



The Town of Hilton Head Island Regular Design Review Board Meeting

Tuesday, July 26, 2011

1:15 p.m. – Benjamin M. Racusin Council Chambers

AGENDA

As a Courtesy to Others Please Turn Off All Cell Phones and Pagers during the Meeting.

- 1. Call to Order**
- 2. Roll Call**
- 3. Freedom of Information Act Compliance**
Public notification of this meeting has been published, posted, and mailed in compliance with the Freedom of Information Act and the Town of Hilton Head Island requirements
- 4. Approval of Agenda**
- 5. Approval of Minutes - Meeting of July 12, 2011**
- 6. Staff Report**
- 7. Board Business**
- 8. Unfinished Business**
- 9. New Business**
 - A) DR11028- IHOP- Minor External Change
 - B) DR11029- Cell Tower Co-Locate 856 Wm. Hilton Parkway- Alteration Addition
- 10. Appearance by Citizens**
- 11. Adjournment**

Please note that a quorum of Town Council may result if four (4) or more of Town Council members attend this meeting.

The Town of Hilton Head Island
DESIGN REVIEW BOARD
Minutes of the Tuesday, July 12, 2011 Meeting
1:15pm – Benjamin M. Racusin Council Chambers

DRAFT

Board Members Present: Chairman Todd Theodore, Vice Chairman Scott Sodemann,
Jennifer Moffett, Tom Parker, and Debra Welch

Board Members Absent: Galen Smith

Council Members Present: Mayor Pro Tem Ken Heitzke and Bill Ferguson

Town Staff Present: Mike Roan, Urban Design Administrator
Richard Spruce, Plans Review Administrator
Kathleen Carlin, Administrative Assistant

1. CALL TO ORDER

Chairman Theodore called the meeting to order at 1:15pm.

2. ROLL CALL

3. FREEDOM OF INFORMATION ACT COMPLIANCE

4. SWEARING IN OF BOARD MEMBERS

Mayor Pro Tem Ken Heitzke performed the swearing in ceremony for Ms. Jennifer Moffett, Mr. Tom Parker, and Mr. Todd Theodore. The term of service is July 1, 2011 – June 30, 2014. On behalf of Town Council, Mayor Pro Tem Heitzke expressed his appreciation to Ms. Moffett, Mr. Parker and Mr. Theodore for their continued service to the Design Review Board and to the Town of Hilton Head Island.

5. APPROVAL OF THE AGENDA

The agenda was **approved** as presented by general consent.

6. APPROVAL OF THE MINUTES

The minutes of the June 28, 2011 meeting were **approved** as amended by general consent.

7. STAFF REPORT

None

8. BOARD BUSINESS

None

9. UNFINISHED BUSINESS

Park Plaza - Kanaley's Restaurant - Outdoor Bar - Alteration Addition – DR110026

Mr. Roan presented a brief history of the project. The applicant has returned with a submission that addresses many of the Board's previous comments including those provided on June 28th. The Board had requested additional information regarding how the project resolves into the building and

how it resolves into the site. The Board had also requested additional landscaping details, additional information regarding the lighting, and additional information regarding the rafters (going from singles to doubles).

Mr. Roan reviewed the materials and provided additional information on the new bar with a granite top. The color of the granite top is not known at this time. ADA requirements have been addressed by the applicant. Mr. Roan presented the elevations including details related to the rafter tails. Mr. Roan also presented some additional landscaping information. Following the staff's presentation, Chairman Theodore requested that the applicant make his presentation.

Mr. Dale Johnson, Architect, presented statements in support of the application. The applicant and the Board discussed several items including plywood panel details, the closure panels, and the use of railroad ties. The Board recommended that the plywood panels be given more detailing (trim, stucco or perhaps shutters) for a more finished look. The Board also stated some concern with the use of the railroad ties (due to a trip hazard). The Board and the applicant also discussed the existing sidewalk and the location of trees. At the completion of the discussion, Chairman Theodore requested that a motion be made.

Mr. Parker made a **motion to approve** the Park Plaza - Kanaley's Restaurant – Outdoor Bar Alteration/Addition application with the following conditions: (1) the plywood panels shall be detailed to provide either an edge relief detail or a shuttered look. Staff shall review and approve this condition; and (2) the retaining, if required, shall match any existing on the site. Ms. Welch **seconded** the motion and the motion **passed** with a vote of 5-0-0.

9. ADJOURNMENT

The meeting was adjourned at 1:50pm.

Submitted By:

Approved By:

Kathleen Carlin
Administrative Assistant

Todd Theodore
Chairman



Town of Hilton Head Island
 Community Development Department
 One Town Center Court
 Hilton Head Island, SC 29928
 Phone: 843-341-4757 Fax: 843-842-8908
www.hiltonheadislandsc.gov

FOR OFFICIAL USE ONLY	
Date Received:	<u>7-11-11</u>
Accepted by:	<u>[Signature]</u>
App. #: DR	<u>110028</u>
Meeting Date:	_____

Applicant/Agent Name: Tony Lopez Company: 4475 INC
 Mailing Address: 439 William Hilton Pkwy City: HILTON HEAD State: SC Zip: 29926
 Telephone: 980-621-6217 Fax: 704-784-5667 E-mail: MWM@CTC.NET
 Project Name: HOV Project Address: 439 William Hilton Pkwy H.H SC 29926
 Parcel Number [PIN]: R 511 008 000 0264 0000
 Zoning District: _____ Overlay District(s): 510-HILTON HEAD PSD

DESIGN REVIEW BOARD (DR) SUBMITTAL REQUIREMENTS

Digital Submissions may be accepted via e-mail by calling 843-341-4757.

Project Category:

- New Development – Conceptual
- New Development – Final, indicate Project Number
- Alteration/Addition
- Minor External Change

Submittal Requirements for *All* projects:

NA Architectural Review Board (ARB) Notice of Action (if applicable): When a project is within the jurisdiction of an ARB, the applicant shall submit such ARB's written notice of action per LMO Section 16-3-1004. Submitting an application to the ARB to meet this requirement is the responsibility of the applicant.

Filing Fee, New Development \$175, Alterations/Additions \$100, Minor External \$50 cash or check made payable to the Town of Hilton Head Island.

Additional Submittal Requirements:

New Development – Conceptual Approval

- A survey (1"=30' minimum scale) of property lines, existing topography and the location of trees meeting the tree protection regulations of Sec. 16-3-405, and if applicable, location of bordering streets, marshes and beaches.
- A site analysis study to include specimen trees, access, significant topography, wetlands, buffers, setbacks, views, orientation and other site features that may influence design.
- A draft written narrative describing the design intent of the project, its goals and objectives and how it reflects the site analysis results.
- Context photographs of neighboring uses and architectural styles.
- Conceptual site plan (to scale) showing proposed location of new structures, parking areas and landscaping.
- Conceptual sketches of primary exterior elevations showing architectural character of the proposed development, materials, colors, shadow lines and landscaping.

Proposed changes to the exterior of the Hilton Head IHOP, 439 William Hilton Head Parkway SC 29926.

APD # DR110028

1. Reface the two columns in the front of the building, with a cultured stone product. (Manufacturer Owens Corning / Color, Golden Buckeye #528458)
 2. A copper panel will be installed between the two columns in front of the building entrance. (Manufacturer, Berridge Manufacturing/ color, copper cote)
-



Exterior Materials

National Account Customer Service
888-615-8169, option 2
www.gliddenprofessional.com

EP-8 N/A

EP-9 N/A



CP-1

Copper Panel

CP-1
Manufacturer: Berridge Manufacturing
Series: L-Panel
Color: Copper Cote
Panel Width: 11-5/8"
Location: Entry Peak Faces
Contact: Berridge Manufacturing
800. 669. 0009
www.berridge.com

IHOP

RESTAURANT



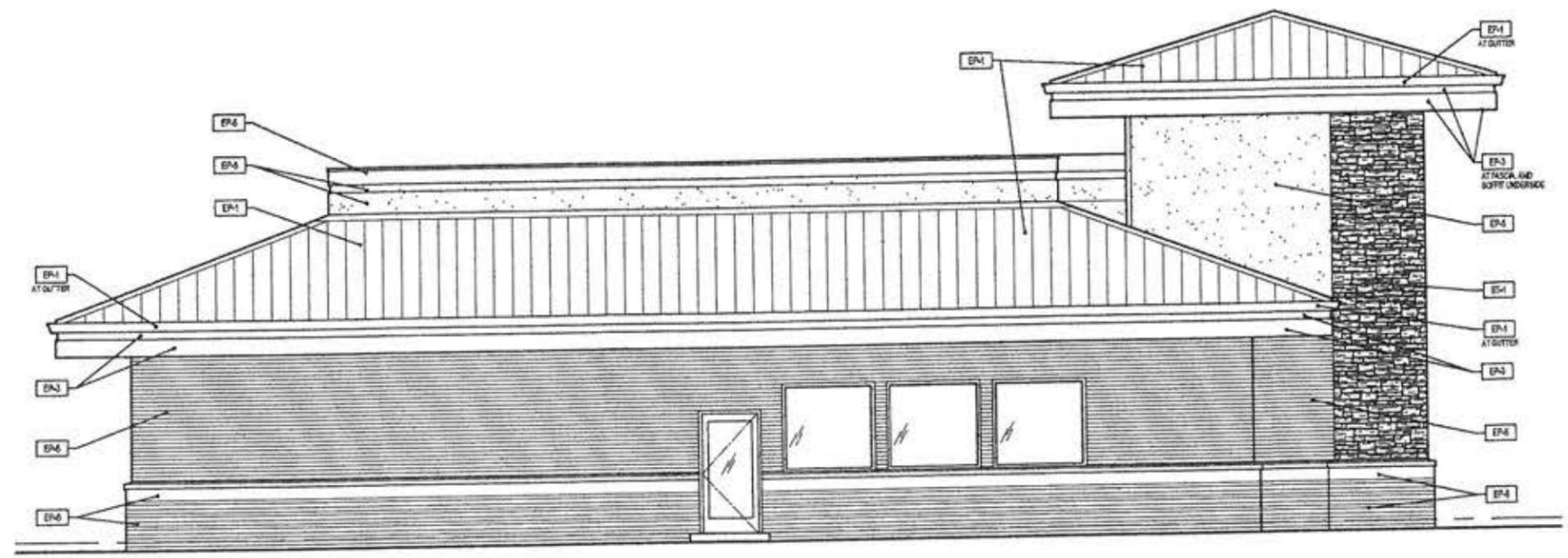
Welcome



HOURS

Sun - Thurs
7am - 10pm
Fri - Sat
7am - 10pm
(847) 681-7733

WELCOME
TO IHOP



Typical D6.0 Building Remodel

Exterior Elevations



IHOP
RESTAURANT

OPEN 24 HOURS
Fri & Sat

VYJ-2681

199-5724





IHOP
RESTAURANT

OPEN 24 HOURS
Fri & Sat

\$4.99
Breakfast
Special

DESIGN TEAM/ DRB COMMENT SHEET

*The comments below are staff recommendations to the Design Review Board (DRB),
and do not constitute DRB approval or denial*

PROJECT	IHOP- Minor External Change	DRB#	DR110028	
DATE	7/26/2011	RECOMMEND APPROVE <input type="checkbox"/>	RECOMMEND APPROVE W/COND. <input type="checkbox"/>	RECOMMEND DENY <input checked="" type="checkbox"/>

ARCHITECTURAL DESIGN

Applicant wishes to reface what are currently stucco columns at the entry with a cultured stone product. Additionally, the applicant would like to place a "copper- finished" panel on the area bounded by the columns and the storefront system.

While the stone would add a quality material to the entry, the stone is foreign to the island's palette and not in keeping with the Design Guide. Continuing upward with the same brick found at the water table might be more appropriate if the applicant still wishes to accent these elements.

Offsetting the panel at the entry would also accentuate it, but the finished proposed doesn't patina, and often ages with an artificial look. Perhaps a warmer material might be more appropriate.



Town of Hilton Head Island
 Community Development Department
 One Town Center Court
 Hilton Head Island, SC 29928
 Phone: 843-341-4757 Fax: 843-842-8908
www.hiltonheadislandsc.gov

FOR OFFICIAL USE ONLY	
Date Received:	_____
Accepted by:	_____
App #: DR	_____
Meeting Date:	_____

Applicant/Agent Name: Jay Sanders Company: AT&T mobility
 Mailing Address: 5405 Windward Pkwy City: Alpharetta State: GA Zip: 30004
 Telephone: 404-934-5468 Fax: 888-736-3961 E-mail: Jay@telecom-development.com
 Project Name: 410-433 Project Address: 856 William Hilton Pkwy
 Parcel Number [PIN]: R550 011 000 0026 0000
 Zoning District: OL Overlay District(s): COR

DESIGN REVIEW BOARD (DR) SUBMITTAL REQUIREMENTS

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 New Development – Final, indicate Project Number Minor External Change

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Additional Submittal Requirements:

New Development – Conceptual Approval

- A survey (1"=30' minimum scale) of property lines, existing topography and the location of trees meeting the tree protection regulations of Sec. 16-3-405, and if applicable, location of bordering streets, marshes and beaches.
- A site analysis study to include specimen trees, access, significant topography, wetlands, buffers, setbacks, views, orientation and other site features that may influence design.
- A draft written narrative describing the design intent of the project, its goals and objectives and how it reflects the site analysis results.
- Context photographs of neighboring uses and architectural styles.
- Conceptual site plan (to scale) showing proposed location of new structures, parking areas and landscaping.
- Conceptual sketches of primary exterior elevations showing architectural character of the proposed development, materials, colors, shadow lines and landscaping.

Additional Submittal Requirements:

New Development – Final Approval

- _____ A final written narrative describing how the project conforms with the conceptual approval and design review guidelines of Sec. 16-4-503.
- _____ Final site development plan meeting the requirements of Sec. 16-3-303.F.
- _____ Final site lighting and landscaping plans meeting the requirements of Sec. 16-3-304 and Sec. 16-3-305.
- _____ Final floor plans and elevation drawings (1/8"=1'-0" minimum scale) showing exterior building materials and colors with architectural sections and details to adequately describe the project.
- _____ A color board (11"x17" maximum) containing actual color samples of all exterior finishes, keyed to the elevations, and indicating the manufacturer's name and color designation.
- _____ Any additional information requested by the Design Review Board at the time of concept approval, such as scale model or color renderings, that the Board finds necessary in order to act on a final application.

Additional Submittal Requirements:

Alterations/Additions and Minor External Changes

- _____ A written narrative describing how project conforms to design guidelines of Section 16-4-503.
- _____ Photographs and/or drawings of existing development.
- _____ Drawings of the proposed development – 11"x 17".
- _____ Material/color samples of existing and proposed changes - 8 1/2"X 14" *Maximum*; Stating manufacturer and material name

Note: All application items must be received by the deadline date in order to be reviewed by the DRB per LMO Section 16-3-106.

A representative for each agenda item is strongly encouraged to attend the meeting.

Are there recorded private covenants and/or restrictions that are contrary to, conflict with, or prohibit the proposed request? If yes, a copy of the private covenants and/or restrictions must be submitted with this application. YES NO

To the best of my knowledge, the information on this application and all additional documentation is true, factual, and complete. I hereby agree to abide by all conditions of any approvals granted by the Town of Hilton Head Island. I understand that such conditions shall apply to the subject property only and are a right or obligation transferable by sale.

I further understand that in the event of a State of Emergency due to a Disaster, the review and approval times set forth in the Land Management Ordinance may be suspended.



SIGNATURE

7-12-11

DATE

July 11, 2011

Town of Hilton Head
Community Development Department
One Town Center Court
Hilton Head Island, South Carolina 29928

RE: Written narrative describing the scope of the project.

Dear Mr. Roan,

AT&T Mobility has interest in collocating on the existing 180 ft. Global Tower Partner's tower located at 856 William Hilton Parkway. AT&T will be installing their panel antennas at the 110 ft. rad center on the tower. The intent is to improve AT&T coverage along William Hilton Parkway, the surrounding commercial businesses and the residential communities.

AT&T will not be expanding the existing compound or increasing the height of the tower.

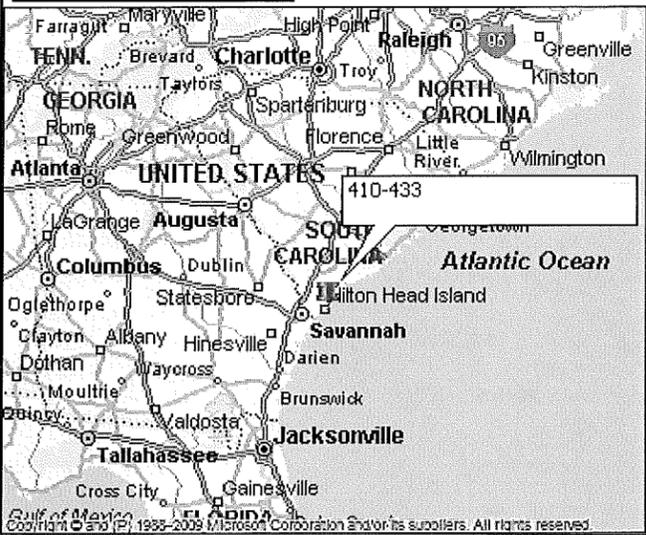
If there is any additional question about AT&T's collocation, please do not hesitate to contact me.

Sincerely,

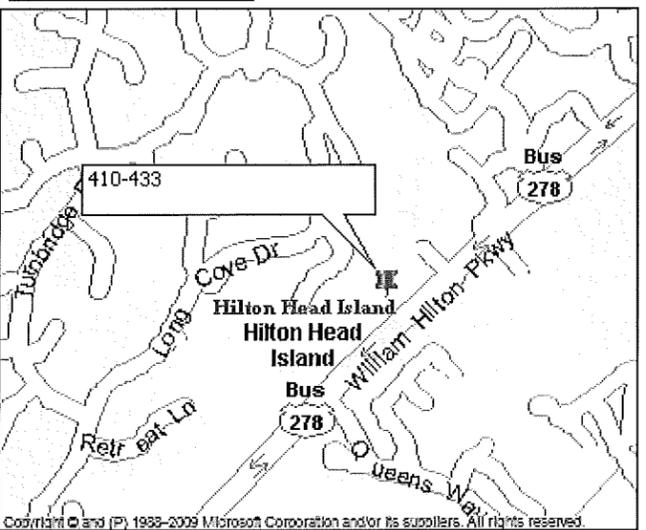


Jay Sanders
404-934-5468

LOCATION MAP



VICINITY MAP



DRIVE DIRECTIONS

FROM I-75/I-95 IN DOWNTOWN ATLANTA:
 TAKE I-75 SOUTH THE I-16 EAST TO I-95 NORTH. PROCEED FOR 21.5 MILES TO EXIT 8, US-278 EAST, MERGE ONTO US-278 EAST AND GO AHEAD FOR 21.1 MILES AND MERGE ONTO WILLIAM HILTON PARKWAY. SITE IS 7.2 MILES AHEAD ON THE RIGHT.

DEPARTMENT	NAME / SIGNATURE	DATE
LAND OWNER / TOWER OWNER		
SITE ACQUISITION AGENT		
ZONING / PERMITTING AGENT		
A/E MANAGER		
CONSTRUCTION MANAGER		
RF ENGINEER		

SITE NUMBER:

410-433 NSB

SITE NAME:

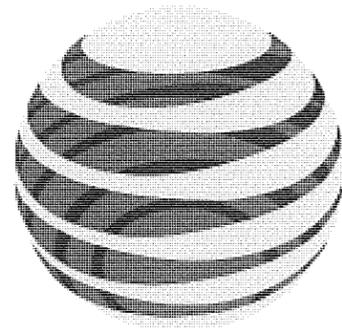
HHI BIC 23

TOWER OWNER:

GLOBAL TOWER PARTNERS

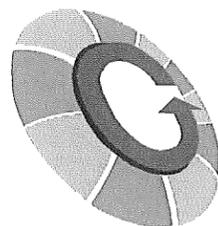
SITE: SC-5037

PREPARED FOR:



at&t

PROJECT MANAGER:



Goodman Networks

Network Knowledge... Delivered.

PREPARED BY:



30 MANSELL CT
 SUITE 103
 ROSWELL, GA 30076
 678-280-2325



PROJECT INFORMATION

SITE ADDRESS: 870 WILLIAM HILTON PARKWAY
 HILTON HEAD ISLAND, SC 29928

LATITUDE: 32° 10' 23.30"
 LONGITUDE: 80° 44' 6.58"

JURISDICTION: TOWN OF HILTON HEAD ISLAND

TOWER OWNER: GLOBAL TOWER PARTNERS
 750 PARK OF COMMERCE BLVD.
 SUITE 300
 BOCA RATON, FL 33487

APPLICANT: AT&T
 5405 WINDWARD PARKWAY
 ALPHARETTA, GA 30004

PROJECT MANAGER: GOODMAN NETWORKS, INC.
 5895 WINDWARD PARKWAY
 SUITE 250
 ALPHARETTA, GA 30005
 CHANCE RENKEL
 464-236-3828

ENGINEER: PM&A
 30 MANSELL COURT, SUITE 103
 ROSWELL, GA 30076
 PATRICK W MARSHALL, P.E.
 678-280-2325

POWER: PALMETTO ELECTRIC COOP.

TELCO: HARGRAY

DRAWING INDEX

- T-1 TITLE SHEET & PROJECT INFORMATION
- C-1 GENERAL NOTES
- C-2 DETAILED SITE PLAN
- C-3 TOWER ELEVATION & DETAILS
- C-4 GRADING & EROSION CONTROL PLAN
- C-5 GRADING & EROSION CONTROL DETAILS
- C-6 GRADING & EROSION CONTROL SPECIFICATIONS
- C-7 EQUIPMENT FOUNDATION DETAILS & NOTES
- C-8 EQUIPMENT LAYOUT
- C-9 ICE BRIDGE DETAILS
- C-10 SITE SIGNAGE
- C-11 LTE EQUIPMENT DETAILS
- C-12 LTE EQUIPMENT DETAILS
- E-1 ELECTRICAL SPECS & ONE-LINE DIAGRAM
- E-2 ELECTRICAL SITE PLAN
- E-3 GROUNDING SITE PLAN
- E-4 GROUNDING DETAILS
- E-5 COAX COLOR CODE TEMPLATE & RFDS
- E-6 GENERATOR FOUNDATION DETAILS
- E-7 GENERATOR ONE-LINE DIAGRAM

RFDS: GA_410_433_TBD_10153571_061411_0



CALL BEFORE YOU DIG
 SOUTH CAROLINA ONE-CALL
 811



PM&A
 30 MANSELL CT
 SUITE 103
 ROSWELL, GA 30076
 678-280-2325



DESCRIPTION:	DATE	NUM
ISSUED FOR REVIEW	06/24/11	A
ISSUED FOR PERMITTING & CONSTRUCTION	07/06/11	O

410-433

TITLE SHEET & PROJECT INFORMATION

DESIGNED: JTG
 DRAWN: JTG
 CHECKED: PWM

JOB #: GN6824

T-1

GENERAL NOTES:

1. THE GENERAL CONTRACTOR MUST VERIFY ALL DIMENSIONS, CONDITIONS AND ELEVATIONS BEFORE STARTING WORK. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH ACCEPTED CONSTRUCTION PRACTICES.
2. IT IS THE INTENTION OF THESE DRAWINGS TO SHOW THE COMPLETED INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, TIES, FORM WORK, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL ORDINANCES, TO SAFELY EXECUTE ALL WORK AND SHALL BE RESPONSIBLE FOR SAME. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES.
3. THE CONTRACTOR SHALL USE ADEQUATE NUMBER OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHOD NEEDED FOR PROPER PERFORMANCE OF THE WORK.
4. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES TO INDEMNIFY AND HOLD DESIGN ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT.
5. SITE GROUNDING SHALL COMPLY WITH AT&T MOBILITY ATLANTA GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH AT&T MOBILITY ATLANTA GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN. GROUNDING SHALL BE COMPLETED BEFORE ERECTION OF THE TOWER.
6. ALL WORK SHALL COMPLY WITH OSHA AND STATE SAFETY REQUIREMENTS. PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTION AND UTILITIES SHALL BE ESTABLISHED PRIOR TO FOUNDATION INSTALLATION. IF TEMPORARY LIGHTING AND MARKING IS REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION (FAA), IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE NECESSARY LIGHTS AND NOTIFY THE PROPER AUTHORITIES IN THE EVENT OF A PROBLEM.
7. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES AND ORDINANCES. THE MOST STRINGENT CODE WILL APPLY IN THE CASE OF DISCREPANCIES OR DIFFERENCES IN THE CODE REQUIREMENTS.
8. ANY DAMAGE TO ADJACENT PROPERTIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
9. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AMPLE NOTICE TO THE BUILDING INSPECTION DEPARTMENT TO SCHEDULE THE REQUIRED INSPECTIONS. A MINIMUM OF 24 HOURS OF NOTICE SHALL BE GIVEN AND THE BUILDING INSPECTION DEPARTMENTS HAVE REQUESTED THAT GROUPS OF TWO OR THREE SITES BE SCHEDULED AT ONE TIME IF POSSIBLE.
10. CONSTRUCTION MANAGER WILL CONFIRM FAA APPROVAL OF TOWER LOCATION BY ISSUING TOWER RELEASE FORM. NO TOWER SHALL BE CONSTRUCTED UNTIL THE TOWER RELEASE FORM IS ISSUED TO THE CONTRACTOR.
11. THE COMPLETE BID PACKAGE INCLUDES THESE CONSTRUCTION DRAWINGS ALONG WITH THE SPECIFICATIONS AND TOWER DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR REVIEW OF TOTAL BID PACKAGE PRIOR TO BID SUBMITTAL.
12. CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES WITHIN CONSTRUCTION LIMITS PRIOR TO CONSTRUCTION.
13. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE ON THE SITE AT ALL TIMES. SILT AND EROSION CONTROL SHALL BE MAINTAINED ON THE DOWNSTREAM SIDE OF THE SITE AT ALL TIMES. ANY DAMAGE TO ADJACENT PROPERTIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
14. CLEARING OF TREES AND VEGETATION ON THE SITE SHOULD BE HELD TO A MINIMUM. ONLY THE TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED. ANY DAMAGE TO PROPERTY OUTSIDE THE LEASE PROPERTY SHALL BE REPAIRED BY THE CONTRACTOR.
15. ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES PRIOR TO DISPOSAL.
16. SEEDING AND MULCHING OF THE SITE SHALL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE SITE DEVELOPMENT. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING AN ADEQUATE COVER OF VEGETATION OVER THE SITE FOR A ONE YEAR PERIOD.
17. FOR ITEMS THAT SHALL BE PROVIDED BY THE OWNER & INSTALLED BY THE CONTRACTOR, SEE "OWNER SUPPLIED MATERIAL LIST" INSERTED IN THIS DRAWING PACKAGE.
18. PERMITS: OBTAIN AND PAY FOR REQUIRED PERMITS, LICENSES, FEES, INSPECTIONS, ETC.
19. RECORD DRAWINGS: MAINTAIN A RECORD OF ALL CHANGES, SUBSTITUTIONS BETWEEN WORK AS SPECIFIED AND INSTALLED. RECORD CHANGES ON A CLEAN SET OF CONTRACT DRAWINGS WHICH SHALL BE TURNED OVER TO THE CONSTRUCTION MANAGER UPON COMPLETION OF THE PROJECT.
20. REFER TO SITE CIVIL SPECIFICATIONS SECTION 13000 - REFERENCE STANDARDS
21. THE CONTRACTOR SHALL VISIT THE SITE BEFORE BIDDING ON THE WORK CONTAINED IN THIS DESIGN PACKAGE.

EXCAVATION & GRADING NOTES:

1. ALL CUT AND FILL SLOPES SHALL BE 3 : 1 MAXIMUM.
2. ALL EXCAVATIONS ON WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIALLY HORIZONTAL ON UNDISTURBED AND UNFROZEN SOIL AND BE FREE FROM LOOSE MATERIAL AND EXCESS GROUND WATER. DRAINAGE FOR EXCESS GROUND WATER SHALL BE PROVIDED IF REQUIRED.
3. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC MATERIAL. IF SOUND SOIL IS NOT REACHED AT THE DESIGNATED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION BE FILLED WITH CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION.
4. ANY EXCAVATION OVER THE REQUIRED DEPTH SHALL BE FILLED WITH EITHER MECHANICALLY COMPACTED GRANULAR MATERIAL OF CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. STONE, IF USED, SHALL NOT BE USED AS COMPILING CONCRETE THICKNESS.
5. AFTER COMPLETION OF THE FOUNDATION AND OTHER CONSTRUCTION BELOW GRADE, AND BEFORE BACK FILLING, ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH.
6. BACK FILL SHALL BE:
 - APPROVED MATERIALS CONSISTING OF EARTH, LOAM, SANDY CLAY, SAND, GRAVEL, OR SOFT SHALE;
 - FREE FROM CLODS OR STONES OVER 2-1/2" MAXIMUM DIMENSIONS;
 - IN LAYERS AND COMPACTED.
7. SITE FILL MATERIAL AND FOUNDATION BACK FILL SHALL BE PLACED IN LAYERS, MAXIMUM 6" DEEP BEFORE COMPACTION. EACH LAYER SHALL BE SPRINKLED IF REQUIRED AND COMPACTED BY HAND OPERATED OR MACHINE TAMPERS TO 95% OF MAXIMUM DENSITY, AT THE OPTIMUM MOISTURE CONTENT ±2% AS DETERMINED BY ASTM DESIGNATION D-698, UNLESS OTHERWISE APPROVED. SUCH BACK FILL SHALL NOT BE PLACED BEFORE 3 DAYS AFTER PLACEMENT OF CONCRETE.
8. THE FOUNDATION AREA SHALL BE GRADED TO PROVIDE WATER RUNOFF AND PREVENT WATER FROM STANDING. THE FINAL GRADE SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE FOUNDATION AND SHALL THEN BE COVERED WITH 4" DEEP COMPACTED STONE OR GRAVEL.
9. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL CITY, COUNTY AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE SUCH MEASURES AS SILT FENCES, STAN BALE SEDIMENT BARRIERS AND CHECK DAMS.
10. FILL PREPARATION: REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACING FILLS. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SO FILL MATERIAL WILL BOND WITH EXISTING SURFACE. WHEN SUBGRADE OR EXISTING GROUND SURFACE TO RECEIVE FILL HAS A DENSITY LESS THAN THAT REQUIRED FOR FILL, BREAK UP GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION OR AERATE SOIL AND RECOMPACT TO REQUIRED DENSITY.
11. REPLACE THE EXISTING WEARING SURFACE ON AREAS WHICH HAVE BEEN DAMAGED OR REMOVED DURING CONSTRUCTION OPERATIONS. SURFACE SHALL BE REPLACE TO MATCH EXISTING ADJACENT SURFACING AND SHALL BE OF THE SAME THICKNESS. NEW SURFACE SHALL BE FREE FROM CORRUGATIONS AND WAVES. EXISTING SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED IF INJURIOUS AMOUNTS OF EARTH, ORGANIC MATERIAL, OF OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ALL ADDITIONAL RESURFACING MATERIAL AS REQUIRED. BEFORE SURFACING IS REPLACED, SUBGRADE SHALL BE GRADED TO CONFORM TO REQUIRED SUBGRADE ELEVATIONS, AND LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED. DEPRESSIONS IN THE SUBGRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. SURFACING SHALL NOT BE USED FOR FILLING DEPRESSIONS IN THE SUBGRADE.
12. PROTECT EXISTING SURFACING AND SUBGRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING OR OTHER SUITABLE MATERIALS DESIGNED TO SPREAD EQUIPMENT LOADS. REPAIR DAMAGE TO EXISTING GRAVEL SURFACING OR SUBGRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTOR'S OPERATIONS. DAMAGED GRAVEL SURFACING SHALL BE RESTORED TO MATCH THE ADJACENT UNDAMAGED GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS.
13. DAMAGE TO EXISTING STRUCTURES AND UTILITIES RESULTING FROM CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED / REPLACED TO OWNER'S SATISFACTION AT CONTRACTOR'S EXPENSE.
14. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH PROPERTY OWNER SO AS TO AVOID INTERRUPTIONS TO PROPERTY OWNER'S OPERATIONS.
15. ENSURE POSITIVE DRAINAGE DURING AND AFTER COMPLETION OF CONSTRUCTION.
16. RIPRAP SHALL BE CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY, AND FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCE.

LEGEND

- X — FENCE
- [550] — CONTOUR LINE
- - - - - - PROPERTY LINE / ROW
- - - - - - LEASE AREA
- - - - - EASEMENT
- DISCONNECT SWITCH
- Ⓜ METER
- Ⓢ CIRCUIT BREAKER
- ⓧ CODED NOTE NUMBER
- Ⓡ CHEMICAL GROUND ROD
- Ⓡ GROUND ROD
- ⓇⓈ GROUND ROD WITH INSPECTION SLEEVE
- CADWELD TYPE CONNECTION
- COMPRESSION TYPE CONNECTION
- G — GROUND WIRE



NUM	DATE	DESCRIPTION:
A	06/24/11	ISSUED FOR REVIEW
O	07/06/11	ISSUED FOR PERMITTING & CONSTRUCTION

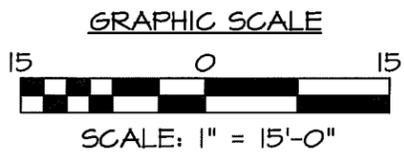
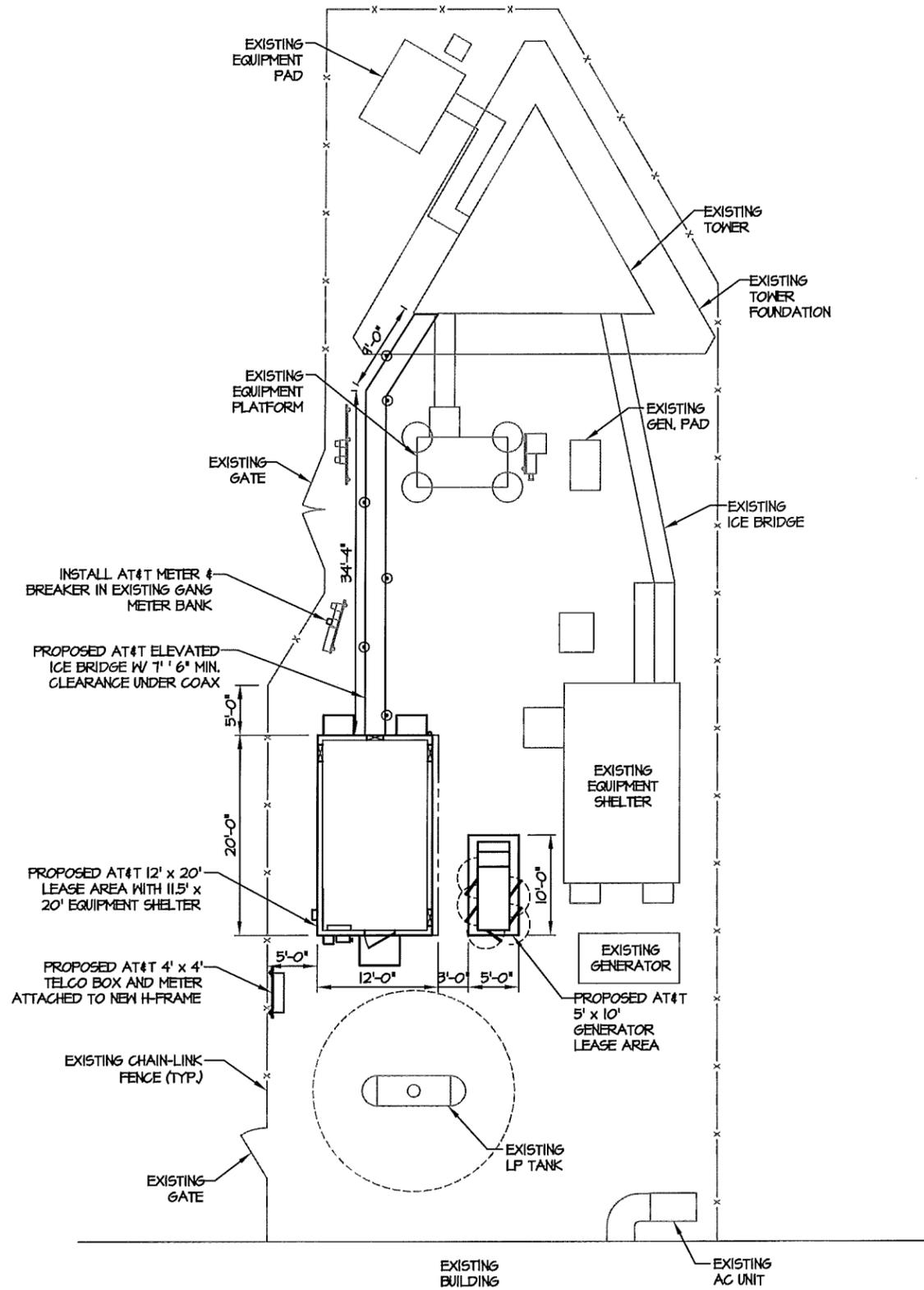
410-433

GENERAL NOTES



DESIGNED: JTG
DRAWN: JTG
CHECKED: PWM

JOB #: GNB24



DETAILED SITE PLAN
 SCALE: 1" = 15'-0"

NUM	DATE	DESCRIPTION:
A	06/24/11	ISSUED FOR REVIEW
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410-433
DETAILED SITE PLAN

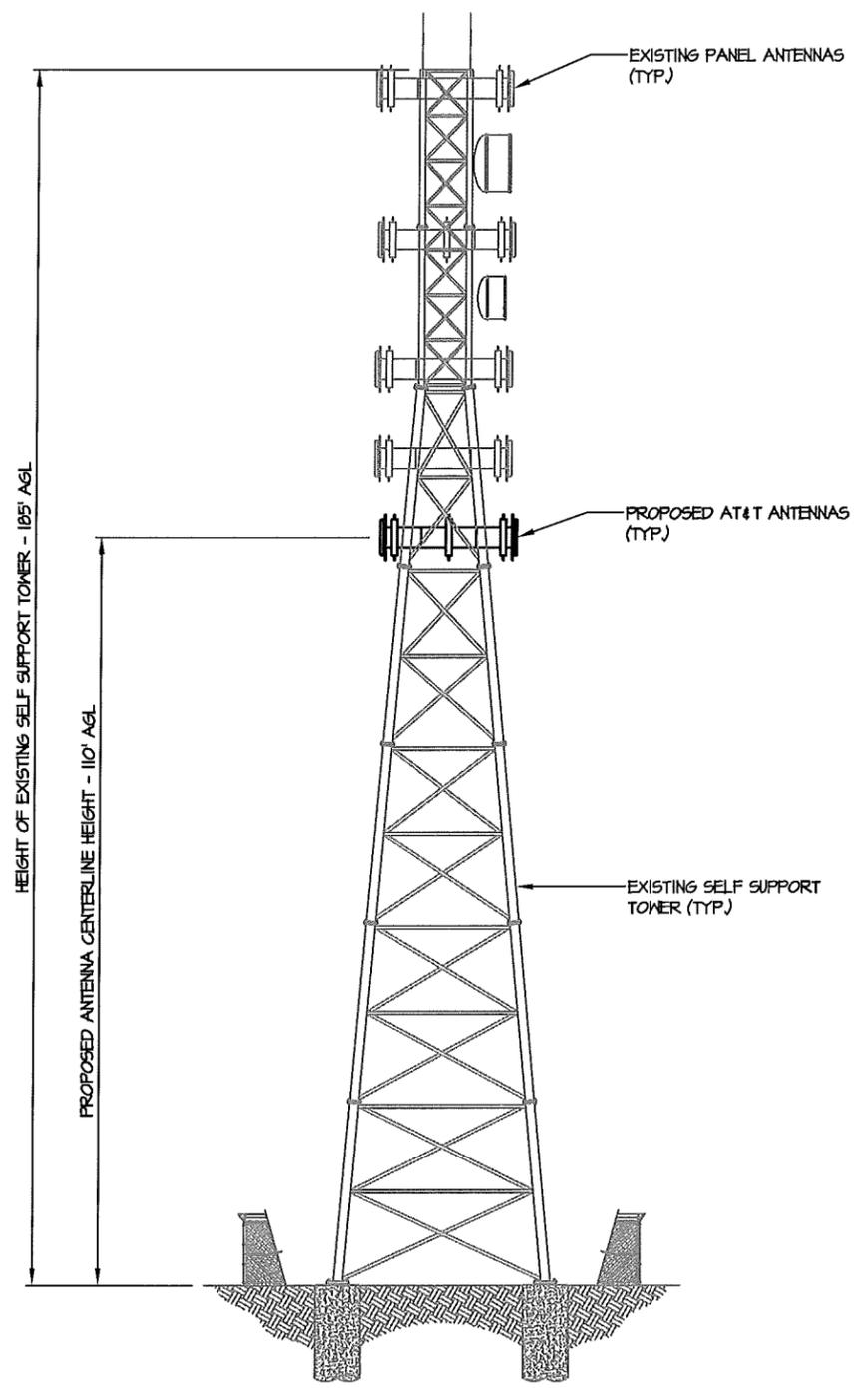
DESIGNED: JTG
 DRAWN: JTG
 CHECKED: PWM

JOB #: GNG824
C-2

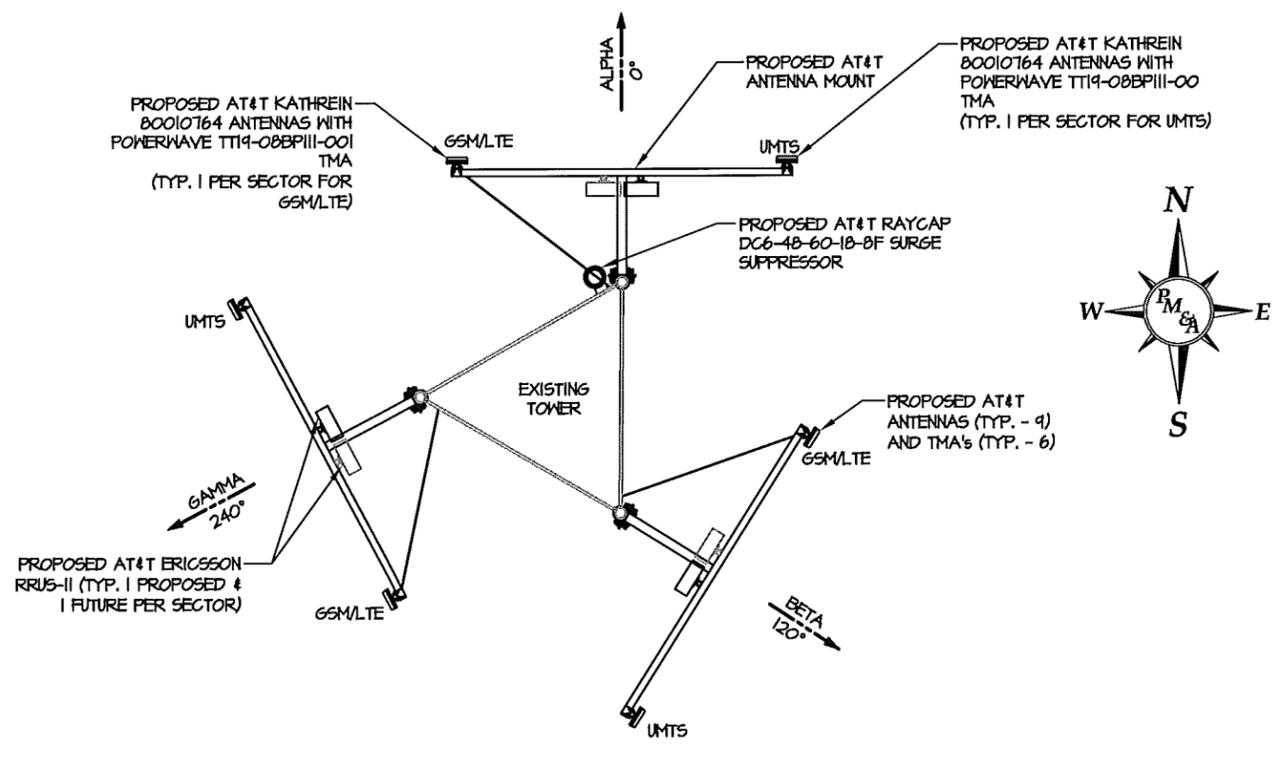




REFER TO THE RFDS ON SHEET E-5; RFDS: GA_410_433_TBD_10153571_061411_0



TOWER ELEVATION
 NTS



ANTENNA ORIENTATION DETAIL
 NTS



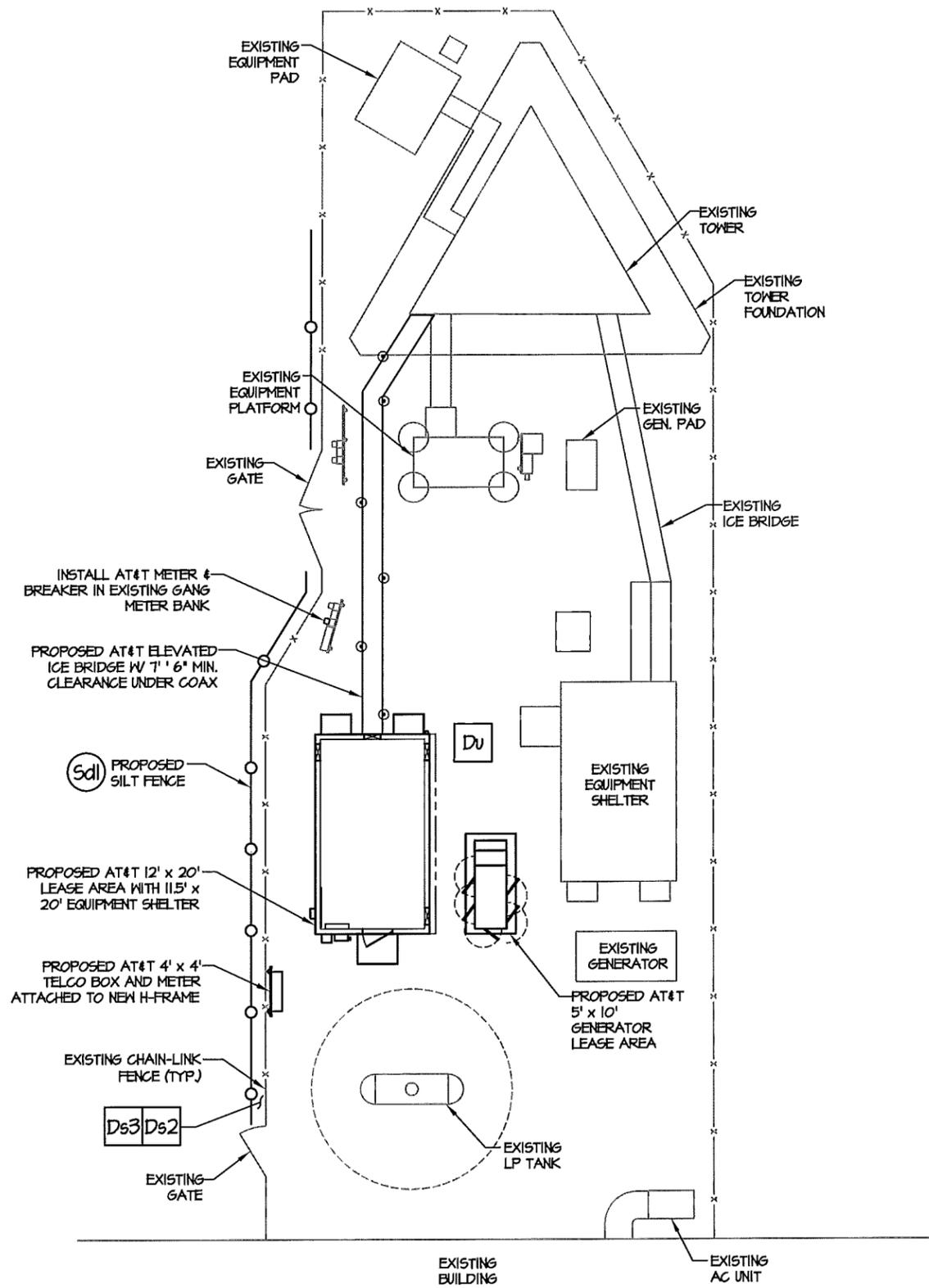
NUM	DATE	DESCRIPTION:
A	06/29/11	ISSUED FOR REVIEW
O	07/06/11	ISSUED FOR PERMITTING & CONSTRUCTION

410-433
TOWER ELEVATION AND DETAILS

DESIGNED: JTG
 DRAWN: JTG
 CHECKED: PWM
 JOB #: 6N6824

C-3

- Co** CONSTRUCTION EXIT - TO REDUCE OR ELIMINATE THE TRANSPORT OF MUD FROM THE CONSTRUCTION AREA ONTO PUBLIC RIGHT-OF-WAYS, STREETS, ALLEYS, SIDEWALKS, OR PARKING AREAS.
- Sd1** TYPE C SEDIMENT BARRIER - TO PREVENT ANY SEDIMENT CARRIED BY SHEET FLOW FROM LEAVING THE SITE AND ENTERING NATURAL DRAINAGE WAYS OR STORM DRAINAGE SYSTEMS.
- Ds2** DISTURBED AREA STABILIZATION (TEMPORARY) - TO ESTABLISH A TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS ON DISTURBED AREAS.
- Ds3** DISTURBED AREA STABILIZATION (PERMANENT) - TO ESTABLISH A PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, VINES, GRASSES, SOD, OR LEGUMES ON DISTURBED AREAS.
- Du** DISTURBED AREA DUST CONTROL - TO CONTROL THE SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADWAYS, AND SIMILAR SITES.

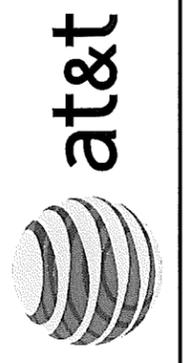


GRAPHIC SCALES



SCALE: 1" = 15'-0"

EROSION CONTROL PLAN
SCALE: 1" = 15'-0"



NUM	DATE	DESCRIPTION:
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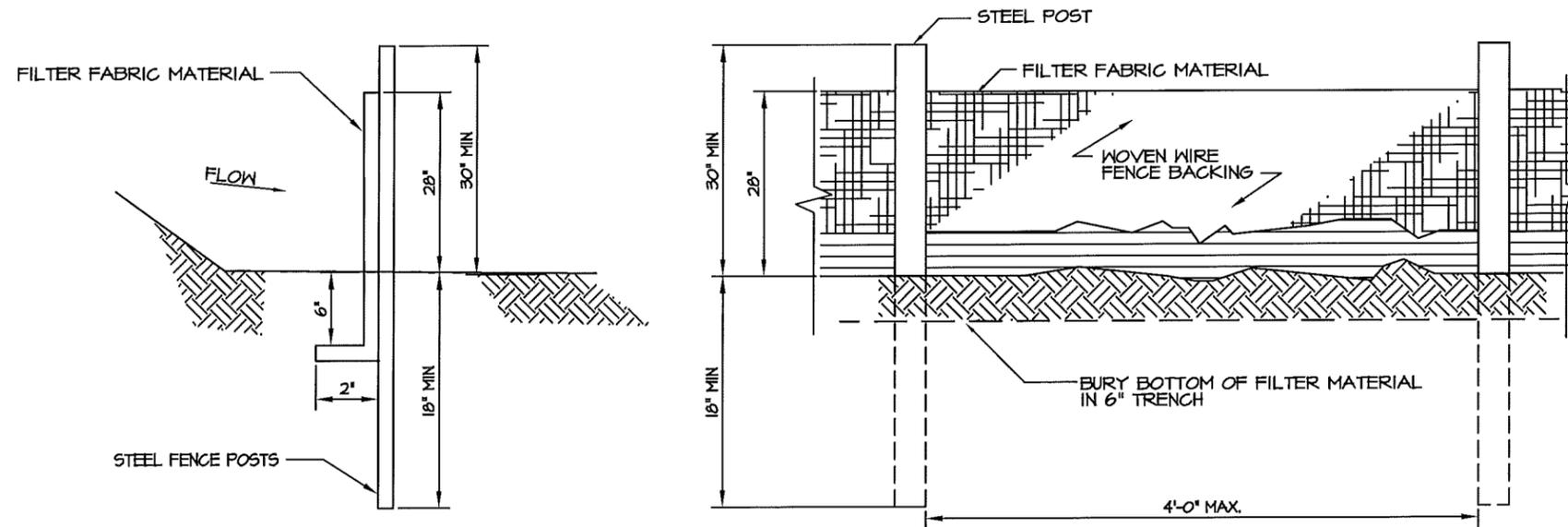
SITE ID: 410-433
GRADING, SEDIMENT & EROSION CONTROL PLAN

DESIGNED: JTG
DRAWN: JTG
CHECKED: PWM

JOB #: GN6824

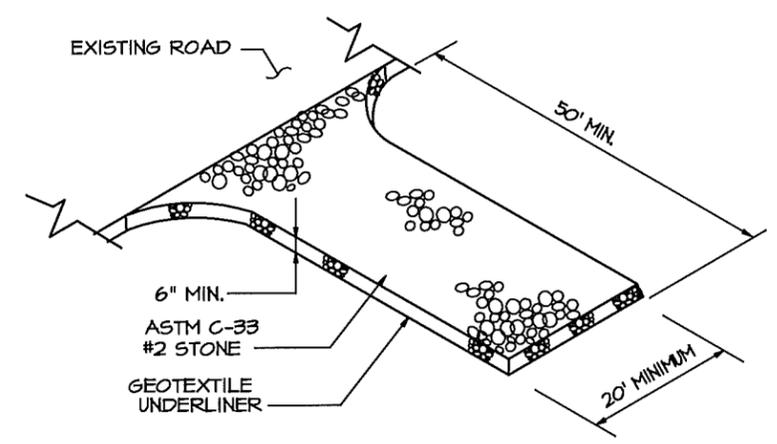
C-4





NOTE: USE 36" DOT APPROVED FABRIC
 USE STEEL POSTS

Sdl-C SILT FENCE, TYPE-C



Co CONSTRUCTION EXIT

NUM	DATE	DESCRIPTION:
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410-433
 GRADING, SEDIMENT &
 EROSION CONTROL DETAILS



DESIGNED: JTG
 DRAWN: JTG
 CHECKED: PWM

JOB #: GNG824

C-5



PIEDMONT VEGETATIVE COVERS

CALENDAR MONTH	TEMPORARY SEED	APPLICATION RATE/ACRE	PERMANENT SEED	APPLICATION RATE/ACRE
1. JANUARY	RYE GRASS	40-50 LB.	UNHULLED BERMUDA SERICEA LESPEDEZA ²	8-10 LB. 30-40 LB. ¹
2. FEBRUARY			UNHULLED BERMUDA SERICEA LESPEDEZA ² FESCUE	8-10 LB. 30-40 LB. 30-50 LB.
3. MARCH	RYE ANNUAL LESPEDEZA WEEPING LOVE GRASS	2-3 BU. 20-25 LB. 4-6 LB.	UNHULLED BERMUDA SERICEA LESPEDEZA ² FESCUE	8-10 LB. 30-40 LB. 30-50 LB.
4. APRIL	RYE BROWN TOP MILLET ANNUAL LESPEDEZA SUDAN ANNUAL	2-3 BU. 30-40 LB. 20-25 LB. 35 LB.	WEEPING LOVE GRASS HULLED BERMUDA BAHIA	4-6 LB. 5-6 LB. 40-60 LB.
5. MAY	WEEPING LOVE GRASS SUDAN GRASS BROWN TOP MILLET	4-6 LB. 35 LB. 30-40 LB.	WEEPING LOVE GRASS HULLED BERMUDA BAHIA	4-6 LB. 5-6 LB. 40-60 LB.
6. JUNE	WEEPING LOVE GRASS SUDAN GRASS BROWN TOP MILLET	4-6 LB. 35 LB. 30-40 LB.	WEEPING LOVE GRASS HULLED BERMUDA BAHIA	4-6 LB. 5-6 LB. 40-60 LB.
7. JULY	WEEPING LOVE GRASS SUDAN GRASS BROWN TOP MILLET	4-6 LB. 35 LB. 30-40 LB.		
8. AUGUST	RYE GRASS WEEPING LOVE GRASS	40-50 LB. 4-6 LB.		
9. SEPTEMBER			TALL FESCUE	30-50 LB.
10. OCTOBER	WHEAT	2-3 BU.	UNHULLED BERMUDA SERICEA LESPEDEZA ² FESCUE	8-10 LB. 30-40 LB. 30-50 LB.
11. NOVEMBER	WHEAT	2-3 BU.	UNHULLED BERMUDA SERICEA LESPEDEZA FESCUE	8-10 LB. 30-40 LB. 30-50 LB.
12. DECEMBER	RYE RYE GRASS WHEAT	2-3 BU. 40-50 LB. 2-3 BU.	UNHULLED BERMUDA SERICEA LESPEDEZA FESCUE	8-10 LB. 30-40 LB. 30-50 LB.

¹ USE A MINIMUM OF 40 LBS. SCARIFIED SEED. THE REMAINDER MAY BE UNSCARIFIED, CLEAN HULLED SEED.
² USE EITHER COMMON SERALA OR INTERSTATE SERICEA LESPEDEZA.

D52 DISTURBED AREA STABILIZATION
(WITH TEMPORARY SEEDING)

D53 DISTURBED AREA STABILIZATION
(WITH PERMANENT VEGETATION)

GENERAL

THIS VEGETATIVE PLAN WILL BE CARRIED OUT ON ROAD CUT AND FILL SLOPES, SHOULDERS, AND OTHER CRITICAL AREAS CREATED BY CONSTRUCTION. SEEDING WILL BE DONE AS SOON AS CONSTRUCTION IN AN AREA IS COMPLETED. PLANTINGS WILL BE MADE TO CONTROL EROSION, TO REDUCE DAMAGE FROM SEDIMENT AND RUNOFF TO DOWNSTREAM AREAS AND TO IMPROVE THE SAFETY AND BEAUTY OF THE DEVELOPMENT AREA.

SOIL CONDITIONS

DUE TO GRADING AND CONSTRUCTION, THE AREAS TO BE TREATED ARE MAINLY SUBSOIL AND SUBSTRATES. FERTILITY IS LOW AND THE PHYSICAL CHARACTERISTICS OF THE EXPOSED MATERIAL ARE UNFAVORABLE TO ALL BUT THE MOST HARDY PLANTS.

TREATMENT SPECIFICATIONS

HYDRAULIC SEEDING EQUIPMENT: WHEN HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS USED, NO GRADING AND SHAPING OR SEEDBED PREPARATION WILL BE REQUIRED. THE FERTILIZER, SEED AND WOOD CELLULOSE FIBER MULCH WILL BE MIXED WITH WATER AND APPLIED IN A SLURRY. ALL SLURRY INGREDIENTS MUST BE COMBINED TO FORM A HOMOGENOUS MIXTURE, AND SPREAD UNIFORMLY OVER THE AREA WITHIN ONE HOUR AFTER MIXTURE IS MADE. STRAW OR HAY MULCH AND ASPHALT EMULSION WILL BE APPLIED WITH BLOWER-TYPE MULCH SPREADING EQUIPMENT WITHIN 24 HOURS AFTER SEEDING. THE MULCH WILL BE SPREAD UNIFORMLY OVER THE AREA, LEAVING ABOUT 25 PERCENT OF THE GROUND SURFACE EXPOSED. THE PER ACRE APPLICATION RATES ARE AS FOLLOWS:

A. SEEDING WITH MULCH: (HYDRAULIC SEEDING EQUIPMENT ON SLOPES 3:1 AND STEEPER)

SEED SPECIES	APPLICATION RATE/ACRE	PLANTING DATES
SERICEA LESPEDEZA, SCARIFIED WEEPING LOVE GRASS, OR COMMON BERMUDA, HULLED	60 LBS. 4 LBS. 6 LBS.	3/1 - 6/15
FESCUE SERICEA LESPEDEZA, UNSCARIFIED	40 LBS. 60 LBS.	9/1 - 10/31
FESCUE SERICEA LESPEDEZA, UNSCARIFIED RYE	40 LBS. 75 LBS. 50 LBS.	11/1 - 2/28
HAY MULCH FOR TEMPORARY COVER	5000 LBS.	6/15 - 8/31

B. TOP DRESSING: APPLY WHEN PLANTS ARE 2 TO 4 INCHES TALL

FERTILIZER (AMMONIUM NITRATE 33.5%)	300 LBS./ACRE
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C. SECOND-YEAR TREATMENT:

FERTILIZER (0-20-20 OR EQUIVALENT)	500 LBS./ACRE
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D52 DISTURBED AREA STABILIZATION
(WITH TEMPORARY SEEDING)

D53 DISTURBED AREA STABILIZATION
(WITH PERMANENT VEGETATION)

GENERAL

THIS VEGETATIVE PLAN WILL BE CARRIED OUT ON ROAD CUT AND FILL SLOPES, SHOULDERS, AND OTHER CRITICAL AREAS CREATED BY CONSTRUCTION. SEEDING WILL BE DONE AS SOON AS CONSTRUCTION IN AN AREA IS COMPLETED. PLANTINGS WILL BE MADE TO CONTROL EROSION, TO REDUCE DAMAGE FROM SEDIMENT AND RUNOFF TO DOWNSTREAM AREAS AND TO IMPROVE THE SAFETY AND BEAUTY OF THE DEVELOPMENT AREA.

SOIL CONDITIONS

DUE TO GRADING AND CONSTRUCTION, THE AREAS TO BE TREATED ARE MAINLY SUBSOIL AND SUBSTRATES. FERTILITY IS LOW AND THE PHYSICAL CHARACTERISTICS OF THE EXPOSED MATERIAL ARE UNFAVORABLE TO ALL BUT THE MOST HARDY PLANTS.

TREATMENT SPECIFICATIONS

CONVENTIONAL SEEDING EQUIPMENT: GRADE, SHAPE, AND SMOOTH WHERE NEEDED TO PROVIDE FOR SAFE EQUIPMENT OPERATION AT SEEDING TIME AND FOR MAINTENANCE PURPOSES. THE LIME AND FERTILIZER IN DRY FORM WILL BE SPREAD UNIFORMLY OVER THE AREA IMMEDIATELY BEFORE SEEDBED PREPARATION. A SEEDBED WILL BE PREPARED BY SCARIFYING TO A DEPTH OF 1 TO 4 INCHES AS DETERMINED ON SITE. THE SEEDBED MUST BE WELL PULVERIZED, SMOOTHED, AND FIRMED. SEEDING WILL BE DONE WITH A CULTIPACKER-SEEDER, DRILL, ROTARY SEEDER, OR OTHER MECHANICAL OR HAND SEEDER. SEED WILL BE DISTRIBUTED UNIFORMLY OVER A FRESHLY PREPARED SEEDBED AND COVERED LIGHTLY. WITHIN 24 HOURS AFTER SEEDING, STRAW OR HAY MULCH WILL BE SPREAD UNIFORMLY OVER THE AREA, LEAVING ABOUT 25 PERCENT OF THE GROUND SURFACE EXPOSED. MULCH WILL BE SPREAD WITH BLOWER-TYPE MULCH EQUIPMENT OR BY HAND AND ANCHORED IMMEDIATELY AFTER IT IS SPREAD. A DISK HARROW WITH THE DISK SET STRAIGHT OR A SPECIAL PACKER DISK MAY BE USED TO PRESS THE MULCH INTO THE SOIL. THE PER ACRE APPLICATION RATES ARE AS FOLLOWS:

A. SEEDING WITH MULCH: (CONVENTIONAL SEEDING EQUIPMENT ON SLOPES LESS THAN 3:1)

SEED SPECIES	APPLICATION RATE/ACRE	PLANTING DATES
HULLED COMMON BERMUDA GRASS	10 LBS.	3/1 - 6/15
FESCUE	50 LBS.	9/1 - 10/31
FESCUE RYE GRASS	50 LBS. 50 LBS.	11/1 - 2/28
HAY MULCH FOR TEMPORARY COVER	5000 LBS.	6/15 - 8/31

B. TOP DRESSING: APPLY WHEN PLANTS ARE 2 TO 4 INCHES TALL

FERTILIZER (AMMONIUM NITRATE 33.5%)	300 LBS./ACRE
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C. SECOND-YEAR TREATMENT:

FERTILIZER (5-10-15 OR EQUIVALENT)	800 LBS./ACRE
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NUM	DATE	DESCRIPTION:
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410-433

GRADING, SEDIMENT & EROSION CONTROL VEGETATION SPECS



DESIGNED: JTG
 DRAWN: JTG
 CHECKED: PWM
 JOB #: GNG824

C-6



DESCRIPTION:	ISSUED FOR REVIEW	ISSUED FOR PERMITTING & CONSTRUCTION
DATE	06/24/11	07/06/11
NUM	A	O

410-433
**EQUIPMENT FOUNDATION
 DETAILS & NOTES**

DESIGNED: JTG
 DRAWN: JTG
 CHECKED: PWM

JOB #: GNG824
C-7

REINFORCED CONCRETE:

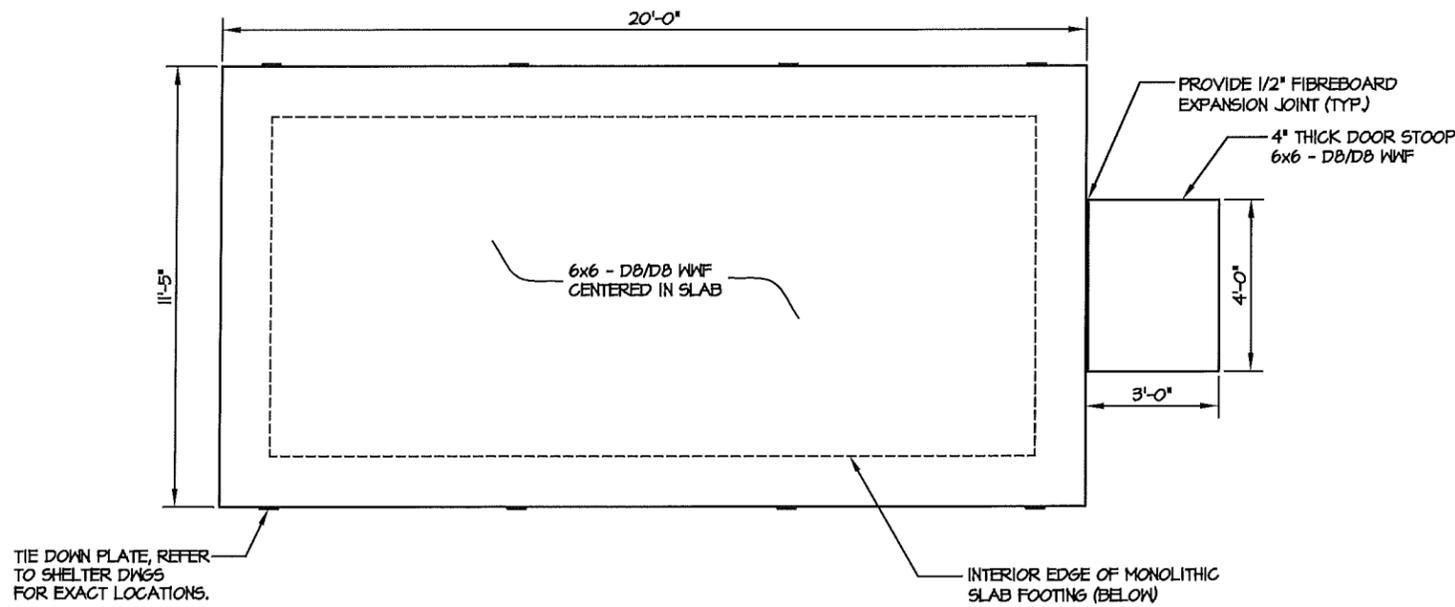
1. CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS; CONCRETE CYLINDER TESTS ARE REQUIRED FOR 7, 14, AND 28 DAY STRENGTHS, AND SHALL BE CONDUCTED BY A QUALIFIED, LICENSED, AND INSURED TESTING COMPANY.

CLASSES OF CONCRETE

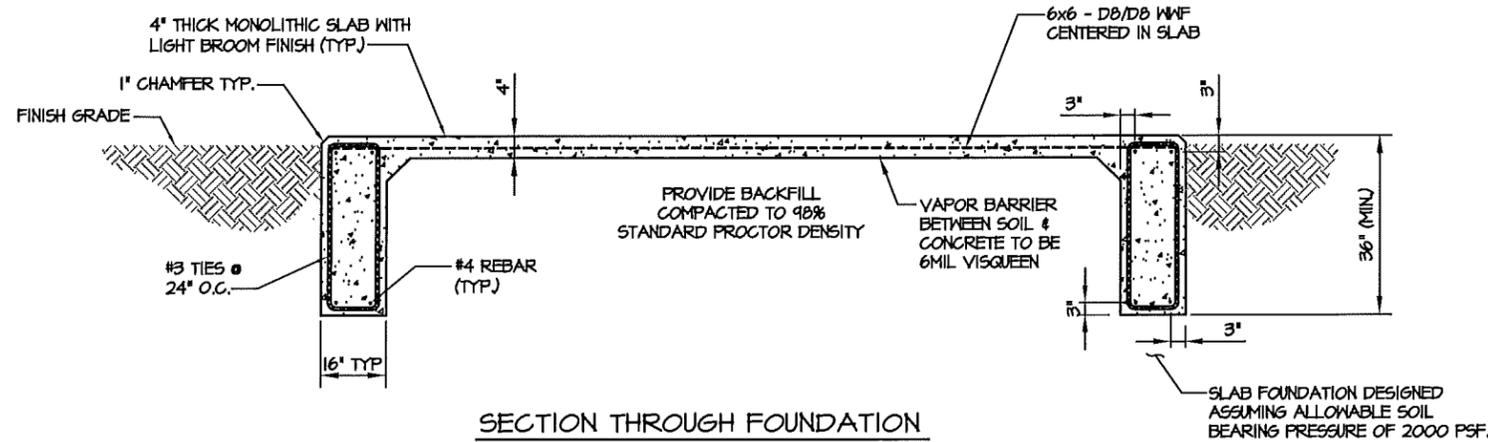
CLASS/ STRENGTH	7 DAY MIN. STRENGTH (PSI)	14 DAY MIN. STRENGTH (PSI)	28 DAY MIN. STRENGTH (PSI)	NOTES
TYPE I - 3000 PSI	2110	2645	3000	NORMAL WT.
TYPE I - 4000 PSI	2815	3525	4000	NORMAL WT.
TYPE I - 5000 PSI	3520	4405	5000	NORMAL WT.

ALL CONCRETE USED SHALL BE 3,000 PSI MIN. OR EQUAL TO THE STRENGTH OF CONCRETE USED IN THE TOWER FOUNDATION, WHICHEVER IS GREATER.

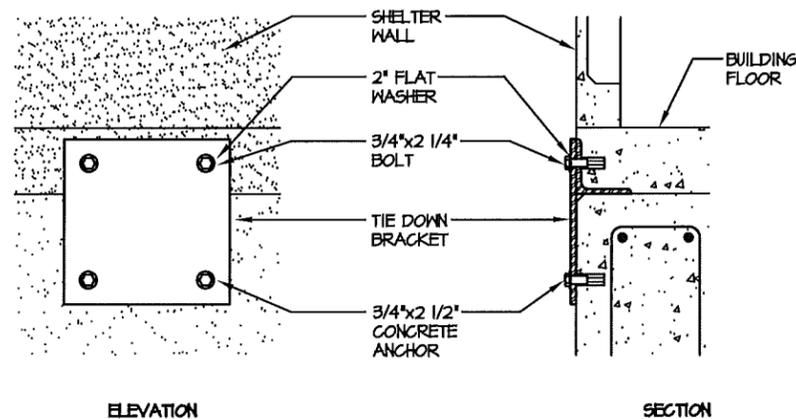
2. MAXIMUM COARSE AGGREGATE SIZE SHALL BE 3/4" REINFORCEMENT SHALL BE NEW BILLET STEEL DEFORMED BARS CONFORMING TO ASTM SPECIFICATION A615 GRADE 60. MINIMUM REBAR SPLICES SHALL BE 40 DIAMETERS.
3. REINFORCEMENT SHALL COMPLY WITH THE LATEST EDITION OF ASCE AND ACI-318 FOR MINIMUM CLEARANCES.
4. ALL EMBEDDED ITEMS SHALL BE SECURELY HELD IN POSITION PRIOR TO PLACEMENT OF CONCRETE. ALL CONCRETE SHALL BE READY-MIXED IN ACCORDANCE WITH ASTM C94.
5. MAINTAIN TEMPERATURE OF CAST IN PLACE CONCRETE BETWEEN 50 DEGREES AND 90 DEGREES FAHRENHEIT.
6. DO NOT USE RETEMPERED CONCRETE, OR ADD WATER TO READY-MIX CONCRETE AT THE JOB SITE.
7. DO NOT USE WELDED WIRE FABRIC IN THE MONOLITHIC SLAB.
8. NO SPLICES OF REINFORCEMENT PERMITTED EXCEPT AS DETAILED OR AUTHORIZED. MAKE BARS CONTINUOUS AROUND CORNERS. WHERE PERMITTED, SPLICES MADE BY CONTRACT LAPS SHALL BE CLASS "B" TENSION LAPS UNLESS NOTED OTHERWISE.
9. DETAIL BARS IN ACCORDANCE WITH "ACI DETAILING MANUAL - 1985, PUBLICATION SP-66 AND " BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318 LATEST EDITION.
10. PROVIDE ACCESSORIES NECESSARY TO PROPERLY SUPPORT



BUILDING FOUNDATION PLAN VIEW
 NOT TO SCALE



SECTION THROUGH FOUNDATION
 NOT TO SCALE



SHELTER ATTACHMENT DETAIL
 NOT TO SCALE





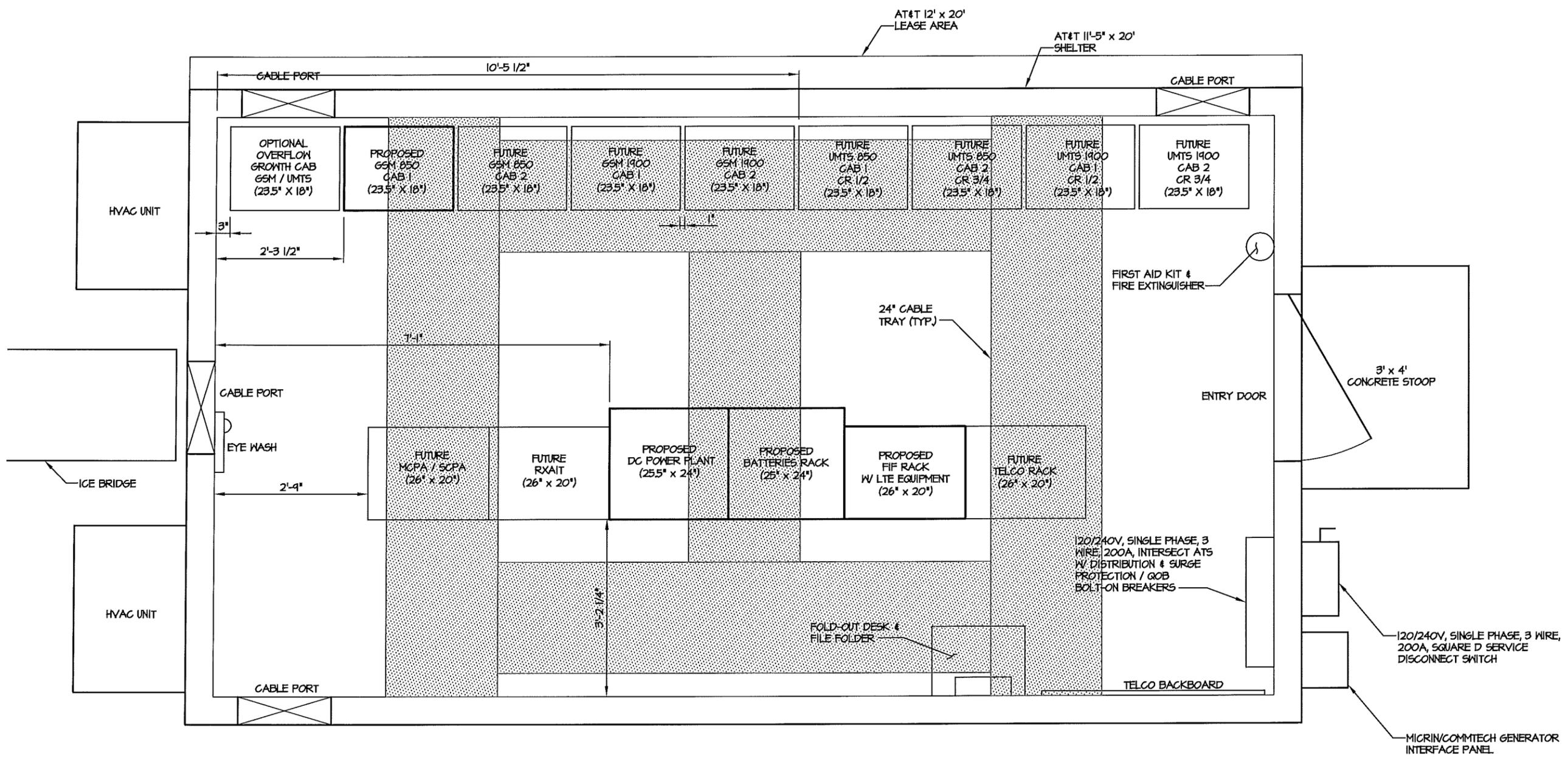
NUM	DATE	DESCRIPTION
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410-433
EQUIPMENT LAYOUT

DESIGNED: JTG
 DRAWN: JTG
 CHECKED: PWM

JOB #: GNG824

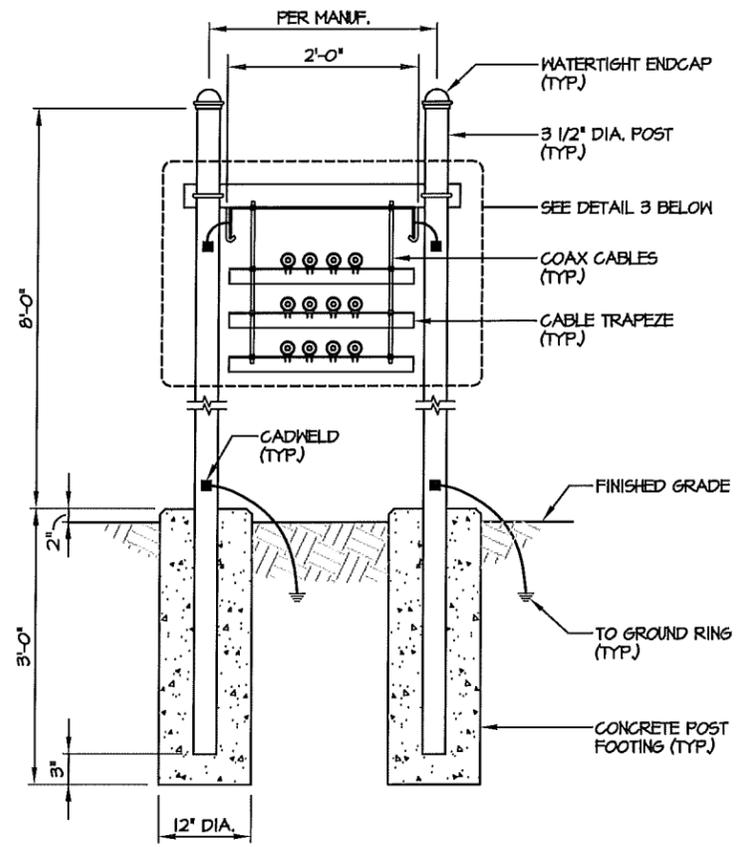
C-8



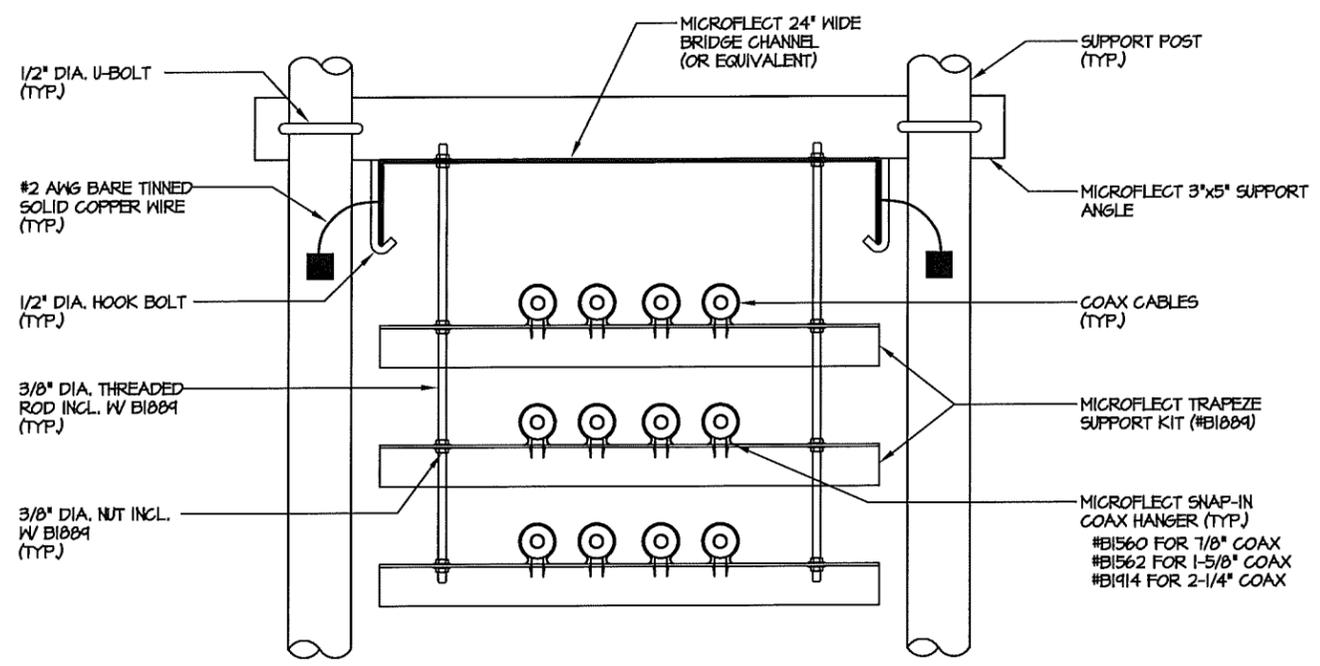
* SEE BUILDING MANUFACTURER'S DRAWINGS FOR ADDITIONAL DETAILS.

EQUIPMENT LAYOUT
 SCALE: 1" = 2'-0"

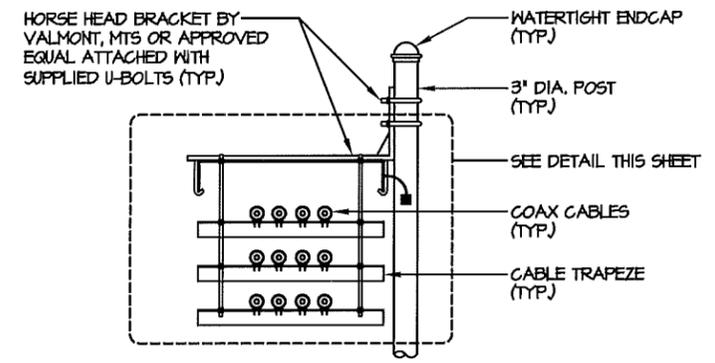




ICE BRIDGE SECTION
 NOT TO SCALE



COAX CABLE TRAPEZE DETAIL
 NOT TO SCALE



ICE BRIDGE SECTION (ALTERNATE HORSE HEAD)
 NOT TO SCALE

NUM	DATE	DESCRIPTION:
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410-433
COAX ICE BRIDGE DETAILS



DESIGNED: JTG
 DRAWN: JTG
 CHECKED: PWM

JOB #: GN6824

C-9



**SITE #
410-433**

SITE # IDENTIFICATION SIGN
 WHITE BACKGROUND, BLACK LETTERING
 MOUNTING LOCATION: EQUIPMENT CABINET
 QUANTITY: 1

**IN CASE OF
EMERGENCY
CALL
1-800-298-3551**

EMERGENCY CONTACT SIGN
 WHITE BACKGROUND, BLACK LETTERING
 MOUNTING LOCATION: EQUIPMENT CABINET
 QUANTITY: 1

INFORMATION

AT&T operates telecommunications antennas at this location.

Stay back a minimum of 3 feet from any antenna.

Obey all posted signs & site guidelines.

Contact the owner(s) of the antenna(s) & follow their instructions prior to performing any repairs or maintenance within a restricted area or closer than 3 feet from their antenna(s).

Contact AT&T at _____ prior to doing any work near AT&T antennas. This is Site # _____

Contact the management office if this door, hatch, or gate is found unlocked.

INFORMATION RF EXPOSURE SIGN
 WHITE/TEAL BACKGROUND, BLACK/WHITE LETTERING
 MOUNTING LOCATION: GATE
 QUANTITY: 1

SIGNAGE NOTES:

1. SIGNS SHALL MEASURE 8" x 12" & BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL & PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
2. SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE & FENCE USING A MINIMUM OF 1 GAUGE ALUMINUM WIRE, HOG RINGS (FENCE) OR BRACKETS, WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.
3. ADDITIONAL E911 ADDRESS & FCC REGISTRATION SIGNS SHALL BE MOUNTED AT EACH ACCESS ROAD GATE LEADING TO THE COMPOUND AS WELL AS ON THE COMPOUND GATE ITSELF.
4. AT&T SITE # & EMERGENCY CONTACT SIGNS SHALL BE MOUNTED ON THE EQUIPMENT CABINET WITH PERMANENT SET ADHESIVE. TWO SIDED TAPE SHALL BE UTILIZED AT EACH CORNER ON THE BACKSIDE TO AID PLACEMENT UNTIL THE ADHESIVE SETS.

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A	06/29/11	ISSUED FOR REVIEW
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SITE # 410-433

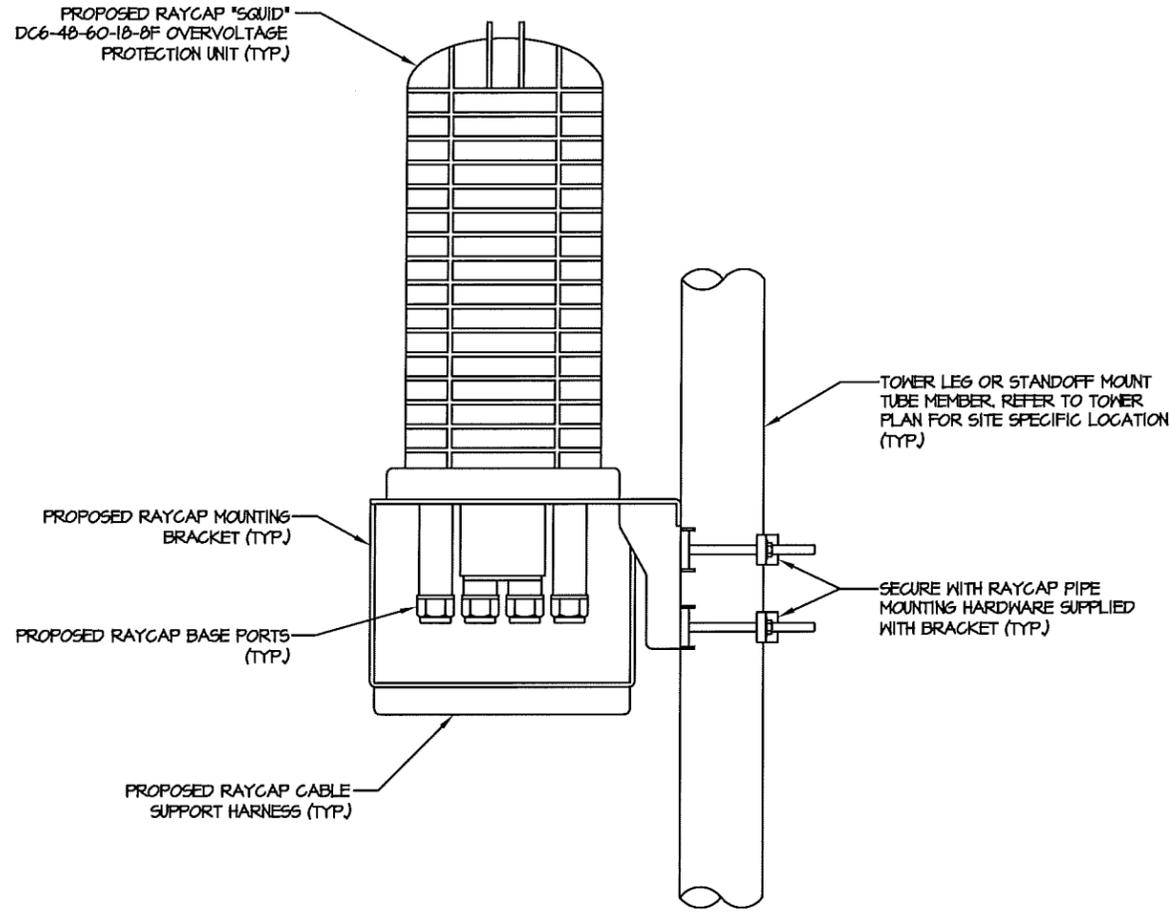
SITE SIGNAGE

DESIGNED: JTG
 DRAWN: JTG
 CHECKED: PWM

JOB #: GNG824

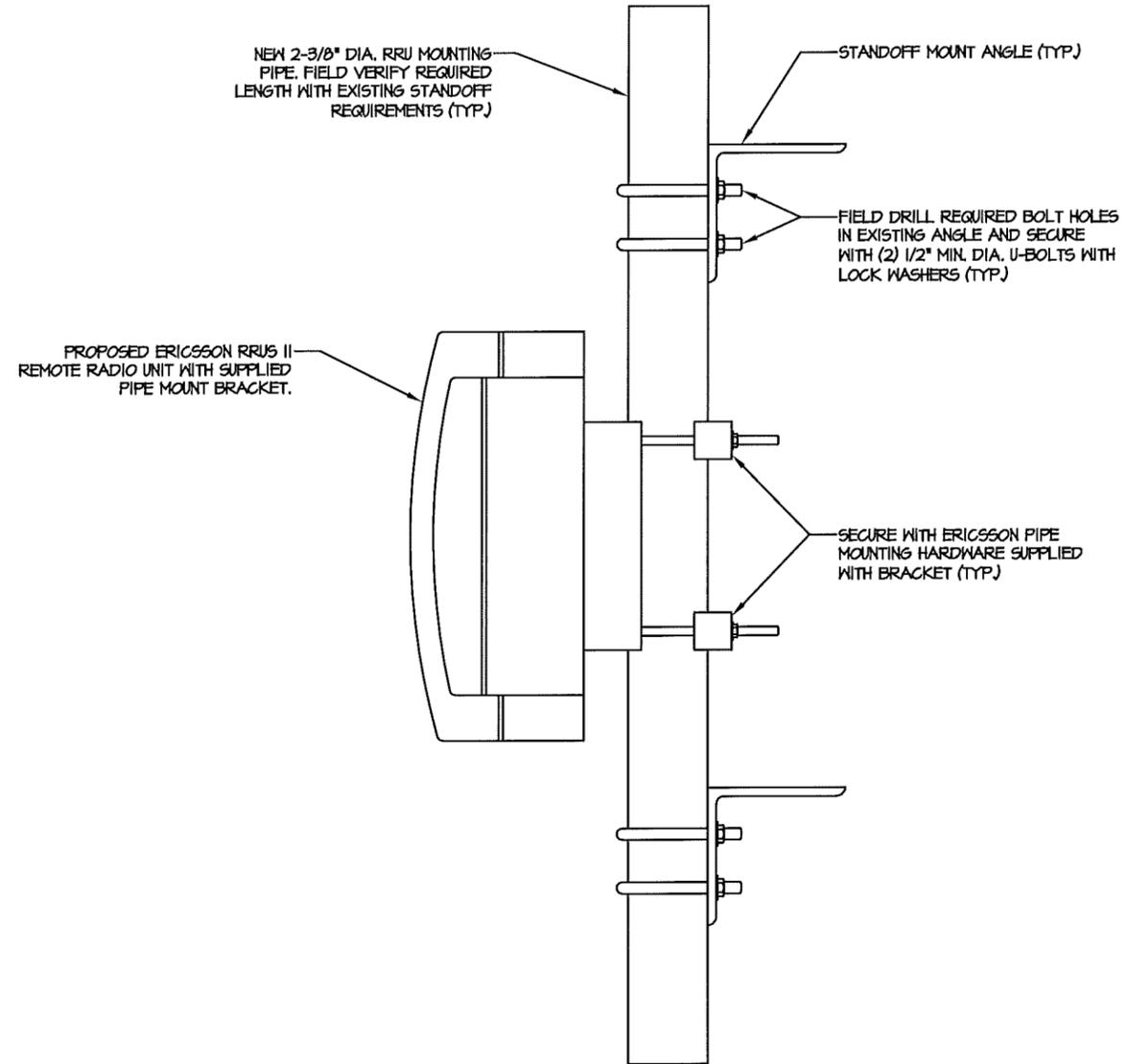
C-10





ELEVATION VIEW

RAYCAP SQUID MOUNT DETAIL
 NOT TO SCALE



ELEVATION VIEW

RRUS II MOUNT DETAIL
 NOT TO SCALE

NUM	DATE	DESCRIPTION:
A	06/24/11	ISSUED FOR REVIEW
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410-433
**LTE EQUIPMENT
 DETAILS**



DESIGNED: JTG
 DRAWN: JTG
 CHECKED: PWM

JOB #: GNG824

C-11

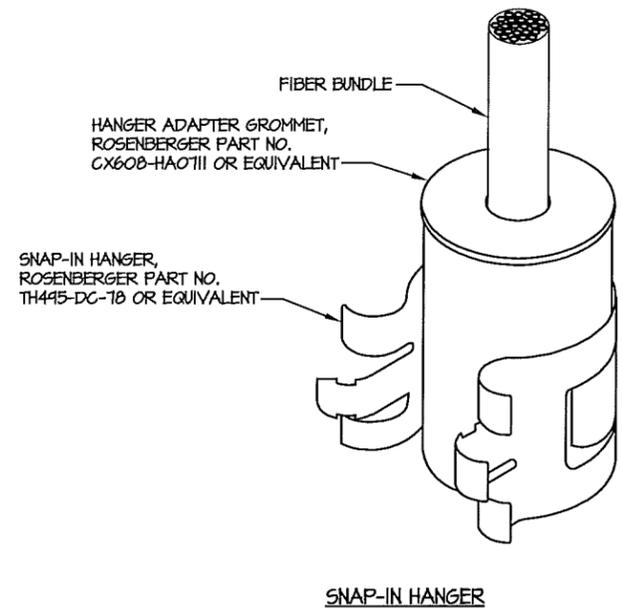


NUM	DATE	DESCRIPTION
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O	07/06/11	ISSUED FOR PERMITTING & CONSTRUCTION

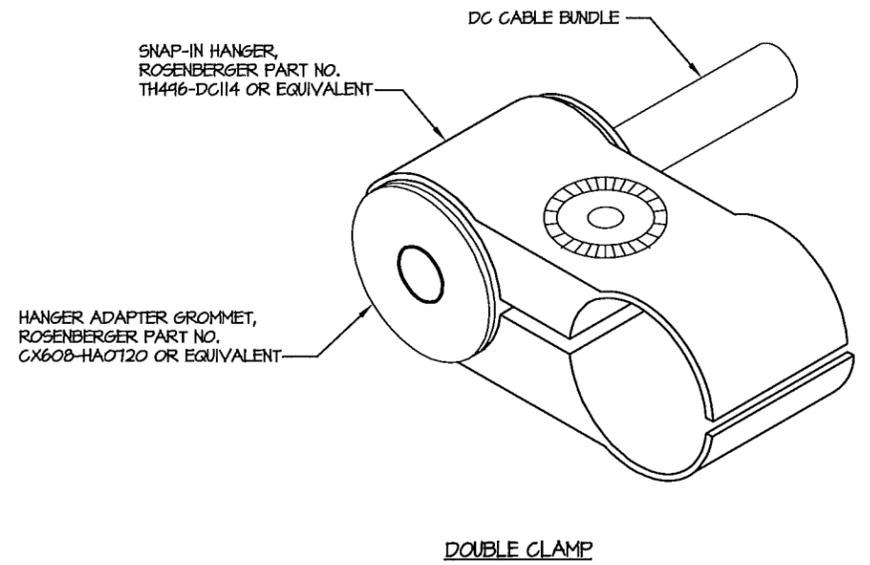
410-433
LTE EQUIPMENT
DETAILS

DESIGNED:	JTG
DRAWN:	JTG
CHECKED:	PWM

JOB #: GNG824



SNAP-IN HANGER

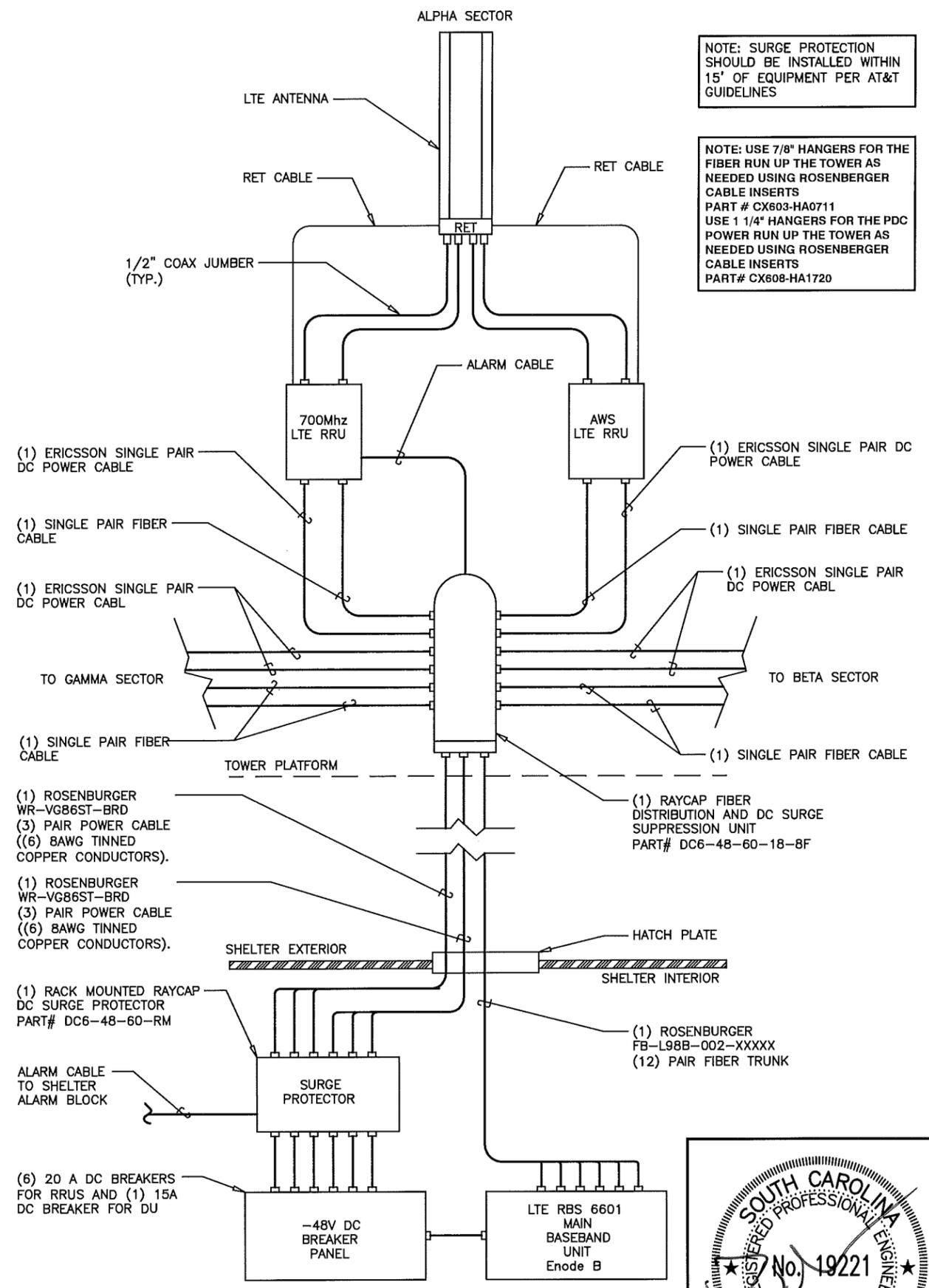


DOUBLE CLAMP

NOTES:

- REFER TO JSA DOCUMENTS FOR EXACT CABLE NUMBER AND MANUFACTURER SPECIFICATIONS FOR PROPER GROMMETS AND HANGERS TO SUPPORT THE FIBER AND DC CABLE BUNDLES.
- REFER TO STRUCTURAL ANALYSIS FOR EXACT CABLE ROUTING AND MOUNTING CONFIGURATION.

HANGER ADAPTER GROMMET DETAILS
 NOT TO SCALE



NOTE: SURGE PROTECTION SHOULD BE INSTALLED WITHIN 15' OF EQUIPMENT PER AT&T GUIDELINES

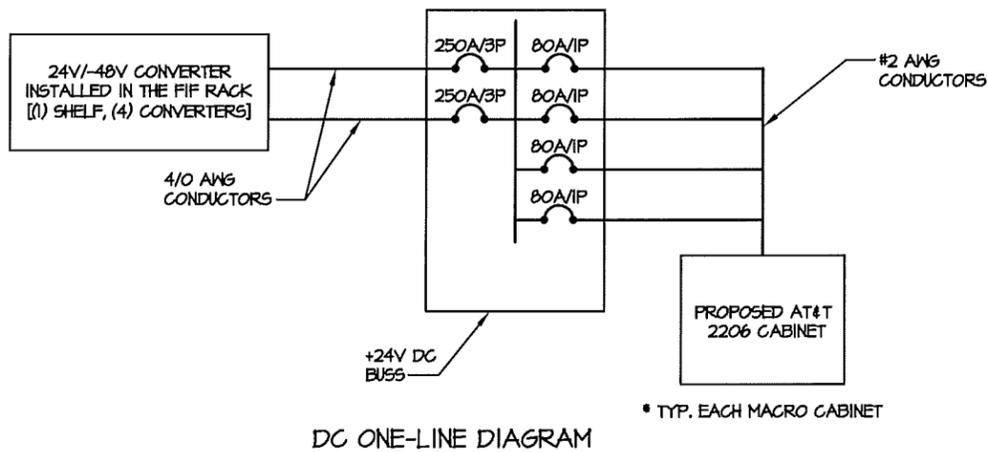
NOTE: USE 7/8" HANGERS FOR THE FIBER RUN UP THE TOWER AS NEEDED USING ROSENBERGER CABLE INSERTS
 PART # CX603-HA0711
 USE 1 1/4" HANGERS FOR THE PDC POWER RUN UP THE TOWER AS NEEDED USING ROSENBERGER CABLE INSERTS
 PART# CX608-HA1720

PLUMBING DIAGRAM
 NOT TO SCALE

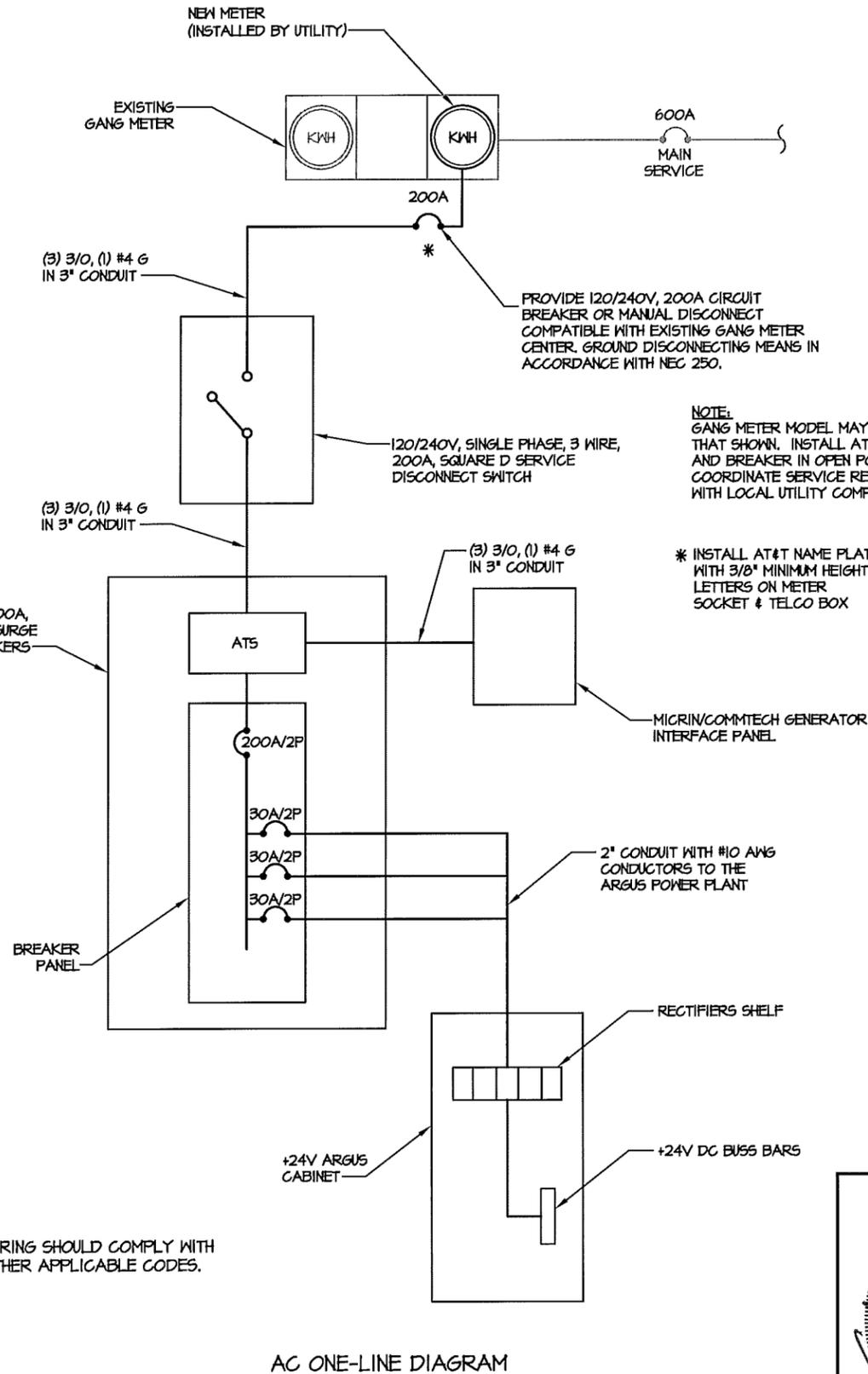


ELECTRICAL INSTALLATION NOTES

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
5. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
6. EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING, AND TI CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA.
7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATINGS, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATINGS, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT IDS).
8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600 V, OIL RESISTANT THIN OR THIN-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.
11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THIN OR THIN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION, LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600 V, OIL RESISTANT THIN OR THIN-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.
13. ALL POWER AND POWER 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).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
15. 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.
16. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
18. 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.
19. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
20. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
21. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
22. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
23. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
24. 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) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
25. 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.
26. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
27. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.



120/240V, SINGLE PHASE, 3 WIRE, 200A, INTERSECT ATS W/ DISTRIBUTION & SURGE PROTECTION / GLOB BOLT-ON BREAKERS



NOTE:
ALL BUILDING WIRING SHOULD COMPLY WITH THE NEC AND OTHER APPLICABLE CODES.



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410-433

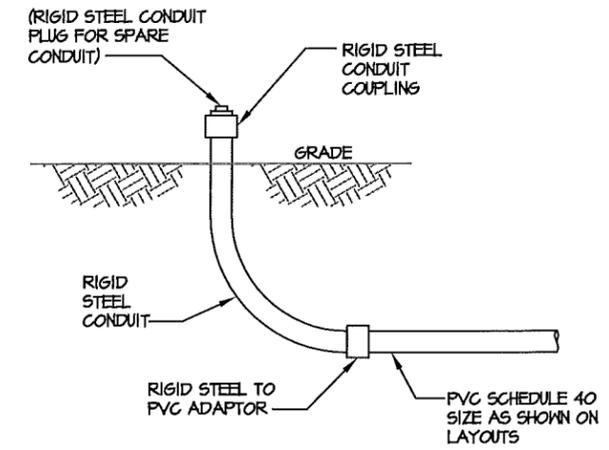
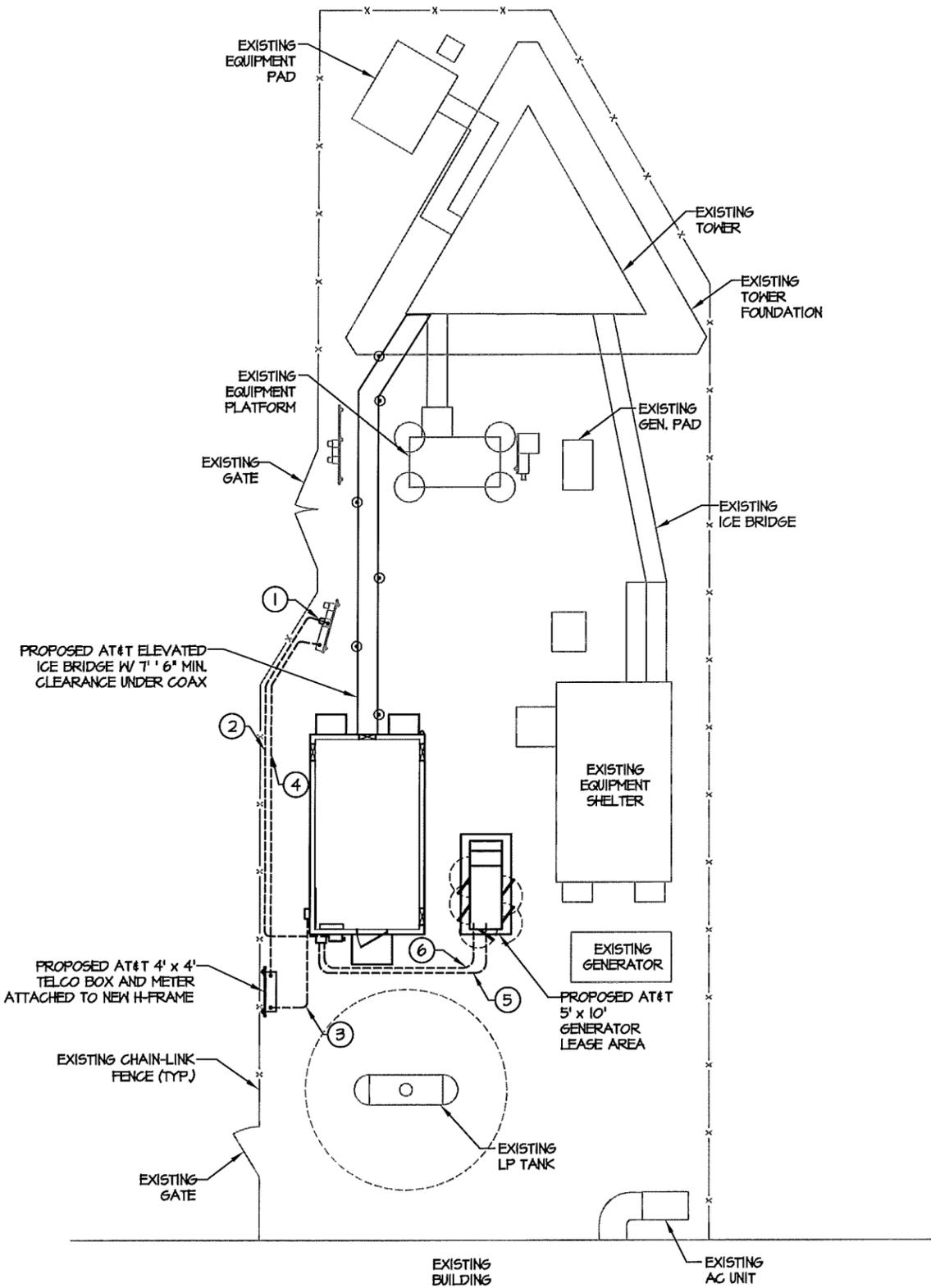
ELECTRICAL SPECS & ONE-LINE DIAGRAM

DESIGNED: JTG
DRAWN: JTG
CHECKED: PWM

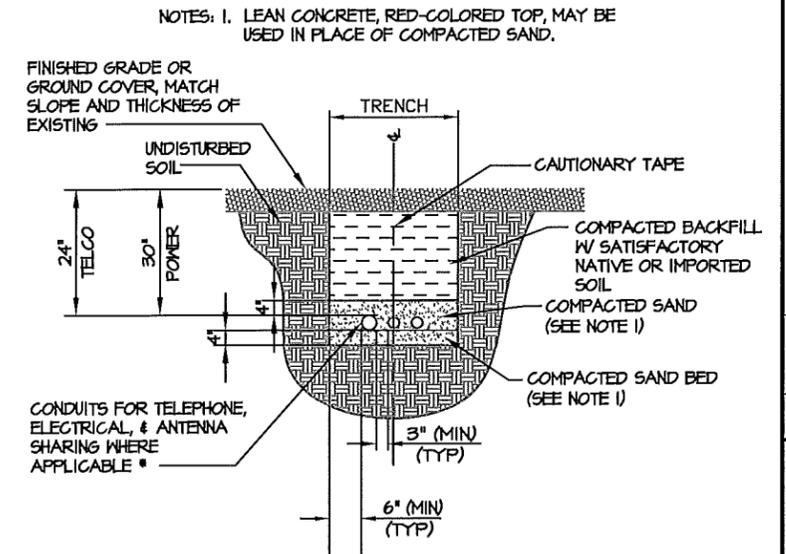
JOB #: GNG824

ELECTRICAL KEY NOTES:

- ① PROPOSED 200A METER & BREAKER INSTALLED IN EXISTING GANG METER.
- ② PROPOSED (3) 3/0, (1) #4 G IN 3" CONDUIT FROM THE METER TO THE DISCONNECT ON SHELTER.
- ③ PROPOSED 4" CONDUIT WITH (2) FULL STRINGS FROM PROPOSED 48" X 48" TELCO BOX TO THE EQUIPMENT SHELTER.
- ④ PROPOSED 4" CONDUIT WITH (2) FULL STRINGS FROM EXISTING TELCO DEMARC TO THE 48" X 48" TELCO BOX MOUNTED ON PROPOSED H-FRAME.
- ⑤ PROPOSED 2" PVC CONDUIT WITH (3) 3/0 + #46 FOR EMERGENCY POWER AND (2) #12 + #12G FOR BATTERY CHARGER/BLOCK HEATER.
- ⑥ PROPOSED 1" PVC CONDUIT WITH CONDUCTORS PER MANUFACTURER FOR START/STOP CONTROL AND ALARM CABLES.

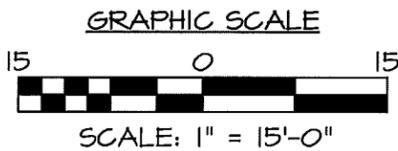


UNDERGROUND CONDUIT STUB-UP
NTS



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

DIRECT BURIED CONDUIT
NTS



ELECTRICAL SITE PLAN
SCALE: 1" = 15'-0"



NUM	DATE	DESCRIPTION:
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SITE ID: 410-433

ELECTRICAL SITE PLAN

DESIGNED:	JTG
DRAWN:	JTG
CHECKED:	PWM

JOB #: GNG824





NUM	DATE	DESCRIPTION:
A	06/29/11	ISSUED FOR REVIEW
O	07/06/11	ISSUED FOR PERMITTING & CONSTRUCTION

410-433
GROUNDING SITE PLAN

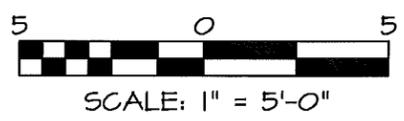
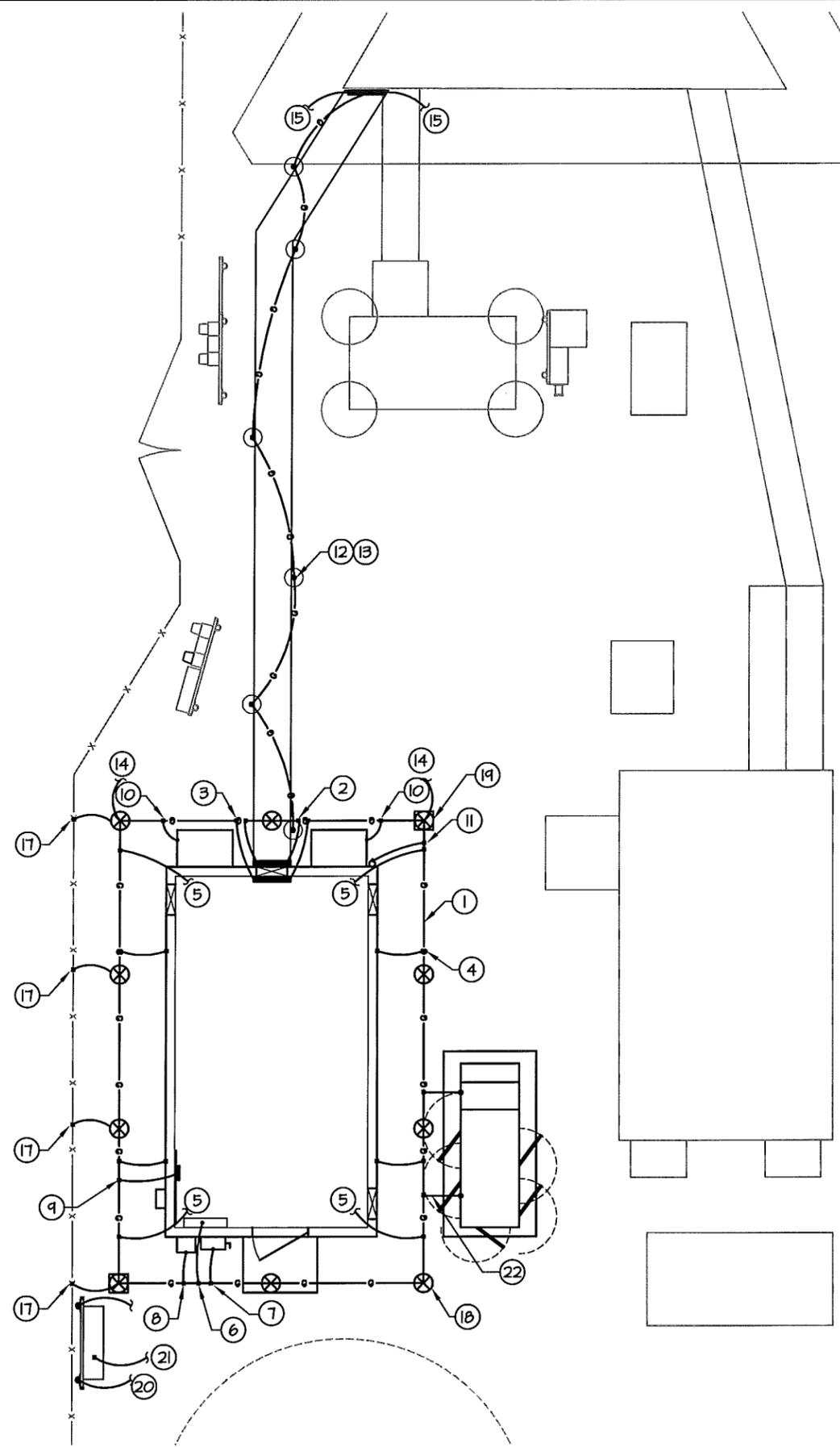
DESIGNED:	JTG
DRAWN:	JTG
CHECKED:	PWM

JOB #: GNG824
E-3

GROUNDING NOTES

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GESS) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC AND AT&T ND-0007I.
2. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. TESTING SHALL BE IN ACCORDANCE WITH SPECIFICATION 24782-000-3P3-EG00-0000I. USE OF OTHER METHODS MUST BE PRE-APPROVED BY CONTRACTOR IN WRITING.
3. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS. WHEN ADDING ELECTRODES, CONTRACTOR SHALL MAINTAIN A MINIMUM DISTANCE BETWEEN THE ADDED ELECTRODE AND ANY OTHER EXISTING ELECTRODE EQUAL TO THE BURIED LENGTH OF THE ROD. IDEALLY, CONTRACTOR SHALL STRIVE TO KEEP THE SEPARATION DISTANCE EQUAL TO TWICE THE BURIED LENGTH OF THE RODS.
4. 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.
5. METAL CONDUIT AND TRAY SHALL BE GROUNDING AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE AND UL APPROVED GROUNDING TYPE CONDUIT CLAMPS PER NEC AND AT&T ND-0007I.
6. 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.
7. 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.
8. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
9. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED. IN ALL CASES, BENDS SHALL BE MADE WITH A MINIMUM BEND RADIUS OF 8 INCHES.
10. EACH INTERIOR BTS CABINET FRAME/PLINTH SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH #2 AWG STRANDED, GREEN INSULATED SUPPLEMENTAL GROUND WIRES. EACH OUTDOOR CABINET FRAME/PLINTH SHALL BE DIRECTLY CONNECTED TO THE BURIED GROUND RING WITH #2 AWG SOLID TIN-PLATED COPPER WIRE.
11. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING, SHALL BE #2 AWG SOLID TIN-PLATED COPPER UNLESS OTHERWISE INDICATED.
12. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE. CONNECTIONS TO ABOVE GRADE EXTERIOR UNITS SHALL BE MADE WITH EXOTHERMIC WELDS WHERE PRACTICAL OR WITH 2 HOLE MECHANICAL TYPE BRASS CONNECTORS WITH STAINLESS STEEL HARDWARE, INCLUDING SET SCREWS. HIGH PRESSURE CRIMP CONNECTORS MAY ONLY BE USED WITH WRITTEN PERMISSION FROM AT&T MARKET REPRESENTATIVE.
13. EXOTHERMIC WELDS SHALL BE PERMITTED ON TOWERS ONLY WITH THE EXPRESS APPROVAL OF THE TOWER MANUFACTURER OR THE CONTRACTORS STRUCTURAL ENGINEER.
14. ALL WIRE TO WIRE GROUND CONNECTIONS TO THE INTERIOR GROUND RING SHALL BE FORMED USING HIGH PRESS CRIMPS OR SPLIT BOLT CONNECTORS WHERE INDICATED IN THE DETAILS.
15. ON ROOFTOP SITES WHERE EXOTHERMIC WELDS ARE A FIRE HAZARD COPPER COMPRESSION CAP CONNECTORS MAY BE USED FOR WIRE TO WIRE CONNECTIONS. 2 HOLE MECHANICAL TYPE BRASS CONNECTORS WITH STAINLESS STEEL HARDWARE, INCLUDING SET SCREWS SHALL BE USED FOR CONNECTION TO ALL ROOFTOP BTS EQUIPMENT AND STRUCTURAL STEEL.
16. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR USING TWO HOLED MECHANICAL TYPE BRASS CONNECTORS AND STAINLESS STEEL HARDWARE.
17. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
18. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
19. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
20. BOND ALL METALLIC OBJECTS WITHIN 6 FT OF THE BURIED GROUND RING WITH #2 SOLID AWG TIN-PLATED COPPER GROUND CONDUCTOR.
21. 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 WITH LISTED BONDING FITTINGS.
22. GROUND ALL RF EQUIPMENT INCLUDING BUT NOT LIMITED TO COAX, DIPLEXERS, SURGE ARRESTORS, TMA's, ANTENNAS, & ANTENNA MASTS PER NEC AND AT&T ND-0007I.

- 1 #2 AWG BARE TINNED SOLID COPPER GROUND RING BURIED 30" BELOW GRADE (TYP)
- 2 CONNECT EXTERIOR GROUND BAR (UNDER WAVEGUIDE PORT) TO NEW GROUND RING WITH #2 GROUND CONDUCTORS.
- 3 CONNECT MASTER GROUND BAR TO EXTERIOR GROUND RING. COORDINATE WITH EQUIPMENT BUILDING MANUFACTURER FOR LOCATION OF WALL PENETRATION.
- 4 BOND EACH SHELTER TIE DOWN PLATE TO GROUND RING WITH CADWELD.
- 5 PROVIDE GROUND LEADS FROM SHELTER HALO TO GROUND RING (4 PLACES). COORDINATE WITH SHELTER MANUFACTURER FOR LOCATION OF WALL PENETRATIONS.
- 6 PROVIDE GROUND LEAD FROM BUILDING 200A PANEL BOARD TO GROUND RING. COORDINATE WITH SHELTER MANUFACTURER FOR LOCATION OF WALL PENETRATIONS.
- 7 BOND DISCONNECT SWITCH TO GROUND RING.
- 8 BOND GENERATOR INTERFACE PANEL TO GROUND RING.
- 9 CONNECT TELCO GROUND BAR TO EXTERIOR GROUND RING. COORDINATE WITH EQUIPMENT BUILDING MANUFACTURER FOR LOCATION OF WALL PENETRATION.
- 10 BOND HVAC UNITS TO GROUND RING (TYP.)
- 11 GROUND GPS ANTENNAS PER MANUFACTURER'S SPECIFICATIONS.
- 12 BOND EVERY ICE BRIDGE POST BASE TO GROUND RING WITH CADWELD.
- 13 BOND EACH ICE BRIDGE SECTION TOGETHER WITH JUMPERS. BOND FIRST AND LAST SECTION TO GROUND RING.
- 14 BOND EQUIPMENT GROUND RING TO TOWER GROUND RING (TYP - 2 PLACES)
- 15 BOND TOWER MOUNTED GROUND BAR TO TOWER GROUND RING WITH #2 AWG SOLID BARE TINNED COPPER WIRE (TYP - 2 PLACES)
- 16 BOND COAX CABLE GROUND KIT TO GROUND BAR. REFER TO COAX CABLE GROUND KIT DETAIL.
- 17 BOND GROUND RING TO EXISTING FENCE POST (TYP.)
- 18 5/8"φ x 10'-0" LONG COPPER CLAD STEEL GROUND RODS (TYP)
- 19 PROPOSED GROUND ROD WITH INSPECTION WELL. (TYP.)
- 20 GROUND PROPOSED H-FRAME TO GROUND RING. (TYP.)
- 21 GROUND PROPOSED TELCO BOX TO GROUND RING.
- 22 #2 AWG BARE TINNED SOLID COPPER WIRE. 2-HOLE LUG CONNECTION TO GENERATOR BASE FRAME, CADWELD CONNECTION TO EXISTING GROUND RING (TYP.)



GROUNDING PLAN
SCALE: 1" = 5'-0"





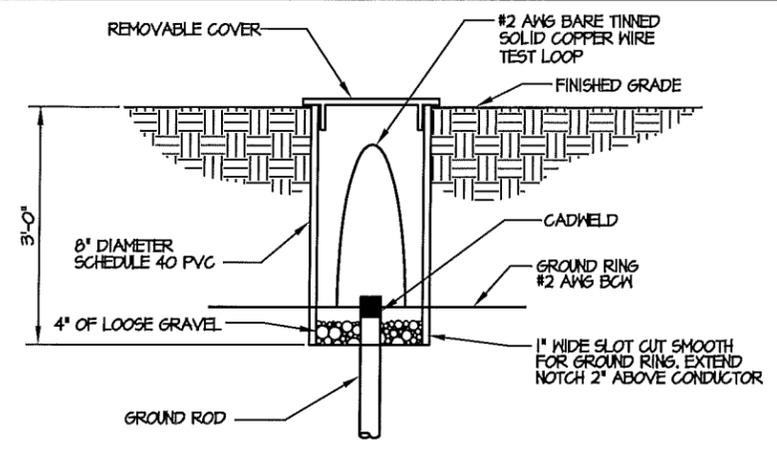
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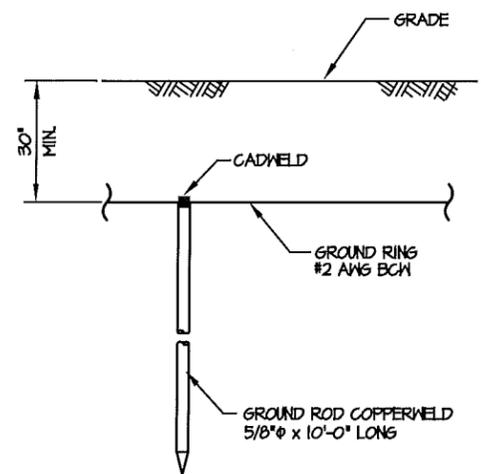
GROUNDING DETAILS

DESIGNED:	JTG
DRAWN:	JTG
CHECKED:	PWM
JOB #:	GN6824

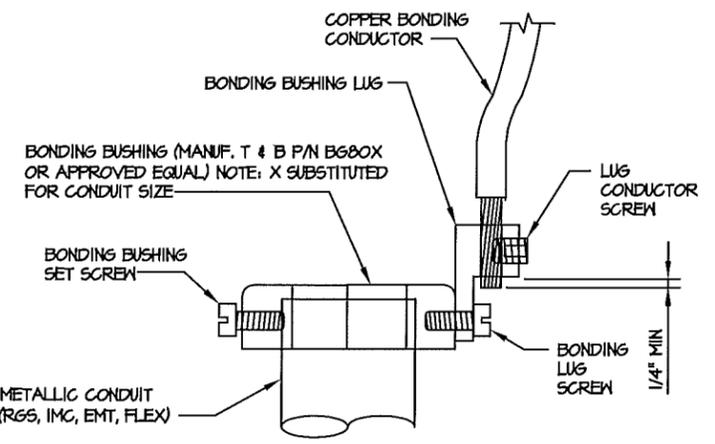
E-4



GROUND ROD INSPECTION WELL
 NOT TO SCALE



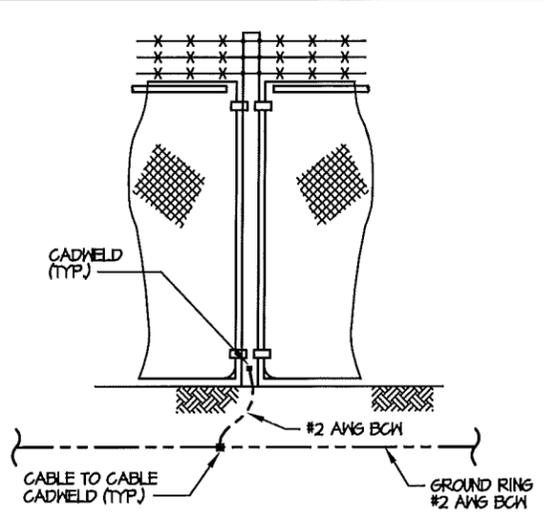
GROUND ROD DETAIL
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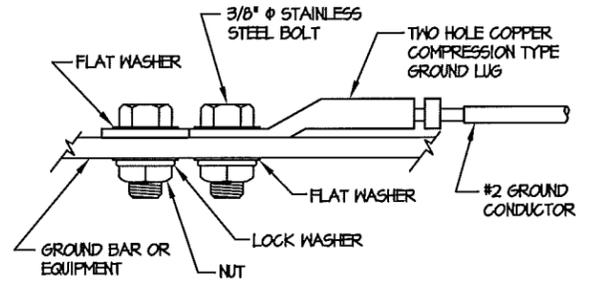
- DIRECTIONS:**
1. MOUNT BONDING BUSHING ONTO CONDUIT
 2. TIGHTEN BOND BUSHING SET SCREW
 3. INSERT COPPER CONDUCTOR INTO LUG
 4. TIGHTEN LUG CONDUCTOR SCREW
 5. TIGHTEN BONDING LUG SCREW

NOTE: BONDING BUSHING, SET SCREW, LUG, LUG SCREW, COND. LUG SCREW, SHOWN AS COMPLETE UNIT.

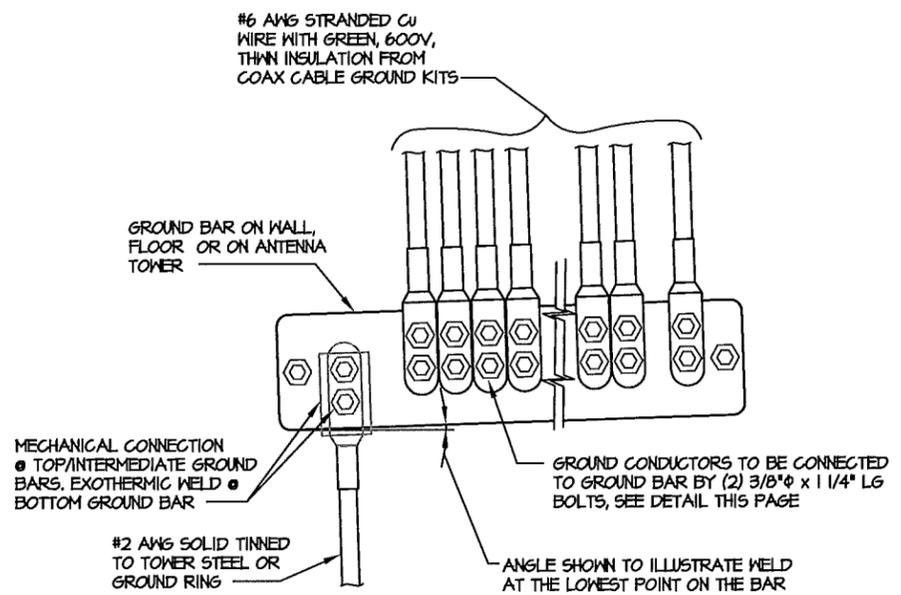
CONDUIT BOND/GROUND BUSHING
 NTS



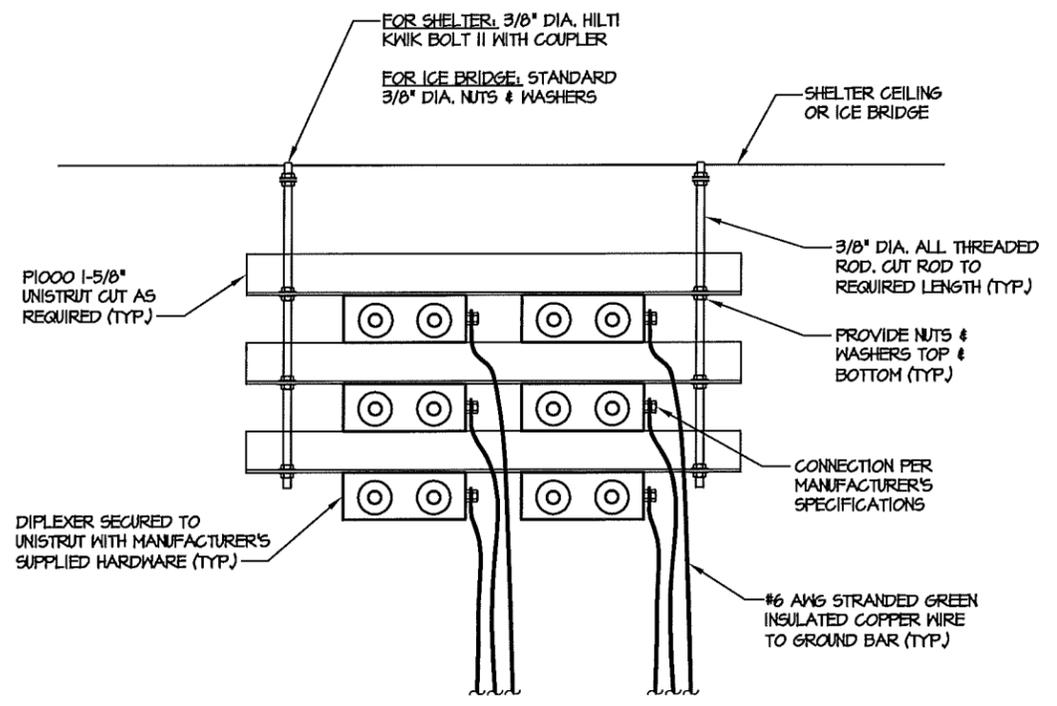
FENCE GROUNDING
 NOT TO SCALE



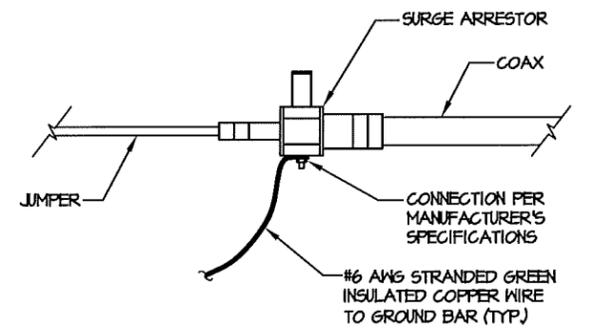
MECHANICAL GROUND CONNECTION
 NOT TO SCALE



INSTALLATION OF GROUND WIRE TO COAX CABLE GROUND BAR
 NTS

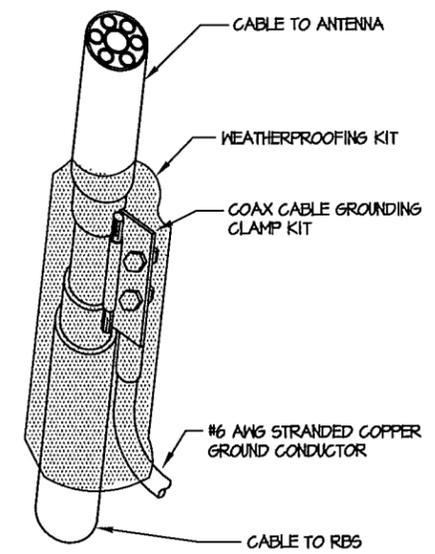


DIPLEXER GROUNDING DETAILS
 NOT TO SCALE



NOTE: ON OUTDOOR SITES, INSTALL WEATHERPROOFING AT EACH CONNECTION PER AT&T SPECIFICATIONS

SURGE ARRESTOR GROUNDING DETAILS
 NOT TO SCALE



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND.
2. ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR
3. GROUNDING KIT & WEATHER PROOFING KIT SHALL BE TYPE & PART # AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.

COAX CABLE GROUND KIT
 NOT TO SCALE



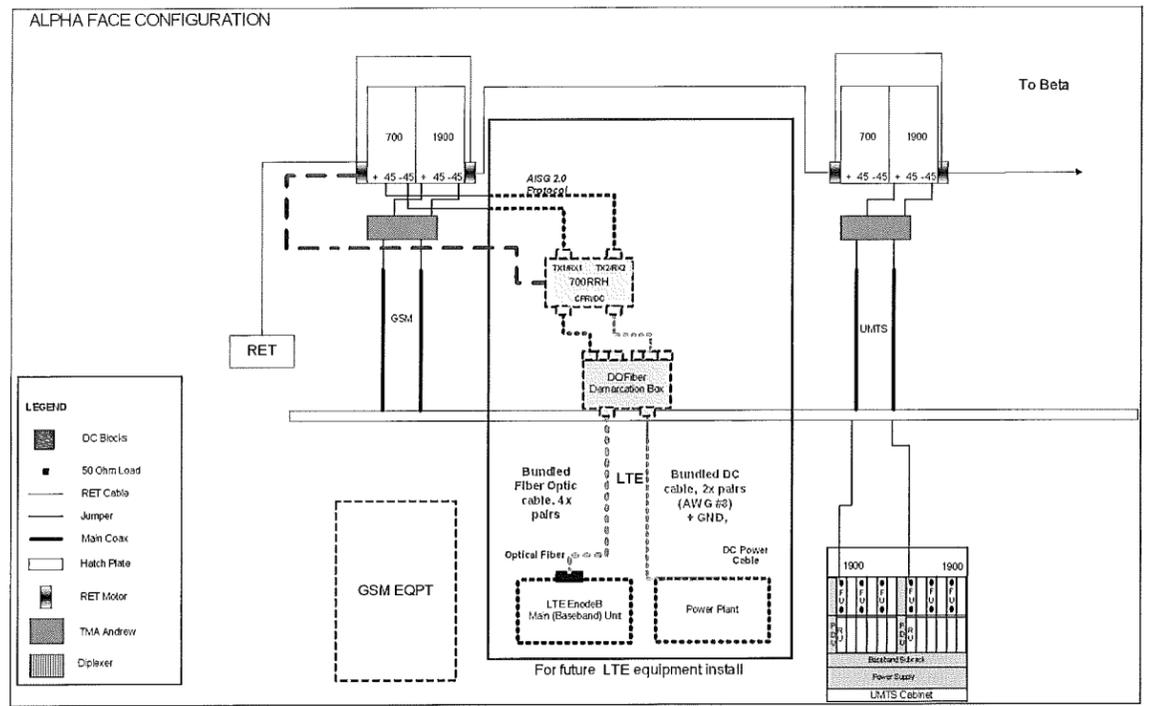


Section 16A - NEW/PROPOSED SECTOR/CELL INFORMATION - ALPHA (OR/UMN)					
ANTENNA CONFIG (FROM BACK):	ANTENNA 1 GSM, UMTS (850 / 1900) or LTE (700 / AWS)	ANTENNA 2 GSM, UMTS (850 / 1900) or LTE (700 / AWS)	ANTENNA 3 GSM, UMTS (850 / 1900) or LTE (700 / AWS)	ANTENNA 4 GSM, UMTS (850 / 1900) or LTE (700 / AWS)	ANTENNA 5 GSM, UMTS (850 / 1900) or LTE (700 / AWS)
TECHNOLOGY	LTE	GSM			GSM
RRH LOCATION (Top/Bottom/None)					
FEEDERS TYPE	Fiber	CR1873 PE (1.5'*) 1900mhz			CR1873 PE (1.5'*) 1900mhz
Feeder Length (feet)	130 ft	130 ft			130 ft
ANTENNA ATOLL	60010764_1950MHz_040				60010764_1950MHz_040
ANTENNA MAKE - MODEL	60010764_1950MHz_040T				60010764_1950MHz_040T
ANTENNA VENDOR	Katrim				Katrim
ANTENNA SIZE (H x W x D)					
ANTENNA WEIGHT					
ANTENNA GAIN	17				17
RADIATION CENTER (feet)	110 ft				110 ft
ANTENNA TIP HEIGHT					
ELECTRICAL TILT (Degrees)	2				2
MECHANICAL DOWN TILT	0				0
FEEDER AMOUNT					
Antenna RET Motor (QTY/MODEL)					
Antenna RET Splitter (QTY/MODEL)					
Antenna RET Earth (Grounding) Clamp (QTY/MODEL)					
Antenna RET Surge Arrestor (QTY/MODEL)					
Antenna RET CONTROL UNIT (QTY/MODEL) usually per site					
DC BLOCK (QTY/MODEL)					
TMA LNA (TYPE/MODEL)	Powerline TT19-08BP111-001 (1900 TMA w/3/0)				Powerline TT19-08BP111-001 (1900 TMA w/3/0)
CURRENT INJECTORS FOR TMA (QTY/MODEL)					
PDU FOR TMAs (QTY/MODEL) usually per site					
SURGE ARRESTOR (QTY/MODEL)					
DUPLEXER (QTY/MODEL)					
HYBRID COMBINER (QTY/MODEL)					
DUPLEXER (QTY/MODEL)					
FILTER (QTY/MODEL)					
RAJIT KIT MODULE					
TRIPLEXER or NARROW BAND LLC (QTY/MODEL)					
SCPA/SCPA MODULE	120V SCPA				
Additional Component1					
Additional Component2					
Additional Component3					
MAGNETIC DECLINATION					
HATCHPLATE POWER (Watts)					
ERP (Watts)					
Local Market Notes					
Local Market Notes					
Local Market Notes					

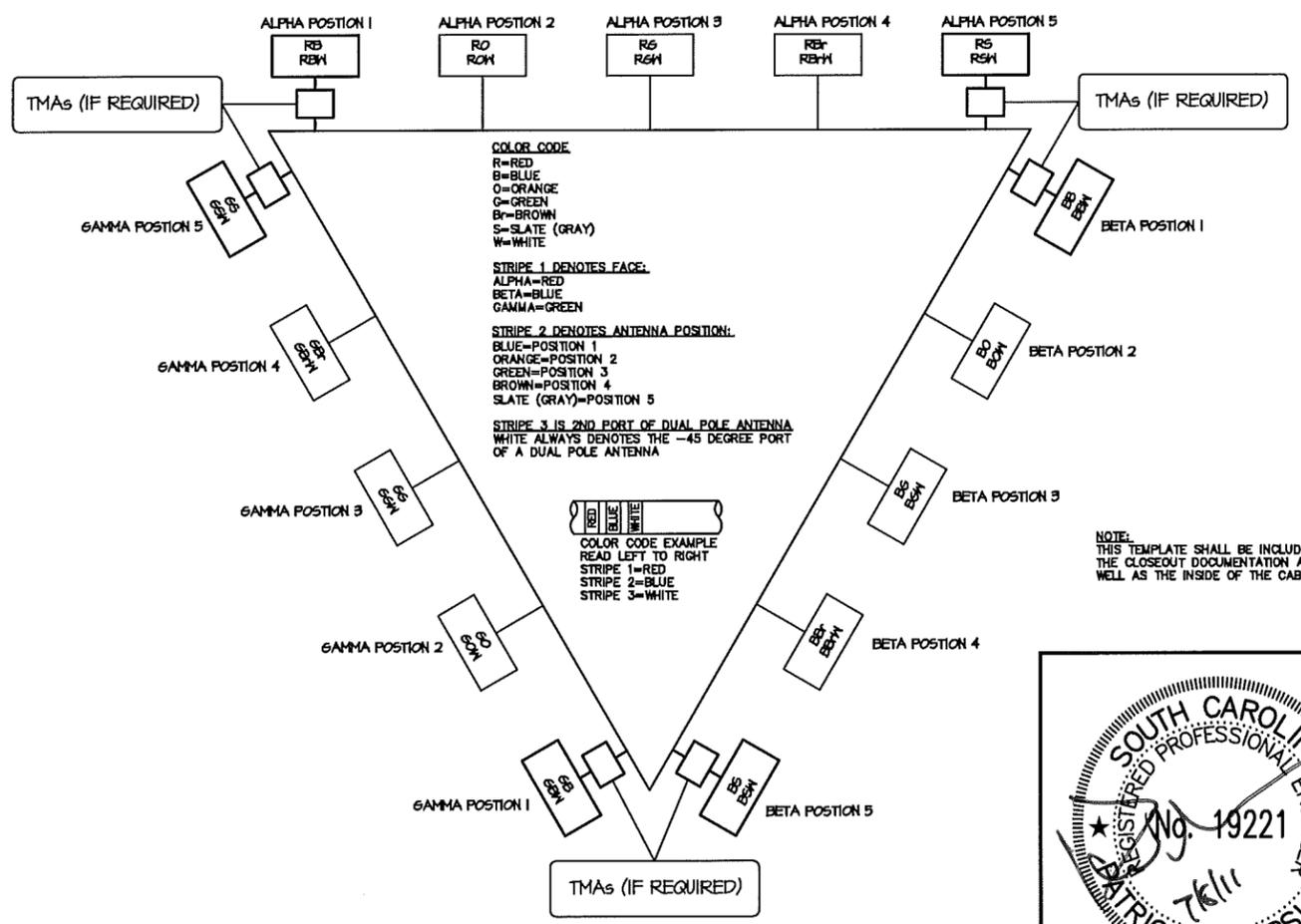
Section 16B - NEW/PROPOSED SECTOR/CELL INFORMATION - BETA					
ANTENNA CONFIG (FROM BACK):	ANTENNA 1 GSM, UMTS (850 / 1900) or LTE (700 / AWS)	ANTENNA 2 GSM, UMTS (850 / 1900) or LTE (700 / AWS)	ANTENNA 3 GSM, UMTS (850 / 1900) or LTE (700 / AWS)	ANTENNA 4 GSM, UMTS (850 / 1900) or LTE (700 / AWS)	ANTENNA 5 GSM, UMTS (850 / 1900) or LTE (700 / AWS)
TECHNOLOGY	LTE	GSM			UMTS
RRH LOCATION (Top/Bottom/None)					
FEEDERS TYPE	Fiber	CR1873 PE (1.5'*) 1900mhz			CR1873 PE (1.5'*) 1900mhz
Feeder Length (feet)	130 ft	130 ft			130 ft
ANTENNA ATOLL	60010764_1950MHz_040				60010764_1950MHz_040
ANTENNA MAKE - MODEL	60010764_1950MHz_040T				60010764_1950MHz_040T
ANTENNA VENDOR	Katrim				Katrim
ANTENNA SIZE (H x W x D)					
ANTENNA WEIGHT					
ANTENNA GAIN	17				17
RADIATION CENTER (feet)	110 ft				110 ft
ANTENNA TIP HEIGHT					
ELECTRICAL TILT (Degrees)	2				2
MECHANICAL DOWN TILT	0				0
FEEDER AMOUNT					
Antenna RET Motor (QTY/MODEL)					
Antenna RET Splitter (QTY/MODEL)					
Antenna RET Earth (Grounding) Clamp (QTY/MODEL)					
Antenna RET Surge Arrestor (QTY/MODEL)					
Antenna RET CONTROL UNIT (QTY/MODEL) usually per site					
DC BLOCK (QTY/MODEL)					
TMA LNA (TYPE/MODEL)	Powerline TT19-08BP111-001 (1900 TMA w/3/0)				Powerline TT19-08BP111-001 (1900 TMA w/3/0)
CURRENT INJECTORS FOR TMA (QTY/MODEL)					
PDU FOR TMAs (QTY/MODEL) usually per site					
SURGE ARRESTOR (QTY/MODEL)					
DUPLEXER (QTY/MODEL)					
HYBRID COMBINER (QTY/MODEL)					
DUPLEXER (QTY/MODEL)					
FILTER (QTY/MODEL)					
RAJIT KIT MODULE					
TRIPLEXER or NARROW BAND LLC (QTY/MODEL)					
SCPA/SCPA MODULE	120V SCPA				
Additional Component1					
Additional Component2					
Additional Component3					
MAGNETIC DECLINATION					
HATCHPLATE POWER (Watts)					
ERP (Watts)					
Local Market Notes					
Local Market Notes					
Local Market Notes					

Section 16C - NEW/PROPOSED SECTOR/CELL INFORMATION - GAMMA					
ANTENNA CONFIG (FROM BACK):	ANTENNA 1 GSM, UMTS (850 / 1900) or LTE (700 / AWS)	ANTENNA 2 GSM, UMTS (850 / 1900) or LTE (700 / AWS)	ANTENNA 3 GSM, UMTS (850 / 1900) or LTE (700 / AWS)	ANTENNA 4 GSM, UMTS (850 / 1900) or LTE (700 / AWS)	ANTENNA 5 GSM, UMTS (850 / 1900) or LTE (700 / AWS)
TECHNOLOGY	LTE	GSM			UMTS
RRH LOCATION (Top/Bottom/None)					
FEEDERS TYPE	Fiber	CR1873 PE (1.5'*) 1900mhz			CR1873 PE (1.5'*) 1900mhz
Feeder Length (feet)	130 ft	130 ft			130 ft
ANTENNA ATOLL	60010764_1950MHz_040				60010764_1950MHz_040
ANTENNA MAKE - MODEL	60010764_1950MHz_040T				60010764_1950MHz_040T
ANTENNA VENDOR	Katrim				Katrim
ANTENNA SIZE (H x W x D)					
ANTENNA WEIGHT					
ANTENNA GAIN	17				17
RADIATION CENTER (feet)	110 ft				110 ft
ANTENNA TIP HEIGHT					
ELECTRICAL TILT (Degrees)	2				2
MECHANICAL DOWN TILT	0				0
FEEDER AMOUNT					
Antenna RET Motor (QTY/MODEL)					
Antenna RET Splitter (QTY/MODEL)					
Antenna RET Earth (Grounding) Clamp (QTY/MODEL)					
Antenna RET Surge Arrestor (QTY/MODEL)					
Antenna RET CONTROL UNIT (QTY/MODEL) usually per site					
DC BLOCK (QTY/MODEL)					
TMA LNA (TYPE/MODEL)	Powerline TT19-08BP111-001 (1900 TMA w/3/0)				Powerline TT19-08BP111-001 (1900 TMA w/3/0)
CURRENT INJECTORS FOR TMA (QTY/MODEL)					
PDU FOR TMAs (QTY/MODEL) usually per site					
SURGE ARRESTOR (QTY/MODEL)					
DUPLEXER (QTY/MODEL)					
HYBRID COMBINER (QTY/MODEL)					
DUPLEXER (QTY/MODEL)					
FILTER (QTY/MODEL)					
RAJIT KIT MODULE					
TRIPLEXER or NARROW BAND LLC (QTY/MODEL)					
SCPA/SCPA MODULE	120V SCPA				
Additional Component1					
Additional Component2					
Additional Component3					
MAGNETIC DECLINATION					
HATCHPLATE POWER (Watts)					
ERP (Watts)					
Local Market Notes					
Local Market Notes					
Local Market Notes					

RFDS: GA_410_433_TBD_I0153571_061411_0



TYPICAL ANTENNA CABLE CONFIGURATION



COAX COLOR CODE TEMPLATE



NUM	DATE	DESCRIPTION:
A	06/24/11	ISSUED FOR REVIEW
O	07/06/11	ISSUED FOR PERMITTING & CONSTRUCTION

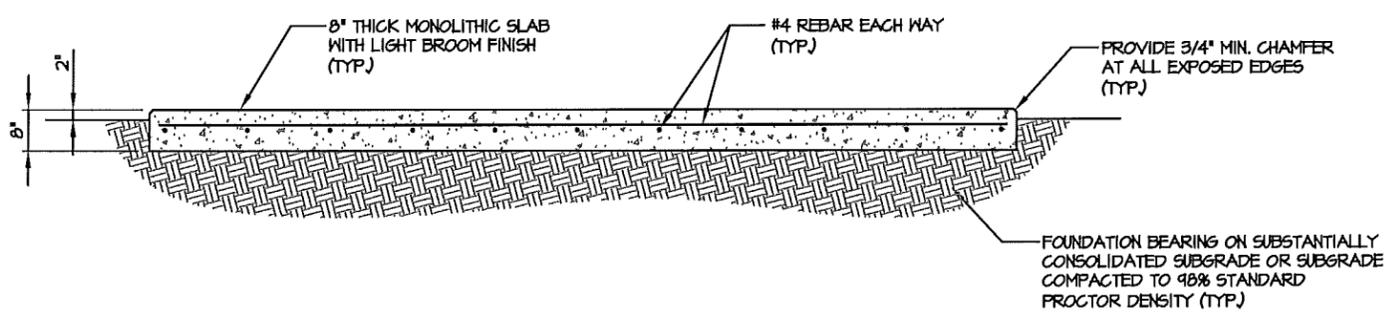
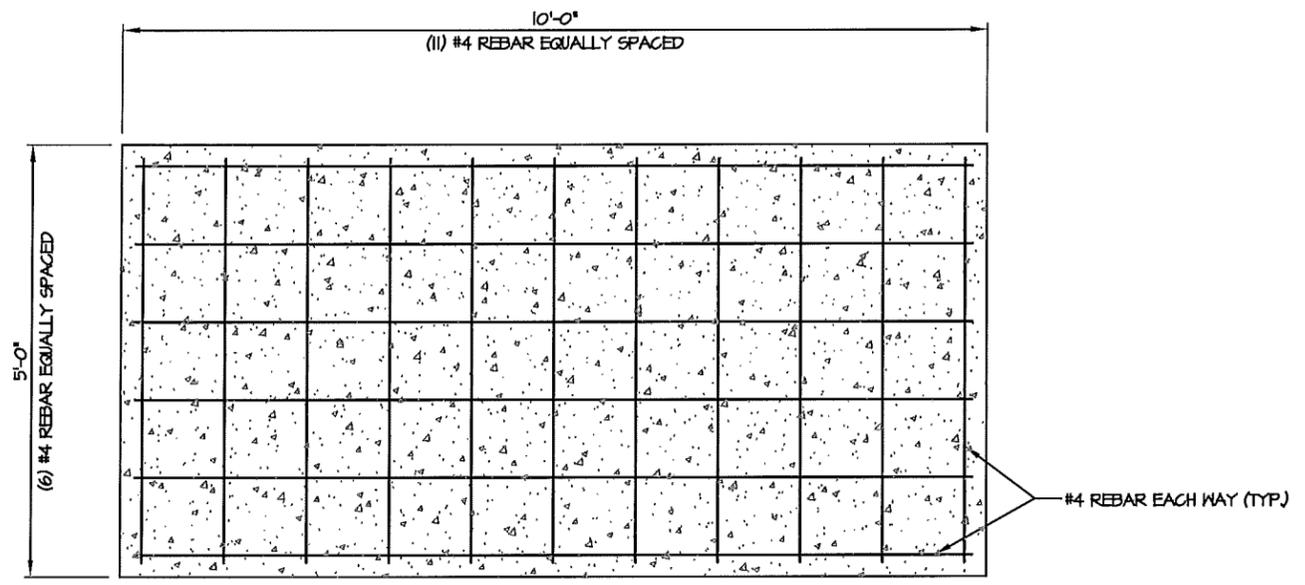
410-433

**COAX COLOR CODE
TEMPLATE & RFDS**

DESIGNED: JTG
DRAWN: JTG
CHECKED: PWM

JOB #: GNG824

E-5



MONOLITHIC GENERATOR SLAB DETAIL
 NOT TO SCALE

REINFORCED CONCRETE NOTES:

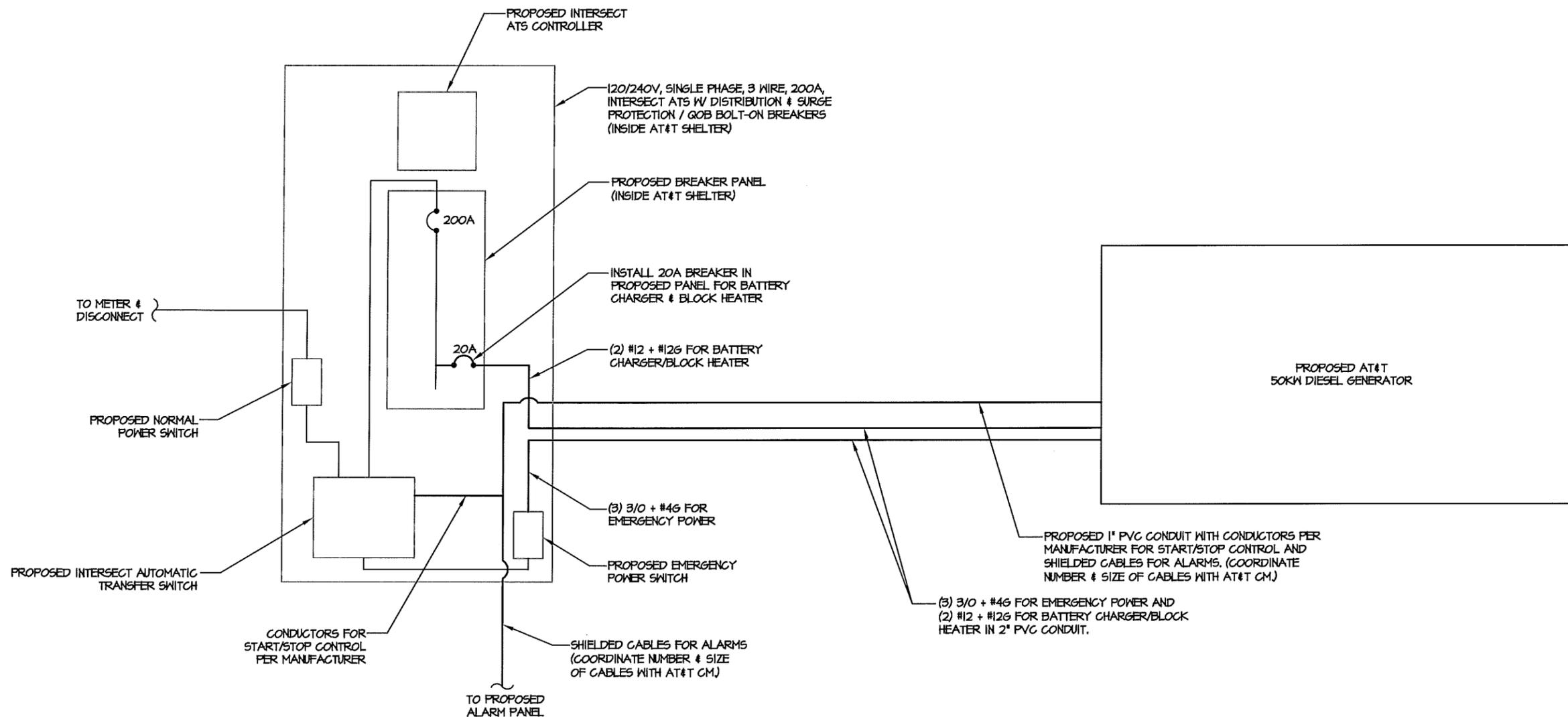
- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN & CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
 - SITECAST CONCRETE FOR SLABS AND POST FOOTINGS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. CONCRETE TESTING IS NOT REQUIRED FOR SLABS AND POST FOOTINGS UNLESS NOTED OTHERWISE.
 SLUMP - 4" MIN. / 6" MAX.
 AIR ENTRAINMENT - 2% TO 3% BY VOLUME
 CLASSES OF CONCRETE
- | CLASS | 28 DAY STRENGTH (PSI) | MAX WATER/CEMENT RATIO | PLACEMENT LOCATION | NOTES |
|-----------|-----------------------|------------------------|--------------------|---------------------|
| TYPE I | 3000 | 0.55 | SLABS & FOOTINGS | NORMAL WEIGHT |
| TYPE III* | 5000 | 0.45 | SLABS & FOOTINGS | HIGH EARLY STRENGTH |
- * IF REQUIRED BY THE CONSTRUCTION SCHEDULE THE CONTRACTOR MAY SUBSTITUTE TYPE III HIGH EARLY STRENGTH CONCRETE WITH THE APPROVAL OF THE CONSTRUCTION MANAGER.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES FOR REBAR SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO. LAPS FOR WELDED WIRE FABRIC SHALL BE AT LEAST 8 INCHES, UNO.
 - THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
 CONCRETE CAST AGAINST EARTH.....3"
 CONCRETE EXPOSED TO EARTH OR WEATHER
 #6 AND LARGER2"
 #5 AND SMALLER & W.W.F.....1-1/2"
 - MAXIMUM COARSE AGGREGATE SIZE SHALL BE 3/4".
 - INSTALLATION OF CONCRETE ANCHORS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATIONS. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO THE ANCHOR MANUFACTURER'S SPECIFICATIONS FOR MATERIAL STRENGTH, EMBEDMENT DEPTH, SPACING, AND EDGE DISTANCE OR AS DETAILED 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, HILTI, OR APPROVED EQUAL. IF THE MANUFACTURER'S SPECIFICATIONS AND DETAILS ARE FOUND TO CONFLICT WITH THAT SHOWN HEREIN, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
 - THE CONTRACTOR SHALL VERIFY FROST LINE AND FOOTING DEPTH REQUIREMENTS WITH THE JURISDICTION HAVING AUTHORITY PRIOR TO CONSTRUCTION.
 - MECHANICAL VIBRATION IS REQUIRED ON ALL SLABS TO REDUCE THE HONEYCOMB EFFECT UNLESS DIRECTED BY THE CONSTRUCTION MANAGER.
 - THE CONTRACTOR SHALL VERIFY ALL ELECTRICAL CONDUIT SIZES AND PENETRATION LOCATIONS PRIOR TO POURING THE SLAB.

NUM	DATE	DESCRIPTION:
A	06/29/11	ISSUED FOR REVIEW
O	07/06/11	ISSUED FOR PERMITTING & CONSTRUCTION

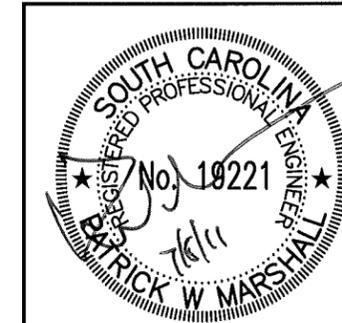
SITE: 410-433
ATC SHARED GENERATOR FOUNDATION DETAILS



DESIGNED: JTG
 DRAWN: JTG
 CHECKED: PWM
 JOB #: GN6824



GENERATOR ONE-LINE DIAGRAM
 NOT TO SCALE



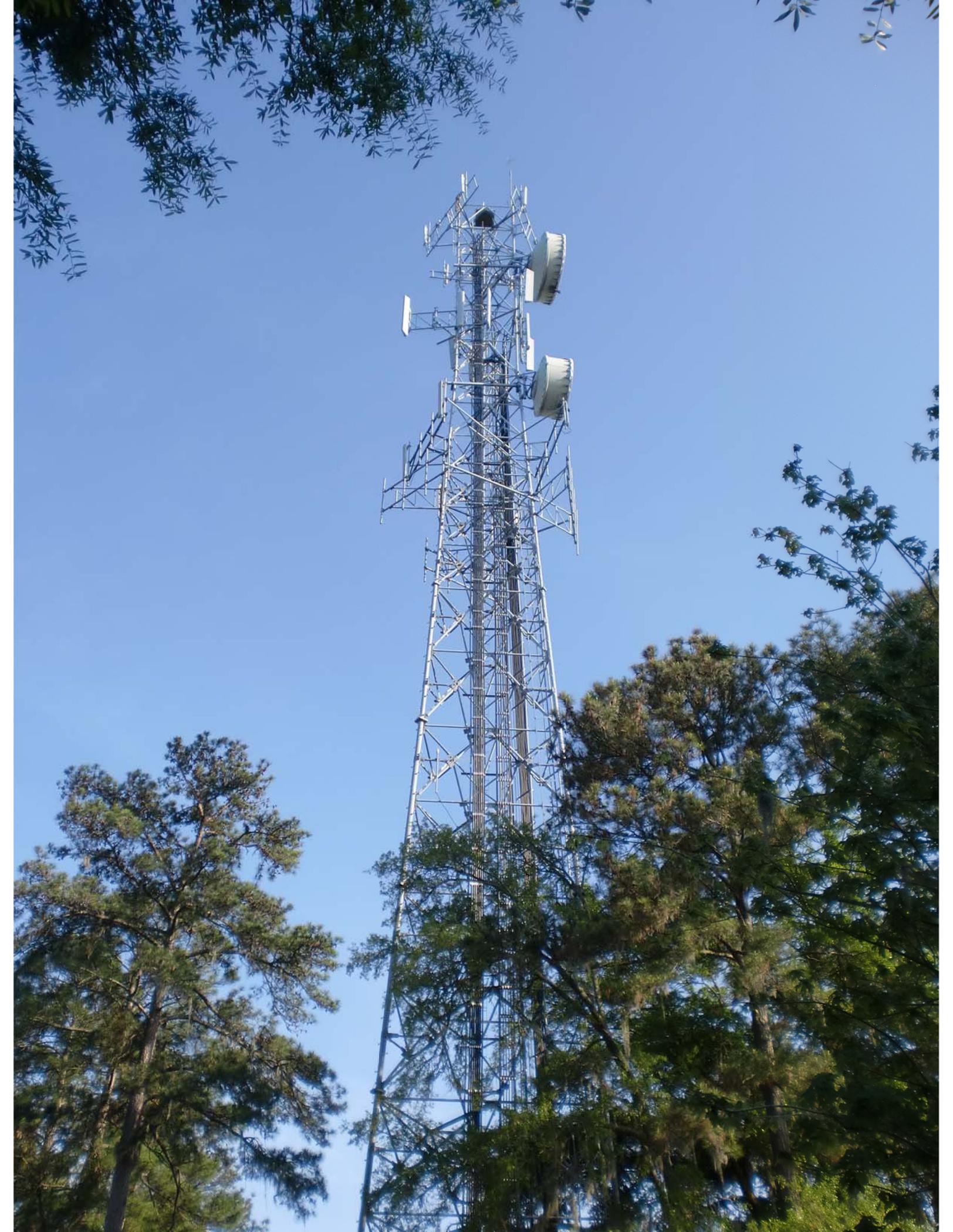
NUM	DATE	DESCRIPTION:
A	06/24/11	ISSUED FOR REVIEW
O	07/06/11	ISSUED FOR PERMITTING & CONSTRUCTION

410-433
ATC SHARED GENERATOR ONE-LINE DIAGRAM

DESIGNED: JTG
 DRAWN: JTG
 CHECKED: PWM
 JOB #: GNG824







DESIGN TEAM/ DRB COMMENT SHEET

*The comments below are staff recommendations to the Design Review Board (DRB),
and do not constitute DRB approval or denial*

PROJECT

DRB#

DATE

RECOMMEND APPROVE

RECOMMEND APPROVE W/COND.

RECOMMEND DENY

ARCHITECTURAL DESIGN

A co-location of a new antennae on an existing tower