Planning Commission

Wednesday, June 28, 2023 at 6:00 PM

Theodore D. Washington Municipal Building, 20 Bridge Street, Henry "Emmett" McCracken Jr. Council Chambers

AGENDA

This meeting can be viewed live on Beaufort County Channel, on Hargray Channel 9 and 113 or on Spectrum Channel 1304.

I. CALL TO ORDER

II. ROLL CALL

III. NOTICE REGARDING ADJOURNMENT

The Planning Commission will not hear new items after 9:30 p.m. unless authorized by a majority vote of the Commission Members present. Items which have not been heard before 9:30 p.m. may be continued to the next regular meeting or a special meeting date as determined by the Commission Members.

IV. NOTICE REGARDING PUBLIC COMMENTS*

Every member of the public who is recognized to speak shall address the Chairman and in speaking, avoid disrespect to Commission, Staff, or other members of the Meeting. State your name and address when speaking for the record. COMMENTS ARE LIMITED TO THREE (3) MINUTES.

V. ADOPTION OF THE AGENDA

VI. CIVILITY PLEDGE

We pledge to build a stronger and more prosperous community by advocating for civil engagement, respecting others and their viewpoints, and finding solutions for the betterment of the Town of Bluffton.

VII. ADOPTION OF MINUTES

1. May 24, 2023 Minutes

VIII. PUBLIC COMMENTS FOR ITEMS NOT ON THE AGENDA*

IX. OLD BUSINESS

X. NEW BUSINESS

1. **Lakes at New Riverside Phases 5 and 6 (Street Naming):** A request by John Paul Moore of Thomas & Hutton, on behalf of Pritchard Farms, LLC for approval of a street naming application. The project consists of 144 single family lots and associated infrastructure. The property is identified by tax map number R610 044 000 0443 0000 and consists of 48.9 acres within the New Riverside Planned Unit Development Zoning District. (STR-05-23-018020) (Staff - Dan Frazier)

2. **Midpoint (Street Naming):** A request by Pulte Homes Company on behalf of Walcam Land Group, LLC for approval of a street naming application. The project consists of seven additional streets for the Midpoint neighborhood with associated single-family home lots. The property is identified by tax map number R610 044 000 0126 0000 and R614 045 000 0019 0000 and is located within the New Riverside PUD. (STR-05-23-018057) (Staff - Dan Frazier)

3. **Wetland Impact for Parcels 12A, 12B and 12C (Development Plan):** A request by Nathan Long of Thomas & Hutton on behalf of Jake Reed of University Investments, LLC for approval of a preliminary development plan. The project proposes partial wetland filling of approximately 0.56 acres to allow crossings for future road alignments. The properties are zoned Buckwalter Planned Unit Development and consists of approximately 58.0 acres identified by tax map numbers R610 029 000 0611 0000, R610 029 000 2343 0000, R610 029 000 2344 0000, and R610 029 000 1721 0000 located south and adjacent to Bluffton Parkway. (DP-03-23-017841) (Staff – Dan Frazier)

4. **Public Hearing:** Certain Amendments to the Town of Bluffton's Municipal Code of Ordinances, Chapter 23, Unified Development Ordinance (UDO), Sec. 3.2.3, Public Hearing Notice; Sec. 5.13, Signs, Exempt and Prohibited; and, Sec. 5.15, Old Town Bluffton Historic District, Cupolas, Setbacks in the NCE-HD and NG-HD Districts, and Establishing a Medium House Building Type with Related Building Requirements (Staff - Charlotte Moore)

5. **Big Blue Marble Academy (Certificate of Appropriateness- Highway Corridor Overlay):** A request by Samantha Kozlowski, Development Manager, on behalf of the parcel owners EIG14T BBMA SC BLUFFFTON, LLC, for approval of a Certificate of Appropriates – Highway Corridor Overlay. The project consists of the landscape, lighting and architecture for Big Blue Marble Academy, a 11,293 SF one-story square foot childcare facility including an outdoor child play area and associated parking, located at the intersection of Mill Creek Boulevard and Okatie Highway (SC HWY 170) off Slater Street in the Jones Estate PUD, within the Cypress Ridge Master Plan. (COFA-03-23-017836) (Staff - Katie Peterson)

6. **Refuel (Certificate of Appropriateness - Highway Corridor Overlay):** A Certificate of Appropriateness to permit the landscape, lighting and architecture for Refuel convenience store and gas station, located along SC Highway 46 across from the May River Xing intersection. It is zoned PUD within the New Riverside PUD and New Riverside Village Master Plan. (COFA-04-23-017905)(Staff - Katie Peterson)

XI. DISCUSSION

XII. ADJOURNMENT

"FOIA Compliance – Public notification of this meeting has been published and posted in compliance with the Freedom of Information Act and the Town of Bluffton policies."

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990 ("ADA"), the Town of Bluffton will not discriminate against qualified individuals with disabilities on the basis of disability in its services, programs, or activities. The Town of Bluffton Council Chambers are ADA compatible. Auditory accommodations are available. Any person requiring further accommodation should contact the Town of Bluffton ADA Coordinator at 843.706.4500 or adacoordinator@townofbluffton.com as soon as possible but no later than 48 hours before the scheduled event.

**Please note that each member of the public may speak at one public comment session and a form must be filled out and given to the Town Clerk. Public comment is limited to 3 minutes per speaker.*

Executive Session - The public body may vote to go into executive session for any item identified for action on the agenda.

Planning Commission

Theodore D. Washington Municipal Building, 20 Bridge Street, Henry "Emmett" McCracken Jr. Council Chambers

May 24, 2023

I. CALL TO ORDER

Chairwoman Denmark called the meeting to order at 6pm.

II. ROLL CALL

PRESENT
Chairwoman Amanda Jackson Denmark
Vice Chairman Charlie Wetmore
Commissioner Kathleen Duncan
Commissioner Rich Delcore
Commissioner Jim Flynn
Commissioner Lydia DePauw

ABSENT
Commissioner Jason Stewart

III. NOTICE REGARDING ADJOURNMENT

The Planning Commission will not hear new items after 9:30 p.m. unless authorized by a majority vote of the Commission Members present. Items which have not been heard before 9:30 p.m. may be continued to the next regular meeting or a special meeting date as determined by the Commission Members.

IV. NOTICE REGARDING PUBLIC COMMENTS*

Every member of the public who is recognized to speak shall address the Chairman and in speaking, avoid disrespect to Commission, Staff, or other members of the Meeting. State your name and address when speaking for the record. COMMENTS ARE LIMITED TO THREE (3) MINUTES.

V. ADOPTION OF THE AGENDA

Vice Chairman Wetmore made a motion to adopt the agenda.

Seconded by Commissioner Duncan.
Voting Yea: Chairwoman Jackson Denmark, Vice Chairman Wetmore, Commissioner Duncan, Commissioner Delcore, Commissioner Flynn, Commissioner DePauw

All were in favor and the motion passed.

VI. ADOPTION OF MINUTES

1. April 26, 2023 Minutes

   Commissioner Duncan made a motion to adopt the minutes as written.

DRAFT

Seconded by Commissioner Flynn.
Voting Yea: Chairwoman Jackson Denmark, Vice Chairman Wetmore, Commissioner Duncan, Commissioner Delcore, Commissioner Flynn, Commissioner DePauw

All were in favor and the motion passed.

VII. PUBLIC COMMENTS FOR ITEMS NOT ON THE AGENDA*

VIII. OLD BUSINESS

IX. NEW BUSINESS

1. **Buckwalter Crossroads (Master Plan Amendment):** A request by Brian Witmer of Witmer Jones Keefer, Ltd, on behalf of Millstone Ventures, LLC, and with the approval of the property owner, Parcel 8A, LLC, for approval of a master plan amendment application. The Applicant proposes to amend the Buckwalter Crossroads Master Plan by adding an additional 21.92 acres that will include 16.02 acres of residential development and 5.9 acres of commercial development. The property is zoned Buckwalter PUD and consists of 21.92 acres located at the northeast corner of the intersection of SC Highway 170 and Gibbet Road. (MPA-01-23-017595) (Staff – Dan Frazier)

The applicant was in attendance. Staff presented.

Public Comment

Carol Crutchfield, Beaufort County School District. Ms. Crutchfield discussed the over capacity of the schools near the project.

Walter Nester, attorney for the applicant, requested clarification on staff's presented conditions. Richardson LaBruce, attorney for the Planning Commission, reviewed what is under the Commission's purview.

There was discussion on connectivity, why this parcel wasn't in the original master plan, the pros and cons of adding this parcel into the master plan and staff's recommendations.

(Mr. LaBruce provided for the record the document that Mr. Nester submitted suggesting edits for staff recommendation number one. This is on file in the Growth Management Department.)

There was discussion on the possible uses for the parcels.

Commissioner DePauw made a motion to recommend approval to Town Council with the following conditions:

1. A statement shall be placed on the amended master plan declaring that the Town shall require all development within the Buckwalter Crossroads Master Plan conform to the requirements and recommendations of the Beaufort County CONNECTS 2021 Bicycle and Pedestrian Plan.

2. Whether located on- or off-site, it shall be the responsibility of developers to install a 10-foot-wide bicycle and pedestrian path along SC Highway 170 frontage consistent with the requirements and recommendations of the Beaufort County CONNECTS 2021 Bicycle and Pedestrian Plan in conjunction with individual site development within the Buckwalter Crossroads Master Plan.

DRAFT

3. Site layouts for all parcels are subject to full Town review and approval at time of development plan submittal.

4. Extend the existing master plan's proposed drive aisle (pink line) through the amended parcel to Gibbet Road.

Seconded by Vice Chairman Wetmore.
Voting Yea: Chairwoman Jackson Denmark, Vice Chairman Wetmore, Commissioner Duncan, Commissioner Delcore, Commissioner Flynn, Commissioner DePauw

All were in favor and the motion passed.

2. Amendments to the Town of Bluffton's Municipal Code of Ordinances, Chapter 23, Unified Development Ordinance (UDO), Article 3 – Application Process, Sec. 3.17, Certificate of Appropriateness – Highway Corridor Overlay District and Article 5 – Sec. 5.8, Lot and Building Standards (Staff – Charlotte Moore)

Staff presented and reviewed the proposed changes.

Vice Chairman Wetmore made a motion to approve the amendments to the Town of Bluffton Code of Ordinances Chapter 23 – Unified Development Ordinance, as recommended by Town Staff.

Seconded by Commissioner Delcore.
Voting Yea: Chairwoman Jackson Denmark, Vice Chairman Wetmore, Commissioner Duncan, Commissioner Delcore, Commissioner Flynn, Commissioner DePauw

All were in favor and the motion passed.

X. DISCUSSION

XI. ADJOURNMENT

Commissioner Duncan made a motion to adjourn.

Seconded by Commissioner Flynn.
Voting Yea: Chairwoman Jackson Denmark, Vice Chairman Wetmore, Commissioner Duncan, Commissioner Delcore, Commissioner Flynn, Commissioner DePauw

All were in favor and the motion passed. The meeting adjourned at 7:16pm.

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PLANNING COMMISSION

STAFF REPORT

DEPARTMENT OF GROWTH MANAGEMENT

MEETING DATE:	June 28, 2023
PROJECT:	STR-05-23-018020 Lakes at New Riverside Phases 5 & 6 - New Street Name Application
PROJECT MANAGER:	Dan Frazier Principal Planner – Department of Growth Management

REQUEST: A request by John Paul Moore of Thomas & Hutton, on behalf of the property owner, Pritchard Farms, LLC for approval of a street naming application. The applicant is requesting approval of the following street names to be used for the future development of The Lakes at New Riverside Phases 5 & 6 (Attachment 1). The subject property is within the New Riverside Planned Unit Development Zoning District and consists of +/- 48.9 acres identified by tax map number R610 044 000 0443 0000 located on the north side of New Riverside Road east of May River High School.

Road Names
Blue Pond (Way, Street or Road) – Accepted/No Conflict
Clarks Hill (Drive, Way, Street or Road) – Accepted/No Conflict
Marion Lake (Drive, Way, Street or Road) – Accepted/No Conflict

Denied Names
Blue Pond Drive

BACKGROUND: On April 12, 2023, the Town of Bluffton Development Review Committee approved the Preliminary Development Plan for The Lakes at New Riverside Phases 5 & 6, a 144 single family residential lot development. Town Staff is currently awaiting Final Development Plan submittal. On May 24, 2023, the New Street Name Application received comments at the DRC meeting (Attachment 2). The Applicant has provided a street naming exhibit that identifies the proposed street name location (Attachment 3).

PLANNING COMMISSION ACTIONS: As granted by the powers and duties set forth in Section 2.2.6.C.5 of the Unified Development Ordinance, the Planning Commission has the authority to take the following actions with respect to this application:

1. Approve the application as submitted by the Applicant;
2. Approve the application with conditions; or
3. Deny the application as submitted by the Applicant.

REVIEW CRITERIA & ANALYSIS: Town Staff and the Planning Commission are required to consider the criteria set forth in Section 3.15.3 of the Unified Development Ordinance in assessing an application for the New Street Name. These criteria are provided below followed by a Staff Finding(s) based upon review of the application submittals to date.

1. Section 3.15.3.A Does not already exist within Beaufort County;

2. Section 3.15.3.B Are not street types with the same primary name, such as Smith Street and Smith Boulevard;

3. Section 3.15.3.C Are not name(s) which sound alike or which might be confused with one another;

4. Section 3.15.3.D Does not use frivolous or complicated words, or unconventional spellings;

5. Section 3.15.3.E Are not numbers (such as 1st Street) or alphabetical letters (such as A Street);

6. Section 3.15.3.F Could not be perceived as offensive;

7. Section 3.15.3.G Are simple, logical, easy to pronounce, clear and brief;

8. Section 3.15.3.H Are associated with the history of Bluffton or the character of the Lowcountry when possible;

9. Section 3.15.3.I May represent a common theme within residential developments; and

10. Section 3.15.3.J The application must comply with applicable requirements in the Applications Manual.

Finding. Town Staff finds that three of the proposed new street names are acceptable and meet the requirements of Article 3 of the Unified Development Ordinance as stated above.

STAFF RECOMMENDATION: Staff finds that the requirements of Section 3.15.3 have been met and recommends that the Planning Commission approve the following three (3) New Street Names:

1. Blue Pond (Way, Street, or Road)
2. Clarks Hill (Drive, Way, Street, or Road)
3. Marion Lake (Drive, Way, Street, or Road)

ATTACHMENTS:

1. New Street Name Application
2. DRC Comments
3. Street Name Exhibit

TOWN OF BLUFFTON
NEW STREET NAME APPLICATION

Growth Management Customer Service Center
20 Bridge Street
Bluffton, SC 29910
(843)706-4500
www.townofbluffton.sc.gov
applicationfeedback@townofbluffton.com

Applicant	Property Owner
Name: JP Moore - Thomas and Hutton	Name: Pritchard Farms, LLC / Jared Cleland
Phone: 912-721-4022	Phone: 843-987-0500
Mailing Address: 50 Park of Commerce Way Savannah, GA 31405	Mailing Address: PO Box 3822 Bluffton, SC 29910
E-mail: moore.j@tandh.com	E-mail: jac@cleland.co
Town Business License # (if applicable):	

Project Information

Project Location: Lakes at New Riverside

Proposed Street Name (in order of preference)*:
1. Blue Pond Road
2. Clarks Hill Way
3. Marion Lake Drive

*Provide at least three street names for each street proposed. If additional space is needed, please provide a separate sheet.

Tax Map Number(s): R610 044 000 0443 0000

Minimum Requirements for Submittal

- ☑ 1. Mandatory Application Check-In meeting scheduled.
- ☑ 2. Digital plat showing the streets, proposed name of each, and a list of the proposed street name(s).
- ☑ 3. Recorded deed and plat showing proof of property ownership.
- ☑ 4. Project Narrative describing reason for application and compliance with the criteria in Article 3 of the UDO.
- ☑ 5. An Application Review Fee as determined by the Town of Bluffton Master Fee Schedule. Checks made payable to the Town of Bluffton.

Disclaimer: **The Town of Bluffton assumes no legal or financial liability to the applicant or any third party whatsoever by approving the plans associated with this permit.**

I hereby acknowledge by my signature below that the foregoing application is complete and accurate and that I am the owner of the subject property. As applicable, I authorize the subject property to be posted and inspected.

Property Owner Signature: Date: 5-3-2023

Applicant Signature: Date: 05/03/2023

For Office Use

Application Number:	*Date Received:*
Received By:	*Date Approved:*

PLAN REVIEW COMMENTS FOR STR-05-23-018020

Town of Bluffton
Department of Growth Management
20 Bridge Street P.O. Box 386 Bluffton, South Carolina 29910
Telephone 843-706-4522

NEW RIVERSIDE -PARCEL 9

Plan Type: Street Naming
Apply Date: 05/04/2023
Plan Status: Pending
Plan Address:
Case Manager: Dan Frazier
Plan PIN #: R610 044 000 0443 0000

Plan Description: **A request by John Paul Moore of Thomas & Hutton, on behalf of Pritchard Farms, LLC for approval of a street naming application. The project consists of 144 single family lots and associated infrastructure. The properties are identified by tax map number R610 044 000 0443 0000 and consists of 48.9 acres within the New Riverside Planned Unit Development Zoning District.**

Status: Staff comments on the street naming application will be reviewed at the May 24, 2023, meeting of the DRC.

Addressing Approval

Submission #: 1 Received: 05/04/2023 Completed: 05/19/2023

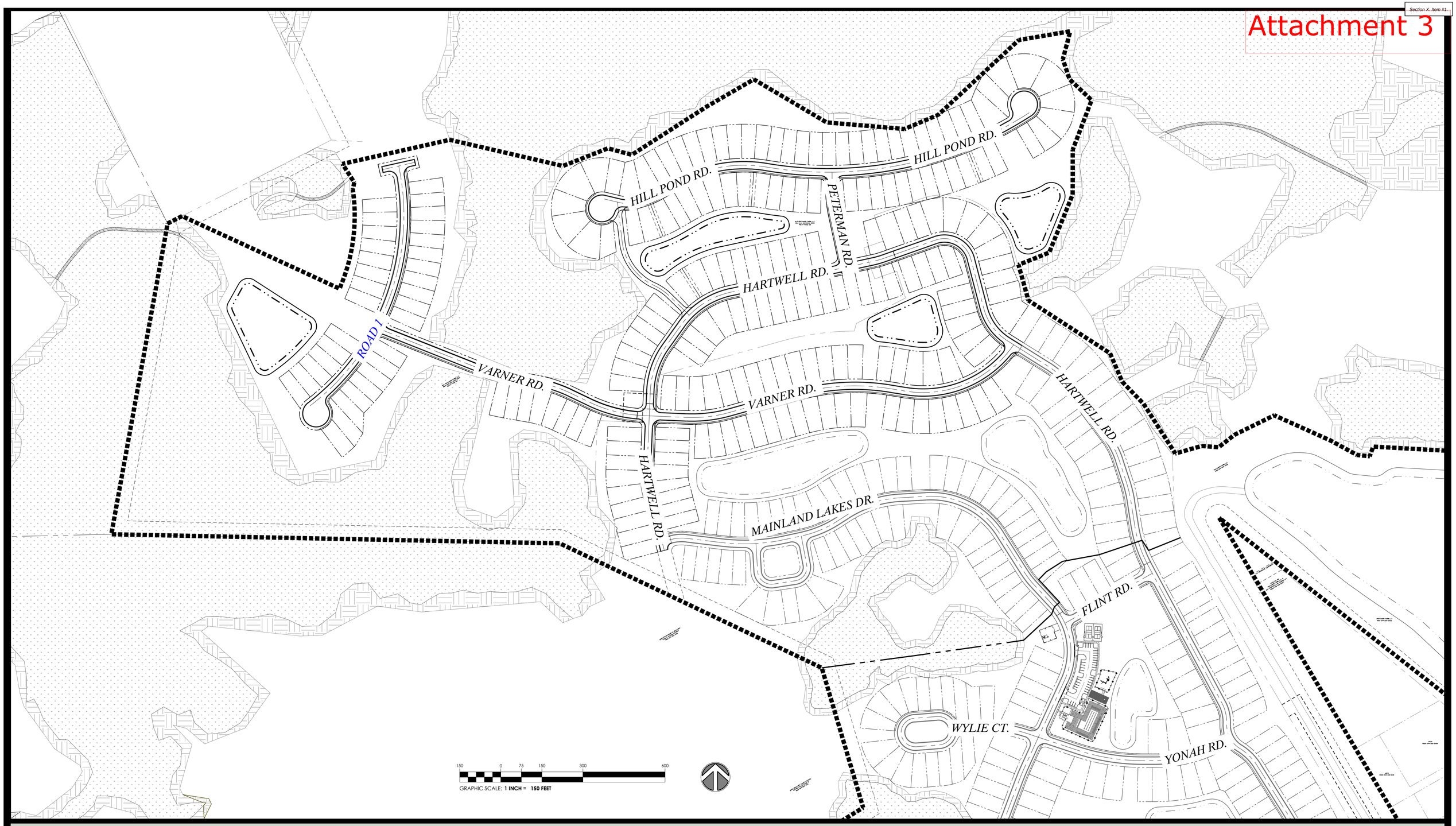
Reviewing Dept.	*Complete Date*	*Reviewer*	*Status*
Addressing Review	05/19/2023	Diego Farias	Approved with Conditions

Comments:
Blue Pond (Way, St, or Rd) - No conflict
Blue Pond Dr - Denied
Clarks Hill (Dr, Way, St, Rd) - No conflict
Matrion Lake (Dr, Way, St, Rd) - No conflict

Planning Review	05/19/2023	Jordan Holloway	Approved

Plan Review Case Notes:

Attachment 3



PARCEL 9

ROAD NAME EXHIBIT

Bluffton, SC

MAY 4, 2023

THOMAS & HUTTON

50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300

www.thomasandhutton.com

This map illustrates a general plan of the development which is for discussion purposes only, does not limit or bind the owner/developer, and is subject to change and revision without prior written notice to the holder. Dimensions, boundaries and position locations are for illustrative purposes only and are subject to an accurate survey and property description.

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PLANNING COMMISSION

STAFF REPORT

DEPARTMENT OF GROWTH MANAGEMENT

MEETING DATE:	June 28, 2023
PROJECT:	STR-05-23-018057 Midpoint at New Riverside - New Street Name Application
PROJECT MANAGER:	Dan Frazier Principal Planner – Department of Growth Management

REQUEST: A request by Patterson Farmer of Pulte Homes Company, on behalf of the property owner, Walcam Land Group, LLC and Pioneer Land & Timber, LLC for approval of a street naming application. The applicant is requesting approval of the following street names to be used for the future development of Midpoint at New Riverside (Attachment 1). The subject property is within the New Riverside Planned Unit Development Zoning District and consists of +/- 59 acres identified by tax map numbers R610 044 000 0126 0000 and R614 045 000 0019 0000 located along Midpoint Blvd.

Road Names

1. Scarlet Sage Drive – Accepted/No Conflict
2. Moonstone Way - Accepted/No Conflict
3. Coral Cove Road - Accepted/No Conflict
4. Sea Glass Lane – Accepted/Potential Conflict with Seagrass Lane
5. Golden Poppy Lane - Accepted/No Conflict
6. Pebble Path Road - Accepted/No Conflict
7. Mint Meadows - Accepted/Needs a street type descriptor
8. Bottlenose Dolphin Drive - Accepted/No Conflict
9. Bluefin Lane - Accepted/No Conflict
10. Toadfish Way - Accepted/No Conflict
11. Menhaden Court - Accepted/No Conflict
12. Seaside Goldenrod Road - Accepted/No Conflict
13. Darby Plantation Road - Accepted/No Conflict
14. Sea Oats Way - Accepted/No Conflict
15. Coral Cove Court - Accepted/No Conflict
16. Coral Haze Drive – Accepted/Don’t use if Coral Cove Court is used
17. Shrimp Boat Lane - Accepted/No Conflict
18. Scallop Shell Road - Accepted/No Conflict
19. Mermaid Cove – Accepted/Needs a street type descriptor

20. Beach Bum Place - Accepted/No Conflict
21. Beachgrass Lane - Accepted/No Conflict

BACKGROUND: On June 7, 2023, the New Street Name Application received comments at the DRC meeting (Attachment 2). The Applicant has provided a street naming exhibit that identifies the proposed street name locations (Attachment 3).

PLANNING COMMISSION ACTIONS: As granted by the powers and duties set forth in Section 2.2.6.C.5 of the Unified Development Ordinance, the Planning Commission has the authority to take the following actions with respect to this application:

1. Approve the application as submitted by the Applicant;
2. Approve the application with conditions; or
3. Deny the application as submitted by the Applicant.

REVIEW CRITERIA & ANALYSIS: Town Staff and the Planning Commission are required to consider the criteria set forth in Section 3.15.3 of the Unified Development Ordinance in assessing an application for the New Street Name. These criteria are provided below followed by a Staff Finding(s) based upon review of the application submittals to date.

1. Section 3.15.3.A Does not already exist within Beaufort County;

2. Section 3.15.3.B Are not street types with the same primary name, such as Smith Street and Smith Boulevard;

3. Section 3.15.3.C Are not name(s) which sound alike or which might be confused with one another;

4. Section 3.15.3.D Does not use frivolous or complicated words, or unconventional spellings;

5. Section 3.15.3.E Are not numbers (such as 1st Street) or alphabetical letters (such as A Street);

6. Section 3.15.3.F Could not be perceived as offensive;

7. Section 3.15.3.G Are simple, logical, easy to pronounce, clear and brief;

8. Section 3.15.3.H Are associated with the history of Bluffton or the character of the Lowcountry when possible;

9. Section 3.15.3.I May represent a common theme within residential developments; and

10. Section 3.15.3.J The application must comply with applicable requirements in the Applications Manual.

Finding. Town Staff finds that twenty-one of the proposed new street names are acceptable and meet the requirements of Article 3 of the Unified Development Ordinance as stated above.

STAFF RECOMMENDATION: Staff finds that the requirements of Section 3.15.3 have been met and recommends that the Planning Commission approve the following twenty-one (21) New Street Names:

1. Scarlet Sage Drive – Accepted/No Conflict
2. Moonstone Way - Accepted/No Conflict
3. Coral Cove Road - Accepted/No Conflict
4. Sea Glass Lane – Accepted/Potential Conflict with Seagrass Lane
5. Golden Poppy Lane - Accepted/No Conflict
6. Pebble Path Road - Accepted/No Conflict
7. Mint Meadows - Accepted/Needs a street type descriptor
8. Bottlenose Dolphin Drive - Accepted/No Conflict
9. Bluefin Lane - Accepted/No Conflict
10. Toadfish Way - Accepted/No Conflict
11. Menhaden Court - Accepted/No Conflict
12. Seaside Goldenrod Road - Accepted/No Conflict
13. Darby Plantation Road - Accepted/No Conflict
14. Sea Oats Way - Accepted/No Conflict
15. Coral Cove Court - Accepted/No Conflict
16. Coral Haze Drive – Accepted/Don’t use if Coral Cove Court is used
17. Shrimp Boat Lane - Accepted/No Conflict
18. Scallop Shell Road - Accepted/No Conflict
19. Mermaid Cove – Accepted/Needs a street type descriptor
20. Beach Bum Place - Accepted/No Conflict
21. Beachgrass Lane - Accepted/No Conflict

ATTACHMENTS:

1. New Street Name Application and Narrative
2. DRC Comments
3. Street Name Exhibit

Attachment 1

TOWN OF BLUFFTON
NEW STREET NAME APPLICATION

Growth Management Custome
20 Bridge Street
Bluffton, SC 29910
(843)706-4500
www.townofbluffton.sc.gov
applicationfeedback@townofbluffton.com

Applicant	Property Owner
Name: Pulte Homes Company - Patterson Farmer	Name: Walcam Land Group, LLC Pioneer Land & Timber, LLC - Chip Campbell
Phone: 843-457-5819	Phone:
Mailing Address: 138 Kings Creek Dr. Bluffton, SC 29909	Mailing Address: 416 Travis St Unit 715 Shreveport, LA 71101
E-mail: patterson.farmer@pultegroup.com	E-mail: chip@campbellcompanies.net
Town Business License # (if applicable):	

Project Information

Project Location: New Riverside Rd/ Midpoint Blvd

Proposed Street Name (in order of preference)*:
1. Please see attached narrative and list
2.
3.

*Provide at least three street names for each street proposed. If additional space is needed, please provide a separate sheet.

Tax Map Number(s): R610-044-000-0126-0000
R614-045-000-0019-0000

Minimum Requirements for Submittal

- [x] 1. Mandatory Application Check-In meeting scheduled.
- [x] 2. Digital plat showing the streets, proposed name of each, and a list of the proposed street name(s).
- [x] 3. Recorded deed and plat showing proof of property ownership.
- [x] 4. Project Narrative describing reason for application and compliance with the criteria in Article 3 of the UDO.
- [ ] 5. An Application Review Fee as determined by the Town of Bluffton Master Fee Schedule. Checks made payable to the Town of Bluffton.

Disclaimer: **The Town of Bluffton assumes no legal or financial liability to the applicant or any third party whatsoever by approving the plans associated with this permit.**

I hereby acknowledge by my signature below that the foregoing application is complete and accurate and that I am the owner of the subject property. As applicable, I authorize the subject property to be posted and inspected.

Property Owner Signature: DocuSigned by: Chip Campbell 29FB3178A891411... Date: 5/16/2023

Applicant Signature: Rob Marek Date: 5.16.2023

For Office Use

Application Number:	*Date Received:*
Received By:	*Date Approved:*

DocuSign Envelope ID: 9F63FC15-280A-410B-81E7-B18E8916DA37

NEW RIVERSIDE - MIDPOINT
PULTE HOMES
BLUFFTON, SOUTH CAROLINA
THOMAS AND HUTTON
ADDITIONAL STREET NAMES

J – 30068.0000
DATE: 04/28/2023
BY: CDG

Additional Street Names:

1. Scarlet Sage Drive
2. Moonstone Way
3. Coral Cove Road
4. Sea Glass Lane
5. Golden Poppy Lane
6. Pebble Path Road
7. Mint Meadows
8. Bottlenose Dolphin Drive
9. Bluefin Lane
10. Toadfish Way
11. Menhaden Court
12. Seaside Goldenrod Road
13. Darby Plantation Road
14. Sea Oats Way
15. Coral Cove Court
16. Coral Haze Drive
17. Scarlet Sage Drive
18. Shrimp Boat Lane
19. Scallop Shell Road
20. Mermaid Cove

21. Beach Bum Place

22. Beachgrass Lane

PLAN REVIEW COMMENTS FOR STR-05-23-018057

Town of Bluffton
Department of Growth Management
20 Bridge Street P.O. Box 386 Bluffton, South Carolina 29910
Telephone 843-706-4522

Plan Type: Street Naming
Apply Date: 05/16/2023
Plan Status: Pending
Plan Address:
Case Manager: Dan Frazier
Plan PIN #: R610 044 000 0126 0000

Plan Description: A request by Pulte Homes Company on behalf of Walcam Land Group, LLC for approval of a Street Naming Application. The project consists of seven additional streets for the Midpoint neighborhood with associated single-family home lots. The property is identified by tax map number R610 044 000 0126 0000 and R614 045 000 0019 0000 and is located within the New Riverside PUD.

This item is on the June 7, 2023 DRC Meeting agenda and the June 28, 2023 Planning Commission Meeting agenda.

Addressing Approval

Submission #: 1 Received: 05/16/2023 Completed: 06/02/2023

Reviewing Dept.	*Complete Date*	*Reviewer*	*Status*
Planning Review	06/02/2023	Jordan Holloway	Approved with Conditions

Comments:

1. Scarlet Sage Drive - Accepted
2. Moonstone Way - Accepted
3. Coral Cove Road - Accepted
4. Sea Glass Lane - Potential Conflict with Seagrass Lane
5. Golden Poppy Lane - Accepted
6. Pebble Path Road - Accepted
7. Mint Meadows - Accepted
8. Bottlenose Dolphin Drive - Accepted
9. Bluefin Lane - Accepted
10. Toadfish Way - Accepted
11. Menhaden Court - Accepted
12. Seaside Goldenrod Road - Accepted
13. Darby Plantation Road - Accepted
14. Sea Oats Way - Accepted
15. Coral Cove Court - Accepted
16. Coral Haze Drive - Accepted, but don't use if Coral Cove Court is used
17. Scarlet Sage Drive - Accepted
18. Shrimp Boat Lane - Accepted
19. Scallop Shell Road - Accepted
20. Mermaid Cove - Accepted
21. Beach Bum Place - Accepted
22. Beachgrass Lane - Accepted

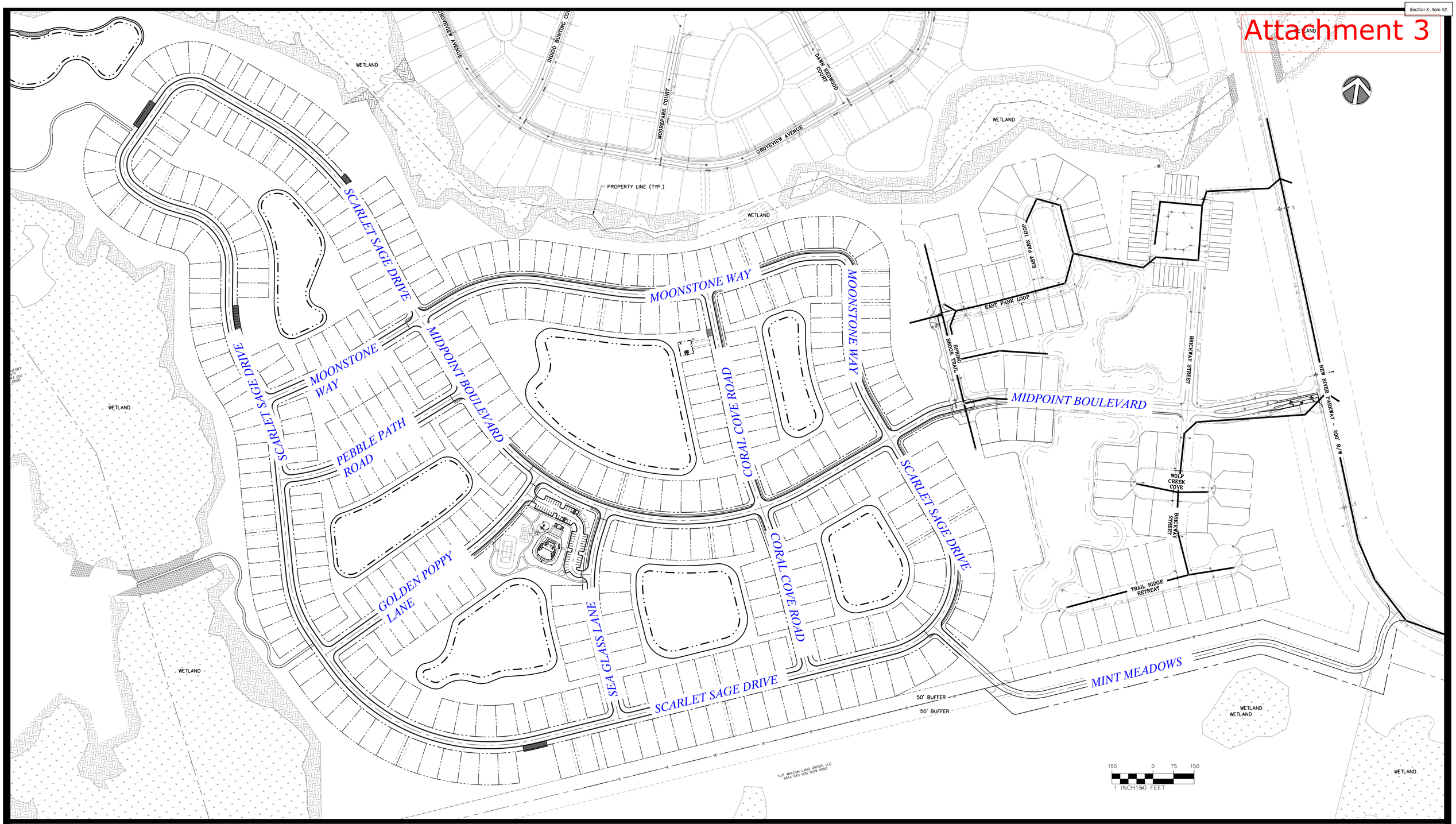
Addressing Review	05/25/2023	Diego Farias	Approved with Conditions

Comments:
See Senior Planner Comments

Plan Review Case Notes:

DocuSign Envelope ID: 9F63FC15-280A-410B-81E7-B18E8916DA37

Attachment 3



PREPARED FOR: PULTE HOMES

Pulte HOMES

ROAD NAME EXHIBIT

MIDPOINT AT NEW RIVERSIDE

BLUFFTON, SOUTH CAROLINA

MAY 15, 2023

THOMAS & HUTTON

50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300

www.thomasandhutton.com

This map illustrates a general plan of the development which is for discussion purposes only, does not limit or bind the owner/developer, and is subject to change and revision without prior written notice to the holder. Dimensions, boundaries and position locations are for illustrative purposes only and are subject to an accurate survey and property description.

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PLANNING COMMISSION

STAFF REPORT
Department of Growth Management

MEETING DATE:	June 28, 2023
PROJECT:	Wetland Impact of Parcels 12A, 12B & 12C Preliminary Development Plan
APPLICANT:	Nathan Long
PROJECT NUMBER:	DP-03-23-017841
PROJECT MANAGER:	Dan Frazier Principal Planner Department of Growth Management

REQUEST: The Applicant, Nathan Long of Thomas & Hutton, on behalf of the property owner, Jake Reed of University Investments, LLC is requesting approval of a Preliminary Development Plan. The project proposes partial wetland filling of approximately 0.56 acres to allow crossings for future road alignments (Attachment 1).

INTRODUCTION: The properties are zoned Buckwalter Planned Unit Development (PUD) and consists of approximately 58.0 acres identified by tax map numbers R610 029 000 0611 0000, R610 029 000 2343 0000, R610 029 000 2344 0000, and R610 029 000 1721 0000 located south and adjacent to Bluffton Parkway. The development plan application is not associated with an approved master plan (Attachment 2).

BACKGROUND: This application is for a preliminary development plan located within the Buckwalter PUD and is subject to the standards set forth in the Buckwalter PUD Development Agreement and Concept Plan. Per Section 2.D.19 of the Buckwalter PUD, infrastructure serving the community (on-site and off-site) is exempt from the Initial Master Plan approval process. (Attachment 3).

Staff comments on the Preliminary Development Plan were reviewed at the May 17, 2022, Development Review Committee meeting (Attachment 4). The Applicant provided a response to comments and revised Wetland Impact Plans (Attachments 5 and 3).

The applicant's narrative provides a description of the projects purpose as follows:

> *The entire purpose of this submittal is to fill the wetland crossing prior to expiration of the permit to provide connectivity for future development. The purpose of the partial fill is to allow crossings for future road alignments interior to the parcels, which will reduce the number of cars traveling on Bluffton Parkway and allow us to comply with the approved Access Management Plan (AMP) for the Parkway.*

The final alignment of the frontage road may vary as the project is planned, although the wetland crossing locations will not change. At this time, we are proposing to limit proposed disturbance at the site to the minimal amount required to transport and place the fill in desired areas. The proposed haul road section will be approximately 30' wide, to allow for 2-way dump truck traffic. Several dry basins are proposed to assist in providing material needed for filling desired areas.

Supporting information provided by the applicant includes a site vicinity map, recorded deeds of the subject property, and the wetland impact permit that expires June 30, 2024 (Attachment 6). The proposed access to Bluffton Parkway is opposite the Elle Apartments that are currently under construction. This location also coincides with a proposed signalized intersection shown on the Town-approved Bluffton Parkway Access Management Plan (Attachment 7). The applicant and Town Staff are currently working on language for an encroachment permit allowing the applicant to perform work within the Town-owned Proposed Innovation Drive Extension property.

REVIEW CRITERIA & ANALYSIS: The Planning Commission shall consider the criteria set forth in Section 3.10.3.A of the Unified Development Ordinance in assessing an application for a Preliminary Development Plan. The applicable criteria are provided below followed by Staff Finding(s) based upon review of the application submittals to date.

1. **Section 3.10.3.A.1. Conformance with the applicable provisions provided in Article 5, Design Standards.**

   Finding. The property lies with the Buckwalter PUD and therefore is not subject to the Design Standards set forth in Article 5 of the UDO.

2. **Section 3.10.3.A.2. The proposed development shall be in conformance with any approved Development Agreement, PUD Concept Plan, PUD Master Plan, Subdivision Plan, or any other agreements or plans that are applicable.**

   Finding. Town Staff finds that the preliminary development plan is in conformance with the Buckwalter PUD Development Agreement and Concept Plan. Per Section 2.D.19 of the Buckwalter Planned Unit Development, infrastructure serving the community (on-site and off-site) is exempt from the Initial Master Plan approval process.

3. **Section 3.10.3.A.3. If the proposed development is associated with a previously approved Master Plan, then the traffic and access plans shall adhere to the previously approved traffic impact analysis or assessment, where applicable. If an application is not associated with a previously approved PUD Master Plan, then a traffic impact analysis shall be required at final development plan submittal.**

   Finding. The proposed infill project adheres to the approved Bluffton Parkway Access Management Plan (Attachment 1 and 7).

4. **Section 3.10.3.A.4. The proposed development must be able to be served by adequate public services, including, but not limited to, water, sanitary sewer, roads, police, fire, and school services. For developments that have the potential for significant impact on infrastructure and services, the applicant shall be required to provide an analysis and mitigation of the impact on transportation, utilities, and community services.**

   Finding. The proposed infill project does not require to be served by public services. The project will require stormwater permit approval.

5. **Section 3.10.3.A.5. The phasing plan, if applicable, is logical and is designed in a manner that allows each phase to fully function independently regarding services, utilities, circulation, facilities, and open space, irrespective of the completion of other proposed phases.**

   Finding. The wetland infill project is proposed to be completed in a single phase of work.

6. **Section 3.10.3.A.6. The application must comply with applicable requirements in the Applications Manual.**

   Finding. The application has been reviewed by Town Staff and has been determined to be complete.

PLANNING COMMISSION ACTIONS: The Planning Commission has the authority to take the following actions with respect to the application as authorized by Section 2.2.6.C.5 of the UDO:

1. Approve the application as submitted;
2. Approve the application with conditions; or
3. Deny the application as submitted.

RECOMMENDATION: Should the Planning Commission choose to approve the application with conditions, Town staff finds that the following condition should be met prior to final development plan approval to be in accordance with the requirements of Section 3.10.3.A:

1. An approved encroachment permit allowing the applicant to perform work within the Town-owned Innovation Drive Extension property will be required prior to final development plan approval.

ATTACHMENTS:
1. Application and Project Narrative
2. Vicinity Map
3. Revised Wetland Impact Plans
4. DRC Comments and Original Wetland Impact Plans
5. DRC Comments Response Letter
6. Additional Submittal Items
7. Bluffton Parkway Access Management Plan Figure 2B

TOWN OF BLUFFTON
DEVELOPMENT PLAN APPLICATION

Growth Management Customer Service Center
20 Bridge Street
Bluffton, SC 29910
(843)706-4522
www.townofbluffton.sc.gov
applicationfeedback@townofbluffton.com

Applicant	Property Owner
Name: Nathan B. Long/Thomas and Hutton	Name: University Investments, LLC/Jake Reed
Phone: 912-234-5300	Phone: 949-945-4959
Mailing Address: 50 Park of Commerce Way Savannah, GA 31405	Mailing Address: 1278 May River Rd., Suite 400 Bluffton, S.C. 29910
E-mail: long.n@tandh.com	E-mail: jreed@reeddevelopment.com
Town Business License # (if applicable):	

Project Information

Project Name: Wetland Impact of Parcels 12A,12B,&12C	☒ Preliminary	☐ Final
Project Location: near Bluffton pkwy & buckwalter pwky	☒ New	☐ Amendment
Zoning District:	Acreage: Disturbed Acreage: ±10.2 acres Parcels Acreage: ±58 acres	
Tax Map Number(s): R610 029 000 0611 0000, R610 029 000 2343 0000, R610 029 000 2344 0000, and R610 029 000 1721 0000		
Project Description: See Project Narrative		

Minimum Requirements for Submittal

- ☒ 1. Two (2) full sized copies and digital files of the Preliminary or Final Development Plans.
- ☒ 2. Project Narrative and digital file describing reason for application and compliance with the criteria in Article 3 of the UDO.
- ☒ 3. All information required on the attached Application Checklist.
- ☐ 4. An Application Review Fee as determined by the Town of Bluffton Master Fee Schedule. Checks made payable to the Town of Bluffton. ***Fees to be paid upon invoice received.**

Note: **A Pre-Application Meeting is required prior to Application submittal.**

Disclaimer: **The Town of Bluffton assumes no legal or financial liability to the applicant or any third party whatsoever by approving the plans associated with this permit.**

I hereby acknowledge by my signature below that the foregoing application is complete and accurate and that I am the owner of the subject property. As applicable, I authorize the subject property to be posted and inspected.

Property Owner Signature:	Jake J. Reed	Date:	2/16/2023
Applicant Signature:	- Thomas E Hutton	Date:	2/16/2023

For Office Use

Application Number:	*Date Received:*
Received By:	*Date Approved:*

TOWN OF BLUFFTON
DEVELOPMENT PLAN
APPLICATION CHECKLIST

In accordance with the Town of Bluffton Unified Development Ordinance (UDO), the following information shall be included as part of a Development Plan application submitted for review. Depending on the proposal, the amount and type of documentation will vary. This checklist is intended to assist in the provision of the minimum documentation necessary to demonstrate compliance with the UDO. Upon review of the submitted application by Town Staff, additional information may be required. The use of this checklist by Town Staff or the Applicant shall not constitute a waiver of any requirement contained in the UDO. Applicants are encouraged to work closely with Town Staff in preparing any application prior to submittal.

Prelim Plan	Final Plan	NOTE: Depending on the activities proposed, Development Plan documentation will vary. At minimum, each plan must contain the General Information and Site & Existing Conditions Documentation in addition to information required for the other specific activities listed below, as applicable. Please contact Town Staff for questions and additional information.
General Information.		
x	x	1. Name and address of property owner(s) and applicant.
x	x	2. If the applicant is not the property owner, a letter of agency from the property owner authorizing the applicant to act on behalf of the property owner.
x	x	3. A detailed narrative describing the existing site conditions and uses, proposed development, proposed uses and activities that will be conducted on the site, statement of conformance with the UDO, description of any energy conservation or green technologies proposed on the site, the maintenance responsibility of any common or public areas, and publically dedicated improvements to be completed.
x	x	4. A listing of any past development permit approval numbers associated with the site and existing conditions placed on the development property by the Town of Bluffton through past approvals including a detailed description of how the condition will be met.
x	x	5. An explanation of why any items on this checklist are not included with the application materials.
x	x	6. Project name and/or name of development.
x	x	7. All plans must include the following: name of county; municipality; project location; parcel identification number(s); date of original design; all dates of revisions; north arrow; graphic scale; and legend identifying all symbology.
x	x	8. Vicinity map.
x	x	9. Site data table to include; total acreage, pervious versus impervious cover, required and proposed open space calculations, number and area of proposed lots, residential density, number and area of each proposed structure, area of each use of the property and buildings, and required and proposed parking calculations.
x	x	10. Signature over seal of registered engineer or landscape architect licensed to practice in South Carolina.
x	x	11. Phasing plan if the development is proposed to be developed in phases.
	x	12. Letters of approval, including any applicable permits, from the following agencies (as necessary for the project): a) United States Army Corp of Engineers; b) South Carolina Department of Health & Environmental Control; c) South Carolina Department of Transportation; d) Beaufort County Engineering; e) Beaufort County EMS; f) Beaufort County School District; g) Bluffton Township Fire District; h) Beaufort Jasper Water Sewer Authority; i) Town of Bluffton; j) Electric Provider; k) Natural Gas provider; and

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		l) Cable, telephone, and data provider.
Site and Existing Conditions Documentation.		
x	x	1. Comprehensive color photograph documentation of site and existing conditions. If digital, images should be at a minimum of 300 dpi resolution.
x	x	2. Names of the owners of contiguous parcels and an indication of adjacent existing and proposed (if known) land uses and zoning.
x	x	3. Location of all property lines.
x	x	4. Location of municipal limits or county lines, zoning, overlay or special district boundaries, if they traverse the development property, form a part of the boundary of the development property, or are contiguous to such boundary.
x	x	5. Location of all existing access points and intersections along both sides of any frontage or access roadway(s) within a minimum of 1,000 feet of the site boundaries.
x	x	6. Location, dimensions, name, and descriptions of all existing or recorded roadways, alleys, reservations, railroads, easements, or other public rights-of-way on or within 200 feet of the development property.
x	x	7. Location, size, and type of all existing easements, rights-of-way, or utility infrastructure on or within a minimum of 200 feet of the development property.
x	x	8. Existing topography and land cover of project site and adjacent and nearby sites that are impacted. Contours shall be shown in intervals of 1 foot or less.
x	x	9. Location, dimensions, area, descriptions, and flow line of existing watercourses, drainage structures, ditches, one-hundred (100) year flood elevation, OCRM critical line, wetlands or riparian corridors top of bank locations, and protected lands on the development property.
x	x	10. Location of any existing buildings, structures, parking lots, impervious areas, public and private infrastructure, or other manmade objects located on the development property.
x	x	11. Boundary survey with bearings and distances of all property lines, tract/lot acreage, location of property markers, and seal of a Registered Land Surveyor, as well as a legal description of the property.
	x	12. Location of benchmarks/primary control points or descriptions and ties to such control points to which all dimensions, angles, bearings, block numbers, and similar data shall be referred.
	x	13. Existing deed covenants, conditions, and restrictions, including any requirements from a POA or ARB.
	x	14. Proposed deed covenants, conditions, and restrictions, including any design or architectural standards.
	x	15. Legal documents for proposed public dedications.
Lot and Building Pattern.		
x		1. Schematic layout and design indicating overall site configuration; roadway design, building location(s), building size(s); general setbacks, and building orientation(s).
	x	2. Detailed layout and design indicating site layout, building location(s), building type(s)/ use(s), building orientation(s), conceptual building elevations, and setbacks.
	x	3. If a PUD, subdivision, office complex, or shopping center, a Master Sign Plan providing unity in sign design and describing the location, types, materials, shapes, sizes, and compatibility with the architecture of the development.
Parking.		
x		1. General location and ingress/egress of parking areas on the site.
	x	2. Location, layout, number of spaces, bicycle parking, and ensuring design shows ADA accessibility compliance.
	x	3. Location of proposed ingress/egress, circulation, loading, parking and pedestrian circulation elements, and ensuring design shows ADA accessibility compliance.

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	x	4. A parking study documenting the reasons for any increase in the maximum amount of parking or a similar study documenting the ability of the site to accommodate a reduction of 20% or more to the maximum parking requirements.
	x	5. A parking study documenting the ability of a site(s) to accommodate a shared parking arrangement. A shared parking easement must also be provided.
	x	6. Detailed engineering information identifying the location of vehicular and bicycle parking facilities and the construction specifications, geometrics, arrangement, character, width, grade, circulation/maneuvering facilities and areas, landscape islands, loading areas, and including detailed dimensions as are necessary and appropriate to demonstrate compliance with all applicable standards and requirements.
Transportation Networks.		
x		1. General layout of transportation networks including access to the site, internal roadways, and access to adjacent properties.
x	x	2. A map or sketch showing the general relationship of the development to the surrounding areas with existing and proposed access roadways referenced to the intersection of the nearest primary or secondary paved roadway.
	x	3. Existing and proposed non-motorized vehicle lanes, paths, sidewalks, and other facilities, including transit facilities, on and within 200 feet of the development property including detailed dimensions as are necessary and appropriate to demonstrate compliance with all applicable standards and requirements.
	x	4. Proposed roadway alignment plan showing right-of-way widths with specific reference to the roadway type and design assembly.
	x	5. Proposed access indicating any access management plans, connectivity, roadway extensions, proposed stub roads, dead-end roadways, and roadway names including detailed dimensions as are necessary and appropriate to demonstrate compliance with all applicable standards and requirements.
	x	6. Emergency access provisions.
	x	7. A Traffic Assessment demonstrating adherence to MUTCD standards and/or other applicable requirements.
	x	8. A Traffic Impact Analysis (TIA), if warranted by the Traffic Assessment.
	x	9. Engineering plan of proposed traffic mitigation measures, including assessment of individual phase, or approved payments in-lieu of such that will be provided to the Town of Bluffton or applicable agency. Plan must ensure adequate transportation network is in place to support development at time of construction.
	x	10. Vehicular and pedestrian signage plan including crosswalk and pavement marking details.
	x	11. Shared access agreements.
	x	12. Detailed engineering information identifying the location, construction specifications, typical sections, geometrics, arrangement, character, width, and grade of existing and proposed roadways and non-motorized vehicle facilities including detailed dimensions and calculations as are necessary and appropriate to demonstrate compliance with all applicable standards and requirements.
Natural Resources, Tree Conservation, Planting, and Landscaping.		
x	x	1. Location of existing tree canopy coverage including table summarizing canopy lot coverage area, lot area not covered by tree canopy, and tree canopy expressed as percentage of lot coverage.
x	x	2. Location and table summarizing trees listed on America's Historic Tree Register as maintained by American Forests.

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	x	3. Location of groups of trees that connect to other vegetated and/or treed areas on adjacent sites helping to create or extend a wildlife or natural corridor.
	x	4. Location and table summarizing trees that have a significant characteristic such as, but not limited to, allees and hedgerow trees, trees of unique character such as those with unique or unusual growth habitat, endangered species, or species rarely found in the area.
	x	5. Location and table summarizing trees designated as protected to be removed.
	x	6. The location and description of existing and proposed landscaping, screening, buffering, and tree preservation areas, including setbacks from natural resource areas.
	x	7. Graphic illustration of the existing tree canopy and mature tree canopy of the proposed tree plantings including a table summarizing the mature canopy of each tree species planted, canopy lot coverage area, lot area not covered by tree canopy, and tree canopy expressed as percentage of lot coverage (all calculations are excluding rooftop area).
	x	8. Detailed landscaping information containing the scientific and common names, quantity and size of each plant species to be planted, typical installation and maintenance drawings/notes, and location and description of irrigation systems.
	x	9. Tree protection zones (TPZ) and tree protection fencing and signage locations and installation specifications.
	x	10. Habitat management plan.
	x	11. Proposed topographic features, including basic contours at one foot or less intervals.
	x	12. Bank stabilization and erosion control measures.
	x	13. If applicable, a Forest Management Plan.
Open Space.		
x	x	1. Proposed open space areas, habitat areas, types, and access trails both on and off-site.
	x	2. Proposed public lands and methods of dedication and access.
	x	3. Proposed ownership and method of transfer through deed restrictions, covenants, public dedication, or other method acceptable to the UDO Administrator.
	x	4. Proposed use for all portions of dedicated open space.
Stormwater Management.		
x	x	1. Acknowledgement of compliance with Bluffton Stormwater Design Manual.
x	x	2. Description of proposed methods and general layout of stormwater drainage.
x	x	3. Proposed drainage system layouts.
x	x	4. Proposed methods to remove pollutants.
x	x	5. Soil types and permeability characteristics from National Resource Conservation Service.
	x	6. Stormwater Drainage Plan with drainage easements.
	x	7. Location and area of proposed impervious coverage.
	x	8. Pre- and post-development runoff volumes, velocities, hydrographs, with Watershed Maps and Link Node Diagrams.
	x	9. Methods to record and report installation and maintenance activities.
	x	10. Stormwater quality monitoring program and pre-development pollutant loading calculations.
	x	11. Notarized Operation and Maintenance Agreement signed by responsible party.
Utilities and Services.		
x		1. Statement by the Applicant/ Engineer/ Design Professional confirming that they believe the site can be supplied with adequate utilities.
	x	2. Proposed water system layout, or individual well locations.
	x	3. Proposed sewer system layout, or individual septic tank locations.

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	x	4. Location of solid waste/trash disposal units/dumpsters.
	x	5. Location of proposed water, sewer, electric, telephone, cable, data, and gas service layouts, and proposed easements and connections.
	x	6. Location of proposed fire lane, hydrant location(s), FDC(s), and apparatus access to the site and building(s).
	x	7. Location of service and meter areas.
	x	8. Location of mail delivery boxes.
	x	9. Capacity and service studies and/or calculations.
	x	10. Detailed engineering information identifying the location, construction specifications, typical sections, service connections, meters, valves, manholes, inverts, transformers, service pedestals/boxes, and any other utility information.
Lighting.		
x		1. Narrative or plan notes describing the proposed exterior lighting scheme for the property.
	x	2. Location, specifications, and details for existing and proposed exterior site and building light fixtures including the total lumen output, type of lamp, method of shielding, pole and mounting height, and verification that there are no conflicts between lighting and landscaping.
	x	3. Photometric grid overlaid on the proposed site plan indicating the overall light intensity throughout the site (in footcandles) including existing and proposed lighting. Photometric calculations must consider all exterior lighting including building lighting.
	x	4. Notes describing lighting limitations, prohibitions, and methods of enforcement.

SIGN AND RETURN THIS CHECKLIST WITH THE APPLICATION SUBMITTAL
ALL SUBMITTALS MUST BE COLLATED AND FOLDED TO 8-1/2" X 11"

By signature below I certify that I have reviewed and provided the minimum submittal requirements listed above, including any additional items requested by the Town of Bluffton Staff. Any items not provided have been listed in the project narrative with an explanation as to why the required submittal item has not been provided or is not applicable. Further, I understand that failure to provide a complete, quality application or erroneous information may result in the delay of processing my application(s).

Signature of Property Owner or Authorized Agent — Date: 2/16/23

Nathan B. Long
Printed Name

University Investments – Wetland Impact for Parcels 12A, 12B, and 12C TOWN OF BLUFFTON, SOUTH CAROLINA

Project Narrative
J – 25312.0015
March 28, 2023

University Investments, LLC (Applicant) proposes to ensure future connectivity within its parcels by constructing wetland crossings, based on the approved impact permit associated with the property. The connectivity plan is consistent with the Bluffton Parkway Access Management Plan (AMP), dated 2007, approved by Beaufort County and adopted by resolution within the Town of Bluffton. A pre-application meeting was held with the Town of Bluffton on October 6, 2022 with Dan Frazier from the Town of Bluffton, and it was agreed upon that the proposed wetland fill project may proceed without an approved Initial Master Plan. This project will allow for the frontage road to be constructed in the future once an Initial Master Plan for the property is developed and approved by the Town of Bluffton.

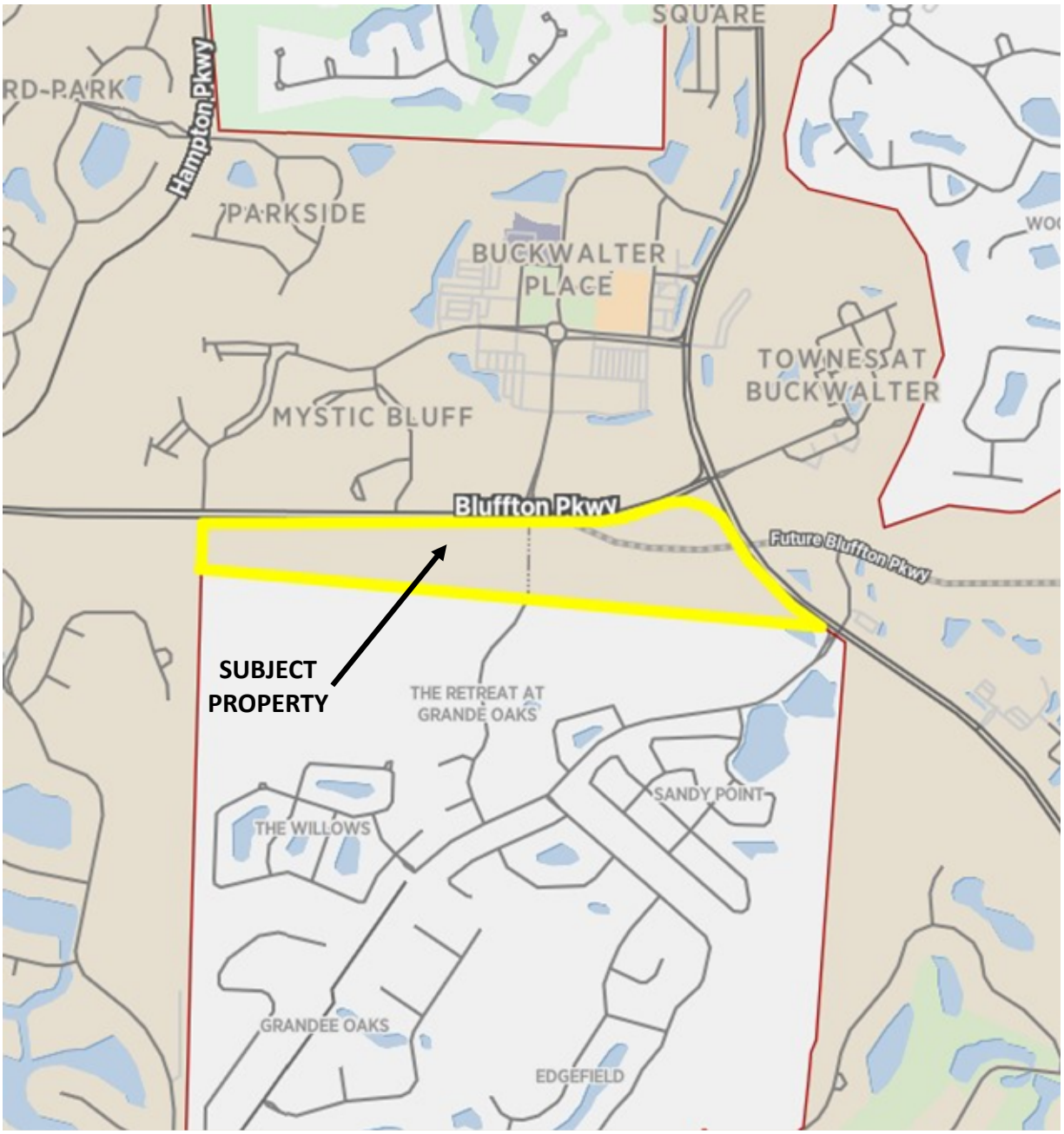
To provide for this future connectivity, the applicant is proposing to impact approximately 0.56 acres of wetlands on Parcels 12A, 12B, and 12C directly south of Bluffton Parkway, located within the Southwest quadrant of the intersection of Bluffton Parkway and Buckwalter Parkway. The individual wetland impact permit was approved by the Army Corp of Engineers and is referenced as Permit #2003-1G-006, set to expire in 2024.

The entire purpose of this submittal is to fill the wetland crossing prior to expiration of the permit in order to provide connectivity for future development. The purpose of the partial fill is to allow crossings for future road alignments interior to the parcels, which will reduce the number of cars traveling on Bluffton Parkway and allow us to comply with the approved Access Management Plan (AMP) for the Parkway. Access locations to the Bluffton parkway will be needed for earthwork operations during construction. Each access location is consistent with the approved AMP. The final alignment of the frontage road may vary as the project is planned, although the wetland crossing locations will not change. At this time, we are proposing to limit proposed disturbance at the site to the minimal amount required to transport and place the fill in desired areas. The proposed haul road section will be approximately 30' wide, to allow for 2-way dump truck traffic. Several dry basins are proposed to assist in providing material needed for filling desired areas.

The subject properties where the fill will occur is currently undeveloped and is mostly pine trees, with the exception of hardwoods within and directly adjacent to the wetlands. We will be installing pipe crossings, under each wetland crossing, to allow for the natural conveyance of the wetlands to be preserved.

Due to the nature of this project, erosion control measures shall be implemented. Once an initial master plan is submitted and approved, final design plans with stormwater detention meeting all state and local requirements shall be provided. Existing drainage patterns will not be modified upon completion of this project. The haul road shall consist of earthen fill material, without rock, to help reduce any negligible increase in runoff rates. Sedimentation and Erosion Control measures will be installed prior to and concurrent with construction. Sedimentation and Erosion Control devices will conform to the latest South Carolina Storm Water Management and Sedimentation Control Handbook, and are shown using standard symbols on the erosion and sedimentation control plans.

VICINITY MAP
WETLAND IMPACTS PARCEL 12A, 12 B & 12C
DEVELOPMENT PLAN



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WETLAND IMPACT PLANS

OF

PARCELS 12A, 12B, & 12C

BLUFFTON, SOUTH CAROLINA

PREPARED FOR:

UNIVERSITY INVESTMENTS, LLC

PO BOX 23767

HILTON HEAD ISLAND, 29925

TM# R610 029 000 0611 0000, R610 029 000 2343 0000,
R610 029 000 2344 0000, & R610 029 000 1721 0000

MARCH 29, 2023

REVISED: MAY 30, 2023

J-25312.0015

PREPARED BY:

THOMAS & HUTTON

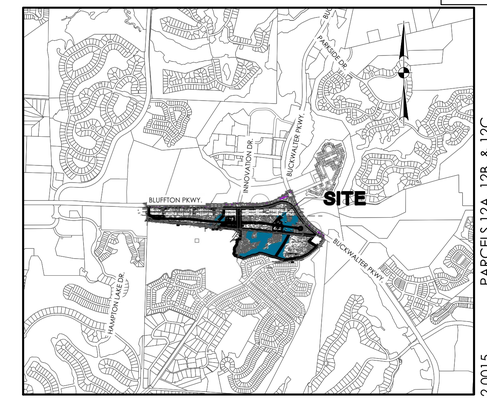
PERMIT SET - FOR REVIEW PURPOSES ONLY

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 26353 NATHAN B. LONG

SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE OF AUTHORIZATION

WETLAND IMPACT PLANS OF PARCELS 12A, 12B, &12C

VERTICAL DATUM: NAVD 88



VICINITY MAP
SCALE: 1" = 2000'

PARCELS 12A, 12B, & 12C

J-25312.0015
05/30/23

PERMIT SET - FOR REVIEW PURPOSES ONLY

Sheet List Table

Sheet Number	Sheet Title
CO	COVER SHEET
G1.1	GENERAL NOTES AND LEGEND
G2.1	EXISTING CONDITIONS PLAN
G2.2	EXISTING CONDITIONS PLAN
C1.1	STRIPING, SIGNAGE, AND LAYOUT PLAN
C1.2	STRIPING, SIGNAGE, AND LAYOUT PLAN
C2.1	GRADING AND DRAINAGE PLAN
C2.2	GRADING AND DRAINAGE PLAN
C2.3	GRADING AND DRAINAGE PLAN
C2.1	GRADING AND DRAINAGE DETAILS
EC1.1	ES & PC NOTES
EC1.2	ES & PC NOTES
EC2.1	ES & PC PLAN
EC2.2	ES & PC PLAN
EC5.1	ES & PC DETAILS

REVISION HISTORY

REV. NO.	REVISION	BY	DATE

SUBMITTAL HISTORY

SUBMITTED TO	DATE

811 Know what's below. Call before you dig.

THOMAS & HUTTON
50 Park of Commerce Way
Savannah, GA 31405
p.912.234.5300
www.thomasandhutton.com

ABBREVIATIONS

HDPE	HIGH DENSITY POLYETHELENE		LF	LINEAR FEET		SF	SQUARE FEET
BOT	BOTTOM		MAX	MAXIMUM		SS	SANITARY SEWER
CI	CURB INLET		MIN	MINIMUM		TC	TOP OF CURB
CPP	CORRUGATED PLASTIC PIPE		MH	MANHOLE		TG	TOP OF GRAVEL
DIP	DUCTILE IRON PIPE		OC	ON CENTER		TP	TOP OF PAVEMENT
EL	ELEVATION		PC	POINT OF CURVE		TW	TOP OF WALK
FG	FINISH GRADE		PH	POST HYDRANT		TYP	TYPICAL
FH	FIRE HYDRANT		PT	POINT OF TANGENT		W	WATER
FM	FORCE MAIN (SANITARY SEWER)		PVC	POLYVINYL CHLORIDE		W/	WITH
FR	FRAME		RCP	REINFORCED CONCRETE PIPE		WV	WATER VALVE
GI	GRATE INLET		RJP	RESTRAINED JOINT PIPE		YI	YARD INLET
GV	GATE VALVE		R/W	RIGHT-OF-WAY		FFE	FINISH FLOOR
INV	INVERT ELEVATION		SD	STORM DRAINAGE			
JB	JUNCTION BOX		SDMH	STORM DRAINAGE MANHOLE			

DRAINAGE LEGEND

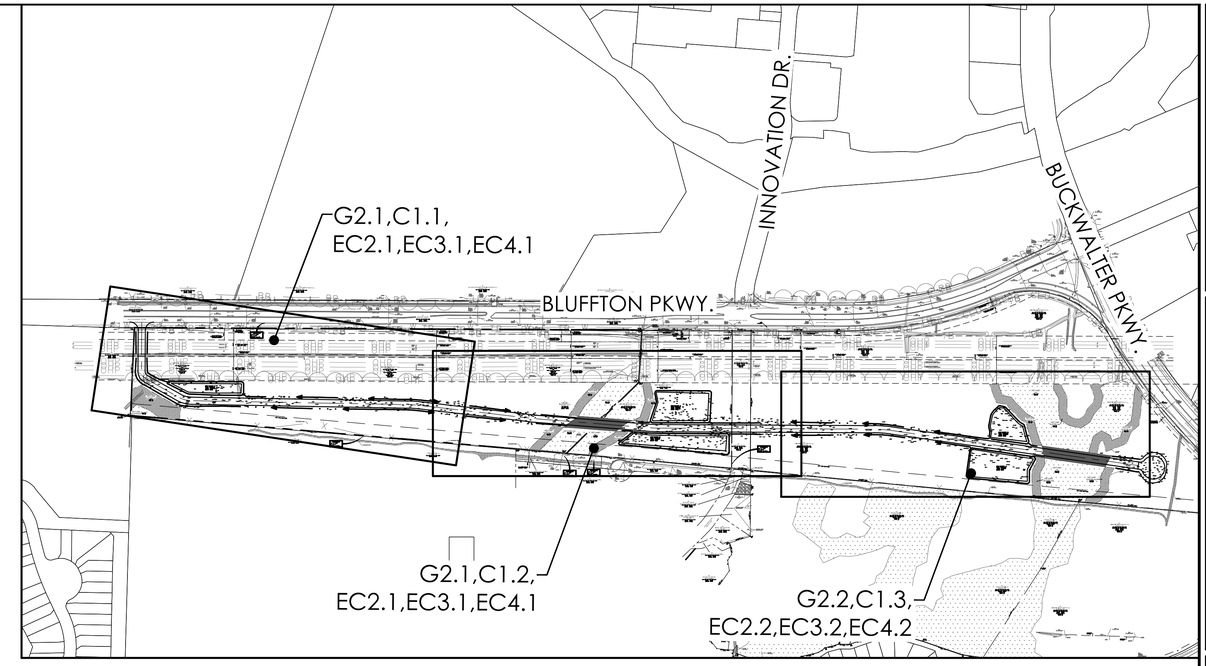
DESCRIPTION	EXISTING	PROPOSED
PIPE		
DITCH		
CURB INLET		
GRATE INLET		
JUNCTION BOX		
OUTLET STRUCTURE		

WATER LEGEND

DESCRIPTION	EXISTING	PROPOSED
WATER MAIN	10"W	10"W
SINGLE SERVICE LATERAL		
DOUBLE SERVICE LATERAL		
VALVE AND BOX		
FIRE HYDRANT W/VALVE & BOX		
POST HYDRANT		
REDUCER		
BACKFLOW PREVENTOR		
CROSS		
TEE		
90° BEND - HORIZONTAL		
45° BEND - HORIZONTAL		
22-½° BEND - HORIZONTAL		
11-¼° BEND - HORIZONTAL		
BEND - VERTICAL		
CAP		

SEWER LEGEND

DESCRIPTION	EXISTING	PROPOSED
GRAVITY PIPE	SS	
SINGLE SERVICE LATERAL		
DOUBLE SERVICE LATERAL		
MANHOLE		
CLEANOUT		
FORCEMAIN	10"FM 10"FM	10"FM 10"FM
VALVE AND BOX		
FLUSH HYDRANT		
REDUCER		
BACKFLOW PREVENTOR		
CROSS		
TEE		
90° BEND - HORIZONTAL		
45° BEND - HORIZONTAL		
22-½° BEND - HORIZONTAL		
11-¼° BEND - HORIZONTAL		
BEND - VERTICAL		
PLUG		



INDEX

SCALE: 1" = 300'

GENERAL NOTES

1. ALL TOPOGRAPHIC INFORMATION IS BASED ON SURVEY FIELD DATA PROVIDED BY ATLAS SURVEYING, INC. ELEVATIONS ARE BASED UPON NAVD 88 VERTICAL DATUM. THE HORIZONTAL DATUM IS SOUTH CAROLINA STATE PLANE COORDINATE SYSTEM. EAST ZONE NAD 83. CONTACT ENGINEER IMMEDIATELY IF FIELD ELEVATIONS VARY FROM EXISTING GROUND ELEVATIONS DISPLAYED. VERIFY CHANGES IN ELEVATIONS RESULTING FROM CONTRACTOR CLEARING AND STRIPPING.
2. BOUNDARY INFORMATION FOR THIS PROJECT IS BASED UPON AN AS-BUILT, TREE & TOPOGRAPHIC SURVEY OF #655 OLD MILLER ROAD, AND INTERSECTION OF BLUFFTON PARKWAY AND BUCKWALTER PARKWAY, PREPARED BY THOMAS & HUTTON, DATED 07-01-05, REVISED 03-27-06, RECORDED IN PB109 PAGE 193.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ESTABLISH SUPPLEMENTAL CONTROL WITHIN THE PROJECT AS NEEDED. SEE SURVEY CONTROL PLAN FOR BENCHMARKS ASSOCIATED WITH THIS PROJECT.
4. PIPE, FITTINGS, VALVES AND OTHER ACCESSORIES SHALL, UNLESS OTHERWISE DIRECTED, BE UNLOADED AT THE POINT OF DELIVERY, AND STORED WHERE THEY WILL BE PROTECTED AND WILL NOT BE HAZARDOUS TO TRAFFIC. THEY SHALL AT ALL TIMES BE HANDLED WITH CARE TO AVOID DAMAGE. THE INTERIOR OF ALL PIPE, FITTINGS AND OTHER ACCESSORIES SHALL BE KEPT FROM DIRT AND FOREIGN MATTER AT ALL TIMES.
5. ANY DEFECTIVE, DAMAGED OR UNSOUND PIPE SHALL BE REJECTED. ALL FOREIGN MATTER OR DIRT SHALL BE REMOVED FROM THE INSIDE OF THE PIPE BEFORE IT IS LOWERED INTO ITS POSITION IN THE TRENCH AND SHALL BE KEPT CLEAN BY ACCEPTABLE MEANS DURING AND AFTER LAYING. CARE SHALL BE TAKEN TO PREVENT DIRT FROM ENTERING THE JOINT SPACE. AT TIMES WHEN PIPE LAYING IS NOT IN PROGRESS, THE OPEN ENDS OF THE PIPE SHALL BE CLOSED BY ACCEPTABLE MEANS AND NO TRENCH WATER SHALL BE PERMITTED TO ENTER THE PIPE.
6. CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS AND INVERTS BEFORE STARTING WORK, THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY WITH DISCREPANCIES AND AWAIT WRITTEN RESPONSE FROM ENGINEER PRIOR TO FROM ENGINEER PRIOR TO PROCEEDING WITH INSTALLATION.
7. CONTRACTOR SHALL COORDINATE TIE IN OF NEW WATER & SEWER FACILITIES WITH BEAUFORT JASPER WATER AND SEWER AUTHORITY. ALL WATER AND SEWER MATERIALS AND INSTALLATION SHALL COMPLY WITH LATEST VERSION OF BEAUFORT JASPER WATER AND SEWER AUTHORITY'S TECHNICAL SPECIFICATIONS. BJWSA SPECIFICATIONS SHALL GOVERN AND TAKE PRECEDENCE OVER CONFLICTS FOUND WITH THOMAS AND HUTTON'S SPECIFICATIONS.
8. CONTRACTOR SHALL MAINTAIN MINIMUM COVER OVER THE WATER MAIN PIPE BARREL OF 3'-0" UNLESS OTHERWISE INDICATED.
9. SHOULD PIPE , FITTINGS AND OTHER MATERIALS BE NEEDED IN ADDITION TO THAT SHOWN ON THE DRAWING BECAUSE PIPELINE WAS NOT INSTALLED TO THE ALIGNMENT SHOWN. THEN THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THOSE NECESSARY MATERIALS AND PROVIDING THE EQUIPMENT AND LABOR TO INSTALL THEM TO MEET THE DESIGN INTENT OF WATER MAIN AT NO COST TO THE OWNER.
10. ALL WATER USED FOR CONSTRUCTION SHALL BE METERED THROUGH AN ACCEPTABLE BACK FLOW PREVENTION DEVICE AND FIRE HYDRANT METER.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNDERGROUND UTILITIES AND SHALL COORDINATE ALL WORK WITH THE OWNER AND UTILITY COMPANIES.
12. THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS OR IN ANY WAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND DO NOT BIND THOMAS & HUTTON.
13. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND DETAILS.
14. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER 48 HOURS IN ADVANCE OF ALL REQUIRED TESTS AND INSPECTIONS.
15. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES OTHER THAN THOSE SHOWN ARE ENCOUNTERED DURING CONSTRUCTION . THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND TAKE STEPS TO PROTECT THE LINE(S) AND ENSURE CONTINUED SERVICE. DAMAGE CAUSED TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR. ADDITIONALLY, THE CONTRACTOR SHALL CONFIRM THE CONNECTION POINTS OF NEW UTILITIES TO EXISTING UTILITIES PRIOR TO BEGINNING NEW CONSTRUCTION.
16. IF WORK IS SUSPENDED OR DELAYED FOR 14 DAYS, THE CONTRACTOR SHALL TEMPORARILY STABILIZE THE DISTURBED AREA AT NO ADDITIONAL COST TO THE OWNER.
17. ANY DAMAGE TO EXISTING PAVEMENT, SIDEWALKS, LANDSCAPING, ACCESS ROADS AND/OR DRIVEWAYS MUST BE REPAIRED AT CONTRACTORS EXPENSE. REPAIRS MADE SHALL BE TO THE SATISFACTION OF THE PROPERTY OWNER(S) EFFECTED BY DAMAGE OR THE TOWN OF BLUFFTON ENGINEER AS APPICABLE.
18. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL AND PREVENTION STRUCTURES SHOWN ON THE PLANS. BOTH MUST BE ACCEPTABLE TO THE ENGINEER AND THE TOWN OF BLUFFTON PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES.
19. A COMPLETE SET OF PERMITTED DRAWINGS AND SPECIFICATIONS MUST BE MAINTAINED ON SITE AT ALL TIMES THAT THE CONTRACTOR IS PERFORMING WORK. THESE DRAWINGS SHALL BE MADE AVAILABLE UPON REQUEST.
20. THE CONTRACTOR SHALL NOT BEGIN CONSTRUCTION UNTIL THE PROPER PERMITS HAVE BEEN OBTAINED.
21. CONTRACTOR WILL BE REQUIRED TO ADJUST MANHOLE FRAMES, VALVE COVERS AND OTHER ACCESSIBLE STRUCTURES TO MATCH FINAL GRADE AT NO ADDITIONAL COST.
22. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CONSTRUCTED SIMULTANEOUSLY WITH THE DISTURBANCE OF THE LAND AND SHALL REMAIN FUNCTIONAL UNTIL THE CONTRIBUTING DISTURBED AREAS ARE STABILIZED. SILT BARRIERS WILL BE INSTALLED AS NECESSARY TO PREVENT EXCESSIVE SEDIMENTATION OF DOWNSTREAM AREAS.
23. CONTRACTOR SHALL GRADE AREAS TO DRAIN FOR POSITIVE FLOW PRIOR TO FINAL ACCEPTANCE.
24. ALL DRAINAGE WILL BE MADE FUNCTIONAL DAILY AS WORK PROGRESSES.
25. EACH EXISTING ROAD WILL BE CLEANED UP AND RESTORED DAILY.
26. CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES BEFORE WORK COMMENCES, EVEN IF UTILITY IS NOT SHOWN ON THE PLANS. CONTRACTOR SHALL VERIFY UTILITY WITHIN THE PROJECT LIMITS AND NOTIFY THE ENGINEER OF CONFLICTS OR VARIANCES TO THE PLANS PRIOR TO BEGINNING WORK OR PURCHASE OF MATERIALS.
27. IT IS THE OBLIGATION OF THE CONTRACTOR TO MAKE THEIR OWN INTERPRETATION OF ALL SURFACE AND SUBSURFACE DATA AVAILABLE AS TO THE NATURE AND EXTENT OF THE MATERIALS TO BE EXCAVATED, WASTED, GRADED AND COMPACTED. THE INFORMATION SHOWN ON THESE PLANS IN NO WAY GUARANTEES THE AMOUNT OR NATURE OF THE MATERIAL TO BE ENCOUNTERED.
28. CONTROL OF THE WATER FLOWING THROUGH THE EXISTING DRAINAGE PATTERNS DURING THE CONSTRUCTION PERIOD SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE EXISTING DRAINAGE CONVEYANCE SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FILL AND OR GRADING TO MEET THE FINISHED PLAN GRADES AND ELIMINATE ANY AND ALL AREAS WHICH ARE LOW AND DO NOT DRAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING PROPER DRAINAGE FOR ANY AREAS WHICH ARE CHANGED AS A RESULT OF FIELD ADJUSTMENTS TO THE CONSTRUCTION PLANS. ALL PENALTIES, CLAIMS AND FEES IMPOSED ON OWNER AS A RESULT OF DAMAGES CAUSED BY ACTIONS OF THE CONTRACTOR, IT'S EMPLOYEES OR SUBCONTRACTORS SHALL BE BORNE IN FULL BY THE CONTRACTOR.
29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PHASING OF CONSTRUCTION AND THE COORDINATION,SEQUENCING AND SUPERVISION OF CONSTRUCTION ACTIVITIES. ANY AND ALL COST ASSOCIATED WITH PROJECT PHASING WILL BE BORNE IN FULL BY THE CONTRACTOR.
30. THE CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS WITHIN THE DISTURBED LIMITS WHICH ARE NECESSARY TO COMPLETE THE WORK. AREAS OUTSIDE OF THESE LIMITS SHALL BE LEFT IN THEIR NATURAL STATE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
31. ALL CLEARING DEBRIS AND EXCESS SOIL MATERIALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL PAYMENT. CLEARING DEBRIS MAY BE BURNED ON SITE IF ALLOWED BY STATE AND LOCAL REGULATIONS.
32. ALL VEHICLES MUST TRAVERSE CONSTRUCTION EXITS TO REMOVE MUD FROM TIRES BEFORE ENTERING ANY PAVED PUBLIC RIGHT-OF-WAYS.
33. WETLAND IMPACTS, PRESERVED WETLANDS AND WETLAND BUFFERS DISPLAYED WITHIN THESE PLANS ARE BASED UPON THE DEPARTMENT OF THE ARMY PERMIT #2001-1G-122. CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THIS PERMIT. A COPY OF THE PERMIT IS AVAILABLE UPON REQUEST.
34. THE TOWN OF BLUFFTON STORMWATER DIVISION SHALL BE NOTIFIED 24 HOURS PRIOR TO ANY DEWATERING ACTIVITIES.

GENERAL INFORMATION

PREPARED FOR:

UNIVERSITY INVESTMENTS, LLC
PO BOX 23767
HILTON HEAD ISLAND, SC 29925

UTILITIES: WATER/SEWER:
BEAUFORT JASPER WATER
AND SEWER AUTHORITY
6 SNAKE ROAD
OKATIE, SC. 29909-3937
(843) 987-9250

COUNTY BEAUFORT

TOWN BLUFFTON

ZONING BUCKWALTER PUD

SURVEYOR:
ATLAS SURVEYING, INC.
168 BOARDWALK DRIVE, SUITE A
RIDGELAND, S.C. 29936
(843) 645-9277

ENGINEER:
THOMAS & HUTTON
50 PARK OF COMMERCE WAY
SAVANNAH, GA 31405
(912) 234-5300

OWNER:
UNIVERSITY INVESTMENTS, LLC
CONTACT: JAKE REED
PO BOX 23767
HILTON HEAD ISLAND, SC 29925
(949) 945-4959

SOUTH CAROLINA PROFESSIONAL ENGINEER CERTIFICATE OF AUTHORIZATION THOMAS & HUTTON ENGINEERING No. C00285

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 28853 NATHAN B. LONG

PERMIT SET - FOR REVIEW PURPOSES ONLY

NO.	REVISIONS	BY	DATE

THOMAS & HUTTON
50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300
www.thomasandhutton.com

UNIVERSITY INVESTMENTS, LLC
BLUFFTON, SOUTH CAROLINA
PARCELS 12A, 12B, & 12C
GENERAL NOTES AND LEGEND

JOB NO:	J-25312.0015
DATE:	05/30/23
DRAWN:	CGC
DESIGNED:	JDF
REVIEWED:	HAC
APPROVED:	NBL
SCALE:	1" = 300'

G1.1

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PARCELS 12A, 12B, & 12C

EXISTING CONDITIONS PLAN

JOB NO:	J-2532.0015
DATE:	05/30/23
DRAWN:	CGC
DESIGNED:	JDF
REVIEWED:	HAC
APPROVED:	NBL
SCALE:	AS NOTED

G2.1

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SCALE:	AS NOTED

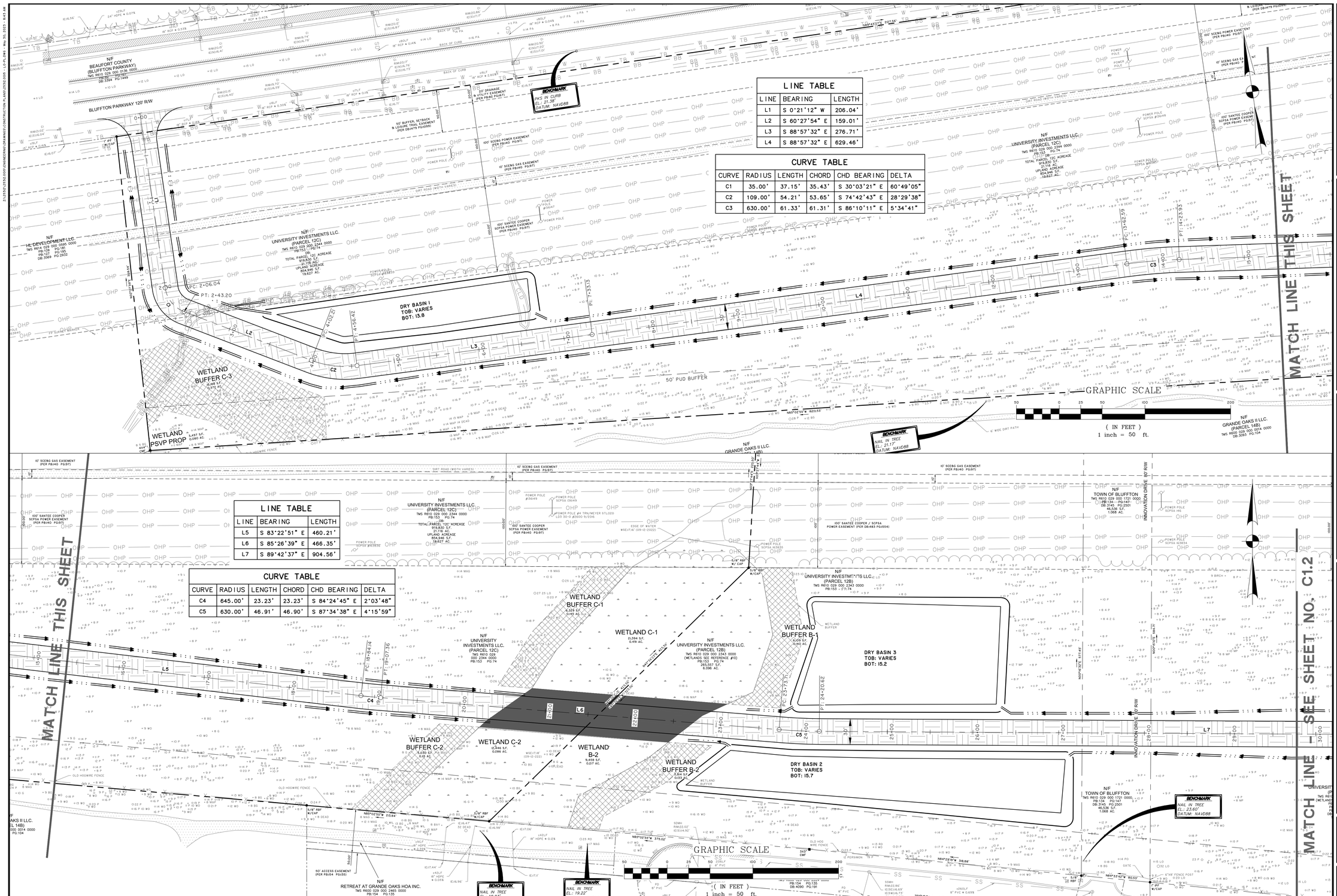
G2.2

LINE TABLE		
LINE	BEARING	LENGTH
L1	S 0°21'12" W	206.04'
L2	S 60°27'54" E	159.01'
L3	S 88°57'32" E	276.71'
L4	S 88°57'32" E	629.46'

CURVE TABLE					
CURVE	RADIUS	LENGTH	CHORD	CHD BEARING	DELTA
C1	35.00'	37.15'	35.43'	S 30°03'21" E	60°49'05"
C2	109.00'	54.21'	53.65'	S 74°42'43" E	28°29'38"
C3	630.00'	61.33'	61.31'	S 86°10'11" E	5°34'41"

LINE TABLE		
LINE	BEARING	LENGTH
L5	S 83°22'51" E	460.21'
L6	S 85°26'39" E	466.35'
L7	S 89°42'37" E	904.56'

CURVE TABLE					
CURVE	RADIUS	LENGTH	CHORD	CHD BEARING	DELTA
C4	645.00'	23.23'	23.23'	S 84°24'45" E	2°03'48"
C5	630.00'	46.91'	46.90'	S 87°34'38" E	4°15'59"



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BLUFFTON, SOUTH CAROLINA

PARCELS 12A, 12B, & 12C

STRIPING, SIGNAGE, AND LAYOUT PLAN

JOB NO:	J-253I2.0015
DATE:	05/30/23
DRAWN:	CGC
DESIGNED:	JDF
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APPROVED:	NBL
SCALE:	AS NOTED

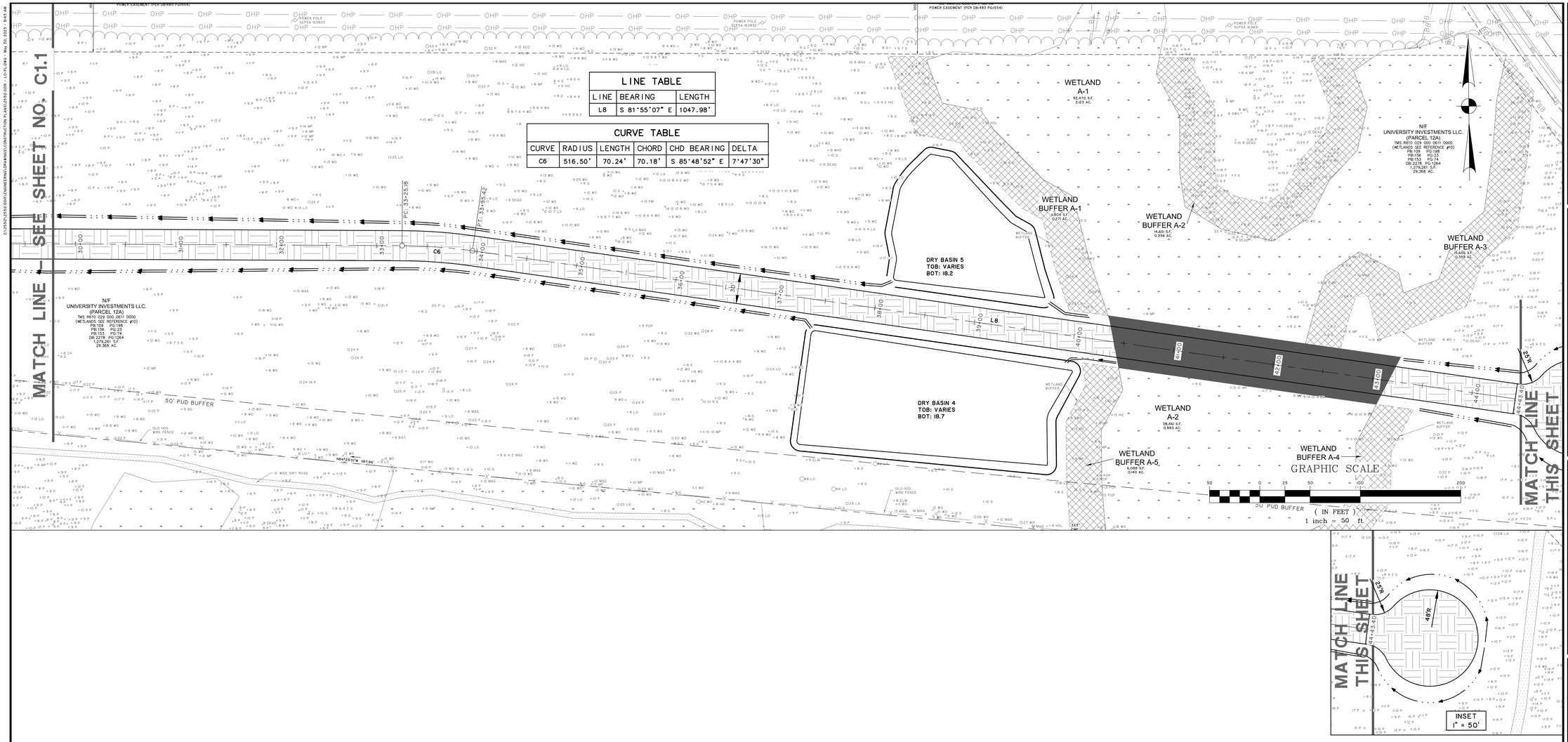
C1.1

ATTACHMENT 3

Section X. Item #3.

LINE TABLE		
LINE	BEARING	LENGTH
L8	S 81°55'07" E	1047.98'

CURVE TABLE					
CURVE	RADIUS	LENGTH	CHORD	CHD BEARING	DELTA
C6	516.50'	70.24'	70.18'	S 85°48'52" E	7°47'30"



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BLUFFTON, SOUTH CAROLINA
PARCELS 12A, 12B, & 12C
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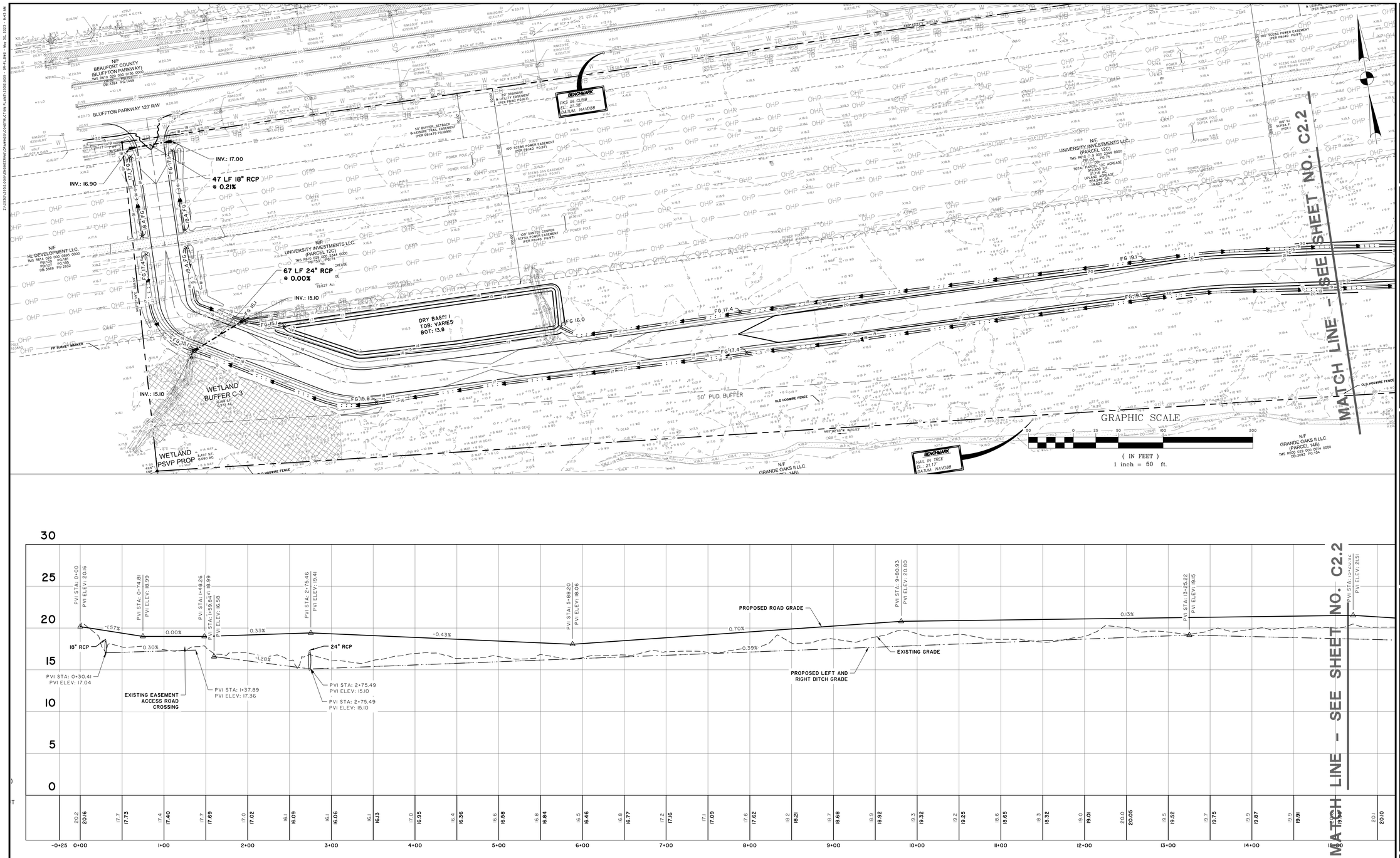
C1.2



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GRADING AND DRAINAGE PLAN

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C2.1

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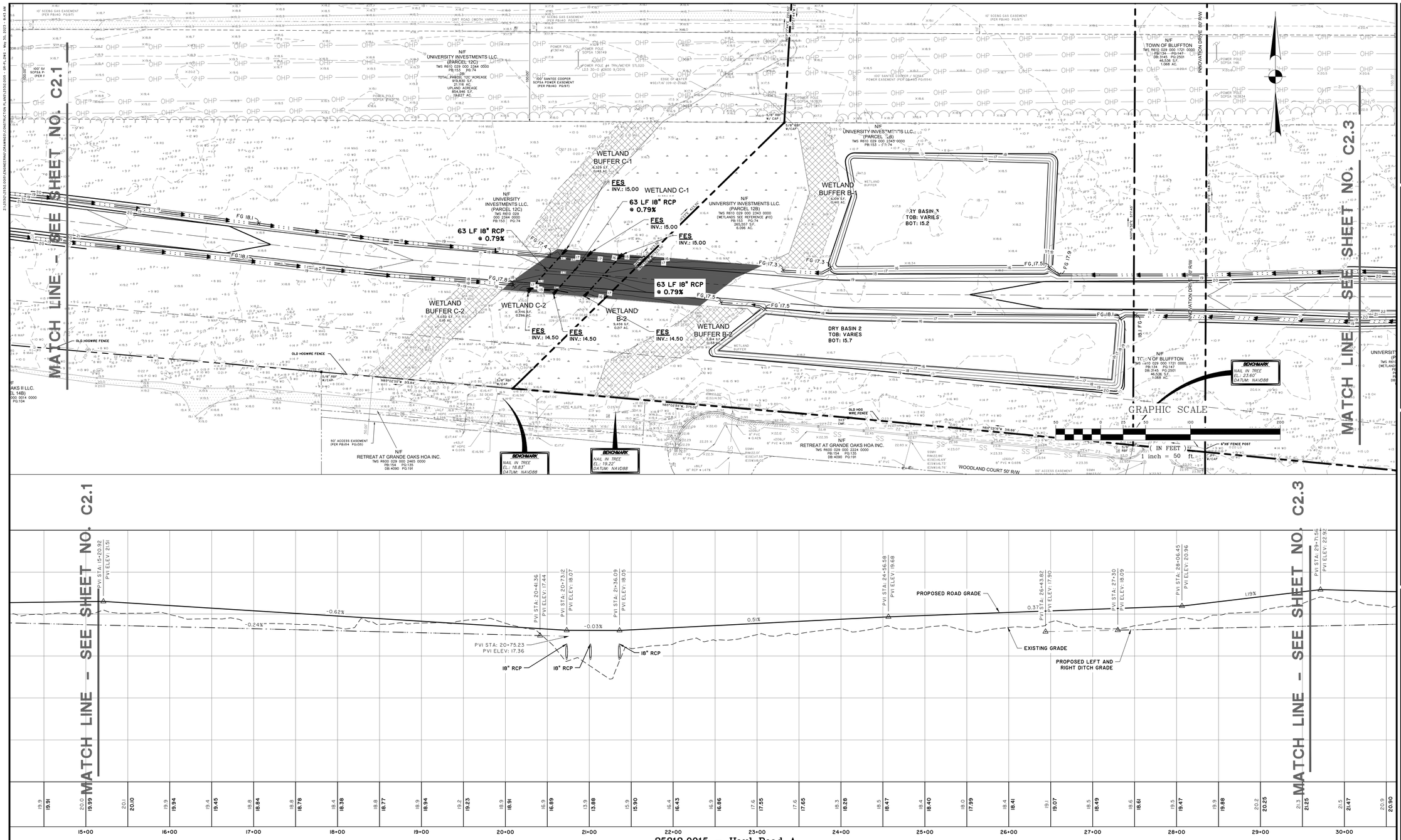

25312.0015 – Haul Road A

STATIONS: -0+25 – 45+50

SCALE: HORZ.: 1" = 50'

VERT.: 1" = 5'

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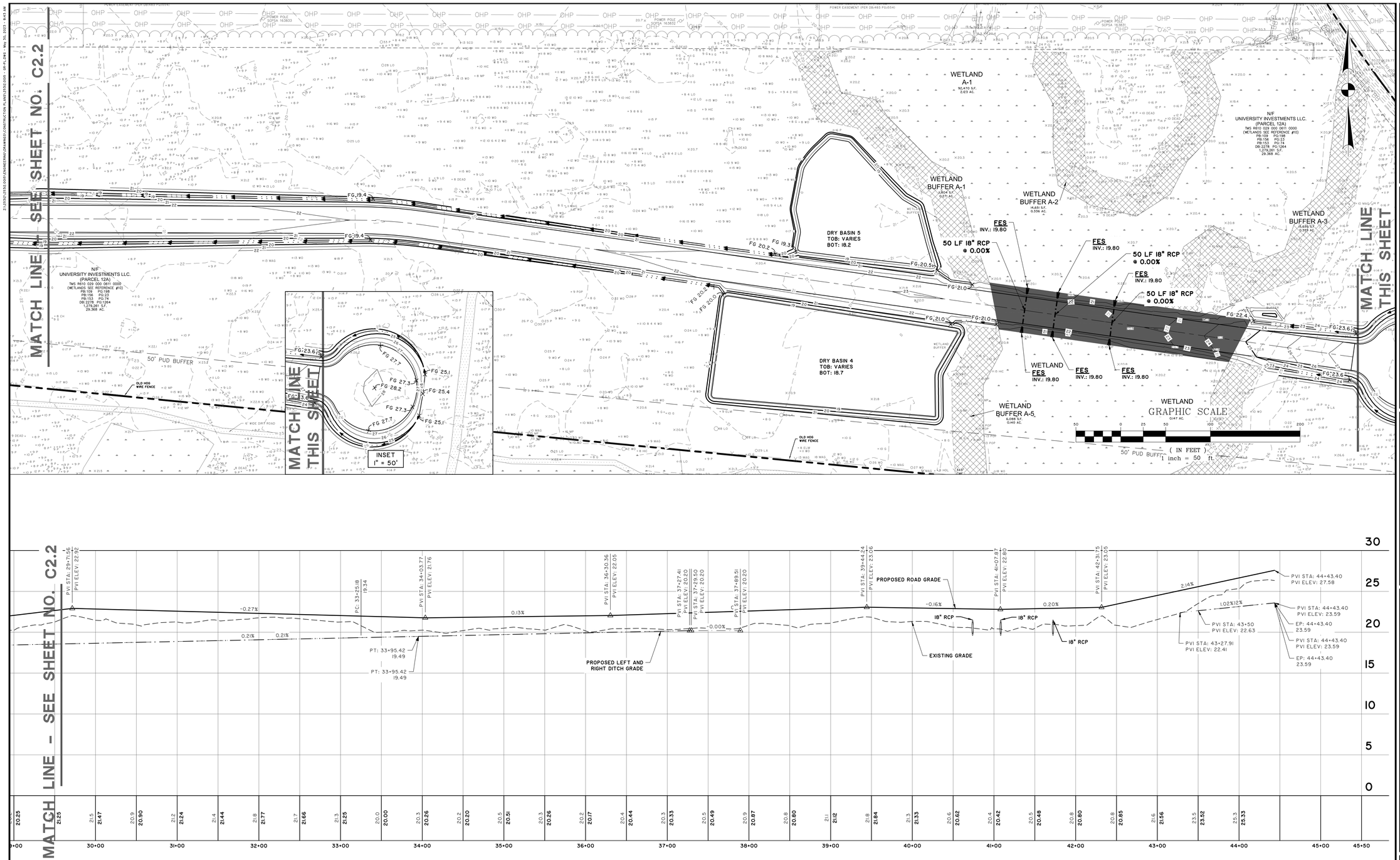

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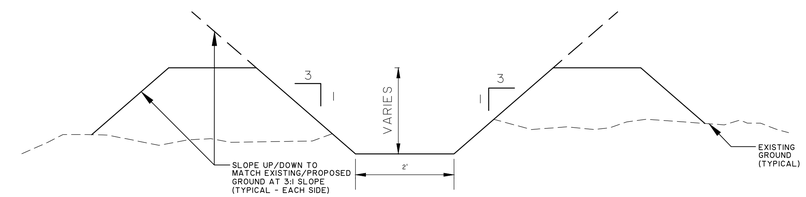
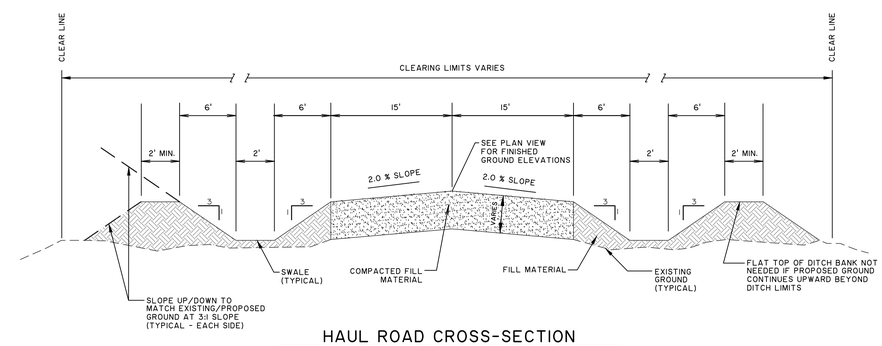


SECTION

SWALE DETAIL

NOT TO SCALE



HAUL ROAD CROSS-SECTION

NOT TO SCALE

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PARCELS 12A, 12B, & 12C

GRADING AND DRAINAGE DETAILS

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APPROVED:	NBL
SCALE:	1" = 1'

C2.1

STORMWATER POLLUTION PREVENTION PLAN

I. SITE DESCRIPTION

A. PROJECT DESCRIPTION

A.1.	PROJECT AREA	58 ACRES
A.2.	AREA DISTURBED	9.6 ACRES
A.3.	PERCENT IMPERVIOUS AREA BEFORE CONSTRUCTION	0 %
A.4.	RUNOFF COEFFICIENT BEFORE CONSTRUCTION	46.7 CN
A.5.	PERCENT IMPERVIOUS AREA AFTER CONSTRUCTION	0 %
A.6.	RUNOFF COEFFICIENT AFTER CONSTRUCTION	51.3 CN

B. DESCRIPTION OF CONSTRUCTION ACTIVITY

WORK CONSISTS OF CLEARING, GRADING, EXCAVATION, DRAINAGE IMPROVEMENTS, GRASSING, AND EARTH ROADS.

C. RUNOFF DATA

C.1.	SOIL CLASSIFICATIONS:	(HSG) A, A/D, B/D, C/D
C.2.	LAND USE(S):	COMMERCIAL

D. RECEIVING WATERS

E. CLOSEST RECEIVING WATERS: OKATEE RIVER

F. ULTIMATE RECEIVING WATERS: MAY RIVER

G. FLOOD

G.1.	FEMA FLOOD ZONE(S):	ZONE X
G.2.	FEMA FLOOD INSURANCE MAP(S):	45013C0270G, EFFECTIVE MARCH 23, 2021

II. CONTROL MEASURES

1. EROSION AND SEDIMENT CONTROLS

PRIOR TO START OF CONSTRUCTION, ALL EXTERIOR SILT FENCE WILL BE INSTALLED AS SHOWN ON THE PLANS.

1.1. CLEARING

1.1.1. AS CLEARING IS COMPLETED, ADDITIONAL SILT FENCE WILL BE INSTALLED WHERE NECESSARY, SUCH AS POINTS WHERE FLOWS BECOME CHANNELIZED, AND OTHER POINTS WHERE EXCESSIVE RUNOFF VELOCITIES MAY OCCUR.
1.1.2. INSTALL CONSTRUCTION ENTRANCES / EXITS BEFORE BEGINNING CLEARING
1.1.3. CONSTRUCTION DELAYS IN ANY ONE AREA GREATER THAN 14 DAYS PRIOR TO START OF ROUGH GRADING WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.
1.1.4. MAINTAIN EXISTING VEGETATION WHENEVER POSSIBLE AND MINIMIZE THE AREA OF DISTURBANCE. RETAIN AND PROTECT TREES TO ENHANCE FUTURE LANDSCAPING EFFORTS AND REDUCE RAINDROP IMPACT.
1.1.5. INSTALL ALL SEDIMENT CONTROL PRACTICES PRIOR TO ANY UP-SLOPE SOIL DISTURBING ACTIVITIES.
1.1.6. PHASE CONSTRUCTION ACTIVITIES TO MINIMIZE THE AREAS DISTURBED AT ONE TIME. THIS WILL ALSO ALLOW COMPLETED AREAS TO BE STABILIZED AND RE-VEGETATED BEFORE DISTURBING ADJACENT SITES. THE NEED FOR TEMPORARY EROSION CONTROL MEASURES MAY BE AVOIDED BY COMPLETING A PHASE AND INSTALLING PERMANENT EROSION CONTROL MEASURES WHEN THE FINAL GRADE IS ATTAINED.
1.1.7. MAINTAIN AND PROTECT ALL NATURAL WATERWAYS. RETAIN AT LEAST A 35-FOOT UNDISTURBED BUFFER OF NATURAL VEGETATION ALONG ALL WATERWAYS TO FILTER OUT SEDIMENT AND OTHER POLLUTANTS. MAINTAIN A 45-FOOT UNDISTURBED BUFFER AROUND SENSITIVE WATERS.
1.1.8. INSTALL SILT FENCE (OR BIO ROLLS/ROCK SOCK PRODUCTS) ON THE DOWN-SLOPE PERIMETER OF ALL DISTURBED AREAS PRIOR TO ANY SOIL DISTURBING ACTIVITIES (INCLUDING CLEARING AND GRUBBING). SILT FENCE CAN TREAT A MAXIMUM OF 100 SQUARE FEET PER LINEAL FOOT OF FENCE. INSTALL SILT FENCE IN SHORTER REACHES ON THE CONTOUR WITH EACH END TURNED UP-SLOPE . SWALES AND SHORELAND AREAS SHOULD ALSO BE PROTECTED WITH SILT FENCE, BIO ROLLS, OR ROCK SOCKS.
1.1.9. IN AREAS OF CONCENTRATED FLOW INSTALL STRAW BALE CHECKS, ROCK CHECK DAMS, TRIANGULAR DIKES, BIO ROLL BLANKETS, OR ROCK SOCKS TO SLOW RUNOFF AND TRAP SEDIMENT.
1.1.10. USE TEMPORARY SLOPE DRAINS OR ROCK CHUTES TO MOVE WATER DOWN STEEP SLOPES.
1.1.11. CONSTRUCT SEDIMENT BASINS FOR DRAINAGE AREAS GREATER THAN 10 ACRES

1.2. ROUGH GRADING

1.2.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING ROUGH GRADING, DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.
1.2.2. ALL AREAS NOT SUBJECT TO FURTHER CONSTRUCTION (DRAINAGE, SANITARY SEWER, ROADS, WATER DISTRIBUTION SYSTEMS, OR STORM WATER FACILITIES) SHALL BE GRASSED WITH A PERMANENT COVER.
1.2.3. COVER ANY STOCK PILED TOPSOIL WITH PLASTIC (OR OTHER IMPERVIOUS COVERING) OR USE A TEMPORARY SEED MIX. USE STOCKPILED TOPSOIL AS EARTHEN BERMS TO SERVE AS TEMPORARY SEDIMENT BASINS.

1.3. DRAINAGE

1.3.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING DRAINAGE INSTALLATION.
1.3.2. CONSTRUCTION DRAINAGE WILL BE ROUTED THROUGH LAKES, WHICH WILL ACT AS SEDIMENT BASINS OR OTHER ACCEPTABLE SEDIMENT BASINS/TRAPS.
1.3.3. STORM DRAIN INLET PROTECTION AS SHOWN ON DETAIL SHEET SHALL BE INSTALLED ON ALL CURB INLETS, STORM DRAIN MANHOLES, JUNCTION BOXES, AND GRATE INLETS.
1.3.4. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF THE NEXT CONSTRUCTION SEQUENCE WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.
1.3.5. ALL STORM LINES NOT IN STREETS OR OTHER PAVED AREAS ARE TO BE MULCHED AND SEEDED WITHIN 5 DAYS AFTER BACKFILL.

1.4. WASTE DISTRIBUTION SYSTEM INSTALLATION

1.4.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING INSTALLATION OF THE WATER DISTRIBUTION SYSTEM.
1.4.2. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.

1.5. WASTEWATER COLLECTION SYSTEM INSTALLATION

1.5.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING INSTALLATION OF THE WASTEWATER SYSTEM.
1.5.2. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.

1.6. CONSTRUCTION OF ROADS

1.6.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING ROAD CONSTRUCTION.
1.6.2. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.

1.7. GRASSING

1.7.1. ALL EXISTING CONTROLS WILL BE MAINTAINED UNTIL GRASSING IS ESTABLISHED
1.7.2. ANY AREAS THAT ERODE OR WHERE GRASS DOES NOT ESTABLISH ITSELF SHALL BE RE-GRADED AND RE-GRASSED.

2. STORM WATER MANAGEMENT

RUNOFF FROM THIS PROJECT WILL DISCHARGE INTO A STORM WATER MANAGEMENT SYSTEM. TREATMENT WILL OCCUR IN STORM WATER DETENTION PONDS.

3. OTHER CONTROLS

3.1. WASTE DISPOSAL

3.1.1. NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED TO ANY RECEIVING WATERS.
3.1.2. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED.
3.1.3. THIS PLAN SHALL COMPLY WITH STATE AND/OR LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS.
3.1.4. DUST CONTROL ON DISTURBED AREAS - CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITE AND HAUL ROUTES. THE PURPOSE OF THE MEASURE IS TO REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES, WHICH MAY BE HARMFUL OR INJURIOUS TO HUMAN HEALTH, WELFARE OR SAFETY, OR TO ANIMALS OR PLANT LIFE.

III. MAINTENANCE

1. MAINTENANCE PROGRAM

1.1. THE SITE SUPERINTENDENT, OR HIS/HER REPRESENTATIVE, SHALL MAKE VISUAL INSPECTIONS OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREAS (I.E. SEEDED AND MULCHED AND/OR SODDED AREAS) ON A DAILY BASIS; ESPECIALLY AFTER HEAVY RAINFALL EVENT TO INSURE THAT ALL CONTROLS ARE MAINTAINED AND PROPERLY FUNCTIONING. ANY DAMAGED CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORK DAY INCLUDING RE-SEEDING AND MULCHING OR RE-SODDING IF NECESSARY.

1.2. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE, ALL DRAINAGE SWALES, POCKETS, DEPRESSION, LOW LINES, AND OUTLET DITCHES SHALL DRAIN EFFECTIVELY AT ALL TIMES. SETTLEMENT OR WASHING THAT MAY OCCUR SHALL BE REPAIRED BY THE CONTRACTOR. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN AN EFFECTIVE BARRIER. MAINTAIN THE CONSTRUCTION EXIT IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TACKED ONTO PUBLIC ROADWAYS. RESEED AND MULCH AREA WHERE SEEDING EMERGENCE IS POOR, OR WHERE EROSION OCCURS. PROTECT FROM TRAFFIC AS MUCH AS POSSIBLE. INSPECT ALL MULCHES PERIODICALLY, AND AFTER RAINSTORMS TO CHECK FOR EROSION, DISLOCATION OR FAILURE. IF WASHOUT OCCURS, REPAIR THE SLOPE GRADE, RESEED AND REINSTALL MULCH. FOLLOW THE CONSTRUCTION SEQUENCE THROUGHOUT THE PROJECT DEVELOPMENT. WHEN CHANGES IN CONSTRUCTION ACTIVITIES ARE NEEDED, AMEND THE SEQUENCE SCHEDULE IN ADVANCE TO MAINTAIN MANAGEMENT CONTROL. IF MAJOR CHANGES ARE NECESSARY, SEND A COPY OF THE MODIFIED SCHEDULE TO THE ENGINEER. SEDIMENT AND EROSION CONTROL MEASURES WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE DISTURBED AREAS ARE STABILIZED.

2. SILT FENCE

SILT FENCES WILL BE MONITORED DURING CONSTRUCTION. ANY SILT FENCE WHICH IS NOT FUNCTIONING PROPERLY WILL BE PROMPTLY REPAIRED. CLEAN OUT THE SILT FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE OR REPLACE WITH FUNCTIONAL SILT FENCE WITHIN 24 HOURS. USE OF HOSES AND WATER TO FLUSH THE SEDIMENT INTO THE STORM INLETS IS UNACCEPTABLE.

3. SEDIMENTATION BASINS

SEDIMENTATION BASINS WHICH ARE AT 50% USED CAPACITY OR APPROACHING SUCH CAPACITY SHALL BE RE-EXCAVATED TO ORIGINAL DIMENSIONS AND THE SILT PROPERLY DISPOSED OF.

4. SEDIMENT LOGS/ROLLS

SEDIMENT LOGS/ROLLS OR OTHER CONTROL MEASURES WHICH BEGIN TO DISINTEGRATE OR FUNCTION INEFFECTIVELY SHALL BE PROMPTLY REPLACED.

5. VEGETATION COVER

ANY VEGETATION COVER SERVING TO STABILIZE DISTURBED SOILS WHICH IS ITSELF DISTURBED SHALL IMMEDIATELY BE REPLACED.

6. CONSTRUCTION ENTRANCE

MAINTAIN ROCK CONSTRUCTION ENTRANCE AND CLEAN ADJACENT ROADS OF ANY MUD TRACKED ONTO THEM.

IV. INSPECTIONS

1. QUALIFIED PERSONNEL WILL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE, AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION THAT HAVE NOT BEEN FINALLY STABILIZED, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. WHERE SITES HAVE BEEN FINALLY STABILIZED SUCH INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH DURING THE WARRANTY PERIOD.

2. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.

3. A WRITTEN REPORT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, WEATHER INFORMATION FOR THE PERIOD SINCE THE LAST INSPECTION (OR SINCE COMMENCEMENT OF CONSTRUCTION ACTIVITY) INCLUDING A BEST ESTIMATE OF THE BEGINNING OF EACH STORM EVENT, DURATION OF EACH STORM EVENT, APPROXIMATE AMOUNT OF RAINFALL FOR EACH STORM EVENT (IN INCHES) AND WHETHER ANY DISCHARGES OCCURRED, LOCATION(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE, LOCATION(S) OF BMP'S THAT NEED MAINTENANCE, LOCATION(S) OF BMP'S THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, LOCATION(S) WHERE ADDITIONAL BMP'S ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION AND ANY CORRECTIVE ACTION REQUIRED INCLUDING ANY CHANGES TO SWPPP NECESSARY AND IMPLEMENTATION DATES.

4. THE REPORT SHALL BE MAINTAINED AT LEAST THREE YEARS FROM THE DATE THE SITE IS FINALLY STABILIZED. THE REPORT MUST BE SIGNED AND SHALL CONTAIN A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN AND THE NPDES PERMIT REFERENCED ABOVE. THE CONTRACTOR SHALL MAINTAIN THIS REPORT. THE REPORT SHALL BE SUBMITTED TO THE ENGINEER AND OWNER.

V. LONG TERM MAINTENANCE OF DRAINAGE AND STORM WATER MANAGEMENT SYSTEM

THE ROADS AND DRAINAGE SYSTEM WILL BE OWNED AND MAINTAINED BY ARGENT LAND HOLDINGS, LLC AFTER CONSTRUCTION IS COMPLETE.

VI. SC DHEC STANDARD NOTES

1. IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS. IN ADDITION TO GRASSING / HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.

2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW:

2.1. WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
2.2. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.

3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF SITE INSPECTIONS IDENTIFY BMP'S THAT ARE DAMAGED OR ARE NOT OPERATING EFFECTIVELY, MAINTENANCE MUST BE PERFORMED AS SOON AS PRACTICAL OR AS REASONABLY POSSIBLE BEFORE THE NEXT STORM EVENT WHENEVER PRACTICAL.

4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE ANY SEDIMENTS BEFORE BEING PUMPED INTO ANY WATERS OF THE STATE.

5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.

6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO THE PAVED ROADWAY FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT AS MAY BE REQUIRED.

7. RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C. REG. 72-300 AND SCR100000.

8. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.

9. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN NOT BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS

10. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.

11. A COPY OF THE SWPPP, INSPECTION RECORDS AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.

12. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.

13. MINIMIZE SOIL COMPACTION IN AREAS NOT UNDER PAVEMENTS AND /OR STRUCTURES AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.

14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUAL OR BETTER TREATMENT PRIOR TO DISCHARGE.

15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).

16. THE FOLLOWING DISCHARGES ARE PROHIBITED:

16.1. WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
16.2. WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
16.3. FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
16.4. SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.

17. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.

18. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF PERMIT SCR100000 AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.

19. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES, FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE, THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

VII. EROSION, SEDIMENTATION & POLLUTION CONTROL NOTES

1. THE IMPLEMENTATION OF THESE EROSION SEDIMENT CONTROL (ESC) PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.

2. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.

3. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS, DURING THE CONSTRUCTION PERIOD. THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.

4. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.

5. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 24 HOURS FOLLOWING A MAJOR STORM EVENT.

6. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING AND PRIOR TO FINAL INSPECTION. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.

7. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

8. BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY, THE EXISTING STORM WATER INLET(S) THAT RECEIVING RUNOFF FROM THE PROPOSED WORK AREA SHALL BE PROTECTED. THE TEMPORARY INLET PROTECTION MUST REMAIN IN PLACE UNTIL THE CONSTRUCTION ACTIVITY IS COMPLETED, THE STREET HAS BEEN SWEPT AND ANY EXPOSED SOILS ARE STABILIZED. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REMOVING ANY TEMPORARY INLET PROTECTION INSTALLED; AFTER ALL DISTURBED AREAS ARE STABILIZED. TEMPORARY PROTECTION OF THE INLETS MAY BE ACCOMPLISHED BY ONE OR MORE OF THE FOLLOWING:

8.1. USE OF GRAVEL BAGS TO FILTER THE SEDIMENT FROM ANY RUNOFF. TO MAKE A GRAVEL BAG, USE A BAG MADE OF GEOTEXTILE FABRIC (NOT BURLAP) AND FILL WITH EITHER 3/4 INCH ROCK OR 1/4 INCH PEA GRAVEL.
8.2. USE OF SEDIMENT LOGS TO FILTER THE SEDIMENT FROM ANY RUNOFF (AVAILABLE THROUGH LOCAL EROSION CONTROL SUPPLIERS).
8.3. USE OF ABOVE OR UNDER-GRATE FILTER BAGS OR DEVICES TO FILTER THE SEDIMENT FROM ANY RUNOFF (AVAILABLE THROUGH EROSION CONTROL SUPPLIERS).

9. WATER MAY NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION, SEDIMENTATION, OR FLOODING ON THE SITE, ON DOWNSTREAM PROPERTIES, IN THE RECEIVING CHANNELS, OR IN ANY STORM WATER INLET. WHEN SITE DEWATERING, WATER PUMPED FROM THE SITE, INCLUDING TRENCHES, SHALL BE TREATED BY ONE OF THE FOLLOWING:

9.1. TEMPORARY SEDIMENTATION BASINS
9.2. SEDIMENT FILTERING BAGS

10. THE CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL EXISTING UTILITIES. EXISTING UTILITIES ARE ALL UTILITIES THAT EXIST ON THE PROJECT IN AN ORIGINAL, RELOCATED OR NEWLY INSTALLED POSITION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE COST OF REPAIRS TO DAMAGED UNDERGROUND OR OVERHEAD FACILITIES, EVEN IF THE UTILITY IS NOT SHOWN ON THE SITE DEVELOPMENT PLANS. THE CONTRACTOR SHALL CONTACT THE LOCAL UTILITIES PROTECTION CENTER TO COORDINATE THE MARKING OF EXISTING UTILITY LINES A MINIMUM OF 96 HOURS PRIOR TO COMMENCEMENT OF ANY WORK.

11. THE CONTRACTOR SHALL FLUSH ALL INLETS AND PIPE AT THE COMPLETION OF CONSTRUCTION TO REMOVE SILT AND DEBRIS. THE CLEANING AND FLUSHING OF INLETS AND PIPE (EXISTING AND PROPOSED) SHALL BE CONSIDERED PART OF THE COST FOR THE PROJECT.

12. EGRESS FROM THE SITE SHALL BE CONTROLLED SUCH THAT VEHICLES LEAVING THE SITE MUST TRAVERSE CONSTRUCTION EXITS TO REMOVE MUD FROM TIRES.

13. SCHEDULE CONSTRUCTION ACTIVITIES TO MINIMIZE THE EXPOSED AREA AND DURATION OF EXPOSURE, IN SCHEDULING, TAKE INTO ACCOUNT THE SEASON AND THE WEATHER FORECAST.

14. EROSION CONTROL MEASURES ARE THE MINIMUM REQUIRED. THE CONTRACTOR SHALL PROVIDE ADDITIONAL CONTROL MEASURES AS DICTATED BY ACTUAL FIELD CONDITIONS AT THE TIME OF CONSTRUCTION IN ORDER TO PREVENT EROSION AND CONTROL SEDIMENT. EROSION AND SEDIMENT CONTROL MEASURES WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE ENTIRE PROJECT IS TERMINATED OR SUSPENDED FOR AN INDEFINITE LENGTH OF TIME, ALL DISTURBED AREAS SHALL BE PLANTED WITH PERMANENT VEGETATION.

15. THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS, OR IN ANY WAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, IS BASED UPON FIELD INVESTIGATIONS AND IS BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME IS SHOWN AS INFORMATION ONLY. IS NOT GUARANTEED AND DOES NOT BIND THOMAS & HUTTON, OR THE OWNER IN ANY WAY.

16. CONTRACTOR SHALL MAINTAIN SITE ON A DAILY BASIS TO PROVIDE FOR POSITIVE DRAINAGE. CONTRACTOR, AT HIS COST, SHALL GRADE SITE AND PROVIDE NECESSARY TEMPORARY DRAINAGE SWALES TO INSURE STORM WATER DOES NOT POND ON SITE.

17. SITE DRAINAGE SHALL BE ESTABLISHED TO PREVENT ANY PONDED WATER CONDITIONS WITHIN THE CONSTRUCTION AREA AND TO FACILITATE STORM WATER DISCHARGE.

18. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.

19. LIME RATES AND ANALYSIS:

19.1. AGRICULTURAL LIME SHALL BE APPLIED AT THE RATE SHOWN IN THE SEEDING SECTION UNLESS SOIL TESTS INDICATE OTHERWISE. GRADED AREAS REQUIRE LIME APPLICATION. IF LIME IS APPLIED WITHIN SIX MONTHS OF PLANTING PERMANENT PERENNIAL VEGETATION, ADDITIONAL LIME IS NOT REQUIRED. AGRICULTURAL LIME APPLICATION SHALL BE WITHIN THE SPECIFICATIONS OF THE

STORMWATER POLLUTION PREVENTION PLAN

TEMPORARY SEEDING - COASTAL

SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET	40												
RYE, GRAIN	56												
RYEGRASS	50												
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET	40												
JAPANESE MILLET	40												
RYE, GRAIN	56												
OATS	75												
RYEGRASS	50												

PERMANENT SEEDING - COASTAL

SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET	10												
BAHIAGRASS	40												
BROWNTOP MILLET	10												
BAHIAGRASS	30												
SERICEA LESPEDEZA	40												
BROWNTOP MILLET	10												
ATLANTIC COASTAL	15												
PANICGRASS	PLS												
BROWNTOP MILLET	10												
SWITCHGRASS	8												
(ALAMO)	PLS												
LITTLE BLUESTEM	4												
SERICEA LESPEDEZA	20												
BROWNTOP MILLET	10												
WEEPING LOVEGRASS	8												
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET	10												
BAHIAGRASS	40												
RYE, GRAIN	10												
BAHIAGRASS	40												
CLOVER, CRIMSON (ANNUAL)	5												
BROWNTOP MILLET	10												
BAHIAGRASS	30												
SERICEA LESPEDEZA	40												
BROWNTOP MILLET	10												
BERMUDA, COMMON	10												
SERICEA LESPEDEZA	40												
BROWNTOP MILLET	10												
BERMUDA, COMMON	12												
KOBE LESPEDEZA (ANNUAL)	10												
BROWNTOP MILLET	10												
BAHIAGRASS	20												
BERMUDA, COMMON	6												
SERICEA LESPEDEZA	40												
BROWNTOP MILLET	10												
SWITCHGRASS	8												
LITTLE BLUESTEM	PLS												
INDIANGRASS	3												

EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
SILT FENCE	
CLEARING LIMITS	CL CL
DIVERSION DIKE	DD
DIVERSION BERM	DB
TEMPORARY DIVERSION	TD
PERMANENT DIVERSION	PD
SUBSURFACE DRAIN	SSD
VEGETATED CHANNEL	
RIP RAP LINED CHANNEL	
ECB OR TRM LINED CHANNEL	
PAVED CHANNEL	PC
TREE PROTECTION	
SURFACE ROUGHENING	OR LG
TOP SOILING	
TEMPORARY SEEDING	TS
PERMANENT SEEDING	PS
MULCHING	M

EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
EROSION CONTROL BLANKET OR TURF REINFORCEMENT MAT	
FLEXIBLE GROWTH MATRIX	FGM
BONDED FIBER MATRIX	BFM
SODDING	SO
SLOPED SODDING	
STAKED SOD	
STAKED SOD AROUND INLET	OR
RIPRAP	
OUTLET PROTECTION - RIP RAP	
OUTLET PROTECTION - ECB OR TRM	
DUST CONTROL	DC
POLYACRYLAMIDE (PAM)	PAM
SEDIMENT BASIN	
SEDIMENT BASIN WITH SKIMMER	
SEDIMENT TRAP	
ROCK SEDIMENT DIKE	
SEDIMENT TUBE	

EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
ROCK CHECK DAM	OR
POROUS BAFFLES	
STABILIZED CONSTRUCTION ENTRANCE	
CONCRETE WASHOUT	
STORM DRAIN INLET PROTECTION - TYPE A FILTER FABRIC	A
STORM DRAIN INLET PROTECTION - TYPE A SEDIMENT TUBE	A
STORM DRAIN INLET PROTECTION - TYPE B HARDWARE FABRIC AND STONE	B
STORM DRAIN INLET PROTECTION - TYPE C BLOCK AND GRAVEL	C
STORM DRAIN INLET PROTECTION - TYPE D RIGID INLET FILTER	D
STORM DRAIN INLET PROTECTION - TYPE E SURFACE COURSE CURB INLET FILTER	E
STORM DRAIN INLET PROTECTION - TYPE F INLET TUBE	F
STORM DRAIN INLET PROTECTION - TYPE G IMPERVIOUS AREA	G
STORM DRAIN INLET PROTECTION - CATCH BASIN INSERT	I
PIPE SLOPE DRAINS	
TEMPORARY STREAM CROSSING	T
LEVEL SPREADER	

LIST OF ACRONYMS FOR SEDIMENT AND EROSION CONTROL

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AMD	ACRYLAMIDE POLYMER
BFM	BONDED FIBER MATRIX
BMP(S)	BEST MANAGEMENT PRACTICE(S)
CFS	CUBIC FEET PER SECOND
CMP	CORRUGATED METAL PIPE
DHEC	DEPARTMENT OF HEATH AND ENVIRONMENTAL CONTROL
ECB	EROSION CONTROL BLANKET
EPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
EPSC	EROSION PREVENTION AND SEDIMENTATION CONTROL
FDA	UNITED STATES FOOD AND DRUG ADMINISTRATION
FGM	FLEXIBLE GROWTH MATRIX
HDPE	HIGH DENSITY POLYETHYLENE
MS4	MUNICIPAL SEPARATE STORM SEWER SYSTEM
MSDS	MATERIAL SAFETY DATA SHEETS
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PAM	POLYACRYLAMIDE OR POLYMER
RCP	REINFORCED CONCRETE PIPE
SCS	SOIL CONSERVATION SERVICE
SWPPP	STORMWATER POLLUTION PREVENTION PROGRAM
TRM	TURF REINFORCEMENT MAT
VFS	VEGETATED FILTER STRIP

CONSTRUCTION SEQUENCE

CONSTRUCTION ACTIVITY	SCHEDULE CONSIDERATION
INITIAL PHASE	
1 OBTAIN COPIES OF ALL PLAN APPROVALS AND OTHER APPLICABLE PERMITS.	CONTRACTOR TO HAVE ONSITE AT ALL TIMES DURING CONSTRUCTION.
2 FLAG THE WORK LIMITS AND BARRICADE TREES AND MARK BUFFER AREAS FOR PROTECTION.	HAVE LOCAL REGULATORY AGENCY INSPECT TREE BARRICADES.
3 HOLD PRE CONSTRUCTION CONFERENCE AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION.	REVIEW TREE PROTECTION (BARRICADE) WITH OWNER AND LOCAL REGULATORY AGENCY. TAKE PICTURES OF ALL PROTECTED TREES AND LOCATIONS WHERE SITE WORK TIES INTO EXISTING TO DOCUMENT PREDEVELOPMENT PROCEDURES.
4 INSTALL CONSTRUCTION ACCESS AND LAY DOWN AREAS	STABILIZE BARE AREAS IMMEDIATELY AND INSTALL CONSTRUCTION EXITS / ENTRANCES.
5 CONSTRUCT SEDIMENT FENCES	INSTALL SEDIMENT FENCES AFTER CONSTRUCTION SITE IS ACCESSED.
6 CONSTRUCT OUTLET PROTECTION. INSTALL SKIMMER.	INSTALL PRINCIPAL BASINS AFTER SEDIMENT FENCES IS INSTALLED.
7 ESTABLISH RUNOFF CONTROL - DIVERSIONS, PERIMETER DIKES, WATER BARS, AND OUTLET PROTECTION.	INSTALL PRINCIPAL SEDIMENT TRAPS AND BEFORE LAND GRADING. INSTALL ADDITIONAL RUNOFF-CONTROL MEASURES DURING GRADING.
8 LAND CLEARING AND GRADING-SITE PREPARATION CUTTING, FILLING AND GRADING, SEDIMENTATION TRAPS, BARRIERS, DIVERSIONS, DRAINS, SURFACE ROUGHENING.	BEGIN MAJOR CLEARING AND GRADING AFTER PRINCIPAL SEDIMENT AND KEY RUNOFF-CONTROL MEASURES ARE INSTALLED. CLEAR BORROW AND DISPOSAL AREAS ONLY AS NEEDED. INSTALL ADDITIONAL CONTROL MEASURES AS GRADING PROGRESSES. MARK TREES AND BUFFER AREAS FOR PRESERVATION.
CONSTRUCTION PHASE	
1 RUNOFF CONVEYANCE SYSTEM- INSTALL STORM DRAINS, STABILIZE BANKS, CHANNELS, INSTALL INLET AND OUTLET PROTECTION, SLOPE DRAINS.	WHERE NECESSARY, STABILIZE BANKS AS EARLY AS POSSIBLE. INSTALL PRINCIPAL RUNOFF CONVEYANCE SYSTEM WITH RUNOFF- CONTROL MEASURES. INSTALL REMAINDER OF SYSTEM AFTER GRADING.
2 INSTALL WASTEWATER COLLECTION, WATER DISTRIBUTION, AND STORM DRAINAGE SYSTEMS	APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS DELAYED OR COMPLETE.
3 SURFACE STABILIZATION-TEMPORARY AND PERMANENT SEEDING, MULCHING, SODDING, RIP RAP.	APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS DELAYED OR COMPLETE.
STABILIZATION PHASE	
4 BUILDING CONSTRUCTION- BUILDINGS UTILITIES, ROADS, ETC.	INSTALL NECESSARY EROSION AND SEDIMENTATION CONTROL PRACTICES AS WORK TAKES PLACE.
5 LANDSCAPING AND FINAL STABILIZATION - TOPSOILING, TREES AND SHRUBS, PERMANENT SEEDING, MULCHING, SODDING, RIP RAP. REMOVE SKIMMER.	LAST CONSTRUCTION PHASE--STABILIZE ALL OPEN AREAS, INCLUDING BORROW AND SPOIL AREAS. REMOVE AND STABILIZE ALL TEMPORARY CONTROL MEASURES.

SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 25353 NEIL B. HUTTON

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Savannah, GA 31405 • 912.234.5300
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UNIVERSITY INVESTMENTS, LLC
BLUFFTON, SOUTH CAROLINA
PARCELS 12A, 12B, & 12C
ES & PC NOTES

JOB NO:	J-25312.0015
DATE:	05/30/23
DRAWN:	CGC
DESIGNED:	JDF
REVIEWED:	HAC
APPROVED:	NBL
SCALE:	N/A

EC1.2

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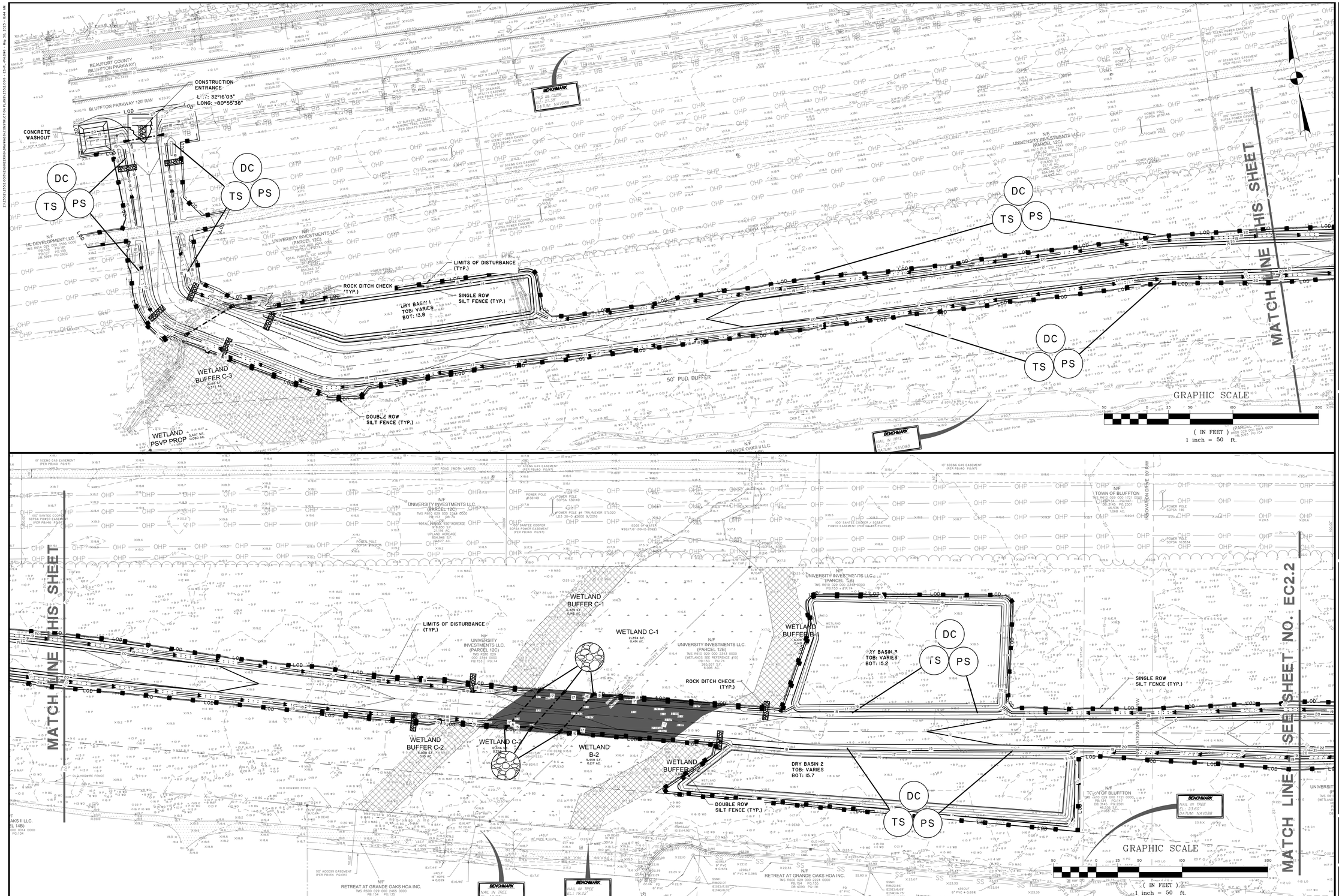

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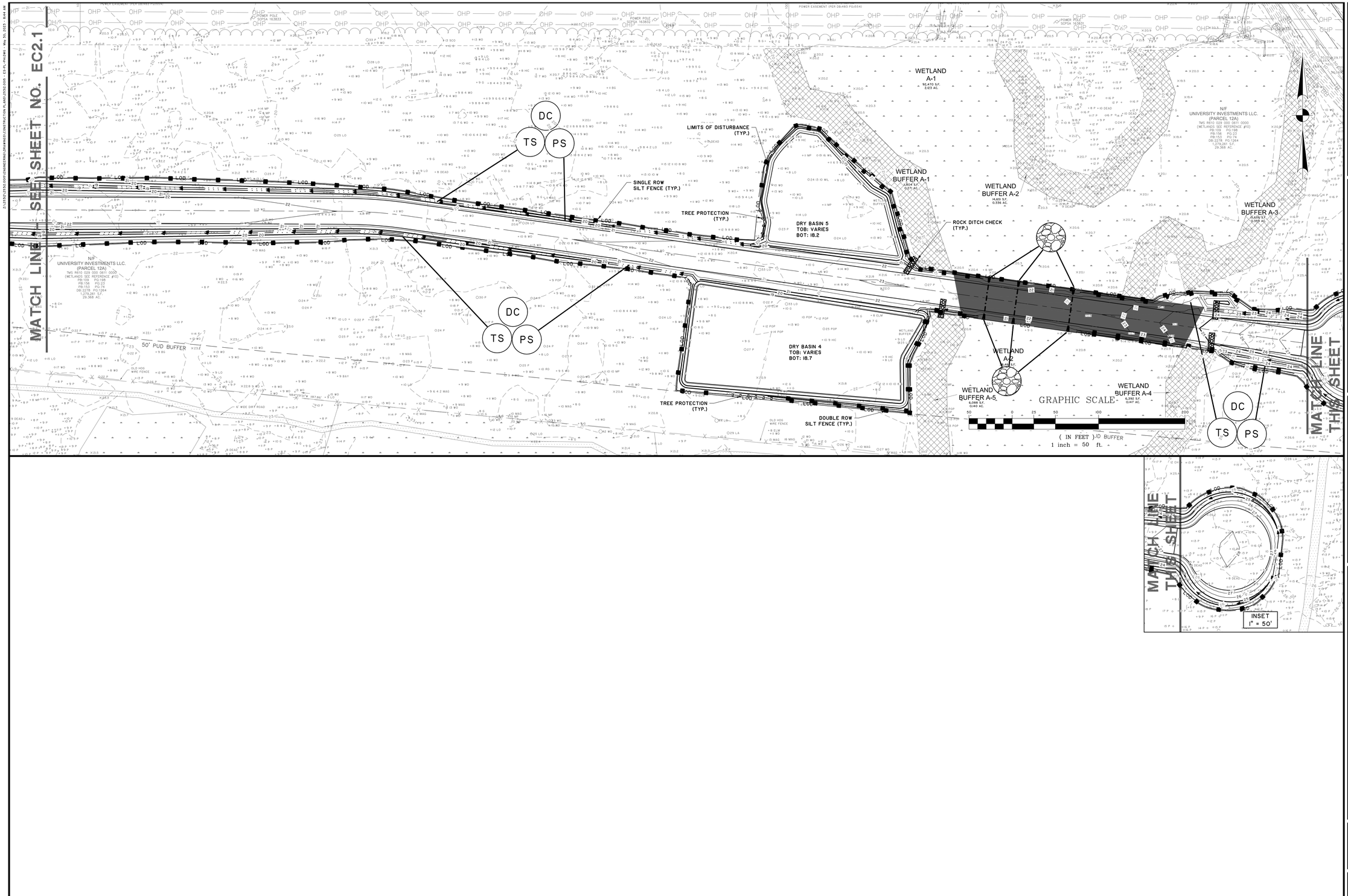
EC2.1



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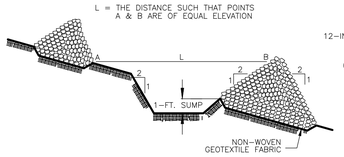
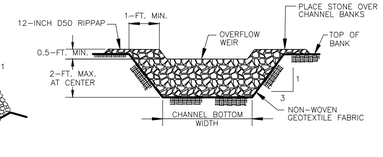
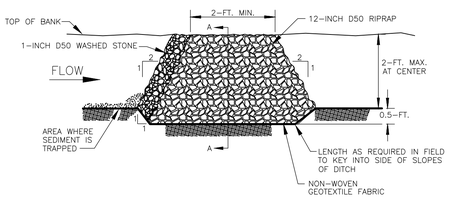
SPACING BETWEEN DITCH CHECK



CROSS SECTION A-A THRU STONE DITCH CHECK



TYPICAL DITCH CHECK SECTION



ROCK DITCH CHECK - GENERAL NOTES

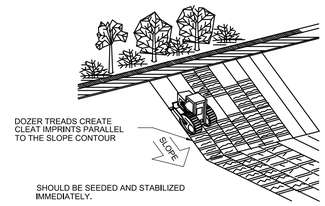
1. ROCK DITCH CHECKS SHOULD NOT BE PLACED IN WATERS OF THE STATE OR USGS BLUE-LINE STREAMS (UNLESS APPROVED BY FEDERAL AUTHORITIES).
2. ROCK DITCH CHECKS SHOULD BE INSTALLED IN STEEPLY SLOPED CHANNELS WHERE ADEQUATE VEGETATION CANNOT BE ESTABLISHED. THIS BMP MEASURE SHOULD ONLY BE USED IN SMALL OPEN CHANNELS.
3. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE INSTALLED OVER THE SOIL SURFACE WHERE THE ROCK DITCH CHECK IS TO BE PLACED.
4. THE BODY OF THE ROCK DITCH CHECK SHALL BE COMPOSED OF 12-INCH D50 RIPRAP. THE UPSTREAM FACE MAY BE COMPOSED OF 1-INCH D50 WASHED STONE.
5. ROCK DITCH CHECKS SHOULD NOT EXCEED A HEIGHT OF 2-FEET AT THE CENTERLINE OF THE CHANNEL.
6. ROCK DITCH CHECKS SHOULD HAVE A MINIMUM TOP FLOW LENGTH OF 2-FEET.
7. RIPRAP SHOULD BE PLACED OVER CHANNEL BANKS TO PREVENT WATER FROM CUTTING AROUND THE DITCH CHECK.
8. THE RIPRAP SHOULD BE PLACED BY HAND OR MECHANICAL PLACEMENT (NO DUMPING OF ROCK TO FORM DAM) TO ACHIEVE COMPLETE COVERAGE OF THE CHANNEL. DOING SO WILL ALSO ENSURE THAT THE CENTER OF THE CHECK IS LOWER THAN THE EDGES.
9. THE MAXIMUM SPACING BETWEEN THE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM CHECK IS AT THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM CHECK.

ROCK DITCH CHECK - INSPECTION & MAINTENANCE

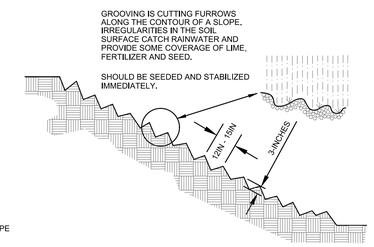
1. THE KEY TO FUNCTIONAL ROCK DITCH CHECK IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
2. REGULAR INSPECTIONS OF ROCK DITCH CHECKS SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
3. ATTENTION TO SEDIMENT ACCUMULATIONS IN FRONT OF THE ROCK DITCH CHECK IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
4. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE ROCK DITCH CHECK.
5. REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
6. INSPECT ROCK DITCH CHECKS' EDGES FOR EROSION AND EVIDENCE OF RUNOFF BYPASSING THE INSTALLED CHECK. IF EVIDENT REPAIR PROMPTLY AS NECESSARY TO PREVENT EROSION AND BYPASSING.
7. IN THE CASE OF GRASS-LINED DITCHES, CHANNELS, AND SWALES, ROCK DITCH CHECKS SHOULD BE REMOVED WHEN THE GRASS HAS MATURED SUFFICIENTLY TO PROTECT THE DITCH OR SWALE UNLESS THE SLOPE OF THE SWALE IS GREATER THAN 4%.
8. AFTER CONSTRUCTION IS COMPLETED AND FINAL STABILIZATION IS REACHED, THE ENTIRETY OF THE ROCK DITCH CHECK SHOULD BE REMOVED IF VEGETATION WILL BE USED FOR PERMANENT EROSION CONTROL MEASURES. THE AREA BENEATH THE REMOVED ROCK DITCH CHECK MUST BE ADDRESSED WITH PERMANENT STABILIZATION MEASURES.

ROCK DITCH CHECK

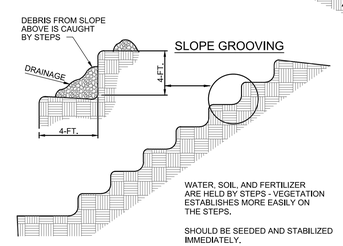
NOT TO SCALE



TRACKING



SLOPE GROOVING

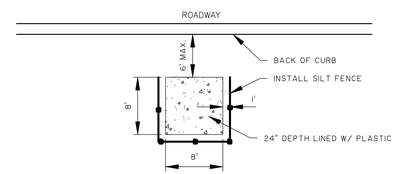


STAIR-STEP GRADING

OR LG

LAND GRADING TECHNIQUES

NOT TO SCALE



CONCRETE WASHOUT DETAIL

NOT TO SCALE

WHEN AND WHERE TO USE IT:
SILT FENCE IS APPLICABLE IN AREAS:

WHERE THE MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE FENCE IS 100-FEET.
WHERE THE MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO FENCE LINE) IS 2H:1V.
THAT DO NOT RECEIVE CONCENTRATED FLOWS GREATER THAN 0.5 CFS.

DO NOT PLACE SILT FENCE ACROSS CHANNELS OR USE IT AS A VELOCITY CONTROL BMP.

MATERIALS:
STEEL POSTS
USE 48-INCH LONG STEEL POSTS THAT MEET THE FOLLOWING MINIMUM PHYSICAL REQUIREMENTS:
COMPOSED OF HIGH STRENGTH STEEL WITH MINIMUM YIELD STRENGTH OF 50,000 PSI.
HAVE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-INCHES AND NOMINAL "T" LENGTH OF 1.48-INCHES.
WEIGH 1.25 POUNDS PER FOOT (± 8%).
HAVE A SOIL STABILIZATION PLATE WITH A MINIMUM CROSS SECTION AREA OF 17-SQUARE INCHES ATTACHED TO THE STEEL POSTS.
PAINTED WITH A WATER BASED BAKED ENAMEL PAINT.

USE STEEL POSTS WITH A MINIMUM LENGTH OF 4-FEET, WEIGHING 1.25 POUNDS PER LINEAR FOOT (± 8%) WITH PROJECTIONS TO AID IN FASTENING THE FABRIC. EXCEPT WHEN HEAVY CLAY SOILS ARE PRESENT ON SITE, STEEL POSTS WILL HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM SUCH THAT WHEN THE POST IS DRIVEN TO THE PROPER DEPTH, THE PLATE WILL BE BELOW THE GROUND LEVEL FOR ADDED STABILITY.
THE SOIL PLATES SHOULD HAVE THE FOLLOWING CHARACTERISTICS:
BE COMPOSED OF MINIMUM 15 GAUGE STEEL.
HAVE A MINIMUM CROSS SECTION AREA OF 17-SQUARE INCHES.

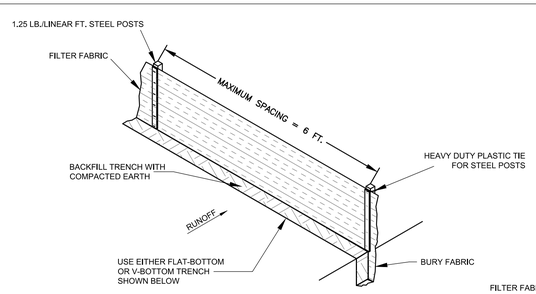
GEOTEXTILE FILTER FABRIC:
FILTER FABRIC IS:
COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS COMPOSED OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES,
FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER,
FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION,
FREE OF DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES,
CUT TO A MINIMUM WIDTH OF 36 INCHES.

USE ONLY FABRIC APPEARING ON SCDOT APPROVAL SHEET #34 MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

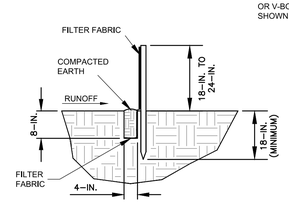
INSTALLATION:
EXCAVATE A TRENCH APPROXIMATELY 6-INCHES WIDE AND 6-INCHES DEEP WHEN PLACING FABRIC BY HAND. PLACE 12-INCHES OF GEOTEXTILE FABRIC INTO THE 6-INCH DEEP TRENCH, EXTENDING THE REMAINING 6-INCHES TOWARDS THE UPSLOPE SIDE OF THE TRENCH. BACKFILL THE TRENCH WITH SOIL OR GRAVEL AND COMPACT. BURY 12-INCHES OF FABRIC INTO THE GROUND WHEN PNEUMATICALLY INSTALLING SILT FENCE WITH A SLICING METHOD. PURCHASE FABRIC IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, WRAPPED THE FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 6-INCH MINIMUM OVERLAP. INSTALL POSTS TO A MINIMUM DEPTH OF 24-INCHES. INSTALL POSTS A MINIMUM OF 1- TO 2- INCHES ABOVE THE FABRIC, WITH NO MORE THAN 3-FEET OF THE POST ABOVE THE GROUND. SPACE POSTS TO MAXIMUM 6-FEET CENTERS. ATTACH FABRIC TO WOOD POSTS USING STAPLES MADE OF HEAVY-DUTY WIRE AT LEAST 1-1/2-INCH LONG, SPACED A MAXIMUM OF 6-INCHES APART. STAPLE A 2-INCH WIDE LATHE OVER THE FILTER FABRIC TO SECURELY FASTEN IT TO THE UPSLOPE SIDE OF WOODEN POSTS. ATTACH FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED AND PLACED IN A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC. IN CALL CASES, TIES SHOULD BE AFFIXED IN NO LESS THAN 4 PLACES. INSTALL THE FABRIC A MINIMUM OF 24-INCHES ABOVE THE GROUND. WHEN NECESSARY, THE HEIGHT OF THE FENCE ABOVE GROUND MAY BE GREATER THAN 24-INCHES. IN TIDAL AREAS, EXTRA SILT FENCE HEIGHT MAY BE REQUIRED. THE POST HEIGHT WILL BE TWICE THE EXPOSED POST HEIGHT. POST SPACING WILL REMAIN THE SAME AND EXTRA HEIGHT FABRIC WILL BE 4-. 5-. OR 6-FEET TALL. LOCATE SILT FENCE CHECKS EVERY 100 FEET MAXIMUM AND AT LOW POINTS. INSTALL THE FENCE PERPENDICULAR TO THE DIRECTION OF FLOW AND PLACE THE FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.

INSPECTION AND MAINTENANCE:
CHECK FOR SEDIMENT BUILDUP AND FENCE INTEGRITY. CHECK WHERE RUNOFF HAS ERODED A CHANNEL BENEATH THE FENCE. OR WHERE THE FENCE HAS SAGGED OR COLLAPSED BY FENCE OVERTOPPING. IF THE FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE SECTION OF FENCE IMMEDIATELY. REMOVE SEDIMENT ACCUMULATED ALONG THE FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED. REMOVE TRAPPED SEDIMENT FROM THE SITE OR STABILIZE IT ON SITE. REMOVE SILT FENCE WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED OR

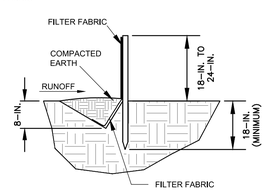
AFTER TEMPORARY BEST MANAGEMENT PRACTICES (BMPS) ARE NO LONGER NEEDED. PERMANENTLY STABILIZE DISTURBED AREAS RESULTING FROM FENCE REMOVAL.



SILT FENCE INSTALLATION



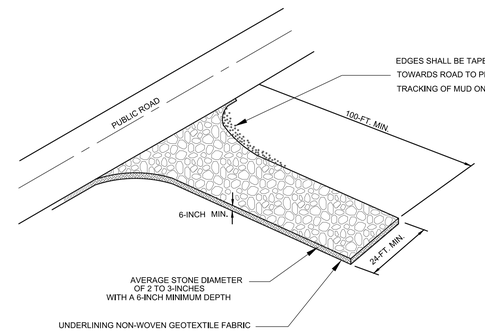
FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL

SILT FENCE

NOT TO SCALE



WHEN AND WHERE TO USE IT:
STABILIZED CONSTRUCTION ENTRANCES SHOULD BE USED AT ALL POINTS WHERE TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVING DIRECTLY ONTO A PUBLIC ROAD.

IMPORTANT CONSIDERATIONS:
IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFFSITE. WASHDOWN FACILITIES SHALL BE REQUIRED AS DIRECTED BY SCDHEC AS NEEDED. WASHDOWN AREAS IN GENERAL MUST BE ESTABLISHED WITH CRUSHED GRAVEL AND DRAIN INTO A SEDIMENT TRAP OR SEDIMENT BASIN.

CONSTRUCTION ENTRANCES SHOULD BE USED IN CONJUNCTION WITH THE STABILIZATION OF CONSTRUCTION ROADS TO REDUCE THE AMOUNT OF MUD PICKED UP BY VEHICLES.

INSTALLATION:
REMOVE ALL VEGETATION AND ANY OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA.

DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM STONES TO A SEDIMENT TRAP OR BASIN.

INSTALL A NON-WOVEN GEOTEXTILE FABRIC PRIOR TO PLACING ANY STONE.

INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE POSITIVE DRAINAGE.

THE ENTRANCE SHALL CONSIST OF 1-INCH TO 3-INCH D50 STONE PLACED AT A MINIMUM DEPTH OF 6-INCHES.

MINIMUM DIMENSIONS OF THE ENTRANCE SHALL BE 24-FEET WIDE BY 100-FEET LONG, AND MAY BE MODIFIED AS NECESSARY TO ACCOMMODATE SITE CONSTRAINTS.

THE EDGES OF THE ENTRANCE SHALL BE TAPERED OUT TOWARDS THE ROAD TO PREVENT TRACKING OF MUD AT THE EDGE OF THE ENTRANCE.

INSPECTION AND MAINTENANCE:
CHECK FOR MUD AND SEDIMENT BUILDUP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING PERIODS OF WET WEATHER. MAINTENANCE IS REQUIRED MORE FREQUENTLY IN WET WEATHER CONDITIONS. RESHAPE THE STONE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.

WASH OR REPLACE STONES AS NEEDED. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF-SITE BY VEHICLES.

FREQUENT WASHING WILL EXTEND THE USEFUL LIFE OF STONE.

IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED WHEN THE WATER CAN BE DISCHARGED TO A SEDIMENT TRAP OR BASIN.

REPAIR ANY BROKEN PAVEMENT IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

DC

DUST CONTROL ON DISTURBED AREAS

DEFINITION

Controlling surface and air movement of dust on land-disturbing activities.

PURPOSE

- Prevent the movement of dust from exposed soil surfaces.
- Prevent the movement of airborne substances that may be harmful to health.

INSTALLATION

- Apply according to approved plan, if shown.
- Mulch disturbed areas and tackify with resins such as asphalt, Curasol or Terratack according to manufacturer's recommendations.
- Stabilize disturbed areas with temporary or permanent vegetation.
- Irrigate disturbed areas until surface is wet.
- Cover surfaces with crushed stone or gravel.

32

DC

- Apply calcium chloride at a rate to keep surfaces moist.
- Apply spray-on adhesives to mineral soils (not muck soils) as described in Table 1.

Table 1. Spray-On Adhesive Application Requirements

Adhesive	Water Dilution	Nozzle Type	Application (Gal./Acre)
Anionic asphalt emulsion	7:1*	Coarse spray	1,200
Latex emulsion	12.5:1 *	Fine spray	235
Resin-in-water emulsion	4:1*	Fine spray	300

*Use manufacturer's recommendations when available.

DUST CONTROL MEASURES

NOT TO SCALE

DC

NO.	REVISIONS	BY	DATE

THOMAS & HUTTON
50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300
www.thomasandhutton.com

UNIVERSITY INVESTMENTS, LLC
BLUFFTON, SOUTH CAROLINA
PARCELS I2A, I2B, & I2C
ES & PC DETAILS

JOB NO:	J-25312.0015
DATE:	05/30/23
DRAWN:	CGC
DESIGNED:	JDP
REVIEWED:	HAC
APPROVED:	NBL
SCALE:	1" = 1'

EC5.1

PERMIT SET - FOR REVIEW PURPOSES ONLY

PLAN REVIEW COMMENTS FOR DP-03-23-017841

Town of Bluffton
Department of Growth Management
20 Bridge Street P.O. Box 386 Bluffton, South Carolina 29910
Telephone 843-706-4522

Plan Type:	**Development Plan**	**Apply Date:**	**03/29/2023**
Plan Status:	**Active**	**Plan Address:**	
Case Manager:	**Dan Frazier**	**Plan PIN #:**	**R610 029 000 2344 0000**

Plan Description: **A request by Nathan Long of Thomas & Hutton on behalf of Jake Reed of University Investments, LLC for approval of a preliminary development plan. The project proposes partial wetland filling of approximately 0.56 acres to allow crossings for future road alignments. The properties are zoned Buckwalter Planned Unit Development and consists of approximately 58.0 acres identified by tax map numbers R610 029 000 0611 0000, R610 029 000 2343 0000, R610 029 000 2344 0000, and R610 029 000 1721 0000 not currently included in a master plan.**
Status: Staff comments will be reviewed at the May 17, 2023, meeting of the DRC.

Technical Review

Submission #: 1 Received: 03/29/2023 Completed: 05/12/2023

Reviewing Dept.	*Complete Date*	*Reviewer*	*Status*
Planning Commission Review	05/12/2023	Dan Frazier	Revisions Required

Comments:

1. This development plan application is not associated with an approved master plan, however, it is recognized that per Section 2.D.19 of the Buckwalter Planned Unit Development infrastructure serving the community (on-site and off-site) is exempt from the Initial Master Plan approval process. The stated intent of the proposed development is to provide fill wetland crossings to allow for future road alignments in compliance with the approved Bluffton Parkway Access Management Plan.
2. The proposed project includes land disturbance on Town owned property (Innovation Drive R/W). Provide a Property Owner Letter from the Town authorizing the applicant to proceed with the development plan application on Town property.
3. RECOMMENDATION: As previously discussed, it is recommended that the Innovation Drive right-of-way be used as the haul road for the proposed work to minimize land disturbance. The result will be less trees removed, less impervious area created and less overall disturbance of land. This aligns with the stated intent of the request included in the application narrative, which is to "limit proposed disturbance at the site to the minimal amount required to transport and place the fill in desired areas".

Planning Review - SR	05/11/2023	Jordan Holloway	Revisions Required

Comments:

1. Per the Buckwalter Development Agreement and Concept Plan, a 25' buffer is required along the southern property line. No grading or clearing shall occur within the 25' buffer. Revise plans to accommodate the buffer requirement.
2. Revise dry basin 4 and 5 configurations to avoid removal of significant trees.
3. Remove 30' stub to dirt trail at the end of the cul-de-sac at the eastern terminus of the project.

Watershed Management Review DRC	04/25/2023	Samantha Crotty	Revisions Required

Comments:

1. Provide the wetland impact permit #2003-1G-006.
2. Show the feasibility of meeting the current SoLoCo standards of the proposed BMPs using the Compliance Calculator. The overall performance requirements for this area are located in the SWDM 3.5.5. At the time of the Pre-Development Plan submittal, you shall demonstrate the capacity of retaining the 95th percentile storm on-site with approved infiltration/filtering BMPs and meet Water Quality standards. The Compliance Calculator can be located: https://www.townofbluffton.sc.gov/704/Southern-Lowcountry-Stormwater-Ordinance. If you have any questions regarding SoLoCo Stormwater Design Manual or the Compliance Calculator, feel free to email scrotty@townofbluffton.com.
3. Revise the narrative to include storm attenuation for the 50- and 100-year, 24-hour design storm events. (SWDM 3.5.2)
4. Provide a Natural Resource Inventory map that identifies resources listed in Table 2.2 of the SWDM. (SWDM 2.1.3 and 2.1.8)

Planning Review - Address	05/12/2023	Diego Farias	Not Required
Building Safety Review	04/11/2023	Richard Spruce	Not Required
Beaufort Jasper Water and Sewer Review	05/12/2023	James Clardy	Approved with Conditions

Comments:
Pending submittal of water and sewer design in accordance with BJWSA 2023 Development Policy and Procedure Manual. Engineer of record and developer will need to coordinate with BJWSA staff on how best to provide water and sewer to the development.

Fire Department Review	05/12/2023	Dan Wiltse	Approved with Conditions

Comments:
Comments may be provided at the development review committee meeting.

Police Department Review	05/12/2023	Bill Bonhag	Approved
Transportation Department Review	03/30/2023	Megan James	Approved

Comments:
No comments

Plan Review Case Notes:

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WETLAND IMPACT PLANS

OF

PARCELS 12A, 12B, & 12C

BLUFFTON, SOUTH CAROLINA

PREPARED FOR:

UNIVERSITY INVESTMENTS, LLC
PO BOX 23767
HILTON HEAD ISLAND, 29925

TM# R610 029 000 0611 0000, R610 029 000 2343 0000,
R610 029 000 2344 0000, & R610 029 000 1721 0000

MARCH 29, 2023

J-25312.0015

PREPARED BY:

THOMAS & HUTTON

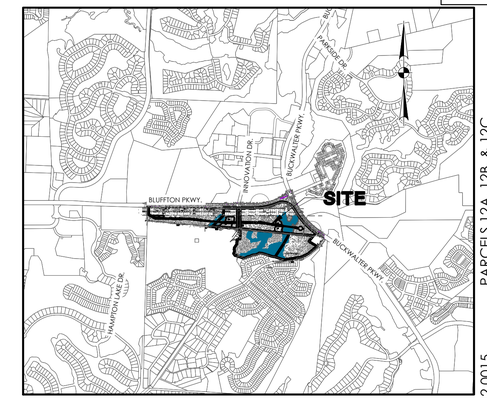
PERMIT SET - FOR REVIEW PURPOSES ONLY

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 25353 NATHAN B. LONG

SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE OF AUTHORIZATION

WETLAND IMPACT PLANS OF PARCELS 12A, 12B, &12C

VERTICAL DATUM: NAVD 88



VICINITY MAP
SCALE: 1" = 2000'

PARCELS 12A, 12B, & 12C
J-25312.0015
03/29/23

PERMIT SET - FOR REVIEW PURPOSES ONLY

Sheet List Table

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G2.1	EXISTING CONDITIONS PLAN
G2.2	EXISTING CONDITIONS PLAN
C1.1	STRIPING, SIGNAGE, AND LAYOUT PLAN
C1.2	STRIPING, SIGNAGE, AND LAYOUT PLAN
C2.1	GRADING AND DRAINAGE PLAN
C2.2	GRADING AND DRAINAGE PLAN
C2.3	GRADING AND DRAINAGE PLAN
C2.1	GRADING AND DRAINAGE DETAILS
EC1.1	ES & PC NOTES
EC1.2	ES & PC NOTES
EC2.1	ES & PC PLAN
EC2.2	ES & PC PLAN
EC5.1	ES & PC DETAILS

REVISION HISTORY

REV. NO.	REVISION	BY	DATE

SUBMITTAL HISTORY

SUBMITTED TO	DATE

811 Know what's below. Call before you dig.

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Savannah, GA 31405
p.912.234.5300
www.thomasandhutton.com

ABBREVIATIONS

HDPE	HIGH DENSITY POLYETHELENE		LF	LINEAR FEET		SF	SQUARE FEET
BOT	BOTTOM		MAX	MAXIMUM		SS	SANITARY SEWER
CI	CURB INLET		MIN	MINIMUM		TC	TOP OF CURB
CPP	CORRUGATED PLASTIC PIPE		MH	MANHOLE		TG	TOP OF GRAVEL
DIP	DUCTILE IRON PIPE		OC	ON CENTER		TP	TOP OF PAVEMENT
EL	ELEVATION		PC	POINT OF CURVE		TW	TOP OF WALK
FG	FINISH GRADE		PH	POST HYDRANT		TYP	TYPICAL
FH	FIRE HYDRANT		PT	POINT OF TANGENT		W	WATER
FM	FORCE MAIN (SANITARY SEWER)		PVC	POLYVINYL CHLORIDE		W/	WITH
FR	FRAME		RCP	REINFORCED CONCRETE PIPE		WV	WATER VALVE
GI	GRATE INLET		RJP	RESTRAINED JOINT PIPE		YI	YARD INLET
GV	GATE VALVE		R/W	RIGHT-OF-WAY		FFE	FINISH FLOOR
INV	INVERT ELEVATION		SD	STORM DRAINAGE			
JB	JUNCTION BOX		SDMH	STORM DRAINAGE MANHOLE			

DRAINAGE LEGEND

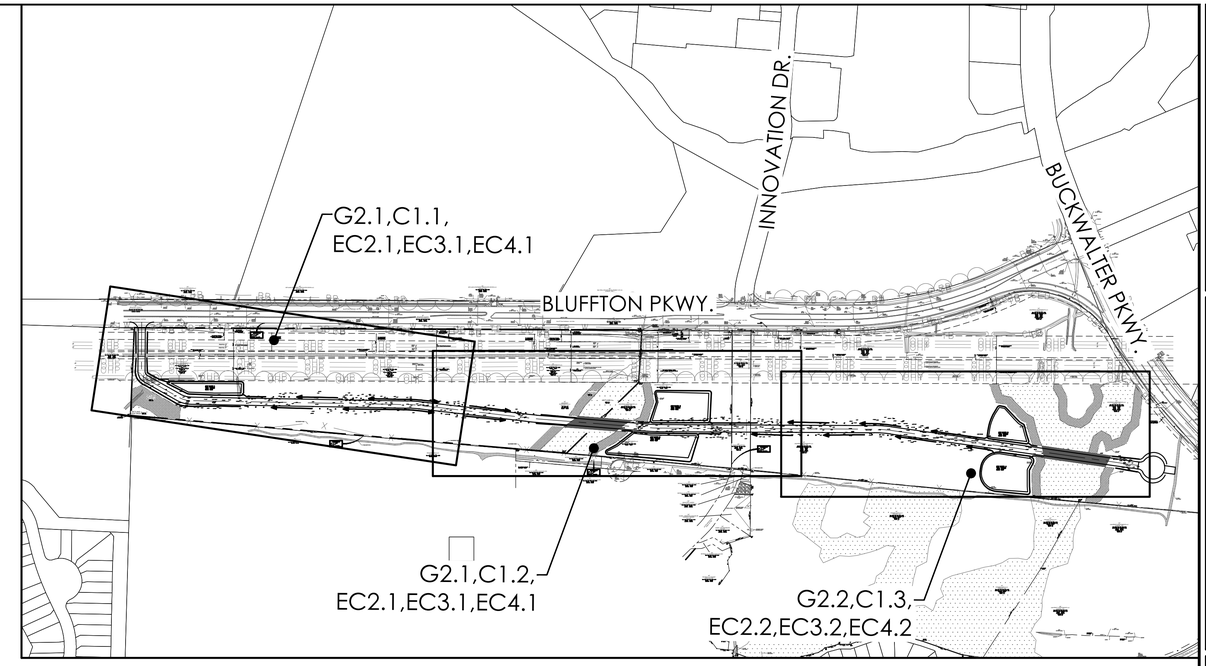
DESCRIPTION	EXISTING	PROPOSED
PIPE		
DITCH		
CURB INLET		
GRATE INLET		
JUNCTION BOX		
OUTLET STRUCTURE		

WATER LEGEND

DESCRIPTION	EXISTING	PROPOSED
WATER MAIN	10"W	10"W
SINGLE SERVICE LATERAL		
DOUBLE SERVICE LATERAL		
VALVE AND BOX		
FIRE HYDRANT W/VALVE & BOX		
POST HYDRANT		
REDUCER		
BACKFLOW PREVENTOR		
CROSS		
TEE		
90° BEND - HORIZONTAL		
45° BEND - HORIZONTAL		
22-½° BEND - HORIZONTAL		
11-¼° BEND - HORIZONTAL		
BEND - VERTICAL		
CAP		

SEWER LEGEND

DESCRIPTION	EXISTING	PROPOSED
GRAVITY PIPE	SS	
SINGLE SERVICE LATERAL		
DOUBLE SERVICE LATERAL		
MANHOLE		
CLEANOUT		
FORCEMAIN	10"FM 10"FM	10"FM 10"FM
VALVE AND BOX		
FLUSH HYDRANT		
REDUCER		
BACKFLOW PREVENTOR		
CROSS		
TEE		
90° BEND - HORIZONTAL		
45° BEND - HORIZONTAL		
22-½° BEND - HORIZONTAL		
11-¼° BEND - HORIZONTAL		
BEND - VERTICAL		
PLUG		



INDEX

SCALE: 1" = 300'

GENERAL NOTES

1. ALL TOPOGRAPHIC INFORMATION IS BASED ON SURVEY FIELD DATA PROVIDED BY ATLAS SURVEYING, INC. ELEVATIONS ARE BASED UPON NAVD 88 VERTICAL DATUM. THE HORIZONTAL DATUM IS SOUTH CAROLINA STATE PLANE COORDINATE SYSTEM. EAST ZONE NAD 83. CONTACT ENGINEER IMMEDIATELY IF FIELD ELEVATIONS VARY FROM EXISTING GROUND ELEVATIONS DISPLAYED. VERIFY CHANGES IN ELEVATIONS RESULTING FROM CONTRACTOR CLEARING AND STRIPPING.
2. BOUNDARY INFORMATION FOR THIS PROJECT IS BASED UPON AN AS-BUILT, TREE & TOPOGRAPHIC SURVEY OF #655 OLD MILLER ROAD, AND INTERSECTION OF BLUFFTON PARKWAY AND BUCKWALTER PARKWAY, PREPARED BY THOMAS & HUTTON, DATED 07-01-05, REVISED 03-27-06, RECORDED IN PB109 PAGE 193.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ESTABLISH SUPPLEMENTAL CONTROL WITHIN THE PROJECT AS NEEDED. SEE SURVEY CONTROL PLAN FOR BENCHMARKS ASSOCIATED WITH THIS PROJECT.
4. PIPE, FITTINGS, VALVES AND OTHER ACCESSORIES SHALL, UNLESS OTHERWISE DIRECTED, BE UNLOADED AT THE POINT OF DELIVERY, AND STORED WHERE THEY WILL BE PROTECTED AND WILL NOT BE HAZARDOUS TO TRAFFIC. THEY SHALL AT ALL TIMES BE HANDLED WITH CARE TO AVOID DAMAGE. THE INTERIOR OF ALL PIPE, FITTINGS AND OTHER ACCESSORIES SHALL BE KEPT FROM DIRT AND FOREIGN MATTER AT ALL TIMES.
5. ANY DEFECTIVE, DAMAGED OR UNSOUND PIPE SHALL BE REJECTED. ALL FOREIGN MATTER OR DIRT SHALL BE REMOVED FROM THE INSIDE OF THE PIPE BEFORE IT IS LOWERED INTO ITS POSITION IN THE TRENCH AND SHALL BE KEPT CLEAN BY ACCEPTABLE MEANS DURING AND AFTER LAYING. CARE SHALL BE TAKEN TO PREVENT DIRT FROM ENTERING THE JOINT SPACE. AT TIMES WHEN PIPE LAYING IS NOT IN PROGRESS, THE OPEN ENDS OF THE PIPE SHALL BE CLOSED BY ACCEPTABLE MEANS AND NO TRENCH WATER SHALL BE PERMITTED TO ENTER THE PIPE.
6. CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS AND INVERTS BEFORE STARTING WORK, THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY WITH DISCREPANCIES AND AWAIT WRITTEN RESPONSE FROM ENGINEER PRIOR TO FROM ENGINEER PRIOR TO PROCEEDING WITH INSTALLATION.
7. CONTRACTOR SHALL COORDINATE TIE IN OF NEW WATER & SEWER FACILITIES WITH BEAUFORT JASPER WATER AND SEWER AUTHORITY. ALL WATER AND SEWER MATERIALS AND INSTALLATION SHALL COMPLY WITH LATEST VERSION OF BEAUFORT JASPER WATER AND SEWER AUTHORITY'S TECHNICAL SPECIFICATIONS. BJWSA SPECIFICATIONS SHALL GOVERN AND TAKE PRECEDENCE OVER CONFLICTS FOUND WITH THOMAS AND HUTTON'S SPECIFICATIONS.
8. CONTRACTOR SHALL MAINTAIN MINIMUM COVER OVER THE WATER MAIN PIPE BARREL OF 3'-0" UNLESS OTHERWISE INDICATED.
9. SHOULD PIPE , FITTINGS AND OTHER MATERIALS BE NEEDED IN ADDITION TO THAT SHOWN ON THE DRAWING BECAUSE PIPELINE WAS NOT INSTALLED TO THE ALIGNMENT SHOWN. THEN THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THOSE NECESSARY MATERIALS AND PROVIDING THE EQUIPMENT AND LABOR TO INSTALL THEM TO MEET THE DESIGN INTENT OF WATER MAIN AT NO COST TO THE OWNER.
10. ALL WATER USED FOR CONSTRUCTION SHALL BE METERED THROUGH AN ACCEPTABLE BACK FLOW PREVENTION DEVICE AND FIRE HYDRANT METER.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNDERGROUND UTILITIES AND SHALL COORDINATE ALL WORK WITH THE OWNER AND UTILITY COMPANIES.
12. THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS OR IN ANY WAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND DO NOT BIND THOMAS & HUTTON.
13. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND DETAILS.
14. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER 48 HOURS IN ADVANCE OF ALL REQUIRED TESTS AND INSPECTIONS.
15. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES OTHER THAN THOSE SHOWN ARE ENCOUNTERED DURING CONSTRUCTION . THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND TAKE STEPS TO PROTECT THE LINE(S) AND ENSURE CONTINUED SERVICE. DAMAGE CAUSED TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR. ADDITIONALLY, THE CONTRACTOR SHALL CONFIRM THE CONNECTION POINTS OF NEW UTILITIES TO EXISTING UTILITIES PRIOR TO BEGINNING NEW CONSTRUCTION.
16. IF WORK IS SUSPENDED OR DELAYED FOR 14 DAYS, THE CONTRACTOR SHALL TEMPORARILY STABILIZE THE DISTURBED AREA AT NO ADDITIONAL COST TO THE OWNER.
17. ANY DAMAGE TO EXISTING PAVEMENT, SIDEWALKS, LANDSCAPING, ACCESS ROADS AND/OR DRIVEWAYS MUST BE REPAIRED AT CONTRACTORS EXPENSE. REPAIRS MADE SHALL BE TO THE SATISFACTION OF THE PROPERTY OWNER(S) EFFECTED BY DAMAGE OR THE TOWN OF BLUFFTON ENGINEER AS APPICABLE.
18. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL AND PREVENTION STRUCTURES SHOWN ON THE PLANS. BOTH MUST BE ACCEPTABLE TO THE ENGINEER AND THE TOWN OF BLUFFTON PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES.
19. A COMPLETE SET OF PERMITTED DRAWINGS AND SPECIFICATIONS MUST BE MAINTAINED ON SITE AT ALL TIMES THAT THE CONTRACTOR IS PERFORMING WORK. THESE DRAWINGS SHALL BE MADE AVAILABLE UPON REQUEST.
20. THE CONTRACTOR SHALL NOT BEGIN CONSTRUCTION UNTIL THE PROPER PERMITS HAVE BEEN OBTAINED.
21. CONTRACTOR WILL BE REQUIRED TO ADJUST MANHOLE FRAMES, VALVE COVERS AND OTHER ACCESSIBLE STRUCTURES TO MATCH FINAL GRADE AT NO ADDITIONAL COST.
22. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CONSTRUCTED SIMULTANEOUSLY WITH THE DISTURBANCE OF THE LAND AND SHALL REMAIN FUNCTIONAL UNTIL THE CONTRIBUTING DISTURBED AREAS ARE STABILIZED. SILT BARRIERS WILL BE INSTALLED AS NECESSARY TO PREVENT EXCESSIVE SEDIMENTATION OF DOWNSTREAM AREAS.
23. CONTRACTOR SHALL GRADE AREAS TO DRAIN FOR POSITIVE FLOW PRIOR TO FINAL ACCEPTANCE.
24. ALL DRAINAGE WILL BE MADE FUNCTIONAL DAILY AS WORK PROGRESSES.
25. EACH EXISTING ROAD WILL BE CLEANED UP AND RESTORED DAILY.
26. CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES BEFORE WORK COMMENCES, EVEN IF UTILITY IS NOT SHOWN ON THE PLANS. CONTRACTOR SHALL VERIFY UTILITY WITHIN THE PROJECT LIMITS AND NOTIFY THE ENGINEER OF CONFLICTS OR VARIANCES TO THE PLANS PRIOR TO BEGINNING WORK OR PURCHASE OF MATERIALS.
27. IT IS THE OBLIGATION OF THE CONTRACTOR TO MAKE THEIR OWN INTERPRETATION OF ALL SURFACE AND SUBSURFACE DATA AVAILABLE AS TO THE NATURE AND EXTENT OF THE MATERIALS TO BE EXCAVATED, WASTED, GRADED AND COMPACTED. THE INFORMATION SHOWN ON THESE PLANS IN NO WAY GUARANTEES THE AMOUNT OR NATURE OF THE MATERIAL TO BE ENCOUNTERED.
28. CONTROL OF THE WATER FLOWING THROUGH THE EXISTING DRAINAGE PATTERNS DURING THE CONSTRUCTION PERIOD SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE EXISTING DRAINAGE CONVEYANCE SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FILL AND OR GRADING TO MEET THE FINISHED PLAN GRADES AND ELIMINATE ANY AND ALL AREAS WHICH ARE LOW AND DO NOT DRAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING PROPER DRAINAGE FOR ANY AREAS WHICH ARE CHANGED AS A RESULT OF FIELD ADJUSTMENTS TO THE CONSTRUCTION PLANS. ALL PENALTIES, CLAIMS AND FEES IMPOSED ON OWNER AS A RESULT OF DAMAGES CAUSED BY ACTIONS OF THE CONTRACTOR, IT'S EMPLOYEES OR SUBCONTRACTORS SHALL BE BORNE IN FULL BY THE CONTRACTOR.
29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PHASING OF CONSTRUCTION AND THE COORDINATION,SEQUENCING AND SUPERVISION OF CONSTRUCTION ACTIVITIES. ANY AND ALL COST ASSOCIATED WITH PROJECT PHASING WILL BE BORNE IN FULL BY THE CONTRACTOR.
30. THE CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS WITHIN THE DISTURBED LIMITS WHICH ARE NECESSARY TO COMPLETE THE WORK. AREAS OUTSIDE OF THESE LIMITS SHALL BE LEFT IN THEIR NATURAL STATE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
31. ALL CLEARING DEBRIS AND EXCESS SOIL MATERIALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL PAYMENT. CLEARING DEBRIS MAY BE BURNED ON SITE IF ALLOWED BY STATE AND LOCAL REGULATIONS.
32. ALL VEHICLES MUST TRAVERSE CONSTRUCTION EXITS TO REMOVE MUD FROM TIRES BEFORE ENTERING ANY PAVED PUBLIC RIGHT-OF-WAYS.
33. WETLAND IMPACTS, PRESERVED WETLANDS AND WETLAND BUFFERS DISPLAYED WITHIN THESE PLANS ARE BASED UPON THE DEPARTMENT OF THE ARMY PERMIT #2001-1G-122. CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THIS PERMIT. A COPY OF THE PERMIT IS AVAILABLE UPON REQUEST.
34. THE TOWN OF BLUFFTON STORMWATER DIVISION SHALL BE NOTIFIED 24 HOURS PRIOR TO ANY DEWATERING ACTIVITIES.

GENERAL INFORMATION

PREPARED FOR:

UNIVERSITY INVESTMENTS, LLC
PO BOX 23767
HILTON HEAD ISLAND, SC 29925

UTILITIES: WATER/SEWER:
BEAUFORT JASPER WATER
AND SEWER AUTHORITY
6 SNAKE ROAD
OKATIE, SC. 29909-3937
(843) 987-9250

COUNTY BEAUFORT

TOWN BLUFFTON

ZONING BUCKWALTER PUD

SURVEYOR:
ATLAS SURVEYING, INC.
168 BOARDWALK DRIVE, SUITE A
RIDGELAND, S.C. 29936
(843) 645-9277

ENGINEER:
THOMAS & HUTTON
50 PARK OF COMMERCE WAY
SAVANNAH, GA 31405
(912) 234-5300

OWNER:
UNIVERSITY INVESTMENTS, LLC
CONTACT: JAKE REED
PO BOX 23767
HILTON HEAD ISLAND, SC 29925
(949) 945-4959

SOUTH CAROLINA NOVEMBER 1, 2022 THOMAS & HUTTON ENGINEERING CERTIFICATE OF AUTHORITY No. C00285

SOUTH CAROLINA PROFESSIONAL ENGINEER NATHAN B. LONG No. 25355

PERMIT SET - FOR REVIEW PURPOSES ONLY

NO.	REVISIONS	BY	DATE

THOMAS & HUTTON
50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300
www.thomasandhutton.com

UNIVERSITY INVESTMENTS, LLC
BLUFFTON, SOUTH CAROLINA
PARCELS 12A, 12B, & 12C
GENERAL NOTES AND LEGEND

JOB NO:	J-25312.0015
DATE:	03/29/23
DRAWN:	CGC
DESIGNED:	JDF
REVIEWED:	HAC
APPROVED:	NBL
SCALE:	1" = 300'

G1.1

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THOMAS & HUTTON
50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300
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NO.	REVISIONS	BY	DATE

UNIVERSITY INVESTMENTS, LLC

BLUFFTON, SOUTH CAROLINA

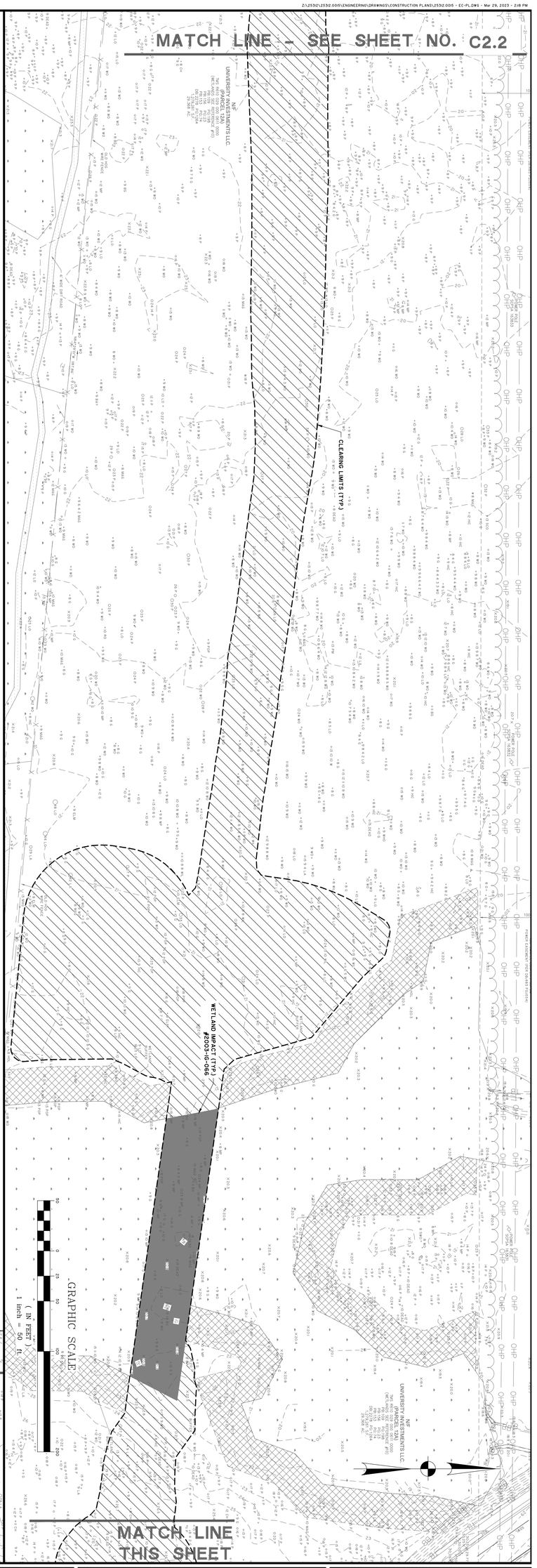
PARCELS 12A, 12B, & 12C

EXISTING CONDITIONS PLAN

JOB NO:	J-2532.0015
DATE:	03/29/23
DRAWN:	CGC
DESIGNED:	JDF
REVIEWED:	HAC
APPROVED:	NBL
SCALE:	AS NOTED

G2.1

Z:\2532\2532.005\ENGINEERING\DRAWINGS\CONSTRUCTION PLANS\2532.005 - EC-PL.DWG - Mar 29, 2023 - 2:18 PM



G2.2

JOB NO:	2532.005
DATE:	03.29.23
DRAWN:	CGC
DESIGNED:	JDF
REVIEWED:	JDF
APPROVED:	NBL
SCALE:	AS NOTED

UNIVERSITY INVESTMENTS, LLC
BLUFFTON, SOUTH CAROLINA

PARCELS I2A, I2B, & I2C

EXISTING CONDITIONS PLAN

THOMAS & HUTTON
50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300
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NO.	REVISIONS	BY	DATE

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 25353 NATHAN B. LONG

SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE OF AUTHORIZATION

PERMIT SET - FOR REVIEW PURPOSES ONLY

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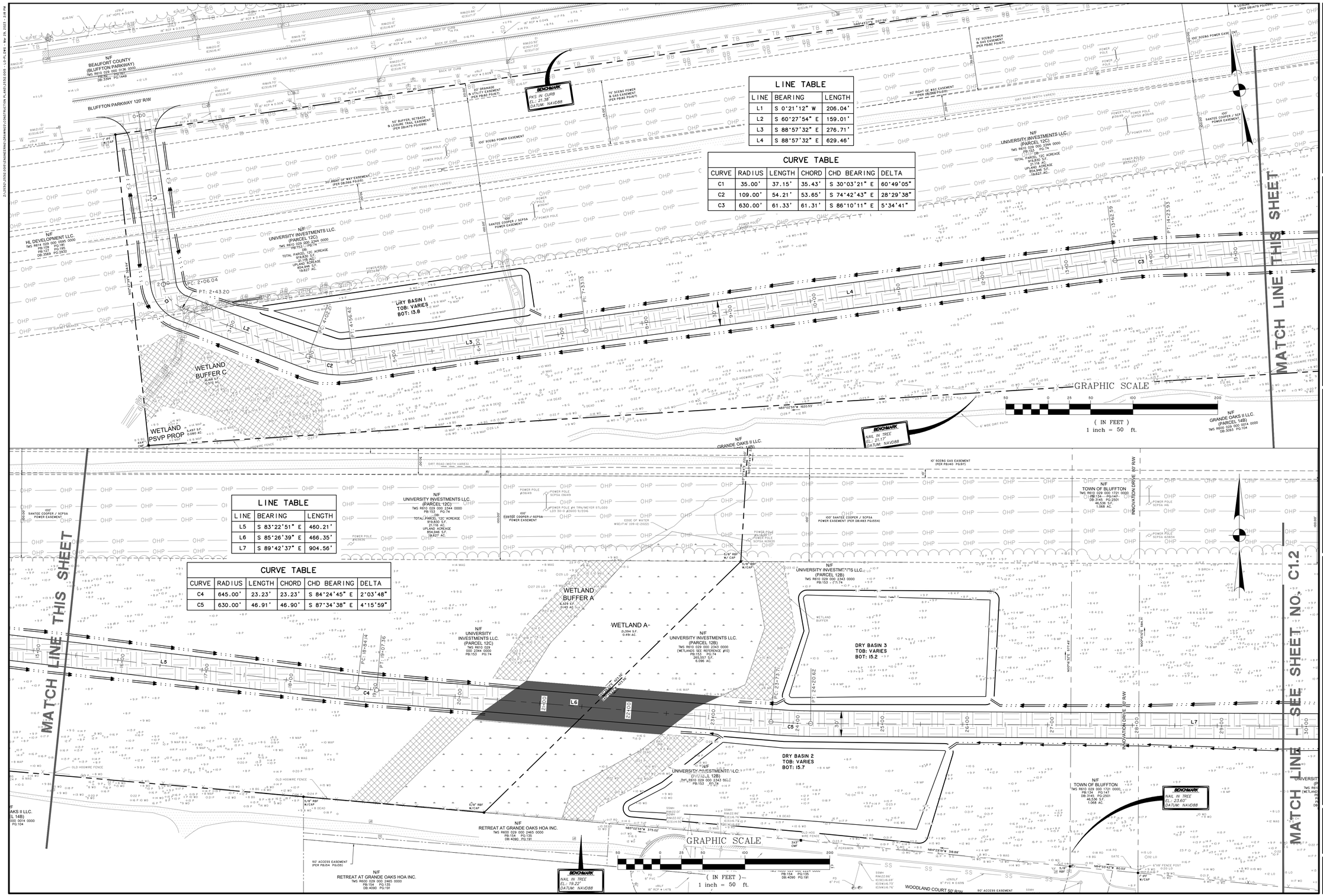

LINE TABLE		
LINE	BEARING	LENGTH
L1	S 0°21'12" W	206.04'
L2	S 60°27'54" E	159.01'
L3	S 88°57'32" E	276.71'
L4	S 88°57'32" E	629.46'

CURVE TABLE					
CURVE	RADIUS	LENGTH	CHORD	CHD BEARING	DELTA
C1	35.00'	37.15'	35.43'	S 30°03'21" E	60°49'05"
C2	109.00'	54.21'	53.65'	S 74°42'43" E	28°29'38"
C3	630.00'	61.33'	61.31'	S 86°10'11" E	5°34'41"

LINE TABLE		
LINE	BEARING	LENGTH
L5	S 83°22'51" E	460.21'
L6	S 85°26'39" E	466.35'
L7	S 89°42'37" E	904.56'

CURVE TABLE					
CURVE	RADIUS	LENGTH	CHORD	CHD BEARING	DELTA
C4	645.00'	23.23'	23.23'	S 84°24'45" E	2°03'48"
C5	630.00'	46.91'	46.90'	S 87°34'38" E	4°15'59"

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UNIVERSITY INVESTMENTS, LLC

BLUFFTON, SOUTH CAROLINA

PARCELS 12A, 12B, & 12C

STRIPING, SIGNAGE, AND LAYOUT PLAN

MATCH LINE – SEE SHEET NO. C1.2

JOB NO:	J-253.2.0015
DATE:	03/29/23
DRAWN:	CGC
DESIGNED:	JDF
REVIEWED:	HAC
APPROVED:	NBL
SCALE:	AS NOTED

C1.1

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UNIVERSITY INVESTMENTS, LLC
BLUFFTON, SOUTH CAROLINA
PARCELS 12A, 12B, & 12C
STRIPING, SIGNAGE, AND LAYOUT PLAN

JOB NO:	J-25312.0015
DATE:	03/29/23
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APPROVED:	NBL
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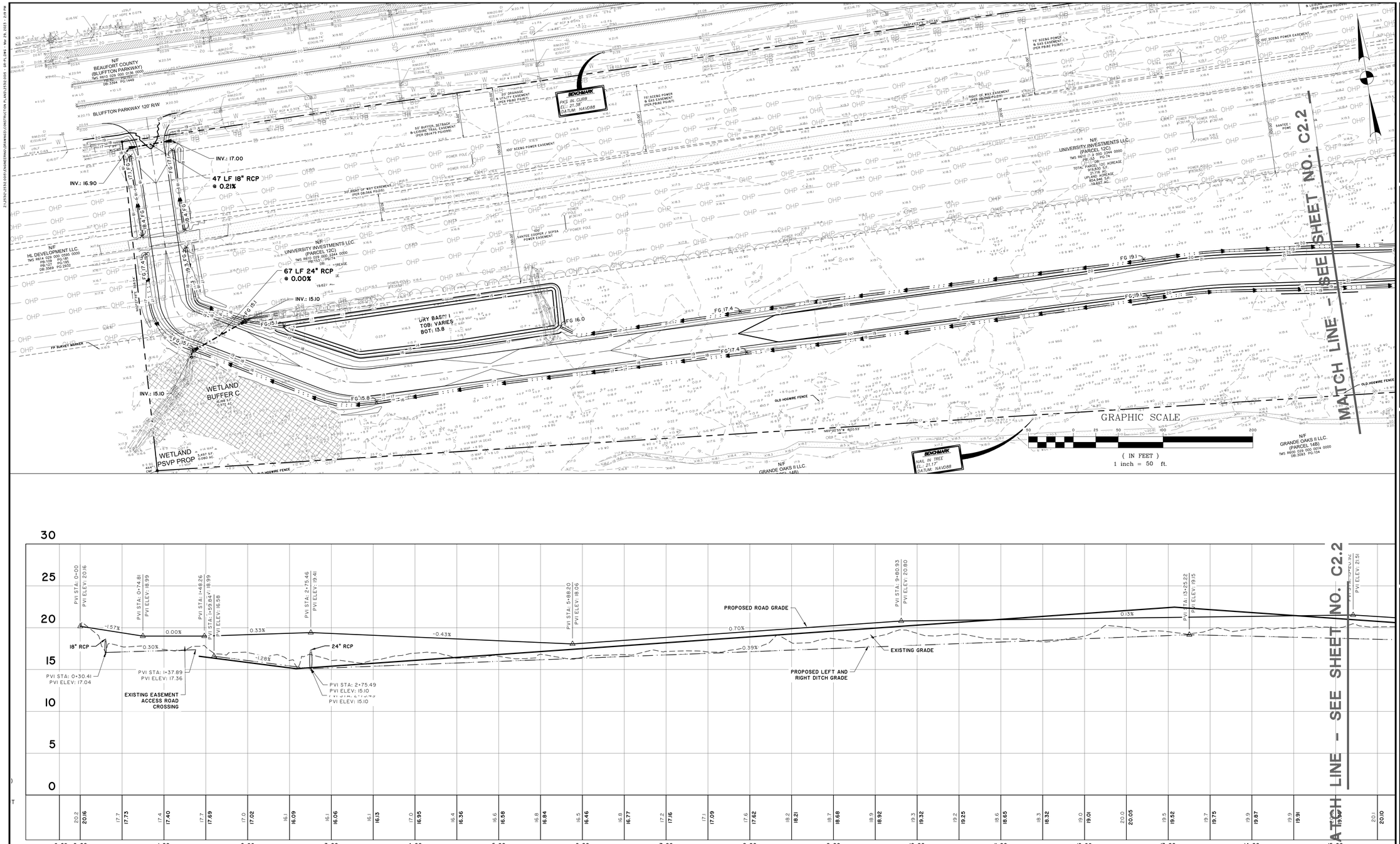
C1.2



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UNIVERSITY INVESTMENTS, LLC
BLUFFTON, SOUTH CAROLINA
PARCELS 12A, 12B, & 12C
GRADING AND DRAINAGE PLAN

JOB NO:	J-25312.0015
DATE:	03/29/23
DRAWN:	CGC
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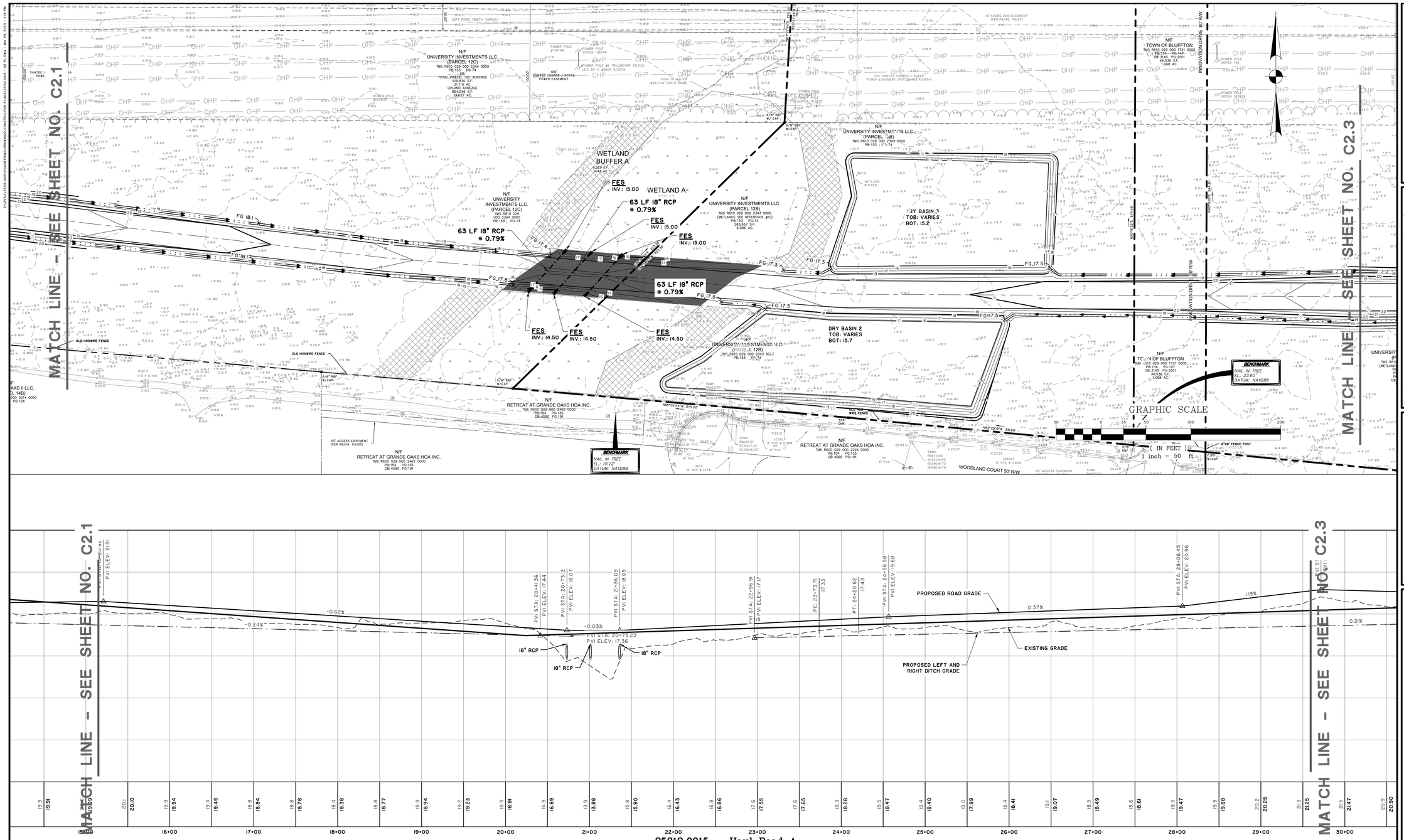
APPROVED:	NBL
SCALE:	AS NOTED

C2.1

ATTACHMENT 4

Section X. Item #3.



25312.0015 – Haul Road A

STATIONS: -0+25 – 45+50

SCALE: HORZ.: 1" = 30'

VERT.: 1" = 3'

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BLUFFTON, SOUTH CAROLINA

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ATTACHMENT 4

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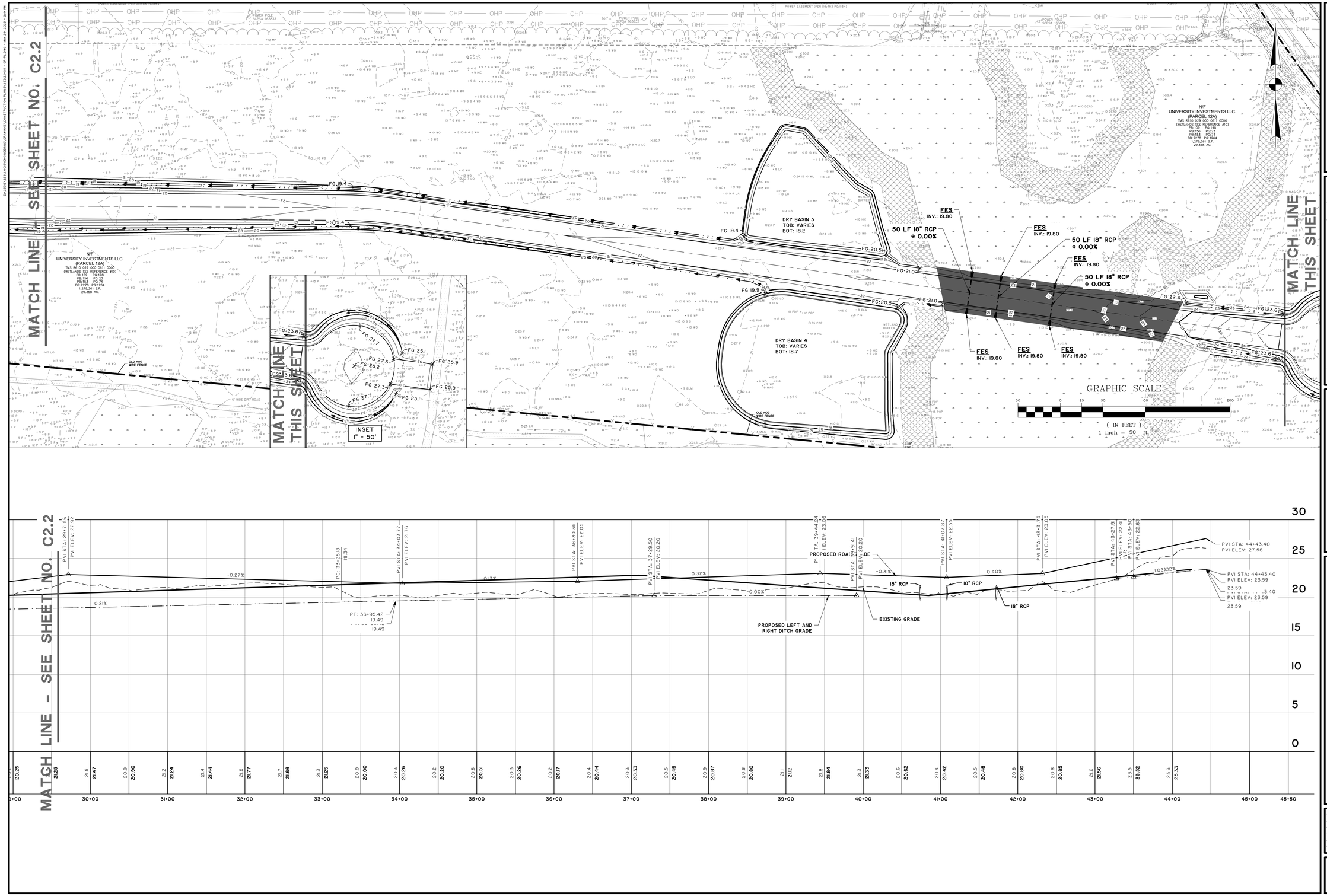

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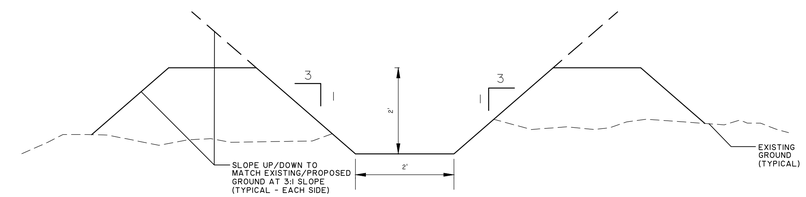
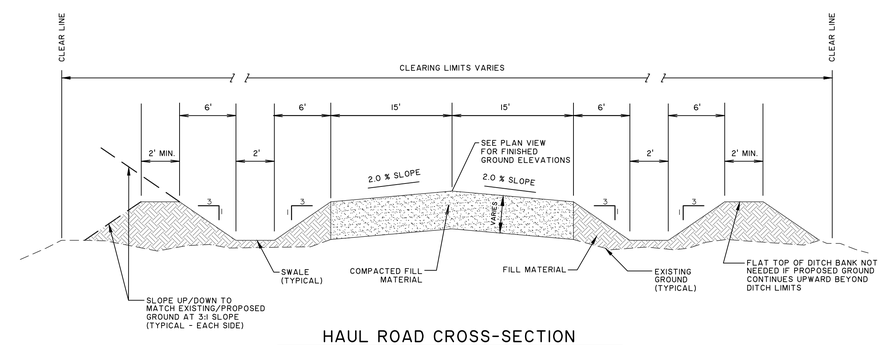


SECTION

SWALE DETAIL

NOT TO SCALE



HAUL ROAD CROSS-SECTION

NOT TO SCALE

SOUTH CAROLINA
THOMAS & HUTTON ENGINEERING
No. C00285
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
NATHAN B. LONG
No. 25355

NO.	REVISIONS	BY	DATE

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UNIVERSITY INVESTMENTS, LLC
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PARCELS 12A, 12B, & 12C

GRADING AND DRAINAGE DETAILS

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SCALE:	1" = 1'

C2.1

PERMIT SET - FOR REVIEW PURPOSES ONLY

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STORMWATER POLLUTION PREVENTION PLAN

I. SITE DESCRIPTION

A. PROJECT DESCRIPTION

A.1.	PROJECT AREA	58 ACRES
A.2.	AREA DISTURBED	10.2 ACRES
A.3.	PERCENT IMPERVIOUS AREA BEFORE CONSTRUCTION	0 %
A.4.	RUNOFF COEFFICIENT BEFORE CONSTRUCTION	46.7 CN
A.5.	PERCENT IMPERVIOUS AREA AFTER CONSTRUCTION	0 %
A.6.	RUNOFF COEFFICIENT AFTER CONSTRUCTION	51.3 CN

B. DESCRIPTION OF CONSTRUCTION ACTIVITY

WORK CONSISTS OF CLEARING, GRADING, EXCAVATION, DRAINAGE IMPROVEMENTS, GRASSING, AND EARTH ROADS.

C. RUNOFF DATA

C.1.	SOIL CLASSIFICATIONS:	(HSG) A, A/D, B/D, C/D
C.2.	LAND USE(S):	COMMERCIAL

D. RECEIVING WATERS

E. CLOSEST RECEIVING WATERS: OKATEE RIVER

F. ULTIMATE RECEIVING WATERS: MAY RIVER

G. FLOOD

G.1.	FEMA FLOOD ZONE(S):	ZONE X
G.2.	FEMA FLOOD INSURANCE MAP(S):	45013C0270G, EFFECTIVE MARCH 23, 2021

II. CONTROL MEASURES

1. EROSION AND SEDIMENT CONTROLS

PRIOR TO START OF CONSTRUCTION, ALL EXTERIOR SILT FENCE WILL BE INSTALLED AS SHOWN ON THE PLANS.

1.1. CLEARING

1.1.1. AS CLEARING IS COMPLETED, ADDITIONAL SILT FENCE WILL BE INSTALLED WHERE NECESSARY, SUCH AS POINTS WHERE FLOWS BECOME CHANNELIZED, AND OTHER POINTS WHERE EXCESSIVE RUNOFF VELOCITIES MAY OCCUR.

1.1.2. INSTALL CONSTRUCTION ENTRANCES / EXITS BEFORE BEGINNING CLEARING

1.1.3. CONSTRUCTION DELAYS IN ANY ONE AREA GREATER THAN 14 DAYS PRIOR TO START OF ROUGH GRADING WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.

1.1.4. MAINTAIN EXISTING VEGETATION WHENEVER POSSIBLE AND MINIMIZE THE AREA OF DISTURBANCE. RETAIN AND PROTECT TREES TO ENHANCE FUTURE LANDSCAPING EFFORTS AND REDUCE RAINDROP IMPACT.

1.1.5. INSTALL ALL SEDIMENT CONTROL PRACTICES PRIOR TO ANY UP-SLOPE SOIL DISTURBING ACTIVITIES.

1.1.6. PHASE CONSTRUCTION ACTIVITIES TO MINIMIZE THE AREAS DISTURBED AT ONE TIME. THIS WILL ALSO ALLOW COMPLETED AREAS TO BE STABILIZED AND RE-VEGETATED BEFORE DISTURBING ADJACENT SITES. THE NEED FOR TEMPORARY EROSION CONTROL MEASURES MAY BE AVOIDED BY COMPLETING A PHASE AND INSTALLING PERMANENT EROSION CONTROL MEASURES WHEN THE FINAL GRADE IS ATTAINED.

1.1.7. MAINTAIN AND PROTECT ALL NATURAL WATERWAYS. RETAIN AT LEAST A 35-FOOT UNDISTURBED BUFFER OF NATURAL VEGETATION ALONG ALL WATERWAYS TO FILTER OUT SEDIMENT AND OTHER POLLUTANTS. MAINTAIN A 45-FOOT UNDISTURBED BUFFER AROUND SENSITIVE WATERS.

1.1.8. INSTALL SILT FENCE (OR BIO ROLLS/ROCK SOCK PRODUCTS) ON THE DOWN-SLOPE PERIMETER OF ALL DISTURBED AREAS PRIOR TO ANY SOIL DISTURBING ACTIVITIES (INCLUDING CLEARING AND GRUBBING). SILT FENCE CAN TREAT A MAXIMUM OF 100 SQUARE FEET PER LINEAL FOOT OF FENCE. INSTALL SILT FENCE IN SHORTER REACHES ON THE CONTOUR WITH EACH END TURNED UP-SLOPE . SWALES AND SHORELAND AREAS SHOULD ALSO BE PROTECTED WITH SILT FENCE, BIO ROLLS, OR ROCK SOCKS.

1.1.9. IN AREAS OF CONCENTRATED FLOW INSTALL STRAW BALE CHECKS, ROCK CHECK DAMS, TRIANGULAR DIKES, BIO ROLL BLANKETS, OR ROCK SOCKS TO SLOW RUNOFF AND TRAP SEDIMENT.

1.1.10. USE TEMPORARY SLOPE DRAINS OR ROCK CHUTES TO MOVE WATER DOWN STEEP SLOPES.

1.1.11. CONSTRUCT SEDIMENT BASINS FOR DRAINAGE AREAS GREATER THAN 10 ACRES

1.2. ROUGH GRADING

1.2.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING ROUGH GRADING, DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.

1.2.2. ALL AREAS NOT SUBJECT TO FURTHER CONSTRUCTION (DRAINAGE, SANITARY SEWER, ROADS, WATER DISTRIBUTION SYSTEMS, OR STORM WATER FACILITIES) SHALL BE GRASSED WITH A PERMANENT COVER.

1.2.3. COVER ANY STOCK PILED TOPSOIL WITH PLASTIC (OR OTHER IMPERVIOUS COVERING) OR USE A TEMPORARY SEED MIX. USE STOCKPILED TOPSOIL AS EARTHEN BERMS TO SERVE AS TEMPORARY SEDIMENT BASINS.

1.3. DRAINAGE

1.3.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING DRAINAGE INSTALLATION.

1.3.2. CONSTRUCTION DRAINAGE WILL BE ROUTED THROUGH LAKES, WHICH WILL ACT AS SEDIMENT BASINS OR OTHER ACCEPTABLE SEDIMENT BASINS/TRAPS.

1.3.3. STORM DRAIN INLET PROTECTION AS SHOWN ON DETAIL SHEET SHALL BE INSTALLED ON ALL CURB INLETS, STORM DRAIN MANHOLES, JUNCTION BOXES, AND GRATE INLETS.

1.3.4. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF THE NEXT CONSTRUCTION SEQUENCE WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.

1.3.5. ALL STORM LINES NOT IN STREETS OR OTHER PAVED AREAS ARE TO BE MULCHED AND SEEDED WITHIN 5 DAYS AFTER BACKFILL.

1.4. WASTE DISTRIBUTION SYSTEM INSTALLATION

1.4.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING INSTALLATION OF THE WATER DISTRIBUTION SYSTEM.

1.4.2. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.

1.5. WASTEWATER COLLECTION SYSTEM INSTALLATION

1.5.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING INSTALLATION OF THE WASTEWATER SYSTEM.

1.5.2. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.

1.6. CONSTRUCTION OF ROADS

1.6.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING ROAD CONSTRUCTION.

1.6.2. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.

1.7. GRASSING

1.7.1. ALL EXISTING CONTROLS WILL BE MAINTAINED UNTIL GRASSING IS ESTABLISHED

1.7.2. ANY AREAS THAT ERODE OR WHERE GRASS DOES NOT ESTABLISH ITSELF SHALL BE RE-GRADED AND RE-GRASSED.

2. STORM WATER MANAGEMENT

RUNOFF FROM THIS PROJECT WILL DISCHARGE INTO A STORM WATER MANAGEMENT SYSTEM. TREATMENT WILL OCCUR IN STORM WATER DETENTION PONDS.

3. OTHER CONTROLS

3.1. WASTE DISPOSAL

3.1.1. NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED TO ANY RECEIVING WATERS.

3.1.2. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED.

3.1.3. THIS PLAN SHALL COMPLY WITH STATE AND/OR LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS.

3.1.4. DUST CONTROL ON DISTURBED AREAS - CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITE AND HAUL ROUTES. THE PURPOSE OF THE MEASURE IS TO REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES, WHICH MAY BE HARMFUL OR INJURIOUS TO HUMAN HEALTH, WELFARE OR SAFETY, OR TO ANIMALS OR PLANT LIFE.

III. MAINTENANCE

1. MAINTENANCE PROGRAM

1.1. THE SITE SUPERINTENDENT, OR HIS/HER REPRESENTATIVE, SHALL MAKE VISUAL INSPECTIONS OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREAS (I.E. SEEDED AND MULCHED AND/OR SODDED AREAS) ON A DAILY BASIS; ESPECIALLY AFTER HEAVY RAINFALL EVENT TO INSURE THAT ALL CONTROLS ARE MAINTAINED AND PROPERLY FUNCTIONING. ANY DAMAGED CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORK DAY INCLUDING RE-SEEDING AND MULCHING OR RE-SODDING IF NECESSARY.

1.2. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE. ALL DRAINAGE SWALES, POCKETS, DEPRESSION, LOW LINES, AND OUTLET DITCHES SHALL DRAIN EFFECTIVELY AT ALL TIMES. SETTLEMENT OR WASHING THAT MAY OCCUR SHALL BE REPAIRED BY THE CONTRACTOR. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN AN EFFECTIVE BARRIER. MAINTAIN THE CONSTRUCTION EXIT IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TACKED ONTO PUBLIC ROADWAYS. RESEED AND MULCH AREA WHERE SEEDING EMERGENCE IS POOR, OR WHERE EROSION OCCURS. PROTECT FROM TRAFFIC AS MUCH AS POSSIBLE. INSPECT ALL MULCHES PERIODICALLY, AND AFTER RAINSTORMS TO CHECK FOR EROSION, DISLOCATION OR FAILURE. IF WASHOUT OCCURS, REPAIR THE SLOPE GRADE, RESEED AND REINSTALL MULCH. FOLLOW THE CONSTRUCTION SEQUENCE THROUGHOUT THE PROJECT DEVELOPMENT. WHEN CHANGES IN CONSTRUCTION ACTIVITIES ARE NEEDED, AMEND THE SEQUENCE SCHEDULE IN ADVANCE TO MAINTAIN MANAGEMENT CONTROL. IF MAJOR CHANGES ARE NECESSARY, SEND A COPY OF THE MODIFIED SCHEDULE TO THE ENGINEER, SEDIMENT AND EROSION CONTROL MEASURES WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE DISTURBED AREAS ARE STABILIZED.

2. SILT FENCE

SILT FENCES WILL BE MONITORED DURING CONSTRUCTION. ANY SILT FENCE WHICH IS NOT FUNCTIONING PROPERLY WILL BE PROMPTLY REPAIRED. CLEAN OUT THE SILT FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE OR REPLACE WITH FUNCTIONAL SILT FENCE WITHIN 24 HOURS. USE OF HOSES AND WATER TO FLUSH THE SEDIMENT INTO THE STORM INLETS IS UNACCEPTABLE.

3. SEDIMENTATION BASINS

SEDIMENTATION BASINS WHICH ARE AT 50% USED CAPACITY OR APPROACHING SUCH CAPACITY SHALL BE RE-EXCAVATED TO ORIGINAL DIMENSIONS AND THE SILT PROPERLY DISPOSED OF.

4. SEDIMENT LOGS/ROLLS

SEDIMENT LOGS/ROLLS OR OTHER CONTROL MEASURES WHICH BEGIN TO DISINTEGRATE OR FUNCTION INEFFECTIVELY SHALL BE PROMPTLY REPLACED.

5. VEGETATION COVER

ANY VEGETATION COVER SERVING TO STABILIZE DISTURBED SOILS WHICH IS ITSELF DISTURBED SHALL IMMEDIATELY BE REPLACED.

6. CONSTRUCTION ENTRANCE

MAINTAIN ROCK CONSTRUCTION ENTRANCE AND CLEAN ADJACENT ROADS OF ANY MUD TRACKED ONTO THEM.

IV. INSPECTIONS

1. QUALIFIED PERSONNEL WILL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE, AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION THAT HAVE NOT BEEN FINALLY STABILIZED, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. WHERE SITES HAVE BEEN FINALLY STABILIZED SUCH INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH DURING THE WARRANTY PERIOD.

2. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.

3. A WRITTEN REPORT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, WEATHER INFORMATION FOR THE PERIOD SINCE THE LAST INSPECTION (OR SINCE COMMENCEMENT OF CONSTRUCTION ACTIVITY) INCLUDING A BEST ESTIMATE OF THE BEGINNING OF EACH STORM EVENT, DURATION OF EACH STORM EVENT, APPROXIMATE AMOUNT OF RAINFALL FOR EACH STORM EVENT (IN INCHES) AND WHETHER ANY DISCHARGES OCCURRED, LOCATION(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE, LOCATION(S) OF BMP'S THAT NEED MAINTENANCE, LOCATION(S) OF BMP'S THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, LOCATION(S) WHERE ADDITIONAL BMP'S ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION AND ANY CORRECTIVE ACTION REQUIRED INCLUDING ANY CHANGES TO SWPPP NECESSARY AND IMPLEMENTATION DATES.

4. THE REPORT SHALL BE MAINTAINED AT LEAST THREE YEARS FROM THE DATE THE SITE IS FINALLY STABILIZED. THE REPORT MUST BE SIGNED AND SHALL CONTAIN A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN AND THE NPDES PERMIT REFERENCED ABOVE. THE CONTRACTOR SHALL MAINTAIN THIS REPORT. THE REPORT SHALL BE SUBMITTED TO THE ENGINEER AND OWNER.

V. LONG TERM MAINTENANCE OF DRAINAGE AND STORM WATER MANAGEMENT SYSTEM

THE ROADS AND DRAINAGE SYSTEM WILL BE OWNED AND MAINTAINED BY ARGENT LAND HOLDINGS, LLC AFTER CONSTRUCTION IS COMPLETE.

VI. SC DHEC STANDARD NOTES

1. IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO GRASSING / HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.

2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW:

2.1. WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.

2.2. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.

3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF SITE INSPECTIONS IDENTIFY BMP'S THAT ARE DAMAGED OR ARE NOT OPERATING EFFECTIVELY, MAINTENANCE MUST BE PERFORMED AS SOON AS PRACTICAL OR AS REASONABLY POSSIBLE BEFORE THE NEXT STORM EVENT WHENEVER PRACTICAL.

4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE ANY SEDIMENTS BEFORE BEING PUMPED INTO ANY WATERS OF THE STATE.

5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.

6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO THE PAVED ROADWAY FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT AS MAY BE REQUIRED.

7. RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C. REG. 72-300 AND SCR100000.

8. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.

9. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN NOT BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS

10. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.

11. A COPY OF THE SWPPP, INSPECTION RECORDS AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.

12. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.

13. MINIMIZE SOIL COMPACTION IN AREAS NOT UNDER PAVEMENTS AND /OR STRUCTURES AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.

14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUAL OR BETTER TREATMENT PRIOR TO DISCHARGE.

15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).

16. THE FOLLOWING DISCHARGES ARE PROHIBITED:

16.1. WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;

16.2. WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;

16.3. FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND

16.4. SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.

17. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.

18. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF PERMIT SCR100000 AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.

19. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE, THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

VII. EROSION, SEDIMENTATION & POLLUTION CONTROL NOTES

1. THE IMPLEMENTATION OF THESE EROSION SEDIMENT CONTROL (ESC) PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.

2. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.

3. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.

4. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.

5. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 24 HOURS FOLLOWING A MAJOR STORM EVENT.

6. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING AND PRIOR TO FINAL INSPECTION. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.

7. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

8. BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY, THE EXISTING STORM WATER INLET(S) THAT RECEIVING RUNOFF FROM THE PROPOSED WORK AREA SHALL BE PROTECTED. THE TEMPORARY INLET PROTECTION MUST REMAIN IN PLACE UNTIL THE CONSTRUCTION ACTIVITY IS COMPLETED, THE STREET HAS BEEN SWEPT AND ANY EXPOSED SOILS ARE STABILIZED. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REMOVING ANY TEMPORARY INLET PROTECTION INSTALLED; AFTER ALL DISTURBED AREAS ARE STABILIZED. TEMPORARY PROTECTION OF THE INLETS MAY BE ACCOMPLISHED BY ONE OR MORE OF THE FOLLOWING:

8.1. USE OF GRAVEL BAGS TO FILTER THE SEDIMENT FROM ANY RUNOFF. TO MAKE A GRAVEL BAG, USE A BAG MADE OF GEOTEXTILE FABRIC (NOT BURLAP) AND FILL WITH EITHER 3/4 INCH ROCK OR 1/4 INCH PEA GRAVEL.

8.2. USE OF SEDIMENT LOGS TO FILTER THE SEDIMENT FROM ANY RUNOFF (AVAILABLE THROUGH LOCAL EROSION CONTROL SUPPLIERS).

8.3. USE OF ABOVE OR UNDER-GRATE FILTER BAGS OR DEVICES TO FILTER THE SEDIMENT FROM ANY RUNOFF (AVAILABLE THROUGH EROSION CONTROL SUPPLIERS).

9. WATER MAY NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION, SEDIMENTATION, OR FLOODING ON THE SITE, ON DOWNSTREAM PROPERTIES, IN THE RECEIVING CHANNELS, OR IN ANY STORM WATER INLET. WHEN SITE DEWATERING, WATER PUMPED FROM THE SITE, INCLUDING TRENCHES, SHALL BE TREATED BY ONE OF THE FOLLOWING:

9.1. TEMPORARY SEDIMENTATION BASINS

9.2. SEDIMENT FILTERING BAGS

10. THE CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL EXISTING UTILITIES. EXISTING UTILITIES ARE ALL UTILITIES THAT EXIST ON THE PROJECT IN AN ORIGINAL, RELOCATED OR NEWLY INSTALLED POSITION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE COST OF REPAIRS TO DAMAGED UNDERGROUND OR OVERHEAD FACILITIES, EVEN IF THE UTILITY IS NOT SHOWN ON THE SITE DEVELOPMENT PLANS. THE CONTRACTOR SHALL CONTACT THE LOCAL UTILITIES PROTECTION CENTER TO COORDINATE THE MARKING OF EXISTING UTILITY LINES A MINIMUM OF 96 HOURS PRIOR TO COMMENCEMENT OF ANY WORK.

11. THE CONTRACTOR SHALL FLUSH ALL INLETS AND PIPE AT THE COMPLETION OF CONSTRUCTION TO REMOVE SILT AND DEBRIS. THE CLEANING AND FLUSHING OF INLETS AND PIPE (EXISTING AND PROPOSED) SHALL BE CONSIDERED PART OF THE COST FOR THE PROJECT.

12. EGRESS FROM THE SITE SHALL BE CONTROLLED SUCH THAT VEHICLES LEAVING THE SITE MUST TRAVERSE CONSTRUCTION EXITS TO REMOVE MUD FROM TIRES.

13. SCHEDULE CONSTRUCTION ACTIVITIES TO MINIMIZE THE EXPOSED AREA AND DURATION OF EXPOSURE. IN SCHEDULING, TAKE INTO ACCOUNT THE SEASON AND THE WEATHER FORECAST.

14. EROSION CONTROL MEASURES ARE THE MINIMUM REQUIRED. THE CONTRACTOR SHALL PROVIDE ADDITIONAL CONTROL MEASURES AS DICTATED BY ACTUAL FIELD CONDITIONS AT THE TIME OF CONSTRUCTION IN ORDER TO PREVENT EROSION AND CONTROL SEDIMENT. EROSION AND SEDIMENT CONTROL MEASURES WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE ENTIRE PROJECT IS TERMINATED OR SUSPENDED FOR AN INDEFINITE LENGTH OF TIME, ALL DISTURBED AREAS SHALL BE PLANTED WITH PERMANENT VEGETATION.

15. THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS, OR IN ANY WAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, IS BASED UPON FIELD INVESTIGATIONS AND IS BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME IS SHOWN AS INFORMATION ONLY, IS NOT GUARANTEED AND DOES NOT BIND THOMAS & HUTTON, OR THE OWNER IN ANY WAY.

16. CONTRACTOR SHALL MAINTAIN SITE ON A DAILY BASIS TO PROVIDE FOR POSITIVE DRAINAGE. CONTRACTOR, AT HIS COST, SHALL GRADE SITE AND PROVIDE NECESSARY TEMPORARY DRAINAGE SWALES TO INSURE STORM WATER DOES NOT POND ON SITE.

17. SITE DRAINAGE SHALL BE ESTABLISHED TO PREVENT ANY PONDED WATER CONDITIONS WITHIN THE CONSTRUCTION AREA AND TO FACILITATE STORM WATER DISCHARGE.

18. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.

19. LIME RATES AND ANALYSIS:

19.1. AGRICULTURAL LIME SHALL BE APPLIED AT THE RATE SHOWN IN THE SEEDING SECTION UNLESS SOIL TESTS INDICATE OTHERWISE. GRADED AREAS REQUIRE LIME APPLICATION. IF LIME IS APPLIED WITHIN SIX MONTHS OF PLANTING PERMANENT PERENNIAL VEGETATION, ADDITIONAL LIME IS NOT REQUIRED. AGRICULTURAL LIME APPLICATION SHALL BE WITHIN THE SPECIFICATIONS OF THE

STORMWATER POLLUTION PREVENTION PLAN

TEMPORARY SEEDING - COASTAL

SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET	40												
RYE, GRAIN	56												
RYEGRASS	50												
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET	40												
JAPANESE MILLET	40												
RYE, GRAIN	56												
OATS	75												
RYEGRASS	50												

PERMANENT SEEDING - COASTAL

SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET	10												
BAHIAGRASS	40												
BROWNTOP MILLET	10												
BAHIAGRASS	30												
SERICEA LESPEDEZA	40												
BROWNTOP MILLET	10												
ATLANTIC COASTAL	15												
PANICGRASS	PLS												
BROWNTOP MILLET	10												
SWITCHGRASS	8												
(ALAMO)	PLS												
LITTLE BLUESTEM	4												
SERICEA LESPEDEZA	20												
BROWNTOP MILLET	10												
WEEPING LOVEGRASS	8												
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET	10												
BAHIAGRASS	40												
RYE, GRAIN	10												
BAHIAGRASS	40												
CLOVER, CRIMSON (ANNUAL)	5												
BROWNTOP MILLET	10												
BAHIAGRASS	30												
SERICEA LESPEDEZA	40												
BROWNTOP MILLET	10												
BERMUDA, COMMON	10												
SERICEA LESPEDEZA	40												
BROWNTOP MILLET	10												
BERMUDA, COMMON	12												
KOBE LESPEDEZA (ANNUAL)	10												
BROWNTOP MILLET	10												
BAHIAGRASS	20												
BERMUDA, COMMON	6												
SERICEA LESPEDEZA	40												
BROWNTOP MILLET	10												
SWITCHGRASS	8												
LITTLE BLUESTEM	PLS												
INDIANGRASS	3												

EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
SILT FENCE	
CLEARING LIMITS	CL CL
DIVERSION DIKE	DD
DIVERSION BERM	DB
TEMPORARY DIVERSION	TD
PERMANENT DIVERSION	PD
SUBSURFACE DRAIN	SSD
VEGETATED CHANNEL	
RIP RAP LINED CHANNEL	
ECB OR TRM LINED CHANNEL	
PAVED CHANNEL	PC
TREE PROTECTION	
SURFACE ROUGHENING	OR LG
TOP SOILING	
TEMPORARY SEEDING	TS
PERMANENT SEEDING	PS
MULCHING	M

EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
EROSION CONTROL BLANKET OR TURF REINFORCEMENT MAT	
FLEXIBLE GROWTH MATRIX	FGM
BONDED FIBER MATRIX	BFM
SODDING	SO
SLOPED SODDING	
STAKED SOD	
STAKED SOD AROUND INLET	OR
RIPRAP	
OUTLET PROTECTION - RIP RAP	
OUTLET PROTECTION - ECB OR TRM	
DUST CONTROL	DC
POLYACRYLAMIDE (PAM)	PAM
SEDIMENT BASIN	
SEDIMENT BASIN WITH SKIMMER	
SEDIMENT TRAP	
ROCK SEDIMENT DIKE	
SEDIMENT TUBE	

EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
ROCK CHECK DAM	OR
POROUS BAFFLES	
STABILIZED CONSTRUCTION ENTRANCE	
CONCRETE WASHOUT	
STORM DRAIN INLET PROTECTION - TYPE A FILTER FABRIC	A
STORM DRAIN INLET PROTECTION - TYPE A SEDIMENT TUBE	A
STORM DRAIN INLET PROTECTION - TYPE B HARDWARE FABRIC AND STONE	B
STORM DRAIN INLET PROTECTION - TYPE C BLOCK AND GRAVEL	C
STORM DRAIN INLET PROTECTION - TYPE D RIGID INLET FILTER	D
STORM DRAIN INLET PROTECTION - TYPE E SURFACE COURSE CURB INLET FILTER	E
STORM DRAIN INLET PROTECTION - TYPE F INLET TUBE	F
STORM DRAIN INLET PROTECTION - TYPE G IMPERVIOUS AREA	G
STORM DRAIN INLET PROTECTION - CATCH BASIN INSERT	I
PIPE SLOPE DRAINS	
TEMPORARY STREAM CROSSING	T
LEVEL SPREADER	

LIST OF ACRONYMS FOR SEDIMENT AND EROSION CONTROL

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AMD	ACRYLAMIDE POLYMER
BFM	BONDED FIBER MATRIX
BMP(S)	BEST MANAGEMENT PRACTICE(S)
CFS	CUBIC FEET PER SECOND
CMP	CORRUGATED METAL PIPE
DHEC	DEPARTMENT OF HEATH AND ENVIRONMENTAL CONTROL
ECB	EROSION CONTROL BLANKET
EPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
EPSC	EROSION PREVENTION AND SEDIMENTATION CONTROL
FDA	UNITED STATES FOOD AND DRUG ADMINISTRATION
FGM	FLEXIBLE GROWTH MATRIX
HDPE	HIGH DENSITY POLYETHYLENE
MS4	MUNICIPAL SEPARATE STORM SEWER SYSTEM
MSDS	MATERIAL SAFETY DATA SHEETS
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PAM	POLYACRYLAMIDE OR POLYMER
RCP	REINFORCED CONCRETE PIPE
SCS	SOIL CONSERVATION SERVICE
SWPPP	STORMWATER POLLUTION PREVENTION PROGRAM
TRM	TURF REINFORCEMENT MAT
VFS	VEGETATED FILTER STRIP

CONSTRUCTION SEQUENCE

CONSTRUCTION ACTIVITY	SCHEDULE CONSIDERATION
INITIAL PHASE	
1 OBTAIN COPIES OF ALL PLAN APPROVALS AND OTHER APPLICABLE PERMITS.	CONTRACTOR TO HAVE ONSITE AT ALL TIMES DURING CONSTRUCTION.
2 FLAG THE WORK LIMITS AND BARRICADE TREES AND MARK BUFFER AREAS FOR PROTECTION.	HAVE LOCAL REGULATORY AGENCY INSPECT TREE BARRICADES.
3 HOLD PRE CONSTRUCTION CONFERENCE AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION.	REVIEW TREE PROTECTION (BARRICADE) WITH OWNER AND LOCAL REGULATORY AGENCY. TAKE PICTURES OF ALL PROTECTED TREES AND LOCATIONS WHERE SITE WORK TIES INTO EXISTING TO DOCUMENT PREDEVELOPMENT PROCEDURES.
4 INSTALL CONSTRUCTION ACCESS AND LAY DOWN AREAS	STABILIZE BARE AREAS IMMEDIATELY AND INSTALL CONSTRUCTION EXITS / ENTRANCES.
5 CONSTRUCT SEDIMENT FENCES	INSTALL SEDIMENT FENCES AFTER CONSTRUCTION SITE IS ACCESSED.
6 CONSTRUCT OUTLET PROTECTION. INSTALL SKIMMER.	INSTALL PRINCIPAL BASINS AFTER SEDIMENT FENCES IS INSTALLED.
7 ESTABLISH RUNOFF CONTROL - DIVERSIONS, PERIMETER DIKES, WATER BARS, AND OUTLET PROTECTION.	INSTALL PRINCIPAL SEDIMENT TRAPS AND BEFORE LAND GRADING. INSTALL ADDITIONAL RUNOFF-CONTROL MEASURES DURING GRADING.
8 LAND CLEARING AND GRADING-SITE PREPARATION CUTTING, FILLING AND GRADING, SEDIMENTATION TRAPS, BARRIERS, DIVERSIONS, DRAINS, SURFACE ROUGHENING.	BEGIN MAJOR CLEARING AND GRADING AFTER PRINCIPAL SEDIMENT AND KEY RUNOFF-CONTROL MEASURES ARE INSTALLED. CLEAR BORROW AND DISPOSAL AREAS ONLY AS NEEDED. INSTALL ADDITIONAL CONTROL MEASURES AS GRADING PROGRESSES. MARK TREES AND BUFFER AREAS FOR PRESERVATION.
CONSTRUCTION PHASE	
1 RUNOFF CONVEYANCE SYSTEM- INSTALL STORM DRAINS, STABILIZE BANKS, CHANNELS, INSTALL INLET AND OUTLET PROTECTION, SLOPE DRAINS.	WHERE NECESSARY, STABILIZE BANKS AS EARLY AS POSSIBLE. INSTALL PRINCIPAL RUNOFF CONVEYANCE SYSTEM WITH RUNOFF- CONTROL MEASURES. INSTALL REMAINDER OF SYSTEM AFTER GRADING.
2 INSTALL WASTEWATER COLLECTION, WATER DISTRIBUTION, AND STORM DRAINAGE SYSTEMS	APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS DELAYED OR COMPLETE.
3 SURFACE STABILIZATION-TEMPORARY AND PERMANENT SEEDING, MULCHING, SODDING, RIP RAP.	APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS DELAYED OR COMPLETE.
STABILIZATION PHASE	
4 BUILDING CONSTRUCTION- BUILDINGS UTILITIES, ROADS, ETC.	INSTALL NECESSARY EROSION AND SEDIMENTATION CONTROL PRACTICES AS WORK TAKES PLACE.
5 LANDSCAPING AND FINAL STABILIZATION - TOPSOILING, TREES AND SHRUBS, PERMANENT SEEDING, MULCHING, SODDING, RIP RAP. REMOVE SKIMMER.	LAST CONSTRUCTION PHASE--STABILIZE ALL OPEN AREAS, INCLUDING BORROW AND SPOIL AREAS. REMOVE AND STABILIZE ALL TEMPORARY CONTROL MEASURES.

SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE NOLLYNOTHUTTON

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 25532 NATHAN B. LONG

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UNIVERSITY INVESTMENTS, LLC
BLUFFTON, SOUTH CAROLINA
PARCELS 12A, 12B, & 12C
ES & PC NOTES

JOB NO:	J-25312.0015
DATE:	03/29/23
DRAWN:	CGC
DESIGNED:	JDF
REVIEWED:	HAC
APPROVED:	NBL
SCALE:	N/A

EC1.2

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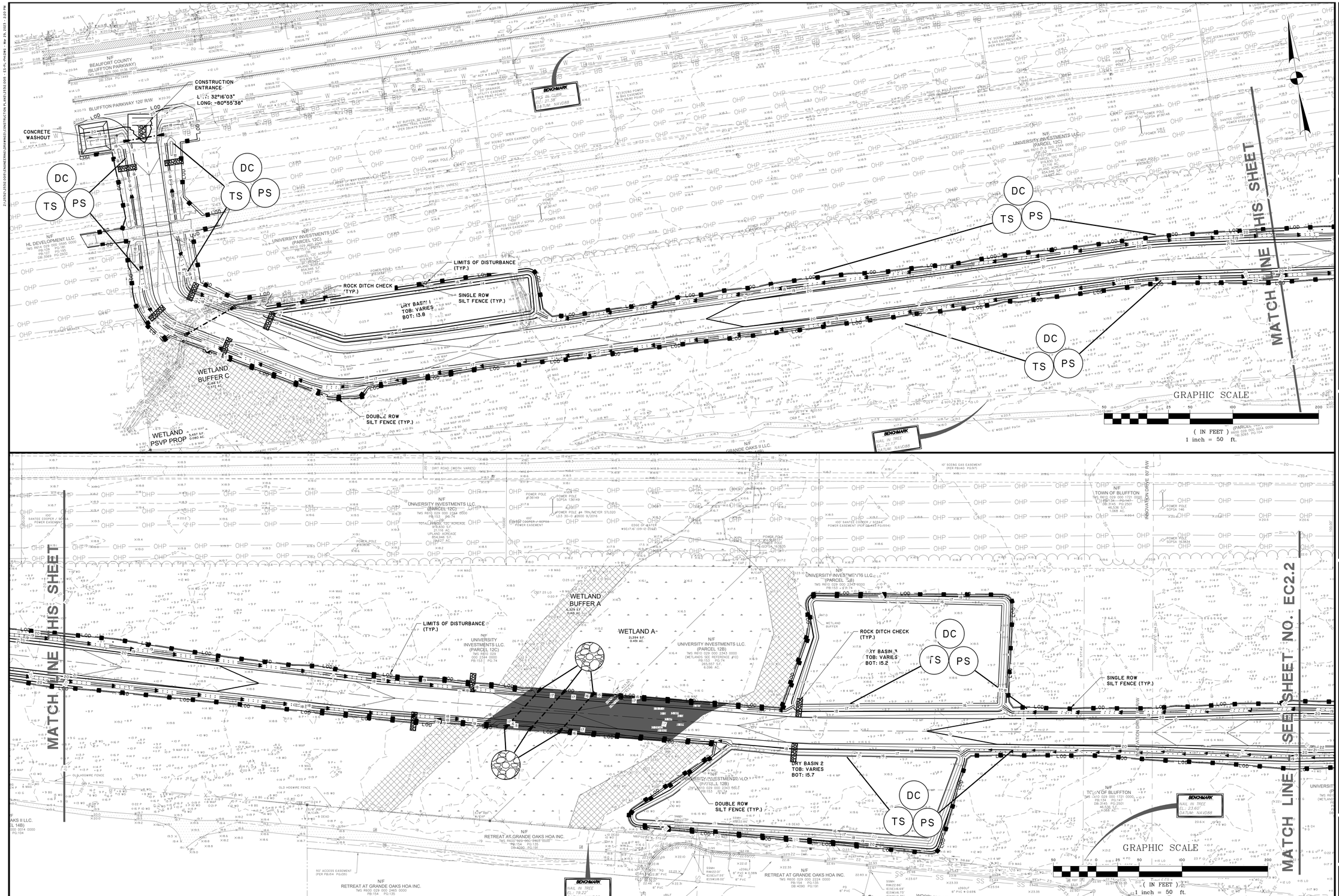

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UNIVERSITY INVESTMENTS, LLC
BLUFFTON, SOUTH CAROLINA
PARCELS 12A, 12B, & 12C
ES & PC PLAN

JOB NO:	J-2532.0015
DATE:	03/29/23
DRAWN:	CGC
DESIGNED:	JDF
REVIEWED:	HAC
APPROVED:	NBL
SCALE:	AS NOTED

EC2.1

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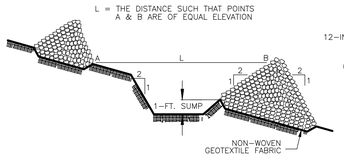
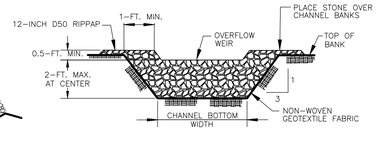
EC2.2

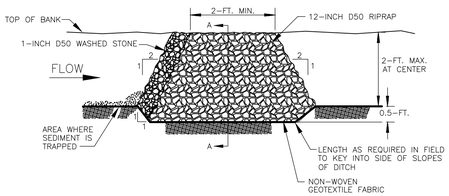
SPACING BETWEEN DITCH CHECK



CROSS SECTION A-A THRU STONE DITCH CHECK



TYPICAL DITCH CHECK SECTION



ROCK DITCH CHECK - GENERAL NOTES

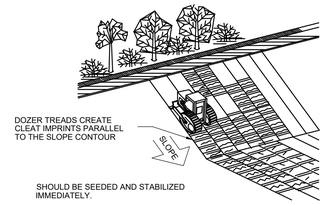
1. ROCK DITCH CHECKS SHOULD NOT BE PLACED IN WATERS OF THE STATE OR USGS BLUE-LINE STREAMS (UNLESS APPROVED BY FEDERAL AUTHORITIES).
2. ROCK DITCH CHECKS SHOULD BE INSTALLED IN STEEPLY SLOPED CHANNELS WHERE ADEQUATE VEGETATION CANNOT BE ESTABLISHED. THIS BMP MEASURE SHOULD ONLY BE USED IN SMALL OPEN CHANNELS.
3. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE INSTALLED OVER THE SOIL SURFACE WHERE THE ROCK DITCH CHECK IS TO BE PLACED.
4. THE BODY OF THE ROCK DITCH CHECK SHALL BE COMPOSED OF 12-INCH D50 RIPRAP. THE UPSTREAM FACE MAY BE COMPOSED OF 1-INCH D50 WASHED STONE.
5. ROCK DITCH CHECKS SHOULD NOT EXCEED A HEIGHT OF 2-FEET AT THE CENTERLINE OF THE CHANNEL.
6. ROCK DITCH CHECKS SHOULD HAVE A MINIMUM TOP FLOW LENGTH OF 2-FEET.
7. RIPRAP SHOULD BE PLACED OVER CHANNEL BANKS TO PREVENT WATER FROM CUTTING AROUND THE DITCH CHECK.
8. THE RIPRAP SHOULD BE PLACED BY HAND OR MECHANICAL PLACEMENT (NO DUMPING OF ROCK TO FORM DAM) TO ACHIEVE COMPLETE COVERAGE OF THE CHANNEL. DOING SO WILL ALSO ENSURE THAT THE CENTER OF THE CHECK IS LOWER THAN THE EDGES.
9. THE MAXIMUM SPACING BETWEEN THE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM CHECK IS AT THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM CHECK.

ROCK DITCH CHECK - INSPECTION & MAINTENANCE

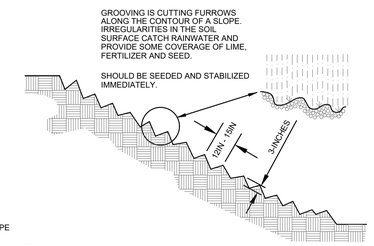
1. THE KEY TO FUNCTIONAL ROCK DITCH CHECK IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
2. REGULAR INSPECTIONS OF ROCK DITCH CHECKS SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
3. ATTENTION TO SEDIMENT ACCUMULATIONS IN FRONT OF THE ROCK DITCH CHECK IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
4. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE ROCK DITCH CHECK.
5. REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
6. INSPECT ROCK DITCH CHECKS' EDGES FOR EROSION AND EVIDENCE OF RUNOFF BYPASSING THE INSTALLED CHECK. IF EVIDENT REPAIR PROMPTLY AS NECESSARY TO PREVENT EROSION AND BYPASSING.
7. IN THE CASE OF GRASS-LINED DITCHES, CHANNELS, AND SWALES, ROCK DITCH CHECKS SHOULD BE REMOVED WHEN THE GRASS HAS MATURED SUFFICIENTLY TO PROTECT THE DITCH OR SWALE UNLESS THE SLOPE OF THE SWALE IS GREATER THAN 4%.
8. AFTER CONSTRUCTION IS COMPLETED AND FINAL STABILIZATION IS REACHED, THE ENTIRETY OF THE ROCK DITCH CHECK SHOULD BE REMOVED IF VEGETATION WILL BE USED FOR PERMANENT EROSION CONTROL MEASURES. THE AREA BENEATH THE REMOVED ROCK DITCH CHECK MUST BE ADDRESSED WITH PERMANENT STABILIZATION MEASURES.

ROCK DITCH CHECK

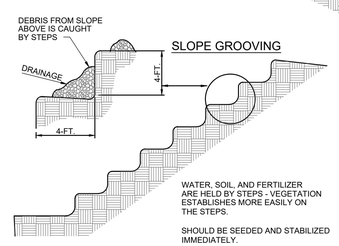
NOT TO SCALE



TRACKING



SLOPE GROOVING

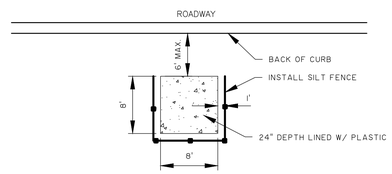


STAIR-STEP GRADING

OR LG

LAND GRADING TECHNIQUES

NOT TO SCALE



CONCRETE WASHOUT DETAIL

NOT TO SCALE

WHEN AND WHERE TO USE IT:
SILT FENCE IS APPLICABLE IN AREAS:

WHERE THE MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE FENCE IS 100-FEET.
WHERE THE MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO FENCE LINE) IS 2H:1V.
THAT DO NOT RECEIVE CONCENTRATED FLOWS GREATER THAN 0.5 CFS.

DO NOT PLACE SILT FENCE ACROSS CHANNELS OR USE IT AS A VELOCITY CONTROL BMP.

MATERIALS:
STEEL POSTS
USE 48-INCH LONG STEEL POSTS THAT MEET THE FOLLOWING MINIMUM PHYSICAL REQUIREMENTS:
COMPOSED OF HIGH STRENGTH STEEL WITH MINIMUM YIELD STRENGTH OF 50,000 PSI.
HAVE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-INCHES AND NOMINAL "T" LENGTH OF 1.48-INCHES.
WEIGH 1.25 POUNDS PER FOOT (± 8%).
HAVE A SOIL STABILIZATION PLATE WITH A MINIMUM CROSS SECTION AREA OF 17-SQUARE INCHES ATTACHED TO THE STEEL POSTS.
PAINTED WITH A WATER BASED BAKED ENAMEL PAINT.

USE STEEL POSTS WITH A MINIMUM LENGTH OF 4-FEET, WEIGHING 1.25 POUNDS PER LINEAR FOOT (± 8%) WITH PROJECTIONS TO AID IN FASTENING THE FABRIC. EXCEPT WHEN HEAVY CLAY SOILS ARE PRESENT ON SITE, STEEL POSTS WILL HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM SUCH THAT WHEN THE POST IS DRIVEN TO THE PROPER DEPTH, THE PLATE WILL BE BELOW THE GROUND LEVEL FOR ADDED STABILITY.
THE SOIL PLATES SHOULD HAVE THE FOLLOWING CHARACTERISTICS:
BE COMPOSED OF MINIMUM 15 GAUGE STEEL.
HAVE A MINIMUM CROSS SECTION AREA OF 17-SQUARE INCHES.

GEOTEXTILE FILTER FABRIC:
FILTER FABRIC IS:
COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS COMPOSED OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES.
FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER.
FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION.
FREE OF DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES.
CUT TO A MINIMUM WIDTH OF 36 INCHES.

USE ONLY FABRIC APPEARING ON SCDOT APPROVAL SHEET #34 MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

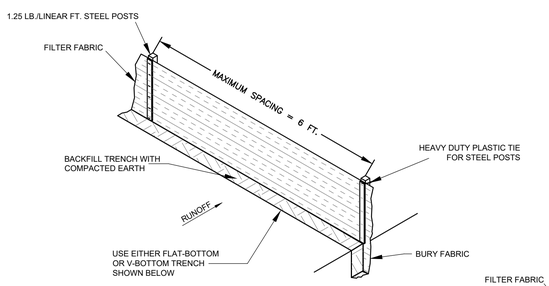
INSTALLATION:
EXCAVATE A TRENCH APPROXIMATELY 6-INCHES WIDE AND 6-INCHES DEEP WHEN PLACING FABRIC BY HAND. PLACE 12-INCHES OF GEOTEXTILE FABRIC INTO THE 6-INCH DEEP TRENCH, EXTENDING THE REMAINING 6-INCHES TOWARDS THE UPSLOPE SIDE OF THE TRENCH. BACKFILL THE TRENCH WITH SOIL OR GRAVEL AND COMPACT. BURY 12-INCHES OF FABRIC INTO THE GROUND WHEN PNEUMATICALLY INSTALLING SILT FENCE WITH A SLICING METHOD. PURCHASE FABRIC IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, WRAPPED THE FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 6-INCH MINIMUM OVERLAP. INSTALL POSTS TO A MINIMUM DEPTH OF 24-INCHES. INSTALL POSTS A MINIMUM OF 1- TO 2- INCHES ABOVE THE FABRIC, WITH NO MORE THAN 3-FEET OF THE POST ABOVE THE GROUND. SPACE POSTS TO MAXIMUM 6-FEET CENTERS. ATTACH FABRIC TO WOOD POSTS USING STAPLES MADE OF HEAVY-DUTY WIRE AT LEAST 1-1/2-INCH LONG, SPACED A MAXIMUM OF 6-INCHES APART. STAPLE A 2-INCH WIDE LATHE OVER THE FILTER FABRIC TO SECURELY FASTEN IT TO THE UPSLOPE SIDE OF WOODEN POSTS. ATTACH FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED AND PLACED IN A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC. IN CALL CASES, TIES SHOULD BE AFFIXED IN NO LESS THAN 4 PLACES. INSTALL THE FABRIC A MINIMUM OF 24-INCHES ABOVE THE GROUND. WHEN NECESSARY, THE HEIGHT OF THE FENCE ABOVE GROUND MAY BE GREATER THAN 24-INCHES. IN TIDAL AREAS, EXTRA SILT FENCE HEIGHT MAY BE REQUIRED. THE POST HEIGHT WILL BE TWICE THE EXPOSED POST HEIGHT. POST SPACING WILL REMAIN THE SAME AND EXTRA HEIGHT FABRIC WILL BE 4-, 5-, OR 6-FEET TALL. LOCATE SILT FENCE CHECKS EVERY 100 FEET MAXIMUM AND AT LOW POINTS. INSTALL THE FENCE PERPENDICULAR TO THE DIRECTION OF FLOW AND PLACE THE FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.

INSPECTION AND MAINTENANCE:
CHECK FOR SEDIMENT BUILDUP AND FENCE INTEGRITY. CHECK WHERE RUNOFF HAS ERODED A CHANNEL BENEATH THE FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED BY FENCE OVERTOPPING. IF THE FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE SECTION OF FENCE IMMEDIATELY. REMOVE SEDIMENT ACCUMULATED ALONG THE FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED. REMOVE TRAPPED SEDIMENT FROM THE SITE OR STABILIZE IT ON SITE. REMOVE SILT FENCE WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED OR

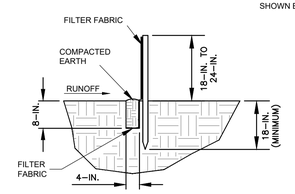
AFTER TEMPORARY BEST MANAGEMENT PRACTICES (BMPS) ARE NO LONGER NEEDED. PERMANENTLY STABILIZE DISTURBED AREAS RESULTING FROM FENCE REMOVAL.

SILT FENCE

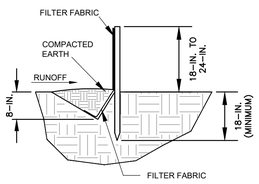
NOT TO SCALE



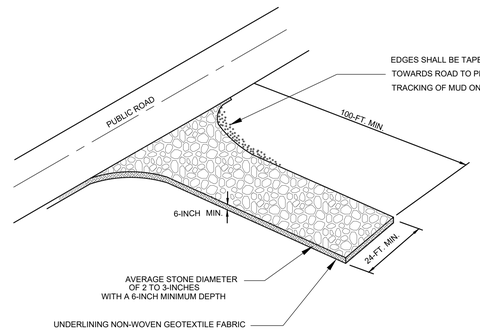
SILT FENCE INSTALLATION



FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL



WHEN AND WHERE TO USE IT:
STABILIZED CONSTRUCTION ENTRANCES SHOULD BE USED AT ALL POINTS WHERE TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVING DIRECTLY ONTO A PUBLIC ROAD.

IMPORTANT CONSIDERATIONS:
IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFFSITE. WASHDOWN FACILITIES SHALL BE REQUIRED AS DIRECTED BY SCDHEC AS NEEDED. WASHDOWN AREAS IN GENERAL MUST BE ESTABLISHED WITH CRUSHED GRAVEL AND DRAIN INTO A SEDIMENT TRAP OR SEDIMENT BASIN.

CONSTRUCTION ENTRANCES SHOULD BE USED IN CONJUNCTION WITH THE STABILIZATION OF CONSTRUCTION ROADS TO REDUCE THE AMOUNT OF MUD PICKED UP BY VEHICLES.

INSTALLATION:
REMOVE ALL VEGETATION AND ANY OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA.

DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM STONES TO A SEDIMENT TRAP OR BASIN.

INSTALL A NON-WOVEN GEOTEXTILE FABRIC PRIOR TO PLACING ANY STONE.

INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE POSITIVE DRAINAGE.

THE ENTRANCE SHALL CONSIST OF 1-INCH TO 3-INCH D50 STONE PLACED AT A MINIMUM DEPTH OF 6-INCHES.

MINIMUM DIMENSIONS OF THE ENTRANCE SHALL BE 24-FEET WIDE BY 100-FEET LONG, AND MAY BE MODIFIED AS NECESSARY TO ACCOMMODATE SITE CONSTRAINTS.

THE EDGES OF THE ENTRANCE SHALL BE TAPERED OUT TOWARDS THE ROAD TO PREVENT TRACKING OF MUD AT THE EDGE OF THE ENTRANCE.

INSPECTION AND MAINTENANCE:
CHECK FOR MUD AND SEDIMENT BUILDUP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING PERIODS OF WET WEATHER. MAINTENANCE IS REQUIRED MORE FREQUENTLY IN WET WEATHER CONDITIONS. RESHAPE THE STONE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.

WASH OR REPLACE STONES AS NEEDED. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF-SITE BY VEHICLES.

FREQUENT WASHING WILL EXTEND THE USEFUL LIFE OF STONE.

IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED WHEN THE WATER CAN BE DISCHARGED TO A SEDIMENT TRAP OR BASIN.

REPAIR ANY BROKEN PAVEMENT IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

DC

DUST CONTROL ON DISTURBED AREAS

DEFINITION

Controlling surface and air movement of dust on land-disturbing activities.

PURPOSE

- Prevent the movement of dust from exposed soil surfaces.
- Prevent the movement of airborne substances that may be harmful to health.

INSTALLATION

- Apply according to approved plan, if shown.
- Mulch disturbed areas and tackify with resins such as asphalt, Curasol or Terratack according to manufacturer's recommendations.
- Stabilize disturbed areas with temporary or permanent vegetation.
- Irrigate disturbed areas until surface is wet.
- Cover surfaces with crushed stone or gravel.

32

DC

- Apply calcium chloride at a rate to keep surfaces moist.
- Apply spray-on adhesives to mineral soils (not muck soils) as described in Table 1.

Table 1. Spray-On Adhesive Application Requirements

Adhesive	Water Dilution	Nozzle Type	Application (Gal./Acre)
Anionic asphalt emulsion	7:1*	Coarse spray	1,200
Latex emulsion	12.5:1 *	Fine spray	235
Resin-in-water emulsion	4:1*	Fine spray	300

*Use manufacturer's recommendations when available.

DUST CONTROL MEASURES

NOT TO SCALE

DC

SOUTH CAROLINA NOVEMBER 2022 THOMAS & HUTTON ENGINEERING CERTIFICATE OF AUTHORIZATION No. C00285
SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED RESEARCH PROFESSIONAL NATHAN B. LONG No. 25355
PERMIT SET - FOR REVIEW PURPOSES ONLY

NO.	REVISIONS	BY	DATE

THOMAS & HUTTON
50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300
www.thomasandhutton.com

UNIVERSITY INVESTMENTS, LLC
BLUFFTON, SOUTH CAROLINA
PARCELS 12A, 12B, & 12C
ES & PC DETAILS

JOB NO:	J-25312.0015
DATE:	03/29/23
DRAWN:	CGC
DESIGNED:	JDP
REVIEWED:	HAC
APPROVED:	NBL
SCALE:	1" = 1'

EC5.1

Z:\25312\0015\ENGINEERING\DRAWINGS\CONSTRUCTION PLANS\25312.0015 - ES-PC.DWG Mar 29, 2023 - 5:22 PM

THOMAS & HUTTON
50 PARK OF COMMERCE WAY
SAVANNAH, GA 31405 | 912.234.5300
WWW.THOMASANDHUTTON.COM

May 30, 2023

Dan Frazier
Town of Bluffton
20 Bridge Street
Bluffton, SC 29910

Re: Wetland Impact Plans of Parcels 12A, 12B, and 12C
DP-03-23-017841
Bluffton, South Carolina
J-25312.0015
Comment Response Letter

Dear Mr. Frazier:

On behalf of our client, Jake Reed of University Investments, LLC, regarding comments dated May 12, 2023 for the Wetland Impact Plans of Parcels 12A, 12B, and 12C, we offer the responses (in bold italics) found below.

Also, please find closed the following information in support of our resubmittal for approval and for being on the agenda for the Planning Commission meeting in June 2023:

- Updated Site Development Plans
- Compliance Calculator
- Wetland Impact Permit #2003-1G-006
- Cultural Resources Overview
- Soils Map

<u>Planning Commission Review – Revisions Required</u>

1. This development plan application is not associated with an approved master plan, however, it is recognized that per Section 2.D.19 of the Buckwalter Planned Unit Development infrastructure serving the community (on-site and off-site) is exempt from the Initial Master Plan approval process. The stated intent of the proposed development is to provide fill wetland crossings to allow for future road alignments in compliance with the approved Bluffton Parkway Access Management Plan.
   Response: Acknowledged.

2. The proposed project includes land disturbance on Town owned property (Innovation Drive R/W). Provide a Property Owner Letter from the Town authorizing the applicant to proceed with the development plan application on Town property.

Response: Our client has reached out to Stephen Steese for an encroachment request. We received an email on May 24, 2023 communicating that the Town of Bluffton has met and discussed the request and is setting up language for an encroachment permit.

3. RECOMMENDATION: As previously discussed, it is recommended that the Innovation Drive right-of-way be used as the haul road for the proposed work to minimize land disturbance. The result will be less trees removed, less impervious area created and less overall disturbance of land. This aligns with the stated intent of the request included in the application narrative, which is to "limit proposed disturbance at the site to the minimal amount required to transport and place the fill in desired areas".
Response: Thank you for the recommendation, but the applicant would prefer to keep the access as shown on the site plans. Creating an access within the Innovation Drive right-of-way would be highly visible to the public, especially to people coming in and out of Buckwalter Place. This could increase the likelihood of people traveling into this area out of curiosity.

In addition, development for a separate project is already planned at the access shown on the plans. Sharing this access allows construction activity to occur at one point off Bluffton Parkway instead of two separate points, thus reducing traffic interruptions.

<u>Planning Review – SR – Revisions Required</u>

1. Per the Buckwalter Development Agreement and Concept Plan, a 25' buffer is required along the southern property line. No grading or clearing shall occur within the 25' buffer. Revise plans to accommodate the buffer requirement.
Response: Revised. Per a "Correction to DRC Comments" email from the Town of Bluffton on May 16, 2023, a 50' buffer was added to the site plan sheets. The dry basins were revised accordingly. Please see sheets C2.1-C2.3.

It should be noted however, the PUD rules do not seem to provide definitive guidance of what can be performed within the 50' PUD buffer are not precise, but speak of retaining trees and vegetation "wherever possible" and requiring additional plantings "as necessary". The adopted modifications to Ordinance 90-3, dealing with River Protection District buffers provide some guidance. Surely, buffers within the River Protection District would be stricter than any PUD buffer not within this district. The River Protection District buffers, under Section 4.25.2, subsection 2, state there is a specific setback of 50 feet for drainage systems and retention ponds, "with the exception of dry retention areas….." This language should be considered for a potential application to this project, similar to road crossings and utility crossings, since there is no defined language addressing dry retention in relation to the PUD perimeter buffer. We would ask that the town consider this going forward, as final development plans may come forward in the future related to this property.

2. Revise dry basin 4 and 5 configurations to avoid removal of significant trees.

Response: Revised. Dry basin 5 was revised to save a 17" LO. Dry basins 2 and 4 were revised per the 50' buffer. This allowed for more significant trees to be saved. Please see enclosed updated site plan sheets C1.1 – C1.2.

3. Remove 30' stub to dirt trail at the end of the cul-de-sac at the eastern terminus of the project.
Response: Revised. Please see enclosed updated site plan sheet C1.2.

Watershed Management Review – Revisions Required

1. Provide the wetland impact permit #2003-1G-006.
Response: Please see wetland impact permit enclosed.

2. Show the feasibility of meeting the current SoLoCo standards of the proposed BMPs using the Compliance Calculator. The overall performance requirements for this area are located in the SWDM 3.5.5. At the time of the Pre-Development Plan submittal, you shall demonstrate the capacity of retaining the 95th percentile storm on-site with approved infiltration/filtering BMPs and meet Water Quality standards. The Compliance Calculator can be located: https://www.townofbluffton.sc.gov/704/Southern-Lowcountry-Stormwater-Ordinance. If you have any questions regarding SoLoCo Stormwater Design Manual or the Compliance Calculator, feel free to email scrotty@townofbluffton.com.
Response: We are in the process of obtaining a geotechnical evaluation of the site. Upon completion, the Compliance Calculator for this project will be updated. Please see enclosed preliminary Compliance Calculator calculations.

3. Revise the narrative to include storm attenuation for the 50- and 100-year, 24-hour design storm events. (SWDM 3.5.2)
Response: We are in the process of obtaining a geotechnical evaluation of the site. Upon completion, an updated stormwater management memo with calculations will be submitted.

4. Provide a Natural Resource Inventory map that identifies resources listed in Table 2.2 of the SWDM. (SWDM 2.1.3 and 2.1.8)
Response: Please see enclosed Cultural Resources Overview. The existing conditions plan sheets (G2.1-G2.2) of the enclosed plans also denote the trees currently present onsite. In addition, a soils map is enclosed in this submittal.

Planning Review – Address – Not Required

Building Safety Review – Not Required

Beaufort Jasper Water and Sewer – Approved with Conditions

1. Pending submittal of water and sewer design in accordance with BJWSA 2023 Development Policy and Procedure Manual. Engineer of record and developer will need to coordinate with BJWSA staff on how best to provide water and sewer to the development.

Response: Acknowledged. No water and sewer are proposed as part of this project.

Fire Department Review – Approved with Conditions

1. Comments may be provided at the development review committee meeting.
   Response: Acknowledged.

Police Department Review – Approved

Transportation Department Review – Approved

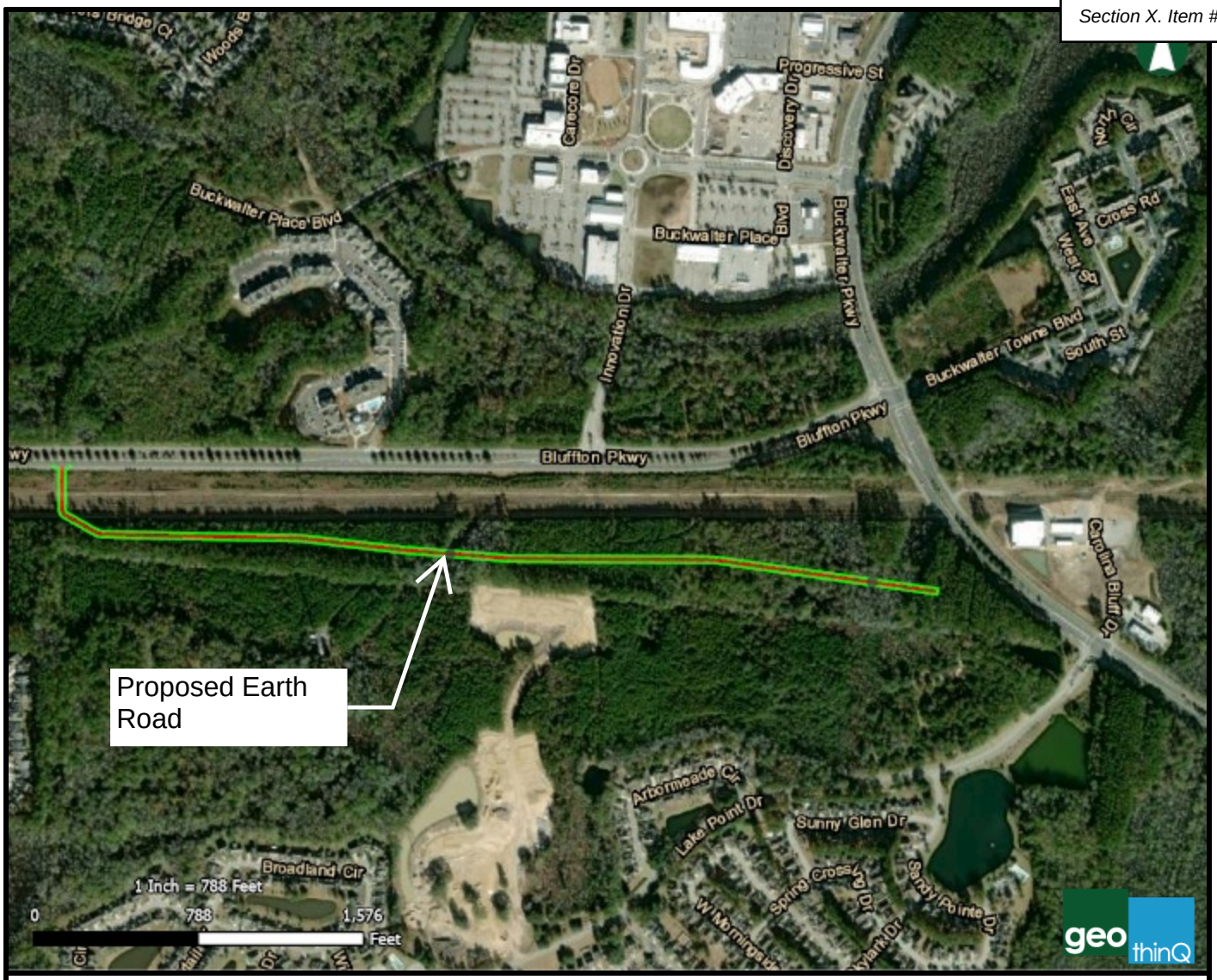
We thank you for your attention to this project and look forward to receiving your approval. Please feel free to contact our office with any questions.

Sincerely,
THOMAS & HUTTON

Michael Lerque, PE

cc: Mr. Nathan Long, PE – Thomas & Hutton, long.n@tandh.com

MDL/fmb



Wetland Impact Plans of Parcels 12A, 12B, &12C

Vicinity Map

02/16/2023

THOMAS & HUTTON

This map was created using geothinQ | www.geothinQ.com | Mapping Smart Land Decisions

ATTACHMENT 6

Section X. Item #3.

EASEMENT/ PLAT INFORMATION

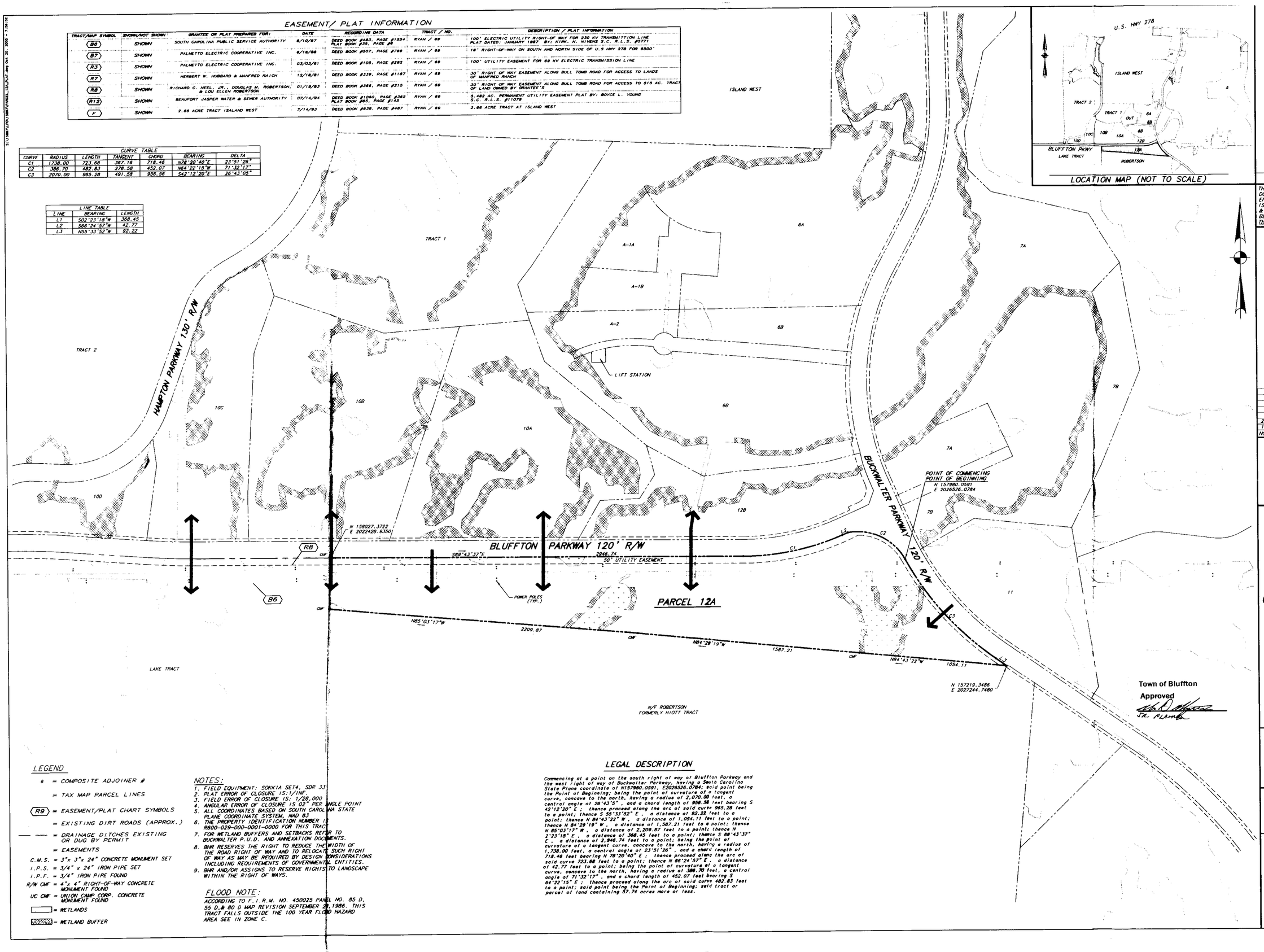
TRACT/MAP SYMBOL	SHOWN/NOT SHOWN	GRANTEE OR PLAT PREPARED FOR:	DATE	RECORDING DATA	TRACT / NO.	DESCRIPTION / PLAT INFORMATION
B6	SHOWN	SOUTH CAROLINA PUBLIC SERVICE AUTHORITY	8/10/87	DEED BOOK #483, PAGE #1534 PLAT BOOK #35, PAGE #4	RYAN / 69	100' ELECTRIC UTILITY RIGHT-OF WAY FOR 230 KV TRANSMITTION LINE PLAT DATED: JANUARY 1987 BY: KIRK, N. NIVENS S.C. R.L.S. #5771
B7	SHOWN	PALMETTO ELECTRIC COOPERATIVE INC.	8/18/88	DEED BOOK #507, PAGE #789	RYAN / 69	18' RIGHT-OF-WAY ON SOUTH AND NORTH SIDE OF U.S HWY 278 FOR 6500'
R3	SHOWN	PALMETTO ELECTRIC COOPERATIVE INC.	03/03/81	DEED BOOK #105, PAGE #292	RYAN / 69	100' UTILITY EASEMENT FOR 69 KV ELECTRIC TRANSMISSION LINE
R7	SHOWN	HERBERT W. HUBBARD & MANFRED RAICH	12/18/81	DEED BOOK #339, PAGE #1187	RYAN / 69	30' RIGHT OF WAY EASEMENT ALONG BULL TOMB ROAD FOR ACCESS TO LANDS OF MANFRED RAICH
R8	SHOWN	RICHARD C. NEEL, JR., DOUGLAS M. ROBERTSON, & LOU ELLEN ROBERTSON	01/19/83	DEED BOOK #366, PAGE #215	RYAN / 69	30' RIGHT OF WAY EASEMENT ALONG BULL TOMB ROAD FOR ACCESS TO 515 AC. TRACT OF LAND OWNED BY GRANTEE'S
R12	SHOWN	BEAUFORT JASPER WATER & SEWER AUTHORITY	07/14/94	DEED BOOK #1060, PAGE #362 PLAT BOOK #65, PAGE #145	RYAN / 69	5.482 AC. PERMANENT UTILITY EASEMENT PLAT BY: BOYCE L. YOUNG S.C. R.L.S. #11078
F	SHOWN	2.66 ACRE TRACT ISALAND WEST	7/14/83	DEED BOOK #638, PAGE #487	RYAN / 69	2.66 ACRE TRACT AT ISLAND WEST

CURVE TABLE

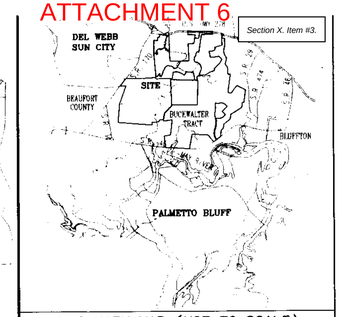
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	1738.00	723.68	367.16	718.46	N78°20'40"E	23°51'26"
C2	388.70	482.83	278.58	452.07	N64°22'15"W	71°32'17"
C3	2070.00	965.28	491.58	956.56	S42°12'20"E	26°43'05"

LINE TABLE

LINE	BEARING	LENGTH
L1	S02°23'18"W	368.45
L2	S66°24'57"W	42.77
L3	N55°33'52"W	92.22



LOCATION MAP (NOT TO SCALE)



VICINITY MAP (NOT TO SCALE)

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SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00286 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL LAND SURVEYOR BOYCE L. YOUNG 11079 10-20-05

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 "A" SURVEY AS SPECIFIED THEREON.

BOYCE L. YOUNG
S.C. REG. LAND SURVEYOR
LICENSE NO. 11079

NO.	REVISION	BY	DATE
2	GENERAL REVISIONS	LPO	8-22-05
1	GENERAL REVISIONS	LPO	8-1-05

TOTAL ACREAGE

UPLANDS	52.992 AC.
WETLANDS	5.364 AC.
TOTALS	57.742 AC.

A PLAT OF

PARCEL 12A
A PORTION OF BHR ACQUISITION CO., LLC PROPERTY

TOWN OF BLUFFTON
BEAUFORT COUNTY, SOUTH CAROLINA

PREPARED FOR:
BHR ACQUISITION CO., LLC

REC: BEAUFORT COUNTY SC - ROD
BK 00109 PG 0198
OFF FILE NUM 2005098616
11/17/2005 03:46:05 PM
REPL REC'D BY S SMITH RCPT# 377142
RECORDING FEES 10.00

PREPARED BY:
THOMAS & HUTTON ENGINEERING CO.
50 PARK OF COMMERCE WAY, P.O. BOX 2787
SAVANNAH, GA 31406 / (912) 234-5300
www.thomas-hutton.com

300 0 100 300 600
SCALE: 1 INCH = 300 FEET

SCALE	1" = 300'
FILE	J-15897
PLAT DATE	7-1-05
DRAWN BY	L.P.O.
REVIEWED BY	T.G.G.
APPROVED BY	B.L.Y.
PARTY CHIEF	M.B.

SHEET 1 OF 1

LEGEND

6 = COMPOSITE ADJOINER #
= TAX MAP PARCEL LINES
R9 = EASEMENT/PLAT CHART SYMBOLS
= EXISTING DIRT ROADS (APPROX.)
= DRAINAGE DITCHES EXISTING OR DUG BY PERMIT
= EASEMENTS
C.M.S. = 3"x 3"x 24" CONCRETE MONUMENT SET
I.P.S. = 3/4" x 24" IRON PIPE SET
I.P.F. = 3/4" IRON PIPE FOUND
R/W CMF = 4"x 4" RIGHT-OF-WAY CONCRETE MONUMENT FOUND
UC CMF = UNION CAMP CORP. CONCRETE MONUMENT FOUND
= WETLANDS
= WETLAND BUFFER

NOTES:

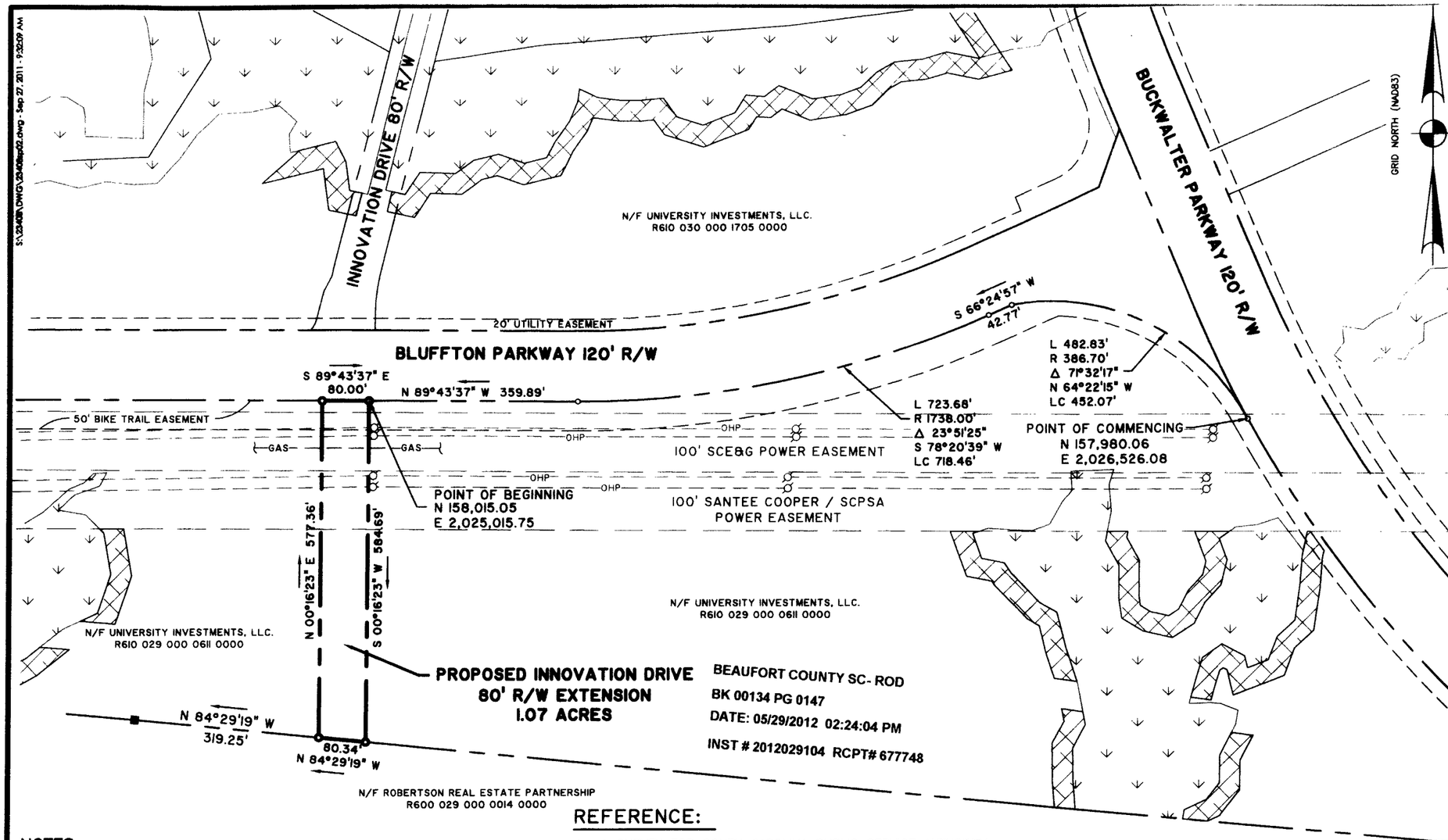
1. FIELD EQUIPMENT: SOKKIA SET4, SDR 33
2. PLAT ERROR OF CLOSURE IS:1/INF.
3. FIELD ERROR OF CLOSURE IS: 1/28,000
4. ANGULAR ERROR OF CLOSURE IS 02" PER ANGLE POINT
5. ALL COORDINATES BASED ON SOUTH CAROLINA STATE PLANE COORDINATE SYSTEM, NAD 83
6. THE PROPERTY IDENTIFICATION NUMBER IS R600-029-000-0001-0000 FOR THIS TRACT
7. FOR WETLAND BUFFERS AND SETBACKS REFER TO BUCKWALTER P.U.D. AND ANNEXATION DOCUMENTS.
8. BHR RESERVES THE RIGHT TO REDUCE THE WIDTH OF THE ROAD RIGHT OF WAY AND TO RELOCATE SUCH RIGHT OF WAY AS MAY BE REQUIRED BY DESIGN CONSIDERATIONS INCLUDING REQUIREMENTS OF GOVERNMENTAL ENTITIES.
9. BHR AND/OR ASSIGNS TO RESERVE RIGHTS TO LANDSCAPE WITHIN THE RIGHT OF WAYS.

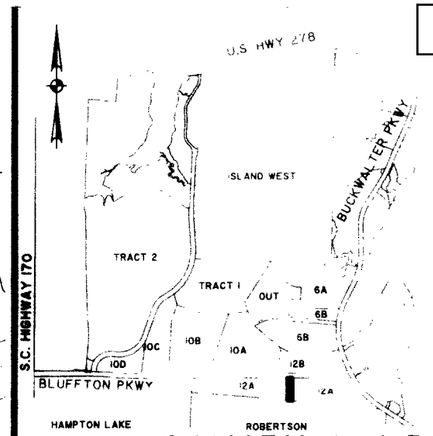
FLOOD NOTE:

ACCORDING TO F.I.R.M. NO. 450025 PANEL NO. 85 D, 55 D,& 80 D MAP REVISION SEPTEMBER 29,1986. THIS TRACT FALLS OUTSIDE THE 100 YEAR FLOOD HAZARD AREA SEE IN ZONE C.

LEGAL DESCRIPTION

Commencing at a point on the south right of way of Bluffton Parkway and the west right of way of Buckwalter Parkway, having a South Carolina State Plane coordinate of N157980.0591, E2026526.0784; said point being the Point of Beginning; being the point of curvature of a tangent curve, concave to the north, having a radius of 2,070.00 feet, a central angle of 26°43'5" , and a chord length of 956.56 feet bearing S 42°12'20" E ; thence proceed along the arc of said curve 965.28 feet to a point; thence S 55°33'52" E , a distance of 92.22 feet to a point; thence N 84°43'22" W , a distance of 1,054.11 feet to a point; thence N 84°29'19" W , a distance of 1,587.21 feet to a point; thence N 85°03'17" W , a distance of 2,209.87 feet to a point; thence N 2°23'18" E , a distance of 368.45 feet to a point; thence S 89°43'37" E , a distance of 2,946.74 feet to a point; being the point of curvature of a tangent curve, concave to the north, having a radius of 1,738.00 feet, a central angle of 23°51'26" , and a chord length of 718.46 feet bearing N 78°20'40" E ; thence proceed along the arc of said curve 723.68 feet to a point; thence N 66°24'57" E , a distance of 42.77 feet to a point; being the point of curvature of a tangent curve, concave to the north, having a radius of 388.70 feet, a central angle of 71°32'17" , and a chord length of 452.07 feet bearing S 64°22'15" E ; thence proceed along the arc of said curve 482.83 feet to a point; said point being the Point of Beginning; said tract or parcel of land containing 57.74 acres more or less.





VICINITY MAP

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RIGHT OF WAY PLAT

PROPOSED INNOVATION DRIVE 80' R/W EXTENSION

BEAUFORT COUNTY,
BLUFFTON, SOUTH CAROLINA

prepared for
TOWN OF BLUFFTON

THOMAS & HUTTON
Engineering | Surveying | Planning | GIS | Consulting

50 Park of Commerce Way
PO Box 2727
Savannah, GA 31402-2727
p 912.234.5300 f 912.234.2950

www.thomasandhutton.com

NOTES

1. TAX MAP NUMBER: R610 029 000 0611 0000,
2. ACCORDING TO F.I.R.M. MAP NO. 450025, PANEL 0085D, REVISED 9-29-1986, THE PROPERTY SHOWN ON THIS PLAT IS LOCATED IN FLOOD HAZARD ZONE C.
3. COORDINATES AND DIRECTIONS SHOWN ON THIS SURVEY ARE BASED ON SOUTH CAROLINA STATE PLANE COORDINATE SYSTEM (NAD83). DISTANCES SHOWN ARE GROUND DISTANCES, NOT GRID DISTANCES.
4. THIS SURVEY IS VALID ONLY IF THE PRINT OF SAME HAS THE ORIGINAL SIGNATURE AND EMBOSSED SEAL OF THE LAND SURVEYOR.
5. A TITLE SEARCH WAS NOT PERFORMED BY THOMAS & HUTTON ENGINEERING COMPANY AT THE TIME OF THIS SURVEY.
6. THE PROPERTY PLATTED HEREON IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
7. WETLANDS DEPICTED HAVE BEEN APPROVED BY THE U.S.ARMY CORPS OF ENGINEERS IN LETTER DATED 12-2-08, SAC:2007-1658-IJQ.

TOWN OF BLUFFTON
MAY 24 2012
PLANNING & GROWTH MGMT

Town of Bluffton
Approved

REFERENCE:

1. A SURVEY FOR SOUTH CAROLINA PUBLIC SERVICE AUTHORITY SHOWING LOCATION OF MCINTOSH-BLUFFTON 230 KV TRAMISSION LINE, DATED JUNE 1986, LAST REVISED JANUARY 1987, BY NIVENS ENGINEERING, INC.
2. PLAT OF PARCEL 12A A PORTION OF BHR ACQUISITION CO., LLC PROPERTY, PREPARED BY THOMAS & HUTTON ENGINEERING CO., DATED 7-1-05, REVISED 11-14-05.
3. RIGHT OF WAY ACQUISITION PLAT FOR BLUFFTON PARKWAY PREPARED BY THOMAS & HUTTON DATED 5-1-01, LAST REVISED 11-30-05.

LEGEND

- MEANDER POINT (NO MONUMENT)
- IRON PIPE (SET)
- CONCRETE MONUMENT FOUND
- POWER POLE
- EASEMENTS
- WETLANDS
- WETLAND BUFFER

SOUTH CAROLINA
THOMAS & HUTTON ENGINEERING CO.
No. C00285
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL
No. 19895
LAND SURVEYOR
WRIGHT C. POWERS, JR.

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

WRIGHT C. POWERS, JR.
SOUTH CAROLINA PROFESSIONAL LAND SURVEYOR
LICENSE NO. 19895

200 0 200 400
1 INCH = 200 FEET

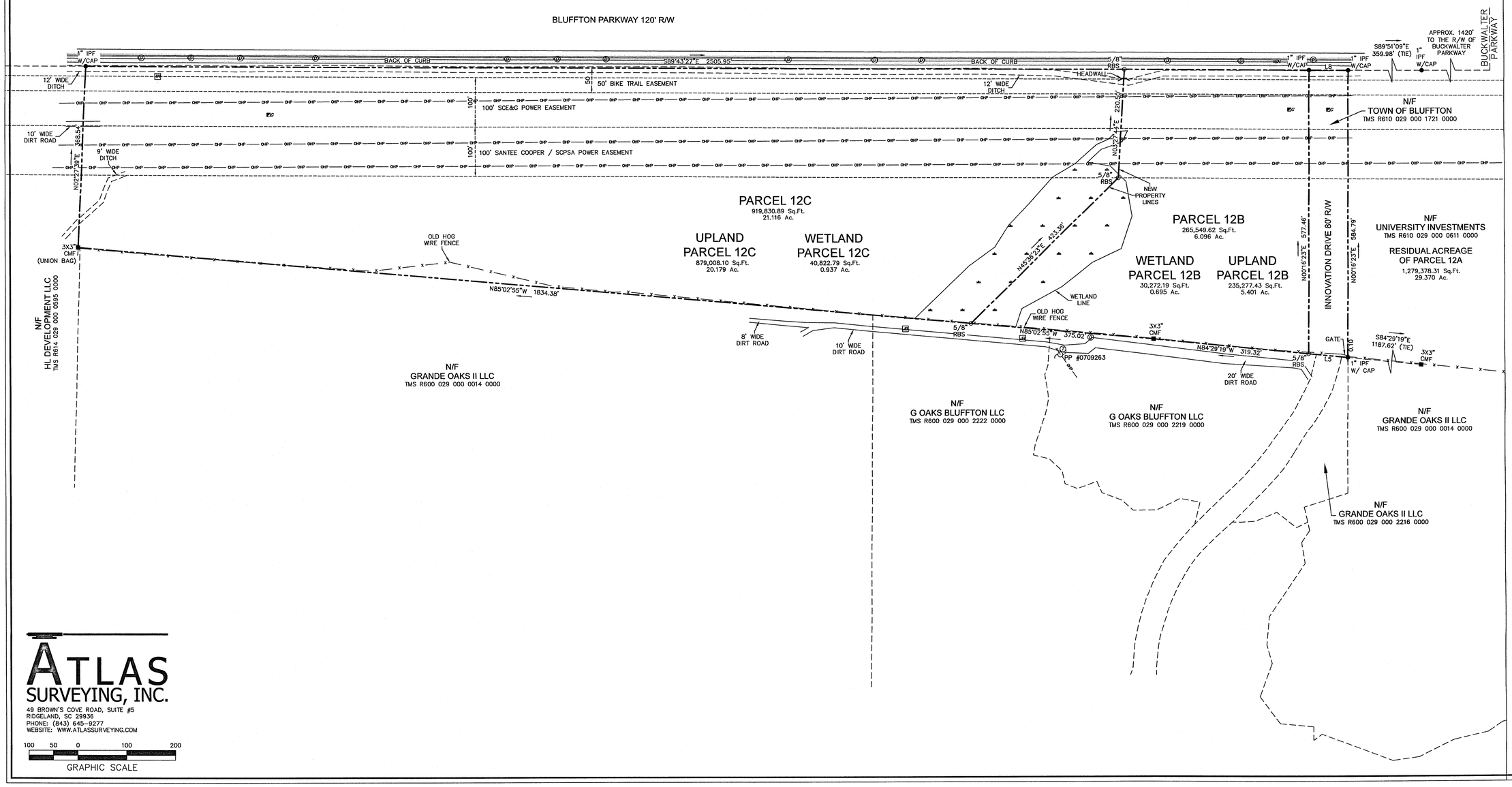
plat	drawn	reviewed	field
9-26-11	LPO	WCP	9-2011

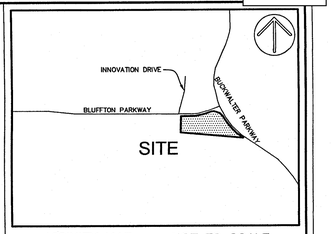
job 23408

SHEET 1 OF 1

NORTH
SC GRID (NAD 83)

LINE TABLE		
LABEL	BEARING	DISTANCE
L1	S84°45'58"E	20.42'
L2	N66°18'46"E	42.77'
L3	N27°28'43"W	14.97'
L4	S89°51'47"W	34.49'
L5	N84°29'19"W	80.34'
L6	S55°33'55"E	82.79'
L7	S55°33'55"E	128.40'
L8	S89°43'45"E	79.57'





VICINITY MAP NOT TO SCALE

LEGEND

CMF	CONC. MONUMENT FOUND
IPF	IRON PIPE FOUND
RBS	5/8" IRON REBAR SET
×	GUY WIRE
JB	JUNCTION BOX
	WETLANDS
	POWER POLE
SN	SIGN
D	STORM DRAIN MANHOLE
T	TELEPHONE MANHOLE
TX	TRANSFORMER–ELECTRIC
GG	UNDERGROUND GAS MARKER
OHP	OVERHEAD POWER LINE
	EDGE OF PAVEMENT

Town of Bluffton
JAN 09 2020
Planning & Growth Mgmt

TOWN OF BLUFFTON APPROVED

NOTES

1. THIS PARCEL APPEARS TO LIE IN FLOOD ZONE C, FIRM PANEL 0085–D COMMUNITY 450025.
2. HORIZONTAL DATUM IS SOUTH CAROLINA STATE PLANE GRID (NAD 83).
3. WETLAND DELINEATION IS PER REFERENCE #4 AND WAS NOT LOCATED AT THE TIME OF FIELD WORK.
4. RESIDUAL ACREAGE OF PARCEL 12A WAS CALCULATED PER REFERENCES #1 & #2.

REFERENCES

1. PB:134 PG:147
2. PB:109 PG:198
3. DB:2278 PG:1264
4. A BOUNDARY PLAT OF A PROPOSED 80' RIGHT OF WAY BY THOMAS AND HUTTON, DATED 09/09/2013 TMS# R610–029–000–0611–0000, BLUFFTON TOWNSHIP, BEAUFORT COUNTY, SC.

BEAUFORT COUNTY SC - ROD
BK 3255 PG 2475
FILE NUM 2020001775
01/10/2020 11:00:42 AM
RECORDING FEES 25.00
RECORD 1 OF 1 PAGES

PREPARED FOR:
REED GROUP
A SUBDIVISION PLAT OF

PARCEL 12A
TAX PARCEL No.
R610 029 000 0611 0000

THE TOWN OF BLUFFTON
BEAUFORT COUNTY, SOUTH CAROLINA

FIELD WORK:	NGN
FIELD CHECK:	JWR
DRAWN BY:	TGJ
DATE:	01–06–2020
SCALE:	1"=100'
PROJECT No.:	BFT–19265
FILE:	BFT–19265 SUB3.DWG

I HEREBY STATE THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF, THE SURVEY SHOWN HEREIN 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 "A" SURVEY AS SPECIFIED THEREIN.

SOUTH CAROLINA ATLAS SURVEYING BFT LLC No. C05928 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL LAND SURVEYOR No. 28139 JEREMY W. REEDER

JEREMY W. REEDER
S.C.P.L.S. No. 28139
NOT VALID UNLESS CRIMPED WITH SEAL

ATLAS SURVEYING, INC.
49 BROWN'S COVE ROAD, SUITE #5
RIDGELAND, SC 29936
PHONE: (843) 645–9277
WEBSITE: WWW.ATLASSURVEYING.COM

100 50 0 100 200
GRAPHIC SCALE

DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS
69A Hagood Avenue
CHARLESTON, SOUTH CAROLINA 29403-5107

REPLY TO
ATTENTION OF

April 21, 2004

Regulatory Division

BHR Acquisition Company, LLC &
Winding River, BTS, 1, LC
c/o Mr. Ed Blakely
192 East Bay Street, Suite 201
Charleston, SC 29401

Dear Mr. Blakely:

This is in response to your application requesting a Department of the Army permit.

Enclosed is your Department of the Army Permit #2003-1G-066. It authorizes you to perform the work specified on the attached drawings. This permit is issued under the provisions of the Federal laws for the protection and preservation of the navigable waters of the United States.

Please notify this office promptly, in writing, when you start and complete the work. The enclosed cards may be used for that purpose. You should also be aware that a special condition has been included in this permit which requires that a copy of the permit and drawings must be available at the work site during the entire time of construction.

Respectfully,

Tina B. Hadden
Chief, Regulatory Division

Enclosures

DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS
69 A Hagood Avenue
CHARLESTON, SOUTH CAROLINA 29403-5107

REPLY TO
ATTENTION OF

REGULATORY DIVISION

TO WHOM IT MAY CONCERN:

In issuing this permit, this office has acted with reliance on the plans which you submitted. As you proceed with your project, please exercise every caution to ensure the work is performed exactly as shown on the approved plans and specifications, as deviations of any nature are expressly prohibited without the **prior** authorization of this office.

With this in mind, you will find this office cooperative in authorizing minor deviations if they are clearly within the scope of the original permit; however, you are place on any "**unauthorized**" deviation from the approved plans will be constructed as a violation of Federal law and, at a minimum, you will be required to submit as-built plans of any deviations. These as-built plans will have to be prepared by a registered land surveyor. You will not be required to submit as-built drawings unless an "**unauthorized**" deviation is detected by this office or such submittals are required by a special condition in the permit (i.e., certified as-built plans are commonly required for utility crossings and structures adjacent to Federal channels.) If, upon demand, you fail to provide this office with such drawings in the requisite format, this office will request the U.S. Attorney to seek appropriate civil or criminal sanctions in order to maintain the integrity of the Department of the Army permit program.

Please be assured that you will find the Corps of Engineers receptive to minor deviations from the approved plans as long as such deviations are approved **prior** to commencement of work.

NOTICE OF COMMENCEMENT OR COMPLETION
OF WORK AUTHORIZED BY PERMIT

_____
DATE

WORK AUTHORIZED BY DEPARTMENT OF THE ARMY PERMIT 2003-1G-066

DATED _____

PERFORM WORK IN _____
(WATERBODY NAME)

WAS COMMENCED
ON _____
WAS COMPLETED (DATE)

(check appropriate box)

_____
SIGNATURE

FL 130
5 MAR. 79

- -

NOTICE OF COMMENCEMENT OR COMPLETION
OF WORK AUTHORIZED BY PERMIT

_____
DATE

WORK AUTHORIZED BY DEPARTMENT OF THE ARMY PERMIT 2003-1G-066

DATED _____

PERFORM WORK IN _____
(WATERBODY NAME)

WAS COMMENCED
ON _____
WAS COMPLETED (DATE)

(check appropriate box)

_____
SIGNATURE

FL 130
5 MAR. 79

DEPARTMENT OF THE ARMY PERMIT

Permittee: BHR ACQUISTION COMPANY, LLC & WINDING RIVER BTS 1, LC

192 E. BAY ST. SUITE 201
CHARLESTON, SC 29401

Permit No: 2003-1G-066

Issuing Office: CHARLESTON DISTRICT

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description:
To place fill material in freshwater wetlands adjacent to tributary of Rose Dhu Creek, to create an economically viable, flexible, long term, master-planned residential community with associated amenities including golf course and commercial areas in accordance with the attached drawings entitled; Applicant: BHR Acquisition Co., LLC, Winding River BTS 1, L.C.; Location: Beaufort County, S.C., Town of Bluffton; Sheets 1 thru 3, 6 thru 8, 10 thru 16, and 19 thru 39 of 39 dated June 17, 2003. Sheets 4, 5, 9, 17, and 18 of 39 dated October 23, 2003.

Project Location:
The project is located south of U.S. Highway 278, east of State Road 170, west of the Buckwalter Parkway and north of SC Highway 46, in the Town of Bluffton, Beaufort County, South Carolina.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **30 June 2024.** If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

SEE PAGE 4.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

☐ Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

☒ Section 404 of the Clean Water Act (33 U.S.C. 1344).

☐ Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

By: GBHR, LLC, Member

By: Gary J. Rome, Member — 4-20-04

(PERMITTEE) — (DATE)

BHR ACQUISITION COMPANY, LLC &
WINDING RIVER, BTS 1, LC

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

APR 21 2004

(DISTRICT ENGINEER) — (DATE)

Alvin B. Lee, LTC
or his Designee
Tina B. Hadden
Chief, Regulatory Division

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE) — (DATE)

CONDITIONS FOR PERMIT #2003-1G-066:

a. That the permittee agrees to provide all contractors associated with construction of the authorized activity a copy of the permit and drawings. A copy of the permit will be available at the construction site at all times.

b. That the permittee shall submit a signed compliance certification to the Corps within 60 days following completion of the authorized work and any required mitigation. The certification will include:

1. A copy of this permit;
2. A statement that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions;
3. A statement that any required mitigation was completed in accordance with the permit conditions;
4. The signature of the permittee certifying the completion of the work and mitigation.

c. That the permittee recognizes that its commitment to perform and implement the following conditions was a deciding factor towards the favorable and timely decision on this permit and that the permittee recognizes that a failure on its part to both actively pursue and implement these conditions may be grounds for modification, suspension or revocation of this Department of the Army authorization.

1. That the permittee agrees, as compensation for the impacts associated with this authorization, to implement the "Buckwalter Southwest Tract Mitigation Plan", dated February 11, 2003, and last revised August 19, 2003. The above-discussed plan defines the type(s) of mitigation to be provided; the number of credits generated by implementing the mitigation work, and it sets forth the time frame(s) for completion of the mitigation activities. A declaration of restrictive covenants or conservation easement must be reviewed and approved by the Corps of Engineers, Regulatory Division prior to recording. A stamped, recorded copy of the declaration of restrictive covenants or conservation easement must be submitted to the Corps of Engineers, Regulatory Division within 60 days of 404 permit issuance or prior to any work commencing under the permit, whichever comes first. It is noted and recognized more credits are being provided than are needed to compensate for the impacts hereby permitted. It is further recognized and agreed that up to approximately 80 of the additional credits generated by implementing the plan are available and can be used, if needed, as mitigation for future permitted impacts on the Buckwalter North Tract. Should development of the Buckwalter North Tract not proceed as envisioned or not be permitted, the mitigation defined in the above referenced plan can not be revised or modified to remove any portion of the defined work and the excess credits can not be used on any other project.

2. That the permittee agrees to submit final road locations that vary from those presented in this application to this office and South Carolina Department of Health and Environmental Control (DHEC) for review and approval prior to construction, to document that the revised plans are consistent with the intent of the permit.

3. That the permittee agrees to avoid, to the maximum extent practicable, significant trees during trail and boardwalk layout and construction.

BOARD:
Elizabeth M. Hagood
Chairman

Edwin H. Cooper, III
Vice Chairman

Steven G. Kisner
Secretary

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment

MAY 9

BOARD:
Henry C. Scott

Paul C. Aughtry, III

Glenn A. McCall

Coleman F. Buckhouse, MD

May 8, 2007

Ms. Tina Hadden
Charleston District
U.S. Army Corps of Engineers
69A Hagood Avenue
Charleston, SC 29403-5107

RE: Revision to 2003-1G-066; BHR Acquisition Co., LLC and Winding River BTS, LC (BHR)
Town of Bluffton; Beaufort County, South Carolina

Dear Ms. Hadden:

The South Carolina Department of Health and Environmental Control (SCDHEC) received a request for a modification to P/N 2003-1G-066. The proposed modification includes an additional 0.39 acres of fill in an isolated wetland to accommodate development of a senior living facility. BHR also proposes to convert 1.34 acres of cleared shrub/scrub wetlands to emergent wetlands to provide a more productive wetland system and eliminate the need for constant maintenance. As part of the requested permit modification BHR also proposes to create 0.39 acres of wetlands and delete 0.71 acres of permitted stormwater impacts. The net result of the proposed modification is a reduction of 0.32 acres in overall impact and an increase of 0.71 acres in on site mitigation.

The staff of the Office of Ocean and Coastal Resource Management (OCRM) has reviewed the requested modifications to the above referenced project and finds them consistent with the S.C. Coastal Management Program. OCRM must be notified, in writing, prior to initiation of work authorized by this certification. Once OCRM is notified of the date work will commence, an "authorization to commence work" placard will be issued. This placard must be placed in a conspicuous place at the site. No work authorized under the OCRM wetland certification can commence until the placard is posted. This placard is in addition to any other required placards (land disturbance permit, critical area permit, etc.) and is not valid until all other required federal, state and local permits have been issued for the activity.

The Bureau of Water has no objection to the proposed revisions per the letter from Newkirk Environmental, Inc., dated April 17, 2007 provided that the compensatory mitigation plan, including calculations, meets guidelines stated in the U.S. Army Corps of Engineers' SOP. Additionally, the applicant must adhere to all conditions of the original state certification issued on August 17, 2004, and any subsequent modifications. If you have questions, please contact me at (803) 898-4261.

Sincerely,

Chris Beckham

Chris Beckham, Project Manager
Water Quality Certification, Standards, and
Wetlands Program Section

cc: John Hensel, OCRM

Mr. Kenneth Hance
Newkirk Environmental
1887 Clements Ferry Road
Charleston, SC 29492

MAY 8 '07

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

April 26, 2007

Ms. Gina Kirkland
S. C. Department of Health and Environmental Control
Office of Environmental Quality Control
Water Quality Certification and Wetlands Programs Section
2600 Bull Street
Columbia, South Carolina 29201

Re: Bhr Acquisition Company LLC & Winding River, BTS 1, LC
2003-1G-066-C-REVISION
Beaufort County

Dear Ms. Kirkland:

The staff of the Office of Ocean and Coastal Resource Management (OCRM) has reviewed the proposed revisions to the above referenced project and finds them consistent with OCRM's previous consistency determination per the letter from Newkirk Environmental, Inc. dated April 17, 2007, and attached revised drawings, and provided all terms and conditions of the original consistency determination, and any previous modifications, are still in effect.

OCRM must be notified, in writing, prior to initiation of work authorized by this certification. Once OCRM is notified of the date work will commence, an "authorization to commence work" placard will be issued. This placard must be placed in a conspicuous place at the site. No work authorized under the OCRM wetland certification can commence until the placard is posted. This placard is in addition to any other required placards (land disturbance permit, critical area permit, etc.) and is not valid until all other required federal, state and local permits have been issued for the activity.

Sincerely,

John L. Hensel Jr.

John L. Hensel, Jr.
Manager, Federal Certification

JLH/bhracquisition
cc: Ms. Barbara Neale
Mr. Jeff Thompson
U.S. Army Corps of Engineers

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
Ocean and Coastal Resource Management
Charleston Office · 1362 McMillan Avenue, Suite 400 · Charleston, SC 29405
Phone: 843-953-0200 · Fax: 843-953-0201 · www.scdhec.gov

D H E C

PROMOTE PROTECT PROSPER

Office of Ocean and Coastal Resource Management

1362 McMillan Avenue. Suite 400
Charleston, SC 29405
843-744-5838 FAX 843-744-5847

January 26, 2007

Ms. Gina Kirkland
S. C. Department of Health and Environmental Control
Office of Environmental Quality Control
Water Quality Certification and Wetlands Programs Section
2600 Bull Street
Columbia, South Carolina 29201

Re: BHR Acquisition Company LLC & Winding River BTS, LLC
2003-1G-066-C (Modification)
Beaufort County

Dear Ms. Kirkland:

The staff of the Office of Ocean and Coastal Resource Management (OCRM) has reviewed the proposed revisions to the above referenced project and finds them consistent with the S. C. Coastal Management Program per the letter from Newkirk Environmental, Inc. dated November 20, 2006, the revised permit drawings dated September 28, 2006, and provided all terms and conditions of the original consistency determination, and any previous modifications, are still in effect.

OCRM must be notified, in writing, prior to initiation of work authorized by this certification. Once OCRM is notified of the date work will commence, an "authorization to commence work" placard will be issued. This placard must be placed in a conspicuous place at the site. No work authorized under the OCRM wetland certification can commence until the placard is posted. This placard is in addition to any other required placards (land disturbance permit, critical area permit, etc.) and is not valid until all other required federal, state and local permits have been issued for the activity.

Sincerely,

John L. Hensel, Jr.
Manager, Federal Certification Section

JLH/bhracquisitions50686
cc: Ms. Barbara Neale
Mr. Jeff Thompson
U.S. Army Corps of Engineers

BOARD
Elizabeth A. Hagood
Chairman
Edwin E. Cooper III
Vice Chairman

BOARD
Henry C. Scott
Paul C. Aughtry III
Glenn A. McCall

D H E C

PROMOTE PROTECT PROSPER

March 26, 2007

Ms. Tina Hadden
Charleston District
U.S. Army Corps of Engineers
69A Hagood Avenue
Charleston, SC 29403-5107

RE: Revision to 2003-1G-066; BHR Acquisition Co., LLC and Winding River BTS, LC (BHR) Town of Bluffton; Beaufort County, South Carolina

Dear Ms. Hadden:

The South Carolina Department of Health and Environmental Control (SCDHEC) received a request for a modification to P/N 2003-1G-066. The proposed modification includes additional road impacts within the approved 20% road contingency and the relocation of littoral shelves, wetland terrace, and upland buffers within the project area. The net result of the proposed modification is utilization of 0.29 acres of fill under the permitted 20% road contingency and an additional 0.15 acres of excavation. BHR proposes to utilize 7.5 mitigation credits previously authorized for use on the Buck Walter North Tract. The proposed mitigation for the modification exceeds the credits required in accordance with the USACE Standard Operating Procedure.

The Bureau of Water has no objection to the proposed revisions per the letter from Newkirk Environmental, Inc., dated November 20, 2006, with attached drawings. Additionally, the staff of the Office of Ocean and Coastal Resource Management (OCRM) has reviewed the requested modifications to the above referenced project and finds them consistent with the S.C. Coastal Management Program. Additionally, the applicant must adhere to all conditions of the original state certification issued on August 17, 2004, and any subsequent modifications. If you have questions, please contact me at (803) 898-4261.

Sincerely,

Chris Beckham

Chris Beckham, Project Manager
Bureau of Water

cc: John Hensel, OCRM

Mr. Kenneth Hance
Newkirk Environmental
1887 Clements Ferry Road
Charleston, SC 29492

D H E C

PROMOTE PROTECT PROSPER

Office of Ocean and Coastal Resource Management

1362 McMillan Avenue, Suite 400
Charleston, SC 29405
843-744-5838 FAX 843-744-5847

May 04, 2006

Ms. Vivianne Vejdani
S. C. Department of Health and Environmental Control
Office of Environmental Quality Control
Water Quality Certification and Wetlands Programs Section
2600 Bull Street
Columbia, South Carolina 29201

Re: BHR Acquisition Company LLC & Winding River BTS 1, LC
2003-1G-066-C-REVISED (April 2006 revision)
Beaufort County

Dear Ms. Vejdani:

The staff of the Office of Ocean and Coastal Resource Management (OCRM) has reviewed the proposed revision to the above referenced project and finds them consistent with OCRM's previous consistency determination per the letter from Newkirk Environmental, Inc. dated April 10, 2006, and revised project drawings (Sheets 4 & 8) dated April 6, 2006, and provided all terms and conditions of the original consistency determination, and any previous modifications, are still in effect.

OCRM must be notified, in writing, prior to initiation of work authorized by this certification. Once OCRM is notified of the date work will commence, an "authorization to commence work" placard will be issued. This placard must be placed in a conspicuous place at the site. No work authorized under the OCRM wetland certification can commence until the placard is posted. This placard is in addition to any other required placards (land disturbance permit, critical area permit, etc.) and is not valid until all other required federal, state and local permits have been issued for the activity.

Sincerely,

John L. Hensel, Jr.
Manager, Federal Certification Section

JLH/bhracq&windingriver50686
cc: Ms. Barbara Neale
Mr. Jeff Thompson
U.S. Army Corps of Engineers

BOARD
Elizabeth M. Hagood
Chairman

Edwin H. Cooper III
Vice Chairman

Steven G. Kinard
Secretary

D H E C
PROMOTE PROTECT PROSPER

Paul Hinnant, Commissioner

BOARD
Henry C. Scott

Paul G. Aughtry III

Glenn A. McCall

Vacant (Ex-Officio - MD)

June 2, 2006

Ken Hance
Newkirk Enviornmental, Inc.
P.O. Box 746
Mt. Pleasant, South Carolina 29465

Re: BHR Acquistion Company, LLC P/N # 2003-1G-066

Dear Mr. Hance:

We have reviewed your request to modify the above referenced state certification, issued on November 30, 2004. The proposed modifications include:

The approval of an additional 0.27 acres of fill for a road crossing as requested per a letter from Newkirk Environmental, Inc. dated April 10, 2006, and the revised project drawings (sheets 4 & 8) dated April 6, 2006.

This additional fill is found to be consistent with the original certification, which allows for a 20% contingency for road impacts. Mitigation for this 20% contingency was included in the original certification and no additional mitigation is required. All terms and conditions of the original certification and any previous modifications, are still in effect. If you have any questions please feel free to call Jessica V. Artz at 803-898-4261 or e-mail at venablja@dhec.sc.gov.

Sincerely,

M. Rheta Geddings, Director
Division of Water Quality

Cc: Debbie King, ACOE

DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS
69-A Hagood Avenue
CHARLESTON, SOUTH CAROLINA 29403-5107

REPLY TO
ATTENTION OF

July 9, 2007

Regulatory Division

BHR Acquisition Company, LLC
& Winding River BST 1, LC
c/o Mr. Ken Hance
Newkirk Environmental, Inc.
Post Office Box 746
Mt. Pleasant, South Carolina 29465-0746

Dear Mr. Hance:

This is in response to your letters submitted on behalf of BHR Acquisition Company, LLC & Winding River BST 1, LC dated April 10, 2006, November 20, 2006, and April 17, 2007, requesting that their Department of the Army permit #2003-1G-066 issued on April 21, 2004, be modified to reflect the changes on the attached drawings (Sheets 8,13, and 25 of 39 revised September 28, 2006, Sheets 4, 5, 5A, 9,14,16,17,18 and 24 of 39 revised March 1, 2007) These changes include the following:

1. The relocation of proposed roads in accordance with Special Condition #2 of the issued permit that reads as follows:

   a. **2. That the permittee agrees to submit final road locations that vary from those presented in this application to this office and South Carolina Department of Health and Environmental Control (DHEC) for review and approval prior to construction, to document that the revised plans are consistent with the intent of the permit.**

   0.11 acres of road impacts at four locations within the project area as authorized under Special Condition c.2 of the permit. Road contingency impacts are indicated on revised permit drawing sheets 8 and 13 revised September 28, 2006, sheets 4, 14 and 25 revised March 1, 2007. A summary of impacts under the 20% road crossing contingency is provided on revised sheet 4 and indicates a balance of 0.69 acres remaining.

2. The road and water access to the west of Wetland DL involves filling 0.09 acres for road construction (included in 20% road crossing contingency described in item 1 above) that is currently permitted to be excavated and excavating an additional 0.24 acres of wetlands. The purpose of this proposed revision is to provide vehicular and water access to development west of Wetland DL.

3. The relocation of 0.23 acres of upland buffer, 1.54 acres of wetland terrace creation and 0.80 acres of littoral shelf creation within the lake to accommodate requested revisions

described in items 1) and 2) above as well as a design and engineering change of the lake shoreline within an upland area.

4. The additional 0.39 acres of fill in isolated jurisdictional Wetland Z as indicated on permit drawing sheets 5 and 9 revised March 1, 2007. Wetland Z was originally permitted to be filled but was mistakenly indicated as preserved, without a buffer, as part of the USACE permit modification of March 11, 2005. The requested impact of Wetland Z is to accommodate development of a senior living facility, offering both assisted living and skilled nursing care under one roof. An alternatives discussion prepared by National Health Care Corporation (NHC), who has a contract to purchase the property, is enclosed as an addendum to this correspondence.

5. To convert 1.34 acres of wetlands permitted to be cleared to be maintained as shrub/scrub to emergent wetlands. This will eliminate the need for constant maintenance and, BHR believes, provides a more productive wetland system as adequate hydrology will be assured by normal water levels in the lake.

6. To create 0.39 acres of wetlands adjacent to on site wetland preservation areas as indicated on permit drawings sheet 5 and 9.

7. To delete 0.71 acres of permitted stormwater impacts, including clearing and pipe installation.

This is to inform you that these three requests for modification are granted. Please attach this letter with the modified drawings to the original permit. All of the conditions to which the work is made subject remain in full force and effect. In that this work appears subject to the jurisdiction of the South Carolina Department of Health and Environmental Control, Office of Ocean and Coastal Resource Management, it is highly recommended that you contact that agency to ascertain their requirements in this matter.

Respectfully,

for: J. RICHARD JORDAN III
Lieutenant Colonel, U.S. Army
District Engineer

Tina B. Hadden
Chief, Regulatory Division

Enclosures

MODIFIED PLANS

#2003-1G-066
BHR Acquisition Co., LLC &Winding River BTS 1, LC
Buckwalter Southwest Tract Development
Modification Request of November 20, 2006

The following definition is reproduced here for ready reference.

Cumulative impact is an evaluation of the cumulative adverse impacts to aquatic sites for the overall project. This factor is proportional to the areas of impact. The formula used to calculate this value is 0.05 x $\sum$ AA, where $\sum$ AA, stands for the sum of the acres of adverse impacts to aquatic areas for the overall project. When computing this value, round to the nearest tenth decimal place using even number rounding. Thus 0.01 and 0.050 are rounded down to give a value of zero while 0.051 and 0.09 are rounded up to give 0.1 as the value for the cumulative impact factor.

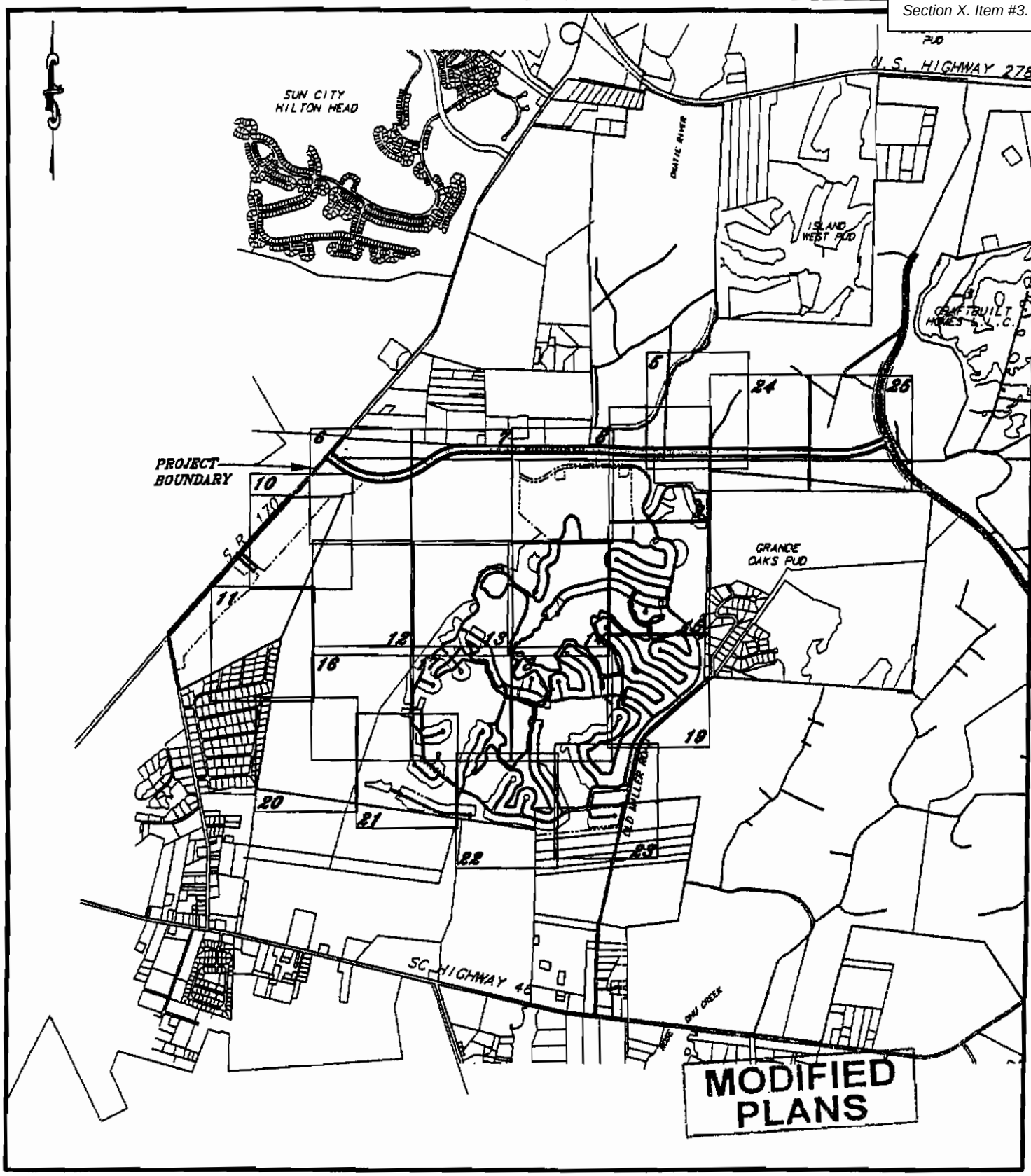
Note: The cumulative impact factor for the overall project must be used in each area column on the Required Mitigation Credits Worksheet below.

Required Mitigation Credits Sample Worksheet

Factor	Area 1	Area 2	Area 3	Area 4	Area 5
Lost Type	**3.0**				
Priority Category	**0.5**				
Existing Condition	**1.0**				
Duration	**2.0**				
Dominant Impact	**1.5**				
Cumulative Impact	**2.5**				
Sum of m Factors	**R_1 = 10.5**	R_2 =	R_3 =	R_4 =	R_5 =
Impacted Area	**AA_1 = 0.24**	AA_2 =	AA_3=	AA_4 =	AA_5 =
R x AA =	**2.5**				

Total Required Credits = $\sum$ (R x AA) = **2.5 x 3 = 7.5**

Area 1 = Excavation in 404 Jurisdictional Wetlands



BUCKWALTER SOUTHWEST TRACT WETLANDS MASTER PLAN

PERMIT # 2003-1G-066 ISSUED: 4-21-2004

DATE: MARCH 29, 2005
REVISION DATE: AUGUST 2, 2005
SHEET 1 OF 39
SCALE: NO SCALE
SOURCE: THOMAS & HUTTON ENGINEERING CO.

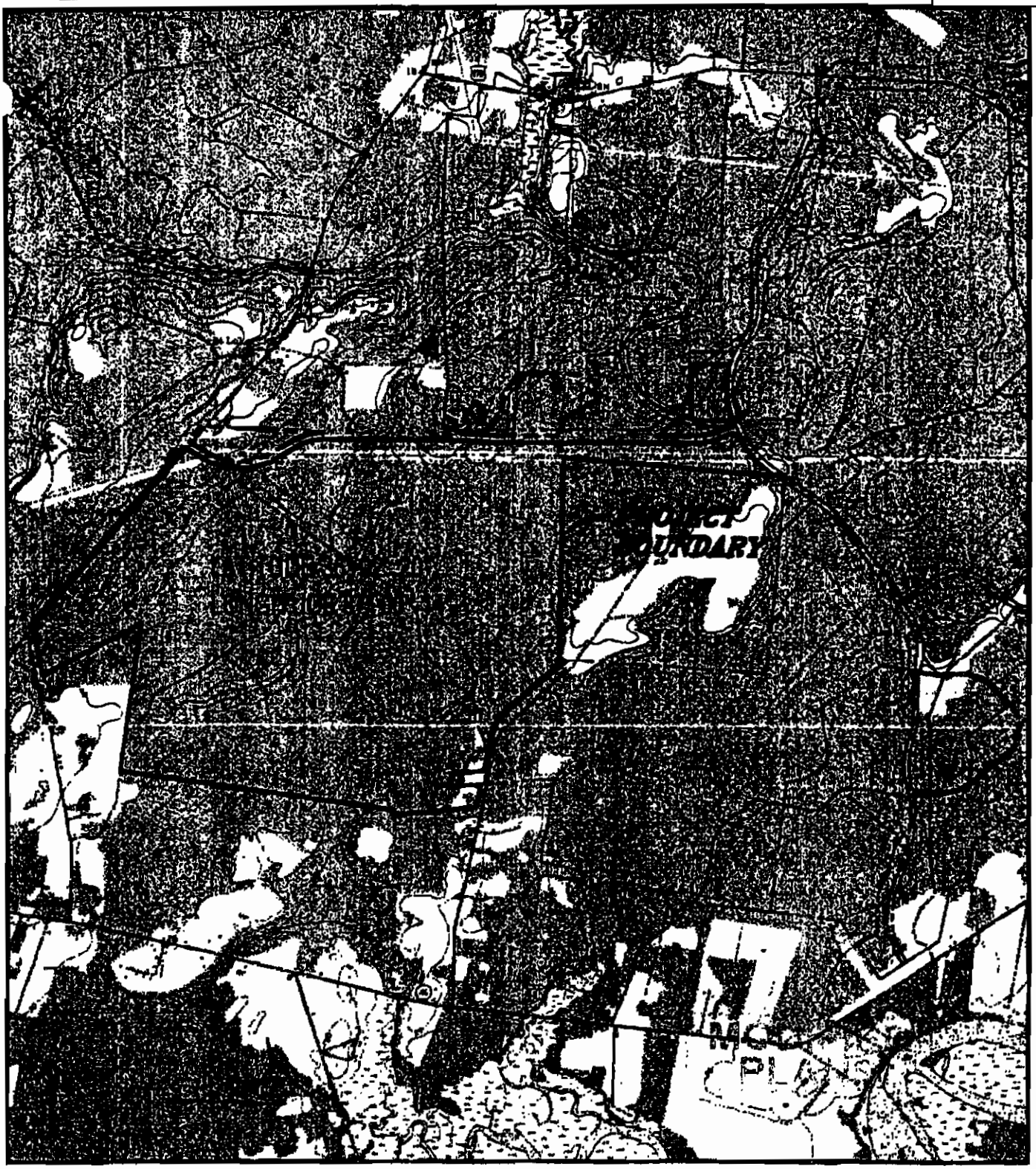
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
USGS QUADRANGLE- JASPER

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 2 OF 39
NO SCALE
SOURCE: THOMAS & HUTTON ENGINEERING CO.

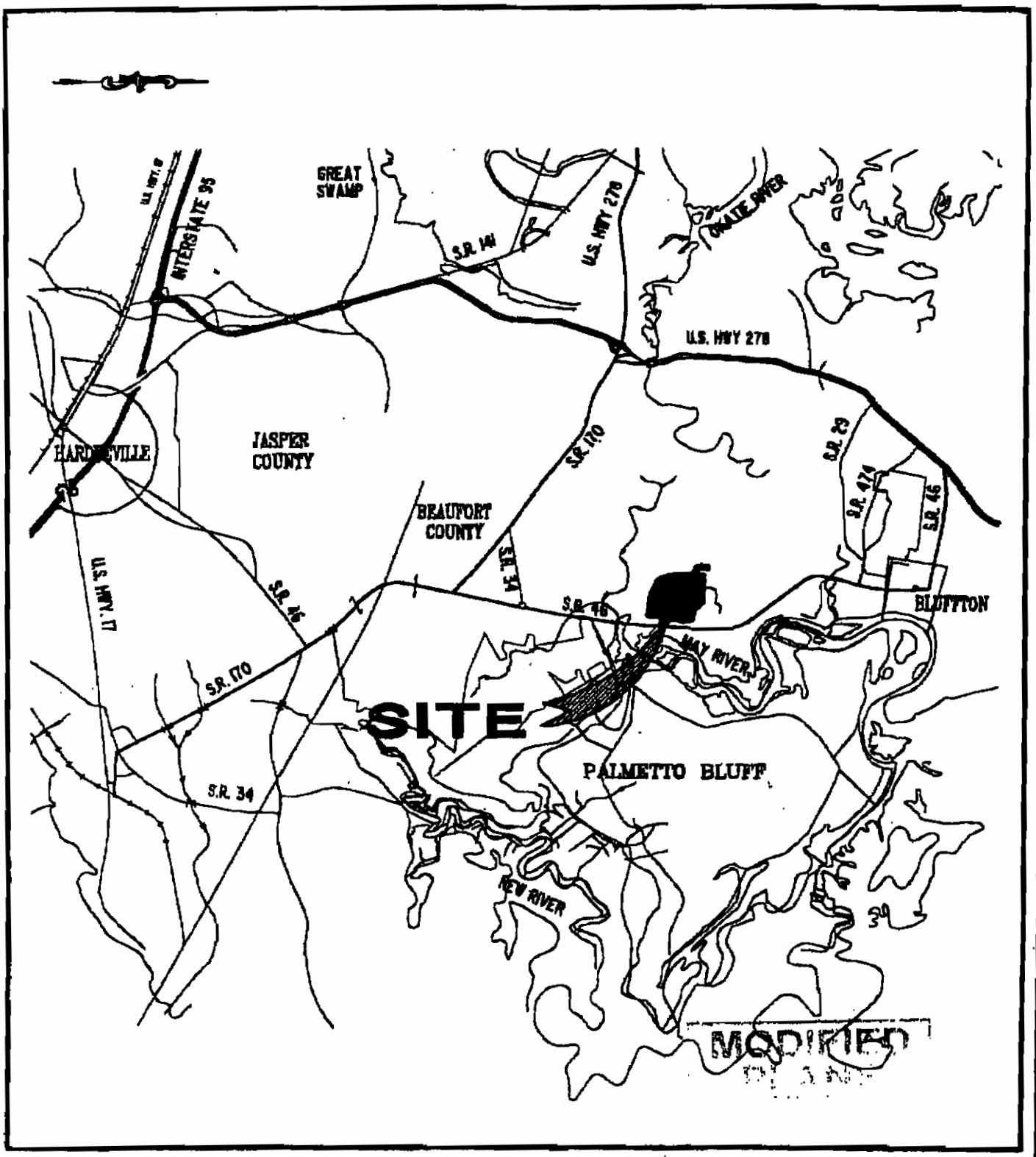
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN (LOCATION MAP)

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 3 OF 39
SCALE: NO SCALE
SOURCE: THOMAS & HUTTON ENGINEERING CO.

DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.

LEGEND

ACREAGE SUMMARY

TOTAL TRACT ACREAGE	1967.44 AC
TOTAL NON-JURISDICTIONAL WETLAND ACREAGE	38.56 AC
TOTAL 404 JURISDICTIONAL WETLAND ACREAGE	151.37 AC

WETLAND IMPACTS

NON-JURISDICTIONAL WETLANDS TO BE FILLED

WETLANDS TO BE FILLED	34.21 AC
TOTAL NON-JURISDICTIONAL WETLAND IMPACTS	34.21 AC

404 JURISDICTIONAL WETLANDS TO BE IMPACTED

WETLAND ROAD CROSSING	6.14 AC
20 PERCENT ROAD CROSSING CONTINGENCY	1.25 AC
TOTAL ROAD CROSSING+20% CONTINGENCY=	7.39 AC
20% CONTINGENCY	1.25 AC
1. 4-6-06 "DO" (-)20% CONTINGENCY	0.27 AC
2. 3-28-06"DX" (-)20% CONTINGENCY	0.06 AC
3 "DW" (-)20% CONTINGENCY	0.07 AC
4. "DO" (-)20% CONTINGENCY	0.03 AC
5. "DA" (-)20% CONTINGENCY	0.09 AC
5. "DA" (-)20% CONTINGENCY	0.02 AC
REMAINING 20% CONTINGENCY	0.69 AC
WETLANDS TO BE FILLED FOR VARIOUS LAND DEVELOPMENT ACTIVITIES	4.44 AC
3-1-07 IMPACT "Z"	0.39 AC
	4.83 AC
WETLANDS TO BE HAND CLEARED	1.34 AC
3-1-07 HAND CLEAR "DA"	(-) 1.34 AC
	0.00 AC
STORMWATER MANAGEMENT	0.71 AC
3-1-07 STORMWATER MANAGEMENT "DA"	(-) 0.59 AC
STORMWATER MANAGEMENT "DV"	(-) 0.12 AC
	0.00 AC
LAGOON EXCAVATION	6.14 AC
9-28-06 EXCAVATE "DA"	0.24 AC
(-) EXCAVATE "DA"	(-)0.09 AC
	6.29 AC
EMERGENT WETLAND CONVERSION	0.98 AC
3-1-07 EMERGENT CONVERSION "DA"	1.34 AC
	2.32 AC
GOLF CART BRIDGE(10' WIDE) (LINEAR FOOTAGE CART BRIDGE IN WETLAND)	0 LF

TOTAL 404 JURISDICTIONAL WETLAND IMPACTS PERMITTED: 9-28-06 21.15 NEW: 20.83 AC

MODIFIED PLANS

WETLAND MITIGATION

FRESHWATER WETLAND PRESERVATION & ENHANCEMENT BY BUFFERING	PERMITTED: 9-28-06	429.81 AC
	NEW: 3-1-07	430.13 AC
FRESHWATER WETLAND ENHANCEMENT OF HYDROLOGY		98.58 AC
PINE PLANTATION RESTORATION		6.18 AC
ROAD RESTORATION		0.99 AC
UPLAND WETLAND BUFFER		91.00 AC
CREATION WETLAND TERRACE		4.74 AC
CREATION LITTORAL ZONES		11.14 AC
WETLAND CREATION "DW"		0.39 AC

TOTAL MITIGATION ACRES

PERMITTED: 9-28-06 642.44 AC

NEW: 3-1-07 643.15 AC

SINGLE FAMILY BUFFER	53.71 AC
AVERAGE WIDTH	43.28 LF
MINIMUM WIDTH	10 LF
COMMERCIAL/GOLF BUFFER	37.29 AC
AVERAGE WIDTH	46.88 LF
MINIMUM WIDTH	15 LF
COMMERCIAL/GOLF/SINGLE FAMILY BUFFER	
TOTAL BUFFER ACRES	91.00 AC
TOTAL AVERAGE WIDTH	81.77 LF

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN (LEGEND)

PERMIT # 2003-1G-066 ISSUED: 4-21-2004

LAST MODIFIED DATE: SEPTEMBER 28, 2006
REVISION DATE: MARCH 1, 2007

DATUM: MEAN SEA LEVEL

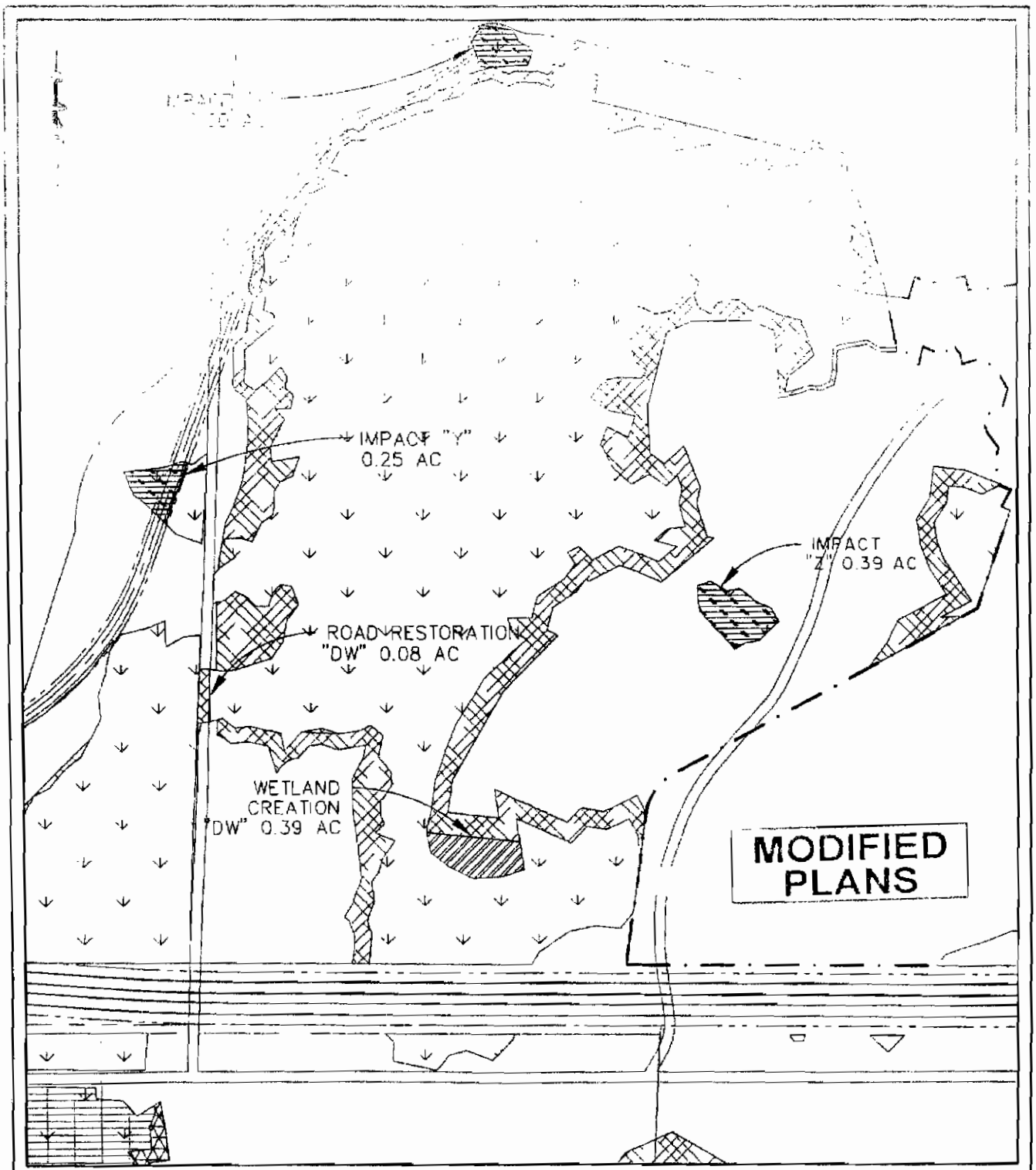
SHEET 4 OF 39
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

PERMIT # 2003-1G-066 ISSUED: 4-21-2004

LAST MODIFIED DATE: SEPTEMBER 21, 2004
REVISION DATE: MARCH 1, 2007

DATUM: MEAN SEA LEVEL

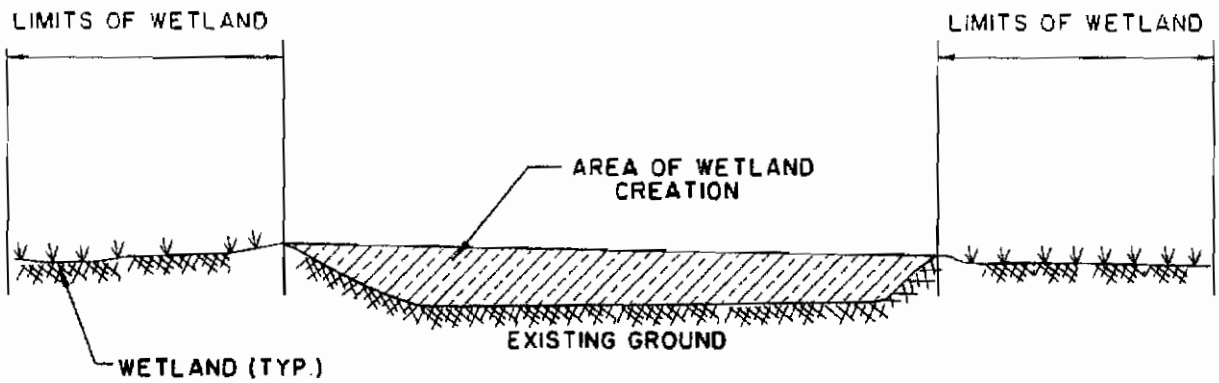
SHEET 5 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C
WINDING RIVER BTS 1, L.C.



WETLAND CREATION

NOT TO SCALE

MODIFIED PLANS

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN
DATE: MARCH 1, 2007

DATUM: MEAN SEA LEVEL

SHEET 5A OF 39

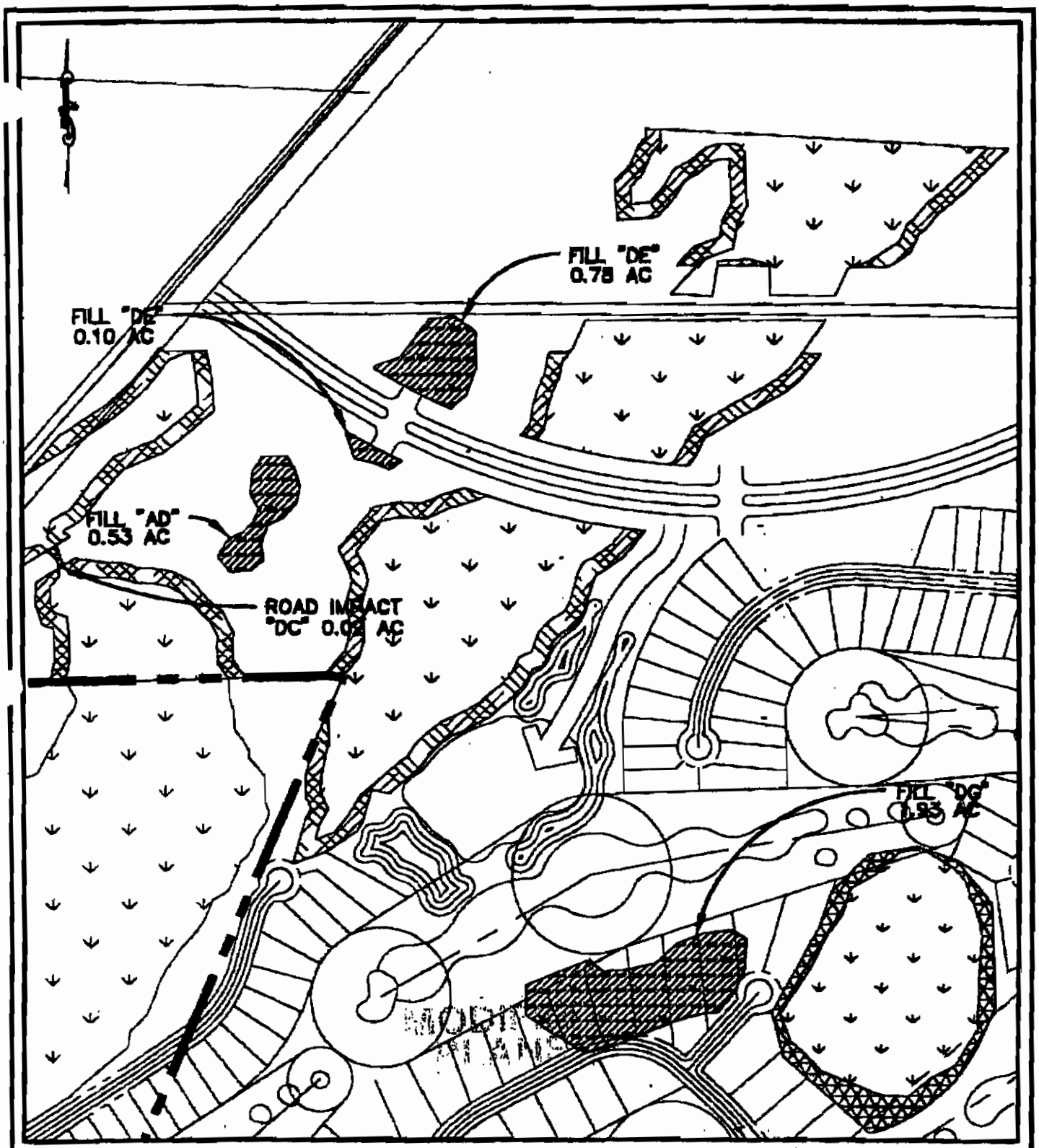
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 8 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

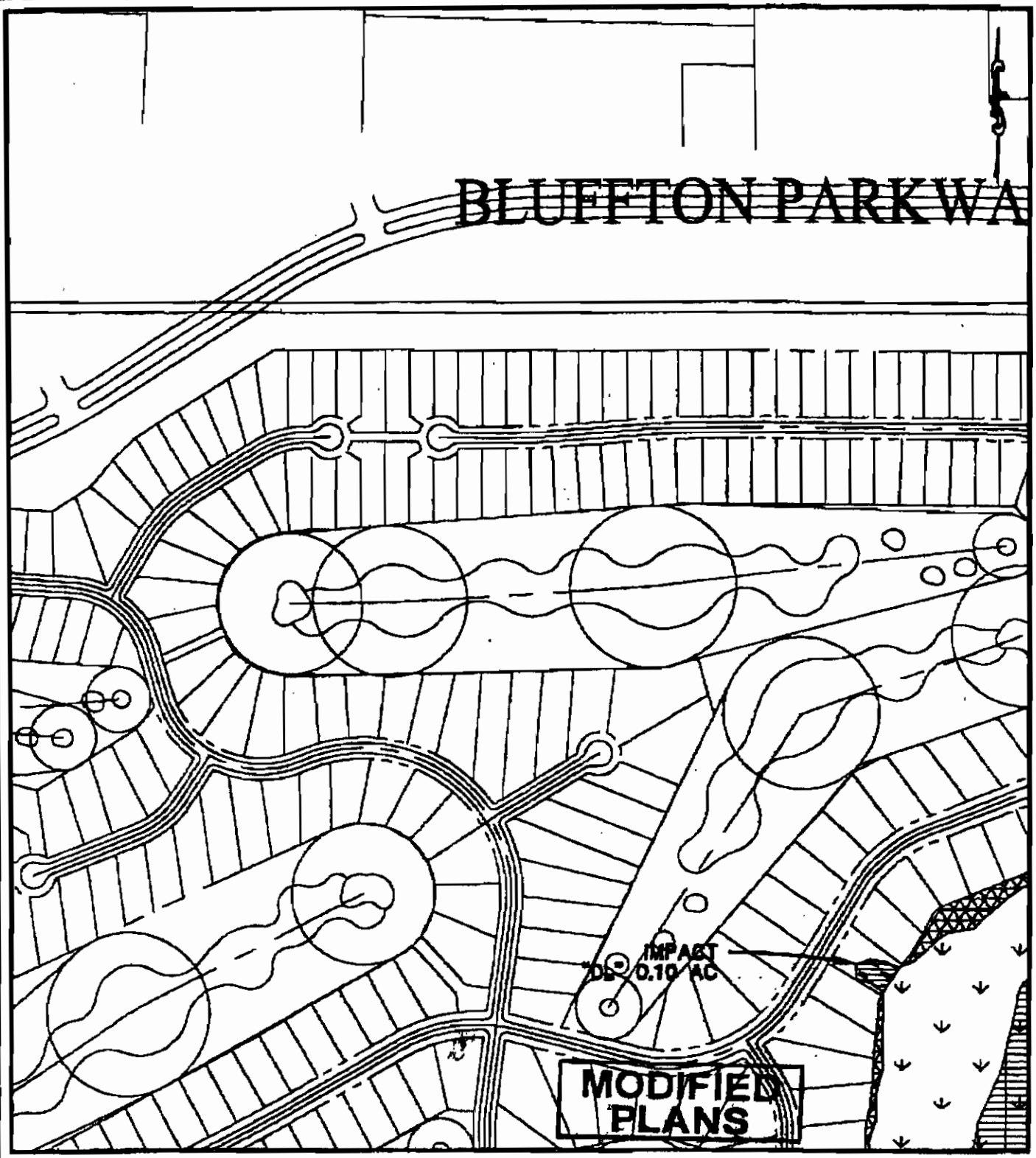
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER SFS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 7 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

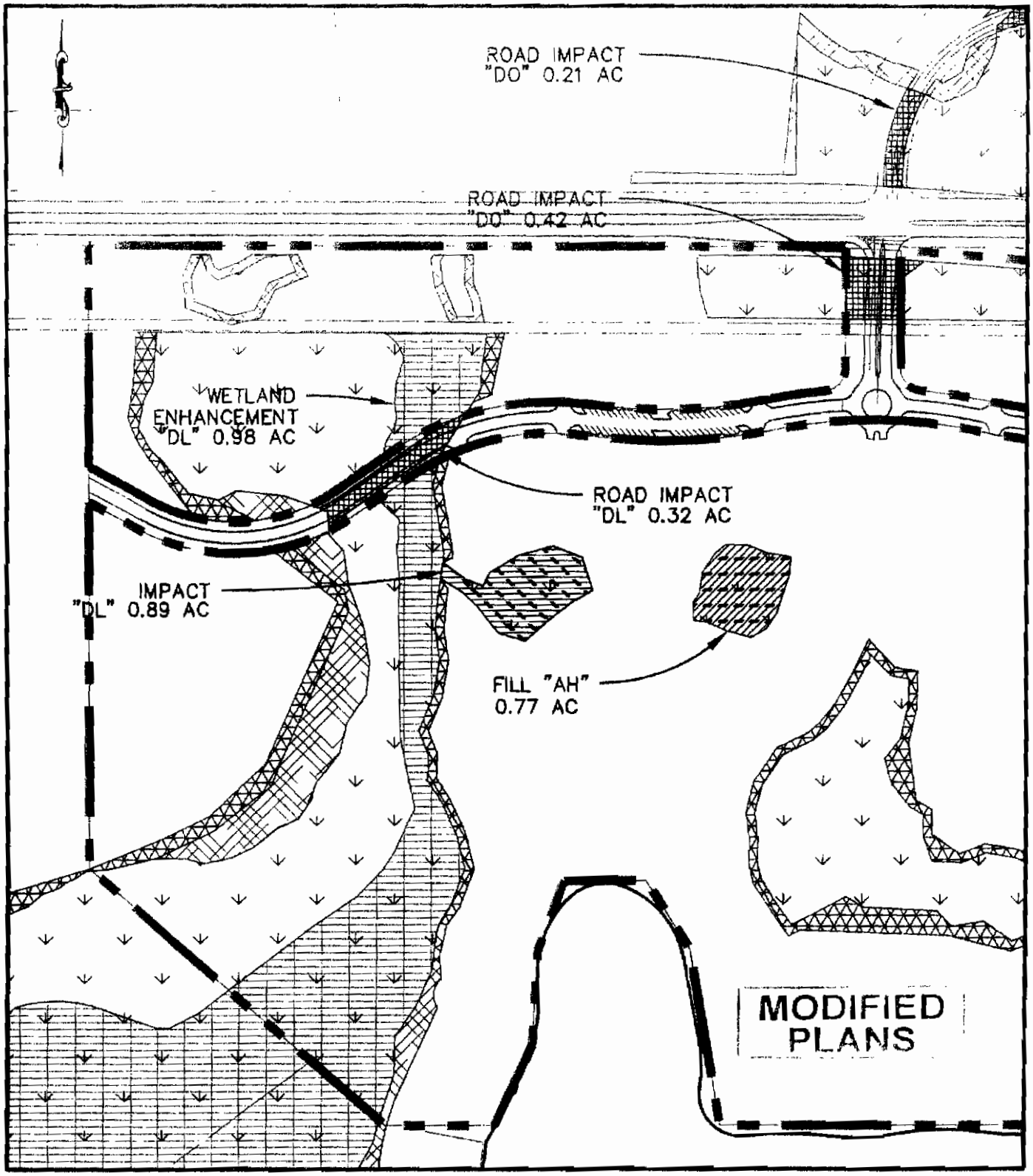
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

PERMIT # 2003-1G-066 ISSUED 4-21-2004

LAST MODIFIED DATE: APRIL 6, 2006
REVISION DATE: SEPTEMBER 28, 2006

SHEET 8 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

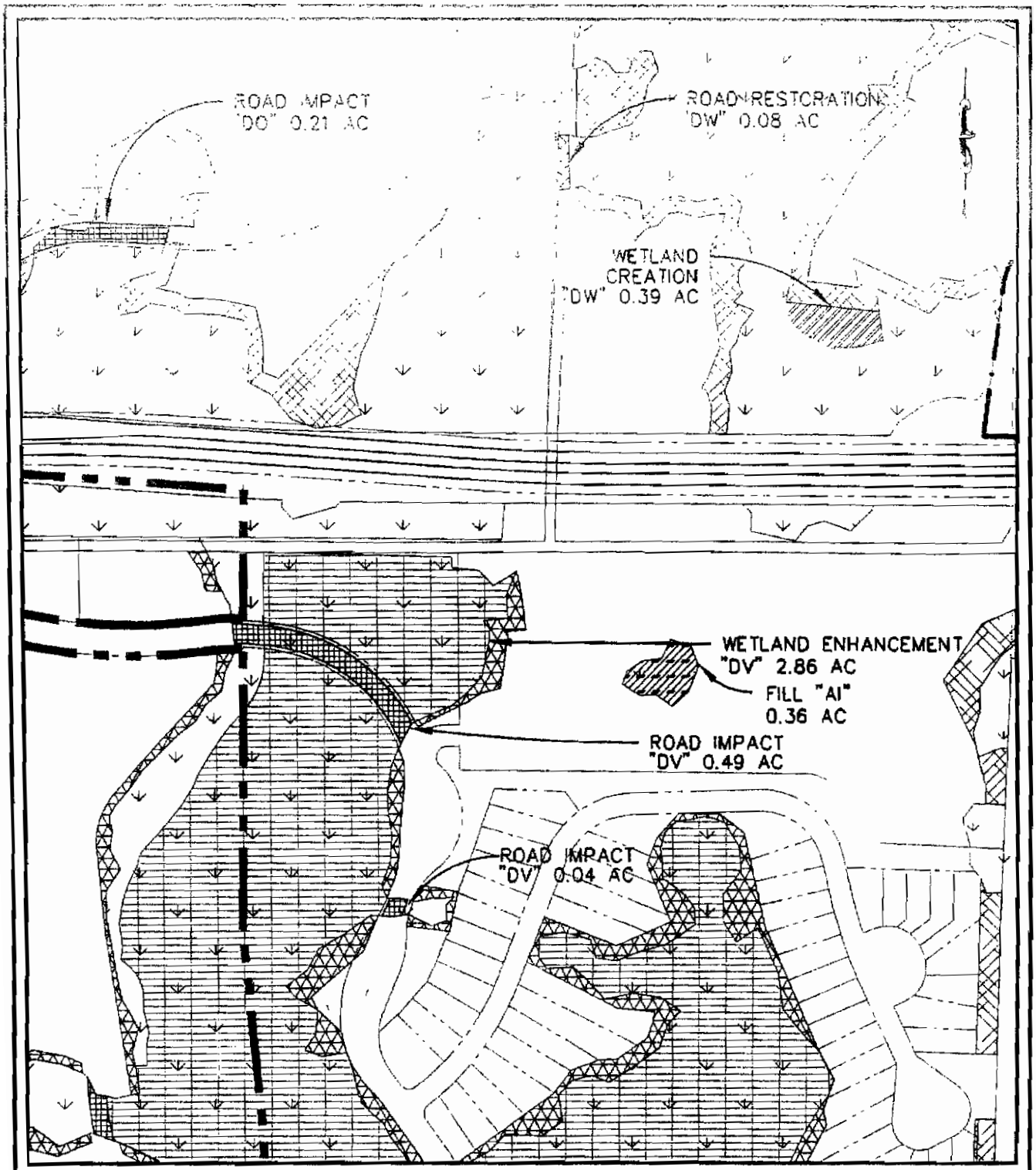
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY,S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN REVISIONS

PERMIT # 2003-1G-066 ISSUED 4-21-2004

LAST MODIFIED DATE: AUGUST 2, 2005
REVISION DATE: MARCH 1,2007

MODIFIED PLANS

SHEET 9
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

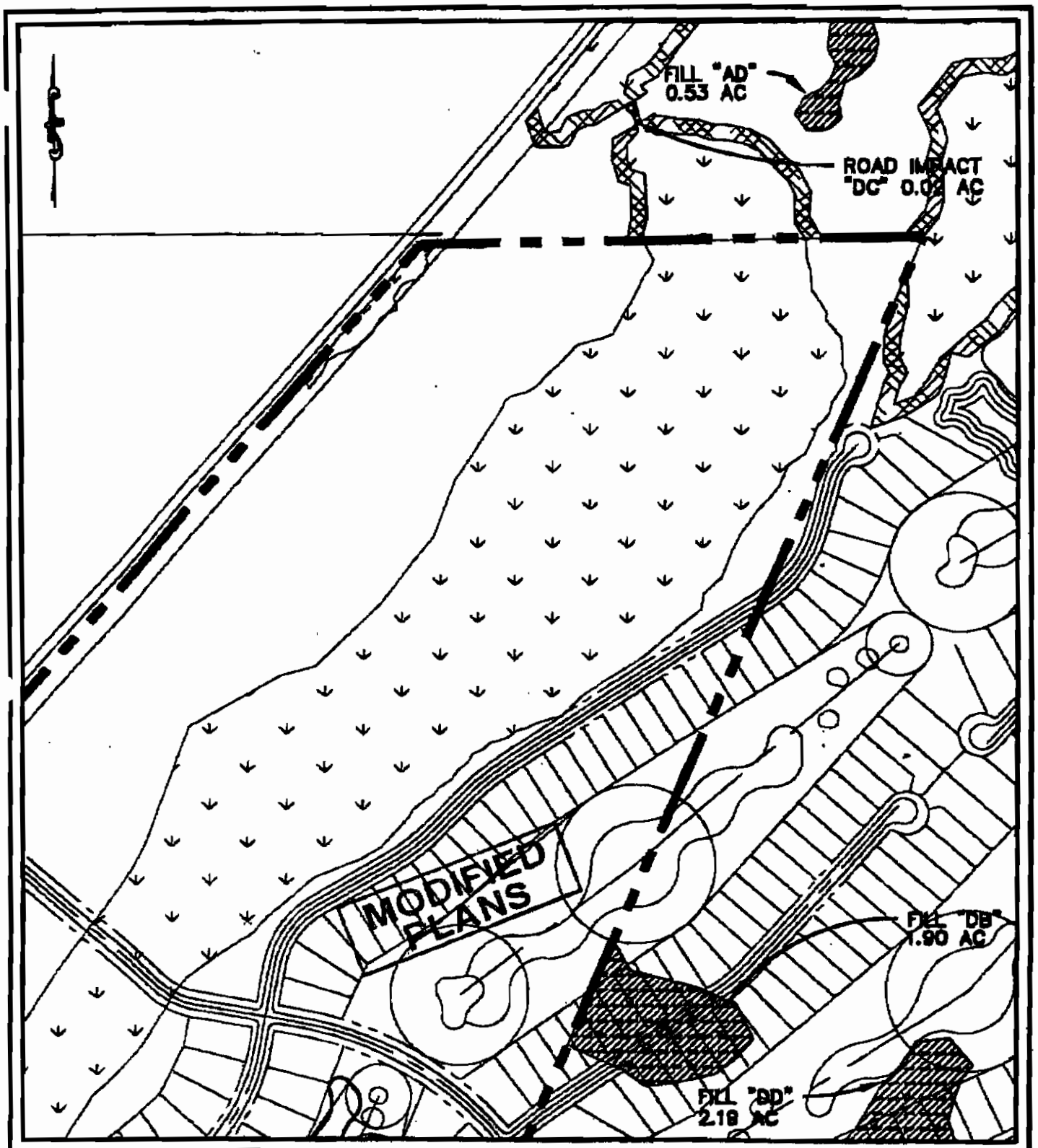
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY,S. C
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 10 OF 38
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

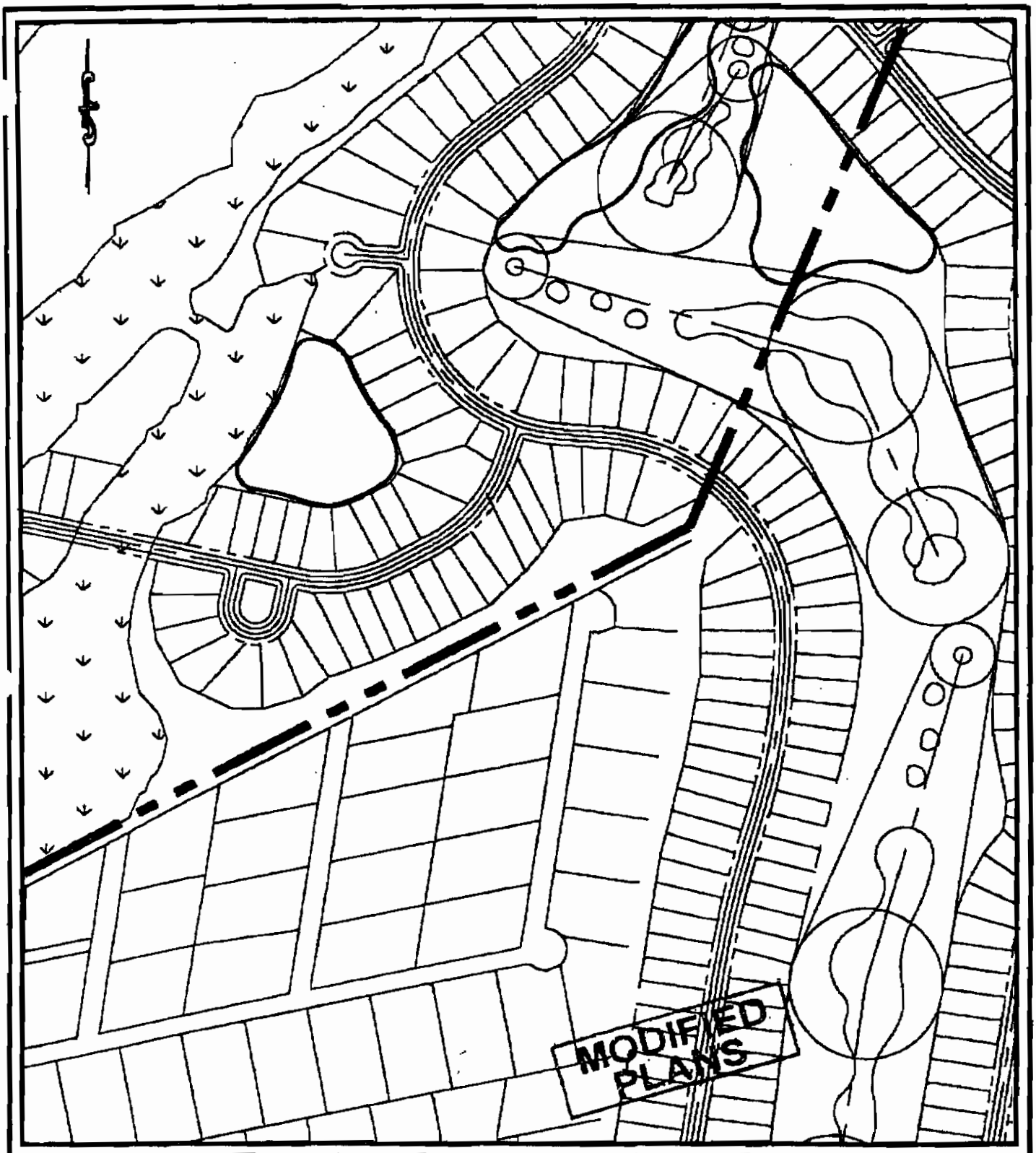
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 11 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

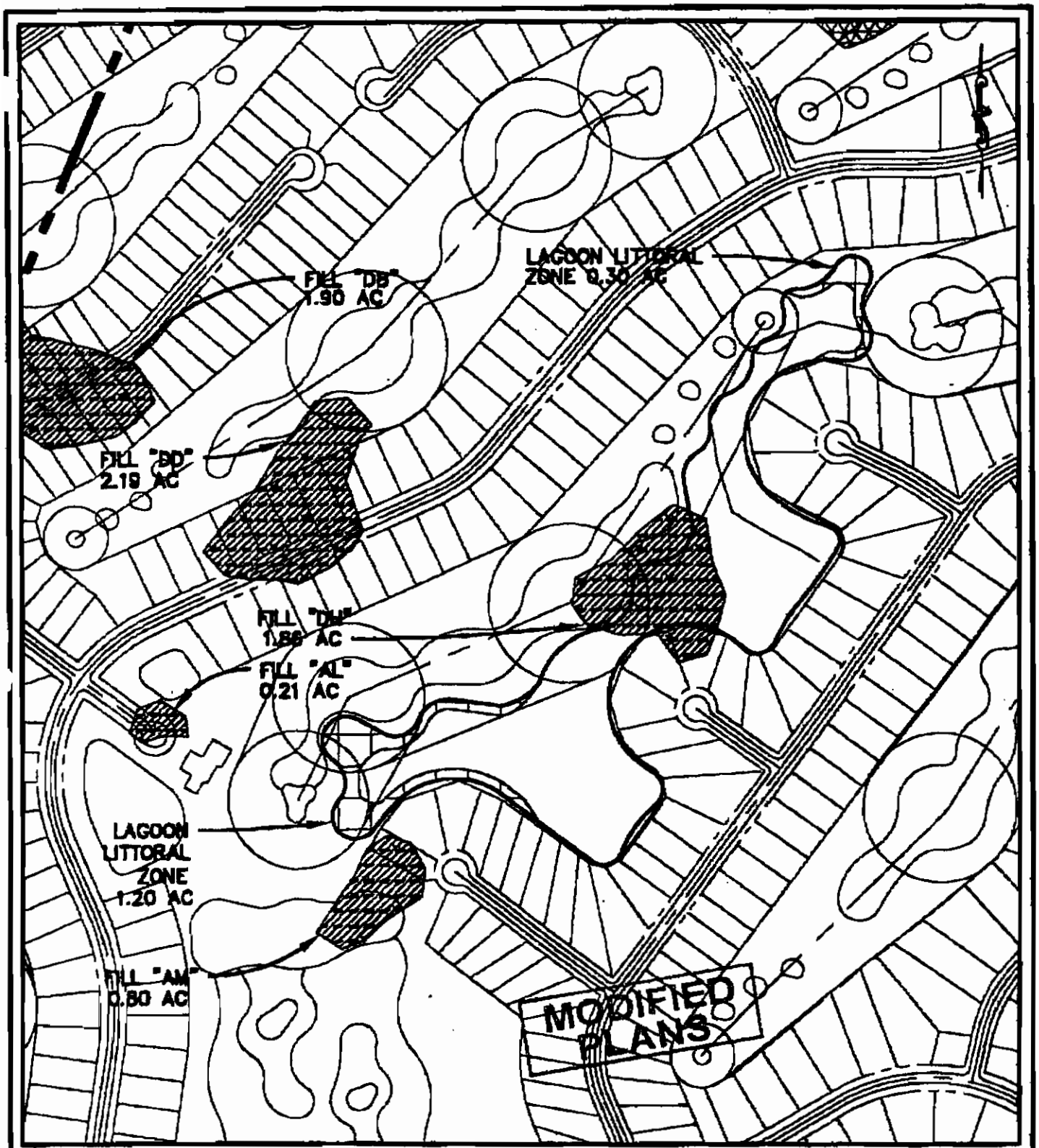
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 12 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

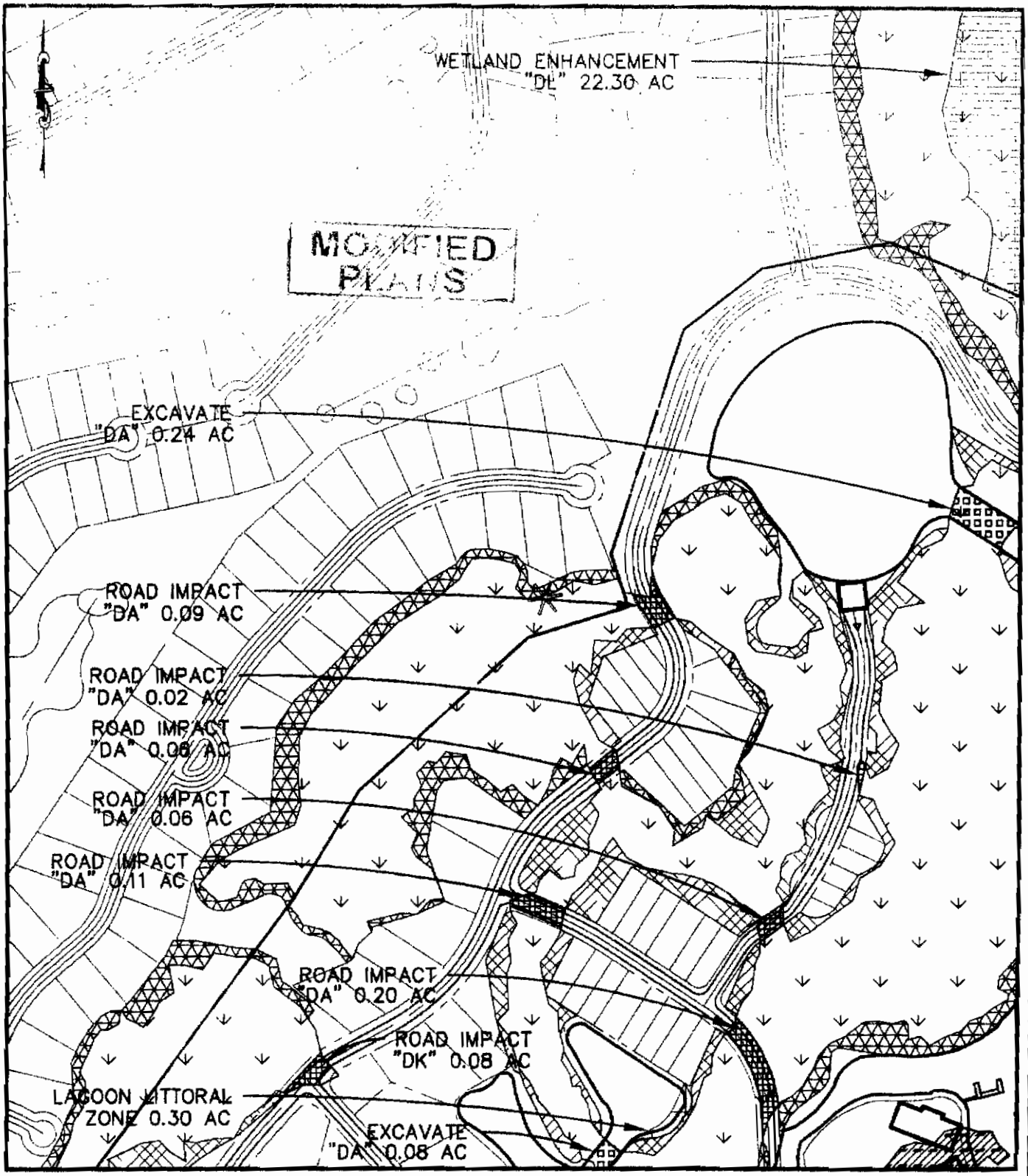
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN REVISIONS

PERMIT # 2003-1G-066 ISSUED: 4-21-2004

LAST MODIFIED DATE: AUGUST 2, 2005
REVISION DATE: SEPTEMBER 28, 2006

SHEET 13 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

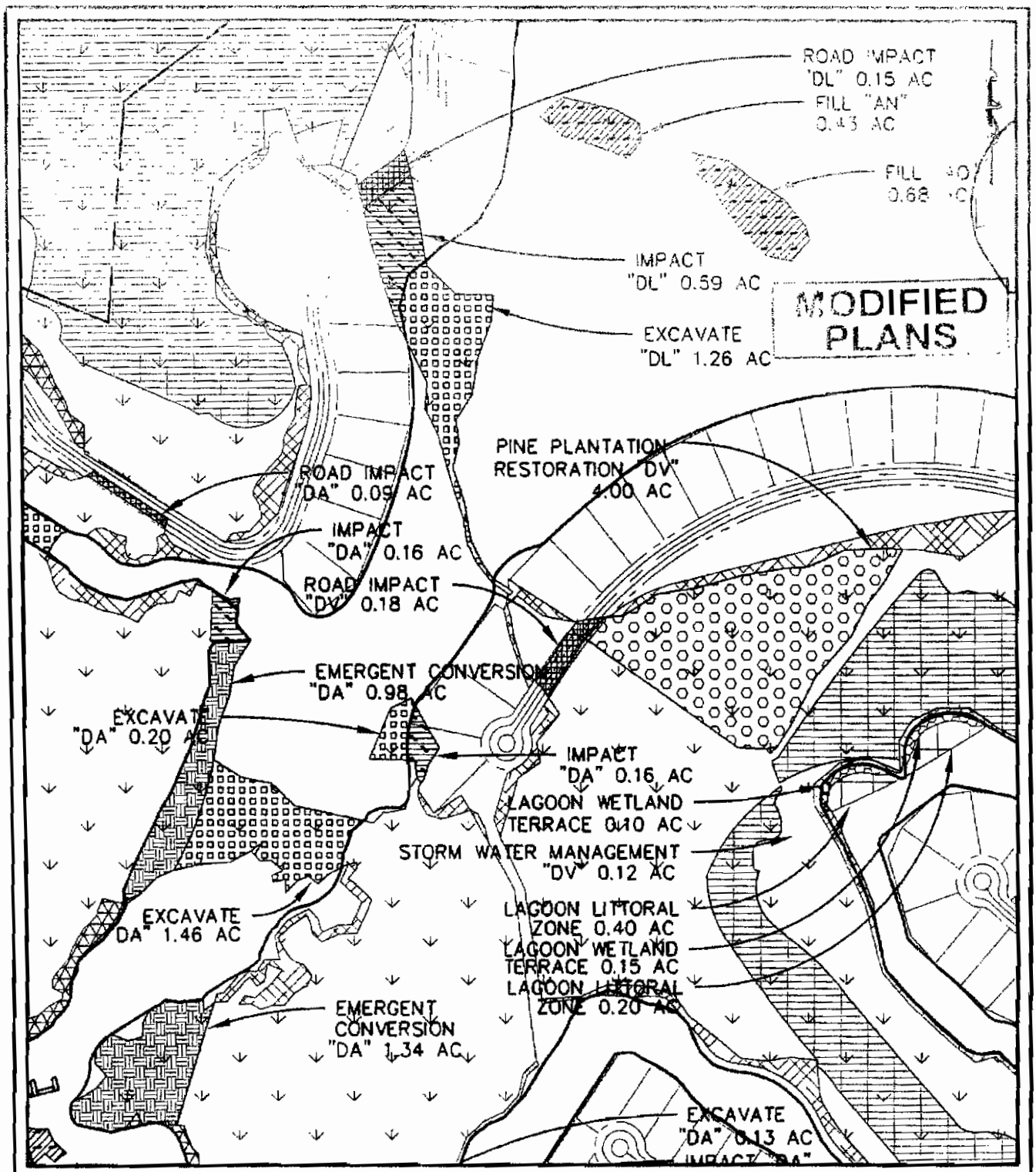
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

PERMIT # 2003-1G-066 ISSUED: 4-21-2004

LAST MODIFED DATE: SEPTEMBER 28, 2006
REVISION DATE: MARCH 1, 2007

SHEET 14 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

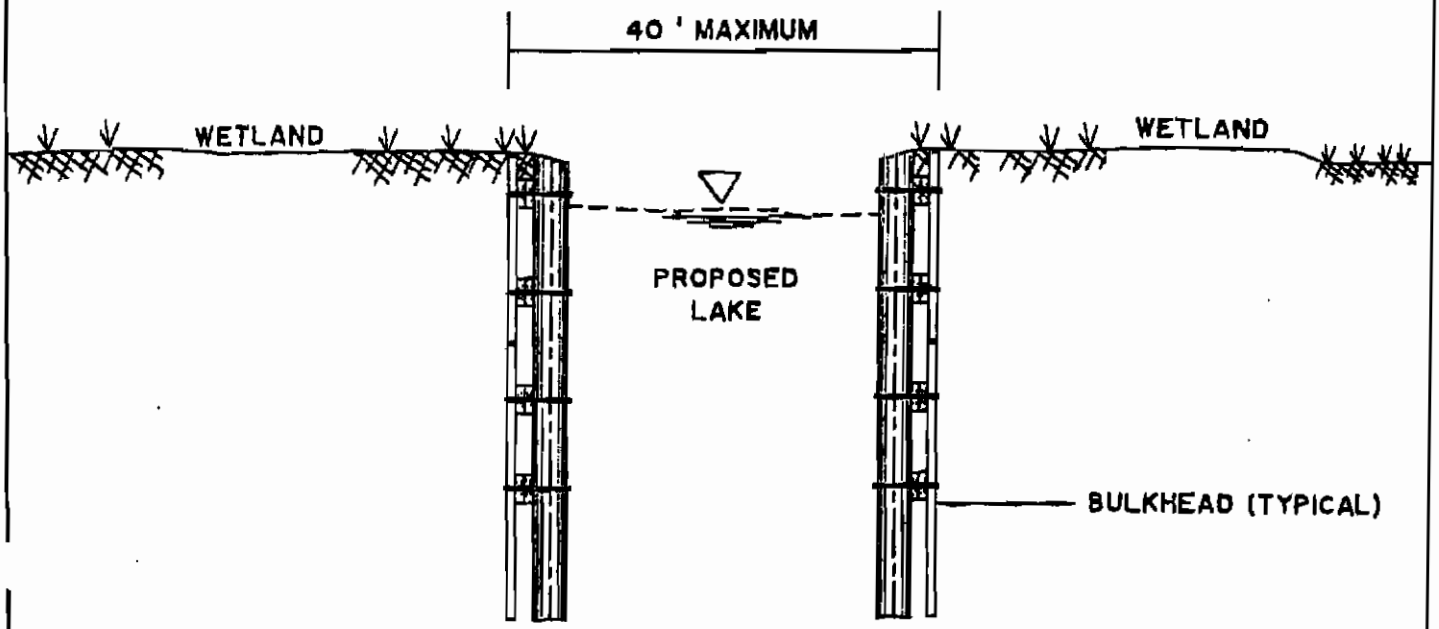
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



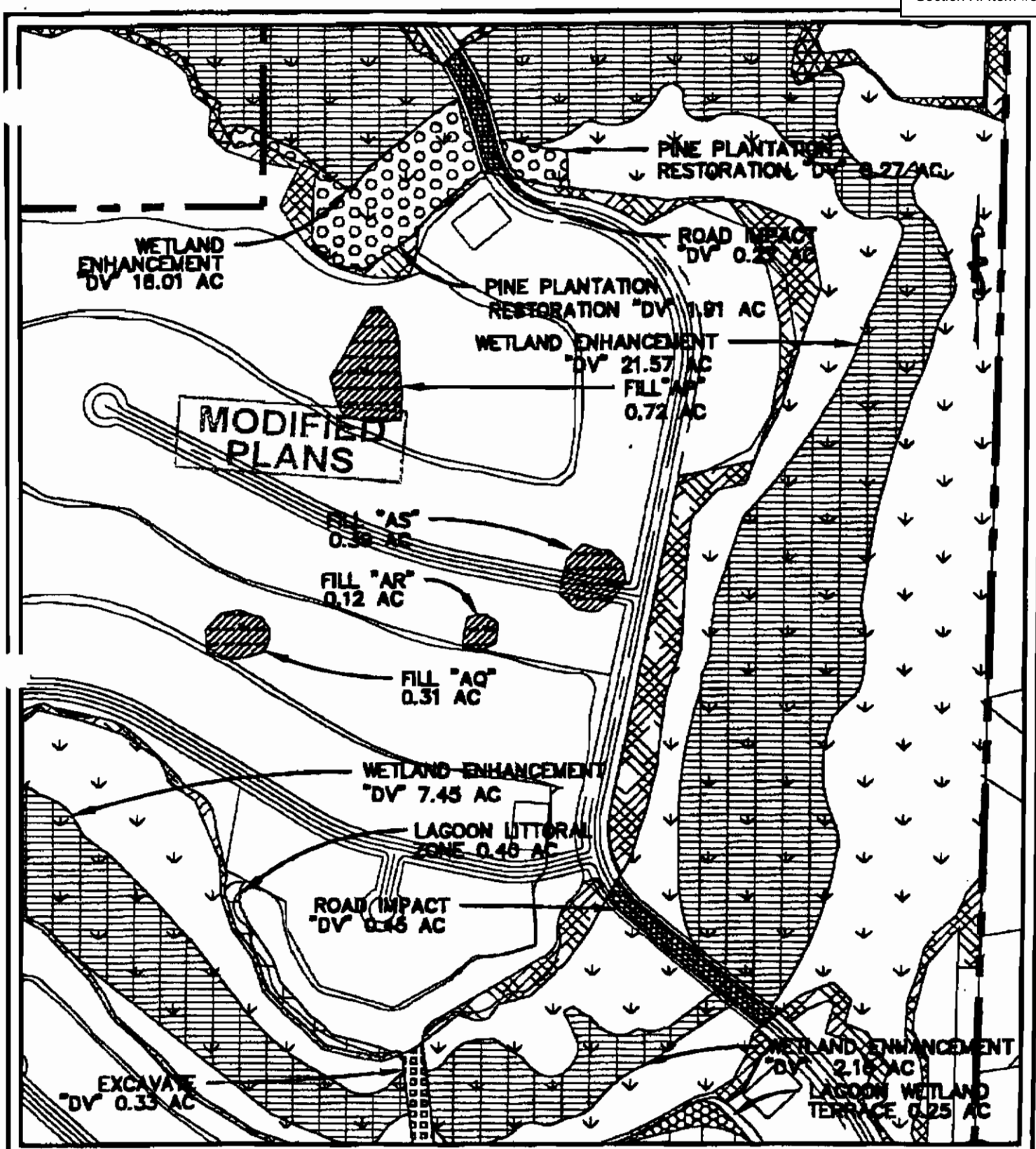
"A"
BULKHEAD CROSS SECTION DETAIL

NOT TO SCALE

MODIFIED PLANS

PERMIT# 2003-IG-066 ISSUED: 4-21-2004
BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN
DATE: AUGUST 2, 2005
SHEET 14A OF 39
DETAIL "A"
DATUM: MEAN SEA LEVEL
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:
WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT
COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON
APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

DATE: FEBRUARY 10, 2003
REVISION DATE: MARCH 29, 2005
SHEET 15 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

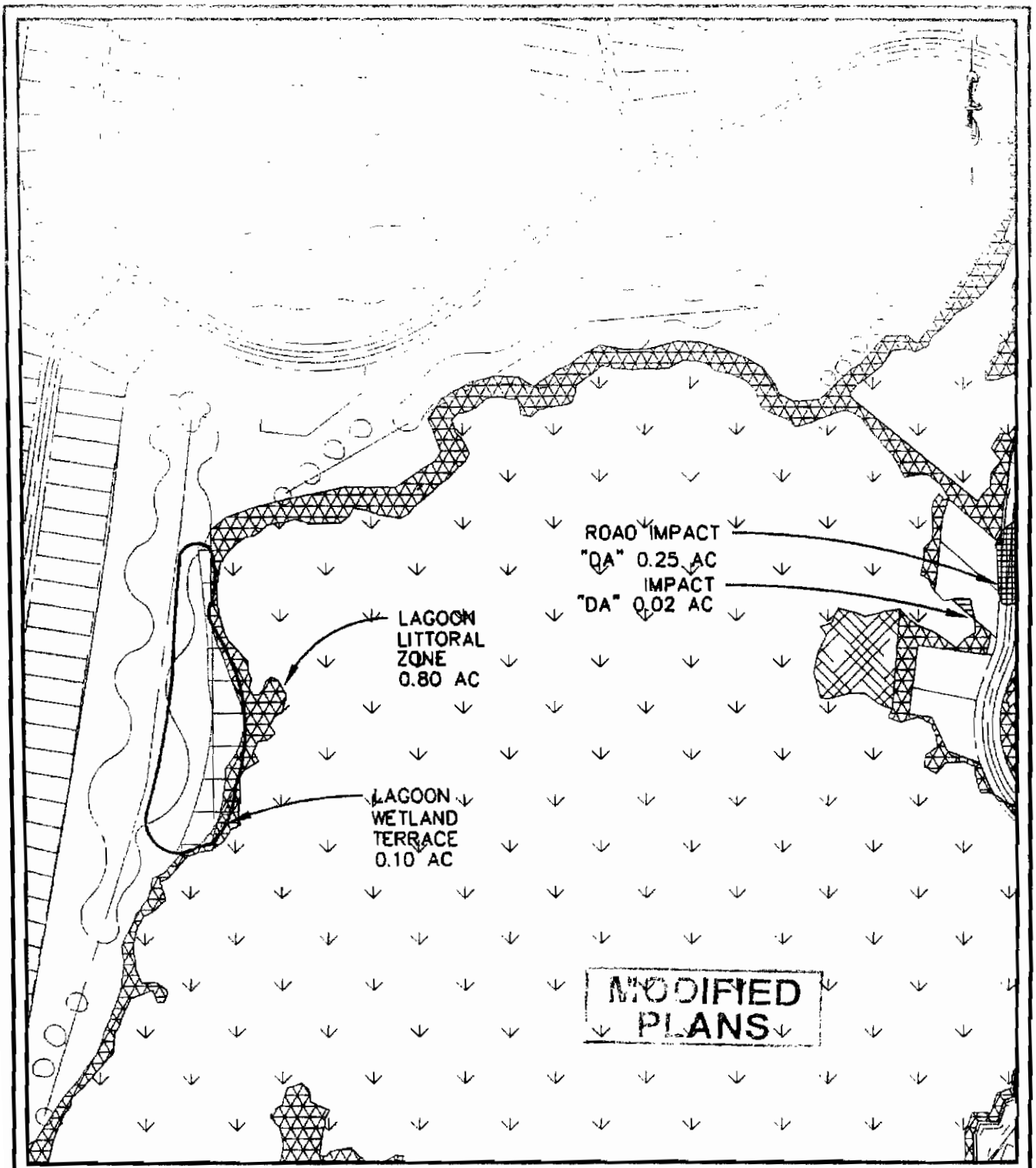
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR ACQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

LAST MODIFIED DATE: SEPTEMBER 21, 2004
REVISION DATE: MARCH 1, 2007

SHEET 16 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO

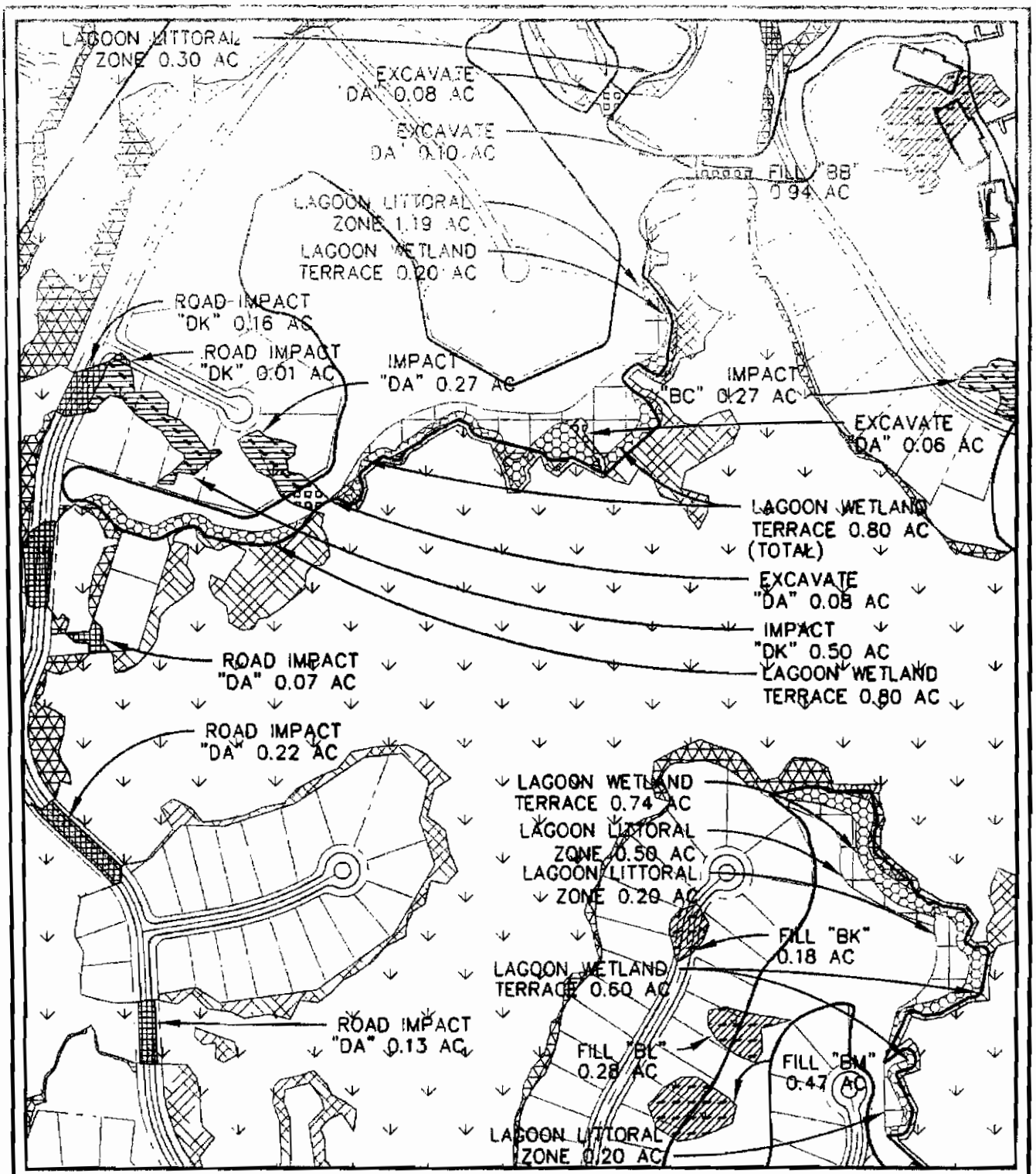
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

PERMIT # 2003-1G-066 ISSUED: 4-21-2004

LAST MODIFIED DATE: SEPTEMBER 28, 2006
REVISION DATE: MARCH 1, 2007

MODIFIED PLANS

SHEET 17 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

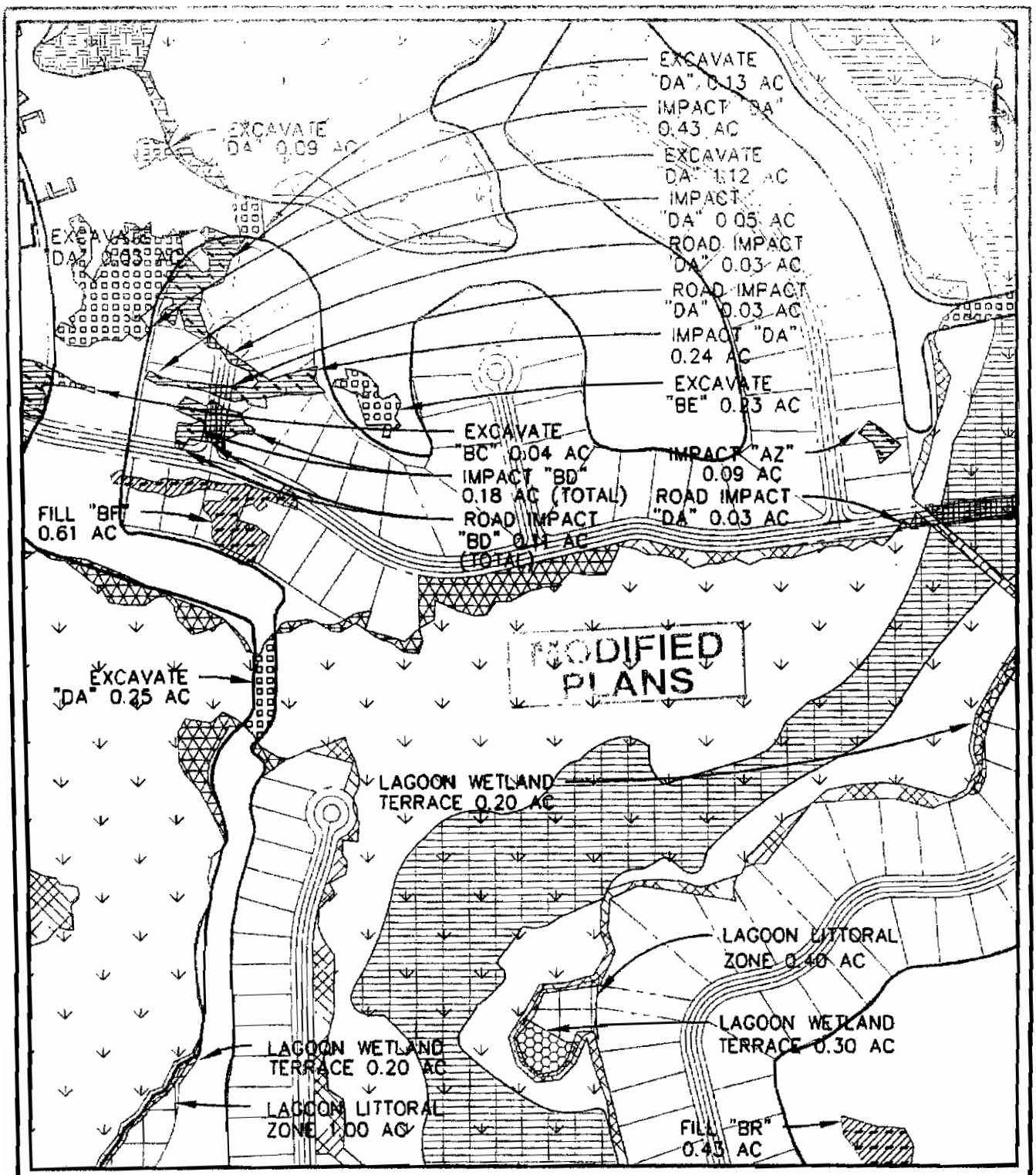
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

PERMIT # 2003-1G-066 ISSUED: 4-21-2004

LAST MODIFIED DATE: AUGUST 2, 2005
REVISION DATE: SEPTEMBER 28, 2006

SHEET 18 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

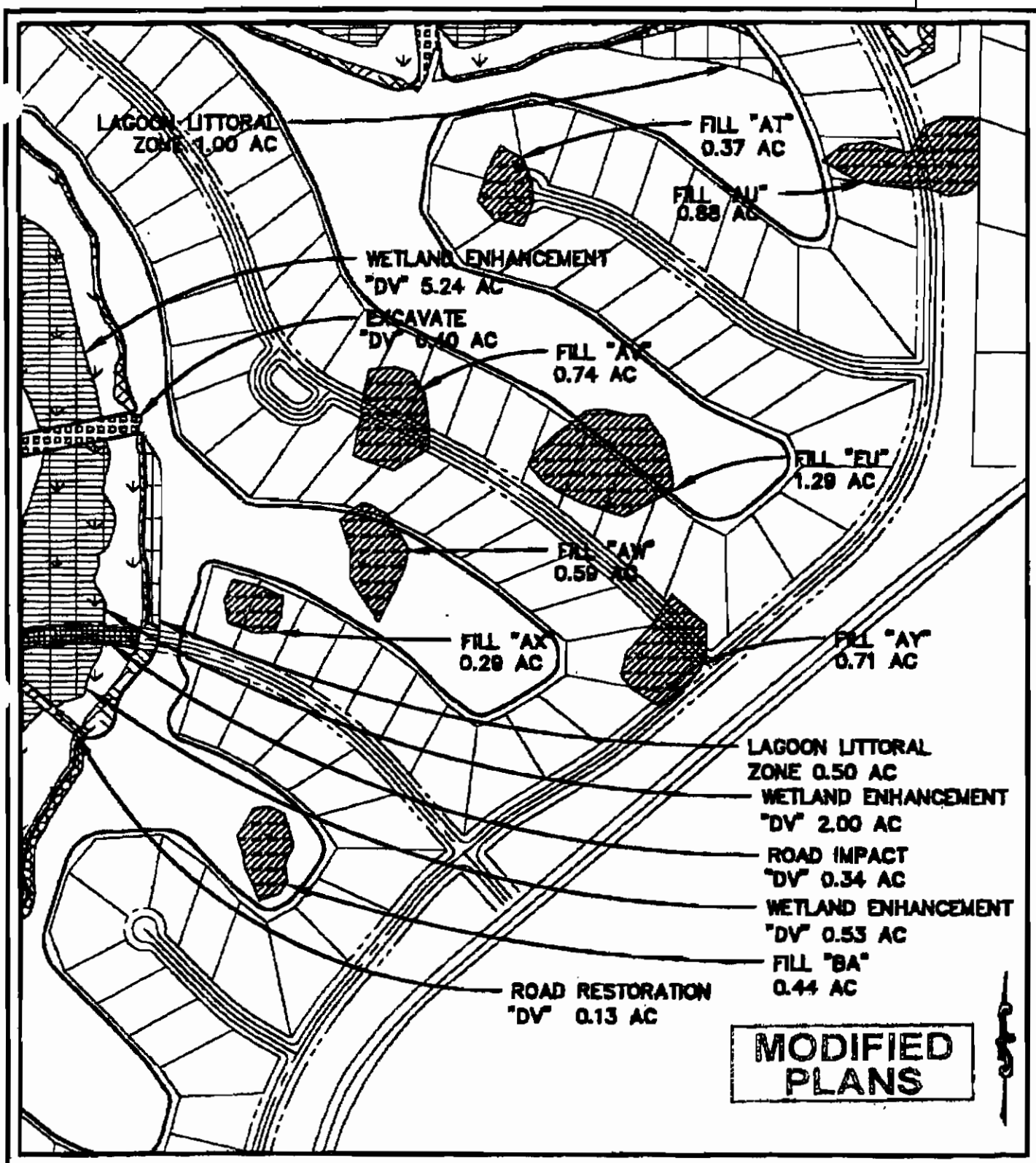
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 19 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

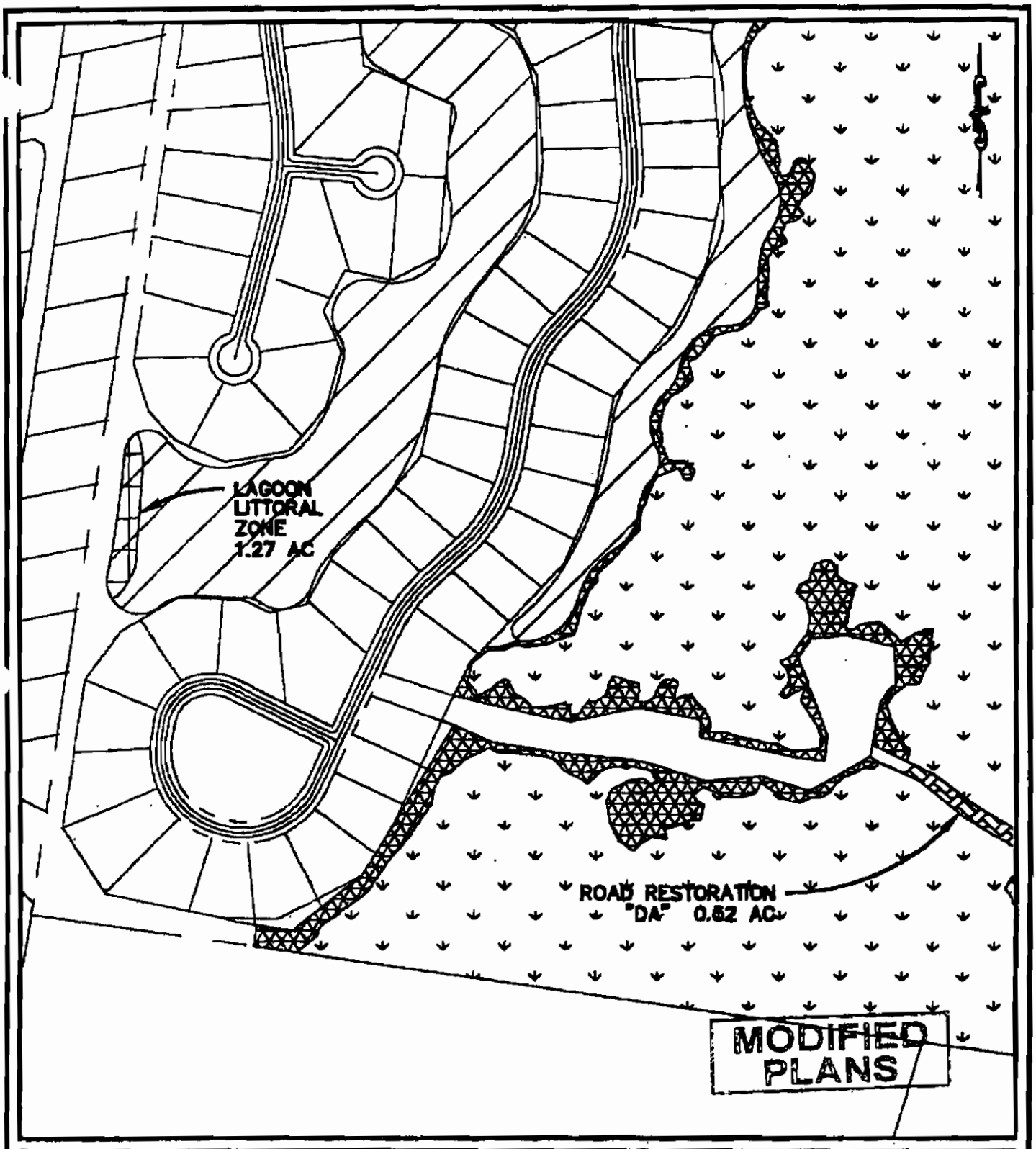
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 20 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

DATUM: MEAN SEA LEVEL

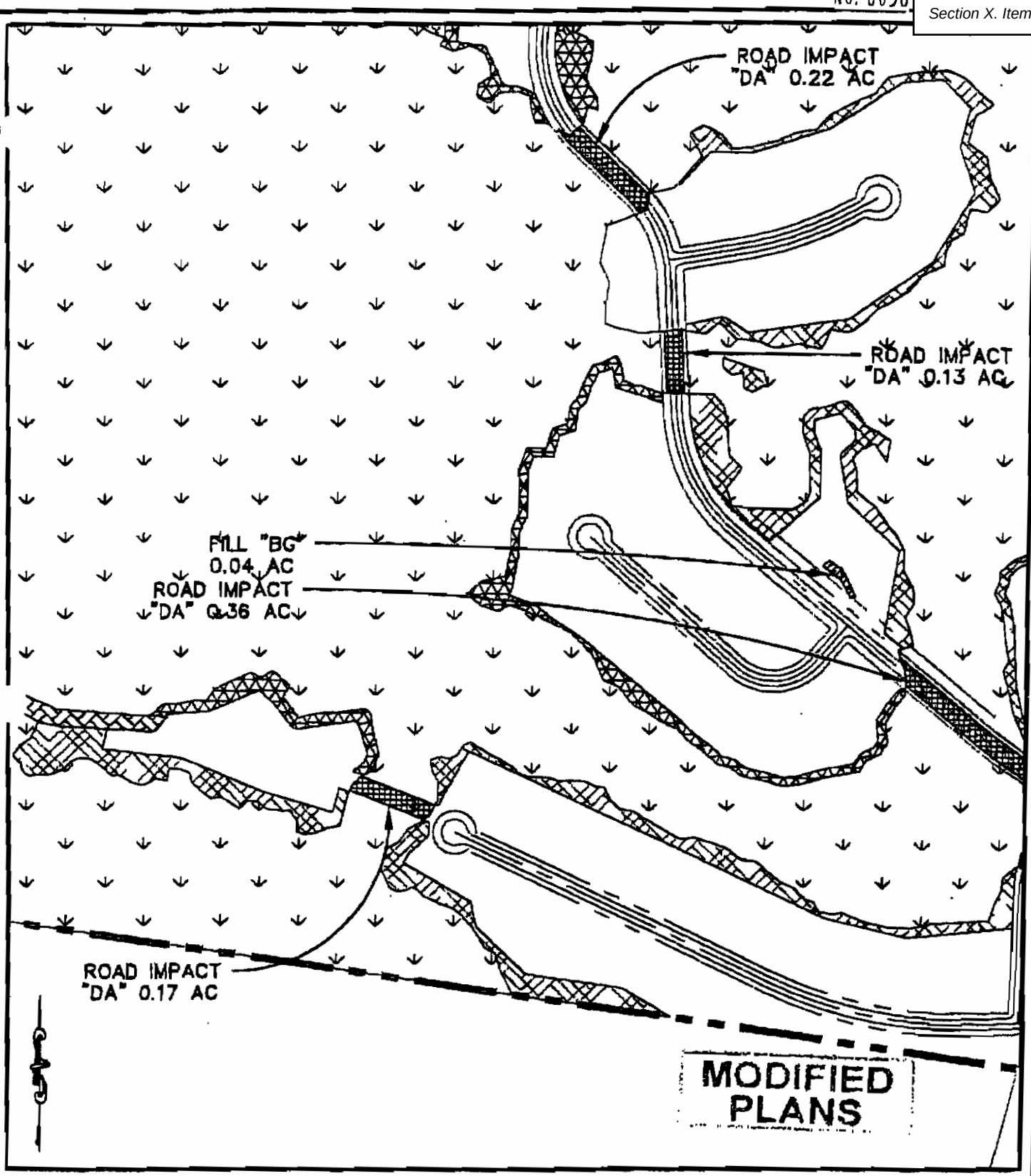
PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER STS 1, L.C.

Jan. 25. 2006 8:42AM Newkirk Environmental, Inc No. 6058



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN
DATE: SEPTEMBER 21, 2004
REVISED: AUGUST 2, 2005

PERMIT # 2003-1G-066 ISSUED: 4-21-2004

SHEET 21 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

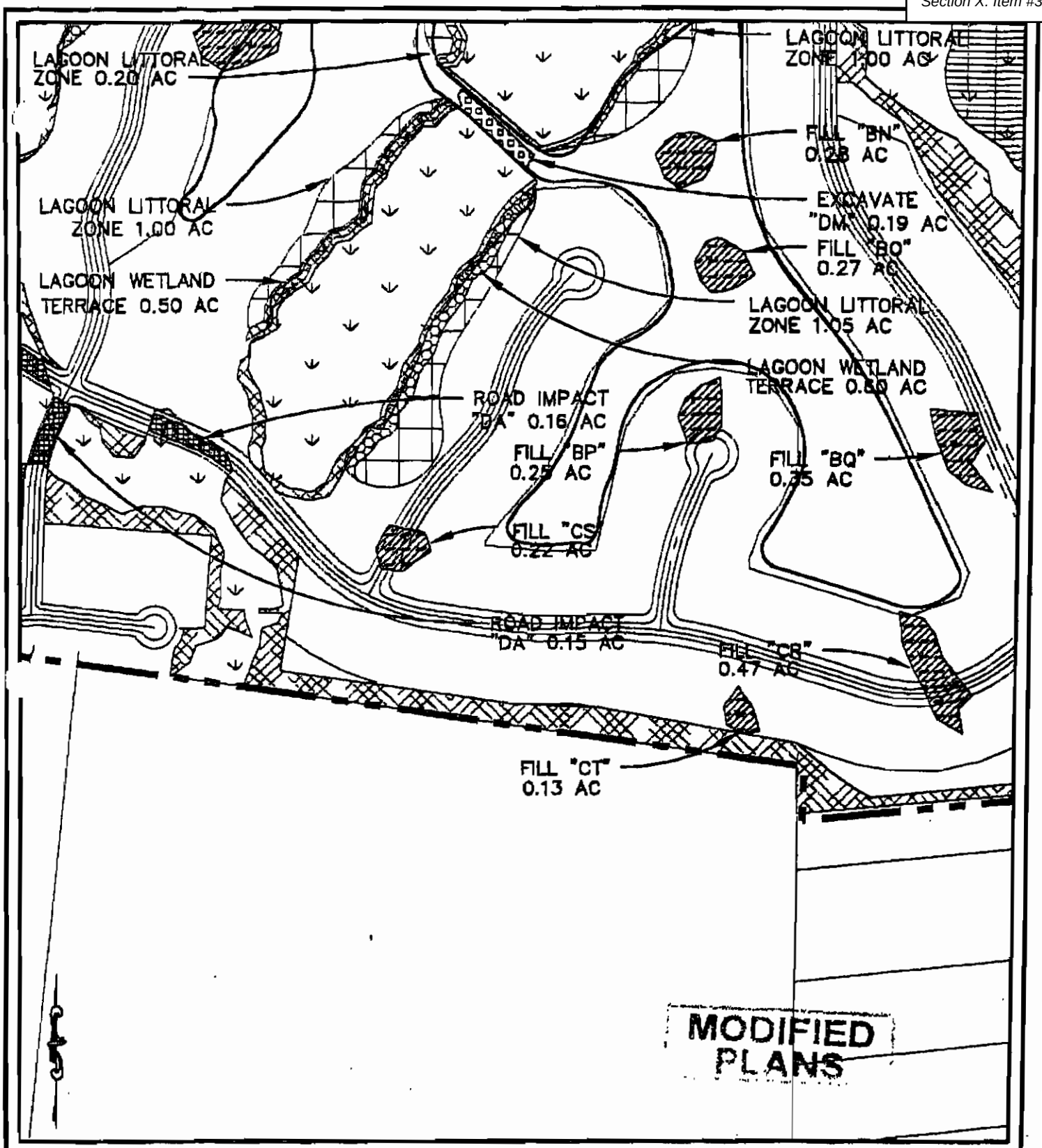
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT WETLANDS MASTER PLAN

PERMIT # 2003-1G-066 ISSUED: 4-21-2004

DATE: SEPTEMBER 21, 2004
REVISED: AUGUST 2, 2005

SHEET 22 OF 38
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

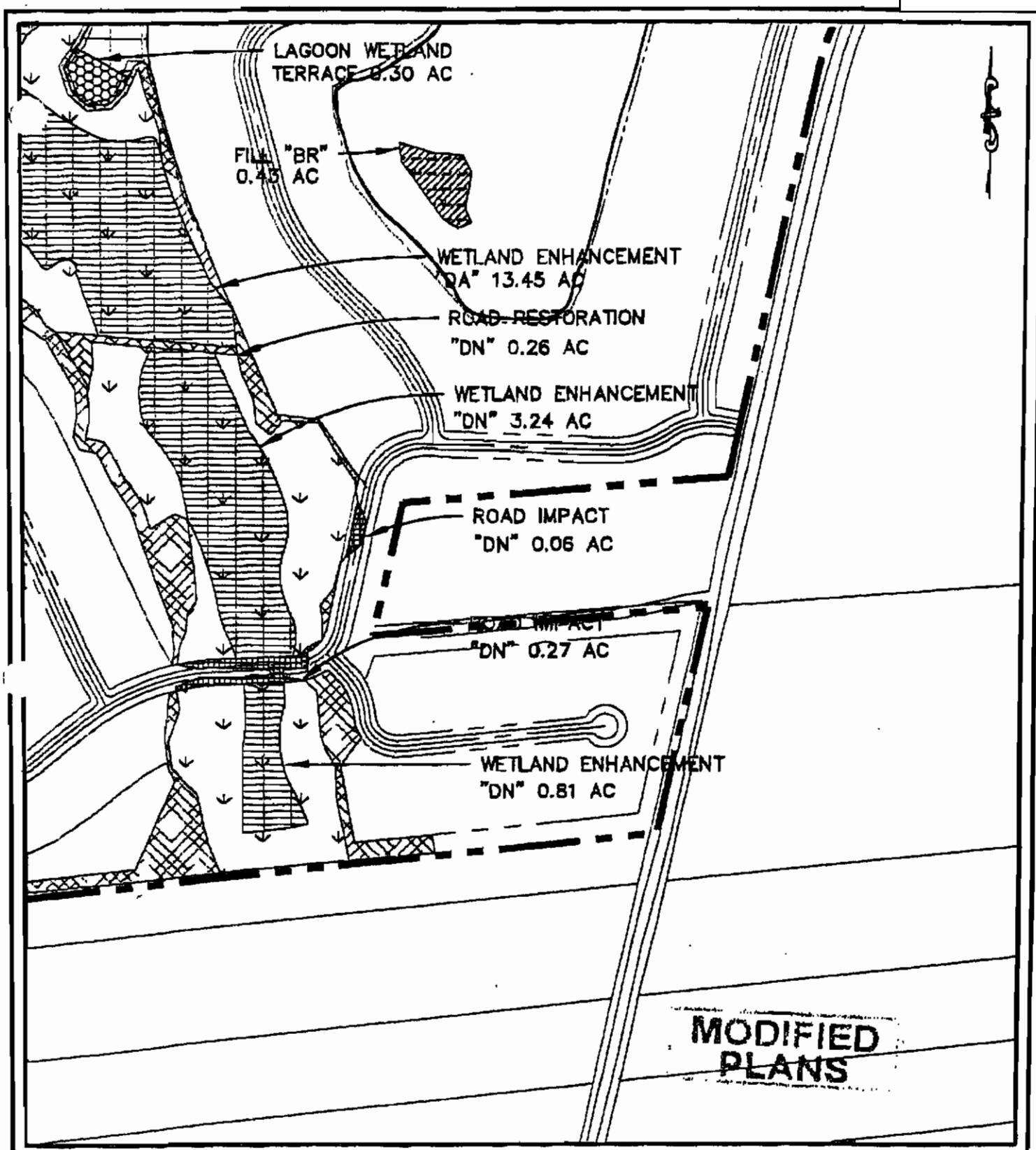
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

PERMIT # 2003-1G-068 ISSUED: 4-21-2004

DATE: SEPTEMBER 21, 2004
REVISED: AUGUST 2, 2005

SHEET 23 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

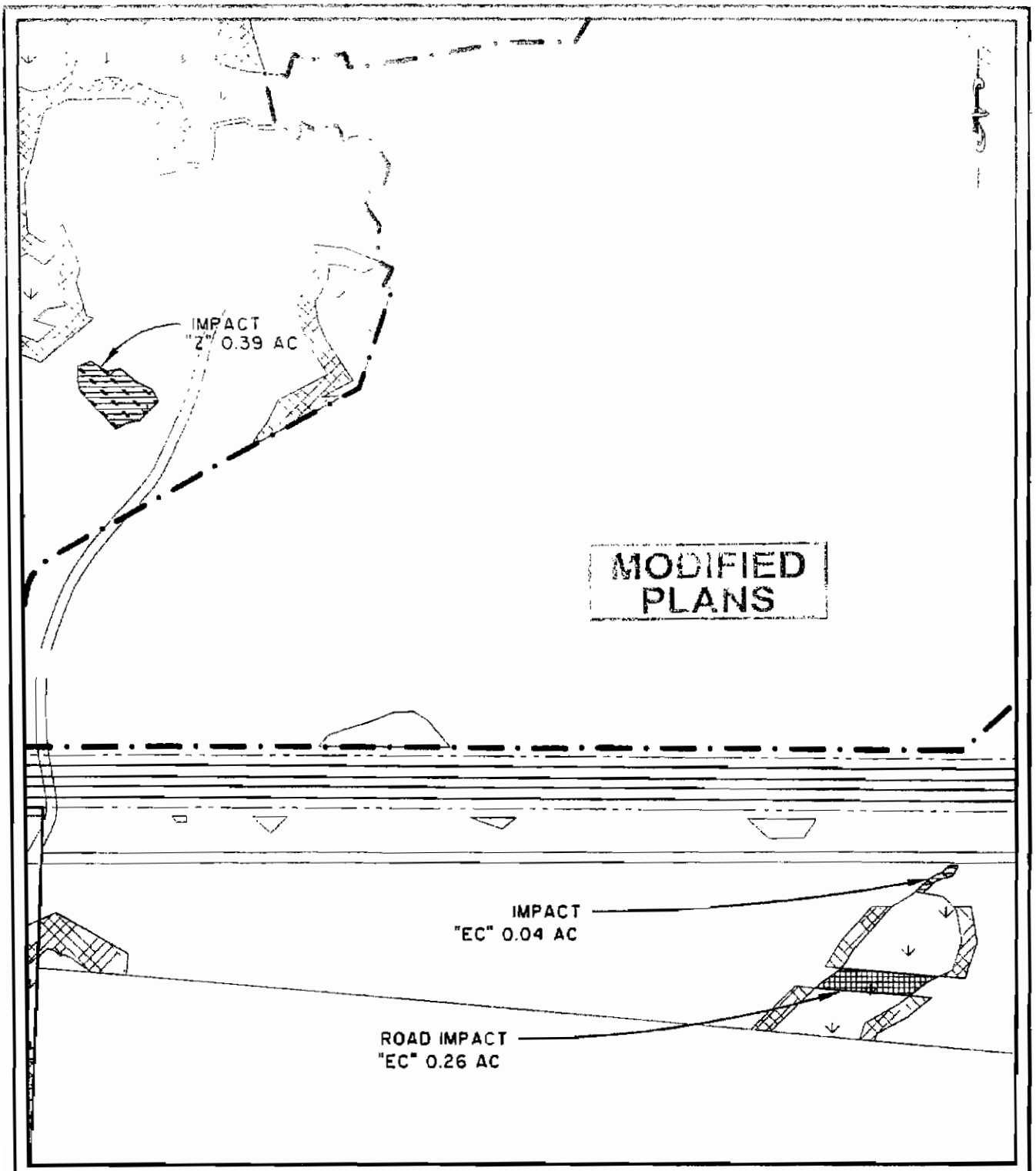
DATUM: MEAN SEA LEVEL

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

PERMIT # 2003-1G-066 ISSUED: 4-21-2004

LAST MODIFIED DATE. SEPTEMBER 21, 2004
REVISION DATE: MARCH 1, 2007

DATUM: MEAN SEA LEVEL

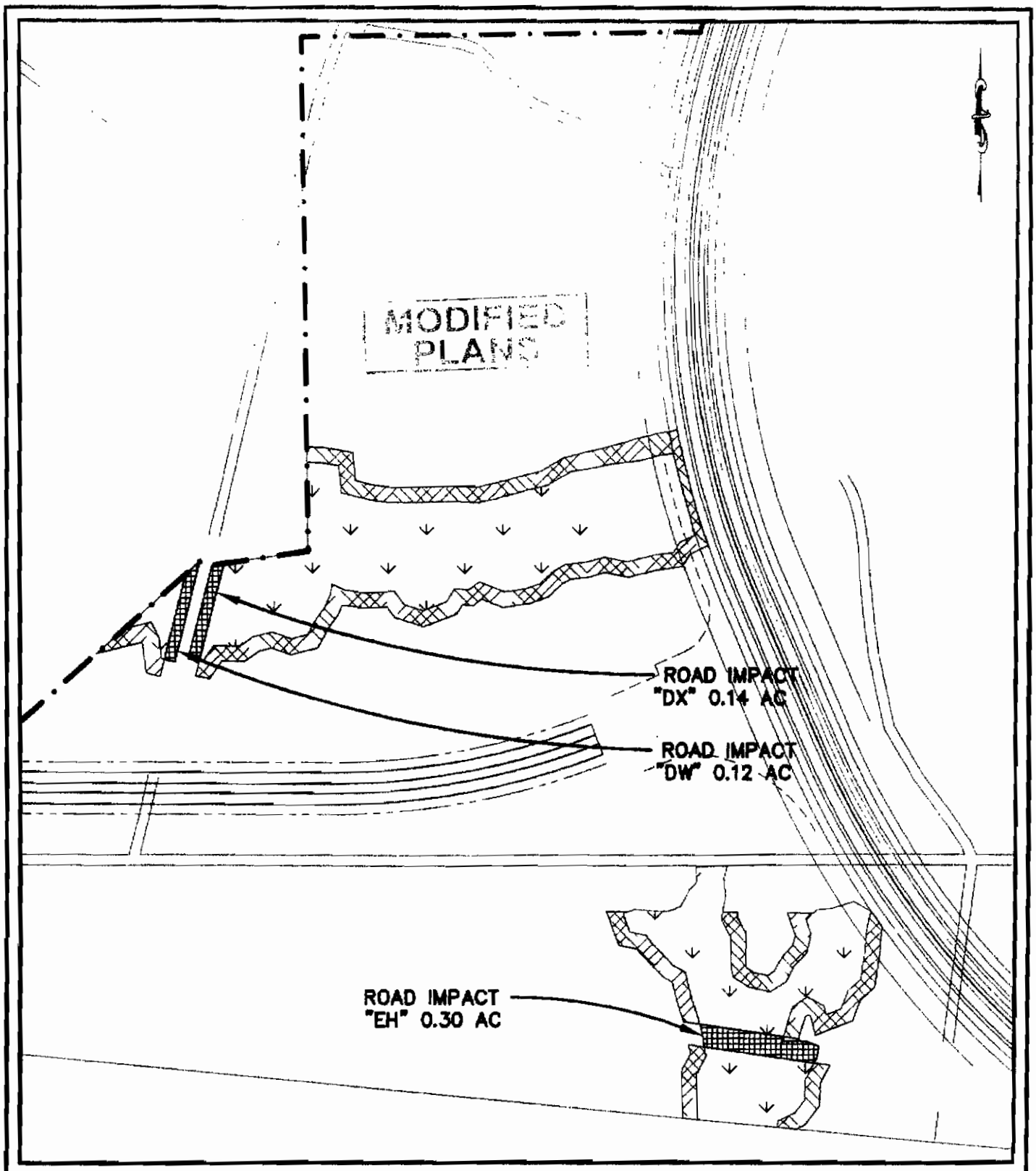
SHEET 24 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT. BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.



BUCKWALTER SOUTHWEST TRACT WETLANDS MASTER PLAN

PERMIT # 2003-1G-066 ISSUED: 4-21-2004

LAST MODIFIED DATE: SEPTEMBER 21 2004
REVISION DATE: SEPTEMBER 28, 2006

DATUM: MEAN SEA LEVEL

SHEET 25 OF 39
SCALE: 1"=300'
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

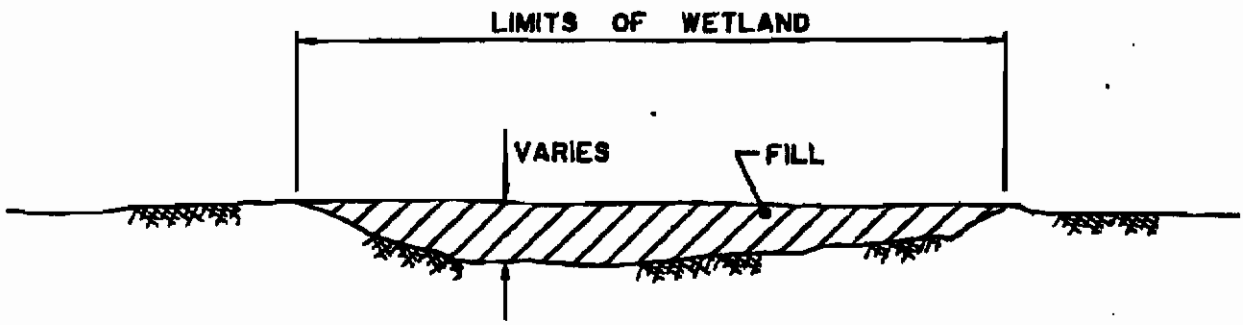
WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY,S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.

TOTAL CU. YDS. OF IMPACT = 25,071 CY.

TOTAL CU. YDS. OF EXCAVATION = 58,564 CY.



WETLAND FILL SECTION

NOT TO SCALE

MODIFIED PLANS

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 26 OF 39

DATUM: MEAN SEA LEVEL

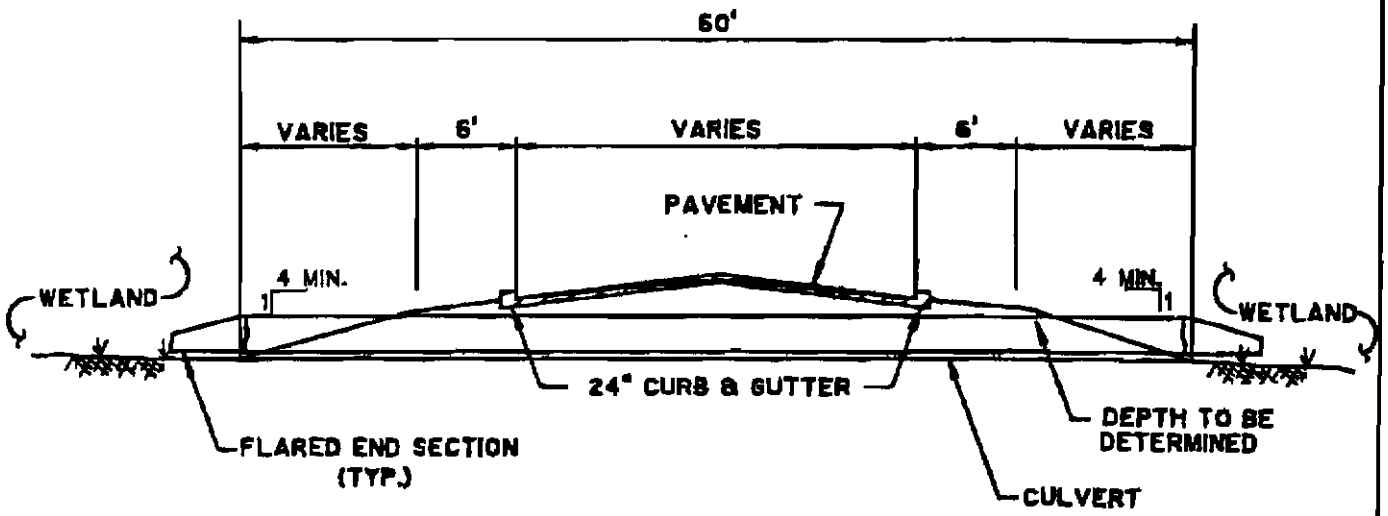
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

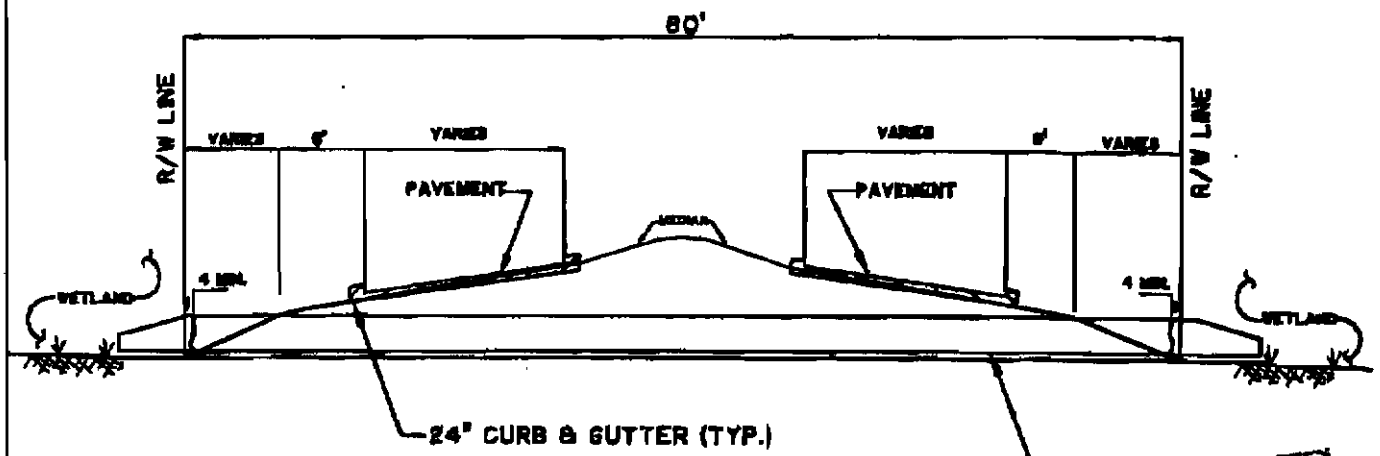
COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



TYPICAL WETLAND CROSSING W/ PIPE
ROAD SECTION

NOT TO SCALE



TYPICAL WETLAND CROSSING W/ PIPE
BOULEVARD SECTION

MODIFIED PLANS

NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN #2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 27 OF 39

DATUM: MEAN SEA LEVEL

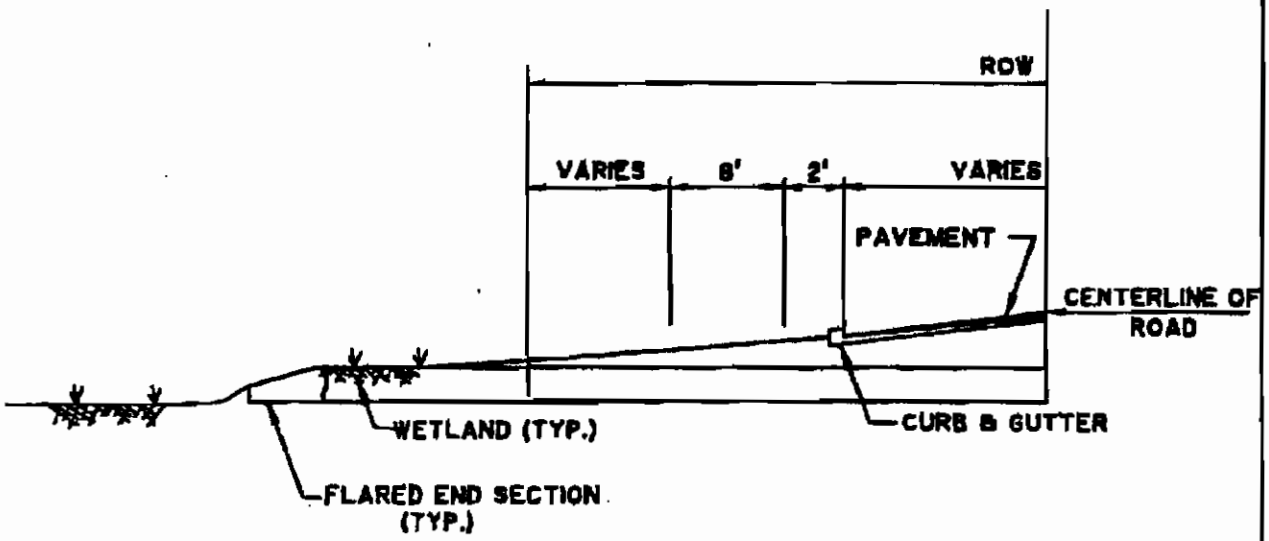
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



PIPING TO WETLAND

NOT TO SCALE

MODIFIED PLANS

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 28 OF 39

DATUM: MEAN SEA LEVEL

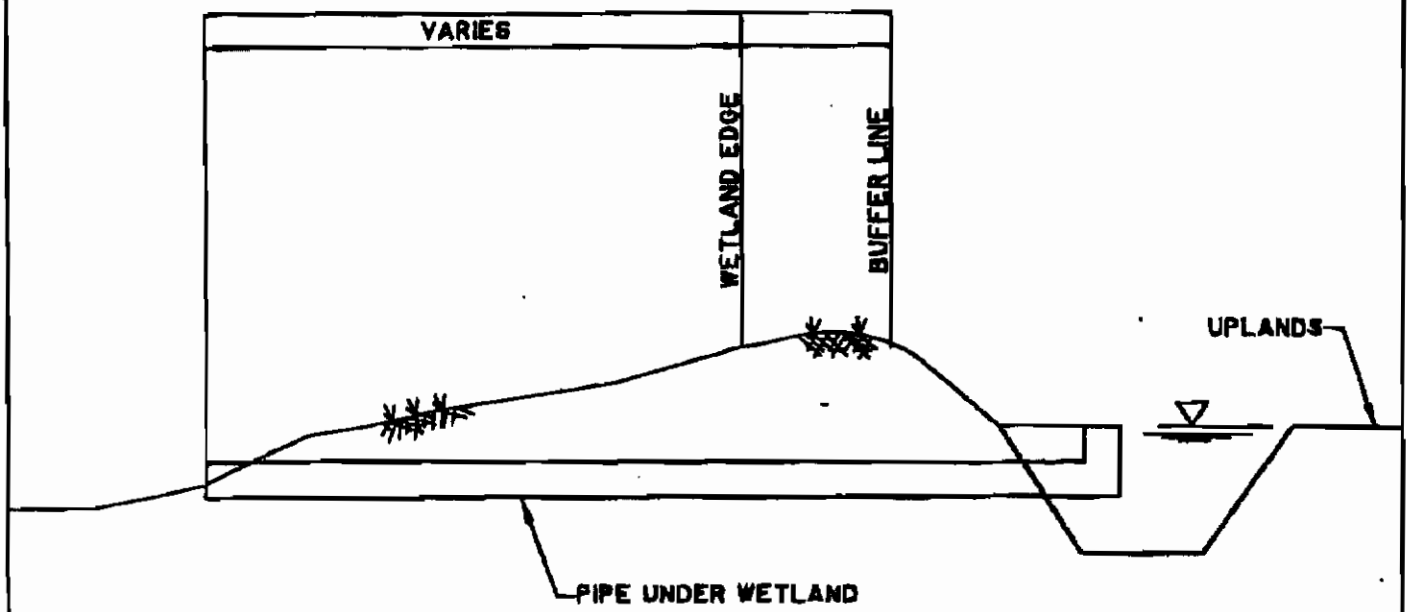
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



TYPICAL STORMWATER MANAGEMENT IMPACT

NOT TO SCALE

MODIFIED PLANS

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN #2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004 DATUM: MEAN SEA LEVEL
SHEET 29 OF 39

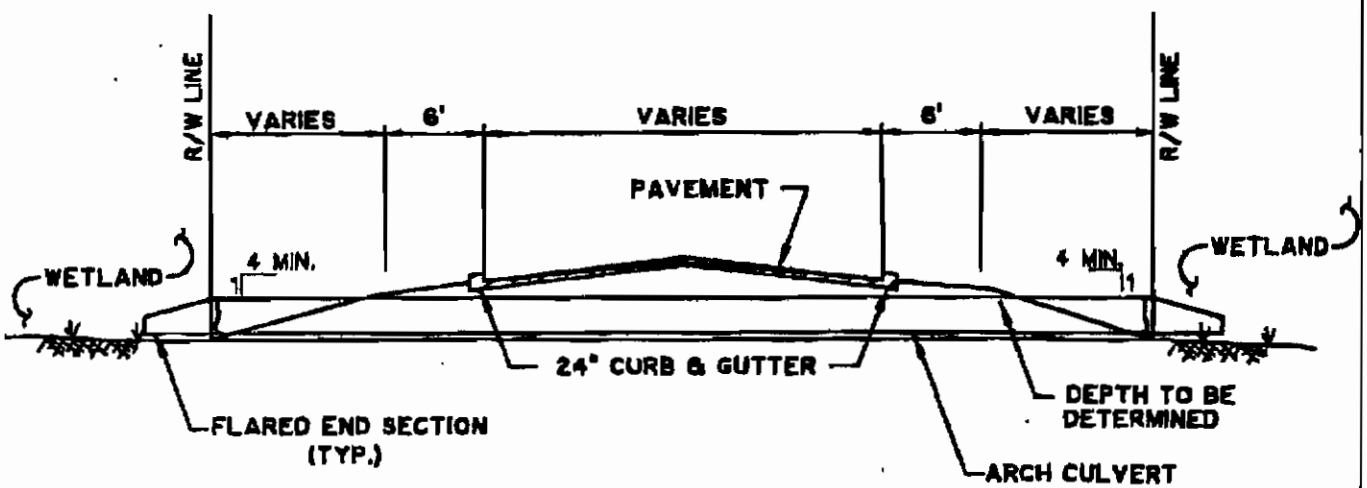
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I, L



ARCH CULVERT ROAD CROSSING

NOT TO SCALE

MODIFIED PLANS

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN #2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 30 OF 39

DATUM: MEAN SEA LEVEL

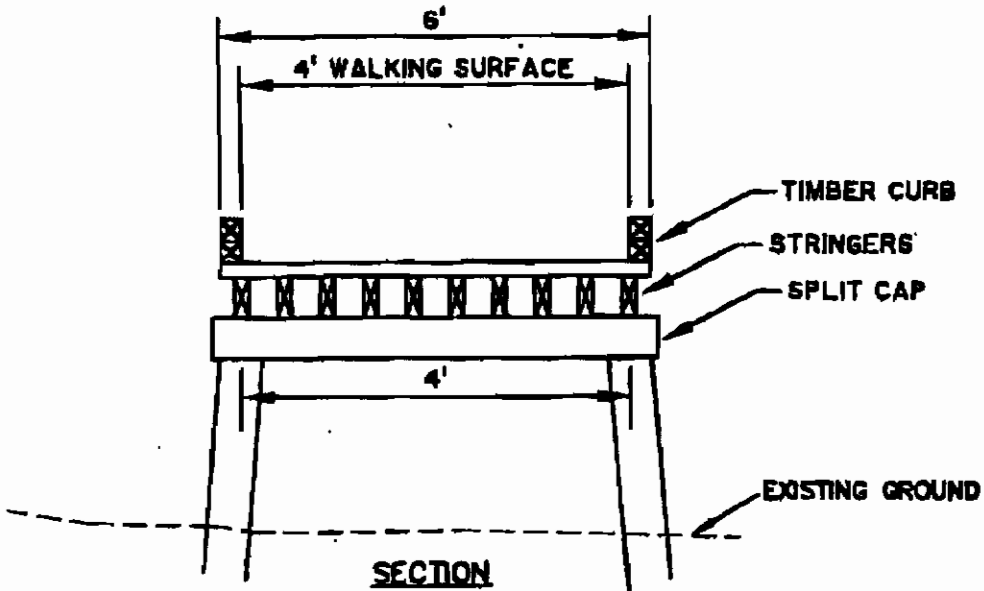
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.

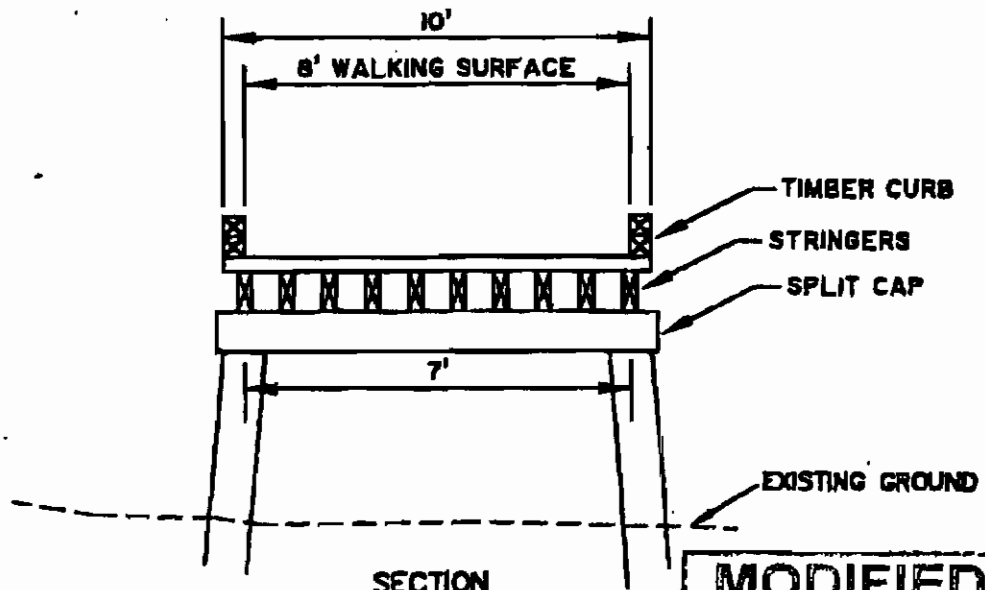


SECTION

4' BOARDWALK BRIDGE

PERVIOUS NATURE "WILDERNESS TRAIL"

NOT TO SCALE



SECTION

CART BRIDGE

NOT TO SCALE

MODIFIED PLANS

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 31 OF 39

DATUM: MEAN SEA LEVEL

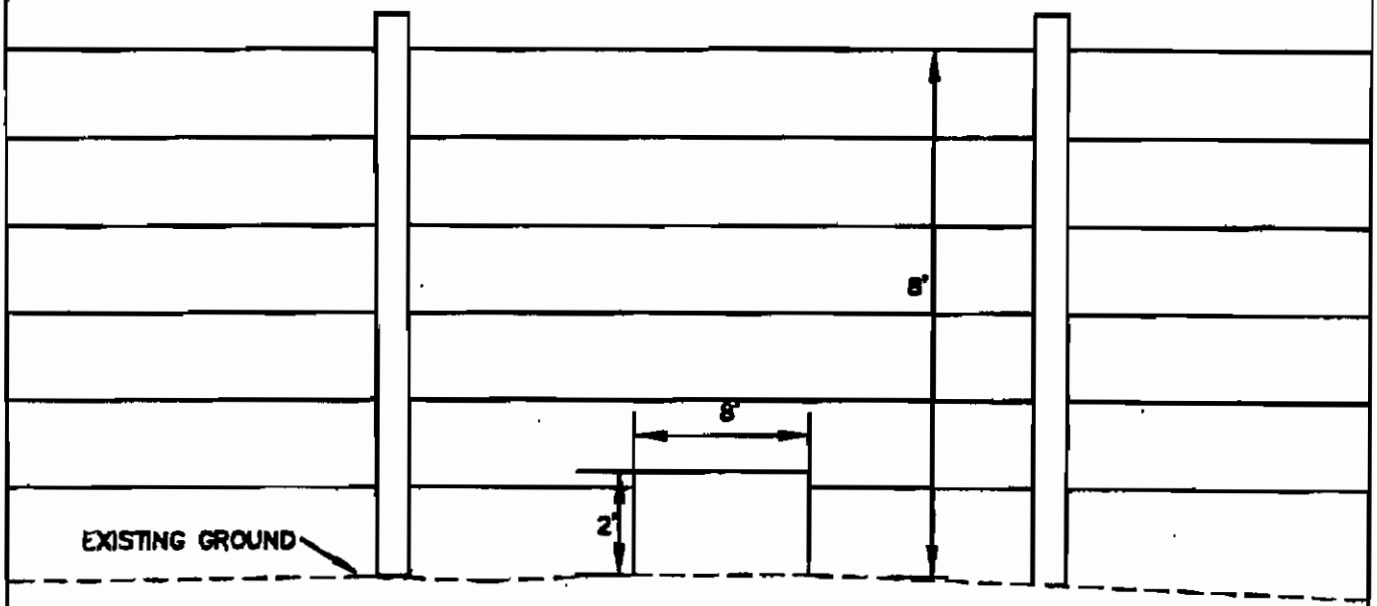
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



SECTION

FENCE DETAIL

NOT TO SCALE

MODIFIED PLANS

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 32 OF 39

DATUM: MEAN SEA LEVEL

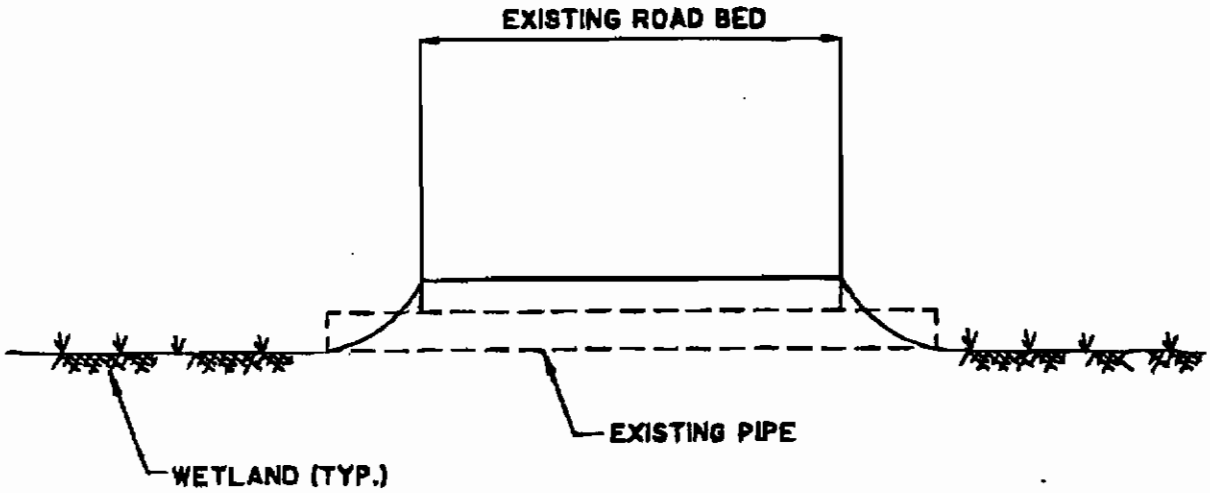
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

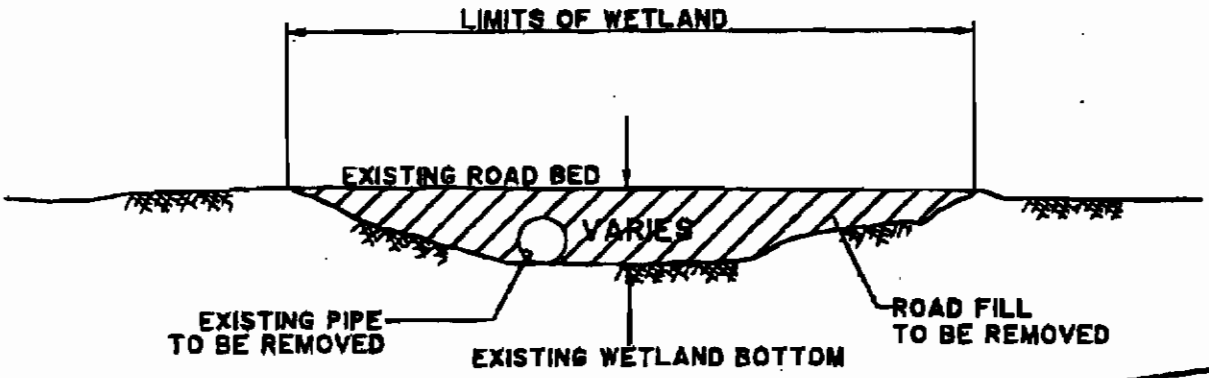
COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



SECTION

NOT TO SCALE



MODIFIED PLANS

NOTE: EXISTING PIPE VARIES

ROAD RESTORATION PROFILE

NOT TO SCALE

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 33 OF 39

DATUM: MEAN SEA LEVEL

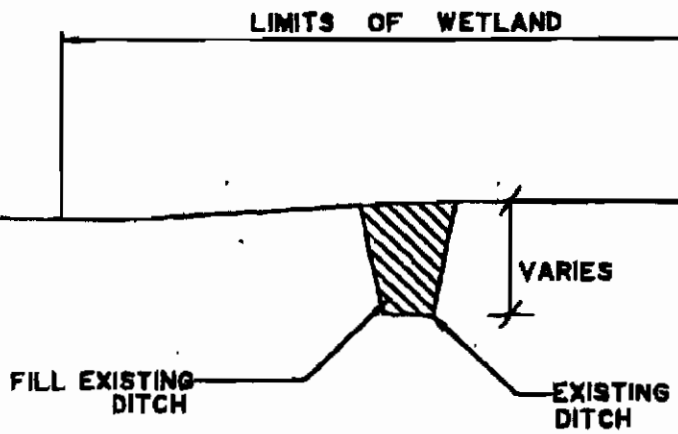
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



DITCH PLUG SECTION

NOT TO SCALE

MODIFIED PLANS

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 34 OF 39

DATUM: MEAN SEA LEVEL

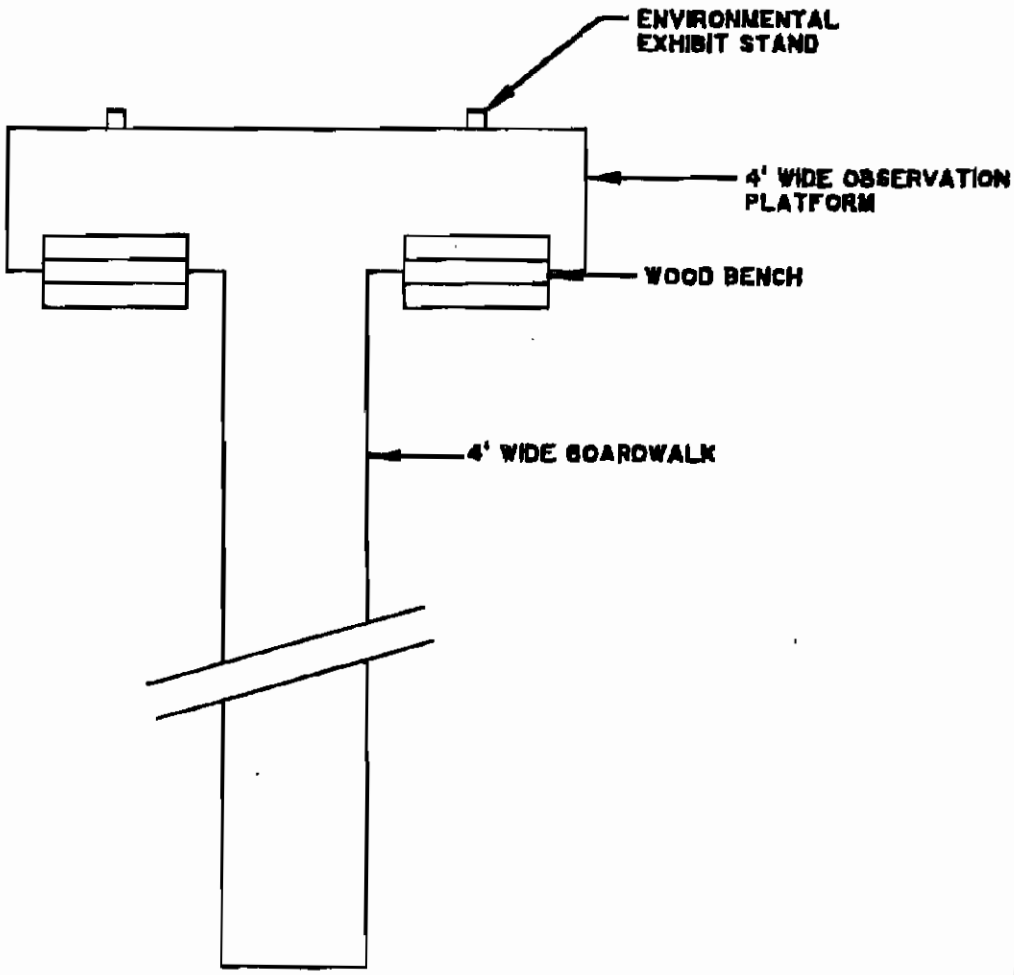
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



OVERLOOK /OBSERVATION DECK SECTION

NOT TO SCALE

MODIFIED PLANS

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN #2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 35 OF 39

DATUM: MEAN SEA LEVEL

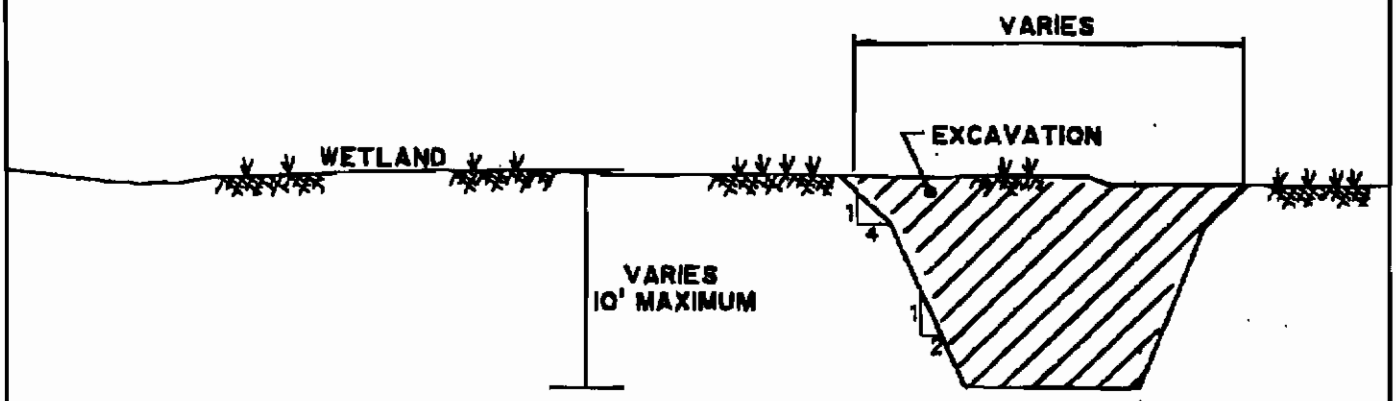
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I,



WETLAND EXCAVATION DETAIL

NOT TO SCALE

MODIFIED PLANS

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN #2003-1G-066-REVISED

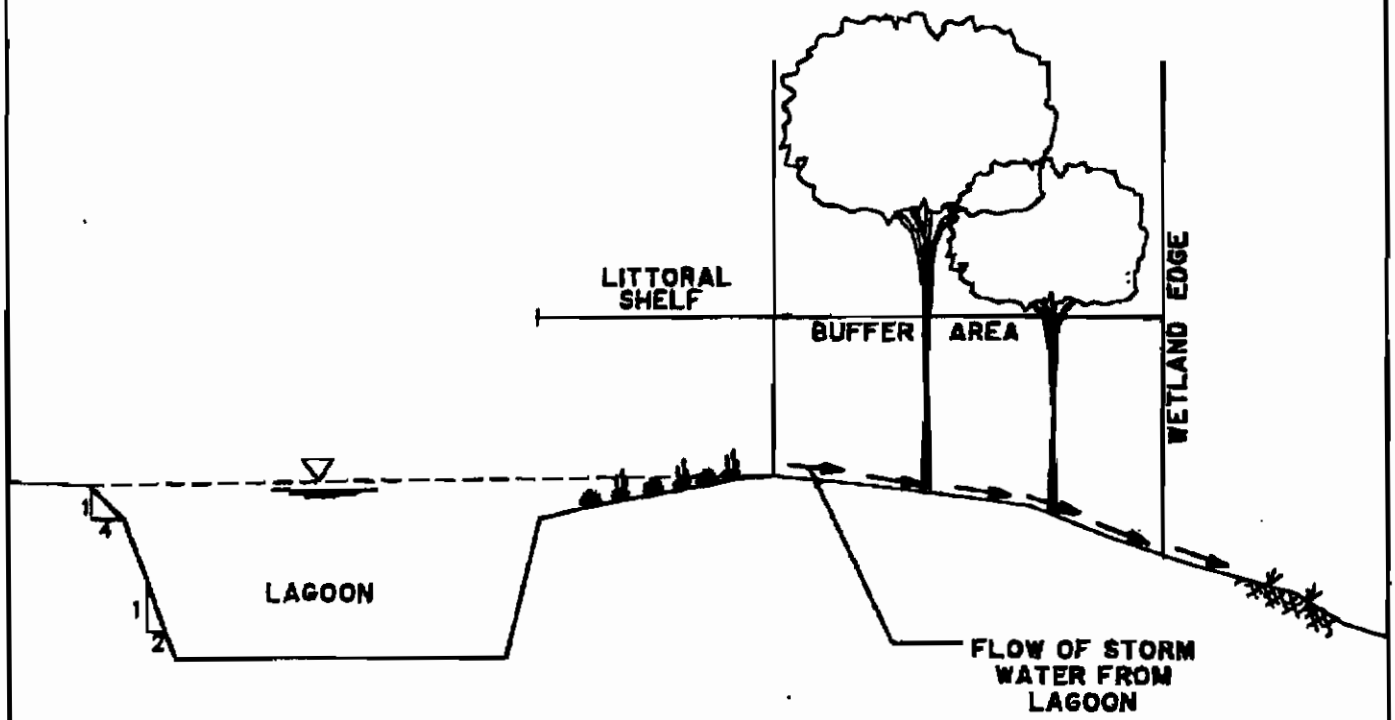
DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 36 OF 39
DATUM: MEAN SEA LEVEL
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I, L



WETLAND TERRACE DETAIL

NOT TO SCALE

MODIFIED PLANS

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 37 OF 39

DATUM: MEAN SEA LEVEL

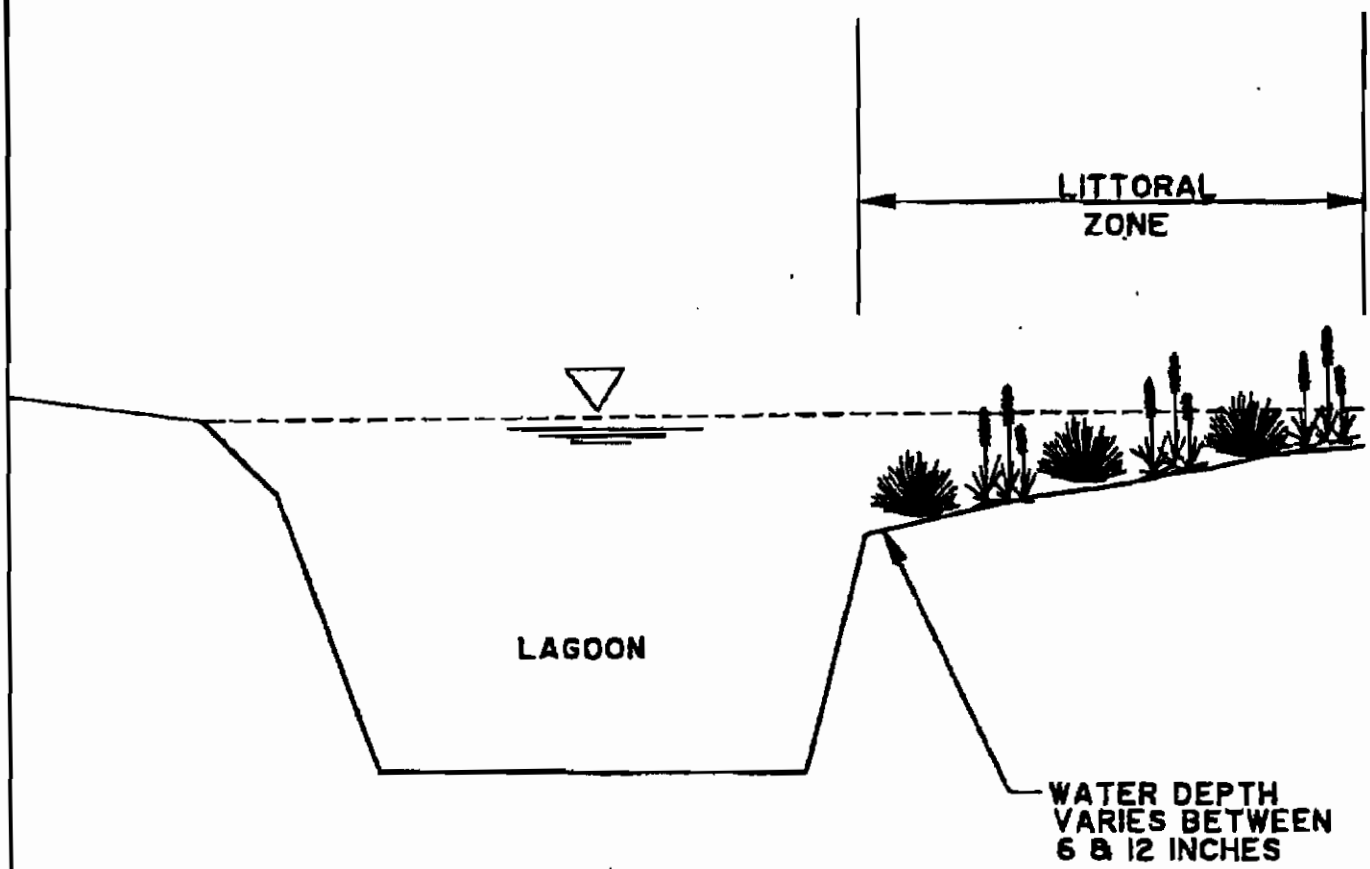
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



LITTORAL ZONE DETAIL

NOT TO SCALE

MODIFIED PLANS

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 38 OF 39

DATUM: MEAN SEA LEVEL

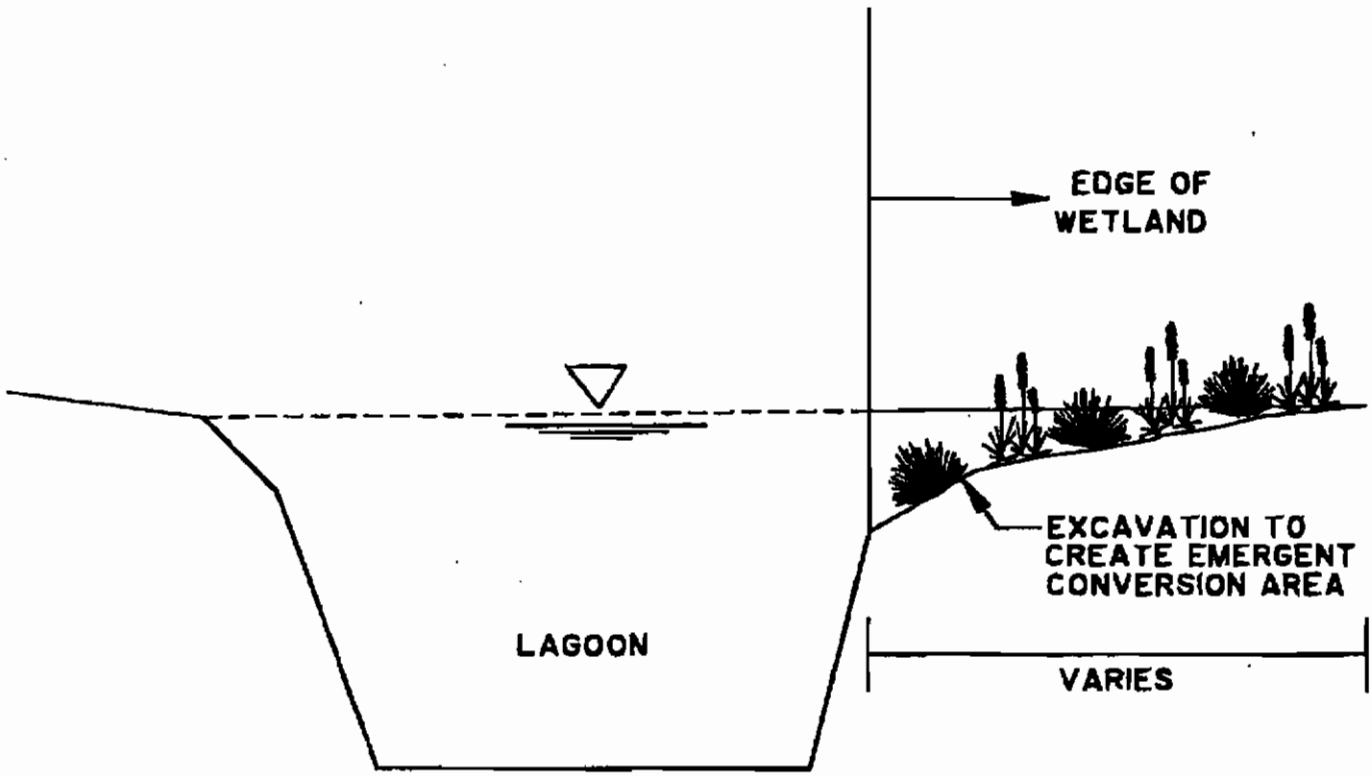
SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS I, L.C.



WETLAND EMERGENT CONVERSION DETAIL

NOT TO SCALE

MODIFIED PLANS

BUCKWALTER SOUTHWEST TRACT
WETLANDS MASTER PLAN

#2003-1G-066-REVISED

DATE: FEBRUARY 10, 2003
REVISION DATE: SEPTEMBER 21, 2004
SHEET 39 OF 39

DATUM: MEAN SEA LEVEL

SOURCE: THOMAS & HUTTON ENGINEERING CO.

PROPOSED ACTIVITY:

WETLAND MODIFICATION FOR PROPOSED DEVELOPMENT

COUNTY: BEAUFORT COUNTY, S. C.
TOWN OF BLUFFTON

APPLICANT: BHR AQUISITION CO., L.L.C.
WINDING RIVER BTS 1, L.C.

SRS ENGINEER
Traffic, Transportation, & Parking Consultants

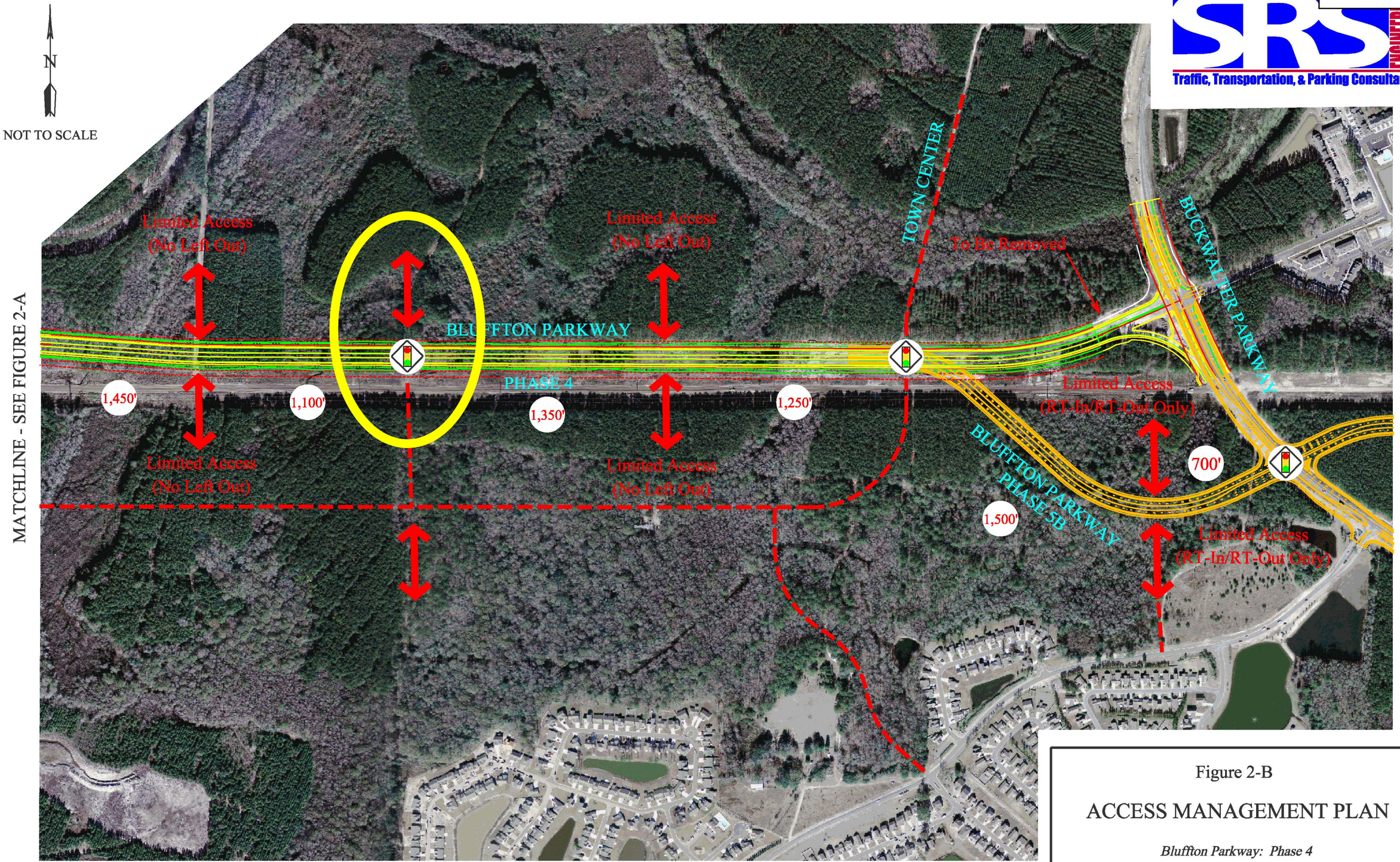


Figure 2-B

ACCESS MANAGEMENT PLAN

Bluffton Parkway: Phase 4
Bluffton, SC

PLANNING COMMISSION

STAFF REPORT
Growth Management Department

MEETING DATE:	June 28, 2023
PROJECT:	Certain Amendments to the Town of Bluffton's Municipal Code of Ordinances, Chapter 23, Unified Development Ordinance (UDO), Sec. 3.2.3, Public Hearing Notice; Sec. 5.13, Signs, Exempt and Prohibited; and, Sec. 5.15, Old Town Bluffton Historic District, Cupolas, Setbacks in the NCE-HD and NG-HD Districts, and Establishing a Medium House Building Type with Related Building Requirements
PROJECT MANAGER:	Charlotte Moore, AICP Principal Planner

INTRODUCTION: As set forth in Section 3.5.2 of the Unified Development Ordinance (UDO), "an application for a UDO Text Amendment may be initiated by a Town of Bluffton property owner, Town Council, Planning Commission, or the UDO Administrator when public necessity, convenience, State or Federal law, general welfare, new research, or published recommendations on zoning and land development justifies such action."

REQUEST: The UDO Administrator requests that the Planning Commission recommend approval to Town Council of certain text amendments to the Town of Bluffton's Municipal Code of Ordinances, Chapter 23, Unified Development Ordinance, as follows: Sec. 3.2.3, Public Hearing Notice; Sec. 5.13, Signs, Exempt and Prohibited; and, Sec. 5.15, Old Town Bluffton Historic District, Cupolas, Setbacks in the NCE-HD and NG-HD Districts, and Establishing a Medium House Building Type with Related Building Requirements.

BACKGROUND: From time to time, amendments to the UDO are necessary to address procedural processes and standards. The attached proposed amendments relate to both processes and standards and are highlighted below:

- **Public Hearing Notice (Sec. 3.2.3):** Amendments include correcting typos; eliminating the published notice requirement for the demolition of any structure, whether a contributing resource or not, within Old Town Bluffton Historic Bluffton as a property posting requirement exists; and, removing the requirement that public notice be published on the Town's website and posted at Town Hall as neither is required by state law. With regard to the latter amendment, meeting agendas are posted at Town Hall and also appear on the Town's website together with related staff reports.

- **Signs, Exempt and Prohibited (Sec. 5.13):** The amendments include prohibiting non-commercial message flags to only two within Old Town Bluffton Historic District zoning districts; and, specifically identifying and prohibiting flutter/feather signage (see below graphic). Flutter/feather signage is not presently allowed but is recommended to be identified by name to better assist UDO readers.

Source: swirlingsilks.com

- **Cupolas/Towers (Sec. 5.15.6.E.4.):** The amendments include correcting a typo, reformatting, and prohibiting cupolas extending above a roof line—as opposed to the zoning district height limit-as well as limiting the height to 50 feet above the adjacent grade level.

- **Certain Setbacks in the NCE-HD and NG-HD Districts (Sec. 5.15.5):** The amendments include increasing the side yard setbacks for certain building types in the NCE-HD district from five feet to eight feet to allow for a larger side yard for building appurtenances, such as stoops, stairs and service yards. They also include extending the maximum setback for the Village House front build-to zone in the NG-HD district from 15 feet to 20 feet to be consistent the Cottage, Medium House and Vernacular House building types.

- **Medium House Building Type (Sec. 5.15):** A new building type is proposed for Old Town Bluffton Historic District that is similar to a Cottage Building Type but has a larger building footprint, can be two stories and must have a front porch. The Medium House is somewhat similar to a Village House Building Type but can be one-story and have a larger building footprint by 200 feet (1,300 sq.ft. vs 1,100 sq.ft.). Associated building standards, such as front-building to line, side and rear yard setbacks, and building height are proposed, as are the zoning districts in which it would be located (i.e., Neighborhood Conservation-HD, Neighborhood General-HD, and Neighborhood Conservation-HD).

REVIEW CRITERIA & ANALYSIS: When assessing an application for UDO Text Amendments, Town Council is required to consider the criteria set forth in UDO Section 3.5.3, Application Review Criteria. These criteria are provided below, followed by a Finding.

1. **Section 3.5.3.A.** Consistency with the Comprehensive Plan or, if conditions have changed since the Comprehensive Plan was adopted, consistency with the overall intent of the Plan, recent development trends and the general character of the area.

   Finding. The proposed amendments have no relationship to this criterion.

2. **Section 3.5.3.B.** Consistency with demographic changes, prevailing economic trends, and/or newly recognized best planning practices.

   Finding. The proposed amendments have no relationship to this criterion.

3. **Section 3.5.3.C.** Enhancement of the health, safety, and welfare of the Town of Bluffton.

   Finding. The proposed amendments have no relationship to this criterion.

4. **Section 3.5.3.D.** Impact of the proposed amendment on the provision of public services.

   Finding. The proposed amendments have no relationship to this criterion.

5. **Section 3.5.3.E.** The application must comply with applicable requirements in the Applications Manual.

   Finding. The application complies with all applicable requirements of the Applications Manual.

NEXT STEPS:

UDO Text Amendment Procedure	Date	Complete
Step 1. Planning Commission Public Hearing and Recommendation	June 28, 2023	✓
Step 2. Town Council – 1st Reading	July 11, 2023	✕
Step 3. Town Council Meeting – Final Reading and Public Hearing	August 8, 2023	✕

PLANNING COMMISSION ACTIONS: As granted by the powers and duties set forth in Sec. 2.2.6.C.4 of the UDO, the Planning Commission has the authority to take the following actions with respect to this application:

1. Approval of the application as submitted;

2. Approval of the application with amendments; or

3. Denial of the application as submitted by the Applicant.

STAFF RECOMMENDATION: Growth Management staff recommends the Planning Commission recommend approval of the proposed Text Amendments as submitted.

ATTACHMENTS:

1. Public Hearing Notice
2. Signs, Exempt & Prohibited
3. OTBHD General Standards, Building Type Requirements
4. OTBHD Cupolas & Towers
5. OTBHD Medium House Type

Sec. 3.2.3, Public Hearing Notice

Purpose: The purpose of these amendments is to 1) correct typos; 2) include removal or "delisting" of a contributing resource as an application type; 3) remove the requirement for newspaper publication of a demolition request within the Old Town Bluffton Historic District as it is not required by State law and property posting is already required; and, 4) removing the requirement that public notice be published on the Town's website and posted at Town Hall as neither is required by state law—the meeting agendas are posted at Town Hall and also appear on the Town's website together with related staff reports.

Sec. 3.2.3, Public Hearing Notice

Specific applications are subject to public hearing notice requirements as set forth in this Section. Upon acceptance of an application that requires a public hearing, the UDO Administrator shall fix a reasonable date and time for the public hearing. Notice of public hearing requirements are as follows:

A. **Timing of Public Hearing Notice Requirements.** Public notice as set forth in this Section shall be provided not less than the following number of calendar days prior to the public hearing:

Application Type	Newspaper Posting	Posting of Property	Certified Mailing to Surrounding Property Owners
Comprehensive Plan Amendment[1]	30	-	-
Zoning Map Amendment[1]	15	15	15
UDO Text Amendment[1]	15	-	-
Special Exception[2]	15	15	15
Variance[2]	15	15	15
Planned Unit Development (PUD) – Concept Plan[1]	15	-	-
Street Renaming[3]	15	-	15
Certificate of Appropriateness – Historic District Demolition[4]	~~15~~	15	~~-~~
Designation or Delisting of a Contributing Resource[4]	15	15	-

[1] A Public Hearing shall be held by both Planning Commission and Town Council.
[2] A Public Hearing shall be held by the Board of Zoning Appeals.
[3] A Public Hearing shall be held by the Planning Commission.
[4] A Public Hearing shall be held by the Historic Preservation Commission.

B. **Newspaper Posting.** When required, the UDO Administrator shall cause notice of the public hearing to be published in a newspaper of general circulation in the Town not less than the number of days prior to the public hearing as specified in the preceding table. Notices shall also be ~~electronically published on the Town of Bluffton website, posted at Town Hall, and~~ distributed ~~either in hardcopy or electronically~~ to any person, agency, or organization registered to receive such notifications.

B. **Posting of Property.** When required, the UDO Administrator shall cause a conspicuous notice of public hearing sign to be posted not less than the number of days prior to the public hearing as specified in the preceding table on or adjacent to the subject property, with at least one such notice being visible from each public thoroughfare that abuts the property. If the subject property does not abut a public thoroughfare, such sign shall be posted on the public thoroughfare from which the subject property is accessed. All signs shall be removed by the Town within 30 days of conducting the public hearing.

D. **Certified Mailing to Surrounding Property Owners.** To help assure surrounding property owners are provided adequate public notice of a public hearing on an application, surrounding property owners shall be notified as follows:

~~1.~~ The Applicant shall send notice of the public hearing by certified US mail not less than the number of days prior to the public hearing as specified in the preceding table to all owners of real property within 250 feet of the subject property. The UDO Administrator shall provide the applicant with the names and addresses of the surrounding property who are to receive~~d~~ mailed notice, and shall provide the applicant with a sample public hearing notification letter. The Applicant shall submit the original Certified Mailing receipts for the mailed notices to the UDO Administrator not less than seven (7) days prior to the public hearing.

E. **Public Notice Compliance.** Failure to comply with the public notice requirements shall result in the removal of an application from the public hearing meeting agenda. Any rescheduled public hearing on an application shall be subject to subsequent compliance with all public notice requirements.

Sec. 5.13 SIGNS

Purpose: 1) For 5.13.3: To identify the number of flags to be allowed within the Old Town Bluffton Historic District zoning districts; and, 2) For 5.13.4: To specifically call out "flutter signs" or "feather signs" as a prohibited sign type. Flutter/feathers signs are a variation of a freestanding flag but are characterized as being tall and narrow.

5.13.3 Exempt Signs

The following signs are exempt from the permit requirements of this UDO, and do not count toward the maximum sign area limitation for a site, provided that they conform to the requirements of this UDO. Exempt signs shall not be located within the public right-of-way without an approved encroachment permit.

Note: A-D and F-K, no changes are proposed.

E. **Flags.**

1. Flags that do not display a commercial message shall be erected and located in accordance with the following standards:

   a. Number Per Lot: For PR, AG, RG and RMU zones and for any Historic District (HD) zones, no more than two (2) flags. For NC, GMU and LI zones, no more than three (3) flags.

   b. Location: Flags shall be attached to a stand-alone flagpole not located within a required setback or on a flagpole attached to a building.

   Flagpoles attached to a building shall not be roof mounted or mounted to extend over the roof line or parapet.

   c. Area and Height (Maximum): 32 square feet per flag with a stand-alone flagpole height of no more than 30 feet.

5.13.4 Prohibited Signs

Unless otherwise and specifically permitted elsewhere in this UDO, the following sign types are prohibited.

Note: A and C-S, no changes are proposed.

B. **Balloons, Inflatable Signs, Flutter/Feather Signs, Streamers, Pennants and Other Attention-Getting Devices.** Balloons, inflatable signs, flutter/feather signs, streamers, pennants and other attention-getting devices designed to move, that direct, promote, or that are otherwise designed to attract attention.

Sec. 5.15.5 Old Town Bluffton Historic District, General Standards

Purpose: 1) To establish a Medium House Building Type dimensional standards in the NCE-HD, NG-HD, and NCV-HD districts; 2) To increase the side yard setbacks for certain building types in the NCE-HD district from five feet to eight feet to allow for a larger side yard for building appurtenances, such as stoops, stairs and service yards ; and, 3) To extend the maximum setback for the Village House front build-to zone in the NG-HD district from 15 feet to 20 feet to be consistent the Cottage, Medium House and Vernacular House building types.

B. Neighborhood Center Historic District (NCE-HD)

[Note: No change to photos or text above chart.]

Neighborhood Center-HD Building Type Requirements		Front Build-to Zone	Lot Width	Frontage Requirements	Rear Setback *(from rear property line)*	Side Setback *(from side property line)*	Height *(in stories)*
Carriage House	One Carriage House may be built per primary structure and may have a maximum footprint of 800 sq. ft. Carriage Houses must be located behind the primary structure. See 5.15.8.F for a full description of this type.				5’	5’	1-2
Main Street Building		10’-25’	50’-80’	75%-90%	25’	8’	2-2.5
Commercial Cottage		5’-20’	50’-60’	50%-70%	25’	8’	1-1.5
Live-Work Sideyard		0’-5’	50’-60’	40%-75%	25’	~~5’~~ 8’	1.5-2.5
Duplex		10’-20’	55’-70’	N/A	25’	8’	1.5-2.5
Triplex			70’-100’				
Mansion Apartment House		10’-20’	60’-80’	N/A	25’	10’	2-2.5
Cottage		5’-15’	50’-60’	N/A	25’	~~5’~~ 8’	1-1.5
Medium House		5’-15’	50’-60’	N/A	25’	8’	1-2
Village House		5’-15’	50’-60’	N/A	25’	~~5’~~ 8’	2-2.5
Sideyard House		5’-10’	50’-65’	N/A	25’	8’	2-2.5
Vernacular House		10’-20’	60’-80’	N/A	25’	10’	1.5
Civic Building		5’-25’	N/A	N/A	N/A	~~5’~~ 8’	2
Additional Building Types							
As approved by the UDO Admin. or Board/Comm. with approval authority in accordance with Article 2 of this Ordinance, additional building types may be allowed in the Neighborhood Conservation-HD zoning district. Building types not specifically listed shall be regulated by the following general requirements:		10’-25’	50’-100’	To be determined by UDO Admin	25’	8’	1-2.5

C. Neighborhood General Historic District (NG-HD)

[Note: No change to photos or text above chart.]

Neighborhood General Building Type Requirements	Front Build-to Zone	Lot Width	Frontage Requirements	Rear Setback *(from rear property line)*	Side Setback *(from side property line)*	Height *(in stories)*
Carriage House	One Carriage House may be built per primary structure and may have a maximum footprint of 800 sq. ft. Carriage Houses must be located behind the primary structure. See 5.15.8.F for a full description of this type.			5’	5’	1-2
Live-Work Sideyard	10’-20’	50’-100’	N/A	25’	10’	1-2.5
Commercial Cottage	10’-20’	50’-100’	N/A	25’	10’	1-1.5
Bungalow Court	10’-20’ for foremost bungalow	60’-100’	N/A	25’	15’	1-1.5
Cottage	10’-20’	50’-60’	N/A	25’	10’	1-1.5
Medium House	10’-20’	50’-60’	N/A	25’	10’	1-2
Village House	10’-~~15~~20’	50’-65’	N/A	30’	15’	2-2.5
Vernacular House	10’-20’	60’-100’	N/A	30’	15’	1.5
Center Hall House	15’-25’	70’-100’	N/A	30’	15’	2-2.5
Civic Building	15’-35’	N/A	N/A	N/A	10’	2
Additional Building Types						
As approved by the UDO Admin. or Board/Comm. with approval authority in accordance with Article 2 of this Ordinance, additional building types may be allowed in the Neighborhood Conservation-HD zoning district. Building types not specifically listed shall be regulated by the following general requirements:	10’-35’	50’-100’	N/A	30’	10’	1-2.5

D. Neighborhood Conservation Historic District (NCV-HD)

Neighborhood Conservation Building Type Requirements	Front Build-to Zone	Lot Width	Frontage Requirements	Rear Setback *(from rear property line)*	Side Setback *(from side property line)*	Height *(in stories)*
Carriage House — One Carriage House may be built per primary structure and may have a maximum footprint of 800 sq. ft. Carriage Houses must be located behind the primary structure. See 5.15.8.F for a full description of this type.				5’	5’	1-2
Cottage	10’-20’	50’-60’	N/A	30’	10’	1-1.5
Medium House	10’-20’	50’-70	N/A	30’	10’	1-2
Village House	10’-20’	50’-70’	N/A	30’	10’	2-2.5
Vernacular House	15’-25’	60’-100’	N/A	30’	10’	1.5
Center Hall House	20’-35’	80’-100’	N/A	30’	15’	2-2.5
Civic Building	15’-40’	N/A	N/A	N/A	10’	1.5
Additional Building Types						
As approved by the UDO Admin. or Board/Comm. with approval authority in accordance with Article 2 of this Ordinance, additional building types may be allowed in the Neighborhood Conservation-HD zoning district. Building types not specifically listed shall be regulated by the following general requirements:	10’-35’	50’-100’	N/A	30’	10’	1-2.5

CUPOLAS

Purpose: The proposed amendments are intended to: 1) correct formatting; and, 2) provide more specificity regarding cupola and tower height as height is based on stories rather than feet in the Old Town Bluffton Historic District. Floor height may vary from 8.5 to 14 feet and can be as tall as 20 feet for a non-residential building that is at least two stories. The proposed amendment caps cupola and tower height at 50 feet.

Sec. 5.15.6.E.4. Cupolas/Small Footprint Towers

a. ~~Plan Area~~ Footprint: ~~=~~ 20’ x 20’ Maximum ~~Footprint~~

b. Height: ~~=~~ Cupolas and towers may extend a maximum of 15 feet above the ~~Zoning District~~ ~~height limit.~~ roof ridge but shall not be taller than 50 feet above the adjacent grade level.

Sec. 5.15.8 Old Town Bluffton Historic District, Building Types

Purpose: To create a new building type, Medium House, within the Old Town Bluffton Historic District to reduce the number of requested Additional Building Types. Additional Building Types are sometimes used to reduce yard setbacks, particularly side yards, which may cause a driveway to be located closer to the property line and may reduce trees and other vegetative buffering. Would allow a Building Type that is 1-2 stories, other than a Carriage House.

I. Medium House Type

General: Detached Single Family Residence

Size Range: 1,300 – 3,000 sq. ft.

Maximum Footprint: (not including porches) 1,300 sq. ft.

Height: 1-2 stories

Characteristics:
Larger than a Cottage, smaller than a Village House

The street elevation must have a front porch that is at least 50% of the façade.

Narrower at street

May have dormers

CORE
CENTER •
GENERAL •
CONSERVE •
RIVER EDGE

Medium House Precedent Imagery

*Precedent images are for illustrative purposes only, with no regulatory effect. They are provided as examples and shall not imply that every element in the photograph is permitted.

Note: The addition of the Medium House Building Type would be most appropriately located between the Cottage and Village House Building Types. This addition will cause all building types to be re-lettered as follows, without any changes to the associated text, drawings and photos:

- ~~I.~~ J. Village House
- ~~J.~~ K. Sideyard House
- ~~K.~~ L. Vernacular House

~~L.~~ M. Center Hall House

~~M.~~ N. River House

~~N.~~ O. Civic Building

~~O.~~ P. Church Building

~~P.~~ Q. Manufactured Homes

TOWN OF BLUFFTON

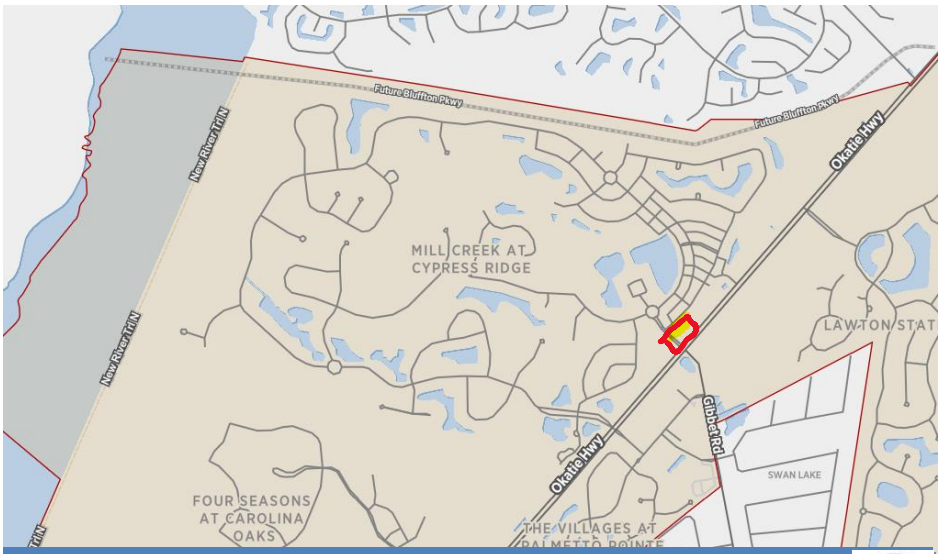
STAFF REPORT
Department of Growth Management

MEETING DATE:	June 28, 2023
PROJECT:	Big Blue Marble Academy: Landscaping, Lighting and Architecture Certificate of Appropriateness Highway Corridor Overlay
PROJECT MANAGER:	Katie Peterson, AICP Senior Planner

APPLICATION REQUEST: The Applicant, Samantha Kozlowski, Development Manager, on behalf of the parcel owners EIG14T BBMA SC BLUFFFTON, LLC, requests that the Planning Commission approve the following application:

1. **COFA-03-23-017836.** A Certificate of Appropriateness to permit the landscape, lighting and architecture for Big Blue Marble Academy, an 11,293 SF one-story childcare facility including an outdoor child play area and associated parking, located at the intersection of Mill Creek Boulevard and Okatie Highway (SC HWY 170) off Slater Street in the Jones Estate PUD, within the Cypress Ridge Master Plan.

INTRODUCTION: The conceptual plan for the Jones Estate PUD was approved by Bluffton Town Council in June 21, 2000. As approved, the plan organized the 4,400-acre Jones tract into planning areas to provide for the regulation and arrangement of land uses as well as the allotment of densities. The subject parcel is located within the Cypress Ridge Master Plan planning area, which was approved by Town Council on February 23, 2005, and last revised in June 2020.



PARCEL LOCATION MAP

The Final Development Plan (DP-07-22-016969) was heard at the May 10, 2023 meeting of the Development Review Committee where comments were provided to the Applicant (Attachment 5). Town Staff is currently working with the Applicant to provide comments on resubmitted materials and ensure all comments have been addressed.

The Applicant is requesting approval of a Certificate of Appropriateness – Highway Corridor Overlay application which is subject to review by the Planning Commission providing authority over the architectural, landscaping, and lighting design only.

PLANNING COMMISSION ACTIONS: As granted by the powers and duties set forth in Section 2.2.6.C.6. of the Unified Development Ordinance, the Planning Commission has the authority to take the following actions with respect to this application:

1. Approve the application as submitted by the Applicant;
2. Approve the application with conditions; or
3. Deny the application as submitted by the Applicant.

REVIEW CRITERIA & ANALYSIS: Town Staff and the Planning Commission are required to consider the criteria set forth in Section 3.17.3 of the Unified Development Ordinance in assessing an application for a Certificate of Appropriateness- HCO. These criteria are provided below followed by a Staff Finding based upon review of the application submittals to date.

1. Section 3.17.3.A. The proposed development must be in conformance with applicable landscaping, lighting, and architectural provisions provided in Article 5, Design Standards.

    a) *Finding.* The project is in the Jones Tract PUD and is part of the Cypress Ridge Master Plan. There are specific design standards established by the PUD via the Beaufort County 1990/3 Zoning and Development Standards Ordinance and the Town of Bluffton Highway Corridor Overlay District (HCOD) within of the 2000 Town of Beaufort Zoning and Development Standards Ordinance (ZDSO) which are attached to the PUD. In addition to these standards, as a result of the adoption the Town of Bluffton's Stormwater Design Manual (SWDM) in September of 2021, the landscaping design criteria of Article 5 of the current Unified Development Ordinance are applicable to review of this application.

2. Section 3.17.3.B. The proposed development shall be in conformance with any approved Development Agreement, PUD Concept Plan, PUD Master Plan, Subdivision Plan, or any other agreements or plans that are applicable.

    The property is located in the Jones Tract PUD and is identified on the Cypress Ridge Master Plan as commercial land use. As a result, the

property is subject to the Beaufort County 1990/3 Zoning and Development Standards Ordinance and the Town of Bluffton Zoning and Development Standards Ordinance and Design Guidelines contain architectural, landscaping, and lighting design standards for properties located in the Highway Corridor Overlay District (HCOD).

A. JONES ESTATE PUD/PUD CONCEPT PLAN

The Jones Estate PUD refers to the Beaufort County 1990/3 Zoning and Development Standards Ordinance (ZDSO) and The Town of Bluffton Zoning and Development Standards Ordinance Highway Corridor Overlay District (HCOD) for development standards.

Landscaping

1) Finding – Site Design Standards. Section 4.16.3.A. requires the site of service yards, utility meters, above-ground tanks, and other such equipment be landscaped so that such facilities are not visible from the highway and shall not be located less than ten (10') feet from the side and rear property lines. While landscaping is shown around the transformer near the southern corner of the building, shrubs are shown as 30 inches in height, which will not screen a standard transformer. Due to the location, it will be highly visible from Highway 170 and the shrubs must be increased in height at this location to screen the transformer.

2) Finding – Parking Lot Requirements. Section 4.24.2.2.E. of the ZDSO requires that each landscape peninsula contain one (1) broad-leafed overstory tree with a minimum size of two and one half (2 ½) caliper inches at DBH and a minimum height of ten (10) feet. The Landscape Plan indicates Crepe Myrtles, which are understory trees, are proposed in the landscape peninsulas. The Landscape Plan must be revised to include a broad-leaf tree in each peninsula.

3) Finding – Parking and Loading Area Landscaping. Per Section 5.3.7.C. of the UDO, all parking and loading areas that are visible from the public right-of way shall be buffered to minimize the visual impact of parked vehicles by landscaped areas that include a mixture of trees and shrubs. Additional screening must be provided in the area between the Parking Lot and Slater Street, as the screening provided does not meet the screening requirements as indicated in DRC Review.

Architecture

1) Finding – Standards and Guidelines. Section 4.16.2.A. states that heating, ventilating and air conditioning equipment, duct work, air compressor, and other fixed operating machinery shall be either screened from view or located so that such items are not visible from

the highway. All roof mechanicals are shown on the front elevation, facing Highway 170, and must be revised.

2) Finding – Site Design Standards. Section 4.16.3.A. requires the site of service yards, utility meters, above-ground tanks, and other such equipment shall be landscaped so that such facilities are not visible from the highway and shall not be located less than ten (10') feet from the side and rear property lines. The electric meter is shown on front elevation, facing Highway 170 and must be revised or be fully screened with an architectural feature.

3) Finding – Inappropriate Exterior Materials and Architectural Elements. Section 4.24.3.A.3. of the ZDSO notes that cinder block and unfaced concrete block are considered incompatible and inappropriate for primary and accessory structures. The dumpster enclosure is identified as Split Face CMU but does not identify a finish material. The dumpster enclosure must be revised to a permitted material. Further, the Applicant should consider revising the door operation on the dumpster enclosure to minimize conflict with pedestrians entering from the building.

4) Finding – Information on the proposed metal fence has not been provided with the COFA materials. Additional information is required to ensure the proposed metal fence meets the material requirements. Further, there is a conflict with the fence at the southeast corner of the building. When the door is open, the sidewalk will become impassable. The fence location must be revised to be passable while the door is open.

5) Finding – Per Section 4.23.3.A. of the ZDSO, the Planning Commission, as the Corridor Review Board, shall review elements of design, including form, mass, scale, proportion, height, texture, color, architectural style, individual architectural elements, or orientation or specific location upon the site. The Front Elevation, facing Highway 170, appears unbalanced. The dormers proposed do not align with the elements beneath them, and while there is articulation, the highway fronting side of the building is less composed than the rear (facing the parking area). The Front elevation should be reconsidered to have dormers align with elements beneath them and ensure the Front (Highway 170 facing side) is appropriately designed.

Lighting

1) Finding – Lighting. Section 4.23.3.C.2.a.2. of the ZDSO allows for incandescent, fluorescent, metal halide, mercury, vapor or color corrected high-pressure sodium lights. As LEDs are not permitted by the ordinance, the Planning Commission must determine the appropriateness of the use of LEDs as a substitute lighting type for

those listed in the Ordinance. Staff finds they are an appropriate substitution.

2) Finding – Lighting. Section 4.23.3.C.2.a.2.1. of the ZDSO requires light fixtures to be a cutoff luminaire whose source is completely concealed with opaque housing and shall not be visible from any street. This provision includes lights on mounted poles as well as architectural display and decorative lighting visible from the corridor. While the light specs include options for cutoff, it is not indicated which options have been selected and additional information is required to ensure all fixtures will be cutoff luminaires.
3) Finding – Lighting. Light poles have been proposed in each of the Landscape Islands. The Landscape Islands require large canopy overstory trees in each. As this creates a conflict with the proposed light positions, the light poles must be relocated, and an updated Photometric exhibit provided to ensure it remains in compliance with the revised pole locations.

B. PUD MASTER PLAN

The Cypress Ridge Master Plan document refers to the Jones Estate PUD for design standards.

1) *Finding. Cypress Ridge Master Plan.* As there are no design guidelines established in the Cypress Ridge Master Plan for the site, no additional design review was performed.

C. DEVELOPMENT PLAN

The Final Development Plan was heard at the DRC meeting. Revised documents have been submitted; however, comments have not yet been provided to the Applicant.

1) *Finding. Final Development Plan.* This project requires development plan approval from the Town of Bluffton. The Applicant has submitted the project for review, and it was presented before the Development Review Committee on May 10, 2023. Staff is working with the Applicant to finalize comments and ensure all conditions have been met. Once complete, a Final Development Plan will be approved.

D. DECLARATION OF COVENANTS, CONDITIONS, AND RESTRICTIONS

The Declaration of Covenants, Conditions, and Restrictions for the Cypress Ridge Master Plan.

1) *Finding. Declaration of Covenants, Conditions, and Restrictions for Cypress Ridge.* The applicant shall confirm conformance with the covenants and restriction which are recorded with the Cypress Ridge Master Plan with an approval from the Declarant.

3. Section 3.17.3.C. The application must comply with applicable requirements in the Application Manual.

    a. *Finding.* The application has been reviewed by Town Staff and has been determined to be complete and that it meets all requirements of the Applications Manual. It should be noted that any proposed signage is reviewed through a Sign Permit process separate from this review. Any proposed signage will need to submit Sign Permits for review and approval prior to installation.

TOWN STAFF RECOMMENDATION: Town Staff finds that with the conditions noted below, the requirements of Section 3.17.3 of the Unified Development Ordinance will be met and recommends that the Planning Commission approve the application with the following conditions:

1. Landscape.
    a. Per Section 4.24.2.2.E. of the ZDSO, Landscape Plan must be revised to include a broad-leaf tree in each peninsula.
    b. Per Section 4.16.3.A of the ZDSO, the shrubs screening the Transformer at the southern corner of the building must be increased in height to fully screen it from view of Highway 170.
    c. Per Section 5.3.7.C. of the UDO, additional landscape screening must be added to the area between the parking lot and Slater Street.

2. Architecture
    a. Per Section 4.16.2.A. all roof mechanicals are shown on the front elevation, facing Highway 170, and must be revised.
    b. Per Section 4.16.3.A. the electric meter is shown on front elevation, facing Highway 170 and must be revised or be fully screened with an architectural feature.
    c. Per Section 4.24.3.A.3. of the ZDSO the dumpster enclosure must be revised from unfinished Split Face CMU to a permitted material.
    d. The Applicant should consider revising the door operation on the dumpster enclosure to minimize conflict with pedestrians entering from the building.
    e. Information on the proposed metal fence must be provided for review as not enough information has been to complete the review.
    f. The fence location at the southeast corner of the building must be revised to remain passable when the door is open.
    g. Per Section 4.23.3.A., the dormers should be relocated to be centered over the elements beneath them.
    h. Per Section 4.23.3.A., the Front (Highway 170 facing) elevation should be reconsidered to better address the street.

3. Lighting

a. Per Section 4.23.3.C.2.a.2. of the ZDSO, the Planning Commission must determine the appropriateness of the use of LEDs as a substitute lighting type for those listed in the Ordinance.
b. Per Section 4.23.3.C.2.a.2.1. of the ZDSO, additional information is required to ensure all fixtures will be cutoff luminaires.
c. Light poles need to be relocated to eliminate conflict with required Landscape Island overstory trees.
d. Photometric exhibit must be revised to ensure it remains in compliance with the revised pole locations.

4. Other
    a. All comments must be addressed, and a Final Development Plan must be approved prior to issuance of the Certificate of Appropriateness – HCO.
    b. Per the Applications Manual, a letter of approval from the Cypress Ridge Declarant for the Covenants, Conditions and Restrictions must be provided.
    c. Signage Permits must be submitted to the Town of Bluffton for review and approval for the signage proposed at each site in the proposed development.

ATTACHMENTS:

1. Application and Narrative
2. Site Plan, Elevations and Materials
3. Landscape Plans
4. Lighting Plan and Details
5. DRC Comments 5.10.23

TOWN OF BLUFFTON
CERTIFICATE OF APPROPRIATENESS
HIGHWAY CORRIDOR OVERLAY APPLICATION

Growth Management Custome
20 Bridge Street
Bluffton, SC 29910
(843)706-4500
www.townofbluffton.sc.gov
applicationfeedback@townofbluffton.com

Applicant	Property Owner
Name: Samantha Kozlowski, Development Manager	**Name:** EIG14T BBMA SC BLUFFTON, LLC
Phone: (248) 817-1691	**Phone:** (248) 817-1691
Mailing Address: 1695 Twelve Mile Road, Suite 100, Berkley, MI 48072	**Mailing Address:** 1695 Twelve Mile Road, Suite 100, Berkley, MI 48072
E-mail: samantha@814cre.com	**E-mail:** reed@814cre.com
Town Business License # (if applicable): N/A	

Project Information

Project Name: Big Blue Marble Academy	**Acreage:** +/- 1.276 Acres
Project Address: Mill Creek Blvd. & Okatie Hwy., Bluffton, SC 29909	
Zoning District: Cypress Ridge PUD	
Tax Map Number(s): TBD	
Project Description: New construction +/- 11,953 SF one-story building located in Cypress Ridge on Mill Creek Blvd. in Bluffton, SC. It will be a new child care building. Use Group "E" for day care facilities.	

Minimum Requirements for Submittal

- [X] **1.** Mandatory Application Check-In meeting scheduled.
- [X] 2. Digital files drawn to scale **of the Site Plan(s).**
- [X] 3. Digital files drawn to scale **of the Architectural Plan(s).**
- [X] 4. **Recorded deed and plat showing proof of property ownership.**
- [X] 5. **Project Narrative describing reason for application and compliance with the criteria in Article 3 of the UDO.**
- [X] 6. **Material samples and color swatches for all proposed materials.**
- [X] 7. **An Application Review Fee as determined by the Town of Bluffton Master Fee Schedule. Checks made payable to the Town of Bluffton.**

Note: **A Pre-Application Meeting is required prior to Application submittal.**

Disclaimer: **The Town of Bluffton assumes no legal or financial liability to the applicant or any third party whatsoever by approving the plans associated with this application.**

I hereby acknowledge by my signature below that the foregoing application is complete and accurate and that I am the owner of the subject property. As applicable, I authorize the subject property to be posted and inspected.

Property Owner Signature: Reed Fenton	**Date:** 3/24/2023
Applicant Signature: Samantha R Kozlowski	**Date:** 3/24/2023

For Office Use

Application Number:	***Date Received:***
Received By:	***Date Approved:***

TOWN OF BLUFFTON
CERTIFICATE OF APPROPRIATENESS- HIGHWAY CORRIDOR OVERLAY (HCO) APPLICATION PROCESS NARRATIVE

The following Process Narrative is intended to provide Applicants with an understanding of the respective application process, procedures and Unified Development Ordinance (UDO) requirements for obtaining application approval in the Town of Bluffton. While intended to explain the process, it is not intended to repeal, eliminate or otherwise limit any requirements, regulations or provisions of the Town of Bluffton's Unified Development Ordinance. The Town of Bluffton's Mission and Vision Statements help navigate staff to ensure that the goals outlined by Town Council are being met. As each project is being reviewed, Town staff will use the Mission Statement, Vision Statement, The Covenant for Bluffton and the current Strategic Plan to guide their review. **Compliance with these procedures will minimize delays and assure expeditious application review.**

Step 1. Pre-Application Meeting	**Applicant & Staff**
Prior to the filing of a Certificate of Appropriateness - HCO Application, the Applicant is required to consult with the UDO Administrator or their designee at a Pre-Application Meeting for comments and advice on the appropriate application process and the required procedures, specifications, and applicable standards required by the UDO.	
Step 2. Application Check-In Meeting	**Applicant & Staff**
Upon receiving input from Staff at the Pre-Application Meeting, the Applicant shall submit the Certificate of Appropriateness - HCO Application and required submittal materials during a <u>mandatory</u> Application Check-In Meeting where the UDO Administrator or designee will review the submission for completeness.	
Step 3. Review by UDO Administrator	**Staff**
If the UDO Administrator or designee **determines that the Certificate of Appropriateness - HCO Application is complete, it shall be** presented to the Planning Commission.	
Step 4. Planning Commission Meeting	**Applicant, Staff & Planning Commission**
The PC shall review the Certificate of Appropriateness - HCO Application for compliance with the criteria and provisions in the UDO. The PC may approve, approve with conditions, or deny the application.	
Step 5. Issue Certificate of Appropriateness	**Staff**
If the PC **approves the Certificate of Appropriateness - HCO Application, the UDO Administrator** or designee **shall issue the Certificate of Appropriateness - HCO.**	

Project Narrative
Certificate of Appropriateness HCO
Big Blue Marble Academy
Cypress Ridge PUD
[Mill Creek Blvd. & Okatie Hwy.]

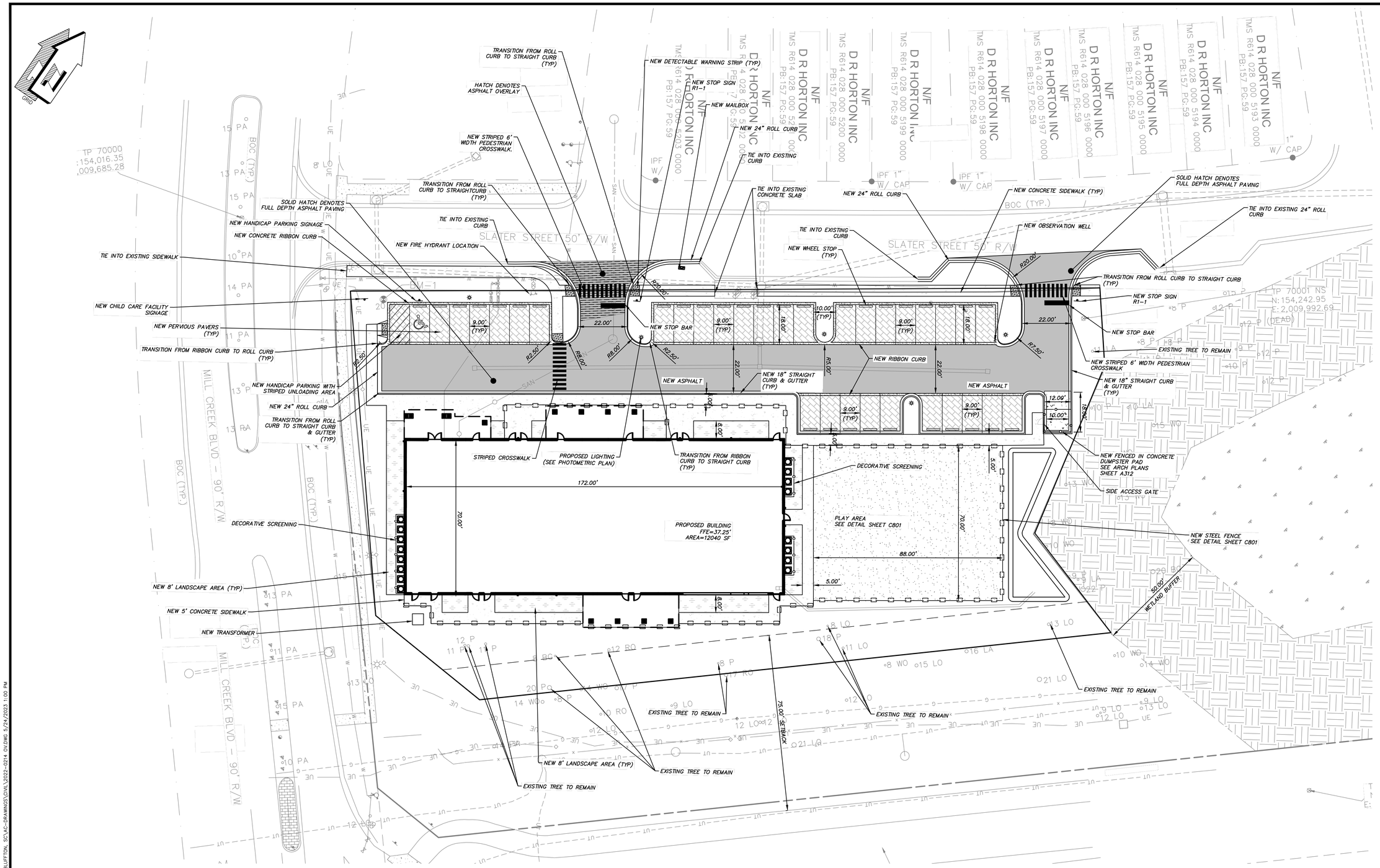
The subject property is a new construction +/- 11,953 SF Big Blue Marble child care facility to be located at the intersection of Mill Creek Boulevard and Okatie Highway in Bluffton, South Carolina. The subject property is situated on approximately +/- 1.276 acres of land. The subject property is currently comprised of undeveloped vacant land. It is located within the jurisdiction of the Town of Bluffton and is currently zoned "Commercial" within the Cypress Ridge PUD. The parcel number and formal address for this property is to be determined. The Master Developer will be recording the lot split/subdivision.

The childcare facility will have dual access points off a private drive, Slater Street. The dual access will allow for improved site traffic accessibility and connectivity. There will be 33 parking spaces, including two (2) ADA compliant parking spaces, which will be enough parking to accommodate all staff members and parents/guardians. There will be no "drop-off lane" permitted for this facility. All parents/guardians will be required to park their vehicle and check their student in and out of the facility at the front desk.

A Certificate of Appropriateness HCO is required to install landscaping, lighting, or architectural elements within the Highway Corridor Overlay district. The proposed application is in conformance with the architectural provisions provided in Article 5, Design Standards, the Cypress Ridge PUD Master Plan, and the requirements in the application manual. The proposed Big Blue Marble Academy building will blend harmoniously with the natural surroundings, and the scale of neighborhood architecture, complying with the intent of Section 5 (Design Guidelines for the HCO). The Developer & Architect have made extensive exterior changes to the prototypical BBMA building to adapt to the traditional Lowcountry Vernacular style preferred by the Town of Bluffton.

The proposed childcare building will consist of primarily neutral colors that are compatible with Lowcountry or coastal vernacular palette, as mentioned in the Design criteria. There are 3 primary materials on the building façade- Siding, Brick, and Glass. Siding makes up 59%, Brick makes up 22%, and Glass makes up 18% of the overall façade. The building will consist of a "Savannah Grey" colored brick wainscot, "Monterey Taupe" colored James Hardie Siding, and white trim. The main roof will rise 4" in a length of 12" (4/12 pitch roof) with the porch roofs and bump outs having a rise of 6" in a length of 12" (6/12 pitch roof) and the materials will be multilayered asphalt shingles color "Oyster Grey" and white soffit panels to match the building and window trim. The building front entrance and back exit will include four (4) white fiberglass columns with a brick base to match the building exterior. The overall building façade will be broken up by many windows, doors, and mixed materials. The proposed building will have upgraded dormers and windows from the typical BBMA prototype to further breakup the roofline.

The dumpster enclosure and monument sign base will consist of the same materials to match the exterior of the building. All HVAC units have been relocated to the west & east sides of the building and screened from the view of Slater Street & Okatie Highway. The grade level HVAC units will be thoroughly screened by a decorative, intentional screening structure comprised of composite vinyl-based planks that provide a well-balanced contrasting look of architectural woods and a metal framework. The roof hood system & service platform facing the parking lot along Slater Street will have the same screening material to provide a balanced look.



LEGEND

- LANDSCAPE AREA
- PERVIOUS PAVING
- CONCRETE
- ASPHALT

PLAN
HORIZONTAL SCALE 1"=20'

20 10 0 20 40
SCALE IN FEET

CRANSTON

SOUTH CAROLINA
Cranston Engineering Group
NO. C00575
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
NO.38607
MEGAN E. SMITH
5/24/23

REV #	DATE	DESCRIPTION

CHILD DAY CARE FACILITY

SITE PLAN

DRAWN BY:	AWD
CHECKED BY:	MES
APPROVED BY:	MES
DATE:	5/24/2023
SCALE:	1" = 20'
JOB No.	2022-0214
DRAWING No.	C400

South Carolina 811 Call 811 Before You Dig

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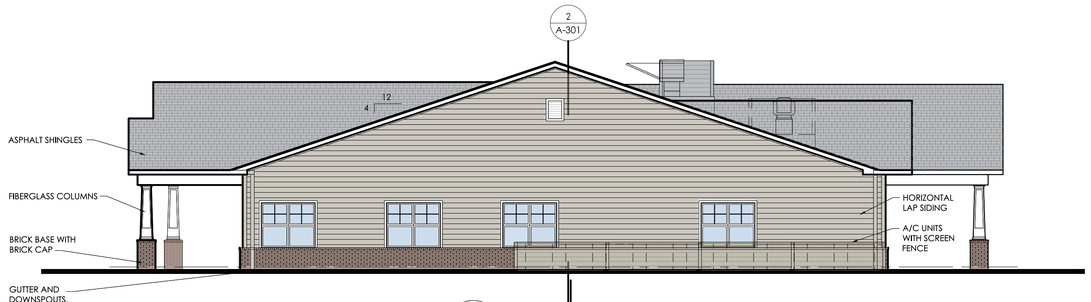
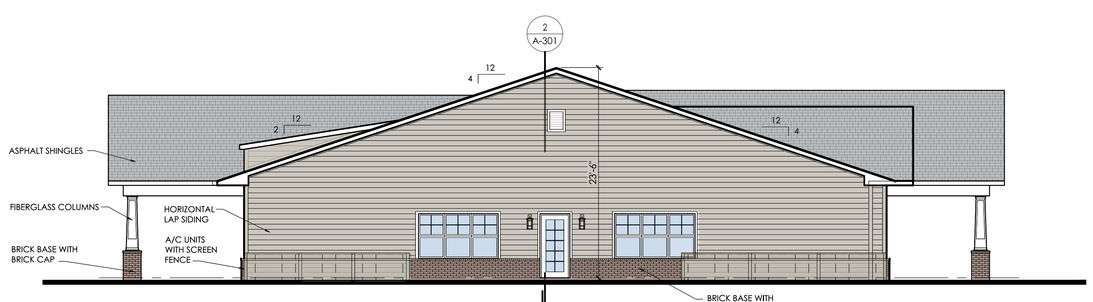
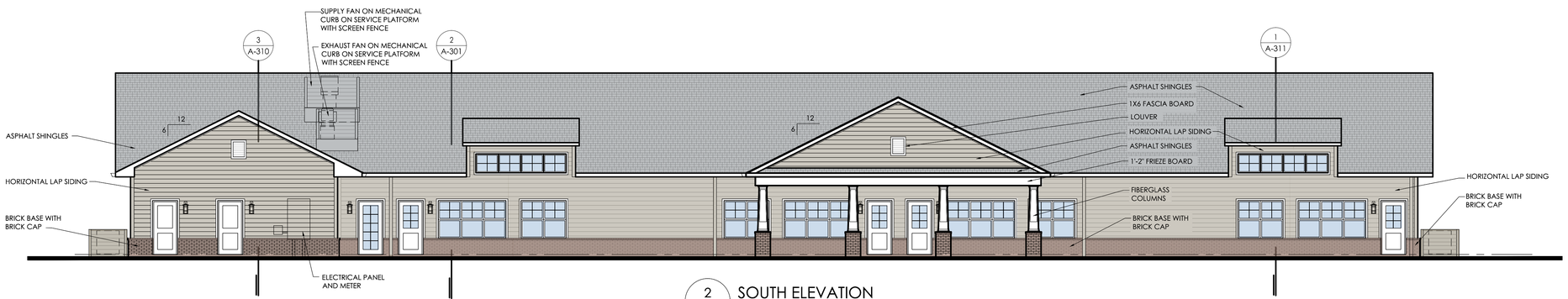


4 / A 101 WEST ELEVATION
SCALE: 1/8"=1'-0"



3 / A 101 EAST ELEVATION
SCALE: 1/8"=1'-0"



2 / A 101 SOUTH ELEVATION
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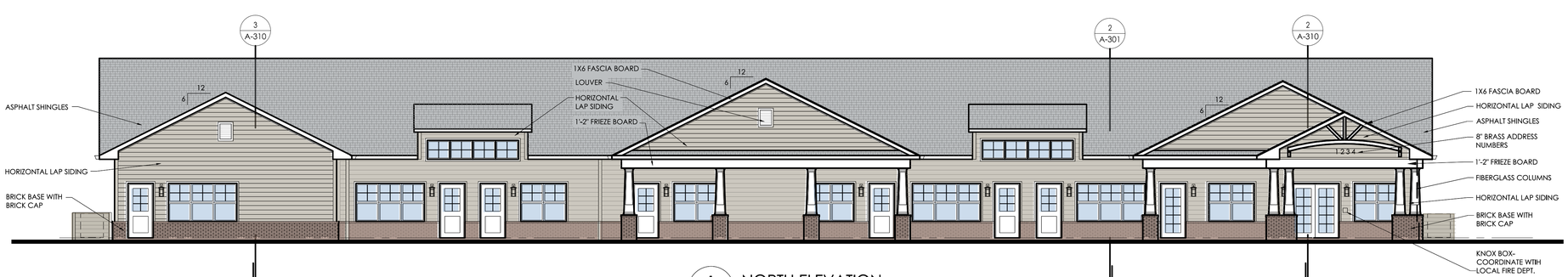


1 / A 101 NORTH ELEVATION
SCALE: 1/8"=1'-0"

EXTERIOR FINISH LEGEND

MATERIAL	MANUFACTURER	DESCRIPTION AND COLOR
ROOF		
ASPHALT SHINGLES	GAF	STYLE: TIMBERLINE HDZ COLOR: OYSTER GREY
SOFFIT PANELS	JAMES HARDIE	STYLE: HARDIESOFFIT PANELS, VENTED CEDARMILL COLOR: WHITE
SCREEN WALL ROOF TOP UNITS	PALMSHIELD	STYLE: MERCURY ECONOMIC STAGGERED (ALUMINUM) COLOR: GREY
WALL		
HORIZONTAL LAP SIDING	JAMES HARDIE	STYLE: HARDIEPLANK LAP SIDING, CEDARMILL COLOR: MONTEREY TAUPE
SIDING TRIM	JAMES HARDIE	STYLE: SMOOTH COLOR: WHITE WINDOWS AND DOOR SURROUNDS, SOFFIT
BRICK	GENERAL SHALE	STYLE: MODULAR BRICK, RUNNING BOND COLOR: SAVANNAH GREY
FIBERGLASS COLUMNS	ENDURA-CRAFT	STYLE: CRAFTSMAN STYLE, TAPERED, RECESSED PANEL COLOR: WHITE
LOUVER	FYPON	STYLE: 33" ROUND, POLYURETHANE COLOR: WHITE
SCREEN WALL A/C UNITS AT GRADE	PALMSHIELD	STYLE: MERCURY ECONOMIC STAGGERED (ALUMINUM) COLOR: BEIGE

Project:

Big Blue Marble Academy

Cypress Ridge
Mill Creek Blvd.
Bluffton, South Carolina

Issued for:

Site Plan Review 02/17/2023
Site Plan Review 03/29/2023
Site Plan Review 05/12/2023

Subject:

ELEVATIONS

Project Owner:

EIGHT

814 Services, LLC
1695 Twelve Mile Road
Suite 100
Berkley, MI 48072

Project Consultants:

FormSurfaces
Design Group
10913 Marcello Lane
Whitmore Lake, MI 48189

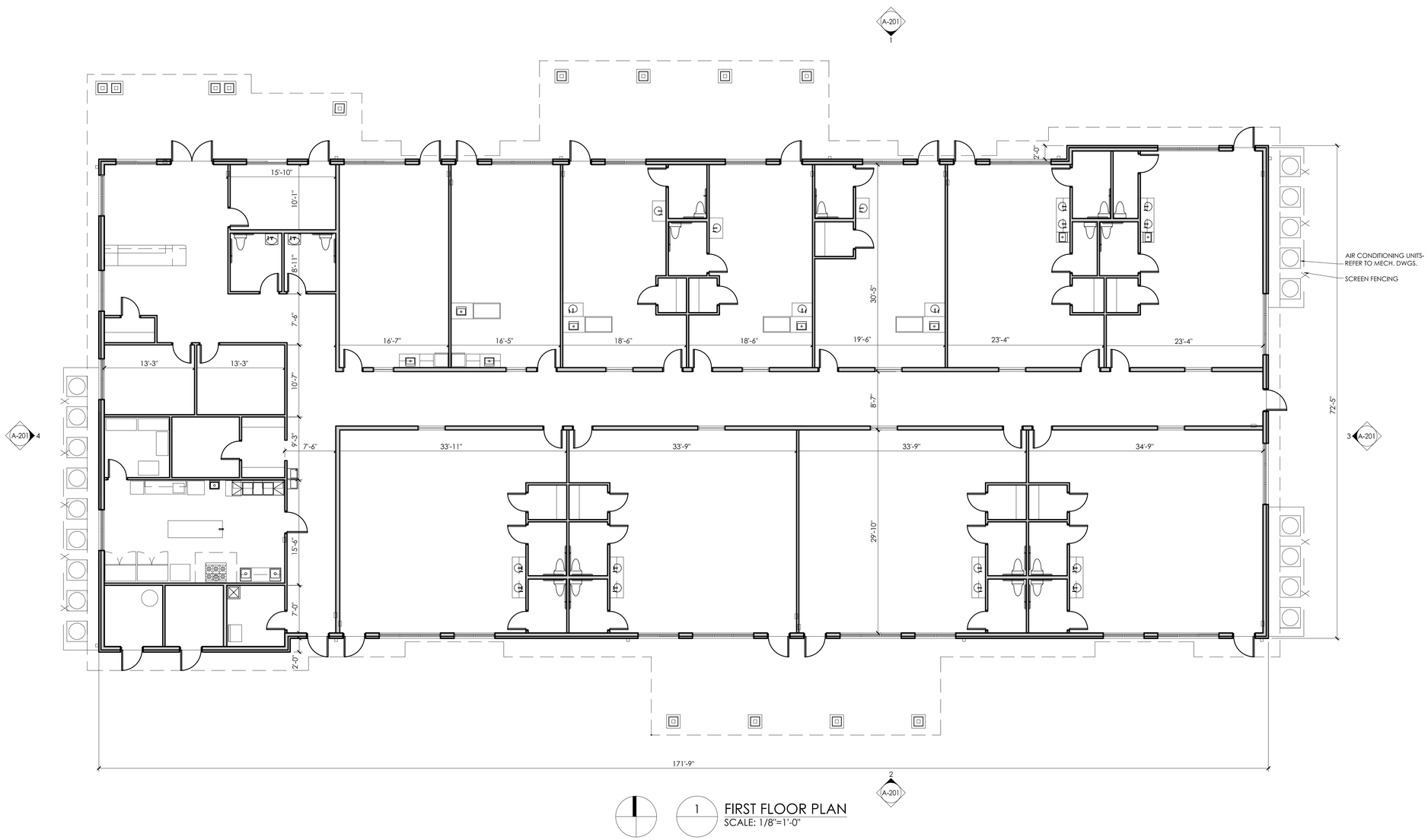
Michael Vernier
Structural Engineering Consultant
www.AEStructures.com
1118 Joshua Drive
Troy, Michigan 48098-6507
Telephone: 248.250.6166
AEStructures@AEStructures.com

CLARK TROMBLEY RANDERS
504 S. Creyts Road, Suite B
Lansing, MI 48917

NOT FOR CONSTRUCTION

Job No.
20211019

Sheet No.
A 201



1 FIRST FLOOR PLAN
SCALE: 1/8"=1'-0"

FLOOR PLAN LEGEND

- NEW STUD PARTITION / WALL FURRING AS SCHEDULED. SEE A 101 FOR DETAILS.
- NEW STUD PARTITION / WALL FURRING WITH BRICK EXTERIOR. SEE EXTERIOR WALL SECTIONS.
- XXX — NEW WINDOW. SEE WINDOW LEGEND.
- XXX — NEW DOOR AND FRAME . WIDTH X HEIGHT. DOOR HAND.
- FE — FIRE EXTINGUISHER
- FEC — FIRE EXTINGUISHER CABINET
- CJ — CONTROL JOINT- SEE SPECIFICATION.

NOT FOR CONSTRUCTION

Project:

Big Blue Marble Academy

Cypress Ridge
Mill Creek Blvd.
Bluffton, South Carolina

Issued for:

Site Plan Review	02/17/2023
Site Plan Review	03/29/2023
Site Plan Review	05/12/2023

Subject:

FLOOR PLANS

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EIGHT

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20211019

Sheet No.
A 101

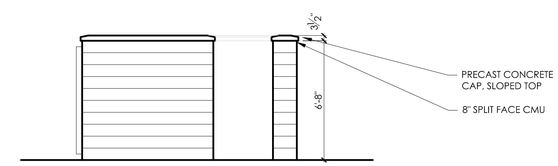
Project:

Big Blue Marble Academy

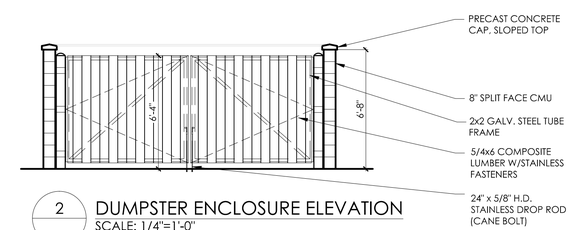
Cypress Ridge
Mill Creek Blvd.
Bluffton, South Carolina

Issued for:

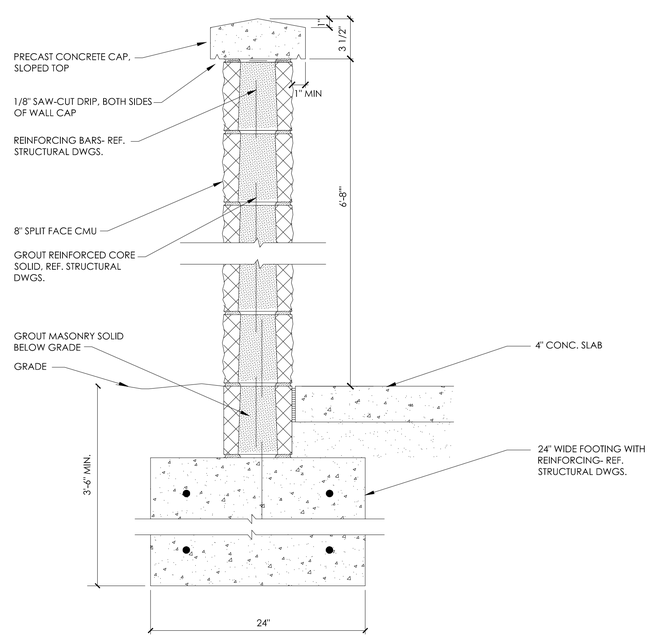
Site Plan Review 02/17/2023



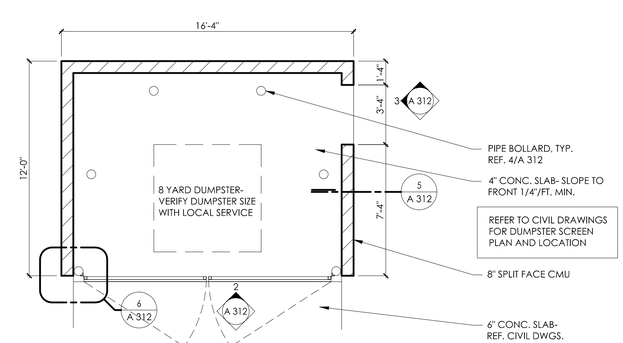
3 DUMPSTER ENCLOSURE ELEVATION
SCALE: 1/4"=1'-0"



2 DUMPSTER ENCLOSURE ELEVATION
SCALE: 1/4"=1'-0"



5 DUMPSTER SCREEN WALL DETAIL
1 1/2"=1'-0"



1 DUMPSTER ENCLOSURE PLAN
SCALE: 1/4"=1'-0"

NOT FOR CONSTRUCTION

Subject:

DUMPSTER ENCLOSURE DETAILS

Project Owner:

EIGHT

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20211019

Sheet No.
A 312

Big Blue Marble Academy

BLUFFTON, SOUTH CAROLINA

SCREEN FENCE

PORCH COLUMNS

EXTERIOR FINISH LEGEND

MATERIAL	MANUFACTURER	DESCRIPTION AND COLOR
ROOF		
ASPHALT SHINGLES	GAF	STYLE: TIMBERLINE HDZ COLOR: OYSTER GREY
SOFFIT PANELS	JAMES HARDIE	STYLE: HARDIESOFFIT PANELS, VENTED CEDARMILL COLOR: WHITE
SCREEN WALL ROOF TOP UNITS	PALMSHIELD	STYLE: MERCURY ECONOMIC STAGGERED (ALUMINUM) COLOR: GREY, HEIGHT: 4 FT.
WALL		
HORIZONTAL LAP SIDING	JAMES HARDIE	STYLE: HARDIEPLANK LAP SIDING, CEDARMILL COLOR: MONTEREY TAUPE
SIDING TRIM	JAMES HARDIE	STYLE: SMOOTH COLOR: WHITE WINDOWS AND DOOR SURROUNDS, SOFFIT
BRICK	GENERAL SHALE	STYLE: MODULAR BRICK, RUNNING BOND COLOR: SAVANNAH GREY
FIBERGLASS COLUMNS	ENDURA-CRAFT	STYLE: CRAFTSMAN STYLE, TAPERED, RECESSED PANEL COLOR: WHITE
LOUVER	FYPON	STYLE: 33" ROUND, POLYURETHANE COLOR: WHITE
SCREEN WALL A/C UNITS AT GRADE		STYLE: VINYL COLOR: BEIGE, HEIGHT: 3'-2" (MIN)

EIGHT

FormSurfaces Design Group

Architects and Designers
We are creators of space.

DO NOT SCALE PRINTS. USE FIGURED DIMENSIONS ONLY.

D-Series Size 0
LED Area Luminaire

Catalog
Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA: 0.44 ft² (0.04 m²)

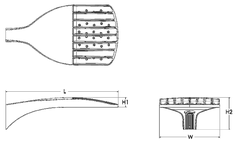
Length: 26.18" (66.5 cm)

Width: 14.06" (35.7 cm)

Height H1: 2.26" (5.7 cm)

Height H2: 7.46" (18.9 cm)

Weight: 23 lbs (10.4 kg)



Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications, with typical energy savings of 70% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX0 LED P6 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX0 LED

Series	LEDs	Color temperature [1]	Color Rendering Index [2]	Distribution		Voltage	Mounting
DSX0 LED	**Forward optics** P1 P5 P2 P6 P3 P7 P4 **Rotated optics** P10 [3] P12 [3] P11 [3] P13 [3]	**(this section 70CRI only)** 30K 3000K 40K 4000K 50K 5000K **(this section 80CRI only, extended lead times apply)** 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	70CRI 70CRI 70CRI 80CRI 80CRI 80CRI 80CRI 80CRI	AFR Automotive front row T1S Type I short T2M Type II medium T3M Type III medium T3LG Type III low glare [3] T4M Type IV medium T4LG Type IV low glare [3] TFTM Forward throw medium	T5M Type V medium T5LG Type V low glare T5W Type V wide BLC3 Type III backlight control [3] BLC4 Type IV backlight control [3] LCCO Left corner cutoff [3] RCCO Right corner cutoff [3]	MVOLT (120V-277V) [4] HVOLT (347V-480V) [4] XVOLT (277V-480V) [5]	**Shipped included** SPA Square pole mounting (4) drilling, 3.5" min. SQ pole) RPA Round pole mounting (4) drilling, 3" min. RND pole) SPA5 Square pole mounting (4) drilling, 3" min. SQ pole) [6] RPA5 Round pole mounting (4) drilling, 3" min. RND pole) [6] SPA8N Square narrow pole mounting (4) drilling, 3" min. SQ pole) WBA Wall bracket [10]

Control options			Other options	Finish (required)
Shipped installed NLTAIR2 PIRHN nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 28; [7, 8, 9, 10] PIR High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 28; [7, 8, 9] PER NEMA twist-lock receptacle only (controls ordered separately) [10] PER5 Five-pin receptacle only (controls ordered separately) [10, 11]	PER7 Seven-pin receptacle only (controls ordered separately) [10,11] FAO Field adjustable output [12, 13] BL30 Bi-level switched dimming, 30% [8, 13] BL50 Bi-level switched dimming, 50% [8, 13] DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) [13]	**Shipped installed** HS Houseside shield (black finish standard) [20] LNS Left oriented optics [1] RNS Right oriented optics [1] CCE Coastal Construction [21] **Shipped separately** BGSR External Glare Shield (reversible, field install required, matches housing finish) BSDB Bird Spikes (field install required)	DDBXD Dark Bronze DBLXD Black DNAXD Natural Aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

LITHONIA LIGHTING.
COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
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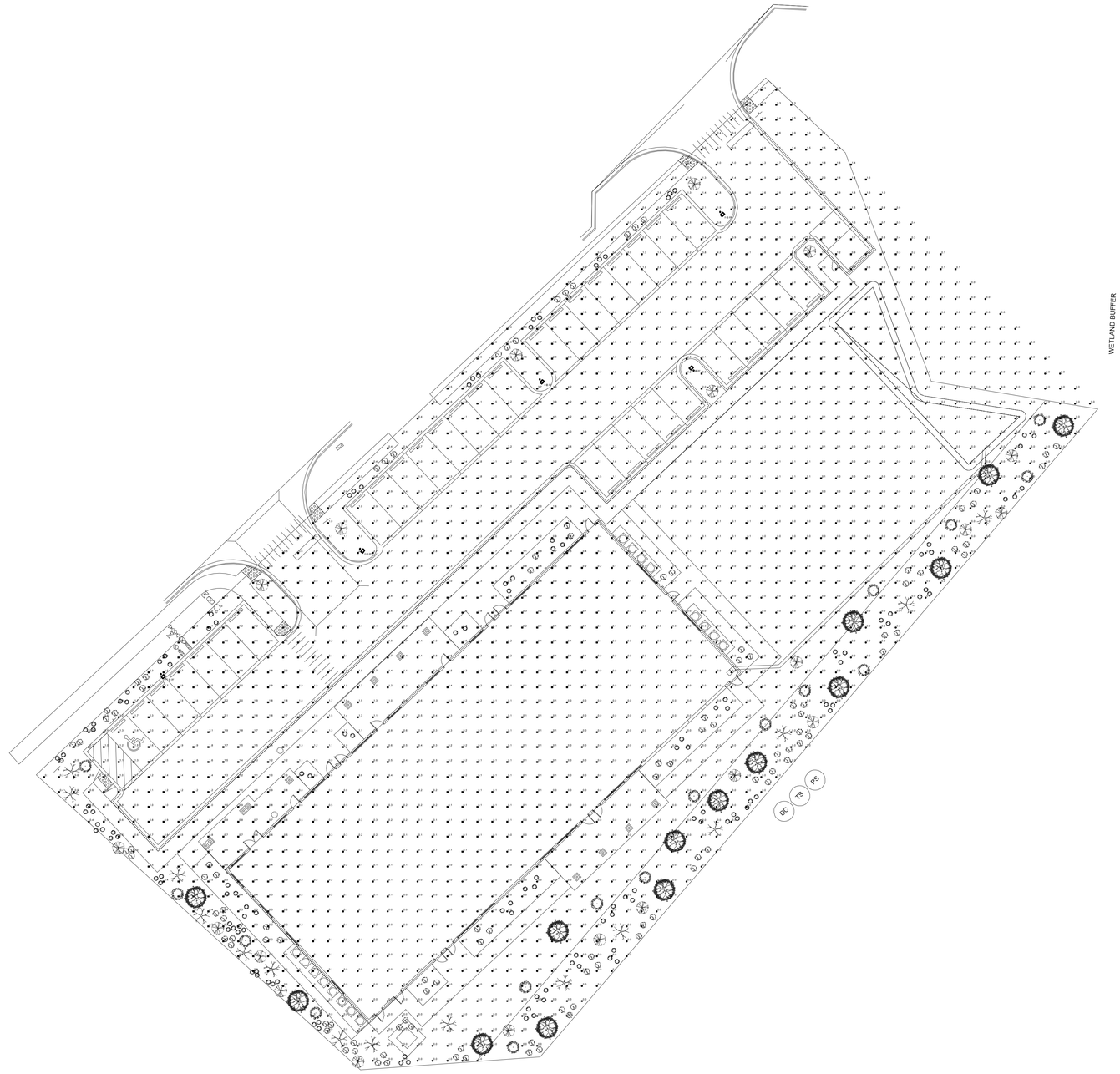
DSX0-LE3
Rev. 01.04.23
Page 1 of 9

FIXTURE TYPE 2: DSX0LED-P4-40K-70CRI-T2M
COUNT: 4 FIXTURES

FIXTURE TYPE FT: DSX0LED-P4-70CRI-TFTM
COUNT: 1 FIXTURE

ALL FIXTURES ARE POLE MOUNTED AT 20'-0" ABOVE GRADE



SITE PLAN - PHOTOMETRICS

SCALE: 1" = 20'-0"

N

STATISTICS						
DESCRIPTION	SYMBOL	AVG	MAX	MIN	MAX/MIN	AVG/MIN
PARKING	·	2.4 FC	5.2 FC	0.5 FC	10.4:1	4.8:1
SITE	·	0.8 FC	5.2 FC	0.0 FC	N/A	N/A

Project:

Big Blue Marble Academy

Cypress Ridge
Mill Creek Blvd.
Bluffton, South Carolina

Issued for:
COFA Submittal 02/16/2023

Subject:
SITE PLAN - PHOTOMETRICS

Project Owner:

EIGHT

814 Services, LLC
1695 Twelve Mile Road
Suite 100
Berkley, MI 48072

Project Consultants:

FormSurfaces Design Group
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Whitmore Lake, MI 48189

AE STRUCTURES
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CLARK TROMBLEY RANDERS
504 S. Creyts Road, Suite B
Lansing, MI 48917

Job No.
20211019

Sheet No.
SP 100

PLAN REVIEW COMMENTS FOR DP-07-22-016969

Town of Bluffton
Department of Growth Management
20 Bridge Street P.O. Box 386 Bluffton, South Carolina 29910
Telephone 843-706-4522

Plan Type: Development Plan
Apply Date: 07/14/2022
Plan Status: Active
Plan Address:
Case Manager: Dan Frazier
Plan PIN #: R614 028 000 5215 0000

Plan Description: **A request by 814 Services, LLC for approval of a preliminary development plan application. The project proposes the construction of a +/-12,130 sq. ft. childcare facility. The property is zoned Jones Estate Planne Unit Development and consists of approximately a 1.50-acre portion of tax map number R614 028 000 5215 0000 located at the intersection of Mill Creek Boulevard and Okatie Highway within the Cypress Ridge Master Plan.**

STATUS 8-17-22: Comments on the Preliminary Development Plan were provided at the August 17, 2022, meeting of the DRC.
STATUS: The preliminary development plan was approved with conditions at the November 16, 2022, Plannin Commission meeting.
STATUS: Comments on the Final Development Plan will be heard at the May 10, 2023, meeting of the DRC.

Final Technical Review

Submission #: 1 Received: 04/03/2023 Completed: 05/05/2023

Reviewing Dept.	*Complete Date*	*Reviewer*	*Status*
Planning Commission Review	05/05/2023	Dan Frazier	Revisions Required

Comments:

1. Photometrics do not extend to the property lines. All lights are shown DIRECTLY adjacent to the large canopy trees required in landscape islands.
2. Sidewalk needs to extend to eastern property line beyond driveway apron.
3. No turnaround for vehicles is provided on the west side of the parking lot appears it will cause conflicting movement in the ADA space for pedestrians.
4. Crosswalks are not provided at all locations where pedestrians will be entering the flow of traffic. Dead end sidewalk at entrance closest to dumpster needs to be connected to somewhere.
5. West side of both vehicle entrances do not have trees in the island at the end of the parking bays
6. Wheel stops are required in all parking spaces.
7. Provide additional information regarding how the parking and landscape areas will be separated. Curb/metal landscape edging etc.
8. Site plan does not match the architectural drawings.
9. Correct the proposed building area on Site Plan Sheet C400.

Planning Review - SR	05/05/2023	Jordan Holloway	Revisions Required

Comments:

1. Locations for transformers are required and proposed screening.
2. Fencing needs to be reexamined. It may not cut off entry and exit of the building, block parking spaces from impede sidewalk.
3. A fence detail must be provided including the materials, dimensions and configurations.
4. As the dumpster enclosure opens directly to the vehicle entrance and faces the townhomes, side access must be provided for pedestrian access to ensure the enclosure doors do not remain open.
5. Large canopy trees do not meet 2.5 Caliper and 12' in height ordinance requirement.
6. The shrubs along Slater Street are not adequate screening for the parking area. A continuous row of shrubs needs to be provided.
7. Shrubs do not show planting minimum height to ensure compliance with minimum height requirements. Further, switch grass is not a shrub.
8. Tree protection areas need to be shown around all trees to remain.
9. While the Applicant may count some of the existing trees in the buffer area as a portion of the required buffer, which existing trees are being counted must be identified and the opacity of the buffer will need to be field verified to ensure compliance with HCOD buffer requirements prior to CofC.
10. Foundation Planting areas need to show quantities and species.

Planning Review - Address	05/05/2023	Diego Farias	Not Required
Beaufort Jasper Water and Sewer Review	05/01/2023	James Clardy	Approved with Conditions

Comments:
Currently under review in accordance with the February 2023 BJWSA Development Policy and Procedure Manual.

Fire Department Review	05/05/2023	Dan Wiltse	Approved with Conditions

Comments:
1. Please verify if you are installing an automatic sprinkler system.

Watershed Management Review DRC	04/27/2023	Samantha Crotty	Approved with Conditions

Comments:
Pending receipt of NPDES approval letter.

Police Department Review	05/05/2023	Adam Barberio	Approved
Building Safety Review	04/03/2023	Richard Spruce	Approved
Transportation Department Review	04/03/2023	Megan James	Approved

Comments:
No comments

TOWN OF BLUFFTON

STAFF REPORT
Department of Growth Management

MEETING DATE:	June 28, 2023
PROJECT:	Refuel 1062 Bluffton: Landscaping, Lighting and Architecture Certificate of Appropriateness Highway Corridor Overlay
PROJECT MANAGER:	Katie Peterson, AICP Senior Planner

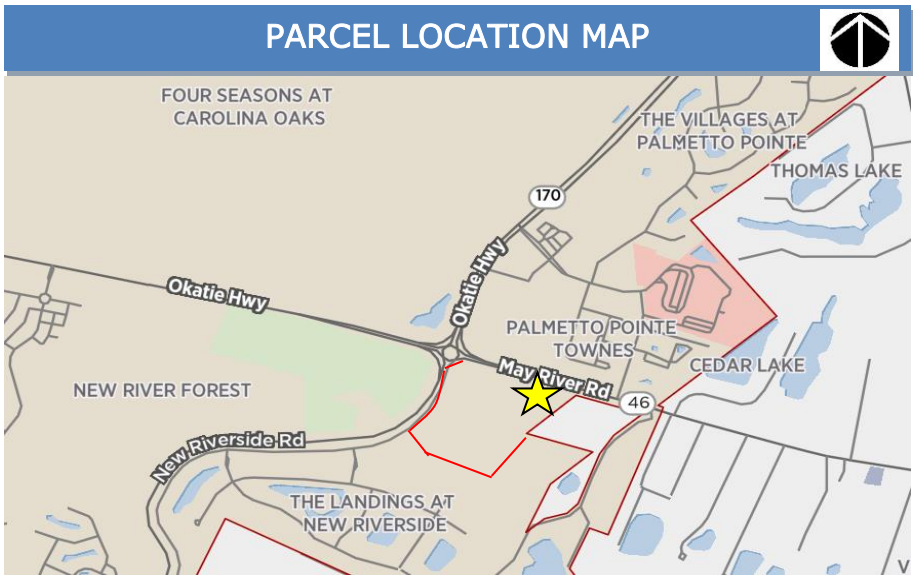
APPLICATION REQUEST: The Applicant, Narciso Lira of Odyssey Services Group, on behalf of the owner, Ian Bowers of Refuel Operating Company, LLC, requests that the Planning Commission approve the following application:

1. **COFA-04-23-017905.** A Certificate of Appropriateness to permit the landscape, lighting and architecture for Refuel convenience store and gas station, located along SC Highway 46 across from the May River Xing intersection. It is zoned PUD within the New Riverside PUD and New Riverside Village Master Plan.

INTRODUCTION: The conceptual plan for the New Riverside PUD was approved by Bluffton Town Council in June of 2004. The Concept Plan and Development Agreement define the allowed land uses in the various areas of the New Riverside Planning Area. The documents also define the development standards, which govern all development activity within the Concept Plan, including Parcels 4B-2 and 4B-3, which are the subject of this application. These negotiated land uses, and development standards are binding upon the Town and this Applicant.

The New Riverside Village Master Plan was approved with conditions in February 2020 by the Town of Bluffton Council. A Preliminary Development Plan for Refuel (DP-02-22-016354) was approved with conditions by the Planning Commission at the July 27, 2022 meeting. A Final Development Plan was heard at the May 10, 2023 Development Review Committee meeting where comments were provided to the Applicant (Attachment 5). Staff is working with the Applicant to review revised drawings and ensure all conditions have been met.

The Applicant has requested the approval of a Certificate of Appropriateness – Highway Corridor Overlay application which is subject to review by the Planning Commission providing authority over the architectural, landscaping, and lighting design only.



<u>PLANNING COMMISSION ACTIONS:</u> As granted by the powers and duties set forth in Section 2.2.6.C.6. of the Unified Development Ordinance, the Planning Commission has the authority to take the following actions with respect to this application:

1. Approve the application as submitted by the Applicant;
2. Approve the application with conditions; or
3. Deny the application as submitted by the Applicant.

<u>REVIEW CRITERIA & ANALYSIS:</u> Town Staff and the Planning Commission are required to consider the criteria set forth in Section 3.17.3 of the Unified Development Ordinance in assessing an application for a Certificate of Appropriateness- HCO. These criteria are provided below followed by a Staff Finding based upon review of the application submittals to date.

1. <u>Section 3.17.3.A.</u> The proposed development must be in conformance with applicable landscaping, lighting, and architectural provisions provided in Article 5, Design Standards.

    a) *Finding.* The project is located in the New Riverside PUD and is part of the New Riverside Village Master Plan. There are specific design standards established by the PUD via the Beaufort County 1990/3 Zoning and Highway Corridor Overlay District (HCOD) within of the Town of Bluffton Zoning and Development Standards Ordinance (BZDSO), approved September 1999, modified June 2000, (Attachment 6) which are attached to the PUD through Appendix 1.3 of the Concept Plan. In addition to these standards, as a result of the adoption the Town of Bluffton's Stormwater Design Manual (SWDM) in September of 2021, the landscaping design criteria of Article 5 of the current Unified Development Ordinance are applicable to review of this application.

2. Section 3.17.3.B. The proposed development shall be in conformance with any approved Development Agreement, PUD Concept Plan, PUD Master Plan, Subdivision Plan, or any other agreements or plans that are applicable.

   The property is in the New Riverside PUD and is identified on the New Riverside Village Master Plan as a General Store. As a result, the property is subject to the Beaufort County 1990/3 Zoning and Highway Corridor Overlay District (HCOD) within of the Town of Bluffton Zoning and Development Standards Ordinance (BZDSO)Zoning and Development Standards Ordinance and Design Guidelines contain architectural, landscaping, and lighting design standards for properties located in the Highway Corridor Overlay District (HCOD).

A. New Riverside PUD/PUD CONCEPT PLAN
The New Riverside PUD refers to the Beaufort County 1990/3 Zoning and Development Standards Ordinance (ZDSO) and The Town of Bluffton Zoning and Development Standards Ordinance (BZDSO) Highway Corridor Overlay District (HCOD) for development standards.

Landscape

1) *Finding – Foundation Buffer.* Per Section 5.15.8.D.(2) of the BZDSO, a landscaped buffer of at least eight (8) feet wide shall be maintained between any structure and any parking or driving areas, except for loading areas and areas where drive-through facilities are utilized. This space is to be reserved for plant material, either existing or planted. No such space is required at the rear of the building but is encouraged. Sidewalks and handicap ramps may be placed adjacent to the buffer on either side. The buffer may be penetrated to provide access to the buildings and is not required in loading areas. As proposed, the east side of the Refuel building does not meet this minimum requirement. The Landscape Plan must be updated to include additional plantings to create an eight (8) foundation buffer along the east side.

2) *Finding – Landscaped Peninsula.* Per Section 5.15.8.D.(5) of the BZDSO Each Landscaped Peninsula shall contain one (1) broad-leaf overstory tree with a minimum size of two and one half (2 ½") caliper inches dbh and a minimum height of ten (10') feet. The Washington Hawthorns used as Landscaped Peninsula trees are proposed at 1 ½" caliper dbh and must be increased.

Architecture

1) *Finding –Appropriate Exterior Materials.* Per Section 5.15.9.(C)(3) of the BZDSO, accessory structures should be architecturally compatible with primary structures. No elevations or details have been provided for the proposed screening for the propane enclosure and ice/outdoor coolers. Additional information on the proposed screening must be provided for review. It should be noted that exposed metal caging is not appropriate as this elevation faces towards Highway 46.

2) *Finding* – Appropriate Exterior Materials. Per Section 5.15.9.(D)(2) pitched roofs are defined as 4 and 12 pitch or greater. The carwash proposes the use of a 2 and 12 pitched roof. The roof pitch must be increased to meet this requirement. Further, a determination on the appropriateness of the curved gas canopies must be made, as they are not a typical roof type to the Lowcountry.

3) *Finding. Other Requirements.* Per Section 5.15.12(A) of the BZDSO, heating, ventilating, and air conditioning equipment, duct work, air compressors, and other fixed operating machinery shall be either screened from view or located so that such items are not visible from the highway. Additional information must be provided regarding the location of proposed service yards and utilities. Should they be located on the roof, a roof plan must be provided as not enough information has been provided to ensure they will be screened from view.

B. PUD MASTER PLAN

The New Riverside Village Master Plan document refers to the New Riverside PUD for design standards.

1) *Finding. New Riverside Village Master Plan.* As there are no design guidelines established in the New Riverside Village Master Plan for the site, no additional design review was performed.

C. DECLARATION OF COVENANTS, CONDITIONS, AND RESTRICTIONS
The Declaration of Covenants, Conditions, and Restrictions for the New Riverside Village Master Plan.

1) *Finding. Declaration of Covenants, Conditions, and Restrictions for New Riverside Village.* The applicant must provide a letter of approval from the Declarant for the covenants and restriction which are recorded with the New Riverside Village Master Plan.

3. Section 3.17.3.C. The application must comply with applicable requirements in the Application Manual.

a. *Finding.* The application has been reviewed by Town Staff and has been determined to be complete and that it meets all requirements of the Applications Manual. It should be noted that any proposed signage is reviewed through a Sign Permit process separate from this review. Any proposed signage will need to submit Sign Permits for review and approval prior to installation.

TOWN STAFF RECOMMENDATION: Town Staff finds that with the conditions noted below, the requirements of Section 3.17.3 of the Unified Development Ordinance will be met and recommends that the Planning Commission approve the application with the following conditions:

1. Landscape.

   a. Per Section 5.15.8.D.(2) of the BZDSO, the Landscape Plan must be updated to include additional plantings to create an eight (8) foundation buffer along the east side.
   b. Per Section 5.15.8.D.(5) of the BZDSO, the 1 ½" caliper dbh Washington Hawthorns used as Landscaped Peninsula trees must be increased to a minimum of 2" calipers.
2. Architecture
   a. Per Section 5.15.9.(C)(3), elevations showing the proposed propane enclosure and ice/outdoor coolers must be provided to ensure the design meets the requirements of the design standards.
   b. Per Section 5.15.9.(D)(2), the 2 and 12 pitched roof must be revised to a minimum of 4 and 12.
   c. Per Section 5.15.9.(D)(2), a determination on the appropriateness of the curved gas canopies must be made, as they are not a typical roof type to the Lowcountry.
   d. Per Section 5.15.12(A), additional information must be provided regarding the location of proposed service yards and utilities, and if proposed on the roof, a roof plan provided as not enough information has been provided to ensure they will be screened from view.

3. Additional Requirements
   a. A letter of approval from the Declarant for the covenants and restriction which are recorded with the New Riverside Village Master Plan.
   b. All comments must be addressed, and a Final Development Plan must be approved prior to issuance of the Certificate of Appropriateness – HCO.
   c. Signage Permits must be submitted to the Town of Bluffton for review and approval for the signage proposed at each site in the proposed development.

ATTACHMENTS:

1. Application and Narrative
2. Site Plan, Elevations and Materials
3. Landscape Plans
4. Lighting Plan and Details
5. DRC Comments, May 10, 2023

ATTACHMENT 1

TOWN OF BLUFFTON
CERTIFICATE OF APPROPRIATENESS
HIGHWAY CORRIDOR OVERLAY APPLICATION

Growth Management Custome
20 Bridge Street
Bluffton, SC 29910
(843)706-4500
www.townofbluffton.sc.gov
applicationfeedback@townofbluffton.com

Applicant	Property Owner
Name: Narciso Lira - Odyssey Services Group	**Name:** Ian Bowers - Refuel Operating Company LLC
Phone: 832.373.7577	**Phone:** (865) 337-9372
Mailing Address: 9540 Garland Rd Dallas, TX 75218	**Mailing Address:** 547 Longpoint Rd, Mt. Pleasant, SC 29464
E-mail: narciso.lira@odysseyservicesgroup.com	**E-mail:** ibowers@refuelmarket.com
Town Business License # (if applicable):	

Project Information

Project Name: Refuel 1062 Bluffton	**Acreage:** 1.58
Project Address: 130E Parkside Commons, Bluffton, SC 29910	
Zoning District:	
Tax Map Number(s): R610-036-000-3713.0000	
Project Description: Construction of Refuel convenience store/gas station with car wash.	

Minimum Requirements for Submittal

- [x] **1.** Mandatory Application Check-In meeting scheduled.
- [x] 2. Di**gital files** drawn to scale **of the Site Plan(s).**
- [x] 3. Digital files drawn to scale **of the Architectural Plan(s).**
- [x] 4. **Recorded deed and plat showing proof of property ownership.**
- [x] 5. **Project Narrative describing reason for application and compliance with the criteria in Article 3 of the UDO.**
- [x] 6. **Material samples and color swatches for all proposed materials.**
- [x] 7. **An Application Review Fee as determined by the Town of Bluffton Master Fee Schedule. Checks made payable to the Town of Bluffton.**

Note: **A Pre-Application Meeting is required prior to Application submittal.**

Disclaimer: **The Town of Bluffton assumes no legal or financial liability to the applicant or any third party whatsoever by approving the plans associated with this application.**

I hereby acknowledge by my signature below that the foregoing application is complete and accurate and that I am the owner of the subject property. As applicable, I authorize the subject property to be posted and inspected.

Property Owner Signature: Ian Bowers VP of Legal **Date:** 4.5.23

Applicant Signature: **Date:** 4-12-23

For Office Use

Application Number:	***Date Received:***
Received By:	***Date Approved:***

ATTACHMENT 1
TOWN OF BLUFFTON
CERTIFICATE OF APPROPRIATENESS- HIGHWAY CORRIDOR OVERLAY (HCO) APPLICATION PROCESS NARRATIVE

The following Process Narrative is intended to provide Applicants with an understanding of the respective application process, procedures and Unified Development Ordinance (UDO) requirements for obtaining application approval in the Town of Bluffton. While intended to explain the process, it is not intended to repeal, eliminate or otherwise limit any requirements, regulations or provisions of the Town of Bluffton's Unified Development Ordinance. The Town of Bluffton's Mission and Vision Statements help navigate staff to ensure that the goals outlined by Town Council are being met. As each project is being reviewed, Town staff will use the Mission Statement, Vision Statement, The Covenant for Bluffton and the current Strategic Plan to guide their review. **Compliance with these procedures will minimize delays and assure expeditious application review.**

Step 1. Pre-Application Meeting	**Applicant & Staff**
Prior to the filing of a Certificate of Appropriateness - HCO Application, the Applicant is required to consult with the UDO Administrator or their designee at a Pre-Application Meeting for comments and advice on the appropriate application process and the required procedures, specifications, and applicable standards required by the UDO.	
Step 2. Application Check-In Meeting	**Applicant & Staff**
Upon receiving input from Staff at the Pre-Application Meeting, the Applicant shall submit the Certificate of Appropriateness - HCO Application and required submittal materials during a <u>mandatory</u> Application Check-In Meeting where the UDO Administrator or designee will review the submission for completeness.	
Step 3. Review by UDO Administrator	**Staff**
If the UDO Administrator or designee **determines that the Certificate of Appropriateness - HCO Application is complete, it shall be** presented to the Planning Commission.	
Step 4. Planning Commission Meeting	**Applicant, Staff & Planning Commission**
The PC shall review the Certificate of Appropriateness - HCO Application for compliance with the criteria and provisions in the UDO. The PC may approve, approve with conditions, or deny the application.	
Step 5. Issue Certificate of Appropriateness	**Staff**
If the PC **approves the Certificate of Appropriateness - HCO Application, the UDO Administrator** or designee **shall issue the Certificate of Appropriateness - HCO.**	

Katie Peterson, AICP
Senior Planner
Town of. Bluffton
20 Bridge Street
Bluffton, SC 29910

March 28, 2023

RE: Refuel 1062
Certificate of Appropriateness HCO

Ms. Peterson,

We are submitted our application for certificate of appropriateness for Highway Corridor Overlay for a proposed Refuel Convenience Store. The project consists of a 4,958 SF convenience store with 6 dispensers. There is also a proposed car wash onsite. The proposed development is located within the New Riverside approved Conceptual Master Plan. The site layout is in line with the lot's Conceptual Master Plan incorporating the required buffers which helps create/protect open spaces.

The proposed design promotes the requirements outlined within HCO Districts requirements. The design promotes protection of architectural and historical heritage of the Town of Bluffton through it's Low-Country design elements. The design enhances the cultural image and character of the Town of Bluffton's historical charm.

Refuel's sense of community involvement embraces community unity and enhancement of the Town's cultural image.

Upon review of the provided documents, do not hesitate to contact me with any questions you may have.

Sincerely,

Narciso Lira
Odyssey Services Group

ATTACHMENT 2

mark	date	by	description
1	04/12/2023	SMB	TOWN COMMENTS
2	05/26/2023	SMB	CIVIL REVISIONS

revisions

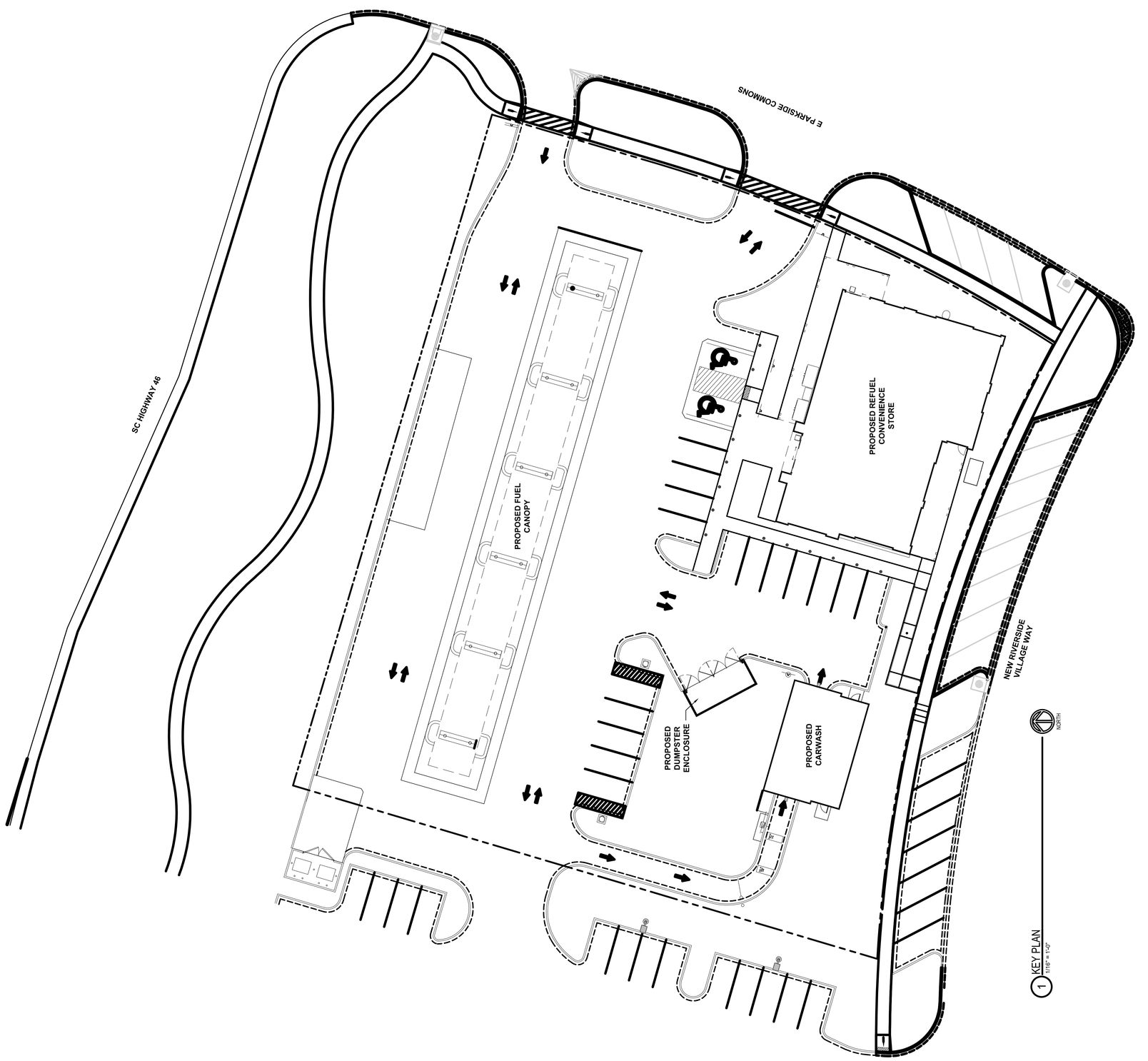
date	03/24/2023
project	231009-06
designed	SMB
drawn	SMB
checked	DAE

RRMM ARCHITECTS, PC
1317 Executive Blvd, Suite 200
Chesapeake, VA 23320
(757)622-2626 / fax (757)622-8883

KEY PLAN

NEW RIVERSIDE - STORE # 1062
SC HIGHWAY 46 & E PARKSIDE COMMONS
BLUFFTON, SOUTH CAROLINA

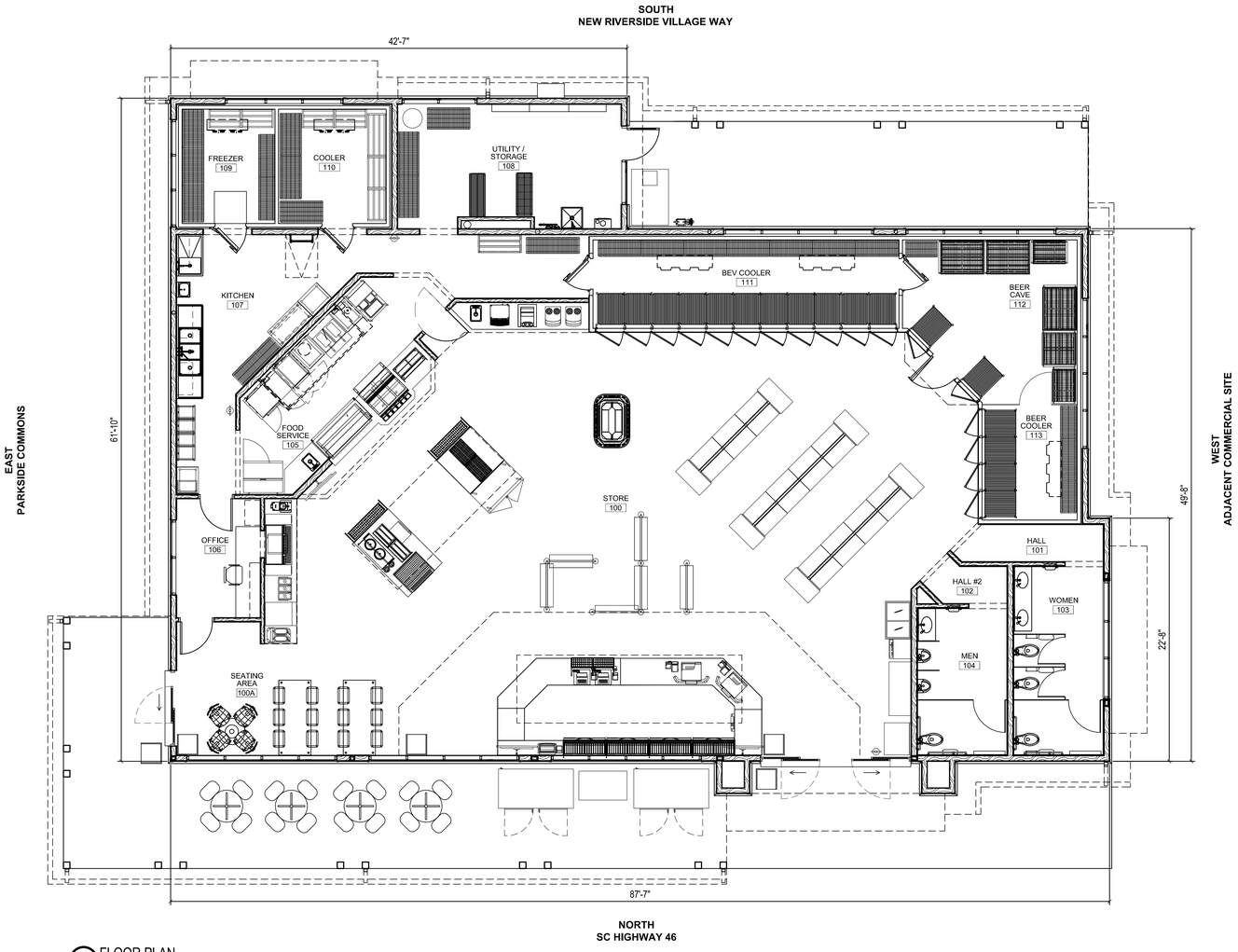
sheet 1



1 KEY PLAN
1/16" = 1'-0"

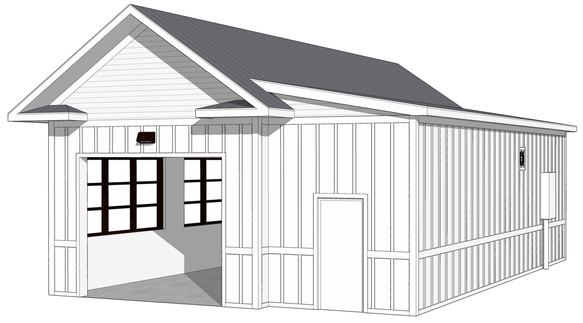
3 PERSPECTIVE FROM NORTHWEST

2 PERSPECTIVE FROM SOUTHEAST



1 FLOOR PLAN
3/16" = 1'-0"

3 CAR WASHPERSPECTIVE FROM NORTHEAST



4 CAR WASHPERSPECTIVE FROM SOUTHWEST

mark	date	by	description
2	05/26/2023	SMB	CIVIL REVISIONS
1	04/12/2023	SMB	TOWN COMMENTS

revisions

date	03/24/2023	
project	2319046	
designed	SMB	
drawn	SMB	
checked	DAE	

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Chesapeake, VA 23320
(757)622-2828 / fax (757)622-6883

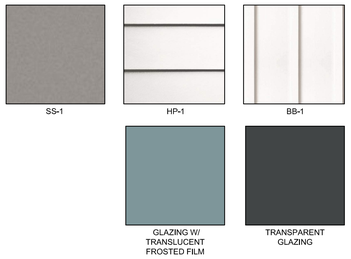
STORE FLOOR PLAN AND PERSPECTIVE VIEWS

NEW RIVERSIDE - STORE # 1062
SC HIGHWAY 46 & E PARKSIDE COMMONS
BLUFFTON, SOUTH CAROLINA

sheet
2

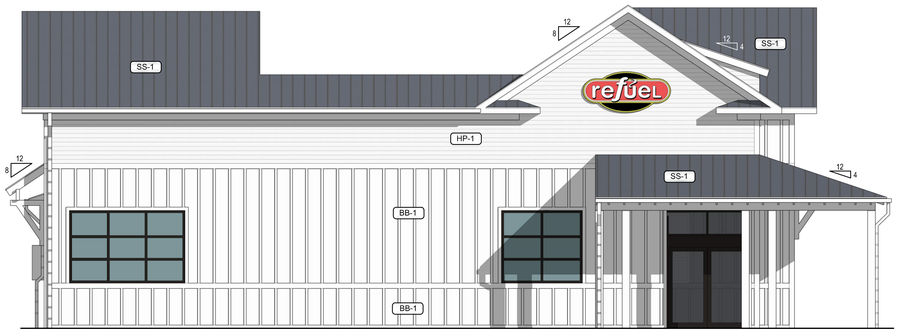
1/16"=1'-0" 0 4' 8' 16' 24' | 3/32"=1'-0" 0 4' 8' 16' | 1/8"=1'-0" 0 4' 8' 12' | 3/16"=1'-0" 0 2' 4' 6' 8' | 1/4"=1'-0" 0 2' 4' 6' | 3/8"=1'-0" 0 1' 2' 3' 4' | 1/2"=1'-0" 0 6" 1' 2' 3' | 3/4"=1'-0" 0 6" 1' 2' | 1"=1'-0" 0 3" 6" 9" 1' 1.5' | 1 1/2"=1'-0" 0 3" 6" 9" 1' | 3"=1'-0" 0 1" 2" 3" 4" 5" 6" | 6"=1'-0" 0 1" 2" 3"

EXTERIOR MATERIALS SCHEDULE			
(NOT ALL MATERIALS IN SCHEDULE ARE USED)			
NO.	MATERIAL	MANUFACTURER	COLOR
BB-1	BOARD & BATTEN SIDING	JAMES HARDIE	WHITE
HP-1	HARDIE PLANK SIDING	JAMES HARDIE	WHITE
SS-1	STANDING SEAM METAL ROOF	METAL ROOFING SYSTEMS	MRS SYSTEM 2000 PRE-WEATHERED GALVALUME
S-1	ALUMINUM STOREFRONT GLAZING	KAWNEER	#29 BLACK FINISH



4 ELEVATION - REAR (SOUTH FACE - NEW RIVERSIDE VILLAGE WAY)
3/16" = 1'-0"

3 ELEVATION - RIGHT (WEST FACE)
3/16" = 1'-0"



2 ELEVATION - LEFT (EAST FACE - PARKSIDE COMMONS)
3/16" = 1'-0"

1 ELEVATION - FRONT (NORTH FACE - SC HIGHWAY 46)
3/16" = 1'-0"

mark	date	by	description
2	05/26/2023	SMB	CIVIL REVISIONS
1	04/12/2023	SMB	TOWN COMMENTS

revisions

date	03/24/2023	DAE
project	23106-06	
designed	SMB	
drawn	SMB	
checked		

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CONVENIENCE STORE ELEVATIONS

NEW RIVERSIDE - STORE # 1062
SC HIGHWAY 46 & E PARKSIDE COMMONS
BLUFFTON, SOUTH CAROLINA

sheet
3

1/16"=1'-0" 0 4' 8' 16' 24' | 3/32"=1'-0" 0 4' 8' 16' | 1/8"=1'-0" 0 4' 8' 12' | 3/16"=1'-0" 0 2' 4' 6' 8' | 1/4"=1'-0" 0 2' 4' 6' | 3/8"=1'-0" 0 1' 2' 3' 4' | 1/2"=1'-0" 0 6" 1' 2' 3' | 3/4"=1'-0" 0 6" 1' 2' | 1"=1'-0" 0 3" 6" 9" 1' 1.5' | 1 1/2"=1'-0" 0 3" 6" 9" 1' | 3"=1'-0" 0 1" 2" 3" 4" 5" 6" | 6"=1'-0" 0 1" 2" 3"

EXTERIOR MATERIALS SCHEDULE

(NOT ALL MATERIALS IN SCHEDULE ARE USED)

NO.	MATERIAL	MANUFACTURER	COLOR
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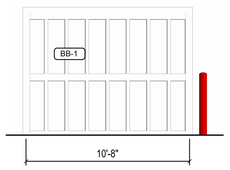
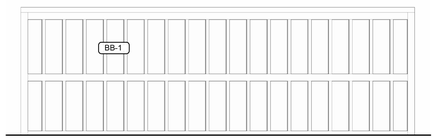
HP-1	HARDIE PLANK SIDING	JAMES HARDIE	WHITE
SS-1	STANDING SEAM METAL ROOF	METAL ROOFING SYSTEMS	MRS SYSTEM 2000 PRE-WEATHERED GALVALUME
S-1	ALUMINUM STOREFRONT GLAZING	KAWNEER	#29 BLACK FINISH

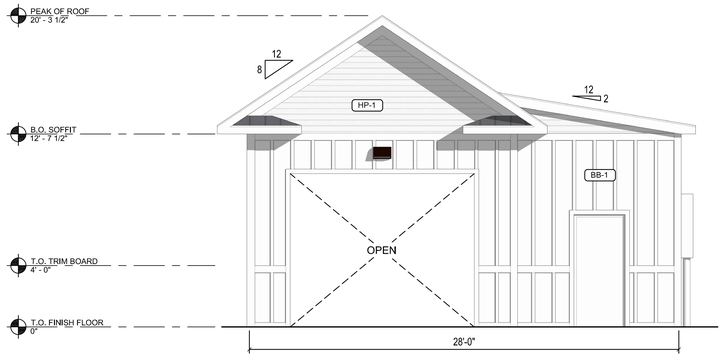
1 DUMPSTER ENCLOSURE ELEVATION - FRONT
1/4" = 1'-0"



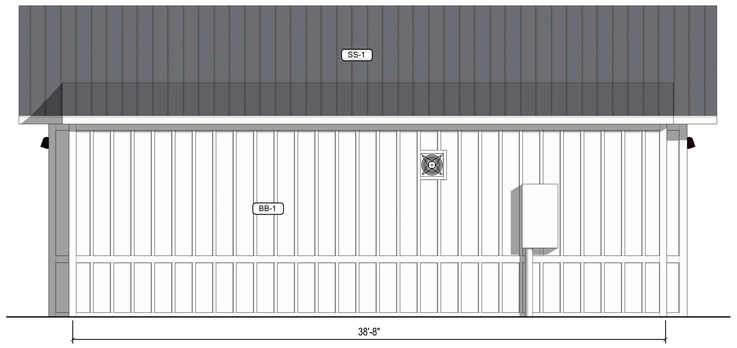
2 DUMPSTER ENCLOSURE ELEVATION - LEFT
1/4" = 1'-0"



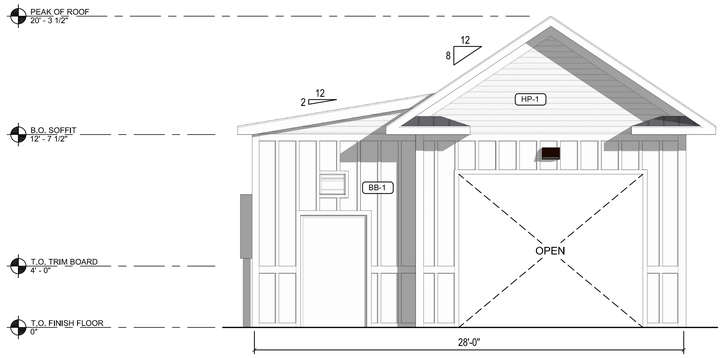
3 DUMPSTER ENCLOSURE ELEVATION - REAR
1/4" = 1'-0"



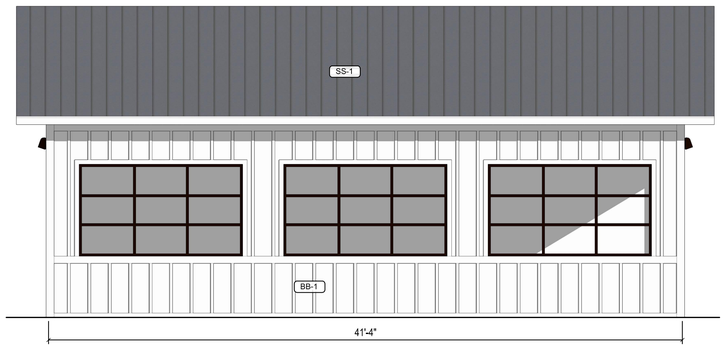
4 CAR WASH ELEVATION - FRONT
1/4" = 1'-0"



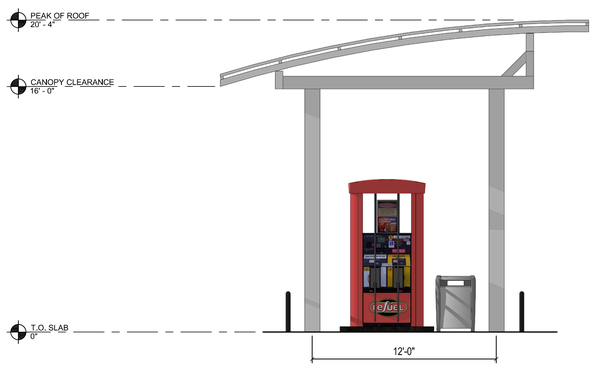
5 CAR WASH ELEVATION - RIGHT
1/4" = 1'-0"



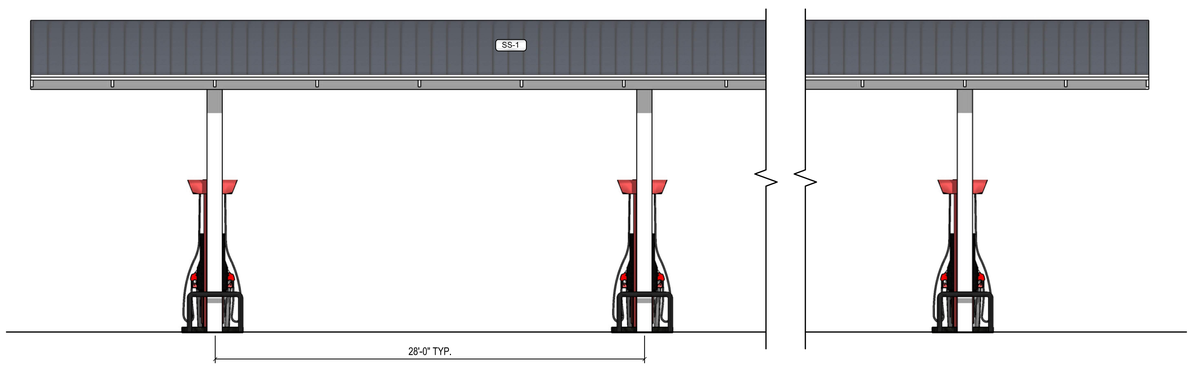
6 CAR WASH ELEVATION - REAR
1/4" = 1'-0"



7 CAR WASH ELEVATION - LEFT
1/4" = 1'-0"



8 FUELING CANOPY ELEVATION - SHORT
1/4" = 1'-0"



9 FUELING CANOPY ELEVATION - LONG
1/4" = 1'-0"

mark	date	description	by
2	05/26/2023	CIVIL REVISIONS	SMB
1	04/12/2023	TOWN COMMENTS	SMB

revisions

date	03/24/2023
project	23150-46
designed	SMB
drawn	SMB
checked	DAE

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CAR WASH AND DUMPSTER ENCOSURE ELEVATIONS

NEW RIVERSIDE - STORE # 1062
SC HIGHWAY 46 & E PARKSIDE COMMONS
BLUFFTON, SOUTH CAROLINA

sheet
4

1/16"=1'-0" 0 4' 8' 16' 24' | 3/32"=1'-0" 0 4' 8' 16' | 1/8"=1'-0" 0 4' 8' 12' | 3/16"=1'-0" 0 2' 4' 6' 8' | 1/4"=1'-0" 0 2' 4' 6' | 3/8"=1'-0" 0 1' 2' 3' 4' | 1/2"=1'-0" 0 6" 1' 2' 3' | 3/4"=1'-0" 0 6" 1' 2' | 1"=1'-0" 0 3" 6" 9" 1' 1.5' | 1 1/2"=1'-0" 0 3" 6" 9" 1' | 3"=1'-0" 0 1" 2" 3" 4" 5" 6" | 6"=1'-0" 0 1" 2" 3"

CORE STATES GROUP
1900 SOUTH BLVD, SUITE 225
CHARLOTTE, NC 28203
PHONE (704) 247-4907
DPARRY@CORE-STATES.COM
CORESTATES, INC.
FIRM CERTIFICATION
NO. C-2880

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CLIENT

refuel

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THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON DESIGN DATA AND MAY VARY FROM THE ACTUAL LOCATION AND ELEVATION AS DETERMINED BY MEASUREMENTS TAKEN IN THE FIELD. CORESTATES, INC. DOES NOT GUARANTEE THAT LOCATIONS SHOWN ARE EXACT. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS.

PALMETTO UTILITY PROTECTION SERVICE
SOUTH CAROLINA PUPS

REVISIONS

REV	DATE	COMMENT	BY

DOCUMENT
PRELIMINARY DEVELOPMENT PLAN

SITE LOCATION
NEW RIVERSIDE VILLAGE, BLUFFTON, SC 29910

CERTIFICATE OF AUTHORIZATION
SOUTH CAROLINA CORESTATES INC. No. 3078 CERTIFICATE OF AUTHORIZATION

ENGINEER SEAL
SOUTH CAROLINA PROFESSIONAL ENGINEER No. 40407 BRIAN T. SEARCY

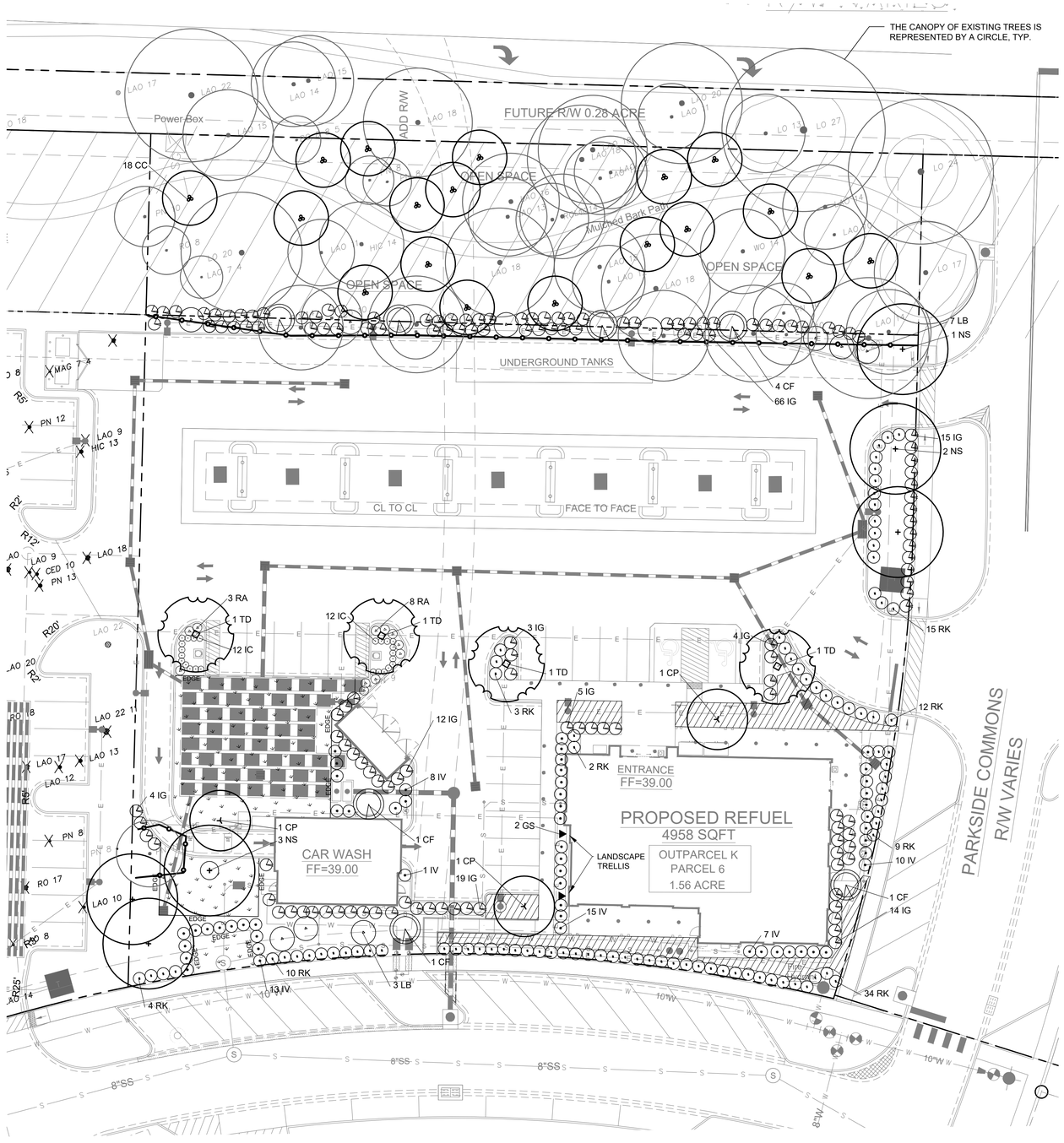
05/30/2023
BRIAN SEARCY, PE
PROFESSIONAL ENGINEER
SC LICENSE #40407

SHEET TITLE
CONSTRUCTION DETAILS

JOB #:	RFL.35149
DATE:	05/25/2022
SCALE:	
DRAWN BY:	KB
CHECKED BY:	BS

SHEET NO.
C13

NATIONAL
NATIONAL
NATIONAL
NATIONAL



PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES
		TREES				
CC	18	CERCIS CANADENSIS	EASTERN REDBUD	1.5" CAL.	PER PLAN	MINIMUM 12' HEIGHT
CP	3	CRATAEGUS PHAENOPYRUM 'PRINCETON SENTRY'	WASHINGTON HAWTHORN	1.5" CAL.	PER PLAN	MINIMUM 12' HEIGHT
NS	6	NYSSA SYLVATICA	BLACK GUM	6" CAL.	PER PLAN	MINIMUM 12' HEIGHT
TD	4	TAXODIUM DISTICHUM	BALD CYPRESS	6" CAL.	PER PLAN	MINIMUM 12' HEIGHT
		SHRUBS				
CF	7	CALYCANTHUS FLORIDUS	CAROLINA ALLSPICE	3' MIN. HT.	8' O.C.	
IC	24	ILEX CRENATA 'SKY PENCIL'	SKY PENCIL HOLLY	3' MIN. HT.	2' O.C.	
IG	99	ILEX GLABRA 'SHAMROCK'	INKBERRY	3' MIN. HT.	4' O.C.	
IV	47	ILEX VERTICILLATA 'BERRY POPPINS' & 'MR. POPPINS'	WINTERBERRY	3' MIN. HT.	4' O.C.	20% OF TOTAL TO BE MR. POPPINS FOR POLLINATION
LB	10	LINDERA BENZOIN	SPICEBUSH	3' MIN. HT.	10' O.C.	
RA	11	ROSA X 'NOAMEL'	APPLEBLOSSOM FLOWERCARPET ROSE	30" MIN. HT.	3' O.C.	
RK	87	ROSA 'KNOCKOUT'	SHRUB ROSE	30" MIN. HT.	4' O.C.	
		VINES				
GS	2	GELSEMIUM SEMPERVIRENS	CAROLINA JESSAMINE	3 GAL.	5' O.C.	
		GROUNDCOVER				
		GROUNDCOVER MIX				
	124	ERAGROSTIS SPECTABILIS	PURPLE LOVE GRASS	1 GAL.	30" O.C.	40% OF AREA
	44	ACHILLEA MILLEFOLIUM	YARROW	1 GAL.	3' O.C.	20% OF AREA
	44	COREOPSIS VERTICILLATA	THREADLEAF COREOPSIS	1 GAL.	3' O.C.	20% OF AREA
	44	PENSTEMON 'DARK TOWERS'	PENSTEMON	1 GAL.	3' O.C.	20% OF AREA
	3,313 SF	SOD: TIFWAY 419 BERMUDA	LAWN	SOD		
	9,337 SF	MULCH: SHREDDED HARDWOOD				3" DEPTH; ALL PLANTING BEDS EXCEPT LAWN

LEGEND

EDGE — METAL EDGE: SEE LANDSCAPE SPECIFICATIONS

CANOPY COVERAGE TABLE	
LOT COVERAGE AREA OF EXISTING CANOPY	14,796 SF
LOT COVERAGE AREA OF PROPOSED CANOPY	12,031 SF
TOTAL CANOPY COVERAGE AREA	26,827 SF
TOTAL LOT AREA	68,784 SF
LOT AREA NOT COVERED BY TREE CANOPY	41,957 SF
TREE CANOPY AS % OF LOT COVERAGE	39.0%

LANDSCAPE REQUIREMENTS

1) BUFFER AT RIGHT-OF-WAY: THE EXISTING VEGETATION IS LEFT UNTOUCHED.
   LENGTH OF RIGHT-OF-WAY: 256 LF
   OVERSTORY TREES REQUIRED: 16 TREES (6 PER 100 LF)
   OVERSTORY TREES PROVIDED: 32 TREES (EXISTING TREES)
   UNDERSTORY TREES REQUIRED: 18 TREES (7 PER 100 LF)
   UNDERSTORY TREES PROVIDED: 18 TREES
   SHRUBS REQUIRED: 77 SHRUBS (30 PER LF)
   SHRUBS PROVIDED: 77 SHRUBS
2) PARKING LOT SCREENING: SHRUBS HAVE BEEN PLANTED AROUND THE EDGES OF THE PROPERTY TO SCREEN THE PARKING LOT FROM VIEW.
3) PARKING LOT PLANTING: THE PARKING LOT ISLANDS HAVE BEEN PLANTED WITH SHRUBS AND 1 TREE PER ISLAND.
4) FOUNDATION PLANTING: A MIX OF TREES, SHRUBS, VINES, AND GROUNDCOVER ARE SHOWN AROUND THE FOUNDATION OF THE BUILDING.
5) TREE MITIGATION: TEN PROPOSED SHADE TREES ARE SHOWN ON THE PLAN. THEY ARE NOTED TO BE PLANTED AT 6" CALIPER TO MAXIMIZE MITIGATION. THIS IS THE MAXIMUM NUMBER OF SHADE TREES THAT CAN BE PLANTED DUE TO CONFLICTS WITH UTILITIES. ONE EXISTING TREE IS EXPECTED TO BE RETAINED WITHIN THE DEVELOPED AREA AND CAN COUNT TOWARD MITIGATION. THE PLAN ALSO INCLUDES 21 SMALL TREES.

LANDSCAPE PLAN NOTES

1) SOIL TYPE PER NRCS SOIL SURVEY: WANDO FINE SAND & SEABROOK FINE SAND
2) THERE IS 1 EXISTING TREE ON SITE THAT WILL BE USED FOR LANDSCAPE REQUIREMENTS.
3) SINCE THE PROPOSED SHADE TREES ARE SIZED AT 6" CALIPER, THE PROPOSED TREES ACCOUNTS FOR 18 MITIGATION TREES; TOTAL OF 19 MITIGATION TREES INCLUDING THE EXISTING TREE TO BE RETAINED.
4) FOR THE GROUNDCOVER MIX, THE ENTIRE AREA IS TO BE PLANTED WITH THE CHASMANTHIUM, AND THE OTHER THREE SPECIES ARE TO BE RANDOMLY INTERMINGLED.

ROOT BARRIERS

THE CONTRACTOR SHALL INSTALL ROOT BARRIERS NEAR ALL NEWLY-PLANTED TREES THAT ARE LOCATED WITHIN FIVE (5) FEET OF PAVING OR CURBS. ROOT BARRIERS SHALL BE "CENTURY" OR "DEEP-ROOT" 24" DEEP PANELS (OR EQUAL). BARRIERS SHALL BE LOCATED IMMEDIATELY ADJACENT TO HARDSCAPE. INSTALL PANELS PER MANUFACTURER'S RECOMMENDATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR USE ROOT BARRIERS OF A TYPE THAT COMPLETELY ENCIRCLE THE ROOTBALL.

EVERGREEN DESIGN GROUP
(800) 680-6630
170 Meeting St., Ste 110
Charleston, SC 29401
www.EvergreenDesignGroup.com

GRAPHIC SCALE
20 10 5 0 20
1" = 20'

N

CORE STATES GROUP
CORESTATES, INC.
FIRM CERTIFICATION NO. C-2880
1900 SOUTH BLVD., SUITE 225
CHARLOTTE, NC 28203
PHONE (704) 247-4907
DPARRY@CORE-STATES.COM

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CLIENT

refuel

811 Know what's below. Call before you dig.

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON DESIGN DRAWINGS, RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. CORESTATES, INC. DOES NOT GUARANTEE THE ACCURACY OF THE SAME. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO VERIFY EXACT FIELD LOCATIONS OF UTILITIES.

PALMETTO UTILITY PROTECTION SERVICE
SOUTH CAROLINA PUPS

REVISIONS

REV	DATE	COMMENT	BY

DOCUMENT
PRELIMINARY DEVELOPMENT PLAN

SITE LOCATION
NEW RIVERSIDE VILLAGE, BLUFFTON, SC 29910

CERTIFICATE OF AUTHORIZATION

ENGINEER SEAL
State of South Carolina
REGISTERED LANDSCAPE ARCHITECT
NO. 1633
LISA GUTSHAW
05-24-2023

SHEET TITLE
PRELIMINARY LANDSCAPING PLAN

JOB #:	RFL.35149
DATE:	12/13/2022
SCALE:	AS SHOWN
DRAWN BY:	KB
CHECKED BY:	BS

SHEET NO.
LP-1

PLANTING SPECIFICATIONS

GENERAL

A. QUALIFICATIONS OF LANDSCAPE CONTRACTOR
1. ALL LANDSCAPE WORK SHOWN ON THESE PLANS SHALL BE PERFORMED BY A SINGLE FIRM SPECIALIZING IN LANDSCAPE PLANTING.
2. A LIST OF SUCCESSFULLY COMPLETED PROJECTS OF THIS TYPE, SIZE AND NATURE MAY BE REQUESTED BY THE OWNER FOR FURTHER QUALIFICATION MEASURES.
3. THE LANDSCAPE CONTRACTOR SHALL HOLD A VALID CONTRACTOR'S LICENSE ISSUED BY THE APPROPRIATE LOCAL JURISDICTION.

B. SCOPE OF WORK
1. WORK COVERED BY THESE SECTIONS INCLUDES THE FURNISHING AND PAYMENT OF ALL MATERIALS, LABOR, SERVICES, EQUIPMENT, LICENSES, TAXES AND ANY OTHER ITEMS THAT ARE NECESSARY FOR THE EXECUTION, INSTALLATION AND COMPLETION OF ALL WORK, SPECIFIED HEREIN AND / OR SHOWN ON THE LANDSCAPE PLANS, NOTES, AND DETAILS.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER SUCH WORK, INCLUDING ALL INSPECTIONS AND PERMITS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES IN SUPPLY, TRANSPORTATION AND INSTALLATION OF MATERIALS.
3. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITY LINES (WATER, SEWER, ELECTRICAL, TELEPHONE, GAS, CABLE, TELEVISION, ETC.) PRIOR TO THE START OF ANY WORK.

PRODUCTS

A. ALL MANUFACTURED PRODUCTS SHALL BE NEW.
B. CONTAINER AND BALLED-AND-BURLAPPED PLANTS:
1. FURNISH NURSERY-GROWN PLANTS COMPLYING WITH ANSI Z60.1-2014. PROVIDE WELL-SHAPED, FULLY BRANCHED, HEALTHY, VIGOROUS STOCK FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT. ALL PLANTS WITHIN A SPECIES SHALL HAVE SIMILAR SIZE, AND SHALL BE OF A FORM TYPICAL FOR THE SPECIES. ALL TREES SHALL BE OBTAINED FROM SOURCES WITHIN 200 MILES OF THE PROJECT SITE, AND WITH SIMILAR CLIMACTIC CONDITIONS.
2. ROOT SYSTEMS SHALL BE HEALTHY, DENSELY BRANCHED ROOT SYSTEMS, NON-POT-BOUND, FREE FROM ENCIRCLING AND/OR GIRDLING ROOTS, AND FREE FROM ANY OTHER ROOT DEFECTS (SUCH AS J-SHAPED ROOTS).
3. TREES MAY BE PLANTED FROM CONTAINERS OR BALLED-AND-BURLAPPED (B&B), UNLESS SPECIFIED ON THE PLANTING LEGEND. BARE-ROOT TREES ARE NOT ACCEPTABLE.
4. ANY PLANT DEEMED UNACCEPTABLE BY THE LANDSCAPE ARCHITECT OR OWNER SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND SHALL BE REPLACED WITH AN ACCEPTABLE PLANT OF LIKE TYPE AND SIZE AT THE CONTRACTOR'S OWN EXPENSE. ANY PLANTS APPEARING TO BE UNHEALTHY, EVEN IF DETERMINED TO STILL BE ALIVE, SHALL NOT BE ACCEPTED. THE LANDSCAPE ARCHITECT AND OWNER SHALL BE THE SOLE JUDGES AS TO THE ACCEPTABILITY OF PLANT MATERIAL.
5. ALL TREES SHALL BE STANDARD IN FORM UNLESS OTHERWISE SPECIFIED. TREES WITH CENTRAL LEADERS WILL NOT BE ACCEPTED IF LEADER IS DAMAGED OR REMOVED. PRUNE ALL DAMAGED TWIGS AFTER PLANTING.
6. CALIPER MEASUREMENTS FOR STANDARD (SINGLE TRUNK) TREES SHALL BE AS FOLLOWS: SIX INCHES ABOVE THE ROOT FLARE FOR TREES UP TO AND INCLUDING FOUR INCHES IN CALIPER, AND TWELVE INCHES ABOVE THE ROOT FLARE FOR TREES EXCEEDING FOUR INCHES IN CALIPER.
7. MULTI-TRUNK TREES SHALL BE MEASURED BY THEIR OVERALL HEIGHT, MEASURED FROM THE TOP OF THE ROOT BALL. WHERE CALIPER MEASUREMENTS ARE USED, THE CALIPER SHALL BE CALCULATED AS ONE-HALF OF THE SUM OF THE CALIPER OF THE THREE LARGEST TRUNKS.
8. ANY TREE OR SHRUB SHOWN TO HAVE EXCESS SOIL PLACED ON TOP OF THE ROOT BALL, SO THAT THE ROOT FLARE HAS BEEN COMPLETELY COVERED, SHALL BE REJECTED.

C. SOD: PROVIDE WELL-ROOTED SOD OF THE VARIETY NOTED ON THE PLANS. SOD SHALL BE CUT FROM HEALTHY, MATURE TURF WITH SOIL THICKNESS OF 3/4" TO 1". EACH PALLET OF SOD SHALL BE ACCOMPANIED BY A CERTIFICATE FROM SUPPLIER STATING THE COMPOSITION OF THE SOD.

D. TOPSOIL: SANDY TO CLAY LOAM TOPSOIL, FREE OF STONES LARGER THAN ½ INCH, FOREIGN MATTER, PLANTS, ROOTS, AND SEEDS.

E. COMPOST: WELL-COMPOSTED, STABLE, AND WEED-FREE ORGANIC MATTER, pH RANGE OF 5.5 TO 8; MOISTURE CONTENT 35 TO 55 PERCENT BY WEIGHT; 100 PERCENT PASSING THROUGH 3/4-INCH SIEVE; SOLUBLE SALT CONTENT OF 5 TO 10 DECISIEMENS/M; NOT EXCEEDING 0.5 PERCENT INERT CONTAMINANTS AND FREE OF SUBSTANCES TOXIC TO PLANTINGS. NO MANURE OR ANIMAL-BASED PRODUCTS SHALL BE USED.

F. FERTILIZER: GRANULAR FERTILIZER CONSISTING OF NITROGEN, PHOSPHORUS, POTASSIUM, AND OTHER NUTRIENTS IN PROPORTIONS, AMOUNTS, AND RELEASE RATES RECOMMENDED IN A SOIL REPORT FROM A QUALIFIED SOIL-TESTING AGENCY (SEE BELOW).

G. MULCH: SIZE AND TYPE AS INDICATED ON PLANS, FREE FROM DELETERIOUS MATERIALS AND SUITABLE AS A TOP DRESSING OF TREES AND SHRUBS.

H. TREE STAKING AND GUYING
1. STAKES: 6' LONG GREEN METAL T-POSTS.
2. GUY AND TIE WIRE: ASTM A 641, CLASS 1, GALVANIZED-STEEL WIRE, 2-STRAND, TWISTED, 0.106 INCH DIAMETER.
3. STRAP CHAFING GUARD: REINFORCED NYLON OR CANVAS AT LEAST 1-1/2 INCH WIDE, WITH GROMMETS TO PROTECT TREE TRUNKS FROM DAMAGE.

L. STEEL EDGING: PROFESSIONAL STEEL EDGING, 14 GAUGE THICK X 4 INCHES WIDE, FACTORY PAINTED DARK GREEN. ACCEPTABLE MANUFACTURERS INCLUDE COL-MET OR APPROVED EQUAL.

M. PRE-EMERGENT HERBICIDES: ANY GRANULAR, NON-STAINING PRE-EMERGENT HERBICIDE THAT IS LABELED FOR THE SPECIFIC ORNAMENTALS OR TURF ON WHICH IT WILL BE UTILIZED. PRE-EMERGENT HERBICIDES SHALL BE APPLIED PER THE MANUFACTURER'S LABELED RATES.

METHODS

A. SOIL PREPARATION
1. BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE GRADE OF ALL LANDSCAPE AREAS ARE WITHIN +/-0.1' OF FINISH GRADE. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY SHOULD ANY DISCREPANCIES EXIST.
2. SOIL TESTING:
   a. AFTER FINISH GRADES HAVE BEEN ESTABLISHED, CONTRACTOR SHALL HAVE SOIL SAMPLES FROM THE PROJECT'S LANDSCAPE AREAS TESTED BY AN ESTABLISHED SOIL TESTING LABORATORY. EACH SAMPLE SUBMITTED TO THE LAB SHALL CONTAIN NO LESS THAN ONE QUART OF SOIL, TAKEN FROM BETWEEN THE SOIL SURFACE AND 6" DEPTH. IF NO SAMPLE LOCATIONS ARE INDICATED ON THE PLANS, THE CONTRACTOR SHALL TAKE A MINIMUM OF THREE SAMPLES FROM VARIOUS REPRESENTATIVE LOCATIONS FOR TESTING.
   b. THE CONTRACTOR SHALL HAVE THE SOIL TESTING LABORATORY PROVIDE RESULTS FOR THE FOLLOWING: SOIL TEXTURAL CLASS, GENERAL SOIL FERTILITY, pH, ORGANIC MATTER CONTENT, SALT (CEC), LIME, SODIUM ADSORPTION RATIO (SAR) AND BORON CONTENT.
   c. THE CONTRACTOR SHALL ALSO SUBMIT THE PROJECT'S PLANT LIST TO THE LABORATORY ALONG WITH THE SOIL SAMPLES.
   d. THE SOIL REPORT PRODUCED BY THE LABORATORY SHALL CONTAIN RECOMMENDATIONS FOR THE FOLLOWING (AS APPROPRIATE): SEPARATE SOIL PREPARATION AND BACKFILL MIX RECOMMENDATIONS FOR GENERAL ORNAMENTAL PLANTS, XERIC PLANTS, TURF, AND NATIVE SEED, AS WELL AS PRE-PLANT FERTILIZER APPLICATIONS AND RECOMMENDATIONS FOR ANY OTHER SOIL RELATED ISSUES. THE REPORT SHALL ALSO PROVIDE A FERTILIZER PROGRAM FOR THE ESTABLISHMENT PERIOD AND FOR LONG-TERM MAINTENANCE.
3. THE CONTRACTOR SHALL INSTALL SOIL AMENDMENTS AND FERTILIZERS PER THE SOILS REPORT RECOMMENDATIONS. ANY CHANGE IN COST DUE TO THE SOIL REPORT RECOMMENTDATIONS, EITHER INCREASE OR DECREASE, SHALL BE SUBMITTED TO THE OWNER WITH THE REPORT.
4. FOR BIDDING PURPOSES ONLY, THE SOIL PREPARATION SHALL CONSIST OF THE FOLLOWING:
   a. TURF: INCORPORATE THE FOLLOWING AMENDMENTS INTO THE TOP 8" OF SOIL BY MEANS OF ROTOTILLING AFTER CROSS-RIPPING:
      i. NITROGEN STABILIZED ORGANIC AMENDMENT - 4 CU. YDS. PER 1,000 S.F.
      ii. PREPLANT TURF FERTILIZER (10-20-10 OR SIMILAR, SLOW RELEASE, ORGANIC) - 15 LBS PER 1,000 S.F.
      iii. "CLAY BUSTER" OR EQUAL - USE MANUFACTURER'S RECOMMENDED RATE
   b. TREES, SHRUBS, AND PERENNIALS: INCORPORATE THE FOLLOWING AMENDMENTS INTO THE TOP 8" OF SOIL BY MEANS OF ROTOTILLING AFTER CROSS-RIPPING:
      i. NITROGEN STABILIZED ORGANIC AMENDMENT - 4 CU. YDS. PER 1,000 S.F.
      ii. 12-12-12 FERTILIZER (OR SIMILAR, ORGANIC, SLOW RELEASE) - 10 LBS. PER CU. YD.
      iii. "CLAY BUSTER" OR EQUAL - USE MANUFACTURER'S RECOMMENDED RATE
      iv. IRON SULPHATE - 2 LBS. PER CU. YD.
5. IN THE CONTEXT OF THESE PLANS, NOTES, AND SPECIFICATIONS, "FINISH GRADE" REFERS TO THE FINAL ELEVATION OF THE SOIL SURFACE (NOT TOP OF MULCH) AS INDICATED ON THE GRADING PLANS.
   a. BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE ROUGH GRADES OF ALL LANDSCAPE AREAS ARE WITHIN +/-0.1' OF FINISH GRADE. SEE SPECIFICATIONS FOR MORE DETAILED INSTRUCTION ON TURF AREA AND PLANTING BED PREPARATION.
   b. CONSTRUCT AND MAINTAIN FINISH GRADES AS SHOWN ON GRADING PLANS, AND CONSTRUCT AND MAINTAIN SLOPES AS RECOMMENDED BY THE GEOTECHNICAL REPORT. ALL LANDSCAPE AREAS SHALL HAVE POSITIVE DRAINAGE AWAY FROM STRUCTURES AT THE MINIMUM SLOPE SPECIFIED IN THE REPORT AND ON THE GRADING PLANS, AND AREAS OF POTENTIAL PONDING SHALL BE REGRADED TO BLEND IN WITH THE SURROUNDING GRADES AND ELIMINATE PONDING POTENTIAL.
   c. THE LANDSCAPE CONTRACTOR SHALL DETERMINE WHETHER OR NOT THE EXPORT OF ANY SOIL WILL BE NEEDED, TAKING INTO ACCOUNT THE ROUGH GRADE PROVIDED, THE AMOUNT OF SOIL AMENDMENTS TO BE ADDED (**BASED ON A SOIL TEST**, PER SPECIFICATIONS), AND THE FINISH GRADES TO BE ESTABLISHED.
   d. ENSURE THAT THE FINISH GRADE IN SHRUB AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 3" BELOW THE ADJACENT FINISH SURFACE, IN ORDER TO ALLOW FOR PROPER MULCH DEPTH. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, AT APPROXIMATELY 18" AWAY FROM THE WALKS.
   e. ENSURE THAT THE FINISH GRADE IN TURF AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 1" BELOW THE FINISH SURFACE OF THE WALKS. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, AT APPROXIMATELY 18" AWAY FROM THE WALKS.
   f. SHOULD ANY CONFLICTS AND/OR DISCREPANCIES ARISE BETWEEN THE GRADING PLANS, GEOTECHNICAL REPORT, THESE NOTES AND PLANS, AND ACTUAL CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY BRING SUCH ITEMS TO THE ATTENTION OF THE LANDSCAPE ARCHITECT, GENERAL CONTRACTOR, AND OWNER.
6. ONCE SOIL PREPARATION IS COMPLETE, THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT THERE ARE NO DEBRIS, TRASH, OR STONES LARGER THAN 1" REMAINING IN THE TOP 6" OF SOIL.

B. SUBMITTALS
1. THE CONTRACTOR SHALL PROVIDE SUBMITTALS AND SAMPLES, IF REQUIRED, TO THE LANDSCAPE ARCHITECT, AND RECEIVE APPROVAL IN WRITING FOR SUCH SUBMITTALS BEFORE WORK COMMENCES.
2. SUBMITTALS SHALL INCLUDE PHOTOS OF PLANTS WITH A RULER OR MEASURING STICK FOR SCALE, PHOTOS OR SAMPLES OF ANY REQUIRED MULCHES, AND SOIL TEST RESULTS AND PREPARATION RECOMMENDATIONS FROM THE TESTING LAB (INCLUDING COMPOST AND FERTILIZER RATES AND TYPES, AND OTHER AMENDMENTS FOR TREE/SHRUB, TURF, AND SEED AREAS AS MAY BE APPROPRIATE).
3. SUBMITTALS SHALL ALSO INCLUDE MANUFACTURER CUT SHEETS FOR PLANTING ACCESSORIES SUCH AS TREE STAKES AND TIES, EDGING, AND LANDSCAPE FABRICS (IF ANY).
4. WHERE MULTIPLE ITEMS ARE SHOWN ON A PAGE, THE CONTRACTOR SHALL CLEARLY INDICATE THE ITEM BEING CONSIDERED.

C. GENERAL PLANTING
1. REMOVE ALL NURSERY TAGS AND STAKES FROM PLANTS.
2. EXCEPT IN AREAS TO BE PLANTED WITH ORNAMENTAL GRASSES, APPLY PRE-EMERGENT HERBICIDES AT THE MANUFACTURER'S RECOMMENDED RATE.
3. TRENCHING NEAR EXISTING TREES:
   a. CONTRACTOR SHALL NOT DISTURB ROOTS 1-1/2" AND LARGER IN DIAMETER WITHIN THE CRITICAL ROOT ZONE (CRZ) OF EXISTING TREES, AND SHALL EXERCISE ALL POSSIBLE CARE AND PRECAUTIONS TO AVOID INJURY TO TREE ROOTS, TRUNKS, AND BRANCHES. THE CRZ IS DEFINED AS A CIRCULAR AREA EXTENDING OUTWARD FROM THE TREE TRUNK, WITH A RADIUS EQUAL TO 1' FOR EVERY 1" OF TRUNK DIAMETER-AT-BREAST-HEIGHT (4.5' ABOVE THE AVERAGE GRADE AT THE TRUNK).
   b. ALL EXCAVATION WITHIN THE CRZ SHALL BE PERFORMED USING HAND TOOLS. NO MACHINE EXCAVATION OR TRENCHING OF ANY KIND SHALL BE ALLOWED WITHIN THE CRZ.
   c. ALTER ALIGNMENT OF PIPE TO AVOID TREE ROOTS 1-1/2" AND LARGER IN DIAMETER. WHERE TREE ROOTS 1-1/2" AND LARGER IN DIAMETER ARE ENCOUNTERED IN THE FIELD, TUNNEL UNDER SUCH ROOTS. WRAP EXPOSED ROOTS WITH SEVERAL LAYERS OF BURLAP AND KEEP MOIST. CLOSE ALL TRENCHES WITHIN THE CANOPY DRIP LINES WITHIN 24 HOURS.
   d. ALL SEVERED ROOTS SHALL BE HAND PRUNED WITH SHARP TOOLS AND ALLOWED TO AIR-DRY. DO NOT USE ANY SORT OF SEALERS OR WOUND PAINTS.

C. TREE PLANTING
1. TREE PLANTING HOLES SHALL BE EXCAVATED TO MINIMUM WIDTH OF TWO TIMES THE WIDTH OF THE ROOTBALL, AND TO A DEPTH EQUAL TO THE DEPTH OF THE ROOTBALL LESS TWO TO FOUR INCHES.
2. SCARIFY THE SIDES AND BOTTOM OF THE PLANTING HOLE PRIOR TO THE PLACEMENT OF THE TREE. REMOVE ANY GLAZING THAT MAY HAVE BEEN CAUSED DURING THE EXCAVATION OF THE HOLE.
3. FOR CONTAINER AND BOX TREES, TO REMOVE ANY POTENTIALLY GIRDLING ROOTS AND OTHER ROOT DEFECTS, THE CONTRACTOR SHALL SHAVE A 1" LAYER OFF OF THE SIDES AND BOTTOM OF THE ROOTBALL OF ALL TREES JUST BEFORE PLACING INTO THE PLANTING PIT. DO NOT "TEASE" ROOTS OUT FROM THE ROOTBALL.
4. INSTALL THE TREE ON UNDISTURBED SUBGRADE SO THAT THE TOP OF THE ROOTBALL IS TWO TO FOUR INCHES ABOVE THE SURROUNDING GRADE.
5. BACKFILL THE TREE HOLE UTILIZING THE EXISTING TOPSOIL FROM ON-SITE. ROCKS LARGER THAN 1" DIA. AND ALL OTHER DEBRIS SHALL BE REMOVED FROM THE SOIL PRIOR TO THE BACKFILL. SHOULD ADDITIONAL SOIL BE REQUIRED TO ACCOMPLISH THIS TASK, USE STORED TOPSOIL FROM ON-SITE OR IMPORT ADDITIONAL TOPSOIL FROM OFF-SITE AT NO ADDITIONAL COST TO THE OWNER. IMPORTED TOPSOIL SHALL BE OF SIMILAR TEXTURAL CLASS AND COMPOSITION IN THE ON-SITE SOIL.
6. TREES SHALL NOT BE STAKED UNLESS LOCAL CONDITIONS (SUCH AS HEAVY WINDS OR SLOPES) REQUIRE STAKING TO KEEP TREES UPRIGHT. SHOULD STAKING BE REQUIRED, THE TOTAL NUMBER OF TREE STAKES (BEYOND THE MINIMUMS LISTED BELOW) WILL BE LEFT TO THE LANDSCAPE CONTRACTOR'S DISCRETION. SHOULD ANY TREES FALL OR LEAN, THE LANDSCAPE CONTRACTOR SHALL STRAIGHTEN THE TREE, OR REPLACE IT SHOULD IT BECOME DAMAGED. TREE STAKING SHALL ADHERE TO THE FOLLOWING GUIDELINES:
   a. 1"-2" TREES — TWO STAKES PER TREE
   b. 2-1/2"-4" TREES — THREE STAKES PER TREE
   c. TREES OVER 4" CALIPER — GUY AS NEEDED
   d. MULTI-TRUNK TREES — THREE STAKES PER TREE MINIMUM, QUANTITY AND POSITIONS AS NEEDED TO STABILIZE THE TREE
7. UPON COMPLETION OF PLANTING, CONSTRUCT AN EARTH WATERING BASIN AROUND THE TREE. COVER THE INTERIOR OF THE TREE RING WITH MULCH (TYPE AND DEPTH PER PLANS).

D. SHRUB, PERENNIAL, AND GROUNDCOVER PLANTING
1. DIG THE PLANTING HOLES TWICE AS WIDE AND 2" LESS DEEP THAN EACH PLANT'S ROOTBALL. INSTALL THE PLANT IN THE HOLE. BACKFILL AROUND THE PLANT WITH SOIL AMENDED PER SOIL TEST RECOMMENDATIONS.
2. WHEN PLANTING IS COMPLETE, INSTALL MULCH (TYPE AND DEPTH PER PLANS) OVER ALL PLANTING BEDS, COVERING THE ENTIRE PLANTING AREA.

E. SODDING
1. SOD VARIETY TO BE AS SPECIFIED ON THE LANDSCAPE PLAN.
2. LAY SOD WITHIN 24 HOURS FROM THE TIME OF STRIPPING. DO NOT LAY IF THE GROUND IS FROZEN.
3. LAY THE SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS. BUTT ENDS AND SIDES OF SOD STRIPS - DO NOT OVERLAP. STAGGER STRIPS TO OFFSET JOINTS IN ADJACENT COURSES.
4. ROLL THE SOD TO ENSURE GOOD CONTACT OF THE SOD'S ROOT SYSTEM WITH THE SOIL UNDERNEATH.
5. WATER THE SOD THOROUGHLY WITH A FINE SPRAY IMMEDIATELY AFTER PLANTING TO OBTAIN AT LEAST SIX INCHES OF PENETRATION INTO THE SOIL BELOW THE SOD.

F. MULCH
1. INSTALL MULCH TOPDRESSING, TYPE AND DEPTH PER MULCH NOTE, IN ALL PLANTING AREAS AND TREE RINGS.
2. DO NOT INSTALL MULCH WITHIN 6" OF TREE ROOT FLARE AND WITHIN 24" OF HABITABLE STRUCTURES, EXCEPT AS MAY BE NOTED ON THESE PLANS. MULCH COVER WITHIN 6" OF CONCRETE WALKS AND CURBS SHALL NOT PROTRUDE ABOVE THE FINISH SURFACE OF THE WALKS AND CURBS. MULCH COVER WITHIN 12" OF WALLS SHALL BE AT LEAST 3" LOWER THAN THE TOP OF WALL.

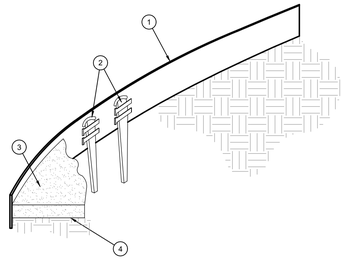
G. CLEAN UP
1. DURING LANDSCAPE PREPARATION AND PLANTING, KEEP ALL PAVEMENT CLEAN AND ALL WORK AREAS IN A NEAT, ORDERLY CONDITION.
2. LEGALLY DISPOSE ALL EXCAVATED MATERIALS OFF THE PROJECT SITE.

H. INSPECTION AND ACCEPTANCE
1. UPON COMPLETION OF THE WORK, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE SITE CLEAN, FREE OF DEBRIS AND TRASH, AND SUITABLE FOR USE AS INTENDED. THE LANDSCAPE CONTRACTOR SHAL THEN REQUEST AN INSPECTION BY THE OWNER TO DETERMINE FINAL ACCEPTABILITY.
2. WHEN THE INSPECTED PLANTING WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, THE LANDSCAPE CONTRACTOR SHALL REPLACE AND/OR REPAIR THE REJECTED WORK TO THE OWNER'S SATISFACTION WITHIN 24 HOURS.
3. THE LANDSCAPE MAINTENANCE PERIOD WILL NOT COMMENCE UNTIL THE LANDSCAPE WORK HAS BEEN RE-INSPECTED BY THE OWNER AND FOUND TO BE ACCEPTABLE. AT THAT TIME, A WRITTEN NOTICE OF FINAL ACCEPTANCE WILL BE ISSUED BY THE OWNER, AND THE MAINTENANCE AND GUARANTEE PERIODS WILL COMMENCE.

I. LANDSCAPE MAINTENANCE
1. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL WORK SHOWN ON THESE PLANS FOR 90 DAYS BEYOND FINAL ACCEPTANCE OF ALL LANDSCAPE WORK BY THE OWNER. LANDSCAPE MAINTENANCE SHALL INCLUDE WEEKLY SITE VISITS FOR THE FOLLOWING ACTIONS (AS APPROPRIATE): PROPER PRUNING, RESTAKING OF TREES, RESETTING OF PLANTS THAT HAVE SETTLED, MOWING AND AERATION OF LAWNS, WEEDING, RESEEDING AREAS WHICH HAVE NOT GERMINATED WELL, TREATING FOR INSECTS AND DISEASES,REPLACEMENT OF MULCH, REMOVAL OF LITTER, REPAIRS TO THE IRRIGATION SYSTEM DUE TO FAULTY PARTS AND/OR WORKMANSHIP, AND THE APPROPRIATE WATERING OF ALL PLANTINGS. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM IN PROPER WORKING ORDER, WITH SCHEDULING ADJUSTMENTS BY SEASON TO MAXIMIZE WATER CONSERVATION.
2. SHOULD SEEDED AND/OR SODDED AREAS NOT BE COVERED BY AN AUTOMATIC IRRIGATION SYSTEM, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING THESE AREAS AND OBTAINING A FULL, HEALTHY STAND OF PLANTS AT NO ADDITIONAL COST TO THE OWNER.
3. TO ACHIEVE FINAL ACCEPTANCE AT THE END OF THE MAINTENANCE PERIOD, ALL OF THE FOLLOWING CONDITIONS MUST OCCUR:
   a. THE LANDSCAPE SHALL SHOW ACTIVE, HEALTHY GROWTH (WITH EXCEPTIONS MADE FOR SEASONAL DORMANCY). ALL PLANTS NOT MEETING THIS CONDITION SHALL BE REJECTED AND REPLACED BY HEALTHY PLANT MATERIAL PRIOR TO FINAL ACCEPTANCE.
   b. ALL HARDSCAPE SHALL BE CLEANED PRIOR TO FINAL ACCEPTANCE.
   c. HYDROMULCHED AREAS SHALL SHOW ACTIVE, HEALTHY GROWTH. BARE AREAS LARGER THAN TWELVE SQUARE INCHES MUST BE RESODDED OR RESEEDED (AS APPROPRIATE) PRIOR TO FINAL ACCEPTANCE.

J. WARRANTY PERIOD, PLANT GUARANTEE AND REPLACEMENTS
1. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL TREES, SHRUBS, PERENNIALS, SEEDEDOHYDROMULCHED AREAS, AND IRRIGATION SYSTEMS FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE OWNER'S FINAL ACCEPTANCE (90 DAYS FOR ANNUAL PLANTS). THE CONTRACTOR SHALL REPLACE, AT HIS OWN EXPENSE AND TO THE SATISFACTION OF THE OWNER, ANY PLANTS WHICH DIE IN THAT TIME, OR REPAIR ANY PORTIONS OF THE IRRIGATION SYSTEM WHICH OPERATE IMPROPERLY.
2. AFTER THE INITIAL MAINTENANCE PERIOD AND DURING THE GUARANTEE PERIOD, THE LANDSCAPE CONTRACTOR SHALL ONLY BE RESPONSIBLE FOR REPLACEMENT OF PLANTS WHEN PLANT DEATH CANNOT BE ATTRIBUTED DIRECTLY TO OVERWATERING OR OTHER DAMAGE BY HUMAN ACTIONS.

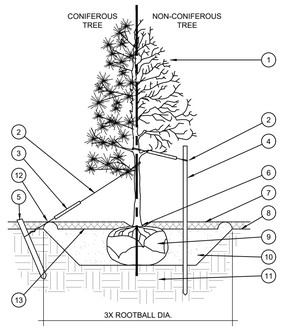
K. PROVIDE A MINIMUM OF (2) COPIES OF RECORD DRAWINGS TO THE OWNER UPON COMPLETION OF WORK. A RECORD DRAWING IS A RECORD OF ALL CHANGES THAT OCCURRED IN THE FIELD AND THAT ARE DOCUMENTED THROUGH CHANGE ORDERS, ADDENDA, OR CONTRACTOR/CONSULTANT DRAWING MARKUPS.



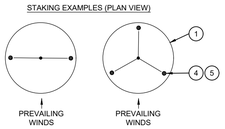
1. ROLLED-TOP STEEL EDGING PER PLANS.
2. TAPERED STEEL STAKES.
3. MULCH, TYPE AND DEPTH PER PLANS.
4. FINISH GRADE.

NOTES:
1) INSTALL EDGING SO THAT STAKES WILL BE ON INSIDE OF PLANTING BED.
2) BOTTOM OF EDGING SHALL BE BURIED A MINIMUM OF 1" BELOW FINISH GRADE.
3) TOP OF MULCH SHALL BE 1" LOWER THAN TOP OF EDGING.

C STEEL EDGING
SCALE: NOT TO SCALE



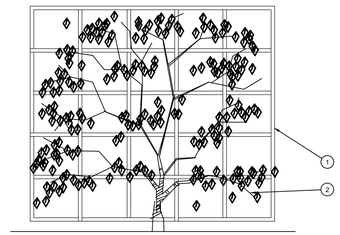
STAKING EXAMPLES (PLAN VIEW)



1. TREE CANOPY.
2. CINCH-TIES (24" BOX/2" CAL. TREES AND SMALLER) OR 12 GAUGE GALVANIZED WIRE WITH NYLON TREE STRAPS AT TREE AND STAKE (36" BOX/2.5" CAL. TREES AND LARGER). SECURE TIES OR STRAPS TO TRUNK JUST ABOVE LOWEST MAJOR BRANCHES.
3. 24" X 3/4" P.V.C. MARKERS OVER WIRES.
4. GREEN STEEL T-POSTS. EXTEND POSTS 12" MIN. INTO UNDISTURBED SOIL.
5. PRESSURE-TREATED WOOD DEADMAN, TWO PER TREE (MIN.). BURY OUTSIDE OF PLANTING PIT AND 18" MIN. INTO UNDISTURBED SOIL.
6. TRUNK FLARE.
7. MULCH, TYPE AND DEPTH PER PLANS. DO NOT PLACE MULCH WITHIN 6" OF TRUNK.
8. FINISH GRADE.
9. ROOT BALL.
10. BACKFILL. AMEND AND FERTILIZE ONLY AS RECOMMENDED IN SOIL FERTILITY ANALYSIS.
11. UNDISTURBED NATIVE SOIL.
12. 4" HIGH EARTHEN WATERING BASIN.
13. FINISH GRADE.

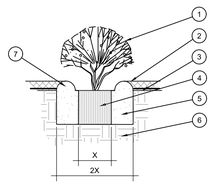
NOTES:
1. SCARIFY SIDES OF PLANTING PIT PRIOR TO SETTING TREE.
2. REMOVE EXCESS SOIL APPLIED ON TOP OF THE ROOTBALL THAT COVERS THE ROOT FLARE. THE PLANTING HOLE DEPTH SHALL BE SUCH THAT THE ROOTBALL RESTS ON UNDISTURBED SOIL AND THE ROOT FLARE IS 2"-4" ABOVE FINISH GRADE.
3. FOR B&B TREES, CUT OFF BOTTOM 1/3 OF WIRE BASKET BEFORE PLACING TREE IN HOLE. CUT OFF AND REMOVE REMAINDER OF BASKET AFTER TREE IS SET IN HOLE. REMOVE ALL NYLON TIES, TWINE, ROPE, AND OTHER PACKING MATERIAL. REMOVE AS MUCH BURLAP FROM AROUND ROOTBALL AS IS PRACTICAL.
4. REMOVE ALL NURSERY STAKES AFTER PLANTING.
5. FOR TREES 36" BOX/2.5" CAL. AND LARGER, USE THREE STAKES OR DEADMEN (AS APPROPRIATE), SPACED EVENLY AROUND TREE.
6. STAKING SHALL BE TIGHT ENOUGH TO PREVENT TRUNK FROM BENDING, BUT LOOSE ENOUGH TO ALLOW SOME TRUNK MOVEMENT IN WIND.

A TREE PLANTING
SCALE: NOT TO SCALE



1. TRELLIS PER PLAN
2. VINE. REMOVE NURSERY STAKES AND SECURE TO TRELLIS WITH VINE TIES. ARRANGE VINE STEMS EVENLY ACROSS TRELLIS.

D VINE PLANTING ON TRELLIS
SCALE: NTS



1. SHRUB, PERENNIAL, OR ORNAMENTAL GRASS.
2. MULCH, TYPE AND DEPTH PER PLANS. PLACE NO MORE THAN 1" OF MULCH WITHIN 6" OF PLANT CENTER.
3. FINISH GRADE.
4. ROOT BALL.
5. BACKFILL. AMEND AND FERTILIZE ONLY AS RECOMMENDED IN SOIL FERTILITY ANALYSIS.
6. UNDISTURBED NATIVE SOIL.
7. 3" HIGH EARTHEN WATERING BASIN.

B SHRUB AND PERENNIAL PLANTING
SCALE: NTS

EVERGREEN DESIGN GROUP
(800) 680-6630
170 Meeting St., Ste 110
Charleston, SC 29401
www.EvergreenDesignGroup.com

CORE STATES GROUP
1900 SOUTH BLVD., SUITE 225
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PHONE (704) 247-4907
DPARRY@CORE-STATES.COM
CORESTATES, INC.
FIRM CERTIFICATION NO. C-2880

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CLIENT

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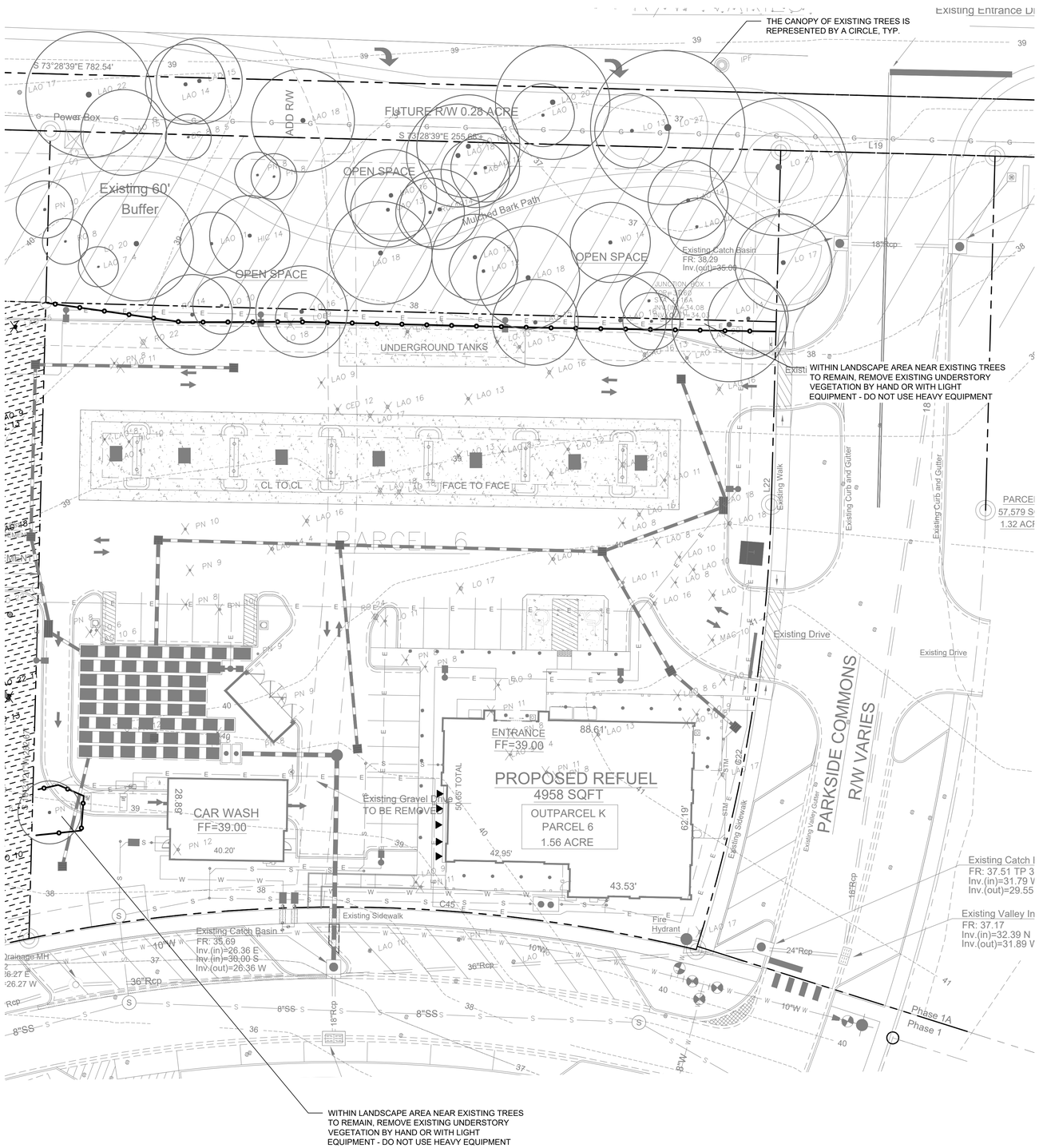


Table 5.3.3.G Number of Replacement Trees Required	
Protected Tree DBH Removed	**Number of Replacement Trees**
Significant Trees ≥24 inches; any tree listed on the America's Historic Tree Register maintained by American Forests; all trees, regardless of size, located within regulated wetland buffers	5 trees or 3 trees with a 6-inch caliper at time of planting
18 inches < 24 inches	3 trees
12 inches < 18 inches	2 trees
8 inches < 12 inches	1 tree
≥4 inches for the following trees: American holly, dogwood, redbud, southern magnolia, and red buckeye	1 tree

TREE DISPOSITION SCHEDULE

TREES TO BE REMOVED		MITIGATION REQUIRED		TREES TO BE RETAINED	CANOPY TREES TO BE PLANTED	UNDERSTORY TREES TO BE PLANTED	MITIGATION PROVIDED
PROTECTED TREE (18"-24")	6	18		1			1
PROTECTED TREE (12"-18")	25	50		4			4
PROTECTED TREE (8"-12")	38	38		5			5
SIGNIFICANT TREE (18"-24")	1	3	@6" CALIPER				
NOT PROTECTED OR SIGNIFICANT	2	0					
TOTAL	72	109		19	6 (X3)	3	32

LEGEND

X LAO 9	TREE TO BE REMOVED
• LO 9	TREE TO BE RETAINED
—o—o—	TREE PROTECTION FENCE

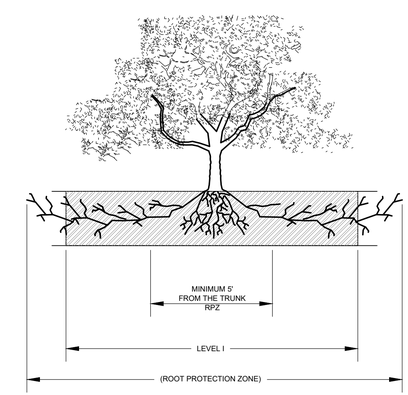
TREE PROTECTION SPECIFICATIONS

MATERIALS

1. FENCING: 6 FOOT HIGH CHAIN LINK FENCING.
2. POSTS: POSTS SHALL BE A MINIMUM OF 72 INCHES LONG AND STEEL.

CONSTRUCTION METHODS

1. ALL TREES AND SHRUBS SHOWN TO REMAIN WITHIN THE PROXIMITY OF THE CONSTRUCTION SITE SHALL BE PROTECTED PRIOR TO BEGINNING ANY DEVELOPMENT ACTIVITY.
2. EMPLOY THE SERVICES OF AN ISA (INTERNATIONAL SOCIETY OF ARBORICULTURE) CERTIFIED ARBORIST AND OBTAIN ALL REQUIRED PERMITS TO PRUNE THE EXISTING TREES FOR CLEANING, RAISING AND THINNING, AS MAY BE REQUIRED.
3. PROTECTIVE FENCING SHALL BE ERECTED OUTSIDE THE CRITICAL ROOT ZONE (CRZ, EQUAL TO 1' FROM THE TRUNK FOR EVERY 1" OF DBH) AT LOCATIONS SHOWN IN THE PLANS OR AS DIRECTED BY THE LANDSCAPE CONSULTANT AND/OR CITY ARBORIST, AND IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS. FENCING SHALL BE MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION. TREES IN CLOSE PROXIMITY SHALL BE FENCED TOGETHER, RATHER THAN INDIVIDUALLY.
4. PROTECTIVE FENCE LOCATIONS IN CLOSE PROXIMITY TO STREET INTERSECTIONS OR DRIVES SHALL ADHERE TO THE APPLICABLE JURISDICTION'S SIGHT DISTANCE CRITERIA.
5. THE PROTECTIVE FENCING SHALL BE ERECTED BEFORE SITE WORK COMMENCES AND SHALL REMAIN IN PLACE DURING THE ENTIRE CONSTRUCTION PHASE.
6. THE INSTALLATION POSTS SHALL BE PLACED EVERY 6 FEET ON CENTER AND EMBEDDED TO 18 INCHES DEEP. CHAIN LINK SHALL BE ATTACHED TO THE INSTALLATION POSTS BY THE USE OF SUFFICIENT WIRE TIES TO SECURELY FASTEN THE CHAIN LINK TO THE POSTS TO HOLD THE CHAIN LINK IN A STABLE AND UPRIGHT POSITION.
7. WITHIN THE CRZ:
   a. DO NOT CLEAR, FILL OR GRADE IN THE CRZ OF ANY TREE.
   b. DO NOT STORE, STOCKPILE OR DUMP ANY JOB MATERIAL, SOIL OR RUBBISH UNDER THE SPREAD OF THE TREE BRANCHES.
   c. DO NOT PARK OR STORE ANY EQUIPMENT OR SUPPLIES UNDER THE TREE CANOPY.
   d. DO NOT SET UP ANY CONSTRUCTION OPERATIONS UNDER THE TREE CANOPY (SUCH AS PIPE CUTTING AND THREADING, MORTAR MIXING, PAINTING OR LUMBER CUTTING).
   e. DO NOT NAIL OR ATTACH TEMPORARY SIGNS METERS, SWITCHES, WIRES, BRACING OR ANY OTHER ITEM TO THE TREES.
   f. DO NOT PERMIT RUNOFF FROM WASTE MATERIALS INCLUDING SOLVENTS, CONCRETE WASHOUTS, ASPHALT TACK COATS (MC-30 OIL), ETC. TO ENTER THE CRZ. BARRIERS ARE TO BE PROVIDED TO PREVENT SUCH RUNOFF SUBSTANCES FROM ENTERING THE CRZ WHENEVER POSSIBLE, INCLUDING IN AN AREA WHERE RAIN OR SURFACE WATER COULD CARRY SUCH MATERIALS TO THE ROOT SYSTEM OF THE TREE.
8. ROUTE UNDERGROUND UTILITIES TO AVOID THE CRZ. IF DIGGING IS UNAVOIDABLE, BORE UNDER THE ROOTS, OR HAND DIG TO AVOID SEVERING THEM.
9. WHERE EXCAVATION IN THE VICINITY OF TREES MUST OCCUR, SUCH AS FOR IRRIGATION INSTALLATION, PROCEED WITH CAUTION, AND USING HAND TOOLS ONLY.
10. THE CONTRACTOR SHALL NOT CUT ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATION OCCURS NEAR EXISTING TREES. ALL ROOTS LARGER THAN ONE INCH IN DIAMETER ARE TO BE CUT CLEANLY. FOR OAKS ONLY, ALL WOUNDS SHALL BE PAINTED WITH WOUND SEALER WITHIN 30 MINUTES
11. REMOVE ALL TREES, SHRUBS OR BUSHES TO BE CLEARED FROM PROTECTED ROOT ZONE AREAS BY HAND.
12. TREES DAMAGED OR KILLED DUE TO CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED AT THE CONTRACTOR'S EXPENSE AND TO THE PROJECT OWNER'S AND LOCAL JURISDICTION'S SATISFACTION.
13. ANY TREE REMOVAL SHALL BE APPROVED BY THE OWNER AND LOCAL JURISDICTION PRIOR TO ITS REMOVAL, AND THE CONTRACTOR SHALL HAVE ALL REQUIRED PERMITS FOR SUCH ACTIVITIES.
14. COVER EXPOSED ROOTS AT THE END OF EACH DAY WITH SOIL, MULCH OR WET BURLAP.
15. IN CRITICAL ROOT ZONE AREAS THAT CANNOT BE PROTECTED DUING CONSTRUCTION AND WHERE HEAVY TRAFFIC IS ANTICIPATED, COVER THE SOIL WITH EIGHT INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION. THIS EIGHT INCH DEPTH OF MULCH SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
16. WATER ALL TREES IMPACTED BY CONSTRUCTION ACTIVITIES, DEEPLY ONCE A WEEK DURING PERIODS OF HOT DRY WEATHER. SPRAY TREE CROWNS WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
17. WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, USE A PLASTIC VAPOR BARRIER BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE SOIL.
18. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL TREE PROTECTION FENCING WHEN ALL THREATS TO THE EXISTING TREES FROM CONSTRUCTION-RELATED ACTIVITIES HAVE BEEN REMOVED.



A TREE PROTECTION FENCE - ELEVATION
SCALE: NOT TO SCALE

EVERGREEN DESIGN GROUP
(800) 680-6630
170 Meeting St., Ste 110
Charleston, SC 29401
www.EvergreenDesignGroup.com

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

CORE STATES GROUP
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PALMETTO UTILITY PROTECTION SERVICE
SOUTH CAROLINA PUPS

REVISIONS

REV	DATE	COMMENT	BY

DOCUMENT
PRELIMINARY DEVELOPMENT PLAN

SITE LOCATION
NEW RIVERSIDE VILLAGE, BLUFFTON, SC 29910

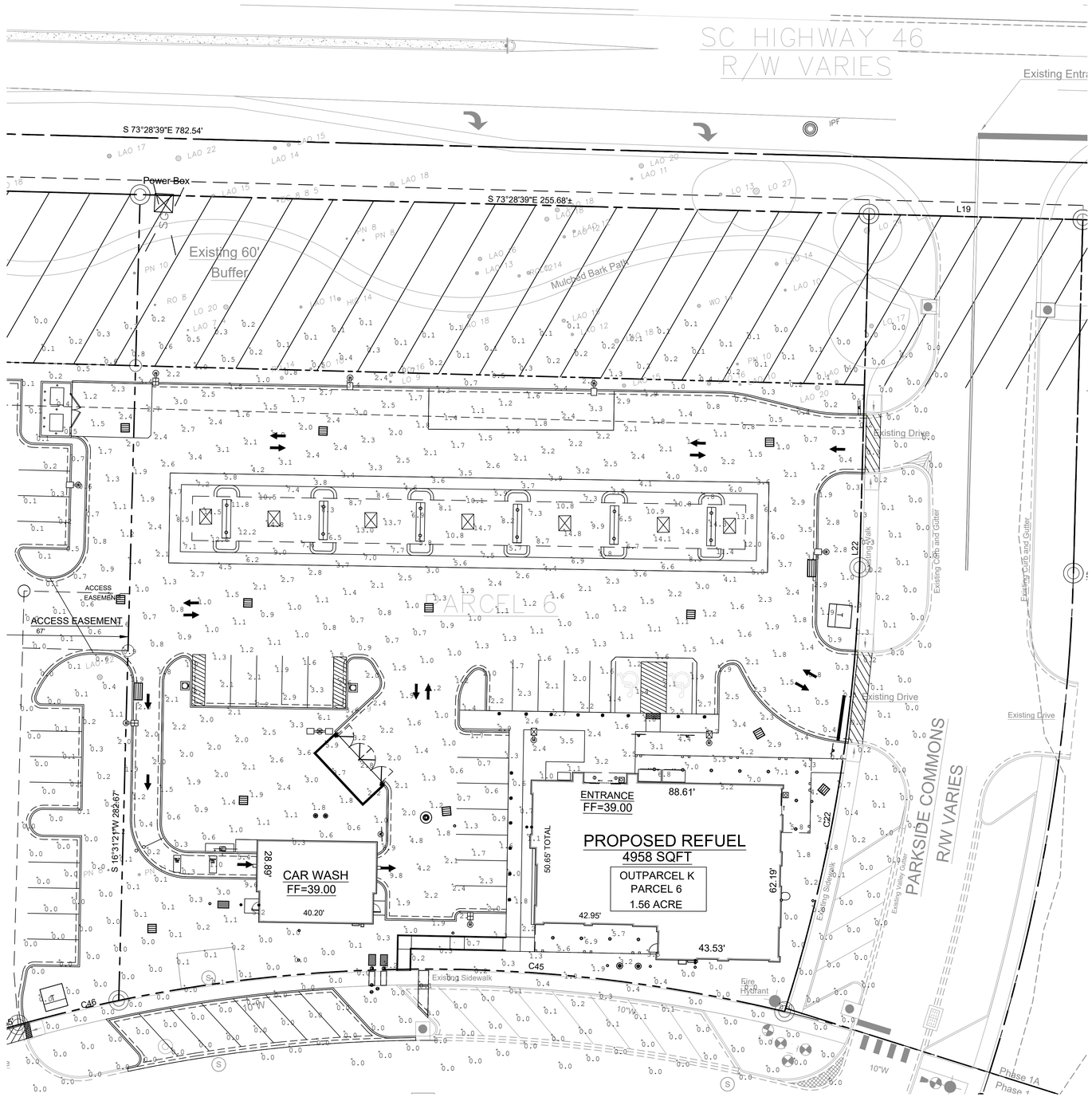
CERTIFICATE OF AUTHORIZATION

ENGINEER SEAL
State of South Carolina
REGISTERED LANDSCAPE ARCHITECT
NO. 1633
BRIAN J. CUTSHAW
05-24-2023

SHEET TITLE
TREE DISPOSITION PLAN

JOB #:	RFL.35149
DATE:	12/13/2022
SCALE:	AS SHOWN
DRAWN BY:	KB
CHECKED BY:	BS

SHEET NO.
TD-1



LIGHTING PLAN

1"=20'

GRAPHIC SCALE

20 10 5 0 20

1" = 20'

N

LIGHTING NOTES:

1. ALL LIGHTING WAS DESIGNED WITH A LIGHT LOSS FACTOR OF 0.85. LIGHTING ANALYSIS WAS MEASURED AT GROUND ELEVATION
2. ALL PROPOSED FIXTURES ON TIMER TO OPERATE DURING NIGHT TIME HOURS, 30 MINUTES AFTER SUNSET AND 30 MINUTES BEFORE SUNRISE.
3. CONTRACTOR TO INSTALL FIXTURE ON COPPER LIGHTING POLE SSS-6-7-24-CW-BS-XXXX-C-BK. MOUNT HEIGHTS ARE BASED ON HEIGHT ABOVE FINISHED ASPHALT GRADE.

NOTES:

1. SITE IS IDENTIFIED AS OUTPARCEL K AND J IN THE NEW RIVERSIDE VILLAGE.
2. BOUNDARY AND TOPOGRAPHICAL SURVEYING BY THOMAS AND HUTTON, INC.
3. THE SITE IS ZONED PUD, PARCEL 6, A PORTION OF PARCEL 4B-2. THE SITE IS A PORTION OF PARCEL 4B-2 (R610 036 000 1258 0000).
4. THE SITE IS LOCATED IN BEAUFORT COUNTY, SOUTH CAROLINA.
5. THE PROPOSED DEVELOPMENT IS A REFUEL SERVICE STATION FACILITY (PARCEL 6).
6. THE SITE IS PRESENTLY UNDEVELOPED.
7. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
8. REFER TO PARKING SUMMARY FOR STALL SIZES AND COUNT.
9. THE SITE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
10. ACCORDING TO FIRM MAP 45013C0405G DATED MARCH 23, 2021 (INDEX DATE MARCH 23, 2021 THE PROPERTY IS LOCATED IN ZONE X.)

LUMINAIRE SCHEDULE

SYMBOL	MANUFACTURER	MODEL	CATALOG	QTY	DISTRIBUTION	MOUNT HT.
	CREE LIGHTING	OSQ™ LED AREA/FLOOD LUMINAIRE	OSQM-B-6L-40K7-3M-UL-NM-BK	3	TYPE 3	16'-0"
	CREE LIGHTING	OSQ™ LED AREA/FLOOD LUMINAIRE	OSQM-B-6L-40K7-4M-UL-NM-BK-BLSMF	1	TYPE 4	16'-0"
	CREE LIGHTING	OSQ™ LED AREA/FLOOD LUMINAIRE	OSQM-B-6L-40K7-4M-UL-NM-BK	2	TYPE 4	16'-0"
	CREE LIGHTING	OSQ™ LED AREA/FLOOD LUMINAIRE	OSQM-B-6L-40K7-4M-UL-NM-BK-BLSMF	3	TYPE 4	16'-0"
	CREE LIGHTING	CUTOFF LED WALL PACK	C-WP-B-RDC-6L-40K-DB	7	-	10'-0"
	CREE LIGHTING	CPY250® LED CANOPY/SOFFIT LUMINAIRE	CPY250-B-DM-F-B-UL-BK-40K	2	-	16'-0"
	CREE INC.	CR6T LED DOWNLIGHT - 6" (152MM)	CR6T-1600L-40K-12-E26GU24	2	-	12'-3"
	BARN LIGHT ELECTRIC CO.	PENDANT LED DOWNLIGHT	BLE-S-WHB13-105-ST712-105-HSC-LED27-2700K-FL	12	-	10'-10"

CALCULATION SUMMARY (FULL SITE)

AREA	AVERAGE	MAX	MIN
LIGHTING ANALYSIS MEASURED AT GROUND ELEVATION	1.82 fc	14.8 fc	0.0 fc

CALCULATION SUMMARY (COMMERCIAL PARKING)

AREA	AVERAGE	MAX	MIN
LIGHTING ANALYSIS MEASURED AT GROUND ELEVATION	1.73 fc	3.3 fc	0.6 fc

CALCULATION SUMMARY (LANDSCAPE AND DECORATIVE)

AREA	AVERAGE	MAX	MIN
LIGHTING ANALYSIS MEASURED AT GROUND ELEVATION	0.48 fc	1.8 fc	0.0 fc

CALCULATION SUMMARY (WALKWAYS AND STREETS)

AREA	AVERAGE	MAX	MIN
LIGHTING ANALYSIS MEASURED AT GROUND ELEVATION	0.82 fc	2.1 fc	0.2 fc

CALCULATION SUMMARY (AREAS FOR DISPLAY OF OUTDOOR MERCHANDISE)

AREA	AVERAGE	MAX	MIN
LIGHTING ANALYSIS MEASURED AT GROUND ELEVATION	4.77 fc	14.8 fc	1.0 fc

*AREAS BEING ILLUMINATED BY SITE AND BUILDING LIGHTING FOR PUBLIC USE WHICH IMPACT THE CALCULATIVE AVERAGES OF THE SPECIFIC CALCULATIVE AREAS PROVIDED IN THE TABLES ABOVE HAVE BEEN OMITTED FROM THE CALCULATION SUMMARY TABLES TO PREVENT OBSCURING PHOTOMETRIC VALUES.

SITE LEGEND:

- EXISTING PROPERTY BOUNDARY LINE
- EXISTING ADJOINING PROPERTY LINE
- EXISTING ROAD CENTERLINE
- PROPOSED ROAD CENTERLINE
- EXISTING CURB
- PROPOSED CURB
- PROPOSED BUILDING

LIGHTING LEGEND:

- 1.9 FOOTCANDLE CALCULATION POINT
- PROPOSED SITE LIGHT FIXTURE

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PALMETTO UTILITY PROTECTION SERVICE
SOUTH CAROLINA PUPS

REVISIONS

REV	DATE	COMMENT	BY

DOCUMENT
PRELIMINARY DEVELOPMENT PLAN

SITE LOCATION
NEW RIVERSIDE VILLAGE, BLUFFTON, SC 29910

CERTIFICATE OF AUTHORIZATION
SOUTH CAROLINA CORESTATES INC. No. 3078 CERTIFICATE OF AUTHORIZATION

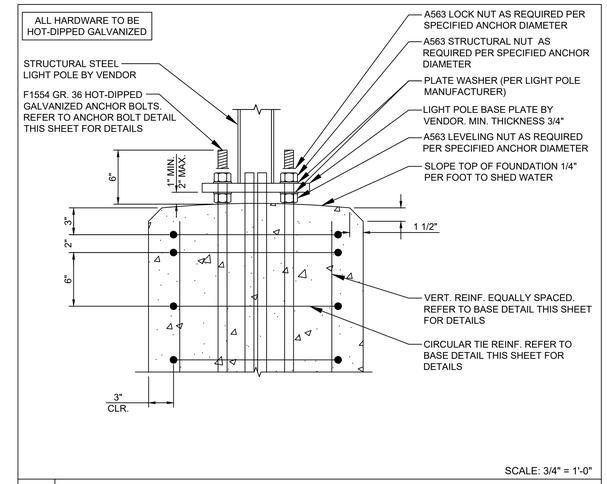
ENGINEER SEAL
SOUTH CAROLINA PROFESSIONAL ENGINEER No. 40407 BRIAN E. SEARCY

05/30/2023
BRIAN SEARCY, PE
PROFESSIONAL ENGINEER
SC LICENSE #40407

SHEET TITLE
LIGHTING PLAN

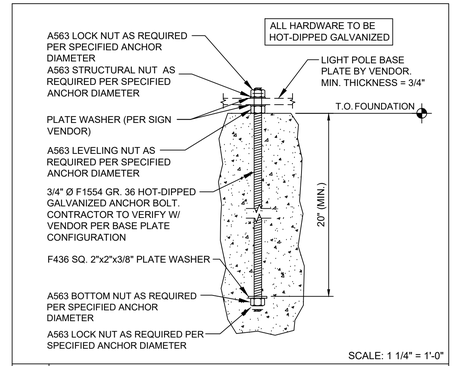
JOB #:	RFL.35149
DATE:	05/25/2022
SCALE:	1"=20'
DRAWN BY:	KB
CHECKED BY:	BS

SHEET NO.
C9



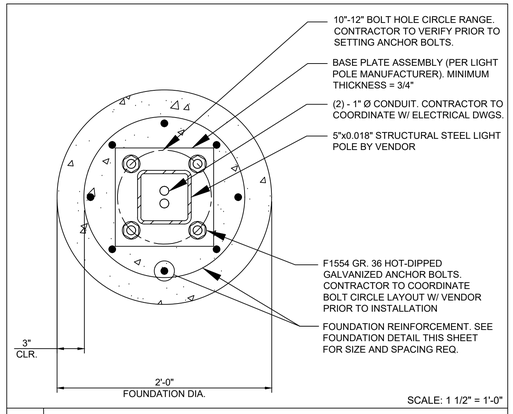
SCALE: 3/4" = 1'-0"

4 SECTION DETAIL



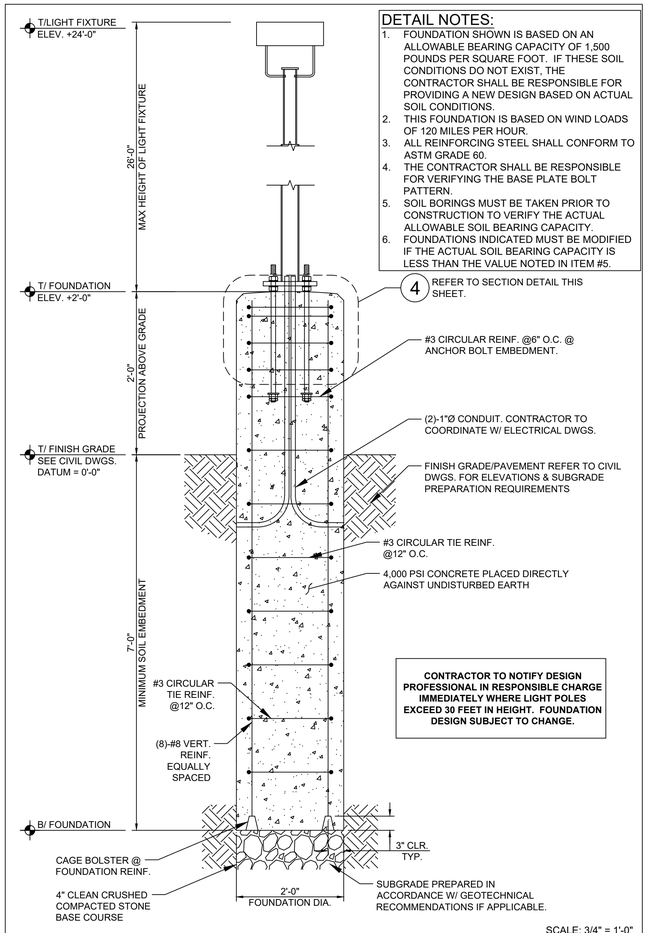
SCALE: 1 1/4" = 1'-0"

2 ANCHOR BOLT DETAIL



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

3 BASE DETAIL



CONTRACTOR TO NOTIFY DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IMMEDIATELY WHERE LIGHT POLES EXCEED 30 FEET IN HEIGHT. FOUNDATION DESIGN SUBJECT TO CHANGE.

SCALE: 3/4" = 1'-0"

1 LIGHT POLE FOUNDATION DETAIL

DETAIL NOTES:

1. FOUNDATION SHOWN IS BASED ON AN ALLOWABLE BEARING CAPACITY OF 1,500 POUNDS PER SQUARE FOOT. IF THESE SOIL CONDITIONS DO NOT EXIST, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A NEW DESIGN BASED ON ACTUAL SOIL CONDITIONS.
2. THIS FOUNDATION IS BASED ON WIND LOADS OF 120 MILES PER HOUR.
3. ALL REINFORCING STEEL SHALL CONFORM TO ASTM GRADE 60.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE BASE PLATE BOLT PATTERN.
5. SOIL BORINGS MUST BE TAKEN PRIOR TO CONSTRUCTION TO VERIFY THE ACTUAL ALLOWABLE SOIL BEARING CAPACITY.
6. FOUNDATIONS INDICATED MUST BE MODIFIED IF THE ACTUAL SOIL BEARING CAPACITY IS LESS THAN THE VALUE NOTED IN ITEM #5.

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refuel

811 Know what's below. Call before you dig.

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON DESIGN DRAWINGS, RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. CORESTATES, INC. DOES NOT GUARANTEE THAT LOCATIONS SHOWN ARE EXACT. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO VERIFY EXACT FIELD LOCATIONS OF UTILITIES.

PALMETTO UTILITY PROTECTION SERVICE
SOUTH CAROLINA PUPS

REVISIONS

REV	DATE	COMMENT	BY

DOCUMENT

PRELIMINARY DEVELOPMENT PLAN

SITE LOCATION

NEW RIVERSIDE VILLAGE, BLUFFTON, SC 29910

CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
CORESTATES INC. No. 3078

ENGINEER SEAL

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 40407 BRIAN L. SEARCY

05/30/2023

BRIAN SEARCY, PE
PROFESSIONAL ENGINEER
SC LICENSE #40407

SHEET TITLE

LIGHTING DETAILS

JOB #:	RFL.35149
DATE:	05/25/2022
SCALE:	
DRAWN BY:	KB
CHECKED BY:	BS

SHEET NO.

C18

C-WP-B-RDC Series

Cutoff LED Wall Pack
Replaces up to 400W PSMH

C-LITE LED LIGHTING

OFF THE WALL SAVINGS

Our cULus listed C-Lite Cutoff LED Wall Pack delivers up to 21,100 lumens and is available in 4000K and 5000K. It's dimmable, for maximum energy savings, and comes with a 5-year limited warranty. It also comes with a DLC Premium 5.1 Listing.

PRODUCT SPECIFICATIONS

OVERVIEW

- Initial Delivered Lumens: 1500 - 21,000 Lumens
- CRI: ≥ 70
- CCT: 4000K, 5000K
- Mounting height: 12 - 25 feet
- Input Power: 12W/22W/47W/77W/144W
- Dimmable: Yes, 0-10V
- Operating Temperature Range: -40°F to 104°F (-40°C to 40°C)
- Estimated L70 Lifetime @ 25°C: > 100,000 hours
- Power Factor: > 0.9
- Total Harmonic Distortion: < 20%
- Limited Warranty: 5 Years*
- Replaces up to 400 PSMH

FEATURES	RECOMMENDED USE	INPUT VOLTAGE
• Replaces up to 400W PSMH • 4kV Surge suppression • Contractor friendly install	• Security • Perimeter • Commercial	• Universal (120V through 277V Operation)

ORDERING INFORMATION

Example: C-WP-B-RDC-1L-40K-DB

C-WP	B	RDC				DB
PRODUCT	SERIES	TYPE	LUMEN PACKAGE		CCT	COLOR
C-WP	B	RDC Round Cutoff	1L 1500L 12W 3L 3000L (4000K), 3100L (5000K) 22W 6L 6200L (4000K), 6300L (5000K) 47W	10L 10,600L 77W 20L 20,900L (4000K), 21,100L (5000K) 144W	40K 4000K (Neutral White) 50K 5000K (Cool White)	DB Dark Bronze

CERTIFICATIONS:

Rev. Date: 05/02/2022

For informational purposes only. Content is subject to change. *See lighting.cree.com/warranty for details

CRT Series

CR6T LED Downlight - 6" (152mm)

Rev. Date: V4 08/24/2020

Product Description

The new CR6T LED downlight delivers up to 1,650 lumens while achieving over 84 lumens per watt. This breakthrough performance is achieved by combining the high efficacy and high-quality 90 CRI light. The CR6T is available in warm and cool color temperatures, and easily installs into most standard five-inch or six-inch recessed IC or non-IC housings.
Applications: New construction or upgrade for residential and commercial lighting

Performance Summary

Initial Delivered Lumens: 825 Lumens - 1,650 Lumens

Input Power: 11 watts, 14.5 watts, 21 watts, 19.5 watts

CRI: 90+

CCT: 2700K, 3000K, 3500K, 4000K

Limited Warranty*: 5 years

Lifetime: Designed to last 50,000 hours

Dimming: Dimmable to 5% (At 120V Only)

Rated for Dry, Damp, and Wet Locations

*See http://creelighting.com/warranty for warranty terms

Accessories

Field-Installed

Trims
CR6T-TRMBRAN-1
- 6" (152mm) Plastic Reflector Trim - Bronze

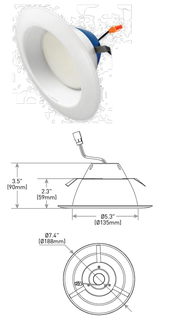
CR6T-TRMBNAN-1
- 6" (152mm) Plastic Reflector Trim - Black

CR6T-TRMSTAN-1
- 6" (152mm) Plastic Reflector Trim - Satin Nickel

CR6T-TRMBKRB-1
- 6" (152mm) Plastic Reflector Trim w/Extended Flange - Black

Housings
Refer to page three for details.

8" Adapter Ring
GRB
- Optional goof ring accommodates existing housings with apertures from a 25° (159mm) to 8.5° (216mm) in diameter



Ordering Information

Example: CR6T-825L-27K-12-E26DU24

CR6T						
Series	Initial Delivered Lumens		CCT		Voltage	Base Type
CR6T 6" (152mm)	825L 11W, 825 Lumens - 75 LPW 1100L 14.5W, 1100 Lumens - 76 LPW 1400L 21W, 1600 Lumens - 76 LPW	1200L (120-277V Only) 14.5W, 1,200 Lumens - 82 LPW 1650L (120-277V Only) 19.5W, 1,650 Lumens - 84 LPW	27K 2700K 30K 3000K 35K 3500K 40K 4000K	12 120 Volts 1227 120-277 Volts (Universal)	E26DU24 Includes E26 (Title 20 Compliant) and GU24 Base Pigtail (Title 24 Compliant) Blank Includes E26 (Title 20 Compliant), GU24 Base (Title 24 Compliant), and 277V Connector Pigtails	

Ordering Number	Single-Carton UPC	Single Cartons Per Master Carton	Master Carton ITF-14	Watts	CCT	Lumens	Rated Life (Hrs)
CR6T-825L-27K-12-E26DU24	844164023487	12	10844164023484	11	2700K	825	50,000
CR6T-825L-30K-12-E26DU24	844164023494	12	10844164023491	11	3000K	825	50,000
CR6T-825L-35K-12-E26DU24	844164023500	12	10844164023507	11	3500K	825	50,000
CR6T-825L-40K-12-E26DU24	844164023517	12	10844164023514	11	4000K	825	50,000
CR6T-1100L-27K-12-E26DU24	844164023425	12	10844164023422	14.5	2700K	1,100	50,000
CR6T-1100L-30K-12-E26DU24	844164023432	12	10844164023439	14.5	3000K	1,100	50,000
CR6T-1100L-35K-12-E26DU24	844164025412	12	10844164025419	14.5	3500K	1,100	50,000
CR6T-1100L-40K-12-E26DU24	844164023449	12	10844164023446	14.5	4000K	1,100	50,000
CR6T-1400L-27K-12-E26DU24	844164025436	12	10844164025433	21	2700K	1,600	50,000
CR6T-1400L-30K-12-E26DU24	844164023463	12	10844164023460	21	3000K	1,600	50,000
CR6T-1400L-35K-12-E26DU24	844164025429	12	10844164025426	21	3500K	1,600	50,000
CR6T-1400L-40K-12-E26DU24	844164023470	12	10844164023477	21	4000K	1,600	50,000
CR6T-1200L-27K-1227	844164037231	12	10844164037238	14.5	2700K	1,200	50,000
CR6T-1200L-30K-1227	844164037248	12	10844164037245	14.5	3000K	1,200	50,000
CR6T-1200L-35K-1227	844164037255	12	10844164037252	14.5	3500K	1,200	50,000
CR6T-1200L-40K-1227	844164037262	12	10844164037269	14.5	4000K	1,200	50,000
CR6T-1650L-27K-1227	844164037279	12	10844164037276	19.5	2700K	1,650	50,000
CR6T-1650L-30K-1227	844164037286	12	10844164037283	19.5	3000K	1,650	50,000
CR6T-1650L-35K-1227	844164037293	12	10844164037290	19.5	3500K	1,650	50,000
CR6T-1650L-40K-1227	844164037309	12	10844164037306	19.5	4000K	1,650	50,000

US: creelighting.com T (800) 234-6800
Canada: creelighting-canada.com T (800) 473-1234

CREE LIGHTING

BOMBER INTEGRATED LED SERIES

SPS-0452 REV A

JOB NAME: Refuel FIXTURE TYPE:

BLE - S - WHB13 - 105 - ST712 - 105 - NA - NA -
(A) (B) (C) (D) (E) (F) (G)
NA - HSC - LED27 - 2700K - FL
(H) (I) (J) (K) (L)

Order Example: BLE - G - WHB15 - 100 - G22 - 100 - NA - WC - 100 - NA - LED27 - 2700K - FL

A - MOUNTING STYLE
- C Cord Hung
- CN Chain Hung
- F Flush Mount
- G Gooseneck
- S Stem Mount

B - SHADE SIZE
BOMBER:
WHB11 WHB13 WHB15 WHB17

C - SHADE FINISH
PORCELAIN FINISHES[1]:
150 Black, 250 White, 350 Vintage Green, 355 Jadite, 455 Cherry Red, 550 Yellow, 650 Bronze, 750 Cobalt Blue, 765 Delphite Blue, 850 Graphite, 950 Metallic Chrome
POWDER COAT FINISHES[1]:
100 Black, 105 Textured Black, 200 White, 300 Dark Green, 307 Emerald Green, 311 Jadite, 370 Mint, 380 Chartreuse, 390 Teal, 400 Barn Red, 420 Orange, 470 Watermelon, 480 Blush Pink, 490 Magenta, 495 Sherbet Orange, 500 Buttery Yellow, 570 Sunflower, 600 Bronze, 601 Chocolate, 605 Rust, 615 Oil-Rubbed Bronze, 700 Royal Blue, 705 Navy, 710 Cobalt Blue, 715 Delphite Blue

C - SHADE FINISH (CONTINUED)
POWDER COAT FINISHES[1]:
790 Lavender, 800 Industrial Grey, 805 Charcoal Granite, 810 Graphite, 975 Galvanized
NATURAL METALS[2]:
995 Raw Copper, 996 Weathered Copper, 997 Raw Brass, 998 Weathered Brass, 999 Oil-Rubbed Copper

D - MOUNTING
Please Note: If Flush Mount (F) is selected in Section A, please select NA
NA Not Applicable

CSA LISTED CORDS:
SBK Standard Black, SWH Standard White, CSB Black Cloth, CSW White Cloth, CMG Grey Cloth, CSR Red Cloth, CRZ Red Chevron Cloth, CSBB Black & Brown Cloth, CSRW Red & White Cloth, CSGW Gold & White Cloth, CSBG Black & Gold Cloth, CSBW Black & White Cloth, CSBP Black & Pink Cloth, CSUW Blue & White Cloth
CHAIN MOUNT OPTIONS:
CN36 3' of Chain[4], CN48 4' of Chain[4], CN60 5' of Chain[4], CN72 6' of Chain[4]
GOOSENECK OPTIONS:
G1[1] G11[1] G26[1], G2[1] G12[1] G32, G3[1,3] G13 G34[1], G4[1] G14 G35[1], G5[1] G15 G36[1], G6 G16[1] G64[1], G7 G17 G65[1], G8 G22, G9 G24, G10 G25

D - MOUNTING (CONTINUED)
STEM MOUNT OPTIONS:
ST506 .5" Stem Mount, 6"[1], ST512 .5" Stem Mount, 12"[1], ST518 .5" Stem Mount, 18"[1], ST524 .5" Stem Mount, 24"[1], ST536 .5" Stem Mount, 36"[1], ST548 .5" Stem Mount, 48"[1], ST706 .75" Stem Mount, 6", ST712 .75" Stem Mount, 12", ST718 .75" Stem Mount, 18", ST724 .75" Stem Mount, 24", ST736 .75" Stem Mount, 36", ST748 .75" Stem Mount, 48"

E - MOUNTING FINISH
Please Note: See Section C for Finish Options. 980-Brushed Aluminum is also available for Gooseneck and Stem mounting styles. If a Porcelain shade finish is selected, mounting will be powder coat painted-to-match. Porcelain shade finishes are not available with a Natural Metal mounting finish
(1) If Cord Hung (C), selection identifies canopy finish
(10) If Chain Hung (CN) Mounting Style, selection identifies chain and canopy finish. Natural Metals are not applicable
(10) If Stem Mount (S) Mounting Style, selection identifies stem and canopy finish
(10) If Flush Mount (F) Mounting Style, selection identifies hex coupler and canopy finish. Natural Metals are not applicable
980 Brushed Aluminum

F - CORDS[7]
NA Not Applicable
Please Note: See Section D for all applicable CSA Listed Cord Options

G - SHADE ACCESSORIES
NA None, WC Wire Cage[8], ACR Acrylic Diffuser[8]

H - SHADE ACCESSORY FINISH
Please Note: See Section C for Finish Options. Natural Metals not applicable with Acrylic Diffuser or Wire Cage. If Porcelain Finish is selected, accessory will be powder coat painted-to-match
NA Not Applicable

I - MOUNTING ACCESSORY
Please Note: Mounting Accessories below are only applicable with select Mounting Styles. Please refer to product listings on our website for further detail.
NA None/Not Applicable, HSC Hang Straight Canopy[9], LDBPC LED Decorative Backing Plate Cover[10], LDCHX LED Decorative Backing Plate Cover & Hex Cover[10]

J - LIGHT SOURCE
LED11 850 Lumen, 11W LED, LED16 1250 Lumen, 16W LED, LED27 2000 Lumen, 27W LED[6], LED38 3000 Lumen, 38W LED[6,11], LED43 4000 Lumen, 43W LED[6,11]

K - COLOR TEMPERATURE
2700K 2700K, Warm White, 3000K 3000K, Neutral White, 3500K 3500K, Bright White, 4000K 4000K, Cool White

L - LED LENS
DL Domed Lens, FL Flat Lens

IMPORTANT: (1) Not available in Natural Metals (2) Not compatible with 15" shade size and larger (3) All Porcelain Enamel finished shades feature a white interior and a black outer rim (4) All Powder Coat finished shades, Galvanized excluded, feature a white interior (5) Acrylic Diffuser limits the maximum lumen selection as well as reduces lumens delivered and LPW. Selection Limits: 1250 Max for 11" shades; 2000 Max for 13" through 17" shades (6) Not Applicable if WHB11 is selected in section B (7) Only applicable if Chain Hung Mounting Style selected in Section A, select NA if another Mounting Style is selected (8) Natural Metals have a longer estimated manufacturing time, please check the website for exact lead time. There are no returns accepted on Natural Metals. (9) Only applicable if Stem Mounting Style is selected in Section A (10) Not available with GU6 Gooseneck option (11) Not available with Acrylic Diffuser shade accessory

Address: 320 Knox McRae Drive Titusville, FL 32780 Phone: (800) 407-8784 Email: sales@barnlight.com Website: www.barnlight.com

1

CPY Series - Version B

CPY250® LED Canopy/Soffit Luminaire

Rev. Date: V18 07/11/2022

Product Description

The CPY250® LED Canopy/Soffit Luminaire has an extremely thin profile constructed of rugged cast aluminum. It can be surface mounted easily from below the canopy deck and can be pendant mounted. Direct imaging of the LEDs is eliminated with a highly efficient patterned flat or 0.91" (23mm) drop glass lens.
Applications: Petroleum canopies, CNG fueling stations, soffits

Performance Summary

Assembled in the USA by Cree Lighting from US and imported parts

Initial Delivered Lumens: Up to 19,600

Efficacy: Up to 141 LPW

CRI: Minimum 70 CRI

CCT: 3000K (+/- 300K), 4000K (+/- 300K)

Limited Warranty*: 10 years on luminaire/10 years on Colorfast DeltaGuard® finish/5 years on PML sensor/1 year on luminaire accessories

IP66 Rated (Direct Mount only)

Class I, Division 2 Hazardous Location for select models

* See http://creelighting.com/warranty for warranty terms

Accessories

Field-Installed

Direct Mount Luminaires
Canopy Upgrade Kits (18 ga. steel, except where noted)
CPY-AP304* - for use with Cree Lighting CAN-304 luminaires, 16 ga. 5052 aluminum
XA-BXCCMW - for use with Jet-Philips, 21.60" (549mm) square, white
XA-BXCCNW - for use with Elsco Franciscan, 22.06" (560mm) square, white
XA-BXCCPW - for use with LSI Dakota or Masters, 22.50" (572mm) square, white
XA-BXCCQW - for use with Whiteway Riviera or Rig-A-Lite, 20.60" (523mm) square, white
XA-BXCCRW - for use with Elsco Merrit, 18.06" (459mm) square, white
XA-BXCCSW - for use with LSI Richmond or Whiteway Civic, 23.00" (584mm) L x 13.00" (330mm) W, white
Direct Mount Junction Box/Stem Kit
XA-BXCJBDK - 6.0" (152mm) H x 3/4" (19mm) NPT Stem
- Watertight
- Rated for feed through 8 Ga in, 4 out #12 AWG conductors
Direct Mount Beauty Plates
XA-BXCBPW - 26.17" (665mm) Beauty Plate Only (18 ga. steel), white
XA-BXCBPB12W - 26.17" (665mm) Beauty Plate (18 ga. steel) w/12" (305mm) Backer Plate (16 ga. steel), white
- For use in canopies where deck opening is larger than what is required for mounting the CPY250 luminaire. Maximum deck opening 10.75" x 15" (183mm x 275mm)
XA-BXCBPB16W - 26.17" (665mm) Beauty Plate (18 ga. steel) w/16" (406mm) Backer Plate (16 ga. steel), white
- For use in canopies where deck opening is larger than what is required for mounting the CPY250 luminaire. Maximum deck opening 12" x 15" (305mm x 375mm)

Pendant Mount Luminaires
Pendant Mount Kits
XA-PS12KIT* - 5" (127mm) pendant
XA-PS18KIT* - 11" (279mm) pendant
XA-PS22KIT* - 15" (381mm) pendant
- Includes two conduit fittings and 3/4-14 NPT pipe threaded on two ends
Hand-Held Remote
XA-SENSREM
- For successful implementation of the programmable multi-level option, a minimum of one hand-held remote is required

* Most specify color: BK (Black), BZ (Bronze), SV (Silver) or WH (White)

Ordering Information

Example: CPY250-B-DM-D-A-UL-SV

CPY250	B							
Product	Version	Mounting**	Optic	Lumen Package/ Input Power Designator	Voltage	Color Options	CCT	Options
CPY250	B	DM Direct HC Hook & Cord PD Pendant	D 0.91" (23mm) Drop Lens F Flat Lens	13L 9.1W B 9.6W E 14.9W	UL Universal 120-277V	BK Black BZ Bronze SV Silver WH White	30K 3000K 40K 4000K	DIM 0-10V Dimming - Control by others - Refer to Dimming spec sheet for details - Can't exceed wattage of specified lumen package/ Input Power Designator HZ Class I, Div. 2 Hazardous Location Certification - Available with DM and PD mounts only - Not available with K or PML options K NSF 2 Certification - Luminaires include NSF certification mark - Available with the DM mount only - Not available with the HZ or PML options PML Programmable Multi-Level - Available with UL voltage only - Refer to PML spec sheet for details

* For Car Wash Applications please contact Cree Lighting @ 1-800-236-6800

US: creelighting.com T (800) 236-6800
Canada: creelighting-canada.com T (800) 473-1234

CREE LIGHTING

OSQ Series

OSQ™ LED Area/Flood Luminaire featuring Cree TrueWhite® Technology – Medium & Large

Rev. Date: V4 07/18/2022

Product Description

The OSQ™ Area/Flood luminaire blends extreme optical control, advanced thermal management and modern, clean aesthetics. Built to last, the housing is rugged cast aluminum with an integral, weathertight LED driver compartment. Versatile mounting configurations offer simple installation. Its slim, low-profile design minimizes wind load requirements and blends seamlessly into the site providing even, quality illumination. The 6L lumen package is a suitable upgrade for HID applications up to 250 Watt, and the 11L lumen package is a suitable upgrade for HID applications up to 400 Watt. The 22L lumen package is a suitable upgrade for HID applications up to 750 Watts, and the 30L lumen package is a suitable upgrade for HID applications up to 1000 Watts.
Applications: Parking lots, walkways, campuses, car dealerships, office complexes, tunnels, underpasses, and internal roadways

Performance Summary

Utilizes Cree TrueWhite® Technology on 5000K Luminaires

NanoOptic® Precision Delivery Grid™ optic

Assembled in the USA by Cree Lighting from US and imported parts

Initial Delivered Lumens: 6,000 - 30,000

Efficacy: Up to 173 LPW

CRI: Minimum 70 CRI (3000K, 4000K & 5700K); 90 CRI (5000K)

CCT: 3000K, 4000K, 5000K, 5700K

Limited Warranty*: 10 years on luminaire; 10 years on Colorfast DeltaGuard® finish; 5 years for PML sensor; up to 5 years for Synapse® accessories; 1 year on luminaire accessories

* See http://creelighting.com/warranty for warranty terms. For Synapse accessories, consult Synapse spec sheets for details on warranty terms.

Ordering Information

Fully assembled luminaire is composed of two components that must be ordered separately:
Example: **Mount:** OSQ-ML-B-AA-BK + **Luminaire:** DSQM-B-L-30K7-2M-UL-NM-BK

Mount (Luminaire must be ordered separately)*

OSQ-

OSQ-ML-B-AA Adjustable Arm
OSQ-ML-B-DA Direct Arm
OSQ-ML-B-TSP Transportation Mount (stainless steel; do not specify color)
OSQ-ML-B-TM Trunnion Mount

Color Options: SV Silver, BZ Bronze, BK Black, WH White

* Reference EPA and pole configuration suitability data beginning on page 10

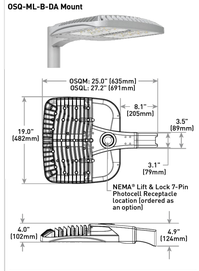
Luminaire (Mount must be ordered separately)

OSQ B

Family	Size	Series	Lumen Package*	CCT/CRI	Optic	Voltage	Mount	Color Options	Controls**	Options
OSQ	M Medium L Large	B	Medium 6L 6,000 Lumens 8L 8,000 Lumens 9L 9,000 Lumens 11L 11,000 Lumens 16L 16,000 Lumens Large 22L 22,000 Lumens 30L 30,000 Lumens	30K7 3000K, 70 CRI 40K7 4000K, 70 CRI 50K7 5000K, 70 CRI 50K9 5000K, 90 CRI 57K7 5700K, 70 CRI	Asymmetric 2M* Type II Medium 3M* Type III Medium 4AM* Type IV Medium Symmetric 5M Type V Medium Type V Narrow 5Q Type V Square N3 Narrow Flood 33 NEMA® 3x3 44 NEMA® 4x4 55 NEMA® 5x5 66 NEMA® 6x6 75 NEMA® 7x5	UL Universal 120-277V UH Universal 347-480V - Not available with 6L or 6L lumen packages	NM No Mount - Most specify mount from table above - Mount ships separately	BK Black BZ Bronze SV Silver WH White	PML Programmable Multi-Level, up to 40' Mounting Height - Refer to PML spec sheet for details - Intended for downlight applications at 5° (0) PML2 Programmable Multi-Level, 10-30' Mounting Height - Refer to PML spec sheet for details - Intended for downlight applications at 5° (0) 09/08/07/06/05/04/03/02/01 Field Adjustable Output - Must select CP, Q8, Q7, Q6, Q5, Q4, Q3, Q2, or Q1 - Offers full range adjustability - Refer to pages 12-18 for power and lumen values - Not available with PML or PML2 options XR/XT/XA/XS/XU/XZ/X1 Locked Lumen Output - Must select add XR, XT, XA, XS, XU, XZ, or X1 - Not available with Z2L or 30L lumen packages - X2 or X1 not available with 4L lumen package - Not available with PML or PML2 options - Lumen output is permanently locked to the setting selected - Refer to pages 12-18 for power and lumen values	20KV 20kV/10kA Surge Protection - Replaces standard 10kV/5kA surge protection F Fuse - Compatible with 120V, 277V or 347V (phase to neutral) - Consult factory if fusing is required for 208V, 240V or 480V (phase to phase) - Refer to PML spec sheet for availability with PML options - When code dictates fusing, use time delay fuse R NEMA® Lift & Lock 7-Pin Photocell Receptacle - 7-pin receptacle per ANSI C136.41 - Intended for downlight applications with maximum 45° (0) - Factory connected 0-10V dim leads - 18" (457mm) seven-conductor cord exits luminaire - Requires photocell or shorting cap by others RL Rotate Left - LED and optic are rotated to the left - Refer to RR/RL configuration diagram on page 19 for optic directionality - Not for use with symmetric optics RR Rotate Right - LED and optic are rotated to the right - Refer to RR/RL configuration diagram on page 19 for optic directionality - Not for use with symmetric optics

* Lumen Package codes identify approximate light output only. Actual lumen output levels vary by CCT and optic selection. Refer to Initial Delivered Lumen tables for specific lumen values
* Available with Backlight Shield when ordered with field-installed accessory (see table on page 2)
** Luminaire comes standard with 0-10V dimming

OSQ-ML-B-DA Mount



Luminaire	Weight
OSQM	28.9 lbs. (13.1kg)
OSQL	32.4 lbs. (14.7kg)

Note: Refer to page 11 for fixture mounting drill pattern. For additional mounts, refer to drawings beginning on page 19

US: creelighting.com (800) 236-6800
Canada: creelighting-canada.com (800) 473-1234

CREE LIGHTING

BARN LIGHT ELECTRIC CO.

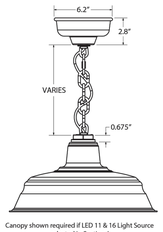
BOMBER INTEGRATED LED SERIES SPS-0452 REV A

MOUNTING STYLE

HIGH LUMEN CANOPY FOR PENDANT & FLUSH MOUNT

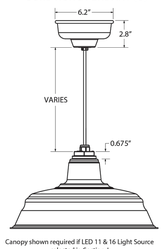
Required if LED 27, 38, 43 Light Source selected in Section J

CHAIN HUNG PENDANT (CN)



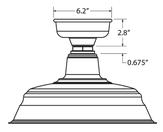
Canopy shown required if LED 11 & 16 Light Source selected in Section J

CORD HUNG PENDANT (C)



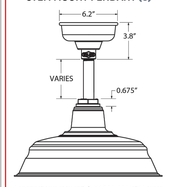
Canopy shown required if LED 11 & 16 Light Source selected in Section J

FLUSH MOUNT (F)



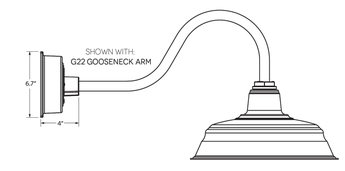
Canopy shown required if LED 11 & 16 Light Source selected in Section J

STEM MOUNT PENDANT (S)

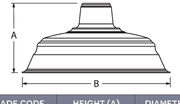


Canopy shown required if LED 11 & 16 Light Source selected in Section J

GOOSENECK (G)



LUMINAIRE DIMENSIONS



SHADE CODE	HEIGHT (A)	DIAMETER (B)
WHB11	6"	11"
WHB13	6"	13"
WHB15	7"	15"
WHB17	8.25"	17"

Address: 320 Knox McRae Drive Titusville, FL 32780 Phone: (800) 407-8784 Email: sales@barnlight.com Website: www.barnlight.com

2

CORE STATES GROUP
CORESTATES, INC.
FIRM CERTIFICATION NO. C-2880
1900 SOUTH BLVD, SUITE 225
CHARLOTTE, NC 28203
PHONE (704) 247-4907
DPARRY@CORE-STATES.COM

DOCUMENTS PREPARED BY CORESTATES, INC., INCLUDING THIS DOCUMENT, ARE TO BE USED ONLY FOR THE SPECIFIC PROJECT AND SPECIFIC USE FOR WHICH THEY WERE INTENDED. ANY EXTENSION OF USE TO ANY OTHER PROJECTS, BY OWNER OR BY ANY OTHER PARTY, WITHOUT THE EXPRESSED WRITTEN CONSENT OF CORESTATES, INC. IS DONE UNLAWFULLY AND AT THE USERS OWN RISK. IF USED IN A WAY OTHER THAN THAT SPECIFICALLY INTENDED, USER WILL HOLD CORESTATES, INC. HARMLESS FROM ALL CLAIMS AND LOSSES.

CLIENT

refuel

811 Know what's below. Call before you dig.

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON DESIGN PLANS AND MAPS AND MAY NOT BE ACCURATE OR CURRENT. NO ADDITIONAL MEASUREMENTS TAKEN IN THE FIELD. CORESTATES, INC. DOES NOT GUARANTEE THAT LOCATIONS SHOWN ARE EXACT. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF UTILITIES.

PALMETTO UTILITY PROTECTION SERVICE
SOUTH CAROLINA PUPS

REVISIONS

REV	DATE	COMMENT	BY

DOCUMENT
PRELIMINARY DEVELOPMENT PLAN

SITE LOCATION
NEW RIVERSIDE VILLAGE, BLUFFTON, SC 29910

CERTIFICATE OF AUTHORIZATION
SOUTH CAROLINA CORESTATES INC. No. 3078 CERTIFICATE OF AUTHORIZATION

ENGINEER SEAL
SOUTH CAROLINA PROFESSIONAL ENGINEER No. 40407 BRIAN C. SEARCY
05/30/2023
BRIAN SEARCY, PE
PROFESSIONAL ENGINEER
SC LICENSE #40407

SHEET TITLE
LIGHTING DETAILS

JOB #:	RFL.35149
DATE:	05/25/2022
SCALE:	
DRAWN BY:	KB
CHECKED BY:	BS

SHEET NO.
C19

PLAN REVIEW COMMENTS FOR DP-02-22-016354

Town of Bluffton
Department of Growth Management
20 Bridge Street P.O. Box 386 Bluffton, South Carolina 29910
Telephone 843-706-4522
NEW RIVERSIDE VILLAGE

Plan Type:	**Development Plan**	**Apply Date:**	**02/07/2022**
Plan Status:	**Active**	**Plan Address:**	**150 Parkside Commons BLUFFTON, SC 29910**
Case Manager:	**Dan Frazier**	**Plan PIN #:**	**R610 036 000 3713 0000**

Plan Description: **A request by Ryan Robinson of Refuel Operating Company, LLC for approval of a preliminary development pl application. The project consists of a Refuel store and carwash. The property is zoned New Riverside Planne Unit Development and consists of approximately 1.58 acres identified by tax map number R610 036 000 3713 0000 located along New Riverside Village Way and Parkside Commons within the New Riverside Village Master Plan.**
STATUS: Staff comments on the Preliminary Development Plan were reviewed at the March 16, 2022 meeting of the DRC. Awaiting re-submittal to address comments.
STATUS: The applicant resubmitted on May 26, 2022.
STATUS: Staff comments on the Preliminary Development Plan were reviewed at the June 29, 2022 meeting o the DRC.
STATUS: The Applicant resubmitted on July 7, 2022.
STATUS: The application was approved with conditions at the July 27, 2022, Planning Commission meeting.
STATUS: Comments on the Final Development Plan will be heard at the May 10, 2023, meeting of the DRC.

Final Technical Review

Submission #: 1 Received: 04/06/2023 Completed: 05/05/2023

Reviewing Dept.	*Complete Date*	*Reviewer*	*Status*
Planning Commission Review	05/05/2023	Dan Frazier	Revisions Required

Comments:
See planning review comments.

Planning Review - SR	05/05/2023	Jordan Holloway	Revisions Required

Comments:

1. Provide clarification on the phasing of work (i.e. who is installing the parking and access through the adjacent parcel) for this site is required prior to approval to ensure circulation, parking, and truck access/delivery etc. will be sufficient sho property not immediately move forward. Stormwater permitting is only for areas within the limits of disturbance, w include the western access point required for truck circulation routes to work.
2. Foundation buffer is not adjacent to the building on any portion of the building except the south east corner of the building. Eight feet of Foundation Plantings must be revised to meet the requirements of Section 5.15.8.D.2. as indicated in previous DRC Comments.
3. Buffering at right of way is not adequate. For every one hundred (100) linear feet (or portion thereof) of frontage or the highway, a minimum of six (6) broad-leaved over story trees, seven (7) under story trees, and thirty (30) shrubs are required in the buffer. The plant materials shall be generally distributed along and throughout the buffer in order that there not be significant gaps without plantings. It appears the overstory requirement has been satisfied, but the plan is severely lacking in shrubs and understory trees.
4. Trees are required in each landscape island. All other site design shall be configured around this requirement.
5. There are conflicts with light pole locations and where required landscape trees need to be installed.
6. Provide a letter from the declarant indicating the on street parking on New Riverside Way (15) and Parkside Commons (4) are dedicated to this use and may not be counted towards other site's parking calculations.
7. Propane locations and screening are still not identified as required in DRC Comments previously. Appears to be on front elevation, but does not include any screening.
8. Identify the two structures shown at property lines adjacent to sidewalks along Parkside Commons and New Riverside Village Way.
9. Shrub sizes need to include heights as minimum height requirement is 30".
10. Bollards are shown at the parking areas – the same notation is used under the canopy. Clarify what these indicate.
11. Bollards shall not be used for any advertising/signage.

Planning Review - Address	05/05/2023	Diego Farias	Not Required
Beaufort Jasper Water and Sewer Review	05/01/2023	James Clardy	Approved with Conditions

Comments:
Currently under review in accordance with the February 2023 BJWSA Development Policy and Procedure Manual.

Watershed Management Review DRC	04/27/2023	Samantha Crotty	Approved with Conditions

Comments:
Pending receipt of NPDES approval letter.

Fire Department Review	05/05/2023	Dan Wiltse	Approved
Police Department Review	05/05/2023	Adam Barberio	Approved
Building Safety Review	04/11/2023	Richard Spruce	Approved
Transportation Department Review	04/06/2023	Megan James	Approved

Comments:
No comments