



## SITE DIRECTIONS

#### DIRECTIONS FROM T-MOBILE OFFICE

3257 E GUASTI RD, ONTARIO, CA 91761 GET ON I-10 W. HEAD SOUTHEAST ON E GUASTI RD TOWARD N CENTRE LAKE DR. USE THE 2ND FROM THE LEFT LANE TO TURN LEFT ONTO N HAVEN AVE. SLIGHT RIGHT TO MERGE ONTO I-10 W . FOLLOW I-10 W TO GILLETTE RD IN POMONA. TAKE EXIT 44 FROM I-10 W. MERGE ONTO I-10 W. USE THE RIGHT LANE TO TAKE EXIT 44 TOWARD GILLETTE RD. KEEP RIGHT, FOLLOW SIGNS FOR DUDLEY ST. FOLLOW DUDLEY ST TO W HOLT AVE. TURN RIGHT ONTO GILLETTE RD. TURN RIGHT ONTO DUDLEY ST. PASS BY JACK IN THE BOX (ON THE RIGHT IN 0.2 MI), TURN RIGHT ONTO WHOLT, AVE, DESTINATION WILL BE ON THE RIGHT, 2005 W HOLT AVE, POMONA, CA 91768

## PROJECT TEAM

CLIENT:

PHONE:

PHONE

COMPANY:

ADDRESS:

CONTACT

COMPANY: ADDRESS:

CONTACT

COMPANY

ADDRESS:

CONTACT

PHONE:

PHONE

PHONE:

COMPANY

ADDRESS:

COMPANY:

APC TOWERS LLC 8601 SIX FORKS RD., SUITE 250 CITY, STATE, ZIP: CONTACT: RALEIGH NC 27615 PAUL ALVAREZ (919) 249-7732 PROPERTY OWNER MJ MANAGEMENT GROUP. LLC ADDRESS: CITY, STATE, ZIP: 2009 W. HOLT AVE. POMONA, CA 91768 (909) 623-9590 TOWER OWNER APC TOWERS LLC 8601 SIX FORKS RD., SUITE 250 CITY, STATE, ZIP: RALEIGH, NC 27615 PAUL ALVAREZ (919) 249-7732 SITE ACQUISITION: PLANCOM, INC. 250 EL CAMINO REAL, SUITE 117 CITY, STATE, ZIP TUSTIN, CA 92780 JIM HEINRICH (714) 906-0018 PROFESSIONAL OF RECORD: XD INDUSTRIES 1572 N. BATAVIA ST. SUITE 1D ORANGE, CA 92876 CITY, STATE, ZIP: JOSE FRIAS (714) 947-3093

# CODE COMPLIANCE

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

- 2016 CALIFORNIA BUILDING CODE
- 2016 CALIFORNIA ENERGY CONSERVATION CODE 2016 CALIFORNIA RESIDENTIAL CODE
- 2016 CALIFORNIA MECHANICAL CODE
   2016 CALIFORNIA PLUMBING CODE
- 2016 CALIFORNIA ELECTRICAL CODE

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

PROPOSED MONOEUCALYPTUS LOCATION

LATITUDE: 34° 3' 44.6508" NORTH (NAD83) LONGITUDE: -117° 47' 9.0924" WEST (NAD83)

LATITUDE:	34.062386° N	THE PROPOSED PROJECT INCLUDES:
LONGITUDE:	-117.785783° W	<ul> <li>PROPOSED (12) 8'-0" PANEL ANTENNAS</li> <li>PROPOSED (12) RRU'S</li> </ul>
GROUND ELEVATION:	803.3' AMSL	PROPOSED (1) 1'Ø MICROWAVE DISH     PROPOSED (1) (ODU) RFU-C
APN #:	8355-016-027	INSTALLATION OF 8'-0" HIGH CMU WALL     PROPOSED 200A DEDICATED ELECTRIC
PARENT PARCEL:	37,847.91 SQ. FT.	PROPOSED 23-6" X 11-0" CONCRETE PA     PROPOSED (1) 6102 MUAC CABINET MO
PROPOSED LEASE AREA:	1,000 SQ. FT.	<ul> <li>PROPOSED (1) FOTORE 6102 MOAC CAB</li> <li>PROPOSED POWER AND TELCO CABINE</li> <li>PROPOSED (1) I TE GPS ANTENNA</li> </ul>
JURISDICTION:	CITY OF POMONA	PROPOSED (1) TELCO BOX     PROPOSED (1) CIENA CABINET
ZONING:	CSP - CORRIDORS SPECIFIC PLAN	PROPOSED CABLE BRIDGE     PROPOSED (3) 6"Ø CONDUIT STUB-UPS
USE:	TELECOMMUNICATIONS FACILITY	PROPOSED (1) BBU CABINET     PROPOSED (1) GENERATOR W/ FLUID T/
HANDICAP REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED	PROPOSED (4) SECURITY FLOOD LIGHT

**PROJECT INFORMATION** 

### GENERAL NOTES

- GENERAL NOTES THIS WIRELESS TELECOMMUNICATIONS FACILITY WILL MEET THE HEALTH AND SAFETY STANDARDS FOR ELECTROMAGNETIC FIELD EMISSIONS AS ESTABLISHED BY THE FEDERAL COMMUNICATIONS COMMISSION OR ANY SUCCESSOR THEREOF, AND ANY OTHER FEDERAL OR STATE AGENCY
- THIS WIRELESS TELECOMMUNICATIONS FACILITY WILL MEET THE REGULATIONS OF THE FEDERAL COMMUNICATIONS COMMISSION REGARDING PHYSICAL AND ELECTROMAGNETIC INTERFERENCE
- LIGHTING OR SIGNS WILL BE PROVIDED ONLY AS REQUIRED BY FEDERAL OR STATE AGENCIES.

DO NOT SCALE DRAWINGS

- CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR
- 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 FEFECT ON DRAINAGE: NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED

## FCC COMPLIANCE

RADIATION FROM THIS FACILITY WILL NOT INTERFERE WITH THE OPERATION OF OTHER COMMUNICATION DEVICES.

- SED (4) SECURITY FLOOD LIGHTS D SHEET NO: T-1 TITLE SHEET GENERAL NOTES GN-1 GN-2 GENERAL NOTES LS-1 SITE SURVEY LS-2 NOTES & OVERALL OVERALL SITE PLAN A-1 ENLARGED SITE PL A-2
  - A-3 PROPOSED ANTENN A-4 PROPOSED WEST & A-5 PROPOSED NORTH

THE FOLLOWING PARTIES HEREBY
AUTHORIZE THE SUBCONTRACTOR
DESCRIBED HEREIN. ALL DOCUMEN
BUILDING DEPARTMENT & MAY IMPO
RF ENGINEER:
PRO JECT MANAGER
SITE ACQUISITION MANAGER:
ZONING VENDOR:
LEASING VENDOR:
CONSTRUCTION MANAGER:
A/E MANAGER:
PROPERTY OWNER:



# PROJECT DESCRIPTION

ATION OF PROPOSED 65'-0" HIGH MONO-FLICAL YPTUS TREE

SED (1) (DU) RFU-C LATION OF 8-0" HIGH CMU WALL ENCLOSURE DSED 200A DEDICATED ELECTRICAL SERVICE TO (1) 200 AMP METER SED 23'-6" X 11'-0" CONCRETE PAD SED (1) 6102 MUAC CABINET MOUTNED ON CONCRETE PAD DSED (1) FUTURE 6102 MUAC CABINET

SED POWER AND TELCO CABINETS

SED (1) GENERATOR W/ FLUID TANK

RAWING INDEX				
SHEET TITLE	REV			
	С			
	С			
	С			
	С			
	С			
1	С			
AN & PROPOSED EQUIPMENT PLAN	С			
IA PLAN & ANTENNA SCHEDULE	С			
SOUTH ELEVATIONS	С			
& EAST ELEVATIONS	С			

# APPROVALS

APPROVE AND ACCEPT THESE DOCUMENTS & TO PROCEED WITH THE CONSTRUCTION ITS ARE SUBJECT TO REVIEW BY THE LOCAL OSE CHANGES OR MODIFICATIONS.

DATE:
DATE:
 DATE:

#### GENERAL NOTES:

- 1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY: CONTRACTOR TBD SUBCONTRACTOR GENERAL CONTRACTOR (CONSTRUCTION)
  - OWNER APC TOWER OEM ORIGINAL EQUIPMENT MANUFACTURE
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR 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 ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, OPDINANCES AND ADD LOCAL UNISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS
- 4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMEN APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON

DELETED

THE DRAWINGS.

- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE
- IF THE SPECIFIED FOUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS. TH SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD PROPOSED TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR. ROUTING OF TRENCHING SHALL BE APPROVED BY CONTRACTOR
- 10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS LANDSCAPING AND STRUCTURES, ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- 11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OFF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- 12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION
- ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
- 14. ANY PROPOSED CONCRETE NEEDED FOR THE CONSTRUCTION SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS UNLESS OTHERWISE SPECIFIED.ALL CONCRETING WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
- 15. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.
- 16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATION 25741-000-3APS-AOOZ-00002, "GENERAL CONSTRUCTION SERVICES.
- 17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- 18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK MAY NEED TO BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT
- 19. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

CONCRETE AND REINFORCING STEEL NOTES:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318. ACI 336. ASTM A184 ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD,

4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

CONCRETE CAST AGAINST EARTH . 3 IN

#5 AND SMALLER & WWF ..1-1/2 IN

..... 3/4 IN. .... 1-1/2 IN. BEAMS AND COLUMNS .

A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

- 5. POST INSTALLED ANCHORS SHALL BE PROVIDED IN ACCORDANCE WITH SPECIFICATION POSTINGUALED SELECTION, DESIGN, INSTALLATION, INSPECTION AND TESTING OF ADHESIVE AND SGS-T18-00013 "SELECTION, DESIGN, INSTALLATION, INSPECTION AND TESTING OF ADHESIVE AND MECHANICAL EXPANSION ANCHORS FOR WIRELESS SITE FACILITIES", ANCHORS SHALL BE HILTI OR APPROVED EQUAL, INSTALLED, INSPECTED AND TESTE AS SHOWN ON THE DESIGN DRAWINGS. NO REINFORCING STEEL SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROV
- CONCRETE CYLINDER TEST IS NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC 1905.6.2) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER; (A) RESULTS OF CONCRETE CYLINDER TESTS PERFORMED AT THE SUPPLIER'S PLANT, (B) CEDIFICATION OF MINIUM COMPRESSIVE STRENGTH FOR

(B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR

THE CONCRETE GRADE SUPPLIED.

FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST, TAKING THREE CYLINDERS FROM EACH TRUCK.

#### GROUNDING NOTES:

- THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYST AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
- ALL GROUND FLECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNIN PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
- THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR PROPOSED GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS. TESTS SHALL BE PERFORMED IN ACCORDANCE WITH 25471-000-39S-EG00-0001, DESIGN & TESTING OF FACILITY GROUNDING FOR CELL SITES.
- METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND ONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN 4 ACCORDANCE WITH THE NEC. SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
- 5 EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS; 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
- 6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED WITH STAINLESS STEEL HARDWARE TO THE BRIDGE AND THE TOWER GROUND BAR.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS
- 10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- 11. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- 2. GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS, WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PYC PLASTIC CONDUIT SHALL BE USED. WHERE HOR ON METALLIC MATERIAL SUCH AS PYC PLASTIC CONDUITS TALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NON-METALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
- 13. ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF ANSI/TIA 222. FOR TOWERS BEING BUILT TO REV G OF THE STANDARD, THE WIRE SIZE OF THE BURIED GROUND RING AND CONNECTIONS BETWEEN THE TOWER AND THE BURIED GROUND RING SHALL BE CHANGED FROM 2 AWG TO 2/0 AWG. IN ADDITION, THE MINIMUM LENGTH OF THE GROUND RODS SHALL BE INCREASED FROM 8 FEET TO 10 FEET

#### SITE WORK GENERAL NOTES:

- 1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES 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 CONTRACTOR EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR WHAT EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR WHAT EXCAVATING TOR THE MODIFIED DEVICE THE DRIVEN OF THE WORKING CREW, THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.
- 3. 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 OFF 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
- 6. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.
- THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE APC TOWER SPECIFICATION FOR SITE SIGNAGE.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- 10. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 11. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
- 12. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES. IF REQUIRED DURING CONSTRUCTION. SHALL BE IN CONFORMANCE WITH THE LOCAL JURISDICTION'S GUIDELINES FOR EROSION AND SEDIMENT CONTROL

#### ELECTRICAL INSTALLATION NOTES:

- WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
- SUBCONTRACTOR SHALL MODIFY EXISTING CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE PROPOSED BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
- 4. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- 5. EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA, AND MATCH EXISTING INSTALLATION REQUIREMENTS.
- 6. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, % INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC & OSHA AND MATCH EXISTING INSTALLATION REQUIREMENTS.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
- 8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
- 9. ALL TIE WRAPS WHERE PERMITTED SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES. USE LOW PROFILES TIE WRAPS.
- 10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (12 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACING WAY SYSTEM USED, UNIT SEC OTHERWISE RECEIVES OF CONFIDENCE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- 11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION, LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- 12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR 2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED
- 13. POWER WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (12 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
- 14 ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/EEE, AND NEC.
- 16. PROPOSED RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- 17. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OF RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- 18. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS
- 19. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE
- 20. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND: DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
- 21. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- 22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- 23. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
- 24. CABINETS, BOXES, AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- 25. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- 26. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS
- 27. METAL RECEPTACLE SWITCH AND DEVICE BOXES SHALL BE GALVANIZED EPOXY-COATED OR NON-COREDUCE, WHICH, AND DECODE DUCSTAILED LEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- 29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS
- 30. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

- REQUIRED

2c.

3.

#### SOIL COMPACTION NOTES FOR SLAB ON GRADE:

EXCAVATE AS REQUIRED TO REMOVE VEGETATION & TOPSOIL EXPOSE UNDISTURBED NATURAL SUBGRADE AND PLACE CRUSHED STONE AS

COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.

AS AN ALTERNATIVE TO ITEM 2a. THE "UNDISTURBED SOIL" BASE SHAL COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAS 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.

AS AN ALTERNATIVE TO ITEMS 2a AND 2b PROOFROLL THE SUBGRADE SOILS WITH 5 PASSES OF A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND-OPERATED SINGLE DRUM /IBRATORY ROLLER (SUCH AS BOMAG BW 55E), ANY SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADED GRANULAR FILL, AND COMPACTED AS STATED ABOVE

COMPACTED SUBBASE SHALL BE UNIFORM & LEVELED. PROVIDE 6" MINIMUM CRUSHED STORE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING 1" SIEVE.

#### COMPACTION EQUIPMENT:

S/G

S/N

6

6.0

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(E)

RF

EG

IGR

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HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

# SYMBOLS

SOLID GROUND BUS BAR

SOLID NEUTRAL BUS BAR

\_\_\_\_\_\_ SUPPLEMENTAL GROUND BAR

2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER

> SINGLE-POLE THERMAL-MAGNETIC CIRCUIT BREAKER

CHEMICAL GROUND ROD

GROUND ROD

DISCONNECT SWITCH

METER

CADWELD TYPE CONNECTION

COMPRESSION TYPE CONNECTION

GROUNDING WIRE

# ABBREVIATIONS

AGL ABOVE GRADE LEVEL

BTS BASE TRANSCEIVER STATION

EXISTING

PROPOSED PROPOSED

MIN MINIMUM

N.T.S. NOT TO SCALE

REF REFERENCE

RADIO FREQUENCY

TYP TYPICAL

REQ REQUIRED

EGR EQUIPMENT GROUND RING

AWG AMERICAN WIRE GAUGE

(MASTER GROUND BAR)

CRGB MASTER GROUND BAR

EQUIPMENT GROUND

BCW BARE COPPER WIRE

SIAD SMART INTEGRATED ACCESS DEVICE

GEN GENERATOR

INTERIOR GROUND RING (HALO)

RBS RADIO BASE STATION

# SYMBOLS & ABBREVIATIONS



SHEET NUMBE

GN-1

#### **STORM GRAIN INLET PROTECTION**



#### **TYPICAL PROTECTION FOR INLET WITH SINGLE FLOW DIRECTION**



### TYPICAL PROTECTION FOR INLET WITH OPPOSING FLOW DIRECTION

# NOTES:

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







PROPOSED ANTENNA SCHEDULE

SECT	OR	ANTENNA MODEL	ANTENNA LENGTH	RAD CENTER	AZIMUTH	TMA MODEL	RRH MODEL	ACTIVE TECHNOLOGY	JUMPER CABLE LENGTH (±5')	COAX CABLE
ALPHA SECTOR	A1	(P) ERICSSON - AIR3246 B66	96"	61"-0"	0°	-	(P) (1) RADIO 4415 B25	L2100/L2100/L2100/L2100	-	HYBRI
	A2	(P) RFS - APXVAARR24_43-U-NA20	95.9"	61"-0"	0°	-	(P) (1) RADIO 4449 B71+B12	L700/L600/L700/L600	(4) 12'	-
	A3	(P) ANDREW - HBXX-6516DS-A2M	96"	61"-0"	0°	-	(P) (1) RADIO 4415 B25	U1900/L1900/U1900/L1900	(4) 12'	-
	A4	FUTURE	-	-	-	-	(P) (1) RADIO 4415 B25	-	-	-
			L	1	I					
BETA SECTOR	B1	(P) ERICSSON - AIR3246 B66	96"	61"-0"	120°	-	(P) (1) RADIO 4415 B25	L2100/L2100/L2100/L2100	-	HYBRI
	B2	(P) RFS - APXVAARR24_43-U-NA20	95.9"	61"-0"	120°	-	(P) (1) RADIO 4449 B71+B12	L700/L600/L700/L600	(4) 12'	-
	В3	(P) ANDREW - HBXX-6516DS-A2M	96"	61"-0"	120°	-	(P) (1) RADIO 4415 B25	U1900/L1900/U1900/L1900	(4) 12'	-
	В4	FUTURE	-	-	-	-	(P) (1) RADIO 4415 B25	-	-	-
				1						
ECTOR	C1	(P) ERICSSON - AIR3246 B66	96"	61"-0"	240°	-	(P) (1) RADIO 4415 B25	L2100/L2100/L2100/L2100	-	HYBRI
	C2	(P) RFS - APXVAARR24_43-U-NA20	95.9"	61"-0"	240°	-	(P) (1) RADIO 4449 B71+B12	L700/L600/L700/L600	(4) 12'	-
	C3	(P) ANDREW - HBXX-6516DS-A2M	96"	61"-0"	240°	-	(P) (1) RADIO 4415 B25	U1900/L1900/U1900/L1900	(4) 12'	-
AMA S										

# PROPOSED ANTENNA PLAN







