



Real Estate Assets

City Consent Application

For installation / modification of Telecommunication antenna facility on City owned property

5/31/17

Date

The City of San Diego
Real Estate Assets Department
1200 Third Avenue, Suite 1700
San Diego, California 92101

RE: Site Name: AT&T - Black Mountain Rd - SD0388 Project # 547344

Site Address: 12865 Black Mountain Road, San Diego, CA 92129, San Diego (the "Property")

Agreement: Agreement dated _____ (the "agreement") between The City of San Diego ("City") and AT&T Mobility, ("Lessee" or "Permittee").

AT&T Mobility is seeking Consent from the City to perform the following to the above
Applicant's Name/Carrier
referenced site:

☒ Modify, upgrade or changes to existing equipment or Site as describe in the attached plans /
photos.

☐ Installation of a New Wireless Communication Facility on City owned property.

☐ Apply for new Permit/New Agreement on existing facility – **NO** modifications or changes to
Existing equipment or site.

Describe proposed project below:

Remove and Replace (1) Antenna per sector, total of (3). Install (2) RRUs per sector, total of (6) & (1) filter per sector, total of (3), install (1) surge protector, (1) fiber trunk & (2) DC power cables.

Pursuant to Improvements and Alterations, section of the above referenced agreement, "Lessee / Permittee shall not construct any improvements, structures or installations of the Premises or make any alterations to the Premises (with the exception of equipment replacement or repairs) without City's prior written approval."

In order to comply with such requirements, AT&T Mobility would like to request City's consent to submit to Development Services Department for review of the proposed items above.

Sincerely, Erin Hicks, agent for AT&T Mobility

Applicant Signature: C. C. Ai

☐ A one-time, **non-refundable Processing Fee** (\$4,920 for long term agreements - \$980 for Short term or ROE Permits) payable to "City Treasure", MUST be paid within 1 week of feasibility walk. This fee applies even if the agreement is never executed.

City Park & Rec. Department has provided its consent and approval to allow applicant to submit application for Required Permits needed for the proposed items listed herein, with the understanding that the Department will be allowed to review the improvement plans prior to any permits being issued and that a pre-construction meeting will be conducted with staff before any work begins, if required.

6/1/17 Date Casey Smith Deputy Director Print Name & Title S 8 Signature

City of San Diego, acknowledgement and consent for 12865 BLK MTN. RD. Site Location

6/5/17 Date CYNELIA THOMPSON Print Name & Title Manager, Permit Issues Signature

☐ Approved and Stamped plans received and attached
☐ Scan as Amendment to Agreement



Real Estate Assets

CODE COMPLIANCE

2016 CALIFORNIA BUILDING CODE
2016 CALIFORNIA RESIDENTIAL CODE
2016 CALIFORNIA TITLE 24
2016 CALIFORNIA FIRE CODE
2016 CALIFORNIA ENERGY CODE
2016 CALIFORNIA PLUMBING CODE
2016 CALIFORNIA MECHANICAL CODE
2016 CALIFORNIA ELECTRICAL CODE
TA-222-G CODE

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.

PROJECT DESCRIPTION

AT&T WIRELESS PROPOSES TO MODIFY AN EXISTING WIRELESS INSTALLATION. THE SCOPE WILL CONSIST OF THE FOLLOWING:

- REPLACE AND REPLACE (1) ANTENNA PER SECTOR, TOTAL OF (3)
- INSTALL (2) BBU PER SECTOR, TOTAL OF (6)
- INSTALL (1) WCS FILTER PER SECTOR, TOTAL OF (3)
- INSTALL (1) SURGE PROTECTOR
- INSTALL (1) FIBER TRUNK AND (2) DC POWER CABLES
- INSTALL (1) DUS41 WITHIN (1) RBS6801 IN (1) LIE PUELLI CABINET
- INSTALL (1) RBS6801 WITHIN (1) MSA 12 IN (1) LIE PUELLI CABINET
- INSTALL (1) RECTIFIER IN (1) POWER PLANT

PROJECT VALUATION = \$70,000.00

SITE INFORMATION

PROPERTY OWNER: CITY OF SAN DIEGO
1280 3RD AVENUE
SAN DIEGO, CA 92101

APPLICANT: AT&T WIRELESS
5738 PACIFIC CENTER BLVD.
SAN DIEGO, CA 92121

APPLICANT REPRESENTATIVE: M&M TELECOM INC.
8888 MINOZA DRIVE
CARLSBAD, CA 92011

ZONING JURISDICTION: CITY OF SAN DIEGO

ZONING DISTRICT: RS-1-14

LATITUDE (NAD 83): 32° 57' 11.23" N

LONGITUDE (NAD 83): 117° 07' 41.18" W

PARCEL #: 315-490-04

OCCUPANCY GROUP: U

CONSTRUCTION TYPE: 8-B

POWER COMPANY: SDG&E

TELEPHONE COMPANY: AT&T

OTHER WIRELESS FACILITIES: VERIZON

PROJECT TEAM

PROJECT MANAGER:
MARIA HERRERA
M&M TELECOM INC.
8888 MINOZA DRIVE
CARLSBAD, CA 92011
PHONE: (760) 872-1983
EMAIL: MARIA.HERRERA@MTELECOMINC.COM

ENGINEERING:
TELECOM MANAGEMENT GROUP
14055 AVENUE VENUSTO #10
SAN DIEGO, CA 92138
PHONE: (619) 248-7676
EMAIL: EDGAR.ORTIZ@TELECOMMG.COM

ZONING:
ERIN HICKS
M&M TELECOM INC.
8888 MINOZA DRIVE
CARLSBAD, CA 92011
PHONE: (760) 872-1983
EMAIL: ERIN.HICKS@MTELECOMINC.COM

ENVIRONMENTAL:
DAVID TAN
ENVIRONMENTAL
2525 DULUTH HWY. 120, SUITE 101
PALM SPRING, CA 92262
PHONE: (951) 266-4670
EMAIL: DAVID.TAN@ENVIRONMENTAL.COM

SITE ACQUISITION:
LYNN SWEETSHED
M&M TELECOM INC.
8888 MINOZA DRIVE
CARLSBAD, CA 92011
PHONE: (760) 872-1983
EMAIL: LYNN.SWEETSHED@MTELECOMINC.COM

CONSTRUCTION:
ROBERT POLITO
GOODMAN NETWORKS
PHONE: (408) 307-6962
EMAIL: RPOLITO@GOODMANNETWORKS.COM

RF ENGINEER:
JONAS SWEETSHED
AT&T
5738 PACIFIC CENTER BLVD.
SAN DIEGO, CA 92121
PHONE: (619) 782-2161
EMAIL: JONAS@ATT.COM



WEST RANCHO PENASQUITOS

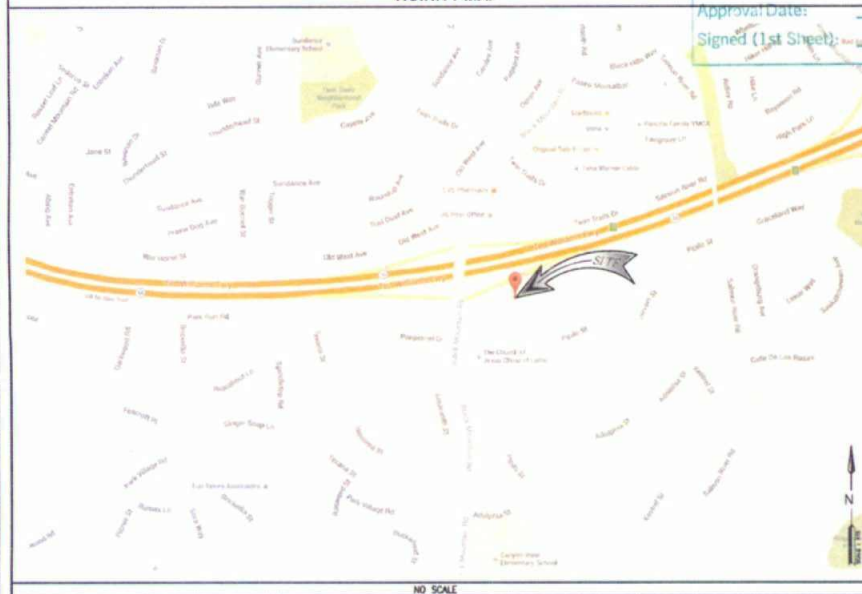
SD0388

LTE 3C (WCS) / LTE 4C (AWS)

FA NUMBER: 10085061

12865 BLACK MOUNTAIN RD
SAN DIEGO, CA 92129

VICINITY MAP



NO SCALE

DRIVING DIRECTIONS FROM AT&T OFFICE

DIRECTIONS FROM AT&T OFFICE:

HEAD NORTHEAST ON PACIFIC CENTER BLVD TOWARD WIRELESS WAY. TURN RIGHT ONTO PACIFIC HEIGHTS BLVD. USE THE LEFT 2 LANES TO TURN LEFT ONTO MIRA MESA BLVD. USE THE LEFT 2 LANES TO TURN LEFT ONTO BLACK MOUNTAIN RD. TURN RIGHT ONTO THE STATE HWY 56 E RAMP.

DESTINATION WILL BE ON THE RIGHT.

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE, NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR SITE MODIFICATIONS.

AT&T COMPLIANCE: _____ DATE: _____

AT&T BY ENGINEER: _____ DATE: _____

AT&T BY ENGINEER: _____ DATE: _____

AT&T BY ENGINEER: _____ DATE: _____

AT&T BY ENGINEER: _____ DATE: _____

AT&T BY ENGINEER: _____ DATE: _____

AT&T BY ENGINEER: _____ DATE: _____

AT&T BY ENGINEER: _____ DATE: _____

AT&T BY ENGINEER: _____ DATE: _____

CITY OF SAN DIEGO: DEVELOPMENT SERVICES DEPARTMENT
ENTITLEMENTS-WIRELESS COMMUNICATION FACILITIES

APPROVED EXHIBIT "A"
PROCESS APPROVAL

This is a Zoning Use Certificate approval. This does not replace any required construction permits. See approval notes within plan set for more details.

Project Number: 547347

Approval Date: 12/15/17

Signed (1st Sheet): [Signature]

DRAWING INDEX

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A2	ENLARGED SITE PLAN
A3	NEW ENLARGED EQUIPMENT PLAN
A4	EXISTING AND NEW ENLARGED ANTENNA PLAN AND ANTENNA SCHEDULE
A5	SITE ELEVATIONS
A6	SITE DETAILS
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E1	ELECTRICAL PLAN "B" SINGLE-LINE DIAGRAM
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E3	ELECTRICAL "DC" ONE-LINE DIAGRAM
E4	GROUNDING-DETAILS



Know what's below.
Call before you dig.

NOTE:
48 HOURS PRIOR TO ORIGINAL CONTRACTOR TO NOTIFY ALL UTILITY COMPANIES TO LOCATE ALL UNDERGROUND UTILITIES.

NO.	REVISION	DATE
1	ISSUED FOR PERMIT	05-10-17
2	REVISED	05-10-17
3	REVISED	05-10-17
4	REVISED	05-10-17
5	REVISED	05-10-17
6	REVISED	05-10-17
7	REVISED	05-10-17
8	REVISED	05-10-17
9	REVISED	05-10-17
10	REVISED	05-10-17



TITLE SHEET

SD0388
WEST RANCHO PENASQUITOS
12865 BLACK MOUNTAIN RD
SAN DIEGO, CA 92129
LTE 3C/LTE 4C



Project Number: _____
Drawn by: ERO/RP
Checked by: ERO
Sheet No: _____

T1

GENERAL CONSTRUCTION NOTES

- FOR THE PURPOSE OF CONSTRUCTION DRAINAGE, THE FOLLOWING DEFINITIONS SHALL APPLY:
GENERAL CONTRACTOR - SEE PROJECT PLAN IN TITLE SHEET
SUBCONTRACTOR - CONSTRUCTION (CONSTRUCTION)
OWNER - "A&T"
- ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND "XIST" PROJECT SPECIFICATIONS.
- GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL VISIT THE SITE AND SHALL FURNISHANCE PERSONALLY WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING. ADHERED WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, ORDINANCES, AND EXISTING. THAT THE WORK MAY BE ACCESSED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER PRIOR TO THE COMMENCEMENT OF WORK.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL OBTAIN ALL APPROPRIATE PERMITS AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWS. ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
- ALL WORK OBTAINED OUT SHALL COMPLY WITH ALL APPLICABLE NATIONAL AND LOCAL SPECIFICATIONS AND LOCAL JURISDICTIONS. CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- PLANS ARE NOT TO BE MODIFIED. THESE PLANS ARE INTENDED TO BE A DISCREPANCY. OUTLINE. OUTLINE. NOTES. SPACING BETWEEN EQUIPMENT IS THE UNLESS REQUIRED. OTHERWISE, IT IS CRITICAL. NO FIELD VARIATIONS. OTHERWISE, THERE WILL BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO INDICATE DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PROVIDED BY THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
- THE SUBCONTRACTOR 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 SUBCONTRACTOR SHALL PROVIDE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE ENGINEER PRIOR TO PROCEEDING.
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA. ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REGULATIONS.
- GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER SUBCONTRACTORS.
- CONSTRUCTION SHALL BE DONE IN A WORKMANSHIP MANNER BY COMPETENT EXPERIENCED PERSONNEL IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL WORKMANSHIP SHALL BE LABO PLANNED AND TRUE AS INDICATED ON THE DRAWINGS.
- SEAL PENETRATIONS THROUGH FIVE INCH AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTIONS. SUBCONTRACTOR SHALL KEEP AREA CLEAR, HAZARD FREE, AND VENTILATED.
- WORK PROGRESS COMPLETED IS REPRESENTED BY LIGHT SHOWN LINES AND NOTES. THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHOWN LINES AND NOTES. SUBCONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXTENSIVE CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
- SUBCONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
- THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, FURNITURE, CLASSES, LANDSCAPING AND STRUCTURES. ANY CHANGES MUST BE APPROVED BY SUBCONTRACTOR'S. COPIES TO THE SATISFACTION OF THE OWNER.
- THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND SUBCONTRACTORS TO THE SITE AND/OR BUILDING.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
- THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDUM, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
- THE GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A-10-B-BC AND SHALL BE WITHIN 25 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
- ALL EXISTING ACTIVE POWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. EXTREME CAUTION SHOULD BE EXERCISED. SUBCONTRACTOR SHALL OPERATING ON DRILLING TOOLS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. SHALL INCLUDE BUT NOT BE LIMITED TO: ALL FALL PROTECTION, CONFINED SPACE, ELECTRICAL SAFETY, AND TO FENCING A LOCATION.
- ALL EXISTING INACTIVE POWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER AND SUBJECT TO THE APPROVAL OF THE OWNER. OWNER LOCAL UTILITIES.
- THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE OWNER, EQUIPMENT OR MATERIAL, SHALL BE GRADED TO A UNIFORM SURFACE, AND STABILIZED TO PREVENT EROSION.
- SUBCONTRACTOR SHALL MAINTAIN SURVEILLANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTIONS FOR EROSION AND SEDIMENT CONTROL.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FRESHLY EXCAVATED FRESH MATERIAL. SURFACE OF ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT MODIFIED PROCTOR DENSITY UNDER POWER AND STRUCTURES AND 90 PERCENT UNMODIFIED PROCTOR DENSITY IN OPEN SPACES. ALL TECHNIQUES IN PUBLIC RIGHT-OF-WAY SHALL BE BACKFILLED WITH FILLABLE FILL OR OTHER MATERIAL PRE-APPROVED BY THE LOCAL JURISDICTIONS.
- ALL NECESSARY RUBBER, STRAPS, BELTS, STOPS, STOPS, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
- ALL BARRICADES, OPERATING AND MAINTENANCE MATERIALS, CATALYSTS, SHEET DRUMS, AND OTHER BARRICADES SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
- SUBCONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT DRAWINGS TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.

- THE PROPOSED FACILITY WILL BE UNARMED AND DOES NOT REQUIRE PORTABLE WATER OR "XIST" PROJECT, AND IS NOT FOR HUMAN HABITAT (NO HUMAN HABITAT). NO HUMAN HABITAT.
- OCCUPANCY IS LIMITED TO PERSONS UNARMED AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY "XIST" TECHNICIANS.
- NO OUTDOOR STORAGE OF SOLID WASTE CONTAINERS ARE PROHIBITED.
- ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISION "XIST" MODIFY ORDINANCES. TECHNICAL SPECIFICATION FOR CONSTRUCTION OF GRADE/PAVEMENT STREET AND TECHNICAL SPECIFICATION FOR FACILITY "XIST" PROJECT, IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE ORDINANCES, THE ORDINANCES SHALL GOVERN.
- SUBCONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF SUBCONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
- SUBCONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
- INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING MATERIAL OR PROCESSING WITH CONSTRUCTION.
- NO WHITE STRONG LIGHTS ARE PERMITTED. LIGHTING, IF REQUIRED, WILL MEET F.M.I. REQUIREMENTS AND REQUIREMENTS.
- ALL COUPLER CABLE INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
- NO NOISE, VIBRATION, DUST, ODOR, OR VIBRATIONS WILL RESULT FROM THIS FACILITY. (EXCEPT THE NOISE OF THE SITE WILL HAVE A CONTINGENCY).
- NO ADDITIONAL PLUMBING TO BE PROPOSED. EXISTING GAS AND FURNACE TO REMAIN. (EXCEPT THIS NOTE ACCORDING TO THE SITE CONFIGURATION).
- NO LANDSCAPING IS PROPOSED AT THIS SITE. (EXCEPT THIS NOTE ACCORDING TO THE SITE CONFIGURATION).

SITE WORK & DRAINAGE

- GENERAL:
CLEARING, GRUBBING, STUMPING, EROSION CONTROL, SURVEY, LAYOUT, SUBGRADE PREPARATION, AND FRESH GRADING AS REQUIRED TO COMPLETE THE PROJECT WORK SHOWN IN THESE PLANS.
- REFERENCE:
A. DOT (STATE DEPARTMENT OF TRANSPORTATION) STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION-CURRENT EDITION.
B. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS).
C. OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION).
- INSPECTION AND TESTING:
A. FIELD TESTING OF EARTHWORK COMPACTION AND COMPACTION CYCLES SHALL BE PERFORMED BY SUBCONTRACTOR'S INDEPENDENT TESTING LAB. THIS WORK IS TO BE COORDINATED BY THE SUBCONTRACTOR.
B. ALL WORK SHALL BE INSPECTED AND RELEASED BY THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL HAVE THE GENERAL INSPECTION OF THE WORK WITH SPECIFIC CONCERN TO PROPER PERFORMANCE OF THE WORK AS SPECIFIED AND/OR CALLED FOR ON THE DRAWINGS. THE SUBCONTRACTOR'S RESPONSIBILITY TO REMEDY ALL DEFECTS MUST BE COMPLETED WITHIN THE TIME FRAME THAT WOULD MAKE THE WORK ACCESSIBLE OR DIFFICULT TO INSPECT.
- SITE MAINTENANCE AND PROTECTION:
A. PROVIDE ALL NECESSARY JOBSITE MAINTENANCE FROM COMPLETION OF WORK UNTIL COMPLETION OF THE SUBCONTRACT.
B. ADD CHANGES TO THE SITE AND TO EXISTING FACILITIES, STRUCTURES, UTILITIES, AND SERVICES DISCONNECTED TO REMAIN. USE PROTECTIVE MEASURES TO PREVENT EXISTING FACILITIES THAT ARE NOT DESIGNED FOR REMOVAL FROM BEING DAMAGED BY THE WORK.
C. KEEP SITE FREE OF ALL PORTABLE WATER.
D. PROVIDE EROSION CONTROL MEASURES IN ACCORDANCE WITH STATE DOT AND EPA REQUIREMENTS.
E. PROVIDE AND MAINTAIN ALL TEMPORARY FENCING, BARRICADES, WARNING SIGNALS, AND SAFETY DEVICES NECESSARY TO PROTECT AGAINST INJURY FROM PROPERTY DURING THE EXTENSIVE PERIOD OF CONSTRUCTION. REMOVE ALL SUCH DEVICES UPON COMPLETION OF THE WORK.
F. EXISTING UTILITIES, DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED BY THE OWNER OR OTHERS. EXCEPT WHEN PERMITTED IN WRITING BY THE ENGINEER AND THEN ONLY AFTER OBTAINING TEMPORARY UTILITY SERVICES HAVE BEEN PROVIDED.
- PROVIDE A MINIMUM 48-HOUR NOTICE TO THE ENGINEER AND RECEIVE WRITTEN NOTICE TO PROCEED BEFORE INTERRUPTING ANY UTILITY SERVICE.

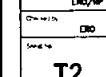
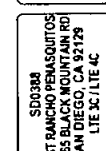
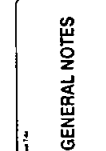
PAVEMENT - PROPOSED

- REPLACE BACKFILL WITH BEST (CLASS A, B, OR C) FREE FROM FRESH LAMPS, REFUSE, STONES, OR OTHER MATERIALS. IN ANY DIMENSION OR OTHER MATERIAL THAT MAY HARM THE BIOMASS MATERIAL. UNDESIRABLE FOR BACKFILL.
- NO-POSSIBLE GRANULAR EMBANKMENT AND BACKFILL WITH BEST (CLASS A, B, OR C) COARSE AGGREGATE. FREE FROM FRESH LAMPS, REFUSE, STONES, OR OTHER MATERIALS. IN ANY DIMENSION OR OTHER MATERIAL THAT MAY HARM THE BIOMASS MATERIAL. UNDESIRABLE FOR BACKFILL.
- POSSIBLE GRANULAR EMBANKMENT AND BACKFILL WITH BEST (CLASS A, B, OR C) COARSE AGGREGATE. FREE FROM FRESH LAMPS, REFUSE, STONES, OR OTHER MATERIALS. IN ANY DIMENSION OR OTHER MATERIAL THAT MAY HARM THE BIOMASS MATERIAL. UNDESIRABLE FOR BACKFILL.
- SELECT STRUCTURAL FILL GRANULAR FILL MATERIAL, MEETING THE REQUIREMENTS OF ASTM D698-03 FOR USE AROUND AND UNDER STRUCTURES. WHERE STRUCTURAL FILL MATERIALS ARE REQUIRED.
- GRANULAR BEDDING AND TRENCH BACKFILL WITH BEST (CLASS A, B, OR C) COARSE AGGREGATE. MEETING THE REQUIREMENTS OF ASTM D698-03 (C, D, OR E) OF 95-100.
- CONFORM AGGREGATE FOR ACCESS ROAD SURFACE COURSE SHALL CONFORM TO ASTM D698-03.
- UNDESIRABLE MATERIAL: NONE AND MODERATELY PLASTIC BUTTS AND CLAYS (LL-40). MATERIALS CONTAINING REFUSE, FRESH LAMPS, UNDESIRABLE BIOMASS MATERIAL, VEGETATIVE MATERIAL, WOOD FRAMES IN EXCESS OF 3 INCHES IN ANY DIMENSION, AND REMAIN AS DETERMINED BY THE CONSTRUCTION MANAGER. TYPICAL THEY WILL BE SOLID CLAYESTY OR AS PT, ML, CH, OR CL, AND SO.
- GEOTEXTILE FACING: MINIMUM 300% OR APPROVED EQUIV.
- PLASTIC WARPING TAP: SHALL BE 100% AND ALSO RESEALING POLYETHYLENE FILM SPECIFICALLY MANUFACTURED FOR WELDING AND LOCATING UNDERGROUND UTILITIES. 8 INCHES WIDE WITH A MINIMUM TENSILE STRENGTH OF 1500 PSI IN BOTH DIRECTIONS AND MANUFACTURED WITH NATIONAL CONSTRUCTION. PLS. BARRIERS OR OTHER MEANS TO ELIMINATE DETECTION BY A METAL DETECTOR WHICH BURIED UP TO 3 FEET DEEP. THE METALLIC CORE OF THE TAP SHALL BE ENCASED IN A PROTECTIVE JACKET OR PREVENTED FROM OTHER MEANS TO PROTECT IT FROM CORROSION. TAP COLOR SHALL BE RED FOR ELECTRIC UTILITIES AND ORANGE FOR TELECOMMUNICATION UTILITIES.

PAVEMENT - EXISTING

- GENERAL:
A. EXISTING EXISTING GENERAL SITE PREPARATION ACTIVITIES, EXISTING EROSION AND STORMY CONTROL, MEASURES, THE WORK AREA SHALL BE CONSTRUCTED AND MAINTAINED IN SUCH CONDITION THAT IN THE EVENT OF RAIN THE SITE WILL BE FIRMED AS SHOWN ON THE DRAWINGS.
- BEFORE ALL SURVEY, LAYOUT, GRADING, AND MATERIALS, EQUIPMENT AND MATERIALS ALL LINES, CANALS, DRAINAGE AND RECOMMENDATIONS NEEDED FOR EXECUTION OF THE WORK.
- CLEAR AND GRUB THE AREA WITHIN THE LIMITS OF THE SITE. REMOVE TREES, BRUSH, STAMPS, RUBBER AND OTHER DEBRIS AND RELOCATE DEBRIS ON OR PROTECTING THROUGH THE SURFACE OF THE SITE AREA TO BE CLEARED.
- REMOVE THE FOLLOWING MATERIALS TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE ORIGINAL SURFACE: ROOTS, STAMPS, AND OTHER DEBRIS, BRUSH, AND RUBBER. EXCAVATED IN OR PROTECTING THROUGH THE ORIGINAL SURFACE. BACK FILL OR FILL THE AREA TO A DEPTH OF NO LESS THAN 8 INCHES, AND REDUCE TO A DEPTH OF 12 INCHES. ALL ROOTS AND OTHER DEBRIS THICKLY EXPOSED.
- REMOVE TOPSOIL, COMPLETELY FROM THE SURFACE UNTIL THE SOIL IS NO LONGER MEETS THE DEFINITION OF TOPSOIL. ADDS MORE TOPSOIL WITH BRUSH OR OTHER UNDESIRABLE MATERIALS.
- EXCEPT WHERE EXCAVATION TO GREATER DEPTH IS INDICATED, FILL DEPRESSIONS RESULTING FROM CLEARING, GRUBBING AND RELOCUTION WORK COMPLETELY WITH SUITABLE FILL.
- REMOVE FROM THE SITE AND DISPOSE IN AN AUTHORIZED LANDFILL ALL DEBRIS RESULTING FROM CLEARING AND GRUBBING OPERATIONS. BURNING WILL NOT BE PERMITTED.
- PRIOR TO DEMOLITION, THOROUGHLY EXAMINE THE AREA TO BE EXCAVATED AND/OR TRENCHES TO VERIFY THE LOCATION OF FEATURES INDICATED ON THE DRAWINGS AND TO ASCERTAIN THE EXISTENCE AND LOCATION OF ANY STRUCTURE, UNDERGROUND STRUCTURE, OR OTHER NOT SHOWN BUT NOW INTERFERE WITH THE PROPOSED CONSTRUCTION. NOTIFY THE CONSTRUCTION MANAGER OF ANY OBSTRUCTIONS THAT WILL PREVENT ACCOMPLISHMENT OF THE WORK AS INDICATED ON THE DRAWINGS.
- SEPARATE AND STOCK PILE ALL EXCAVATED MATERIALS SUITABLE FOR BACKFILL. ALL EXCESS EXCAVATED AND UNDESIRABLE MATERIALS SHALL BE DISPOSED OF OFF-SITE IN A LEGAL MANNER.
- BACKFILL:
A. AS SOON AS PRACTICAL, AFTER COMPLETING CONSTRUCTION OF THE RELATED STRUCTURE, INCLUDING COMPLETION OF THE SPECIFIED UNARMED CURBED FENCED FOR LAST-OR-FINEST CONCRETE BACKFILL THE EXCAVATION WITH APPROVED MATERIAL TO RESTORE THE REQUIRED FINISHED GRADE.
1. PRIOR TO PLACING BACKFILL ABOVE STRUCTURES, ALL FORMS SHALL BE REMOVED AND THE EXCAVATION CLEANED OF ALL TRASH, DEBRIS, AND UNDESIRABLE MATERIALS.
2. BACKFILL BY PLACING AND COMPACTING SUITABLE BACKFILL MATERIAL OR SELECT GRANULAR BACKFILL MATERIAL, WHEN REQUIRED IN UNIFORM HORIZONTAL LAYERS OF NO GREATER THAN 8-INCHES LOOSE THICKNESS AND COMPACTED. UNLESS WHEN ORDERED BY CONTRACTORS ARE LEVEL, THE FILL MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEED A WEIGHT IN LOOSE DRY AND COMPACTED.
3. MAINTAIN THE BATTERY TESTING INDICATES THAT THE CONSTRUCTION HAS NOT EXCEEDED THE SPECIFIED DEPTH. THE SUBSEQUENT LAYER SHALL NOT BE PLACED UNTIL THE SPECIFICATION REQUIREMENTS ARE MET. UNLESS OTHERWISE ORDERED BY THE CONSTRUCTION MANAGER, THE CONSTRUCTION SHALL MAKE SURE THAT APPROPRIATE ACTION IS NECESSARY, SUCH AS GRADING AND GRADING, AROUND DRAINAGE, TO MAINTAIN THE COMPACTED LAYER TO MEET THE UNARMED CONSTRUCTION REQUIREMENTS.
4. THOROUGHLY COMPACT EACH LAYER OF BACKFILL TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE MODIFIED PROCTOR TEST, ASTM D 1557.
3. FRENCH EXCAVATION:
A. UTILITY TRENCHES SHALL BE EXCAVATED TO THE LIMITS AND GRADES SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE GENERAL CONTRACTOR. PROVIDE SHIELDING, SHEETING AND BRACING AS REQUIRED TO PREVENT COLLAPSE OR SLOUGHING OF THE TRENCH WALLS.
B. EXTEND THE TRENCH WITH A MINIMUM OF 6 INCHES BEYOND THE OUTSIDE EDGE OF THE OUTERMOST CURBOUT.
C. WHEN SOFT YIELDING, OR OTHERWISE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, BACKFILL AT THE REQUIRED TRENCH TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE REQUIRED ELEVATION AND BACKFILL WITH GRANULAR BEDDING MATERIAL.
3.4 FRENCH BACKFILL:
A. PROVIDE GRANULAR BEDDING MATERIAL IN ACCORDANCE WITH THE DRAWINGS AND THE UTILITY REQUIREMENTS.
B. NOTIFY THE GENERAL CONTRACTOR 24 HOURS IN ADVANCE OF BACKFILLING.
C. CONDUCT UTILITY CHECK TESTS BEFORE BACKFILLING BACKFILL AND COMPACT TRENCH BEFORE BACKFILLING TRENCH.
D. PLACE GRANULAR BEDDING BACKFILL UNIFORMLY ON BOTH SIDES OF THE CONDUITS IN 8-INCH UNCOMPACTED LIFTS UNTIL 12 INCHES OVER THE CONDUITS. BACKFILL WITH TAMP BACKFILL WITH SPACE AROUND CONDUITS.
E. PROTECT CONDUITS FROM LATERAL MOVEMENT, IMPACT DAMAGE, OR UNWANTED LOADING.
F. ABOUT THE CONDUIT EMBANKMENT TRENCH, PLACE AND COMPACT WATERPROOFING BACKFILL MATERIAL IN 8-INCH UNIFORM LAYERS. PROVIDE LIFTS TO RESTORE THE REQUIRED FINISHED SURFACE.
G. COMPACT FINAL TRENCH BACKFILL TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE EXISTING UNDISTURBED MATERIAL. IMMEDIATELY ADJACENT TO THE TRENCH BUT NO LESS THAN 18 INCHES FROM THE PROTECT OF THE UNARMED BUT DENSITY AS PROVIDED BY THE MODIFIED PROCTOR TEST, ASTM D 1557.
3.5 ADOPTED ACCESS ROAD:
A. CLEAR, GRUB, STUMP AND EXCAVATE FOR THE ACCESS ROAD TO THE LIMITS AND GRADERS INDICATED ON THE DRAWINGS. EXCAVATE TO A DEPTH OF 8 INCHES AND FRESH-FILL ALL FILL, FILL, FILL, SOFT FILL, AND OTHER OBJECTS SHALL BE CONNECTED.
B. THE EXISTING SURFACE SHALL BE COMPACTED TO NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE MODIFIED PROCTOR TEST, ASTM D 1557.
4. AFTER COMPLETION OF THE SURFACE IS COMPLETE, THE GEOTEXTILE FACING (WHICH SHOULD BE INSTALLED TO THE LIMITS INDICATED ON THE DRAWINGS IF JOINTS ARE NOT JOINTS) SHOULD BE LAYED ALONG THE ROADWAY. THE FACING SHALL NOT BE DAMAGED ACROSS THE ROADWAY. PLACE THE EXISTING ROLL IN A SINGLE OPERATOR. ROLLING OUT AS INDICATED AS POSSIBLE.
5. OVERLAPS PERMITTED TO THE ROADWAY WILL BE PERMITTED ON THE COURTESY AND AT LOCATIONS BEYOND THE ROADWAY SURFACE WITH (1) WITHIN THE ROADWAY SURFACE. ONLY ONE OVERLAP SHALL BE PERMITTED. OVERLAPS SHALL BE LOCATED BETWEEN THE COURTESY AND THE SHOULDER. PARALLEL OVERLAPS SHALL BE A MINIMUM OF 3 FEET WIDE.
6. TRANSVERSE (PERPENDICULAR) TO THE ROADWAY OVERLAPS AT THE END OF A ROLL SHALL OVERLAP IN THE DIRECTION OF THE ADOPTED PLACEMENT (PREVIOUS ROLL OR TOP) AND SHALL HAVE A MINIMUM LENGTH OF 3 FEET.
7. ALL OVERLAPS SHALL BE FINISHED WITH STAPLES OR NAILS A MINIMUM OF 16 INCHES LONG TO PROVIDE PERFORMANCE DURING PLACEMENT OF ADJACENT PLS. LONGITUDINAL SEAMS AT 25 FEET CENTERS AND TRANSVERSE SEAMS EVERY 3 FEET.

1	17.00	17.00	17.00
2	17.00	17.00	17.00
3	17.00	17.00	17.00
4	17.00	17.00	17.00
5	17.00	17.00	17.00
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10	17.00	17.00	17.00



D. THE AGGREGATE BASE AND SURFACE COURSES SHALL BE CONSTRUCTED IN LAYERS NOT MORE THAN 4 INCHES (100MM) THICKNESS. AGGREGATE TO BE PLACED ON DESTITUTE FABRIC SHALL BE END-DUMPED ON THE FABRIC FROM THE FRONT END OF THE PAVING MACHINE. EXISTING PREVIOUSLY PLACED AGGREGATE, THE FIRST LIFT SHALL BE ROLLED DOWN TO A THICKNESS OF 8 INCHES PRIOR TO CONSTRUCTION AT THE TOP SHALL COMBINATION, EITHER TRANSPORTING THE AGGREGATE OR GRADING THE AGGREGATE, BE PERMITTED ON THE ROADWAY WITH LESS THAN 4 INCHES OF MATERIAL COVERING THE FABRIC.

E. THE AGGREGATE SHALL BE IMMEDIATELY COMPACTED TO NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST, ASTM D 1557 WITH A TAMPING ROLLER OR WITH A PNEUMATIC-TYRED ROLLER, OR WITH A VIBRATORY MACHINE OR ANY COMBINATION OF THE ABOVE. THE TOP LAYER SHALL BE GIVEN A FINAL ROLLING WITH A THREE-WHEEL OR TANDUM ROLLER.

1.8 FINISH GRADES:

A. PERFORM ALL GRADING TO PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES AND SMOOTH, EVEN SURFACE DRAINAGE OF THE ENTIRE AREA WITHIN THE LIMITS OF CONSTRUCTION. GRADING SHALL BE COMPATIBLE WITH ALL SURROUNDING TOPOGRAPHY AND STRUCTURES.

B. UTILIZE SATISFACTORY FILL MATERIAL, INCLUDING FROM THE EXCAVATION WORK IN THE CONSTRUCTION OF FILLS, EMBANKMENTS AND FOR REPLACEMENT OF REMOVED UNDESIRABLE MATERIALS.

C. HOMEWRE FINISHED GRADE BY PLACING A MINIMUM OF 1/2" - 3/4" CRUSHED STONE ON TOP SOLE STABILIZER FABRIC.

D. REPAIR ALL ACCESS ROADS AND SURROUNDING AREAS USED DURING THE COURSE OF THIS WORK TO THEIR ORIGINAL CONDITION.

1.9 ASPHALT PAVED ROAD:

A. CHAPTER 830 - CALIFORNIA DEPARTMENT OF TRANSPORTATION FLEXIBLE PAVEMENT DESIGN GUIDE AND STANDARDS FOR ROADWAY REHABILITATION PROJECTS (DN 78-03)

ELECTRICAL NOTES

NOTE 1 - GENERAL

1.1 GENERAL CONDITIONS:

A. CONTRACTOR SHALL INSPECT THE EXISTING SITE CONDITIONS PRIOR TO SUBMITTING BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARD TO THE SUBCONTRACTOR'S INTERPRETATION OF THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.

B. THE SUBCONTRACTOR SHALL OBTAIN PERMITS, LICENSES, AND PAY ALL FEES REQUIRED FOR THE CONSTRUCTION PERFORMANCE FOR THE WORK UNDER THIS SECTION.

C. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF ALL SYSTEMS AND COMPONENTS COVERED UNDER THIS SECTION. THE SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS. DRAWINGS SHALL NOT BE SCALED TO DETERMINE DIMENSIONS.

1.2 LAWS, REGULATIONS, ORDINANCES, STATUTES AND CODES:

A. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AND ALL APPLICABLE LOCAL LAWS, REGULATIONS, ORDINANCES, STATUTES AND CODES. CONDUIT BENDS SHALL BE THE RADIUS SHOWN FOR THE TRADE SIZE OF CONDUIT IN COMPLIANCE WITH THE LATEST EDITIONS OF NEC.

1.3 REFERENCES:

A. THE PUBLICATIONS LISTED BELOW ARE PART OF THIS SPECIFICATION. EACH PUBLICATION SHALL BE THE LATEST REVISION AND IN EFFECT ON THE DATE THIS SPECIFICATION IS ISSUED FOR CONSTRUCTION UNLESS OTHERWISE NOTED. EXCEPT AS INDICATED BY THE REQUIREMENT SPECIFIED HEREON OR THE DETAILS OF THE DRAWINGS, ALL MATERIALS, METHODS, AND CONSTRUCTION SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THESE PUBLICATIONS:

1. AMERICAN NATIONAL STANDARDS INSTITUTE
2. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS)
3. IEEE (INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS)
4. NFPA (NATIONAL FIRE PROTECTION ASSOCIATION)
5. NFPA (NATIONAL FIRE PROTECTION ASSOCIATION)
6. OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION)
7. UL (UNDERWRITERS LABORATORIES, INC.)
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1.4 SCOPE OF WORK:

A. WORK UNDER THIS SECTION SHALL COVER THE FURNISHING OF ALL LABOR, MATERIAL, AND ASSOCIATED SERVICES REQUIRED TO COMPLETE REQUIRED CONSTRUCTION AND BE OPERATIONAL.

B. ALL ELECTRICAL EQUIPMENT UNDER THIS CONTRACT SHALL BE PROPERLY TESTED, ADJUSTED, AND ALIGNED BY THE SUBCONTRACTOR.

C. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATING, GRADING, TRENCHING, BACKFILLING, AND REMEDIATION OF EXCESS DIRT.

D. THE SUBCONTRACTOR SHALL FURNISH TO THE OWNER WITH CERTIFICATES OF A FINAL INSPECTION AND APPROVAL FROM THE INSPECTION AUTHORITY HAVING JURISDICTION.

E. THE SUBCONTRACTOR SHALL PREPARE A COMPLETE SET OF AS-BUILT DRAWINGS, DOCUMENT ALL WIRING, EQUIPMENT CONDITIONS, AND CHANGES WHILE COMPLETING THIS CONTRACT. THE AS-BUILT DRAWINGS SHALL BE SUBMITTED AT COMPLETION OF THE PROJECT.

NOTE 2 - PRODUCTS

2.1 GENERAL:

A. ALL MATERIALS AND EQUIPMENT SHALL BE UL LISTED, NEW, AND FREE FROM DEFECTS.

B. ALL ITEMS OF MATERIALS AND EQUIPMENT SHALL BE ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AS SATISFACTORY FOR THE USE INTENDED.

C. ALL MATERIALS SHALL BE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.

D. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING EQUAL TO OR GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTS. TYPE, BREAKING CAPACITY, AND VOLTAGE RATING SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

2.2 MATERIALS AND EQUIPMENT:

A. CONDUIT:

1. RIGID METAL CONDUIT (RMC) SHALL BE HOT-DIPPED GALVANIZED IRON AND OUTSIDE INCLUDING ENDS AND THREADED AND UNTHREADED OR GALVANIZED IRON IN ADDITION TO GALVANIZING.

2. LOCATION FLEXIBLE METAL CONDUIT SHALL BE UL LISTED.

3. CONDUIT CLAMPS, STRAPS AND SUPPORTS SHALL BE STEEL OR GALVANIZED IRON. ALL FITTINGS SHALL BE COMPRESSION AND CONCRETE TIGHT TYPE. BROADCASTING BROADCAST WITH INSULATED THROATS SHALL BE INSTALLED ON ALL CONDUIT TERMINATIONS.

4. NON-METALLIC CONDUIT AND FITTINGS SHALL BE SCHEDULE 40 PVC, INSTALL USING SOLVENT-CEMENT-TYPE JOINTS AS RECOMMENDED BY THE MANUFACTURER.

B. CONDUCTORS AND CABLE:

1. CONDUCTORS AND CABLE SHALL BE FLAME-RETARDANT, MOISTURE, AND HEAT RESISTANT THERMOPLASTIC, SINGLE CONDUCTOR, COPPER, TYPE THHN/THWN-2, 90C VOLT, SIZE AS INDICATED, #12 AND SHALL BE THE MINIMUM SIZE CONDUIT USED.

2. #10 AND SMALLER CONDUCTOR SHALL BE SOLID OR STRANDED AND #8 AND LARGER CONDUCTORS SHALL BE STRANDED.

3. SOLIDLESS, COMPRESSION-TYPE CONNECTIONS SHALL BE USED FOR TERMINATION OF ALL STRANDED CONDUCTORS.

4. STRAIN-RELIEF SUPPORTS GRIPS SHALL BE HUBBELL KELENS OR APPROVED EQUAL. CABLES SHALL BE SUPPORTED IN ACCORDANCE WITH THE NEC AND CABLE MANUFACTURER'S RECOMMENDATIONS.

5. ALL CONDUCTORS SHALL BE TAGGED AT BOTH ENDS OF THE CONDUCTOR, AT ALL PULL BOXES, J-BOXES, EQUIPMENT AND CONDUITS AND SHALL BE IDENTIFIED WITH APPROVED PLASTIC TAGS (ACTION CRAFT, BROWN, OR APPROVED EQUIVALENT).

C. DISCONNECT SWITCHES:

1. DISCONNECT SWITCHES SHALL BE HEAVY DUTY, DEAD-FRONT, QUICK-BREAK, QUICK-TRIP, EXTERNALLY OPERABLE, HINGED LOCKABLE AND INTERLOCK WITH COVER IN CLOSED POSITION, RATING AS INDICATED, UL LABELED FURNISHED IN NEW 30 CYCLE, SQUARE-1 OR EQUIVALENT APPROVED EQUAL.

D. CHEMICAL ELECTROLYTIC GROUNDING SYSTEM:

1. INSTALL CHEMICAL GROUNDING AS REQUIRED. THE SYSTEM SHALL BE ELECTROLYTIC MAINTENANCE FREE. ELECTROLYTIC GROUNDING OF RODS WITH A MINIMUM 2 INCH (50MM) DIAMETER SHALL BE PROVIDED WITH PROTECTIVE BODIES, AND BACKFILL MATERIAL. MANUFACTURER SHALL BE LYNDONITE NOT GROUNDING ROD TYPES 10-1905 OR 10-1905 (1) LENGTH AS REQUIRED.

2. GROUNDING ACCESS ROD SHALL BE A POLYPLASTIC ROD FOR NON-TRAFFIC APPLICATIONS, INCLUDING BOLT DOWN PLATE COVER WITH "THREAT" HOLES, NOT HOLE #10-12. ALL DISCONNECT SWITCHES AND CONTROLLING DEVICES SHALL BE PROVIDED WITH DISCONNECT LAMINATE WARNINGS INDICATING EQUIPMENT CONTROLLED. BRANCH CIRCUITS AT MANHOLE AND ELECTRICAL POWER SOURCE.

3. BACKFILL MATERIAL SHALL BE LYNDONITE AND LYNDONITE GROUNDING GRAVEL.

E. SYSTEM GROUNDING:

1. ALL GROUNDING COMPONENTS SHALL BE THINED AND GROUNDING CONDUCTORS SHALL BE 2 AND BARE, SOLID, THINED, COPPER, ALUMINUM OR COPPER. GROUNDING CONDUCTORS SHALL BE IDENTIFIED WHERE NOTED.

2. GROUNDING BUSES SHALL BE BARE, THINED, ANNEALED COPPER BARS OF RECTANGULAR CROSS SECTION. STANDARD BUS BARS SHALL BE FURNISHED AND INSTALLED BY THE SUBCONTRACTOR. THEY SHALL NOT BE FURNISHED OR INSTALLED IN THE FIELD. ALL GROUNDING BUSES SHALL BE IDENTIFIED WITH MINIMUM 3/4" LETTERS BY MEANS OF STICKLING OR DESIGNATION PLATE.

3. CONDUCTORS SHALL BE HIGH-CONDUCTIVITY, HEAVY DUTY, LISTED AND LABELED AS GROUNDING CONDUCTORS FOR THE MATERIALS USED. USE TWO-HOLE COPPER CONDUIT WITH TWO-HOLE COPPER CONDUIT FOR MECHANICAL CONNECTIONS. INTERIOR CONNECTIONS USE TWO-HOLE COMPRESSION LUGS WITH INSPECTION WINDOW AND CLEAN HEAT SHIELD.

4. EXTERIOR WELDED CONNECTIONS SHALL BE PROVIDED IN KIT FORM AND BE SELECTED FOR THE SPECIFIC TYPES, SIZES, AND CONDITIONS OF CONDUCTORS AND OTHER ITEMS TO BE CONNECTED.

5. GROUNDING RODS SHALL BE COPPER-CLAD STEEL WITH HIGH-STRENGTH STEEL CORE AND ELECTROLYTIC-CANOE COPPER OUTER SHEATH, WELDED TO CORE, 5/8" DIA. ALL GROUNDING RODS SHALL BE IDENTIFIED WITH INSPECTION MARKERS.

6. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS IN COMPLIANCE WITH THE "AT&T" OPERATING AND MCO. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE BONDING AT ALL JUNCTION BOXES, PULLBOXES, DISCONNECT SWITCHES, STARTERS, AND EQUIPMENT CEMENTS.

F. OTHER MATERIALS:

1. THE SUBCONTRACTOR SHALL PROVIDE OTHER MATERIALS, THOUGH NOT SPECIFICALLY DESCRIBED, WHICH ARE REQUIRED FOR A COMPLETELY OPERATIONAL SYSTEM AND PROPER INSTALLATION OF THE WORK.

2. PROVIDE PULL BOXES AND JUNCTION BOXES WHERE SHOWN OR REQUIRED BY NEC.

G. PANELS AND LOAD CENTERS:

1. ALL PANEL DEVICES SHALL BE TYPEWITTH.

NOTE 3 - EXCAVATION

3.1 GENERAL:

A. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

B. EQUIPMENT SHALL BE TIGHTLY COVERED AND PROTECTED AGAINST DIRT OR WATER, AND AGAINST CHEMICAL OR MECHANICAL ABUSE DURING INSTALLATION AND CONSTRUCTION PERIODS.

3.2 LABOR AND WORKMANSHIP:

A. ALL LABOR FOR THE INSTALLATION OF MATERIALS AND EQUIPMENT FURNISHED FOR THE ELECTRICAL SYSTEM SHALL BE INSTALLED BY EXPERIENCED PERSONNEL, AND MUST BE INSTALLED IN A WORKMAN-LIKE MANNER.

B. ALL ELECTRICAL EQUIPMENT SHALL BE ADJUSTED, ALIGNED AND TESTED BY THE SUBCONTRACTOR AS REQUIRED TO PRODUCE THE INTENDED PERFORMANCE.

C. UPON COMPLETION OF WORK, THE SUBCONTRACTOR SHALL THOROUGHLY CLEAN ALL EXPOSED EQUIPMENT, REMOVE ALL LABELS AND ANY DIRT, CRATING OR CARTONS AND LEAVE THE INSTALLATION FINISHED AND READY FOR OPERATION.

3.3 COORDINATION:

A. THE SUBCONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRICAL ITEMS WITH THE OWNER-FURNISHED EQUIPMENT DELIVERY SCHEDULE TO PREVENT UNNECESSARY DELAYS IN THE TOTAL WORK.

3.4 INSTALLATION:

A. CONDUIT:

1. ALL ELECTRICAL WIRING SHALL BE INSTALLED IN CONDUIT AS SPECIFIED, NO CONDUIT OR TUBING OF LESS THAN 3/4" INCH TRADE SIZE.

2. PROVIDE RIGID PVC SCHEDULE 40 CONDUITS FOR ALL RISERS, BARS, OTHERWISE NOTED. CMT MAY BE INSTALLED FOR EXTERIOR CONDUITS WHERE NOT SUBJECT TO PHYSICAL DAMAGE.

3. THE INSTALLATION OF SCHEDULE 40 PVC AND RMC CONDUITS SHALL BE 24 INCHES MINIMUM DEPTH ALL 90 DEGREE BENDS SHALL BE RMC. EXPANSION JOINTS ARE REQUIRED ON ALL CONDUIT RISERS.

4. USE GALVANIZED FLEXIBLE STEEL CONDUIT WHERE DIRECT CONNECTION TO EQUIPMENT WITH MOVEMENT, VIBRATION, OR FOR EASE OF MAINTENANCE. USE LEAD TIGHT, FLEXIBLE METAL CONDUIT FOR CORROSION APPLICATIONS. INSTALL GALVANIZED FLEXIBLE STEEL CONDUIT AT ALL POINTS OF CONNECTION TO EQUIPMENT REQUIRING NO SUPPORT TO ALLOW FOR CORROSION AND CONTRACTION.

5. A RUN OF CONDUIT BETWEEN BOXES OR EQUIPMENT SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF THREE QUARTER-BENDS. CONDUIT BEND SHALL BE MADE WITH THE UL LISTED BEND OR FACTORY 90 DEGREE ELBOWS MAY BE USED.

6. FIELDS FABRICATED CONDUITS SHALL BE CUT SQUARE WITH A CONDUIT CUTTING TOOL AND REAMED TO PROVIDE A SMOOTH BORE SURFACE.

7. PROVIDE INSULATED GROUNDING BUSHING FOR ALL CONDUITS.

8. SUBCONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL CONDUITS DURING CONSTRUCTION. TEMPORARY DAMPERS IN THE CONDUIT SYSTEM SHALL BE PLUGGED OR CAPPED TO PREVENT ENTRANCE OF MOISTURE OR FOREIGN MATTER. SUBCONTRACTOR SHALL REPLACE ANY CONDUITS CONTAINING FOREIGN MATERIALS THAT CANNOT BE REMOVED.

9. ALL CONDUITS SHALL BE THOROUGHLY CLEAN BY PULLING AN APPROPRIATE SIZE MARSHAL THROUGH THE CONDUIT BEFORE INSTALLATION OF CONDUCTORS OR CABLES. CONDUIT SHALL BE FREE OF DIRT AND DEBRIS.

10. INSTALL PULL STRINGS IN ALL CLEAN EMPTY CONDUITS. IDENTIFY PULL STRINGS AT EACH END.

11. INSTALL 3" HIGHLY VISIBLE AND DETECTABLE TAPE 12" ABOVE ALL UNDERGROUND CONDUITS AND CONDUITS.

12. CONDUITS SHALL BE INSTALLED IN SUCH A MANNER AS TO INSURE AGAINST COLLECTION OF TRAPPED CONDENSATION.

13. PROVIDE CORE DRILLING AS NECESSARY FOR PENETRATIONS TO ALLOW FOR RISERS AND CABLES TO BE ROUTED THROUGH THE BUILDING. DO NOT PENETRATE STRUCTURAL MEMBERS, SLEEVES AND/OR PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE EFFECTIVELY SEALED WITH FIRE RATED MATERIAL. WHICH SHALL MAINTAIN THE FIRE RATING OF THE WALL OR STRUCTURE. FIRE STOP AT FLOOR PENETRATIONS SHALL PREVENT PASSAGE OF WATER, SMOKE, FIRE, AND FLAMES. ALL MATERIAL SHALL BE UL APPROVED FOR THIS PURPOSE.

6. CONDUCTORS AND CABLE:

1. ALL POWER WIRING SHALL BE COLOR CODED AS FOLLOWS:

DESCRIPTION	200/410/120 VOLT SYSTEM
PHASE A	BROWN
PHASE B	RED
PHASE C	BLUE
NEUTRAL	WHITE
GROUNDING	GREEN

2. SPICES SHALL BE WASH DRY AT OUTLETS, JUNCTION BOXES, OR ACCESSIBLE RACEWAY CONSULTANTS APPROVES FOR THIS PURPOSE.

3. PULLING LUBRICANTS SHALL BE UL APPROVED. SUBCONTRACTOR SHALL USE WAXEN OR HEMP ROPE FOR PULLING CONDUCTOR OR CABLE WITHIN THE CONDUIT.

4. CABLES SHALL BE HEAVY THINED, WITHOUT INTERLACING, AND BE OF SUFFICIENT LENGTH IN ALL BOXES. EQUIPMENT TO POINT MAKING A NEAT ARRANGEMENT. CABLES SHALL BE SECURED IN A MANNER TO HOLD TENSION ON CONDUCTORS OR TERMINALS. CABLES SHALL BE PROTECTED FROM MECHANICAL ABUSE AND MOISTURE. SHARP BENDS OVER CONDUIT BUSHINGS ARE PROHIBITED. DAMAGED CABLES SHALL BE REMOVED AND REPLACED AT THE SUBCONTRACTOR'S EXPENSE.

C. DISCONNECT SWITCHES:

1. INSTALL DISCONNECT SWITCHES LEVEL AND PLUMB. CONNECT TO WIRING SYSTEM AND GROUNDING SYSTEM AS INDICATED.

D. GROUNDING:

1. ALL METALLIC PARTS OF ELECTRICAL EQUIPMENT WHICH DO NOT CARRY CURRENT SHALL BE GROUNDING IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING MANUFACTURER, AT&T GROUNDING AND BONDING STANDARDS (P-79414, P-80121, AND THE NATIONAL ELECTRICAL CODE).

2. PROVIDE ELECTRICAL GROUNDING AND BONDING SYSTEM INDICATED WITH ASSEMBLY OF MATERIALS, INCLUDING GROUNDING ELECTRODES, BONDING JUNCTIONS AND ADDITIONAL ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION.

3. ALL GROUNDING CONDUCTORS SHALL PROVIDE A STRAIGHT DOWNWARD PATH TO GROUNDING WITH MINIMUM BEND AS REQUIRED. GROUNDING CONDUCTORS SHALL NOT BE LOADED OR BUNDLED WITH OTHER WIRING. GROUNDING CONDUCTORS AND CONDUCTORS TO GROUNDING IN THE SHORTEST AND STRAIGHTEST PATHS POSSIBLE TO MINIMIZE TRANSPARENT VOLTAGE RISES.

4. BUILDINGS AND/OR NEW TOWERS GREATER THAN 75 FEET IN HEIGHT AND WHERE THE MINIMUM GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GROUND. THE SUBCONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWER, AND WATER TOWERS GROUNDING SHALL TO THE EXISTING GROUNDING SYSTEM. THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 3/4" AND COPPER ROOFTOP GROUNDING RING SHALL BE BONDING TO THE EXISTING GROUNDING SYSTEM. THE BUILDING SHALL BE GROUNDING, LIGHTNING PROTECTION SYSTEM, AND BUILDING WIRE SILEX LINE (TERMINAL OR INTERFERENTIAL METAL PIPING ONLY) SEE STANDARD 8.3.2.2.

5. TOWER GROUNDING AND BONDING CONNECTIONS, INCLUDING BONDING AND BOLTS, IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED TORQUE TIGHTENING VALUES FOR CONNECTIONS AND BOLTS. WHERE MANUFACTURER'S TORQUE TIGHTENING VALUES ARE NOT AVAILABLE, TOWER CONNECTIONS TO COMPLY WITH TOWERING TORQUE VALUES SPECIFIED IN UL TO ACHIEVE PERMANENT AND EFFECTIVE GROUNDING.

6. SUBCONTRACTOR SHALL VERIFY THE LOCATION OF GROUNDING TIE-INS POINTS TO THE EXISTING GROUNDING SYSTEM. ALL UNDERGROUND GROUNDING CONNECTIONS SHALL BE MADE BY THE EXTERIOR WELD PROCESS AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

7. ALL GROUNDING CONNECTIONS SHALL BE INSPECTED FOR TECHNICAL, EXTERIOR WELD CONNECTIONS SHALL BE APPROVED BY THE INSPECTOR HAVING JURISDICTION BEFORE BEING PERMANENTLY CONCEALED.

8. APPLY CORROSION-RESISTANCE FINISH TO FIELD CONNECTIONS AND PLACES WHERE FACTORY APPLIED PROTECTIVE COATINGS HAVE BEEN DETECTED. USE COPPER-CLAD ANTI-CORROSION COMPOUND ON ALL COMPRESSION GROUNDING CONNECTIONS.

9. A SEPARATE, CONTINUOUS, INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL FEEDER AND BRANCH CIRCUITS.

10. BOND ALL INSULATED GROUNDING BUSBARS WITH A BARE 6 AND GROUNDING CONDUCTOR TO A GROUND BUS.

11. DIRECT BURIED GROUNDING CONDUCTORS SHALL BE INSTALLED AT A MINIMUM DEPTH OF 36" MINIMUM BELOW GRADE, OR 6" BELOW THE FIRST LAYER, USE THE GREATER OF THE TWO DISTANCES.

12. ALL GROUNDING CONDUCTORS EMBEDDED IN OR PENETRATING CONCRETE SHALL BE INSTALLED IN SCHEDULE 40 PVC CONDUIT.

13. THE INSTALLATION OF CHEMICAL ELECTROLYTIC GROUNDING SYSTEM IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. REMOVE SEALING TAPE FROM LEACHING AND BREAKER HOLES. INSTALL PROTECTIVE BOB FLUENT WITH GRADE.

14. DRIVE GROUNDING RODS INTO TOPS ARE A MINIMUM DISTANCE OF 36" DEPTH OR 6" BELOW FIRST LAYER, USING THE GREATER OF THE TWO DISTANCES.

15. IF WORK ON THE 2ND BRIDGE IS MORE THAN 8 FT. FROM THE GROUNDING BUS AT THE BASE OF THE TOWER, A SECOND GROUNDING BAR WILL BE NEEDED AT THE END OF THE 2ND BRIDGE, TO GROUND THE COAT LANE GROUNDING RITE AND IN-LINE PARALLELS.

16. SUBCONTRACTOR SHALL REPAIR, AND/OR REPLACE, EXISTING GROUNDING SYSTEM COMPONENTS DAMAGED DURING CONSTRUCTION AT THE SUBCONTRACTOR'S EXPENSE.

3.8 ACCEPTANCE TESTING:

A. CERTIFIED PERSONNEL USING CERTIFIED EQUIPMENT SHALL PERFORM REQUIRED TESTS AND SUBMIT WRITTEN TEST REPORTS UPON COMPLETION.

B. WHEN MATERIAL AND/OR WORKMANSHIP IS FOUND NOT TO COMPLY WITH THE SPECIFIED REQUIREMENTS, THE NONCOMPLYING ITEMS SHALL BE REMOVED FROM THE PROJECT SITE AND REPLACED WITH ITEMS COMPLYING WITH THE SPECIFIED REQUIREMENTS PROMPTLY AFTER NOTICE FOR WORK FOR NON-COMPLIANCE.

C. TEST PROCEDURES:

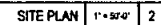
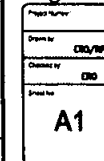
1. ALL FITTERS SHALL HAVE INSULATION TESTED AFTER INSTALLATION, BEFORE CONNECTION TO DEVICES. THE CONDUCTORS SHALL TEST FREE FROM SHORT CIRCUITS AND GROUNDING. TEST SHALL BE FOR ONE HOUR USING 1000V DC. PROVIDE WRITTEN DOCUMENTATION FOR ALL TEST LISTED TO SUBCONTRACTOR.

2. PRIOR TO ENERGIZING CIRCUITRY, TEST WIRING DEVICES FOR ELECTRICAL CONTINUITY AND PROPER POLARITY CONNECTIONS.

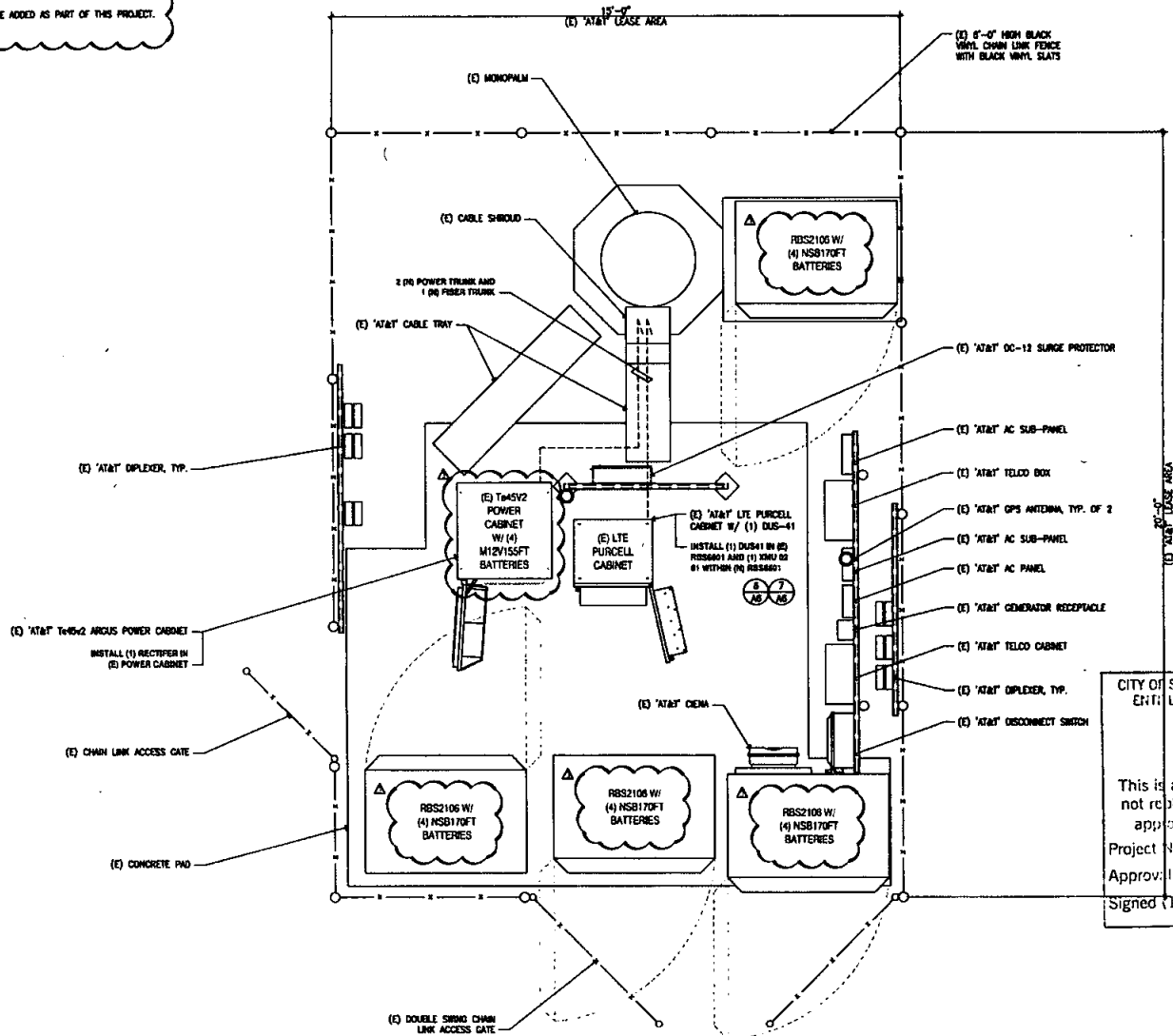
3. MEASURE AND RECORD VOLTAGES BETWEEN PHASES AND BETWEEN PHASE CONDUCTORS AND NEUTRALS. SUBMIT A REPORT OF MAXIMUM AND MINIMUM VOLTAGES.

4. PERFORM GROUNDING TEST TO MEASURE GROUNDING RESISTANCE OF GROUNDING SYSTEM USING THE IEEE STANDARD 3-PHASE "VOLT-OF-POTENTIAL" METHOD. PROVIDE PLOTTED TEST VALUES AND LOCATION SECTION. NOTIFY THE ENGINEER IMMEDIATELY IF MEASURED VALUE IS OVER 5 OHMS.

△	NO. 10	11-10-11
△	NO. 10	11-10-11
2	NO. 10	11-10-11
3	NO. 10	11-10-11
4	NO. 10	11-10-11
Rev.	Description	Date



NOTES:
NO NEW BATTERIES WILL BE ADDED AS PART OF THIS PROJECT.



CITY OF SAN DIEGO - DEVELOPMENT SERVICES DEPARTMENT
ENTIREMENTS-WIRELESS COMMUNICATION FACILITIES

APPROVED EXHIBIT "A" PROCESS 1 APPROVAL

This is a Zoning Certificate approval. This does not replace any required construction permits. See approval notes within plan set for more details.

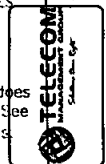
Project Number: SA7344
Approval Date: 5/24/17
Signed (1st Sheet): [Signature]

Rev	Description	Date
1	Initial	5-24-17
2	Revised	5-24-17
3	Revised	5-24-17
4	Revised	5-24-17
5	Revised	5-24-17
6	Revised	5-24-17
7	Revised	5-24-17
8	Revised	5-24-17
9	Revised	5-24-17
10	Revised	5-24-17



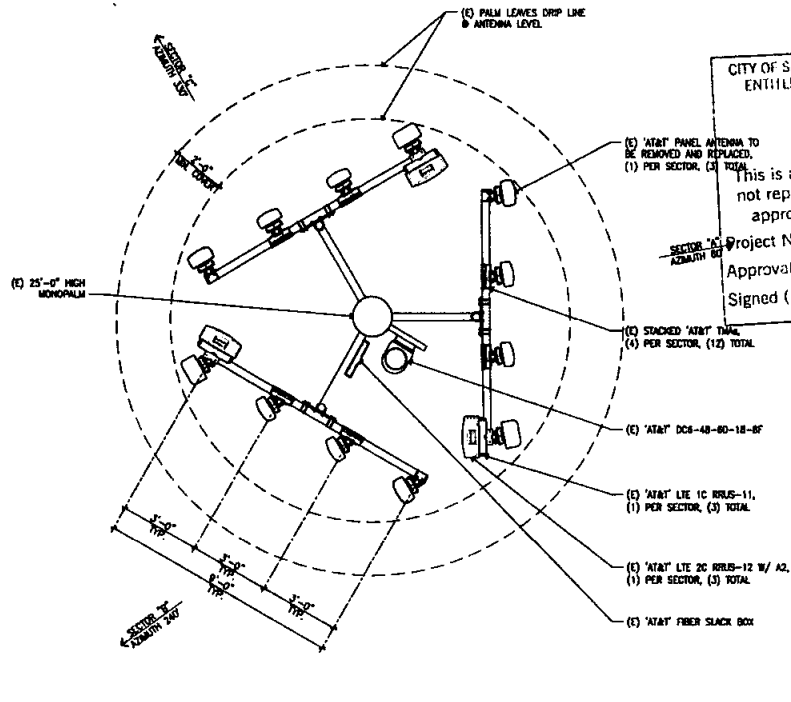
NEW ENLARGED
EQUIPMENT PLAN

SD0338
WEST RANCHO PENASQUITOS
12885 BLACK MOUNTAIN RD
SAN DIEGO, CA 92129
LTE 3C/LTE 4C



Project Number	SA7344
Drawn by	CHD/JP
Checked by	CHD
Sheet No	A3

EXISTING ANTENNA AND TRANSMISSION CABLE SCHEDULE							
SECTOR	TECHNOLOGY	LFP ALLOY ANTENNA			RRU MODEL / QTY.	TMA & TRIPLEXER MODEL / QTY.	TRANSMISSION LINES (SIZE / LENGTH FT +/-)
		MODEL	AZIMUTH	TP HEIGHT			
ALPHA SECTOR	A1	LTE 1C/2C COMSCOPE SBRW-1063 B	80°	24'-6"	RRUS-11 (1) RRUS12+A2 (1)	-	(1) FIBER +/- 35'
	A2	GSM 850/1900 POWERWAVE 7752	80°	24'-6"	-	KRY 112 75/1 (2)	(2) 7/8" COAX +/- 35'
	A3	UMTS 850/1900 POWERWAVE 7752	80°	24'-6"	-	KRY 112 75/1 (2)	(2) 7/8" COAX +/- 35'
	A4	SPARE KATHREIN 80010784	80°	24'-6"	-	-	-
BETA SECTOR	B1	LTE 1C/2C COMSCOPE SBRW-1063 B	240°	24'-6"	RRUS-11 (1) RRUS12+A2 (1)	-	(1) FIBER +/- 35'
	B2	GSM 850/1900 POWERWAVE 7752	240°	24'-6"	-	KRY 112 75/1 (2)	(2) 7/8" COAX +/- 35'
	B3	UMTS 850/1900 POWERWAVE 7752	240°	24'-6"	-	KRY 112 75/1 (2)	(2) 7/8" COAX +/- 35'
	B4	SPARE KATHREIN 80010784	240°	24'-6"	-	-	-
GAMMA SECTOR	C1	LTE 1C/2C COMSCOPE SBRW-1063 B	330°	24'-6"	RRUS-11 (1) RRUS12+A2 (1)	-	(1) FIBER +/- 35'
	C2	GSM 850/1900 POWERWAVE 7752	330°	24'-6"	-	KRY 112 75/1 (2)	(2) 7/8" COAX +/- 35'
	C3	UMTS 850/1900 POWERWAVE 7752	330°	24'-6"	-	KRY 112 75/1 (2)	(2) 7/8" COAX +/- 35'
	C4	SPARE KATHREIN 80010784	330°	24'-6"	-	-	-



EXISTING ENLARGED ANTENNA PLAN 1/2" = 1'-0" 1

NEW ANTENNA AND TRANSMISSION CABLE SCHEDULE							
SECTOR	TECHNOLOGY	LFP ALLOY ANTENNA			RRU MODEL / QTY.	TMA & FILTER MODEL / QTY.	TRANSMISSION LINES (SIZE / LENGTH FT +/-)
		MODEL	AZIMUTH	TP HEIGHT			
ALPHA SECTOR	A1	LTE 1C/2C COMSCOPE SBRW-1063 B	80°	24'-6"	RRUS-11 (1) RRUS12+A2 (1)	-	(1) FIBER +/- 35'
	A2	GSM 850/1900 POWERWAVE 7752	80°	24'-6"	-	KRY 112 75/1 (2)	(2) 7/8" COAX +/- 35'
	A3	UMTS 850/1900 POWERWAVE 7752	80°	24'-6"	-	KRY 112 75/1 (2)	(2) 7/8" COAX +/- 35'
	A4	LTE 3C / LTE 4C COMSCOPE SBAJAH-1065B-DL	80°	24'-6"	RRUS-32 (2)	WCS-INFO-AMT (1)	(1) FIBER +/- 35'
BETA SECTOR	B1	LTE 1C/2C COMSCOPE SBRW-1063 B	240°	24'-6"	RRUS-11 (1) RRUS12+A2 (1)	-	(1) FIBER +/- 35'
	B2	GSM 850/1900 POWERWAVE 7752	240°	24'-6"	-	KRY 112 75/1 (2)	(2) 7/8" COAX +/- 35'
	B3	UMTS 850/1900 POWERWAVE 7752	240°	24'-6"	-	KRY 112 75/1 (2)	(2) 7/8" COAX +/- 35'
	B4	LTE 3C / LTE 4C COMSCOPE SBAJAH-1065B-DL	240°	24'-6"	RRUS-32 (2)	WCS-INFO-AMT (1)	(1) FIBER +/- 35'
GAMMA SECTOR	C1	LTE 1C/2C COMSCOPE SBRW-1063 B	330°	24'-6"	RRUS-11 (1) RRUS12+A2 (1)	-	(1) FIBER +/- 35'
	C2	GSM 850/1900 POWERWAVE 7752	330°	24'-6"	-	KRY 112 75/1 (2)	(2) 7/8" COAX +/- 35'
	C3	UMTS 850/1900 POWERWAVE 7752	330°	24'-6"	-	KRY 112 75/1 (2)	(2) 7/8" COAX +/- 35'
	C4	LTE 3C / LTE 4C COMSCOPE SBAJAH-1065B-DL	330°	24'-6"	RRUS-32 (2)	WCS-INFO-AMT (1)	(1) FIBER +/- 35'

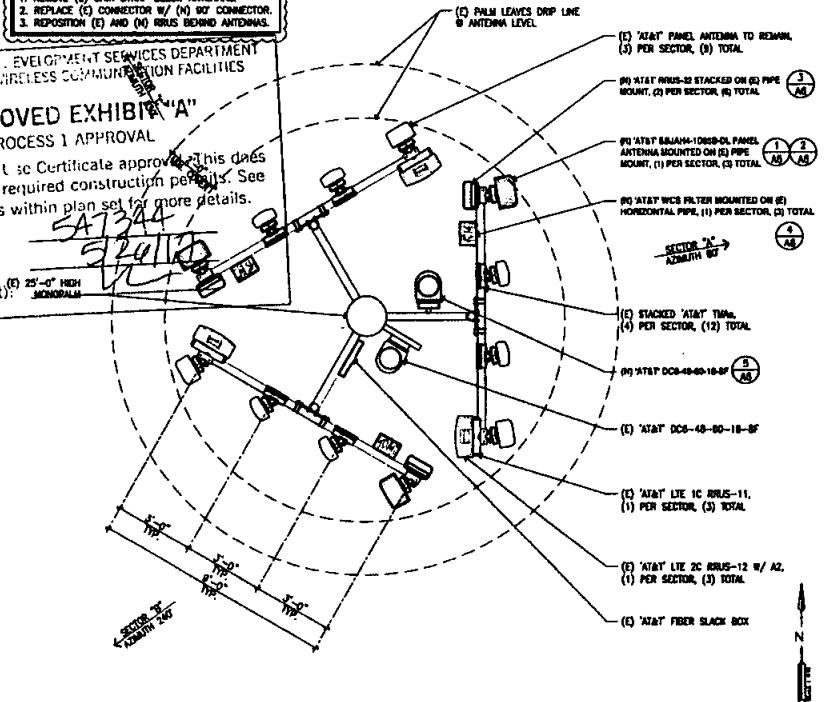
NOTE:
1. REMOVE (C) CHIM STRIP BELOW ANTENNAS.
2. REPLACE (C) CONNECTOR W/ (N) 90° CONNECTOR.
3. REPOSITION (E) AND (N) RRUS BEHIND ANTENNAS.

CITY OF SAN DIEGO - DEVELOPMENT SERVICES DEPARTMENT
ENTITLEMENTS - WIRELESS COMMUNICATION FACILITIES

APPROVED EXHIBIT "A"
PROCESS 1 APPROVAL

This is a Zoning Use Certificate approval. This does not replace any required construction permits. See approval notes within plan set for more details.

Project Number: 547344
Approval Date: 5/20/13
Signed (1st Sheet):



NEW ENLARGED ANTENNA PLAN 1/2" = 1'-0" 2

1	DATE	10-16-11
2	BY	WILLIAM J. BROWN
3	FOR	AT&T
4	BY	WILLIAM J. BROWN
5	FOR	AT&T
6	BY	WILLIAM J. BROWN
7	FOR	AT&T
8	BY	WILLIAM J. BROWN
9	FOR	AT&T
10	BY	WILLIAM J. BROWN
11	FOR	AT&T
12	BY	WILLIAM J. BROWN
13	FOR	AT&T
14	BY	WILLIAM J. BROWN
15	FOR	AT&T
16	BY	WILLIAM J. BROWN
17	FOR	AT&T
18	BY	WILLIAM J. BROWN
19	FOR	AT&T
20	BY	WILLIAM J. BROWN



EXISTING AND NEW
ENLARGED ANTENNA
PLAN AND SCHEDULE

SD0338
MEST RANCHO PENASQUITOS
12885 BLACK MOUNTAIN RD
SAN DIEGO, CA 92129
LTE 3C / LTE 4C



Project Number:
Drawn by: CHD/MP
Checked by: CHD
Sheet No: A4

1	WTS CO	05-20-17
2	WTS CO	05-20-17
3	WTS CO	05-20-17
4	WTS CO	05-20-17
5	WTS CO	05-20-17
6	WTS CO	05-20-17
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9	WTS CO	05-20-17
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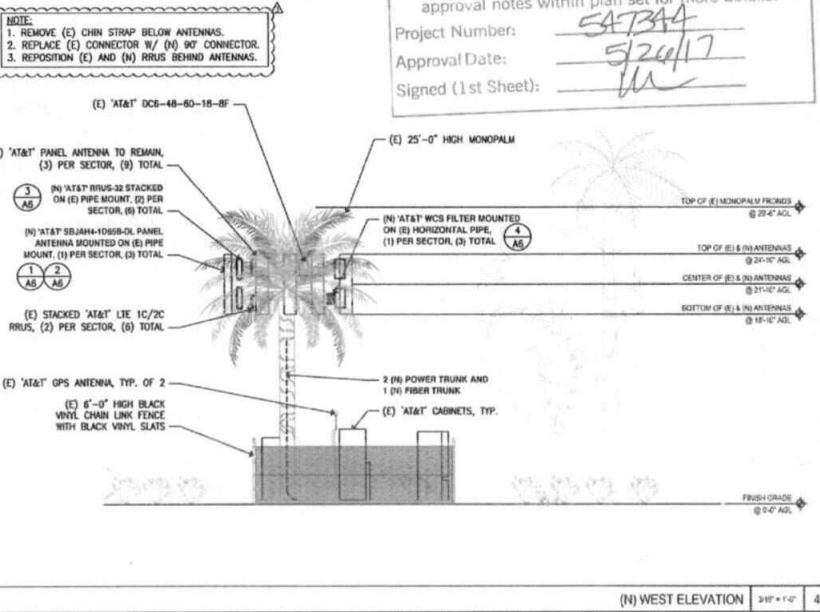
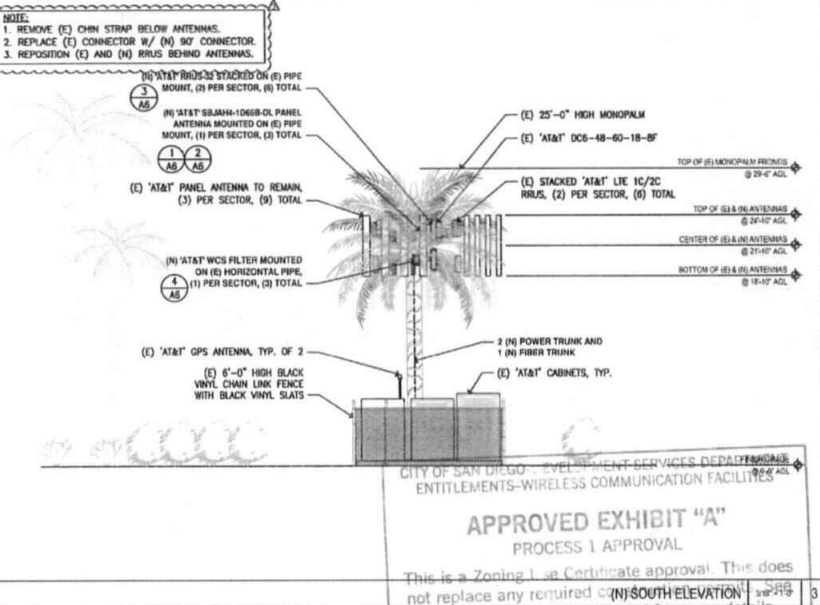
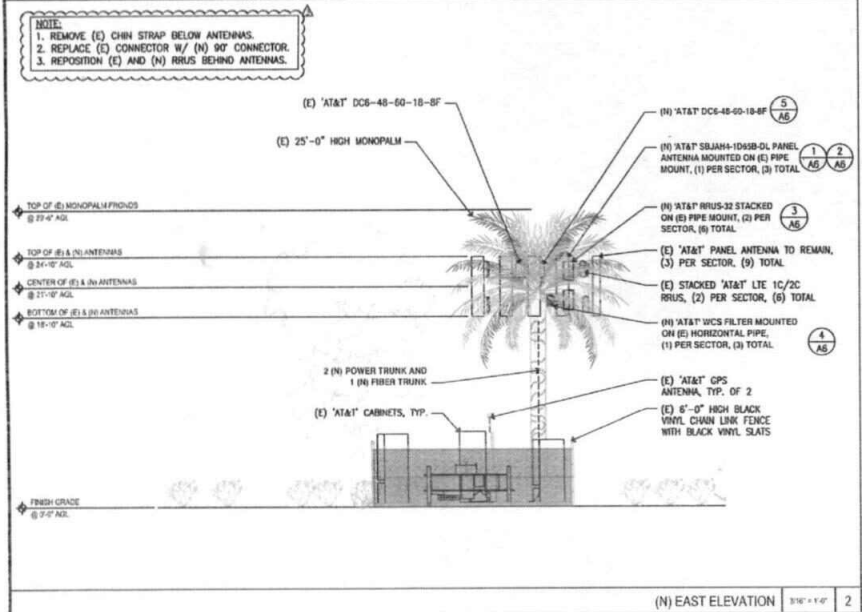
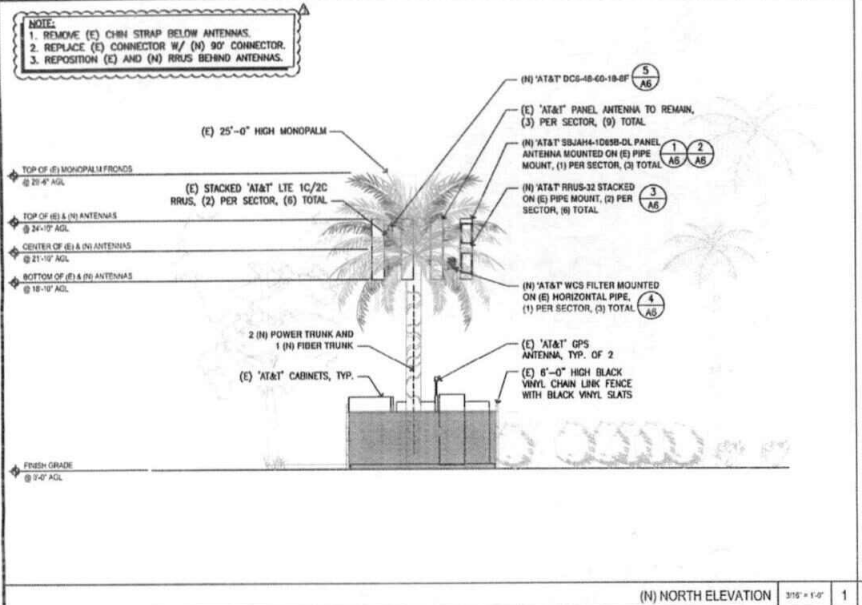


SITE ELEVATIONS

SD0388
WEST RANCHO PENASQUITOS
12865 BLACK MOUNTAIN RD
SAN DIEGO, CA 92129
LTE 3C / LTE 4C



Project Number:
Drawn by: **ERO/MP**
Checked by: **ERO**
Sheet No:
A5

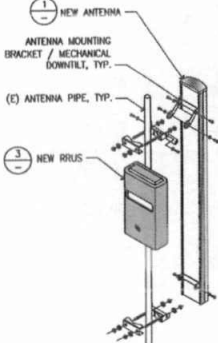
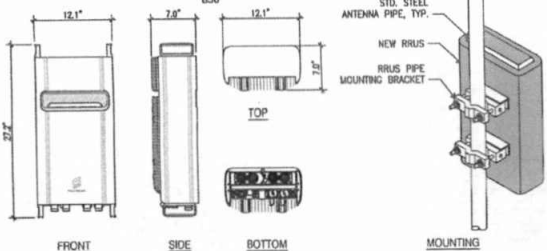
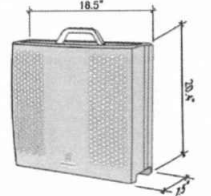
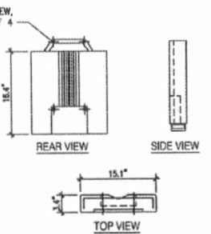
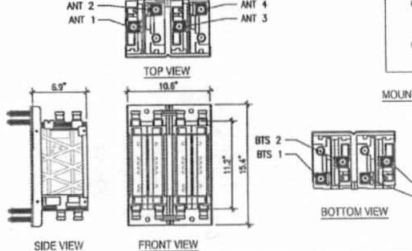
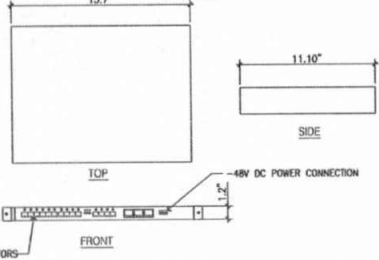
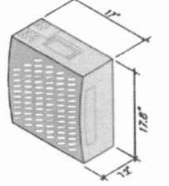
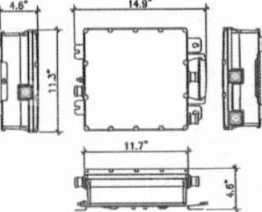


CITY OF SAN DIEGO - DEVELOPMENT SERVICES DEPARTMENT
ENTITLEMENTS-WIRELESS COMMUNICATION FACILITIES

APPROVED EXHIBIT "A"
PROCESS 1 APPROVAL

This is a Zoning 1.3a Certificate approval. This does not replace any required City of San Diego approval notes within plan set for more details.

Project Number: SA7344
Approval Date: 5/24/17
Signed (1st Sheet): [Signature]

COMMSCOPE SBJAH4-1D65B-DL DIMENSIONS, HxWxD: 1828x350x208mm (72"x13.8"x8.2") NET WEIGHT: 26.8 kg (59.1 lbs) WIND LOADING, FRONTAL: 746.0 N @ 150 km/h WIND LOADING, LATERAL: 243.0 N @ 150 km/h WIND LOADING, REAR: 776.0 N @ 150 km/h WIND SPEED, MAXIMUM: 241 km/h 150 MPH CONNECTOR: 12 x 4.3-10 (FEMALE)	 1 NEW ANTENNA ANTENNA MOUNTING BRACKET / MECHANICAL DOWNRILL, TYP. (C) ANTENNA PIPE, TYP. 3 NEW RRU	RAYCAP DC6-48-60-18-8F DIMENSIONS, WxHxD: (11"x18.5"x31.25") NOMINAL OPERATING VOLTAGE: 48 VDC NOMINAL DISCHARGE CURRENT: 20 KA 8/20us MAXIMUM DISCHARGE CURRENT: 60 KA 8/20us MAXIMUM CONTINUOUS OPERATING VOLTAGE: 75 VDC VOLTAGE PROTECTION RATING: 400 V WIND LOADING: 195 MPH GUST (213.6 lbs) TOTAL WEIGHT: 32.8 lbs.	COMMSCOPE SBNHH-1D65 B DIMENSIONS, HxWxD: 1828.8x301x181mm (72"x11.85"x7.1") NET WEIGHT: 23.00 kg 50.71 lbs WIND LOAD, MAXIMUM: 617.7 N @ 150 km/h 138.9 lbf @ 150 km/h WIND, MAXIMUM: 241.4 km/h (150.0 mph) CONNECTOR: (6) 7-16 DIN FEMALE	POWERWAVE 7752 DIMENSIONS, HxWxD: 2033x280x125mm (8'-7"x11"x5") WEIGHT: 19.7 kg (44 lbs) INCLUDING BRACKETS: 70M/S (156MPH) SURVIVAL WIND SPEED: 70M/S (156MPH) WIND LOAD, FRONTAL: 42M/S CD=1 628N (141LBF) CONNECTOR: 7/16 DIN FEMALE		
(N) ANTENNA SPECIFICATIONS NTS 1	(N) ANTENNA / RRU MOUNTING NTS 2	(N) SURGE PROTECTOR SPECIFICATIONS NTS 2	(E) ANTENNA SPECIFICATIONS NTS 8	(E) ANTENNA SPECIFICATIONS NTS 9		
RRUS 32 DIMENSIONS, WxHxD: 12.1"x7.0"x27.2" WEIGHT (W/O MOUNTING HARDWARE): 24 Kg/53 lbs OUTPUT POWER: 800W PORTS: CPRI 2 PORTS x 10 Gbps FDD LTE: 2305-2315 MHz UPLINK 2305-2360 MHz DOWNLINK B30  FRONT SIDE BOTTOM MOUNTING	ERICSSON RRUS-12 DIMENSIONS, WxHxD: 18.5"x7.5"x20.4" (INCLUDES SUNSHIELD) POWER REQUIREMENT: -48 VDC TOTAL WEIGHT: 50 lbs (FULLY EQUIPPED) TEMPERATURE: -40° TO 55° C 	RRUS A2 DIMENSIONS, WxHxD: 15.1"x3.4"x16.4" WEIGHT: 22 lbs INPUT POWER: -48V VDC OR AC (OPTION) FUSE SIZE: 13 - 32A DC CONNECTOR: SCREW TERMINAL INSTALLATION OPTIONS: WALL, POLE OR TOWER  REAR VIEW SIDE VIEW TOP VIEW	QUAD WCS IMF FOR 2360-2395 MHz AMT BAND CO-LOCATION MODEL NUMBER: WCS-IMFO-AMT PART NUMBER: E15V8P71 DIMENSIONS, HxWxD: 285x268x175 mm (11.2X 10.6 X 6.9 in) WEIGHT: 13.4 kg (29.5 lbs)  TOP VIEW SIDE VIEW BOTTOM VIEW	ERICSSON XMU 02 01 DIMENSIONS, WxHxD: 350x282x30mm (13.7"x11.1"x1.2") NOMINAL OPERATING VOLTAGE: 48 VDC TOTAL WEIGHT: 13.7" ± 4.62 lbs  TOP SIDE FRONT	ERICSSON RRUS-11 DIMENSIONS, WxHxD: 431x184x452mm (17"x7.2"x17.8") POWER CONSUMPTION: 200 WATTS TOTAL WEIGHT: 55 lbs TEMPERATURE: -40° TO 55° C 	ERICSSON KRY 112 75/1 BANDWIDTH: 25 @ 800MHz, 60 @ 1900MHz WEIGHT: 13.5kg (30lbs) FRP CONNECTORS: DIN 7/16 FEMALE  TOP VIEW SIDE VIEW FRONT VIEW
(N) RRU SPECIFICATIONS AND MOUNTING NTS 3	(N) RBS6601 AND DUS41 SPECIFICATIONS NTS 9	(E) RRU SPECIFICATIONS NTS 10	(E) RRU SPECIFICATIONS NTS 11	(E) TMA SPECIFICATIONS NTS 13		
(N) FILTER SPECIFICATIONS NTS 4	(N) XMU 02 01 SPECIFICATIONS NTS 7	(E) RRU SPECIFICATIONS NTS 12	(E) TMA SPECIFICATIONS NTS 13			

CITY OF SAN DIEGO DEVELOPMENT SERVICES DEPARTMENT
ENTITLEMENTS-WIRELESS COMMUNICATION FACILITIES

APPROVED EXHIBIT "A"
PROCESS 1 APPROVAL

This is a Zoning Certificate approval. This does not replace any required construction permits. See approval notes within plan set for more details.

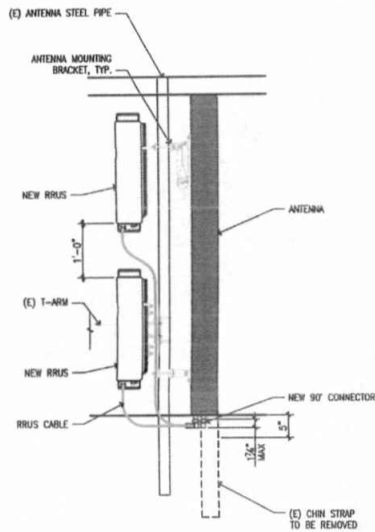
Project Number: 547344
Approval Date: 9/26/17




SITE DETAILS
 SD0388
 WEST RANCHO PENASQUITOS
 12865 BLACK MOUNTAIN RD
 SAN DIEGO, CA 92129
 LTE 3G/LTE 4C



Approved By: [Signature]
 Drawn By: ERO/RP
 Checked By: ERO
 Sheet No: A6



NOTES:
ROUTE CABLES ALONG ANTENNA PIPE AND ANTENNA FRAME
STRUCTURE TO MINIMIZE VISIBILITY

CITY OF SAN DIEGO - DEVELOPMENT NOT USED DEPARTMENT
ENTITLEMENTS-WIRELESS COMMUNICATION FACILITIES

APPROVED EXHIBIT "A"
PROCESS 1 APPROVAL

This is a Zoning Use Certificate approval. This does not replace any required construction permits. See approval notes within plan set for more details.

Project Number: SA-7344

Approval Date: 5/26/17

Signed (1st Sheet): LM

ANTENNA SECTION NTS 1

NOT USED NTS 4

NOT USED NTS 7

NOT USED NTS 2

NOT USED NTS 5

NOT USED NTS 8

REVIS CD	25-10-15
REVIS DATE	25-10-15
REVIS BY	25-10-15
REVIS DESCRIPTION	25-10-15
REV	25-10-15
DESCRIPTION	25-10-15



SD0388
WEST RANCHO PENASQUITOS
12865 BLACK MOUNTAIN RD
SAN DIEGO, CA 92129
LIE 3C/LIE 4C



Project Number:
Drawn by: **ERO/RP**
Checked by: **ERO**
Sheet No:
A7