



T-MOBILE SITE NAME: ATC CALL MOUNTAIN 8202
ATC SITE NUMBER: 8202
ATC SITE NAME: CALL MOUNTAIN
STREET ADDRESS: 2 MILES OF PANOCHE ROAD FROM HWY 25
CALL MTN PAICINES, CA 95043

FINAL CD'S 11/19/2015

APPROVAL SIGNATURE BLOCK		
THE FOLLOWING PARTIES HAVE REFERENCED THESE DOCUMENTS.		
ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL ZONING BUILDING DEPARTMENTS AND MAY IMPOSE CHANGES OR NOTIFICATIONS.		
<input type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED		
_____ PROJECT MANAGER (Print)	_____ PROJECT MANAGER	_____ DATE
<input type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED		
_____ RF ENGINEER (Print)	_____ RF ENGINEER	_____ DATE
<input type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED		
_____ SITE ACQUISITION (Print)	_____ SITE ACQUISITION	_____ DATE
<input type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED		
_____ TMO QUALITY ASSURANCE (Print)	_____ QA	_____ DATE



SITE NAME:

ATC CALL MOUNTAIN 8202

SITE NUMBER:

SF95460A

STREET ADDRESS:

**2 MILES OF PANOCHÉ ROAD FROM HWY 25
CALL MTN PAICINES, CA 95043**

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1755 CREEKSIDE OAKS DRIVE
STE 109
SACRAMENTO, CA 95833

**L700
CONSTRUCTION**

CHECKED BY: RI
APPROVED BY: MB

APPROVALS

OPERATIONS	DATE
RF ENGINEER	DATE
ZONING ADMINISTRATOR	DATE
SITE ACQUISITION	DATE
T-MOBILE CONSTRUCTION MANAGER	DATE
PROPERTY OWNER	DATE
POWER APPROVAL	DATE
TELCO APPROVAL	DATE

#	DATE	DESCRIPTION	INT.
0	10/29/15	90% REVIEW	AA
0	10/30/15	95% REVIEW	AA
0	11/18/15	100% REVIEW	AA
1	11/19/15	FINAL	AA

PROJECT DIRECTORY

PROJECT INFORMATION

VICINITY MAP

APPLICANT:
T-MOBILE
1755 CREEKSIDE OAKS DRIVE
STE 190
SACRAMENTO, CA 95833

A&E COMPANY:
FULLERTON ENGINEERING
9600 W. BRYN MAWR AVE., SUITE 200
ROSEMONT, ILLINOIS 60018
TEL: (847) 292-0200
FAX: (847) 292-0206

TOWER OWNER:
AMERICAN TOWER CORPORATION
19100 VON KARMAN SUITE 200
IRVINE, CA 92612
TEL: (619) 384-2109

TYPE OF CONSTRUCTION:
PROJECT TYPE: SELF SUPPORT TOWER

TOWER INFORMATION:
(LATITUDE & LONGITUDE BASED ON NAD1983)
LATITUDE: 36.6124°
LONGITUDE: -121.06476670°
RAD CENTER HEIGHT: 45' AGL

SQUARE FOOTAGE:
LEASE AREA:
N/A

TOWER OWNER:
AMERICAN TOWER CORPORATION
19100 VON KARMAN SUITE 200
IRVINE, CA 92612

PARCEL NUMBER (TAX I.D.):
-

OCCUPANT LOAD:
UNOCCUPIED

SUBJECT SITE ZONING:
AE

TOWER SETBACKS:
FRONT: N/A-EXISTING TOWER
REAR: N/A-EXISTING TOWER
SIDES: N/A-EXISTING TOWER



DIRECTIONS TO SITE:
DEPART HOLLISTER MUNICIPAL AIRPORT [90 SKYLANE DR, HOLLISTER CA 95023, UNITED STATES, TEL: +(1)-831-6364365] ON AIRPORT DR (EAST), TURN RIGHT (SOUTH) ONTO SAN FELIPE RD, TURN LEFT (EAST) ONTO LOCAL ROAD(S), KEEP STRAIGHT ONTO CA-25, TURN LEFT (EAST) ONTO CR-J1 [PANOCHÉ RD] TURN RIGHT (SOUTH) ONTO LOCAL ROAD(S), ARRIVE AT SITE.

SCOPE OF WORK

- NEW 10'-0"x10'-0" EQUIPMENT STEEL PLATFORM
 - (1) NEW PURCELL CABINET
 - (1) NEW BATTERY CABINET
 - (1) NEW UTILITY H-FRAME WITH NEW TELCO AND PPC CABINET
 - (1) GPS ANTENNA
 - (3) NEW ANTENNAS & (3) NEW RRUS-11
 - (1) NEW MICROWAVE DISH & (1) ODU
 - (1) NEW HYBRID CABLE & (1) COAX CABLE FOR NEW MICROWAVE
 - (3) NEW SECTOR DUAL PIPE MOUNT
 - (1) NEW 200 AMP METER
- DRAWING SCALE NOTE: THE DRAWING ARE DESIGNED FOR 11"x17" FORMAT

PROJECT SUMMARY

DO NOT SCALE DRAWINGS

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

THE SEAL CERTIFIES ONLY THE CIVIL ENGINEERING DESIGN AND RELATED DETAILS SHOWN ON THESE PLANS. THIS SEAL DOES NOT CERTIFY ANY ARCHITECTURAL, ELECTRICAL, MECHANICAL, STRUCTURAL DESIGN, AND RELATED DETAILS INCLUDED IN THESE PLANS.

FOR SITES WHERE A CRANE IS NECESSARY, THE CONTRACTOR SHALL CONFIRM AN UNOBSTRUCTED ROUTE FOR THE CRANE FROM PUBLIC ROAD TO TOWER SITE PRIOR TO CONSTRUCTION. NO AERIAL OBSTRUCTION UNDER FIFTEEN FEET ABOVE GRADE, INCLUDING AERIAL UTILITY LINES ARE ALLOWED ALONG SIDE OF SAID CRANE ROUTE.

THIS DRAWING IS THE PROPERTY OF FULLERTON ENGINEERING CONSULTANTS, INC. IT IS FOR THE EXCLUSIVE USE OF THIS PROJECT. ANY RE-USE OF THIS DRAWING WITHOUT THE EXPRESSED WRITTEN CONSENT OF FULLERTON ENGINEERING CONSULTANTS, INC. IS PROHIBITED.



CODE COMPLIANCE

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

- 2013 CAC
- 2013 CBC, VOLUME 1 & 2 (2012 EDITION INTERNATIONAL BUILDING CODE WITH 2013 CALIFORNIA AMENDMENTS)
- 2013 CEC (WITH 2015 CALIFORNIA AMENDMENTS)
- 2013 CMC (2012 EDITION IAPMO UNIFORM MECHANICAL CODE WITH 2013 CALIFORNIA AMENDMENTS)
- 2013 CALGREEN, CALIFORNIA CODE OF REGULATIONS, PART 6, TITLE 24)
- 2013 CFC (2012 EDITION OF INTERNATIONAL FIRE CODE WITH 2010 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA GREEN CODE, 2013 CALIFORNIA REFERENCES STANDARDS CODE CITY/COUNTY ZONING ORDINANCES

CERTIFICATION STATEMENT:

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY PROFESSIONAL KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE CODES



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SITE ADDRESS:
**2 MILES OF PANOCHÉ ROAD FROM HWY 25
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SHEET NAME:
TITLE SHEET

SHEET NUMBER:
T-1

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DIVISION 1 - GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 INTENT

- A. THESE SPECIFICATIONS AND CONSTRUCTION DRAWINGS ACCOMPANYING THEM DESCRIBE THE WORK TO BE DONE AND THE MATERIALS TO BE FURNISHED FOR THE CONSTRUCTION OF THIS PROJECT.
- B. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE FULLY EXPLANATORY AND SUPPLEMENTARY. HOWEVER, SHOULD ANYTHING BE SHOWN, INDICATED OR SPECIFIED ON ONE AND NOT THE OTHER, IT SHALL BE DONE THE SAME AS IF SHOWN, INDICATED OR SPECIFIED IN BOTH.
- C. THE INTENTION OF THE DOCUMENTS IS TO INCLUDE ALL LABOR AND MATERIALS REASONABLY NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK AS STIPULATED IN THE CONTRACT.
- D. THE PURPOSE OF THE SPECIFICATIONS IS TO INTERPRET THE INTENT OF THE DRAWINGS AND TO DESIGNATE THE METHOD OF THE PROCEDURE, TYPE AND QUALITY OF MATERIAL REQUIRED TO COMPLETE THE WORK.
- E. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND SHALL BE CONSIDERED AS PART OF THE WORK, NO CHANGES THAT AFFECT THE CHARACTER OF THE WORK WILL BE MADE OR PERMITTED BY THE OWNER WITHOUT ISSUING A CHANGE ORDER.

1.2 CONFLICTS

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL MEASUREMENTS AT THE SITE BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK, NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ANY SUCH DISCREPANCY IN DIMENSION WHICH MAY BE FOUND SHALL BE SUBMITTED TO THE OWNER FOR CONSIDERATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK IN THE AFFECTED AREAS.
- B. THE BIDDER, IF AWARDED THE CONTRACT, WILL NOT BE ALLOWED ANY EXTRA COMPENSATION BY REASON OF ANY MATTER OR THING CONCERNING THE WORK WHICH THE BIDDER MIGHT HAVE FULLY DISCOVERED PRIOR TO THE BIDDING.
- C. NO PLEA OF IGNORANCE OR CONDITIONS THAT EXIST, OR OF DIFFICULTIES OR CONDITIONS THAT MAY BE ENCOUNTERED OR OF ANY OTHER RELATED MATTER CONCERNING THE WORK TO BE PERFORMED IN THE EXECUTION OF THE WORK WILL BE ACCEPTED AS AN EXCUSE FOR ANY FAILURE OR OMISSION ON THE PART OF THE CONTRACTOR TO FULFILL EVERY DETAIL OF ALL THE REQUIREMENTS.

1.3 CONTRACTS AND WARRANTIES

- A. EACH CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE BUILDING PERMIT AT THE LOCAL JURISDICTION AS THE CONTRACTOR OF RECORD, AND PROVIDE TOTAL JURISDICTION WITH ALL PROOF REQUIRED TO OPERATE AS A CONTRACTOR IN THAT JURISDICTION. THE CONTRACTOR SHALL BE REIMBURSED ONLY THE AMOUNT OF ANY FEE PAID AS FOLLOWS:
 - 1. PLAN REVIEW FEE.
 - 2. BUILDING PERMIT FEE.
 - 3. CONNECTIONS AND INSPECTIONS FEE.
 - 4. DEVELOPMENT FEE.
- B. CONTRACTOR IS RESPONSIBLE FOR APPLICATION AND PAYMENT OF CONTRACTOR LICENSES AND BONDS.

1.4 STORAGE

ALL MATERIALS MUST BE STORED IN A LEVEL AND DRY FASHION IN A MANNER THAT DOES NOT NECESSARILY OBSTRUCT THE FLOW OF OTHER WORK. ANY STORAGE METHOD MUST MEET ALL RECOMMENDATIONS OF THE ASSOCIATED MANUFACTURER.

1.5 CLEAN UP

THE CONTRACTOR SHALL AT ALL TIMES KEEP THE SITE FREE FROM ACCUMULATION OF WASTE, MATERIAL OR RUBBISH AT THE WORK SITE AND, AT COMPLETION OF THE WORK, SHALL REMOVE ALL RUBBISH FROM AND ABOUT THE BUILDING AREA, INCLUDING ALL TOOLS, EQUIPMENT AND SURPLUS MATERIALS AND SHALL LEAVE THE WORK AREA CLEAN AND READY FOR USE.

1.6 CHANGE ORDER PROCEDURE

CHANGE ORDER MAY BE INITIATED BY THE OWNER AND/OR THE CONTRACTOR INVOLVED. THE CONTRACTOR, UPON VERBAL REQUEST FROM THE OWNER SHALL PREPARE A WRITTEN PROPOSAL DESCRIBING THE CHANGE IN WORK OR MATERIALS AND ANY CHANGES IN THE CONTRACT AMOUNT AND PRESENT TO THE OWNER FOR APPROVAL. SUBMIT REQUESTS OR SUBSTITUTIONS IN THE FORM AND IN ACCORDANCE WITH PROCEDURES REQUIRED FOR CHANGE ORDER PROPOSALS. ANY CHANGES IN SCOPE OF WORK OR MATERIALS WHICH ARE PERFORMED BY THE CONTRACTOR WITHOUT A WRITTEN CHANGE ORDER AS DESCRIBED AND APPROVED BY THE OWNER SHALL PLACE FULL RESPONSIBILITY OF THESE ACTIONS ON THE CONTRACTOR.

1.7 RELATED DOCUMENTS AND COORDINATION

GENERAL CARPENTRY, ELECTRICAL AND ANTENNA DRAWINGS ARE INTERRELATED. IN PERFORMANCE OF THE WORK, THE CONTRACTOR MUST REFER TO ALL DRAWINGS, ALL COORDINATION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.

1.8 PRODUCTS AND SUBSTITUTIONS

- A. SUBMIT 3 COPIES OF EACH REQUEST FOR SUBSTITUTION. IN EACH REQUEST IDENTIFY THE PRODUCT OR FABRICATION OR INSTALLATION METHOD TO BE REPLACED BY THE SUBSTITUTION. INCLUDE RELATED SPECIFICATION SECTION AND DRAWING NUMBERS AND COMPLETE DOCUMENTATION SHOWING COMPLIANCE WITH THE REQUIREMENTS FOR SUBSTITUTIONS.
- B. SUBMIT ALL NECESSARY PRODUCT DATA AND CUT SHEETS WHICH PROPERLY INDICATE AND DESCRIBE THE ITEMS, PRODUCTS, AND MATERIALS BEING INSTALLED. THE CONTRACTOR SHALL, IF DEEMED NECESSARY BY THE OWNER, SUBMIT ACTUAL SAMPLES TO THE OWNER FOR APPROVAL IN LIEU OF CUT SHEETS.

1.9 QUALITY ASSURANCE

ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. THESE SHALL INCLUDE BUT NOT BE LIMITED TO THE LATEST VERSION OF THE FOLLOWING:

- ANSI/EIA - 222 - E
- UNIFORM BUILDING CODE (UBC)
- 2006 BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA 2006)
- NATIONAL ELECTRICAL CODE (NEC) WITH LOCAL AMENDMENTS
- UNDERWRITER LABORATORIES APPROVED ELECTRICAL PRODUCTS
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATIONS (AISC)
- LIFE SAFETY CODE NFPA - 101
- MINIMUM DESIGN CRITERIA FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES WILL BE TIA / EIA - 222 - F

1.10 ADMINISTRATION

- A. PRIOR TO THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR WILL ASSIGN A PROJECT MANAGER WHO WILL ACT AS A SINGLE POINT OF CONTACT FOR ALL PERSONNEL INVOLVED IN THIS PROJECT. THIS PROJECT MANAGER WILL DEVELOP A MASTER SCHEDULE FOR THE PROJECT WHICH WILL BE SUBMITTED TO THE OWNER PRIOR TO THE COMMENCEMENT OF ANY WORK.
- B. SUBMIT A BAR CHART TYPE PROGRESS NOT MORE THAN 3 DAYS AFTER THE DATE ESTABLISHED FOR COMMENCEMENT OF THE WORK ON THE SCHEDULE. INDICATE A TIME BAR FOR EACH MAJOR CATEGORY OR UNIT OF WORK TO BE PERFORMED AT SITE, PROPERTY SEQUENCED AND COORDINATED WITH OTHER ELEMENTS OF WORK. SHOW COMPLETION OF THE WORK SUFFICIENTLY IN ADVANCE OF THE DATE ESTABLISHED FOR SUBSTANTIAL COMPLETION OF THE WORK.
- C. PRIOR TO COMMENCING CONSTRUCTION, THE OWNER WILL SCHEDULE AN "ON-SITE" MEETING WITH ALL MAJOR PARTIES. THIS WOULD INCLUDE (THOUGH NOT LIMITED TO) THE OWNER, LOCAL TELEPHONE COMPANY, TOWER ERECTION FOREMAN (IF SUBCONTRACTED).
- D. CONTRACTOR SHALL BE EQUIPPED WITH SOME MEANS OF CONSTANT COMMUNICATIONS, SUCH AS A MOBILE PHONE OR A PAGER. THIS EQUIPMENT WILL NOT BE SUPPLIED OR PAID FOR BY THE OWNER NOR WILL CELLULAR SERVICE BE ARRANGED.
- E. DURING CONSTRUCTION, CONTRACTOR MUST ENSURE THAT EMPLOYEES AND SUBCONTRACTORS WEAR OSHA LEVEL D PERSONAL PROTECTIVE EQUIPMENT AT ALL TIMES. THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE OSHA REQUIREMENTS.

- F. CONTRACTOR SHALL PROVIDE DAILY UPDATES ON SITE PROGRESS, EITHER VERBAL OR WRITTEN.
- G. A COMPLETE INVENTORY OF CONSTRUCTION MATERIALS AND EQUIPMENT IS REQUIRED PRIOR TO START OF CONSTRUCTION.

DIVISION 2 - SITE WORK

PART 1 - GENERAL

1.1 WORK INCLUDED

REFER TO THE SURVEY AND ARCHITECTURAL SITE PLAN FOR WORK INCLUDED.

1.2 RELATED WORK

- A. INSTALLATION OF ANTENNA SYSTEM
- B. ERECTION OF FENCE
- C. ACCESS ROAD
- D. PARKING AREA

1.3 DESCRIPTIONS

ACCESS ROAD, TURNAROUND AREAS, AND SITES ARE CONSTRUCTED TO PROVIDE A WELL DRAINED, EASILY MAINTAINED, EVEN SURFACE FOR MATERIAL AND EQUIPMENT DELIVERIES AND MAINTENANCE PERSONNEL ACCESS.

1.4 REFERENCES

- A. MDOT - MICHIGAN DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS FOR CONSTRUCTION," 2003 EDITION.
- B. ASTM - AMERICAN SOCIETY OF TESTING MATERIALS, LATEST EDITION.

1.5 QUALITY ASSURANCES

- A. CONTRACTOR SHALL APPLY SOIL STERILIZER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, AS NEEDED.
- B. VEGETATION AND LANDSCAPING, IF REQUIRED WITHIN THE CONTRACT, SHALL BE PLACED AND MAINTAINED AS RECOMMENDED BY NURSERY INDUSTRY STANDARDS.

1.6 SEQUENCING

- A. CONTRACTOR SHALL CONFIRM SURVEY STAKES AND SET ELEVATION STAKES PRIOR TO ANY CONSTRUCTION.
- B. THE COMPLETE ROAD AND SITE AREA SHALL BE CLEARED OF HEAVY GROWTH OF GRASS, TREES, SHRUB AND TOPSOIL PRIOR TO FOUNDATION CONSTRUCTION OR PLACEMENT OF BLACKFILL OR SUBBASE MATERIAL.
- C. CONSTRUCT TEMPORARY CONSTRUCTION ZONE ALONG ACCESS DRIVE.
- D. THE SITE AREA SHALL BE BROUGHT TO SUBBASE COURSE ELEVATION AND THE ACCESS ROAD TO BASE COURSE ELEVATION PRIOR TO FORMING FOUNDATIONS.
- E. CONTRACTOR SHALL APPLY SOIL HERBICIDE PRIOR TO PLACING BASE MATERIALS.
- F. IF REQUIRED, GRADE, SEED, FERTILIZE AND MULCH DISTURBED AREA IMMEDIATELY AFTER BRINGING THE SITE AND ACCESS ROAD TO BASE COURSE ELEVATION PRIOR TO FORMING FOUNDATIONS.
- G. REMOVE GRAVEL FROM TEMPORARY CONSTRUCTION ZONE.
- H. AFTER APPLICATIONS OF FINAL SURFACES, SOIL HERBICIDE SHALL BE APPLIED TO THE STONE SURFACES.

1.7 SUBMITTALS

- A. PRIOR TO CONSTRUCTION
 - 1. IF LANDSCAPING IS APPLICABLE TO THE CONTRACT, SUBMIT TWO COPIES OF THE LANDSCAPING PLAN UNDER NURSERY LETTERHEAD. IF A LANDSCAPE ALLOWANCE WAS INCLUDED IN THE CONTRACT, SUBMIT AN ITEMIZED LISTING OF PROPOSED COSTS UNDER NURSERY LETTERHEAD (REFER TO SITE PLAN FOR LANDSCAPING REQUIREMENT).
 - 2. SUBMIT FOR APPROVAL 1/2 CUBIC FEET OF THE PROPOSED SURFACE COURSE MATERIAL.
- B. FOLLOWING CONSTRUCTION
 - 1. MANUFACTURER'S DESCRIPTION OF PRODUCT AND WARRANTY STATEMENT ON SOIL HERBICIDE TREATMENT
 - 2. MANUFACTURER'S DESCRIPTION OF PRODUCT ON GRASS SEED AND FERTILIZER, IF NEEDED.
 - 3. LANDSCAPING WARRANTY STATEMENT, IF REQUIRED.

1.8 WARRANTY

- A. IN ADDITION TO THE WARRANTY ON ALL CONSTRUCTION COVERED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL REPAIR AU DAMAGE OF SURROUNDING PROPERTY CAUSED BY CONSTRUCTION.
- B. SOIL HERBICIDE APPLICATION WILL GUARANTEE VEGETATION FREE ROAD AND SITE AREA FOR ONE YEAR FROM THE DATE OF FINAL INSPECTION .
- C. DISTURBED AREAS SHALL REFLECT GROWTH OF NEW GRASS COVER PRIOR TO FINAL INSPECTION.
- D. LANDSCAPING, IF INCLUDED WITHIN THE SCOPE OF THE CONTRACT, SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL INSPECTION.

PART 2 - PRODUCTS

2.1 MATERIAL

- A. SUBBASE: GRANULAR MATERIAL MDOT CLASS II OR IIA, MDOT 8.02-3.
- B. AGGREGATE BASE COURSE:
 - 1. F OR BASES TO BE SURFACED WITH CONCRETE OR BITUMINOUS MIXTURES, USE AGGREGATE 22A UNLESS OTHERWISE SPECIFIED, MDOT 3.01.02 AND 8.02.04.
 - 2. FOR BASES TO BE SURFACED WITH AGGREGATE, USE AGGREGATE 6A OR 3-4" CRUSHED CONCRETE (NO REROD).
- C. AGGREGATE SURFACE COURSE: USE AGGREGATE 21AA WHEN THE AGGREGATE SURFACE COURSE IS TO BE CONSTRUCTED WITHOUT A BITUMINOUS SURFACE, MDOT 3.08.02 AND 8.02.04.

2.2 EQUIPMENT

- A. COMPACTION SHALL BE ACCOMPLISHED BY MECHANICAL MEANS.
 - 1. LARGER AREAS SHALL BE COMPACTED BY SHEEPS FOOT, VIBRATORY OR RUBBER TIERED ROLLERS WEIGHING AT LEAST FIVE TONS.
 - 2. SMALLER AREAS SHALL BE COMPACTED BY POWER-DRIVER, HAND HELD TAMPERS.

PART 3 - EXECUTION

3.1 PREPARATION

- A. CLEAR TREES, BRUSH AND DEBRIS FROM SITE AREA AND ACCESS ROAD RIGHT OF WAY (IF REQUIRED).
- B. PRIOR TO OTHER EXCAVATION AND CONSTRUCTION EFFORTS CLEAR SITE OF ORGANIC MATERIAL TO A MINIMUM OF SIX INCHES BELOW ORIGINAL GROUND LEVEL.
- C. UNLESS OTHERWISE INSTRUCTED BY THE OWNER, REMOVE TREES, BRUSH, AND DEBRIS FROM THE PROPERTY TO AN AUTHORIZED LANDFILL.
- D. PRIOR TO PLACEMENT OF FILL OR BASE MATERIALS, PROOF ROLL THE SOIL.
- E. WHERE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, COVER CLEARED AREAS WITH STABILIZER MAT PRIOR TO PLACEMENT OF FILL OR BASE MATERIAL.

3.2 INSTALLATION

- A. THE SITE AND TURNAROUND AREA SHALL BE AT THE SUBBASE COURSE ELEVATION PRIOR TO FORMING FOUNDATIONS. GRADE OR FILL THE SITE AND ACCESS ROAD AS REQUIRED SUCH THAT THERE IS AN EVEN DISTRIBUTION OF SPOILS RESULTING FROM FOUNDATION EXCAVATIONS. THE RESULTING GRADE SHALL CORRESPOND WITH SAID SUBBASE COURSE; ELEVATIONS SHALL BE CALCULATED FROM FINISHED GRADES OR SLOPES INDICATED.
- B. EXCESS SPOILS, IF ANY, SHALL BE CLEARED FROM JOB SITE AND NOT SPREAD BEYOND THE LIMITS OF OWNER/LEASED PROPERTY UNLESS AUTHORIZED BY PROJECT MANAGER.
- C. THE ACCESS ROAD SHALL BE BROUGHT TO BASE COURSE ELEVATION PRIOR TO FOUNDATION CONSTRUCTION TO PERMIT USE. COMPACTION SHALL BE PERFORMED DURING CONSTRUCTION OF THE SITE.
- D. A VOID CREATING DEPRESSIONS WHERE WATER MAY POND.
- E. THE CONTRACT SHALL BE ASSUMED TO INCLUDE GRADING, BANKING, DITCHING AND UNLESS OTHERWISE INDICATED, COVERING WITH TWO INCHES OF SURFACE COURSE ALL ROADS OR ROUTES UTILIZED FOR ACCESS TO THE OWNER SITE, COMMENCING AT THE POINT OF INTERSECTION WITH THE NEAREST PUBLIC THOROUGHFARE.
- F. WHEN IMPROVING AN EXISTING ACCESS ROAD, THE EXISTING ROAD SHALL BE GRADED TO REMOVE ANY ORGANIC MATTER AND SMOOTH THE SURFACE BEFORE PLACING FILL OR STONE.
- G. FILL MATERIAL OR STONE SHALL BE PLACED IN SIX-INCH MAXIMUM LIFTS AND COMPACTED AS DESCRIBED, IN SECTION 2.10 PRIOR TO PLACEMENT OF NEXT LIFT.
- H. THE FINISH GRADE, INCLUDING TOP SURFACE COURSE, SHALL EXTEND A MINIMUM OF THREE FEET BEYOND THE SITE FENCE AND SHALL COVER THE AREA AS INDICATED.
 - I. SUBBASE:
 - 1. THICKNESS: CONFORM TO DESIGN CROSS SECTION.
 - 2. CONSTRUCTION METHOD: PLACE IN LAYERS NOT EXCEEDING 15 INCHES LOOSE MEASURE. SPREAD EVENLY AND COMPACT TO NOT LESS THAN NINETY-FIVE PERCENT (95%) J MAXIMUM DENSITY ACCORDING TO MICHIGAN SAND CONE TEST. CONFORM CONSTRUCTION TO MDOT 2.11.03.
 - J. AGGREGATE BASE COURSE:
 - 1. THICKNESS: COMPACTED IN PLACE IN TWO (2) EQUAL COURSES.
 - 2. CONSTRUCTION METHOD: CONFORM THE PLACING OF AGGREGATE BASE COURSE WITH MDOT 3.01.07.
 - K. AGGREGATE SURFACE COURSE:
 - 1. THICKNESS: COMPACTED IN PLACE IN TWO (2) EQUAL COURSES.
 - 2. CONSTRUCTION METHODS: CONFORM CONSTRUCTION OF AN AGGREGATE SURFACE COURSE TO MDOT 3.08.04 THROUGH 3.08.11.
 - O. RIPRAP SHALL BE APPLIED TO THE SIDE SLOPES OF AU FENCED SITE AREAS, PARKING AREAS AND TO ALL OTHER SLOPES GREATER THAN 2: 1.
 - P. RIPRAP SHALL BE APPLIED TO THE SIDE OF DITCHES OR DRAINAGE SWALES.
 - Q. RIPRAP ENTIRE DITCH FOR SIX FEET IN ALL DIRECTIONS AT CULVERT OPENINGS.
 - R. SEED, FERTILIZER AND STRAW COVER SHALL BE APPLIED TO ALL OTHER DISTURBED AREAS AND DITCHES, DRAINAGE, SWALES, NOT OTHERWISE RIPRAPPED.
 - S. UNDER NO CIRCUMSTANCES WILL DITCHES, SWALES OR CULVERTS BE PLACED SUCH THAT THEY DIRECT WATER TOWARDS, OR PERMIT STANDING WATER IMMEDIATELY ADJACENT TO THE SITE, IF OWNER DESIGNS OR ELEVATIONS CONFLICT WITH THIS GUIDANCE THE OWNER SHOULD BE ADVISED IMMEDIATELY.
 - T. IF ANY DITCH LIES WITH SLOPES GREATER THAN TEN PERCENT, MOUND DIVERSIONARY HEADWALLS IN THE DITCH AT THE CULVERT ENTRANCES 45 DEGREES OFF THE DITCH LINE. RIPRAP THE UPSTREAM SIDE OF THE HEADWALL AS WELL AS THE DITCH FOR SIX FEET ABOVE THE CULVERT ENTRANCE.
 - U. SEED AND FERTILIZER SHALL BE APPLIED TO SURFACE CONDITIONS THAT WILL ENCOURAGE ROOTING. RAKE AREAS TO BE SEEDED TO EVEN THE SURFACE AND LOOSEN THE SOIL.
 - V. SAW SEED IN TWO DIRECTIONS IN TWICE THE QUANTITY RECOMMENDED BY THE SEED PRODUCER.
 - W. CONTRACTOR IS RESPONSIBLE FOR THE GROWTH OF SEEDED AND LANDSCAPED AREAS BY WATERING UP TO THE POINT OF RELEASE FROM THE CONTRACT. CONTINUE TO REWORK BARE AREAS UNTIL COMPLETE COVERAGE IS OBTAINED.

DIVISION 3 - CONCRETE

PART 1 : GENERAL

1.1 INSPECTIONS

- A. LOCAL BUILDING INSPECTION SHALL RECEIVE ADEQUATE NOTIFICATION IN ADVANCE OF CONCRETE POURS.
- 1.2 SUMMARY**
- A. THE WORK INCLUDES ALL CAST-IN-PLACE CONCRETE.
- 1.3 REFERENCES**
- ASTM - AMERICAN SOCIETY TESTING MATERIALS, LATEST EDITION. ACI- AMERICAN CONCRETE INSTITUTE, LATEST EDITION.
 - MDOT - MICHIGAN DEPARTMENT OF TRANSPORTATION, " STANDARD SPECIFICATIONS FOR CONSTRUCTION" 1990 EDITION.
 - ACI 318. BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
 - ACI 301. SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.

1.4 SUBMITTALS

- A. PROPOSED MIX DESIGN PREPARED BY AN APPROVED INDEPENDENT TESTING FIRM FOR EACH CLASS OF CONCRETE. SELECT PROPORTIONS ACCORDING TO ACI301-05, SECTION 3.8, METHOD 1 OR METHOD 2.
- B. SHOP DRAWINGS SHOWING FABRICATION DIMENSIONS AND LOCATIONS FOR PLACING THE REINFORCING STEEL AND ACCESSORIES. DETAILS OF REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI 315.
- C. CERTIFICATIONS FOR THE FOLLOWING:
 - 1. CEMENT.
 - 2. AGGREGATES.
 - 3. ADMIXTURES.
 - 4. REINFORCEMENT.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. CONCRETE:
 - 1. CEMENT: ASTM C150 OR ASTM C595 (MAXIMUM FLY ASH CONTENT SHALL BE 20% BY WEIGHT), ALL CEMENT USED IN EXPOSED CONCRETE SHALL BE OF THE SAME BRAND FROM THE SAME MILL.
 - 2. COURSE AGGREGATES: ASTM C33.
 - 3. FINE AGGREGATE: ASTM C33.
 - 4. MIXING WATER: CLEAN, FRESH, AND POTABLE.
 - 5. ADMIXTURES: AIR-ENTRAINING: ASTM C260, WATER-REDUCING, RETARDING, AND ACCELERATING: ASTM C494, CALCIUM CHLORIDE WILL NOT BE PERMITTED AS AN ADMIXTURE. POZZOLANIC ADMIXTURES: ASTM C618, TYPE F, LOSS ON IGNITION LIMITED TO 4 PERCENT (4%).
- B. REINFORCEMENT: REFER TO TOWER FOUNDATION DESIGN OR TOWER MANUFACTURER FOR TYPE FOR MATERIAL TYPE AND CONFIGURATION OF REINFORCEMENT BARS.
- C. CURING COMPOUND, IF NEEDED: ASTM C309

2.15 FIELD QUALITY CONTROL

- A. COMPACTION SHALL BE AT LEAST 95% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557. AREAS OF SETTLEMENT SHALL BE EXCAVATED AND REFILLED AT CONTRACTOR'S EXPENSE.
- B. ALL TREES PLACED IN CONJUNCTION WITH A LANDSCAPE CONTRACT WILL BE WRAPPED, TIED WITH HOSE PROTECTED WIRE AND SECURED TO 2- INCH X 2-INCH X 4-INCH WOODEN STAKES EXTENDING TWO FEET INTO THE GROUND ON FOUR SIDES OF THE TREE.
- C. ALL EXPOSED AREAS SHALL BE PROTECTED AGAINST WASHOUTS AND SOIL EROSION. STRAW BALES WIN BE PLACED AT THE INLET APPROACH TO ALL NEW OR EXISTING CULVERTS, WHERE THE SITE OR ROAD AREAS HAVE BEEN ELEVATED IMMEDIATELY ADJACENT TO A RAIL LINE, EROSION CONTROL FABRIC WILL BE STAKED FULL LENGTH IN THE SWALE BETWEEN THE SITE AND THE RAIL BED TO PREVENT CONTAMINATION OF THE RAIL BALLAST.
- D. FIELD INSPECTION AND TESTING IS TO BE PERFORMED BY A FIRM APPOINTED AND PAID FOR BY THE OWNER. WHEN ADDITIONAL TESTING OF MATERIALS OR CONCRETE IS NECESSARY BECAUSE OF THEIR FAILURE BY TEST OR INSPECTION TO MEET SPECIFICATION REQUIREMENTS, THE COST OF THE ADDITIONAL TESTING SHALL BE PAID FOR BY THE CONTRACTOR. ADDITIONAL TESTING FOR EARLY FORM REMOVAL SHALL ALSO BE PAID FOR BY THE CONTRACTOR.
- E. ACCEPTANCE TESTING: IF INITIAL TESTING INDICATES FAILED OR NON-CONFORMANCE TO SPECIFICATION, PERFORM ADDITIONAL TEST IF FURTHER TESTING VERIFIES NON-CONFORMANCE. ADDITIONAL TESTING SHALL BE PAID BY CONTRACTOR. REPLACE NON-CONFORMING MATERIAL AT NO ADDITIONAL COST TO OWNER.
 - 1. AGGREGATES:
 - A. SAMPLING AND ANALYSIS: MICHIGAN TESTING METHODS, SERIES 100.
 - B. EXCEPTION: PROVIDE CERTIFICATION OF APPROVED STOCKPILED MATERIAL.

2.2 PROPORTIONING CONCRETE

- A. PROPORTIONS AND MATERIALS: PERMISSIBLE CEMENT TYPES: I, IP, I-A, IP-A MINIMUM CEMENT CONTENT: 5.5 SACKS/CU.YD. FOR 3500 PSI, S.O SACKS/CU.YD. FOR 4000 PSL. COURSE AGGREGATE: MDOT 6A SAND: MDOT-2NS MAXIMUM WATER-CEMENT RATIO: 5.0 GAL/SACK ENTRAINED AIR CONTENT: FIVE PERCENT (5%) TO EIGHT PERCENT (8%). MAXIMUM SLUMP:3%-INCH FOR FLOORS AND SLABS ON GRADE, 4 INCHES OTHERWISE (INDIVIDUAL BATCHES MAY BE 1%:1% INCH AS LONG AS THE AVERAGE OF AU BATCHES IS AT OR BELOW MAXIMUM), MINIMUM COMPRESSIVE STRENGTH, FE' (28 DAY) 4000 PSI FLOORS AND SLABS ON GRADE, ALL OTHER 3500 PSI.
- B. ADMIXTURES: APPROVAL OF ENGINEER REQUIRED. USE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- C. IF THE CONTRACTOR INTENDS TO PLACE CONCRETE BY PUMPING, THE MIX DESIGN SHALL BE PREPARED IN ACCORDANCE WITH THESE SPECIFICATIONS AND THE RECOMMENDATIONS OF ACI 304.

2.3 FABRICATING REINFORCEMENT

FABRICATE IN ACCORDANCE WITH APPROVED SHOP DRAWINGS AND AC1315. REINFORCING SPLICES: CLASS B UNLESS OTHERWISE SHOWN.

PART 3 - EXECUTION

3.1 PERFORMANCE

IN ACCORDANCE WITH THE REQUIREMENTS OF ACI301, CHAPTERS 4 THROUGH 13, 17 AND 18.

3.2 CONCRETE WORK FOR DRILLED PIERS

ALL CONCRETE PIERS SHALL BE DRILLED AND POURED ON THE SAME DAY TO PREVENT ANY MIGRATION OF WATER INTO THE HOLE AND TO PREVENT DEBRIS FROM COLLECTING IN THE HOLE.

3.3 FIELD QUALITY CONTROL

- A. PROVIDE ACCESS TO ALL PORTIONS OF THE WORK AND ANY NECESSARY ASSISTANCE IN OBTAINING AND HANDLING SAMPLES AT THE PROJECT OR OTHER MATERIAL SOURCES. THREE CONCRETE TEST CYLINDERS WILL BE TAKEN FOR EVERY 50 CUBIC YARDS, OR FRACTION THEREOF, FOR EACH CLASS OF CONCRETE PLACE IN ANYONE DAY. ONE ADDITIONAL CYLINDER WILL BE TAKEN DURING COLD WEATHER CONCRETING AND BE CURED ON THE PROJECT SITE UNDER THE SAME CONDITIONS AS THE CONCRETE IT REPRESENTS. ONE SLUMP TEST WILL BE TAKEN FOR EACH SET OF CYLINDERS TAKEN.



1755 CREEKSIDE OAKS DRIVE
STE 109
SACRAMENTO, CA 95833

**L700
CONSTRUCTION**

CHECKED BY:	RI		
APPROVED BY:	MB		
#	DATE	DESCRIPTION	INT.
0	10/29/15	90% REVIEW	AA
0	10/30/15	95% REVIEW	AA
0	11/18/15	100% REVIEW	AA
1	11/19/15	FINAL	AA



AMERICAN TOWER CORPORATION
19100 VON KARMAN SUITE 200
IRVINE, CA 92612

**FULLERTON
ENGINEERING · DESIGN**

9600 W. BRYN MAWR AVE., SUITE 200
ROSEMONT, ILLINOIS 60018
TEL: 847-292-0200
FAX: 847-292-0206
www.FullertonEngineering.com

SITE #:

SF95460A

SITE NAME:

ATC CALL
MOUNTAIN 8202

SITE ADDRESS:

2 MILES OF PANOCHE ROAD
FROM HWY 25
CALL MTN PAICINES, CA 95043

SHEET NAME:

GENERAL NOTES

SHEET NUMBER:

N-1

NOTE: THESE NOTES ARE OF A GENERAL NATURE AND ARE NOT SITE-SPECIFIC. SOME NOTES MAY NOT APPLY TO THIS SITE. CROSS-REFERENCE NOTES WITH OTHER SHEETS AND T-MOBILE SCOPE OF WORK TO VERIFY WORK TO BE COMPLETED.

THIS DRAWING IS THE PROPERTY OF FULLERTON ENGINEERING CONSULTANTS, INC. IT IS FOR THE EXCLUSIVE USE OF THIS PROJECT. ANY RE-USE OF THIS DRAWING WITHOUT THE EXPRESSED WRITTEN CONSENT OF FULLERTON ENGINEERING CONSULTANTS, INC. IS PROHIBITED.

DIVISION 15 - MECHANICAL

PART 1 - GENERAL

- INCLUDED - WORK OF THIS SECTION GENERALLY INCLUDES PROVISIONS OF LABOR, MATERIALS, EQUIPMENT, ACCESSORIES, NECESSARY FOR INSTALLATION OF MECHANICAL SYSTEMS SHOWN ON THE CONTRACT DRAWINGS AND SPECIFIED IN THE GENERAL NOTES. INTENT OF CONSTRUCTION DOCUMENTS IS TO PROVIDE THE OWNER WITH A COMPLETE AND OPERATING FACILITY, AND ANY MINOR ITEMS OMITTED BUT OBVIOUSLY NECESSARY TO ACCOMPLISH INTENT SHALL BE PROVIDED WHETHER OR NOT SHOWN OR SPECIFIED.
- RELATED - THE GENERAL REQUIREMENTS DIVISION OF THE GENERAL NOTES IS HEREBY MADE A PART OF THE WORK OF THIS SPECIFICATION. THE REQUIREMENTS OF THIS SPECIFICATION APPLY TO THE WORK OF ALL SECTIONS OF DIVISION 15.
 - WORK PERFORMED BY OTHERS INCLUDES INSTALLATION OF ELECTRICAL EQUIPMENT. EXCEPT AS NOTED OTHERWISE ON DRAWINGS OR IN SPECIFICATION.
 - ELECTRICAL DIVISION 16
 - ORDINANCES AND CODES
 - ALL WORK SHALL BE EXECUTED AND INSPECTED IN ACCORDANCE WITH ALL UNDERWRITER'S, PUBLIC UTILITIES, LOCAL AND STATE CODES AND REGULATIONS, APPLICABLE TO THE TRADE AFFECTED. RECOMMENDATIONS OF AFA, NFPA, OSHA AND ASHRAE AND APPLICABLE STATE ENERGY CODE COMPLIANCE SHALL BE RIGIDLY FOLLOWED.
 - SHOULD ANY CHANGE IN THE PLANS AND SPECIFICATIONS BE REQUIRED TO COMPLY WITH THESE REGULATIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER BEFORE SUBMITTING HIS BID. AFTER ENTERING INTO CONTRACT WITH THE OWNER, THE CONTRACTOR WILL BE HELD ACCOUNTABLE TO COMPLETE ALL WORK NECESSARY TO MEET THESE REQUIREMENTS AT HIS OWN EXPENSE.
 - WHERE THE WORK REQUIRED BY THE DRAWINGS AND SPECIFICATIONS IS ABOVE THE STANDARD REQUIRED, IT SHALL BE DONE AS SHOWN OR SPECIFIED.
 - PERMITS - THE CONTRACTOR SHALL ARRANGE AND PAY FOR ALL PERMITS IN CONNECTION WITH THE WORK HEREINAFTER SPECIFIED AND AT COMPLETION OF THE WORK FURNISH THE OWNER WITH THE FINAL CERTIFICATE OF INSPECTION.
 - DRAWINGS - THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF THE PROPOSED WORK. DETAILS OF PROPOSED DEPARTURES DUE TO ACTUAL FIELD CONDITIONS OR OTHER CAUSES SHALL BE PROVIDED FOR. NO EXTRAS WILL BE PAID FOR CORRECTING FAULTY, POORLY ARRANGED, OR POORLY COORDINATED WORK.
 - SITE EXAMINATION - THE CONTRACTOR SHALL VISIT THE PREMISES SO AS TO ASCERTAIN THE EXISTING CONDITIONS BEFORE SUBMITTING HIS BID. NO EXTRAS WILL BE ALLOWED FOR HIS LACK OF KNOWLEDGE OF THESE CONDITIONS.
 - COMPLETE INSTALLATION - THE CONTRACTOR SHALL FURNISH AND INSTALL ALL INCIDENTAL PARTS, VALVES, FITTINGS, PUMPS, CONTROL VALVES AND CONTROL WIRING REQUIRED FOR THE PROPER FUNCTION OF ALL COMPONENT PARTS. THE COMPLETE INSTALLATION SHALL FUNCTION SMOOTHLY AND NOISELESSLY TO THE FULL EXTENT OF THE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHAN COMPLETE HIS INSTALLATION AS RAPIDLY AS GENERAL CONSTRUCTION PERMITS. ALL FILTERS, STRAINERS, AND SAFETY DEVICES SHALL BE PROPERLY INSTALLED BEFORE STARTING EQUIPMENT. THE OWNER SHALL BE LEFT WITH A NEW SET OF FILTERS AT FINAL ACCEPTANCE.
 - COORDINATION - BEFORE ANY EQUIPMENT IS PURCHASED OR FABRICATED AND BEFORE RUNNING AND/OR FABRICATING ANY LINES OF PIPING OR DUCTWORK, THE MECHANICAL CONTRACTOR AND HIS SUBCONTRACTORS SHALL ASSURE THEMSELVES THAT THEY CAN BE RUN AS CONTEMPLATED, BECAUSE, OF THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES THAT MAY BE REQUIRED. THE MECHANICAL CONTRACTOR AND HIS SUBCONTRACTORS SHALL CAREFULLY INVESTIGATE ALL OTHER MECHANICAL, AND ELECTRICAL AND STRUCTURAL DRAWINGS AND FINISH CONDITIONS AFFECTING ALL OF THEIR WORK ACCORDINGLY. FURNISHING SUCH FITTINGS, VALVES, DUCT TRANSITIONS, OFFSETS AND ACCESSORIES AS MAY BE REQUIRED TO MEET SUCH CONDITIONS, AT NO ADDITIONAL COST.
 - TEMPORARY HEAT - ARRANGEMENTS FOR USAGE OF SYSTEM FOR TEMPORARY HEAT SHALL BE COORDINATED WITH GENERAL CONTRACTOR. SYSTEM SHAH NOT BE USED FOR TEMPORARY HEAT UNLESS ALL TEMPORARY FILTERS ARE INSTALLED. TEMPORARY FILTERS AND OPERATION OF UNITS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
 - SUBMITTALS - WITHIN 5 DAYS AFTER PROPOSAL ACCEPTANCE THE CONTRACTOR SHALL SUBMIT TO THE OWNER FOR APPROVAL TWO (2) COPIES OF SHOP DRAWINGS ON EACH ITEM OF EQUIPMENT WHETHER AS SPECIFIED OR SUBSTITUTED. SHOP DRAWINGS SHALL GIVE OVERALL DIMENSIONS, WEIGHTS, METAL GAUGES, MATERIALS, CERTIFIED CAPACITIES, BRAKE HP, MOTOR HP, TUBE DIAMETERS FRICTION DROP AND NAMEPLATE DATA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING SHOP DRAWINGS BEFORE SUBMITTING FOR APPROVAL. THE OWNER'S CHECK SHAH BE GENERAL AND DOES NOT RELIEVE THE CONTRACTOR OF FINAL RESPONSIBILITY FOR A COMPLETE JOB TO THE INTENT OF PLANS AND SPECIFICATIONS. AIR CONTROL DIAGRAMS AND EQUIPMENT SHOULD BE ASSEMBLED IN ONE SUBMITTAL.
 - SUBSTITUTION OF EQUIPMENT A. BIDS SHAH BE BASED ON PROVIDING ALL EQUIPMENT MENTIONED BY BRAND NAME IN PLANS AND SPECIFICATIONS. NO SUBSTITUTIONS SHAH BE CONSIDERED BEFORE BIDDING.
 - THE CONTRACTOR SHALL ATTACH A LIST OF PROPOSED SUBSTITUTIONS, GIVING THE AMOUNT TO BE ADDED OR DEDUCTED TO CONTRACT PRICE FOR EACH ITEM. COMPLETE ENGINEERING DATA SHALL BE SUBMITTED ON EACH REQUEST FOR SUBSTITUTION ITEM. SUBSTITUTE ITEMS SHALL BE EQUAL OR BETTER THAN ITEMS MENTIONED IN REGARD TO ALL ACCESSORIES, CAPACITIES, DURABILITY AND APPEARANCE. CONTRACTOR SHALL PAY ALL COSTS INCURRED TO MAKE SUBSTITUTE ITEMS FIT REQUIRED SPACE WITH MAINTENANCE CLEARANCES - PIPING, SHEET METAL, ELECTRICAL OR BUILDING ALTERATION SHAH BE INCLUDED IN SAID COSTS.
 - ALL STANDARD ACCESSORIES AS WELL AS SPECIFIED EXTRAS SHALL BE PROVIDED WITH EQUIPMENT.
 - GUARANTEE - ALL MATERIAL AND WORKMANSHIP INSTALLED AND/OR FURNISHED UNDER THIS SECTION OF WORK SHALL BE GUARANTEED AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER. ANY DEFECTS OR FAULTY WORKMANSHIP SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE CORRECTED ENTIRELY AT HIS EXPENSE.

PART 2 - PRODUCTS

- APPROVED MANUFACTURERS - APPROVAL BY NAME LISTED IN THIS SPECIFICATION DOES NOT IMPLY THAT THE MANUFACTURER STANDARD PRODUCT MEETS THE INTENT OF THE DRAWINGS AND SPECIFICATION. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE ALL NECESSARY ALTERATIONS, MATERIALS, LABOR, ETC., AS APPROVED BY THE OWNER TO MEET THE FULL INTENT OF THE DRAWINGS AND SPECIFICATIONS. THIS IS TO INCLUDE, BUT NOT NECESSARILY BE LIMITED TO ELECTRICAL, STRUCTURAL, MECHANICAL, AND ARCHITECTURAL ALTERATIONS AND REVISIONS NECESSARY TO PROVIDE A COMPLETE AND OPERATING FACILITY AT NO ADDITIONAL COSTS TO THE OWNER.
- MATERIALS - MATERIALS THROUGHOUT SHALL BE NEW AND OF THE BEST GRADES SPECIFIED. THEY SHALL BE STANDARD CATALOG ITEMS AND MANUFACTURED BY NATIONALLY KNOWN MANUFACTURERS OF THE ITEMS SPECIFIED. CONTRACTOR SHALL RECEIVE AND BE RESPONSIBLE FOR ALL OWNER FURNISHED EQUIPMENT AND PROVIDE ROUGH-IN AND FINAL CONNECTIONS FOR ALL MECHANICAL EQUIPMENT FURNISHED UNDER THIS CONTRACT OR BY OTHERS. THE CONTRACTORS SHALL PROVIDE A SUITABLE SHED FOR THE STORAGE OF ALL MATERIALS DURING PROGRESS OF THE JOB.
- SOLDER - ALL SOLDER USED ON SWEAT FITTINGS SHALL BE 95-5 HARD SOLDER UNLESS BRAZING OR SILVER SOLDER IS SPECIFIED. ALL BURIED COPPER PIPING SHALL BE SILVER SOLDERED.
- FLOOR, CEILING PLATES, FLANGES - PROVIDE TIGHT FITTING FLOOR AND CEILING PLATES ON PIPES PASSING THROUGH WALLS, CEILINGS, FLOORS. NICKEL OR CHROME PLATE IN FINISHED AREAS. PROVIDE WALL AND CEILING FLANGES FOR DUCTS IN FINISHED AREAS.
- PIPE HANGERS, SUPPORTS - PROVIDE HANGERS, SUPPORTS, BRACES BY GRINNELL, FEE AND MASON, GRABLER, ELCEN, UNISTRUT, BASIN ENGINEERS, INC. TO PREVENT UNDUE STRAIN, STRESSES, NOISE, VIBRATION.

PART 3 - EXECUTION

- WORKMANSHIP
 - WORK THROUGHOUT SHALL BE PERFORMED BY MEN SKILLED IN THE INSTALLATION OF THE VARIOUS TRADES OF THE WORK HEREIN SPECIFIED.
 - AFT PIPING AND DUCTWORK SHALL BE RUN CONCEALED IN FINISHED AREAS EXCEPT WHERE NOTED OTHERWISE OR AS CHROME PLATED PLUMBING FIXTURE CONNECTIONS.
- CURBS, BASES, SUPPORTS - MAJOR CURBS, OPENINGS, AND EQUIPMENT SUPPORTS WILL BE PROVIDED UNDER THE GENERAL SECTION OF THIS CONTRACT ONLY WHERE SHOWN ON ENGINEERING OR STRUCTURAL PLANS. ALL OTHER SUPPORTS, ANCHORS, AND BASES SHALL BE PROVIDED BY MECHANICAL CONTRACTOR FOR ALL MECHANICAL EQUIPMENT SHALL BE SUPPORTED PER MANUFACTURER'S WRITTEN RECOMMENDATIONS FOR NOISE-FREE INSTALLATION.
- REMOVAL OF EXISTING WORK - ALL EXISTING MECHANICAL EQUIPMENT, PIPING, ETC., REMOVED BY THE CONTRACTOR SHAL BE THE PROPERTY OF THE BUILDING. SUCH ITEMS WILL BE DISPOSED OF AT THE BUILDING OWNER'S DIRECTION.
- REMOVAL OF RUBBISH - ON COMPLETION OF HIS WORK, THE CONTRACTOR SHAL REMOVE ALL OF HIS TOOLS, SCAFFOLDING, DEBRIS, ETC., FROM THE GROUNDS AND LEAVE THE PREMISES PERFECTLY CLEAN.
- OPERATING AND MAINTENANCE INSTRUCTIONS - UPON COMPLETION, THE CONTRACTORS SHALL MAKE UP A SET OF OPERATING AND MAINTENANCE INSTRUCTIONS COVERING ALL MECHANICAL EQUIPMENT WITH MOVING OR MOVEABLE PARTS INCLUDING GENERAL OPERATING OR HEATING, PLUMBING AND COOLING SYSTEMS AND SHALL GIVE THE OWNER FOUR (4) COPIES OF THESE INSTRUCTIONS. MANUFACTURER'S PRINTED OPERATIONS AND MAINTENANCE INSTRUCTIONS SHALL ALSO BE PROVIDED FOR EACH PIECE OF EQUIPMENT.
 - NAME, ADDRESS, AND TELEPHONE NUMBER OF PARTY TO BE CONTACTED FOR 24 HOUR SERVICE FOR EACH ITEM OF EQUIPMENT
 - STARTING, STOPPING, LUBRICATION, AND ADJUSTMENT SHALL BE CLEARLY INDICATED FOR EACH PIECE OF EQUIPMENT.
 - PREPARE 8-112"x11" BLUEPRINTS WITH BINDING EDGE OF APPROPRIATE SCALE TO INDICATE ALL EQUIPMENT, RESPECTIVE SWITCHES, AND VALVE LOCATIONS. BIND IN INSTRUCTION BOOK.

DIVISION 5 - FENCE

PART 1 - GENERAL

- WORK INCLUDED
 - REFER TO THE SITE PLANS FOR SIZE AND LOCATION OF FENCE AND GATES TO BE INSTALLED.
- RELATED WORK
 - COORDINATE FENCE GROUNDING WITH ELECTRICAL CONTRACTOR.
 - REFER TO FENCE DETAIL PLAN - CONCRETE FOR SPECIFICATION OF CONCRETE AND GROUT
 - REFER TO FENCE DETAIL PLAN FOR APPLICABLE LOCATIONS OF ACCESS ROAD GATES.

3.3 DESCRIPTION

- A SECURITY FENCE IS PROVIDED IN ORDER TO INHIBIT UNAUTHORIZED ACCESS TO THE SITE AREA.

3.4 QUALITY ASSURANCE

REFER TO FENCE DETAIL PLAN.

3.5 SEQUENCING

- IF THE SITE AREA HAS BEEN BROUGHT UP TO SURFACE COURSE. ELEVATION PRIOR TO FENCE CONSTRUCTION, FENCE POST EXCAVATION SPOILS MUST BE CONTROLLED TO PRECLUDE CONTAMINATION OF SURFACE COURSE.

3.6 SUBMITTALS

- MANUFACTURER'S DESCRIPTIVE LITERATURE.
- CERTIFICATE OF COMPLIANCE THAT SPECIFICATIONS HAVE BEEN MET.

3.7 FENCE MATERIAL

REFER TO FENCE DETAIL PLAN.

DIVISION 7 - ANTENNA SYSTEM

PART 1 - GENERAL

- WORK INCLUDED
 - ERECT FURNISHED TOWER AS INDICATED IN THE DRAWINGS.
 - INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND OWNER SPECIFICATIONS.
 - INSTALL ANTENNA PLATFORM AS INDICATED ON DRAWINGS.
 - INSTALL FURNISHED GALVANIZED STEEL WAVEGUIDE LADDER.
 - INSTALL WAVEGUIDE BRIDGE AS INDICATED ON DRAWINGS.
 - INSTALL COAX CABLE, CONNECTORS, JUMPERS, GROUNDING KITS AS INDICATED IN DRAWINGS.
 - SWEET REST. RESULT.

1.2 REQUIREMENTS OF REGULATORY AGENCIES

- FURNISH U.L. LISTED EQUIPMENT WERE SUCH LABEL IS AVAILABLE, INSTALL IN CONFORMANCE WITH U.L. STANDARDS WHERE APPLICABLE.
- INSTALL ANTENNA, ANTENNA CABLES, GROUNDING SYSTEM IN ACCORDANCE WITH DRAWINGS AND SPECIFICATION IN EFFECT AT PROJECT LOCATION AND RECOMMENDATIONS OF STATE AND LOCAL BUILDING CODES, SPECIAL CODES HAVING JURISDICTION OVER SPECIFIC PORTIONS OF WORK. THIS INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:
 - EIA - ELECTRICAL INDUSTRIES ASSOCIATION RE -222. STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.
 - FAA - FEDERAL AVIATION ADMINISTRATION ADVISORY CIRCULAR AC 70F7460-4H, OBSTRUCTION MARKING AND LIGHTING.
 - FCC - FEDERAL COMMUNICATIONS COMMISSION RULES AND REGULATIONS FORM 715 "OBSTRUCTION MARKING AND LIGHTING SPECIFICATIONS FOR ANTENNA STRUCTURES", AND FORM 715A, "HIGH INTENSITY OBSTRUCTION LIGHTING SPECIFICATION FOR ANTENNA STRUCTURES".
 - DISC - AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASST. A325 OR A490 BOLLS.
 - NECK - NATIONAL ELECTRICAL CODE - ON TOWER LIGHTING KITS.
 - UL - UNDERWRITER'S LABORATORIES APPROVED.
 - IN ALL CASES PART 77 OR THE FAA RULES AND PARTS 17 AND 22 OF THE FCC RULES ARE APPLICABLE AND IN THE EVENT OF CONFLICT, SUPERSEDE ANY OTHER STANDARDS OR SPECIFICATIONS. 1990 LIFE SAFETY CODE NAPA - 101.

DIVISION 16 - GENERAL ELECTRIC

PART 1 - GENERAL ELECTRICAL PROVISION

- SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
- CONTRACTOR SHALL PERFORM ALL VERIFICATION, OBSERVATIONS, TESTS, AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ARCHITECT LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
- HEIGHTS SHAH BE VERIFIED WITH OWNER PRIOR TO INSTALLATION.
- THESE PLANS ARE DIAGRAMMATIC ONLY.
- ELECTRICAL SERVICE 120/240 V.A.C. SINGLE PHASE 3-WIRE 100 AMP SERVICE.
- CONTRACTOR SHALL PROVIDE ALF LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC. FOR A COMPLETE AND PROPERLY OPERATIVE SYSTEM ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
- CONTRACTOR SHALL CARRY OUT ALL WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY, AND LOCAL CODES AND O.S.H.A.
- CONTRACTOR SHALL SECURE ALL NECESSARY BUILDING PERMITS AND PAY ALL REQUIRED FEES

- COMPLETE JOB SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL, OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
- PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS AND CIRCUITS.
- THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY AH APPLICABLE CODES.
- UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT AND FALL POTENTIAL GROUND TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OR ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.

PART 2 - PRODUCTS

- ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT MATERIAL SHALL BE LISTED "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU.
- ALL CONDUIT ONLY (C. 0.) SHALL HAVE A PULL WIRE OR ROPE.
- ALL CONDUCTORS SHALL BE COPPER.
- ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING SHORT CIRCUIT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 1 0,000 A.I.C.
- WIRE AND CABLE CONDUCTORS SHALL BE COPPER 12 AWG MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE ON DRAWINGS.
- GROUNDING CONDUCTORS SHAH BE SOLID TINNED COPPER AND ANNEALED +2.
- METER SOCKET AMPERES, VOLTAGE, NUMBER OF PHASES SHALL BE AS NOTED ON THE DRAWINGS, MANUFACTURED BY SQUARE D COMPANY OR APPROVED EQUAL.
- ALL MATERIAL SHALL BE U.L. LISTED.
- ALL UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40 (UNLESS NOTED OTHERWISE) AT A MINIMUM DEPTH OF 24" BELOW GRADE.
- CABLES
 - ALL GROUND CABLE SHALL BE STANDARD TND SOLID BARE COPPER PLATE AND OF SIZE INDICATED ON DRAWINGS.
 - WHEN THE DIRECTION OF THE CONDUCTOR MUST CHANGE IT SHALL BE DONE GRADUALLY. THE CURVATURE OF THE TURN SHALL BE DONE IN ACCORDANCE WITH THE FOLLOWING TABLE:

GROUNDING CONDUCTOR SIZE

MIN BENDING RADIUS TO INSIDE EDGE:	
NO.6 AWG. TO NO. 4 AWG	3"
NO.6 AWG TO NO. 1/0 AWG	8"
NO. 2/0 AWG. TO 750 MCRN	1"
BUS BAR	NO RESTRICTIONS

PART 3 - UNDERGROUND ELECTRICAL SERVICE

- COORDINATE THE ELECTRICAL SERVICE WITH THE UTILITY COMPANY.
- CONTRACTOR TO COORDINATE WITH UTILITY COMPANY CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS TO BE PAID BY CONTRACTOR.
- THE SERVICE SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS TO BE ACCEPTABLE TO THE GOVERNING AUTHORITIES EXERCISING LEGAL JURISDICTION OVER ELECTRICAL INSTALLATIONS.

PART 4 - GROUNDING CONNECTIONS

- EXTERNAL CONNECTIONS:
 - ALL EXTERNAL GROUNDING CONNECTIONS SHALL BE MADE BY THE "CADWELD" PROCESS. CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE SPLICES, TEES, XS, ETC. AIL CABLE TO GROUND RODS, GROUND ROD SPLICES AND LIGHTNING PROTECTION SYSTEM AS INDICATED. ALL MATERIALS USED (MOLDS, WELDING, METAL, TOOTS, ETC.) SHALL BE BY "CADWELD" AND INSTALLED PER MANUFACTURER'S RECOMMENDATION AND PROCEDURES.
 - ALL INTERIOR GROUNDING AND BONDING CONDUCTORS SHALL BE CONNECTED BY TWO HOLES CRIMP TYPE (COMPRESSION) CONNECTIONS (EXCEPT FOR THE ACEG AND GROUND ROD) MECHANICAL CONNECTIONS, FITTING OR CONNECTIONS THAT DEPEND SOLELY ON SOLDER SHALL NOT BE USED.
- GROUND RODS:
 - ALL GROUND RODS SHALL BE 5/8" DIAMETER X 10'-0" LONG "COPPERWELD" OR APPROVED EQUAL OF THE NUMBER AND AT LOCATIONS INDICATED. GROUND RODS SHALL BE DRIVEN FULL LENGTH VERTICAL IN UNDISTURBED EARTH. ALL GROUND RODS TO BE 10' APART UNLESS OTHERWISE
- GROUND BARS:
 - ALL GROUND BARS SHALL BE 1/4" THICK BARE COPPER PLATE AND OF SIZE INDICATED ON DRAWINGS.
- GROUND RING:
 - THE GROUND RING ENCRICLING THE BUILDING SHALL BE MINIMUM SIZE OF NO. 2 AWG BARE COPPER CONDUCTOR IN DIRECT CONTACT WITH THE EARTH AT A DEPTH OF NOT LESS THAN 42 INCHES (MIN) CONDUCTOR BENDS SHALL HAVE A MINIMUM RADIUS OF 8 INCHES.
 - ALL EXTERNAL GROUND RINGS SHALL BE JOINED TOGETHER AND ALL CONNECTIONS SHALL BE "CADWELD". NO LUGS OR CLAMPS WILL BE ACCEPTED.
 - FENCE/GATE ALL SECTIONS OF FENCE AND GATE SHAH BE GROUNDED AS INDICATED ON DRAWINGS. GROUND EACH GATE POST AND CORNER POST. ALL OTHER CONNECTIONS FOR THE GROUND GRID SYSTEM SHALL BE MADE BY THE "CADWELD" PROCESS, AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND PROCEDURES.
 - GROUND TEST PIT A GROUND TEST PIT SHALL CONSIST OF 6" DIAMETER SCH 40 PVC 1,11TH 6" CLEANOUT PLUG & CLEANOUT ADAPTER FITTING. PLUG THREADS SHALL BE COATED WITH ANTI-SEIZE LUBRICANT PRIOR TO INSTALLATION. 6" PVC WILL BE 18" LONG, BURIED 12" UNDERGROUND WITH 61" ABOVE FINISHED GRADE. TOP OF GROUND ROD CADWELDED TO GROUND RING WIN BE 12" FROM TOP OF CLEANOUT ADAPTER.

PART 5 - ASTM FALL POTENTIAL TESTS

- GROUND TESTS SHAH BE PERFORMED AS INDICATED ON DRAWINGS. A BIDDLE GROUND OHM METER OR THE METHOD OF USING TWO AUXILIARY GROUND RODS (AS DESCRIBED IN L.E.E.E. STANDARD NO. 81-1983, PART 1) MAY BE USED. THE I.E.E.E. METHOD REQUIRES THE USE OF AN A.C. TEST CURRENT THE AUXILIARY TEST RODS MUST BE SUFFICIENTLY FAR AWAY FROM THE ROD UNDER TEST SO THAT THE REGIONS IN WHICH THEIR RESISTANCE IS LOCALIZED DO NOT OVERLAP.
- CONTRACTOR TO CONDUCT GROUND RESISTANCE TEST IN THE FORMAT AS FOLLOWS:
 - EQUIPMENT BUILDING
 - FIRST TEST - SHALL BE WITH FOUR GROUND RODS INSTALLED, ONE AT EACH CORNER OF THE BUILDING BUT NOT CONNECTED TO THE MAIN GROUNDING BUS, FURNISH WIRE TO CONNECT (TEMPORARY CLAMP) ALL FOUR GROUND RODS TOGETHER TO MAKE A SYSTEM TEST AFTER EACH ROD IS INDIVIDUALLY TESTED, IF ANY INDIVIDUAL ROD TESTS 25 OHMS OR MORE, THE ELECTRICAL CONTRACTOR AND OWNER'S REPRESENTATIVE SHOULD BE NOTIFIED SO THAT THE ROD CAN BE DRIVEN DEEPER UNTIL ALL FOUR RODS HAVE A RESISTANCE OF 10 OHMS OR LESS ON A DRY DAY.
 - SECOND TEST - SHALL BE WITH THE GROUND RODS CONNECTED WITH DRY SOIL AND WHEN NO STANDING WATER HAS BEEN PRESENT FOR THE PAST TEN DAYS. THE MAXIMUM ALLOWABLE READING IS 5 OHMS TO GROUND. IF THE RESISTANCE OF THE ENTIRE SYSTEM EXCEEDS 5 OHMS, THE ELECTRICAL CONTRACTOR AND OWNER'S REPRESENTATIVE SHOULD BE NOTIFIED SO THAT EITHER ADDITIONAL AND/OR DEEPER RODS CAN BE INSTALLED.
 - TOWER
 - FIRST TEST - SHALL BE WITH NINE (9) GROUND RODS INSTALLED (MIN.) EQUALLY SPACED AROUND THE TOWER FOUNDATION, BUT NOT CONNECTED TO THE EQUIPMENT BUILDING EXTERNAL GROUND RING. FURNISH WIRE TO CONNECT (TEMPORARY CLAMP) ALL THREE GROUND RODS TOGETHER TO MAKE A SYSTEM TEST AFTER EACH ROD IS OHMS OR MORE, THE ELECTRICAL ENGINEER AND THE OWNER'S REPRESENTATIVE SHOULD BE NOTIFIED SO THAT THE ROD CAN BE DRIVEN DEEPER UNTIL ALL THREE RODS HAVE A RESISTANCE OF 10 OHMS OR LESS ON A DRY DAY.
 - SECOND TEST - SHALL BE WITH THE GROUNDS CONNECTED, WITH DRY SOIL AND WHEN NO STANDING WATER HAS BEEN PRESENT FOR THE PAST TEN DAYS. THE MAXIMUM ALLOWABLE READING IS 5 OHMS TO GROUND. IF THE RESISTANCE OF THE ENTIRE SYSTEM EXCEEDS 5 OHMS THE ELECTRICAL CONTRACTOR AND OWNER'S REPRESENTATIVE SHOULD BE NOTIFIED SO THAT EITHER ADDITIONAL AND/OR DEEPER RODS CAN BE INSTALLED.
 - EQUIPMENT BUILDING AND TOWER .
 - AFTER THE EQUIPMENT BUILDING AND TOWER GROUND RESISTANCE TEST IS COMPLETED, ELECTRICAL CONTRACTOR SHALL TIE EQUIPMENT BUILDING EXTERNAL GROUND RING TOGETHER. AFTER FIRST AND SECOND TEST, AFT CONNECTIONS SHALL BE "CADWELD". NO LUGS OR CLAMPS WILL BE ACCEPTED.
 - AFTER ALL THE EXTERNAL GROUND RINGS ARE TIED TOGETHER BUT BEFORE THE EQUIPMENT BUILDING IS TIED DOWN, A MEGGER CHECK OF THE GROUND SYSTEM SHOULD BE DONE. THE MAXIMUM ALLOWABLE READING IS 5 OHMS TO GROUND.
 - GROUND RESISTANCE TEST REPORT
 - UPON COMPLETION OF THE TESTING FOR EACH SITE, CONTRACTOR SHAH SUBMIT A TEST REPORT SHOWING RESISTANCE IN OHMS WITH AUXILIARY POTENTIAL ELECTRODES AT 5-FOOT AND 10-FOOT INTERVALS UNTIL THE AVERAGE RESISTANCE STARTS INCREASING; 10-15 PHOTOS MUST BE TAKEN TO PROOF ENTIRE EXTERNAL GROUND RING SYSTEM BEFORE BACKFILL OR PROJECT MANAGER MUST BE NOTIFIED NO LESS THAN 48 HOURS IN ADVANCE OF BACKFILL. TESTING SHALL BE COMPLETED BY GENERAL CONTRACTOR AND TWO (2) SETS OF TEST DOCUMENTS ARE TO BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK OF COMPLETION.



1755 CREEKSIDE OAKS DRIVE
STE 109
SACRAMENTO, CA 95833

**L700
CONSTRUCTION**

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#	DATE	DESCRIPTION	INT.
0	10/29/15	90% REVIEW	AA
0	10/30/15	95% REVIEW	AA
0	11/18/15	100% REVIEW	AA
1	11/19/15	FINAL	AA



AMERICAN TOWER CORPORATION
19100 VON KARMAN SUITE 200
IRVINE, CA 92612



9600 W. BRYN MAWR AVE., SUITE 200
ROSEMONT, ILLINOIS 60018
TEL: 847-292-0200
FAX: 847-292-0206
www.FullertonEngineering.com

SITE #:

SF95460A

SITE NAME:

**ATC CALL
MOUNTAIN 8202**

SITE ADDRESS:

**2 MILES OF PANOCHE ROAD
FROM HWY 25
CALL MTN PAICINES, CA 95043**

SHEET NAME:

GENERAL NOTES

SHEET NUMBER:

N-2

NOTE: THESE NOTES ARE OF A GENERAL NATURE AND ARE NOT SITE-SPECIFIC. SOME NOTES MAY NOT APPLY TO THIS SITE. CROSS-REFERENCE NOTES WITH OTHER SHEETS AND T-MOBILE SCOPE OF WORK TO VERIFY WORK TO BE COMPLETED.

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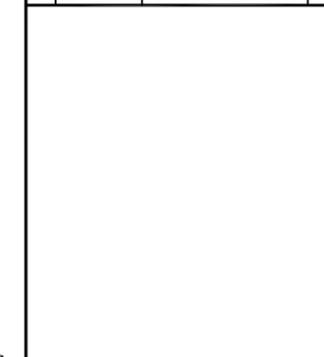
1755 CREEKSIDE OAKS DRIVE
STE. 109
SACRAMENTO, CA 95833

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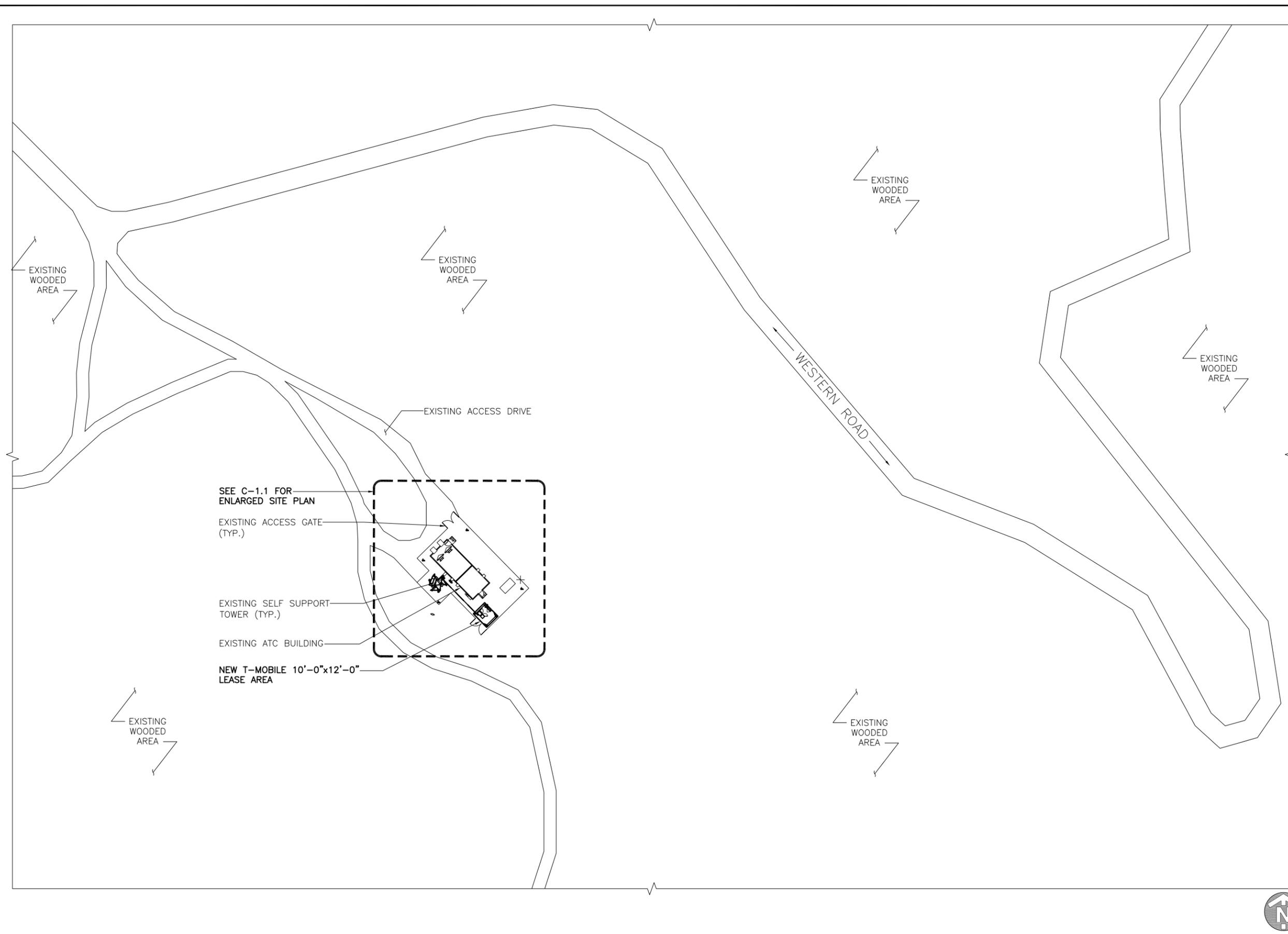
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SITE NAME:
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MOUNTAIN 8202**
SITE ADDRESS:
**2 MILES OF PANOCHÉ ROAD
FROM HWY 25
CALL MTN PAICINES, CA 95043**

SHEET NAME:
**OVERALL
SITE PLAN**

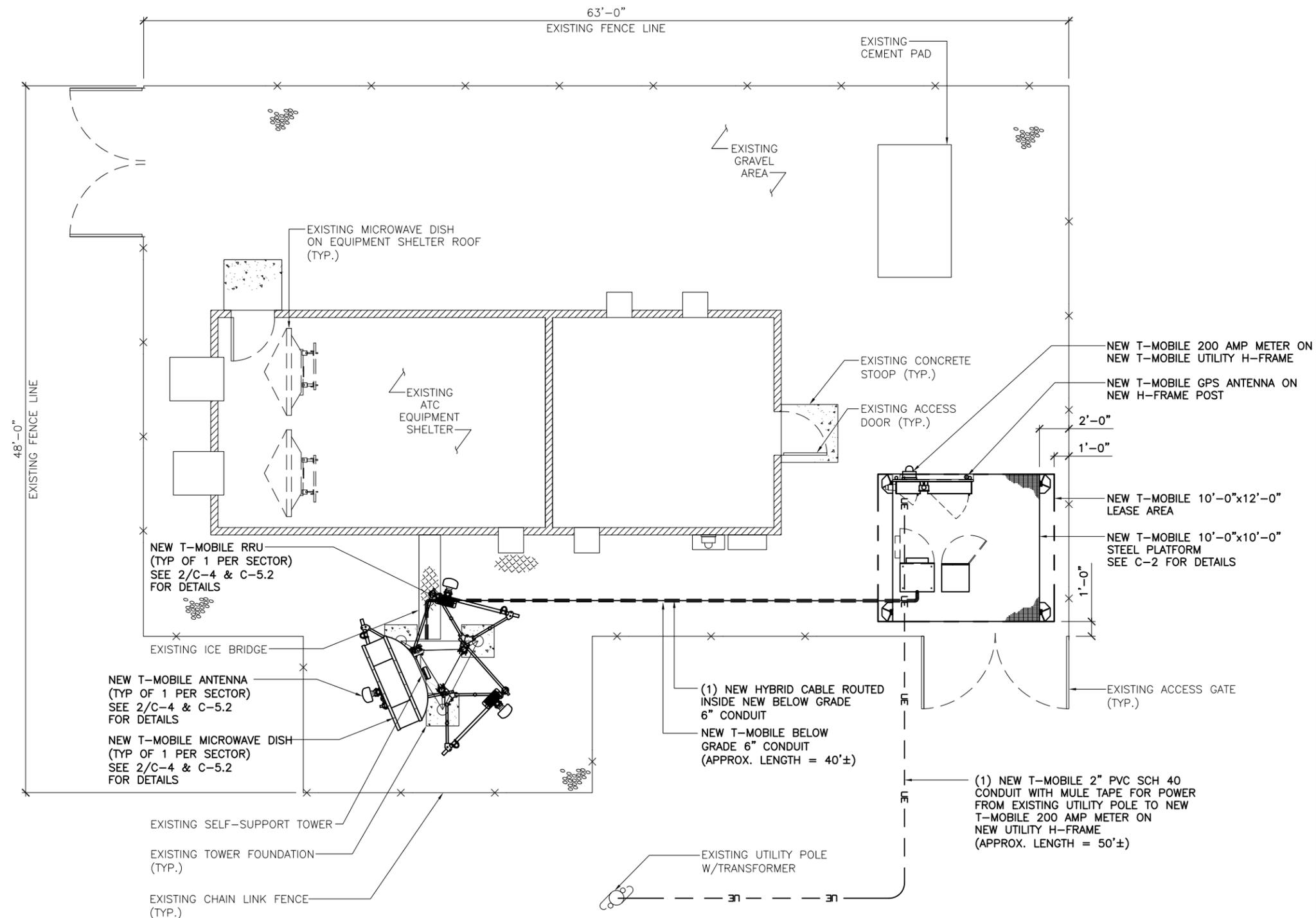
SHEET NUMBER:
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GENERAL NOTES

1. ELEVATIONS ARE U.S.G.S. DATUM.
2. SURVEY INFORMATION SHOWN IS FROM A SURVEY CONDUCTED BY LANDTECH PROFESSIONAL SURVEY & ENGINEERING.
3. ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UTILITY COMPANY, TELEPHONE COMPANY, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS LOCATION.
4. DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.
5. DO NOT SCALE BUILDING DIMENSIONS FROM DRAWINGS.
6. ANY DRAIN AND/OR FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE RETURNED TO ITS ORIGINAL CONDITION PRIOR TO COMPLETION OF WORK. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON AS-CONSTRUCTED DRAWINGS BY GENERAL CONTRACTOR AND ISSUED TO THE ENGINEER AT THE COMPLETION OF THE PROJECT.
7. ALL EXISTING UTILITIES, FACILITIES, CONDITIONS, AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.
8. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES BOTH HORIZONTALLY AND VERTICALLY PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHOULD BE IMMEDIATELY REPORTED TO THE ENGINEER FOR RESOLUTION AND INSTRUCTION, AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT HIS/HER OWN RISK AND EXPENSE. CONTRACTOR SHALL CALL LOCAL DIGGER HOT LINE FOR UTILITY LOCATIONS 3 WORKING DAYS PRIOR TO START OF CONSTRUCTION.
9. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO INSPECTION OF FINAL WORK.
10. THE BUILDING DEPARTMENT ISSUING THE BUILDING PERMIT SHALL BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK OR AS STIPULATED BY THE CODE ENFORCEMENT OFFICIAL HAVING JURISDICTION.
11. GRADING OF THE SITE WORK AREA IS TO BE SMOOTH AND CONTINUOUS IN SLOPE AND IS TO FEATHER INTO EXISTING GRADES AT THE GRADING LIMITS.
12. ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
13. STRUCTURAL FILLS SUPPORTING PAVEMENTS SHALL BE COMPACTED TO 100% OF MAXIMUM STANDARD PROCTOR DRY DENSITY.
14. NEW GRADES NOT IN BUILDING AND DRIVEWAY IMPROVEMENT AREA TO BE ACHIEVED BY FILLING WITH APPROVED CLEAN FILL AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY.
15. ALL FILL SHALL BE PLACED IN UNIFORM LIFTS. THE LIFTS THICKNESS SHOULD NOT EXCEED THAT WHICH CAN BE PROPERLY COMPACTED THROUGHOUT ITS ENTIRE DEPTH WITH THE EQUIPMENT AVAILABLE.
16. ANY FILLS PLACED ON EXISTING SLOPES THAT ARE STEEPER THAN 10 HORIZONTAL TO 1 VERTICAL SHALL BE PROPERLY BENCHED INTO THE EXISTING SLOPE AS DIRECTED BY A GEOTECHNICAL ENGINEER.
17. THE GRADES WITHIN THE FENCED-IN AREA ARE TO BE ACHIEVED BY COMPACTING CLEAN FILL TO A DENSITY OF 90% OF STANDARD PROCTOR COVERING THE AREA WITH 6 MIL. VISQUENE (1" OVERLAP AT SEAMS) FOR WEED SUPPRESSION, THEN ACHIEVING FINISH GRADE BY ADDING 6" OF 3/4" CRUSHED STONE-NO FINES.
18. CONTRACTOR SHALL CLEAN ENTIRE SITE AFTER CONSTRUCTION SUCH THAT NO PAPERS, TRASH, WEEDS, BRUSH OR ANY OTHER DEPOSITS WILL REMAIN. ALL MATERIALS COLLECTED DURING CLEANING OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR.
19. ALL TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH THE IMPROVEMENTS SHALL BE PROTECTED BY THE GENERAL CONTRACTOR.
20. DRIVEWAY CONSTRUCTION, GRADING AND DRAINAGE WORK SHALL CONFORM TO ALL STATE AND LOCAL COUNTY ORDINANCES.
21. ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UTILITY COMPANY, TELEPHONE COMPANY, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS LOCATION.
22. FOR SITES WHERE A CRANE IS NECESSARY, THE CONTRACTOR SHALL CONFIRM AN UNOBSTRUCTED ROUTE FOR THE CRANE FROM PUBLIC ROAD TO TOWER SITE PRIOR TO CONSTRUCTION. NO AERIAL OBSTRUCTIONS UNDER FIFTEEN FEET ABOVE GRADE, INCLUDING AERIAL UTILITIES, ARE ALLOWED ALONG SAID CRANE ROUTE.



ENLARGED SITE PLAN

SCALE: 1/8" = 1'-0" 1



1755 CREEKSIDE OAKS DRIVE
STE 109
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**L700
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FAX: 847-292-0206
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SF95460A

SITE NAME:
**ATC CALL
MOUNTAIN 8202**

SITE ADDRESS:
**2 MILES OF PANOCHE ROAD
FROM HWY 25
CALL MTN PAICINES, CA 95043**

**ENLARGED SITE
PLAN**

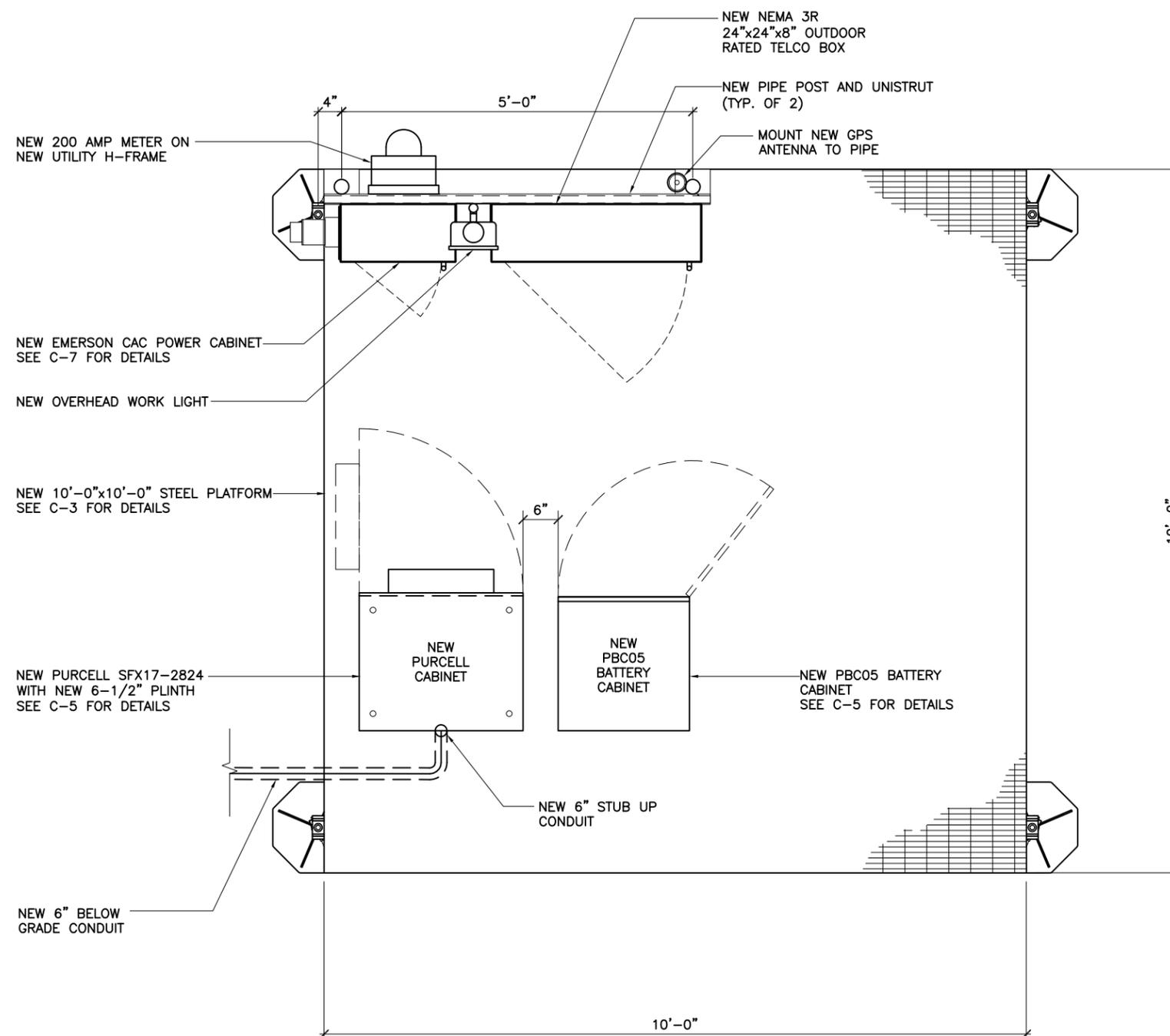
SHEET NUMBER:
C-1.1

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SHEET NAME:
**EQUIPMENT
PLAN**

SHEET NUMBER:
C-2





1755 CREEKSIDE OAKS DRIVE
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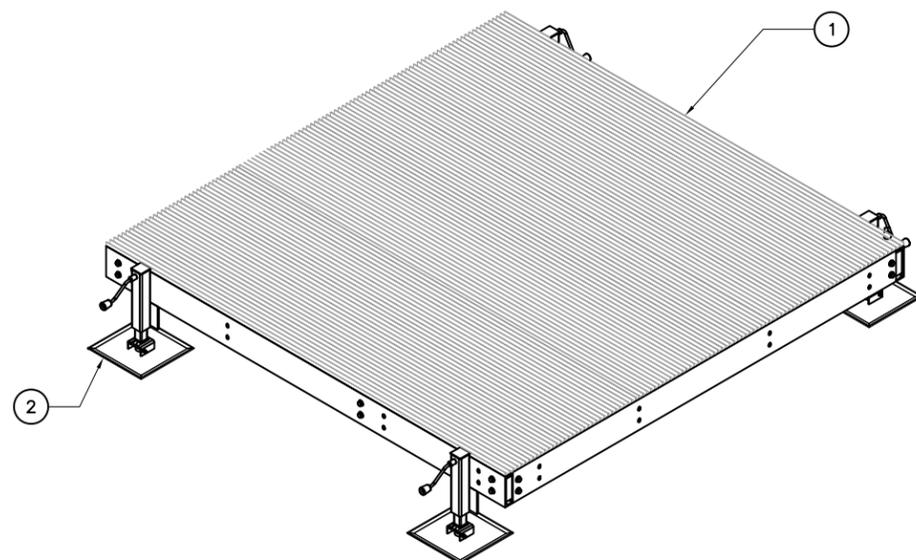
L700
CONSTRUCTION

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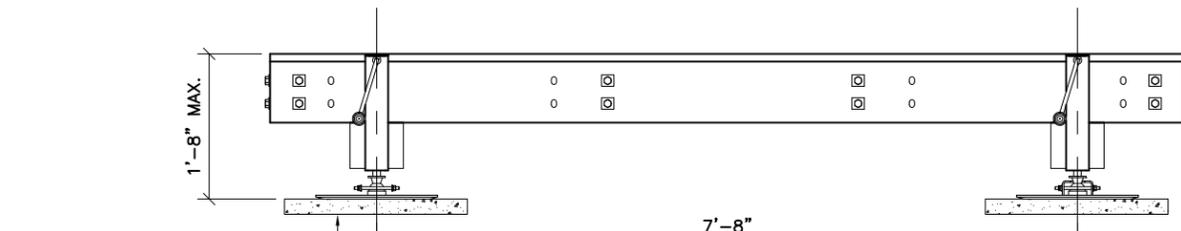
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0	10/30/15	95% REVIEW	AA
0	11/18/15	100% REVIEW	AA
1	11/19/15	FINAL	AA

ITEM	PART NO.	DESCRIPTION	QTY	WEIGHT
1	EQ-P1010-B	10'x10' EQUIPMENT PLATFORM BASE	1	1444.50 LBS
2	EQ-P-AL	ADJUSTABLE LEG KIT FOR EQ-P SERIES	4	56 LBS

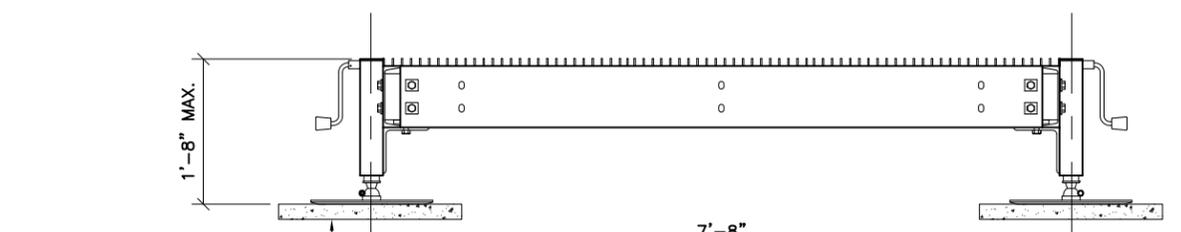


ITEM	DESCRIPTION	QTY.	
1	10'x10' EQUIPMENT PLATFORM BASE	1	10' x 10' PLATFORM WITH (4) ADJUSTABLE LEGS (ANDREW #EQ-P1010-AL) TOTAL WEIGHT: 1668.5 lbs
2	ADJUSTABLE LEG KIT	4	



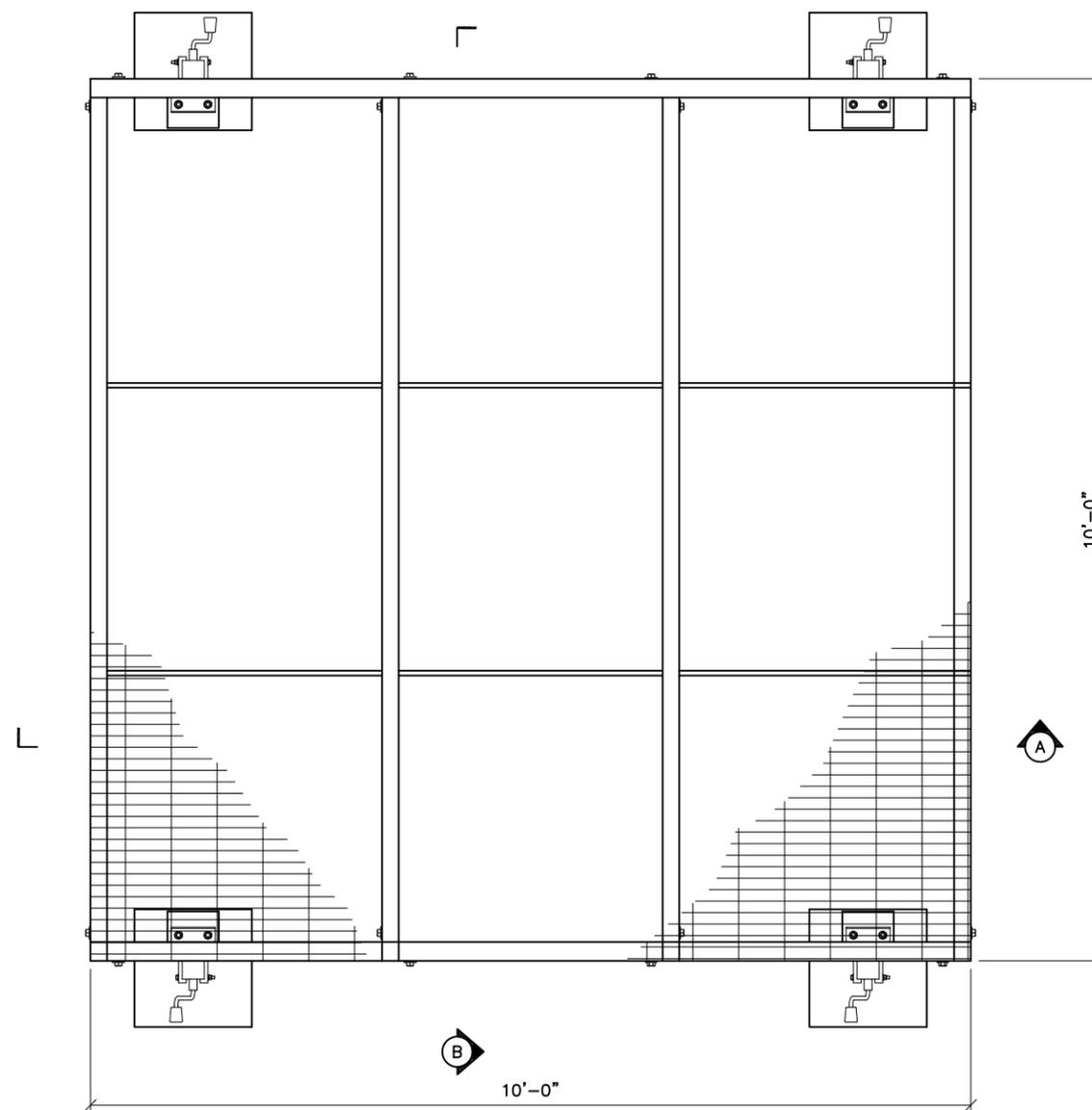
NEW 2'x2'x2" CONCRETE PAVERS
FURNISHED & INSTALLED BY
CONTRACTOR
(TYP.)

SECTION-A



NEW 2'x2'x2" CONCRETE PAVERS
FURNISHED & INSTALLED BY
CONTRACTOR
(TYP.)

SECTION-B



PLAN



AMERICAN TOWER CORPORATION
19100 VON KARMAN SUITE 200
IRVINE, CA 92612



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SITE NAME:
ATC CALL
MOUNTAIN 8202
SITE ADDRESS:
2 MILES OF PANOCHE ROAD
FROM HWY 25
CALL MTN PAICINES, CA 95043

SHEET NAME:
PLATFORM
DETAILS

SHEET NUMBER:
C-3

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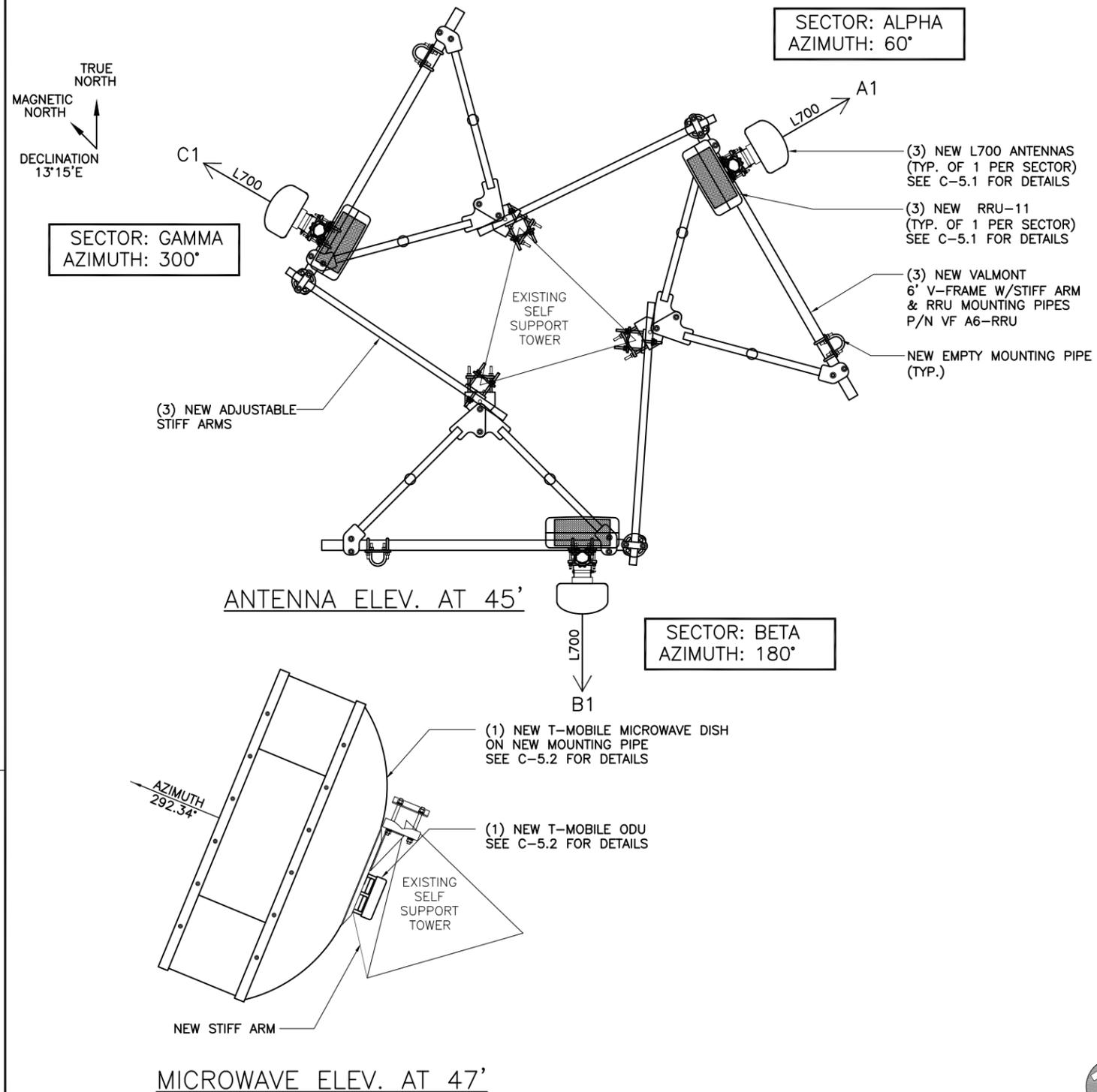
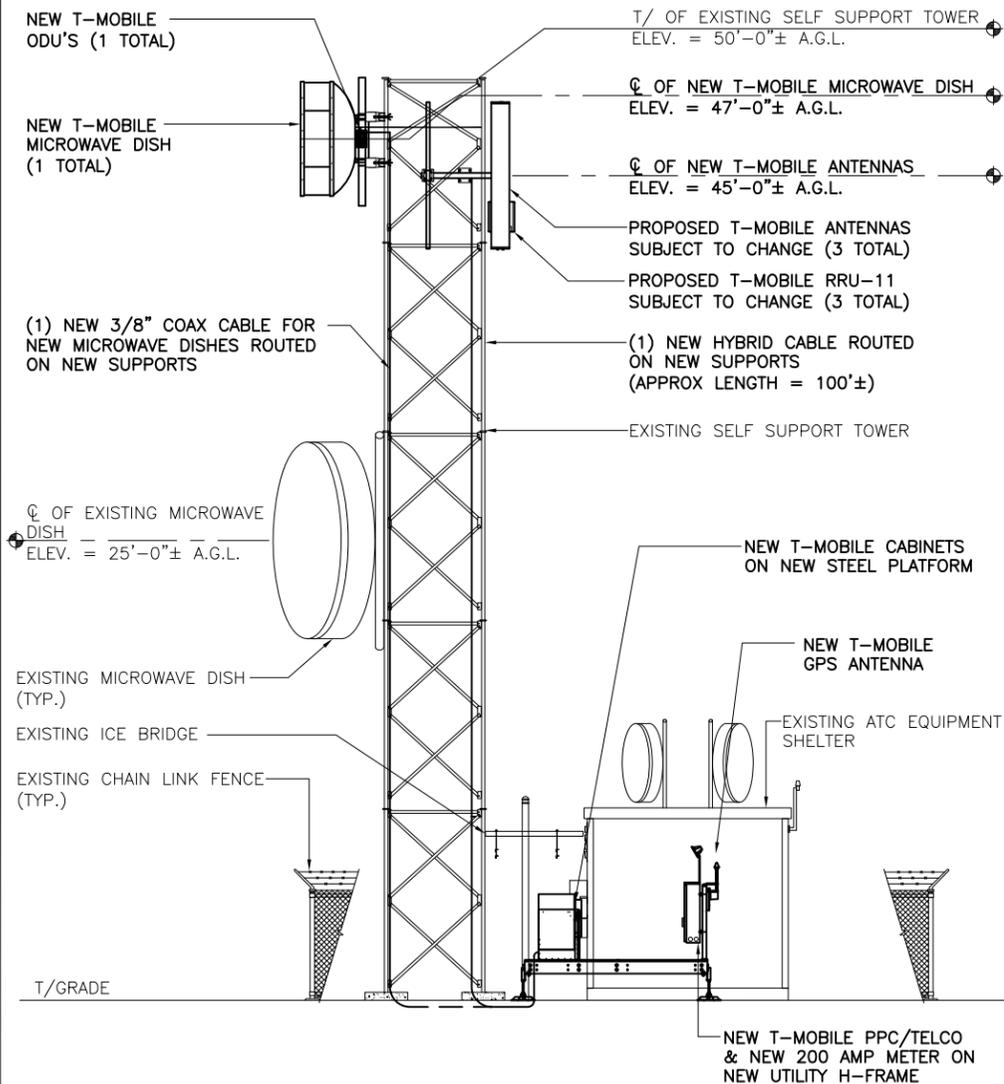
ANTENNA SCHEDULE						
SECTOR	ALPHA		BETA		GAMMA	
ANTENNA POSITION	-	A-1	-	B-1	-	C-1
ANTENNA TYPE	-	LTE	-	LTE	-	LTE
AZIMUTH	-	60°	-	180°	-	300°
RAD CENTER (AGL)	-	45'	-	45'	-	45'
MODEL	-	ANDREW LNX-6515DS-VTM	-	ANDREW LNX-6515DS-VTM	-	ANDREW LNX-6515DS-VTM
FEEDER LENGTH	-	±15'-0"	-	±15'-0"	-	±15'-0"



1755 CREEKSIDE OAKS DRIVE
STE. 109
SACRAMENTO, CA 95833

L700
CONSTRUCTION

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2 MILES OF PANOCHÉ ROAD
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CALL MTN PAICINES, CA 95043

SHEET NAME:
TOWER ELEVATION
AND ANTENNA
DETAILS

SHEET NUMBER:



C-4

TOWER ELEVATION VIEW

SCALE 1" = 10'-0" 1

ANTENNA LAYOUT

SCALE: 3/8" = 1'-0" 2

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PURCELL SYSTEMS - SFX17-2824

SITEFLEX 17RU OUTDOOR TELECOM ENCLOSURE

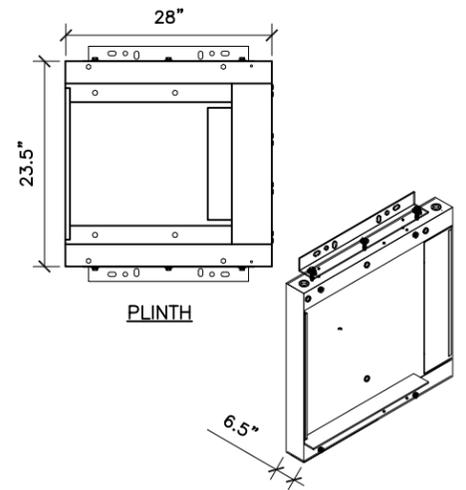


POWER SYSTEM FEATURES:

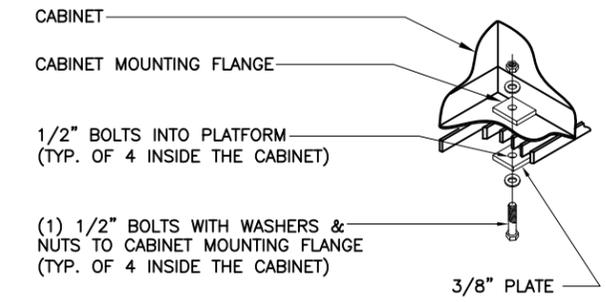
- HIGH FLEXIBLE AND SCALABLE
- ENERGY EFFICIENT ADVANCED THERMAL SOLUTIONS
- FLEXAIR DOOR SUPPORTS MULTIPLE THERMAL ZONES WITHIN CABINET
- RF TOP FOR CABLE MANAGEMENT
- FIELD UPGRADABLE
- AC AND DC POWER OPTIONS
- PAD, POLE, WALL AND H-FRAME MOUNT OPTIONS
- 5, 17, 24, 31, 37 AND 42 RU EQUIPMENT BAY OPTIONS

GENERAL		AC POWER TERMINATION AND DISTRIBUTION	
CONSTRUCTION	0.090" CORROSION RESISTANT ALUMINUM	LOCATION	EXTERNAL
DIMENSIONS (WxHxD)	28"x35.5"x23.5" (711 x 1067 x 597 mm)	POSITIONS	8 POSITION EXTERNAL LOAD CENTER
WEIGHT	70 LBS	MAIN BREAKER	UP TO 70 AMP MAIN BREAKER
FINISH	ULTRA-LIGHT GRAY POLYESTER POWDER COAT	GENERAL INLET	100 AMP
DOOR/SIDE/TOP	FRONT DOOR; REAR HATCH, PAD-LOCKABLE HANDLES, DOOR HINGES NOT HIDDEN	DC POWER SYSTEMS AND DISTRIBUTION	
		DISTRIBUTION	UP TO 10 POSITIONS

OTHER OPTIONS			
OUTLETS	20A, GFCI OR STANDARD	OTHER:	AGENCY COMPLIANCE: UL LISTED - UL508A, NEMA 3R.
BONDING/GROUNDING	COPPER ISOLATED 7 POSITIONS, INTEGRATED 4 POSITIONS	ENVIRONMENTAL:	IP PROTECTION DESIGNED TO IP54 WARRANTY.
ALARM BLOCK	UP TO 12 POSITIONS (INCLUDES INTRUSION AND THERMAL)	WARRANTY:	5 YEARS ON ENCLOSURE, 1 YEAR ON THERMAL SYSTEM.
ACCESSORIES	RAIL ADAPTERS, 23" TO 19", TELCO BOARD		

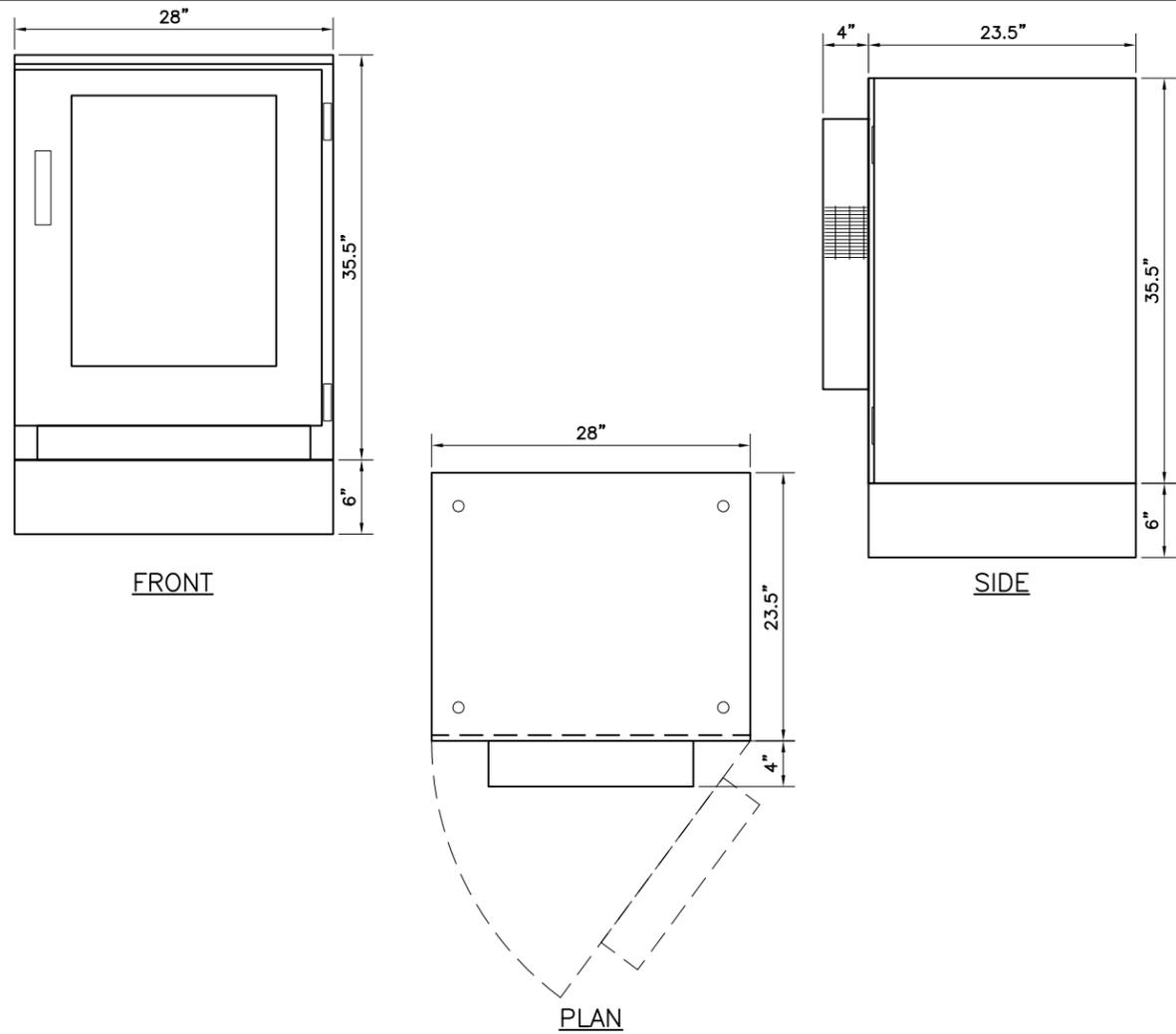


DIMENSIONS	711 x 165 x 597 mm
	28" x 6.5" x 23.5"
WEIGHT	N/A

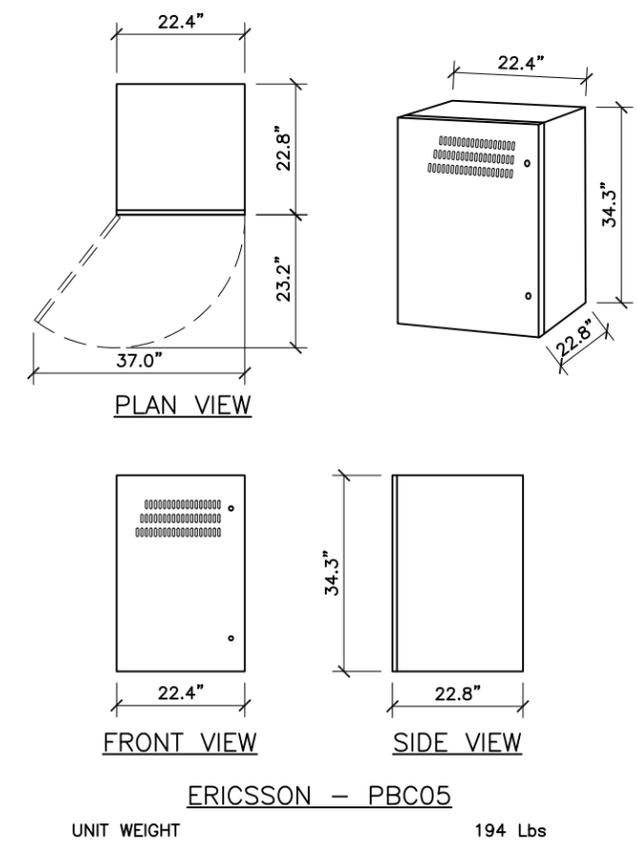


PLINTH DETAIL SCALE: N.T.S. 2

CABINET CONNECTION DETAIL SCALE: N.T.S. 3



SFX17-2824 SPECIFICATIONS SCALE: N.T.S. 1



PBC05 SPECIFICATION SCALE: N.T.S. 4

T-Mobile
1755 CREEKSIDE OAKS DRIVE
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SACRAMENTO, CA 95833

L700 CONSTRUCTION

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0	10/30/15	95% REVIEW	AA
0	11/18/15	100% REVIEW	AA
1	11/19/15	FINAL	AA

AMERICAN TOWER
AMERICAN TOWER CORPORATION
19100 VON KARMAN SUITE 200
IRVINE, CA 92612

FULLERTON
ENGINEERING-DESIGN
9600 W. BRYN MAWR AVE., SUITE 200
ROSEMONT, ILLINOIS 60018
TEL: 847-292-0200
FAX: 847-292-0206
www.FullertonEngineering.com

SITE #:
SF95460A
SITE NAME:
ATC CALL MOUNTAIN 8202
SITE ADDRESS:
2 MILES OF PANOCH ROAD FROM HWY 25 CALL MTN PAICINES, CA 95043

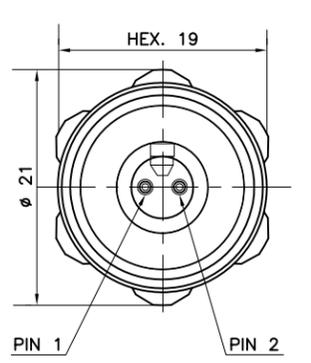
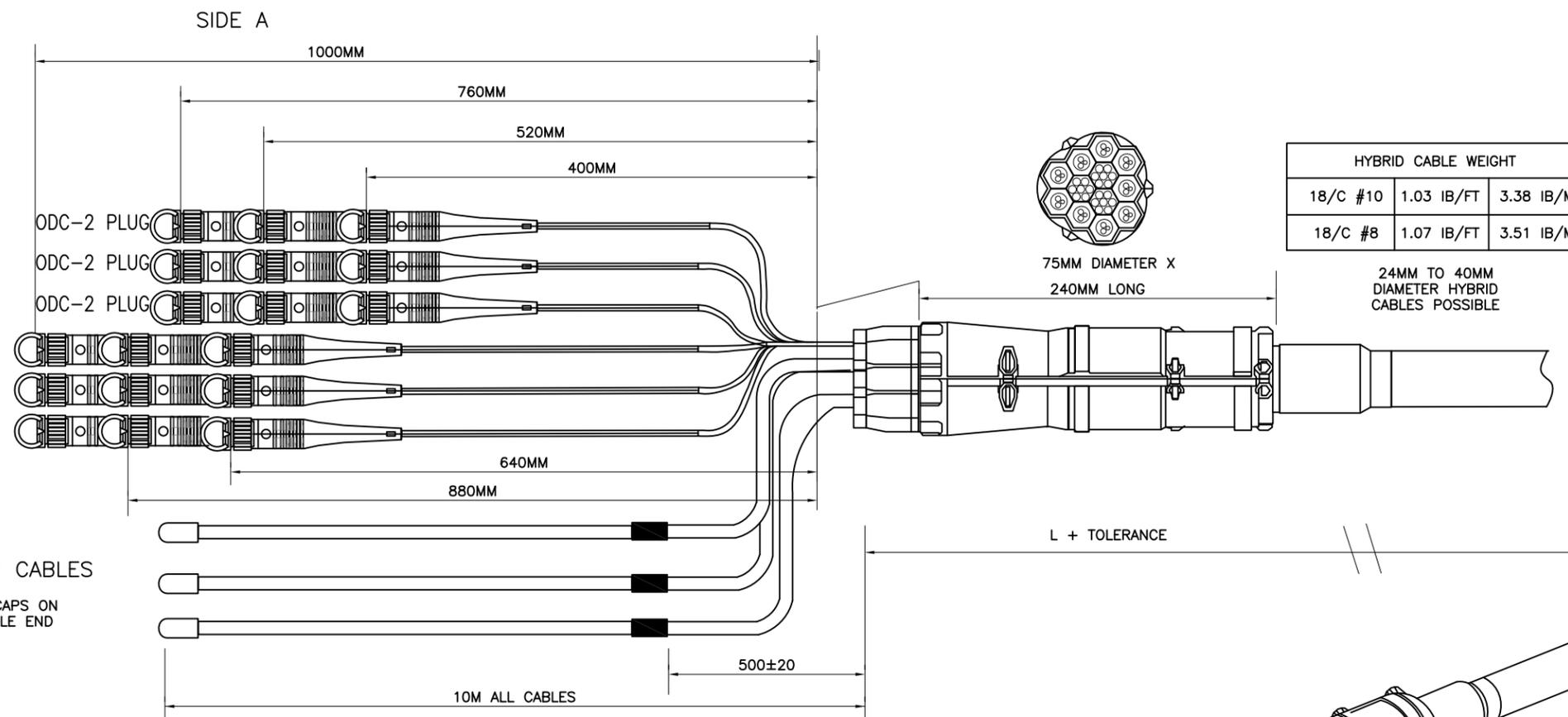
SHEET NAME:
CABINET DETAILS

SHEET NUMBER:
C-5

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**L700
CONSTRUCTION**

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FRONT VIEW ODC-2 PLUG

FIBER OPTIC					
RRH	SIDE A		SIDE B		
#	ODC PLUG	PIN	PIN	COLOR LCD BOOTS	LENGTH SIDE B
1	ODC-2 RED	1	B	RED (SHORT BREAKOUT)	1000±30
		2	A		
2	ODC-2 GREEN	1	B	GREEN	1060±30
		2	A		
3	ODC-2 BLUE	1	B	BLUE	1120±30
		2	A		
4	ODC-2 RED	1	B	RED (SHORT BREAKOUT)	1000±30
		2	A		
5	ODC-2 GREEN	1	B	GREEN	1060±30
		2	A		
6	ODC-2 BLUE	1	B	BLUE	1120±30
		2	A		
7	ODC-2 RED	1	B	RED (SHORT BREAKOUT)	1000±30
		2	A		
8	ODC-2 GREEN	1	B	GREEN	1060±30
		2	A		
9	ODC-2 BLUE	1	B	BLUE	1120±30
		2	A		

TOLERANCE	ASSEMBLY LENGTH
+80	L<5M
+2%	L≥5M

POWER	
LENGTH	DIAMETER
L≤60M	6MM ² (10AWG)
L>60M	10MM ² (8AWG)

ERICSSON HYBRID CABLE 9x18

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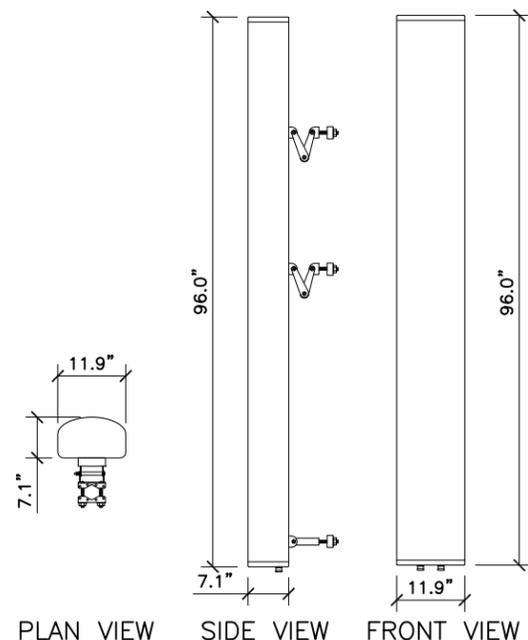
SITE ADDRESS:
**2 MILES OF PANOCHE ROAD FROM HWY 25
CALL MTN PAICINES, CA 95043**

SHEET NAME:

CABLE DETAILS

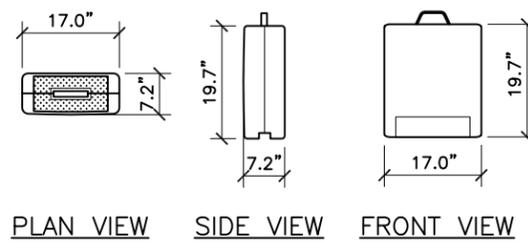
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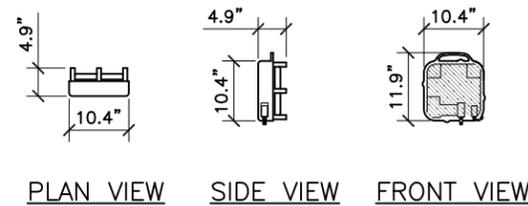


COMMSCOPE – LNX-6515DS-VTM

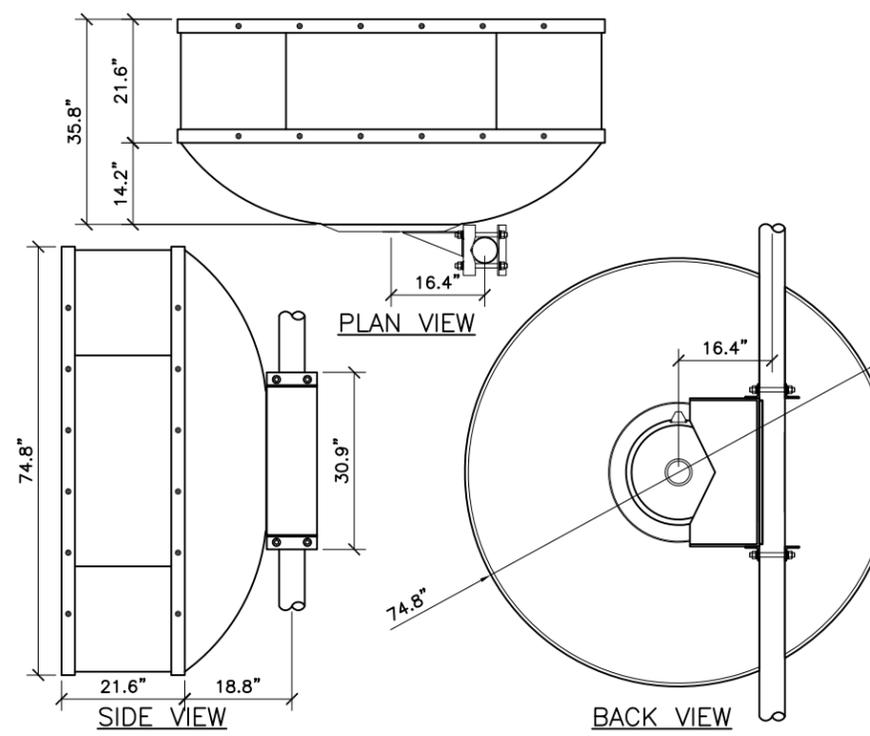
FREQUENCY RANGE 698-806 MHZ
806-896 MHZ
ANTENNA WITH BRACKET 49.8 LBS
66.2 LBS



ERICSSON – RRUS11 B12
FREQUENCY 699 TO 715 MHZ UPLINK
729 TO 745 MHZ DOWNLINK
UNIT WEIGHT 50.6 Lbs



AVIAT – ODU 600
WEIGHT 11 Lbs



CELWAVE RFS SB6-W100AMPT – COMPACTLINE EASY ANTENNA
SINGLE POLARIZED
FREQUENCY RANGE 10 – 11.7 GHz
WEIGHT 198.0 Lbs



1755 CREEKSIDE OAKS DRIVE
STE. 109
SACRAMENTO, CA 95833

L700
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1	11/19/15	FINAL	AA

ANTENNA DETAIL

SCALE: 3/8" = 1'-0"

1

RRU DETAIL & ODU SPEC

SCALE: 3/8" = 1'-0"

2

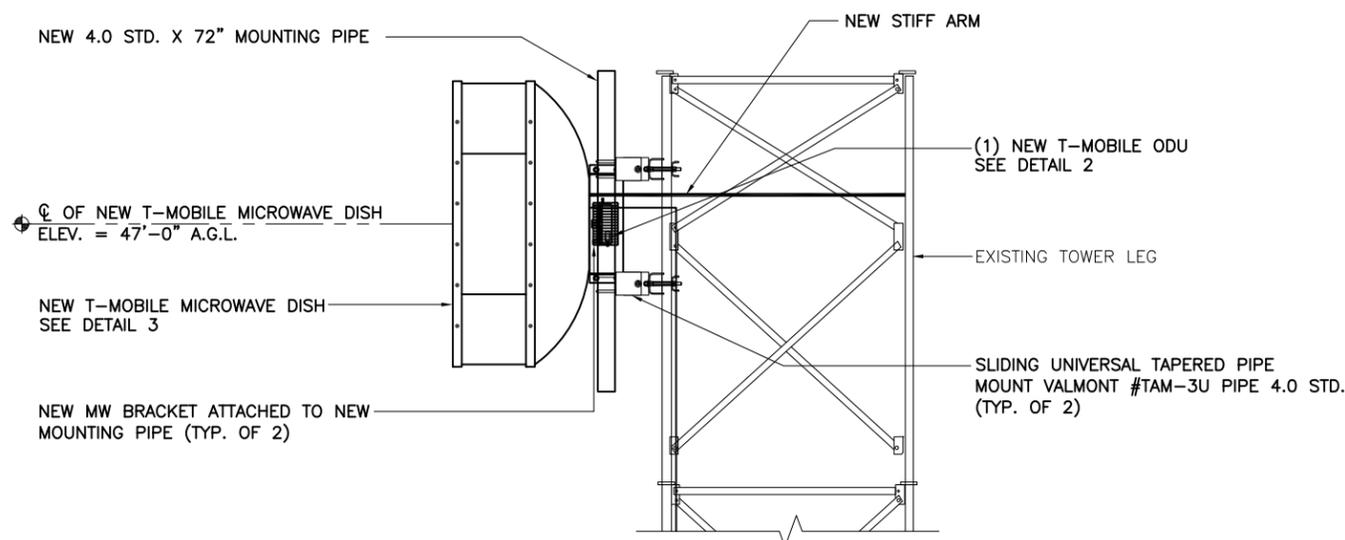
MICROWAVE DISH DETAIL AND SPECIFICATION

SCALE: 3/8" = 1'-0"

3

NEW EQUIPMENT SCHEDULE

MICROWAVE MODEL #	ODU		RAD CENTER (FT)	AZIMUTH (DEG)	TILT (DEG)	CABLE + 20%			
	QTY	MODEL #				QTY	TYPE	LENGTH (FT)	DIA (IN)
RFS SB6-W100AMPT	1	AVIAT NETWORKS ODU 600	47	292.34	TBD	1	COAX	110	3/8



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SITE #:

SF95460A

SITE NAME:
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SITE ADDRESS:
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CALL MTN PAICINES, CA 95043

SHEET NAME:

ANTENNA DETAILS & SPECS

SHEET NUMBER:

C-5.2

NOT USED

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

4

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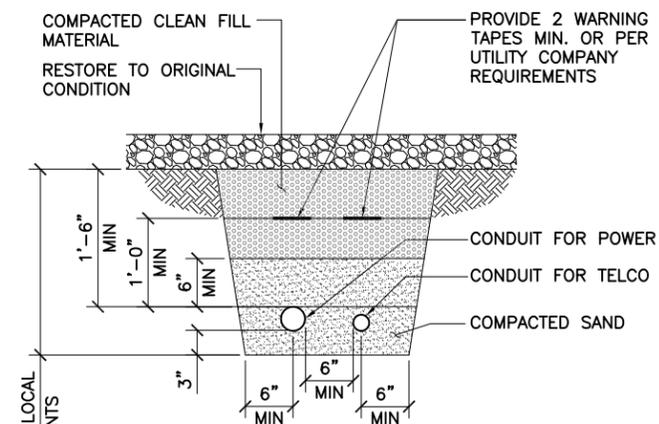
1755 CREEKSIDE OAKS DRIVE
STE. 109
SACRAMENTO, CA 95833

L700
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NOTES:

1. ALL UTILITIES WITHIN THE TOWER COMPOUND SHALL BE INSTALLED IN CONDUIT.
2. SCHEDULE 80 PVC SHALL BE USED FOR CONDUIT IN ALL VEHICULAR TRAFFIC AREAS.
3. DIRECT-BURY UTILITIES MAY BE USED IN APPROVED AREAS OUTSIDE THE LIMITS OF THE TOWER COMPOUND.

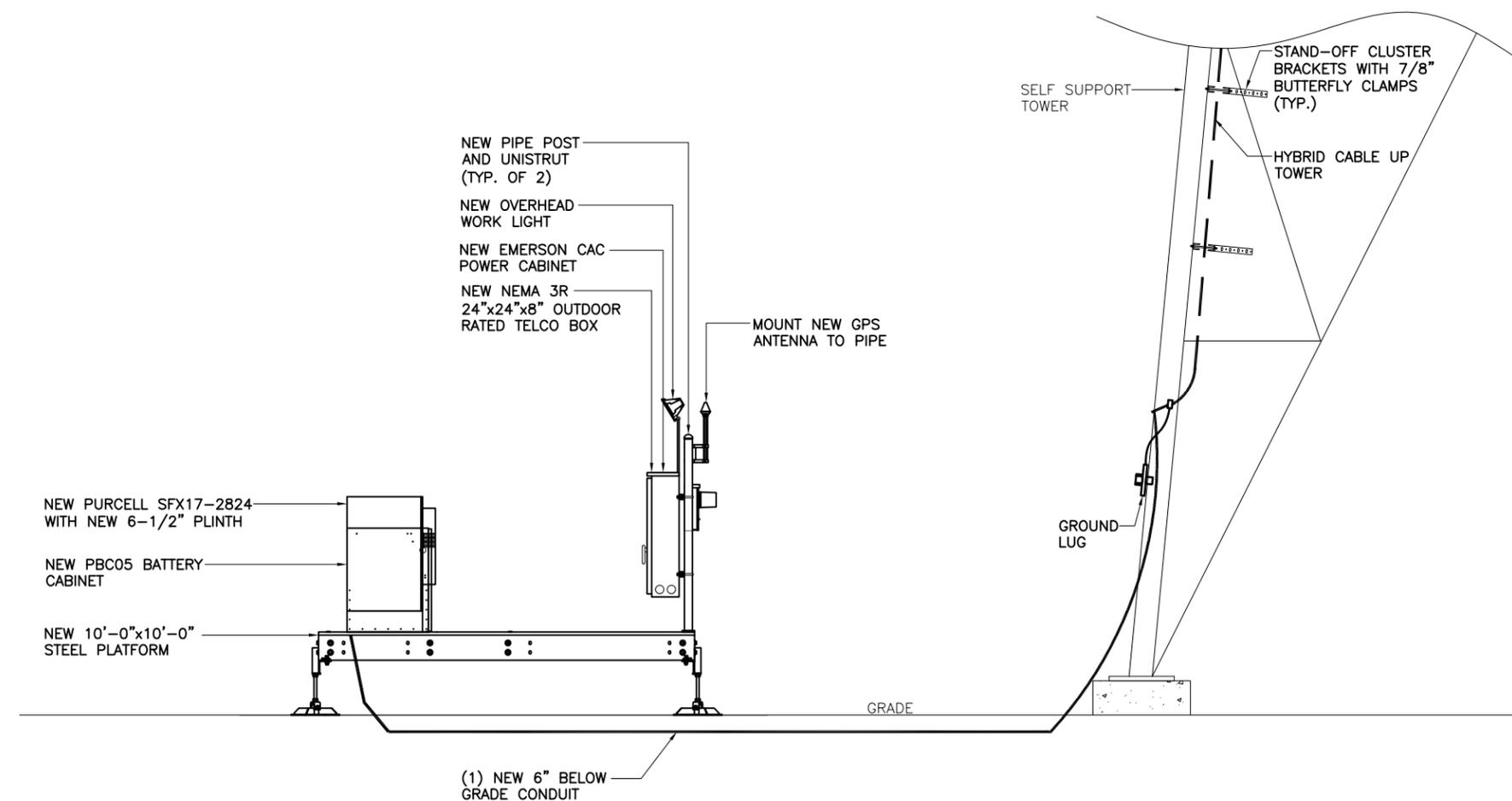
2'-6" MIN OR PER LOCAL CODE REQUIREMENTS

NOT USED

SCALE: N.T.S. 2

TYPICAL ELECTRIC & TELCO TRENCH DETAIL

SCALE: N.T.S. 3



NOT USED

SCALE: N.T.S. 1

TYPICAL EQUIPMENT ELEVATION

SCALE: N.T.S. 4



SITE #:
SF95460A
SITE NAME:
ATC CALL MOUNTAIN 8202
SITE ADDRESS:
2 MILES OF PANOCHE ROAD FROM HWY 25
CALL MTN PAICINES, CA 95043

SHEET NAME:
TOWER ELEVATION AND DETAILS

SHEET NUMBER:

C-6

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EMERSON CAC POWER CABINET



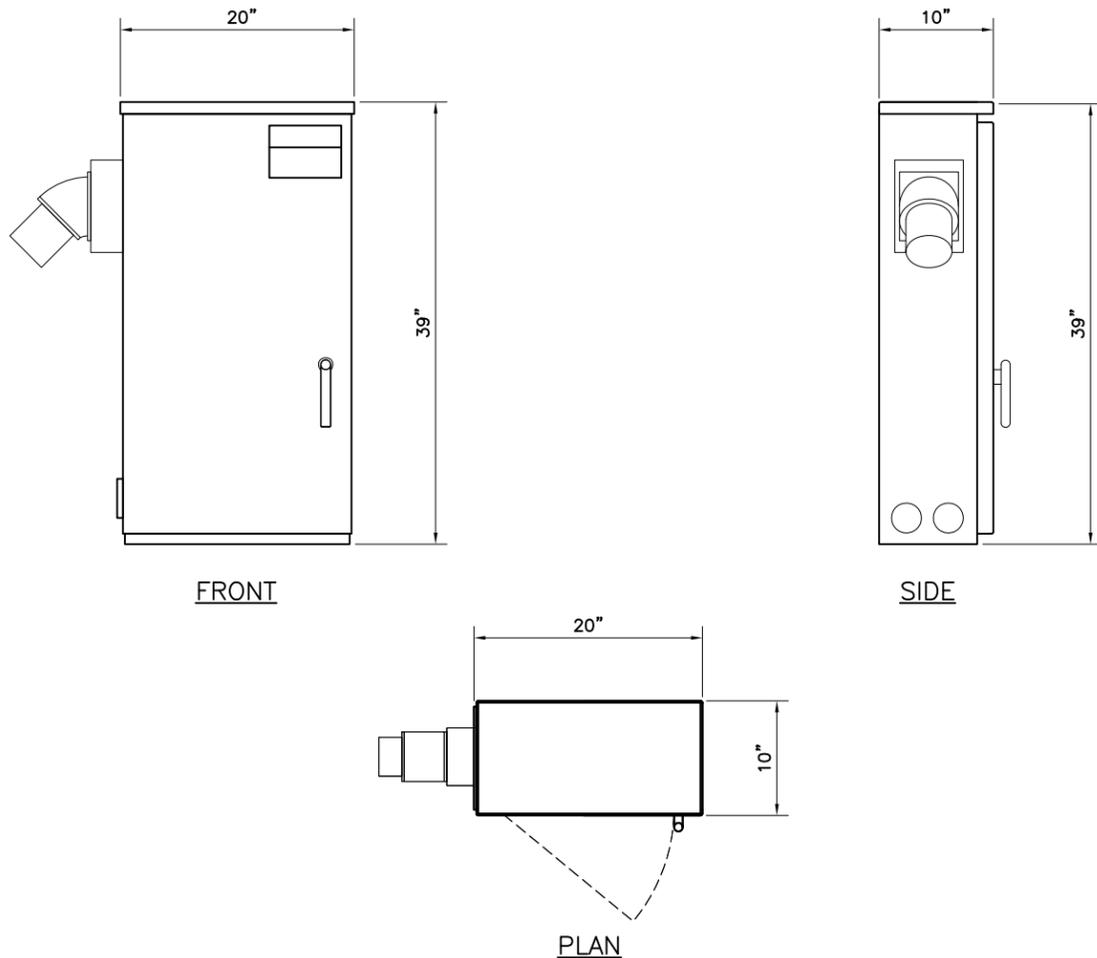
STANDARD FEATURES:

- NEMA 3R RAINPROOF ENCLOSURE
- 3-POINT DOOR CLOSURE WITH CONTINUOUS HINGE AND HEAVY DUTY DOOR GASKET
- UL891 LISTED RAIN/DRIP HOOD PROVIDES PROTECTION AGAINST THE ELEMENTS
- 0.1" THICK ALUMINUM
- CORROSION RESISTANT POWER COAT PAINT
- WALL/BACKET OR PAD-MOUNTABLE
- OPTIONAL N-G BONDING JUMPER
- MECHANICAL INTERLOCK PREVENTS SIMULTANEOUS USE OF UTILITY AND GENERATOR POWER
- BRUTE FORCE METAL OXIDE VARISTOR SURGE SUPPRESSION WITH EASY TO READ LED AND REMOTE STATUS INDICATION
- GENERATOR RECEPTACLE OPTIONS INCLUDE: 100A OR 200A, 10kAIC OR 22kAIC, 65kAIC

ENCLOSURE		ELECTRICAL	
EXTERNAL MATERIAL	0.1" THICK ALUMINUM	VOLTAGE	120/240 VAC, SINGLE PHASE, 3 WIRE/GROUND
DIMENSIONS (WxHxD)	20"x39"x10"	SERVICE	100 AMP OR 200 AMP. UTILITY/STANDBY
WEIGHT	75 LBS	DISCONNECT	SLIDE BAR MECHANICAL INTERLOCK
PROTECTION	RAIN/DRIP HOOD, RAIN TESTED PER UL891	LOAD CENTER	200 AMP, 24 POSITION, 1-30 AMP DOUBLE POLE, 1-15 AMP SINGLE POLE
CABINET TYPE	ONE AC POWER TVSS CABINET (NEMA 3R TYPE ENCLOSURE)	BONDING JUMPER	OPTIONAL N-G BONDING JUMPER
		POWER RECEPT.	APPLETON AR20044RS STANDARD
		TVSS	METAL OXIDE VARISTOR/REMOTE ALARM CONTACT

OTHER OPTIONS

SECURITY	3-POINT DOOR CLOSURE WITH 1/4 TURN HANDLE, SS HINGE
SAFETY	UL891, DEAD FRONT SWITCHBOARDS
OPTIONS	10,000 OR 22,000, 65,000 SERIES RATED, PAD-MOUNTING BASE (8" THICK), VARIOUS GENERATOR RECEPTACLES OFFERED



Ordering Information – CAC Model

A small selection of products is listed below. Please refer to the CAC Model Ordering Matrix for additional configurations.

Emerson Catalog Number	Emerson Part Number	Description
CACA22204090		100A slide bar transfer device, 24-position load center, ADR1044RS, MOV
CACA45201090		200A slide bar transfer device, 24-position load center, AR20044RS, MOV
CACA45201190		200A slide bar transfer device, 24-position load center, AR20044RS with 45 degree angle adapter, MOV
CACA75201090		200A slide bar transfer device, 30-position load center, AR20044RS, MOV

Ordering Matrix – CAC Model

AC Power Configuration	2 = 100A main, 24 pos. LC 4 = 200A main, 24 pos. LC 7 = 200A main, 30 pos. LC
AIC Rating	2 = 10K AIC 5 = 65K AIC Series Rated
Main Breakers (Transfer Device)	1 = Single disconnect 2 = Slide bar mechanical interlock
Generator Inlet	00 = None 01 = AR20044RS (Appleton 200A) 02 = AR20034RS (Appleton 200A) 03 = AR20033RS (Appleton 200A) 04 = AR1044RS (Appleton 100A) 05 = HBL2715SW (Hubbell 30A) 08 = M4100B12W (McGill 100A) 09 = HBL4100RS2WR (Hubbell 100A) 10 = HBL4100RS1WR (Hubbell 100A) 11 = HBL4200RS1WR (Hubbell 200A) 12 = 4100B12W (Hubbell 100A) 13 = ADR1033RS (Appleton 100A) 14 - Custom Option
Generator Inlet Accessories	0 = No angle adapter 1 = 45 degree angle adapter
TVSS Options	0 = None 9 = IG120S200RK-WW
Cabinet Mounting	0 = None



1755 CREEKSIDE OAKS DRIVE
STE. 109
SACRAMENTO, CA 95833

L700
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SITE #:

SF95460A

SITE NAME:

ATC CALL

MOUNTAIN 8202

SITE ADDRESS:

2 MILES OF PANOCHE ROAD

FROM HWY 25

CALL MTN PAICINES, CA 95043

SHEET NAME:

EQUIPMENT

DETAILS

SHEET NUMBER:

C-7



20 AMP OUTDOOR GFCI & SWITCH COMBO
NOT TO SCALE

MANUFACTURER: GENERAL ELECTRIC (OR EQUIVALENT)
MODEL: U010S010GRP
DEPTH: 5.2"
HEIGHT: 7.1"
WIDTH: 5.8"
WEIGHT: 3.92 LBS

UL LISTING: 1-UL LISTED
MAX. AMPERAGE: 20 A
VOLTAGE: 120V

CONTRACTOR IS RESPONSIBLE TO COORDINATE INSTALL OF ELECTRICAL METER WITH UTILITY COMPANY AND VERIFY INSTALLATION WITH T-MOBILE.

ELECTRICAL CONTRACTOR NOTE

THESE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY AND SHOW THE GENERAL INTENT OF THE FINAL ARRANGEMENT OF ELECTRICAL SYSTEMS, EQUIPMENT AND CONNECTIONS. IT IS THE INTENT OF THESE ELECTRICAL DRAWINGS TO REQUIRE APPROPRIATE ELECTRICAL WORK TO COMPLETELY FACILITATE THE ELECTRICAL REQUIREMENTS FOR THE NEW TENANT (T-MOBILE). SOME OF THE ELECTRICAL WORK SHOWN IS EXISTING AND SHALL REMAIN IN PLACE AND NEW WORK ADDED TO ACCOMMODATE T-MOBILE ELECTRICAL REQUIREMENTS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ELECTRICAL EQUIPMENT AND WIRING AND ADD NEW WORK, AS REQUIRED TO COMPLETE THE T-MOBILE ELECTRICAL REQUIREMENTS. IT IS NOT INTENDED TO SHOW EXISTING ELECTRICAL WORK EXACTLY AS IS, BUT TO SHOW THE INTENT ONLY. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY'S FOR ADDED LOAD (T-MOBILE). VERIFY ELECTRICAL AND TELEPHONE SERVICE SIZE AND CAP.

GENERAL NOTES

1) ALL WORK IS TO COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY LOCAL ORDINANCES, CODES AND ALL OTHER ADMINISTRATIVE AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL FURNISH AND PAY FOR ALL PERMITS AND RELATED FEES.

2) ALL EQUIPMENT AND MATERIAL FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL BE UNDERWRITERS LABORATORIES (U.L.) LISTED, NEW, FREE FROM DEFECTS AND SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY OWNER OR HIS REPRESENTATIVE. SHOULD ANY TROUBLE DEVELOP DURING THIS PERIOD DUE TO FAULTY WORKMANSHIP, MATERIAL OR EQUIPMENT, THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS AND LABOR TO CORRECT THE TROUBLE WITHOUT COST TO THE OWNER.

3) ALL WORK SHALL BE EXECUTED IN A WORKMAN LIKE MANNER AND SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED. CONTRACTOR SHOULD AVOID DAMAGE TO EXISTING UTILITIES WHEREVER POSSIBLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING RELATED TO ELECTRICAL WORK, AND SHALL RESTORE ALL EXISTING LANDSCAPING, SPRINKLER SYSTEMS, CONDUITS, WIRING, PIPING, ETC. DAMAGED BY THE ELECTRICAL WORK TO MATCH CONDITIONS.

4) ELECTRICAL WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE ELECTRICAL POWER AND LIGHTING SYSTEMS, TELEPHONE AND COMMUNICATION SYSTEMS, PANEL BOARDS, CONDUIT, CONTROL WIRING, GROUNDING, ETC. AS INDICATED ON ELECTRICAL DRAWINGS AND/OR AS REQUIRED BY GOVERNING CODES.

5) PRIOR TO INSTALLING ANY ELECTRICAL WORK,

THE CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY EXISTING SITE LOCATIONS AND CONDITIONS AND UTILITY SERVICE REQUIREMENTS OF THE JOB, AND BY REFERENCE TO ENGINEERING AND EQUIPMENT SUPPLIERS DRAWINGS. SHOULD THERE BE ANY QUESTION OR PROBLEM CONCERNING THE NECESSARY PROVISIONS TO BE MADE, PROPER DIRECTIONS SHALL BE OBTAINED BEFORE PROCEEDING WITH ANY WORK.

6) PROVIDE POWER AND TELEPHONE TO SERVICE POINTS PER UTILITY COMPANY REQUIREMENTS. CONTRACTOR SHALL CONTACT UTILITY SERVICE PLANNERS AND OBTAIN ALL SERVICE REQUIREMENTS AND INCLUDE COSTS SUCH IN THEIR BID.

7) SERVICE EQUIPMENT SHALL HAVE A SHORT CIRCUIT WITHSTAND RATING EQUAL TO OR EXCEEDING THE MAXIMUM AVAILABLE FAULT CURRENT AT THE SUPPLY TERMINAL ON THE UTILITY TRANSFORMER SECONDARY. THE INSULATION SHALL BE FREE FROM ANY SHORT CIRCUITS AND GROUNDS.

8) WHERE APPLICABLE CONTRACTOR SHALL COORDINATE W/LOCAL UTILITY COMPANY REGARDING REQUIREMENTS & INSTALLATION OF A CT CABINET.

ELECTRICAL NOTES

1) ALL WIRES SHALL BE STRANDED COPPER WITH THHN/THWN AND 600 VOLTS INSULATION. ALL GROUND CONDUCTORS TO BE PROPERLY SIZED COPPER. (STRANDED OR SOLID).

2) IN THE EVENT OF ANY CONFLICT OR

INCONSISTENCY BETWEEN ITEMS SHOWN ON THE PLANS AND/OR SPECIFICATIONS, THE NOTE, SPECIFICATION OR CODE WHICH PRESCRIBES AND ESTABLISHES THE HIGHEST STANDARD OF PERFORMANCE SHALL PREVAIL

3) SERVICE CONDUITS SHALL HAVE NO MORE THAN (4) -90° BENDS IN ANY SINGLE RUN. THE CONTRACTOR SHALL PROVIDE PULL BOXES AS NEEDED WHERE CONDUIT REQUIREMENTS EXCEED THESE CONDITIONS. PULL WIRES AND CAPS SHALL BE PROVIDED AT ALL SPARE CONDUITS FOR FUTURE USE.

4) ALL COAX, POWER AND TELEPHONE SYSTEM CONDUITS SHALL HAVE A MINIMUM 24-SCH. 80 PVC RADIUS SWEEPS TO EQUIPMENT. PULL BOXES, MONOPOLE, ETC., UNLESS OTHERWISE NOTED. OR AS REQUIRED BY UTILITY COMPANIES.

5) ALL CONDUIT AND NIPPLE ENTRIES TO CABINET AND METER BOXES WILL BE MADE WITH WEATHERPROOF HUBS, CONNECTORS OR LOCKNUTS LISTED FOR THE APPLICATIONS. NON-METALLIC BUSHINGS.

6) ONLY ONE SERVICE ALLOWED PER LUG. ALL GROUNDING AND BONDING MUST COMPLY WITH NEC 250 REQUIRED.

7) UPON COMPLETION OF THE JOB, THE CONTRACTOR SHALL FURNISH AS-BUILT DRAWINGS TO THE OWNER.



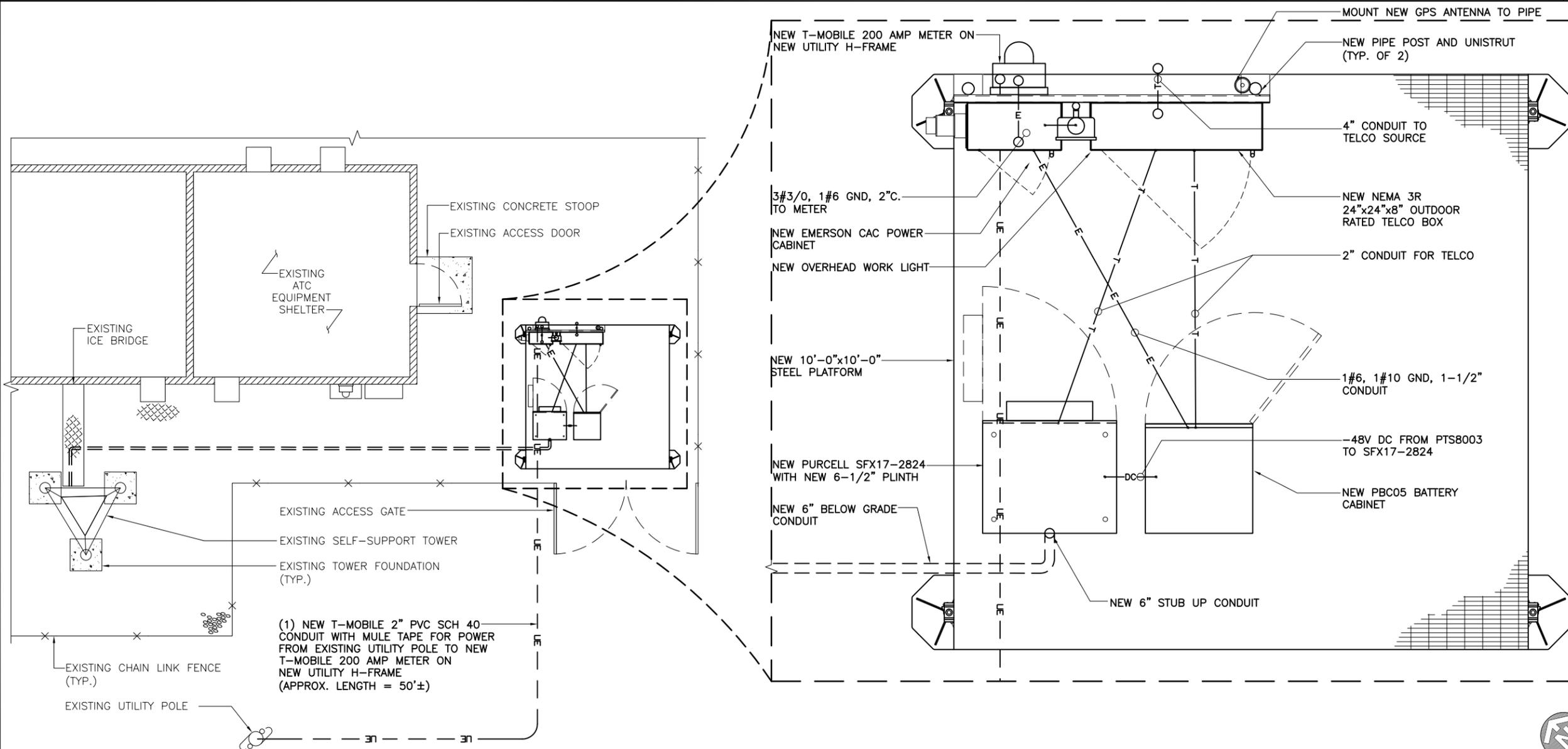
1755 CREEKSIDE OAKS DRIVE
STE. 109
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20 AMP OUTDOOR GFCI AND SWITCH COMBO

SCALE: N.T.S. 1



UTILITY PLAN

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



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ELECTRICAL PLAN
AND NOTES

SHEET NUMBER:

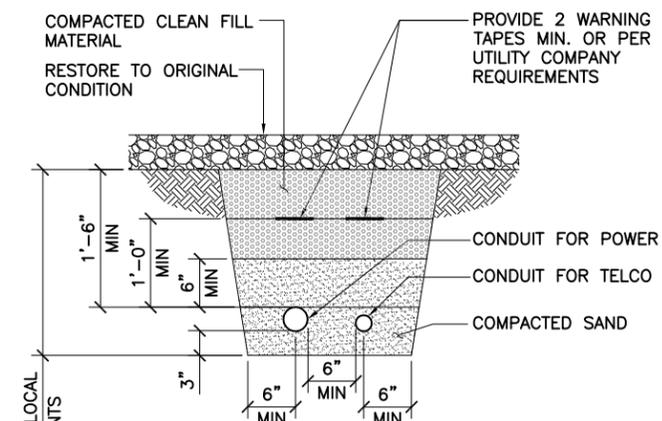
E-1

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NEW PANEL													
MAIN CB	VOLTAGE				PHASE				WIRE SIZE				
200A	120/240V				1 ϕ				3				
REMARKS	BREAKER				LOADS PER PHASE		LOADS PER PHASE		BREAKER				REMARKS
	WIRE SIZE	POLES	AMPS	CIRCUIT #	LOAD A	LOAD B	LOAD A	LOAD B	CIRCUIT #	AMPS	POLES	WIRE SIZE	
NEW SSC RF CABINET	2	2	60	1	5000		1000		2	60	2	2	BATTERY CABINET
-				3		5000		1000	4				-
LIGHT	3	1	20	5	100				6				-
-				7					8				-
-				9					10				-
-				11					12				-
LOAD LOAD/PHASE (VA)					5100	5000	1000	1000					
TOTAL LOAD x 130% (VA)									15730				
TOTAL AMPS @ 240 (A)									65.54				



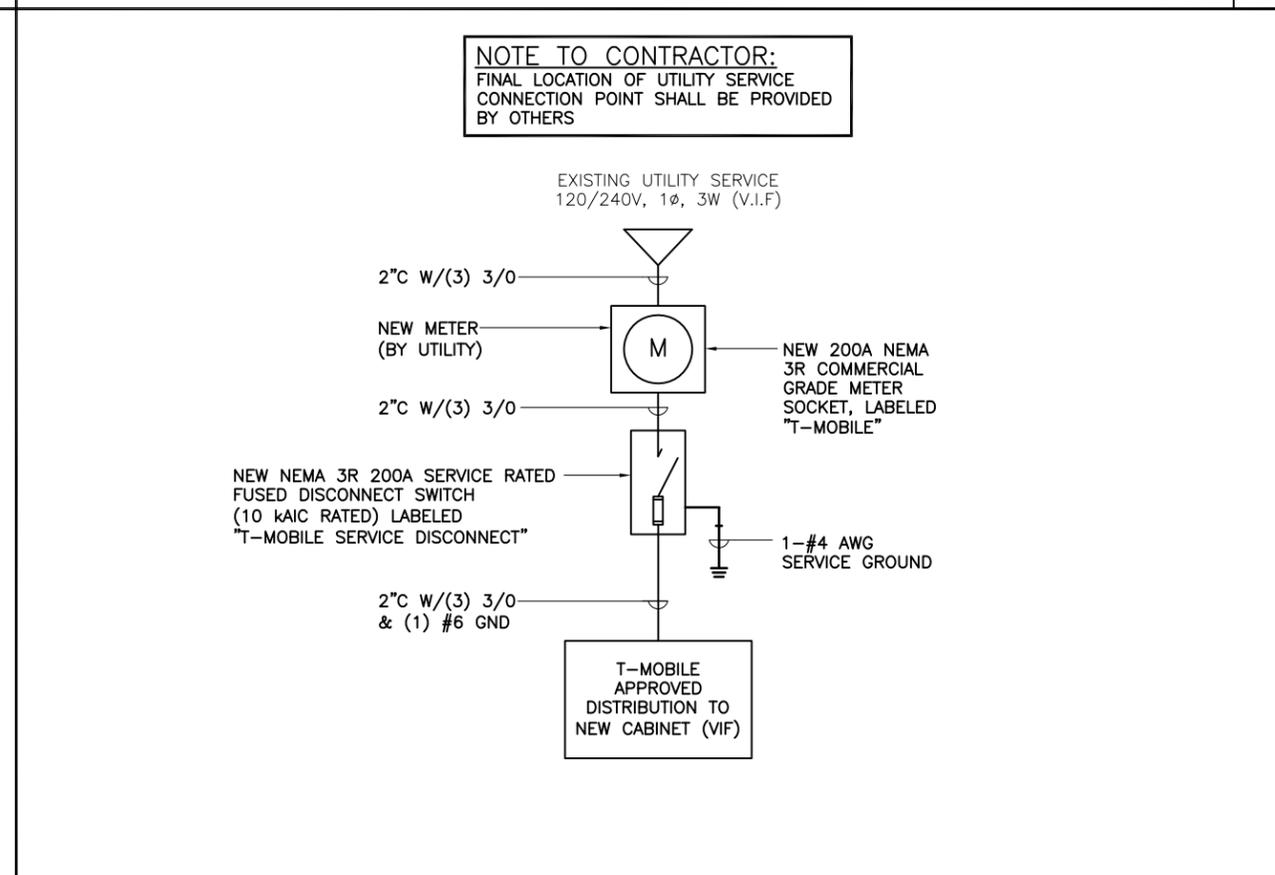
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2. SCHEDULE 80 PVC SHALL BE USED FOR CONDUIT IN ALL VEHICULAR TRAFFIC AREAS.
3. DIRECT-BURY UTILITIES MAY BE USED IN APPROVED AREAS OUTSIDE THE LIMITS OF THE TOWER COMPOUND.

PANEL SCHEDULE	SCALE: N.T.S.	1
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TYPICAL ELECTRIC AND TELCO TRENCH DETAIL	SCALE: N.T.S.	2
------------------------------------------	---------------	---

NOT UDED	SCALE: N.T.S.	3
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ELECTRICAL SINGLE LINE	SCALE: N.T.S.	4
------------------------	---------------	---



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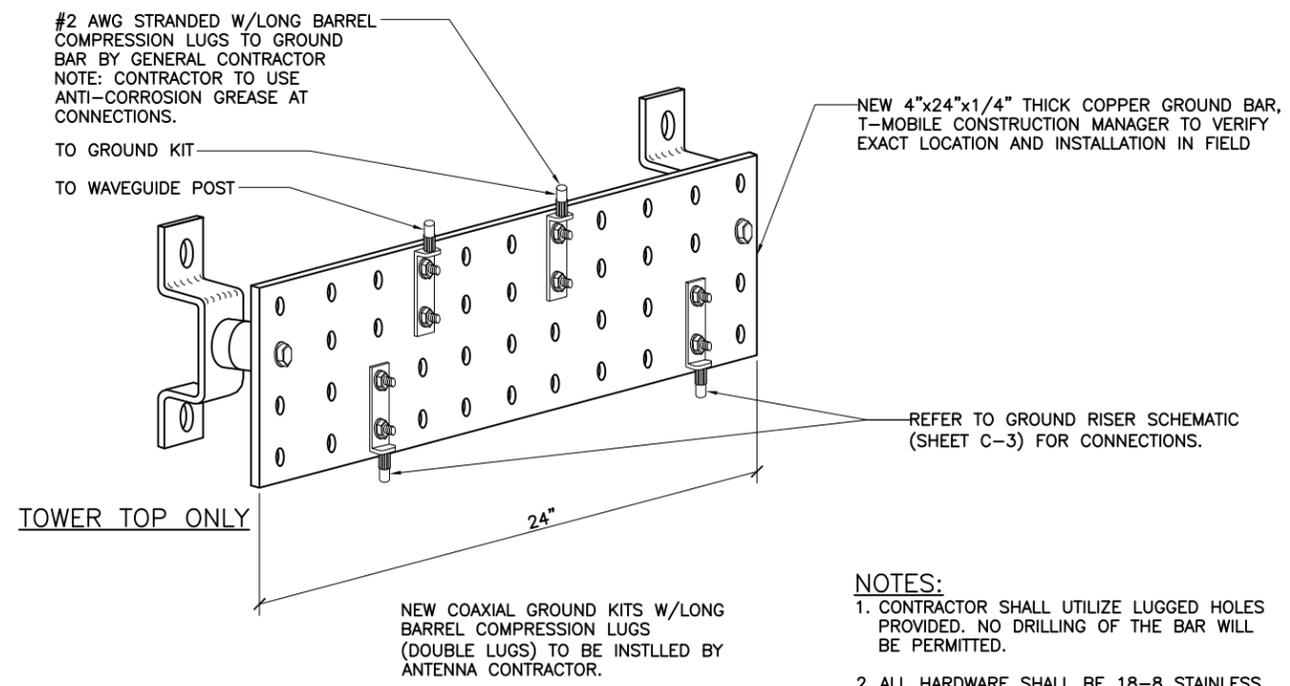
SITE NAME:
ATC CALL MOUNTAIN 8202

SITE ADDRESS:
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CALL MTN PAICINES, CA 95043**

SHEET NAME:
**ELECTRICAL
DETAILS**

SHEET NUMBER:
E-2

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- NOTES:**
1. CONTRACTOR SHALL UTILIZE LUGGED HOLES PROVIDED. NO DRILLING OF THE BAR WILL BE PERMITTED.
 2. ALL HARDWARE SHALL BE 18-8 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
 3. FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH KOPR-SHIELD.

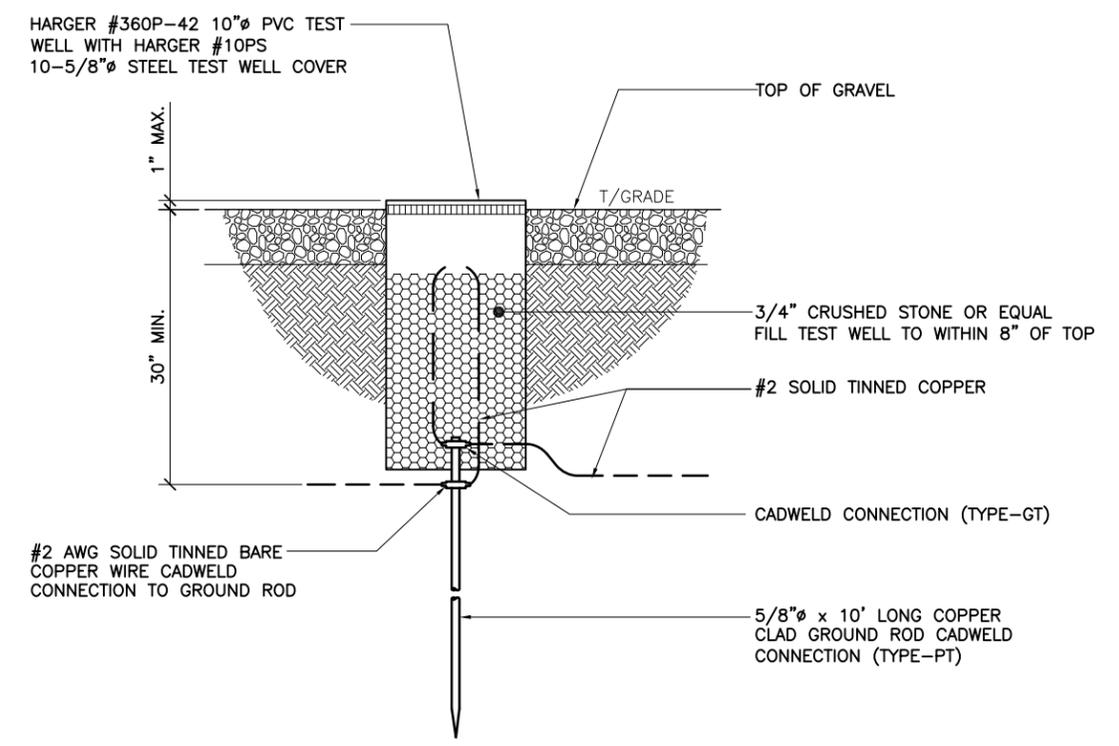
T-Mobile
 1755 CREEKSIDE OAKS DRIVE
 STE. 109
 SACRAMENTO, CA 95833

**L700
 CONSTRUCTION**

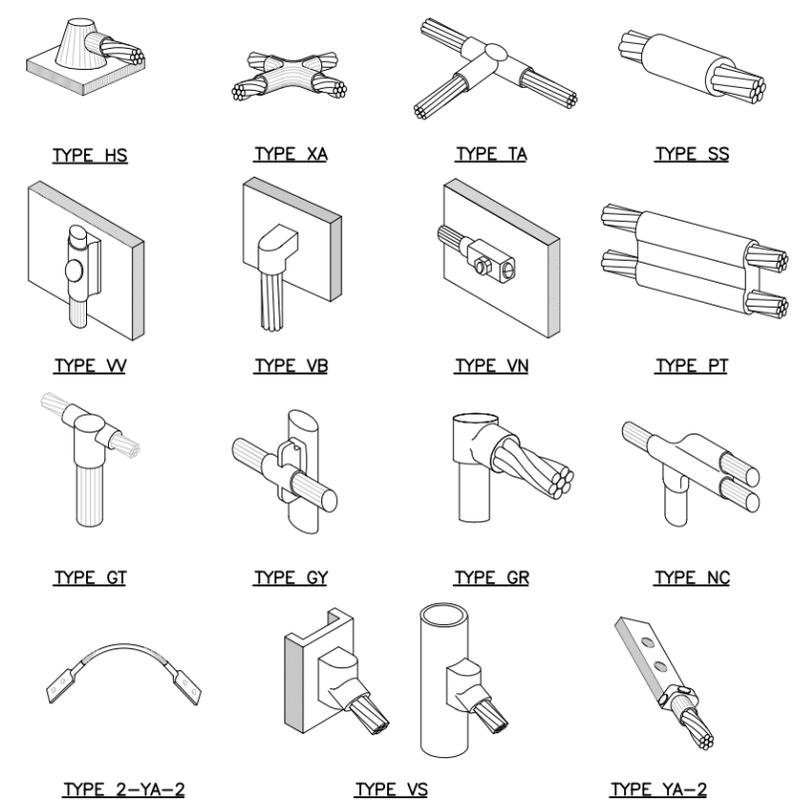
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APPROVED BY:	MB		
#	DATE	DESCRIPTION	INT.
0	10/29/15	90% REVIEW	AA
0	10/30/15	95% REVIEW	AA
0	11/18/15	100% REVIEW	AA
1	11/19/15	FINAL	AA

TYPICAL GROUNDING BAR DETAIL

SCALE: N.T.S. 1



NOTE:
 CALDWELD "TYPES" SHOWN ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC TYPES OF CALDWELDS TO BE USED FOR THIS PROJECT.



AMERICAN TOWER
 AMERICAN TOWER CORPORATION
 19100 VON KARMAN SUITE 200
 IRVINE, CA 92612

FULLERTON
 ENGINEERING-DESIGN
 9600 W. BRYN MAWR AVE., SUITE 200
 ROSEMONT, ILLINOIS 60018
 TEL: 847-292-0200
 FAX: 847-292-0206
 www.FullertonEngineering.com

SITE #:
SF95460A
 SITE NAME:
ATC CALL MOUNTAIN 8202
 SITE ADDRESS:
 2 MILES OF PANOCHE ROAD
 FROM HWY 25
 CALL MTN PAICINES, CA 95043

**GROUNDING
 DETAILS**

SHEET NUMBER:
E-3

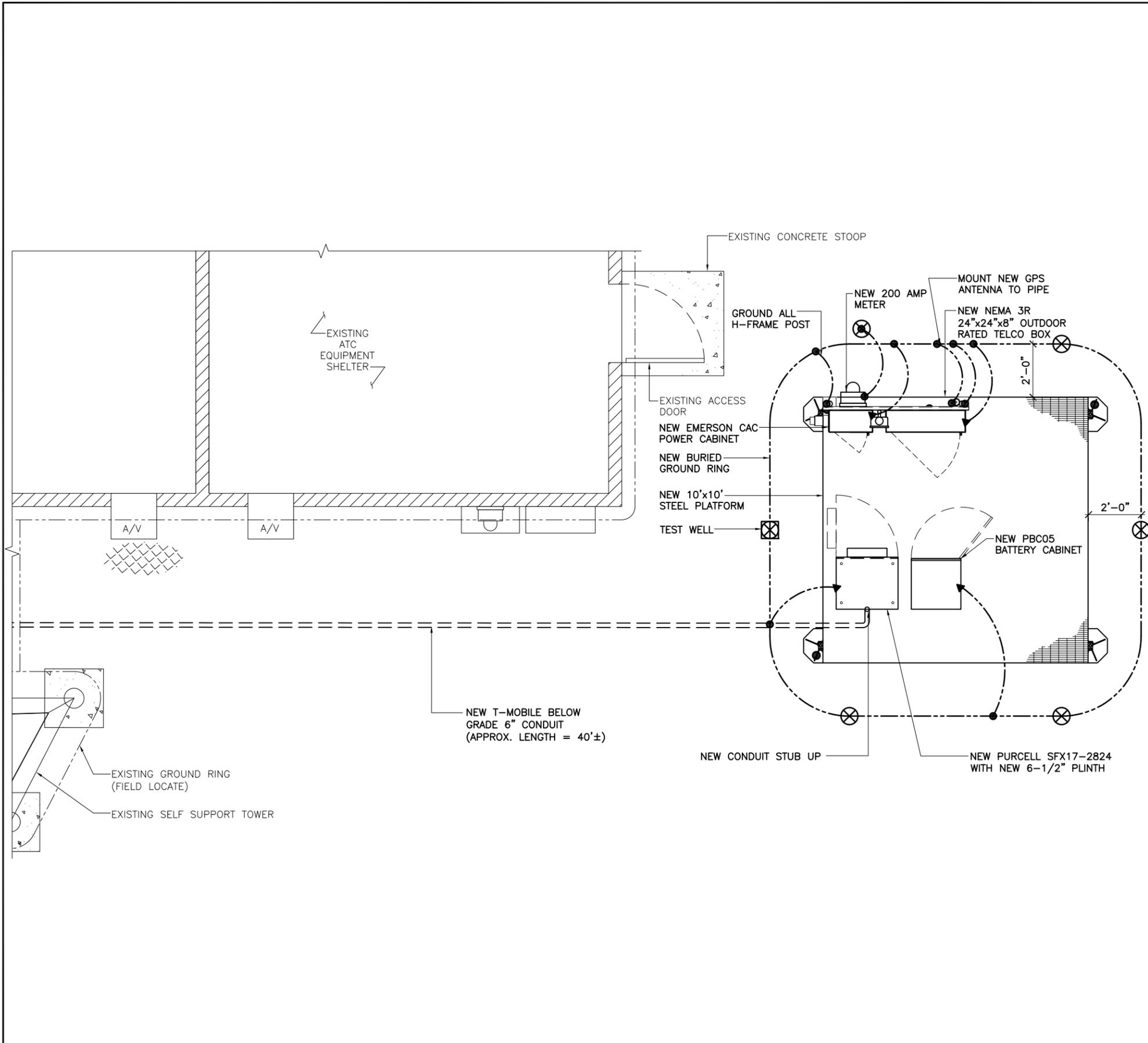
TEST WELL DETAIL

SCALE: N.T.S. 3

CADWELD CONNECTION TYPES

SCALE: N.T.S. 3

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IMPORTANT GROUNDING / CABLE NOTES:

1. INSTALL 2 GROUND BARS AT THE BOTTOM OF THE TOWER (EVEN WITH SHORT ICE BRIDGE RUNS). ONE GROUND BAR AT THE TOWER, AND ONE AT THE PLATFORM. IF SITE IS A ROOFTOP AND THE EQUIPMENT IS IN THE PENTHOUSE. T-MOBILE REQUIRES ONE GROUND BAR ON THE OUTSIDE OF THE PORT ENTRY AND ONE ON THE INSIDE NEAR THE CABINET. MONOPOLE JOBS WILL REQUIRE SECTORIZED GROUNDING, WHICH WILL REQUIRE 3 TOP BUSS BARS.
2. T-MOBILE IS ELIMINATING THE HOME RUN GROUND WIRE FROM THE TOP BUSS BAR TO THE BOTTOM BUSS BAR ON TOWER SITES. ROOFTOPS ARE STILL REQUIRED TO HAVE SECTORIZED GROUND AND #2 INSULATED GROUND WIRE. FROM SECTOR GROUNDS TO MAIN BUSS BARS AND BUILDING STEEL.
3. REMOVE INSULATORS (CHERRIES) FROM THE BUSS BARS AND GROUND TO TOWER, TOP AND BOTTOM ON TOWER SITES ONLY.
4. ALL EXPOSED GROUNDS TO BE DRESSED WITH SEAL TIGHT.
5. ALL ICE BRIDGE POST ARE TO BE GROUNDED WITH #2 SOLID AND DRESSED IN SEAL TIGHT.
6. (2) OF THE (4) PLATFORM POST NEED TO BE GROUNDED DIAGONALLY.
7. BOTTOM BUSS BAR TO HAVE TWO #2 GROUND LEADS DRESSED IN WITH SEAL TIGHT.
8. THE DISTANCE BETWEEN TRAPEZE HANGERS ON ICE BRIDGE IS 4'-0".
9. THE DISTANCE BETWEEN BUTTERFLIES AND CABLE STAND OFFS IS 4'-0".
10. THE DISTANCE BETWEEN CONVENTIONAL AND/OR SNAP-HANGERS ON 1/2" JUMPERS SHALL BE NO MORE THAN 3 FEET AT THE TOP AND 2 FEET ON THE BOTTOM JUMPERS PER MANUFACTURER'S RECOMMENDATIONS.
11. NO HYBRID CABLES SHALL TOUCH METAL OR STEEL. THE USE OF STANDOFF BRACKETS ARE REQUIRED.
12. T-MOBILE WOULD LIKE TO SHORTEN THE TOP JUMPER TO 4'-0" SUREFLEZ, INSTEAD OF 6'-0". JUMPERS SHOULD NOT BE CURLED UP OR COILED TO ELIMINATE SLACK.
13. GRAVEL UNDER ALL PLATFORMS IS REQUIRED.
14. HYBRIDS AND JUMPER LINES SHOULD BE DRESSED IN ON THE SIDE OR BOTTOM OF T-BOOMS. NEVER ON TOP WERE SOMEONE WOULD WALK.

GROUNDING LEGEND

- INSPECTION WELL VERIFY LOCATION W/CONSTRUCTION MANAGER
- 5/8"x10'-0" COPPER CLAD GROUND ROD, 10' O.C. (TYP.)
- #2 AWG SOLID COPPER TINNED
- GROUND BUS BAR
- EXOTHERMIC CONNECTION
- MECHANICAL CONNECTION

T-Mobile

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SITE NAME:
ATC CALL MOUNTAIN 8202

SITE ADDRESS:
2 MILES OF PANOCHE ROAD
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CALL MTN PAICINES, CA 95043

SHEET NAME:
GROUNDING PLAN AND NOTES

SHEET NUMBER:
E-4

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