



**GENERAL NOTES**

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
 CONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)  
 OWNER – ATC  
 OEM – ORIGINAL EQUIPMENT MANUFACTURE
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR 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. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.  
  
 ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- DRAWINGS PROVIDED HERE ARE NOT TO SCALE AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE OWNER.
- CONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF 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.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
- CONTRACTOR SHALL COMPLY WITH SPECIFICATIONS "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF ATC GSM SITES". ANY DEVIATION TO FINAL APPROVED DRAWINGS MUST BE REVIEWED AND APPROVED THROUGHOUT A CHANGE ORDER PROCESS BY THE CONSTRUCTION CONTRACTOR AND OWNER (ATC)

**WOVEN WIRE FENCING NOTES:**

- (INSTALL FENCING PER ASTM F-567, SWING GATES PER ASTM F- 900)
- GATE POST, CORNER, TERMINAL OR PULL POST SHALL BE 2 7/8"Ø SCHEDULE 40 FOR GATE WIDTHS UP THROUGH 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
  - LINE POST: 2-3/8"Ø SCHEDULE 40 PIPE PER ASTM-F1083.
  - GATE FRAME: 1 1/2"Ø SCHEDULE 40 PIPE PER ASTM-F1083.
  - TOP RAIL & BRACE RAIL: 1 1/4"Ø SCHEDULE 40 PIPE PER ASTM-F1083.
  - FABRIC: 11 GA. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392 CLASS 1.
  - TIE WIRE: MINIMUM 11 GA GALVANIZED STEEL INSTALL A SINGLE WRAP TIE WIRE AT POSTS AND RAILS AT MAX. 24" INTERVALS. INSTALL HOG RINGS ON TENSION WIRE AT 24" INTERVALS.
  - TENSION WIRE: 7 GA. GALVANIZED STEEL.
  - BARBED WIRE: 3 STRANDS OF DOUBLE STRAND 12-1/2 GAUGE TWISTED WIRE, 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.
  - GATE LATCH: 1-3/8" O.D. PLUNGER ROD W/ MUSHROOM TYPE CATCH AND LOCK (KEYED ALIKE FOR ALL SITES OR COMBINATION AS SPECIFIED BY ATC).
  - LOCAL ORDINANCE FOR BARBED WIRE PERMIT SHALL GOVERN INSTALLATION.
  - HEIGHT = 6' VERTICAL.
  - ALL WORK SHALL CONFORM WITH THE PROJECT SPECIFICATIONS.

**SITE WORK GENERAL NOTES:**

- THE CONTRACTOR 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 CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.
- ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL 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.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 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 AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

**STRUCTURAL STEEL NOTES:**

- ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS OTHERWISE NOTED.
- ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.
- BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"Ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.

**FOUNDATION NOTES:**

- THE SITE SHALL BE STRIPPED OF ALL VEGETATION PRIOR TO FILL OR CONSTRUCTION OF THE FOUNDATION PAD.
- ALL FILL SAND SHALL BE 0-15 P.I. WITH A COMPACTION TEST RUN ON EACH 6" LIFT - COMPACTED TO 90% MODIFIED PROCTOR.
- ANY SOFT AREAS (TREE STUMP HOLES, ETC.) SHALL BE CUT OUT AND RECOMPACTED TO SAID PROCTOR.
- THE CONTRACTOR SHALL KEEP THE SITE SO IT WILL HAVE POSITIVE DRAINAGE AT ALL TIMES.
- ALL EXCAVATIONS SHALL BE FREE OF WATER BEFORE POURING CONCRETE.
- MINIMUM SOIL BEARING CAPACITY OF 2,500 PSF IN ALL FOUNDATION AND SLAB AREAS.
- SEE SHELTER MANUFACTURER DWG. FOR CONNECTION DETAILS AND SHIM REQUIREMENTS.

**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, UNO.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:  
 CONCRETE CAST AGAINST EARTH.....3 IN.  
 CONCRETE EXPOSED TO EARTH OR WEATHER:  
 #6 AND LARGER .....2 IN.  
 #5 AND SMALLER & WWF.....1 1/2 IN.  
 CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:  
 SLAB AND WALL .....3/4 IN.  
 BEAMS AND COLUMNS.....1 1/2 IN.
- A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.  
  
 CONCRETE CYLINDER TEST IS NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (UBC 1905.6.1.3) FOR GREATER THAN 50 CUBIC YARDS THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER:  
 (A) RESULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIER'S PLANT.  
 (B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.



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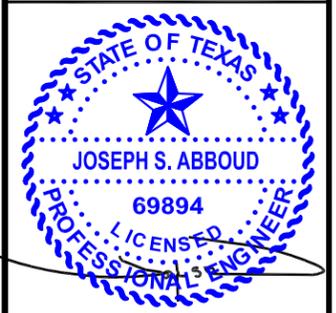
REV/DATE	DESCRIPTION
02/03/14	ISSUE FOR CONSTRUCTION



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02/03/2014

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SITE NUMBER:	281370
SITE NAME:	WINGS & MORE - GRUBBS
SITE ADDRESS:	721 N. HARVEY MITCHELL PKWY. BRYAN, TEXAS 77807
SHEET NUMBER:	GN.1
SHEET TITLE:	GENERAL NOTES
DRAWN BY:	V.M.
CHECK BY:	JSA
IED PROJECT NUMBER:	

**ELECTRICAL INSTALLATION NOTES:**

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES. 2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
- CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA.
- 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).
- PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 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 RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- 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.
- POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 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.
- 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/IEEE, AND NEC.
- ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- 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.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
- 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)
- EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS OR NEMA 3R (OR BETTER) OUTDOORS
- METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) 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.
- THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE CONTRACTOR 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.

**GROUNDING NOTES:**

- ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING 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 CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. THE SUB-CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
- THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
- 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.
- METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
- 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.
- CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
- ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING, SHALL BE #2 AWG SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR & EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
- COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
- ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
- APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- BOND ALL METALLIC OBJECTS WITHIN 6 FT OF MAIN GROUND WIRES WITH 1-#2 AWG TIN-PLATED COPPER GROUND CONDUCTOR.
- 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 PVC PLASTIC CONDUIT SHALL 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.

**ABBREVIATIONS**

(E)	EXISTING
(NEW)	NEW
PROP.	PROPOSED
DEMO	DEMOLISHED
T.B.D.	TO BE DETERMINE
T.B.R.	TO BE RESOLVED
N.T.S.	NOT TO SCALE
EL	ELEVATION
AGL	ABOVE GRADE LEVEL
DWG	DRAWING
BTS	BASE TRANSCEIVER STATION
RBS	RADIO BASE STATION
SIAD	SMART INTEGRATED ACCESS DEVICE
GEN	GENERATOR
PCS	PERSONAL COMMUNICATION SYSTEM
PTS	POWER TRANSFER SWITCH
X-FMR	ELECTRICAL TRANSFORMER BOX
RF	RADIO FREQUENCY
MIN	MINIMUM
REF	REFERENCE
TYP	TYPICAL
REQ	REQUIRED
CND	CONDUIT
GRD	GROUND
EG	EQUIPMENT GROUND
EGR	EQUIPMENT GROUND RING
AWG	AMERICAN WRE GAUGE
MGB	MASTER GROUND BUS
BCW	BARE COPPER WIRE
BTC	BARE TINNED COPPER
IGR	INTERIOR GROUND (HALO)
IMC	INTERMEDIATE METALLIC CONDUIT
PVC	RIGID (SCH. 40) POLYVINYL CHLORIDE CONDUIT
RGS	RIGID GALVANIZED STEEL
RWY	RACEWAY

**ELECTRICAL SYMBOLS**

	SOLID GROUND BUS BAR
	SOLID NEUTRAL BUS BAR
	SUPPLEMENTAL GROUND CONDUCTOR
	2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
	SINGLE-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
	DISCONNECT SWITCH
	METER



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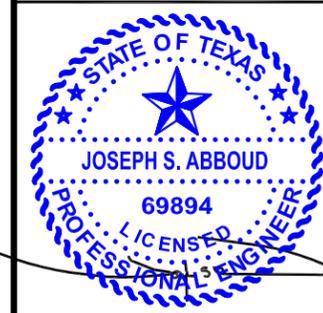
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SITE NUMBER: 281370

SITE NAME: WINGS & MORE - GRUBBS

SITE ADDRESS: 721 N. HARVEY MITCHELL PKWY. BRYAN, TEXAS 77807

SHEET NUMBER: GN.2

SHEET TITLE: GENERAL NOTES

DRAWN BY: V.M. CHECK BY: JSA

IED PROJECT NUMBER:



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TX FIRM REGISTRATION NO. F-11281

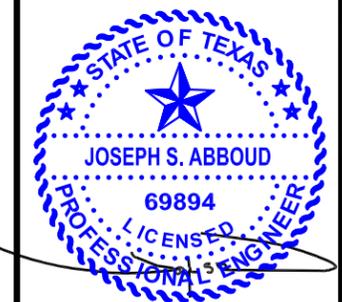
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SITE NUMBER: 281370

SITE NAME: WINGS & MORE - GRUBBS

SITE ADDRESS: 721 N. HARVEY MITCHELL PKWY. BRYAN, TEXAS 77807

SHEET NUMBER: GN.3

SHEET TITLE: GENERAL NOTES

DRAWN BY: V.M. CHECK BY: JSA

IED PROJECT NUMBER:

**INFORMATION**

AT&T operates telecommunications antennas of this location. Remain at least 3 feet away from any antenna and obey all posted signs.  
Contact the owner(s) of the antenna(s) before working closer than 3 feet from the antenna(s).

Contact AT&T at 800-636-2822 Option \_\_\_\_\_ prior to performing any maintenance or repairs near AT&T antennas.

This Site# **HX3868**  
Contact the management office if this door/hatch/gate is found unlocked.

**INFORMACION**

En esta propiedad se ubican antenas de telecomunicaciones operadas por AT&T. Favor mantener una distancia de no menos de 3 pies y obedecer todos los avisos

Comuniquese con el propietario o los propietarios de las antes de trabajar o caminar de menos de 3 pies de la antena

Comuniquese con AT&T 800-636-2822 Option \_\_\_\_\_ antes de realizar cualquier mantenimiento o reparaciones cerca de las antenas de AT&T.

Esta es la estacion base numero \_\_\_\_\_

Favor comuniquese con la oficina de la administracion del edificio si esta puerta o compuerta se encuentra sin candado.

AT&T SIGN #1

**CAUTION**

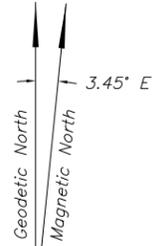
**Beyond This Point** you are entering a controlled area where RF emissions may exceed the FCC Occupational Exposure Limits

Obey all posted signs and site guidelines for working in RF environment

Ref: FCC 47CFR 1.1307(b)

AT&T SIGN #5

**SIGN NOTES:**  
1. SIGNS ARE PROVIDED AND INSTALLED BY SUBCONTRACTOR  
2. ATTACH SIGNS AS PER AT&T PROJECT MANAGER.



MAGNETIC DECLINATION  
Magnetic Declination Information Provided  
By The National Geophysical Data Center

CALLED 4.00 ACRES  
TO CUBESMART, L.P.  
BY SPECIAL WARRANTY DEED  
C.F. NO. 2013-1163756  
O.P.R.B.C.T.  
APPRAISAL DISTRICT NO. 94704

**PROPOSED SITE**  
SEE ENLARGED SITE PLAN, SHT. A.2

**ZENO PHILLIPS LEAGUE, A-45**  
BRAZOS COUNTY, TEXAS

**ZENO PHILLIPS LEAGUE, A-45**  
BRAZOS COUNTY, TEXAS

LINE	BEARING	LENGTH
L1	S52°31'57"W	20.00
L2	N52°31'57"E	20.00
L3	S52°31'57"W	20.00
L4	N52°31'57"E	20.00
L5	S37°20'49"W	20.00
L6	N37°20'49"W	20.00
L7	N37°20'49"W	2.96
L8	S37°20'49"E	49.76
L9	S52°25'50"W	20.00
L10	N37°20'49"W	56.34
L11	N70°40'18"E	21.02
L12	S37°20'49"E	2.96

**OVERALL SITE PLAN**  
SCALE: 1" = 80'-0"

**SITE BENCHMARK**

SET 80D NAIL EL. 333.76 (GEOID 99)

ELEVATIONS AS MEASURED WITH TRIMBLE VRS USING BRYAN  
AREA NETWORK

**FLOOD INFORMATION:**

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP FOR BRAZOS COUNTY, TEXAS, MAP NUMBER 48041C0195E, EFFECTIVE DATE OF MAY 16, 2012, AND THE MAP INDICATES THIS TRACT TO BE IN "OTHER AREAS, ZONE "X", DETERMINED TO BE OUTSIDE 500 YEAR FLOOD PLAIN"; NO PORTION OF THIS PLAT LIES WITHIN A DESIGNATED SPECIAL FLOOD HAZARD AREA, INUNDATED BY 100 YEAR FLOOD OR OTHER FLOOD AREAS. WARNING: IF THIS SITE IS NOT WITHIN AN IDENTIFIED SPECIAL FLOOD HAZARD AREA, THIS STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR THE STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. THIS DETERMINATION HAS BEEN MADE BY SCALING THE PROPERTY ON THE REFERENCED MAP AND IS NOT THE RESULT OF AN ELEVATION SURVEY. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE ENGINEER.



Quail Valley Business Park  
1306 FM 1092, Suite 303  
Missouri City, Texas 77459-1564  
Tel : (713) 562-6100

TX FIRM REGISTRATION NO. F-11281

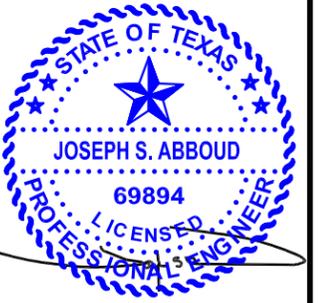
REV/DATE	DESCRIPTION
02/03/14	ISSUE FOR CONSTRUCTION



AMERICAN TOWER CORPORATION  
8505 FREEPORT PARKWAY SUITE 135  
IRVING, TX 75063  
TEL : (972) 929-8172



6500 WEST LOOP SOUTH  
4TH FLOOR  
BELLAIRE, TEXAS 77401  
(713) 265 - 4640



02/03/2014

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SITE NUMBER: 281370

SITE NAME: WINGS & MORE - GRUBBS

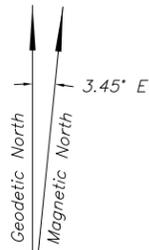
SITE ADDRESS: 721 N. HARVEY MITCHELL PKWY.  
BRYAN, TEXAS 77807

SHEET NUMBER: A.1

SHEET TITLE: OVERALL SITE PLAN

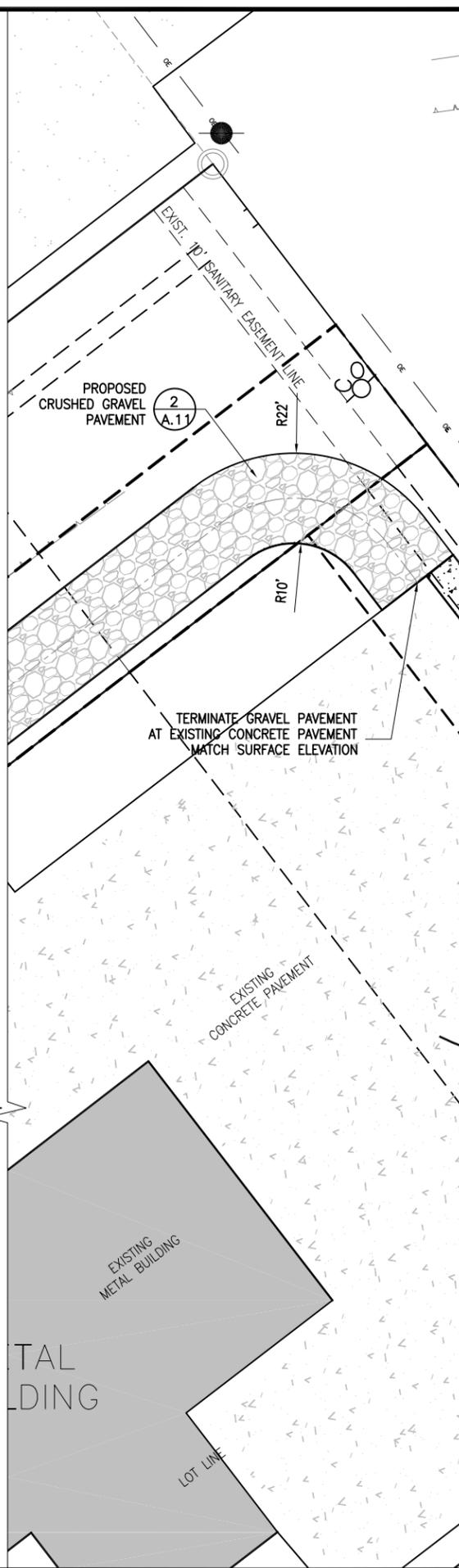
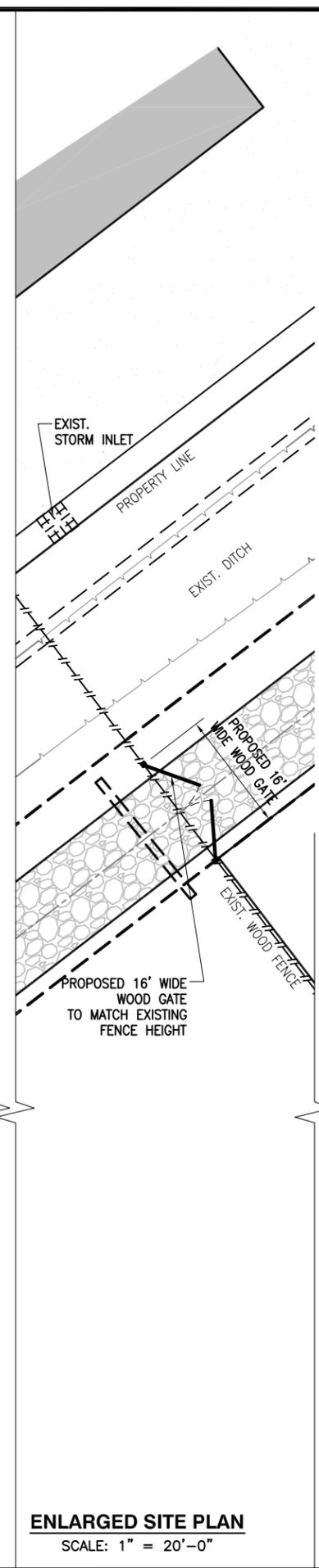
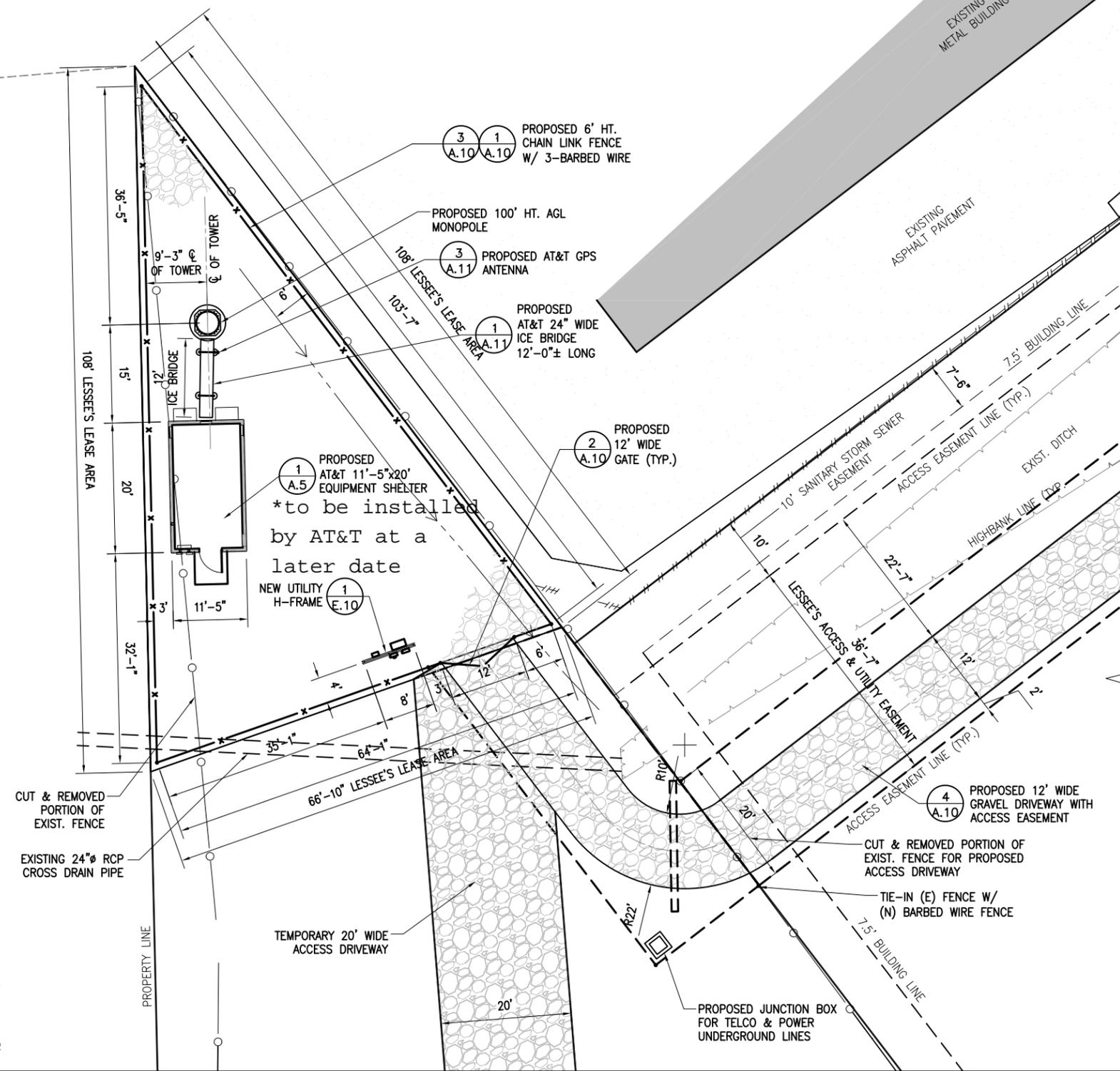
DRAWN BY: V.M. CHECK BY: JSA

IED PROJECT NUMBER:

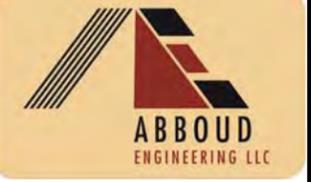


PLANS WILL COMPLY WITH NEC 2011  
ARTICLE 100 FOR EQUIPMENT TO  
BE APPROVED, IDENTIFIED,  
LABEL AND LISTED.

MAGNETIC DECLINATION  
Magnetic Declination Information Provided  
By The National Geophysical Data Center



**ENLARGED SITE PLAN**  
SCALE: 1" = 20'-0"



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Missouri City, Texas 77459-1564  
Tel : (713) 562-6100

TX FIRM REGISTRATION NO. F-11281

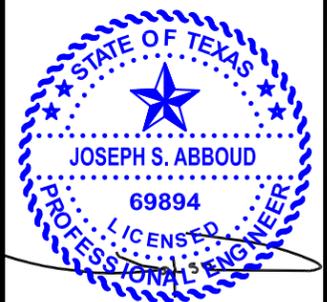
REV/DATE	DESCRIPTION
02/03/14	ISSUE FOR CONSTRUCTION



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8505 FREEPORT PARKWAY SUITE 135  
IRVING, TX 75063  
TEL : (972) 929-8172



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4TH FLOOR  
BELLAIRE, TEXAS 77401  
(713) 265 - 4640



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SITE NUMBER: 281370

SITE NAME: WINGS & MORE - GRUBBS

SITE ADDRESS: 721 N. HARVEY MITCHELL PKWY.  
BRYAN, TEXAS 77807

SHEET NUMBER: A.2

SHEET TITLE: ENLARGED SITE PLAN

DRAWN BY: V.M. CHECK BY: JSA

IED PROJECT NUMBER:

**SITE BENCHMARK**  
 SET 80D NAIL EL. 333.76 (GEOID 99)  
 ELEVATIONS AS MEASURED WITH TRIMBLE VRS  
 USING BRYAN AREA NETWORK

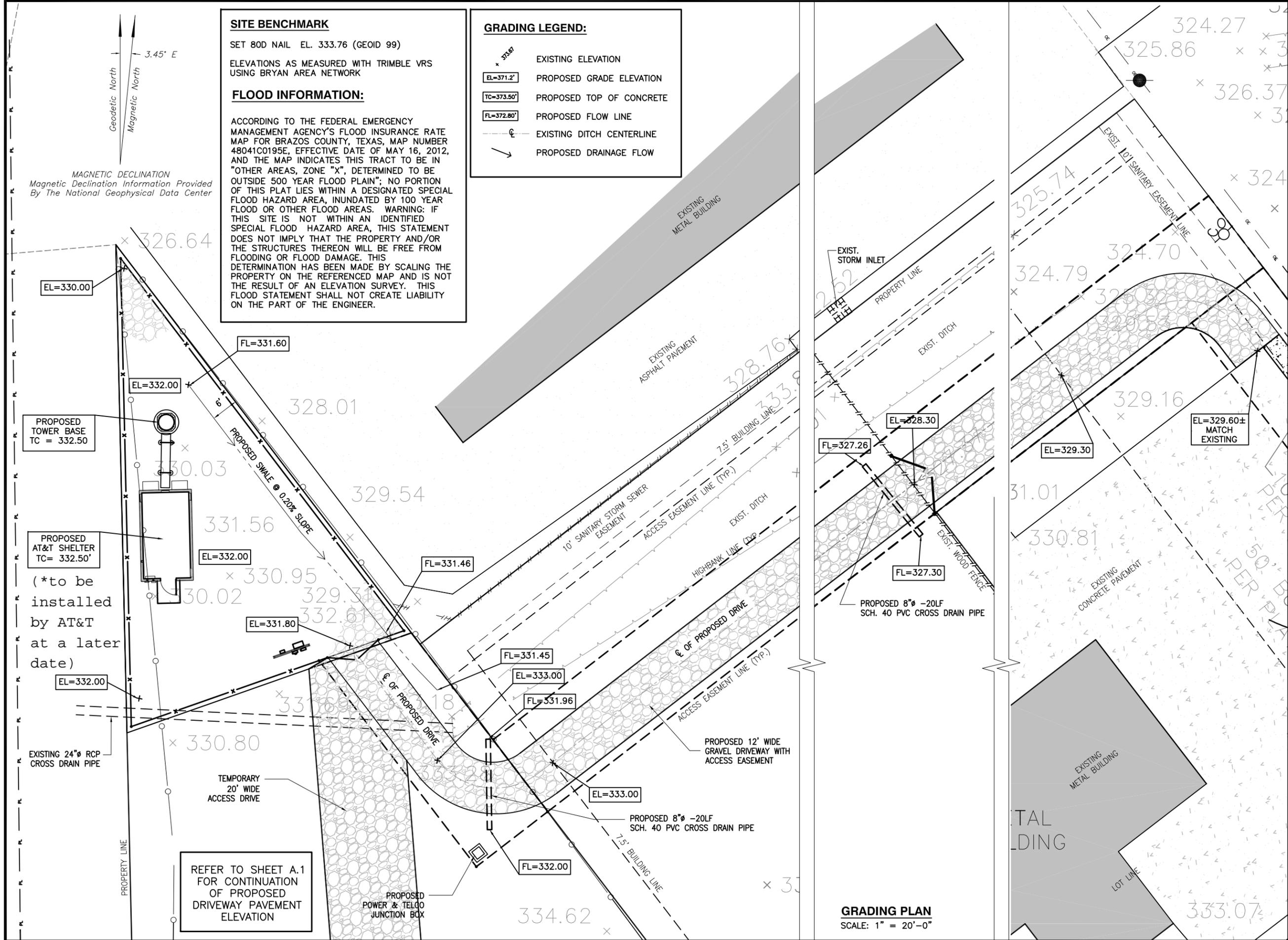
**FLOOD INFORMATION:**  
 ACCORDING TO THE FEDERAL EMERGENCY  
 MANAGEMENT AGENCY'S FLOOD INSURANCE RATE  
 MAP FOR BRAZOS COUNTY, TEXAS, MAP NUMBER  
 48041C0195E, EFFECTIVE DATE OF MAY 16, 2012,  
 AND THE MAP INDICATES THIS TRACT TO BE IN  
 "OTHER AREAS, ZONE "X", DETERMINED TO BE  
 OUTSIDE 500 YEAR FLOOD PLAIN"; NO PORTION  
 OF THIS PLAT LIES WITHIN A DESIGNATED SPECIAL  
 FLOOD HAZARD AREA, INUNDATED BY 100 YEAR  
 FLOOD OR OTHER FLOOD AREAS. WARNING: IF  
 THIS SITE IS NOT WITHIN AN IDENTIFIED  
 SPECIAL FLOOD HAZARD AREA, THIS STATEMENT  
 DOES NOT IMPLY THAT THE PROPERTY AND/OR  
 THE STRUCTURES THEREON WILL BE FREE FROM  
 FLOODING OR FLOOD DAMAGE. THIS  
 DETERMINATION HAS BEEN MADE BY SCALING THE  
 PROPERTY ON THE REFERENCED MAP AND IS NOT  
 THE RESULT OF AN ELEVATION SURVEY. THIS  
 FLOOD STATEMENT SHALL NOT CREATE LIABILITY  
 ON THE PART OF THE ENGINEER.

**GRADING LEGEND:**

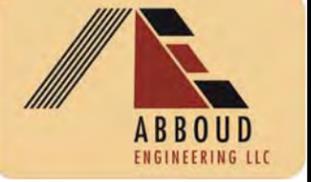
- EXISTING ELEVATION
- PROPOSED GRADE ELEVATION
- PROPOSED TOP OF CONCRETE
- PROPOSED FLOW LINE
- EXISTING DITCH CENTERLINE
- PROPOSED DRAINAGE FLOW

MAGNETIC DECLINATION  
 Magnetic Declination Information Provided  
 By The National Geophysical Data Center

Geodetic North  
 Magnetic North  
 3.45° E



**GRADING PLAN**  
 SCALE: 1" = 20'-0"



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 Missouri City, Texas 77459-1564  
 Tel : (713) 562-6100

TX FIRM REGISTRATION NO. F-11281

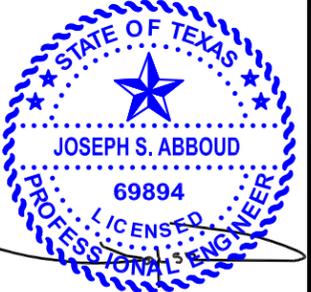
REV/DATE	DESCRIPTION
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SITE NAME: WINGS & MORE - GRUBBS

SITE ADDRESS: 721 N. HARVEY MITCHELL PKWY.  
 BRYAN, TEXAS 77807

SHEET NUMBER: A.3

SHEET TITLE: GRADING PLAN

DRAWN BY: V.M. CHECK BY: JSA

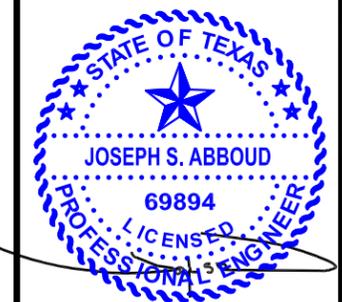
PROJECT NUMBER:



Quail Valley Business Park  
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TX FIRM REGISTRATION NO. F-11281

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SITE NAME: WINGS & MORE - GRUBBS

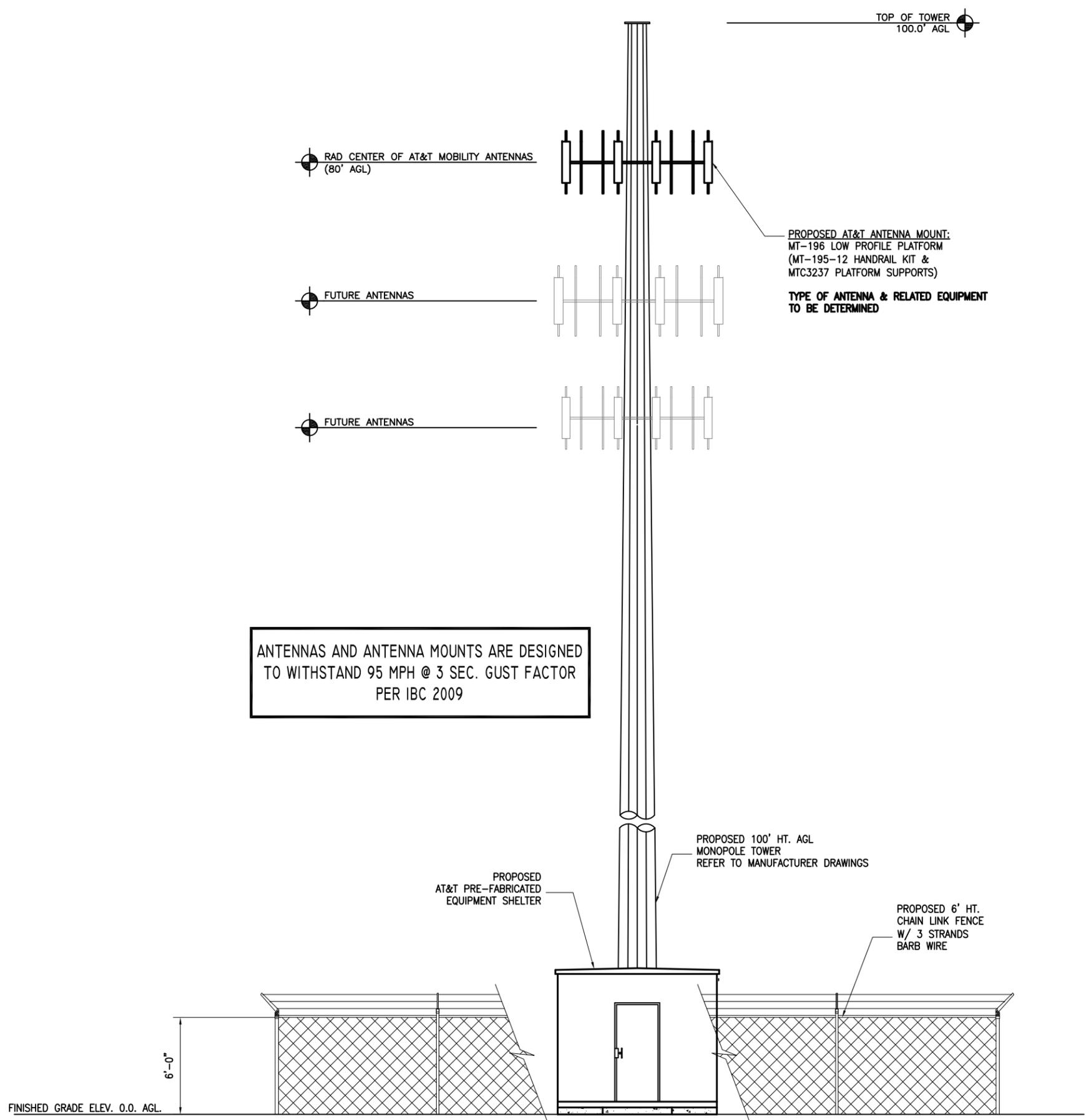
SITE ADDRESS: 721 N. HARVEY MITCHELL PKWY. BRYAN, TEXAS 77807

SHEET NUMBER: A.4

SHEET TITLE: TOWER ELEVATION

DRAWN BY: V.M. CHECK BY: JSA

IED PROJECT NUMBER:



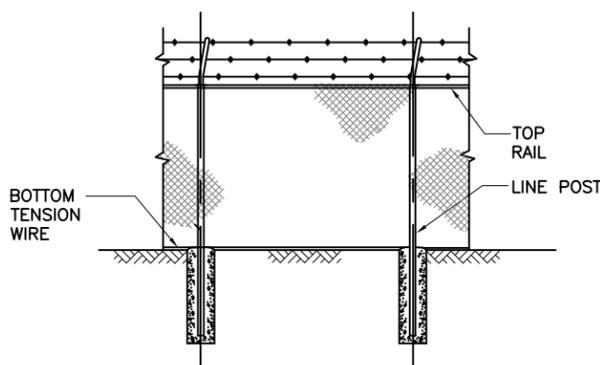
**TOWER ELEVATION**  
SCALE: N.T.S.

**NOTES:**

(INSTALL FENCING PER ASTM F-567, SWING GATES PER ASTM F-900)

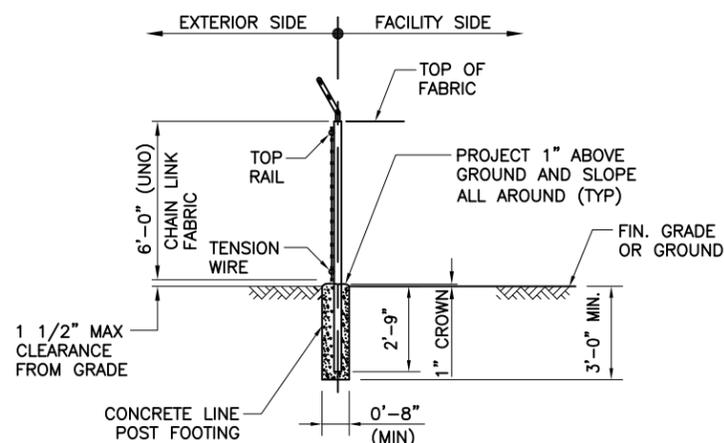
- GATE POST, CORNER, TERMINAL OR PULL POST SHALL BE 2 7/8" SCHEDULE 40 FOR GATE WIDTHS UP THROUGH 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
- LINE POST: 2-3/8" SCHEDULE 40 PIPE PER ASTM-F1083.
- GATE FRAME: 1 1/2" SCHEDULE 40 PIPE PER ASTM-F1083.
- TOP RAIL & BRACE RAIL: 1 1/4" SCHEDULE 40 PIPE PER ASTM-F1083.
- FABRIC: 9 GA. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392 CLASS 1.
- THE WIRE: MINIMUM 11 GA GALVANIZED STEEL INSTALL A SINGLE WRAP TIE WIRE AT POSTS AND RAILS AT MAX. 24" INTERVALS. INSTALL HOG RINGS ON TENSION WIRE AT 24" INTERVALS.
- TENSION WIRE: 7 GA. GALVANIZED STEEL.
- BARBED WIRE: 3 STRANDS OF DOUBLE STRANDED 12-1/2 GAUGE TWISTED WIRE, 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.
- GATE LATCH: 1-3/8" O.D. PLUNGER ROD W/MUSHROOM TYPE CATCH AND LOCK (KEYED ALIKE FOR ALL SITES OR COMBINATION AS SPECIFIED BY VERIZON).
- LOCAL ORDINANCE FOR BARBED WIRE PERMIT SHALL GOVERN INSTALLATION.
- HEIGHT = 6' VERTICAL + 1' BARBED WIRE VERTICAL DIMENSION.
- ALL WORK SHALL CONFORM WITH THE PROJECT SPECIFICATIONS.

**WOVEN WIRE FENCING NOTES**



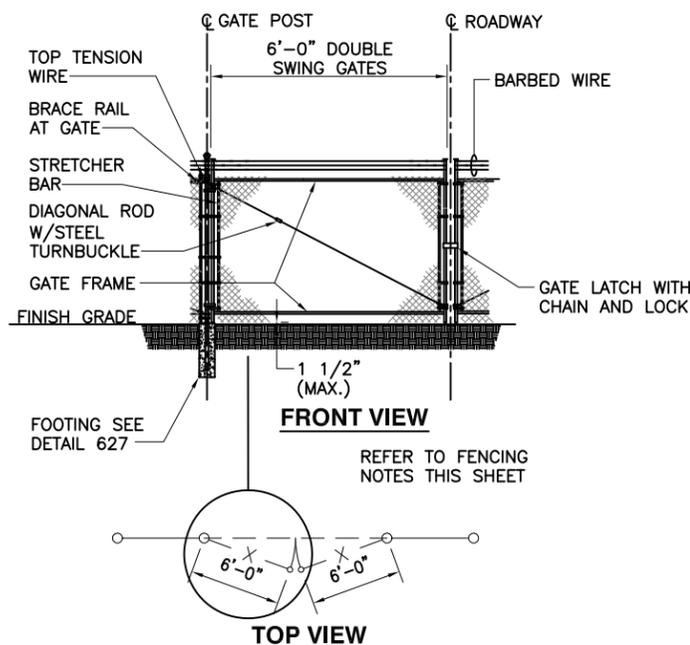
**TYPICAL ELEVATION**

FENCE POST AND FOOTING DIMENSIONS TABLE		
6'-8' HIGH FENCE	STD. PIPE	FOOTING
LINE POST	2-3/8"	8"x36"
CORNER POST	2-7/8"	12"x36"
GATE POST	2-7/8"	12"x36"



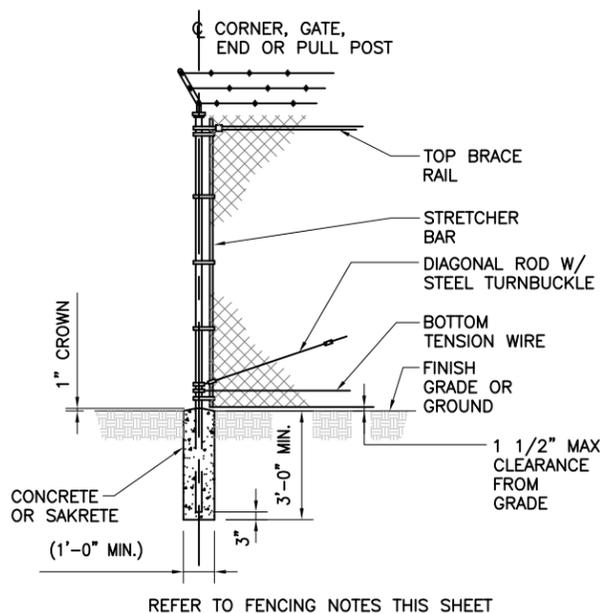
**TYPICAL SECTION  
WOVEN WIRE FENCE**

**DETAIL 1**  
NTS A.10



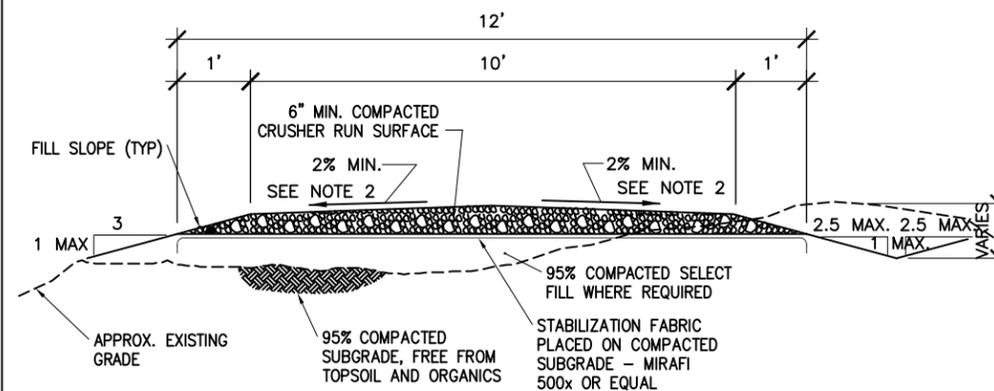
**WOVEN WIRE SWING GATE, DOUBLE**

**DETAIL 2**  
NTS A.10



**WOVEN WIRE CORNER, GATE,  
END OR PULL POST**

**DETAIL 3**  
NTS A.10

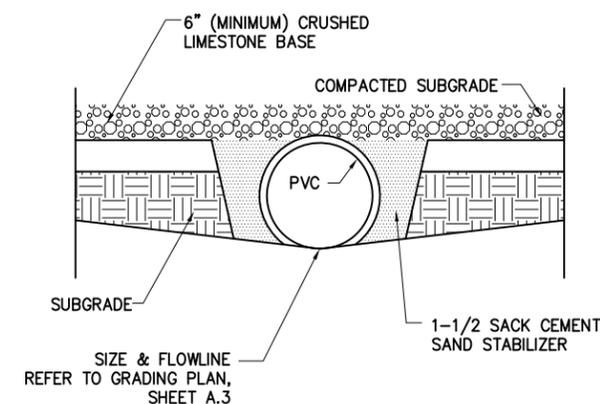


**GRAVEL DRIVEWAY SECTION**

**DETAIL 4**  
NTS A.7

**NOTE:**

- CONTRACTOR SHALL VERIFY DITCH LOCATIONS (IF REQUIRED) WITH SITE GRADING PLANS.
- ROAD CROSS SECTION VARIES. CONTRACTOR SHALL REVIEW GRADING PLAN FOR CROSS SLOPE AREAS. MAINTAIN A MINIMUM 2% CROSS SLOPE.



**CROSS DRAIN CULVERT**

**DETAIL 5**  
NTS A.10



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TX FIRM REGISTRATION NO. F-11281

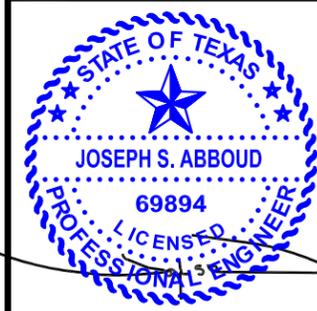
REV/DATE	DESCRIPTION
02/03/14	ISSUE FOR CONSTRUCTION



AMERICAN TOWER CORPORATION  
8505 FREEPORT PARKWAY SUITE 135  
IRVING, TX 75063  
TEL : (972) 929-8172



6500 WEST LOOP SOUTH  
4TH FLOOR  
BELLAIRE, TEXAS 77401  
(713) 265 - 4640



02/03/2014

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SITE NUMBER: 281370

SITE NAME: WINGS & MORE - GRUBBS

SITE ADDRESS: 721 N. HARVEY MITCHELL PKWY. BRYAN, TEXAS 77807

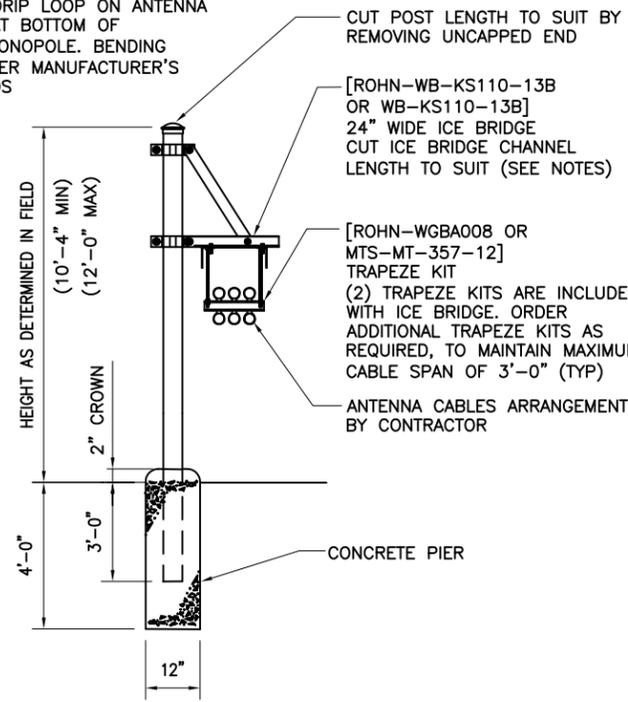
SHEET NUMBER: A.10

SHEET TITLE: CONSTRUCTION DETAILS

DRAWN BY: V.M. CHECK BY: JSA

IED PROJECT NUMBER:

\* INSTALL DRIP LOOP ON ANTENNA CABLES AT BOTTOM OF TOWER/MONOPOLE. BENDING RADIUS PER MANUFACTURER'S STANDARDS



ROHN PN:	MTS PN:
RN-WB-KS110-13B	WB-KS110-13B
RN-WB-KS110-15B	MT-C8269
WGBA008	MT-357-12

**ICE BRIDGE**  
**DETAIL 1**  
 NTS A.11

**NOTES:**

WHEN USING COMPONENTS AS SHOWN IN STANDARD DETAILS, MAXIMUM ALLOWABLE SPAN BETWEEN SUPPORTS ON A CONTINUOUS SINGLE SECTION OF BRIDGE CHANNEL SHALL BE 9 FEET FOR 10 FEET BRIDGE CHANNEL.

WHEN USING COMPONENTS FOR SPLICING BRIDGE CHANNEL SECTIONS, THE SPLICE SHOULD BE PROVIDED AT THE SUPPORT, IF POSSIBLE, OR AT A MAXIMUM OF 2 FEET FROM THE SUPPORT.

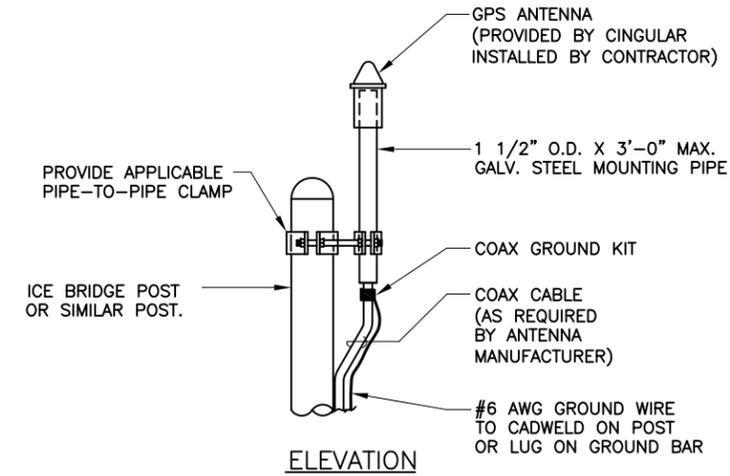
WHEN USING COMPONENTS, SUPPORT SHOULD BE PROVIDED AS CLOSE AS POSSIBLE TO THE ENDS OF ICE BRIDGES, WITH A MAXIMUM CANTILIVER DISTANCE OF 2 FEET FROM THE SUPPORT TO THE FREE END OF THE ICE BRIDGE.

CUT BRIDGE CHANNEL SECTIONS SHALL HAVE RAW EDGES TREATED WITH A MATERIAL TO RESTORE THESE EDGES TO THE ORIGINAL CHANNEL, OR EQUIVALENT, FINISH.

ICE BRIDGES MAY BE CONSTRUCTED WITH COMPONENTS FROM OTHER MANUFACTURERS, PROVIDED THE MANUFACTURER'S INSTALLATION GUIDELINES ARE FOLLOWED.

DEVIATIONS FROM STANDARDS FOR COMPONENT INSTALLATIONS ARE PERMITTED WITH THE RESPECTIVE MANUFACTURER'S APPROVAL.

DEVIATIONS FROM ICE BRIDGE FOUNDATIONS REQUIRE ENGINEERING APPROVAL.



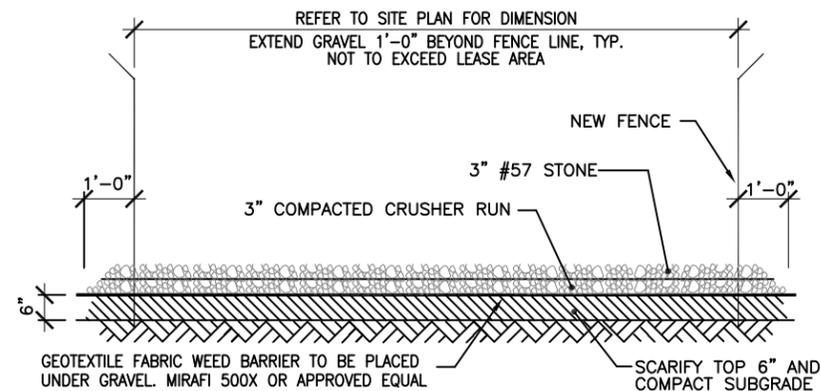
**NOTES:**

1. LOCATION OF ANTENNA MUST HAVE CLEAR VIEW OF SOUTHERN SKY AND CANNOT HAVE ANY BLOCKAGES EXCEEDING 25% OF THE SURFACE AREA OF A HEMISPHERE AROUND THE GPS ANTENNA.
2. ALL GPS ANTENNA LOCATIONS MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF FOUR (4) SATELLITES. VERIFY WITH HANDHELD GPS BEFORE FINAL LOCATION OF GPS ANTENNA.

**E911-GPS ANTENNA**  
**PIPE MOUNT**  
**DETAIL 3**  
 NTS A.11

THIS SPACE HAS BEEN  
 INTENTIONALLY LEFT BLANK

NOTE:  
 CLEAR AND GRUB SITE AS  
 REQUIRED



**SITE COMPOUND GRAVEL**

**DETAIL 2**  
 NTS A.11



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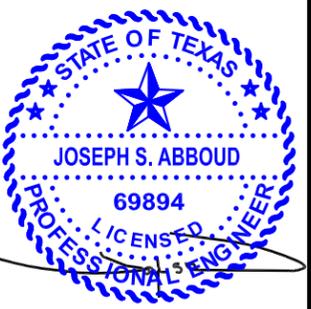
REV/DATE	DESCRIPTION
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SITE NAME: WINGS & MORE - GRUBBS

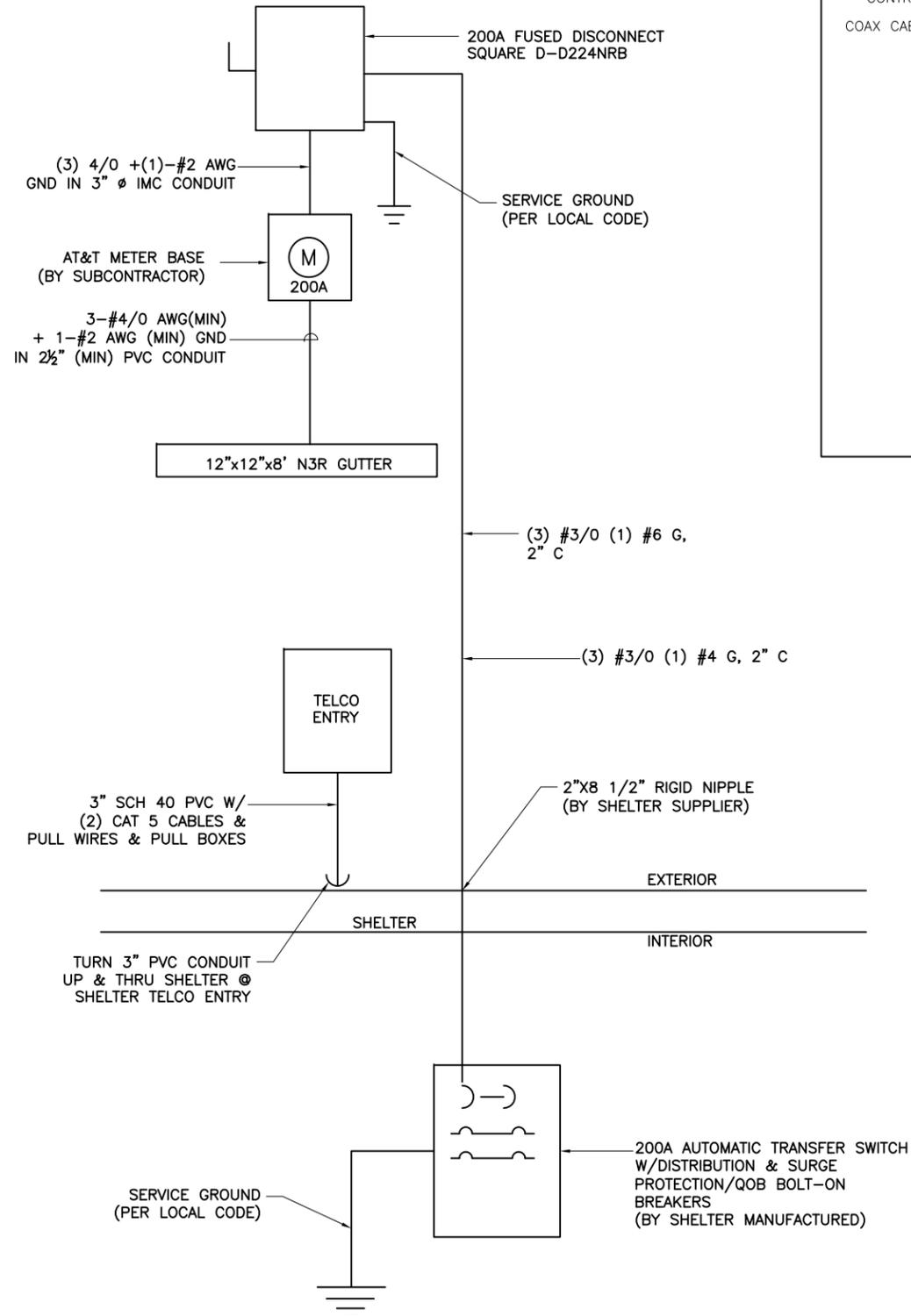
SITE ADDRESS: 721 N. HARVEY MITCHELL PKWY. BRYAN, TEXAS 77807

SHEET NUMBER: A.11

SHEET TITLE: CONSTRUCTION DETAILS

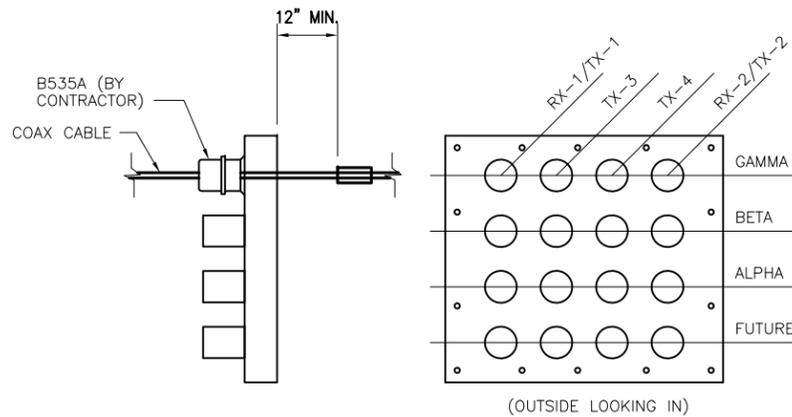
DRAWN BY: V.M. CHECK BY: JSA

IED PROJECT NUMBER:



**SINGLE LINE DIAGRAM**  
200A, 120/240V, 1Ø

**DETAIL** 1  
NTS E.1



**HATCH PLATE LAYOUT**  
SCALE: N.T.S.

**DETAIL** 2  
NTS E.1

ALL NOTES FOR GROUNDING, BONDING AND OVERCURRENT PROTECTION REFER TO NEC 2011 CODE.

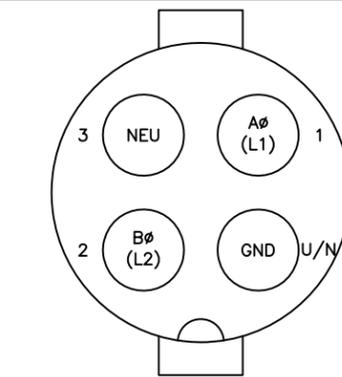
PLANS WILL COMPLY WITH NEC 2011 ARTICLE 100 FOR EQUIPMENT TO BE APPROVED, IDENTIFIED, LABEL AND LISTED.

**NOTES:**

1. THIS DESIGN MAY BE ADJUSTED TO COMPLY WITH SPECIFIC NEC, FEDERAL, STATE, LOCAL CODES AND ORDINANCES.
2. UNLESS SPECIFICALLY INDICATED, CONDUIT TYPE SHALL BE SELECTED IN ACCORDANCE WITH CODE REQUIREMENTS.
3. GAUGE OF ELECTRICAL CONDUCTORS AND CONDUIT DIAMETERS MAY REQUIRE ADJUSTMENT TO COMPENSATE FOR CHANGES IN LENGTH. UTILITY TRANSFORMER AND ASSOCIATED GROUND PROVIDED BY THE UTILITY COMPANY.
4. POWER PANEL IS PROVIDED AS PART OF THE FIBERBOND SHELTER. INTERNAL WIRING IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY AND MAY VARY ACCORDING TO MANUFACTURER.
5. SUBCONTRACTOR SHALL VERIFY THAT THE MAIN BONDING JUMPER IS INSTALLED PROPERLY IN THE DISCONNECT AND REMOVED IN THE POWER PANEL.
6. SERVICE METER AND DISCONNECT PLACEMENT MAY VARY ACCORDING TO SITE REQUIREMENTS.
7. GENERATOR RECEPTACLE MAY BE ELIMINATED FROM DESIGN TO CONFORM TO TENANT IMPROVEMENT SITE REQUIREMENTS.
8. AC PANEL IS RATED AS SERVICE ENTRANCE EQUIPMENT.

**NOTES:**

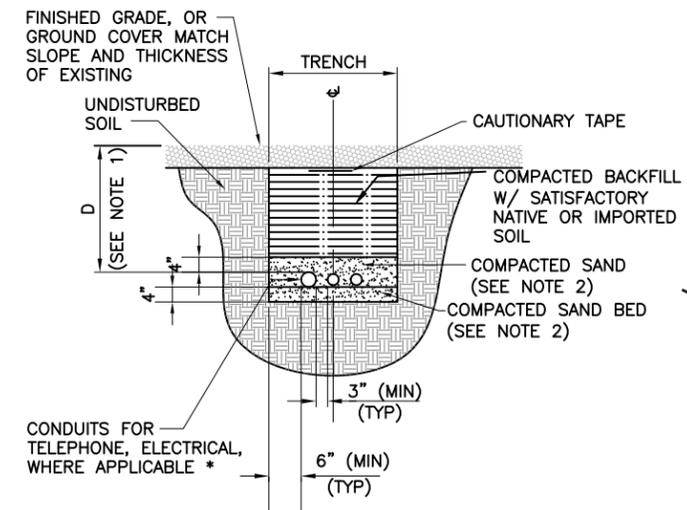
1. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT, REFER TO DRAWINGS PROVIDED BY PANEL MANUFACTURER.
2. SUBCONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.
3. CUT, COIL AND TAPE A 10 FEET PIGTAIL FROM END OF FLEX CONDUIT FOR TERMINATION BY ERICSSON.
4. SUBCONTRACTOR TO VERIFY AVAILABLE POWER IN EXISTING POWER RACK WIREWAY. IF POWER IS AVAILABLE, TAP BUSS. OTHERWISE, COORDINATE NEW SERVICE WITH POWER UTILITY.



**APPLETON AR-20044RS**  
**GENERATOR RECEPTACLE DETAIL**  
**(FRONT EXTERIOR VIEW)**

**DETAIL** 3  
NTS E.1

- NOTES: 1. CONTRACTOR SHALL DETERMINE DEPTH "D" BASED UPON NATIONAL ELECTRICAL CODE, UTILITY REQUIREMENTS OR STATE AND LOCAL CODES.  
2. LEAN CONCRETE, RED-COLORED TOP, MAY BE USED IN PLACE OF COMPACTED SAND.



\* CONDUIT SIZE, TYPE, QUANTITY AND SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS

**DIRECT BURIED CONDUIT**

**DETAIL** 4  
NTS E.1



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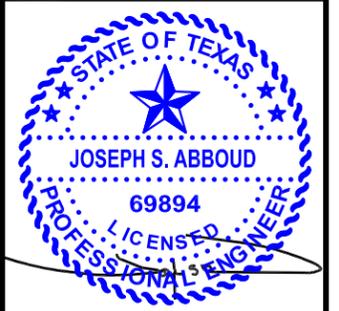
REV/DATE	DESCRIPTION
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SITE NUMBER: 281370

SITE NAME: WINGS & MORE - GRUBBS

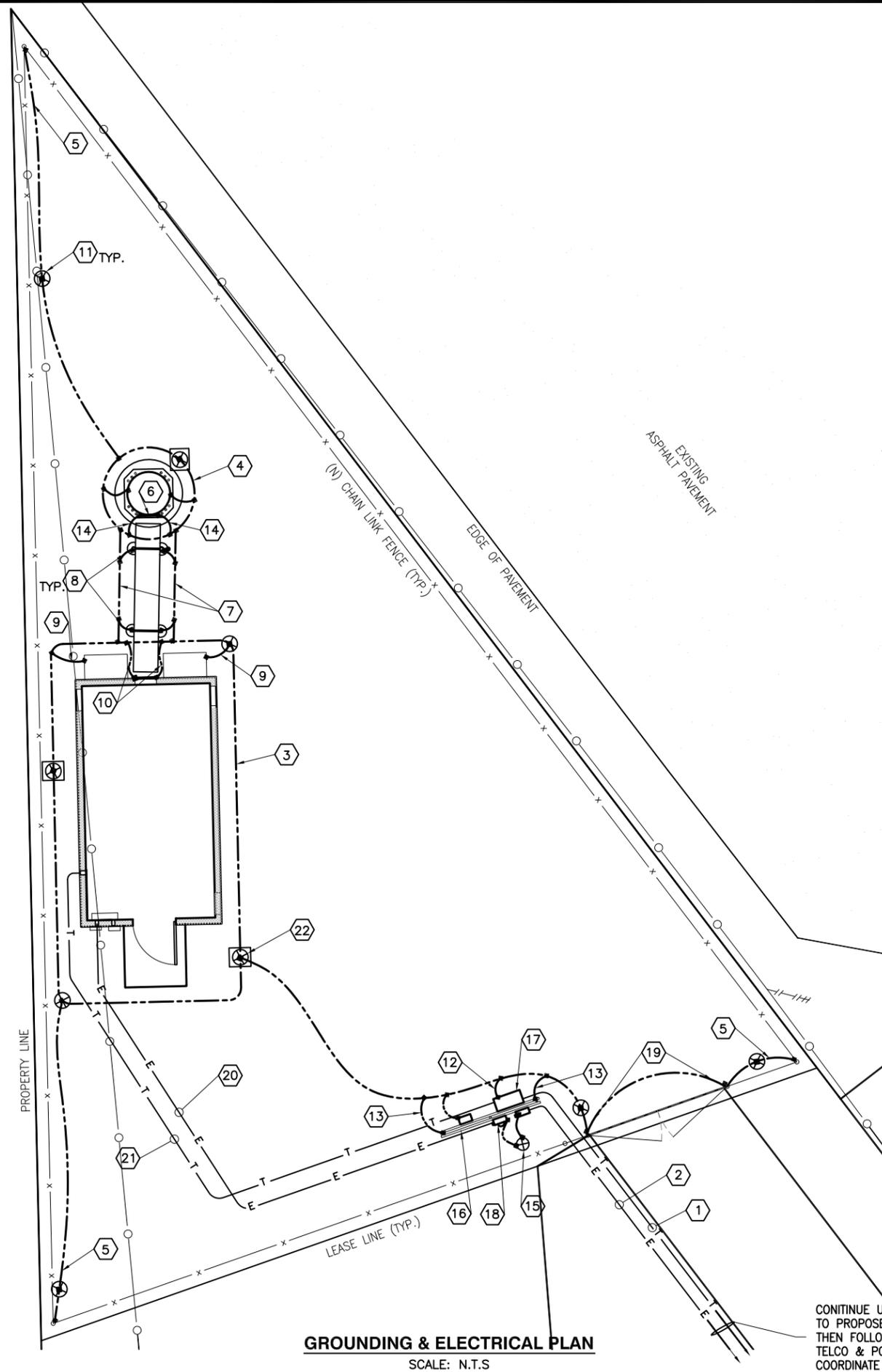
SITE ADDRESS: 721 N. HARVEY MITCHELL PKWY.  
BRYAN, TEXAS 77807

SHEET NUMBER: E.1

SHEET TITLE: ELEC. ONE-LINE DIAGRAM & DETAILS

DRAWN BY: V.M. CHECK BY: JSA

IED PROJECT NUMBER:



**GROUNDING & ELECTRICAL PLAN**  
SCALE: N.T.S

CONTINUE UTILITY ROUTE TO PROPOSED JUNCTION BOX. THEN FOLLOW WITHIN ACCESS & UTILITY EASEMENT TELCO & POWER SOURCE. COORDINATE WITH UTILITY COMPANY & PROJECT MANAGER

**UTILITIES NOTES:**

- 1 TELEPHONE SERVICE CONDUIT: 1 EACH, 4"Ø RIGID PVC CONDUIT, SCH. 40, BURIED BELOW GRADE. SEE DETAIL 4, SHEET E.1.
- 2 ELECTRIC SERVICE CONDUIT: 1 EACH, 4"Ø RIGID P.V.C. CONDUIT, SCH. 40, BURIED BELOW GRADE. SEE DETAIL 4, SHEET E.1.
- 3 SHELTER GROUND RING: #2 TINNED CU WIRE BURIED 18" BELOW, SEE DETAILS SHT. E.6
- 4 TOWER GROUND RING: #2 AWG SOLID TINNED BCW. NEW TOWER GROUND RING SEE DETAIL 1, SHEET E.6
- 5 FENCE GROUNDING: GROUND TO GROUND RING WITH #2 SOLID B.T.C. WIRE ATTACHED WITH DOUBLE HOLE LUGS AND CADWELDED TO 5/8"Ø x 8' LG. COPPER PLATED GROUND RODS. SEE DETAIL 6, SHEET E.6
- 6 ANTENNA GROUND BAR: MOUNT 1/2" COPPER GROUND BAR DIRECTLY TO TOWER AT TOP OF COAX RUN. SECURE TO TOWER WITH STAINLESS STEEL MOUNTING (2 REQUIRED) MATERIAL SHEET E.8.
- 7 TOWER GROUNDING: TIE IN NEW SHELTER GROUND TO TOWER GROUND WITH #2 B.T.C. WIRE, AND MAKE AN EXOTHERMIC CONNECTION (TYP. 2 PLCS.)
- 8 ICE BRIDGE SUPPORT POST GROUNDING: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING/ OR RODS TO ALL ICE BRIDGE SUPPORT POSTS AND EXOTHERMICALLY WELD.
- 9 HVAC GROUNDING: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING TO THE HVAC UNIT AND MAKE A MECHANICAL CONNECTION.
- 10 SHELTER GROUND BAR GROUNDING: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING UP TO SHELTER GROUND BAR AND MAKE AN EXOTHERMIC CONNECTION.
- 11 GROUND ROD: COPPERCLAD STEEL, 5/8 DIA. EIGHT (8) FEET LONG, GROUND ROD (TYP.)
- 12 SERVICE ENTRANCE GROUNDING: #2 AWG SOLID, TINNED BCW IN 1" PVC TO SERVICE ENTRANCE GROUND ROD.
- 13 UTILITY RACK GROUNDING: #2 AWG SOLID, TINNED BCW TO RACK POST. (TYP.)
- 14 ANTENNA GROUNDING: EXTEND #2 TINNED CU WIRE BURIED GROUND RING UP TO THE TOWER GROUND BAR AND MAKE AN EXOTHERMIC CONNECTION
- 15 UTILITY GROUNDING: GROUNDING AS PER LOCAL UTILITY COMPANY. (VERIFY AND INSTALL AS NEEDED)
- 16 NEW UTILITY RACK, SEE SHEET A.10
- 17 NEW TELCO BOX.
- 18 NEW 200A AT&T METER & DISC.
- 19 GATE POST GROUND: GROUND WITH #2 SOLID B.T.C WIRE ATTACHED WITH DOUBLE HOLE LUGS AND CALDWELDED TO 5/8"Ø x 8' LG. COPPER PLATED GROUND RODS. SEE SHEET E.6
- 20 POWER TO SHELTER: 2" SCH 40 PVC POWER CONDUIT 30" BELOW GRADE W/ (3) #3/0. (1) #4 G.
- 21 TELCO TO SHELTER: 4", SCH. 40 PVC W/ 25 PAIR, GEL FILLED TELCO CABLE.
- 22 INSPECTION SLEEVE (2-REQUIRED)

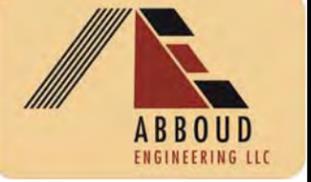
**ELECTRICAL NOTES:**

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND ALL APPLICABLE LOCAL CODES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
3. THE SUBCONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
4. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC (CADWELD) CONNECTIONS.
5. SERVICE TO EQUIPMENT CABINETS SHALL BE 120/240 VAC, 200A, 1-PHASE.
6. ALL GROUND CONNECTIONS BELOW GRADE SHALL BE EXOTHERMIC (CADWELD).
7. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR & EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
8. ALL EXOTHERMIC CONNECTIONS TO THE GROUND RODS SHALL START AT THE TOP & HAVE A VERTICAL SEPARATION OF 6" FOR EVERY ADDITIONAL CONNECTION.
9. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
10. ALL EXTERIOR GROUND CONDUCTORS SHALL BE #2 AWG SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
11. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
12. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
13. MAXIMUM RESISTANCE OF THE COMPLETED GROUND SYSTEM SHALL NOT EXCEED 5 OHMS. TESTING SHALL BE PERFORMED IN ACCORDANCE WITH PROJECT SPECIFICATION FOR FACILITY GROUNDING, USING FALL OF POTENTIAL METHOD.

ALL NOTES FOR GROUNDING, BONDING AND OVERCURRENT PROTECTION REFER TO NEC 2011 CODE.

PLANS WILL COMPLY WITH NEC 2011 ARTICLE 100 FOR EQUIPMENT TO BE APPROVED, IDENTIFIED, LABELED AND LISTED.

GROUNDING LEGEND	
SYMBOL	DESCRIPTION
⊗	5/8" x 10' COPPER CLAD STEEL GROUND ROD
⊗	5/8" x 10' COPPER CLAD STEEL GROUND ROD WITH INSPECTION SLEEVE
■	EXOTHERMIC WELD (CADWELD) (UNLESS OTHERWISE NOTED)
■	EXOTHERMIC WELD (CADWELD) WITH INSPECTION SLEEVE
●	MECHANICAL TYPE CONNECTION



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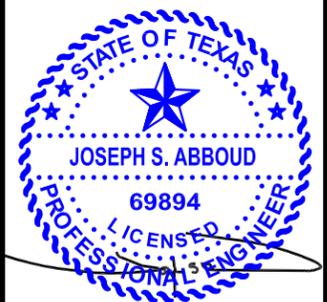
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SITE NUMBER: 281370

SITE NAME: WINGS & MORE - GRUBBS

SITE ADDRESS: 721 N. HARVEY MITCHELL PKWY. BRYAN, TEXAS 77807

SHEET NUMBER: E.5

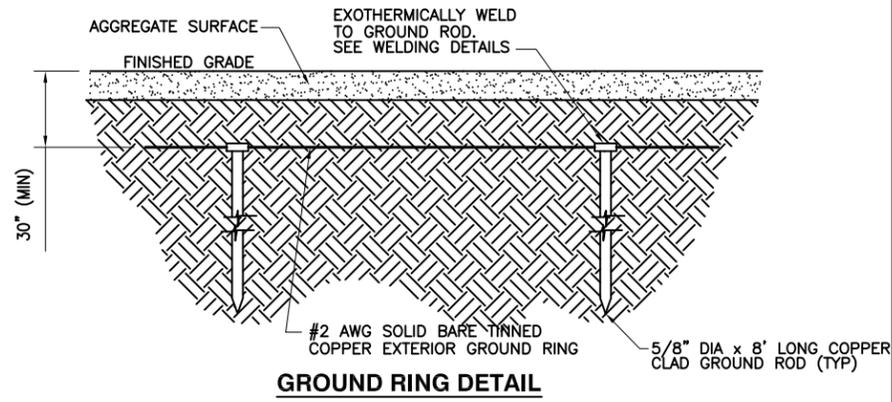
SHEET TITLE: GROUNDING & ELECTRICAL PLAN

DRAWN BY: V.M. CHECK BY: JSA

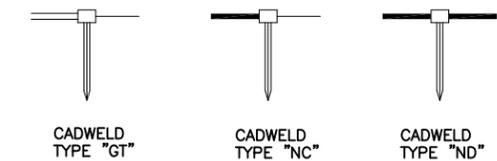
IED PROJECT NUMBER:

**GENERAL NOTES:**

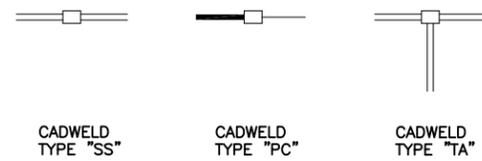
1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SPECIFIC SITE CONDITIONS.
2. ALL EXTERIOR GROUNDING CABLE AND TOP OF GROUNDING RODS SHALL BE BURIED A MINIMUM DEPTH OF 2'-6" BELOW FINISHED GRADE, OR 6" BELOW FROST LINE, WHICHEVER IS DEEPER.
3. ALL GROUNDING CONDUCTORS SHALL BE #2 SOLID TINNED COPPER CABLE.
4. GROUND SYSTEM SHALL BE TESTED PER SPECIFICATIONS AND SHALL HAVE A RESISTANCE OF 5 OHMS OR LESS.
5. NOTIFY ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.



DETAIL 1  
NTS E.6



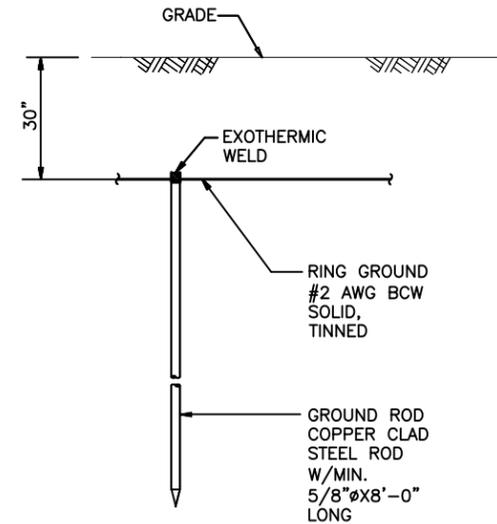
**CABLE TO GROUND ROD COMBINATIONS**



**CABLE TO CABLE COMBINATIONS**

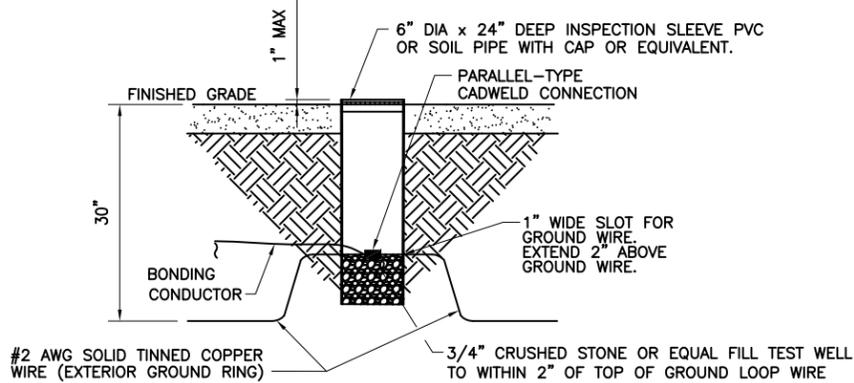
**EXOTHERMIC WELDING DETAILS**

DETAIL 4  
NTS E.6



1. DESIGNER/ENGINEER TO DETERMINE DIMENSION WHICH SHALL BE BELOW THE FROST LINE OR 18" MINIMUM.
2. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.

GROUND ROD DETAIL 5  
NTS E.6

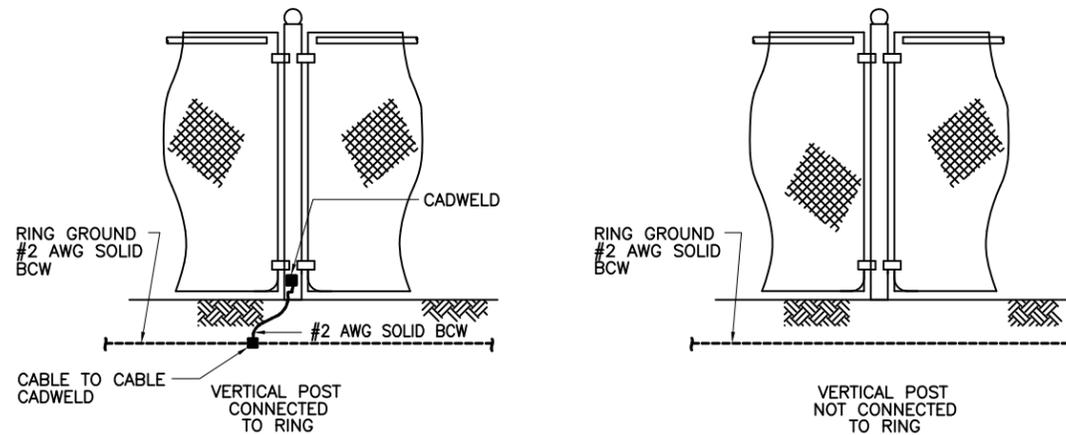


**EXOTHERMIC WELD W/ INSPECTION SLEEVE**

DETAIL 2  
NTS E.6

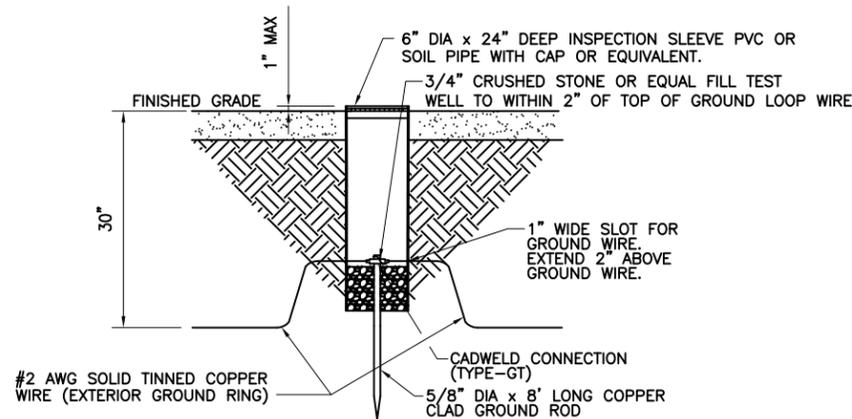
**NOTE:**

1. VERTICAL POSTS SHALL BE BONDED TO THE RING AT EACH CORNER AND AT EACH GATE POST. AS A MINIMUM ONE VERTICAL POST SHALL BE BONDED TO THE GROUND RING IN EVERY 100 FOOT STRAIGHT RUN OF FENCE.
2. HORIZONTAL POLES SHALL BE BONDED TO EACH OTHER.
3. BOND EACH HORIZONTAL POLE / BRACE TO EACH OTHER AND TO EACH VERTICAL POST THAT IS BONDED TO THE EXTERIOR GROUND RING



**FENCE GROUNDING**

DETAIL 6  
NTS E.6



**GROUND ROD W/ INSPECTION SLEEVE**

DETAIL 3  
NTS E.6



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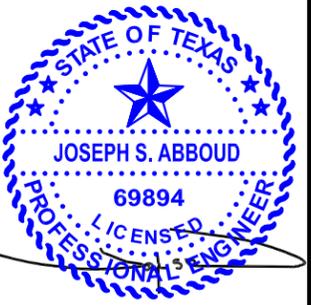
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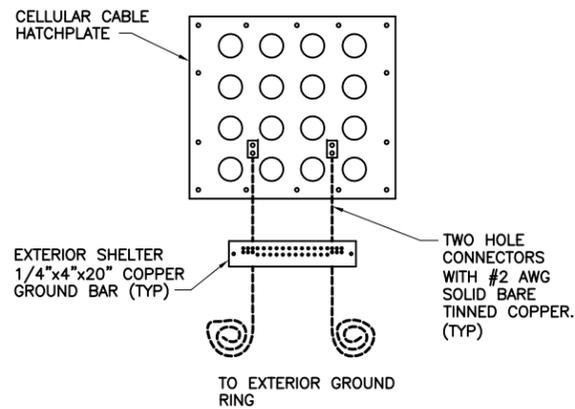
SITE ADDRESS: 721 N. HARVEY MITCHELL PKWY. BRYAN, TEXAS 77807

SHEET NUMBER: E.6

SHEET TITLE: GROUNDING DETAILS - PG.1

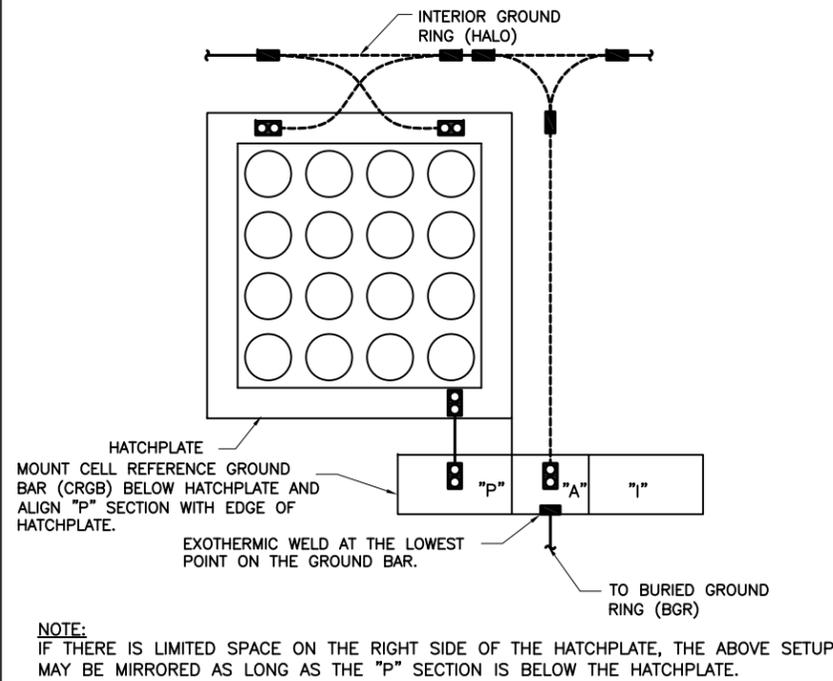
DRAWN BY: V.M. CHECK BY: JSA

IED PROJECT NUMBER:



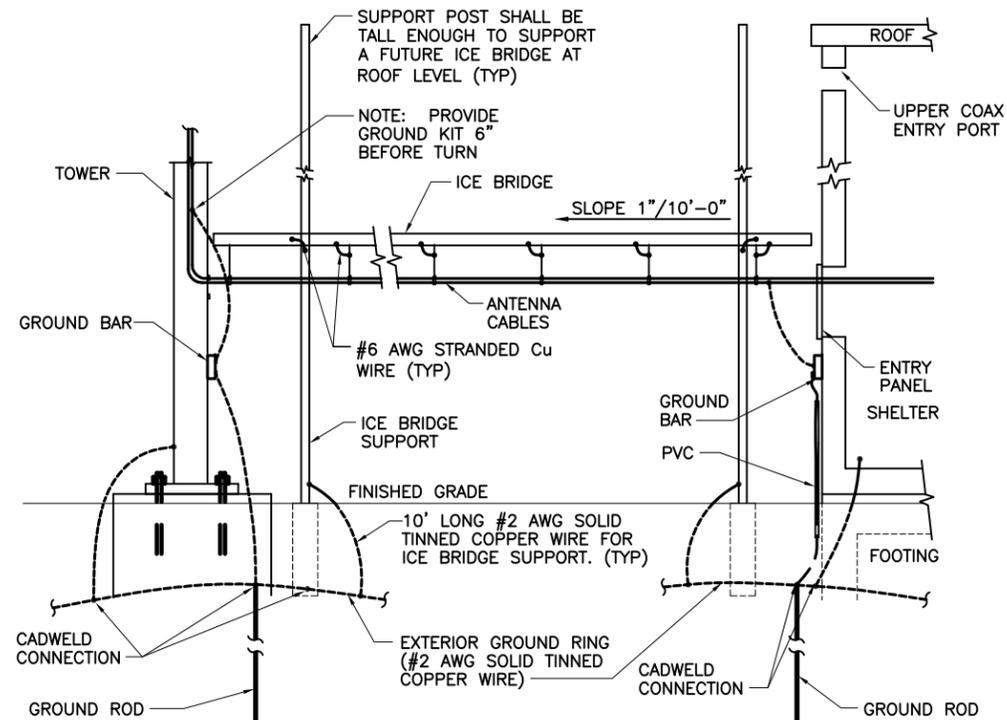
**HATCH PLATE GROUNDING AT SHELTER EXTERIOR**

DETAIL 1  
NTS E.7



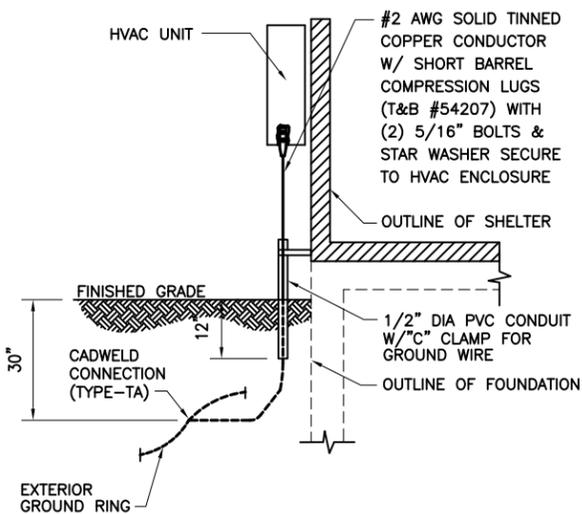
**CELL REFERENCE GROUND BAR (CRGB) INSTALLATION DETAIL**

DETAIL 2  
NTS E.7



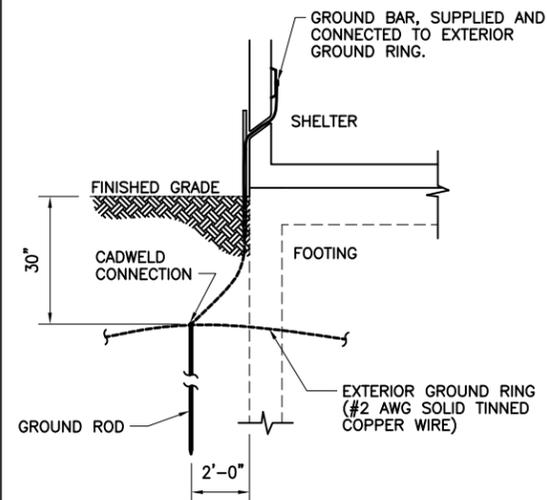
**ICE BRIDGE AND ANTENNA CABLE DETAIL**

DETAIL 3  
NTS E.7



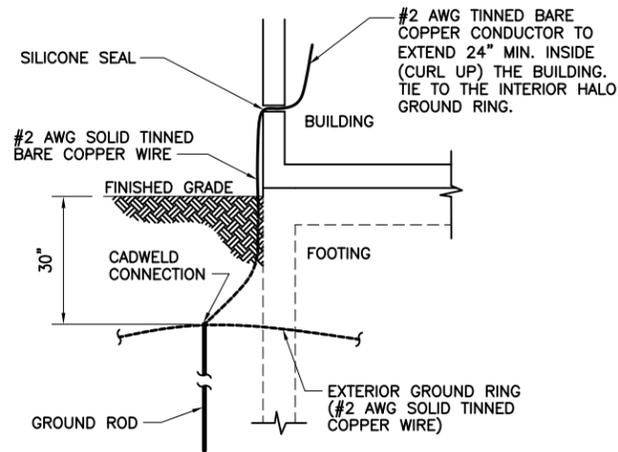
**HVAC GROUND DETAIL**

DETAIL 4  
NTS E.7



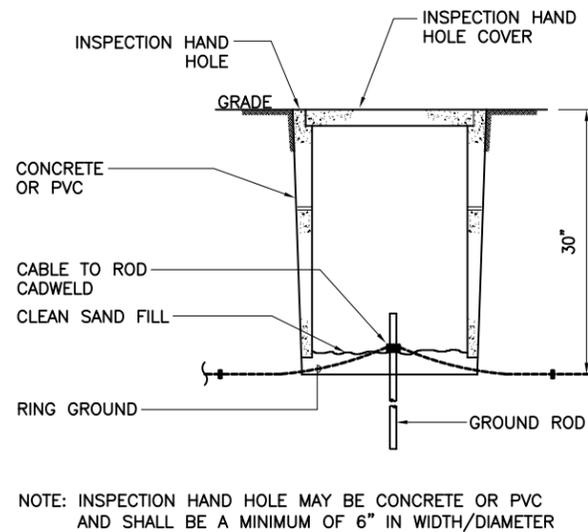
**TELEPHONE GROUND DETAIL**

DETAIL 5  
NTS E.7



**BUILDING GROUND DETAIL**

DETAIL 6  
NTS E.7



**GROUND ROD WITH ACCESS AREA**

DETAIL 7  
NTS E.7



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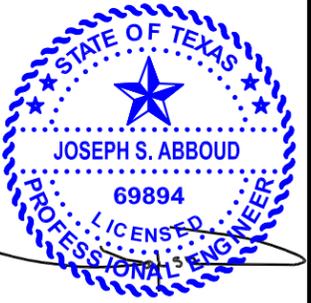
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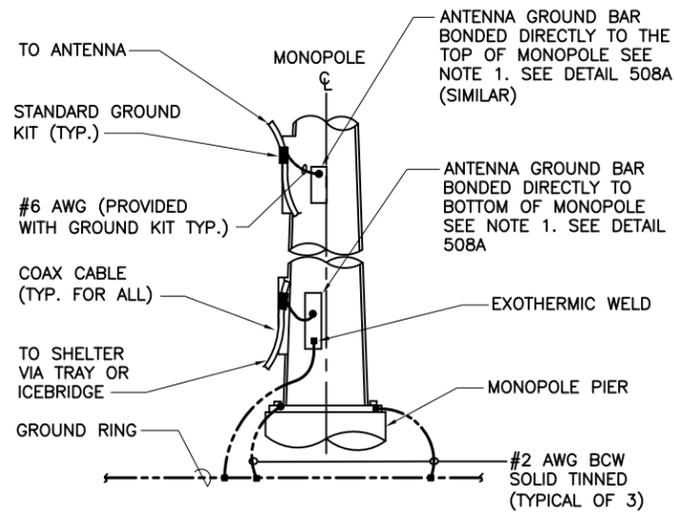
SITE ADDRESS: 721 N. HARVEY MITCHELL PKWY. BRYAN, TEXAS 77807

SHEET NUMBER: E.7

SHEET TITLE: GROUNDING DETAILS - PG.2

DRAWN BY: V.M. CHECK BY: JSA

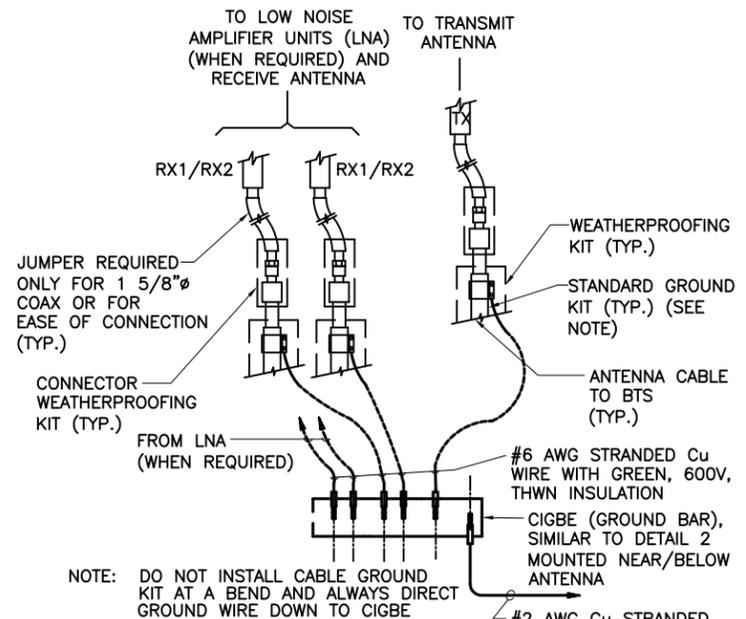
IED PROJECT NUMBER:



NOTE:  
NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF MONOPOLE, ANTENNA LOCATION AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.

**ANTENNA CABLE GROUNDING FOR MONOPOLE TOWER**

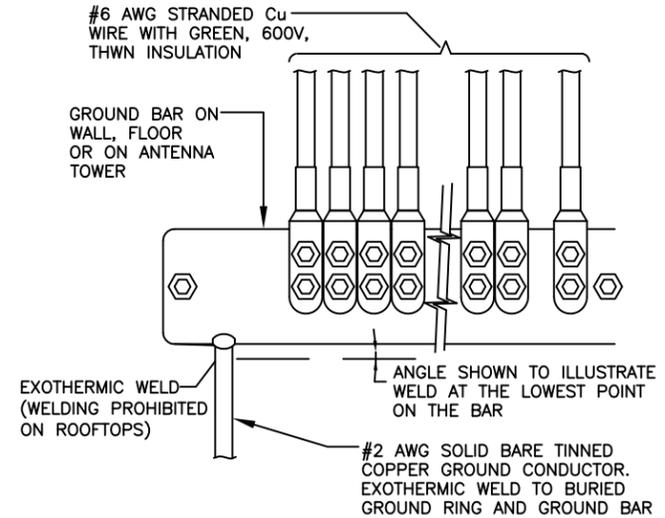
DETAIL 1  
NTS E.8



NOTE: DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE

**CONNECTION OF GROUND WIRE TO GROUNDING BAR (CIGBE) TOWER/MONOPOLE/ROOFTOP**

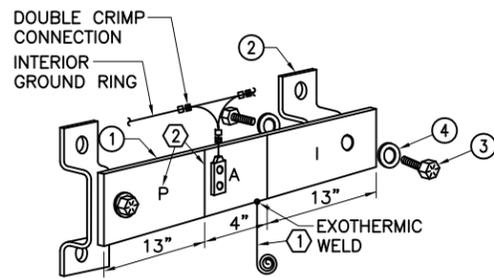
DETAIL 2  
NTS E.8



**INSTALLATION OF GROUND WIRE TO COAX CABLE GROUND BAR**

DETAIL 3  
NTS E.8

NEWTON INSTRUMENT COMPANY, INC. BUTNER, N.C.			
NO.	REQ.	PART NO.	DESCRIPTION
①	1	1/4"x4"x30"	SOLID GND. BAR
②	2	A-6056	WALL MTG. BRKT.
③	4	3012-1	5/8"-11x1" H.H.C.S.
④	4	3015-8	5/8 LOCKWASHER



**(RGB) REFERENCE GROUND BAR**

DETAIL 4  
NTS E.8

EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

**SECTION "P" - SURGE PROTECTORS**

- CABLE ENTRY PORTS (HATCH PLATES) (#2)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
- TELCO GROUND BAR (#2)
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
- +24V POWER SUPPLY RETURN BAR (#2)
- 48V POWER SUPPLY RETURN BAR (#2)
- RECTIFIER FRAMES.
- COAX SUPPRESSION

**SECTION "A" - SURGE ABSORBERS**

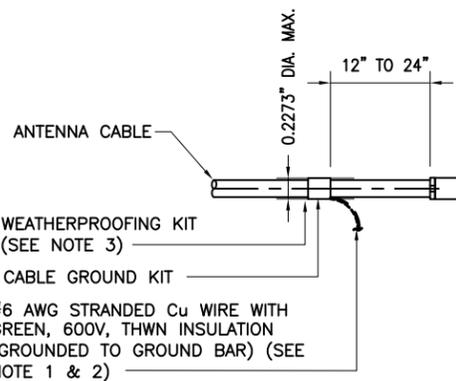
- INTERIOR GROUND RING (#2)
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
- METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
- BUILDING STEEL (IF AVAILABLE) (#2)

**SECTION "I" - ISOLATED GROUND ZONE**

- ALL COMMUNICATIONS EQUIPMENT FRAMES.
- ISOLATED GROUND BAR - IGB (#2)

**DETAIL NOTES:**

- EXOTHERMICALLY WELD #2 AWG BARE TINNED SOLID COPPER CONDUCTOR TO GROUND BAR. ROUTE CONDUCTOR TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
- USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "I") WITH 1" HIGH LETTERS.

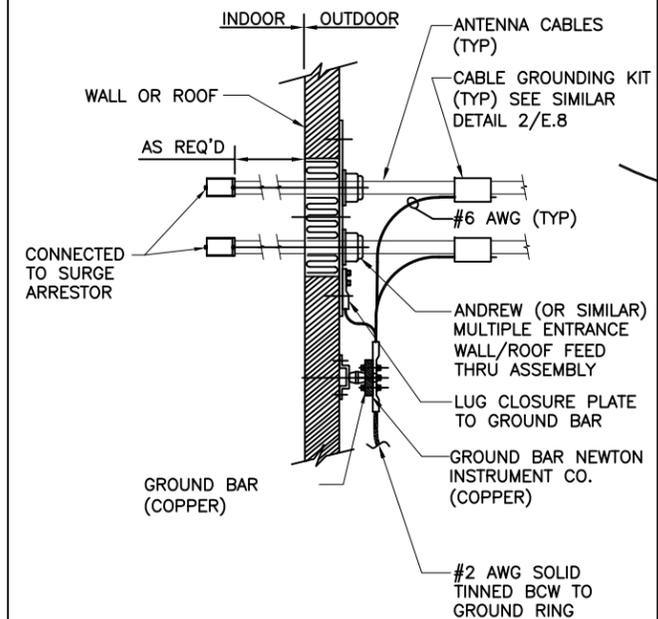


**CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE**

**NOTES:**

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
- WEATHER PROOFING SHALL BE (TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.)

DETAIL 5  
NTS E.8



**CABLE INSTALLATION WITH WALL/ ROOF FEED THRU ASSEMBLY**

DETAIL 6  
NTS E.8



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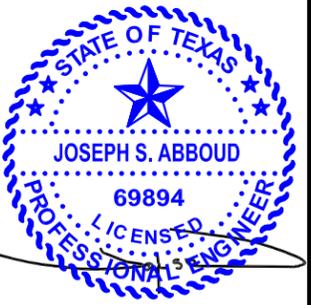
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SHEET NUMBER: E.8

SHEET TITLE: ELECTRICAL AND GROUNDING DETAILS

DRAWN BY: V.M. CHECK BY: JSA

IED PROJECT NUMBER:



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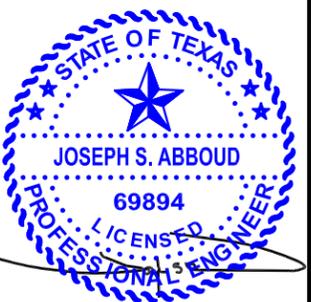
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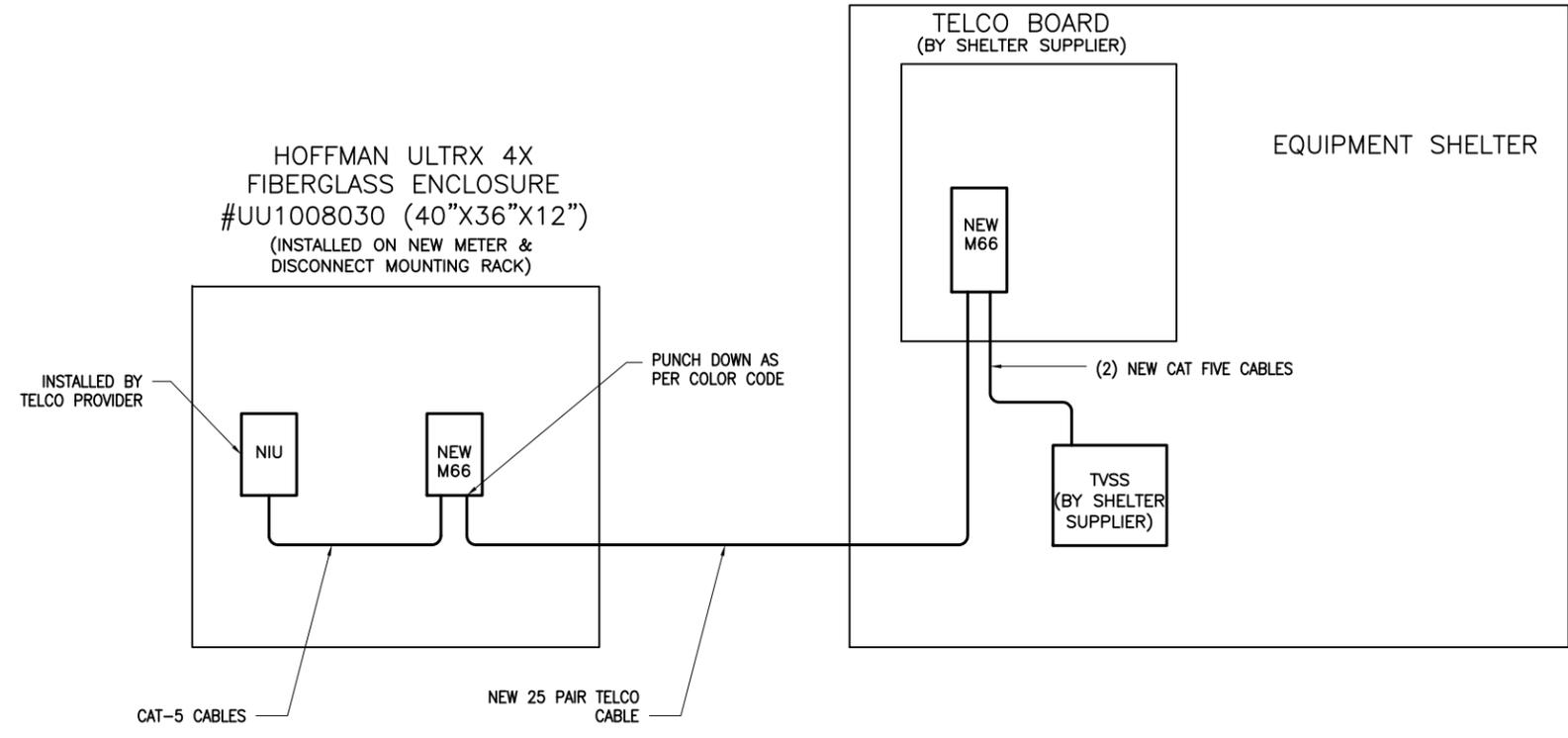
SITE ADDRESS: 721 N. HARVEY MITCHELL PKWY. BRYAN, TEXAS 77807

SHEET NUMBER: E.9

SHEET TITLE: TELCO INSTALLATION DIAGRAM

DRAWN BY: V.M. CHECK BY: JSA

IED PROJECT NUMBER:

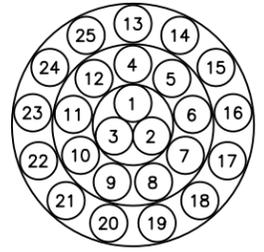


**TELCO INSTALLATION RISER**

- ONE M66 WILL BE INSTALLED IN THE FIBERGLASS TELCO BOX.
- ONE M66 WILL BE INSTALLED AT THE TELCO BOARD INSIDE THE SHELTER.
- ROUTE NEW 25 PAIR CABLE (GENERAL CABLE #7525785) FROM TELCO BOX TO INSIDE THE SHELTER. FOLLOW THE PUNCH DOWN DIAGRAM AND THE COLOR CODE AND PUNCH DOWN CABLE PAIRS ONTO THE NEW PATCH PANELS IN THE TELCO BOX AND THE SHELTER.
- ROUTE TWO NEW CAT-5 CABLES WITH RJ-45 CONNECTORS FROM THE PATCH PANEL INSIDE THE SHELTER, AT THE TELCO BOARD TO THE TVSS.

**NEW TELCO INSTALLATION NOTES**

PAIR NO.	COLORS
1	W-BL
2	W-O
3	W-G
4	W-BR
5	W-S
6	R-BL
7	R-O
8	R-G
9	R-BR
10	D-S
11	BK-BL
12	BK-O
13	BK-G
14	BK-BR
15	BK-S
16	Y-BL
17	Y-O
18	Y-BR
19	Y-S
20	Y-BL
21	V-BL
22	V-O
23	V-G
24	V-BR
25	V-S



**GENERAL CABLE CORPORATION  
CORE LAY-UPS FOR TELECOMMUNICATIONS  
CABLES FULL COLOR CODE**

DETAIL 1  
NTS E.9

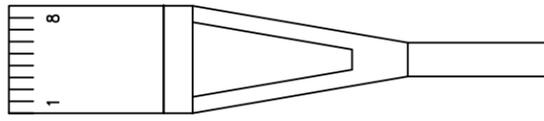
PIN	RJ45	RJ45	PIN
8			8
7			7
6			6
3	1	2	3
2			2
1			1
4			4
5			5
8			8
7			7
6			6
3	3	4	3
2			2
1			1
4			4
5			5
8			8
7			7
6			6
3	5	6	3
2			2
1			1
4			4
5			5
8			8
7			7
6			6
3	7	8	3
2			2
1			1
4			4
5			5
8			8
7			7
6			6
3	9	10	3
2			2
1			1
4			4
5			5
8			8
7			7
6			6
3	11	12	3
2			2
1			1
4			4
5			5
8			8
7			7
6			6
3			3
2			2
1			1
4			4
5			5

**M66 ELIMINATOR PUNCHDOWN DIAGRAM**

VIEW FROM REAR TOP

**RJ45 CONNECTIONS**

- PIN 8 NOT USED
- PIN 7 NOT USED
- PIN 6 NOT USED
- PIN 5 /ORG
- PIN 4 ORG/WHT
- PIN 3 NOT USED
- PIN 2 /BLU
- PIN 1 BLU/WHT



RJ45 CONNECTOR VIEWED FROM TOP WITH CLIP DOWN AS THOUGH YOU WERE GOING IN TO PLUG IT IN.

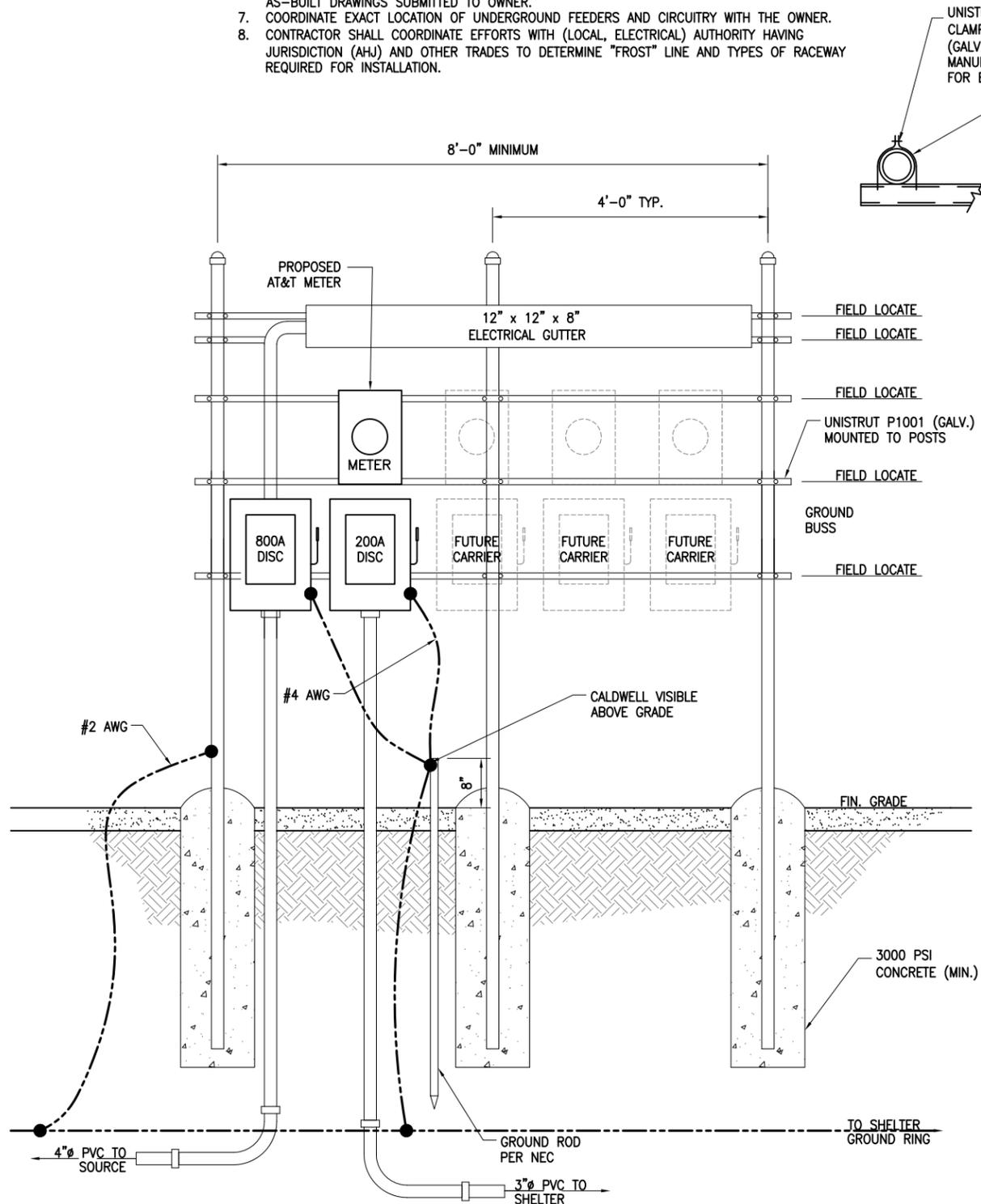
**RJ45 CONNECTIONS**

**GENERAL NOTES:**

1. ALL WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE, STATE BUILDING CODES AND LOCAL BUILDING CODES.
2. REFER TO SITE LAYOUT PLAN FOR EXACT LOCATION OF H-FRAME. REFER TO AT&T WIRELESS STANDARD CONSTRUCTION DRAWINGS FOR H-FRAME COMPLETE DESIGN.
3. CONTRACTOR TO COORDINATE WITH LOCAL UTILITY COMPANY FOR METER.
4. CONTRACTOR TO PROVIDE AND INSTALL METER SOCKET.
5. CONTRACTOR TO LOCATE METER RACK TO ENSURE WORKING SPACES REQUIRED BY THE NEC (ART. 110-226), STATE OR LOCAL CODES ARE MAINTAINED BETWEEN FRONT OF ENCLOSURES AND THE COMPOUND FENCE.
6. SHOW LOCATION (INCLUDING DIMENSIONS) OF ALL CAPPED UNDERGROUND CONDUIT ON FINAL AS-BUILT DRAWINGS SUBMITTED TO OWNER.
7. COORDINATE EXACT LOCATION OF UNDERGROUND FEEDERS AND CIRCUITRY WITH THE OWNER.
8. CONTRACTOR SHALL COORDINATE EFFORTS WITH (LOCAL, ELECTRICAL) AUTHORITY HAVING JURISDICTION (AHJ) AND OTHER TRADES TO DETERMINE "FROST" LINE AND TYPES OF RACEWAY REQUIRED FOR INSTALLATION.

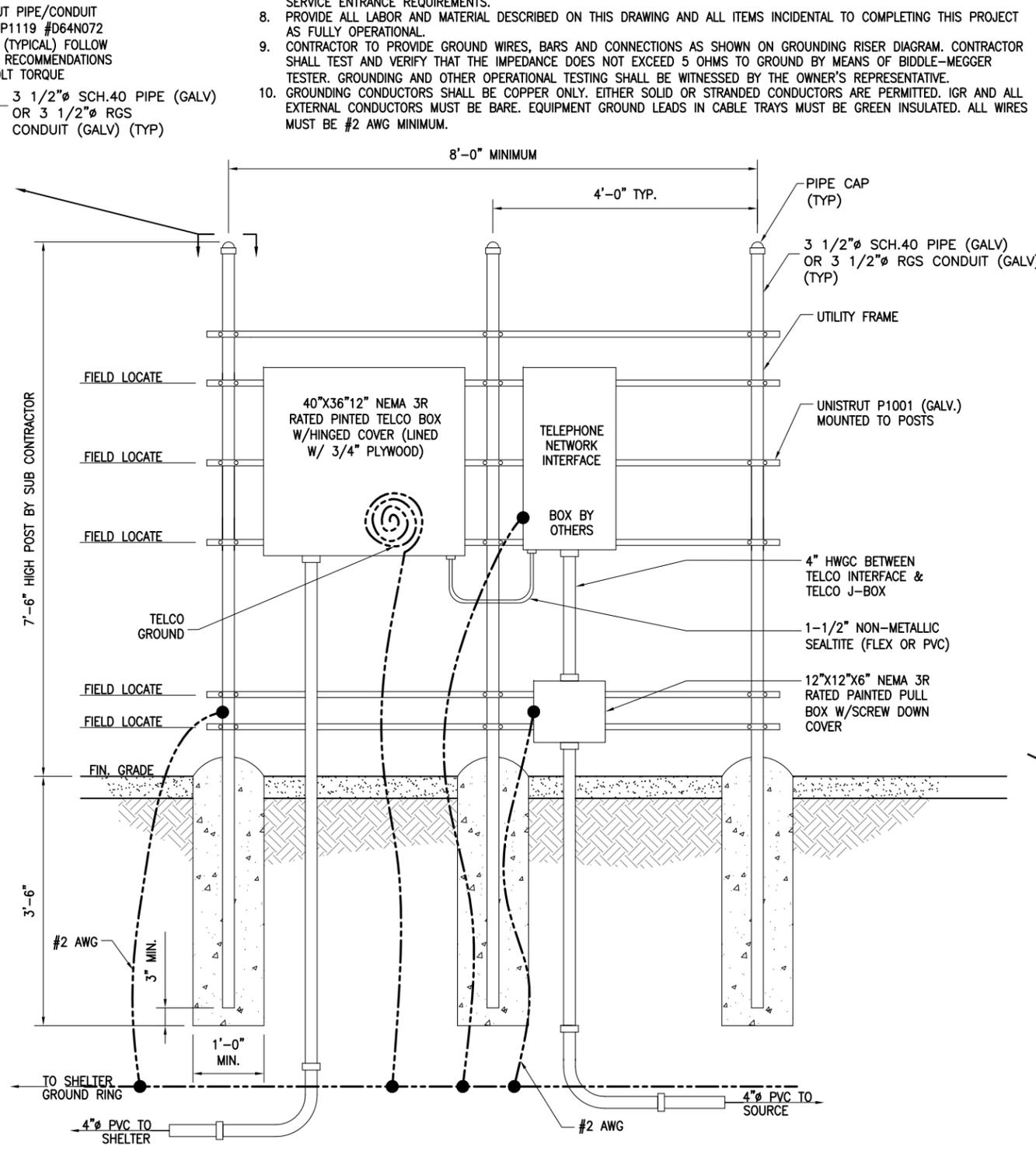
**ELECTRICAL NOTES:**

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE NATIONAL ELECTRIC CODE (EDITION ACCEPTED BY LOCAL JURISDICTION) AND APPLICABLE LOCAL CODES.
2. GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRIC CODE.
3. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED.
4. POWER WIRES AND CABLES SHALL BE COPPER WITH TYPE XHHW, THWN OR THHN INSULATION. SOLID CONDUCTORS FOR #10 AWG AND SMALLER, STRANDED FOR LARGER THAN #10 AWG. MINIMUM SIZE #12 AWG.
5. POWER WIRES AND CABLES SHALL BE INSTALLED IN GALVANIZED RIGID STEEL CONDUIT OR FLEXIBLE LIQUDTIGHT CONDUIT AS INDICATED ON DRAWING.
6. CONTRACTOR TO OBTAIN ALL PERMITS, PAY PERMIT FEES AND BE RESPONSIBLE FOR SCHEDULING INSPECTIONS.
7. CONTRACTOR TO OBTAIN LOCAL POWER AND TELEPHONE COMPANY APPROVAL AND COORDINATE WITH UTILITY COMPANIES SERVICE ENTRANCE REQUIREMENTS.
8. PROVIDE ALL LABOR AND MATERIAL DESCRIBED ON THIS DRAWING AND ALL ITEMS INCIDENTAL TO COMPLETING THIS PROJECT AS FULLY OPERATIONAL.
9. CONTRACTOR TO PROVIDE GROUND WIRES, BARS AND CONNECTIONS AS SHOWN ON GROUNDING RISER DIAGRAM. CONTRACTOR SHALL TEST AND VERIFY THAT THE IMPEDANCE DOES NOT EXCEED 5 OHMS TO GROUND BY MEANS OF BIDDLE-MEGGER TESTER. GROUNDING AND OTHER OPERATIONAL TESTING SHALL BE WITNESSED BY THE OWNER'S REPRESENTATIVE.
10. GROUNDING CONDUCTORS SHALL BE COPPER ONLY. EITHER SOLID OR STRANDED CONDUCTORS ARE PERMITTED. IGR AND ALL EXTERNAL CONDUCTORS MUST BE BARE. EQUIPMENT GROUND LEADS IN CABLE TRAYS MUST BE GREEN INSULATED. ALL WIRES MUST BE #2 AWG MINIMUM.



**FRONT**

**UTILITY RACK FRAME**



**DETAIL**

**1**

**E.10**

**BACK**



Quail Valley Business Park  
1306 FM 1092, Suite 303  
Missouri City, Texas 77459-1564  
Tel : (713) 562-6100

TX FIRM REGISTRATION NO. F-11281

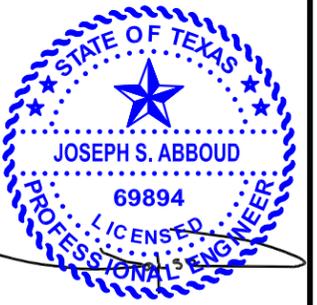
REV/DATE	DESCRIPTION
02/03/14	ISSUE FOR CONSTRUCTION



AMERICAN TOWER CORPORATION  
8505 FREEPORT PARKWAY SUITE 135  
IRVING, TX 75063  
TEL : (972) 929-8172



6500 WEST LOOP SOUTH  
4TH FLOOR  
BELLAIRE, TEXAS 77401  
(713) 265 - 4640



02/03/2014

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SITE NUMBER: 281370

SITE NAME: WINGS & MORE - GRUBBS

SITE ADDRESS: 721 N. HARVEY MITCHELL PKWY. BRYAN, TEXAS 77807

SHEET NUMBER: E.10

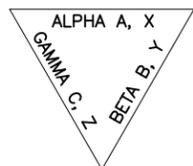
SHEET TITLE: UTILITY RACK FRAME DETAILS

DRAWN BY: V.M. CHECK BY: JSA

IED PROJECT NUMBER:

**NOTES:**

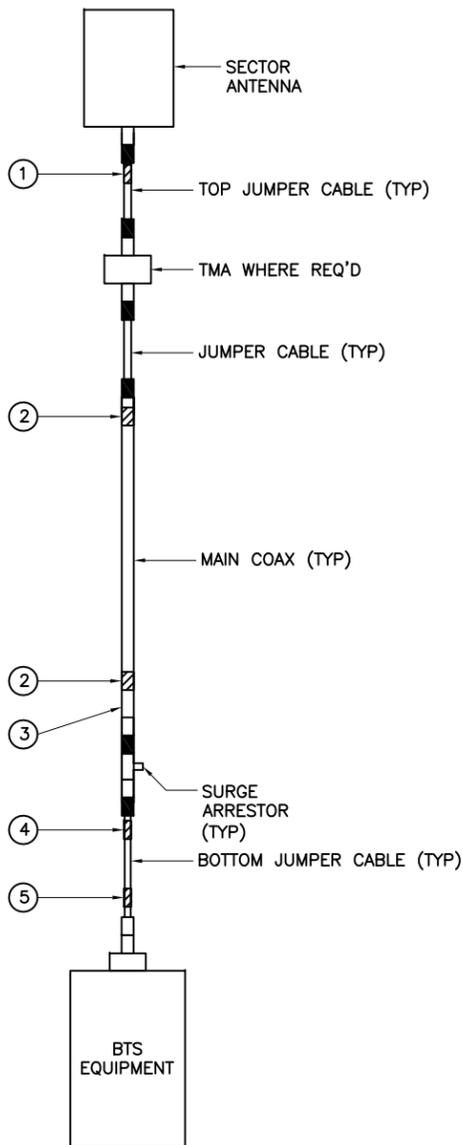
1. SECTOR ORIENTATION/AZIMUTH WILL VARY FROM REGION TO REGION AND IS SITE SPECIFIC. REFER TO RF REPORT FOR EACH SITE TO DETERMINE THE ANTENNA LOCATION AND FUNCTION OF EACH TOWER SECTOR FACE.
2. THE STANDARD IS BASED ON EIGHT COLORED TAPES—RED, BLUE, GREEN, YELLOW, ORANGE, BROWN, WHITE, AND SLATE(GREY). THESE TAPES SHOULD BE READILY AVAILABLE TO THE ELECTRICIAN OR CONTRACTOR ON SITE.
3. USING COLOR BANDS ON THE CABLES, MARK ALL RF CABLE BY SECTOR AND CABLE NUMBER AS SHOWN ON "CABLE MARKING COLOR CONVENTION TABLE".
4. ALL COLOR CODE TAPE SHALL BE 3M-35 AND SHALL BE INSTALLED USING A MINIMUM OF (3) WRAPS OF TAPE AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT SO AS TO AVOID UNRAVELING.
5. ALL COLOR BANDS INSTALLED AT THE TOWER TOP SHALL BE A MINIMUM OF 3" WIDE AND SHALL HAVE A MINIMUM OF 3/4" OF SPACING BETWEEN EACH COLOR.
6. ALL COLOR BANDS INSTALLED AT OR NEAR THE GROUND SHALL BE A MINIMUM OF 3/4" WIDE.
7. ALL COLOR CODES SHALL BE INSTALLED SO AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE-TO-SIDE.



**TOWER PLAN VIEW**

**NOTES:**

- A. CONTRACTOR SHALL FILL OUT THE CABLE PORT DIAGRAM UPON COAX INSTALLATION. CABLE PORT DIAGRAM WILL BE AFFIXED TO THE INTERIOR SHELTER WALL NEAR THE CABLE ENTRY PORT TO AID IN CABLE IDENTIFICATION. THE CHART IS INTENDED TO BE USED TO RECORD THE LINE AND CORRESPONDING ANTENNA POSITION ON THE TOWER AT THE TIME OF INSTALLATION.
- B. ONE COMPLETED COPY PLUS TWO BLANK COPIES OF THE CHART SHOULD BE POSTED IN THE SHELTER IN A PROTECTIVE PLASTIC SLEEVE.



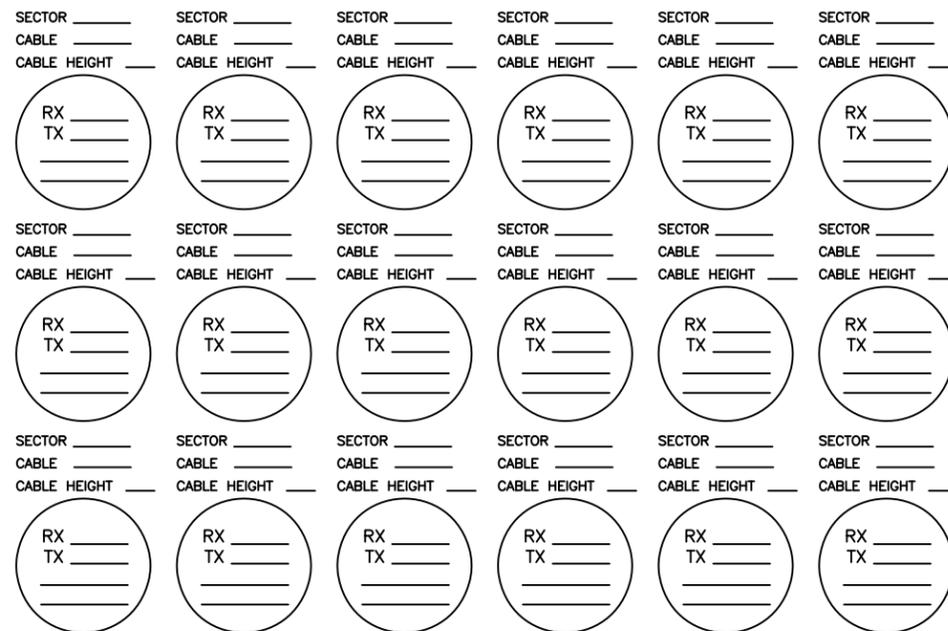
**CABLE MARKING LOCATIONS DIAGRAM**

**COAX COLOR CODING AND IDENTIFICATION  
DETAIL FOR GREENFIELDS**

DETAIL 1  
NTS E.11

**CABLE PORT DIAGRAM**

CAUTION: HARMFUL RF ENERGY EXISTS ON THESE LINES



ALL RF CABLE SHALL BE MARKED AS PER CABLE MARKING LOCATIONS TABLE BELOW:

CABLE MARKING LOCATIONS TABLE			
NO.	TAPE	TAG	LOCATIONS
1.	X		EACH TOP-JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS.
2.	X		EACH MAIN COAX SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS NEAR THE TOP-JUMPER CONNECTION AND WITH (1) SET OF 3/4" WIDE COLOR BANDS JUST PRIOR TO ENTERING THE BTS OR TRANSMITTER BUILDING.
3.		X	CABLE ENTRY PORT ON THE INTERIOR OF THE SHELTER. (IF SHELTER IS USED)
4.	X		ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.
5.	*	*	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.

(\* - DENOTES TAG OR TAPE.)



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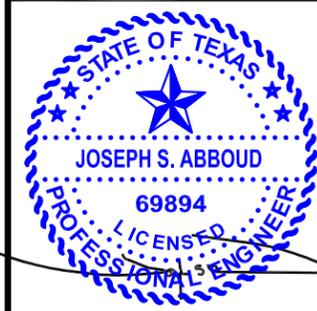
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BRYAN, TEXAS 77807

SHEET NUMBER: E.11

SHEET TITLE: COAXIAL CABLE MARKINGS

DRAWN BY: V.M. CHECK BY: JSA

IED PROJECT NUMBER: