



# **Town of Hilton Head Island Regular Design Review Board Meeting**

**Tuesday, March 27, 2012**

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

## **AGENDA**

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**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 March 13, 2012**
- 6. Staff Report**
- 7. Board Business**
- 8. Unfinished Business**
  - A) DR120004- Hilton Head Christian Academy
  - B) DR120007- Jenkins Island Cell Tower
- 9. New Business**
  - A) DR120014- Airport Tree Mitigation
- 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.**

**Town of Hilton Head Island**  
**Design Review Board**  
**Minutes of the Tuesday, March 13, 2012 Meeting**      **DRAFT**  
**1:15p.m – Benjamin M. Racusin Council Chambers**

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

Board Members Absent:      Galen Smith

Council Members Present:      None

Town Staff Present:      Mike Roan, Urban Design Administrator  
Richard Spruce, Plans Administrator  
Rocky Browder, Environmental Planner  
Kathleen Carlin, Administrative Assistant

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**1. CALL TO ORDER**

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

**2. ROLL CALL**

**3. FREEDOM OF INFORMATION ACT COMPLIANCE**

**4. APPROVAL OF THE AGENDA**

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

**5. APPROVAL OF THE MINUTES**

The minutes of the February 28, 2012 meeting were **approved** as presented by general consent.

**6. STAFF REPORT**

None

**7. BOARD BUSINESS**

None

**8. UNFINISHED BUSINESS**

**Hilton Head Christian Academy** – Practice Gym - DR120004

Mr. Roan presented a brief history of the application. The Board is reviewing this application for the third time. The conceptual application for this project was approved on February 14<sup>th</sup> with conditions. Since the project's last review on February 28<sup>th</sup>, the applicant has introduced stucco on all four sides of the building bringing it closer to Design Guide criteria. The trellis and entry features also add some wood elements to the structure. Mr. Roan presented a visual review of the elevations. Staff feels that the south elevation is still sparsely composed, but fits the program of interior. At the previous submission implied pilaster utilized in the stucco elements, where they are now labeled as control joints. Pilasters might add some shadow to the facades. Overhang is now introduced on the

1/12 roof. The allowance of the metal building set the precedent for a project that was driven by cost over the quality of the detailing, so in that light the project has moved significantly closer to what the Board was recommending for approval. The trellises seem to exist for their own sake, and are under-proportioned, relative to depth and material dimensions.

If the adjacent area were to be later developed into a courtyard, perhaps a useable trellis/ pergola in that area would be a practical first phase, and help reduce the mass of the building. The landscape on the north elevation should correspond to the architectural elements on that side of the building. The trees will be growing into the trellises upon installation.

The Natural Resources has reviewed and approved the proposed tree removal and mitigation plan. All replacement trees will be field located and approved by Town staff. Staff recommended that the application be approved with conditions. At completion of the staff's presentation, Chairman Theodore requested that the applicant make his presentation.

Mr. Greg Beste, Architect, presented statements in support of the application. The applicant discussed the building, the trellis, the courtyard, and the landscaping plan. The Board stated the need for additional architectural detail on the gable end of the building. The Board also discussed the landscape plan particularly regarding the south elevation. The Board and applicant discussed the size and the species of plant material.

Following their discussion, and based on the Board's comments, the applicant chose to **withdraw** his application for recommended revisions. The applicant will resubmit at a later date.

*\* Mr. Tom Parker recused himself from review of the following application due to a professional conflict of interest. A Conflict of Interest Form was completed, signed, and attached to the record.*

## 9. NEW BUSINESS

\* Harbourside III – DR1200013

Mr. Roan introduced the application and stated its location, 9 Harbourside Way. The project adds a 400-square foot office to the front of the existing Harbourside building. The materials, finishes and colors all match the existing. Staff believes that the flat roof form strays from the Design Guide; however, given the overall mass of the building and the unusual existing roofline at the first floor level, it helps highlight and identify the registration office and integrates nicely.

Mr. Roan provided an in-depth review of the application. A landscape plan will be needed for the area between the office and sidewalk and to repair/replace the remaining landscape, post-construction. Natural Resources' concerns have been addressed through the Expedited Development Review process. The staff recommended that the application be approved with the receipt of a landscape plan. Following staff's presentation, Chairman Theodore requested that the applicant make his presentation.

Mr. Tom Parker, Lee and Parker Architects, presented statements in support of the application. The applicant discussed the materials, the finishes, roof form, and landscape plan. The Board and the applicant discussed the project. Following this discussion, Chairman Theodore requested that a motion be made.

Vice Chairman Sodemann made a **motion** to **approve** the Harbourside III application with the condition that a landscape plan shall be submitted. Ms. Welch **seconded** the motion and the motion **passed** with a vote of 5-0-0.

**10. APPEARANCE BY CITIZENS**

None

**11. APPEARANCE BY CITIZENS**

None

**12. ADJOURNMENT**

The meeting was adjourned at 2:00p.m.

Submitted By:

Approved By:

\_\_\_\_\_  
Kathleen Carlin  
Administrative Assistant

\_\_\_\_\_  
Todd Theodore  
Chairman

DRAFT



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**OCEAN WOODS LANDSCAPING**

67 Union Cemetery Road Hilton Head Island, South Carolina 29926  
ph 843.682.4000 fx 843.682.4012 www.oceanwoods.com

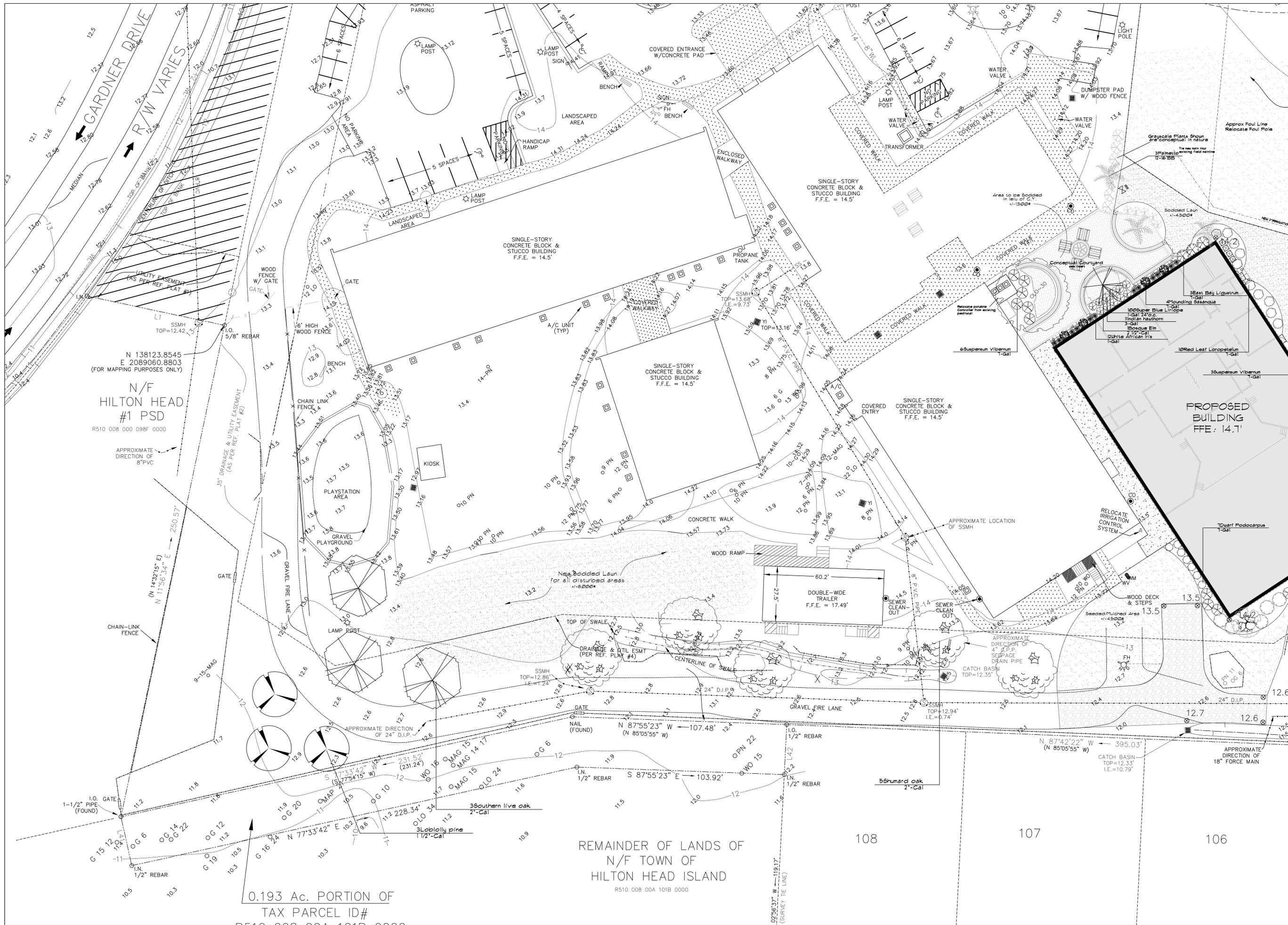
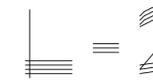


EXPERIENCE EXCELLENCE INTEGRITY

A Landscape Plan for:  
**Hilton Head Christian Academy  
New Gymnasium and Classroom Building**  
Gardner Drive Hilton Head Island, SC

By: R. Sotiropoulos  
Scale: 1" = 20'-0"  
Date: 1/1/12  
Revs: 2-23-12 per DRB  
Revs: 3-5-12 DRB

Sht:



REMAINDER OF LANDS OF  
N/F TOWN OF  
HILTON HEAD ISLAND  
R510 008 00A 101B 0000

0.193 Ac. PORTION OF  
TAX PARCEL ID#

N 138123.8545  
E 2089060.8803  
(FOR MAPPING PURPOSES ONLY)  
**N/F  
HILTON HEAD  
#1 PSD**  
R510 008 000 098F 0000

0.193 Ac. PORTION OF  
TAX PARCEL ID#



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**OCEAN WOODS LANDSCAPING**  
 67 Union Cemetery Road Hilton Head Island, South Carolina 29926  
 ph 843.682.4000 fx 843.682.4012 www.oceanwoods.com



EXPERIENCE EXCELLENCE INTEGRITY

A Landscape Plan for:

**Hilton Head Christian Academy**  
**New Gymnasium and Classroom Building**  
 Gardner Drive Hilton Head Island, SC

By: R. Sotiropoulos  
 Scale: 1" = 20'-0"  
 Date: 1/17/12  
 Revs: 2-23-12 per DRB  
 Revs: 3-5-12 DRB

Sht:

**MULCH NOTE**

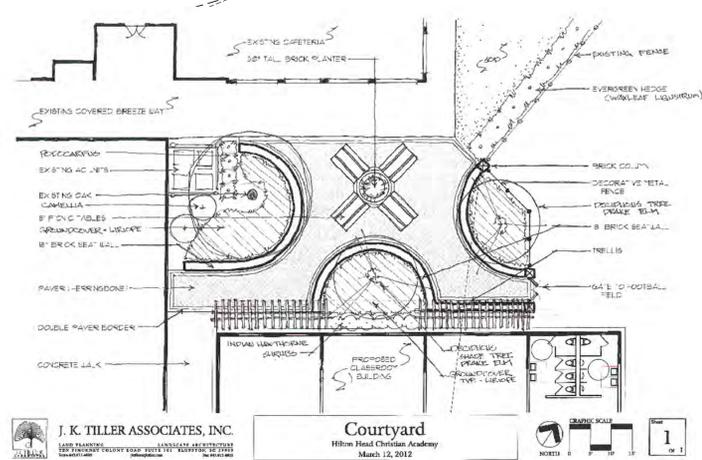
All planting beds shown are to be mulched to a depth of 3" using Pine Straw Mulch at an approximate area of 6,000<sup>sq</sup> at 1 bale/40<sup>sq</sup> or approximately 150 bales.

**LAWN NOTE**

All areas shown as Lawn are to be sodded using Certified Bermudagrass Sod at an approximate area of 10,000<sup>sq</sup>. All sodded areas are to be graded to achieve a minimum slope of 1/100 or 1%. Areas shown to be seeded are to be hydroseeded using an establishment mixture of Bermudagrass/Brown-Top Millet and/or Ryegrass as seasonally dependent. Seeding can be modified as field conditions may dictate alternate seed types. Approximate area of seeding is 4,500<sup>sq</sup>. Mobile Classroom area shall be restored to a sodded lawn using sod appropriate sod type to be determined based on exposure for proper development this area. An approximate area of sod to be 4-8,000<sup>sq</sup>. The CONCEPTUAL COURTYARD shown would be sodded if Courtyard is a future phase. Approximate adjustment in sodded area to be approximately 4-15,000<sup>sq</sup>.

**IRRIGATION NOTE**

Existing irrigation system(s) are currently in place. A pre-construction alteration of the existing systems is required. A new mainline and control wiring that currently supplies/controls the athletic fields is to be re-run as shown, to allow for operation during construction. Also required will be modification of the Baseball outfield head placement and irrigation to allow for new fencing and outfield limits. The existing controller for the possible irrigation is to be relocated to the existing service yard as shown. All new plant materials and sod shown on this plan are to be irrigated from the existing irrigation well providing 100% coverage. The existing system is to be modified as needed to meet or exceed all current industry standards and all Town codes and requirements. All turf areas are to be conventional sprays or rotor zones and plant materials are to be irrigated using a single 4" pop-up spray zone. The existing field controller is to be relocated to the irrigation well location and upgraded to a new controller that meets current industry standards. Selected controller is to be ready for expansion when and if the athletic field irrigation is modified in the future.



**PLANT MATERIALS LIST-Planting Schedule**

Symbol	Quantity	Common Name	Scientific Name	Planting Size
☼	4	Bush Camellia	Camellia sasanqua 'ShiShi Gashira'	1-Gal 18-24x18-24'
☼	12	White African Iris	Diets africanus bicolor	3-Gal 18-24x12-18'
☼	3	Wax Myrtle	Myrica cerifera	3-Gal 8-10x3-4'lf
☼	10	Red Leaf Loropetalum	Loropetalum chinense rubra	1-Gal 24-30x18-24'
☼	100	Super Blue Liriope	Liriope muscarii 'Super Blue'	1-Gal 6-8x6-8"
☼	3	East Bay Ligustrum	Ligustrum japonicum 'East Bay'	1-Gal 30-36x18-24'
☼	1	Dwarf Podocarpus	Podocarpus macrophyllus 'Pringle's Dwarf'	1-Gal 18-24-18-24'
☼	11	Indian Hawthorne	Raphiolepis indica (Pink)	3-Gal 12-18x12-18"
☼	1	Bosque Elm	Ulmus parvifolia 'Bosque'	30-Gal 10-12x4-5'
☼	1	Sweet viburnum	Viburnum odoratissimum	15-Gal 48-54x24-30"
☼	19	Suspensum Viburnum	Viburnum suspensum	1-Gal 24-30x24-30"

**PLANT MATERIALS LIST-Mitigation Trees**

Symbol	Quantity	Common Name	Scientific Name	Planting Size
☼	3	Loblolly pine	Pinus taeda	1 1/2"-Cal 10-12x4-5'
☼	3	Sabal Palmetto	Sabal Palmetto	BR 12-16'ht
☼	5	Shumard oak	Quercus shumardii	2"-Cal 10-12x4-5'
☼	3	Southern live oak	Quercus virginiana	2"-Cal 10-12x4-5'

\*This mitigation list is to be field located along fire-lane as shown. Placement of these trees are to maximize breaking up of view from adjacent properties. Field adjust to proper tree development and placement considerations for firelane access and existing tree canopy and root structures should be emphasized. \*Final placement of mitigation trees to be approved by the landscape architect or Town representative.



PREPARED FOR: HILTON HEAD CHRISTIAN ACADEMY

ADDRESS: #55 GARDNER DRIVE  
 PORTION OF TAX PARCEL I.D. NO. R510-008-000-098A-0000  
 AND A PORTION OF TAX PARCEL I.D. NO. R510-008-000-0098-0000

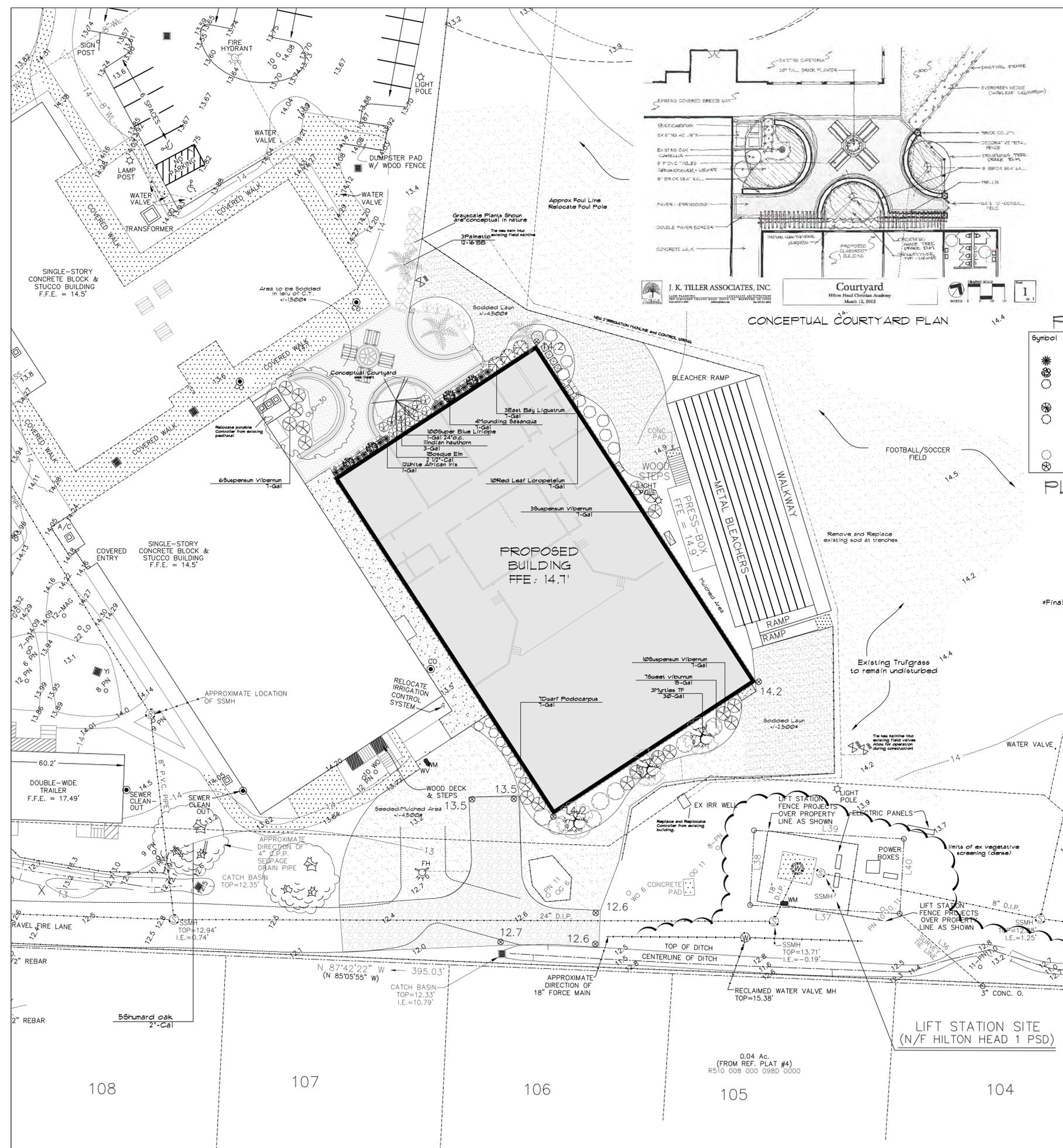
ASBUILT, BOUNDARY, TREE & TOPOGRAPHIC SURVEY OF PARCELS A & B  
**HILTON HEAD CHRISTIAN ACADEMY**  
 GARDNER DRIVE & WILLIAM HILTON PARKWAY

A SECTION OF HONEY HORN PLANTATION & PARCEL II, INDIGO RUN PLANTATION  
 HILTON HEAD ISLAND, BEAUFORT COUNTY, SOUTH CAROLINA

1" = 40' DATE: 12/8/2006 JOB NO: S890490-5  
 REVISED 03/08/2007: ADDITIONAL TREE AND TOPO INFO ADDED  
 REVISED 09/24/2008: UPDATED SURVEY  
 REVISED 11/25/2008: ADDITIONAL BOUNDARY, TREE & TOPO OF NEW 0.193 AC. PARCEL  
 REVISED 8/10/2011: UPDATE ASBUILT, TREE & TOPO IN THE BASKETBALL COURT AREA



**SURVEYING CONSULTANTS**  
 17 Sherington Drive, Suite C, Bluffton, SC 29910  
 SC Telephone: (843) 815-3304 FAX (843) 815-3305  
 GA Telephone: (912) 826-2775 FAX (912) 826-2783



108

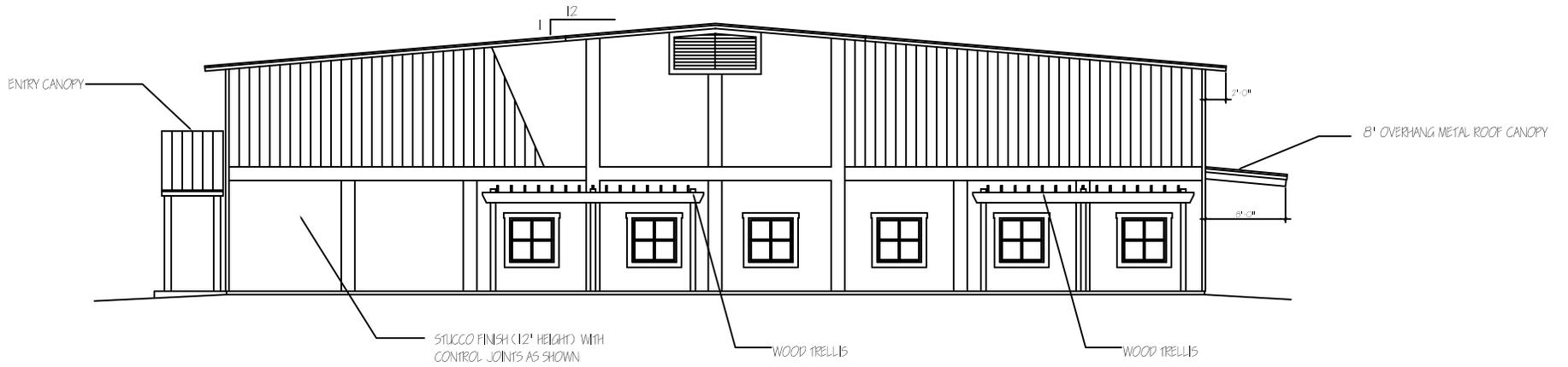
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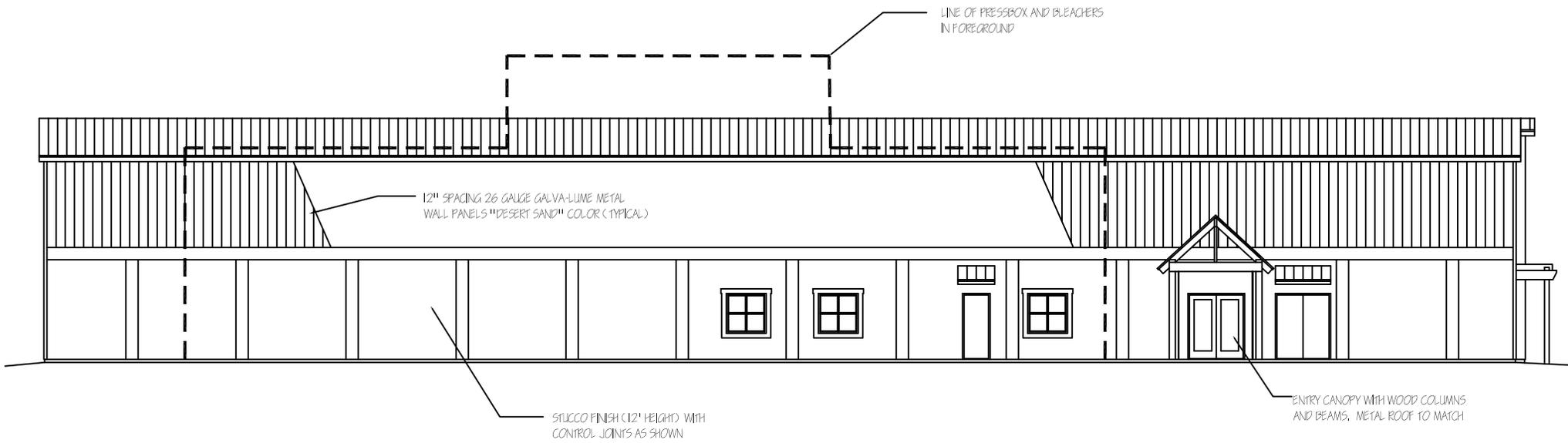
104

12" SPACING 26 GAUGE GALVA-LUME METAL  
WALL PANELS "DESERT SAND" COLOR (TYPICAL)



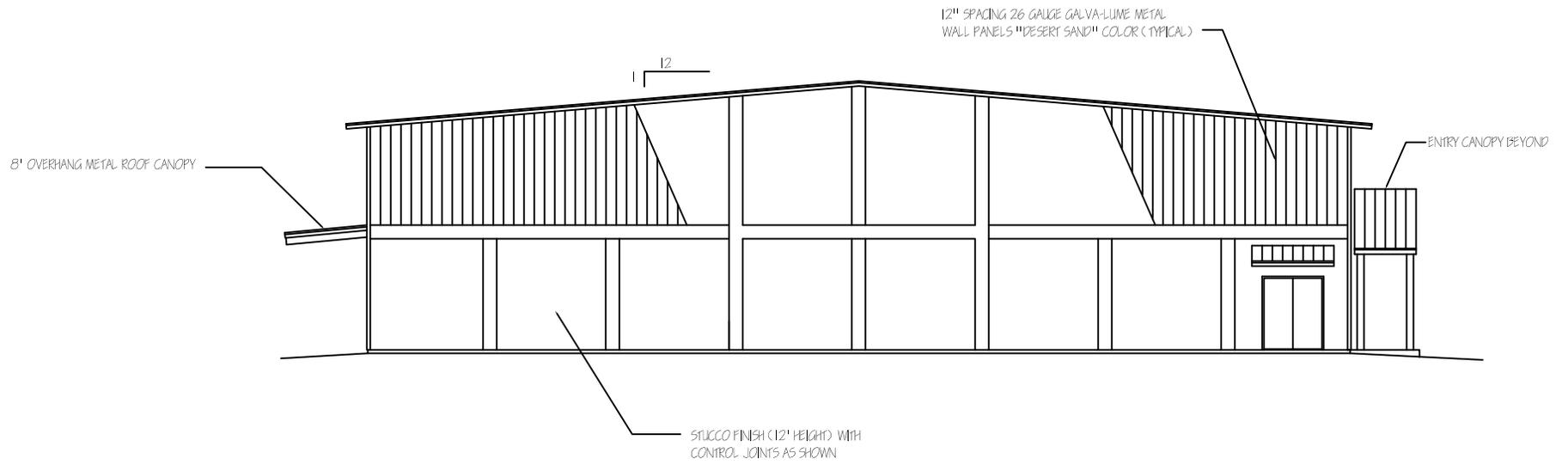
NORTH ELEVATION

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



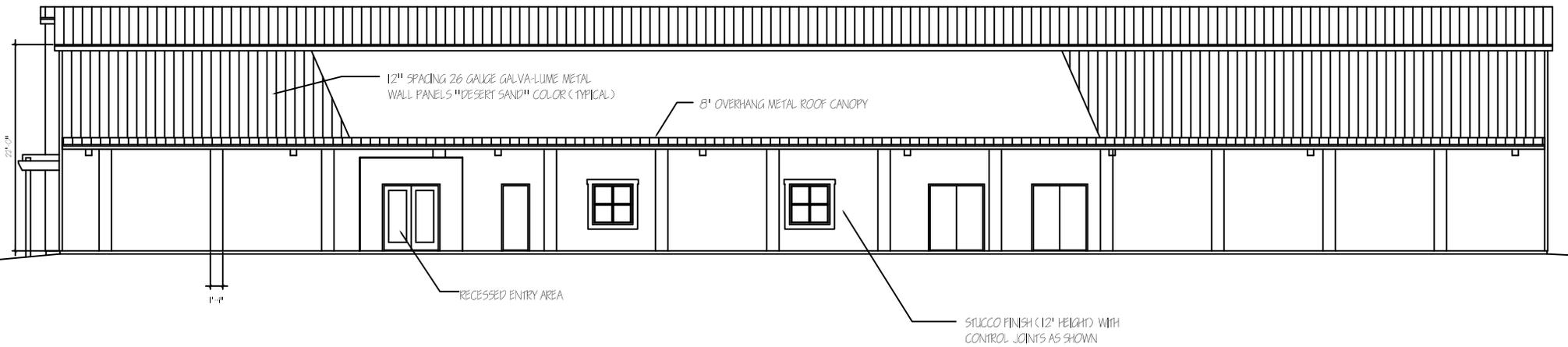
## EAST ELEVATION

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



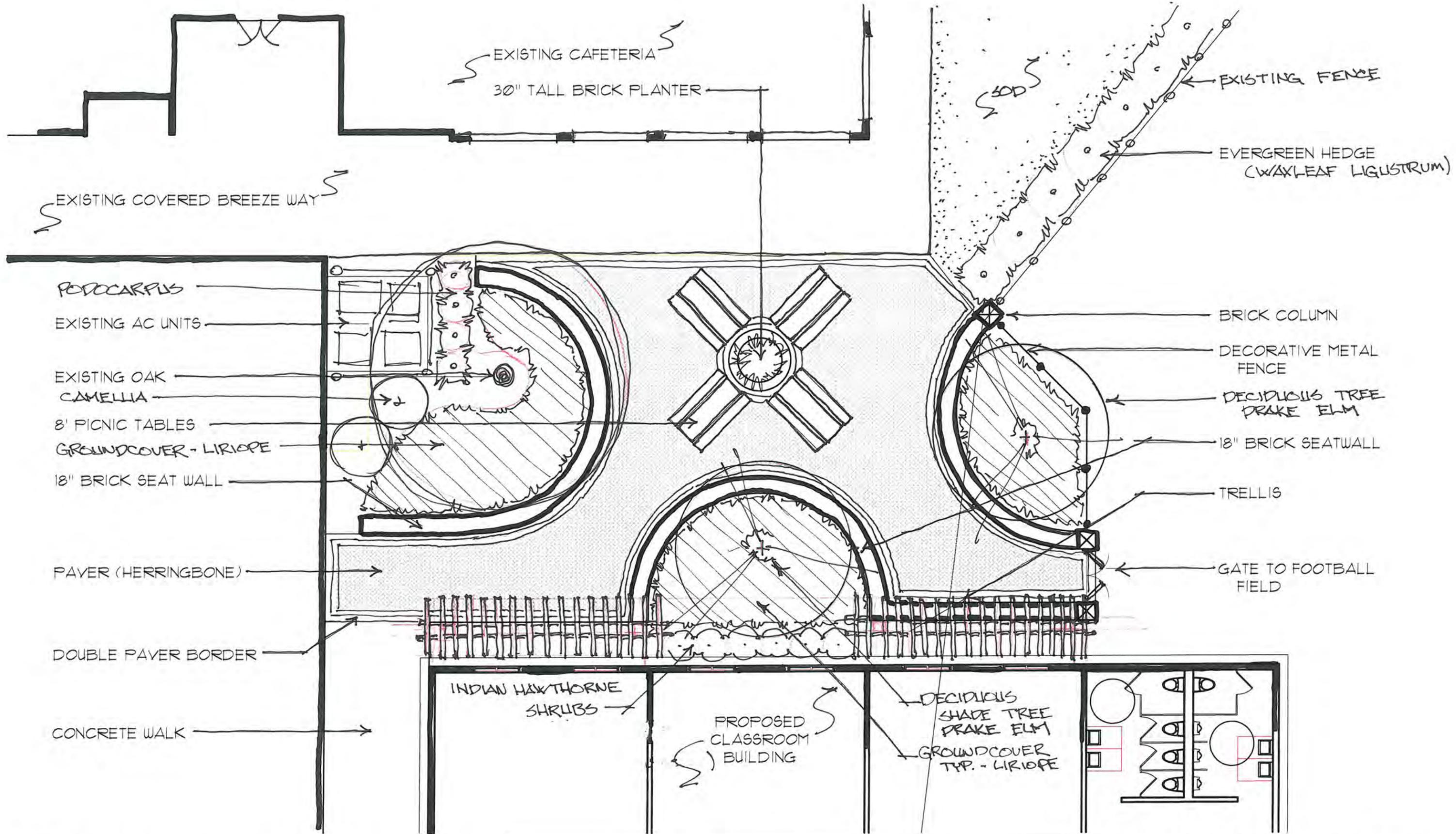
## SOUTH ELEVATION

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



## WEST ELEVATION

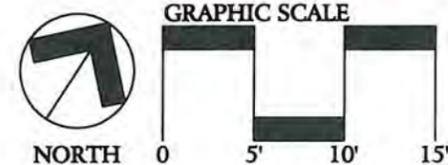
SCALE: 1/8" = 1'-0"



**J. K. TILLER ASSOCIATES, INC.**

LAND PLANNING      LANDSCAPE ARCHITECTURE  
 TEN PINCKNEY COLONY ROAD SUITE 101 BLUFFTON, SC 29909  
 Voice 843.815.4800      jktiller@jktiller.com      Fax 843.815.4802

**Courtyard**  
 Hilton Head Christian Academy  
 March 12, 2012



Sheet  
**1**  
 Of 1

## 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 NAME: HH Christian Academy Practice Gym/ Classroom

DRB#: DR120004

DATE: 3-27-2012

RECOMMENDATION:    Approval                Approval with Conditions                Denial   

### ARCHITECTURAL DESIGN- SEE GENERAL COMMENTNS BELOW

DESIGN GUIDE/LMO CRITERIA	Complies Yes	No	Not Applicable	Comments or Conditions
Structure is designed to be appropriate to the neighborhood	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Promotes pedestrian scale and circulation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Design is unobtrusive and set into the natural environment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Utilizes natural materials and colors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Avoids distinctive vernacular styles	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Design is appropriate for its use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
All facades are have equal design characteristics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Avoids monotonous planes or unrelieved repetition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Altering the stucco finishes on the gable ends and extending the rake addresses Board comments
Has a strong roof form with enough variety to provide visual interest	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	To the extent requested by the Board
Minimum roof pitch of 6/12	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Overhangs are sufficient for the façade height.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Forms an details are sufficient to reduce the mass of the structure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Human scale is achieved by the use of proper proportions and architectural elements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Utilizes a variety of materials, textures and colors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Incorporates wood or wood simulating materials	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Windows are in proportion to the facade	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Details are clean, simple and appropriate while avoiding excessive ornamentation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Utilities and equipment are concealed from view	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Decorative lighting is limited and low wattage and adds to the visual character	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Accessory elements are design to coordinate with the primary structure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**LANDSCAPE DESIGN**

<b>DESIGN GUIDE/LMO CRITERIA</b>	<b>Complies Yes</b>	<b>No</b>	<b>Not Applicable</b>	<b>Comments or Conditions</b>
Treats the Landscape as a major element of the project	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Provides Landscaping of a scope and size that is in proportion to the scale of the development	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Landscape is designed so that it may be maintained in its natural shape and size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Preserves a variety of existing native trees and shrubs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Provides for a harmonious setting for the site's structures, parking areas or other construction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Location of existing trees and new trees provides street buffers, mitigation for parking lots, and an architectural complement that visually mitigates between parking lots and building(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shrubs are selected to complement the natural setting, provide visual interest and screen less desirable elements of the project	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A variety of species is selected for texture and color	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Provides overall order and continuity of the Landscape plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Native plants or plants that have historically been prevalent on the Island are utilized	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A variety of sizes is selected to create a "layered" appearance for visual interest and a sense of depth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The location of existing mature trees is taken into	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

account in placement of shrubs so as not to damage tree roots				
Proper spacing and location for plants to reach their mature size and natural shape while avoiding excessive or unnatural pruning	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Proposed groundcovers are evergreen species with low maintenance needs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Large grassed lawn areas encompassing a major portion of the site are avoided	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The adjacent development is taken into account in determining the most appropriate buffer so as not to depart too dramatically from the neighborhood	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ornamentals and Annuals are limited to entrances and other focal points	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

***NATURAL RESOURCE PROTECTION***

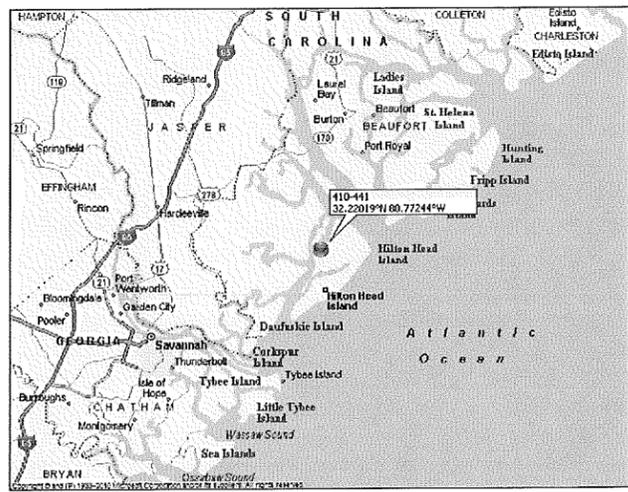
***Natural Resources has reviewed and approved the proposed tree removal and mitigation plan. All replacement trees will be field located and approved by Town Staff***

<b>DESIGN GUIDE/LMO CRITERIA</b>	<b>Complies Yes</b>	<b>No</b>	<b>Not Applicable</b>	<b>Comments or Conditions</b>
An effort has been made to preserve existing trees and under story plants	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Supplemental and replacement trees meet LMO requirements for size, species and number	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wetlands if present are avoided and the required buffers are maintained	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sand dunes if present are not disturbed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

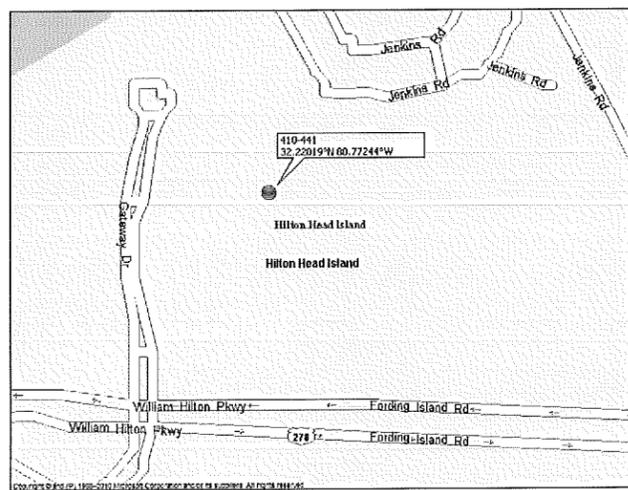
***MISC COMMENTS/QUESTIONS***

Latest application addresses specific conditions of the Board's last review

**LOCATION MAP**



**VICINITY MAP**



**DRIVE DIRECTIONS**

FROM ATLANTA: TAKE I-75 SOUTH TOWARD MACON TO I-16 SOUTH TOWARD SAVANNAH TO I-95 NORTH TOWARD HILTON HEAD. FROM I-95 TAKE EXIT 8 TO HWY-218 / INDEPENDENCE BLVD AND CONTINUE ALL THE WAY TO HILTON HEAD ISLAND. AFTER CROSSING THE BRIDGE ONTO HILTON HEAD ISLAND TURN LEFT ONTO GATEWAY DRIVE. FOLLOW TO THE THIRD TURN AND TURN RIGHT ONTO THE PAVED DRIVE. FOLLOW INTO THE PLANT SITE. TOWER SITE IS ON THE LEFT AT THE TREELINE.

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

SITE NUMBER:

**410-441**

SITE NAME:

**HHI\_BIC\_35**

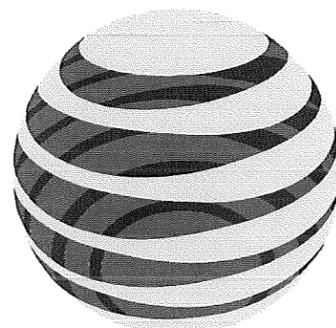
PROJECT:

**NSB**

PROJECT DESCRIPTION:

**PROPOSED 148 FT. MONOPOLE TOWER**

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: GATEWAY DRIVE  
HILTON HEAD ISLAND, SC 29928

LATITUDE: 32° 13' 12.7"  
LONGITUDE: 80° 46' 20.8"

PARCEL ID: R510-006-000-0099-0000  
PARCEL SIZE: 55.33 ACRES  
ZONING: N/A  
JURISDICTION: HILTON HEAD ISLAND

PROPERTY OWNER: THE TOWN OF HILTON HEAD  
ONE TOWN CENTER COURT  
HILTON HEAD ISLAND, SC 29928

TOWER OWNER & APPLICANT: AMERICAN TOWER CORPORATION  
1898 LELAND DRIVE, SUITE A  
MARIETTA, GA 30067  
MET HEPSEN  
678-265-6759

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

PROJECT MANAGER: GOODMAN NETWORKS, INC.  
5895 WINDWARD PARKWAY, SUITE 250  
ALPHARETTA, GA 30005

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

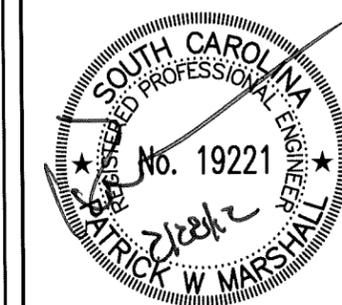
POWER: PALMETTO ELECTRIC

TELCO: HARGRAY

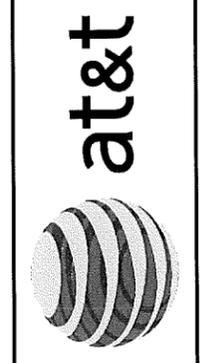
**DRAWING INDEX**

- T-1 TITLE SHEET & PROJECT INFORMATION
- SURVEY
- C-1 GENERAL NOTES
- C-2 OVERALL SITE PLAN
- C-3 DETAILED SITE PLAN
- C-4 TOWER ELEVATION & DETAILS
- C-4A LTE RRUS AND SQUID MOUNTING DETAILS
- C-5 GRADING & EROSION CONTROL PLAN
- C-6 GRADING & EROSION CONTROL DETAILS
- C-7 GRADING & EROSION CONTROL SPECIFICATIONS
- C-8 EQUIPMENT LAYOUT
- C-9 ICE BRIDGE DETAILS
- C-10 SITE SIGNAGE
- L-1 LANDSCAPING PLAN & DETAILS
- E-1 ELECTRICAL SPECS & ONE-LINE DIAGRAM
- E-2 ELECTRICAL SITE PLAN
- E-3 GROUNDING SITE PLAN
- E-4 GROUNDING NOTES
- E-5 GROUNDING DETAILS
- E-6 COAX COLOR CODE TEMPLATE & RFDS
- E-7 LTE EQUIPMENT DETAILS
- E-8 UTILITY FRAME DETAILS
- E-4 ATC GENERATOR ONE-LINE DIAGRAM

RFDS: GA\_410\_441\_CCO\_2413000662\_10153578\_012612\_0\_3



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



NUM	DATE	DESCRIPTION
A	1/24/12	ISSUED FOR REVIEW
O	2/7/12	ISSUED FOR ZONING SUBMITTAL
1	2/22/12	LANDSCAPING PLAN REVISED
2	2/29/12	TOWER HEIGHT REVISED

**410-441**  
**TITLE SHEET & PROJECT INFORMATION**

DESIGNED: AJB  
DRAWN: AJB  
CHECKED: PWM

JOB #: TCD136  
**T-1**

**LINE TABLE**

LINE	BEARING	DISTANCE
L1	N10°29'09"E	79.22'
L2	N73°15'11"E	54.49'
L3	N65°55'05"E	38.46'
L4	N71°11'44"E	55.44'
L5	N77°59'46"E	38.58'
L6	N42°00'56"E	52.60'
L7	N37°07'20"E	50.91'
L8	N54°38'22"E	46.17'
L9	N73°41'22"E	53.81'
L10	S89°09'33"E	43.89'
L11	N40°37'19"E	57.70'
L12	N00°11'09"W	63.72'
L13	N16°31'07"E	57.87'
L14	N38°53'22"E	49.34'
L15	N48°35'46"E	54.59'
L16	N59°04'05"E	200.03'
L17	N57°07'20"E	116.20'
L18	N61°20'47"E	148.73'
L19	N60°34'33"E	92.26'
L20	N55°01'24"E	66.16'
L21	N61°09'22"E	42.55'
L22	S55°05'09"E	42.18'
L23	S53°32'53"E	67.59'
L24	S06°53'26"W	35.56'
L25	S48°52'29"W	73.03'
L26	N01°02'02"W	102.52'
L27	N13°50'21"W	188.36'
L28	S87°48'44"E	73.38'
L29	N82°27'45"E	100.98'
L30	S80°34'45"E	54.46'
L31	N79°24'10"E	81.43'
L32	N00°09'04"E	22.27'

**CURVE TABLE**

LINE	ARC	RADIUS	CHD. BRG.	CHD.
C1	60.45'	983.35'	S01°30'12"W	60.44'
C2	62.24'	983.35'	S05°04'40"W	62.23'
C3	44.70'	200.00'	N07°26'12"W	44.61'
C4	143.17'	424.67'	N02°16'00"W	142.49'
C5	72.62'	49.07'	N49°47'22"E	66.18'
C6	29.60'	100.00'	S89°03'30"E	29.49'
C7	40.01'	100.00'	N87°57'27"E	39.75'

**GENERAL NOTES**

THIS EASEMENT SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF AT&T AND EXCLUSIVELY FOR THE TRANSFERRAL OF THE LEASEHOLD AND THE RIGHTS OF EASEMENT SHOWN HEREON AND SHALL NOT BE USED AS AN EXHIBIT OR EVIDENCE IN THE FEE SIMPLE TRANSFERRAL OF THE SUBJECT PROPERTY NOR ANY PORTION OR PORTIONS THEREOF. NO BOUNDARY SURVEY WAS PERFORMED.

THIS SURVEY WAS PREPARED WITHOUT BENEFIT OF A TITLE REPORT WHICH MAY REVEAL ADDITIONAL CONVEYANCES, EASEMENTS, OR RIGHTS-OF-WAY NOT SHOWN HEREON.

EQUIPMENT USED FOR ANGULAR & LINEAR MEASUREMENTS: LEICA TCRA 1103 ROBOTIC

THE FIELD DATA UPON WHICH THIS EASEMENT SURVEY IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 20,000+ FEET AND AN ANGULAR ERROR OF 5.0" PER ANGLE POINT AND WAS ADJUSTED USING LEAST SQUARES.

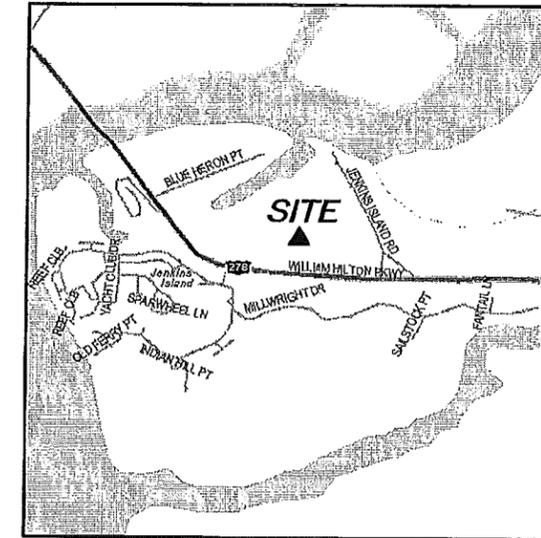
THE PLAT HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE TO WITHIN ONE FOOT IN 100,000+ FEET.

THE 2' CONTOURS AND SPOT ELEVATIONS SHOWN ON THIS EASEMENT SURVEY ARE ADJUSTED TO NAVD 88 DATUM AND HAVE A VERTICAL ACCURACY OF ± 1'. CONTOURS AND SPOT ELEVATIONS OUTSIDE THE IMMEDIATE SITE AREA ARE APPROXIMATE.

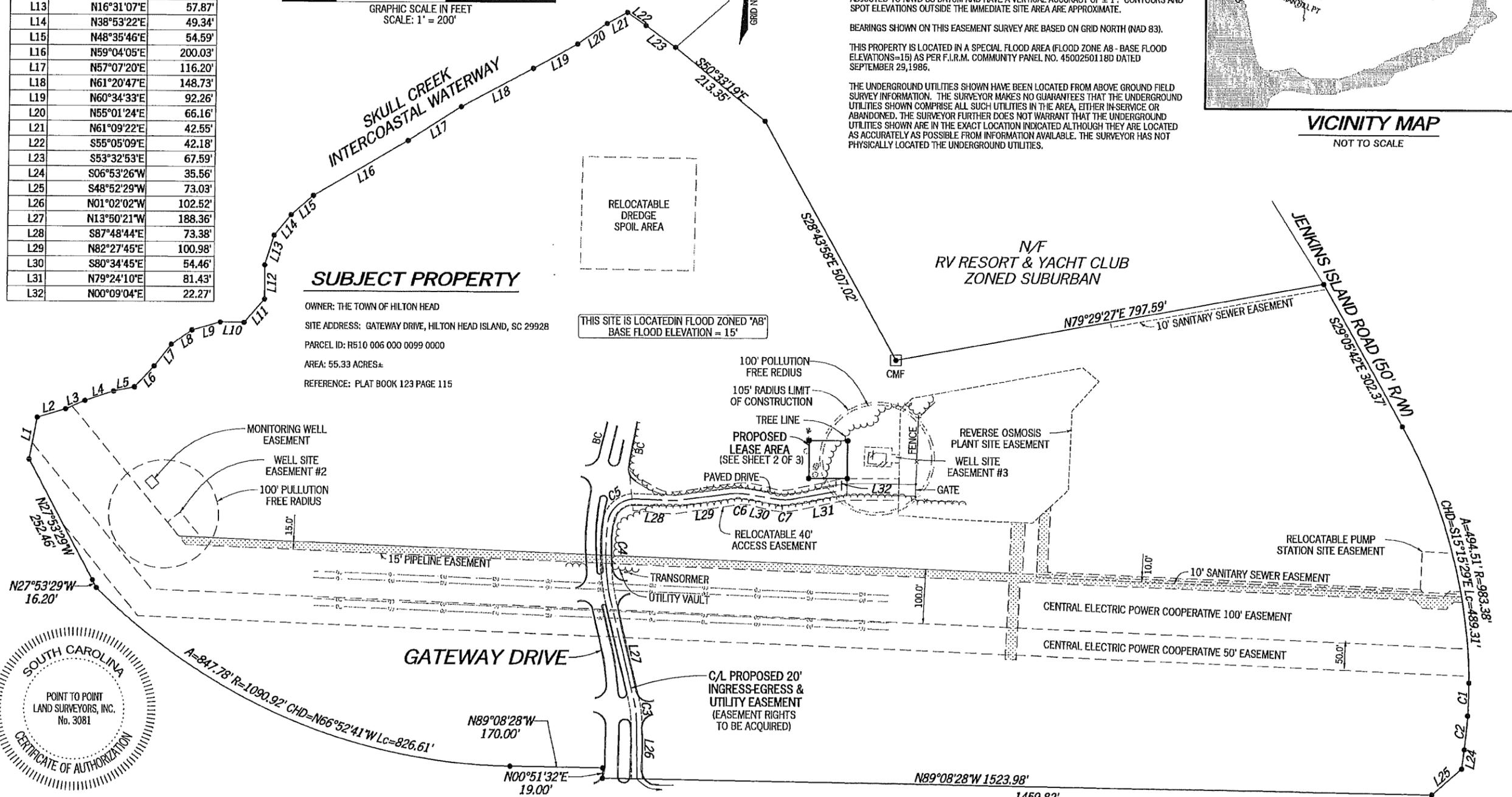
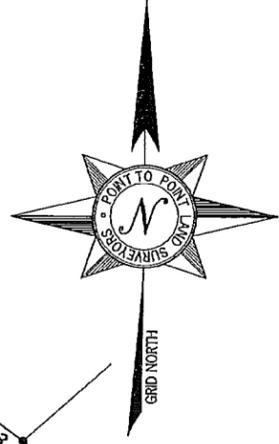
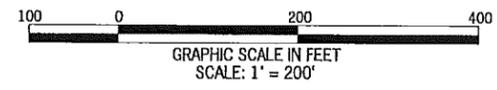
BEARINGS SHOWN ON THIS EASEMENT SURVEY ARE BASED ON GRID NORTH (NAD 83).

THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD AREA (FLOOD ZONE A8 - BASE FLOOD ELEVATIONS=15) AS PER F.I.R.M. COMMUNITY PANEL NO. 4500250118D DATED SEPTEMBER 29, 1986.

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM ABOVE GROUND FIELD SURVEY INFORMATION. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.



**VICINITY MAP**  
NOT TO SCALE



**SUBJECT PROPERTY**

OWNER: THE TOWN OF HILTON HEAD  
 SITE ADDRESS: GATEWAY DRIVE, HILTON HEAD ISLAND, SC 29928  
 PARCEL ID: R510 006 000 0099 0000  
 AREA: 55.33 ACRES±  
 REFERENCE: PLAT BOOK 123 PAGE 115

THIS SITE IS LOCATED IN FLOOD ZONED "A8" BASE FLOOD ELEVATION = 15'



**SURVEYOR CERTIFICATION**

I HEREBY STATE THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE SURVEY SHOWN HEREON WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MINIMUM STANDARDS MANUAL FOR THE PRACTICE OF LAND SURVEYING IN SOUTH CAROLINA, AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS "B" SURVEY SPECIFIED THEREIN.

THIS SURVEY IS NOT FOR RECORDATION PURPOSES.

**LEGEND**

POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
CMF	CONCRETE MONUMENT FOUND
EP	EDGE OF PAVEMENT
BC	BACK OF CURB
OU	OVERHEAD UTILITY
TR	TRANSFORMER
N/F	NOW OR FORMERLY



NO.	DATE	REVISION
1	12/07/2011	REVISE LEASE - CLC
2	01/18/2012	ADD TREE LOCATIONS

EASEMENT SURVEY PREPARED BY:  
**POINT TO POINT LAND SURVEYORS**  
 810 Jackson Street  
 Locust Grove, Georgia 30248  
 (p) 678.565.4440 (f) 678.565.4497  
 (w) pointtopointsurvey.com

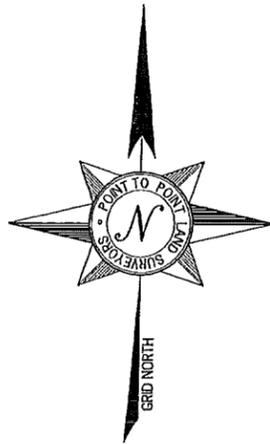


EASEMENT SURVEY PREPARED FOR:

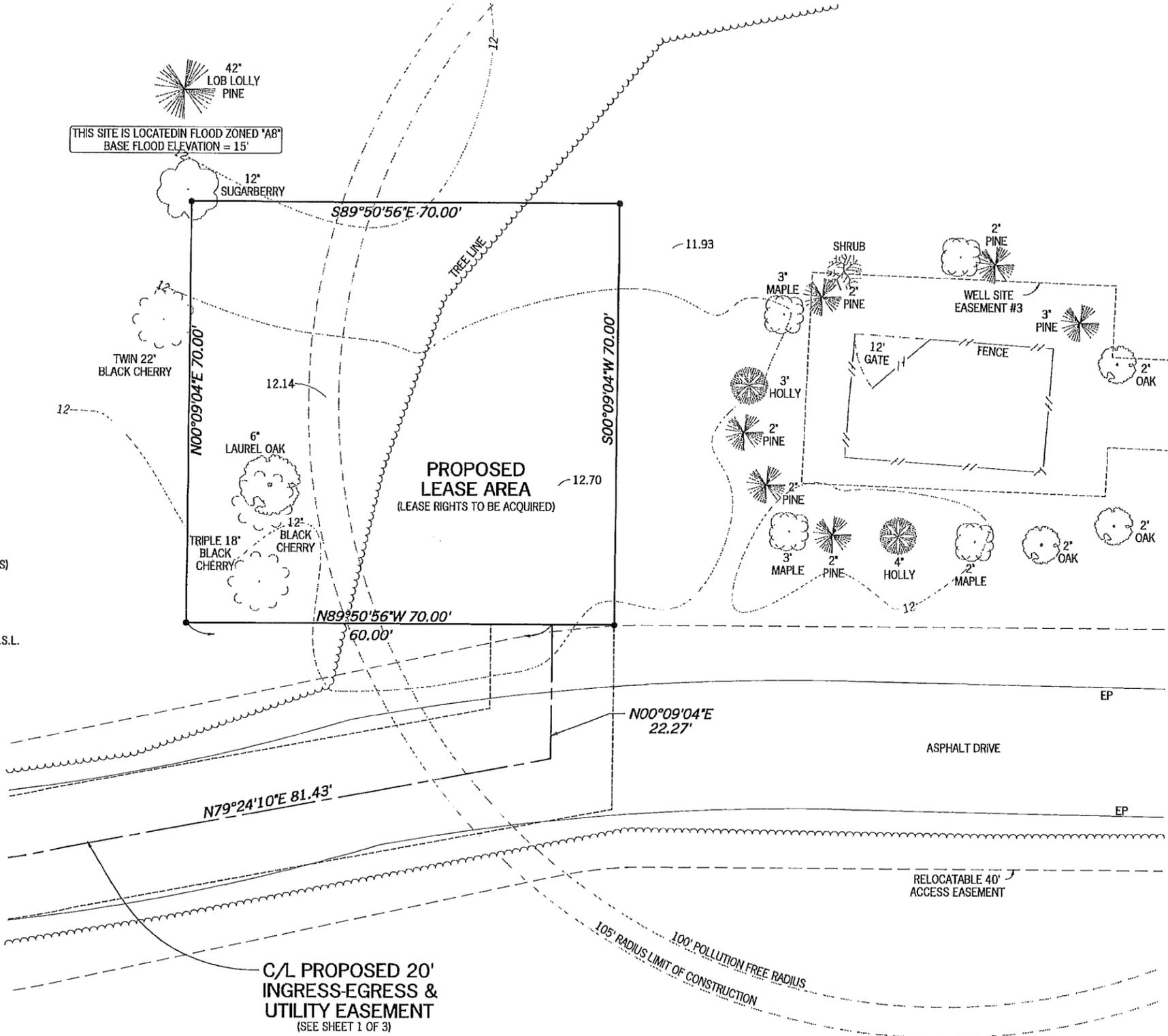


"HHI\_BIC\_35"  
 SITE NO. 410-441  
 HILTON HEAD ISLAND  
 BEAUFORT COUNTY  
 SOUTH CAROLINA

DRAWN BY: NRW	SHEET: 1
CHECKED BY: MW	OF 3
APPROVED: C. INER	
DATE: 14 NOVEMBER, 2011	
P2P JOB #: 2011.716	

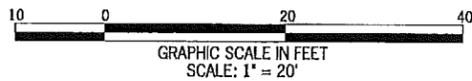


THIS SITE IS LOCATED IN FLOOD ZONED "A8"  
BASE FLOOD ELEVATION = 15'



**SITE INFORMATION**

PROPOSED LEASE AREA = 4,900 SQUARE FEET (0.1125 ACRES)  
 LATITUDE = 32°13'12.7" (NAD 83)  
 AT CENTER OF PROPOSED LEASE AREA  
 LONGITUDE = 80°46'20.8" (NAD 83)  
 ELEVATION AT CENTER OF PROPOSED LEASE AREA = 12' A.M.S.L.



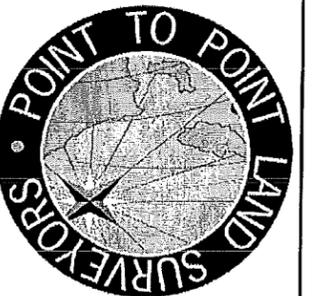
**LEGEND**

- POB POINT OF BEGINNING
- POC POINT OF COMMENCEMENT
- CMF CONCRETE MONUMENT FOUND
- EP EDGE OF PAVEMENT
- BC BACK OF CURB
- OU OVERHEAD UTILITY
- TR TRANSFORMER
- N/F NOW OR FORMERLY



NO.	DATE	REVISION
1	12/07/2011	REVISE LEASE - CLC
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 810 Jackson Street  
 Locust Grove, Georgia 30248  
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 (w) pointpointsurvey.com



EASEMENT SURVEY PREPARED FOR:



"HHI\_BIC\_35"

**SITE NO.  
410-441**

HILTON HEAD ISLAND  
 BEAUFORT COUNTY  
 SOUTH CAROLINA

DRAWN BY: NRW	SHEET:
CHECKED BY: MW	<b>2</b>
APPROVED: C. INER	
DATE: 14 NOVEMBER, 2011	OF 3
P2P JOB #: 2011.716	

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# LEGAL DESCRIPTION SHEET

## SUBJECT PROPERTY

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN HILTON HEAD ISLAND, BEAUFORT COUNTY, SOUTH CAROLINA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF THE MITERED INTERSECTION FORMED BY THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF JENKINS ISLAND ROAD (HAVING A 50-FOOT RIGHT-OF-WAY) AND THE NORTHERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY 278 (ALSO KNOWN AS WILLIAM HILTON PARKWAY AND HAVING A VARIABLE WIDTH RIGHT-OF-WAY); THENCE LEAVING SAID INTERSECTION AND RUNNING ALONG SAID NORTHERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY 278, NORTH 89°08'28" WEST, 1523.98 FEET TO A POINT; THENCE, NORTH 00°51'32" EAST, 19.00 FEET TO A POINT; THENCE, NORTH 89°08'28" WEST, 170.00 FEET TO A POINT; THENCE, 847.78 FEET ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 1090.92 FEET AND BEING SCRIBED BY A CHORD BEARING NORTH 66°52'41" WEST, 826.61 FEET TO A POINT; THENCE, NORTH 27°53'29" WEST, 16.20 FEET TO A POINT; THENCE, NORTH 27°53'29" WEST, 252.46 FEET TO A POINT; THENCE LEAVING SAID NORTHERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY 278 AND RUNNING, NORTH 10°29'09" EAST, 79.22 FEET TO A POINT; THENCE, NORTH 73°15'11" EAST, 54.49 FEET TO A POINT; THENCE, NORTH 65°55'05" EAST, 38.46 FEET TO A POINT; THENCE, NORTH 71°11'44" EAST, 55.44 FEET TO A POINT; THENCE, NORTH 77°59'46" EAST, 38.58 FEET TO A POINT; THENCE, NORTH 42°00'56" EAST, 52.60 FEET TO A POINT; THENCE, NORTH 37°07'20" EAST, 50.91 FEET TO A POINT; THENCE, NORTH 54°38'22" EAST, 46.17 FEET TO A POINT; THENCE, NORTH 73°41'22" EAST, 53.81 FEET TO A POINT; THENCE, SOUTH 89°09'33" EAST, 43.89 FEET TO A POINT; THENCE, NORTH 40°37'19" EAST, 57.70 FEET TO A POINT; THENCE, NORTH 00°11'09" WEST, 63.72 FEET TO A POINT; THENCE, NORTH 16°31'07" EAST, 57.87 FEET TO A POINT; THENCE, NORTH 38°53'22" EAST, 49.34 FEET TO A POINT; THENCE, NORTH 48°35'46" EAST, 54.59 FEET TO A POINT; THENCE, NORTH 59°04'05" EAST, 200.03 FEET TO A POINT; THENCE, NORTH 57°07'20" EAST, 116.20 FEET TO A POINT; THENCE, NORTH 61°20'47" EAST, 148.73 FEET TO A POINT; THENCE, NORTH 60°34'33" EAST, 92.26 FEET TO A POINT; THENCE, NORTH 55°01'24" EAST, 66.16 FEET TO A POINT; THENCE, NORTH 61°09'22" EAST, 42.55 FEET TO A POINT; THENCE, SOUTH 55°05'09" EAST, 42.18 FEET TO A POINT; THENCE, SOUTH 53°32'53" EAST, 67.59 FEET TO A POINT; THENCE, SOUTH 50°33'19" EAST, 213.35 FEET TO A POINT; THENCE, SOUTH 28°43'58" EAST, 507.02 FEET TO A CONCRETE MONUMENT FOUND; THENCE, NORTH 79°29'27" EAST, 797.59 FEET TO A POINT ON THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF JENKINS ISLAND ROAD; THENCE ALONG SAID SOUTHWESTERLY RIGHT-OF-WAY LINE OF JENKINS ISLAND ROAD, SOUTH 29°05'42" EAST, 302.37 FEET TO A POINT; THENCE, 494.51 FEET ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 983.38 FEET AND BEING SCRIBED BY A CHORD BEARING SOUTH 15°15'29" EAST, 489.31 FEET TO A POINT; THENCE, 60.45 FEET ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 983.35 FEET AND BEING SCRIBED BY A CHORD BEARING SOUTH 01°30'12" WEST, 60.44 FEET TO A POINT; THENCE, 62.24 FEET ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 983.35 FEET AND BEING SCRIBED BY A CHORD BEARING SOUTH 05°04'40" WEST, 62.23 FEET TO A POINT; THENCE, SOUTH 06°53'26" WEST, 35.56 FEET TO A POINT AT THE NORTHEAST CORNER OF THE MITERED INTERSECTION FORMED BY THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF JENKINS ISLAND ROAD AND THE NORTHERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY 278; THENCE LEAVING SAID SOUTHWESTERLY RIGHT-OF-WAY LINE OF JENKINS ISLAND ROAD AND RUNNING ALONG SAID MITERED INTERSECTION, SOUTH 48°52'29" WEST, 73.03 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY 278 AND THE TRUE POINT OF BEGINNING.

SAID TRACT CONTAINS 55.3325 ACRES (2,410,285 SQUARE FEET), MORE OR LESS.

## PROPOSED 20' INGRESS-EGRESS & UTILITY EASEMENT

TOGETHER WITH A PROPOSED 20-FOOT WIDE INGRESS-EGRESS AND UTILITY EASEMENT LYING AND BEING IN HILTON HEAD ISLAND, BEAUFORT COUNTY, SOUTH CAROLINA, BEING DESCRIBED BY THE FOLLOWING CENTERLINE DATA:

TO FIND THE POINT OF BEGINNING, COMMENCE AT THE SOUTHWEST CORNER OF THE MITERED INTERSECTION FORMED BY THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF JENKINS ISLAND ROAD (HAVING A 50-FOOT RIGHT-OF-WAY) AND THE NORTHERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY 278 (ALSO KNOWN AS WILLIAM HILTON PARKWAY AND HAVING A VARIABLE WIDTH RIGHT-OF-WAY); THENCE LEAVING SAID INTERSECTION AND RUNNING ALONG SAID NORTHERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY 278, NORTH 89°08'28" WEST, 1459.82 FEET TO A POINT AND THE TRUE POINT OF BEGINNING; THENCE LEAVING SAID NORTHERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY 278 AND RUNNING, NORTH 01°02'02" WEST, 102.52 FEET TO A POINT; THENCE, 44.70 FEET ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 200.00 FEET AND BEING SCRIBED BY A CHORD BEARING NORTH 07°26'12" WEST, 44.61 FEET TO A POINT; THENCE, NORTH 13°50'21" WEST, 188.36 FEET TO A POINT; THENCE, 143.17 FEET ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 424.67 FEET AND BEING SCRIBED BY A CHORD BEARING NORTH 02°16'00" WEST, 142.49 FEET TO A POINT; THENCE, 72.62 FEET ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 49.07 FEET AND BEING SCRIBED BY A CHORD BEARING NORTH 49°47'22" EAST, 66.18 FEET TO A POINT; THENCE, SOUTH 87°48'44" EAST, 73.38 FEET TO A POINT; THENCE, NORTH 82°27'45" EAST, 100.98 FEET TO A POINT; THENCE, 29.60 FEET ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 100.00 FEET AND BEING SCRIBED BY A CHORD BEARING SOUTH 89°03'30" EAST, 29.49 FEET TO A POINT; THENCE, SOUTH 80°34'45" EAST, 54.46 FEET TO A POINT; THENCE, 40.01 FEET ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 100.00 FEET AND BEING SCRIBED BY A CHORD BEARING NORTH 87°57'27" EAST, 39.75 FEET TO A POINT; THENCE, NORTH 79°24'10" EAST, 81.43 FEET TO A POINT; THENCE, NORTH 00°09'04" EAST, 22.27 FEET TO THE ENDING AT A POINT.

## PROPOSED LEASE AREA

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN HILTON HEAD ISLAND, BEAUFORT COUNTY, SOUTH CAROLINA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TO FIND THE POINT OF BEGINNING, COMMENCE AT THE SOUTHWEST CORNER OF THE MITERED INTERSECTION FORMED BY THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF JENKINS ISLAND ROAD (HAVING A 50-FOOT RIGHT-OF-WAY) AND THE NORTHERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY 278 (ALSO KNOWN AS WILLIAM HILTON PARKWAY AND HAVING A VARIABLE WIDTH RIGHT-OF-WAY); THENCE LEAVING SAID INTERSECTION AND RUNNING ALONG SAID NORTHERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY 278, NORTH 89°08'28" WEST, 1459.82 FEET TO A POINT; THENCE LEAVING SAID NORTHERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY 278 AND RUNNING, NORTH 01°02'02" WEST, 102.52 FEET TO A POINT; THENCE, 44.70 FEET ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 200.00 FEET AND BEING SCRIBED BY A CHORD BEARING NORTH 07°26'12" WEST, 44.61 FEET TO A POINT; THENCE, NORTH 13°50'21" WEST, 188.36 FEET TO A POINT; THENCE, 143.17 FEET ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 424.67 FEET AND BEING SCRIBED BY A CHORD BEARING NORTH 02°16'00" WEST, 142.49 FEET TO A POINT; THENCE, 72.62 FEET ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 49.07 FEET AND BEING SCRIBED BY A CHORD BEARING NORTH 49°47'22" EAST, 66.18 FEET TO A POINT; THENCE, SOUTH 87°48'44" EAST, 73.38 FEET TO A POINT; THENCE, NORTH 82°27'45" EAST, 100.98 FEET TO A POINT; THENCE, 29.60 FEET ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 100.00 FEET AND BEING SCRIBED BY A CHORD BEARING SOUTH 89°03'30" EAST, 29.49 FEET TO A POINT; THENCE, SOUTH 80°34'45" EAST, 54.46 FEET TO A POINT; THENCE, 40.01 FEET ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 100.00 FEET AND BEING SCRIBED BY A CHORD BEARING NORTH 87°57'27" EAST, 39.75 FEET TO A POINT; THENCE, NORTH 79°24'10" EAST, 81.43 FEET TO A POINT; THENCE, NORTH 00°09'04" EAST, 22.27 FEET TO A POINT; THENCE, NORTH 89°50'56" WEST, 60.00 FEET TO A POINT AND THE TRUE POINT OF BEGINNING; THENCE RUNNING, NORTH 00°09'04" EAST, 70.00 FEET TO A POINT; THENCE, SOUTH 89°50'56" EAST, 70.00 FEET TO A POINT; THENCE, SOUTH 00°09'04" WEST, 70.00 FEET TO A POINT; THENCE, NORTH 89°50'56" WEST, 70.00 FEET TO A POINT AND THE TRUE POINT OF BEGINNING.

SAID TRACT CONTAINS 0.1125 ACRES (4,900 SQUARE FEET), MORE OR LESS.



NO.	DATE	REVISION
1	12/07/2011	REVISE LEASE - CLC
2	01/18/2012	ADD TREE LOCATIONS

EASEMENT SURVEY PREPARED BY:

**POINT TO POINT LAND SURVEYORS**  
810 Jackson Street  
Locust Grove, Georgia 30248  
(p) 678.565.4440 (f) 678.565.4497  
(w) pointtopointsurvey.com



EASEMENT SURVEY PREPARED FOR:



"HHI\_BIC\_35"

**SITE NO.**  
**410-441**

HILTON HEAD ISLAND  
BEAUFORT COUNTY  
SOUTH CAROLINA

DRAWN BY: NRW	SHEET:
CHECKED BY: MW	3
APPROVED: C. INER	
DATE: 14 NOVEMBER, 2011	
P2P JOB #: 2011.716	OF 3

**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. DEWATERING 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, STAW 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. FLOW 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, OR 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
- GADWELD TYPE CONNECTION
- COMPRESSION TYPE CONNECTION
- G — GROUND WIRE



DESCRIPTION:	DATE	NUM	ISSUED FOR REVIEW	ISSUED FOR ZONING SUBMITTAL
	1/24/12	A		
	2/1/12	O		

410-441

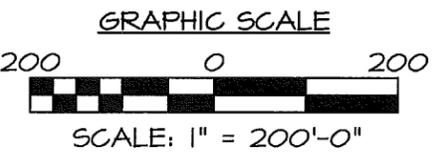
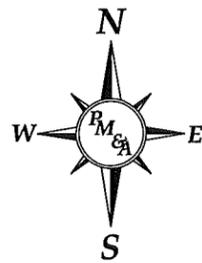
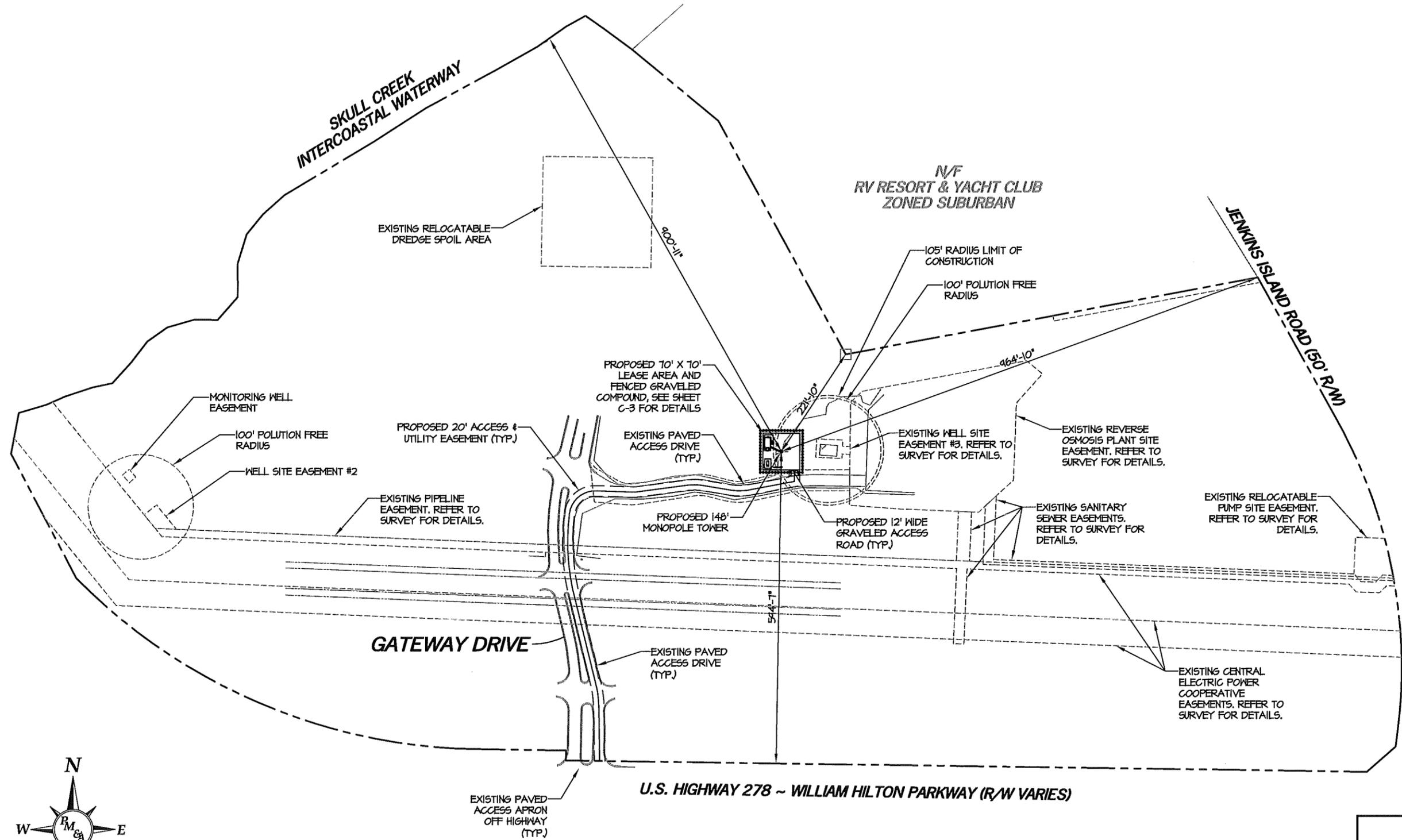
**GENERAL NOTES**

DESIGNED: AJB  
DRAWN: AJB  
CHECKED: PWM

JOB #: TCD136

**C-1**





OVERALL SITE PLAN  
 SCALE: 1" = 200'-0"

NUM	DATE	DESCRIPTION:
A	1/24/12	ISSUED FOR REVIEW
O	2/7/12	ISSUED FOR ZONING SUBMITTAL

410-441  
**OVERALL SITE PLAN**



DESIGNED: A.JB  
 DRAWN: A.JB  
 CHECKED: P.W.M.

JOB #: TCD136

**C-2**

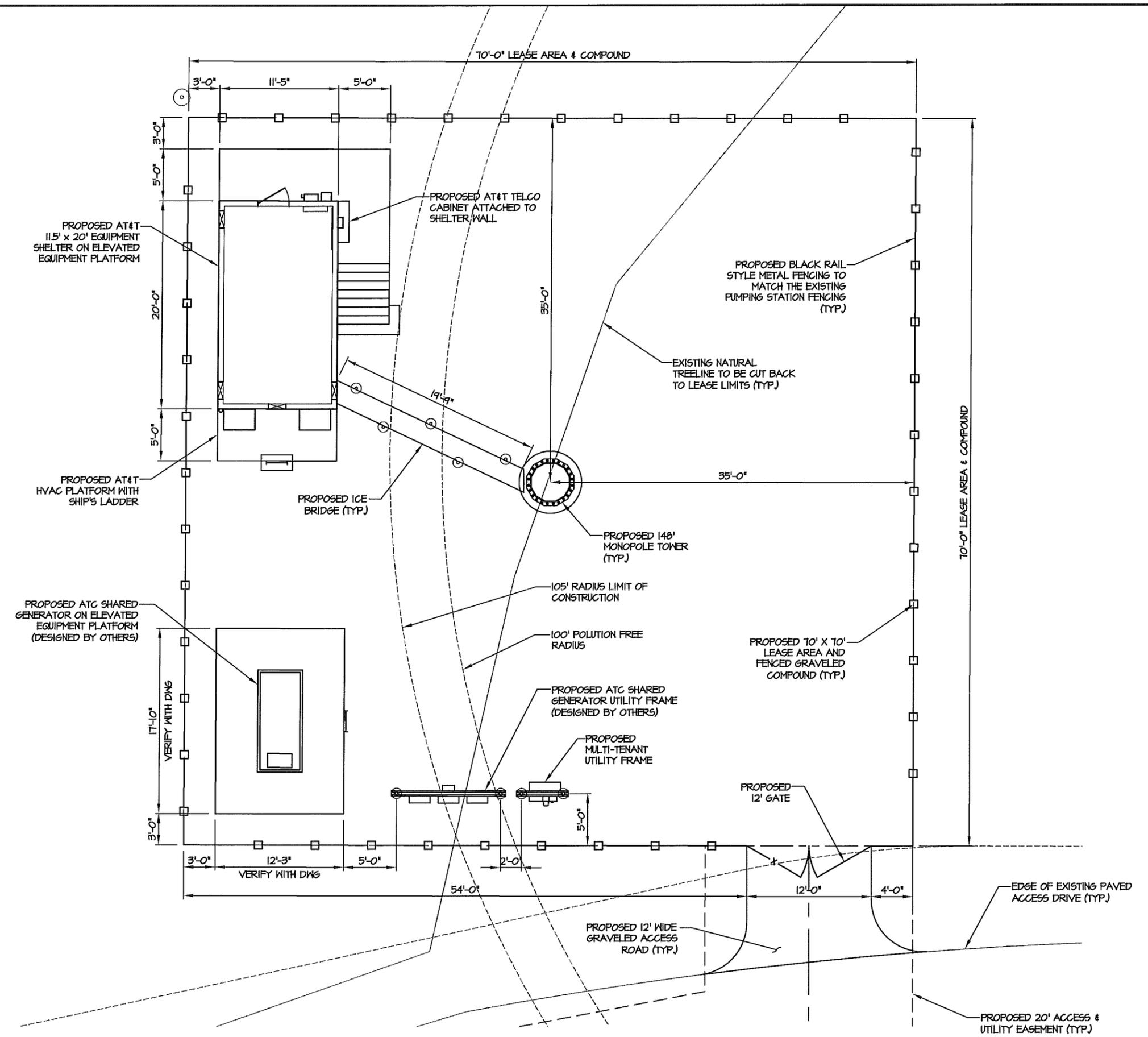


NUM	DATE	DESCRIPTION
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O	2/7/12	ISSUED FOR ZONING SUBMITTAL

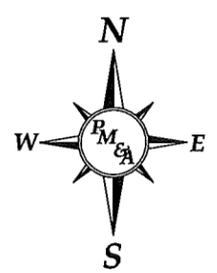
410-441  
**DETAILED SITE PLAN**

DESIGNED:	AJB
DRAWN:	AJB
CHECKED:	PWM
JOB #:	TCD136

**C-3**



**DETAILED SITE PLAN**  
 SCALE: 1" = 10'-0"



GRAPHIC SCALE

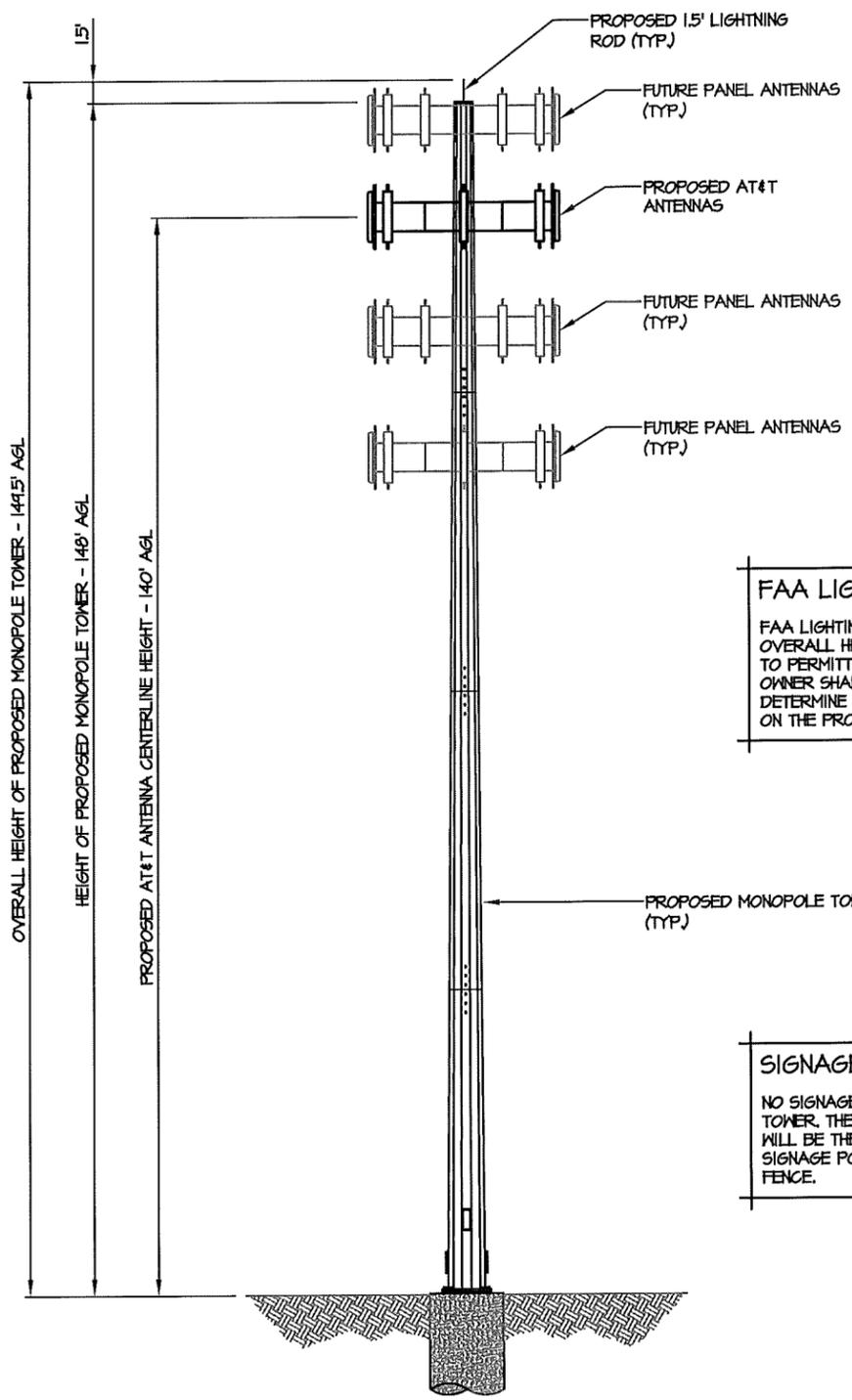


SCALE: 1" = 10'-0"





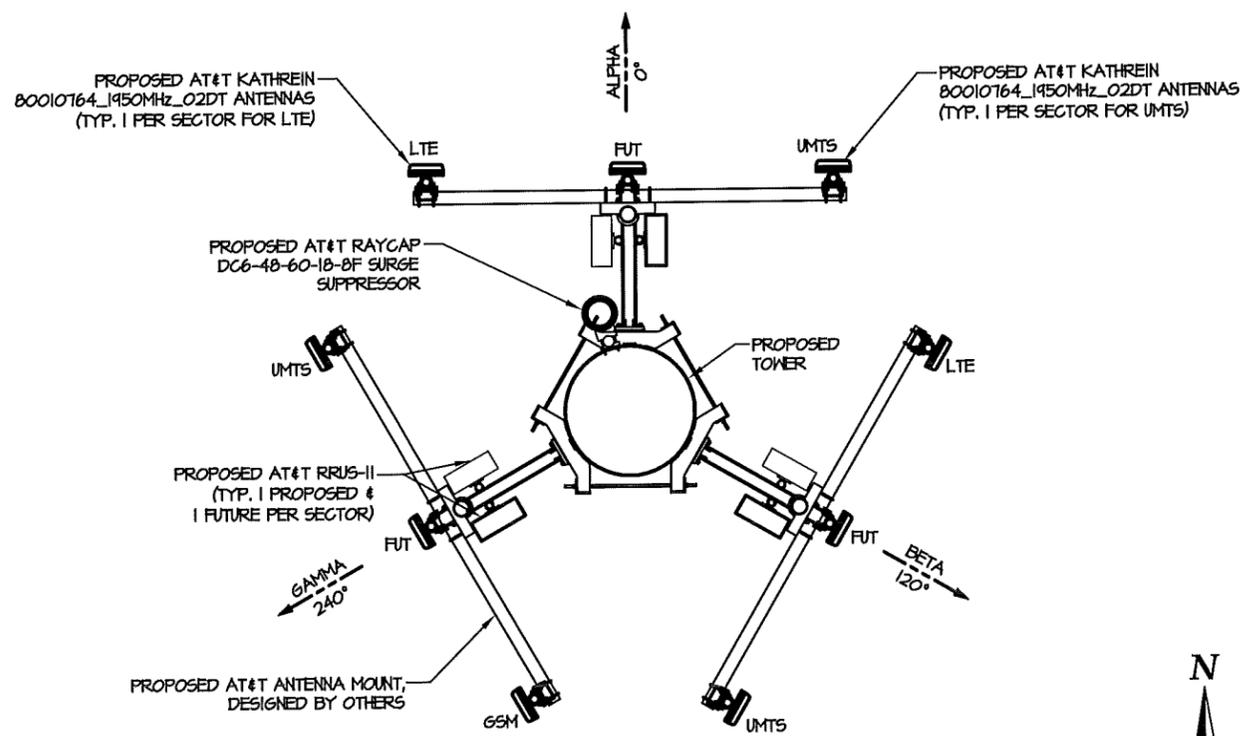
REFER TO THE RFDS ON SHEET E-6: GA\_410\_441\_CCO\_2413000662\_10153578\_012612\_0.3



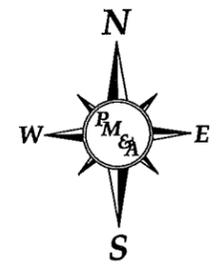
**FAA LIGHTING NOTE:**  
 FAA LIGHTING IS NOT REQUIRED BASED ON THE OVERALL HEIGHT OF THE PROPOSED TOWER. PRIOR TO PERMITTING AND CONSTRUCTION THE TOWER OWNER SHALL CONDUCT AN FAA STUDY TO DETERMINE IF TOWER LIGHTING IS REQUIRED BASED ON THE PROXIMITY TO NEARBY AIRPORTS.

**SIGNAGE NOTE:**  
 NO SIGNAGE WILL BE POSTED ON THE PROPOSED TOWER. THE ONLY SITE SIGNAGE FOR THIS PROJECT WILL BE THE FCC AND OSHA REQUIRED SAFETY SIGNAGE POSTED ON THE PROPOSED CHAIN LINK FENCE.

**TOWER ELEVATION**  
 NTS



**ANTENNA ORIENTATION DETAIL**  
 NTS



NUM	DATE	DESCRIPTION
A	1/24/12	ISSUED FOR REVIEW
O	2/7/12	ISSUED FOR ZONING SUBMITTAL
1	2/22/12	LANDSCAPING PLAN REVISED
2	2/28/12	TOWER HEIGHT REVISED

**TOWER ELEVATION AND DETAILS**

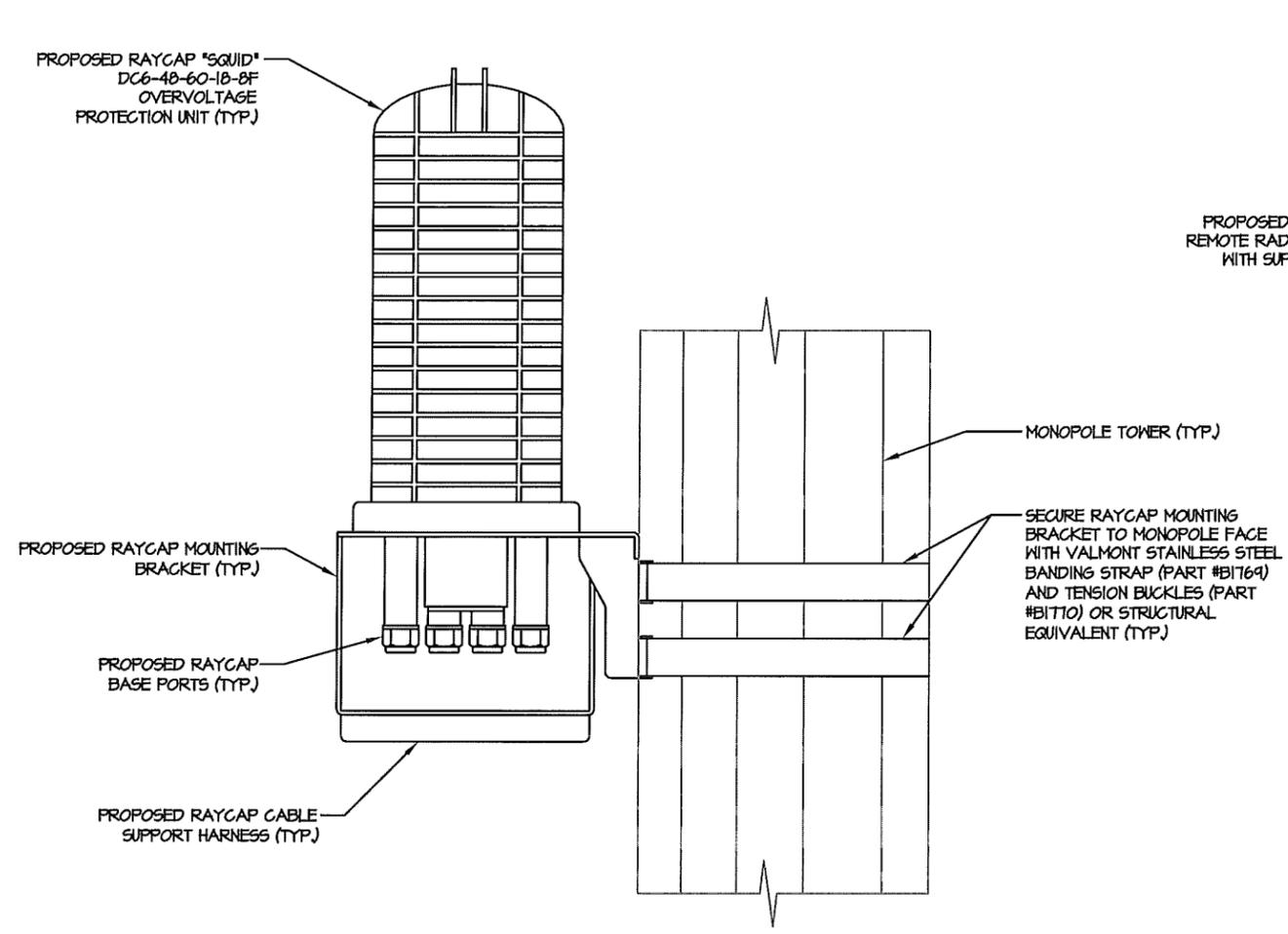
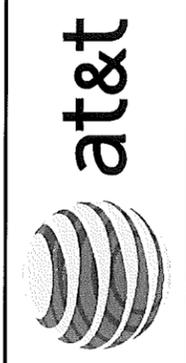
410-441



DESIGNED: AJB  
 DRAWN: AJB  
 CHECKED: PWM

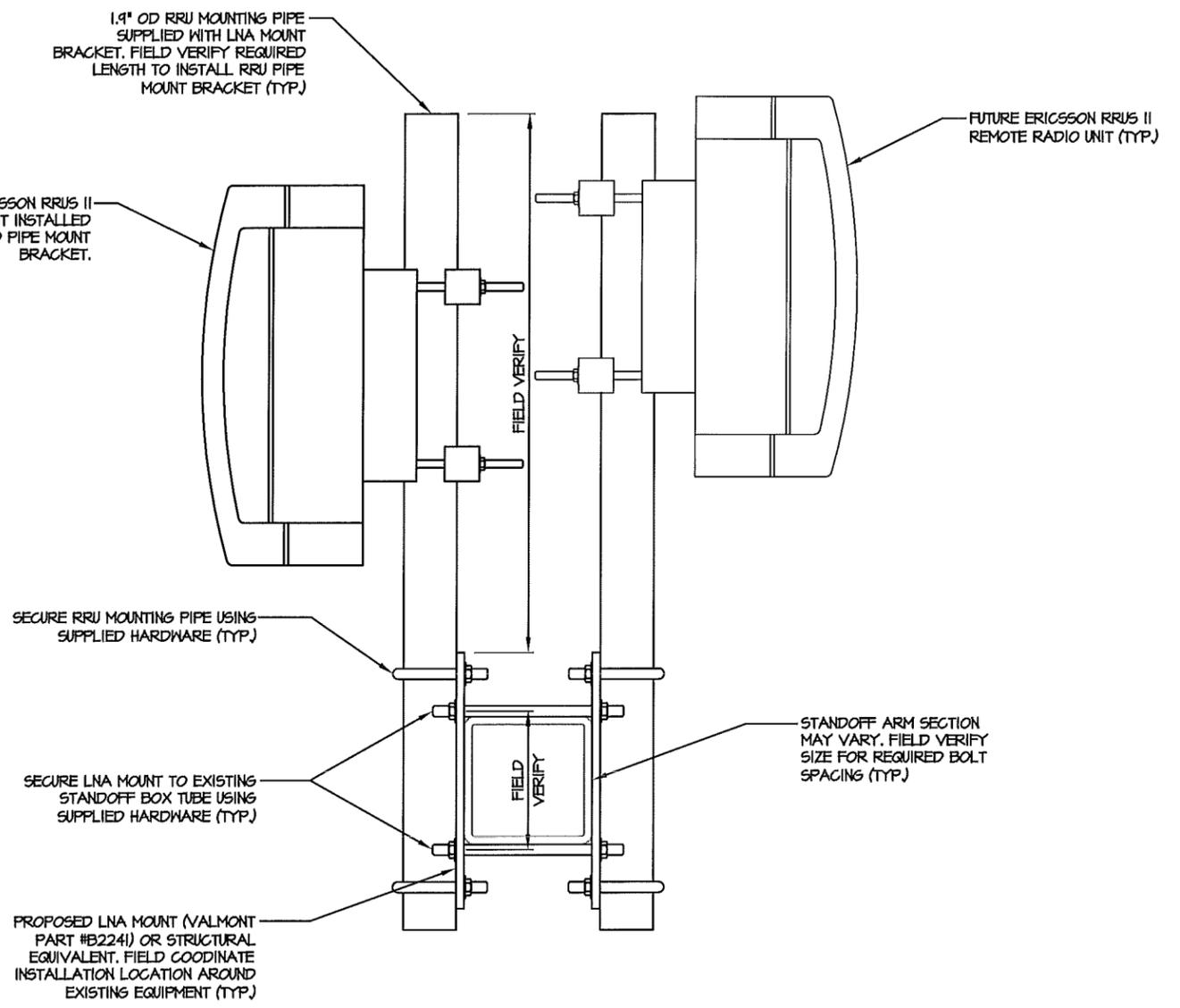
JOB #: TCD136

**C-4**



ELEVATION VIEW

RAYCAP SQUID MOUNT DETAIL  
 NOT TO SCALE



ELEVATION VIEW

RRUS II MOUNT DETAIL  
 NOT TO SCALE

NUM	DATE	DESCRIPTION
A	12/4/12	ISSUED FOR REVIEW
O	2/7/12	ISSUED FOR ZONING SUBMITTAL

410-441

**LTE RRU & SQUID  
 MOUNTING DETAILS**



DESIGNED: A.JB  
 DRAWN: A.JB  
 CHECKED: PWM

JOB #: TCD136

**C-4A**

DISTURBED AREAS LEFT IDLE SHALL BE STABILIZED WITH TEMPORARY VEGETATION AFTER 14 DAYS; AFTER 30 DAYS PERMANENT VEGETATION SHALL BE ESTABLISHED

MAINTENANCE STATEMENT  
EROSION CONTROL MEASURES WILL BE INSPECTED AT LEAST WEEKLY, AFTER EACH RAIN AND REPAIRED BY THE GENERAL CONTRACTOR

ADDITIONAL EROSION CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION

**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.

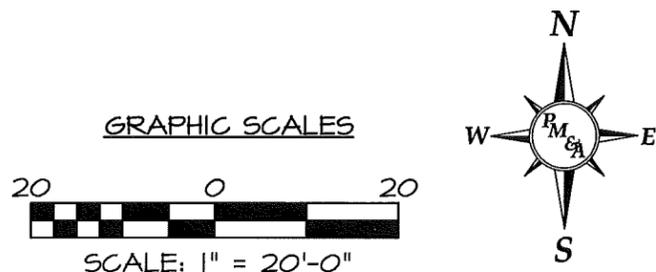
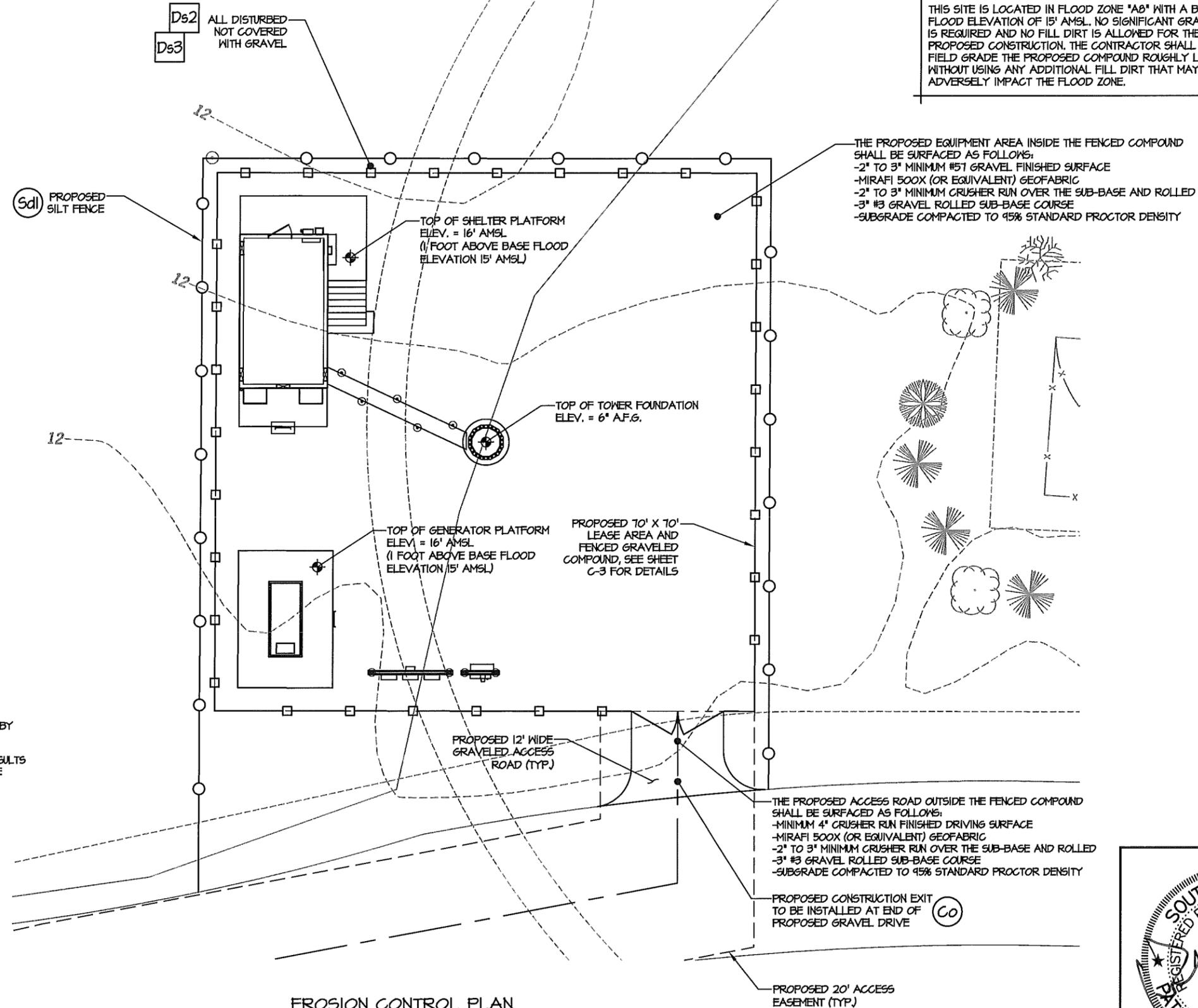
**Du** DISTURBED AREA DUST CONTROL - TO CONTROL THE SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADWAYS, AND SIMILAR SITES.

AMERICAN TOWER GRAVEL SURFACING NOTES:

1. THE PROPOSED ACCESS ROAD OUTSIDE THE FENCED COMPOUND SHALL BE SURFACED AS FOLLOWS:  
-MINIMUM 4" CRUSHER RUN FINISHED DRIVING SURFACE  
-MIRAFI 500X (OR EQUIVALENT) GEOFABRIC  
-2" TO 3" MINIMUM CRUSHER RUN OVER THE SUB-BASE AND ROLLED  
-3" #3 GRAVEL ROLLED SUB-BASE COURSE  
-SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY
2. THE PROPOSED EQUIPMENT AREA INSIDE THE FENCED COMPOUND SHALL BE SURFACED AS FOLLOWS:  
-2" TO 3" MINIMUM #51 GRAVEL FINISHED SURFACE  
-MIRAFI 500X (OR EQUIVALENT) GEOFABRIC  
-2" TO 3" MINIMUM CRUSHER RUN OVER THE SUB-BASE AND ROLLED  
-3" #3 GRAVEL ROLLED SUB-BASE COURSE  
-SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY
3. ALL EXISTING SUBGRADE AND CRUSHER RUN GRAVEL SURFACING SHALL BE COMPACTED TO 95% MINIMUM STANDARD PROCTOR DENSITY AS SPECIFIED BY ASTM D698 AND AASHTO T99.
4. THE CONTRACTOR IS REQUIRED TO TEST AND SUBMIT COMPACTION TEST RESULTS FOR ALL EXISTING SUBGRADE AND CRUSHER RUN GRAVEL SURFACING IN THE CLOSEOUT PACKAGE SUPPLIED TO AMERICAN TOWER.

FLOOD PLAIN NOTE:

THIS SITE IS LOCATED IN FLOOD ZONE "A0" WITH A BASE FLOOD ELEVATION OF 15' AMSL. NO SIGNIFICANT GRADING IS REQUIRED AND NO FILL DIRT IS ALLOWED FOR THE PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL FIELD GRADE THE PROPOSED COMPOUND ROUGHLY LEVEL WITHOUT USING ANY ADDITIONAL FILL DIRT THAT MAY ADVERSELY IMPACT THE FLOOD ZONE.



EROSION CONTROL PLAN  
SCALE: 1" = 20'-0"



NUM	DATE	DESCRIPTION
A	1/24/12	ISSUED FOR REVIEW
O	2/7/12	ISSUED FOR ZONING SUBMITTAL

410-441  
**GRADING, SEDIMENT & EROSION CONTROL PLAN**



DESIGNED: A.JB  
DRAWN: A.JB  
CHECKED: PWM

JOB #: TCD136

**C-5**



NUM	DATE	DESCRIPTION:
A	1/24/12	ISSUED FOR REVIEW
O	2/7/12	ISSUED FOR ZONING SUBMITTAL

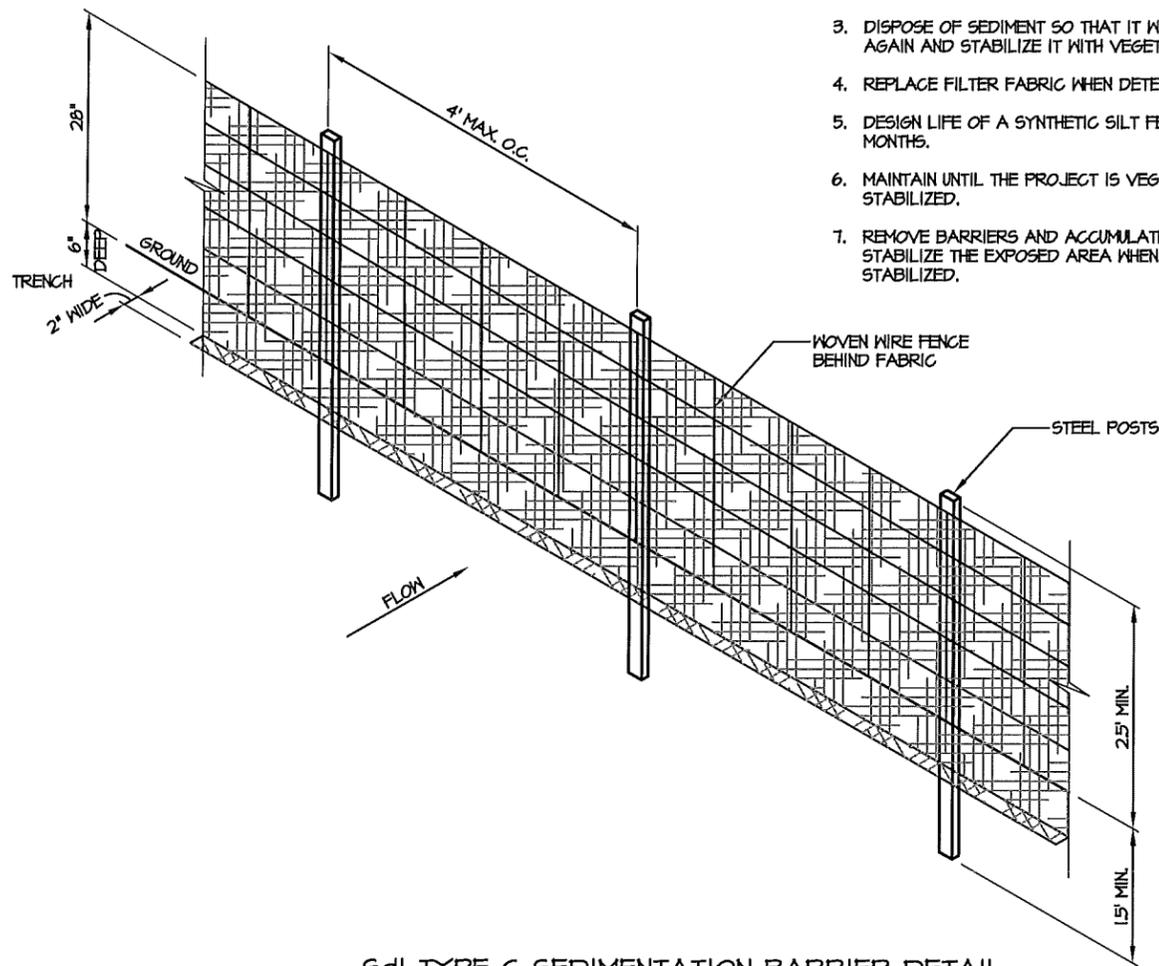
410-441  
**GRADING, SEDIMENT & EROSION CONTROL DETAILS**

DESIGNED: AJB  
 DRAWN: AJB  
 CHECKED: PWM

JOB #: TCD136  
**C-6**

**MAINTENANCE:**

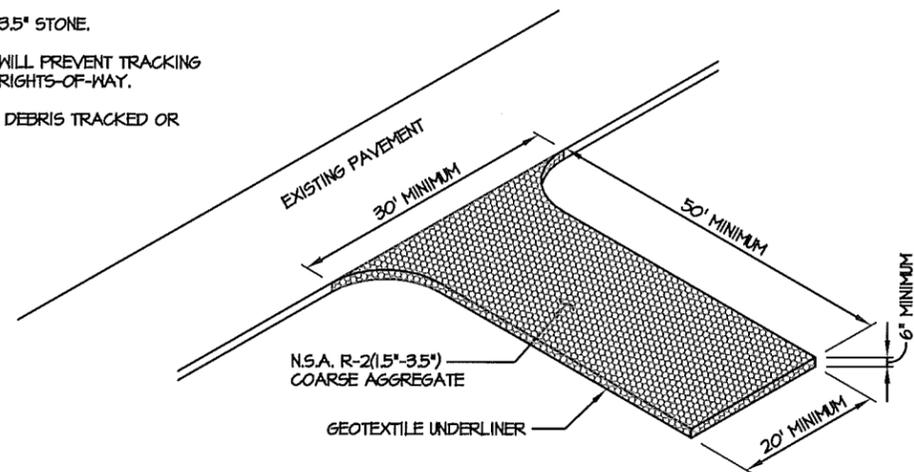
1. INSPECT BARRIERS AT THE END OF EACH WORKING DAY, OR AFTER EACH RAIN, AND REPAIR OR CLEAN AS NECESSARY.
2. REMOVE SEDIMENT FROM BARRIER WHEN TWO-THIRDS FULL.
3. DISPOSE OF SEDIMENT SO THAT IT WILL NOT ENTER THE BARRIER AGAIN AND STABILIZE IT WITH VEGETATION.
4. REPLACE FILTER FABRIC WHEN DETERIORATED.
5. DESIGN LIFE OF A SYNTHETIC SILT FENCE IS APPROXIMATELY 6 MONTHS.
6. MAINTAIN UNTIL THE PROJECT IS VEGETATED OR OTHERWISE STABILIZED.
7. REMOVE BARRIERS AND ACCUMULATED SEDIMENT AND STABILIZE THE EXPOSED AREA WHEN THE PROJECT IS STABILIZED.



**SdI TYPE C SEDIMENTATION BARRIER DETAIL**  
 NOT TO SCALE

**MAINTENANCE:**

1. PERIODICALLY DRESS WITH 1.5"-3.5" STONE.
2. MAINTAIN IN A CONDITION THAT WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY.
3. IMMEDIATELY REMOVE MUD AND DEBRIS TRACKED OR SPILLED ONTO ROADWAYS.



**Co CONSTRUCTION EXIT DETAIL**  
 NOT TO SCALE





PIEDMONT VEGETATIVE COVERS

CALENDAR MONTH	TEMPORARY SEED	APPLICATION RATE/ACRE	PERMANENT SEED	APPLICATION RATE/ACRE
1. JANUARY	RYE GRASS	40-50 LB.	UNHULLED BERMUDA <sup>2</sup> SERICEA LESPEDEZA <sup>2</sup>	8-10 LB. 30-40 LB. <sup>1</sup>
2. FEBRUARY			UNHULLED BERMUDA <sup>2</sup> SERICEA LESPEDEZA <sup>2</sup> 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 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 <sup>2</sup> SERICEA LESPEDEZA <sup>2</sup> 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.

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

**Ds2** DISTURBED AREA STABILIZATION  
(WITH TEMPORARY SEEDING)

**Ds3** 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)

AGRICULTURAL LIMESTONE #15	4000 LBS./ACRE
FERTILIZER, 5-10-15	1500 LBS./ACRE
MULCH (STRAW OR HAY) OR WOOD CELLULOSE FIBER MULCH	5000 LBS./ACRE

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
-------------------------------------	---------------

C. SECOND-YEAR TREATMENT:

FERTILIZER (0-20-20 OR EQUIVALENT)	500 LBS./ACRE
------------------------------------	---------------

**Ds2** DISTURBED AREA STABILIZATION  
(WITH TEMPORARY SEEDING)

**Ds3** 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)

AGRICULTURAL LIMESTONE #15	4000 LBS./ACRE
FERTILIZER, 5-10-15	1500 LBS./ACRE
MULCH (STRAW OR HAY)	5000 LBS./ACRE

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
-------------------------------------	---------------

C. SECOND-YEAR TREATMENT:

FERTILIZER (5-10-15 OR EQUIVALENT)	800 LBS./ACRE
------------------------------------	---------------

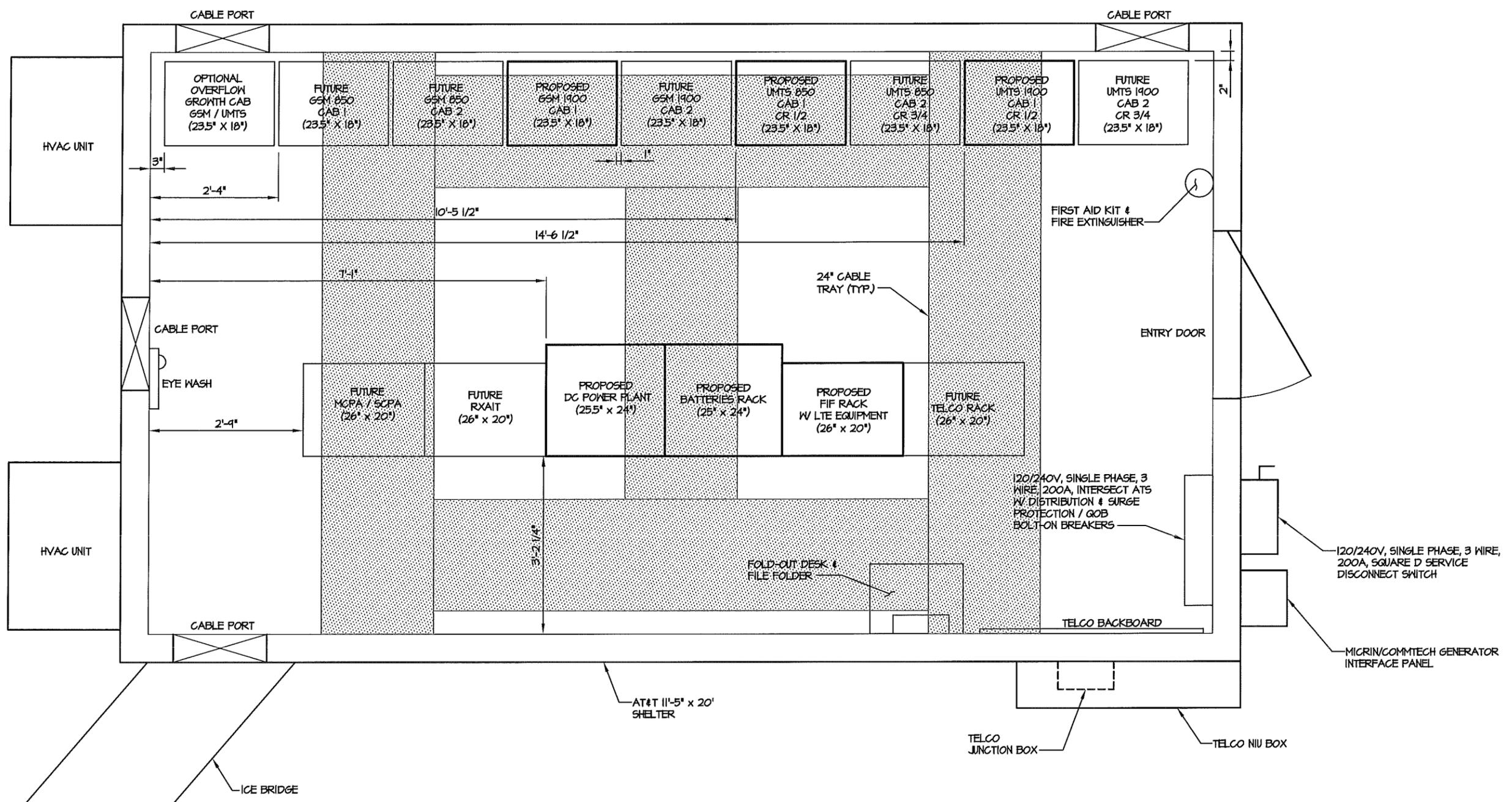
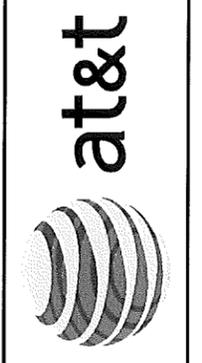
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			1/24/12	2/7/12		
A	0					

410-441  
**GRADING, SEDIMENT & EROSION CONTROL VEGETATION SPECS**

DESIGNED: A.JB  
 DRAWING: A.JB  
 CHECKED: PWM  
 JOB #: TCD136

**C-7**





\* SEE BUILDING MANUFACTURER'S DRAWINGS FOR ADDITIONAL DETAILS.

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

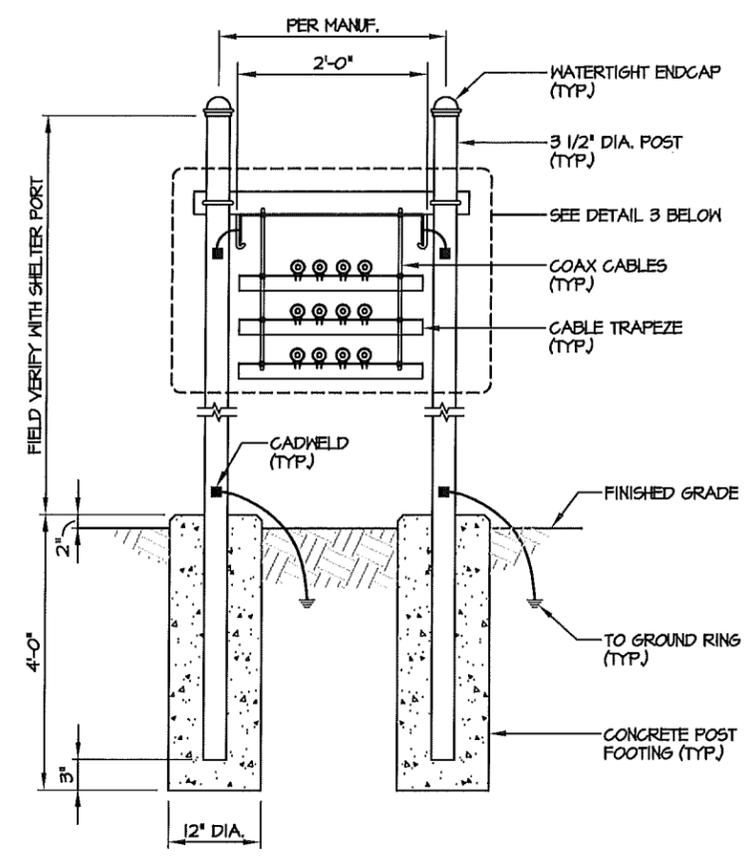
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O	2/7/12	ISSUED FOR ZONING SUBMITTAL

410-441  
**EQUIPMENT LAYOUT**

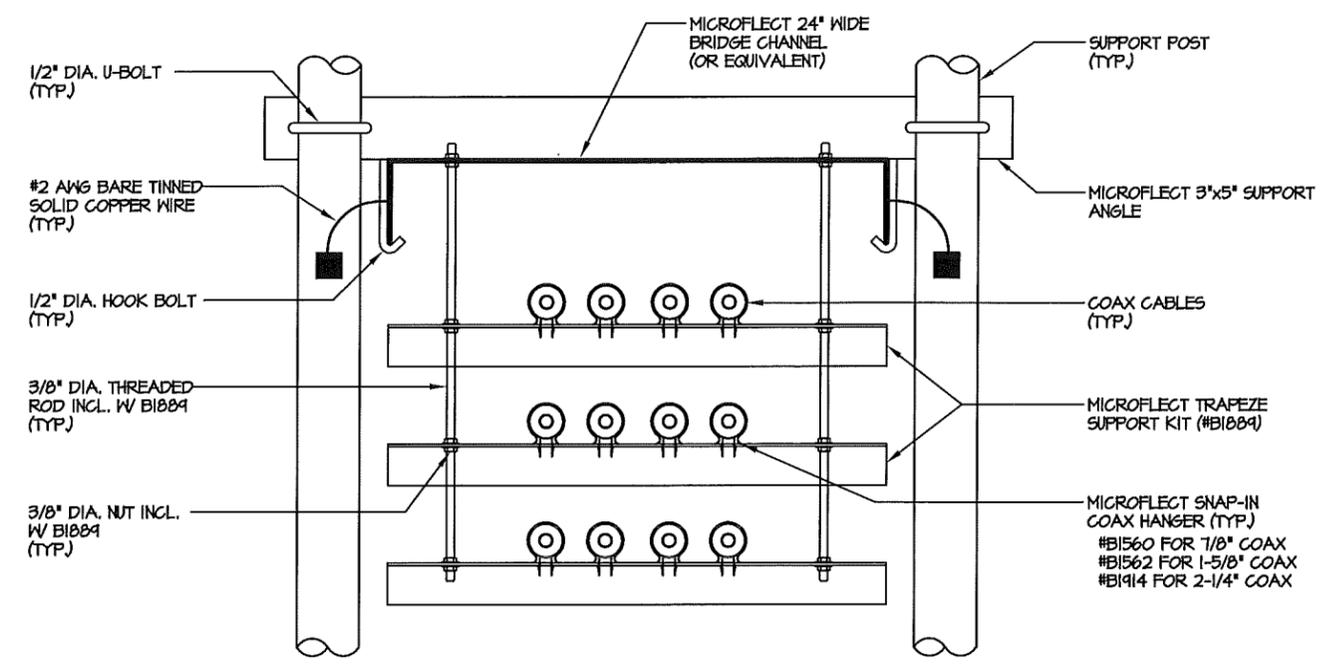
DESIGNED: A-JB  
 DRAWN: A-JB  
 CHECKED: PWM  
 JOB #: TCD136

**C-8**

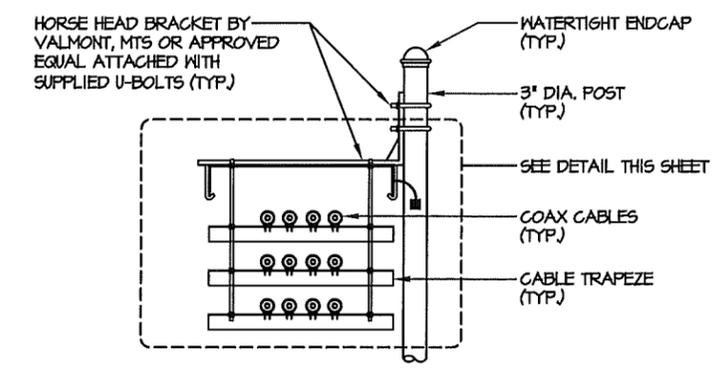




**ICE BRIDGE SECTION**  
 NOT TO SCALE



**COAX CABLE TRAPEZE DETAIL**  
 NOT TO SCALE



**ICE BRIDGE SECTION (ALTERNATE HORSE HEAD)**  
 NOT TO SCALE

NUM	DATE	DESCRIPTION:
A	1/24/12	ISSUED FOR REVIEW
O	2/7/12	ISSUED FOR ZONING SUBMITTAL

410-441  
**COAX ICE BRIDGE DETAILS**

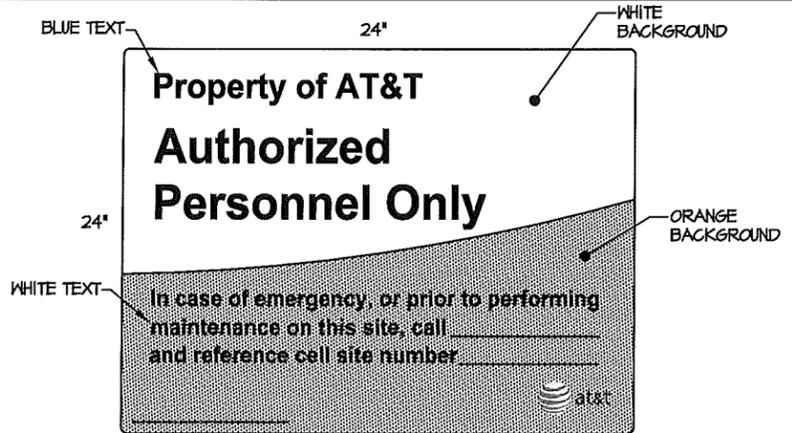


DESIGNED: A.JB  
 DRAWN: A.JB  
 CHECKED: P.W.M.  
 JOB #: TCD136



**SIGNAGE NOTES:**

1. SIGNS SHALL 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.



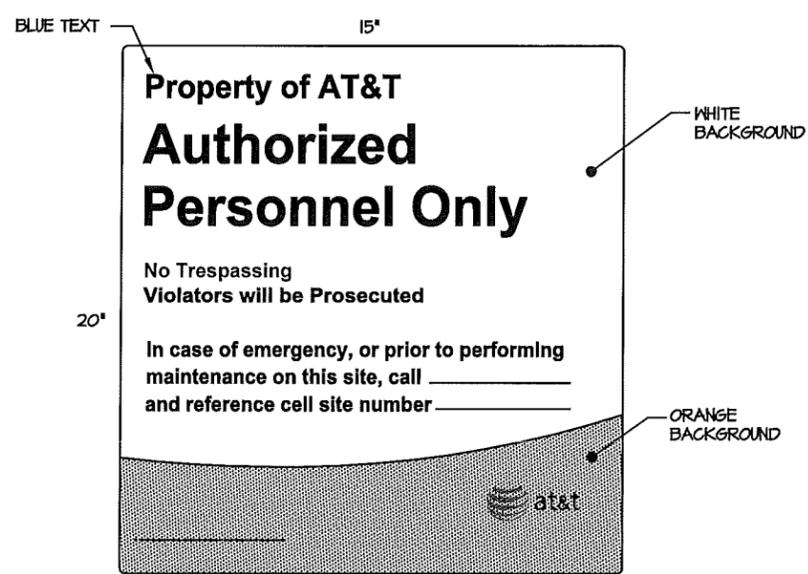
**PROPERTY OF AT&T**  
WHITE/ORANGE BACKGROUND, BLUE/WHITE LETTERING  
MOUNTING LOCATION: ALL 4 SIDES OF FENCE (IF AT&T OWNED SITE)  
QUANTITY: 4



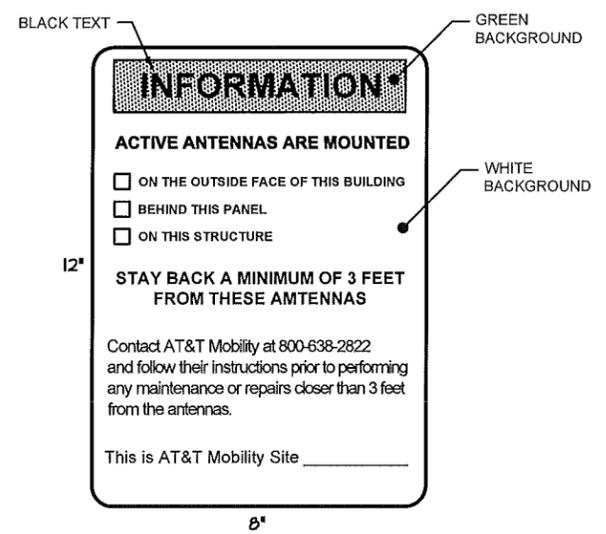
**AUTHORIZED PERSONNEL SIGN**  
WHITE/BLUE BACKGROUND, WHITE/BLACK LETTERING  
MOUNTING LOCATION: SHELTER DOOR & CABINET DOORS  
QUANTITY: PER NUMBER OF CABINET DOORS ON SITE



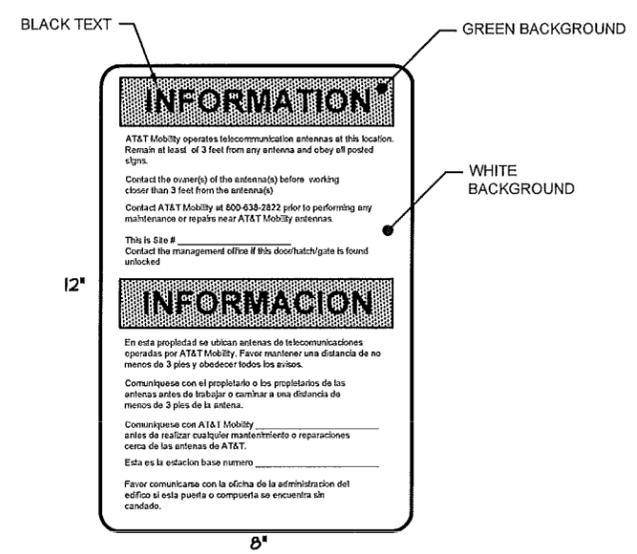
**FCC REGISTRATION SIGN**  
WHITE/GREEN BACKGROUND, WHITE/BLACK LETTERING  
MOUNTING LOCATION: GATE & BASE OF TOWER  
QUANTITY: 2



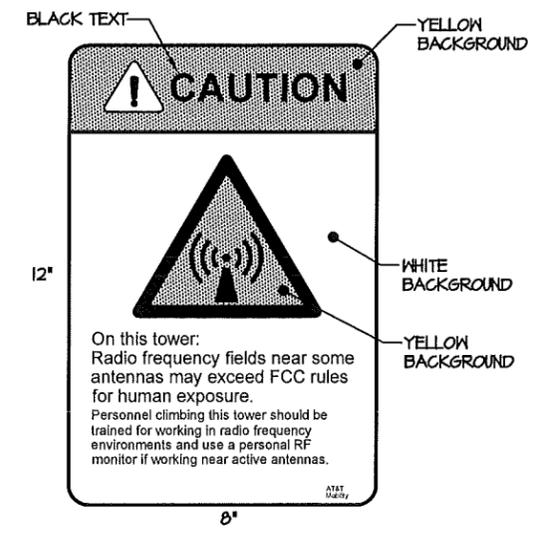
**PROPERTY OF AT&T - DOOR**  
WHITE/ORANGE BACKGROUND, BLUE/WHITE LETTERING  
MOUNTING LOCATION: SHELTER DOOR  
QUANTITY: 1



**RF EXPOSURE INFORMATION SIGN**  
WHITE/GREEN BACKGROUND, BLACK LETTERING  
MOUNTING LOCATION: GATE & BASE OF TOWER  
QUANTITY: 2



**RF EXPOSURE INFORMATION SIGN**  
WHITE/GREEN BACKGROUND, BLACK LETTERING  
MOUNTING LOCATION: GATE & BASE OF TOWER  
QUANTITY: 2



**RF EXPOSURE CAUTION SIGN**  
WHITE/YELLOW BACKGROUND, BLACK LETTERING  
MOUNTING LOCATION: BASE OF TOWER  
QUANTITY: 1

**AT&T ABOVE GROUND FUEL STORAGE SYSTEMS SIGNS AND LABELING REQUIREMENTS**

NEPA 704 Hazard Identification System  
15" Diamond

Hazard Ratings:  
Nine o'clock - Health  
Twelve o'clock - Flammability  
Three o'clock - Instability  
Six o'clock - Special

REFERENCES:  
NEPA 704  
UFC 7901.9  
IFC 2703.5

Signs must be of durable material with red lettering on a white background. Letters shall not be less than 3 inches (76.2 mm) in height and 1/2 inch (12.7 mm) in stroke. Signs shall not be obscured or removed and shall be in English as a primary language. Combustible Sign may also be white letters on red background.

**DIESEL**  
Product Identification

**COMBUSTIBLE**

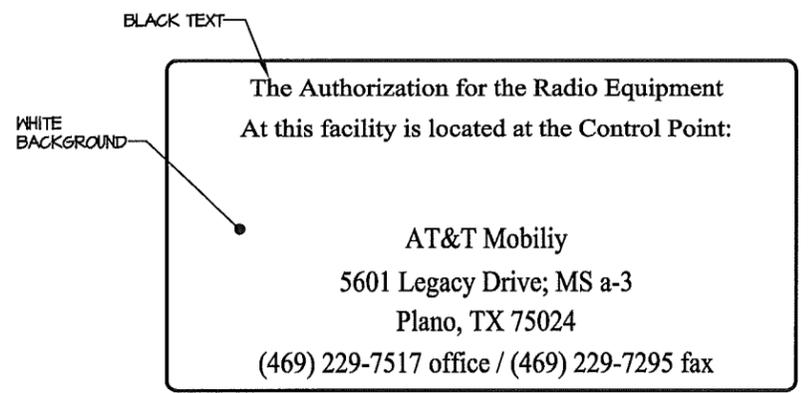
**FLAMMABLE**

**NO SMOKING**

**HAZARDOUS MATERIALS**  
MOUNTING LOCATION: FUEL STORAGE TANK / GENERATOR  
QUANTITY: 1



**DANGER NO TRESPASSING SIGN**  
WHITE/BLACK BACKGROUND, BLACK/WHITE LETTERING  
MOUNTING LOCATION: ALL 4 SIDES OF FENCE (IF AT&T OWNED SITE)  
MOUNTING LOCATION: GATE (IF OWNED BY OTHERS)  
QUANTITY: 1



**AUTHORIZATION FOR RADIO EQUIPMENT SIGN**  
WHITE BACKGROUND, BLACK LETTERING  
MOUNTING LOCATION: SHELTER DOOR  
QUANTITY: 1



NUM	DATE	DESCRIPTION:
A	1/24/12	ISSUED FOR REVIEW
O	2/7/12	ISSUED FOR ZONING SUBMITTAL

410-441

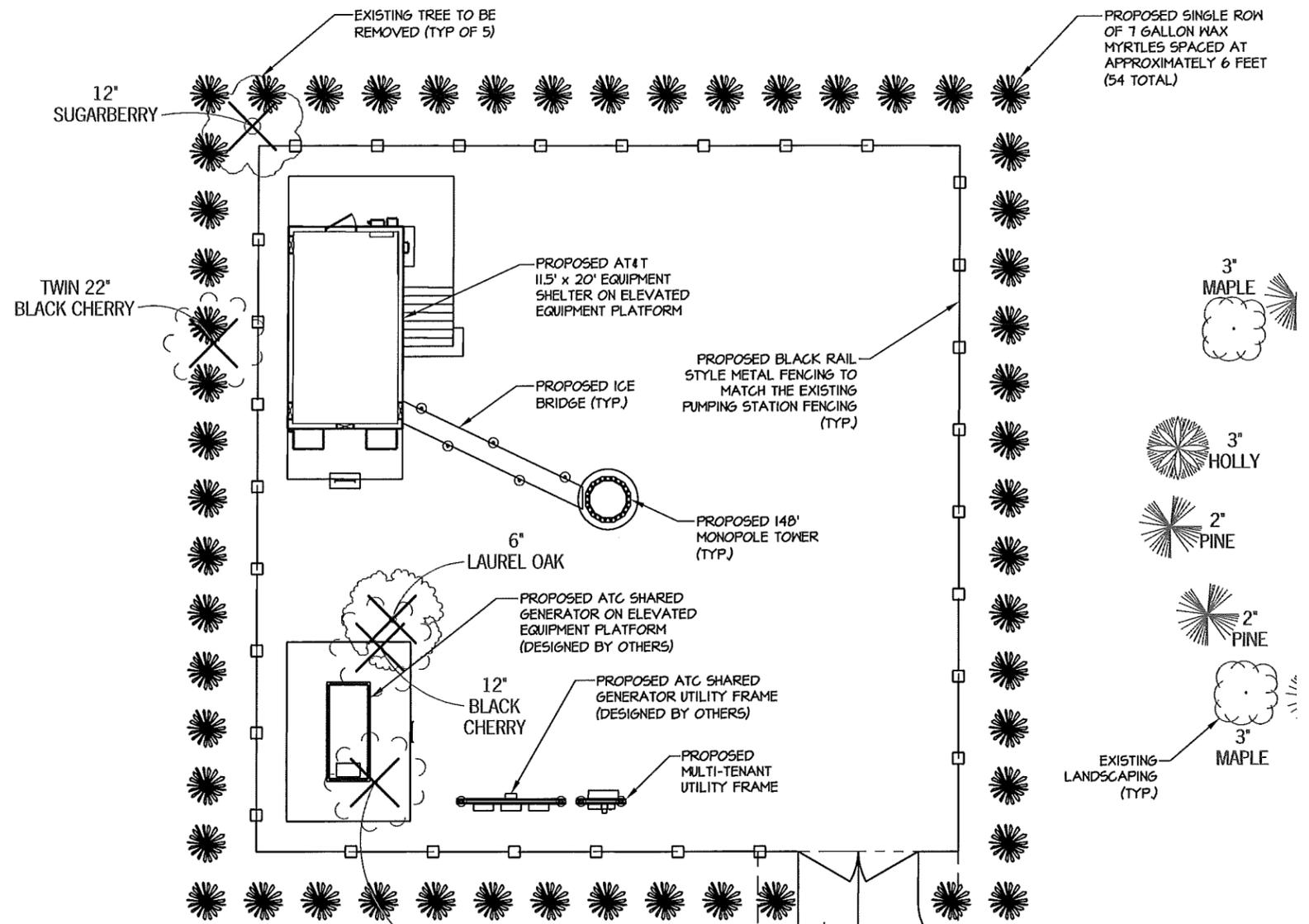
**SITE SIGNAGE**

DESIGNED: AJB  
DRAWN: AJB  
CHECKED: PWM

JOB #: TCD136

**C-10**

1. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE.
2. ALL PLANTS MUST BE CONTAINER-GROWN OR BALLED AND BURLAPPED AS SPECIFIED.
3. ALL TREES MUST BE STRAIGHT TRUNKED, FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
4. ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER'S REPRESENTATIVE BEFORE, DURING, AND AFTER INSTALLATION.
5. ALL TREES MUST BE GUYED OR STAKED AS SHOWN.
6. ALL PLANTS AND PLANTING AREAS MUST BE COMPLETELY MULCHED AS SPECIFIED.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING COURSE OF THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE LANDSCAPE CONSTRUCTION.
8. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.
9. THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING (INCLUDING, BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZATION, ETC.) OF PLANTING AREAS UNTIL THE WORK IS ACCEPTED IN TOTAL BY THE ENGINEER'S REPRESENTATIVE.
10. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) YEAR BEGINNING AT THE DATE OF TOTAL ACCEPTANCE. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE GUARANTEE PERIOD.
11. THE ENGINEER'S REPRESENTATIVE WILL APPROVE THE STAKED LOCATION OF ALL PLANT MATERIAL PRIOR TO INSTALLATION.
12. AFTER BEING DUG AT THE NURSERY SOURCE, ALL TREES IN LEAF SHALL BE ACCLIMATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
13. ANY PLANT MATERIAL THAT DIES, TURNS BROWN OR DEFOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, SIZE AND MEETING ALL SPECIFICATIONS.
14. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK", LATEST EDITION, REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.

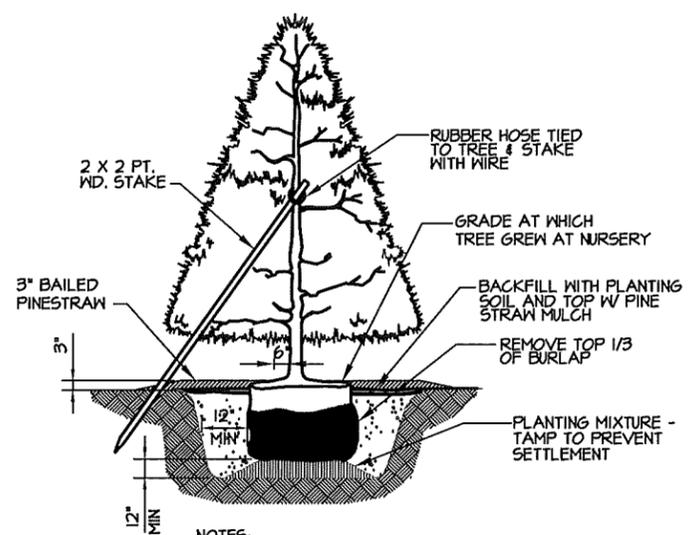


**TOTAL AREA OF LANDSCAPE BUFFER:** 3,080 SF - 0.070 ACRES

**PLANT LIST:**

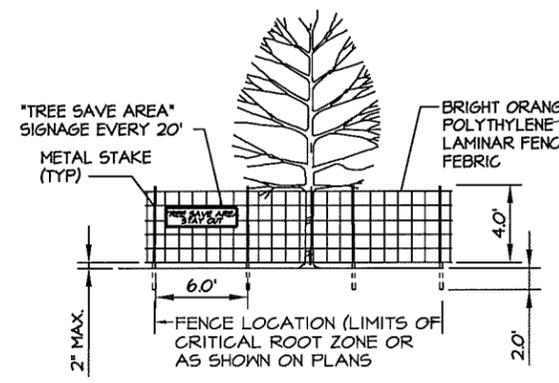
QTY.	COMMON NAME	BOTANICAL NAME	SIZE/REMARKS
54	WAX MYRTLE	MORELLA CERIFERA	7 GALLON MIN. HEIGHT AT PLANTING

LANDSCAPE BUFFER SHALL BE GRASSED SIMILAR TO EXISTING SURROUNDING AREAS (TYP.)



- NOTES:**
1. TOP OF ROOT FLARE SHALL BE 2" ABOVE GRADE.
  2. NO MULCH SHOULD BE WITHIN 6" OF THE BASE OF THE TRUNK.

**TREE PLANTING DETAIL**  
 NOT TO SCALE

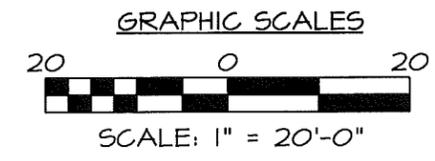
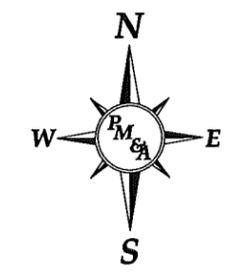


- NOTES:**
- 1) ALL PARKING WILL OCCUR ON EXISTING DRIVE.
  - 2) THERE WILL BE NO BURNING OR BURIAL OF DEBRIS ON SITE.
  - 3) ALL BUFFERS AND TREE SAVE AREAS ARE TO BE CLEARLY IDENTIFIED WITH FLAGGING AND/OR FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE.

**TREE PROTECTION DETAIL**  
 NOT TO SCALE

**TREE SCHEDULE**

EXISTING TREES TO BE SAVED	(17) SPECIMENS ADJACENT TO TOWER SITE (TOTAL CALIPER INCHES SAVED - 84")
EXISTING TREES TO BE REMOVED	(1) SUGARBERRY, (1) LAUREL OAK, (3) BLACK CHERRY (TOTAL CALIPER INCHES REMOVED - 70")
PROPOSED PLANTINGS	(54) WAX MYRTLE, 7 GALLON



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



NUM	DATE	DESCRIPTION:
A	1/24/12	ISSUED FOR REVIEW
O	2/7/12	ISSUED FOR ZONING SUBMITTAL
1	2/22/12	LANDSCAPING PLAN REVISED

**LANDSCAPE PLAN**

410-441

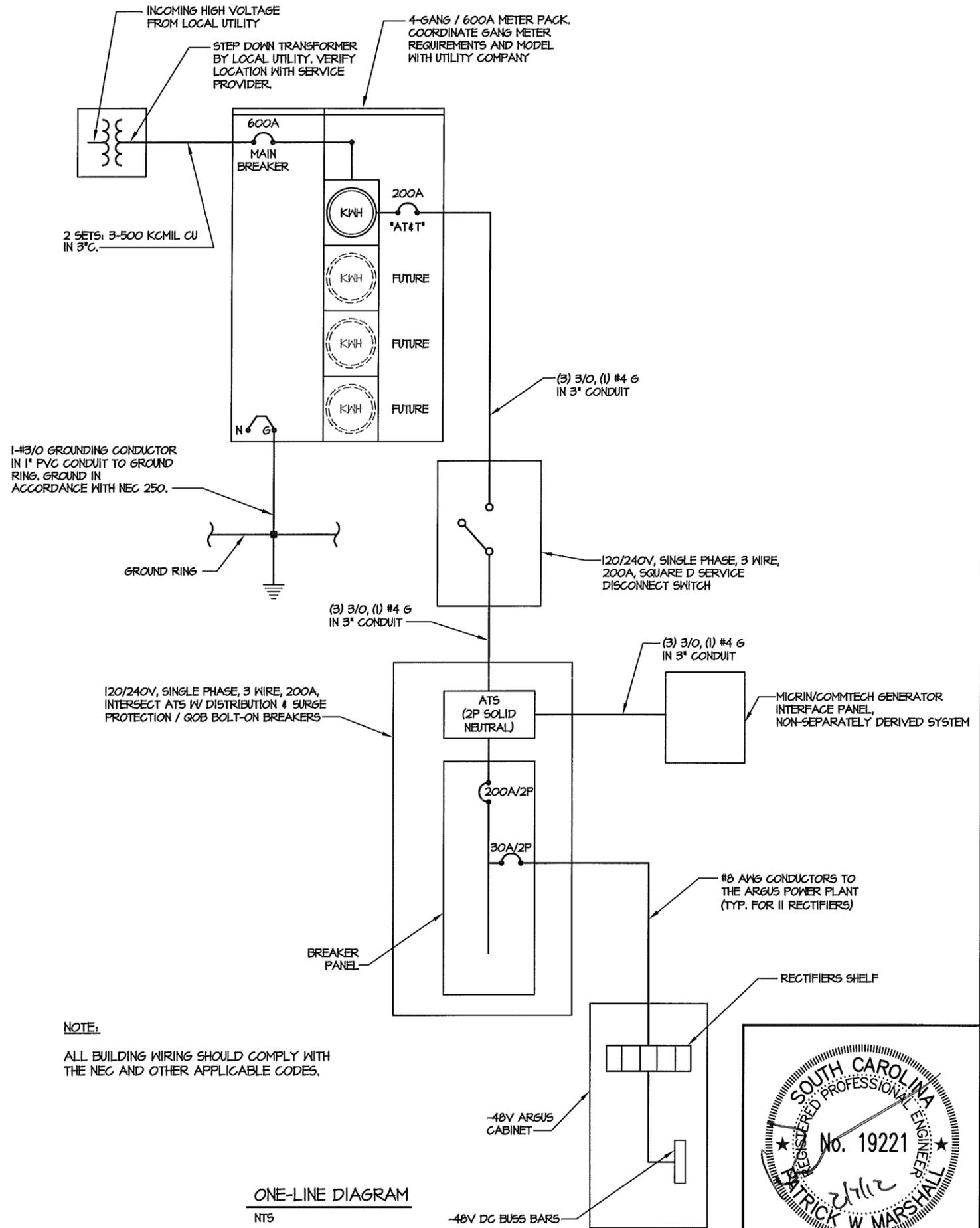
DESIGNED: A.J.B.  
 DRAWN: A.J.B.  
 CHECKED: P.W.M.

JOB #: TCD136

**L-1**

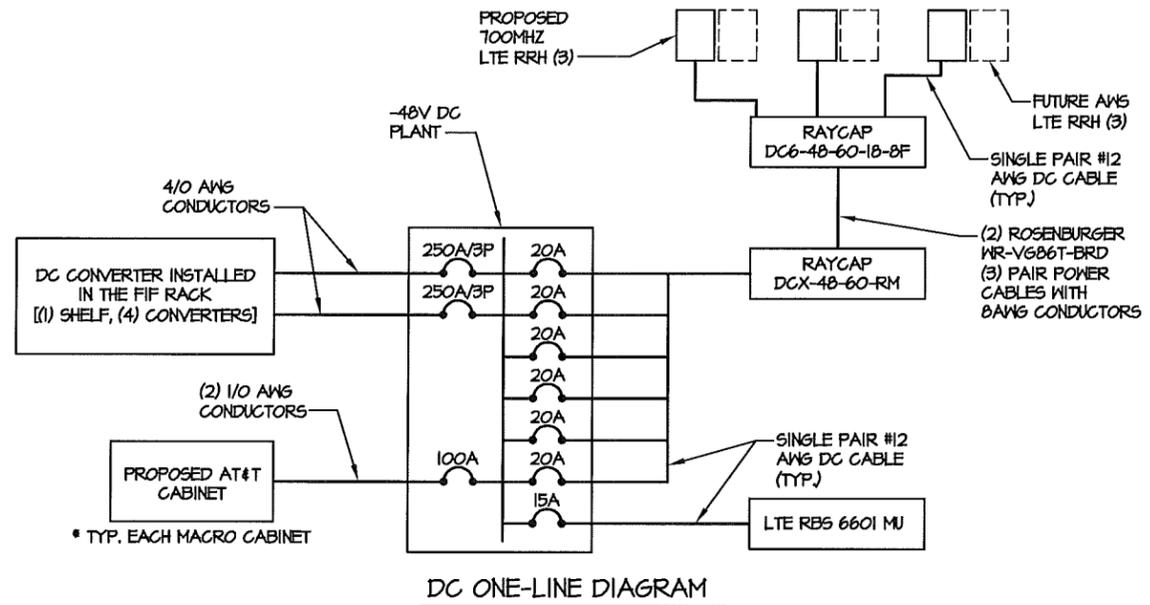
**ELECTRICAL INSTALLATION NOTES**

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR 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 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.
- 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 ID'S).
- PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
- ALL THE 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 THHN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (NET 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 THHN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (NET 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 THHN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (NET AND DRY) OPERATION, WITH OUTER JACKET, LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
- 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 (10°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 ENGAGED 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) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- 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.
- 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 (#P 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 (#P OR BETTER) OUTDOORS.
- THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGINGS ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.



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

**ONE-LINE DIAGRAM**  
NTS



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

**at&t**

DESCRIPTION:	DATE	ISSUED FOR REVIEW	ISSUED FOR ZONING SUBMITTAL
NUM	A	0	

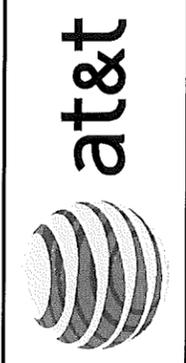
410-441

**ELECTRICAL SPECS & ONE-LINE DIAGRAM**

DESIGNED: A.JB  
DRAWN: A.JB  
CHECKED: PWM  
JOB #: TCD136

**E-1**

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER  
No. 19221  
PATRICK W. MARSHALL



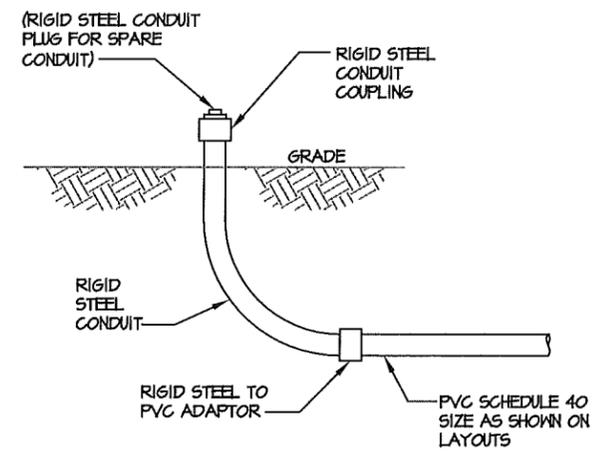
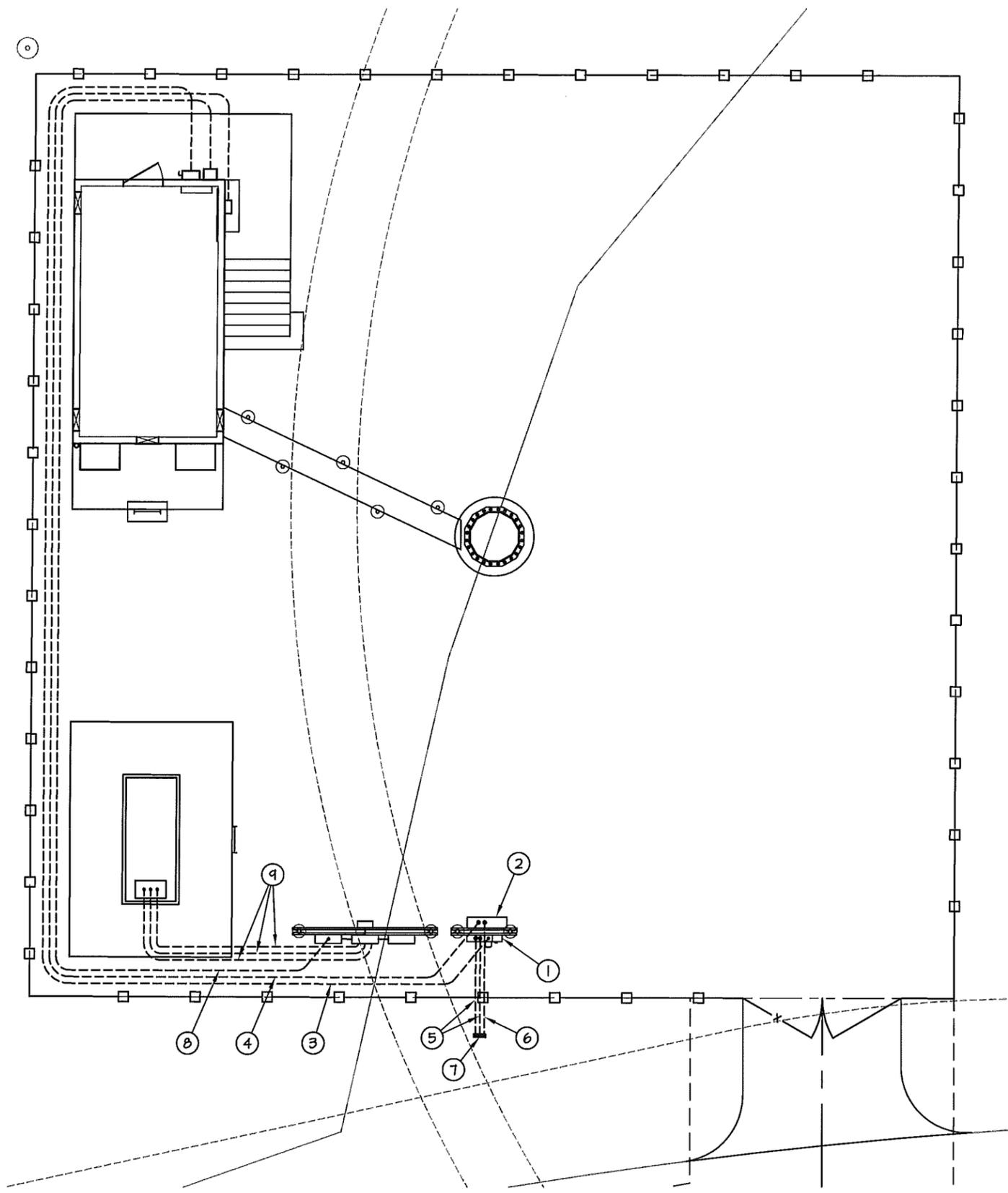
NUM	DATE	DESCRIPTION:
A	1/24/12	ISSUED FOR REVIEW
O	2/7/12	ISSUED FOR ZONING SUBMITTAL

410-441  
**ELECTRICAL SITE PLAN**

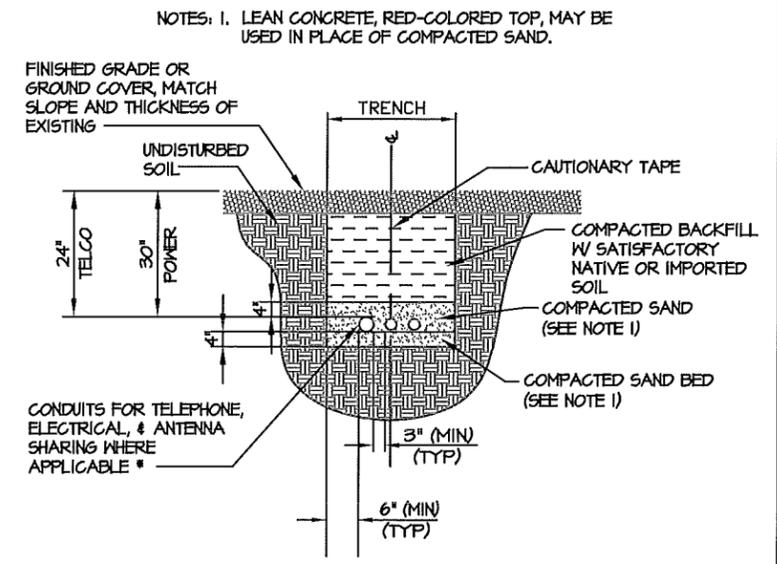
DESIGNED: A.JB  
 DRAWN: A.JB  
 CHECKED: P.W.M.  
 JOB #: TCD136  
**E-2**

**ELECTRICAL KEY NOTES:**

- ① PROPOSED 4-GANG / 600A METER PANEL, SEE SHEET E-8 FOR MOUNTING DETAILS. SEE SHEET E-1 FOR ELECTRICAL ONE-LINE DIAGRAM.
- ② PROPOSED 48"x48"x12" TELCO CABINET, SEE E-8 FOR MOUNTING DETAILS.
- ③ PROPOSED (3) 3/0, (1) #4 6 IN 3" CONDUIT FROM THE METER TO THE DISCONNECT ON SHELTER.
- ④ PROPOSED 4" CONDUIT WITH (2) FULL STRINGS FROM THE MULTI-TENANT TELCO BOX TO THE AT&T SHELTER
- ⑤ PROPOSED (2) 4" PVC CONDUITS FOR POWER SERVICE.
- ⑥ PROPOSED (1) 4" PVC CONDUITS WITH FULLSTRINGS FOR TELCO SERVICE.
- ⑦ STUB UP CONDUITS A MINIMUM OF 2' ABOVE FINISHED GRADE AND CAP AT REQUIRED LOCATION. COORDINATE WITH UTILITY PROVIDER FOR FINAL CONNECTION TO EXISTING UTILITIES.
- ⑧ PROPOSED 2" PVC CONDUIT WITH (3) 3/0 + #46 FOR EMERGENCY POWER FROM ATC DISTRIBUTION PANEL (BY OTHERS) TO AT&T GENERATOR INTERFACE PANEL.
- ⑨ PROPOSED GENERATOR CONDUITS (BY OTHERS)



**UNDERGROUND CONDUIT STUB-UP**  
 NTS

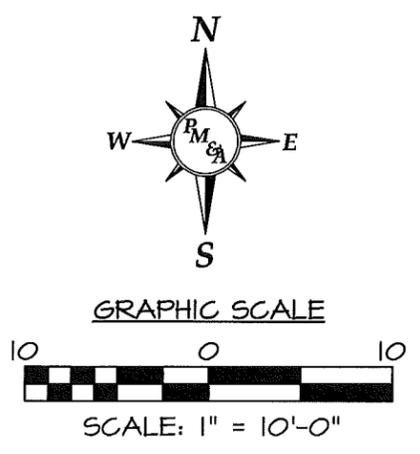


\* CONDUIT SIZE, TYPE, QUANTITY AND SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS

**DIRECT BURIED CONDUIT**  
 NTS



**ELECTRICAL SITE PLAN**  
 SCALE: 1" = 10'-0"





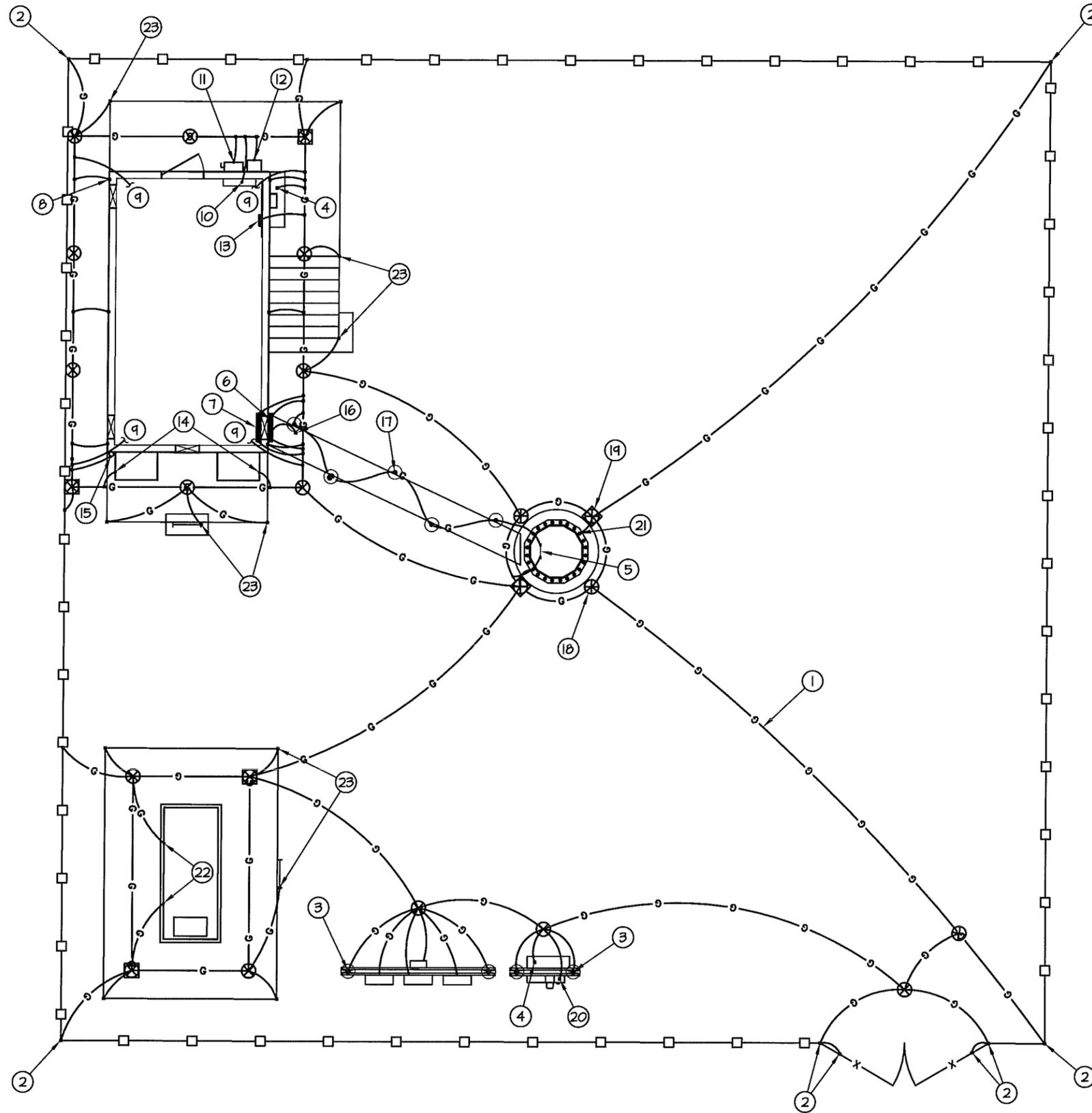
NUM	DATE	DESCRIPTION:
A	1/24/12	ISSUED FOR REVIEW
O	2/7/12	ISSUED FOR ZONING SUBMITTAL

410-441  
**GROUNDING SITE PLAN**  
 SITE ID:

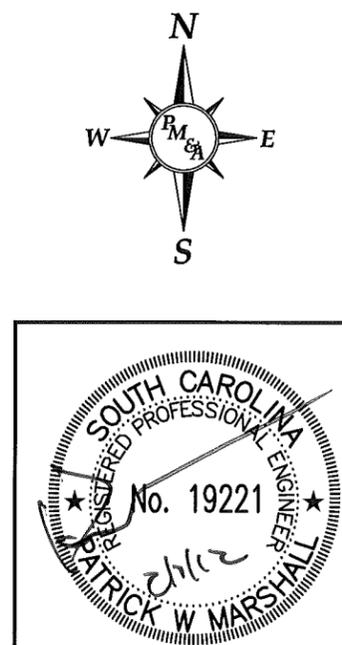
DESIGNED: AJB  
 DRAWN: AJB  
 CHECKED: PWM

JOB #: TCD136  
**E-3**

- ① #2 AWG BARE TINNED SOLID COPPER GROUND RING BURIED 30" BELOW GRADE (TYP)
- ② BOND FENCE & GATE POSTS TO GROUND RING WITH CADWELD CONNECTION (TYP)
- ③ BOND ALL H-FRAME POSTS TO GROUND RING
- ④ BOND TELCO BUSS BAR TO GROUND RING
- ⑤ BOND TOWER MOUNTED GROUND BAR TO TOWER GROUND RING (TYP-2)
- ⑥ CONNECT EXTERIOR GROUND BAR (UNDER WAVEGUIDE PORT) TO NEW GROUND RING WITH #2 GROUND CONDUCTORS.
- ⑦ CONNECT MASTER GROUND BAR TO EXTERIOR GROUND RING. COORDINATE WITH EQUIPMENT BUILDING MANUFACTURER FOR LOCATION OF WALL PENETRATION.
- ⑧ BOND EACH SHELTER TIE DOWN PLATE TO GROUND RING WITH CADWELD.
- ⑨ PROVIDE GROUND LEADS FROM SHELTER HALO TO GROUND RING (4 PLACES). COORDINATE WITH SHELTER MANUFACTURER FOR LOCATION OF WALL PENETRATIONS.
- ⑩ PROVIDE GROUND LEAD FROM BUILDING 200A PANEL BOARD TO GROUND RING. COORDINATE WITH SHELTER MANUFACTURER FOR LOCATION OF WALL PENETRATIONS.
- ⑪ BOND DISCONNECT SWITCH TO GROUND RING.
- ⑫ BOND GENERATOR INTERFACE PANEL TO GROUND RING.
- ⑬ CONNECT TELCO GROUND BAR TO EXTERIOR GROUND RING. COORDINATE WITH EQUIPMENT BUILDING MANUFACTURER FOR LOCATION OF WALL PENETRATION.
- ⑭ BOND HVAC UNITS TO GROUND RING (TYP.)
- ⑮ GROUND GPS ANTENNAS PER MANUFACTURER'S SPECIFICATIONS.
- ⑯ BOND EACH ICE BRIDGE SECTION TOGETHER WITH JUMPERS. BOND FIRST AND LAST SECTION TO GROUND RING.
- ⑰ BOND EVERY ICE BRIDGE POST BASE TO GROUND RING WITH CADWELD.
- ⑱ PROPOSED GROUND ROD (TYP).
- ⑲ PROPOSED GROUND ROD WITH INSPECTION WELL.
- ⑳ 1-#3/0 GROUNDING CONDUCTOR IN 1" PVC CONDUIT TO GROUND RING.
- ㉑ BOND TOWER BASE PLATE TO TOWER 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.)
- ㉓ BOND THE BASE OF ALL VERTICAL STRUCTURAL STEEL MEMBERS AND STAIRS/LADDERS TO THE BURIED GROUND RING WITH A CADWELD CONNECTION (TYP.)



**GROUNDING PLAN**  
 SCALE: NTS



GROUNDING NOTES

1. 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 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 247B2-000-3PS-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 GROUNDED 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 EQUIPMENT 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 CONNECTORS. 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.



NUM	DATE	DESCRIPTION:
A	1/24/12	ISSUED FOR REVIEW
O	2/7/12	ISSUED FOR ZONING SUBMITTAL

410-441

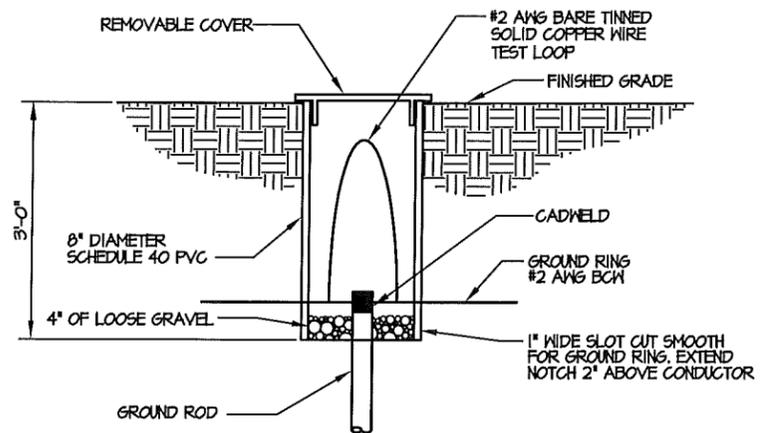
**GROUNDING NOTES**



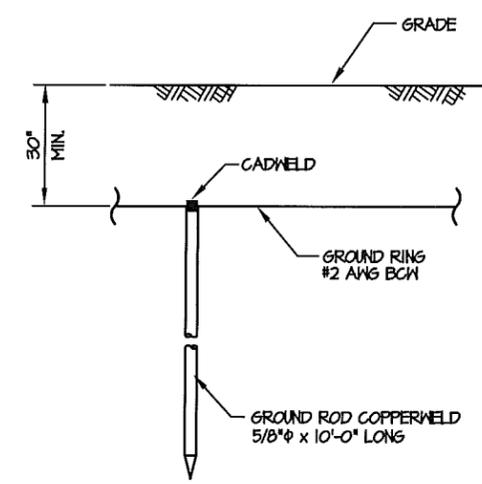
DESIGNED: A.JB  
DRAWN: A.JB  
CHECKED: PWM

JOB #: TCD136

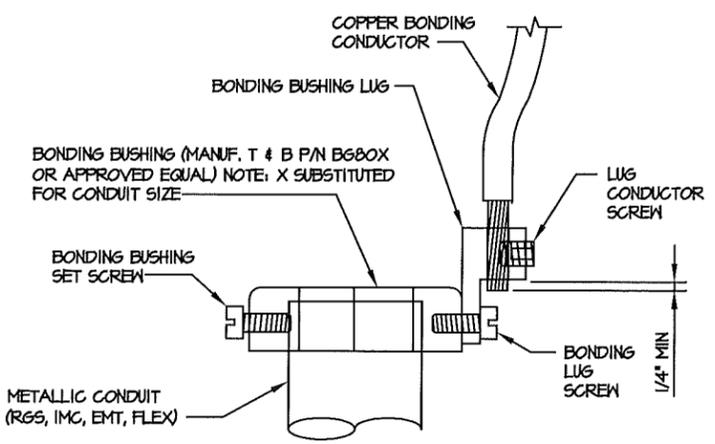
**E-4**



**GROUND ROD INSPECTION WELL**  
NOT TO SCALE



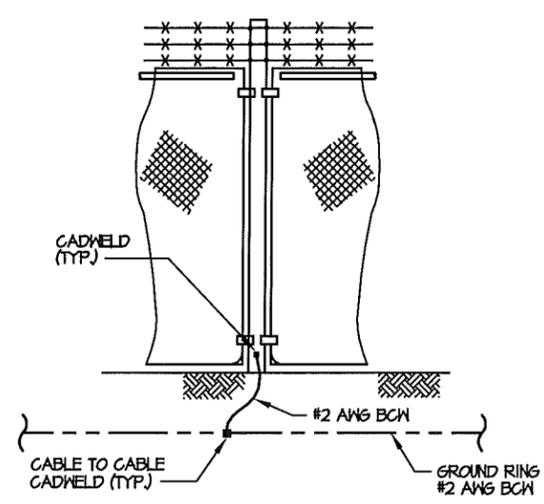
**GROUND ROD DETAIL**  
NOT TO SCALE



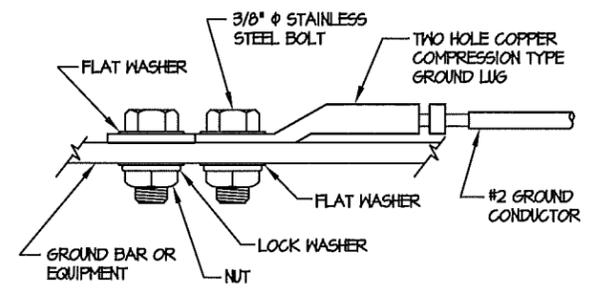
- DIRECTIONS:**
1. MOUNT BONDING BUSHING ONTO CONDUIT
  2. TIGHTEN BOND BUSHING SET SCREW
  3. INSERT COPPER CONDUCTOR INTO LUG
  4. TIGHTEN LUG CONDUCTOR SCREW
  5. TIGHTEN BONDING LUG SCREW

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

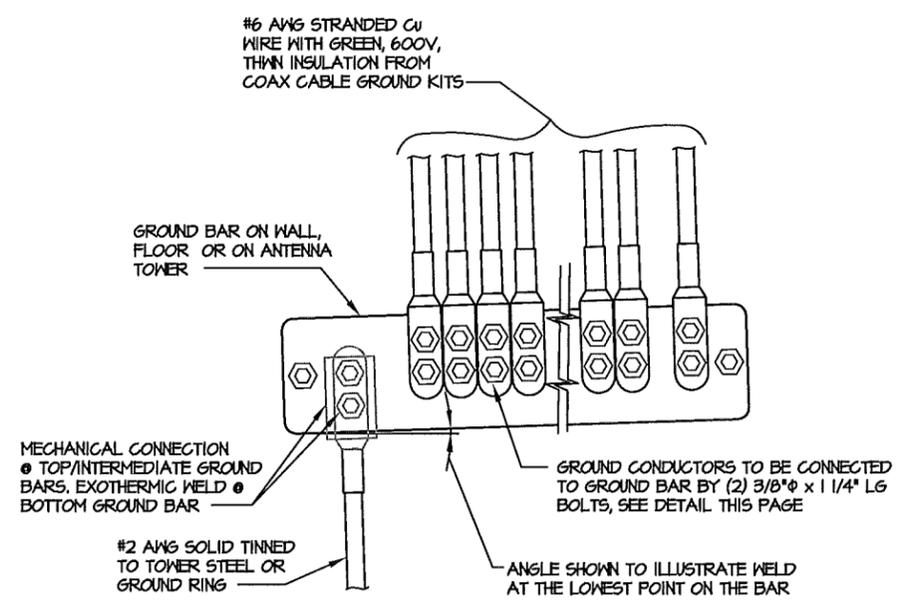
**CONDUIT BOND/GROUND BUSHING**  
NTS



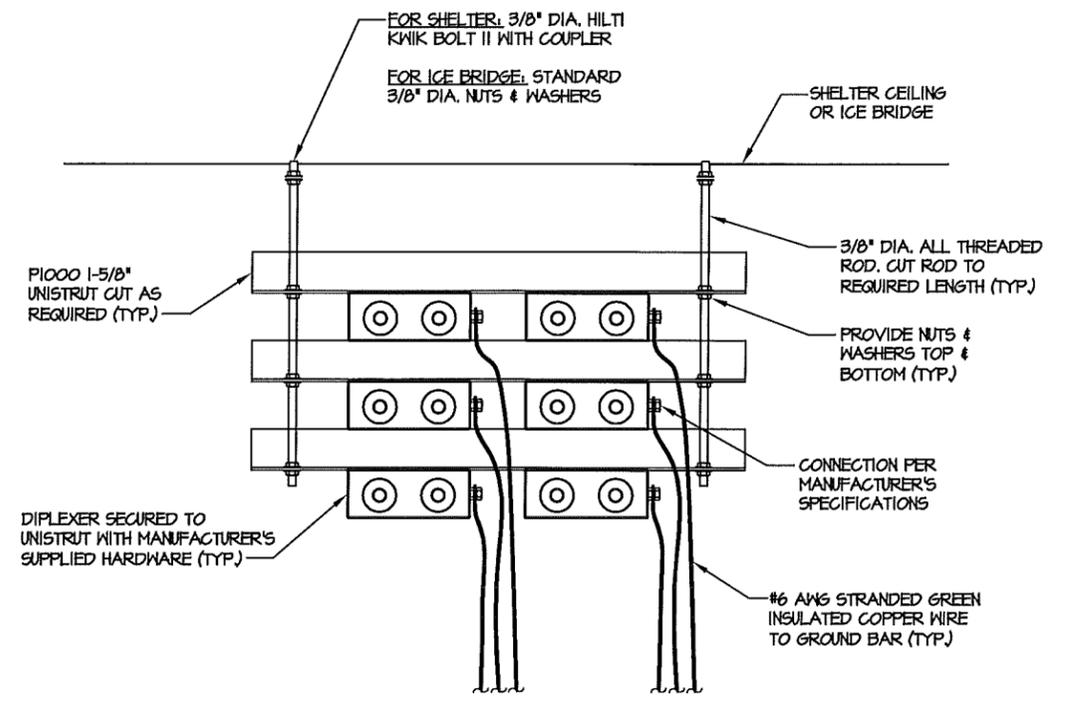
**FENCE GROUNDING**  
NOT TO SCALE



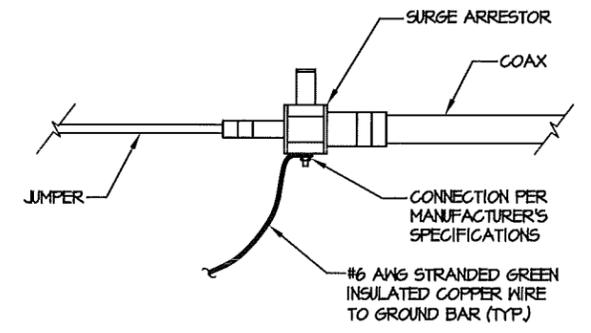
**MECHANICAL GROUND CONNECTION**  
NOT TO SCALE



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

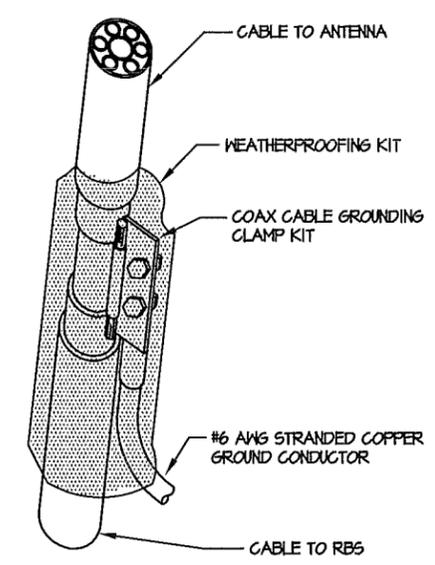


**DIPLEXER GROUNDING DETAILS**  
NOT TO SCALE



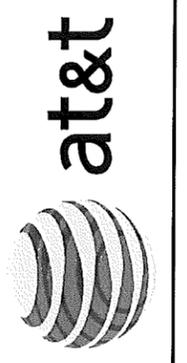
NOTE: ON OUTDOOR SITES, INSTALL WEATHERPROOFING AT EACH CONNECTION PER AT&T SPECIFICATIONS

**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



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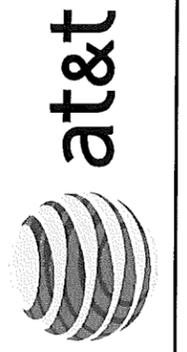
**GROUNDING DETAILS**

DESIGNED: A.JB  
DRAWN: A.JB  
CHECKED: PWM

JOB #: TCD136

**E-5**





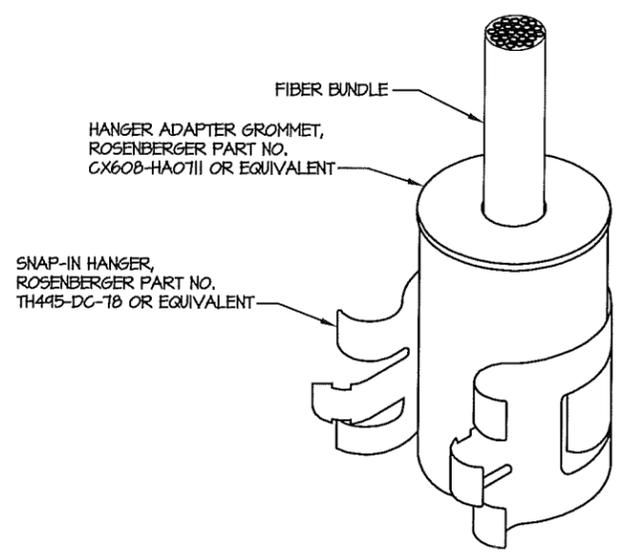
DESCRIPTION:	DATE	DATE
ISSUED FOR REVIEW	1/24/12	2/7/12
ISSUED FOR ZONING SUBMITTAL		

**LTE EQUIPMENT DETAILS**

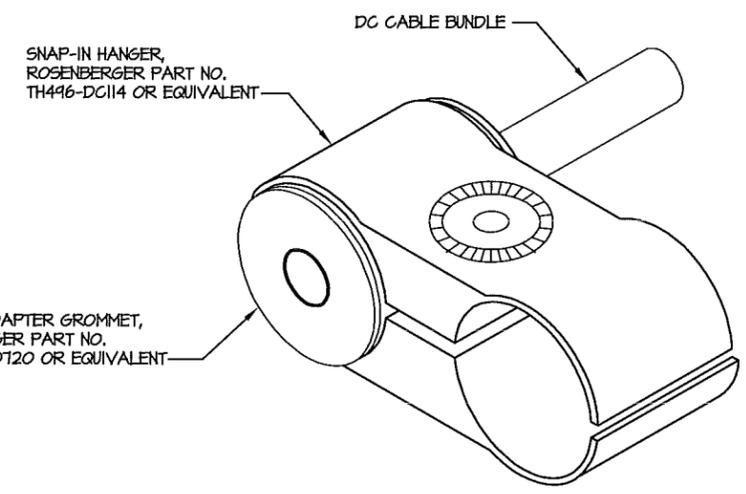
410-441

DESIGNED:	AJB
DRAWN:	AJB
CHECKED:	PWM
JOB #:	TCD136

**E-7**



**SNAP-IN HANGER**

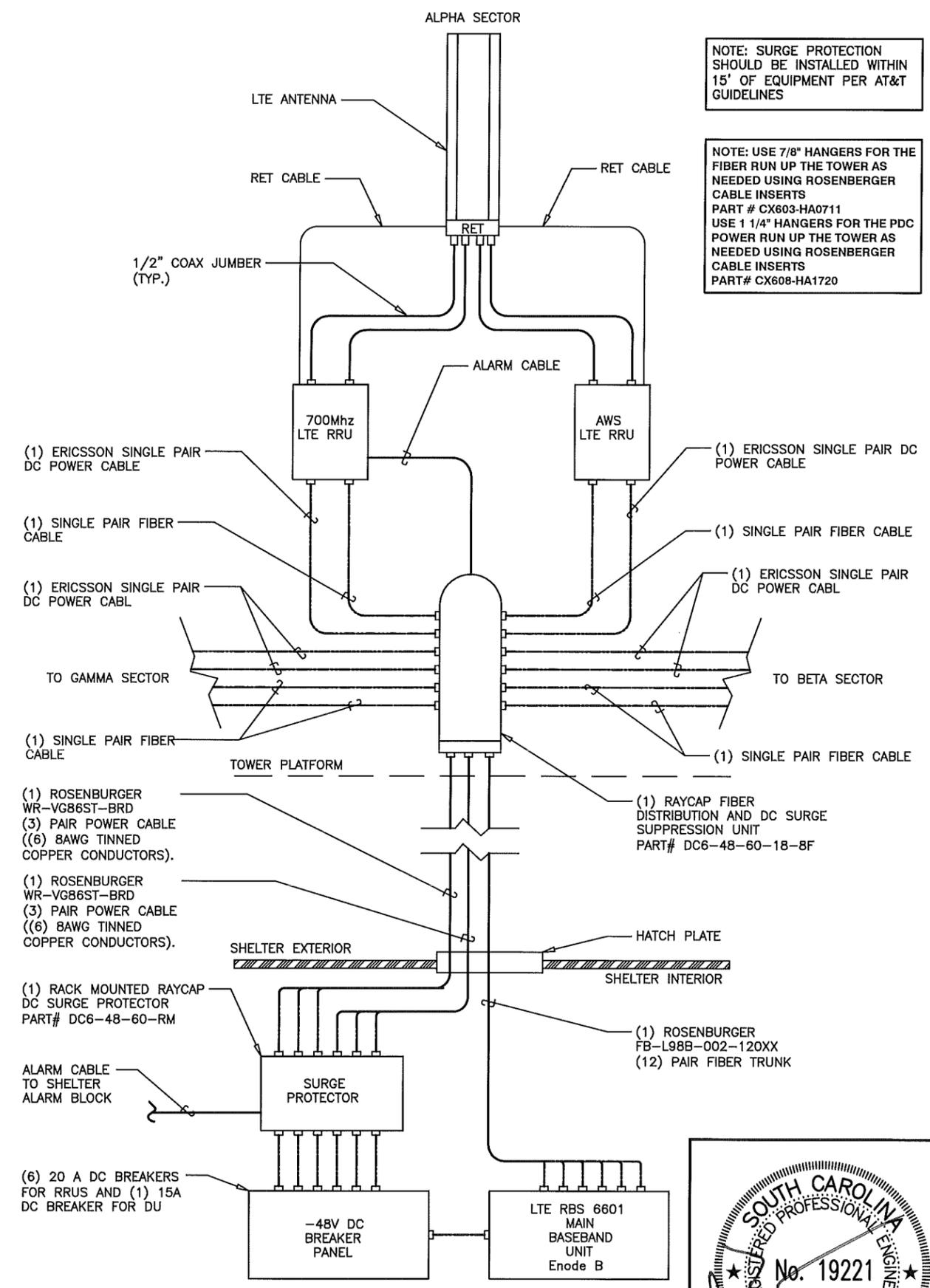


**DOUBLE CLAMP**

**NOTES:**

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

**HANGER ADAPTER GROMMET DETAILS**  
 NOT TO SCALE

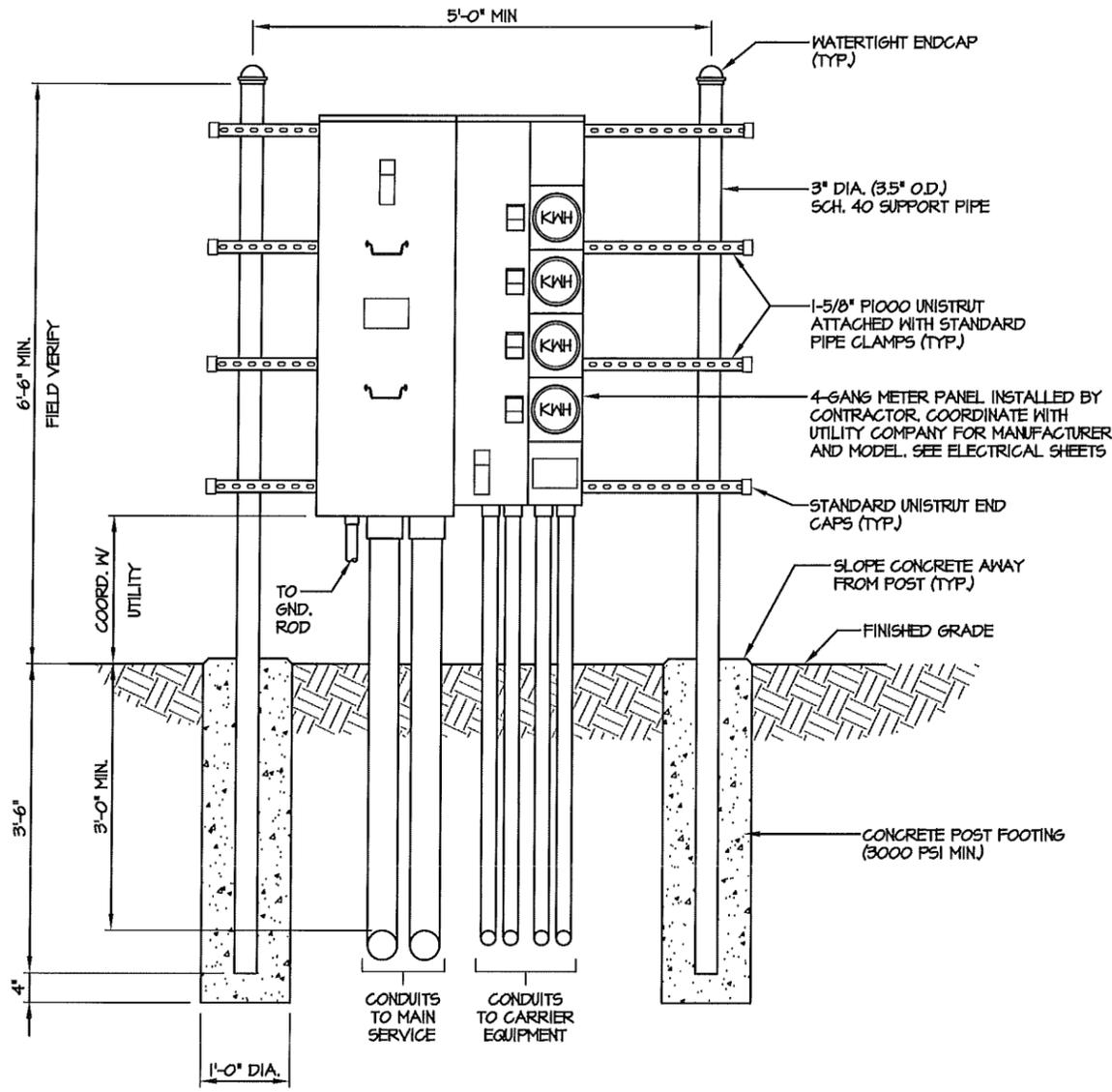


NOTE: SURGE PROTECTION SHOULD BE INSTALLED WITHIN 15' OF EQUIPMENT PER AT&T GUIDELINES

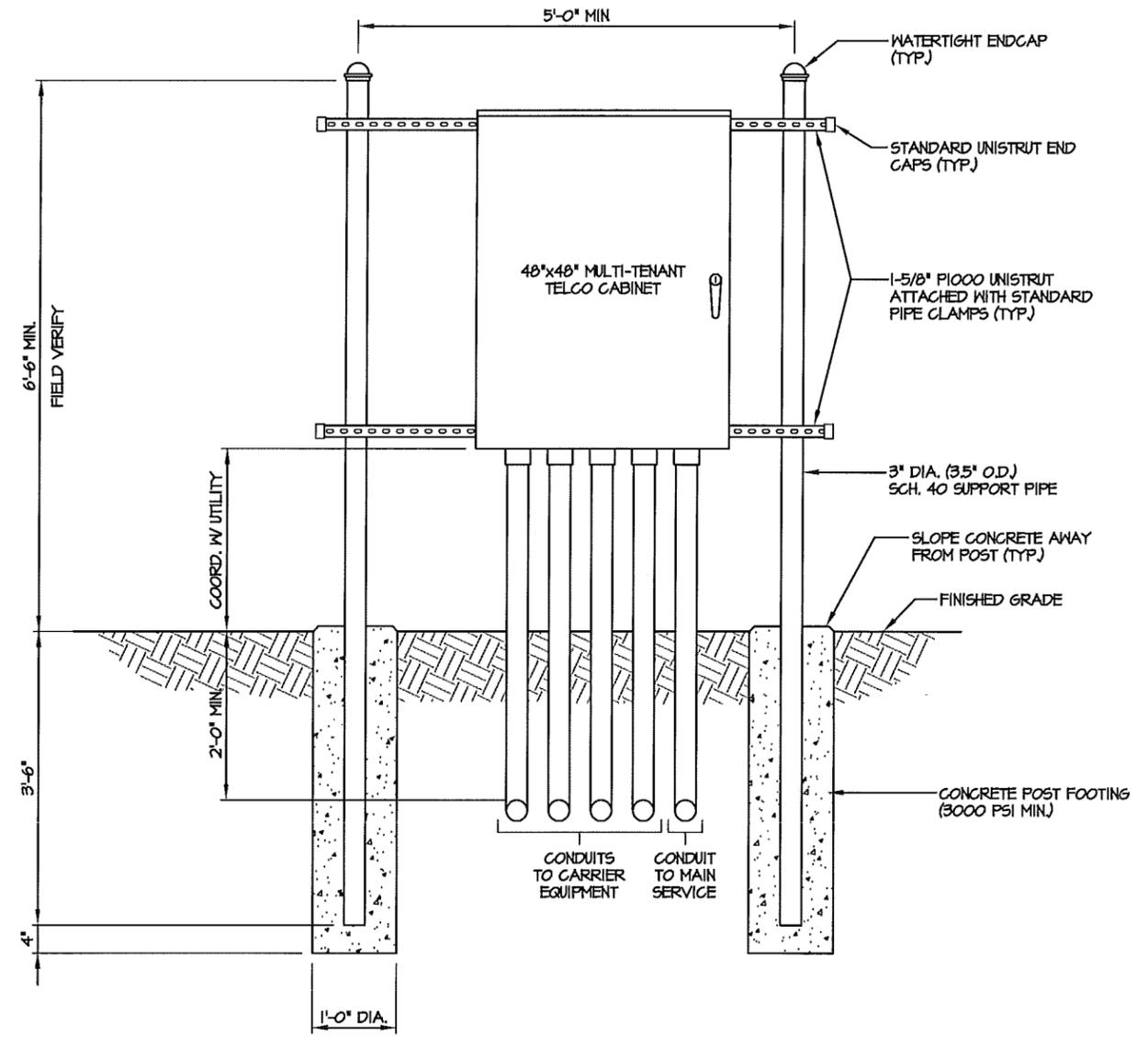
NOTE: USE 7/8\" HANGERS FOR THE FIBER RUN UP THE TOWER AS NEEDED USING ROSENBERGER CABLE INSERTS PART # CX603-HA0711 USE 1 1/4\" HANGERS FOR THE PDC POWER RUN UP THE TOWER AS NEEDED USING ROSENBERGER CABLE INSERTS PART# CX608-HA1720

**PLUMBING DIAGRAM**  
 NOT TO SCALE





UTILITY FRAME DETAIL (GANG METER)  
 NTS



UTILITY FRAME DETAIL (TELCO)  
 NTS

**NOTES:**

1. CONTRACTOR SHALL FIELD LOCATE THE METER PEDESTAL AS SHOWN ON SITE PLAN. INSTALL THE METER PEDESTAL NEAR THE PERIMETER OF THE FENCED COMPOUND WITH THE METERS FACING AS SHOWN.
2. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL UTILITY COMPANY FOR THE CONDUIT RUN TO THE MAIN SERVICE CONNECTION OR TRANSFORMER.
3. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL UTILITY COMPANY FOR GROUND ROD REQUIREMENTS. IF REQUIRED, THE CONTRACTOR SHALL ORDER AND PAY FOR NECESSARY GROUND TESTS.
4. SUPPORT POST AND UNISTRUT SHALL BE GALVANIZED. PIPE CLAMPS AND HARDWARE SHALL BE GALVANIZED OR STAINLESS STEEL.
5. TELCO CABINET SHALL BE 36"x48"x10" HOFFMAN OR EQUIVALENT. PROVIDE 3/4" PLYWOOD BACKBOARD INSIDE THE MULTI-TENANT TELCO CABINET.
6. ADJUSTMENTS TO THE METER PEDESTAL DESIGN MAY BE REQUIRED DEPENDING ON THE EXACT METER PANEL INSTALLED. CONTRACTOR SHALL FIELD COORDINATE ADJUSTMENTS AND INFORM THE ENGINEER IF ANY UNUSUAL CONDITIONS ARE FOUND TO EXIST.

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410-441

**UTILITY FRAME DETAILS**



DESIGNED:	AJB
DRAWN:	AJB
CHECKED:	PWM

JOB #: TCD136

**E-8**



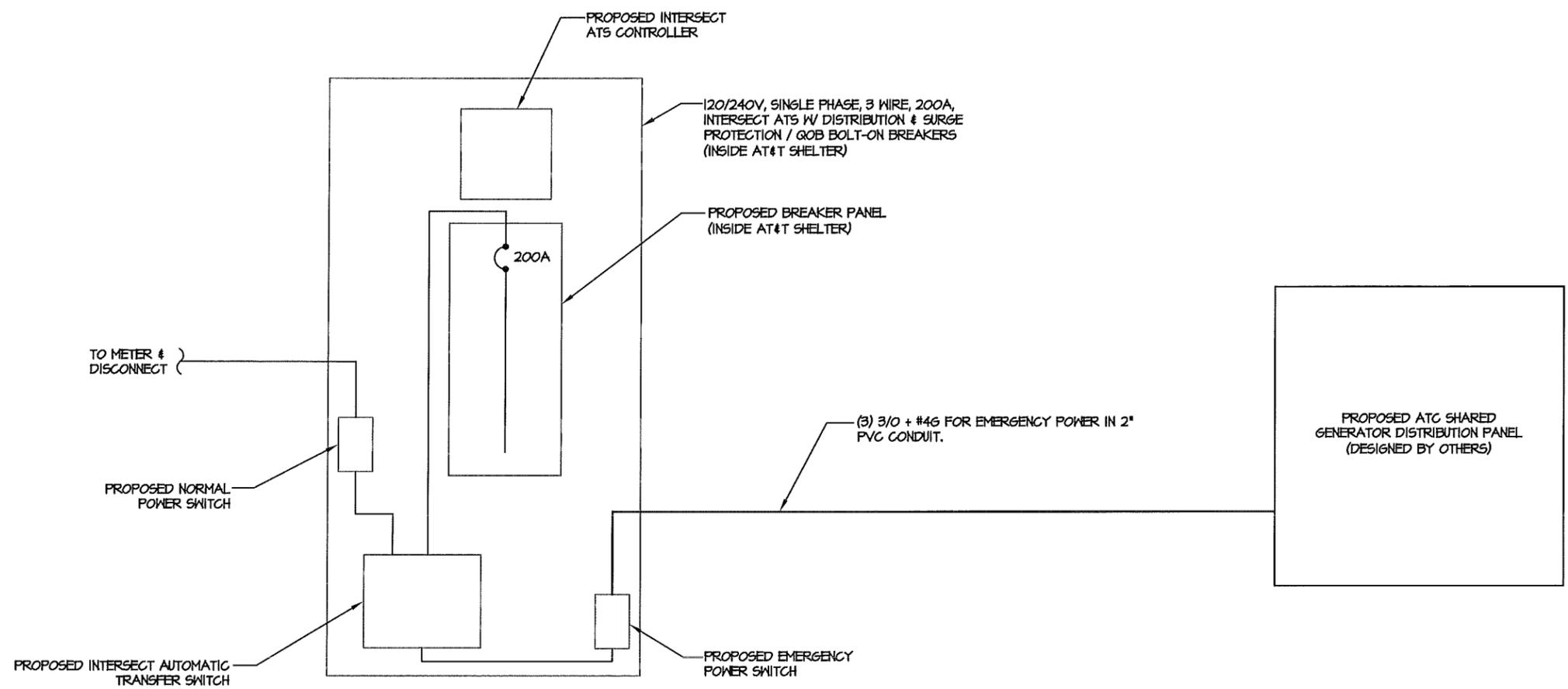
NUM	DATE	DESCRIPTION:
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410-441  
**ATC GENERATOR ONE-LINE DIAGRAM**

DESIGNED: AJB  
 DRAWN: AJB  
 CHECKED: PWM

JOB #: TCD136

**E-9**



GENERATOR ONE-LINE DIAGRAM  
 NOT TO SCALE



## 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 NAME: Jenkins Island Cell Tower- New Development

DRB#: DR120007

DATE: 3-27-2012

RECOMMENDATION:    Approval             Approval with Conditions             Denial

### ***MISC COMMENTS/QUESTIONS***

New Development requires a second reading. All specifications are the same as the Conceptual Approval, with the exception of reducing the total height of the tower, including lightning rod to 150'-0", per the Board's conditions for Conceptual Approval.




1301 Gervais Street, Suite 1600  
Columbia, South Carolina 29201  
tel: 803 758-4500

March 13, 2012

Design Review Board  
Town of Hilton Head Island  
One Town Center  
Hilton Head Island, SC 29928

RE: Hilton Head Island Airport  
Landscape Plans for Mitigation of Tree Removal  
Runway 21 Approach  
CDM Smith Project Number 86216

Gentlemen:

Submitted herewith is the DRB submittal application for the referenced project, with supporting documentation, for review at the March 27, 2012, Design Review Board meeting.

We seek approval of this submittal so this project can be advertised for construction at the earliest opportunity.

Thank you in advance for your consideration of this matter.

Sincerely,

A handwritten signature in blue ink that reads 'Charles F. Stearns'.

Charles F. Stearns, PE  
Project Manager

Enclosures

Cc: Mr. Paul Andres, Airport Manager





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](http://www.hiltonheadislandsc.gov)

<b>FOR OFFICIAL USE ONLY</b>	
Date Received:	_____
Accepted by:	_____
App. #: DR	_____
Meeting Date:	_____

Applicant/Agent Name: Paul Andres Company: Beaufort County  
 Mailing Address: 120 Beach City Rd. City: Hilton Head Island State: SC Zip: 29926  
 Telephone: (843) 255-2950 Fax: (843) 255-9424 E-mail: pandres@bcgov.net  
 Project Name: On-Airport Tree Mitigation Runway 21 Approach Project Address: Hilton Head Island Airport  
 Parcel Number [PIN]: N/A  
 Zoning District: IL Overlay District(s): AZ – Airport Overlay District

**DESIGN REVIEW BOARD (DR) SUBMITTAL REQUIREMENTS**

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

Project Category:

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

Submittal Requirements for **All** projects:

N/A Private 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.

N/A 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.

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.

Paul L. Andrew  
SIGNATURE

MARCH 13, 2012  
DATE

## **NARRATIVE TO ACCOMPANY DESIGN REVIEW BOARD SUBMITTAL**

### **Landscape Plans for Mitigation of On-Airport Tree Obstruction Removal Hilton Head Island Airport – Runway 21 Approach**

#### Background

Tree obstructions have been removed from the airport property for the Runway 21, 34:1 approach in accordance with the permit issued by the Town of Hilton Head Island in 2011. The work began in September 2011 and was completed in February 2012.

#### Project Description

The landscape plans submitted with this application were prepared according to requirements and guidelines provided in the Town's Land Management Ordinance (LMO) and in consultation with Town staff. They represent the proposed mitigation for trees removed from the airport property, by replacement planting. All mitigation is proposed to be done within the buffers defined within the LMO, on airport property.

#### Permits

No wetlands permits are required since all planting is to occur outside the wetlands and wetland buffers.

The non-buffer area will be grassed, utilizing non-tilling methodology, i.e., sprigging. A land disturbance permit will therefore not be required. The area bounded by the western buffer line, the eastern 34:1 line and a line parallel and 110 feet from the end of the existing airport fence will be grassed to accommodate the proposed extension of the runway safety area. The remainder of the non-buffer area will be planted with either native grasses or Bermuda depending upon the resolution of the FAA and Town differences concerning same. Please refer to the attached copies of letters from the FAA to Mr. Gary Kubic dated March 1, 2012, and from Mr. Gary Kubic to Hon. Drew Laughlin and Mr. Steve Riley dated March 9, 2012.

This project is currently being coordinated with the State Historic Preservation Office because it lies within the historic Mitchelville site. See attached copy of the letter transmitting the project information to SHPO, dated March 12, 2012.



OFFICE OF THE COUNTY ADMINISTRATOR  
COUNTY COUNCIL OF BEAUFORT COUNTY

**GARY KUBIC**  
COUNTY ADMINISTRATOR

**CHERYL HARRIS**  
EXECUTIVE ASSISTANT

ADMINISTRATION BUILDING  
100 RIBAUT ROAD  
POST OFFICE DRAWER 1228  
BEAUFORT, SOUTH CAROLINA 29901-1228  
TELEPHONE: (843) 255-2180  
FAX: (843) 255-9401  
[www.bcgov.net](http://www.bcgov.net)

**BRYAN J. HILL**  
DEPUTY COUNTY ADMINISTRATOR

**JOSHUA A. GRUBER**  
STAFF ATTORNEY

March 9, 2012

Hon. Drew Laughlin  
Mayor, Hilton Head Island  
One Town Center Court  
Hilton Head Island, SC 29928

Mr. Steve Riley  
Hilton Head Island Town Manager  
One Town Center Court  
Hilton Head Island, SC 29928

Re: Replanting requirements for on-airport tree trimming/removal project  
Request for reconsideration due to safety concerns

Dear Mayor Laughlin and Mr. Riley:

The challenge for us as we plan for the replantation of vegetation in the areas affected by the trimming and removal process is to proceed in the interests of public safety. As you are aware, Beaufort County has received written correspondence from the Federal Aviation Administration indicating their belief that the current plant-back requirements contained in the Town's LMO as applied to the on-airport tree trimming/removal project will result in the creation of habitat for wildlife that could potentially pose a direct and substantial threat to aviation safety.

The dilemma is that if we continue to proceed with the Town's LMO replanting choices, we do so knowing that the FAA objects to these choices as unnecessary hazards that should be avoided.

Therefore, I am requesting that the Town review its current position and if possible, reconsider its demand that the County must choose a vegetation from the plant-back requirements contained in the Town's LMO.

Nevertheless, the County will continue to proceed and remain in compliance with all federal, state and local regulations with the hope that an exception may be found which would allow the County to plant Bermuda grass and avoid grasses that are attractive nuisances. If not, the County may request the development of an agreement with the Town to address the assumption of risk for any future damages that may arise out of the County's compliance with said laws.

Hon. Drew Laughlin  
Mr. Steve Riley  
March 9, 2012  
Page 2

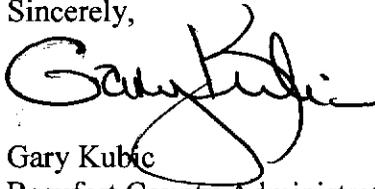
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The County looks forward to your prompt responses so that it may proceed with this portion of the project and work to bring this matter to ultimate completion in the near future.

Again, the County makes this request in the interests of aviation safety.

Please contact me should you have any questions.

Sincerely,



Gary Kubic  
Beaufort County Administrator

Enclosure: (1)

cc: Beaufort County Council Members  
Hilton Head Island Town Council Members  
Scott Seritt, Federal Aviation Administration  
Noel E. Myers, S.C. USDA - APHIS - Wildlife Services  
Paul Andres, Airport Director  
Robert McFee, Infrastructure & Engineering  
Bryan Hill, Deputy County Administrator  
Joshua A. Gruber, Staff Attorney



U.S. Department  
of Transportation  
Federal Aviation  
Administration

Federal Aviation Administration  
Atlanta Airports District Office

1701 Columbia Avenue  
Campus Building, Suite 2-260  
College Park, Georgia 30337

March 1, 2012

Mr. Gary Kubic  
Beaufort County Administrator  
Post Office Drawer 1228  
Beaufort, South Carolina 29901

RE: Runway 21 Safety Area Drainage Improvements and  
On-Airport Tree Obstruction Removal Mitigation

Dear Mr. Kubic:

I understand that Beaufort County and the Town of Hilton Head have not reached an agreement regarding the plant-back requirements resulting from the obstruction clearing to Runway 21. I have reviewed the recent exchanges between Steve Riley and yourself, as well as the emails between Noel Myers and my staff, and want to clarify the Federal Aviation Administration's (FAA) position. FAA concurs with Noel Myers' statement: "Given that some species mentioned in the LMO produce fruit that is attractive to wildlife, and that many of the plants listed are low growing shrubs I would recommend Bermuda grass be planted. My professional opinion is that the County should not create additional edge effect that has the risk of increasing wildlife diversity. Habitat modification and creating a monotypic environment (using Bermuda grass in this case) will be the best long-term strategy of making the airfield less attractive to wildlife and reduce risks to aviation safety." An extensive environmental assessment (EA) was completed and found no legitimate water quality issues with the project. Beaufort County has completed water quality samplings and found no water quality concerns. FAA will not allow the planting of species that create a wildlife attractant for the benefit of unsubstantiated water quality concerns. This would have a negative effect on safety. As I said in my August 10, 2011 letter, FAA objects to the planting of anything other than grass within the RSA or the planting of anything that may attract wildlife in the obstruction removal areas.

Please let me know if you'd like to discuss the issue further and I look forward to the completion of this much needed project.

Sincerely,

Scott Seritt  
Manager

Cc: Paul Werts, South Carolina Aeronautics Commission  
Noel E. Myers, S.C. USDA-APHIS-Wildlife Services  
Files



1301 Gervais Street, Suite 1600  
Columbia, South Carolina 29201  
tel: 803 758-4500

March 12, 2012

Mr. John Sylvest  
Review and Compliance, SC SHPO  
8301 Parklane Road  
Columbia, SC 29223

**Subject: Section 106 Project Review Form for the Tree Obstruction Removal Project for Runway 21-Phase I at the Hilton Head Island Airport, Beaufort County, SC**

Dear Mr. Sylvest:

Please find attached a revised Section 106 Project Review Form and supporting documentation to update your office concerning this project and resume consultation in order to fulfill Section 106 of the National Historic Preservation Act for actions proposed by the Federal Aviation Administration (FAA). In order to comply with the Town of Hilton Head Island Land Management Ordinance (LMO) concerning tree removal, the FAA must plant back trees previously removed that comply with the LMO as well as FAA regulations regarding obstructions within airspace. Beaufort County, the owner of the Hilton Head Island Airport, contracted with CDM Smith to provide a tree mitigation plan that conforms to these regulations. In order to fulfill Section 106 consultation previously begun for this project, the tree mitigation plan is submitted for your review and recommendation.

### ***Project History***

Section 106 consultation for this project was begun in 2008 with the submittal of a Project Review Form and report entitled *Historic Resources Assessment for the Tree Obstruction Removal Project for Runway 21 at the Hilton Head Island Airport, Beaufort County, SC* (Bean, 2008). The project at the time consisted of tree trimming and tree removal within the graduating airspace contours of the approach slope (to the front of the runway) and the transition slope (to the sides of the runway) for Runway 21. The historic resources survey identified two historic resources and two archaeological sites. Fish Haul Archaeological Site/Mitchelville (38BU805) is listed on the National Register of Historic Places (NRHP) and Fort Howell (38BU79/1151), which was considered eligible for the NRHP at the time and is now listed on the NRHP. Site 5042 is the Cherry Hill Schoolhouse, considered eligible for the NRHP, and Site 5043, the St. James Baptist Church, considered not eligible for the NRHP but may be a Traditional Cultural Property. Your office concurred in a letter from Fran Knight dated July 31, 2008 and also offered guidance on procedures to follow for tree trimming and removal within





Mr. John Sylvest  
March 12, 2012

Page 2

historic areas. The letter defined historic areas as the properties of Fort Howell and Mitchelville with an extension of the NRHP boundaries of Mitchelville to include the historical extent, which for this project as it extends west of Dillon Road and south of Beach City Road. (See attached c.1865 map of Mitchelville) Because Town of Hilton Head requirements for planting back trees were still being negotiated then the letter expressed the opinion that planting in the historic areas would be considered an adverse effect and consultation with your office regarding this matter should continue.

In an email dated August 10, 2009, Paul Andres from Beaufort County continued consultation with your office by asking if replanting within the buffer areas along Beach City Road in fulfillment of Town requirements would be acceptable or not. Rebekah Dobrasko responded in an email on August 17, 2009 with the recommendation that a qualified archaeologist be present during replanting in the historic areas to assess potential artifacts and determine if further consultation or investigation is warranted.

The Town of Hilton Head revised their LMO in 2011 to include an Airport Overlay District with corresponding regulations pertaining to tree removal and plant back. The LMO requires the Airport to document all trees removed and submit a mitigation plan detailing what tree types and sizes will be planted back. Tree types are limited to native species and replacement tree sizes are determined by category of tree removed. For instance, Category I and II trees are broad-leaved evergreen or deciduous overstory hardwoods, broad-leaved evergreen understory, and endangered species. They must be replaced with tree types of the same category that are 10 feet tall and at least two inches in diameter. For airport property, tree plant back is required within designated buffers. Adjacent use buffers (along Dillon and Beach City roads) and wetland buffers on the airport property were established at 75 feet in width. Additional buffers include the areas between the wetland buffer and the roadway buffers and the areas between the wetland buffer and the 1:34 approach slope line. (Buffers are shown on the attached tree mitigation plan.)

### ***Current Phase of Project***

Beaufort County, which is receiving funding for the project from FAA, elected to split the project into several phases in order to comply with FAA airspace obstruction regulations for Runway 21. Phase I, the phase with which this Project Review Form is concerned, involves tree trimming, tree removal, and plant back. The tree trimming and removal was conducted between October 2011 and February 2012 in accordance with the "best practices" outlined in the July 31, 2008 letter from your office. The next task is to fulfill the Town of Hilton Head's LMO requirements with planting back trees that were removed. With LMO plant back regulations and FAA height restrictions in mind, a tree mitigation plan was prepared and submitted for



Mr. John Sylvest  
March 12, 2012

Page 3

Town approval. Having received approval the plans will now be submitted to the Town Of Hilton Head Island Design Review Board in order to receive the appropriate permits.

Future phases of the Tree Obstruction Removal Project will include tree trimming, tree removal, and plant back in the approach slope that is off airport property and also in the transition slope both on and off airport property. Consultation with your office for these phases will occur at the appropriate time.

#### ***Section 106 Recommendation***

The Area of Potential Effect (APE) for Phase I of this project is the proposed tree mitigation site on airport property which is the required buffer areas. Planting back trees within the required buffer areas on airport property will entail approximately 1,200 trees planted at an average depth of one-and one-half feet and an average width of three feet. Depth and widths depend on the size of tree being replanted. Although existing NRHP boundaries for the Mitchelville site do not include airport property, it was determined in the July 31, 2008 letter from your office that the historical extent of the site should be considered eligible for the NRHP. The historical extent includes airport property and specifically includes the buffer zones to be replanted. Replanting would constitute a ground disturbing activity and therefore, is an adverse effect to historic property.

Hilton Head Island Airport has an additional project, that of extending Runway 21, that is currently being studied in the field. Brockington and Associates is completing testing within an APE that is adjacent or may even overlap this project's APE. A report on the archaeological findings of the runway extension project should be forthcoming to your office via Beaufort County's consultant, Talbert and Bright.

#### ***Other Alternatives***

The LMO includes a Tree Replacement Fund that may be used as mitigation for when trees cannot be replaced on a property. It includes an allowance for the Airport to use this fund only if adequate buffers are also established. The required street buffer and wetland buffer areas are within the Mitchelville site. Therefore, planting back trees within the historic property would still be required if the Town's Tree Replacement Fund was used in order to reduce the number of trees required for plant back.

Planting trees elsewhere on airport property is not feasible because areas on the property that would support tree growth in conformity to approach and transition slope height restrictions are already densely planted and would not be able to sustain the necessary volume required.

#### ***Conclusion***



Mr. John Sylvest  
March 12, 2012

Page 4

Please advise if the recommendation from your office in the email dated August 17, 2009 to have a qualified archaeologist present during replanting is still valid in light of the updated project information and the forthcoming archaeological survey. If it is not, then please advise on ways to reduce, avoid, or mitigate the adverse effect of the tree mitigation plan.

I appreciate your review and comments on this project. I am available to answer your questions at 803-758-4756 or by email at [Beanjl@cdmsmith.com](mailto:Beanjl@cdmsmith.com).

Very truly yours,

*Original Signed*

Jana Bean  
Architectural Historian  
CDM Smith Inc.

cc: Lisa Favors, FAA  
Paul Andres, Beaufort County



South Carolina Department of Archives & History  
State Historic Preservation Office  
SECTION 106 PROJECT REVIEW FORM

Section 106 of the National Historic Preservation Act requires the South Carolina State Historic Preservation Office (SHPO) to review all projects that are federally funded, licensed, or assisted. The SHPO is only one consulting party under Section 106. Refer to 36 CFR 800.2 for information about other participants who are entitled to comment on the Section 106 process, including Native American tribes, interested parties, and the public. Consultation with the SHPO is NOT a substitution for consultation with appropriate Native American tribes.

**HELPFUL TIPS:**

- Please consult the FAQs located at the back of this document. If you cannot find the answer, then contact the Review and Compliance Coordinator at (803) 896-6169.
- If you need more space to answer the questions, please attach additional pages.
- When planning to submit a project for review, please remember that our office has 30 days to review federal projects and 45 days to review due diligence projects. Due to the volume of phone calls and e-mails we receive, we are unable answer inquiries regarding a project's status until 30 days has elapsed.
- Please **DO NOT** send project review forms by e-mail or fax; we recommend that you use certified mail, Fed-Ex, or UPS so that you can determine if your project has been delivered. Due to the volume of phone calls and e-mails we receive, we are unable to confirm if your project has been received.
- Please send this completed form along with supporting documentation (photographs, maps, plans, etc.) to: Review & Compliance Coordinator, SC Department of Archives & History, 8301 Parklane Road, Columbia, SC 29223. You must include all of the supporting documentation in your package. If we do not receive the requested documentation, we are unable to review your project until these materials are received.

**STATUS OF PROJECT** (check one)

- FEDERAL UNDERTAKING ANTICIPATED (You are applying for Federal assistance)  
 FEDERAL UNDERTAKING ESTABLISHED (You have received Federal assistance)  
 DUE DILIGENCE PROJECT (You are anticipating Federal assistance)  
 ADDITIONAL INFORMATION FOR PREVIOUS SUBMISSION (SHPO #: 08-FK0076)

**GENERAL INFORMATION**

1. Project Name: Tree Obstruction Removal Project for Runway 21 at Hilton Head Island Airport-Phase I  
2. City: Hilton Head 3. County: Beaufort
4. Federal Agency (providing funding, license, permit, or assistance): FAA  
Agency Contact Name: Lisa Favors, Environmental Planner  
Address: 1701 Columbia Ave., Campus Bldg., Suite 2-260 College Park, GA 30337  
Phone: 404-305-7145 E-mail: Lisa.Favors@faa.gov
5. Federal Agency Authorized Applicant: Beaufort County  
Applicant Contact Name: Paul Andres, Airports Director  
Address: 120 Beach City Road Hilton Head Island, SC 29925  
Phone: 843-252-2995 E-mail: pandres@bcgov.net
6. Consultant for the Applicant or Agency: CDM Smith  
Consultant Contact Name: Jana Bean  
Address: 1301 Gervais St, 16th Floor  
Phone: 803-758-4756 E-mail: Beanjl@cdmsmith.com

## INFORMATION REQUIRED FOR NEW PROJECTS

**NOTE:** If the project involves the rehabilitation of a building eligible for or listed in the National Register of Historic Places, **complete and submit the Historic Building Supplement** in addition to this form.

### DETERMINING THE PROJECT AREA OF POTENTIAL EFFECT (APE)

1. Describe **in detail** all aspects of the project. Include a detailed description of any proposed ground disturbance and any proposed building rehabilitation or repairs.

Planting of trees on airport property within the approach slope at the northeast end of Runway 21 which is closest to the intersection of Beach City Road and Dillon Road. Planting will require 1200 trees planted at an average depth of 1 1/2 feet with a rootball requiring on average 3 feet in width.

2. Will this project involve phases of construction? If so, please describe the work to be conducted under each phase:

Phase I concerns planting trees on airport property within approach slope. Phase II will concern trimming, removal and planting trees off of airport property within the approach slope. Future phases may involve the transitional slope both on and off airport property. This review form is only for Phase I.

3. How many acres are in the project area? For building rehabilitation projects, list the building's square footage.

4.3 acres

4. Describe the current land use within and immediately adjacent to the project area (e.g. farmland, forest, developed, etc.):

Current land use within airport property involves an airport runway, clear cut space, and buffer zone. Adjacent is a church, park, private property, and roadways.

5. Describe prior land use or previous modification within and immediately adjacent to the project area (e.g. grading, plowing, mining, draining, etc.):

Within airport property has been significant grading for runway construction. Adjacent modifications are minimal with the exception of paving roads.

6. Will the project involve (check all that apply):

- new construction
- rehabilitation of any structures
- relocation of any structures
- demolition of any structures

7. Provide a written description of the Area of Potential Effect (APE). The APE is the geographic area or areas within which a project/undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist.

The APE for Phase I is the tree mitigation site within the approach zone of Runway 21 on airport property. (See attached)

## IDENTIFICATION OF HISTORIC PROPERTIES

A historic property can be defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on the National Register.

1. **ATTACH** a copy of the pertinent ArchSite GIS map to this submission. Please see <http://archsite.cas.sc.edu/archsite> for information on registering for and using the GIS database.
2. **ATTACH** a copy of a map and clearly mark the project site. If your project involves ground disturbance, a USGS topographic map is **required**. You can obtain a topographic map at <http://www.mytopo.com> or <http://www.maptech.com>.
3. **ATTACH original** photographs of the project area. **Be sure to include any structures on site.**
4. **ATTACH** a site plan or sketch of the project area (existing and proposed).
5. List all historical societies, local governments, members of the public, Indian tribes, and any other sources consulted in addition to the SHPO to identify known and potential historic properties and note any comments received.

Members of the public were consulted for original Historic Resources Assessment (Bean, 2008).

6. Are there any structures in the project area (houses, barns, old garages, sheds, commercial buildings, churches, etc.)?  YES  NO \_\_\_\_\_ Approximate age?
7. Does the landowner know of any archaeological resources?  YES  NO  
If yes, please describe:

Previous archaeological surveys in adjacent areas have found artifacts relating to Mitchelville and Fort Howell.

8. Has a cultural resources assessment or a historic resources survey been conducted in the area?  
 YES  NO  DO NOT KNOW
9. Based on the information contained in questions 1 – 8, please check one:  
 **Historic Properties are present in the APE**  
 **Historic Properties are not present in the APE**

## ASSESSMENT OF PROJECT EFFECT

PLEASE CHOOSE ONE DETERMINATION:

- No historic properties affected
- No adverse effect on historic properties
- Adverse effect on historic properties
- Due Diligence Project (Does not apply)

Please explain the basis for your determination:

The undertaking will require ground disturbance within the historic boundaries of Mitchelville.

## SECTION 106 FREQUENTLY ASKED QUESTIONS (FAQs)

### 1. What is Section 106 of the National Historic Preservation Act (NHPA)?

Section 106 of NHPA requires each Federal agency to identify and assess the effects of its actions on historic properties. The responsible Federal agency must consult with appropriate State and local officials, Indian tribes, applicants for Federal assistance, and members of the public and consider their views and concerns about historic preservation issues when making final project decisions. The regulations that implement Section 106 are 36 CFR 800, and can be found at: <http://www.achp.gov/regs-rev04.pdf>.

### 2. What is the Area of Potential Effect (APE)?

As defined in 36 CFR 800.16(d), the APE is the geographic area or areas within which a project/undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist. The APE is influenced by the scale and nature of the project/undertaking and may be different for different kinds of projects (undertakings). **Every project/undertaking has an APE, which must be defined.**

### 3. What are historic properties?

Historic properties are those properties that are eligible for or listed in the National Register of Historic Places. In order to be eligible, a property must be at least 50 years old and meet one of the following criteria: associated with events that have made a significant contribution to the broad patterns of history; associated with the lives of significant persons in our past; embodies distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or that have yielded, or may be likely to yield, information important in prehistory or history.

### 4. Where can I find information on historic properties?

Please visit ArchSite at <http://archsite.cas.sc.edu/archsite>. Thanks to a grant from the South Carolina Department of Transportation, the State Historic Preservation Office (SHPO) was able to partner with the South Carolina Institute of Archaeology and Anthropology (SCIAA) to develop ArchSite. This online service is a GIS based map that contains all of the *known* historic properties in the State of South Carolina. Please note: even if ArchSite does not list any historic properties in your APE, that does not mean that there are not any historic properties present. Be particularly sure to notify us of any existing structures on the site, regardless of age. You should consult hard copy records at SHPO, SCIAA, or your local historical society.

### 5. What is an Adverse Effect?

Under Section 106, a project adversely affects a historic property if it alters the characteristics that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property. "Integrity" is the ability of a property to convey its significance, based on its location, design, setting, materials, workmanship, feeling, and association. Adverse effects can be direct or indirect. They include reasonably foreseeable impacts that may occur later in time, be farther removed in distance, or be cumulative. Examples of adverse effects include:

- physical destruction or damage;
- alteration inconsistent with the [Secretary of the Interior's Standards for the Treatment of Historic Properties](#);
- relocation of the property;
- change in the character of the property's use or setting;
- introduction of incompatible visual, atmospheric, or audible elements;
- neglect and deterioration.

### 6. What happens if construction is already under way when I receive federal funding or permits?

Under Section 110(k) of the National Historic Preservation Act, federal agencies are permitted to withhold grants, licenses, approvals, or other assistance to applicants who intentionally significantly and adversely affect historic properties. This provision, known as the "anticipatory demolition" section, is designed to prevent applicants from destroying historic properties prior to seeking federal assistance in an effort to avoid the Section 106 review process. If you have begun work, please stop and notify the Federal agency.

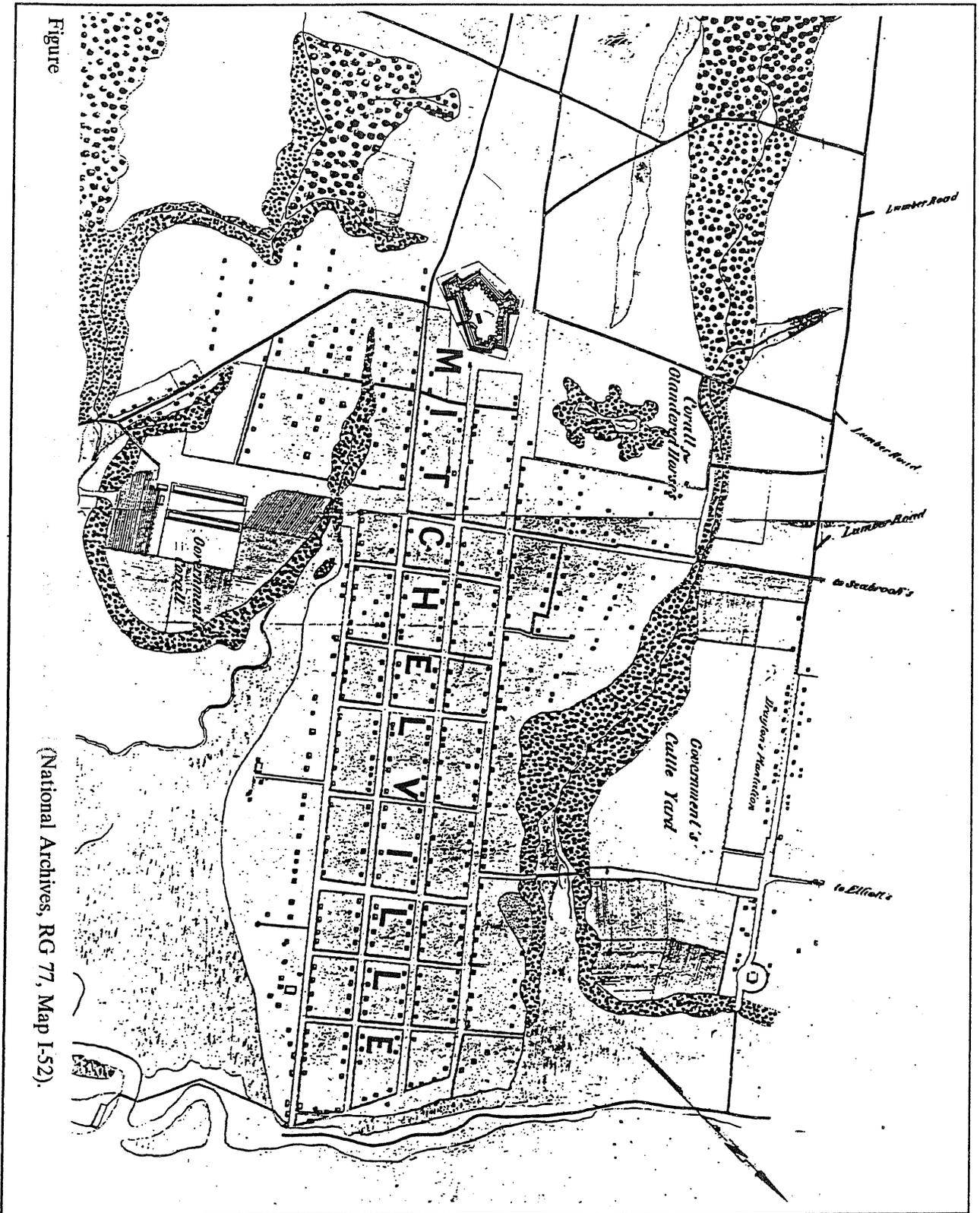
### 7. Should I consult with the Tribal Historic Preservation Officer (THPO)?

Yes. Consulting with the SHPO is not the same as consulting with the Tribes. You must consult with the Tribes as a part of the Section 106 process. For more information, please visit: <http://www.achp.gov/regs-tribes.html>.

### 8. Where can I find more information?

Please visit our website for more FAQs and information on the Section 106 process: <http://shpo.sc.gov/revcomp>





Figure

(National Archives, RG 77, Map I-52).

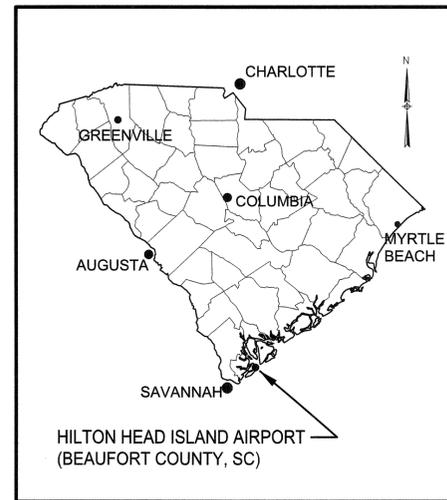


CONSTRUCTION PLANS  
FOR  
**ON-AIRPORT TREE MITIGATION PROJECT**  
**RUNWAY 21 APPROACH**

AT  
**HILTON HEAD ISLAND AIRPORT (HXD)**  
**HILTON HEAD ISLAND, SOUTH CAROLINA**

**FAA A.I.P. NO. 3-45-0030-029-2010**

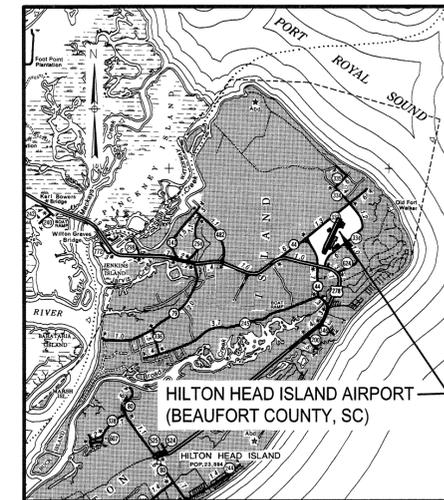
CDM Smith Project No. 86216.PLTBK



LOCATION MAP



PREPARED FOR  
**BEAUFORT COUNTY,**  
**SOUTH CAROLINA**



VICINITY MAP

DRAWING INDEX	
SHEET	TITLE
1	COVER SHEET
2	SAFETY PLAN
3	SURVEY CONTROL PLAN
4	STAKING AND FENCING PLAN AND GENERAL NOTES
5a, 5b	TREE MITIGATION PLANS
7	TREE PLANTING DETAILS AND NOTES
8	FENCING DETAILS AND NOTES

PLANS PREPARED BY



1301 GERVAIS STREET COLUMBIA, SC 29201

Approximate Location of Project	
LATITUDE	32° 13' 58" N
LONGITUDE	80° 41' 32" W

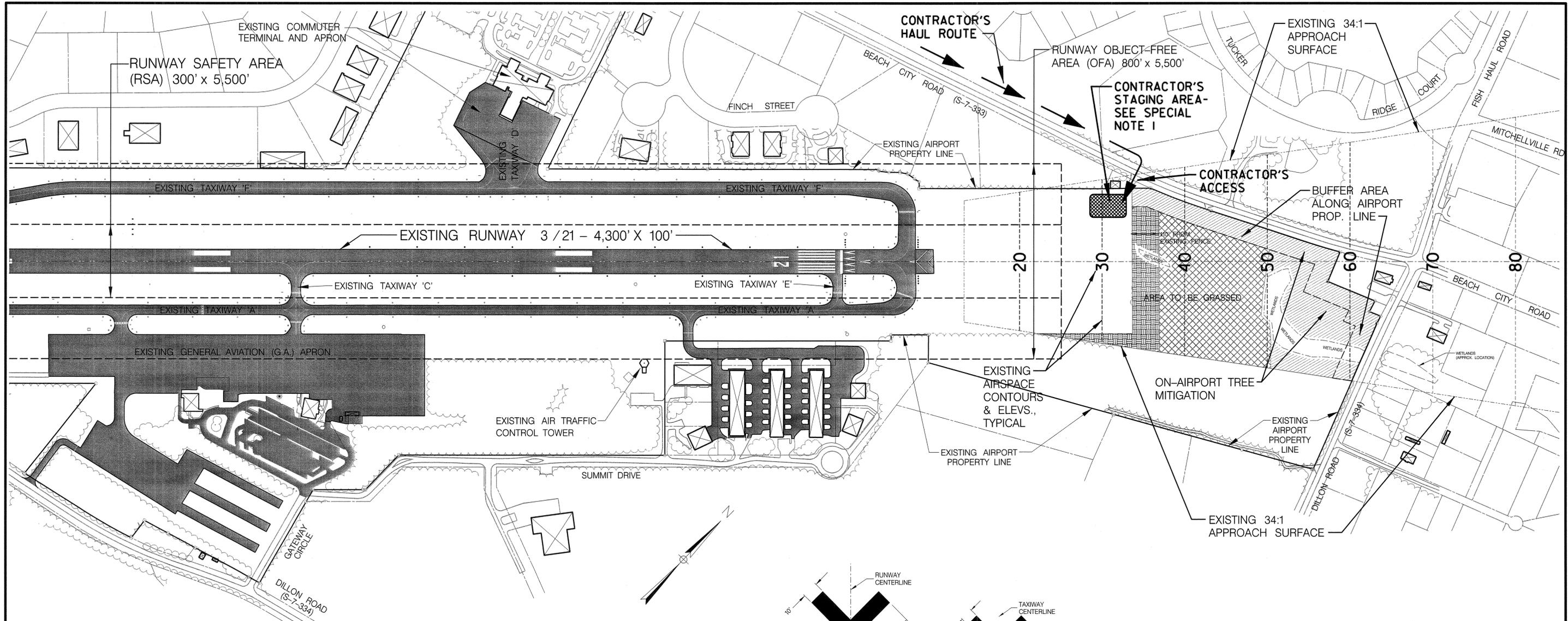
NPDES Disturbed	
AREA =	0.00 ACRES

These plans issued for:	Date
<input type="checkbox"/> Design review 100 %	_____
<input type="checkbox"/> Permitting	_____
<input type="checkbox"/> Bidding	_____
<input type="checkbox"/> Construction	_____

3 DAYS BEFORE DIGGING IN  
SOUTH CAROLINA  
CALL 1-888-721-7877  
PALMETTO UTILITY LOCATION SERVICE



March 2012



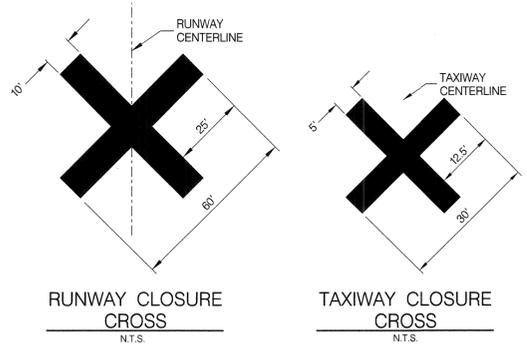
**SAFETY NOTES:**

1. IN ORDER THAT "NOTICES TO AIRMEN" CAN BE APPROPRIATELY PUBLISHED, THE CONTRACTOR MUST NOTIFY THE ENGINEER AND AIRPORT MANAGER NOT LESS THAN 3 DAYS PRIOR TO COMMENCING THE CONSTRUCTION, PRIOR TO THE PERFORMING OF WORK IN AIRPORT OPERATIONS AREA, AND PRIOR TO THE CLOSING OF A RUNWAY OR TAXIWAY OR THE OPENING OF A RUNWAY OR TAXIWAY.
2. THE CONTRACTOR SHALL BECOME KNOWLEDGEABLE OF THE SAFETY PROVISIONS CONTAINED IN FAA ADVISORY CIRCULAR (A.C.) 1506370-2E - "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION", AND SHALL INCORPORATE THESE PROVISIONS INTO THEIR CONSTRUCTION PROCEDURES. A COPY IS PROVIDED IN THE PROJECT MANUAL.
3. ALL ACTIVE AIRPORT OPERATIONAL SAFETY AREAS WHICH ARE ADJACENT TO A CONSTRUCTION WORK AREA SHALL BE SEPARATED BY BARRICADES. NO CONSTRUCTION TRAFFIC SHALL CROSS AIRPORT OPERATIONAL SAFETY AREAS EXCEPT AS APPROVED BY THE ENGINEER AND AIRPORT OWNER. NO BARRICADES WHICH ARE ADJACENT TO AIRPORT OPERATIONAL SAFETY AREAS MAY EXCEED 36 INCHES IN HEIGHT.
4. ALL CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE PROJECT AREA THROUGH THE PROJECT ACCESS ROUTES AND THESE SHALL BE COORDINATED WITH THE ENGINEER AND AIRPORT OWNER.
5. ALL BARRICADES, ETC. SHALL BE FURNISHED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. NO SEPARATE MEASUREMENT AND PAYMENT WILL BE MADE FOR THESE ITEMS. ALL COSTS ASSOCIATED WITH THESE ITEMS MUST BE INCLUDED IN THE CONTRACT BID PRICE FOR MOBILIZATION.
6. ALL CONSTRUCTION STAKEOUT IS TO BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH ARTICLE 50-06. THE ENGINEER SHALL FURNISH INITIAL SURVEY INFORMATION FOR HORIZONTAL CONTROL AND BENCHMARKS FOR VERTICAL CONTROL.
7. THE CONTRACTOR SHALL PROVIDE SECURITY WITHIN THE CONSTRUCTION AREA AND SHALL KEEP ALL UNAUTHORIZED PERSONNEL OUT. THE PROJECT SUPERINTENDENT SHALL BE REQUIRED TO OBTAIN A SECURITY BADGE FROM THE AIRPORT OWNER AND SHALL ACT AS ESCORT FOR ALL CONTRACTOR AND SUBCONTRACTOR PERSONNEL.
8. THE CONTRACTOR SHALL KEEP THE ACTIVE RUNWAYS AND TAXIWAYS CLEAN AND FREE FROM DEBRIS AND OBSTRUCTIONS DURING CONSTRUCTION OPERATIONS AND SHALL NOT PARK EQUIPMENT WITHIN 250 FEET OF A RUNWAY OR 100 FEET OF A TAXIWAY OR APRON AREA.

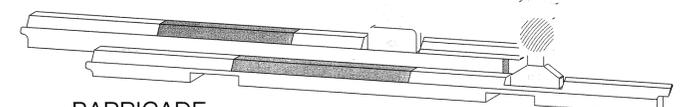
9. HAUL ROADS AND CONTRACTOR'S GRAVEL ACCESS ROAD SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION.
10. ALL CONTRACTOR STAGING AREAS AND HAUL ROADS THAT ARE DISTURBED BY THE CONTRACTOR'S WORK SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. ANY DAMAGE TO EXISTING PAVEMENT RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. APPROVAL OF RESTORED OR REPAIRED AREAS SHALL BE MADE BY THE ENGINEER. THERE WILL BE NO SEPARATE PAYMENT FOR THIS WORK.
11. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES ON THE SITE. THEY SHALL PROTECT ALL UTILITIES WHICH ARE TO REMAIN. ALL DAMAGE TO UTILITIES RESULTING DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
12. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT ALL EXISTING CABLE LOCATIONS HAVE BEEN FLAGGED BY FAA AIRWAYS FACILITY.

**LEGEND:**

- EXISTING AIRFIELD PAVEMENT
- PROPOSED TREE MITIGATION THIS PROJECT
- PROPOSED GRASSING - ALTERNATE METHODS
- PROPOSED GRASSING - BERMUDA



- NOTES:**
1. RUNWAY CLOSURE CROSSES SHALL BE MOBILE, LIGHTED STRUCTURES, AND SHALL BE PLACED AS DIRECTED BY THE OWNER /ENGINEER, AND SHALL BE ILLUMINATED FROM THE TIME OF RUNWAY CLOSURE TO TIME OF RUNWAY REOPENING, MINIMUM.
  2. TAXIWAY CLOSURE CROSSES MAY BE CONSTRUCTED OF FABRIC, PLYWOOD, OR OTHER SUITABLE MATERIAL AND SHALL BE PAINTED AVIATION YELLOW.
  3. PLACE RUNWAY CLOSURE CROSS OVER RUNWAY NUMERALS OR IMMEDIATELY OFF OF RUNWAY END AND SECURE IN PLACE TO PREVENT DISPLACEMENT BY WIND OR AIRCRAFT.
  4. PLACE TAXIWAY CLOSURE CROSSES OVER ENDS OF TAXIWAY(S) OR AS DIRECTED BY OWNER /ENGINEER AND SECURE IN PLACE TO PREVENT DISPLACEMENT BY WIND OR AIRCRAFT.
  5. INSTALLATION AND REMOVAL OF THESE ITEMS SHALL BE AS DIRECTED BY THE OWNER /ENGINEER. COST FOR INSTALLATION, MAINTENANCE AND REMOVAL OF THESE ITEMS SHALL BE INCIDENTAL TO BID ITEM FOR MOBILIZATION.



BARRICADE CHARACTERISTICS		BARRICADE NOTES	
HEIGHT	6" (36" MAX.)	1.	USED ON ALL AIRPORT MOVEMENT AREAS
WIDTH	6"	2.	HIGH VISIBILITY
LENGTH	36" MIN./VARIABLE MAX. (USUALLY 6 FEET)	3.	FRANGIBLE
WEIGHT EMPTY	11 lbs.	4.	EACH BARRICADE IS MARKED WITH DIAGONAL ALTERNATING ORANGE AND WHITE HIGH REFLECTIVE GRADE TAPE WITH ONE 3-WAY APPROVED RED DOT (SOLAR / BATTERY) LIGHT.
WEIGHT FULL	100 lbs. (S) 58 lbs. (W)	5.	CAN BE FILLED WITH WATER OR SAND
GALLON CAPACITY	5 GALLONS	6.	DESIGNED TO FAA AC 150 / 5370-2E SPECIFICATIONS AND PERFORMANCE STANDARDS
TYPE OF FRAME	POLYTHENE PLASTIC		

**LOW PROFILE BARRICADE DETAIL**

N.T.S.

**SPECIAL NOTES :**

1. FINAL LOCATION OF CONTRACTOR'S STAGING AREA AND AREA FOR TEMPORARY STOCKPILING OF MATERIAL SHALL BE COORDINATED BY THE CONTRACTOR WITH THE OWNER AND ENGINEER PRIOR TO BEGINNING OF CONSTRUCTION.
2. SEE ADDITIONAL NOTES AND REQUIREMENTS ON SHEET 4.

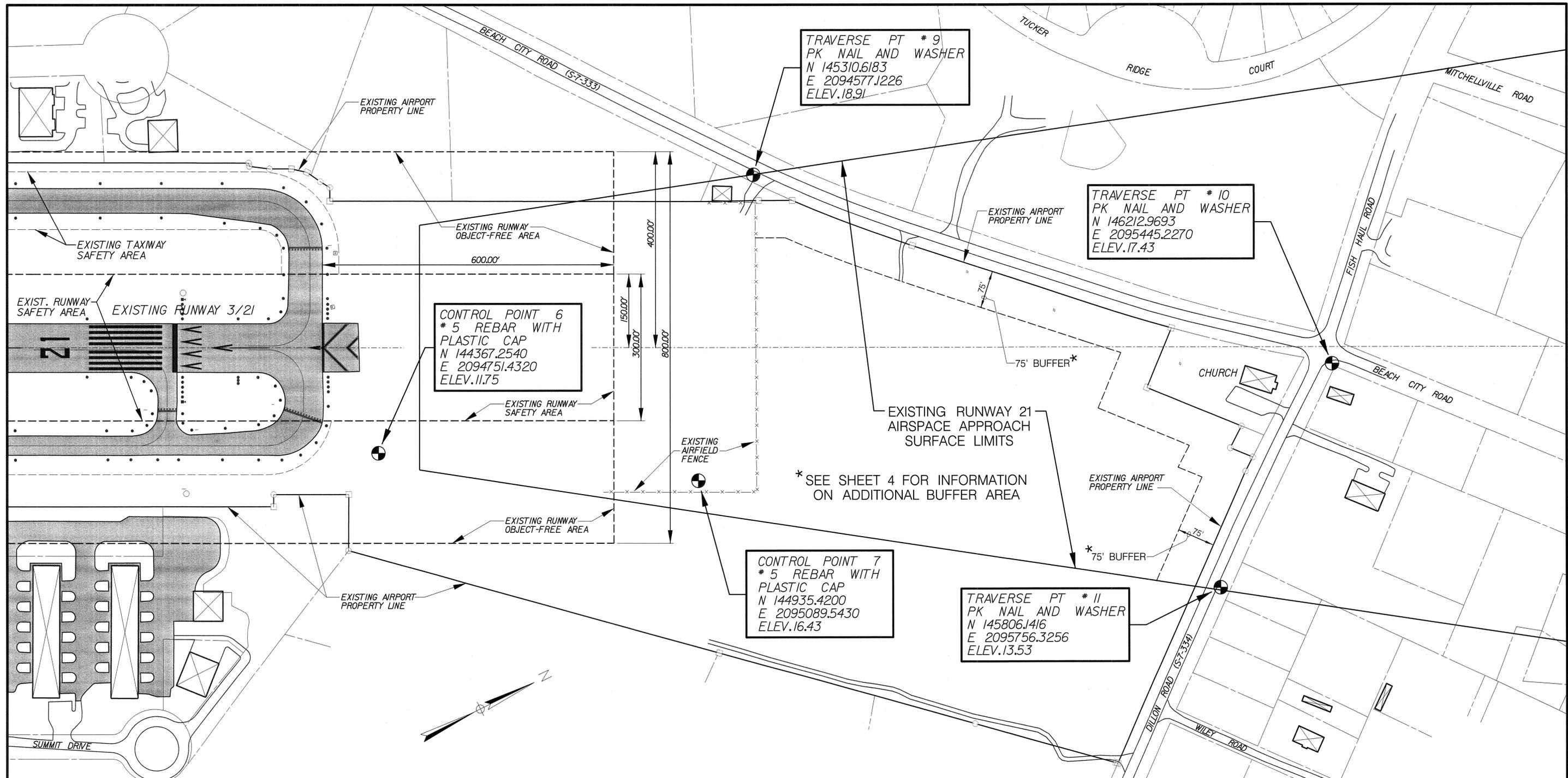
REVISIONS:		DESCRIPTION OF REVISION
REV. NO.	DATE	

DESIGNED BY	JES	DATE	
DRAWN BY	JES	DATE	
CHECKED BY	CFS	DATE	03-19-12



PLANS PREPARED FOR  
**BEAUFORT COUNTY**  
 HILTON HEAD ISLAND AIRPORT (HXD)  
 HILTON HEAD ISLAND, SC

PROJECT NO. (CLIENT)	PROJECT NO. (WSA)	FAA A.I.P. 3-45-0030-029-2010	NO. 2 OF 8
	86216.PLTBK		

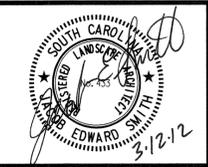


**NOTES:**

1. STATE PLANE COORDINATES FOR MONUMENT '49J G' WERE HELD TO. COORDINATES FOR ALL OTHER CONTROL POINTS SHOWN HEREON, INCLUDING MONUMENT '49J F', WERE SURVEYED AND COMPUTED USING HORIZONTAL GROUND DISTANCE VALUES.
2. VERTICAL INFORMATION SHOWN ON THE PLANS IS BASED ON NAVD 1929 DATUM. THE CONTRACTOR SHALL VERIFY ALL CONTROL POINTS AND THEIR DATA IN THE FIELD PRIOR TO UTILIZATION, FOR VERIFICATION THAT THESE POINTS HAVE NOT BEEN DISTURBED.

REVISIONS:		
REV. NO.	DATE	DESCRIPTION OF REVISION

DESIGNED BY	JES	DATE
DRAWN BY	JES	DATE
CHECKED BY	CFS	DATE 03-19-12



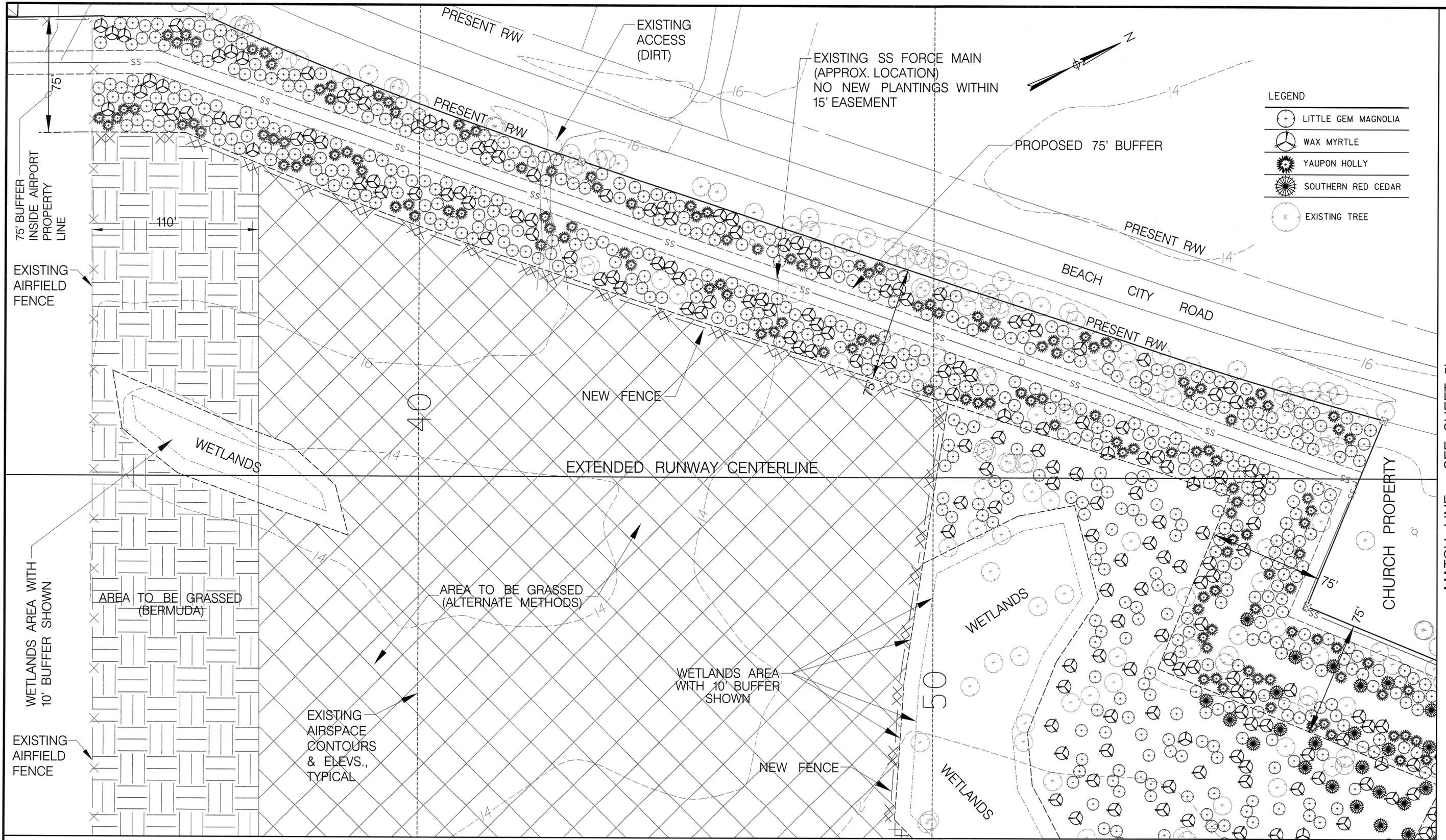
PLANS PREPARED FOR  
 BEAUFORT COUNTY  
 HILTON HEAD ISLAND AIRPORT (HXD)  
 HILTON HEAD ISLAND, SC

PROJECT NO. (CLIENT)  
 86216.PLTBK

SURVEY CONTROL PLAN

FAA A.I.P. 3-45-0030-029-2010 NO. 3 OF 8





- LEGEND
- LITTLE GEM MAGNOLIA
  - WAX MYRTLE
  - YAUPON HOLLY
  - SOUTHERN RED CEDAR
  - EXISTING TREE

MATCH LINE - SEE SHEET 5b

MATCH LINE - SEE SHEET 5b

REVISIONS:		
REV. NO.	DATE	DESCRIPTION OF REVISION

DESIGNED BY	JES	DATE	
DRAWN BY	JES	DATE	
CHECKED BY	CFS	DATE	03-19-12



PLANS PREPARED FOR  
 BEAUFORT COUNTY  
 HILTON HEAD ISLAND AIRPORT (HXD)  
 HILTON HEAD ISLAND, SC

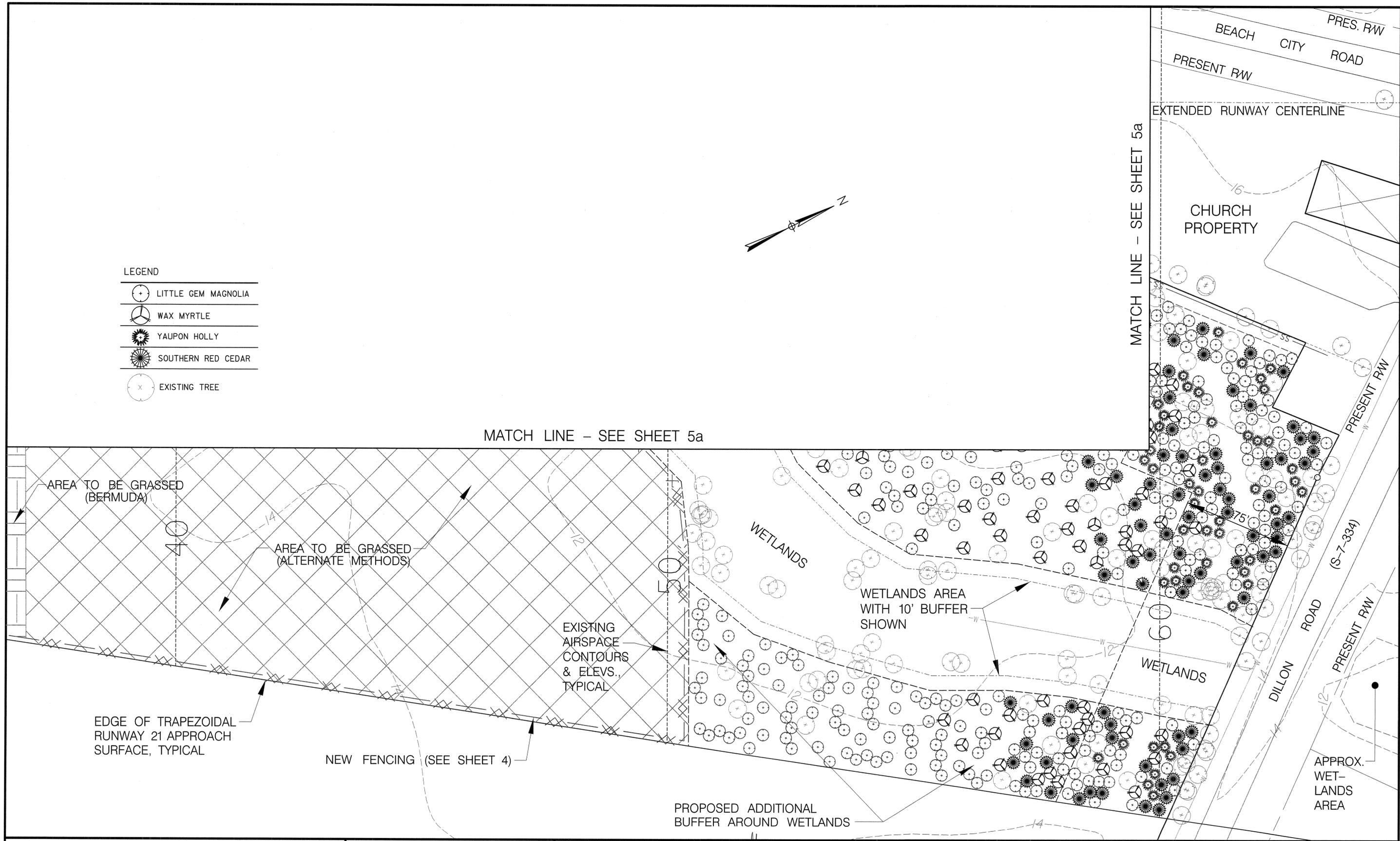
PROJECT NO. (CLIENT) \_\_\_\_\_ PROJECT NO. (WSA) 86216.PLTBK

TREE MITIGATION PLAN (1 of 2)

FAA A.I.P. 3-45-0030-029-2010 NO. 5a OF 8

\*\*\*\*\*USERNAME\*\*\*\*\*

- LEGEND
-  LITTLE GEM MAGNOLIA
  -  WAX MYRTLE
  -  YAUPON HOLLY
  -  SOUTHERN RED CEDAR
  -  EXISTING TREE



REVISIONS:		
REV. NO.	DATE	DESCRIPTION OF REVISION

DESIGNED BY JES		DATE
DRAWN BY JES		DATE
CHECKED BY CFS		DATE 03-19-12



PLANS PREPARED FOR  
 BEAUFORT COUNTY  
 HILTON HEAD ISLAND AIRPORT (HXD)  
 HILTON HEAD ISLAND, SC

PROJECT NO. (CLIENT)  
 PROJECT NO. (WSA)  
 86216.PLTBK

TREE MITIGATION PLAN (2 of 2)

FAA A.I.P. 3-45-0030-029-2010 NO. 5b OF 8

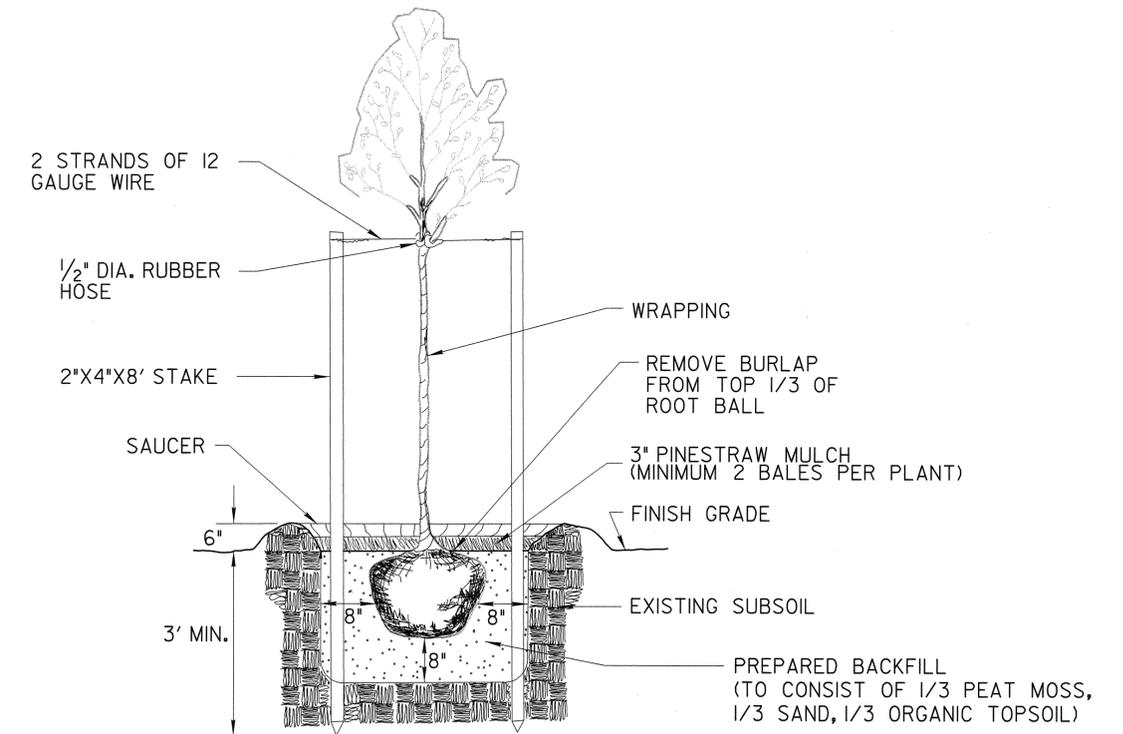
PLANT LIST

LEGEND	KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	
	LG	765	MAGNOLIA GRANDIF. 'LITTLE GEM'	LITTLE GEM MAGNOLIA	10' (2" DBH)	8' ON CENTER (min.)	CATEGORY I
	WM	231	MYRICA CERIFERA	WAX MYRTLE	10' (2" DBH)	8' ON CENTER (min.)	CATEGORY II
	YH	198	ILEX VOMITORIA	YAUPON HOLLY	10' (2" DBH)	8' ON CENTER (min.)	CATEGORY II
	RC	100	JUNIPERUS SILICICOLA	SOUTHERN RED CEDAR	10' (1" DBH)	8' ON CENTER (min.)	CATEGORY III
		5.8 ACRE*	GRASSING - ALTERNATE	SEE PLAN SHTS. 5A, 5B			
		1.7 ACRE	GRASSING - BERMUDA	SEE PLAN SHTS. 5A, 5B			

\* NOTE : THIS AREA TO BE GRASSED SHALL BE BID AS 2 ALTERNATES:

ALTERNATE 1 - GRASS AREA USING SEED MIXTURE AS SPECIFIED IN SECTION T-90I.

ALTERNATE 2 - PLANT AREA WITH NATIVE GRASSES. (EQUAL MIXTURE OF SAND CORDGRASS, PINK MUHLY GRASS, AND BROOMSEDGE. 4" POTS, 10' ON CENTER)



TREE PLANTING DETAIL

(WITH STAKING AND GUYING)  
NO SCALE

Hilton Head Island Airport (HXD)  
On-Airport Tree Obstruction Removal Runway 21  
Preliminary Mitigation Calculations  
February 20, 2012

Description	Unit	CAT I	CAT II	CAT III	CAT IV	Total
Pre-Removal (Existing Trees Prior to Removals)(CI) <sup>(1)</sup>	CI	9635	5139	1039	12	15825
Post-Removal (Remaining Trees after Removals)(CI) <sup>(2)</sup>	CI	1986	849	38	12	1766
Difference in Pre- and Post-Removal	CI	7649	4290	1001	0	12940
Replacement Trees Required (1 per 10" CI Removed) <sup>(2)</sup>	Each	765	429	100	0	1294

NOTES:

- (1) Caliper Inches based upon design survey
- (2) Caliper Inches based upon arborist and survey records.
- (3) CAT I and CAT II Replacement Plants are 2" DBH; CAT III are 1" DBH

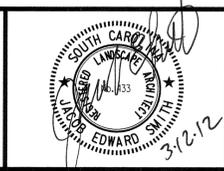
NOTES:

- 1) CONTRACTOR TO GUARANTEE ALL PLANT MATERIAL (TREES, SHRUBS, AND LAWNS), TO SURVIVE FOR 1 YEAR FROM TIME OF ACCEPTANCE BY OWNER.
- 2) ALL PLANT MATERIAL TO CONFORM TO AMERICAN STANDARDS FOR NURSERY STOCK, LATEST EDITION, AND TO BE APPROVED BY OWNER AND ENGINEER'S REPRESENTATIVE BEFORE PLANTING.
- 3) CONTRACTOR IS RESPONSIBLE FOR LAYOUT OF ALL PLANT MATERIAL IN ACCORDANCE WITH PLANS. MINOR CHANGES OR SUBSTITUTIONS MAY BE MADE IN THE FIELD WITH PRIOR APPROVAL OF OWNER AND ENGINEER'S REP.
- 4) CONTRACTOR IS RESPONSIBLE FOR QUANTITIES OF ALL PLANTS SHOWN ON PLAN. PLANT LIST SHOWN IS FOR REFERENCE ONLY.

\*\*\*\*\*DONSPEC\*\*\*\*\*  
\*\*\*\*\*SYTIME\*\*\*\*\*  
\*\*\*\*\*NAME\*\*\*\*\*

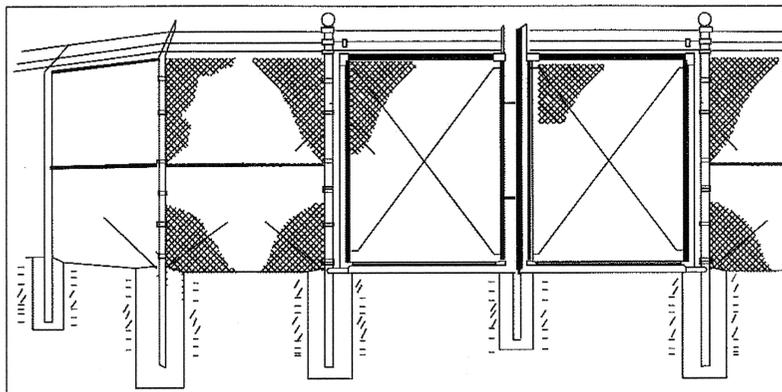
REV. NO.	DATE	DESCRIPTION OF REVISION

DESIGNED BY	HAP	DATE	05-11-2010
DRAWN BY	HAP	DATE	05-17-2010
CHECKED BY	JES/CFS	DATE	05-20-2010

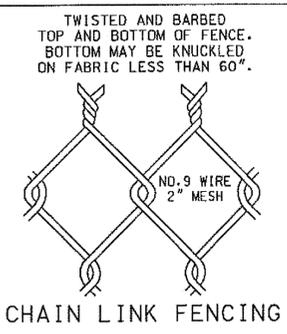


PLANS PREPARED FOR	
BEAUFORT COUNTY	
HILTON HEAD ISLAND AIRPORT (HXD)	
HILTON HEAD ISLAND, SC	
PROJECT NO. (CLIENT)	PROJECT NO. (WSA)
	86216.PLTBK

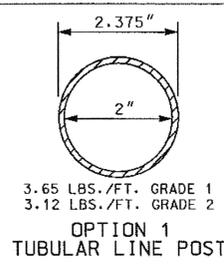
TREE PLANTING DETAILS AND NOTES	
FAA A.I.P. 3-45-0030-029-2010	NO. 7 OF 8



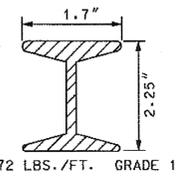
GATE CORNER AND BRACE POST CONSTRUCTION



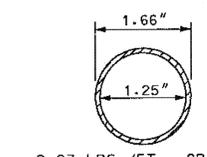
CHAIN LINK FENCING



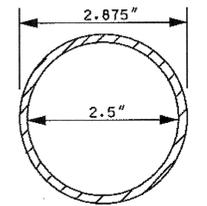
OPTION 1 TUBULAR LINE POST



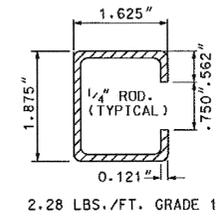
OPTION 2 SECTION "H" COLUMN LINE POST



TUBULAR BRACE BAR

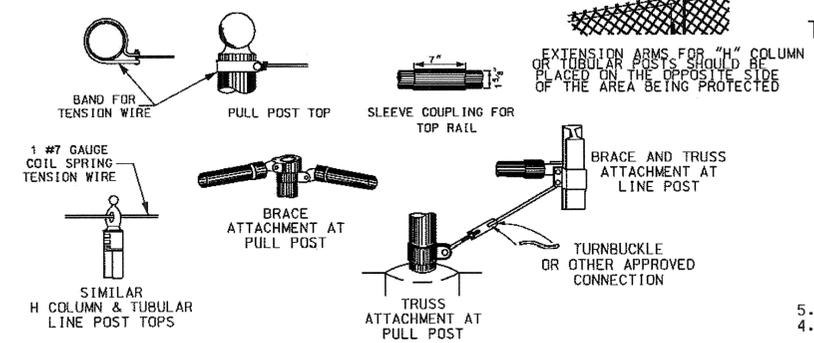


TUBULAR END CORNER OR PULL POST



OPTION 3 SECTION "C" COLUMN LINE POST

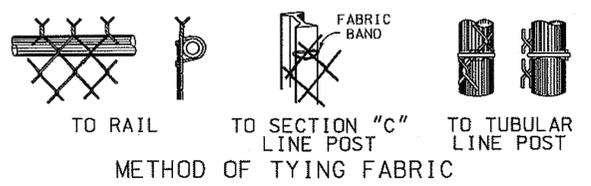
- NOTES:
- AS INDICATED HEREON, ALL CHAIN LINK FENCE METAL COMPONENTS SHALL BE IN ACCORDANCE WITH AASHTO M 181. CONCRETE FOR POST HOLES SHALL BE PORTLAND CEMENT CONCRETE. BARBED WIRE SHALL BE IN ACCORDANCE WITH SECTION 806 OF THE STANDARD SPECIFICATIONS.
  - CHAIN LINK FABRIC SHALL BE NO. 9 GAUGE STEEL WIRE IN ACCORDANCE WITH AASHTO M 181 TYPE 1, CLASS D, SECTION 14, OR TYPE 2, SECTION 14.
  - ALL END, CORNER POSTS AND BRACE BARS SHALL BE TUBULAR PIPE IN ACCORDANCE WITH AASHTO M 181 TYPE 1, GRADE 1, SECTION 32 OR TYPE 2, GRADE 2, SECTION 32 WITH DIMENSIONS AS SHOWN ON THE PLANS.
  - LINE POSTS SHALL BE TUBULAR POSTS, H SECTION POSTS, OR C SECTION POSTS SHOWN IN LINE POSTS OPTIONS NO. 1, NO. 2 OR NO. 3 BELOW. ONCE AN OPTION IS SELECTED IT SHALL BE USED THROUGHOUT THE ENTIRE CONTRACT.
- OPTION 1 - LINE POSTS MAY BE TUBULAR POSTS WITH 2" INSIDE DIAMETER AND 2.375" OUTSIDE DIAMETER WITH WEIGHT PER FOOT AS SHOWN HEREON. THE POSTS SHALL BE IN ACCORDANCE WITH AASHTO M 181 TYPE 1, GRADE 1, SECTION 32 OR TYPE 2, GRADE 2, SECTION 32. CONCRETE FOOTINGS ARE REQUIRED.
- OPTION 2 - LINE POSTS MAY BE H SECTION POSTS 2.25"x 1.7" WITH WEIGHT PER FOOT AS SHOWN HEREON. THE POSTS SHALL BE IN ACCORDANCE WITH AASHTO M 181 TYPE 1, GRADE 1, SECTION 32. CONCRETE FOOTINGS ARE REQUIRED.
- OPTION 3 - LINE POSTS MAY BE C SECTION POSTS 1.875"x 1.625" WITH MINIMUM WALL THICKNESS 0.121" WITH WEIGHT PER FOOT AS SHOWN HEREON. THE POSTS SHALL BE IN ACCORDANCE WITH AASHTO M 181 TYPE 1, GRADE 1, SECTION 32 WITH STEEL IN ACCORDANCE WITH ASTM A 570, GRADE 45. ALL POSTS SHALL BE PRE-CUT AND THEN GALVANIZED AFTER THE CUT. STANDARD LINE POSTS SHALL BE DRIVEN TO A DEPTH OF 2'-9" WITH THE CONCRETE FOOTING OMITTED.
- TUBULAR POST SHALL MEET SPECIFICATIONS AS SHOWN IN SECTION 806 OF THE STANDARD SPECIFICATIONS.
  - MISCELLANEOUS FITTING, BOLTS, AND OTHER HARDWARE SHALL BE STEEL OR CAST IRON WITH ZINC COATING IN ACCORDANCE WITH SECTION 29 OF AASHTO M 181. THE CONTRACTOR AT HIS OPTION MAY FURNISH EQUIVALENT ALUMINUM ALLOY HARDWARE FOR THESE ITEMS.
  - TENSION WIRE SHALL BE THE SIZE AND COATING AS DESCRIBED IN SECTION 23 AND 25 RESPECTIVELY OF AASHTO M 181. DIMENSION, WEIGHT AND PERMISSIBLE VARIATIONS ON METAL COMPONENTS AND COATINGS SHALL BE IN ACCORDANCE WITH SECTION 31 OF AASHTO M 181 WHEN NOT STATED HEREON. BRACE TENSION AND STRETCHER BARS, COMPLETE WITH ALL ASSEMBLIES ARE REQUIRED ON ALL END, CORNER OR PULL POSTS. PREPARATION FOR PLACING THE FENCE SHALL BE IN ACCORDANCE WITH SEC. 806 OF THE STANDARD SPECIFICATIONS. DIMENSIONS AND SIZE SHALL BE AS SHOWN HEREON. THE COST OF PERFORMING ANY GRADING OPERATION WHICH MAY BE NECESSARY TO INSTALL THE FENCE ON A UNIFORM GRADE WILL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT OF FENCE AND NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK.
  - ADDITIONAL POSTS, BARBED WIRE AND HARDWARE NEEDED TO COMPLETE INSTALLATION AS SHOWN HEREON WILL BE INCLUDED IN THE UNIT PRICE OF CHAIN LINK FENCE.
  - THE PAY ITEMS SHALL BE: SECURITY CHAIN LINK FENCE (SIZE) \_\_\_\_\_ L.F.



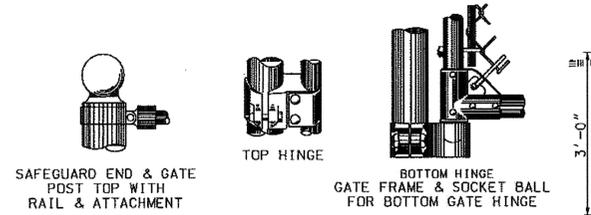
ATTACHMENTS AT LINE AND PULL POST



STRETCH DETAILS

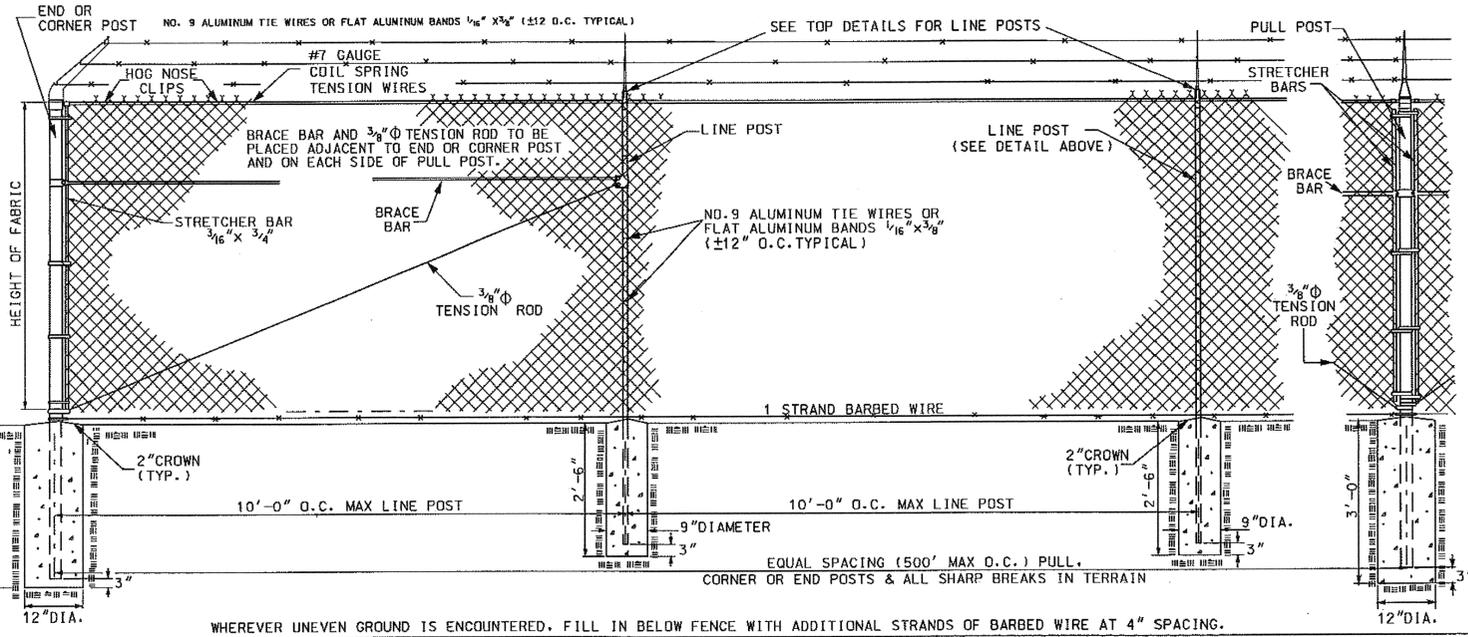


METHOD OF TYING FABRIC



GATE HINGES & TOP ATTACHMENT

THIS DRAWING IS NOT TO SCALE



WHEREVER UNEVEN GROUND IS ENCOUNTERED, FILL IN BELOW FENCE WITH ADDITIONAL STRANDS OF BARBED WIRE AT 4" SPACING.

REFERENCES

NATIONAL DOCUMENTS  
AASHTO M181, ASTM A570

SCDOT DOCUMENTS

RELATED DRAWINGS & KEYWORDS

PRECONSTRUCTION SUPPORT ENGINEER

**SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER**  
NO. 8858  
SYLVESTER EARGLE

*S. Blaylock*  
SIGNATURE

MARCH 3, 2008  
DATE

6			
5			
4			
3			
2			
1			
0	3/2008	DSO	GENERAL REVISIONS
#	DATE	CHK	DESCRIPTION

**SCDOT**  
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DESIGN STANDARDS OFFICE  
955 PARK STREET  
ROOM 405  
COLUMBIA, SC 29201

STANDARD DRAWING

FENCE (SECURITY CHAIN LINK)

806-110-00  
EFFECTIVE LETTING DATE | MAY 2008

REVISIONS:

REV. NO.	DATE	DESCRIPTION OF REVISION

DESIGNED BY	JES	DATE	
DRAWN BY	JES	DATE	
CHECKED BY	CFS	DATE	03-19-12



PLANS PREPARED FOR  
BEAUFORT COUNTY  
HILTON HEAD ISLAND AIRPORT (HXD)  
HILTON HEAD ISLAND, SC

PROJECT NO. (CLIENT)      PROJECT NO. (WSA)  
86216.PLTK      86216.PLTK

FENCING DETAILS AND NOTES  
(SCDOT STANDARD DRAWING)

FAA A.I.P. 3-45-0030-029-2010      No. 8 OF 8

## 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 NAME: Airport Tree Mitigation

DRB#: DR120014

DATE: March 27, 2012

RECOMMENDATION:    Approval             Approval with Conditions             Denial

Application meets very specific mitigation criteria as established by the Town and the County, outlined in the application narrative, relative to vegetation type, flowering characteristics, and installation size. Staff recommends approval with the condition that in the event the initial installation leaves any specific views into the site unbuffered, the applicant will fortify the installation in that area, where practical