) |
|-----|------------------|--------|------------|---|
| Sym | | 5 | 35 AC Unit | Sample symbols |
| - | | | | |

Sym 14 5 Roof Access

Sym 45 5 AC Unit

Sym 45 20 Ladder

List Of Area \$AE\$141:\$(

Structural Calculations

Equipment Installation

VERIZON SF_CUPER001 10465 SOUTH DE ANZA BLVD

- p. 1/14

10465 South De Anza Boulevard Cupertino, CA 95014

Client: James Vaccaro, AIA Date: February 2018 Project: 536

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Jeffrey M. Van Dyke, S.E. 1470 Felta Road, Healdsburg, CA 95448 jeffrey@structuralengineeringconsulting.com (707) 696-3721

PROJECT DESCRIPTION

A new telecommunications antenna is to be placed atop a new tapered steel City of Cupertino Department of Public Works street light pole. An antenna mount connects the antenna, a cylindrical radome shroud, and tapered sheet steel skirt to the top of the pole. Design of these elements and their anchorage are by others. The gravity, wind, and seismic affects of these elements on the pole and foundation are considered herein. P.2/14

Two new remote radio units are to be anchored to the pole with fabricated steel and strap assemblies. Fabricated sheet steel cable shrouds feed each radio unit, and are also attached to the pole with fabricated steel and strap assemblies. A small power interface cabinet is to be mounted similarly below the RRUS units.

These calculations consider loading on signage and other appurtenances. They address the anchorage of new equipment noted above and specify supports for an existing or future single banner where occurs. Additionally, these calculations verify pole, pole anchorage, and new reinforced concrete pier foundation adequacy.

DESIGN CRITERIA

- TIA-222G "Structural Standards for Antenna Supporting Structures and Antennas"
- 2013 AASHTO LTS-6

P.3/

VERIZON SF_CUPER001 10465 SOUTH DE ANZA BLVD



PROJECT LOCATION: 10465 South De Anza Blvd, Cupertino, CA 95014 LATITUDE= 37.316385 LONGITUDE= -122.032501 WIND EXPOSURE: B SITE CLASS: D

| S _S = 1.945g | S _{MS} = 1.945g | $S_{DS} = 1.296g$ |
|-------------------------|--------------------------|-------------------|
| S ₁ = 0.717g | S _{M1} = 1.075g | $S_{D1} = 0.717g$ |

VERIZON SF_CUPER001 10465 SOUTH DE ANZA BLVD



EXISTING GROUND ELEVATION: AT BASE OF LT POLE=248.6' AMSL

p. 4/14

VERIZON SF_CUPER001 10465 SOUTH DE ANZA BLVD



p. 5/14

APPURTENANCE DATA

NOTE PESCRIPTION CA AA (SF) MAST/LUMINAIRE 3,0 0.82 ANTENNA RADOME/SKIRT 9.4 0,82 (2) PRUS/CABLE SHROUD 3.0 EA 1.20 LOAD CENTER 1.20 1,0 1.5 SF MAX. SIGN 1,40 1.5 2.5 SF MAX. SIGN 1,40 2.5 200 4.0 SF MAX. SIGN 1,20 4.0 6.0 SF MAX. SIGN 1.20 6.0 20 8.0 SF MAX. SIGN 1,20 8.0 19,5 SF BANNER 0,601 19.5 1 LE WIND SPILLING BANNER SYSTEM 2 SEE p. 5/14, POLE ELEVATION.

REUSE OF EXISTING APPURTENANCES



P. 6/14

P./14 NEW POLE/MAST/LUMINIARE

PROVIDE NEW 7 GAGE (0.179 inch WALL THICKNESS) TAPERED STEEL 8" POLE W/ BASE PLATE AND MAST ARM BY VALMONT (SEE NEXT SHEET)

DESIGN SPREADSHEET, P. 13/14, SHOWS BENDING AND AXIAL STRESSES TO FALL INTO ALLOWABLE LIMITS.



P. 8/14

P. 9/14 NEW ANTENNA/RADOME/SKIRT THE DESIGN OF THESE ELEMENTS. AND THEIR ATTACHMENT TO THE POLE, ARE BY OTHERS NEW RRUS, CABLE SHROUD, AND LOAD CENTER ANCHORAGE TO POLE TACK WELD NUT TO BOTTOM OF PLATE, TYP. PROVIDE 3/16" TYP. Q1/8V (N) PL 7%" X % STEEL ASSEMBLY CENTER PLATE WITH KG" FILLET 2% WELDS, W/2-3/4×0.03 (N) PL 1" X-% TYP. OF (2) AT NOTCH (N) PL 21/2" X %6", STAINLESS BANDS TYP. EA. SIDE ISOMETRIC NOTES: TO POLE. HOT-DIP GALVANIZE ALL STEEL COMPONENTS AFTER FABRICATION. PROVIDE STEEL SHOP DRAWING FOR REVIEW AND APPROVAL 2. PRIOR TO FABRICATION. PROVIDE MOCK-UP FOR REVIEW AND APPROVAL TO ENSURE 3 LISE 2 ANCHORAGE PROPER CLEARANCE FOR PSU AC08 UNIT. PRIME AND PAINT MOUNTING COMPONENTS WITH TNEMEC ASSEMBLIES AT EACH EXTERIOR PAINT COATING TO MATCH POLE. WELD ALL STEEL PLATE COMPONENTS WITH %" FILLET WELDS. RRUS UNIT, AND 1 AT CABLE SHROUD (N) STEEL LIGHT POLE (N) RRUS 32 1 UNIT W/ PSU SFE NEXT SHTFOR AC 08 POWER A-3 INTERFACE CABLE SHROLIDAND (N) RRUS 32 4 MOUNT, TYP. S-1 ACCESS SLOT IN POLE "-11%" K 1 (N) CABLE/ 2-6" SHROUD (S-2 4 3 (N) TUBE ASSEMBLY S-2 (N) 1" WIDE X 4" (N) MOUNTING BOLT. 1/2 TALL SLOT IN POLE TYP. SUPPLIED W/ (N) PL 21/2" X 3/16" ; TYP. EA. SIDE **RRUS UNIT** (N) RRUS 32 1 UNIT W/ PSU (N) 83MM MOUNTING 1-11% AC 08 POWER A-3 (E) OR (N) STEEL BRACKET (SUPPLIED INTERFACE LIGHT POLE W/ RRUS UNIT) (N) RRUS 32 4 (N) RRUS 32 UNIT W/ MOUNT, TYP. S-1 PSU AC 08 POWER 20 INTERFACE / 1 1 (N) CABLE SHROUD S-2 (N) ¾" X .03"-A1230-034 A-3 "BAND-FAST" BFES 3 (N) TUBE 201SS, WITH (N) PL 8" X %6" BENT ASSEMBLY S-2 EAR-LOKT BUCKLE PLATE, TYP. OF (2). BY BAND-IT IDEX. NOTCH AT STEEL (N) 1" WIDE X 4" INC., TYP, OF (4) POLE AS SHOWN TALL SLOT IN POLE BANDS PER UNIT 3 (BRACKET TO POLE) S-2

p. 10/14 NEW GSM CABLE SHROUP PABRICATE 12 GA GALV SHEET METAL (N) HDG #8 X 1/2" PAN HEAD SHROUD FOR FOR 50 TEK-SCREW, TYP. OF (4) 10-1 (N) 12 GA, STEEL ALL CONDUCTORS CABLE SHROUD" REMOVABLE TO AND FROM RRUS FRONT PANEL 31/4 SIDE ELEVATION ANCHOR TO POLE C BOTTOM, AND TO 32 1/3" TYP. PRUS MOUNTING OLAMP ABOVE 63/4" 1 sol 2: FOIDUP FOLDIN FOLD BACK FOLDIN ARD FOLD FOLD 010: (SEE p 9/14) FOLD FORWARD. (N) 12 GA. STEEL FOLD UP CABLE SHROUD 374" 12" TVP. (N) 2"X5" OPENING 1'-0" FOR TUBE ASSEMBLY UNFOLDED ELEVATION CONFLICTOR ACCESS TURE 24 1'-0' ELEMENTS & CONNECTIONS ok by insp. V FOLD BACK (N) 12 GA. STEEL "CABLE SHROUD" REMOVABLE .0-,1 BEND LINE FRONT PANEL 3/16 (N) HDG #8 X 1/2" (N) TS 5X2X3/16" PAN HEAD FOLD BACK TEK-SCREW, TYP. (N) 12 GA. (N) 1* WIDE X 4* OF (4) TALL SLOTTED STEEL "CABLE UNFOLDED ELEVATION (REMOVABLE FRONT PANEL) **OPENING IN POLE** SHROUD" (N) PL 录X4X6" (E) OR (N)-PLATE W/ 1-1/2" STEEL LIGHT X 4" OPENING POLE SLOT IN (N) POLE M=9.95 K'(@10'AGL) 1/4" (N) #" THICK "BISCO" HT-800 SEALANT ALL MEDIUM CELLULAR SILICONE 31/2" 5,0=5.04 (6.25"6) AROUND TUBE GASKET, BY STOCKWELL ASSEMBLY TO ELASTOMERICS (800-523-0123) PLAN BACK OF fb= 9.95×12 = 24/251 SHROUD 21/4" (N) TEK 410SS HWH N SLVR CLSD 1/4"-14X%" SCREWS, 12 GA, 4"HIGH X 3"WIDE 0 B TYP. OF (6) N SEGMENTS, FIXED/FIXE 1-1/2" X 4" OPENING 0 0 NOT ASSMMING 5 (N) PL =X4X6" 2/2 CURVED CROSSSECT. PLATE KL/r= 0,5(4)/0.052 PLATE DETAIL A SOI = 38.4 : Fa=26 ksi GLOT ok / 724 -

NEW LOAD CENTER AND CABLE SWEEP AND SHEET STEEL SIGN SUPPORTS SAD. FOR CABINET INFO., BY OTHERS ALIGN W/ & OF KNOCKOUT (E) OR (N) STEEL ANCHOR TOPOLE W LIGHT POLE (N) LOAD/ 3 ANCHORAGE CENTER A-3 ASSY. PER PREVIOUS (N) LOAD A (N) PL %16X31/4X31/2 PLATE W/ (4) TEK CENTER MOUNT S-2 EXC. USE 10"LONG 410SS HWH SLVR 6 CLSD 1/4"-14X3/4" MOUNT .. to, S-2 SCREWS (N) 1" DIA. HOLE IN (N) 1" STD. PIPE (E) POLE FOR (1.315" O.D.) SWEEP FOR CONDUCTORS CONDUCTORS PROVIDE 1" & HOLE IN POLE FOR CONDUCTORS. 3/16 sk by insp. (N) PL 3/16X31/4X31/2" (N) 1" DIA. HOLE IN-PLATE W/ (4) TEK (E) POLE FOR 410SS HWH SLVR CONDUCTORS CLSD 1/4"-14X3/4" FFIELD DRILLED, SCREWS W/PROTECT (N) 1" STD. PIPE (E) OR (N) STEEL (1.315" O.D.) LIGHT POLE ER ARCH 1. DWGS. SWEEP FOR (N) 1/8" THICK "BISCO" CONDUCTORS NIPPLE HT-800 MEDIUM ELBOW **CELLULAR SILICONE** 1/8 PP GASKET, BY STOCKWELL **ELASTOMERICS** ALIGN W/ & OF PROVIDE SCREWLON (800-523-0123) KNOCKOUT SWEEP ASSEMBLY PLAN CUMBER: 3/4" 613/4" 10 10 3/4" WITH GASKET PER SAY 200# ARCH DWGS. (N) 1" DIA. HOLE IN OKEN PLATE INSP -(N) PL 3/16X31/4X31/2" 37 ZP# PLATE W/ (4) TEK USE 12 GA STEEL 410SS HWH SLVR SIGN SUPPORTS PER CLSD 1/4"-14X3/4" SCREWS ARCH DWGS. W/8-#9 PLATE DETAIL SCREWS TO MOUNTS (N) 12 GA. GALV. SHEET STEEL STREET (E) OR (N) STEEL -SIGN SUPPORT, TYP. LIGHT POLE (N) RRUS 32 UNIT W/ (N) HDG #8 X 1" HEX RELOCATED PSU AC 08 POWER HEAD TEK-SCREW, INTERFACE OR (N) TYP. OF (8) 1 STREET SIGN (E) OR (N) STEEL A-3 -0-LIGHT POLE (N) HDG #8 X 1 RELOCATED HEX HEAD OR (N) 3" TYP. TEK-SCREW, STREET SIGN TYP. OF (8) (N) 12 GA. GALV .-1" TYP. 2" SHEET STEEL STREET SIGN SUPPORT, TYP.

P.12/14

Design Wind Loads on Antenna Supporting Structures TIA 222 REVISION G & 2013 AASHTO LTS-6

PROJECT: VERIZON SF_CUPER001 10465 SOUTH DE ANZA BLVD

10465 South De Anza Boulevard Cupertino, CA 95014

| Tapered Steel Light Pole | | | | P | roperties of | section at | pole base | 1 |
|--------------------------|----------|------|-------------|--------------|--------------|------------|-----------|------|
| h = | 30.00 ft | t | Pole Height | | D = | 8.00 in | 1 | |
| Db = | 8.00 ir | n | Diameter a | t base | A = | 4.50 | | |
| Dt = | 3.80 ir | n | Diameter a | t top | t = | 0.179 in | 1 | |
| Op. t= | 0.179 ir | 2 | Wall Thickr | iess | S = | 8.41 in | 13 | |
| At wp= | 525 # | ŧ) | pole weigh | t | I = | 33.65 in | 14 | |
| | / | unit | | | | | | |
| Appurtenences | EA | wt | CA | AA | CAAA | у | CAAAy | wty |
| 1 MAST/LUMINAIRE | 1 | 80 | 0.82 | 3.00 | 2.45 | 32.00 | 78.5 | 2560 |
| 2 ANTENNA RADOME/SKIRT | 1 | 70 | 0.82 | 9.37 | 7.66 | 32.50 | 249.1 | 2275 |
| 3 RRUS/CABLE SHROUD | 2 | 45 | 1.20 | 3.00 | 7.20 | 13.00 | 93.6 | 1170 |
| 4 LOAD CENTER | 1 | 25 | 1.20 | 1.00 | 1.20 | 9.50 | 11.4 | 238 |
| 5 1.5 SF MAX SIGN | 0 | 3 | 1.40 | 1.50 | 0.00 | 1.00 | 0.0 | 0 |
| 6 2.5 SF MAX SIGN | 0 | 5 | 1.40 | 2.50 | 0.00 | 1.00 | 0.0 | 0 |
| 7 4.0 SF MAX SIGN | 0 | 8 | 1.20 | 4.00 | 0.00 | 1.00 | 0.0 | 0 |
| 8 6.0 SF MAX SIGN | 0 | 16 | 1.20 | 6.00 | 0.00 | 1.00 | 0.0 | 0 |
| 9 8.0 SF MAX SIGN | 0 | 24 | 1.20 | 8.00 | 0.00 | 11.50 | 0.0 | 0 |
| 10 19.5 SF BANNER | 1 | 30 | 0.60 | 19.50 | 11.70 | 21.00 | 245.7 | 630 |
| 11 MISC. | 0 | 100 | 1.80 | 6.00 | 0.00 | 1.00 | 0.0 | 0 |
| | 14/2- | 205 | | $(EPA)_{,=}$ | 30.22 | | 678.3 | 6873 |

TIA 222 Wind on Pole

Section 2.6.9.1

| F _{st} = | 195 lb | Design Wind Force on Pole | | |
|----------------------|----------|---|---------|-----------|
| | | $= q_z G_H (EPA)_s N$ | | |
| $q_z =$ | 9.74 psf | Velocity Pressure | Section | 2.6.9.6 |
| | | $= 0.00256K_zK_{zt}K_dV^2I$ | | |
| z = | 13.22 ft | Height of Pole Centroid | alpha = | 7 |
| WIND EXP = | В | Wind Exposure Category | Zg = | 1200 |
| G _H = | 1.1 | Gust Effect Factor | Section | 2.6.7.3 |
| K ₇ = | 0.554 | Velocity Pressure Coefficient | Section | 2.6.5.2 |
| K _{zt} = | 1.00 | Topographic Factor | Section | 2.6.6.4 |
| $K_d =$ | 0.95 | Wind Direction Probability Facto | Table | 2-2 |
| V = | 85 mph | Basic Wind Speed | | |
| I = | 1.00 | Importance Factor | Table | 2-3 |
| (EPA) _s = | : 18.20 | Effective Proj. Area of Structure = $C_f A_p$ | Section | 2.6.9.1.2 |
| $C_f =$ | 1.234 | Force Coefficient (32 <c<64)< td=""><td>Table</td><td>2-7</td></c<64)<> | Table | 2-7 |
| C = | 31.12 | $= (IK_{zt}K_z)^{1/2}VD$ | Table | 2-7 |
| D avg = | 5.90 in | | | |
| A _o = | 14.75 sf | Projected Area of Pole | | |
| | | | | |

TIA 222 Wind on Appurtenances

 $F_A = \frac{324}{10}$ lb

Design Wind Force on Appurter Section 2.6.9.2 = $q_z G_H (EPA)_A$ Height of Resultant of Wind on Appurtenances

AASHTO LTS-6 WIND on Pole and Appurtenances Fw = 958 b

w = 958 lb

 $y_{res} = 22.45 \text{ ft}$

Kz = 1.00 below 32.8ft

1.14

d (NON) = d (CON) =

đ

5.01 ft

G = V = 90 mph

Ir = 1.00 50 yr, non-hurricane

CaAa = 40.54 (EPA)a + (EPA)s

P. 13/14

| | Height and Magnitude of R | esuitant of o | critical Lateral Forces on Pol | e and Appu | rtenances |
|---|--------------------------------|---------------|--------------------------------|--|--|
| | F _w = | 519 lb | TIA 222 WIND | Section | 2.6.9 |
| | | 958 lb | AASHTO LTS-6 WIND | | |
| | Fp = | 0.63 Wp | = Sds/(R/I) | | SEISMIC |
| | | 514 lb | SEISMIC | R = | 2.00 |
| | | 958 # | CRITICAL LATERAL FORCE | I = | 1.00 |
| | | 19.65 ft | RESULTANT HEIGHT | Sds = | 1.25268 |
| | | 18.83 ft lb | DESIGN BASE MOMENT | Fa = | 1.00 |
| | | | | Ss = | 1.90 |
| | Pole Stress and Bolt Tension | on | | | a contration of the second of |
| | WT= | 820 # | | | |
| | fa= | 0.18 ksi | axial | | |
| | M= | 18.83 ft k | | | |
| | fb= | 26.86 ksi | bending | | |
| | f= | 27.05 ksi | total stress | | |
| | D/t= | 45 | width/thickness ratio of pole | | / |
| | non-compact limit | 60 | =3300/Fy | | ./ |
| | Fb'= | 48.28 ksi | allowable stress | OK | V |
| | Bolt Circle Diameter = | 11.50 in | | | |
| | Dist btwn bolt pairs = | 8.13 in | | | / |
| | T= | 13.90 k | tension force per bolt | | . / |
| | | 20.88 k | allowable bolt tension | ОК | V |
| | Foundation Adequacy | | | | |
| | b = | 2.5 ft | Diameter or width of footing | | |
| | d = | 8.5 ft | Depth of footing | | |
| 1 | ateral Soil pressure allowed = | 150 psf/ft | | | |
| | S1 = | 425 psf | | | |
| | S3 = | 1275 psf | | | |
| | A = | 2.11 | | | |
| | d (NON) = | 7.86 ft | Required (OK for nonco | nstrained fo | oting |
| | | | | the state of the s | A REAL PROPERTY AND A REAL |

Required

OK for nonconstrained footing OK for constrained footing

NEW REINFORCED CONGRETE PIER FOOTING

PROVIDE 2'-6"& X6'-6" DEEP PIER FTG, W/4-==6VERTAND=4 TIESE12, CASTIN AN ADJAGENT JUNCTION BOX. PR-0112E 4-1 "x 4" 0 134 A.B. DOUBLE NUTS, DRYFAC ABANDON (E) FTG IN PLACE, CAST (N) FTG ADJACENT (S.A.D.), REPLACE SIDEWALK, ETC.





CONCRETE FLEXURAL DESIGN

| As= | 0.872 | in2 |
|--------------|--------|------|
| b= | 19 | in |
| d= | 19 | in |
| f'c= | 2.5 | ksi |
| fy= | 60 | ksi |
| M= | 45 | k-ft |
| Load Factor | 1.6 | |
| Mu= | 864 | k-in |
| phi= | 0.9 | |
| fy/0.85f'cb= | 1.486 | |
| Mu/phify= | 16.000 | |
| | | |



Radio Frequency - Electromagnetic Energy (RF-EME) Jurisdictional Report

Site No. CPSC001 SF_CUPER001 10465 S. De Anza Boulevard Cupertino, California 95014 Santa Clara County 37° 18' 58.99" N, -122° 1' 57.00" W NAD83

> EBI Project No. 6218000319 March 9, 2018



Prepared for:

Verizon Wireless c/o Modus, LLC 240 Stockton Street, 3rd Floor San Francisco, CA 94108



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APPENDICES

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EXECUTIVE SUMMARY

Purpose of Report

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by Verizon Wireless to conduct radio frequency electromagnetic (RF-EME) modeling for Verizon Site CPSC001 located at 10465 S. De Anza Boulevard in Cupertino, California to determine RF-EME exposure levels from proposed Verizon wireless communications equipment at this site. As described in greater detail in Section 2.0 of this report, the Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) Limits for general public exposures and occupational exposures. This report summarizes the results of RF-EME modeling in relation to relevant FCC RF-EME compliance standards for limiting human exposure to RF-EME fields.

Statement of Compliance

A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits <u>and</u> there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

As presented in the sections below, based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antennas that exceed the FCC's occupational or general public exposure limits at this site. Additionally, there are areas where workers who may be elevated above the ground may be exposed to power densities greater than the occupational limits. Therefore, workers should be informed about the presence and locations of antennas and their associated fields.

At the nearest walking/working surfaces to the Verizon antennas, the maximum power density generated by the Verizon antennas is approximately **51.50** percent of the FCC's general public limit (**10.30** percent of the FCC's occupational limit).

The composite exposure level from all carriers on this site is approximately **51.50** percent of the FCC's general public limit (**10.30** percent of the FCC's occupational limit) at the nearest walking/working surface to each antenna.

Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes instructions to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.

I.0 INTRODUCTION

Radio frequency waves are electromagnetic waves from the portion of the electromagnetic spectrum at frequencies lower than visible light and microwaves. The wavelengths of radio waves range from thousands of meters to around 30 centimeters. These wavelengths correspond to frequencies as low as 3 cycles per seconds (or hertz [Hz]) to as high as one gigahertz (one billion cycles per second).

Personal Communication (PCS) facilities used by Verizon in this area operate within a frequency range of 1900-2100 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed a distance above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of in areas in the immediate vicinity of the antennas.

MPE limits do not represent levels where a health risk exists, since they are designed to provide a substantial margin of safety. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size or health.

2.0 SITE DESCRIPTION

| Verizon Antenna Information (proposed Configuration) | | | | | | | | | | | | | |
|--|--------------------|----------------------|--------------------------------------|------|---------------|------------------------------------|----|----|-------------|--|--|--|--|
| Antenna # and Model | Frequency (MHz) | # of Transmitters | Transmit Power Azimuth (Watts) | | Gain (dBd) | Gain above (dBd) Ground (CL) | | Y | Z (feet) | | | | |
| AI Amphenol CUUT360X06F56 | 1900 2100 | 2 2 | 48.7 53.8 | 0° | 7.65 | 34.3 | 30 | 30 | 33.3 | | | | |
| BI Amphenol CUUT360X06F56 | 1900 2100 | 2 2 | 48.7 53.8 | 120° | 7.65 | 34.3 | 30 | 30 | 33.3 | | | | |
| CI Amphenol CUUT360X06F56 | 1900 2100 | 2 2 | 48.7 53.8 | 240° | 7.65 | 34.3 | 30 | 30 | 33.3 | | | | |

This project site includes one (1) wireless telecommunication antenna (at three sector locations) on a light pole located at 10465 S. De Anza Boulevard in Cupertino, California.

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general population/uncontrolled exposure limits for members of the general public that may be exposed to antenna fields. While access to this site is considered uncontrolled, the analysis has considered exposures with respect to both controlled and uncontrolled limits as an untrained worker may access adjacent rooftop locations. Additional information regarding controlled/uncontrolled exposure limits is provided in Section 3.0. Appendix B presents a site safety plan that provides a plan view of the light pole with antenna locations.

3.0 FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS

The FCC has established Maximum Permissible Exposure (MPE) limits for human exposure to Radiofrequency Electromagnetic (RF-EME) energy fields, based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc. (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general public/uncontrolled exposure limits for members of the general public.

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

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

Table I and Figure I (below), which are included within the FCC's OET Bulletin 65, summarize the MPE limits for RF emissions. These limits are designed to provide a substantial margin of safety. They vary by frequency to take into account the different types of equipment that may be in operation at a particular facility and are "time-averaged" limits to reflect different durations resulting from controlled and uncontrolled exposures.

The FCC's MPEs are measured in terms of power (mW) over a unit surface area (cm²). Known as the power density, the FCC has established an occupational MPE of 5 milliwatts per square centimeter (mW/cm²) and an uncontrolled MPE of 1 mW/cm² for equipment operating in the 1900 MHz frequency range. For the Verizon equipment operating at 700 MHz or 850 MHz, the FCC's occupational MPE is 2.83 mW/cm² and an uncontrolled MPE of 0.57 mW/cm². These limits are considered protective of these populations.

| I able 1: Limits for Maximum Permissible Exposure (MPE) | | | | | | | | | | | |
|---|---|---|------------------------|----|--|--|--|--|--|--|--|
| (A) Limits for Occupational/Controlled Exposure | | | | | | | | | | | |
| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Averaging Time [E] ² , [H] ² , or S (minutes) | | | | | | | | | |
| 0.3-3.0 | 614 | 1.63 | (100)* | 6 | | | | | | | |
| 3.0-30 | 1842/f | 4.89/f | (900/f ²)* | 6 | | | | | | | |
| 30-300 | 61.4 | 0.163 | 1.0 | 6 | | | | | | | |
| 300-1,500 | | | f/300 | 6 | | | | | | | |
| 1,500-100,0005 6 | | | | | | | | | | | |
| (B) Limits for General Public/Uncontrolled Exposure | | | | | | | | | | | |
| Frequency Range (MHz) | requency Range (MHz) Electric Field Strength (E) (V/m) (A/m) Power Density (S) (mW/cm ²) | | | | | | | | | | |
| 0.3-1.34 | 614 | 1.63 | (100)* | 30 | | | | | | | |
| 1.34-30 | 824/f | 2.19/f | (180/f ²)* | 30 | | | | | | | |
| 30-300 | 27.5 | 0.073 | 0.2 | 30 | | | | | | | |
| 300-1,500 | | | f/1,500 | 30 | | | | | | | |
| 1,500-100,000 | | | 1.0 | 30 | | | | | | | |

f = Frequency in (MHz)

* Plane-wave equivalent power density





Based on the above, the most restrictive thresholds for exposures of unlimited duration to RF energy for several personal wireless services are summarized below:

| Personal Wireless Service | Approximate Frequency | Occupational MPE | Public MPE | | |
|------------------------------|--------------------------|-------------------------|-------------------------|--|--|
| Personal Communication (PCS) | 1,950 MHz | 5.00 mW/cm ² | 1.00 mW/cm ² | | |
| Cellular Telephone | 870 MHz | 2.90 mW/cm ² | 0.58 mW/cm ² | | |
| Specialized Mobile Radio | 855 MHz | 2.85 mW/cm ² | 0.57 mW/cm ² | | |
| Most Restrictive Freq, Range | 30-300 MHz | 1.00 mW/cm ² | 0.20 mW/cm ² | | |

MPE limits are designed to provide a substantial margin of safety. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

Personal Communication (PCS) facilities used by Verizon in this area operate within a frequency range of 1900-2100 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of areas directly in front of the antennas.

4.0 WORST-CASE PREDICTIVE MODELING

EBI has performed theoretical modeling using RoofView® software to estimate the worst-case power density at the site ground-level and nearby rooftops resulting from operation of the antennas. RoofView® is a widely-used predictive modeling program that has been developed by Richard Tell Associates to predict both near field and far field RF power density values for roof-top and tower telecommunications sites produced by vertical collinear antennas that are typically used in the cellular, PCS, paging and other communications services. The models utilize several operational specifications for different types of antennas to produce a plot of spatially-averaged power densities that can be expressed as a percentage of the applicable exposure limit.

The modeling is based on worst-case assumptions for the number of antennas and transmitter power. The modeling assumes a maximum 4-4-4 radio configuration for Sectors A, B and C, with a power level of 46.9 dbM (48.7 watts) per transmitter for the 1900 frequency and 47.3 dbM (53.8 watts) per transitter for the 2100 frequency, in order to provide a worst-case evaluation of predicted MPE levels. The assumptions used in the modeling are based upon information provided by Verizon, and information gathered from other sources. The parameters used for the modeling are summarized in the RoofView® export files presented in Appendix C.

There are no other wireless carriers with equipment installed at this site.

Based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed Verizon antennas that exceed the FCC's occupational or general public exposure limits at this site. At the nearest walking/working surfaces to the Verizon antennas, the maximum power density generated by the Verizon antennas is approximately 51.50 percent of the FCC's general public limit (10.30 percent of the FCC's occupational limit). The composite exposure level from all carriers on this site is approximately 51.50 percent of the FCC's general public limit (10.30 percent of the FCC's general public limit (10.30 percent of the FCC's general public limit).

The Site Safety Plan also presents areas where Verizon Wireless antennas contribute greater than 5% of the applicable MPE limit for a site. A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

The inputs used in the modeling are summarized in the RoofView® export file presented in Appendix C. A graphical representation of the RoofView® modeling results is presented in Appendix B. It should be noted that RoofView is not suitable for modeling microwave dish antennas; however, these units are designed for point-to-point operations at the elevations of the installed equipment rather than ground level coverage.

5.0 MITIGATION/SITE CONTROL OPTIONS

EBI's modeling indicates that there are no areas in front of the Verizon antennas that exceed the FCC standards for occupational or general public exposure. All exposures above the FCC's safe limits require that individuals be elevated above the ground. In order to alert people accessing the light pole at ground level, yellow CAUTION signs are recommended for installation 9 feet below the antenna (24 feet above the ground). These signs must be placed in a conspicuous manner so that they are visible to any person approaching the light pole from any direction.

There are no barriers recommended on this site.

These protocols and recommended control measures have been summarized and included with a graphic representation of the antennas and associated signage and control areas in a RF-EME Site Safety Plan, which is included as Appendix B. Individuals and workers accessing the light pole should be provided with a copy of the attached Site Safety Plan, made aware of the posted signage, and signify their understanding of the Site Safety Plan.

Implementation of the signage recommended in the Site Safety Plan and in this report will bring this site into compliance with the FCC's rules and regulations.

6.0 SUMMARY AND CONCLUSIONS

EBI has prepared a Radiofrequency – Electromagnetic Energy (RF-EME) Compliance Report for telecommunications equipment installed by Verizon Site Number CPSC001 located at 10465 S. De Anza Boulevard in Cupertino, California to determine worst-case predicted RF-EME exposure levels from wireless communications equipment installed at this site. This report summarizes the results of RF-EME modeling in relation to relevant Federal Communications Commission (FCC) RF-EME compliance standards for limiting human exposure to RF-EME fields.

As presented in the sections above, based on the FCC criteria, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antennas that exceed the FCC's occupational or general public exposure limits at this site. Workers should be informed about the presence and locations of antennas and their associated fields. Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes procedures to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.

7.0 LIMITATIONS

This report was prepared for the use of Verizon Wireless. It was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by EBI are based solely on the information provided by the client. The observations in this report are valid on the date of the investigation. Any additional information that becomes available concerning the site should be provided to EBI so that our conclusions may be revised and modified, if necessary. This report has been prepared in accordance with Standard Conditions for Engagement and authorized proposal, both of which are integral parts of this report. No other warranty, expressed or implied, is made.

Appendix A

Certifications

Reviewed and Approved by:



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

Preparer Certification

I, Jos Schorr, state that:

- I am an employee of EnviroBusiness Inc. (d/b/a EBI Consulting), which provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed RF-EME safety training, and I am aware of the potential hazards from RF-EME and would be classified "occupational" under the FCC regulations.
- I am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation.
- I have reviewed the data provided by the client and incorporated it into this Site Compliance Report such that the information contained in this report is true and accurate to the best of my knowledge.

Appendix B Radio Frequency Electromagnetic Energy Safety / Signage Plans





Verizon Signage Plan



| Sign Image | Description | Posting Instructions | Required Signage | | | | |
|---|---|---|---|--|--|--|--|
| Construction of the second secon | Notice To Workers Informational sign, used to notify workers that there are active antennas installed and provide guidelines for working in RF environments. | Not required | Not required | | | | |
| INFORMATION | NOC Information Sign Informational sign with NOC Phone Number and Base Transceiver Station (BTS) Number | Not required | Not required | | | | |
| | Blue Notice Sign Used to alert individuals that they are entering an area where the power density emitted from transmitting antennas exceeds the FCC's maximum permissible exposure limit for the general public but is less than the occupational exposure limit. | Not required | Not required | | | | |
| | Yellow Caution Sign Used to alert individuals that they are entering an area where the power density emitted from transmitting antennas may exceed the FCC's maximum permissible exposure limit for the general public and the occupational exposure limit. | Securely post on opposite sides of the light pole in a manner conspicuous to all individuals entering thereon as indicated in the signage plan. | 2 signs on opposite sides of the pole 9 feet below the antenna (24 feet above ground level. Install 7" wide x 5" tall CAUTION sign. | | | | |
| | Red Warning Sign Used to alert individuals that they are entering an area where the power density emitted from the transmitting is substantially above the FCC's maximum permissible limit for occupational exposure (greater than ten times the Occupational limit). | Not required | Not required | | | | |

Appendix C Roofview® Export File

Map, Settings, Antenna, and Symbol Data Table .. Exported from workbook -> RoofView 4.15.xls Done on 1/23/2018 at 11:09:36 AM. Use this format to prepare other data sets for the RoofView workbook file. You may use as many rows in this TOP header as you wish. The critical point are the cells in COLUMN ONE that read 'Start...' (eg. StartMapDefinition) If used, these (4) headers are required to be spelled exactly, as one word (eg. StartMapDefinition) The very next row will be considered the start of that data block. The first row of the data block can be a header (as shown below), but this is optional. When building a text file for import, Add the Map info first, then the Antenna data, followed by the symbol data. All rows above the first marker line 'Start...' will be ignored, no matter how many there are. This area is for you use for documentation. End of help comments. You can place as much text here as you wish as long as you don't place it below the Start Map Definition row below the blue line. You may insert more rows using the Insert menu. Should you need additional lines to document your project, simply insert additional rows by highlighting the row number adjacent to the blue line below and then clicking on the Insert menu and selecting rows.

StartMapDefinition

Roof Max Y Roof Max Y Map Max Y Map Max X Y Offset X Offset Number of envelope

60 60 80 90 20 20 1 \$AE\$141:\$ \$AE\$141:\$ CL\$200

StartSettingsData

| Standard | Method | Uptime | Scale Fact | o Low Thr | Low Co | olor Mid Thr | Mid Col | or Hi Thr | Hi Color | Over Co | olor Ap Ht Mi | ult Ap Ht | Method | | | | | | | | |
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| StartAnter | naData | lt is advisa | ble to prov | ride an ID (| ant 1) for | all antennas | | | | | | | | | | | | | | | |
| | | (MHz) | Trans | Trans | Coax | Coax | Other | Input | Calc | | | (ft) | (ft) | (ft) | | (| (ft) | dBd | BWdth | Uptime | ON |
| ID | Name | Freq | Power | Count | Len | Туре | Loss | Power | Power | Mfg | Model | Х | Y | Z | Ту | ре | Aper | Gain | Pt Dir | Profile | flag |
| VZW A1 | LTE | 1900 | 48.67 | 7 | 2 | | | | 97.3 | 54 Amphe | nol CUUT360 |)X(| 30 | 30 | 33.25 | | | 2 | 7.65 120;0 | | ON• |
| VZW A1 | LTE | 2100 | 53.83 | 1 | 2 | | | | 107.6 | 62 Amphe | nol CUUT360 |)X(| 30 | 30 | 33.25 | | | 2 | 7.65 120;0 | | ON• |
| VZW B1 | LTE | 1900 | 48.67 | 7 | 2 | | | | 97.3 | 54 Amphe | nol CUUT360 |)X(| 30 | 30 | 33.25 | | | 2 | 7.65 120;120 | | ON• |
| VZW B1 | LTE | 2100 | 53.83 | 1 | 2 | | | | 107.6 | 62 Amphe | nol CUUT360 |)X(| 30 | 30 | 33.25 | | | 2 | 7.65 120;120 | | ON• |
| VZW C1 | LTE | 1900 | 48.67 | 7 | 2 | | | | 97.3 | 54 Amphe | nol CUUT360 |)X(| 30 | 30 | 33.25 | | | 2 | 7.65 120;240 | | ON• |
| VZW C1 | LTE | 2100 | 53.83 | 1 | 2 | | | | 107.6 | 62 Amphe | nol CUUT360 |)X(| 30 | 30 | 33.25 | | | 2 | 7.65 120;240 | | ON• |
| StartSymb | olData | | | | | | | | | | | | | | | | | | | | |
| Sym | Map Marl | k€Roof X | Roof Y | Map Lab | el Descri | ption (notes | for this tabl | e only) | | | | | | | | | | | | | |
| Sym | | 5 | 3 | 5 AC Unit | Sampl | e symbols | | | | | | | | | | | | | | | |
| Sym | | 14 | - ! | 5 Roof Acc | cess | | | | | | | | | | | | | | | | |
| Sym | | 45 | ; ! | 5 AC Unit | | | | | | | | | | | | | | | | | |

Sym 45 20 Ladder

List Of Areas \$AE\$141:\$CL\$200
VERIZON PERMIT SUBMITTAL NOTICE

Verizon Site Number: SF_CUPER001

Verizon Wireless, in partnership with the City of Cupertino, is happy to announce that it will soon be improving coverage and data capacity to its network in your neighborhood. The improved wireless coverage will help accommodate the growing number of wireless calls and data use on the Verizon Wireless network. The Verizon Wireless small cell site will greatly enhance service capacity with the most aesthetically discrete technology available today.

In order to make these upgrades, Verizon Wireless is proposing a small cell on a streetlight pole located in the <u>public right of way near the intersection of S De Anza Blvd & McClellan Rd</u>. The major components of the proposed installation include the following:

- Removing the existing steel streetlight pole and replacing with a new steel streetlight pole similar in size
- Installing (1) canister antenna on top of the streetlight pole
- Installing (2) small remote radio units (RRUs) on the side of the streetlight pole

Included in this letter are the following documents:

- Map showing the proposed project location
- Photo simulations showing the before and after view of the proposed project

Part of the permitting process through the City of Cupertino Department of Public Works (DPW) involves notifying residents located within 300' of the proposed project site about the installation. Residents are invited to contact Verizon Wireless, within 14 days of the postmarked date on the envelope, with any questions or concerns regarding this installation. All inquiries will be logged and shared with the City of Cupertino Public Works Department prior to issuance of any permits for this work.

After construction is completed, Verizon will perform on site testing to ensure the small cell is operating within FCC standards for Radio Frequency Emissions. Residents within 100' of the site will be notified of the date of the testing and may request, in advance that Verizon Wireless perform tests on their property at that time.

For further information, and answers to frequently asked questions, please check the FAQ on Small Cell Facilities provided on the City of Cupertino website here:

http://www.cupertino.org/home/showdocument?id=19317

Contact Information:

<u>Modus Representing Verizon Wireless:</u> Kevin Bowyer Phone: (415) 989-1102 Email: kbowyer@modus-corp.com



Location of Installation on City Streetlight



















| N) CONCEALMENT SHROUD ±35'-7" A.G.L. | | |
|--|---|--|
| AD CENTER OF (N) VERIZON ESS CYLINDRICAL ANTENNA +34'-3" A G I | | |
| | | (E) LUMINAIRE |
| | | |
| ±32'-0" A.G.L. + | | |
| TOP OF (N) LIGHT POLE +30'-2" A.G.L. | | |
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| | BANNER WORKS OF FLORIDA (800-438-0351) OR APPROVED FOUAL ON | |
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(E) GRADE 0'-0" MODIFIED OR REPRODUCED IN PART OR IN WHOLE WITHOUT PRIOR WRITTEN CONSENT. THESE PLANS ARE FORMATTED TO BE FULL-SIZE AT ARCH D 24"X36". COPYRIGHT 2016 JAMES VACCARO ARCHITECT, INC..

SHEET NUMBER

SOUTH DE ANZA BOULEVARD

ELEVATIONS

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| (E) GRADE 0'-0" (E) CONCRETE SIDEWALK SOUTH DE ANZA BOULEVARD | (E) LANDSCAPING | |
| | (N) CONCRETE FOUNDATION (BY VALMONT INDUSTRIES, INC.) | |





865 The Alameda San Jose, CA 95126-3133 Telephone 408-296-5515 Recsimile 408-296-8114

June 22, 2018 2018170

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

Attention: Zachary Mann

Subject:

Special Inspections and Materials Testing – Final Report Verizon – Light Pole SF_CUPER001 Adjacent to 10465 S. De Anza Boulevard Cupertino, CA Permit # P2018–00231

Gentlemen:

In accordance with Section 1704.2.4 of the California Building Code and as specified in the structural contract drawings, Biggs Cardosa Associates, Inc. has performed the following special inspections.

Shop welding of structural steel

The completed inspections were performed under the supervision of the undersigned Registered Engineer. Based both upon inspections performed and our substantiating reports, it is our professional judgement that, to the best of our knowledge, the inspected work was performed in accordance with the applicable workmanship provisions of the California Building Code and the approved plans and specifications.

Should you have any questions, please do not hesitate to call.

Sincerely,

BIGGS CARDOSA ASSOCIATES, INC.

Mark a Culou

Mark A, Cardosa Vice President

cc: Building Division, City of Cupertino

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300' RADIUS MAP CUPER001



Mailing Address Only: 668 N Coast Hwy #401 Laguna Beach, CA 92651

866.752.6266 toll free 949.613.8341 fax sales@notificationmaps.com

www.notificationmaps.com

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300 ft Radius Map - Cuper001

| APN | TYPE | NAME |
|------------|----------------|---|
| 359-17-019 | OWNER | BDC HAYWARD LP |
| 359-17-019 | BUSINESS OWNER | BUSINESS OWNER |
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| 369-39-002 | OWNER | PETRI GEORGENE |
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| 369-39-017 | OWNER | HARMAN-MANAGERS INVESTMENT INC |
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| 369-39-017 | BUSINESS OWNER | BUSINESS OWNER |
| 369-39-017 | BUSINESS OWNER | BUSINESS OWNER |
| 369-39-041 | OWNER | LIAONING BENEFIT PETROLEUM US CORPORATION |
| 369-39-041 | BUSINESS OWNER | BUSINESS OWNER |
| 369-40-014 | OWNER | BANK CATHAY |
| 369-40-014 | BUSINESS OWNER | BUSINESS OWNER |
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| ADDRESS |
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| 1556 PARKSIDE DR |
| 10395 S DE ANZA BLVD |
| 10303 S DE ANZA BLVD |
| 10425 S DE ANZA BLVD |
| 10465 S DE ANZA BLVD |
| 10455 S DE ANZA BLVD |
| 10457 S DE ANZA BLVD |
| 10467 S DE ANZA BLVD |
| |
| 10475 S DE ANZA BLVD |
| 10477 S DE ANZA BLVD |
| 10477 B S DE ANZA BLVD |
| 10487 S DE ANZA BLVD |
| 10493 S DE ANZA BLVD |
| 1556 PARKSIDE DR |
| |
| 10497 3 DE ANZA BLVD |
| 10495 S DE ANZA BLVD STE A |
| 10495 S DE ANZA BLVD STE C |
| 34 W SANTA CLARA ST |
| 20480 PACIFICA DR STE B |
| 20480 PACIFICA DR STE F |
| |
| 20480 PACIFICA DR STE C |
| 20480 PACIFICA DR STE A |
| 20480 PACIFICA DR STE E1 |
| 20480 PACIFICA DR STE E2 |
| 20480 PACIFICA DR STE G |
| 20480 PACIFICA DR STE D |
| 5544 S CREEN ST |
| 10500 O DE ANITA DI VO OTE D |
| 10520 S DE ANZA BLVD STE B |
| 10520 S DE ANZA BLVD STE A |
| 10520 S DE ANZA BLVD FRNT |
| 1625 THE ALAMEDA STE 202 |
| 10490 S DE ANZA BI VD |
| 77 N BROADWAY |
| |
| 10480 S DE ANZA BLVD |
| 20710 SCOFIELD DR |
| 10420 S DE ANZA BLVD |
| 10440 S DE ANZA BLVD STE D4 |
| 10440 S DE ANZA BLVD STE D1 |
| 10440 S DE ANZA BLVD STE D6 |
| 5674 SONOMA DR STE A |
| 40420 O DE ANIZA DI VID OTE 400 |
| 10430 S DE ANZA BLVD STE 100 |
| 10430 S DE ANZA BLVD STE 110 |
| 10430 S DE ANZA BLVD STE 120 |
| 10430 S DE ANZA BLVD STE 130 |
| 10430 S DE ANZA BLVD STE 140 |
| 10430 S DE ANZA BLVD STE 150 |
| 10430 S DE ANZA BLVD STE 150 |
| 10430 S DE ANZA BLVD STE 100 |
| 10430 S DE ANZA BLVD STE 170 |
| 10430 S DE ANZA BLVD STE 175 |
| 10430 S DE ANZA BLVD STE 185 |
| 10430 S DE ANZA BLVD STE 195 |
| 10430 S DE ANZA BLVD STE 200 |
| 10430 S DE ANZA BLVD STE 210 |
| |
| 10430 S DE ANZA BLVD STE 220 |
| 10430 S DE ANZA BLVD S FE 230 |
| 10430 S DE ANZA BLVD STE 260 |
| 10430 S DE ANZA BLVD STE 270 |
| 10430 S DE ANZA BLVD STE 275 |
| 10430 S DE ANZA BI VD STE 280 |
| 10430 S DE ANZA BLVD STE 200 |
| 10700 0 DE ANZA DEVD 01E 290 |

| CITY | STATE |
|----------------|----------|
| WALNUT CREEK | CA |
| CUPERTINO | CA |
| CUPERTINO | CA |
| | CA CA |
| | CA CA |
| CUPERTINO | CA |
| | CA |
| CUPERTINO | CA |
| WALNUT CREEK | CA |
| CUPERTINO | CA |
| CUPERTINO | CA |
| CUPERTINO | CA |
| SAN JOSE | CA |
| CUPERTINO | CA |
| SALI LAKE CITY | UI |
| CUPERTINO | CA |
| CUPERTINO | CA |
| COPERTINO | CA |
| SAN JUSE | CA |
| | CA |
| | CA |
| CUPERTINO | |
| CUPERTINO | CA |
| PLEASANTON | CA |
| CUPERTINO | CA |
| | CA |
| CUPERTINO | CA |
| CUPERTINO | CA |
| CUPERTINO | CA |

ZIP 94596 95014-3009 95014-3009 95014-3011 95014-3011 95014-3011 95014-3011 95014-3011 95014-3011 95014-3011 95014-3011 95014-3011 95014-3013 95014-3014 95014-3034 95014-3034 95014-3034 95014-3035 95014-3015 95014-3015 95014-3015 95014-3015 95014-3015 95014-3015 95014-3015 95014-3015 95014-3015 95014-3015 95014-3025 95014-3022 95014-3022 95014-3024 95014-3024 95014-3024 95014-3024 95014-3025 95014-3024 95014-3024 95014-3024 95014-3024 95014-3024 95014-3024 95014-3024 95014-3024 95014-3024 95014-3024 95014-3024 95014-3024 95014-3024 95014-3024 95014-3025 95014-3026 95014-3026 95014-3026 95014-3026 95014-3026 95014-3026 95014-3026 95014-3026 95014-3026 95014-3026 95014-3026 95014-3026 95014-3026 95014-3026 95014-3026 95014-3026 95014-3026 95014-3025 95014-

Page 1

STATE OF CALIFORNIA

COUNTY OF ORANGE)

DECLARATION OF MAILING RE: PERMIT SUBMITTAL NOTICE

I, <u>Norah Jaffan</u> , do hereby declare as follows:

)

- 1. I am a <u>Project Manager of NotificationMaps.com</u>. I am over 18 years of age and I am a resident of the County of Orange, State of California.
- 2. On April 11, 2018 I caused to be mailed and/or distributed a copy of "PERMIT SUBMITTAL NOTICE" to the following location(s) within the 300 foot boundaries of the proposed site :

| a. | See Attached Map | b. | 10465 S De Anza Blvd |
|----|---------------------------|----|----------------------|
| | See Attached Mailing List | _ | |
| | See Attached Notice | - | |
| c. | See Attached Envelope | d. | |
| | | - | |
| | | - | |

3. The attached list was prepared using the latest available data per the County Assesor's Office.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed 04/11/2018 at County of Orange, California.

By: Norah Jaffan [Please Print Name]

300' RADIUS MAP CUPER001



Mailing Address Only: 668 N Coast Hwy #401 Laguna Beach, CA 92651

866.752.6266 toll free 949.613.8341 fax sales@notificationmaps.com

www.notificationmaps.com

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| APN | TYPE | NAME | ADDRESS | CITY | STATE | ZIP |
|------------|----------------|---|------------------------------|----------------|----------|------------|
| 359-17-019 | OWNER | BDC HAYWARD LP | 1556 PARKSIDE DR | WALNUT CREEK | CA | 94596 |
| 359-17-019 | BUSINESS OWNER | BUSINESS OWNER | 10385 S DE ANZA BLVD | CUPERTINO | CA | 95014-3009 |
| 359-17-019 | BUSINESS OWNER | BUSINESS OWNER | 10425 S DE ANZA BLVD | CUPERTINO | CA | 95014-3011 |
| 359-17-019 | BUSINESS OWNER | BUSINESS OWNER | 10465 S DE ANZA BLVD | CUPERTINO | CA | 95014-3011 |
| 359-17-019 | BUSINESS OWNER | BUSINESS OWNER | 10455 S DE ANZA BLVD | CUPERTINO | CA | 95014-3011 |
| 359-17-019 | BUSINESS OWNER | BUSINESS OWNER | 10457 S DE ANZA BLVD | CUPERTINO | CA | 95014-3011 |
| 350-17-010 | BUSINESS OWNER | BUSINESS OWNER | | | | 95014-3011 |
| 250 17 010 | BUSINESS OWNER | BUSINESS OWNER | | | | 05014 2011 |
| 250 17 010 | BUSINESS OWNER | BUSINESS OWNER | | | | 95014-3011 |
| 359-17-019 | BUSINESS OWNER | BUSINESS OWNER | | | | 95014-5011 |
| 359-17-019 | BUSINESS OWNER | BUSINESS OWNER | | | | 95014-5011 |
| 359-17-019 | BUSINESS OWNER | BUSINESS OWNER | | | CA | 95014-3011 |
| 359-17-019 | BUSINESS OWNER | BUSINESS OWNER | 10493 S DE ANZA BLVD | | CA | 95014-3011 |
| 359-17-023 | OWNER | BDC ATWATER SHOPS LP | 1556 PARKSIDE DR | WALNUT CREEK | CA | 94596-3556 |
| 359-17-023 | BUSINESS OWNER | BUSINESS OWNER | 10497 S DE ANZA BLVD | CUPERTINO | CA | 95014-3011 |
| 359-17-023 | BUSINESS OWNER | BUSINESS OWNER | 10495 S DE ANZA BLVD STE A | CUPERTINO | CA | 95014-3034 |
| 359-17-023 | BUSINESS OWNER | BUSINESS OWNER | 10495 S DE ANZA BLVD STE C | CUPERTINO | CA | 95014-3034 |
| 369-39-002 | OWNER | PETRI GEORGENE | 34 W SANTA CLARA ST | SAN JOSE | CA | 95113-1806 |
| 369-39-002 | BUSINESS OWNER | BUSINESS OWNER | 20480 PACIFICA DR STE B | CUPERTINO | CA | 95014-3015 |
| 369-39-002 | BUSINESS OWNER | BUSINESS OWNER | 20480 PACIFICA DR STE F | CUPERTINO | CA | 95014-3015 |
| 369-39-002 | BUSINESS OWNER | BUSINESS OWNER | 20480 PACIFICA DR STE C | CUPERTINO | CA | 95014-3015 |
| 369-39-002 | BUSINESS OWNER | BUSINESS OWNER | 20480 PACIFICA DR STE A | CUPERTINO | CA | 95014-3015 |
| 369-39-002 | BUSINESS OWNER | BUSINESS OWNER | 20480 PACIFICA DR STE E1 | CUPERTINO | CA | 95014-3015 |
| 369-39-002 | BUSINESS OWNER | BUSINESS OWNER | 20480 PACIFICA DR STE E2 | CUPERTINO | CA | 95014-3015 |
| 369-39-002 | BUSINESS OWNER | BUSINESS OWNER | 20480 PACIFICA DR STE G | CUPERTINO | CA | 95014-3015 |
| 369-39-002 | BUSINESS OWNER | BUSINESS OWNER | 20480 PACIFICA DR STE D | CUPERTINO | CA | 95014-3015 |
| 369-39-017 | OWNER | HARMAN-MANAGERS INVESTMENT INC | 5544 S GREEN ST | SALT LAKE CITY | UT | 84123-5798 |
| 369-39-017 | BUSINESS OWNER | BUSINESS OWNER | 10520 S DE ANZA BLVD STE B | CUPERTINO | CA | 95014-3036 |
| 369-39-017 | BUSINESS OWNER | BUSINESS OWNER | 10520 S DE ANZA BI VD STE A | CUPERTINO | CA | 95014-3036 |
| 369-39-017 | BUSINESS OWNER | BUSINESS OWNER | 10520 S DE ANZA BI VD ERNT | CUPERTINO | CA | 95014-3036 |
| 369-39-041 | OWNER | LIAONING BENEFIT PETROLEUM US CORPORATION | 1625 THE ALAMEDA STE 202 | SANJOSE | CA | 95126-2223 |
| 369-39-041 | BUSINESS OWNER | BUSINESS OWNER | 10490 S DE ANZA BI VD | CUPERTINO | CA | 95014-3020 |
| 369-40-014 | OWNER | | | | | 90012 |
| 369-40-014 | BUSINESS OWNER | BUSINESS OWNER | | | | 95014-3012 |
| 369-40-038 | OWNER | | | | | 95014-2062 |
| 260 40 029 | | | | | | 05014-2002 |
| 260 40 029 | BUSINESS OWNER | | | | | 05014-0012 |
| 260 40 029 | | | | | | 05014-0010 |
| 260 40 029 | BUSINESS OWNER | BUSINESS OWNER | | | CA CA | 95014-5018 |
| 309-40-030 | OWNER | | | | CA CA | 95014-5018 |
| 309-40-039 | | | | | CA | 94000-0102 |
| 309-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 100 | | | 95014-5096 |
| 309-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 110 | | CA | 95014-3024 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 120 | | | 95014-3024 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 130 | CUPERTINO | CA | 95014-3025 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 140 | CUPERTINO | CA | 95014-3024 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 150 | CUPERTINO | CA | 95014-3024 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 160 | CUPERTINO | CA | 95014-3000 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 170 | CUPERTINO | CA | 95014-3000 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 175 | CUPERTINO | CA | 95014-3000 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 185 | CUPERTINO | CA | 95014-3006 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 195 | CUPERTINO | CA | 95014-3006 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 200 | CUPERTINO | CA | 95014-3006 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 210 | CUPERTINO | CA | 95014-3022 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 220 | CUPERTINO | CA | 95014-3022 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 230 | CUPERTINO | CA | 95014-3022 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 260 | CUPERTINO | CA | 95014-3025 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 270 | CUPERTINO | CA | 95014-3025 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 275 | CUPERTINO | CA | 95014-3025 |
| 369-40-039 | BUSINESS OWNER | BUSINESS OWNER | 10430 S DE ANZA BLVD STE 280 | CUPERTINO | CA | 95014-3025 |

APNTYPENAME369-40-039BUSINESS OWNERBUSINESS OWNER

ADDRESS 10430 S DE ANZA BLVD STE 290 **CITY** CUPERTINO **STATE ZIP** CA 95014-3025

VERIZON PERMIT SUBMITTAL NOTICE

Verizon Site Number: SF_CUPER001

Verizon Wireless, in partnership with the City of Cupertino, is happy to announce that it will soon be improving coverage and data capacity to its network in your neighborhood. The improved wireless coverage will help accommodate the growing number of wireless calls and data use on the Verizon Wireless network. The Verizon Wireless small cell site will greatly enhance service capacity with the most aesthetically discrete technology available today.

In order to make these upgrades, Verizon Wireless is proposing a small cell on a streetlight pole located in the <u>public right of way near the intersection of S De Anza Blvd & McClellan Rd</u>. The major components of the proposed installation include the following:

- Removing the existing steel streetlight pole and replacing with a new steel streetlight pole similar in size
- Installing (1) canister antenna on top of the streetlight pole
- Installing (2) small remote radio units (RRUs) on the side of the streetlight pole

Included in this letter are the following documents:

- Map showing the proposed project location
- Photo simulations showing the before and after view of the proposed project

Part of the permitting process through the City of Cupertino Department of Public Works (DPW) involves notifying residents located within 300' of the proposed project site about the installation. Residents are invited to contact Verizon Wireless, within 14 days of the postmarked date on the envelope, with any questions or concerns regarding this installation. All inquiries will be logged and shared with the City of Cupertino Public Works Department prior to issuance of any permits for this work.

After construction is completed, Verizon will perform on site testing to ensure the small cell is operating within FCC standards for Radio Frequency Emissions. Residents within 100' of the site will be notified of the date of the testing and may request, in advance that Verizon Wireless perform tests on their property at that time.

For further information, and answers to frequently asked questions, please check the FAQ on Small Cell Facilities provided on the City of Cupertino website here:

http://www.cupertino.org/home/showdocument?id=19317

Contact Information:

<u>Modus Representing Verizon Wireless:</u> Kevin Bowyer Phone: (415) 989-1102 Email: kbowyer@modus-corp.com



Location of Installation on City Streetlight



















| N) CONCEALMENT SHROUD ±35'-7" A.G.L. | | |
|--|---|--|
| AD CENTER OF (N) VERIZON ESS CYLINDRICAL ANTENNA +34'-3" A G I | | |
| | | (E) LUMINAIRE |
| | | |
| ±32'-0" A.G.L. + | | |
| TOP OF (N) LIGHT POLE +30'-2" A.G.L. | | |
| | | |
| | | |
| | | |
| | | l P |
| | | |
| | | |
| | | |
| | BRACKET, TYP. OF (3) TO BE REMOVED. PROVIDE WIND | |
| ±22'-1" A.G.L. + | SPILLING BANNER MOUNT, TYP. OF "BANNER FLEX" BY | <u></u> <u> </u> |
| | BANNER WORKS OF FLORIDA (800-438-0351) OR APPROVED FOUAL ON | |
| | REPLACEMENT POLE | |
| | | |
| CATED MOUNTING BRACKET | | |
| ±17'-0" A.G.L. ♥ | | |
| ATED MOUNTING BRACKET ±15'-3" A.G.L. | | <u> </u> |
| TOP OF (N) RRUS UNIT | | |
| TOP OF (N) SIGN | | |
| BOTTOM OF (N) SIGN | | |
| BOTTOM OF (N) RRUS UNIT | | |
| OAD CENTER/ DISCONNECT | | |
| OAD CENTER/ DISCONNECT | | |
| ±9-0 A.G.L. | | WRONG |
| | TO BE REMOVED. PROVIDE (N) SIGN ON | |
| | | |
| | (E) STEEL LIGHT POLE & | |
| | REMOVED & REPLACED | |
| | | |
| | (E) HAND | |
| | HOLE | Ø |
| (E) GRADE 0'-0" | (E) LANDSCAPING | (E) CONCRETE SIDEWALK |
| ANZA BOULEVARD | | ., |
| BE 7 GA. MODIFIED TYPE 15 POLE E ARM ASSEMBLY (ARM LENGTH | | |
| BE RELOCATED TO NEW POLE. SHALL BE ORIENTED | | |
| TING ROADWAY. (ISTING CONTROL JOINTS AS | | |
| OUNDATION AND PLACEMENT SIDEWALK IN KIND. | | |
| SCALE: <u>1' 2' 4'</u> 2 | EXISTING SOUTH ELEVATI | ON |



(E) GRADE 0'-0" MODIFIED OR REPRODUCED IN PART OR IN WHOLE WITHOUT PRIOR WRITTEN CONSENT. THESE PLANS ARE FORMATTED TO BE FULL-SIZE AT ARCH D 24"X36". COPYRIGHT 2016 JAMES VACCARO ARCHITECT, INC..

SOUTH DE ANZA BOULEVARD

| | | Δ-2 |
|----|---|-----|
| 4' | 1 | |

SHEET NUMBER

ELEVATIONS

| SCALE: | | | | 1 |
|------------|----|----|----|---|
| 1/2"=1'-0" | 1' | 2' | 4' | |

| ±35'-7" A.G.L. RAD CENTER OF (N) VERIZON WIRELESS CYLINDRICAL ANTENNA ±34'-3" A.G.L. (N) LED LUMINAIRE & CONTROLLER | (N) VERIZON WIRELESS CYLINDRICAL ANTENNA (CONCEALED WITHIN SHROUD) (N) FRP CONCEALMENT 7 8 A-3 A-3 A-3 A-3 (CONCEALED WITHIN SHROUD) | |
|--|--|--|
| TOP OF (N) LUMINAIRE | (N) VERIZON WIRELESS 6 7 DIPLEXER (CONCEALED 4-3 4-3) | TOP OF (E) LUMINAIRE ±31'-11" A.G.L. |
| TOP OF (N) LIGHT POLE ±30'-2" A.G.L. | WITHIN SHROUD) (N) WIRELESS METER (CONCEALED WITHIN SHROUD) (N) SHEET METAL (N) SHEET METAL SKIRT A-3 A-3 A-3 A-3 A-3 | TOP OF (E) LIGHT POLE ±30'-5" A.G.L. |
| | (N) VERIZON WIRELESS CAUTION SIGNAGE/ DECAL A-3 | |
| ELOCATED MOUNTING BRACKET ±22'-1" A.G.L. | (N) WIND SPILLING BANNER MOUNT, TYP. OF "BANNER FLEX" BY BANNER WORKS OF FLORIDA (800-438-0351) OR APPROVED EQUAL, TYP. OF (3) | |
| RELOCATED MOUNTING BRACKET ±17'-0" A.G.L. | | |
| ELOCATED MOUNTING BRACKET ±15'-3" A.G.L. | | |
| TOP OF (N) RRUS UNIT/ TOP OF (N) SIGN 13'-3" A.G.L. BOTTOM OF (N) RRUS UNIT 11'-4" A.G.L. | (N) SPEED (INITY 7 SIGN (R2-1) (N) VERIZON WIRELESS' RRUS UNIT (BEHIND SIGN), TYP A-3 S-1 | |
| TOP OF RELOCATED SIGN/ BOTTOM OF (N) SIGN ±10'-9" A.G.L. TOP OF (N) LOAD CENTER/ DISCONNECT ±10'-0" A.G.L. | OF (2) TOTAL (N) VERIZON WIRELESS 4 2 CABLE SHROUD SCON | |
| BOTTOM OF RELOCATED SIGN ±9'-3" A.G.L. BOTTOM OF (N) LOAD CENTER/ DISCONNECT ±9'-0" A.G.L. | RELOCATED "BIKE LANE" SIGN S-2 (N) VERIZON WIRELESS LOAD CENTER/ DISCONNECT (BEHIND/ OPPOSITE SIDE OF POLE) A 3 S-2 | ◆ TOP OF (E) SIGN ±8'-10" A.G.L. ◆ BOTTOM OF (E) SIGN ±7'-4" A.G.L. |
| | (N) STEEL LIGHT POLE | |
| (E) GRADE 0'-0" (E) CONCRETE SIDEWALK SOUTH DE ANZA BOULEVARD | (E) LANDSCAPING | |
| | (N) CONCRETE FOUNDATION (BY VALMONT INDUSTRIES, INC.) | |



Activation Report • Verizon Wireless • Small Cell No. 417709 "SF_CUPER001" 10465 South De Anza Boulevard • Cupertino, California

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of Verizon Wireless, a personal wireless telecommunications carrier, to evaluate the small cell located at 10465 South De Anza Boulevard in Cupertino, California, compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Executive Summary

Verizon had installed a cylindrical antenna above the light pole sited in the public right-of-way near 10465 South De Anza Boulevard in Cupertino. All exposure levels under the existing conditions for anyone in publicly accessible areas nearby were well below the federal standard.

Prevailing Exposure Standards

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

| | Transmit | "Uncontrolled" | Occupational Limit |
|------------------------------------|-----------|-----------------------|-----------------------|
| Wireless Service Band | Frequency | Public Limit | (5 times Public) |
| Microwave (point-to-point) | 1-80 GHz | 1.0 mW/cm^2 | 5.0 mW/cm^2 |
| Millimeter-wave | 24–47 | 1.0 | 5.0 |
| Part 15 (WiFi & other unlicensed) | 2–6 | 1.0 | 5.0 |
| BRS (Broadband Radio) | 2,490 MHz | 1.0 | 5.0 |
| WCS (Wireless Communication) | 2,305 | 1.0 | 5.0 |
| AWS (Advanced Wireless) | 2,110 | 1.0 | 5.0 |
| PCS (Personal Communication) | 1,930 | 1.0 | 5.0 |
| Cellular | 869 | 0.58 | 2.9 |
| SMR (Specialized Mobile Radio) | 854 | 0.57 | 2.85 |
| 700 MHz | 716 | 0.48 | 2.4 |
| [most restrictive frequency range] | 30-300 | 0.20 | 1.0 |

General Facility Requirements

Small cells typically consist of two distinct parts: the electronic transceivers (also called "radios" or "channels") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The radios are typically mounted on the support pole or placed in a cabinet at ground level, and they are connected to the antennas by coaxial cables. Because of the short wavelength of the frequencies



HAMMETT & EDISON, INC. CONSULTING ENGINEERS SAN FRANCISCO ©2019

Activation Report • Verizon Wireless • Small Cell No. 417709 "SF_CUPER001" 10465 South De Anza Boulevard • Cupertino, California

assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

Site Description

The site was visited by Mr. Scott Walthard, a qualified field technician employed by Hammett & Edison, Inc., during normal business hours on July 16, 2019, a non-holiday weekday. Verizon had installed a small cylindrical antenna about three stories above ground on top of the light pole located in the public right-of-way on the west side of South De Anza Boulevard, in front of the bank building located at 10465 South De Anza Boulevard, at least 14 feet away. There were observed no other wireless telecommunications base stations located at or next to the site. There were no residences located within 100 feet of the site.

Measurement Results

The measurement equipment used was a Narda Type NBM-520 Broadband Field Meter with Type EA-5091 Isotropic Electric Field Probe (Serial No. 01035) and a Wandel & Goltermann Type EMR-300 Radiation Meter with Type 18 Isotropic Electric Field Probe (Serial No. C-0010). The meters and probes were under current calibration by the manufacturers. Measurements were made from a bucket-truck at the antenna, as well as at ground near the site. At each test point, the measurement results were compared with applicable FCC standards. The maximum power density level observed for a person at ground near the site was 0.00052 mW/cm², which is 0.26% of the most restrictive public limit. The three-dimensional perimeter of RF power density levels equal to the FCC standard for uncontrolled areas did not extend into any uncontrolled areas.

No Recommended Compliance Measures

Access to the antenna was restricted by its mounting location and height. Since exposure levels in publicly accessible areas were found to be below the applicable public limit, no other access controls or signs are required to meet FCC public guidelines. The operation can be considered intrinsically compliant with the FCC occupational guidelines. An explanatory sign was posted on the pole below the antenna.



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Activation Report • Verizon Wireless • Small Cell No. 417709 "SF_CUPER001" 10465 South De Anza Boulevard • Cupertino, California

Conclusion

Based upon the information and analysis above, it is the undersigned's professional opinion that this Verizon Wireless small cell, as installed and operating at the time of the measurements, complies with the FCC standards for limiting public exposure in uncontrolled areas to radio frequency energy and, therefore, does not for this reason cause a significant impact on the environment.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2021. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.

William F. Hammett, P.E. -30-2021 707/996-5200

July 31, 2019

Comment on Acoustic Noise

As noted for similar Verizon facilities at other locations in Cupertino, no noise was perceptible from the equipment inside the pedestal at the base of the pole.



FCC Radio Frequency Protection Guide

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

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



Frequency (MHz)

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

HAMMETT & EDISON, INC. CONSULTING ENGINEERS SAN FRANCISCO ©2019

ROWAT 19465 S. DE ANZA BLOD - CUPER CON ENCROACHMENT AGREEMENT

This Encroachment Agreement ("Encroachment Agreement"), made this <u>29</u> day of <u>MAT</u>, 20<u>19</u> ("Effective Date") between the City of Cupertino, a political subdivision of the State of California, hereinafter designated "Licensor" and GTE Mobilnet of California Limited Partnership, d/b/a Verizon Wireless, with its principal offices at c/o Verizon Wireless, 180 Washington Valley Road, Bedminster, New Jersey 07921, hereinafter designated "Licensee":

1. <u>Encroachment Agreement</u>. This is an Encroachment Agreement as referenced in that certain Small Cell License Agreement between Licensor and Licensee dated May 16, 2017 ("Agreement"). This Encroachment Agreement shall serve as an encroachment license. All of the terms and conditions of the Agreement are incorporated hereby by reference and made a part hereof without the necessity of repeating or attaching the Agreement. In the event of a contradiction, modification or inconsistency between the terms of the Agreement and this Encroachment Agreement, the terms of the Encroachment Agreement shall govern. Capitalized terms used in this Encroachment Agreement shall have the same meaning described for them in the Agreement unless otherwise indicated herein.

2. <u>Project Description and Locations</u>. Licensee shall have the right to use the ROW for a Small Cell at the designated areas in the ROW as further described in Attachment I attached hereto (the "Licensed Area").

3. <u>Equipment</u>. The Small Cell to be installed at the Licensed Area is described in Attachment 1 attached hereto.

4. <u>Term</u>. The term of this Encroachment Agreement shall be as set forth in Section 2 of the Agreement.

5. <u>Fees</u>. The initial Rent for the term of this Encroachment Agreement shall be \$1,500.00, as determined in accordance with Paragraph 5.1 of the Agreement, as adjusted by Paragraph 5.2.

6. <u>Commencement Date</u>. The first day of the month following the date Licensee has Commenced Installation of its Equipment at the Licensed Area.

7. <u>Approvals/Fiber</u>. It is understood and agreed that Licensee's ability to use the Licensed Area is contingent upon its obtaining all of the certificates, permits and other approvals (collectively the "Governmental Approvals") that may be required by any Federal, State or Local authorities, as well as a satisfactory fiber and electrical connection which will permit Licensee use of the Licensed Area as set forth above. In the event that (i) any of such applications for such Governmental Approvals should be finally rejected; (ii) any Governmental Approval issued to Licensee is canceled, expires, lapses, or is otherwise withdrawn or terminated by governmental authority; (iii) Licensee determines that such Governmental Approvals may not be obtained in a timely manner; (iv) Licensee determines that it will be unable to obtain in a satisfactory manner, or maintain any fiber or power connection; or (v) Licensee determines that the Licensed Area is no longer technically compatible for its use, Licensee shall have the right to terminate this Encroachment Agreement. Notice of Licensee's exercise of its right to terminate shall be given to Licensee in writing by certified mail, return receipt requested, and shall be effective upon the mailing of such notice by Licensee, or upon such later date as designated by Licensee. All rentals paid to said termination date shall be retained by Licensor. Upon such termination, this Encroachment Agreement shall be of no further force or effect except to the extent of the representations, warranties and indemnities made by each party to the other hereunder. Otherwise, Licensee shall have no further obligations for the payment of Rent to Licensor.

8. Miscellaneous.

[Signature page follows]

EXECUTED to be effective as of the date shown above.

LICENSOR:

City of Cupertino, a political subdivision of the State of California

By: MOSLEY CHAD Name: Title: ENGINCERS CITY

ATTEST: Clerk

APPROVED AS TO FORM CITY ATTORNEY'S OFFICE

BY: 4 001 Randolph Hom City Attorney Adr

LICENSEE:

GTE MOBILNET OF CALIFORNIA LIMITED PARTNERSHIP, D/B/A VERIZON WIRELESS

by Cellco Partnership, its General Partner

Scott Stewart 5/7/18 By: Name: SCOTT STEWAR DIRECTUR- NETWORK Title:

Exhibits: Attachment 1

Attachment 1

Licensed Area

See attached.

| | V | e | riz | zon | SITE NAME: SITE ID: LOCATION C ASSET ID: BADGE NUM SERVICE ID: SITE ADDRE COUNTY: SITE TYPE: | | | | |
|--|---|--------------------------|---------------|--|--|-------|--|------|---|
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| | 4 | 120 | | THE PROJECT INVOLVES THE INSTALLATION OF AN UNMANNED WIRELESS TELECOMMUNICATION FACILITY CONSISTING OF AN | VERIZON WIRELESS 2765 MITCHELL DRIVE SUITE 9 | NO. | | | VERIZON WIRE |
| | RAD | OE A | | ANTENNA AND ASSOCIATED EQUIPMENT ON A CITY OF CUPERTING REPLACEMENT STEEL LIGHT POLE IN THE PUBLIC | WALNUT CREEK, CA 54568 CONTACT: JENNIFER HAAS | 1-1 | SYMBOLS ABBREVIATIONS | 3 | WALNUT CHEER CAS |
| | SHERYL DR | 42 | 1.00 | RIGHT OF WAY EXISTING POLE AND FOUNDATION TO BE REMOVED AND REPLACED WITH NEW STEEL POLE AND | PHONE: (650) 759-1577 EMAIL JENNIFER HAAS@VERIZONWIRELESS.COM | T-3 | GENERAL NOTES | 3 | CONSOLIANTS |
| | | SILE | CIFICA OR | CONCRETE FOUNDATION EXISTING POLE FOUNDATION TO BE DEMOLISHED TO A MINIMUM DEPTH BELOW EXISTING GRADE | AGENT | C-1 | TOPOGRAPHIC SURVEY, EXISTING CONDITIONS | 1 | |
| | MCCLELLAN RD | | | AND ABANDONED IN PLACE GENERAL SCOPE OF WORK | MODUS, INC. 240 STOCKTON STREET, 3RD FLOOR | A-1 | SITE PLAN, ENLARGED ANTENNA LAYOUT, ENLARGED EQUIPMENT LAYOU | E TI | |
| | | SILVER | RADO AVE | ANTENNA AND ASSOCIATED EQUIPMENT | SAN FRANCISCO, CA 94108 CONTACT: KEVIN BOWVER | A-2.0 | ELEVATIONS | z . | |
| | AN AN BLO | SSOMEN | | INSTALL A NEW CYLINDRICAL ANTENNA AND EQUIPMENT ON A STEEL LIGHT POLE. INSTALLATION CONSISTS OF (1) | PHONE: (405) 219-5442 EMAIL KBOWYER@MODUS-CORP.COM | A-2.1 | ELEVATIONS | 5 | |
| | NNH | Ster | CLAY ST | NEW CYLINDRICAL ANTENNA CONCEALED WITHIN NEW CONCEALMENT SHROUD AT TOP OF LIGHT POLE, (2) NEW | PROPERTY OWNER | A-3 | DETAILS DETAILS | 3 | 0 |
| | - NO | EAN | - | CENTER/DISCONNECT MOUNTED TO LIGHT POLE AND | CITY OF CUPERTING CUPERTING CITY HALL | 5-2 | DETAILS | 3 | AR |
| | | CUP | PERTINO | ROUTED WITHIN LIGHT POLE. | 10300 TORRE AVENUE CUPERTINO, CA 95014-3202 | EP-1 | SINGLE LINE DIAGRAM, EQUIPMENT GROUNDING DIAGRAM | 3 | 6 LA |
| Contract Control August 20 Marked 20 Mark | MCINITY | MAR | 20 | D PAINT | PHONE (408) 777-3354 EMAIL ENGINEERING@CUPERTING.ORG | EP-2 | UTILITY PLAN, CONDUIT SCHEDULE, CIRCUIT DIAGRAM | 3 | 2 ← 9,58 |
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| | WALNUT CREEK, C | A. | | D change | ZONING JURISDICTION: CITY OF CUPERTINO | SP-2 | SPECIFICATIONS | 3 | J S MA |
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| DARD BA LACM COOL DAND WM BM WODE FLANGE BEAM W BOUNDARY EX EX DAND WM BM WODE FLANGE BEAM VIM BUILDING EX EX DAND WM BM WODE FLANGE BEAM VIM BUILDING EX EX EX DOING MM BM WODE FLANGE BEAM CO BUILDING EX EX <td></td> <td>BETWEEN DENTERS BOLT CINCLE</td> <td>E</td> <td>EAST</td> <td>IBC</td> <td>INDOGR AIR QUALITY</td> <td>nine.</td> <td>RATING</td> <td>BUR</td> <td>RIGHT HAND REVERSE ROOF LEADER</td> <td>WD</td> <td>WOOD</td> <td>CONCRETE STUD</td> <td></td> | | BETWEEN DENTERS BOLT CINCLE | E | EAST | IBC | INDOGR AIR QUALITY | nine. | RATING | BUR | RIGHT HAND REVERSE ROOF LEADER | WD | WOOD | CONCRETE STUD | |
| MY BOUNDARY EF EXCURACE ICC INTERNATIONAL CODE, NO NO HOURD MV WIRE MEEN MILLIONG EF EXCURACE ICC INTERNATIONAL CODE, NO | | BOARD | EA | EACH EACH END | | CODE | NIC | NOT IN CONTRACT | RM | ROOM | WE BM | WIDE FLANGE BEAM | | REV DATE ISSI |
| G BADRING LP LATERICEPTION NOM | RY IUM | BOUNDARY | EF | EACH FACE | icc | COUNCIL. | NO | NUMBER | RO | KOUGH OPENING | WM | WIRE MESH | BRICK (PLAN) BRICK (PLAN) | 2 26/2016 100% DONS |
| NM BURLAND EAR Ever energy Generation N Induction N | G | BADKING | EFS | EXTERIOR FINISH EXTERIOR FINISH SYSTEM | 10 | IDENTIFICATION | NORM | NORMAL | ROW | RIGHT OF WAY | WP | WORK ORDER WATERPROOFING | | 3 3/25/2018 100% CONSTR |
| NG. BUOCHNOC HER. PROME HAGE WEEK PARE WACK WATE PROCOMMARKANE 1 BUILT HUBLE | K | ILUCK | EGR | EMERGENCY GENERATOR | (D) | INSIDE DIMENSION | NRC | NOISE REDUCTION | RRU | REMOTE RADIO UNIT | WP. | WEATHERPROOF | RICK (SECTION) | |
| VD EVALUATION AND LUMM LUMM/RETOR CONTRACTORS S DOUL FANDO VM WATER RESISTANT WATER RESI | KG. T | BUDGKING | EIFS | EXTERIOR INSULATION | IF5 | INSIDE FACE | NRCA | NATIONAL ROOFING | RWO | REDWOOD RAIN WATER LEADER | WR. | WATER REPELLENT | Insulation Insulation | the second second |
| Max Max Li Expansion const NEED MAREDUATE No. LOLLE SCH SCH Martie | VD | BOULEVARD | | AND FINISH SYSTEM | ILLUM | ILLUMINATION | | CONTRACTORS | 5 | SOUTH | WR | WATER RESISTANT | MASONRY UNIT FOAM/SPRAY | |
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| AT BRAURES ELEC ELECTION WALLBOARD Or OVER SECT SECT WEIGHT WEIGHT WALLBOARD WALLBOAR | G | BEARING | ELAST | ELEVATION | INCAND | INCANDESCENT | NTP NTS | NOTICE TO PROCEED NOT TO SCALE | SE | STRUCTURAL ENGINEER | WRM | WATER RESISTANT MEMORANE | CONCRETE GYPSUM | MODIFICION REPRODUCED IN PART |
| WM BETWEEN ELLMM < | MT | BASEMENT | ELEC | ELECTRIC | INFO | INFORMATION | 0 | OVER | SECT | SELECT | WT | WEIGHT | (SECTION) WALLBOARD | FORMATED TO BE FOR LIDE AT AND |
| W BOLLUM WAYS DHANKAW | WN | BETWEEN | EMP | ELECTROMAGNETIC | INSUL | INSULATION | 0 | OXYGEN | SEP | SEPARATE | WWW | WELDED WIRE FABRIC WELDED WIRE MESH | DIMENSIONAL LUMBER CEMENT | DRIFTINGHT 25% MMEL WICCARGAN |
| CHANNEL CHANNE | N | BOTH WAYS | Enco | FREQUENCY | 16 | INSIDE RADIUS | 00 | ON CENTER | SHT | SHEET | WWR | WELDED WIRE | ICONTINUOUSI | |
| AB CABINET PHOTECTION AGENCY COOP OUTGIDE FACE SI DECOME FUNCTION VISUAL PORMAR VISUAL PORMAR VISUAL PORMAR COOP OUTGIDE FACE SI DECOME FUNCTION COOP OUTGIDE FACE SI DECOME FUNCTION COOP OUTGIDE FACE SI DECOME FUNCTION VISUAL PORMAR VISUAL PORMAR COOP OUTGIDE FACE SI DECOME FUNCTION COOP DECOME FUNCTION SI COOP COOP DECOME FACE SI SI DECOME FACE SI SI DECOME FACE SI DECOME FACE SI DECOME FACE SI SI DECOME FACE SI DECOME FA | TOP | CHANNEL CENTER TO CENTER | EPA | ENVIRONMENTAL | 150 | INTERNATIONAL STANDARD | 000 | OUTSIDE DIAMETER | SHTHG | SHEATHING | XBRACI | CROSS BRACE | WRE MESH | SYMBOLS |
| ac Construction chance for the construction of | AB | CAUNET | FROM | PROTECTION AGENCY | 100 | CODE | OFICE | OUTSIDE FAGE | 51 | SCORED JOINT | KEMR | TRANSFORMER | OISCONTINUOUS | ARPREVIATIO |
| DO DOVERTRUCTION CHANGE FOUR EDUINE FOUR DOVERT CALOR FURNISTILLED OWNER FURNISTILLED OWN | BC | CALIFORNIA BUILDING | C. UM | POLYSTYRENE BOARD | ISO J.BOX | JUNCTION BOX | all and the second | CONTRACTOR INSTALLED | SKLT | SKETCH | | 1.000 | | ADDREVIATIO |
| Construction Construction Documents Construction Documents Construction EXCL EXCLUDE Construction EXCL EXCLUDE Construction EXCL EXCLUDE Construction EXCLUDE Construction EXCLUDE Construction C | co | CONSTRUCTION CHANGE | EQUIP | EQUAL | JST | JOIST | OFIOI | OWNER FURNISHED/ OWNER INSTALLED | SLNT | SEALANT | | | | SHETT INAMER |
| D CONSTRUCTION EVE EXCLUDE NO KNOCKOUT OPING OPENING. SO SQUARE | cw | COUNTERCLOCKWISE | EQUIV | EQUIVALENT | KIP | THOUSAND POUNDS | OF5 | OUTSIDE FACE OF STUDS | SPEG | SPECIFICATION | | | | 1.2.2.2.2 |
| | 0 | CONSTRUCTION | EXCL | EXCLUDE | RIT | KITCHEN | OPNG | OPENING | SPALR | SPRINKLER | | | | TO |
| | | Projectione in CO. | | | nu | HUDDOUDU1 | - | | 90 | Juning | | | The second | |

General Notes

GENERAL NOTES

- CONTRACTOR EHALL VERIFY AND COORDINATE ALL NEW AND EXISTING CONDITIONS AND ALL NEW AND EASTING CONDITIONS AND DIMENSIONS AT JUB SITE FOR COMPARISON WTH DRAWINGE AND SPECIFICATIONS PRIOR TO BIDDING AND START OF CONSTRUCTION IF ANY DISCREPANCIES, INCONSISTENCIES OR OMISSIONS ARE FOUND THE ARCHITECT/ ENGINEER SHALL BE NOTIFIED. IN WRITING FOR ICATION PRIOR TO PROCEEDING WITH
- OO NOT SCALE DRAWINGS. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ ENGINEER FOR LARIFICATIONS ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR AND COORDINATED WITH ALL OF THE WORK OF ALL TRADES IF DISCREPANCIES ARE FOUND. THE CONTRACTOR SHALL NOTICY THE ARCHITECT/ ENGINEER IN WRITING FOR CLARIFICATION BEFORE COMMENCEMENT OR RESUMPTION OF
- ABBREVIATIONS THROUGHOUT THE PLANS ARE HOSE IN COMMON USE NOTIFY THI ARCHITECT/ ENGINEER OF ANY ABBREVIATIONS IN OUESTION
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES. REGULATIONS, AND ORDINANCES CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS ORDINANCES BULES REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOGAL JUNISDICTIONAL CODES, ORDINANCES AND APPLICABLE GODE AND REGULATIONS.
- UNLESS NOTED OTHERWISE. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPUNTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDIGATED ON THE DRAWINGS
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE ARCHITECT/ENGINEER
- LEGAL EXITS BHALL NOT BE BLOCKED AT
- 10. TEMPORARY PEDESTRIAN PROTECTION BHALL HE PROVIDED AS REQUIRED BY LOCAL CODES
- THE ARCHITECT/ENGINEER SHALL BE CONSULTED IN ANY/ ALL CASES WHERE CUTTING INTO AN EXISTING STRUCTURAL PORTION OF ANY STRUCTURE IS NECESSARY PRIOR TO
- 12 CONTRACTOR SHALL VERIFY ACTUAL ROUTING OF CONDUIT. POWER AND FIBER CABLES. GROUND CABLES AS SHOWN. CONTRACTOR SHALL SHALL ADD NEW CONDUIT AS NEGESSARY. CONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONSTRUCTION ANADER
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS LANDSGAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION THE OWNER
- CLEAN UP AND DISPOSAL-REMOVE DEBRIS UBBISH AND WASTE MATERIAL FROM THE OWNER'S PROPERTY TO A LAWFUL/ LEGAL DISPOSAL AREA AND PAY ALL HAULING AN DUMPING GOSTS: CONFORM TO PERTAINING FEDERAL STATE AND LOCAL LAWS. REGULATIONS AND ORDERS UPON COMPLETION OF WORK ALL CONSTRUCTION AREAS SHALL BE LEFT CLEAN AND FREE FROM DEBRIS. CLEAN

- ALL STAINS, PAINT SPOTS, DROPPINGS, AND OTHER BLEMISTIES.
- THE CONTRACTOR SHALL PROTECT ALL FINISH WORK AND SURFACES FROM DAMAGE DURING THE COURSE OF CONSTRUCTION AND SHALL REPLACE AND/ OR REPAIR ALL DAMAGED SURFACES CAUSED BY THE CONTRACTOR OR SUBCONTRACTOR PERSONNEL TO THE ATISFACTION OF THE OWNER
- PHION TO INSPECTION OF THE EXISTING 16 FACILITY, THE CONTRACTOR MUST RECEIVE PERMISSION FOR SITE ACCESS FROM THE OWNER OR THE DESIGNATED REPRESENTATIVE.
- WHEN IT IS NECESSARY TO INTERRUPT ANY EXISTING UTILITY SERVICE TO MAKE CORRECTIONS AND/ OR CONNECTION. A MINIMUM OF 38 HOURS ADVANCE NOTICE SHALL BE GIVEN TO THE OWNER INTERRUPTIONS IN UTILITY SERVICES SHALL BE OF THE SHORTEST POSSIBLE DURATION AND SHALL BE APPROVED IN ADVANCE BY THE OWNER
- ALL CONTRACTORS PERFORMING WORK ON THE SITE SHALL BE RESPONSIBLE FOR INITIATING MAINTAINING AND SUPERVISING A REALONABLE AND PRUDENT SAFETY PROGRAM INCLUDING AND PRODERT SAFETY PROGRAM INCODING BUT NOT UNITED TO THE ISOLATION OF WORK AREAS AND THE PROMPT REMOVAL OF ANY DEBRIS OR TOOLS WHICH MAY ENDANGER THE PUBLIC OR WORKERS
- 19 THE CONTRACTOR SHALL VERIFY THE LOCATION DI ALL EXISTING UTILITIES BELOW GRADE AND RELATED SERVICE GONNECTIONS WITH THE RESPECTIVE UTILITY COMPANIES.
- 20. THE CONTRACTOR SHALL COORDINATE THE REMOVAL ABANDONMENT, AND/ OR RELOCATION OF EXISTING UTILITIES ABOVE OF BELOW GRADE WITH THE RESPECTIVE UTILITY. COMPANIES
- 21 THE CONTRACTOR BHALL PERFORM ALL WORK WITHIN PUBLIC RIGHTS OF WAY ACCORDING TO LOCAL JURISDICTIONAL STANDARDS AND SPECIFICATIONS CONTRACTOR SHALL OBTAIN PERMITS FROM APPROPRIATE AGENCIES
- 22 ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301
- ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS 23 24. THE EXISTING SITE IS IN FULL OPERATION, ANY
- CONSTRUCTION WORK BY CONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK MUST BE COORDINATED WITH THE OWNER. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE WINDOW TO MINIMIZE DISTURBANCE.
- 25. THE ARCHITECT/ ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY SUBSTITUTIONS. INCLUDING CHANGES IN PRODUCTS, MATERIALS, EQUIPMENT AND DETAILS OF CONSTRUCTIONS FROM THOSE SHOWN. THE SUBSTITUTIONS PROGEDURES PER SPECIFICATIONS SECTION OF 25 00 SHALL BE FOLLOWED THE CONTRACTOR EHALL ASSUME FULL RESPONSIBILITY FOR PERFORMANCE AND ASSOCIATED COSTS FOR ANY SUBSTITUTION NOT APPROVED BY THE ARCHITECT/ ENGINEER PER ED IN WRITING SPECIFICATIONS SECTION 01 25 00
- 26. PROVIDE & PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A 10 BC. WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE WORK AREA DURING CONSTRUCTION
- 27 CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION
- 25. SHOP DRAMINGS SHALL BE SUBMITTED FOR ALL EQUIPMENT AND MATERIALS WHICH MUST INTERFACE AND COORDINATE WITH OTHERS. WHETHER DETAILED OR NOT

- THE CONTRACTOR SHALL OBTAIN OSHA PERMITS FOR ANY VERTICAL EXCAVATION OVER 31 5-0' DEEP INTO WHICH PERSONS MUST
- DESCEND ALL DISSIMILAR METALLIC MATERIALS SHALL BE EFFECTIVELY ISOLATED FROM EACH OTHER TO

GENERAL NOTES

- PREVENT GALVANIC ACTION, WHETHER DETAILED ON NOT 20 ALL WOOD W CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED WITH AN APPROVED PRESERVATIVE.
- 2 Site Work Notes

- SITE WORK NOTES THE CONTRACTOR SHALL CONTACT UTILITY. LOCATING SERVICES AND CONDUCT UNDERGROUND UTILITY LOCATING AND MAPPING PRIOR TO THE START OF CONSTRUCTION
- ALL EXISTING ACTIVE SEWER WATER, GAS, ELECTRIC, AND OTHER UTLITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES. AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONSTRUCTION MANAGER ONLY UPON APPROVAL OF SPECIFIC UTILITY OWNER EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES

ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS

IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DESPOSED OF LEGALLY.

ALL EXISTING INACTIVE SEWER, WATER, GAS, ALL EASTING MACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, MIALL NE REMOVED AND/OR CAPPED PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WALL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL LITE ITIES

CONTRACTOR SHALL DETERMINE THE ACCURATE LOCATION OF EXISTING UNDERGROUND FACILITIES PRIOR TO ANY EXCAVATION.

- CONTRACTOR SHALL CEASE EXCAVATING IF WIDENTIFIED UTILITIES ARE ENCOUNTERED.
- CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY OWNER OF EXCAVATION DAMAGE AND TAKE STEPS TO MITIGATE DAMAGE AND/ OR ASSIST WITH REPAIR
- CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BACKFILL AND OTHER PHYSICAL SUPPORT TO PROTECT UNDERGROUND
- 10. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION 11. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH VERIZON
- WIRELESS AND AUTHORITY HAVE JURISDICTION SPECIFICATIONS FOR SITE SIGNAGE
- EXISTING SITE DURING CONSTRUCTION EROSION CONTROL MEASURES. IF REQUIRED DUBING CONSTRUCTION SHALL AF IN CONFORMANCE WITH THE LOCAL GUIDELINES. FOR EROSION AND SEDIMENT CONTROL.
- 12 CONTRACTOR SHALL MINIMIZE DISTURBANCE TO

CONCRETE NOTES ALL POURED IN PLACE CONCRETE SHALL HAVE AN ULTIMATE COMPRESSIVE STRENGTH OF 3,000

Concrete Notes

- PSI AT 38 DAYS, UNLESS OTHERWISE NOTED (DESIGN BASIS 2,500 PSI-NO SPECIAL INSPECTION REQUIRED) CEMENT TO BE TYPE II FROM TESTED STOCK PER ASTM C-150
- CONCRETE FORM TOLERANCES SHALL BE 2 WITHIN THE STANDARDS SET BY THE AMERICAN CONCRETE INSTITUTE
 - ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS AND OTHER INSERTS SHALL BE SECURED IN POSITION AND INSPECTED BY THE I DOAL BUILDING DEPARTMENT INSPECTOR OR TO THE POURING OF ANY CONGRETE
- NO PIPES OR DUCTS SHALL BE PLACED IN 4. STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED REFER TO ARCHITECTURAL MECHANICAL, PLUMBING AND ELECTRICAL DIIAWINGS FOR LOCATIONS
- FORM EXPOSED CORNERS OF COLUMNS, BEAMS, 5. WALLS, ETC. WITH 3/4 INCH CHAMFERS UNLESS DETAILED OTHERWISE.
- PROVIDE LIGHT BROOM FINISH ON ALL EXPOSED CONCRETE UNLESS NOTED OTHERWISE

Reinforcing Steel Notes

REINFORCING STEEL NOTES

- REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60 U.O.N
- BANS SHALL BE CLEAN OF MUD, DIL OR OTHER COATINGS LIKELY TO IMPAIR BONDING
- 5 ALL REINFORCING SHALL BE SECURED IN PLACE IOR TO PLACING CONCRETE OR GROUTING MASONRY.
- REINFORCING STEEL SHALL BE SPLICED AS SHOWN OR NOTED SPLICES AT OTHER LOCATIONS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER

Steel Notes

STEEL NOTES ALL STRUCTURAL AND MISCELLANEOUS STEEL EHALL CONFORM TO ASTM A-3E AND SHALL BE EABRICATED AND ERECTED IN ACCORDANCE

- WITH A I S C SPECIFICATIONS FOR THE DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST ADDITION. 2 BOLTS SHALL CONFORM TO ASTM A307. UNLESS
- TED OTHERWISE
- 3. PIPE STEEL SHALL CONFORM TO ASTM A-53. GRADE B
- 4. PLATES SHALL CONFORM TO ASTM A-36. ALL STEEL PERMANENTLY EXPOSED TO
- WEATHER, (INCLUDING NUTS, BOLTS, WASHERS) SHALL BE HOT OIP GALVANIZED AFTER FABRICATION

INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED MANDFACTORER'S WRITTEN RECOMMENDED PROCEDURE THE BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE OUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS

Welding Notes

WELDING NOTES THE QUALITY OF MATERIALS AND THE

FABRICATION OF ALL WELDED CONNECTIONS SHALL BE IN CONFORMANCE WITH THE AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE, AWS D1.1 LATEST EDITION SPECIAL INSPECTION OF WELDING PEA SECTION

1704 IS REQUIRED. A QUALIFIED AND CERTIFIED INSPECTOR SHALL BE PRESENT DURING SHOP AND FIELD WELDING OPERATIONS UNLESS OTHERWISE NOTED AND SHALL INSPECT AL THE WORK AS REQUIRED BY AWS D1.1. SECTION

3 SPECIAL INSPECTION NEED NOT BE CONTINUOUS FOR THE FOLLOWING ITEMS. PROVIDED THE MATERIAL QUALIFICATIONS OF WELDING PROCEDURES AND WELDERS ARE VERIFIED PRIOR TO THE START OF WORK PERIODIC INSPECTIONS MAY BE MADE OF WORK PROGESS AND A VISUAL INSPECTION OF WELDS IS STILL REQUIRED.

1 SINGLE-PASS FILLET WELDS NOT EXCEEDING SIG INCH

> INSPECTORS SHALL POSSESS AND BE FAMILIAR WITH THE APPROVED WELDING PROCEDURE SPECIFICATIONS (WPS)

ALL WELDING SHALL BE DONE BY CERTIFIED WELDER'S USING FRE-QUALIFIED WELDING PROCEDURES

THE INSPECTOR SHALL CONFIRM THE QUALIFICATION OF WELDERS, THE USE OF AWS OUALIFIED PROCEDURES, THE MANUFACTURER'S RECOMMENDED USE OF AUTOMATIC EQUIPMENT AND THE PROPER USE OF PREHEAT IF REQUIRED

Painting Notes

PAINTING NOTES

- 1. EXTRA MATERIALS: DELIVER TO OWNER 1 QUART OF EACH COLOR AND TYPE OF FINISH COAT PAINT USED ON PROJECT. IN CONTAINERS PROPERLY LABELED AND BEALED.
- MANUFACTURER SHALL BE TNEMED COMPANY 7 INCORPORATED, UNLESS NOTED OTHERWISE
- MATERIAL COMPATIBILITY: PROVIDE MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND. WITH SUBSTRATES
- FOR EACH COAT IN A PAINT SYSTEM, PROVIDE PRODUCTS RECOMMENDED IN WRITING BY MANUFACTURERS OF TOPCOAT FOR USE IN PAINT SYSTEM AND ON SUBSTRATE INDICATED.
- 5 REMOVE HARDWARE AND SIMILAR ITEMS THAT ARE NOT TO BE PAINTED MASK (TEMS THAT CANNOT BE REMOVED. REINSTALL ITEMS IN EACH AREA AFTER PAINTING IS COMPLETE.
- 6 CLEAN AND PREPARE SURFACES IN AN AREA BEFORE BEGINNING PAINTING IN THAT AREA SCHEDULE PAINTING SO CLEANING OPERATIONS WILL NOT DAMAGE NEWLY PAINTED SURFACES
- APPLY PAINTS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS
- APPLY PAINTS TO PRODUCE SURFACE FILMS WITHOUT CLOUDINEES, SPOTTING, HOLIDAYS LAPS, BRUSH MARKS, ROLLER TRACKING, RUNS SAGS, ROPINESS, OR OTHER SURFACE COLOR BREAKS
- IF UNDERCOATS OR OTHER CONDITIONS SHOW THROUGH TOPCOAT APPLY ADDITIONAL COATS UNTIL CURED FILM HAS A UNIFORM PAINT FINISH LOR, AND APPEARANCE
- 10 SEE SPECIFICATIONS SECTION 09 50 00 FOR PAINTING AND COATING SPECIFICATIONS

- JAMES VACCARO ARCHITECT, INC.

8 Light Pole Notes

LUMINAIRES. JUNCTION BOXES, 1-1/2" RIGID.

METAL CONDUIT. 1-1/2" PVC CONDUIT. AND POLES SHALL COMPLY WITH SECTION 86 OF THE CALTRANS STANDARD SPECIFICATIONS AND CITY OF CUPERTING STANDARD DETAILS.

LUMINAIRES MAY BE OUT OFF. TYPE M II OR M I

LE 5 LIGHT DISTRIBUTION, UNLESS OTHERWISE

THE SERVICE SUPPLYING ELECTROLIER CIRCUIT

CONDUCTOR CONDUCTORS SHALL BE #8 THW UNLESS OTHERWISE NOTED AND ALL SERVICE

CONTROL IS TO BE LOCATED AT THE LUMINAIRE

SHALL BE 120 VOLT PHOTO ELECTRIC UNIT

THE CONTRACTOR SHALL OBTAIN A SERVICE

DEPARTMENT PRIOR TO INSTALLING ANY

PRIOR TO PLACING ANY WORK OTHER THAN

SUPPLY THE CITY OF CUPERTING PUBLIC SUPPLY THE GITY OF CUPENTING PUBLIC WORKS DEPARTMENT WITH A PACIFIC GAS AND ELECTRIC COMPANY ELECTRICAL POWER DESIGN WITH ELECTRICAL SERVICE POINTS AND

A CITY OF CUPERTING PUBLIC WORKS

TO PACIFIC GAS AND FLECTRIC)

CURB AND GUTTER. THE CONTRACTOR SHALL

DEPARTMENT CONNECTION ORDER IS REQUIRE TO ENERGIZE ANY ELECTROLIER OR EQUIPMEN

PROVIDED BY THE CITY OF CUPERTINO AFTER

COMPLETION AND INSPECTION FOR SUBMITTAI

FOUNDATIONS FORTY EIGHT HOURS PRIOR TO

THE CONTRACTOR SHALL SUPPLY TO THE CITY

MANUFACTURER'S SUBMITTALS FOR ALL NEW

ACCORDANCE WITH THE NATIONAL ELECTRICA

ALL OVERLOAD PROTECTION (FUSES) SHALL BE SIZED IN ACCORDANCE WITH THE NATIONAL

OVERHEAD WIRES/ CONDUCTORS, A CLEARAN

MUST BE OBTAINED FROM PACIFIC GAS AND ELECTRIC PRIOR TO INSTALLATION

CONTACT PACIFIC GAS AND ELECTRIC FOR

ADDITIONAL REQUIREMENTS AND CO CITY OF CUPERTING PUBLIC WORKS

DEPARTMENT FOR INSPECTIONS OF

GUPERTINO FOR APPRO

FOUNDATION POURING AND ELECTRICAL

ALL CONDUCTORS SHALL BE \$2FO IN

11 WHENEVER AN INSTALLATION IS NEAR ANY

FOUNDATIONS POLES CIRCUITS AND

POINT CONFIRMATION AND A CLEARANCE FROM THE CITY OF CUPERTING PUBLIC WORKS

CONDUCTORS UNDERGROUND SERVICE ALERT SHALL BE USED TO VERIFY LOCATION OF DTHEF

NOTED AT CUL-DE-GACS USE TYPE M-III OR

SHALL BE FUSED AND GROUNDED IN ACCORDANCE WITH NATIONAL ELECTRICAL

CODE AT THE FIRST JUNCTION BOX. AN

PLECTROLIER ON ANY UNGROUNDED

UNLESS OTHERWISE NOTED

UNDERGROUND UTILITIES

POLE NUMBERS.

NEPECTIONS

LUMINAIRES

ELECTRICAL CODE

CODE

10

5.

7.

ADDITIONAL FUSE IS REQUIRED AT EACH

BETTER, UNLESS OTHERWISE NOTED

LIGHTING NOTES

ALL DORENE WAY MUTCH ALL DOT BUT WAY MAT S PACIFICA (CA. 19144 ALS NO 3470 PHONE ALS VAL SAT LAT RESERVANCEMENT COM WWW. WARCHHIST.COM

CLIENT (\mathbf{m})

MODUS, INC. October Street Last BAN PRANOSCO CA SPILE

verizon

VERIZON WIRELESS Watching Devys Sond e Watching Califor, CA setse CONSULTANTS





DATE ISSUE 10/16/2017 90% CONSTRUCTION 100% CONSTRUCTION 3 3/26/2018 100% CONSTRUCTION REV IE31 PLAMS AND INTERVICE AND ARE MYTED FORE FEEL GIZE AT ARCHID 24 X26 ROHT ZHE JANES VACCHID ARCHITECT. N

GENERAL NOTES






















SECTION 01 40 00 QUALITY REQUIREMENTS END OF SECTION 01 30 00 D. Future J party Characteristics of andigate-barry larger with the sevential and caracteristic sevents for particular interpretation materials and acceptable to extend on the Network Immediation. In Proceedings of the Seventian Processing Immediation in Proceedings of the Seventian Processing Immediation in Proceedings of the Seventian Processing Immediation in Proceedings of the Seventian Processing Interpretation of the Seventian Immediate Processing Interpretation of the Seventian Immediate Interpretation of the Seventian Immediate Immediate Interpretation of the Seventian Immediate B. Manih, Lichens, and Carlitatise. 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Pronisci Data, and other required submittals, eatingt three copies of a statement, signed and usafed by the reusbewide Hommun Quantity or Quality Levels. This guarning ar quarts there issues ar specified shall not live minimum. The guar issues and an expected the minimum antities research to addition may access obtained a classification of assariant and applications. The the context of an equivariant. Well an automative to Australia for 2 decision. Nuterenced Standards. It compliance with this or motiv standards is specified and the standards exactly different or conficting specified and the standards with the easy stringard systematic Referencestatives to Architect for a decision SUDMITTAL HEVEN Yest and Superlise Reports: Prepare and submit con-written reports specified in other Sections. Include Maturating Testing and inspecting version are required to versy conductor with requirements suscening or indicated. 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Engage a guilding leading againsty to constant special texts and impections required to authorities having jurisdiction. DENERAL WEOK REPARE AND PROTECTION 2 Do not perform any visual of Contractor, Associated Services. Cooperate with feature apenders and principle reasonable particulty as respected in the output principle reasonable particulty as respected. Adviewantes and Acceptive, winner adovisions and acceptive are used in superferations or other conven-documents, they shall main the recognized uses of the outlans in the following that, names are subject to change and are belowed to be accurate and up-to-data an all the abi-and are belowed to be accurate and up-to-data an all the abi-al are contract documents. Publication Dates. Comply with standards in effect as of date of the Contract documents unless of interview indicated Adequate quantities of numericative annuals of nationals that require tecting and inspecting. 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PRODUCTS TWIELA Samo 信ぎるない ACTE Comparate Product Requests Subris Interest in consistentian of lash comparation product. Estimity product or laterication of installation pathods to replaced. 1. Soos constances with requirements for comparation product requests. Deliver, stary, and sandle preparts using seales nethods ind we prevent damage, distributions, and including Beh. Conjuy, with sanufacturiers a protocol SECTION NE PRODUCT SELECTION PROCEDURES PRAVES products that could/ with the Contrast Documents are undersigner, and unders ablances indicated, are new at you must at invaluation. "equipment," system," and terms of aunital intent Where the following essange are used to fits preducts or massfuctivity. 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Inspect products on delivery to ensure compliance with the Contrast Decoments and is ensure that products are andomisiged and property protected. Deliver products to Project site in manufacturers enginal solved container of parcaging, complete with labels and lastitudiens for handling, sitting, unpacking, aretecting, and externing Schedule addivery to maximize storage at Project and to prevent averation daily of construction spaces Architect will review the proposed product and notify Contractive at its acceptance an rejection EXECUTION (NOT USED) A Visual requirements locate "one of the demand," provide local time pretexts instal time compares with requirements.
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..... SECTION 01 70 00 EXECUTION AND CLOSEOUT REQUIREMENTS FART I DENEMAL END OF SECTION 01 60 00 PART 3 EXECUTION (NOI UNH Contractor's List of incomplete items (nitial submitte) at Substantial Completion SUBSTANTIAL COMPLETION PROC Recess Product Data Sadanit one paper stepy to each supportat Necural Drawings: Scottin leve set al manad-up redord prints Completion GLOSEOUT SAIBMITTALS standarturer's instanzan instructions. Onen and maintais private manufacturer's written recommendations and instructions for installation of products and equipment. ENCLINDA REQUIREMENTS Architect will consider Contractor's request for comparible pranue what the following conditions are welf-lined COMPARABLE PROD Where Spectrations reside the stars, "as calculate to be added a product that complete non-resource stars, forther starts," a product that complete non-resource stars, forther where a product that complete non-resource stars, the starts, a product that complete non-resource stars, and starts, and the start of the start of the starts with the starts and the starts of the start of the starts of the starts and the starts of the start of the starts of the starts and the starts of the start of the starts of the starts of the starts of the start of the starts of the starts of the starts of the starts of the start of the starts of the starts of the starts of the starts of the start of the starts of t When Specifizations require "natio Architect's sample," provide a protect: that campiles with requirements, and natives Architects sample, Architects decision will be ination whether a proposed process; maiches. Prepare a flat of risess to be competed and corrected (parch list), the value of some an the fact, and reasons why the Work is not complete. 2 Maka Iral Inseguore of any pressured tasks and address large to device any engineering a complete strange of fetcing or express an engineering a proving presenter any endities a proving transmission of a proving the strange of complete a proving the strange of complete in mobilities a datase Company of complete in anothing a proving the strange of complete in a collision of proving the strange of the strange of the strange of the proving the strange of the str Submittais Prior to Bultistantial Compartner Before requesting Substantial Completion inspection, identified ins following Sep vianesi Evaluate that the provided product shore such degine reveales. In the Context, the Submitter, but, if the canadidat with the Context, and with product the instance review, and but it is compatible with Data perfects of the Wood. General Requirements Continued Samples, II Jeptersted Bown of Dewyn Present: Provide the predect named, or indicated on the Drawings for a consuming product by one of the invest manufacturery. List of seminal link Detailed entryanian of significant quanties of propriate preduct with these named in the Specific diany. Obtain and submit releases (resp. submittee saves periodices permitted Constants of the HON and access its services and utilities, acclude occupantly permits, operating certilicates, and similar releases. ingel we plouest Touch up and chines are repair and sectors marred express minutes in embranes vivual defects. sources Prior to Substantial Genepietion. Before rating Substantial Completion impertion, complete the range reardes, increasing bones, inclusions and increase rearders. Las Lexifications, and variant devices and neuropeons, successful books, taune above results, and solution than and adverter to increase regulate by Cristications above and changes are increased on statute to Company's capacity are depicture, and encompany. Conjuny of pending inverteice changement Dubins a written request for inspection for Consumetion. On received of vequest, Constituction proceed with Inspectant or warne Contracted orary factories and controls submittals specified in other section record documents, specificn and uses, senitar linul record information replyin formy. Firsh suspectal at Fendl stions for companied projects. v SEPARATE S PART 2 PRODUCTS 5 ŝ t, 2 PART 3 - A Salamata War & Nau Cangatana Datas inganay anyotan in the second of the second of the annew.
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SPECIFICATIONS

PART 2 PRODUCTS

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ARCHITECT. INC.

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- John. Make prints of readings width. Where print top drows to explosed work are not indicated, arrange parts for the Said vacual effect. Fit supprised connections together to form surface parts.
- Requisiony Requirements: Compty with EPA regulations and with featuring and approval regulations, of autocrease narring arreststorn. ACI Jot.
- B. Standards: Comply with AN3BASSE ALCS and NPPA 241, Normal-Weight Concrete 1 Anumum Compressive Meeiden Orawings
- Maumum Water-Cen
- Stanp Limit 4 Inches NODILLA MARYNIN RADO 010.
- Air Contect: Munitive writive range permitted by ACI 811. Co not allow an content of floor states to receive boweled limitives to exceed 3 percent.

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CUTTERS AND PATCHING

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PART 2 - ENGLISH

DEMOLITION

- Measure, hatch, and, and dollow concrete according to ASTMC SALS SALE.
- When air temperature is spore 30 deg P, resivie manig and debuty time to 40 minutes

1.4 HETALLATION

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MODUS, INC.

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CONSULTANTS

VERIZON WIRELESS

- PART 3. EXECUTION
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CONCRETING

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Coming Call implace constructions using meliniots using to earning a solution retrained or any conversion

Cut holes and slight nearby to minimum size required, and with minimum sisterfunction of adjacent surfaces. Temporarry cover openings when not in one

Where exerting service/splans are required to be tomoved, relection, or abjingthed, bypase such service-registeris before bulling to prevent interruption to Prolection: Biolect include construction during cutting and petitiong to prevent damage. Provide protection trops advice weather constitutes for portunate of Project to advice weather constitutes for particular and anyth the way-avec during cutting and patching agerations.

- D. Protect stanting from work that is to remain E. Protects and meanage sharing, sharing and descend supports as reason to prove scalarly and protection sconward, wetween to produce an endotretion and tensions to remain and to protect swampents annotated severant or collapse at conduction deag amendment.

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one exposed himorys of patched areas and extend a vectoration into adjoining construction in a left that will minimize evidence of patching and using

Provide Metopotary weather protection is prevent water leakage and damage to scructure.

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END OF SECTION 05 50 00 DIVISIONS 6 THROUGH 8-NOT USED

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Place concrete in a communum spectron and comportant

Autor

9 Division 9 Finishes SECTION 09 90 00 PAINTING AND COATING

- Hually cut openings and holes plants, square, and true to dimensions required. Use cutting restroods least likely to damage construction to remain or educining construction.
- fismore demosfor waste materials iron Project was and injuity dispose of them in an EPA speroved (angle). Do not burn demosfored extends.

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- Clean adjacent structures and improvements of dost. Dif-and waters caused by switching tendetion operations feature adjacent areas to constition existing before selective approximation operations areas.
- END OF SECTION 02 41 19

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3 Division 3 Concrete SECTION 33 20 TO CAST IN PLACE CONCRETE SAULT: DEVINA

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PANT 2- PRODUCTS

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SECTION REQUIREMENTS

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PUBLIC ROW ADJACENT TO 10465 S. DE ANZA BOULEVARD CUPERTINO, CA 95014 APN: PUBLIC ROW ADJACENT

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- SECTION REQUIREMENTS santai seturate per subrat Dayn sunny sentrete slabs after innvises. Keep concrete continuously morst for at least seren slave.
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- Engage a testing agency to perform field texts and to submit test reports
- Protect concrete from demage. Report and patch
- END OF SECTION 03 30 00

B. Malenal. Compatibility Privite mananata compatible with and unstreet and with sub-strates.

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Company Include Company (The)

- DIVISION 4-NOT USED
- PEFORMANCE REQUIREMENTS Concept with ACIDI, "Specification for Encoding Concept, and the ACIDI, "Specifications for Tolorance for Concept, Sectors and Materia."
- MATERIALS
- 5 Division 6 Metals SECTION 05 50:00 METAL FABRICATIONS

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PHEFARATION

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PART'2 - EXECUTION

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2 Division 2 Existing Conditions section 02 30 00 SUBSURFACE INVESTIGATION PMIT 11 GENOME

END OF SECTION 01 70.00

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PART - PRODUCTS

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SECTION 02 41 19 SELECTIVE DEMOLITION

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SPECIFICATIONS

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C . Stati Pipe, ASTM A 33, standard weight

Schedule 40

Steel Tubry: ASTM A 500. Steel Plates, Shopes

and Bury

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APPLICATION

END OF SECTION 02 30 00 PART 2 PRODUCTS (Not Used) PART 2 EXECUTION - pint (Ned)

- Appropriate ASTH C 32, Class 35.

- PANT2 PRODUCTS

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METALS

- A. Sabritula Stop Dramings

- PART -OENINAL



SPECIFICATIONS

GENERAL ELECTINICAL COUPERINT DILVTYLEH

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27Division 27 Communications SECTION 27 45 09 COMMUNICATIONS

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ARCHITECT, INC.

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PART 2. PRODUCTS 21 PERFORMANCE REQUIREMENTS A Construment RPA TO. 22 PATHWAYS A Summitally Primovel Date PART 1- DENERAL

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Raceway Fillings Specifically designed for raceway type youd in Project HNC: Type (IPC-IG-IV)C, conjulying with HBMA YC) and UL 651 unlose conversion indicated.

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MODUS, INC,

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City of Cupertino General Notes for Temporary Traffic Control (TTC) Plan

As of September 26, 2006, the California Manual on Uniform Traffic Control Devices (MUTCD) has been combined with the Federal Highway Administration (FHWA) MUTCD 2003 and the California Supplement (May 20, 2004). Chapter 6, of the *California MUTCD* covers TTC typical setups and the use within public right-of-way.

As a traffic control practitioners, the City expects the Contractor to design and provide a TTC plan with high-level warning devices, channeling cones, flashing arrow boards, and signing and be able to install these items as shown on the approved plan. In addition, it is acceptable to contract a responsible signing and striping company for TTC designing and all updates, which complies with the *California MUTCD*.

- 1. Twenty-four (24) hours prior to setting up any TTC zone, the Contractor SHALL call the Public Works Inspector for proper signing and setup approval. The set up shall match the approved TTC or a "STOP WORK" notice will be issued. The Inspector's number is 408.777.3104.
- Signs used for stationary or temporary traffic control zone, may be fabricated from fiberglass reinforced plastic, metal, reflective mesh, or other reflective material as approved by the Assistant City Engineer or acting agent. Absolutely, no *paper signs* shall be allowed.
 - a. Signs shall be in good condition, no tears, not worn out, or no missing reflective properties.
 - b. Typical TTC setup and other beneficial material have been printed in the 2006 Work Area Traffic Control Handbook (WATCH). The 2006 WATCH guide is in conformance with *California MUTCD*.
- 3. All TTC signing shall be STANDARD / CONVENTIONAL in size.
- 4. Channeling cones shall be 28" in height and in good clean condition. Reflective sheeting is advisable and mandatory when left overnight or for night work.
- 5. Each high-level warning device shall have flags and at least one (1) cone on the left vehicle approach side. In some cases, barricades may be required, however when left overnight or for night work, the device shall have a flashing beacon.
- 6. In most cases, there may be a special need to protect bicycles and pedestrians, which are not fully covered in Part 6 of the MUTCD. Special bike and pedestrian signage shall be required by the City of Cupertino.
- 7. Construction signing shall NOT be placed in bike lane or in pedestrian walkway, unless the bike lane, sidewalk, or pedestrian path has been APPROVED for closure.
- 8. Construction signing shall NOT be installed on traffic signal poles. It is okay to install construction signs on City owned electroliers.

Common TTC Signing (California in parentheses): W20-1 (C23) Road Work Ahead, W9-3 (C20) XXX Lane Closed Ahead (L, R, Center, Bike), C30 (CA) Lane Closed, G20-2 (C14) End Road Work, SC11 (CA) Bike-lane-Closed, W16-1 Share the Road (black on yellow), R9-9 Sidewalk Closed (black on white), R9-11(L,R) Sidewalk Closed Ahead (black on white), C9 (CA) Flagger (w/stop paddle), W4-2 (W11) lane drop.

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

| District | Distance Between Signs** | | |
|---|--------------------------|------------|------------|
| Road Type | Α | В | С |
| Urban (low speed) - 25 mph or less*** | 100 feet | 100 feet | 100 feet |
| Urban - more than 25 mph to 40 mph*** | 250 feet | 250 feet | 250 feet |
| Urban (high speed) - more than 40 mph*** | 350 feet | 350 feet | 350 feet |
| Rural | 500 feet | 500 feet | 500 feet |
| Expressway / Freeway | 1,000 feet | 1,500 feet | 2,640 feet |

* Spood 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.)

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

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. Taper Length Criteria for Temporary Traffic Control Zones

| Type of Taper | Taper Length |
|---------------------------------|-----------------------------------|
| Merging Taper | at least L |
| Shifting Taper | at least 0.5 L |
| Shoulder Taper | at least 0.33 L |
| One-Lane, Two-Way Traffic Taper | 50 feet minimum, 100 feet maximum |
| Downstream Taper | 50 feet minimum, 100 feet maximum |

Note: Use Table 6C-4 to calculate L

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

| | Minimum Taper Length** | | | |
|------------|---------------------------------|---------------------------|---------------------------|-----------------------------|
| Speed* | for Width of Offset 12 feet (W) | | | |
| S (mph) | 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 |
| 75 | 900 | 450 | 300 | 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=WS²/60

For speeds of 45 mph or more, L=WS

Where:L = taper length in feetW = width of offset in feetS = posted speed limit, off-peak 85th-percentile speed prior to workstarting, or the anticipated operating speed in mph

*** - Maximum downstream taper length is 100 feet. See Section 6C.08.

Table 6C-4. Formulas for DeterminingTaper Length

| Speed (S) | Taper Length (L) in fee | |
|----------------|-------------------------|--|
| 40 mph or less | $L = \frac{WS^2}{60}$ | |
| 45 mph or more | L= WS | |

Where: L = taper length in feet

W = width of offset in feet

S = posted speed limit, or off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

Table 6C-101(CA). Stopping Sight Distance as a Function of Speed on Downgrades. (Used as suggested longitudinal buffer space length or location for flagger station)

| Speed | % Downgrade (Buffer Space) | | | |
|-------|----------------------------|---------------|---------------|--|
| (mph) | -3% (feet) | -6% (feet) | -9% (feet) | |
| 20 | 116 | 120 | 126 | |
| 25 | 158 | 165 | 173 | |
| 30 | 205 | 215 | 227 | |
| 35 | 257 | 271 | 287 | |
| 40 | 315 | 333 | 354 | |
| 45 | 378 | 400 | 427 | |
| 50 | 446 | 474 | 507 | |
| 55 | 520 | 553 | 593 | |
| 60 | 598 | 638 | 686 | |
| 65 | 682 | 728 | 785 | |
| 70 | 771 | 825 | 891 | |
| 75 | 866 | 927 | 1003 | |

* Exhibit 3-2. A Policy on Geometric Design of Highways and Streets, AASHTO, 2001, p.115.

In the Santa Clara Valley, storm drains flow directly to our local creeks, and on to San Francisco Bay, with no treatment.

Storm water pollution is a serious problem for wildlife dependent on our waterways and for the people who live near polluted streams or baylands.

Proper management of construction sites reduces pollution significantly.

This sheet summarizes the "Best Management Practices" (BMPs) for storm water pollution prevention.

ORDINANCE OF THE CITY OF CUPERTINO FOR STORM WATER POLLUTION **PREVENTION & WATERCOURSE** PROTECTION: Chapter 9.18

9.18.040 Discharge into the storm drain prohibited It is unlawful to cause, allow, or permit to be discharged, any discharge not composed entirely of stormwater to the storm drain system or to surface waters or to any location where it would contact or eventually be transported to surface waters, including flood plain areas, unless specifically called out in the Municipal Regional Permit as an exempt or conditionally exempt discharge.

9.18.070 Accidental Discharge

All persons shall notify the Director of Public Works immediately upon accidentally discharging pollutants of concern to enable countermeasures to be taken by the City to minimize damage to storm drains and the receiving waters. Initial notification shall be followed, within five (5) business days of the date of occurrence, by a detailed written statement describing the causes of the accidental discharge and the measures being taken to prevent future occurrences. Such notification will not relieve persons of liability for violations of this chapter or for any fines imposed on the City on account thereof under Section 13350 of the California Water Code, or for violation of Section 5650 of the California Fish and Wildlife Code, or any other applicable provisions of State or Federal laws.

9.18.220 Violation*

Any person who violates any provision of this Chapter shall be guilty of a misdemeanor and upon conviction thereof shall be punished as provided in Chapter 1.12 of the City of Cupertino Municipal Code.

Chapter 1.12: General Penalty, Section 1.12.010, paragraph D, states*:

Unless otherwise specified by this code, an infraction is punishable by:

- A fine not to exceed \$100 for a first violation
- A fine not to exceed \$200 for a second violation
- A fine not to exceed \$500 for a third violation of the same chapter within one year.

9.18.240 Civil penalty for illicit discharges*

Any person who discharges pollutants, in violation of this Chapter, by the use of illicit connections shall be civilly liable to the City in a sum not to exceed twenty-five thousand dollars per day per violation for each day in which such violation occurs.

*Excerpts – For complete CODE language refer to the City of Cupertino Municipal Code.

Cupertino Building Dept:

- 408-777-3228 Public Works Dept: 408-777-3354 Santa Clara County **Recycling Hotline:** 800-533-8414 www.reducewaste.org www.recyclestuff.com
- Small Business Hazardous Waste: 408-299-7300
- Cupertino Sanitary Sewer Distr 408-253-7071
- Santa Clara Valley Urban Runoff Pollution Prevention Prgm 800-794-2482
- State Office of Emergency Services 1-800-852-7550 (24 hrs)
- Report spills to 911

General Construction and Site Supervision

Storm Drain Pollution from **Construction Activities**

Construction sites are common sources of storm water pollution. Materials and wastes that blow o wash into a storm drain, gutter, or street have a direct impact on local creeks and the Bay. As a contractor, or site supervisor, owner or operator of a site, you may be responsible for any environmental damage caused by your subcontractors or employees.

General Principles

- Keep an orderly site and ensure good housekeeping practices are used.
- Maintain equipment properly.
- Cover materials when they are not in use. Keep materials away from streets, storm
- drains and drainage channels. Ensure dust control water doesn't leave site
- or discharge to storm drains. Advance Planning To Prevent Pollution Schedule excavation and grading activities
- for dry weather periods. To reduce sol erosion, plant temporary vegetation or place other erosion controls before rain begins. Use the Erosion and Sediment Control Manual, available from the Regional Water Quality Control Board, as a reference.
- Control the amount of runoff crossing your site (especially during excavation!) by using berms or temporary or permanent drainage ditches to divert water flow around the site Reduce stormwater run off velocities by constructing temporary check dams or berms where appropriate
- Train your employees and subcontractors. The city can provide brochures about these issues for you to distribute to workers at your construction site. Inform your subcontractors about the stomwater requirements and their own responsibilities. Use Blueprint for a Clear Bay, a construction best management ractices guide available at our Building Dept. counter.

Good House keeping Practices

- Designate one area of the site for auto parking. vehicle refueling, and routine equipment maintenance. The designated area should be well away from streams or storm drain inlets, bermed if
- necessary. Make major repairs off site. To prevent off-site tracking of dirt, provide entrances with stabilized aggregate surfaces. Or provide a tire wash area.
- Keep materials out of the rain prevent runoff contamination at the source. Cover exposed piles of soil or construction materials with plastic sheeting or temporary roofs. Before it rains, sweep and remove materials from surfaces that drain to
- storm drains, creeks, or channels, Contain all litter, food wrappers, bottles and cans - Place lidded trash and recycling bins around the site.
- Clean up leaks, drips and other spills immediately so they do not contaminate soil or groundwater or leave residue on paved surfaces. Use dry cleanup methods whenever possible. If you must use water, use just enough to keep the dust down.
- Cover and maintain dumpsters Place dumpsters under roofs or cover with tarps or plastic sheeting secured around the outside of the dumpster. Never clean out a dumpster by hosing it
- down on the construction site. Place portable toilets away from storm drains. Make sure portable toilets are in good working order. Check frequently for leaks.
- Materials/Waste Handling
- Practice Source Reduction -- minimize waste when you order materials. Estimate carefully.
- Recycle excess materials, whenever possible such as concrete, asphalt, scrap metal, solvents, degreasers, cleared vegetation, paper, rock, and vehicle maintenance materials such as used oil. antifreeze, batteries, and tires,
- www.reducewaste.org for info Dispose of all wastes properly. Materials that cannot be recycled must be taken to an appropriate landfill or disposed of as hazardous waste. Never bury waste materials or leave then in the street or near a creek or stream bed.
- In addition to local grading and building permits. you will need to obtain coverage under the State's General Construction Activity Stormwater Permit if your construction site's disturbed area totals 5 acres or more. Information on the General Permit can be obtained from the Regional Water Quality

acre as of Mar. 2003.)

Painting and Application of Adhesives

Solvents, and Adhesives

should be recycled when possible, or disposed of properly to prevent these materials from flowing into storm drains and watercourses.

Handling Paint Products

Keep all liquid paint products and wastes away from the gutter, street, and storm drains.

Painting Cleanup

- Never clean brushes or rinse paint containers into a street, gutter, storm drain, French drain, or creek.
- For water-based paints, paint out brushes to the extent possible, and rinse into an inside sink drain that goes to the sanitary sewer.
- General For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent. Filter and reuse thinners and solvents where possible. Dispose of excess liquids and residue as hazardous waste.
- When thoroughly dry, empty paint cans, used brushes, rags, and drop doths may be disposed of as garbage.

Donate excess paint (call 299-7300 to donate.)



IMM BORDEN, RCE 45512 DIRECTOR OF PUBLIC WORKS

APPROVED BY

Solvents and Storm Drain Pollution from Paints. All paints, solvents, and adhesives contain chemicals that are harmful to wildlife in local creeks, San Francisco Bay, and the Pacific Ocean. Toxic chemicals may come from liquid or solid products or from cleaning residues or rags. Paint material and wastes, adhesives and cleaning fluids

- contractor.
 - with high-pressure water, block storm drains. into soil. Or, check with Cupertino Sanitary washwater and dispose of it in a sanitary be required.
 - Washwater from painted buildings constructed before 1978 can contain high amounts of Lead, even if paint chips are not present. Before you begin stripping paint or under high pressure, test paint for lead by taking paint scrapings to a local laboratory. (See Yellow Pages for a state-certified laboratory.)
 - If there is loose paint on the building, or if the paint tests positive for lead, block storm drains. Check with Cupertino Sanitary District to the sanitary sewer, or if you must send it offsite for disposal as hazardous waste.

Paint Disposal, Return or Donation

- Dispose of unwanted liquid paint, thinners. solvents, glues, and deaning fluids as hazardous waste (call the Small Business Hazardous Waste Prgm: 299-7300).
- Or Return to supplier. (Unopened cans of paint may be able to be returned. Check with the vendor regarding its "buy-back" policy.)



Control Board. (This criteria will change to one

Landscaping, Gardening, and Pool Maintenance

- Lands caping/Garden Maintenance Protect stockpiles and landscaping materials from wind and rain by storing them under tarps or secured plastic sheeting.
- Schedule grading and excavation projects during dry weather
- Use temporary check dams or ditches to divert runoff away from storm drains.
- Protect storm drains with sandbags, gravelfilled bags, straw wattles, or other sediment controls
- Re-vegetation is an excellent form of erosion control for any site Store pesticides, fertilizers, and other
- chemicals indoors or in a shed or storage cabinet Use pesticides sparingly, according to
- instructions on the labe. Rinseempty containers, and use rinsewater as product Dispose of rinsed, empty containers in the trash. Dispose of unused pesticides as hazardous waste
- In Cupertino, residents with curbside recycling can collect lawn, garden and tree trimmings in yardwaste toters. Yardwaste will be collected and composted by the city's contractors. Residents are encouraged to compost vard waste on-site themselves. Or take yard waste to a land fill where it will be composted
- Landscape contractors should take clippings and pruning waste to a landfill that composts yard waste (BFI's Newby Island and Zanker Rd. landfill are the nearest)
- Do not blow or rake leaves into the street

Storm Drain Pollution from Landscaping and Swimming Pool Maintenance Many landscaping activities expose soils and increase the likelihood that earth and garden chemicals will run off into the storm drains during irrigaton or when it rains. Swimming pool water containing chlorine and copper-based algaecides should never be discharged to storm drains. These chemicals are toxic to aquatic life.

Pool/Fountain/Spa Maintenance Draining pools or spas

When it's time to drain a pool, spa, or fountain please be sure to call the Cupertino Sanitary District before you start for further guidance on flow rate restrictions, backflow prevention, and handling special cleaning waste (such as acid wash). Discharge flows should be kept to the low levels typically possible through a garden hose Higher flow rates may be prohibited by local ordinance.

- Never discharge pool or spa water to a street or storm drain; discharge to a sanitary sewer cleanout
- If possible, when emptying a pool or spa, let chlorine dissipate for a few days and then recycle/reuse water by draining it gradually onto a landscaped a rea.
- Do not use copper-based algaecides. Control algae with chlorine or other alternatives, such as sodium bromide.

Filter Cleaning

- Never clean a filter in the street or near a storm drain. Rinse cartridge and diatomaceous earth filters onto a dirt area. and spade filter residue into soil. Dispose of spent diatomaceous earth in the garbage.
- If there is no suitable dirt area, call Cupertino Sanitary for instructions on discharging filter backwash or rinsewater to the sanitary sewer.

Earth-Moving Activities

Storm Drain Pollution from Earth-Moving Activities

Soil excavation and grading operations loosen large amounts of soil that can flow or blow into storm crains when handled improperly. Sediments in runoff can dog storm drains, smother aquatic life, and cestroy habitats in creeks and the Bay. Effective erosion control practices reduce the amount of runof crossing a site and slow the flow with check dams o roughened ground surfaces.

Practices During Construction

- Remove existing vegetation only when absolutely necessary. Plant temporary vegetation for erosion control on slopes or where construction is not immediately planned.
- Protect downslope drainage courses, streams, and storm drains with wattles, or temporary drainage swales. Use check dams or ditches to divert runoff around excavations. Refer to the Regional Water Quality Control Board's Erosion and Sediment Control Field Manual for proper erosion and sediment control measures.
- Cover stockpiles and excavated soil with secured tarps or plastic sheeting.



The property owner and the contractor share ultimate responsibility for the activities that occur on a construction site. You may be held responsible for any environmental damage caused by your subcontractors or employees.

The Project Contractor is responsible for removal of all BMP Facilities located within the Public Right of Way upon project final inspection.

drain.

Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and

Chemical paint stripping residue, and chips and dust from marine paints, or paints containing lead, mercury or tributyl tin must be disposed of as hazardous wastes. Lead based paint removal requires a state-certified

When stripping or cleaning building exteriors Direct washwater onto a dirt area and spade District to find out if you can mop or vacuum the sewer drain. Sampling of the washwater may

cleaning pre-1978 building exteriors with water

to determine whether you may discharge water

Roadwork and 6 Paving

General Business Practices

- Develop and implement erosion/sediment control plans for roadway embankments.
- □ Schedule excavation and grading work during dry weather.
- Check for and repair leaking equipment. Perform major equipment repairs at designated areas in your maintenance yard, where cleanup is easier. Avoid performing
- equipment repairs at construction sites. U When refueling or when vehicle /e quipment maintenance must be done on site, designate a location away from storm drains and creeks.
- Do not use diesel oil to lubricate equipment parts or clean equipment.
- Recycle used oil, concrete, broken a sphalt, etc. whenever possible, or dispose of properly. (www.recyclestuff.com for list of recycling companies.)

Asphalt/Concrete Removal

- Avoid creating excess dust when breaking asphalt or concrete.
- After breaking up old pavement, be sure to remove all chunks and pieces. Make sure broken pavem ent does not com e in contact with rainfall or runoff.
- U When making saw cuts, use as little water as possible. Shovel or vacuum saw-cut slurry and remove from the site. Cover or protect storm drain inlets during saw-cutting. Sweep up, and properly dispose of, all residues.
- Sweep, never hose down streets to clean up tracked dirt. Use a street sweeper or vacuum truck. Do not dump vacuumed liquor in storm drains.

Storm Drain Pollution from Roadwork

Road paving, surfacing, and pavement removal happen right in the street, where there are numerous opportunities for a sphalt, saw-cut slurry, or excavated material to illegally enter storm drains. Extra planning is required to store and dispose of materials properly and guard against pollution of storm drains, creeks, and the Bay.

During Construction

- Avoid paving and seal coating in wet weather, or when rain is forecast, to prevent fresh materials from contacting stormwater runoff
- Cover and seal catch basins and manholes when applying seal coat, slurry seal, fog seal, or similar materials.
- Protect drainage ways by using earth dikes, sand bags, or other controls to divert or trap and filter runoff.
- Never wash excess material from exposedaggregate concrete or similar treatments into a street or storm drain. Collect and recycle, or dispose to dirt area.
- Cover stockpiles (asphalt, sand, etc.) and other construction materials with plastic tarps. Protect from rainfall and prevent runoff with temporary roofs or plastic sheets and berms
- Park paving machines over drip pans or absorbent material (cloth, rags, etc.) to catch drips when not in use.
- Clean up all spills and leaks using "dry" methods (with absorbent materials and/or rags), or dig up, remove, and properly dispose of contaminated soil.
- Collect and recycle or appropriately dispose of excess abrasive gravel or sand. ???
- Avoid over-application by water trucks for dust control.

Fresh Concrete and Mortar Application

Storm Drain Pollution from Fresh Concrete and Mortar Applications

Fresh concrete and cement-related mortars that wash into lakes, streams, or estuaries are toxic to fish and the aquatic environment. Disposing of these materials to the storm drains or creeks can block storm drains, causes serious problems, and is prohibited by law.

General Business Practices

- Wash out concrete mixers only in designated washout areas in your yard, away from storm drains and waterways, where the water will flow into a temporary waste pit in a dirt area. Let water percolate through soil and dispose of settled, hardened concrete as garbage. Whenever possible, recycle washout by pumping back into mixers for reuse.
- Wash out chutes onto dirt areas that do not flow to streets or drains.
- Always store both dry and wet materials under cover, protected from rainfall and runoff and away from storm drains or waterways. Protect dry materials from wind.
- Secure bags of cement after they are open. Be sure to keep wind-blown cement powder away from streets, gutters, storm drains, rainfall, and runoff,
- Do not use diesel fuel as a lubricant on concrete forms, tools, or trailers,

9/16 CONSTRUCTION BEST MANAGEMENT PRACTICES



Dewatering Operations

Storm Drain Pollution From Dewatering Activities

Be sure to call your city's storm water inspector at 408-472-9907 before discharging water to street, gutter, or storm drain. Filtration or diversion through a basin, tank, and sediment trap may be required. Reuse water for dust control, irrigation or another on-site purpose to the greatest extent possible.

Check for Sediment or Toxic Pollutants

- Check for odors, discoloration, or an oily sheen on ground water.
- Ask your city inspector whether the groundwater must be tested by a certified labo ratory
- Depending on the test results, you may be allowed to discharge pumped groundwater to the storm drain OR you may be required to discharge to the sanitary sewer or collect and haul the water off-site for treatment and disposal at an appropriate treatment facility.
- When discharging to a storm drain, protect the inlet using a barrier of burlap bags filled with drain rock, or cover inlet with filter fabric anchored under the grate.
- Contact Cupertino Sanitary District at 253-7071 prior to discharging to the sanitary sewer.

Removal of BMP Facilities

During Construction

- Don't mix up more fresh concrete or cement than you will use in a two-hour period. Set up and operate small mixers on tarps or
- heavy plastic drop cloths. When cleaning up after driveway or sidewalk construction, wash fines onto dirt areas, not down the drive way or into the street or storm
- Protect applications of fresh concrete and mortar from rainfall and runoff until the material has dried.
- Wash down exposed aggregate concrete only when the washwater can (1) flow onto a dirt area, (2) drain onto a bermed surface from which it can be pumped and disposed of properly, or (3) be vacuumed from a catchment created by blocking a storm drain inlet. If necessary, divert runoff with temporary berms. Make sure runoff does not reach gutters or storm drains.
- When breaking up pavement, be sure to pick up all the pieces and dispose of properly. Recycle large chunks of broken concrete. See www.reducewaste.org for info on recyclers.
- Never bury waste material. Dispose of small amounts of excess dry concrete, grout, and mortar in the trash.
- Never dispose of washout into the street. storm drains, drainage ditches, or streams.

Heavy Equipment Operation

Storm water Pollution from Heavy Equipmenton Construction Sites

Poorly maintained vehicles and heavy equipment that leak fuel, oil, antifreeze or other fluids on the construction site are common sources of storm drain pollution Prevent spills and leaks by isolating equipment from runoff channels, and by watching for leaks and other maintenance problems. Remove construction equipment from the site as soon as possible.

Site Planning and Preventive Vehicle Maintenance

- Designate one area of the construction site, well away from stream s or storm drain inlets, for auto and equipm entparking, refueling, and routine vehicle and equipment maintenance. Contain the area with berms, sand bags, or other barriers.
- Maintain all vehicles and heavy equipment In spect frequently for and repair leaks
- Perform major maintenance, repair jobs, and vehicle and equipment washing off-site, where cleanup is easier.
- If you must drain and replace motoroil, radiator coolant or other fluids on site use drip pans or drop cloths to catch drips and spills. Collect all spent fluids, store in separate containers, and properly dispose as hazardous waste (recycle whenever possible
- Do not use diesel oil to lubricate equipment parts or clean equipment. Use only water for any onsite cleaning.
- Cover exposed fifth wheel hitches and other oily or greasy equipment during rain events.
- Spill Cleanup Clean up spills im mediately.
- Neverhose down "dirty" pavement or impermeable surfaces where fluids have spilled Use dry cleanup methods (absorbent materials, cat litter and/or rags) whenever possible and properly dispose of absorbent m aterials
- Sweep up spilled dry materials immediately. Never attempt to "wash them away" with water, or bury them
- Use as little water as possible for dust control. Ensure water used doesn't leave silt or discharge to storm drains
- Clean up spills on dirt areas by digging up and properly disposing of contaminated soil Call 911 for significant spills
- If the spill poses a significant hazard to hum an health and safety property or the environment, you must also report it to the State Office of Emergency Services.



Small Business





Pollution Prevention Program

UPDATED SEPTEMBER 2016

SHEETS

SHEET:

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DEPARTMENT OF PUBLIC WORKS