



**AGENDA
TECHNICAL REVIEW COMMITTEE
REGULAR MEETING
NOVEMBER 12, 2020
9:00 AM
CITY HALL COMMISSION CHAMBERS
204 ASH STREET
FERNANDINA BEACH, FL 32034**

- 1. CALL TO ORDER**
- 2. ROLL CALL**
- 3. PLEDGE OF ALLEGIANCE**
- 4. APPROVAL OF MINUTES**
 - 4.1 Approval of Minutes for the Regular Meeting of July 9, 2020.
 - 4.2 Approval of Minutes for the Regular Meeting of August 13, 2020.
 - 4.3 Approval of Minutes for the Regular Meeting of October 22, 2020.
 - 4.4 Approval of Minutes for the Regular Meeting of September 24, 2020.
- 5. DISCUSSION ITEMS**
 - 5.1 Pre-Application: 233 S. 14th Street - Nick Gillette, Gillette and Associates, to discuss a Group Residential Project on an MU-1 Mixed Use parcel.
 - 5.2 Pre-Application: 515 S. 8th Street - Scott Thompson
 - 5.3 Change of Use: 2022 1st Ave. - Kate & Rado Kovalcik to discuss opening an ice cream shop in a former art gallery space.
 - 5.4 Pre-Application: 1014 Atlantic Ave. - Tara Thousand to discuss a tenant using the location as an art gallery and retail space.
 - 5.5 Change of Use: 320 S. 8th St. - Mark Akins to discuss opening a salon in a former athletic gym space.
- 6. NEW BUSINESS**
 - 6.1 SPR 2020-0007: North 2nd Street Townhomes - Review Comment Discussion
 - 6.2 SPR 2020-0008: WestRock Drop Yard - Review Comment Discussion
- 7. DEVELOPMENT INQUIRIES FROM APPLICANTS NOT ON THE AGENDA - DISCUSSION ONLY, NO ACTION TO BE TAKEN.**
- 8. COMMITTEE BUSINESS**

8.1 SPR 2020-0010: 14th & Lime Street Retail Building_Sign Off

9. ADJOURNMENT

NEXT REGULAR TRC MEETING IS SCHEDULED FOR DECEMBER 10, 2020

Persons with disabilities requiring accommodations in order to participate in this program or activity should contact 310-3115, TTY 711, or through the Florida Relay Services at 1-800-955-8771 (TTY number for all City offices) at least 24 hours in advance to request such accommodations.



**MINUTES
TECHNICAL REVIEW COMMITTEE
REGULAR MEETING
JULY 9, 2020
9:00 AM**

1. CALL TO ORDER 9:00 AM

2. ROLL CALL

MEMBERS PRESENT:

Jacob Platt, Planning
John Mandrick, Utilities
Jason Higginbotham, Fire
Don Kukla, Building

Stephen Beckman, Building
Rex Lester, Streets/ADA (joined at 9:02)
Andre Desilet, Stormwater

3. APPROVAL OF MINUTES

No Minutes were presented

4. DISCUSSION ITEMS

4.1 Pre-application: 105 S. 5th Street – John Hillman, Cabana Lane, Inc. to discuss a mixed-use project on a C-3, Central Business District parcel.

Mr. Hillman withdrew his application prior to the meeting.

4.2 CHANGE OF USE - 4000 Amelia Island Parkway, Jose Miranda, Architect – For an office/storage facility to be converted to a scooter rental business.

Mr. Miranda asked member how a change of use is determined. Mr. Beckman, Building Official, explained the process. Member Platt explained the difference between the Florida Building Code change of use and a change of use as defined in the City's Land Development Code. Member Platt confirmed that scooter rentals are permissible in the I-1 zoning district.

After the applicant confirmed that all scooters are electric, Member Higginbotham spoke of battery requirements and confirmed that no fire alarm would be required. Member Beckman then stated that the property falls under the F1 Factory occupancy class and mentioned that records show that the building was renovated back in 2015. There was a question from Member Kukla inquiring about battery chargers.

Mr. Miranda stated that ADA requirements were met when the building was first built and asked about the impact fees and if electrical engineering was required. Member Mandrick mentioned that there would be no change of use for utilities.

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Mr. Kukla suggested that a thorough inspection should be performed and the owner voiced that he is anxious to open his business and asked the panel what is required to expedite the process.

It was explained that a building permit application would need to be submitted.

Mr. Lasserre, attorney, mentioned that he was working on acquiring the license and finalizing the franchise agreement. Lastly, Member Platt noted that once licenses and agreement were finalized, a Local Business Tax Receipt could then be applied for and issued.

5. NEW BUSINESS

6. DEVELOPMENT INQUIRIES FROM APPLICANTS NOT ON THE AGENDA – DISCUSSION ONLY, NO ACTION TO BE TAKEN

7. COMMITTEE BUSINESS

7.1 SPR 2020-0003: 8th Street Townhomes – Sign-off

8. ADJOURNMENT at 9:14 a.m.

Jacob Platt, Chair



**MINUTES
TECHNICAL REVIEW COMMITTEE
REGULAR MEETING
AUGUST 13, 2020
9:00 A.M.**

1. CALL TO ORDER 9:00 A.M.

2. ROLL CALL

MEMBERS PRESENT:

Jacob Platt, Planning
Rex Lester, Streets/ADA
Andre Desilet, Stormwater
Dave Holley, Arborist

Don Kukla, Building
Michelle Forstrom, Code
Jason Higginbotham, Fire

3. APPROVAL OF MINUTES

No Minutes were presented for approval.

4. DISCUSSION ITEMS

- 4.1 Change of Use Discussion: Brian Kyzer with Watanut Gourmet Nuts & Cookies to discuss opening a new location at 118 Centre Street. This property is zoned C-3, Central Business District.

Mr. Kyzer was present to explain his project. They mentioned that no cooking or baking would take place on site but a warmer would be installed for the aroma factor. Storage areas and ventilation were also discussed. It was recommended that the applicant work with a design professional.

- 4.2 Pre-Application Discussion: Christopher Nardone with Passero Associates to discuss the relocation and construction of Fire Station No. 2 on Municipal Airport Property. This parcel is zoned I-1, Industrial.

Mr. Nardone spoke about the project. Members discussed building placement, parking lot, training tower, and airport drainage. Application for site plan review is forthcoming.

- 4.3 Pre-Application Discussion: Chris Nardone with Passero Associates to discuss proposed expansion of existing hangar units 6 & 7, to provide 3 additional hangar units per building. This parcel is zoned I-A, Industrial.

- 4.4 Mr. Nardone commented on the proposed expansion of hangars 6 & 7 which would

include 3 additional hangar units per building. Members discussed the addition of restroom facilities and fire separation. Formal site plan application for the hangar additions will be made by the applicant following revisions to the Airport Architectural Standards that are adopted in the Land Development Code by reference.

- 45 Pre-Application Discussion: Wade Olszewski with CPH to discuss the redevelopment of the Sadler Square Shopping Center at 2100 Sadler Road. The proposal calls for a new grocery store.

The applicant presented a preliminary site plan expanding the existing shopping center footprint to include a rear loading zone. The group discussed the excess parking and the desire to reduce the parking spaces to accommodate more landscaping and better traffic and pedestrian circulation. The provisions of LDC section 6.04.00 for large scale commercial development were discussed. The existing shopping center is nonconforming regarding the maximum allowable building square footage. There was discussion about the need for a variance from a couple of provisions of the LDC.

5. NEW BUSINESS

6. OLD BUSINESS

- 6.1 SPR 2018-07 Mocama Brewery: Trey Dennard with Dreamscapes - Proposed Landscape Plan Revisions**

Members reviewed the proposed landscape plan revisions. Mr. Holley stated that improvements were made to the plan and was satisfied with the number of trees added.

- 6.2 SPR 2019-11 Bistro 2020: Wayne Chism with Chism Development Company to discuss 2nd round of review comments.**

Mr. Chism was not present, and no discussion took place about the project.

7. DEVELOPMENT INQUIRIES FROM APPLICANTS NOT ON THE AGENDA - DISCUSSION ONLY, NO ACTION TO BE TAKEN.

Summer Smith 2424 Lynndale Road was present to speak about her project which is to convert the building into a laundry facility to be used by a resort rental management company. The facility will not be open to members of the public for general use. Members discussed the reconfiguration of the building considering that the laundry facility would hold 2 washers and 2 dryers. Fire rating was also brought up along with the possibility of upgrading the power voltage. The owner mentioned that they would be working with Jose Miranda from Miranda Architect. There was also mention of parking and the option of using natural gas.

8. COMMITTEE BUSINESS

9. ADJOURNMENT 10:45 a.m.



**MINUTES
TECHNICAL REVIEW COMMITTEE
REGULAR MEETING
OCTOBER 22, 2020**

1. CALL TO ORDER 9:02

2. ROLL CALL

MEMBERS PRESENT:

Jacob Platt, Planning
Jason Higginbotham, Fire
Michelle Forstrom, Code Enforcement
Dave Holley, Arborist
Rex Lester, Streets/ADA (joined at 9:05)

Don Kukla, Building (joined at 9:08)
Sal Cumella, Historic Preservation
Walter Gray, Utilities
Juan Brown, Utilities

3. APPROVAL OF MINUTES

3.1 Approval of Minutes for the October 8, 2020 Regular Meeting.

3.2 Approval of Minutes for the June 25, 2020 Regular Meeting.

ACTION TAKEN: A motion was made by Member Forstrom, seconded by Member Cumella, to approve both sets of Minutes as presented.

Motion passed by unanimous voice vote.

4. DISCUSSION ITEMS

4.1 Change of Use: Bill Files, owner of The Spice & Tea Exchange in Winter Park Florida, to discuss opening a store in the Central Business District.

Mr. Platt introduced the case and opened the floor for discussion.

The applicant appeared via Zoom and presented their ideas. They are part of a small national franchise that offers loose leaf teas and spices. Mr. Files stated that they were looking for a high foot-traffic area. Possible locations include 311 Center Street, or 316 Center Street. Mr. Files explained that there would be no kitchen necessary and no hot food served. They would like to have a To-Go hot and cold tea bar.

Mr. Cumella explained the requirements for outdoor signage. Mr. Files showed a picture of an awning sign that he would like to install.

Mr. Kukla recommended seeking the assistance of a design professional to assess things such as fixture needs, plumbing, and ADA compliance. He also informed the applicant that if they are open to the public, they would need to have a public restroom facility.

Mr. Platt offered to direct the applicant to the Stormwater Department once a location has been selected.

It was recommended to the applicant to move forward with permitting.

- 4.2 Change of Use: 205 S. 14th Street - Steve Simmons with ERA Fernandina Beach Realty to discuss operating a Linen Processing Facility for Resort Rentals operated by ERA in the former Gator Fire Extinguisher building. The property is zoned C-1, Community Commercial.

Mr. Platt introduced the case and opened the floor for discussion.

Mr. Simmons introduced his plan and stated that this facility will not be for public use. He plans to use energy efficient washing and drying machines which will require less energy and produce less wastewater. He also indicated that this facility would not be processing any more linens than what they currently do. He plans to have a total of 7 washing machines and 5 stacked dryers.

Mr. Brown stated that the meter might have to be upgraded but that there would be no additional impact fees.

Mr. Kukla instructed the applicant to obtain a plan that represents the current location layout and what would be replaced and/or added.

It was recommended to the applicant to move forward with permitting.

- 4.3 Change of Use: Jessica Staszewski to discuss opening a European Grocery with deli in the former H&R Block office at the 8 Flags Shopping Center.

Mr. Platt introduced the case and opened the floor for discussion.

Ms. Staszewski presented her project. The desired location would be at 1016 S. 14th Street. She stated that the business will only have sinks, a meat slicer, and a cheese slicer. There would be no seating or dining, only sales.

Mr. Kukla recommended seeking the assistance of a design professional to assess things such as installation of privacy walls, plumbing, and ADA compliance with regards to the sales counter height.

It was recommended to the applicant to move forward with permitting.

- 4.4 Pre-application: 309 N. 10th Street - Asa Gillette, Gillette & Associates, to discuss extending North 10th Street for access to a single-family residential lot.

Mr. Platt introduced the case and opened the floor for discussion.

Mr. Gillette presented further information about the case, including a brief history of the area. He stated that the road extension would stop short of the sanitation manhole.

Mr. Lester asked about the surrounding areas and whether they were occupied and/or developed. He also questioned what material would be used to construct the street extension.

Mr. Platt stated that the maximum roadway width is 20 feet and that prior to construction, and assessment of wildlife presence should be made including Gopher Tortoises.

It was recommended that the applicant was free to move forward with a formal TRC submittal.

5. NEW BUSINESS

5.1 SPR 2020-0009 Jefferson Avenue Extension – Applicants cancelled on 10/21/20

5.2 TRC 2020-0010 14th & Lime Street – Dollar General Project

Mr. Gillette asked if he would be receiving formal comments from the TRC and Mr. Platt confirmed that

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he would send Mr. Gillette the report.

Mr. Platt stated that they cannot issue a Local Development Order until the Minor Subdivision request processed.

6. DEVELOPMENT INQUIRIES FROM APPLICANTS NOT ON THE AGENDA - DISCUSSION ONLY, NO ACTION TO BE TAKEN.

None were presented.

7. COMMITTEE BUSINESS

8. ADJOURNMENT 9:55

Jake Platt, Chair



**MINUTES
TECHNICAL REVIEW COMMITTEE
REGULAR MEETING
SEPTEMBER 24, 2020**

1. CALL TO ORDER – 9:03 a.m.

2. ROLL CALL

MEMBERS PRESENT:

Jacob Platt, Planning
Rex Lester, Streets/ADA
John Mandrick, Utilities
Dave Holley, Arborist/Planning
Jason Higginbotham, Fire

Don Kukla, Building
Andre Desilet, Stormwater
Michelle Forstrom, Code
Sal Cumella, Historic Preservation

MEMBERS ABSENT

OTHERS PRESENT

Jacob Platt, City Planner
Sylvie McCann, Recording Secretary
Taylor Hartmann, Recording Secretary

3. PLEDGE OF ALLEGIANCE

4. APPROVAL OF MINUTES

4.1 September 10, 2020 Regular Meeting

ACTION TAKEN: A motion was made by Member Desilet, seconded by Member Mandrick, to approve the minutes as presented.

Motion passed by unanimous voice vote.

5. DISCUSSION ITEMS

5.1 PRE-APPLICATION DISCUSSION: CHRIS NARDONE, PASSERO ASSOCIATES, 907 S. 11 STREET - FERNANDINA BEACH HOUSING AUTHORITY

Relocation of an existing aluminum canopy and construction of a 1-story 21' x 15' wood framed addition.

Mr. Nardone explained the scope of the project. He inquired if a survey would be necessary. Mr. Platt explained that setback would not be an issue and a survey of the whole property would not be required but this will be discussed with the Building Official and applicant will be updated on the decision. Mr. Kukla addressed the slab elevation and the rear stoop. Mr. Desilet didn't see a problem. Mr. Holley suggested that some trees could be planted on this

site. Commissioner Ross, who was in attendance, commented that he would provide contact information for Mr. Holley to discuss tree planting possibility. Mr. Platt summarized that with clarification regarding the survey and site plan to be provide, this project would be ready to move forward with the Building Department.

5.2 CHANGE OF USE DISCUSSION: ANTHONY DIBUONO REPRESENTATIVES OF RACHRIDGE LLC, 115 CENTRE STREET

Back patio expansion. The property is C-3 zoned in the Central Business District.

Mr. Platt revisited the rear patio project reviewed at a previous TRC meeting. Mr. Dibuono explained the scope of the project and spoke about maximum capacity inside and overflow to the outside patio. Mr. Kukla commented on the capacity percentage and its impact on the threshold of fixtures according to building code and emphasize that it should be looked at by a design professional. Mr. Platt spoke of the trash can location and the need for a Certificate of Approval (COA) from the HDC for the fencing. He also addressed a need for a type B landscape buffer. Mr. Platt will email this information to the applicant. Mr. Holley noted that limbs from a neighboring pecan tree are crossing over the property line and may need some reducing. Mr. Kukla addressed the ADA accessibility to the patio area and re-emphasized the need of a design professional to capture all the requirements. Ms. Forstrom suggested the applicant verifies with the Building Department that a Local Business Tax Receipt for the outside food services is covered. Ms. Forstrom gave a deadline of 30 days with a date of October 24, 2020 for compliance.

5.3 CHANGE OF USE DISCUSSION: SHELLY RAWLS, RAWLS ARCHITECTURE, 25 N. 3rd STREET

Bean School of Dance conversion to Duckpin Bowling Alley and Bar. The property is C-3 zoned in the Central Business District.

Mr. Tim Poynter explained the scope of the project. The plan is to merge this property with Cafe Kariboo. Mr. Poynter mentioned that there would be 4 lanes with 5 seats per lane. This would occupy ½ of the first floor. He noted that the upstairs would have some type of mezzanine with seating around the railing and added televisions which would lead onto a rear porch. This project would not involve adding a kitchen as all foods would come from Cafe Kariboo. Mr. Kukla addressed the occupancy load considering there is combination of 2 properties. Mr. Poynter commented that he would request a bigger water meter. Mr. Mandrick explained that this would be related to accurate seat count and spoke about the need of a backflow preventer. Mr. Poynter asked for input from the Fire Department. Mr. Higginbotham answered that he would need to know more about occupancy load. Mr. Desilet addressed the new flood plain ordinance impact to this project. Mr. Platt noted that a survey showing 2017 updated FEMA map would be required. He added that any exterior deck project would have to be discussed with the Preservation Planner and through the HDC review process. Ms. Forstrom addressed the need for a Local Business Tax Receipt. Mr. Desilet spoke of the drainage impact with any added impervious pavers in the rear. It was recommended to move forward to the permitting after discussing the project with the Preservation Planner.

6. DEVELOPMENT INQUIRIES FROM APPLICANTS NOT ON THE AGENDA - DISCUSSION ONLY, NO ACTION TO BE TAKEN.

Mr. George Haffey, Homeowner's Association committee member, was present to discuss the installation of a monument sign at the entrance island of Amelia Park at the intersection of S. 15th Street + Northpark Drive similar to the one present at other entrances to Amelia Park. He noted that all islands in Amelia Park are City right-of-ways. Mr. Lester had no issues with this project as long as the City it not held liable for any damage incurred in the future. Mr. Mandrick spoke of the underground sewer lines present at that location. Mr. Kukla inquired about sign lighting to which Mr. Haffey answered that solar lighting would be installed. Mr. Lester spoke about next year's budgeted project for that corner with the installation of an additional ADA curb and a crosswalk. Mr. Platt

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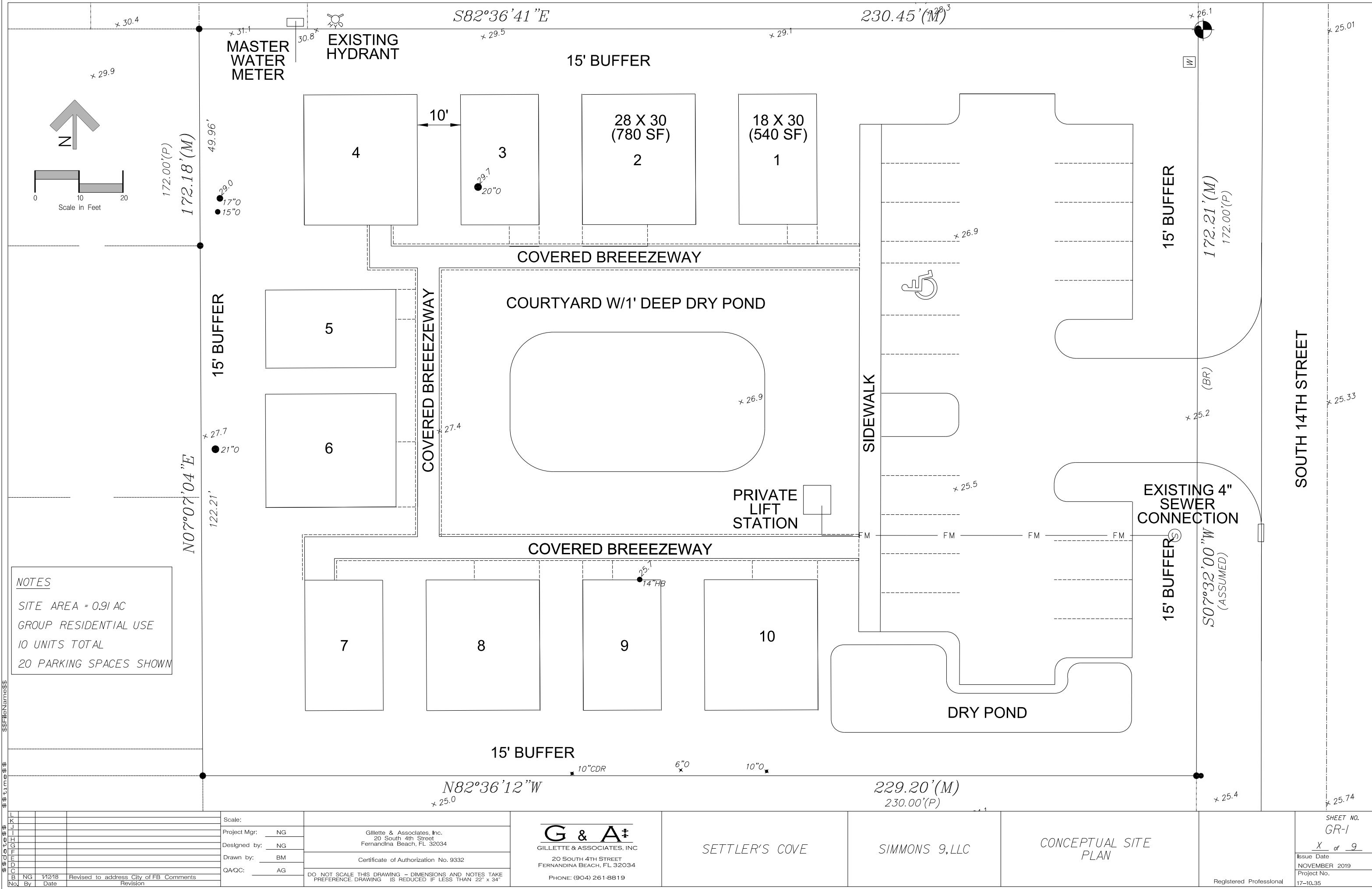
suggested that an easement could be drafted for this intersection of right-of-way, but Mr. Mandrick mentioned that this could be spelled out within the Right-of-Way permit. Mr. Kukla mentioned that a General Building permit would be required for the foundation base of the sign and a separate sign permit for the monument part.

7. COMMITTEE BUSINESS

Mr. Lester brought up the status of the Loft on 5th project at N. 5th Street. It was then established that he would be contacting the contractor to get an update.

8. ADJOURNMENT 10:38 p.m.

Jacob Platt, City Planner



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Technical Review Committee (TRC): Pre-Application Meeting Request - Submission #6198

Date Submitted: 10/22/2020

Technical Review Committee (TRC) Pre-Application Meeting Request

USE THIS FORM TO Submit a project for input and guidance from the Technical Review Committee, the City group responsible for reviewing site plans and commercial projects. TRC pre-application meetings are a free service provided by the City of Fernandina Beach to help guide a project through the development review and permitting process. The TRC pre-application meeting is a meeting between an applicant and representatives of City departments responsible for reviewing applications for the purpose of exchanging information on the potential development of a site. This may include providing information on permissible uses of the site; required improvements; infrastructure requirements; any applicable design standards; any potential regional, state or federal standards; requirements for supporting plans, documents and studies; and any applicable design standards.

Fees

None

IMPORTANT NOTES

A change of use occurs when an existing use is replaced by a different use, as listed in table 2.03.02. A proposed change of use shall be subject to the pre-application conferences as set forth in 11.01.02. A change of use shall not require a local development order when all the conditions of 11.00.05 are met. The determination that a proposed use or development constitutes a change of use is an administrative decision subject to appeal. When a local development order is required due to a proposed change of use, all standards and procedures of the Comprehensive Plan and LDC shall apply to the proposed new use.

Please see the Land Development Code (LDC) for detailed information:



Local Development Orders for a Change of Use “ see LDC Section 11.00.05



Pre-Application Conference “ see LDC section 11.01.02

The LDC is available for review at

www.fbfl.us/LDC

Application Requirements



A complete application.



Site plans or scaled drawings; and



Any other files that illustrate the proposed project.

PROPERTY INFORMATION

Property information can be found at the Nassau County Property Appraiser’s Website’s Map Search

Site Address***City*****State*****Zip*****Parcel ID #(s)*****Lot****Block****Subdivision****Zoning District*****Future Land Use Designation*****Overlay District****Size of Property (acres)*****Present Property Use*****Wetlands*****Flood Zone*****Coastal Construction Control Line (CCCL)*****CONTACT INFORMATION**

Applicant or interested party who will be present at the meeting.

First Name***Last Name*****Company (if applicable)****Telephone Number*****E-mail Address*****PROJECT INFORMATION****Project Name****Project Type*****Project Description***

Describe your project in detail

Proposed Access Road***Rd Maintenance Jurisdiction ***

Certification*



By signing below, I certify that the information contained in this application is true and correct to the best of my knowledge at the time of the application.



I acknowledge that I understand and have complied with all of the submittal requirements and procedures.

Applicant First Name*

Nick

Applicant Last Name*

Gillette

Today's Date*

10/22/2020

Upload Supporting Documentation*

Settlers Cove Group Res Conc Site Plan.pdf

Upload 2

Choose File

No file selected

Upload 3

Choose File

No file selected

Upload 4

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No file selected

Upload 5

Choose File

No file selected



DEPARTMENT OF PLANNING & CONSERVATION

204 Ash Street | Fernandina Beach, Florida 32034 | 904 310-3480 |
www.fbfl.us/planning



Print

Technical Review Committee (TRC): Pre-Application Meeting Request - Submission #6210

Date Submitted: 10/24/2020

Technical Review Committee (TRC) Pre-Application Meeting Request

USE THIS FORM TO Submit a project for input and guidance from the Technical Review Committee, the City group responsible for reviewing site plans and commercial projects. TRC pre-application meetings are a free service provided by the City of Fernandina Beach to help guide a project through the development review and permitting process. The TRC pre-application meeting is a meeting between an applicant and representatives of City departments responsible for reviewing applications for the purpose of exchanging information on the potential development of a site. This may include providing information on permissible uses of the site; required improvements; infrastructure requirements; any applicable design standards; any potential regional, state or federal standards; requirements for supporting plans, documents and studies; and any applicable design standards.

Fees

None

IMPORTANT NOTES

A change of use occurs when an existing use is replaced by a different use, as listed in table 2.03.02. A proposed change of use shall be subject to the pre-application conferences as set forth in 11.01.02. A change of use shall not require a local development order when all the conditions of 11.00.05 are met. The determination that a proposed use or development constitutes a change of use is an administrative decision subject to appeal. When a local development order is required due to a proposed change of use, all standards and procedures of the Comprehensive Plan and LDC shall apply to the proposed new use.

Please see the Land Development Code (LDC) for detailed information:



Local Development Orders for a Change of Use “ see LDC Section 11.00.05



Pre-Application Conference “ see LDC section 11.01.02

The LDC is available for review at

www.fbfl.us/LDC

Application Requirements



A complete application.



Site plans or scaled drawings; and



Any other files that illustrate the proposed project.

PROPERTY INFORMATION

Property information can be found at the Nassau County Property Appraiser’s Website’s Map Search

Site Address***City*****State*****Zip*****Parcel ID #(s)*****Lot****Block****Subdivision****Zoning District*****Future Land Use Designation*****Overlay District****Size of Property (acres)*****Present Property Use*****Wetlands*****Flood Zone*****Coastal Construction Control Line (CCCL)***

CONTACT INFORMATION

Applicant or interested party who will be present at the meeting.

First Name***Last Name*****Company (if applicable)****Telephone Number*****E-mail Address***

PROJECT INFORMATION

Project Name**Project Type*****Project Description***

Describe your project in detail

Proposed Access Road***Rd Maintenance Jurisdiction ***

Certification*



By signing below, I certify that the information contained in this application is true and correct to the best of my knowledge at the time of the application.



I acknowledge that I understand and have complied with all of the submittal requirements and procedures.

Applicant First Name*

SCOTT

Applicant Last Name*

THOMPSON

Today's Date*

10/24/2020

Upload Supporting Documentation*

Capture.JPG

Upload 2

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No file selected

Upload 3

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DEPARTMENT OF PLANNING & CONSERVATION

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www.fbfl.us/planning











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Technical Review Committee (TRC): Pre-Application Meeting Request - Submission #6253

Date Submitted: 11/2/2020

Technical Review Committee (TRC) Pre-Application Meeting Request

USE THIS FORM TO Submit a project for input and guidance from the Technical Review Committee, the City group responsible for reviewing site plans and commercial projects. TRC pre-application meetings are a free service provided by the City of Fernandina Beach to help guide a project through the development review and permitting process. The TRC pre-application meeting is a meeting between an applicant and representatives of City departments responsible for reviewing applications for the purpose of exchanging information on the potential development of a site. This may include providing information on permissible uses of the site; required improvements; infrastructure requirements; any applicable design standards; any potential regional, state or federal standards; requirements for supporting plans, documents and studies; and any applicable design standards.

Fees

None

IMPORTANT NOTES

A change of use occurs when an existing use is replaced by a different use, as listed in table 2.03.02. A proposed change of use shall be subject to the pre-application conferences as set forth in 11.01.02. A change of use shall not require a local development order when all the conditions of 11.00.05 are met. The determination that a proposed use or development constitutes a change of use is an administrative decision subject to appeal. When a local development order is required due to a proposed change of use, all standards and procedures of the Comprehensive Plan and LDC shall apply to the proposed new use.

Please see the Land Development Code (LDC) for detailed information:



Local Development Orders for a Change of Use “ see LDC Section 11.00.05



Pre-Application Conference “ see LDC section 11.01.02

The LDC is available for review at

www.fbfl.us/LDC

Application Requirements



A complete application.



Site plans or scaled drawings; and



Any other files that illustrate the proposed project.

PROPERTY INFORMATION

[Property information can be found at the Nassau County Property Appraiser’s Website’s Map Search](#)

Site Address***City*****State*****Zip*****Parcel ID #(s)*****Lot****Block****Subdivision****Zoning District*****Future Land Use Designation*****Overlay District****Size of Property (acres)*****Present Property Use*****Wetlands*****Flood Zone*****Coastal Construction Control Line (CCCL)*****CONTACT INFORMATION**

Applicant or interested party who will be present at the meeting.

First Name***Last Name*****Company (if applicable)****Telephone Number*****E-mail Address*****PROJECT INFORMATION****Project Name****Project Type*****Project Description***

Hi, I would like to participate in a meeting of technical review board on November 12th at 9 am. I am planning to open an ice-cream shop and need your advice and approval of converting a space from retail (current gallery) to a restaurant ?I will only sell ice-cream and candies there. The address for a property is 2022 1st Avenue, Fernandina Beach. Parcel Number 00-00-31-1360-0056-0020. Building is zoned for commercial and is divided into 4 separate spaces. Surf shop, GoJuice, Gallery, Hairdresser. I would take over art gallery space. Thank you so much.

Describe your project in detail

Proposed Access Road***Rd Maintenance Jurisdiction ***

Certification*



By signing below, I certify that the information contained in this application is true and correct to the best of my knowledge at the time of the application.



I acknowledge that I understand and have complied with all of the submittal requirements and procedures.

Applicant First Name*

Kate and Rado

Applicant Last Name*

Kovalcik

Today's Date*

11/2/2020

Upload Supporting Documentation*

gallery1.jpg

Upload 2

gallery2.jpg

Upload 3

gallery3.jpg

Upload 4

gallery4.jpg

Upload 5

gallery5.jpg



DEPARTMENT OF PLANNING & CONSERVATION

204 Ash Street | Fernandina Beach, Florida 32034 | 904 310-3480 |
www.fbfl.us/planning



FOR LEASE

1014 ATLANTIC AVE,
FERNANDINA BEACH, FL 32034



Excellent location on Atlantic Ave & walking distance to Fernandina's Historic Downtown. Perfect for a retail store or professional offices. 1,100 SF space is wide open with a private restroom, but tenant can do a build out. At this retail / office plaza you'll enjoy your neighbors at Red Otter (upscale clothing store, Atlantic Hair Studio, and professional services).

Asking \$1,690 per month



Phil Griffin
904.556.9140
phil@acrfl.com



www.acrfl.com

904.261.2770

Tara Thousand
904.710.1870
tara@acrfl.com



Print

Technical Review Committee (TRC): Pre-Application Meeting Request - Submission #6260

Date Submitted: 11/3/2020

Technical Review Committee (TRC) Pre-Application Meeting Request

USE THIS FORM TO Submit a project for input and guidance from the Technical Review Committee, the City group responsible for reviewing site plans and commercial projects. TRC pre-application meetings are a free service provided by the City of Fernandina Beach to help guide a project through the development review and permitting process. The TRC pre-application meeting is a meeting between an applicant and representatives of City departments responsible for reviewing applications for the purpose of exchanging information on the potential development of a site. This may include providing information on permissible uses of the site; required improvements; infrastructure requirements; any applicable design standards; any potential regional, state or federal standards; requirements for supporting plans, documents and studies; and any applicable design standards.

Fees

None

IMPORTANT NOTES

A change of use occurs when an existing use is replaced by a different use, as listed in table 2.03.02. A proposed change of use shall be subject to the pre-application conferences as set forth in 11.01.02. A change of use shall not require a local development order when all the conditions of 11.00.05 are met. The determination that a proposed use or development constitutes a change of use is an administrative decision subject to appeal. When a local development order is required due to a proposed change of use, all standards and procedures of the Comprehensive Plan and LDC shall apply to the proposed new use.

Please see the Land Development Code (LDC) for detailed information:



Local Development Orders for a Change of Use “ see LDC Section 11.00.05



Pre-Application Conference “ see LDC section 11.01.02

The LDC is available for review at

www.fbfl.us/LDC

Application Requirements



A complete application.



Site plans or scaled drawings; and



Any other files that illustrate the proposed project.

PROPERTY INFORMATION

Property information can be found at the Nassau County Property Appraiser’s Website’s Map Search

Site Address***City*****State*****Zip*****Parcel ID #(s)*****Lot****Block****Subdivision****Zoning District*****Future Land Use Designation*****Overlay District****Size of Property (acres)*****Present Property Use*****Wetlands*****Flood Zone*****Coastal Construction Control Line (CCCL)*****CONTACT INFORMATION**

Applicant or interested party who will be present at the meeting.

First Name***Last Name*****Company (if applicable)****Telephone Number*****E-mail Address*****PROJECT INFORMATION****Project Name****Project Type*****Project Description***

Describe your project in detail

Proposed Access Road***Rd Maintenance Jurisdiction ***

Certification*



By signing below, I certify that the information contained in this application is true and correct to the best of my knowledge at the time of the application.



I acknowledge that I understand and have complied with all of the submittal requirements and procedures.

Applicant First Name*

TARA

Applicant Last Name*

THOUSAND

Today's Date*

11/3/2020

Upload Supporting Documentation*

1014 Atlantic.pdf

Upload 2

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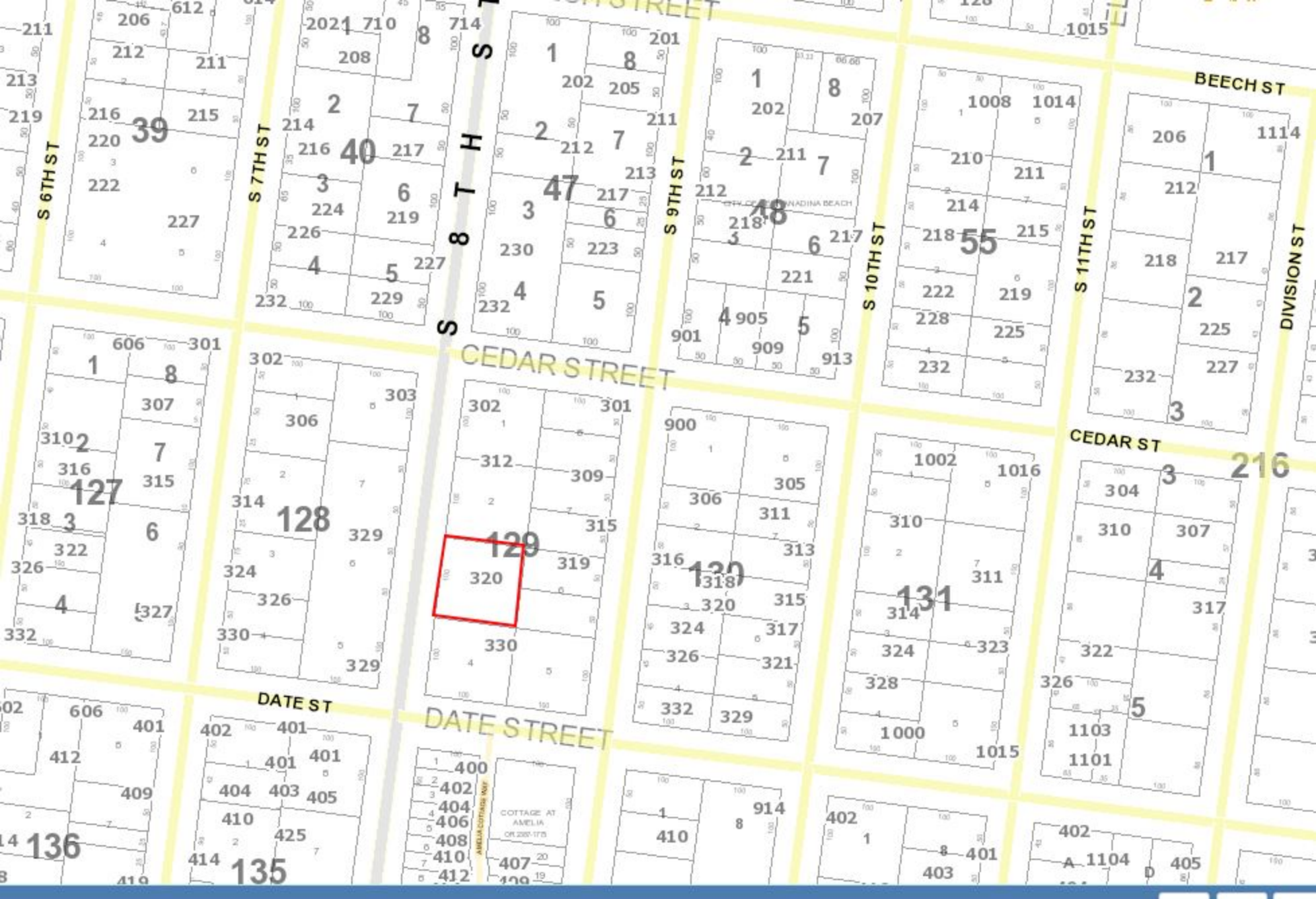
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DEPARTMENT OF PLANNING & CONSERVATION

204 Ash Street | Fernandina Beach, Florida 32034 | 904 310-3480 |
www.fbfl.us/planning



Print

Technical Review Committee (TRC): Pre-Application Meeting Request - Submission #6276

Date Submitted: 11/5/2020

Technical Review Committee (TRC) Pre-Application Meeting Request

USE THIS FORM TO Submit a project for input and guidance from the Technical Review Committee, the City group responsible for reviewing site plans and commercial projects. TRC pre-application meetings are a free service provided by the City of Fernandina Beach to help guide a project through the development review and permitting process. The TRC pre-application meeting is a meeting between an applicant and representatives of City departments responsible for reviewing applications for the purpose of exchanging information on the potential development of a site. This may include providing information on permissible uses of the site; required improvements; infrastructure requirements; any applicable design standards; any potential regional, state or federal standards; requirements for supporting plans, documents and studies; and any applicable design standards.

Fees

None

IMPORTANT NOTES

A change of use occurs when an existing use is replaced by a different use, as listed in table 2.03.02. A proposed change of use shall be subject to the pre-application conferences as set forth in 11.01.02. A change of use shall not require a local development order when all the conditions of 11.00.05 are met. The determination that a proposed use or development constitutes a change of use is an administrative decision subject to appeal. When a local development order is required due to a proposed change of use, all standards and procedures of the Comprehensive Plan and LDC shall apply to the proposed new use.

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Application Requirements



A complete application.



Site plans or scaled drawings; and



Any other files that illustrate the proposed project.

PROPERTY INFORMATION

[Property information can be found at the Nassau County Property Appraiser’s Website’s Map Search](#)

Site Address***City*****State*****Zip*****Parcel ID #(s)*****Lot****Block****Subdivision****Zoning District*****Future Land Use Designation*****Overlay District****Size of Property (acres)*****Present Property Use*****Wetlands*****Flood Zone*****Coastal Construction Control Line (CCCL)*****CONTACT INFORMATION**

Applicant or interested party who will be present at the meeting.

First Name***Last Name*****Company (if applicable)****Telephone Number*****E-mail Address*****PROJECT INFORMATION****Project Name****Project Type*****Project Description***

Describe your project in detail

Proposed Access Road***Rd Maintenance Jurisdiction ***

Certification*



By signing below, I certify that the information contained in this application is true and correct to the best of my knowledge at the time of the application.



I acknowledge that I understand and have complied with all of the submittal requirements and procedures.

Applicant First Name*

Mark

Applicant Last Name*

Akins

Today's Date*

11/5/2020

Upload Supporting Documentation*

Crow 320 S. 8th Street Parcel.JPG

Upload 2

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Upload 3

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Upload 5

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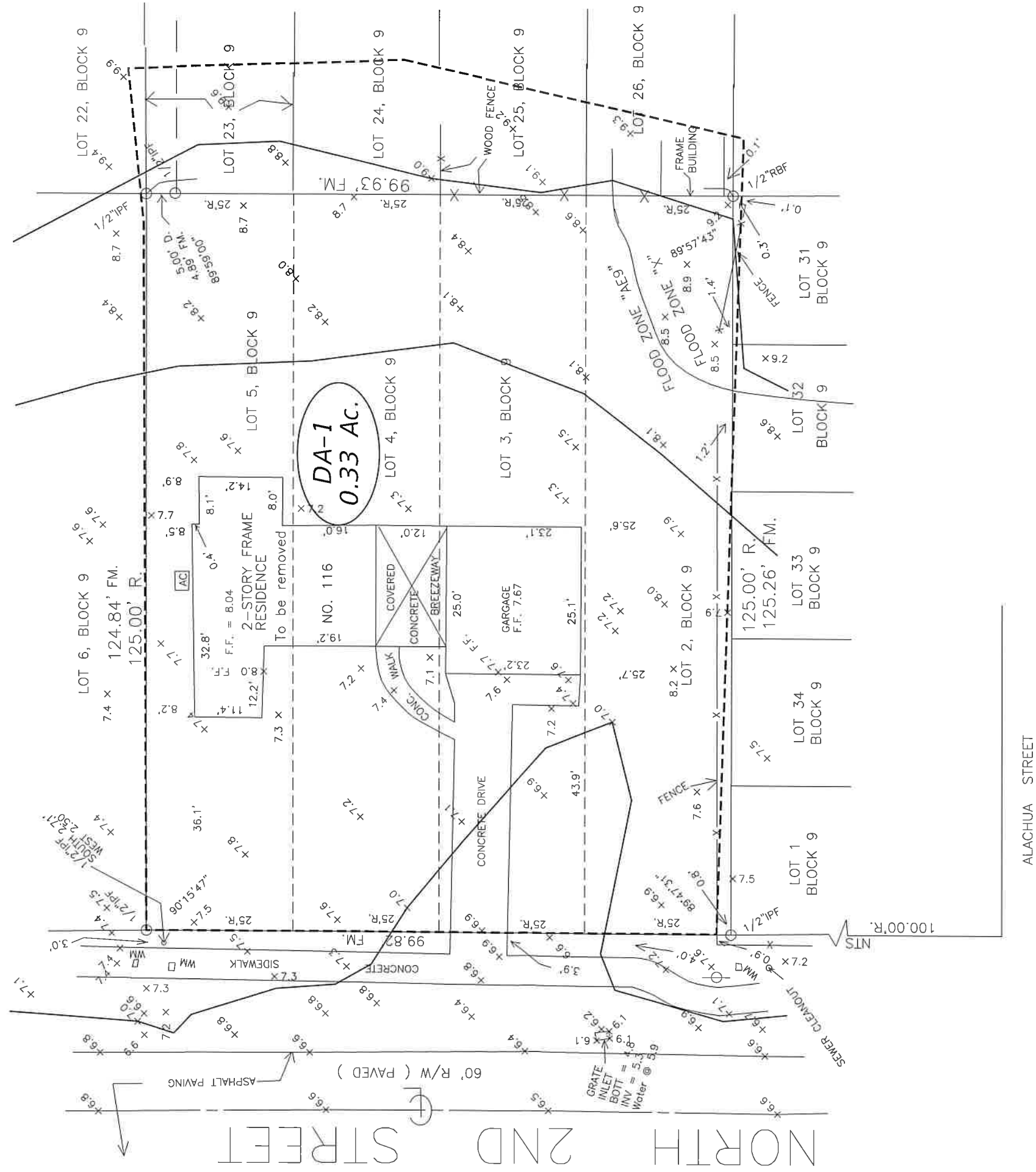


DEPARTMENT OF PLANNING & CONSERVATION

204 Ash Street | Fernandina Beach, Florida 32034 | 904 310-3480 |
www.fbfl.us/planning

LYING, AND BEING IN THE CITY OF FERNANDINA BEACH (FORMERLY NAMED FERNANDINA), IN THE COUNTY OF NASSAU AND THE STATE OF FLORIDA, AND KNOWN AND DESCRIBED UPON AND ACCORDING TO THE OFFICIAL PLAT OF SAID CITY (AS LITHOGRAPHED AND ISSUED BY THE FLORIDA RAILROAD COMPANY IN 1857, AND ENLARGED, REVISED AND REISSUED BY THE FLORIDA TOWN IMPROVEMENT COMPANY IN 1887 AND 1901).*

PRE-CONSTRUCTION



COASTAL LAND SURVEYORS

& MAPPERS, INC.
34 NORTH FOURTEENTH STREET
FERNANDINA BEACH, FLORIDA 32032
TEL. 904-261-8950 FAX 904-277-6650

I HEREBY CERTIFY THE INFORMATION DEPICTED HEREON AS MEETING THE MINIMUM TECHNICAL STANDARDS FOR LAND SURVEYING, CHAPTER 5J-17.050, FLORIDA ADMIN. CODE, AND/OR CHAPTER 180-7, GEORGIA STATUTES.

LICENSED BUSINESS NO. 6412

JAMES C. PEACOCK, PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE NO. 3718
GEORGIA CERTIFICATE NO. 2365
NOT VALID UNLESS EMBOSSED WITH SURVEYORS OFFICIAL SEAL

BEARINGS BASED ON _____N/A_____

PROPERTY SHOWN HEREON LIES WITHIN
FLOOD ZONE X & AE9 AS SHOWN ON

FEMA FLOOD INSURANCE RATE MAP,
COMMUNITY NO. 120172, PANEL NO. 237G
DATED 8/2/17.

DATE OF SURVEY: APRIL 23, 2019
SCALE 1"=20'

SCALE 1 = 20
JOB NO. 1810-10 F.B. 348, 351

CORNER MARKERS HAVE NO IDENTIFICATION U.N.O.
LEGEND:

IRON PIPE FOUND	— IPF	POWER LINE	--- P ---
IRON PIPE SET	— IPS	PLAT	— P
RE/BAR FOUND	— RBF	FIELD MEASURED	— FM.
NOT TO SCALE	— NTS	RECORD — R.	DEED — D.
BUILDING RESTRICTION LINE	— BRL	POWER POLE	— O
CONCRETE MONUMENT FOUND	— CMF	CONCRETE	— CONC.
STAINLESS STEEL PIPE FOUND	— SSPF	FENCE	--- X ---
RIGHT-OF-WAY — R/W		RIGHT-OF-WAY — R/W	
POINT OF CURVE — PC		POINT OF REVERSE CURVE	
CENTERLINE — IC		OFFICIAL RECORDS BOOK	— O.R.B. FINISHED F

MAP SHOWING BOUNDARY AND TOPOGRAPHIC SURVEY OF
LOTS 2, 3, 4 AND 5, BLOCK 9,
LYING AND BEING IN THE CITY OF FERNANDINA BEACH (FORMERLY NAMED
FERNANDINA), IN THE COUNTY OF NASSAU AND THE STATE OF FLORIDA,
AND KNOWN AND DESCRIBED UPON AND ACCORDING TO THE OFFICIAL
PLAT OF SAID CITY (AS LITHOGRAPHED AND ISSUED BY THE FLORIDA
RAILROAD COMPANY IN 1857, AND ENLARGED, REVISED AND REISSUED
BY THE FLORIDA TOWN IMPROVEMENT COMPANY IN 1887 AND 1901).

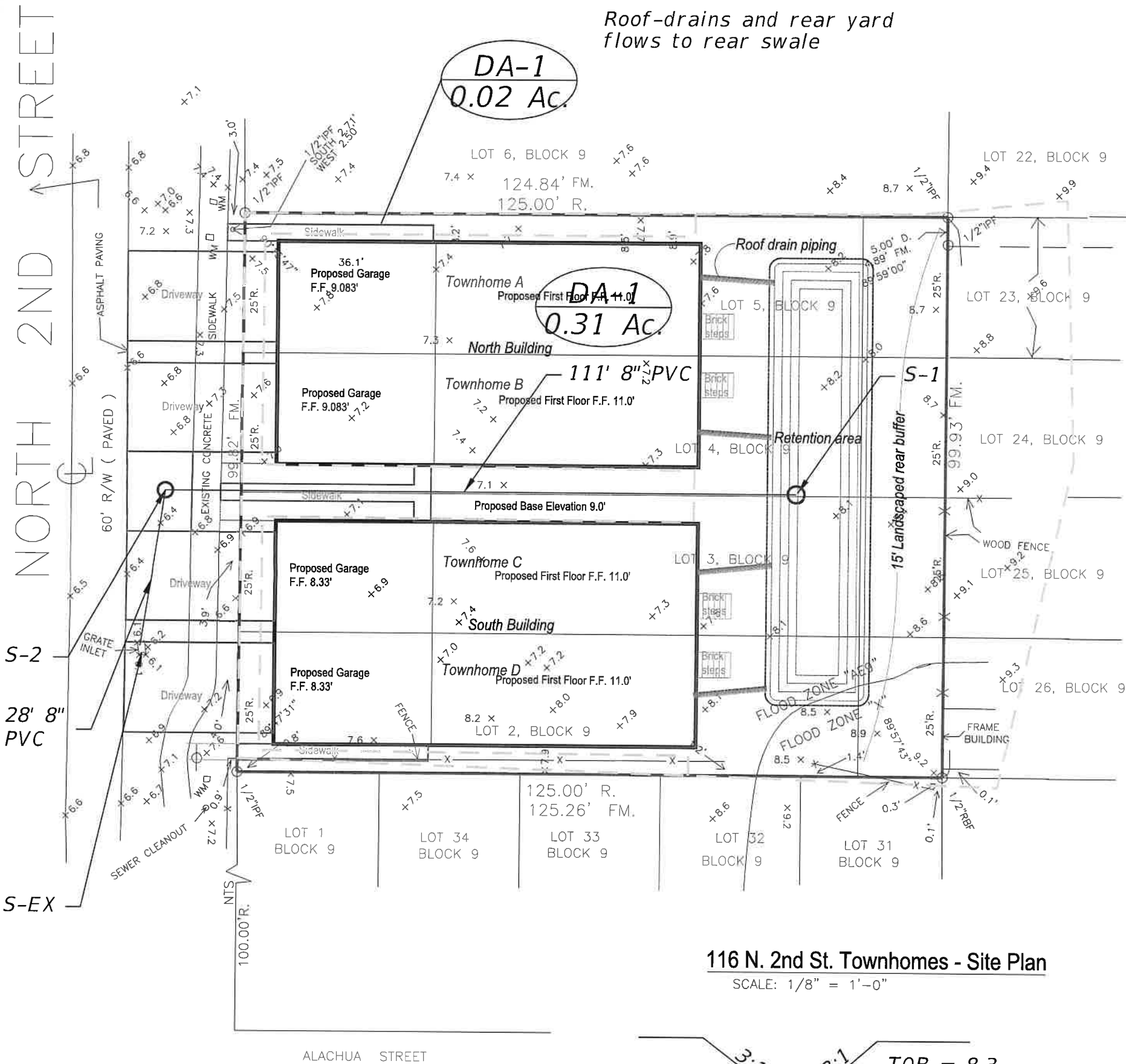
FOR: CMR ISLAND PROPERTIES, LLC.

S-1 - 8" PVC 90° TEE
Inv. El = 6.5
Top of riser = 8.0
2" orifice drilled @ 6.5
S-2
manhole/clean-out
Top = 6.8
Inv. El = 5.62

S-EX - Existing Inlet
Grate El. = 6.2
Inv. El = 5.4 (north, new)
Inv. El = 5.3 (west, existing)

POST-CONSTRUCTION

Roof-drains and rear yard
flows to rear swale



116 N. 2nd St. Townhomes - Site Plan
SCALE: 1/8" = 1'-0"

SPOT ELEVATIONS SHOWN THUS X 0.0 REFER TO NORTH AMERICAN VERTICAL DATUM 1988.

COASTAL LAND SURVEYORS
& MAPPERS, INC.

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TEL. 904-261-8950 FAX 904-277-6650

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SURVEYING, CHAPTER 5J-17.050, FLORIDA ADMIN. CODE, AND/OR
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FLORIDA CERTIFICATE NO. 3718
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NOT VALID UNLESS EMBOSSED WITH SURVEYORS OFFICIAL SEAL

BEARINGS BASED ON N/A

PROPERTY SHOWN HEREON LIES WITHIN
FLOOD ZONE X & AE9 AS SHOWN ON

FEMA FLOOD INSURANCE RATE MAP,
COMMUNITY NO. 120172 PANEL NO. 237G
DATED 8/2/17

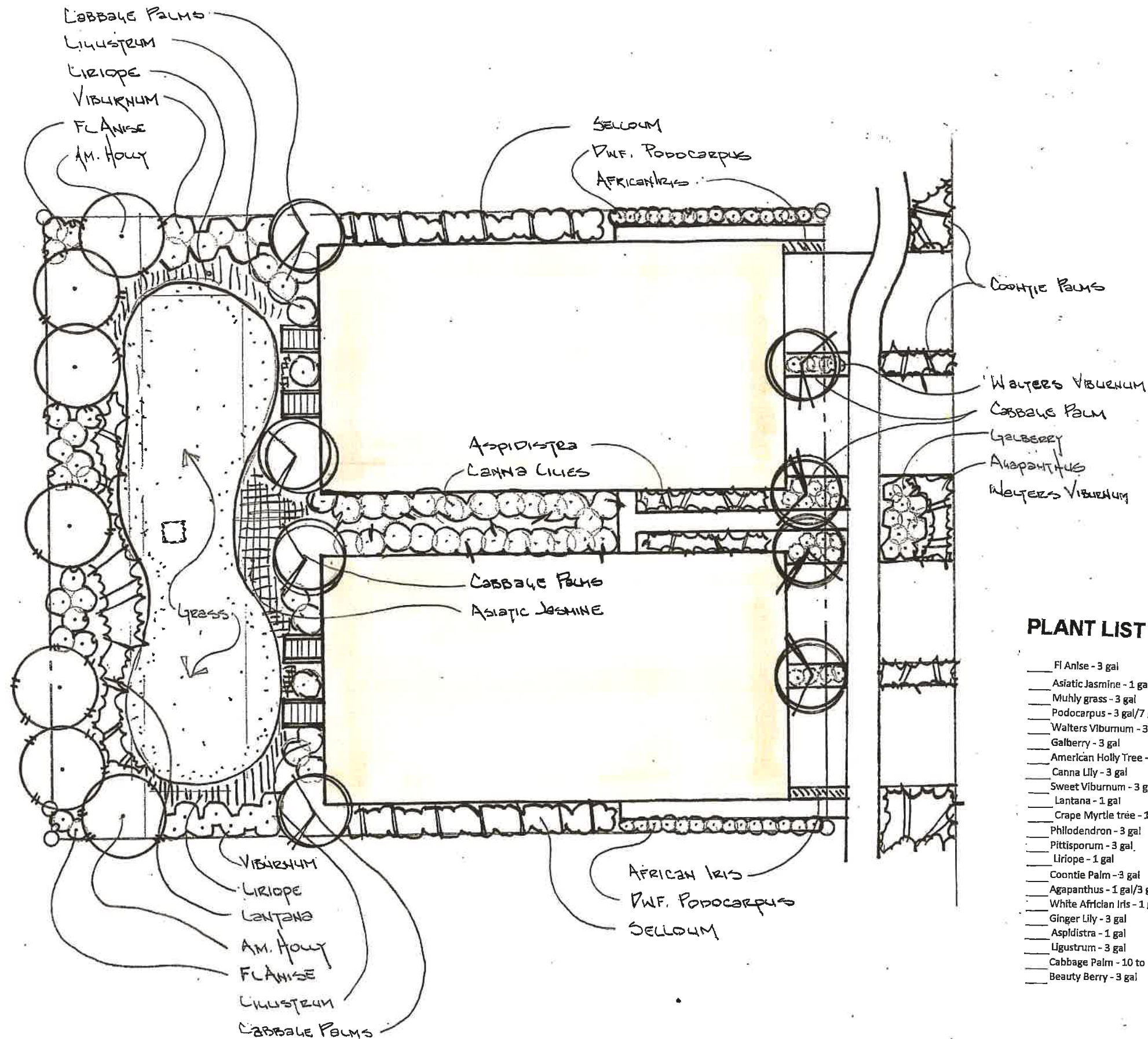
DATE OF SURVEY: APRIL 23, 2019
SCALE 1"=16'
JOB NO. 1810-10 F.B. 348, 351

CORNER MARKERS HAVE NO IDENTIFICATION U.N.O.

LEGEND:

IRON PIPE FOUND - IPF
IRON PIPE SET - IPS
RE/BAR FOUND - RBF
NOT TO SCALE - NTS
BUILDING RESTRICTION LINE - BRL
CONCRETE MONUMENT FOUND - CMF
STAINLESS STEEL PIPE FOUND - SSPF
RIGHT-OF-WAY - R/W
POINT OF CURVE - PC
CENTERLINE - C

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RECORD - R. DEED - D.
POWER POLE - O
CONCRETE - CONC.
FENCE - X-----
RIGHT-OF-WAY - R/W
POINT OF REVERSE CURVE - PRC
POINT OF TANGENCY - PT
OFFICIAL RECORDS BOOK - O.R.B.
FINISHED FLOOR - F.F.



PLANT LIST

- Fl Anise - 3 gal
- Asiatic Jasmine - 1 gal
- Muhly grass - 3 gal
- Podocarpus - 3 gal/7 gal
- Walters Viburnum - 3 gal
- Galberry - 3 gal
- American Holly Tree - 65 gal
- Canna Lily - 3 gal
- Sweet Viburnum - 3 gal
- Lantana - 1 gal
- Crape Myrtle tree - 15 gal/30 gal
- Philodendron - 3 gal
- Pittisporum - 3 gal
- Liriope - 1 gal
- Coontie Palm - 3 gal
- Agapanthus - 1 gal/3 gal
- White African Iris - 1 gal
- Ginger Lily - 3 gal
- Aspidistra - 1 gal
- Ligustrum - 3 gal
- Cabbage Palm - 10 to 16 CT
- Beauty Berry - 3 gal



Richard Sasser, ARCHITECT
217 Centre St. No. 2
Fernandina Beach, Florida
32034
904-491-6060
Cell 912-288-5674
richardsasser@bellsouth.net



Coastal Landscapes, Inc.
Florida Registered Landscape Architects

216 N. 2nd St. Townhomes

CMR Island Properties, LLC
Cayman Builders, Inc.
CBC 1281148

Project number

Date 8-05-20

Drawn by RAS

Checked by RAS

LP-100

Scale 1/8" = 1'-0"

CMR Island Properties, 116 N 2nd St. Post Developed

Basin Calculations

Basin 1 - Pond 1

Composite Cn

Total Drainage Area =	13347 ft ²	0.3064
Impervious Area =	7000 ft ²	52% Impervious
Pervious Area =	6347 ft ²	
Impervious Cn =	98.0	
Pervious Cn =	38.0	
Composite Cn =	69.5	

Time of Concentration, Tc

Minimum Time of Concentration =	10 min.
Length of Overland Flow @ 1 ft/sec. =	322 ft.
Length of Pipe Flow @ 3 ft/sec. =	0 ft.
Tc =	16 min.

Pond Information

El. (ft.)		Area ft ²	Volume ft ³
8.30	TOB	1,464	1758
8.00		1,293	1345
8.00	Weir	1,293	1345
7.50		1,019	767
7.00		762	322
6.50	Bottom	524	

Treatment Volume Required, TVR (on-line retention)

$$\text{TVR} = 1" * (1/12") * \text{Total Drainage Area} = 1112 \text{ ft}^3$$

or

$$\text{TVR} = 1.25" * (1/12") * \text{Total Impervious Drainage Area} + 0.5" * (1/12") * \text{Total Drainage Area} = 1285 \text{ ft}^3$$

$$\text{TVR} = 1285 \text{ ft}^3$$

Treatment Volume Provided, TVP

$$\text{TVP} = \text{Vol @ Weir} = 1345 \text{ ft}^3 \quad \text{OK}$$

Drawdown Calculation

Underlined # are Inputed

Abbreviation	#	Description
TV	<u>1285</u>	Treatment Volume (ft ³)
TV _{el}	<u>8.00</u>	Treatment Volume Elevation (ft)
h _v	<u>1.50</u>	Treatment Volume Depth (ft)
El _{gwt}	<u>16</u>	Elevation of the Groundwater Table (ft)
El _{bb}	<u>6.5</u>	Elevation of the Basin Bottom (ft)
El _{aq}	<u>0</u>	Elevation of the Aquifer (ft)
h _b	<u>0.5</u>	Height of Basin Bottom Above Groundwater Table (ft)
f	<u>0.3</u>	Fillable Porosity (.2 to .3)
h _u	<u>0.15</u>	Height of Water to Saturate the Soil (ft)
L	<u>90</u>	Equivalent Pond Length (ft)
W	<u>19</u>	Equivalent Pond Width (ft)
A _b	<u>1710</u>	Area of Basin Bottom (ft ²)
V _u	<u>256.5</u>	Volume of Water Required to Saturate Soil below the Basin Bottom (ft ³)
K _{vs}	<u>7.7</u>	Saturated Vertical Hydraulic Conductivity (ft/day)
K _{vu}	<u>5.1</u>	Unsaturated Vertical Hydraulic Conductivity (ft/day)
I _d	<u>5.1</u>	Design Infiltration Rate (ft/day)
FS	<u>1</u>	Factor of Safety
t _{sat}	<u>0.0291</u>	Time to Saturate Soil (days)
V _{rem}	<u>1029</u>	Remaining Volume to be Infiltrated Under Saturated Lateral Flow (ft ³)
V _{reuel}	<u>7.73</u>	Remaining Volume to be Infiltrated Under Saturated Lateral Flow Elevation (ft)
h _c	<u>0.5</u>	Height of Water in Basin Above the Initial Ground Water Table at Recovery (ft)
h ₂	<u>1.23</u>	Height of Water in Basin at Start of Saturated Lateral Flow (ft)
H	<u>1.73</u>	Height of Water in Basin Above the Initial Ground Water Table at the Start of Saturated Lateral Flow (ft)
F _v	<u>0.29</u>	Dimensionless parameter
F _s	<u>0.7</u>	Dimensionless parameter
H	<u>16</u>	Initial Saturated Thickness of Aquifer (ft)
D	<u>16.25</u>	Average Saturated Thickness of Aquifer (ft)
K _h	<u>3.86</u>	Saturated Horizontal Hydraulic Conductivity (ft/day)
t	<u>2.9364</u>	Cumulative Time Since Saturated Lateral Flow Started (days)
t _{total}	<u>2.966</u>	Total Drawdown Time (days)

Step 1 Calculate Required Treatment Volume to be Drawn Down

$$TV = 1285 \text{ (ft}^3\text{), from previous sheet}$$

Step 2 Calculate the height of the Treatment Volume in the Basin

$$TV_{el} = 8.00 \text{ (ft), by interpolation}$$

Step 3 Determine if Saturated Lateral Flow Will Occur

$$h_v = 1.50 \text{ (ft), } = TV_{el} - El_{bb}$$

$$h_u = 0.15 \text{ (ft), } = f * h_b$$

Saturated Lateral Flow Will Occur

Step 4 Calculate the Volume of Water Infiltrated in Unsaturated Vertical Flow and the Time to Infiltrate this Volume

$$A_b = 1710 \text{ (ft}^2\text{), } = \text{Equivalent Pond Length} * \text{Equivalent Pond Width}$$

$$V_u = 256.5 \text{ (ft}^3\text{), } = A_b * h_b * f$$

$$K_{vu} = 5.14667 \text{ (ft/day), } = 2/3 * K_v$$

$$I_d = 5.14667 \text{ (ft/day), } = K_{vu}/FS$$

$$t_{sat} = 0.029 \quad (\text{days}), = f \cdot h_b / I_d$$

Step 5 Calculate the Remaining Treatment Volume to be Recovered under Saturated Lateral Flow

$$V_{rem} = 1029 \quad (\text{ft}^3), = TV - V_u$$

$$V_{rem-cl} = 7.73 \quad (\text{ft}), \text{ by interpolation}$$

Step 6 Calculate F_y and F_x

$$H_i = 1.73 \quad (\text{ft}), = H_o + H_2$$

$$F_y = 0.3 \quad = h_c / H_i$$

$$L/W = 5 \quad = \text{Basin Length to Width Ratio}$$

$$F_x = 0.7 \quad \text{From Figure 26-7, given } f \text{ and } F_y$$

Step 7 Calculate the time to Recover the Remaining Treatment Volume Under Saturated Lateral Flow

$$D = 16.25 \quad (\text{ft}), = H + h_c/2$$

$$t = 2.94 \quad (\text{days}), = W^2 / (4 \cdot K_b \cdot D \cdot F_x^2)$$

Step 8 Total time to Recover the Treatment Volume

$$t_{total} = 2.966 \quad (\text{days}), = t_{sat} + t$$



Planning

- Land Development Code Section 11.01.04 Requirements for All Site Plans should be reviewed and applicable elements need to be added to the site plan. Summary block, impervious surface ratio, etc.
- Tree survey is required.
- Garage floor height seems excessive in relationship to the edge of pavement.
- Please indicate the location of the mechanical equipment
- Landscape plan must demonstrate compliance with LDC section 4.05.03(C) Design Options for Xeriscape Landscaping
- Provide dimension from the eastern side of the retention area to the rear property. LDC section 4.05.12(H) requires a minimum of 10 feet when a stormwater facility is located with a required buffer.
- Building setbacks should be indicated on the plan.
- Landscape plan should be oriented to match the site plan.

Stormwater

- Drainage calculations show infiltration as means of recovery. Origice is not permitted in retention systems. Suggest an inlet at weir elevation for overflow, and possibly underdrain below pond bottom to improve recovery.
- Structure S-2 will need to be a pre-cast concrete structure which will be maintained by the City after acceptance.
- Verify existing pipe size in structure S-EX, The pipe from S-2 to S-EX will need to the existing pipe size.
- Note that S-1 will be privately maintained.

Fire

- NFPA 1: Fire Code, 2015 Edition - Chapter 13 Fire Protection Systems. 13.3.2.4 - New buildings three or more stories in height above grade shall be protected throughout by an approved automatic sprinkler system in accordance with Section 13.3 of this Code. This requirement includes fire alarm installation for monitoring the sprinkler system.
- Address: Options are, to have each living unit with its own unique address number or one address for each building with Unit #'s (can only be numbers not letters). Possible address, for each unit, 116, 114, 112, 110 N 2nd St. Please advise which one is preferred.

Streets

- Need to provide grading details for the work within the right of way. Proposed garage elevations would require modifications to the sidewalk.
- Provide driveway width and material. Maximum allowable width within the right of way is twenty feet.



Building

- Structures are fully in the FEMA, SFHA, AE- 9 portion of the property. Please consult with the Flood Plaine Manager have the designed factors with you prior to submitting for a building permit.
- Be mindful of the fire separation distances, they are face to face of the exterior finishes of each building wall and the property lines adjacent the other walls. Please ensure the foundations are adequately spaced to account for these matters. Soffits too.
- The noted brick steps on the back of the properties will need a landing if the doors swing outward.
- Please denote your utilities, Electrical service meters and disconnects, HVAC condensers, Any fuel propane or natural gas., tank or meter locations, vents. Plumbing for water meters, fire riser rooms or the fire systems back flow preventors locations and accesses, sanitary sewer clean outs.
- 10/27/2020 no further notes currently. DPK

Utilities – Wastewater

- Utility plan not provided for review.

Utilities – Water

- Utility plan not provided for review.

Trees

- No tree survey was provided, or either I missed it. Please contact me if you'd like to meet and look at the trees together.



If the lot is 0.29 acres as stated on the property appraiser's website, we need to retain or replant at least 8.42 trees for a total of 21.05 inches. However, this will change based on the tree diameters removed and retained. Dead, severely decayed, or invasive/non-native trees documented by a certified arborist do not count.

-

Planting calculations are first based on lot size: We need 1 tree for every 2,500 square feet for 1 and 2 family homes OR 1 tree for every 1,500 square feet for commercial and multi-family lots. Also, the number of tree inches removed vs. retained can either reduce or increase planting requirements, since at least 50% of the inches removed must be



matched through retained trees and newly planted trees. If this amount is exceeded, usually NO tree planting is required... it would just be optional!

-

When planting, keep in mind that AT LEAST HALF of the trees on the lot need to be "shade trees" that can grow at least 35 feet tall and 30 feet wide at maturity. Examples include live oak, magnolia, cedar, hickory, etc. The remainder can be "landscape" or "ornamental" trees like holly, redbud, bottlebrush, crape myrtle, citrus, etc. Plantings should be at least 2.5 inches in diameter to count. If natural saplings were retained and are suitable, they can count too.

-

Substitute 3 palms for any "shade tree" if desired, but please try to avoid Washingtonia palms since they're considered invasive in south and central Florida. Also, many homeowners dislike their rapid height growth and persistent dead fronds.

-

If planting this many trees is not feasible, up to HALF can be covered by paying into the City's Tree Mitigation Fund at \$400 for every 2.5 inches. PLEASE PROVIDE A LANDSCAPE PLAN showing tree locations and diameters for documentation. If tree sizes are not listed for qualifying species, a 1 inch diameter credit may be granted.

CONSTRUCTION PLANS FOR WESTROCK DROP YARD FERNANDINA BEACH

GENERAL NOTES:

A. TOPOGRAPHIC BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION EXISTING UTILITIES, SITE TOPOGRAPHY WITH SPOT ELEVATIONS, OUTSTANDING PHYSICAL FEATURES AND EXISTING STRUCTURE LOCATIONS WAS PROVIDED BY THE FOLLOWING COMPANY, AS CONTRACTORS TO THE OWNER:

ARC SURVEYING & MAPPING, INC.
5202 SAN JUAN AVE
JACKSONVILLE, FL 32210
CONTACT: JEFF YOIST
PHONE: 904-384-8377

MATTHEWS DESIGN GROUP, INC AND ITS ASSOCIATES WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS OR OMISSIONS RESULTING FROM SURVEY INACCURACIES.

B. THE GENERAL CONTRACTOR SHALL NOTIFY THE OWNER/ENGINEER OF ANY DISCREPANCIES BETWEEN THE SURVEY AND FIELD VERIFICATION OF INFORMATION ABOVE OR BELOW GROUND THAT MAY BE CRITICAL TO THE DESIGN OF THIS PROJECT. THE GENERAL CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION OF THIS PROJECT.

C. WARRANTY / DISCLAIMER:
THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR ITS PERSONNEL CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER IS INVOLVED WITH THE PHYSICAL CONSTRUCTION ON AN ONGOING BASIS AT THE SITE.

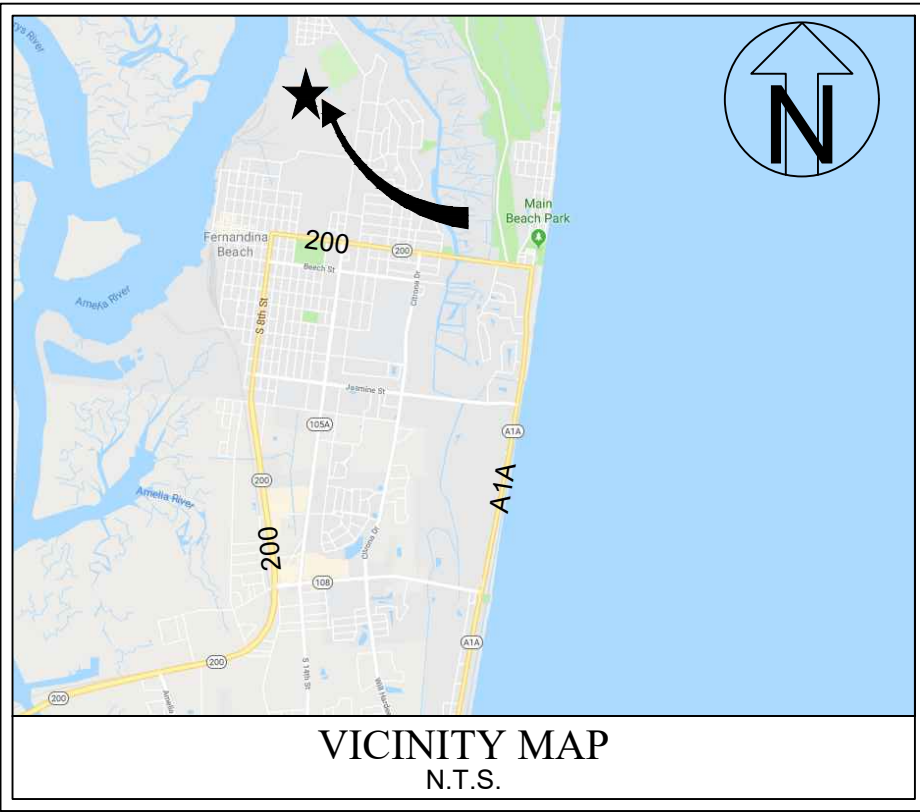
D. SAFETY NOTICE TO CONTRACTOR:
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE.

E. CONSTRUCTION TESTING:
CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION, TESTING, LABORATORY ANALYSES, REPORTS, COSTS, ETC., CONCERNING SOILS AND PAVEMENT RELATED DESIGN REQUIREMENTS AND SPECIFICATIONS AS SET FORTH IN THESE PLANS.

F. AS-BUILT SURVEY NOTE:
UPON COMPLETION OF CONSTRUCTION, CONTRACTOR IS REQUIRED TO PROVIDE OWNER / ENGINEER WITH A SIGNED AND SEALED AS-BUILT SURVEY AND ANY OTHER RELATED CONSTRUCTION DOCUMENTS, IN ACCORDANCE WITH APPLICABLE PERMITTING AGENCY REQUIREMENTS, AS THE BASIS FOR PROJECT CERTIFICATIONS AND CLOSE-OUT.

G. RIGHT-OF-WAY:
ANY AND ALL WORK CONDUCTED WITHIN THE FERNANDINA BEACH RIGHT-OF-WAYS MUST BE IN ACCORDANCE WITH THE APPLICABLE LAND DEVELOPMENT CODES.

H. PRE-CONSTRUCTION MEETING:
IT IS THE RESPONSIBILITY OF THE APPLICANT TO SCHEDULE A PRE-CONSTRUCTION / PRE PERMIT ISSUANCE MEETING WITH FERNANDINA BEACH STAFF AFTER PLANS HAVE BEEN RELEASED FOR CONSTRUCTION BY THE FERNANDINA BEACH AND PRIOR TO STARTING ANY SITE ACTIVITIES. THE PRE-CONSTRUCTION MEETING WILL BE HELD IN CONJUNCTION WITH THE FERNANDINA BEACH MANDATORY PRE-CONSTRUCTION MEETING.
ALL ELEVATIONS SHOWN HEREIN ARE REFERENCED TO NORTH AMERICAN GEODETIC VERTICAL DATUM 1988 (NAVD 88).



OWNER:
WESTROCK FERNANDINA MILL
600 N 8TH STREET
FERNANDINA BEACH, FL 32034
PHONE: (904) 277 - 5744
CONTACT: MANOHARAN THAMODHARAN

PREPARED BY:
 MATTHEWS DESIGN GROUP, INC.
P.O. BOX 3126, 7 WALDO STREET
ST. AUGUSTINE, FLORIDA 32084
PHONE: (904) 826-1334

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RESOURCE LIST

FERNANDINA BEACH TRC	FDEP - WATER & SEWER
204 ASH STREET	7825 BAYMEADOWS WAY SUITE B-200
FERNANDINA BEACH, FL 32034	JACKSONVILLE, FLORIDA 32256
(904) 310-3135	(904) 256-1620
KELLY GIBSON	JUN YONG SHI

PERMITS / APPROVALS	SUBMITTED	RECEIVED
FERNANDINA BEACH	09-11-19	4-12-2019
FDEP	04-20-18	(MOD # 45-0367519-002-EM)



FLOOD CERTIFICATION:
THIS SITE IS SHOWN IN FLOOD ZONES "AE" AND "X" AS DESIGNATED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NUMBER 12089C0237G, FOR FERNANDINA BEACH, FLORIDA, EFFECTIVE DECEMBER 17TH, 2017.

COVER SHEET

WESTROCK DROP YARD

FERNANDINA BEACH

PREPARED FOR

WESTROCK FERNANDINA MILL

DESIGN BY: SAK

DESIGN BY: MS & KJM

DATE: 11/18/2019

JOB No.: 18037

REVISIONS

NO.	DATE	DESCRIPTION
1	8/29/2019	UPDATES PER COFB TRC COMMENTS
2	11/18/2019	UPDATED PER COFB TRC COMMENTS (2ND SUBMITTAL)

SHEET No.: 1

OF 17

MATTHEWS DESIGN GROUP, INC.

P.O. BOX 3126, 7 WALDO STREET

ST. AUGUSTINE, FLORIDA 32084

PHONE: 904.826.1334

FAX: 904.826.4547

INFO@MATTHEWSDESIGN.NET



REGISTERED ENGINEER

SCOTT A. KNOWLES, P.E.

CA#26835 FL#55391

1. ALL WORK AND MATERIALS SHALL BE IN COMPLETE ACCORDANCE WITH ALL RELATIVE SECTIONS OF FERNANDINA BEACH LAND DEVELOPMENT CODE, (LATEST REVISION) AND ALL FERNANDINA BEACH STANDARD DETAILS.
2. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER. ALL SAFETY RULES AND GUIDELINES OF OSHA SHALL BE FOLLOWED. THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ANY INJURIES OF THEIR EMPLOYEES, AND FOR ANY DAMAGE TO PRIVATE PROPERTY OR PERSONS DURING THE COURSE OF THIS PROJECT. ALL COSTS ASSOCIATED WITH COMPLYING WITH OSHA REGULATIONS AND THE FLORIDA TRENCH SAFETY ACT MUST BE INCLUDED IN THE CONTRACTORS BID.
3. PRIOR TO CONSTRUCTION, THE SITE CONTRACTOR SHALL VERIFY ALL SURVEY CONTROL POINTS AS PROVIDED IN THE BOUNDARY SURVEY. THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER OF ANY DISCREPANCIES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE JOB SITE PRIOR TO PREPARING THE BID FOR THE PURPOSE OF FAMILIARIZING THEMSELVES WITH THE NATURE AND THE EXTENT OF THE WORK AND LOCAL CONDITIONS, EITHER SURFACE OR SUB-SURFACE, WHICH MAY AFFECT THE WORK TO BE PERFORMED, AND THE EQUIPMENT, LABOR AND MATERIALS REQUIRED. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER THE CONSTRUCTION CONTRACT. THE CONTRACTOR IS ALSO URGED TO TAKE COLOR PHOTOGRAPHS ALONG THE ROUTE OF OR WITHIN THE PROJECT TO RECORD EXISTING CONDITIONS PRIOR TO CONSTRUCTION, AND TO AID IN RESOLVING POSSIBLE FUTURE ISSUES THAT MAY OCCUR DUE TO THE CONSTRUCTION OF THE PROJECT.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EITHER CONDUCT ANY FIELD EXPLORATION OR ACQUIRE ANY GEOTECHNICAL ASSESSMENT REQUIRED TO ESTIMATE THE AMOUNT OF UNSUITABLE MATERIAL THAT WILL REQUIRE REMOVAL AND TO ESTIMATE THE AMOUNT OF OFF SITE BORROW THAT WILL BE REQUIRED. FAILURE OF THE CONTRACTOR TO IDENTIFY/QUANTIFY THE AMOUNT OF UNSUITABLE MATERIAL TO BE REMOVED AND REPLACED DURING THE BID PROCESS WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER THE CONSTRUCTION CONTRACT.
6. ALL IMPROVEMENTS SHOWN ARE TO BE WARRANTED BY THE CONTRACTOR TO THE DEVELOPER AND FERNANDINA BEACH FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY THE OWNER AND FERNANDINA BEACH.
7. FOR BOUNDARY, ROADWAY, AND BUILDING GEOMETRY INFORMATION SEE ENGINEERING SITE PLAN. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT THE BUILDING DIMENSIONS SHOWN ON THE ENGINEERING PLAN CORRELATE WITH THE DIMENSIONS SHOWN ON THE ARCHITECTURAL PLAN. IF ANY DIMENSIONS DO NOT AGREE, THE ARCHITECT, ENGINEER, AND OWNER SHALL BE NOTIFIED AND THE DIMENSIONS ADJUSTED PRIOR TO COMMENCING WITH CONSTRUCTION.
8. UNLESS DIRECTED OTHERWISE BY THE OWNER OR THE ENGINEER, THE CONTRACTOR WILL CONTRACT WITH AN INDEPENDENT TESTING LABORATORY TO PERFORM MATERIAL TESTING AND SOIL TESTING IN ACCORDANCE WITH FERNANDINA BEACH REQUIREMENTS. THIS SHALL INCLUDE DENSITY TESTS IN ALL PAVEMENT AREAS AND IN ALL UTILITY TRENCHES SHOWN ON THE ARCHITECTURAL PLAN. IF ANY DIMENSIONS DO NOT AGREE, TESTING PRIOR TO LIMEROCK PLACEMENT, THE PROJECT GEOTECHNICAL ENGINEER SHALL MAKE RECOMMENDATION FOR UNDERDRAIN PLACEMENT.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE REQUIRED FOR THE PROJECT INCLUDING FERNANDINA BEACH RIGHT-OF-WAY PERMITS FOR WORK IN THE FERNANDINA BEACH RIGHT-OF-WAY OR EASEMENT.
10. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION WITH ALL OTHER CONTRACTORS. IN THE EVENT OF ANY CONFLICT WHATSOEVER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.
11. THE LOCATION OF ALL EXISTING UTILITIES, STRUCTURES AND IMPROVEMENTS SHOWN ON THE DRAWINGS IS BASED ON LIMITED INFORMATION AND MAY NOT HAVE BEEN FIELD VERIFIED. THE LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL NOTIFY RESPECTIVE UTILITY OWNERS AND FIELD VERIFY LOCATIONS OF EXISTING UTILITIES AND OTHER IMPROVEMENTS PRIOR TO COMMENCING ANY CONSTRUCTION. IF THE LOCATIONS SHOWN ARE CONTRARY TO THE ACTUAL LOCATIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER OF THE DISCREPANCY. THE DISCREPANCY SHOULD BE RESOLVED PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN AREAS NEAR EXISTING UTILITIES AND IMPROVEMENTS AND SHALL BE RESPONSIBLE FOR AND SHALL REPAIR OR PAY FOR ALL DAMAGE MADE TO EXISTING UTILITIES AND OTHER IMPROVEMENTS. PRIOR TO COMMENCING OF ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL GRADES, INVERTS AND TYPE OF MATERIAL OF EXISTING UTILITIES TO WHICH THEY SHALL CONNECT, AND NOTIFY THE OWNER AND ENGINEER OF ANY DISCREPANCIES.
12. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE CIVIL ENGINEER TO DETERMINE IF THIS PROJECT IS WITHIN THE FERNANDINA BEACH'S JURISDICTION FOR INSPECTION. IF SO, THEN IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE FERNANDINA BEACH FOR A PRE-CON MEETING FOR INSPECTIONS.
13. DUE TO THE PROXIMITY TO EXISTING RESIDENTIAL HOMES THE APPLICANT SHOULD LIMIT HOURS OF OPERATION TO DAYTIME HOURS AND PROVIDE MITIGATION TO NOISE FROM PUMPS IF 24 HOUR DEWATERING ACTIVITIES ARE REQUIRED.
14. THE BUILDING FOOTPRINTS SHOWN HEREON ARE APPROXIMATE. SEE ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.
15. THE MAXIMUM BUILDING HEIGHT SHALL NOT EXCEED 35'.
16. ALL STOP SIGNS SHALL BE FINISHED WITH DIAMOND GRADE HIGH REFLECTIVITY SURFACE.
17. ALL STOP BARS SHALL BE THERMO-PLASTIC MATERIAL.
18. MECHANICAL EQUIPMENT LOCATED ON THE GROUND AND/OR THE ROOFTOP SHALL BE SCREENED IN COMPLIANCE WITH LDC SECTION 6.06.04 (9).
19. SOLID WASTE STORAGE DUMSTER SCREENING AND LOCATION SHALL BE IN COMPLIANCE WITH LDC SECTION 6.06.04 (8).

PAVING & DRAINAGE NOTES:

1. "AS-BUILT" DRAWINGS - DRAINAGE AS-BUILTS PROVIDED TO FERNANDINA BEACH AND THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT ARE REQUIRED TO BE SIGNED AND SEALED BY A FLORIDA REGISTERED LAND SURVEYOR. THEREFORE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTRACT WITH A LAND SURVEYOR TO PREPARE THE "AS-BUILT" DRAWINGS FOR THE PREPARATION, FIELD LOCATIONS, CERTIFICATION AND SUBMITTAL OF "AS-BUILT" DRAWINGS IN ACCORDANCE WITH CURRENT FERNANDINA BEACH STANDARDS AND SPECIFICATIONS AND SJRWMD REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROCESS THE AS-BUILT DRAWINGS FOR APPROVAL BY FERNANDINA BEACH. IN ADDITION TO THE DRAINAGE SYSTEM THE AS-BUILTS SHALL SHOW THE ELEVATION AND LOCATION OF THE TOP BANK, WATER LEVEL, ANY POINTS OF CHANGE IN SLOPE, TOP OF SLOPE AND POND BOTTOM AT 100' MAXIMUM INTERVALS ALONG POND BANK FOR ALL POND CONSTRUCTION. ALL DIMENSIONS AND ELEVATIONS ON THE CONTROL STRUCTURE DETAILS SHALL BE SHOWN ON AS-BUILT DRAWINGS.
2. ALL AREAS SHOWN TO BE FILLED SHALL BE CLEARED AND GRUBBED IN ACCORDANCE WITH FERNANDINA BEACH STANDARDS AND SHALL BE FILLED WITH CLEAN STRUCTURAL FILL COMPACTED AND TESTED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
3. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL SURVEY AND PROPERTY MONUMENTS. IF A MONUMENT IS DISTURBED, THE CONTRACTOR SHALL CONTRACT WITH THE SURVEYOR OF RECORD FOR REINSTALLATION OF THE MONUMENT.
4. ALL DEBRIS RESULTING FROM ALL ACTIVITIES SHALL BE DISPOSED OF OFF-SITE BY CONTRACTOR.
5. ALL EXCESS SUITABLE AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT HIS EXPENSE UNLESS DIRECTED OTHERWISE BY ENGINEER OR OWNER.
6. ALL EXISTING TREES TO REMAIN SHALL BE PRESERVED AND PROTECTED.
7. BURNING OF TREES, BRUSH, AND OTHER MATERIAL SHALL BE APPROVED, PERMITTED, AND COORDINATED WITH FERNANDINA BEACH FIRE MARSHAL.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF SOD AND/OR GRASS PER FERNANDINA BEACH STANDARDS AND MEETING THE NPDES FINAL STABILIZATION REQUIREMENTS.
9. UNSUITABLE MATERIALS UNDER WATER PIPE, SEWER PIPE, STORM PIPE, OR STRUCTURES SHALL BE REMOVED AND REPLACED WITH SELECTED BACKFILL, PROPERLY COMPACTED AT CONTRACTOR'S EXPENSE.
10. THE CONTRACTOR SHALL COORDINATE THE WORK WITHIN FERNANDINA BEACH OR STATE RIGHT-OF-WAY WITH THE PROPER AGENCIES FOR MAINTENANCE OF TRAFFIC AND METHOD OF CONSTRUCTION AND REPAIR.
11. ALL CLEARING AND GRUBBING REQUIRED FOR ALL ROADWAY, UTILITIES, DITCHES, BERMS, AND BUILDINGS INCLUDED IN THIS PROJECT AND THE CLEARING AND GRUBBING OF ALL RIGHT-OF-WAY OR EASEMENTS SHALL BE CONSIDERED AS PART OF THIS PROJECT.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A DEWATERING PERMIT FROM THE SJRWMD.
13. PRIOR TO ANY DISCHARGE OF GROUND WATER (DEWATERING) FROM CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT TO WATERS OF THE STATE (INCLUDING, BUT NOT LIMITED TO, WETLANDS, CREEKS, SWALES AND MUNICIPAL STORM SEWERS), THE CONTRACTOR SHALL TEST THE EFFLUENT (WATER TO BE DISCHARGED) IN ACCORDANCE WITH RULE 62-621.300(2), F.A.C. IF THE TEST RESULTS ON THE EFFLUENT ARE BELOW THE SCREENING VALUES OF RULE 62-621.300(2), F.A.C., THE CONTRACTOR SHALL SUBMIT A CERTIFICATION OF THE PROPOSED CONSTRUCTION ACTIVITY AND THE TEST RESULTS TO THE DEPARTMENT OF ENVIRONMENTAL PROTECTION DISTRICT OFFICE, WITHIN ONE (1) WEEK AFTER DISCHARGE BEGINS. THE CONTRACTOR SHALL CONTINUE TO SAMPLE THE EFFLUENT AS REQUIRED THROUGHOUT THE PROJECT AND COMPLY WITH ALL CONDITIONS OF RULE 62-621.300(2), F.A.C. IF THE GROUND WATER EXCEEDS THE SCREENING VALUES OF RULE 62-621.300(2), F.A.C., THE CONTRACTOR SHALL COMPLY WITH OTHER APPLICABLE RULES AND REGULATIONS PRIOR TO DISCHARGE OF THE EFFLUENT (GROUND WATER) TO SURFACE WATERS OF THE STATE.
14. FOR ALL STANDARD DETAILS SEE THE FERNANDINA BEACH STANDARD SPECIFICATIONS AND DETAILS, LATEST REVISION.
15. ALL PIPE LENGTHS ARE SCALED DIMENSIONS, MEASURED FROM CENTER OF STRUCTURE TO END OF MITERED END.

16. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEAN AND FUNCTIONING PROPERLY AT TIME OF ACCEPTANCE.
17. ALL DRAINAGE STRUCTURES SHALL HAVE TRAFFIC BEARING GRATES.
18. ALL DRAINAGE PIPE JOINTS ARE TO BE FILTER-WRAPPED.
19. ALL INVERTS IN DRAINAGE STRUCTURES TO BE PRECAST OR BRICK WITH LAYER OF MORTAR BETWEEN EACH LAYER OF BRICK, OR REDDI-MIX CONCRETE WITH #5 STONE.
20. THE CONTRACTOR SHALL PROVIDE HANDICAP RAMPS AT ALL SIDEWALK AND CURB CONNECTIONS. HANDICAP RAMPS SHALL MEET ALL APPLICABLE ADA REQUIREMENTS.
21. ALL UNDERGROUND UTILITIES MUST BE INSTALLED PRIOR TO PREPARATION OF SUBGRADE FOR PAVEMENT.
22. IF DEWATERING CAPACITY REQUIRES A CONSUMPTIVE USE PERMIT (C.U.P.), IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE PERMIT THROUGH THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.
23. ALL DIMENSIONS TO EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN. ALL EDGE OF PAVEMENT RADII ARE TO BE UNLESS OTHERWISE NOTED.
24. ALL DRAINAGE PIPES INSTALLED WITHIN ROADWAY RIGHT-OF-WAYS/EASEMENTS (PUBLIC OR PRIVATE) SHALL BE TELEVIEWED BY A COMPANY OR INDIVIDUAL CERTIFIED TO PERFORM SUCH WORK PER LCD 6.04.07 L.S.G. THIS REQUIREMENT MAY ONLY BE WAIVED ON COMMERCIAL SITES IF THE ENGINEER OF RECORD CERTIFIES BY LETTER THAT THE USE OF VIDEO DOES ANY RUNOFF FROM THE FERNANDINA BEACH RIGHT-OF-WAYS. IF THERE IS ANY CONNECTION OR RELATIONSHIP BETWEEN THE PROJECT SITE AND A FERNANDINA BEACH OWNED OR MAINTAINED DITCH, POND, OR STRUCTURE, IT SHALL BE REQUIRED. THIS TELEVIEWING OF THE DRAINAGE LINE SHALL BE DONE TO THE EXTENT OF THE QUALITY AS TO VISUALLY IDENTIFY THE PROPER CONSTRUCTION OF ALL JOINTS AND PIPE ALIGNMENT. A VIDEO TAPE SHALL BE PROVIDED TO THE FERNANDINA BEACH UPON COMPLETION. THE TELEVIEWING OF THE DRAINAGE LINES SHALL BE PERFORMED AFTER THE PLACEMENT OF THE BASE MATERIAL AND PRIOR TO THE FINAL WEARING SURFACE OF THE ROADWAY. THE APPROVAL, BY THE FERNANDINA BEACH, OF THE TELEVIEWING SHALL BE REQUIRED PRIOR TO THE PLACEMENT OF THE FINAL WEARING SURFACE OF THE ROADWAY. THE TELEVIEWED RECORD SHALL BE REVIEWED AND CERTIFIED BY THE ENGINEER OF RECORD (EOR).

1. ALL TRIPPING SHALL CONFORM TO FERNANDINA BEACH AND/OR FOOT SPECIFICATIONS.
2. MATCH EXISTING PAVEMENT MARKINGS AT THE BEGINNING AND ENDING OF PROJECT AND ALL SIDE STREETS
3. SIGNS SHALL BE PLACED IN ACCORDANCE WITH INDEX NO. 11860, 17302, AND 17346
4. SIGN ASSEMBLY LOCATIONS SHOWN ON PLANS WHICH ARE IN CONFLICT WITH LIGHTING, UTILITIES, DRIVEWAYS, CURBS, ETC., SHALL BE ADJUSTED AS DIRECTED BY ENGINEER
5. EXISTING SIGNS TO BE REMOVED SHALL BE DELIVERED AND STOCKPILED ON SITE IN THE MATERIALS STORAGE AREA AND RETURNED TO THE OWNER.
6. COST FOR SIGNING AND MARKING, IF ANY, SHALL BE INCLUDED IN THE COSTS FOR PAVEMENT

1. ALL UTILITIES SHALL REMAIN IN PLACE AND UNHARMED UNLESS SPECIFICALLY INDICATED OTHERWISE BY THE DEMOLITION PLANS (SHEETS 8 AND 7).
2. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY ABANDONING WELLS OR SEPTIC SYSTEMS FOUND DURING CONSTRUCTION. ABANDONMENT SHALL BE IN ACCORDANCE WITH ALL FERNANDINA BEACH, STATE REGULATIONS, PER THE REQUIREMENTS SET FORTH IN THE F.A.C.

1. NO CONSTRUCTION ACTIVITY INVOLVING EXCAVATION, DENUDING OR DEMOLITION OF ANY SITE SURFACE OR STOCKPILING OF ANY EARTHEN OR AUDIBLE MATERIALS SHALL BEGIN WITHOUT AN APPROVED PLAN AND/OR WRITTEN CONSENT BY THE FERNANDINA BEACH PUBLIC WORKS.
2. THE CONTRACTOR SHALL ESTABLISH ALL EROSION CONTROL MEASURES PRIOR TO EXCAVATION, DENUDING OR DEMOLITION OF ANY SITE SURFACE OR STOCKPILING OF ANY EARTHEN OR ERODIBLE MATERIALS.
3. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT THE DEVELOPMENT OF THE PROJECT AND SHALL NOT REMOVE ANY EROSION CONTROL MEASURE UNTIL ALL CONTRIBUTING SITE SURFACES AND VEGETATION HAVE BEEN ESTABLISHED AND STABILIZED.

4. THE CONTRACTOR SHALL PERFORM DAILY CLEAN UP OF ALL SEDIMENT AND DEBRIS WHICH LEAVES THE PROJECT SITE(S).
5. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL FERNANDINA BEACH STORM DRAIN SYSTEMS WHICH RECEIVE SEDIMENT OR DEBRIS AS A RESULT OF CONSTRUCTION, STOCKPILING OR DISPOSAL ACTIVITIES. CLEANING OF THE STORM DRAIN WILL OCCUR FROM THE POINT OF INTERCEPT TO THE OUTFALL OF THE SYSTEM OR TO A POINT WITHIN THE SYSTEM WHERE SEDIMENT OR DEBRIS IS NO LONGER PRESENT.

1. LOCATE ALL UTILITIES AND SITE LIGHTING CONDUITS BEFORE LANDSCAPE CONSTRUCTION BEGINS.
2. NOTIFY LANDSCAPE ARCHITECT OR DESIGNATED REPRESENTATIVE OF ANY LAYOUT DISCREPANCIES PRIOR TO ANY PLANTING.
3. FERTILIZE ALL PLANTS AT THE TIME OF PLANTING WITH TIME RELEASE FERTILIZER.
4. PLANT MATERIAL SHALL CONFORM TO THE STANDARDS FOR GRADE #1 OR BETTER AS GIVEN IN THE LATEST "GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II," FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES OR TO THE STANDARDS AS GIVEN IN THE LATEST "AMERICAN STANDARD FOR NURSERY STOCK," AMERICAN NATIONAL STANDARDS INSTITUTE.
5. REMOVE ALL DEAD WOOD AND PRUNE TREES ACCORDING TO THE PRUNING GUIDELINES BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE. 1996 EDITION IF ARBORIST BELIEVES A LIMB SHOULD NOT BE REMOVED THE ARBORIST SHALL CONTACT THE LANDSCAPE DESIGNER. REMOVE ALL DEBRIS FROM THE SITE TO AN APPROVED OFF-SITE LOCATION. FOLLOW THE "AMERICAN NATIONAL STANDARDS FOR TREE CARE OPERATIONS" AND ANSI Z133.1 GUIDELINES.
6. TREES SHALL HAVE A MINIMUM HEIGHTS OF (8) EIGHT TO (10) TEN FEET AND (2) TWO INCHES OF CALIPER.
7. ALL DISTURBED AREAS MUST BE STABILIZED BY MEANS OF MULCH, SEEDING, OR SOD AS CALLED OUT ON THIS PLAN. IF DISTURBED AREA IS OUTSIDE OF THE LIMITS OF THIS PLAN, AREAS MUST BE STABILIZED WITH EXISTING MATERIAL OR BETTER, I.E. SEEDING OR SODDING.

8. VEGETATION THAT EXCEEDS TWENTY-FIVE (25) FEET IN HEIGHT AT MATURITY SHOULD NOT BE PLANTED CLOSER THAN TEN (10) FEET OF THE VERTICAL PLANE OF AN EXISTING POWER LINE, EXCLUDING SERVICE WIRES.
9. INSPECTED AND BURGLARPROOF STRAPPING WIRE, AND ANY SYNTHETIC MATERIAL SHALL BE REMOVED PRIOR TO FINAL INSPECTION. WIRE BASKETS SHOULD BE PULLED AWAY FROM THE TRUNKS. WIRE BASKETS SHOULD BE CUT AWAY FROM THE TOP 1/3 OF THE ROOT BALL.
10. TREES SHALL NOT BE PLANTED CLOSER THAN TEN (10) FEET FROM OTHER TREES UNLESS APPROVED BY THE FERNANDINA BEACH ADMINISTRATOR. CANOPY TREES SHOULD BE SPACED A MINIMUM OF 20' TO 30'.
11. A MULCH RING OF PINE STRAW OR PINE BARK SHALL BE PROVIDED AT LEAST FIVE (5) FEET IN DIAMETER AND NOT CLOSER THAN SIX (6) INCHES FROM THE TREE TRUNK. FOR ALL NEWLY PLANTED TREES.
12. PINE STRAW OR PINE BARK MULCH SHALL BE PROVIDED A MINIMUM OF FOUR (4) INCHES OF DEPTH AROUND ALL NEWLY PLANTED LANDSCAPING.
13. SHRUB LINES ARE TO BE PLANTED AT THE REQUIRED MINIMUM HEIGHT, NOT BY A CONTAINER SIZE.
14. SOIL IN TREE ISLANDS SHALL HAVE AT LEAST 12" OF SUITABLE SOIL. FOR TREE PLANTINGS, AND BE VOID OF ANY CONSTRUCTION DEBRIS OR UNSUITABLE MATERIAL.
15. IRRIGATION SHALL BE PROVIDED WITH AN AUTOMATIC IRRIGATION SYSTEM FOR ALL NEWLY PLANTED MATERIAL, UNLESS AN ALTERNATE MEANS IS APPROVED. ALL TREES SHALL BE IRRIGATED BY BUBBLER-TYPE EMITTERS.
16. TREES SHALL NOT BE PLANTED CLOSER THAN 7.5' FROM THE CENTERLINE OF UNDERGROUND UTILITIES.
17. UNLESS OTHERWISE SPECIFIED, NO HIGH VOLUME IRRIGATION IS PROPOSED ON THESE PLANS.
18. UNLESS OTHERWISE SPECIFIED, ALL SOD SHALL BE BAHIA.

1. ALL EXISTING UTILITIES ARE TO BE ADJUSTED TO FINAL GRADE.

1. FIRE PROTECTION FOR THE PURPOSE OF THESE PLANS IS ANY UNDERGROUND WATER LINE NOT OWNED AND MAINTAINED BY A PUBLIC UTILITY AS WELL AS ANY PRIVATE FIRE SERVICE MAIN AND PIPE AND ITS APPURTENANCES OR PRIVATE PROPERTY. (1) BETWEEN A SOURCE OF WATER AND THE BASE OF THE SYSTEM RISER FOR WATER-BASED FIRE PROTECTION SYSTEMS, (2) BETWEEN A SOURCE OF WATER AND INLETS TO FOAM-MAKING SYSTEMS, (3) BETWEEN A SOURCE OF WATER AND THE BASE ELBOW OF PRIVATE HYDRANTS OR MONITOR NOZZLES AND (4) USED AS FIRE PUMP SUCCTION AND DISCHARGE PIPING, (5) BEGINNING AT THE INLET SIDE OF THE CHECK VALVE ON A GRAVITY OR PRESSURE TANK.
2. THIS SHALL ALSO APPLY TO COMBINED SERVICE MAINS USED TO CARRY WATER FOR FIRE SERVICE AND OTHER USES, I.E. DOMESTIC.
3. STANDARDS TO BE REFERENCED ARE TO BE THE MOST CURRENT AS ADOPTED BY THE FLORIDA FIRE PREVENTION CODE:
 - NFPA 24, INSTALLATION OF PRIVATE FIRE SERVICE MAINS & THEIR APPURTENANCES
 - NFPA 30, STANDARD FOR INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
 - NFPA 22, STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION
 - NFPA 16, STANDARD ON DELUGE FOAM-WATER SPRINKLER & FOAM-WATER SPRAY SYSTEMS
 - NFPA 1963 STANDARD FOR FIRE HOSE CONNECTIONS
4. ITEMS ON THE CONSTRUCTION PLANS SHALL INCLUDE BUT NOT LIMITED TO SCALE DRAWINGS AND DETAILS AND TO INCLUDE THE FOLLOWING ITEMS WHEN THEY ARE APPLICABLE TO THE SYSTEM BEING INSTALLED:

- A. NAME OF OWNER AND OCCUPANT.
 - B. LOCATION, INCLUDING STREET ADDRESS
 - C. POINT OF COMPASS.
 - D. A GRAPHIC REPRESENTATION OF THE SCALE USED ON ALL PLANS.
 - E. NAME AND ADDRESS OF CONTRACTOR.
 - F. SIZE AND LOCATION OF ALL WATER SUPPLIES.
 - G. SIZE AND LOCATION OF ALL PIPING, INDICATING, WHERE POSSIBLE, THE CLASS AND TYPE AND DEPTH OF EXISTING PIPE, THE CLASS AND TYPE OF NEW PIPE TO BE INSTALLED, AND THE DEPTH TO WHICH IT IS TO BE BURIED.
 - H. SIZE, TYPE, AND LOCATION OF VALVES. INDICATE IF LOCATED IN PIT OR IF OPERATION IS BY POST INDICATOR OR KEY WRENCH THROUGH A CURB BOX.
 - I. LOCATION OF FIRE DEPARTMENT CONNECTIONS, IF PART OF PRIVATE FIRE SERVICE MAIN SYSTEM, INCLUDING DETAIL OF CONNECTIONS.
 - J. SPRINKLER AND STANDPIPE RISERS AND MONITOR NOZZLES TO BE SUPPLIED BY THE SYSTEM.
 - K. LOCATION OF FIRE DEPARTMENT CONNECTIONS, IF PART OF PRIVATE FIRE SERVICE MAIN SYSTEM, INCLUDING DETAIL OF CONNECTIONS.
 - L. ALL COMPONENTS MUST HAVE LISTING WITH FIRE PROTECTION PER NFPA 24.
 - M. ALL FIRE HYDRANTS INSTALLED IN ST. JOHNS COUNTY MUST HAVE A SINGLE 4.5 INCH HOSE OUTLET, AND TWO (2.5) INCH HOSE OUTLETS, ALL WITH MALE NH STANDARD THREADS, IN ACCORDANCE WITH NFPA 1963.
5. A COPY THESE APPROVED ENGINEERED PLANS SHALL ACCOMPANY A REQUIRED FIRE MARSHAL UNDERGROUND PERMIT SUBMITTED BY A CERTIFIED CONTRACTOR. THIS UNDERGROUND PERMIT WILL REQUIRE ADDITIONAL DETAILS AND SPECS AT THE TIME OF SUBMITTAL TO THE FIRE MARSHAL'S OFFICE.
6. CONTRACTORS INSTALLING THE UNDERGROUND PIPING IN ACCORDANCE WITH THE ABOVE REFERENCE STANDARDS FOR A FIRE PROTECTION SYSTEM USING WATER AS THE EXTINGUISHING AGENT BEGINNING AT THE POINT OF ENTRY TO THE BUILDING SHALL BE RESPONSIBLE FOR FIRE PROTECTION AND ENDING NO MORE THAN 1 FOOT ABOVE THE FLOOR SHALL BE REQUIRED TO HAVE A CLASS I, II, OR V FIRE PROTECTION CONTRACTORS LICENSE PURSUANT TO CHAPTER 633, FLORIDA STATUTES. GENERAL CONTRACTORS ARE REMINDED THAT THEY ARE RESPONSIBLE FOR VERIFYING THAT THEIR SUBCONTRACTORS HOLD THE REQUIRED LICENSES. CONTRACTORS FOUND TO BE VIOLATING THIS REQUIREMENT MAY BE REPORTED TO THE DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION AND/OR THE STATE FIRE MARSHAL'S REGULATORY LICENSING SECTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A PERMIT FROM THE FIRE MARSHAL'S OFFICE PRIOR TO THE START OF SITE CONSTRUCTION IN ACCORDANCE WITH THE ABOVE REFERENCED STANDARDS.
8. NOTE: MINIMUM WORKING PRESSURE OF THE UNDERGROUND PIPING SHALL BE 150 PSI. NFPA 24 REQUIRES SPECIFIC PVC PIPING TO MEET TABLE C-900 WITH MANUFACTURING LISTING FOR FIRE PROTECTION.

Figure 1 is a plan view diagram of a roadway cross-section. It shows a central roadway with a centerline and gutters. Above the roadway, there are several horizontal lines representing different levels: 'PROPERTY / RIGHT OF WAY LINE', 'WETLAND LINE', 'ROADWAY CENTERLINE', and 'CURB & GUTTER'. Below the roadway, there are more horizontal lines representing 'WETLANDS'. A 'SPOT ELEVATION' is marked with an 'X' and the value '33.33'. To the right of the spot elevation, there are four vertical lines representing different features: 'GRAVITY SEWER', 'FORCE MAIN SEWER', 'WATER MAIN', and 'MAJOR CONTOUR'. Below these, there are two more horizontal lines representing 'MINOR CONTOUR'.

	PROPERTY / RIGHT OF WAY LINE
	DRAINAGE EASEMENT LINE
	UTILITY EASEMENT LINE
	ROADWAY CENTERLINE
	BUILDING SETBACK LINE
	CURB & GUTTER
	UPLAND BUFFER HATCH
	LOT AREA
	SPOT ELEVATION
	SLOPE INDICATOR

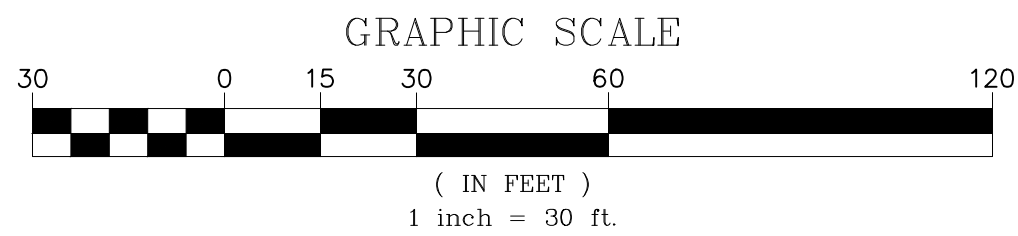
	EXISTING TREE TO BE REMOVED
	EXISTING TREE TO BE SAVED
	TREE PROTECTION FENCING
	STORM PIPE
	STORM DITCH BOTTOM INLET
	CURB INLET
	MITERED END SECTION
	HEADWALL
	STORM MANHOLE

	MAJOR CONTOUR
	MINOR CONTOUR
	DRAINAGE DIVIDE
	FLOW DIRECTION
	SLOPE
	SILT FENCE
	CONSTRUCTION REFERENCE POINT
	PROPOSED WATER MAIN W/SIZE
	PROPOSED GATE VALVE W/BOX AND COVER
	FIRE HYDRANT ASSEMBLY
	SINGLE WATER SERVICE
	FLUSHING VALVE
	PROPOSED SANITARY SEWER MAIN
	PROPOSED SANITARY SEWER MANHOLE
	SANITARY SEWER CLEAN OUT
	SANITARY SEWER SERVICE LATERAL
	PROPOSED SANITARY SEWER FORCE MAIN
	PROPOSED FIRE PROTECTION MAIN
	REDUCED PRESSURE BACK FLOW PREVENTER
	UTILITY CROSSING
	SAMPLE POINT (SP)
	END OF WATER MAIN PLUG
	DOUBLE WATER SERVICE

ABBREVIATION	DESCRIPTION
AB	ACRE
BC	BACK OF CURB
BDF	BACK FLOW PREVENTER
BLDG	BUILDING
BM	BENCHMARK
BOTT	BOTTOM
CI	CURB INLET
CH	CLEANOUT
CB	CHORD BEARING
CO	CHORD
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CONSTR	CONSTRUCT
CONT	CONTINUATION
COORD	COORDINATE
DBL	DOUBLE CURB INLET
DE	DRAINAGE EASEMENT
DHW	DESIGN HIGH WATER
DIP	DUCTILE IRON PIPE
Δ	DELTA
E	EAST
EOP	EDGE OF PAVEMENT
EL	ELEVATION
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
ESMT	EASEMENT
EXIST	EXISTING
FF	FINISH FLOOR
FH	FIRE HYDRANT
FL	FLOW LINE
FM	FORCE MAIN
FP	FIRE PROTECTION MAIN
FV	FLUSHING VALVE
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HDWL	HEADWALL
HWL	HIGH WATER LEVEL
INV	INVERT
L	LENGTH
LF	LENGTH
MES	METERED END SECTION
MAX	MAXIMUM
H	MANHOLE
MIN	MINIMUM
N	NORTH
NIC	NOT IN CONTRACT
NG	NATURAL GRADE
NTS	NOT TO SCALE
NWL	NORMAL WATER LEVEL
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PI	POINT OF INTERSECTION
POB	POINT OF BEGINNING
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INFLECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PVC	POLYVINYL CHLORIDE PIPE
R	RADIUS
RP	RADIUS POINT
R/W	RIGHT OF WAY
RCP	REINFORCED CONCRETE PIPE
RED	REDUCER
RPBZFP	REDUCED PRESSURE BACKFLOW PREVENTER
S	SOUTH
SAN	SANITARY
SEP	SEPARATION
SL	SLOPE
SP	SAMPLE POINT
SHT	SHEET
STA	STATION
STWM	STORM WATER MANAGEMENT FACILITY
SWF	TOP OF BANK
SWR	SEWER
TOC	TOP OF CURB
TRI CI	TRIPLE CURB INLET
TRY	TYPICAL
UDAE	UNOBSTRUCTED DRAINAGE & EASEMENT
UDE	UNOBSTRUCTED DRAINAGE EASEMENT
UF	UTILITY EASEMENT
VC	VERTICAL CURVE
W	WEST
WM	WATER MAIN

SHEET No.		GENERAL NOTES SHEET WESTROCK DROP YARD FERNANDINA BEACH PREPARED FOR WESTROCK FERNANDINA MILL		MATTHEWS DESIGN GROUP, INC. 1000 W. WALDO STREET P.O. BOX 3126, 7 WALDO STREET ST. AUGUSTINE, FLORIDA 32084 PHONE: 904.826.1334 FAX: 904.826.4547 INFO@MATTHEWSDESIGN.NET				DATE: 11/8/2019 TIME: 11:00 AM BY: [Signature]		NO. 1 DATE 8/29/2019 DESCRIPTION UPDATES PER COFB TRC COMMENTS		NO. 2 DATE 11/8/2019 DESCRIPTION UPDATED PER COFB TRC COMMENTS (2ND SUBMITTAL)		NO. 3 DATE DESCRIPTION		NO. 4 DATE DESCRIPTION		NO. 5 DATE DESCRIPTION		NO. 6 DATE DESCRIPTION		NO. 7 DATE DESCRIPTION		NO. 8 DATE DESCRIPTION		NO. 9 DATE DESCRIPTION		NO. 10 DATE DESCRIPTION		NO. 11 DATE DESCRIPTION		NO. 12 DATE DESCRIPTION		NO. 13 DATE DESCRIPTION		NO. 14 DATE DESCRIPTION		NO. 15 DATE DESCRIPTION		NO. 16 DATE DESCRIPTION		NO. 17 DATE DESCRIPTION		NO. 18 DATE DESCRIPTION		NO. 19 DATE DESCRIPTION		NO. 20 DATE DESCRIPTION		NO. 21 DATE DESCRIPTION		NO. 22 DATE DESCRIPTION		NO. 23 DATE DESCRIPTION		NO. 24 DATE DESCRIPTION		NO. 25 DATE DESCRIPTION		NO. 26 DATE DESCRIPTION		NO. 27 DATE DESCRIPTION		NO. 28 DATE DESCRIPTION		NO. 29 DATE DESCRIPTION		NO. 30 DATE DESCRIPTION		NO. 31 DATE DESCRIPTION		NO. 32 DATE DESCRIPTION		NO. 33 DATE DESCRIPTION		NO. 34 DATE DESCRIPTION		NO. 35 DATE DESCRIPTION		NO. 36 DATE DESCRIPTION		NO. 37 DATE DESCRIPTION		NO. 38 DATE DESCRIPTION		NO. 39 DATE DESCRIPTION		NO. 40 DATE DESCRIPTION		NO. 41 DATE DESCRIPTION		NO. 42 DATE DESCRIPTION		NO. 43 DATE DESCRIPTION		NO. 44 DATE DESCRIPTION		NO. 45 DATE DESCRIPTION		NO. 46 DATE DESCRIPTION		NO. 47 DATE DESCRIPTION		NO. 48 DATE DESCRIPTION		NO. 49 DATE DESCRIPTION		NO. 50 DATE DESCRIPTION		NO. 51 DATE DESCRIPTION		NO. 52 DATE DESCRIPTION		NO. 53 DATE DESCRIPTION		NO. 54 DATE DESCRIPTION		NO. 55 DATE DESCRIPTION		NO. 56 DATE DESCRIPTION		NO. 57 DATE DESCRIPTION		NO. 58 DATE DESCRIPTION		NO. 59 DATE DESCRIPTION		NO. 60 DATE DESCRIPTION		NO. 61 DATE DESCRIPTION		NO. 62 DATE DESCRIPTION		NO. 63 DATE DESCRIPTION		NO. 64 DATE DESCRIPTION		NO. 65 DATE DESCRIPTION		NO. 66 DATE DESCRIPTION		NO. 67 DATE DESCRIPTION		NO. 68 DATE DESCRIPTION		NO. 69 DATE DESCRIPTION		NO. 70 DATE DESCRIPTION		NO. 71 DATE DESCRIPTION		NO. 72 DATE DESCRIPTION		NO. 73 DATE DESCRIPTION		NO. 74 DATE DESCRIPTION		NO. 75 DATE DESCRIPTION		NO. 76 DATE DESCRIPTION		NO. 77 DATE DESCRIPTION		NO. 78 DATE DESCRIPTION		NO. 79 DATE DESCRIPTION		NO. 80 DATE DESCRIPTION		NO. 81 DATE DESCRIPTION		NO. 82 DATE DESCRIPTION		NO. 83 DATE DESCRIPTION		NO. 84 DATE DESCRIPTION		NO. 85 DATE DESCRIPTION		NO. 86 DATE DESCRIPTION		NO. 87 DATE DESCRIPTION		NO. 88 DATE DESCRIPTION		NO. 89 DATE DESCRIPTION		NO. 90 DATE DESCRIPTION		NO. 91 DATE DESCRIPTION		NO. 92 DATE DESCRIPTION		NO. 93 DATE DESCRIPTION		NO. 94 DATE DESCRIPTION		NO. 95 DATE DESCRIPTION		NO. 96 DATE DESCRIPTION		NO. 97 DATE DESCRIPTION		NO. 98 DATE DESCRIPTION		NO. 99 DATE DESCRIPTION		NO. 100 DATE DESCRIPTION		NO. 101 DATE DESCRIPTION		NO. 102 DATE DESCRIPTION		NO. 103 DATE DESCRIPTION		NO. 104 DATE DESCRIPTION		NO. 105 DATE DESCRIPTION		NO. 106 DATE DESCRIPTION			
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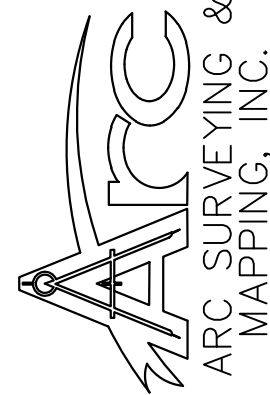
MAP SHOWING TOPOGRAPHIC SURVEY OF



TOPOGRAPHIC LEGEND
x 20.00 = TOPOGRAPHIC HARD SPOT SHOT
x 20.0 = TOPOGRAPHIC SOFT SPOT SHOT
---(5)--- = MAJOR CONTOUR 5.0' INTERVAL
---(1)--- = MINOR CONTOUR 1.0' INTERVAL
(NAVD_88) = NORTH AMERICAN VERTICAL DATUM OF 1988
(NGVD_29) = NATIONAL GEODETIC VERTICAL DATUM OF 1929

GENERAL NOTES

1. BEARINGS AND DISTANCES ESTABLISHED FROM XXXXXXXXXX
2. DIMENSIONS SHOWN THUS 25.0' AND DENOTE BUILDING, CONCRETE AND FENCE TIES.
3. ALL DIMENSIONS SHOWN HEREON ARE IN FEET AND IN TENTHS AND ARE BASED ON THE U.S. SURVEY FOOT.
4. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF TITLE COMMITMENT.
5. NOTICE: THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT SHOWN ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.
6. THE LANDS SHOWN HEREON LIE WITHIN FEMA FLOOD INSURANCE ZONE "X" ACCORDING TO FLOOD INSURANCE RATE MAP XXXXXXXXX, DATED XX/XX/XXXX FOR DUVAL COUNTY, FLORIDA.



ARC SURVEYING &
MAPPING, INC.
5202 San Juan Ave.
Jacksonville, Florida 32210
Tel: (904) 444-8888
Fax: (904) 444-8888
Licensed Business # 6467

NASSAU COUNTY, FLORIDA

FERNANDINA

File name:

Reference files:

Party Chief:

C.V.

N/A

Dwn by:

JDY

Clk by:

BLP

Drawing Date

09/26/17

Survey Date:

09/25/17

Certified To:

WESTROCK

Description

No Approved

Date

THIS IS TO CERTIFY THAT THE ABOVE LANDS WERE SURVEYED UNDER MY RESPONSIBLE SUPERVISION AND I CERTIFY THAT THERE ARE NO UNRECORDED EASEMENTS, ENCUMBRANCES, OR OTHER INTERESTS AFFECTING THE SURVEYED LANDS. I AM A LICENSED PROFESSIONAL SURVEYOR IN THE STATE OF FLORIDA, LICENSE NO. 4827, RAISED SEPTEMBER 2017, AND I AM NOT PROVIDING THIS CERTIFICATE OF SURVEY TO ANY OTHER PARTY.

BOB L. PITTMAN, P.E., P.S.M., OF
FLORIDA REGISTERED PROFESSIONAL SURVEYOR NO. 4827
RAISED SEPTEMBER 2017, AND I AM NOT PROVIDING THIS CERTIFICATE OF SURVEY TO ANY OTHER PARTY.

PROJECT NO.
17-03-18

FILE NO.
17-03-18

SHEET X OF X

LOCATION OF TREES NORTHWEST OF THE INTERSECTION OF EIGHTH STREET AND ESCAMBIA STREET, LYING IN THE CITY OF FERNANDINA BEACH, NASSAU COUNTY, FLORIDA.



1. THIS IS NOT A BOUNDARY SURVEY, NOR DOES IT PURPORT TO BE SUCH.
2. THE SPECIFIC PURPOSE OF THIS SURVEY IS TO SHOW THE LOCATION OF TREES NORTHWEST OF THE INTERSECTION OF EIGHTH STREET AND ESCAMBIA STREET, AS REQUESTED BY THE CLIENT.
3. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF TITLE COMMITMENT.
4. NOTICE: THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT SHOWN ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.

 ARC SURVEYING & MAPPING, INC. 5202 San Juan Ave. Jacksonville, Florida 32210 Tel. (904)384-4374 Fax (904)384-4388 Licensed Business # 6487	NASSAU COUNTY, FLORIDA FERNANDINA BEACH	File name: Reference files:	Party Chief: CV Field Bk/Pg N/A	Dwn by: Ckd by: BLP	Drawing Date 06-14-2019 Survey Date: 03-20-2018	No Approved Date	Description
	Certified To: WESTROCK				THIS IS TO CERTIFY THAT THE ABOVE LINES WERE SURVEYED UNDER MY PERSONAL SUPERVISION AND IN ACCORDANCE WITH THE FLORIDA SURVEYING ENFORCEMENTS EXCEPT AS SHOWN AND THAT THE SURVEY SHOWN HEREON MEETS ALL STANDARDS OF ACCURACY SET FORTH BY THE CHARTERED BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS OF THE FLORIDA ADMINISTRATIVE CODE.	PROJECT NO. 170318	FILE NO. 170318-TREE

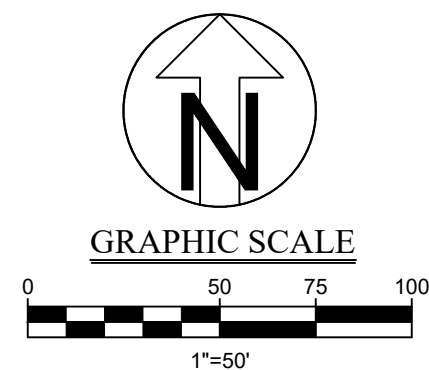
C:\PROJECTS\180301-0001 - WESTROCK DROP YARD\DRAWINGS\CONSTRUCTION\DOCUMENTS\18037 - OVERALL SITE PLAN.DWG - 1/25/2019 9:57 AM - Brenda Marshall - MATTHEWS DESIGN GROUP, INC.



HATCH LEGEND	
PROPOSED PAVED ASPHALT	
PROPOSED CONCRETE	
PROPOSED GRAVEL	
EXISTING GRAVEL	
EXISTING PAVED ASPHALT	
EXISTING CONCRETE	
EXISTING BUILDINGS	

SITE DATA TABLE		
TOTAL SITE	213 AC	9,278,280 SF
EXISTING IMPERVIOUS AREA		355,790 SF
EXISTING BUILDING		919,106 SF
PROPOSED BUILDING		0 SF
PROPOSED IMPERVIOUS AREA		304,399 SF
TOTAL IMPERVIOUS		1,579,298 SF
TOTAL PERVIOUS		7,698,982 SF
TOTAL IMPERVIOUS %		17%
TOTAL PERVIOUS %		83%
PARCEL NUMBER(S)		00-00-31-1860-0000-0000
911 ADDRESS		600 N 8TH ST
FEMA PANEL NUMBER		12089C0237G
FLOOD ZONE		AE, X

SHEET NO.: 6 OF 17	OVERALL SITE PLAN WESTROCK DROP YARD FERNANDINA BEACH PREPARED FOR WESTROCK FERNANDINA MILL	 MATTHEWS DESIGN GROUP, INC. P.O. BOX 3126, 7 WALDO STREET ST. AUGUSTINE, FLORIDA 32084 PHONE: 904.826.1334 FAX: 904.826.4547 INFO@MATTHEWSDESIGN.NET	DESIGN BY: MS & KJM	SAK	NO.	DATE	DESCRIPTION	REVISIONS
			CHK BY: SJK	SAK	1	8/29/2019	UPDATES PER COFB TRC COMMENTS	
			DATE	11/8/2019	2	11/8/2019	UPDATES PER COFB TRC COMMENTS (2ND SUBMITTAL)	
			JOB NO.	18037				
								REGISTERED ENGINEER BREND A. MARSHALL, P.E. C0426535, FL 463391



	DEMOLITION DETAILS
GD1	STABILIZED CONSTRUCTION ENTRANCE
GD2A	HAYBALE INLET PROTECTION
GD9A	DOUBLE TYPE III SILT FENCE

	DEMOLITION NOTES
D01	EXISTING TO BE REMOVED
D02	EXISTING TO REMAIN
D03	EXISTING TO BE RELOCATED, PER OWNERS DISCRETION
D04	EXISTING VEGETATION TO BE REMOVED, NO CLEARING TO OCCUR OUTSIDE OF CONSTRUCTION LIMITS OR IN WETLAND OR WETLAND BUFFERS
D05	RISER BOX TO BE REPLACED WITH TRAFFIC RATED PRECAST CONCRETE PULL BOX

HATCH LEGEND	
DEMO FENCE	XXXXXXXXXXXXXXXXXXXX
DEMO ASPHALT	
TREE TO BE REMOVED	

SHEET No.:	DEMOLITION PLAN		MATTHEWS DESIGN GROUP, INC.				REVISIONS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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7	WESTROCK DROP YARD	FERNANDINA BEACH	PREPARED FOR	WESTROCK FERNANDINA MILL	8/29/2019	1	8/29/2019	UPDATES PER COFB TRC COMMENTS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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DEMOLITION DETAILS

GD1

STABILIZED CONSTRUCTION ENTRANCE

GD2A

HAYBALE INLET PROTECTION

GD8A

DOUBLE TYPE III SILT FENCE

DEMOLITION NOTES

D01

EXISTING TO BE REMOVED

D02

EXISTING TO REMAIN

D03

EXISTING TO BE RELOCATED, PER OWNERS DISCRETION

D04

EXISTING VEGETATION TO BE REMOVED, NO CLEARING TO OCCUR OUTSIDE OF CONSTRUCTION LIMITS OR IN WETLAND OR WETLAND BUFFERS

D05

RISER BOX TO BE REPLACED WITH TRAFFIC RATED PRECAST CONCRETE PULL BOX

HATCH LEGEND

DEMO FENCE

XXXXXXXXXXXXXXXXXX

DEMO ASPHALT

TREE TO BE REMOVED

TREE NUMBER	TREE SPECIE	TRUNK STYLE	TREE DBH (IN)	PROPOSED PLAN OF ACTION	SPECIMEN TREE?	BONUS INCHES?	REMOVED TREE INCHES REQUIRING MITIGATION	TREE INCHES PRESERVED
1	HACKBERRY	SINGLE	7	TO REMAIN	NO	YES	-	7
2	HACKBERRY	SINGLE	9	TO REMAIN	NO	YES	-	9
3	HACKBERRY	SINGLE	12	TO REMAIN	NO	YES	-	12
4	PALM	SINGLE	18	TO REMAIN	NO	YES	-	18
5	OAK	SINGLE	18	TO REMAIN	NO	YES	-	18
6	CHESTNUT	SINGLE	10	TO REMAIN	NO	YES	-	10
7	HACKBERRY	SINGLE	7	TO REMAIN	NO	YES	-	7
8	CHESTNUT	SINGLE	11	TO REMAIN	NO	NO	-	11
9	OAK	SINGLE	8	TO REMAIN	NO	NO	-	8
10	OAK	SINGLE	5	TO REMAIN	NO	NO	-	5
11	OAK	SINGLE	16	TO REMAIN	NO	NO	-	16
12	HACKBERRY	SINGLE	8	TO REMAIN	NO	NO	-	8
13	HACKBERRY	SINGLE	12	TO REMAIN	NO	NO	-	12
14	OAK	SINGLE	5	TO REMAIN	NO	NO	-	5
15	MAGNOLIA	SINGLE	7	TO REMAIN	NO	NO	-	7
16	OAK	SINGLE	11	TO REMAIN	NO	NO	-	11
17	OAK	SINGLE	11	TO REMAIN	NO	NO	-	11
18	OAK	SINGLE	11	TO REMAIN	NO	NO	-	11
19	HACKBERRY	SINGLE	7	TO REMAIN	NO	NO	-	7
20	OAK	SINGLE	25	TO REMAIN	NO	NO	-	25
21	HACKBERRY	SINGLE	7	TO REMAIN	NO	NO	-	7
22	PECAN	SINGLE	15	TO REMAIN	NO	NO	-	15
23	HACKBERRY	SINGLE	12	TO REMAIN	NO	NO	-	12
24	OAK	SINGLE	15	TO REMAIN	NO	NO	-	15
25	OAK	SINGLE	5	TO REMAIN	NO	NO	-	5
26	OAK	SINGLE	7	TO REMAIN	NO	NO	-	7
27	OAK	SINGLE	9	TO REMAIN	NO	NO	-	9
28	OAK	SINGLE	6	TO REMAIN	NO	NO	-	6
29	CHESTNUT	SINGLE	7	TO REMAIN	NO	NO	-	7
30	OAK	SINGLE	6	TO REMAIN	NO	NO	-	6
31	CHINABERRY	SINGLE	9	TO REMAIN	NO	NO	-	9
32	CHINABERRY	SINGLE	6	TO REMAIN	NO	NO	-	6
33	CHINABERRY	SINGLE	7	TO REMAIN	NO	NO	-	7
34	OAK	SINGLE	7	TO REMAIN	NO	NO	-	7
35	OAK	SINGLE	9	TO REMAIN	NO	NO	-	9
36	OAK	SINGLE	8	TO REMAIN	NO	NO	-	8
37	OAK	SINGLE	7	TO REMAIN	NO	NO	-	7
38	CHINABERRY	SINGLE	6	TO REMAIN	NO	NO	-	6
39	OAK	SINGLE	7	TO REMAIN	NO	NO	-	7
40	OAK	SINGLE	16	TO REMAIN	NO	NO	-	16
41	OAK	SINGLE	19	TO REMAIN	NO	NO	-	19
42	OAK	SINGLE	16	TO REMAIN	NO	NO	-	16
43	OAK	SINGLE	7	TO REMAIN	NO	NO	-	7
44	OAK	SINGLE	7	TO REMAIN	NO	NO	-	7
45	OAK	SINGLE	23	TO REMAIN	NO	NO	-	23
46	OAK	SINGLE	8	TO REMAIN	NO	NO	-	8
47	OAK	SINGLE	20	TO REMAIN	NO	NO	-	20
48	OAK	SINGLE	23	TO REMAIN	NO	NO	-	23
49	OAK	SINGLE	12	TO REMAIN	NO	NO	-	12
50	OAK	SINGLE	12	TO REMAIN	NO	NO	-	12
51	CHESTNUT	SINGLE	5	TO REMAIN	NO	NO	-	5
52	CHESTNUT	SINGLE	7	TO REMAIN	NO	NO	-	7
53	OAK	SINGLE	36	TO REMAIN	NO	NO	-	36
54	CHESTNUT	SINGLE	5	TO REMAIN	NO	NO	-	5
55	OAK	SINGLE	5	TO REMAIN	NO	NO	-	5
56	CHINABERRY	SINGLE	8	TO REMAIN	NO	NO	-	8
57	OAK	SINGLE	4	TO REMAIN	NO	NO	-	4
58	OAK	SINGLE	10	TO REMAIN	NO	NO	-	10
59	CHINABERRY	SINGLE	8	TO REMAIN	NO	NO	-	8
60	OAK	SINGLE	9	TO REMAIN	NO	NO	-	9
61	OAK	SINGLE	6	TO REMAIN	NO	NO	-	6
62	OAK	SINGLE	28	TO BE REMOVED	NO	NO	28	-
63	OAK	SINGLE	12	TO REMAIN	NO	NO	-	12
64	OAK	SINGLE	6	TO REMAIN	NO	NO	-	6
65	OAK	SINGLE	6	TO REMAIN	NO	NO	-	6
66	OAK	SINGLE	16	TO REMAIN	NO	NO	-	16
67	OAK	SINGLE	7	TO REMAIN	NO	NO	-	7
68	OAK	SINGLE	11	TO REMAIN	NO	NO	-	11
69	OAK	SINGLE	6	TO REMAIN	NO	NO	-	6
70	CHESTNUT	SINGLE	6	TO BE REMOVED	NO	NO	6	-
71	HACKBERRY	SINGLE	7	TO BE REMOVED	NO	NO	7	-
72	HACKBERRY	SINGLE	11	TO BE REMOVED	NO	NO	11	-
73	HACKBERRY	SINGLE	7	TO BE REMOVED	NO	NO	7	-
74	OAK	SINGLE	5	TO REMAIN	NO	NO	-	5
75	OAK	SINGLE	14	TO REMAIN	NO	NO	-	14
76	OAK	SINGLE	5	TO REMAIN	NO	NO	-	5
77	CHESTNUT	SINGLE	7	TO REMAIN	NO	NO	-	7
78	CHESTNUT	SINGLE	7	TO REMAIN	NO	NO	-	7
79	CHESTNUT	SINGLE	5	TO REMAIN	NO	NO	-	5
80	OAK	SINGLE	42	TO REMAIN	NO	NO	-	42
81	OAK	SINGLE	30	TO REMAIN	NO	NO	-	30
82	OAK	SINGLE	12	TO REMAIN	NO	NO	-	12
83	OAK	SINGLE	9	TO REMAIN	NO	NO	-	9
84	OAK	SINGLE	13	TO REMAIN	NO	NO	-	13
85	OAK	SINGLE	13	TO REMAIN	NO	NO	-	13
86	OAK	SINGLE	12	TO REMAIN	NO	NO	-	12
TOTALS							59	283

REVISIONS

NO.	DATE	DESCRIPTION
1	8/29/2019	UPDATES PER COFB TRC COMMENTS
2	11/8/2019	UPDATES PER COFB TRC COMMENTS (2ND SUBMITTAL)

SAK

MS & KJM	1/8/2019	18037
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DEMO PLAN

WESTROCK DROP YARD

FERNANDINA BEACH

PREPARED FOR

WESTROCK FERNANDINA MILL

SHEET NO.

8

OF 17

MATTHEWS DESIGN GROUP, INC.

P.O. BOX 3126, 7 WALDO STREET

ST. AUGUSTINE, FLORIDA 32084

PHONE: 904.826.1334

FAX: 904.826.4547

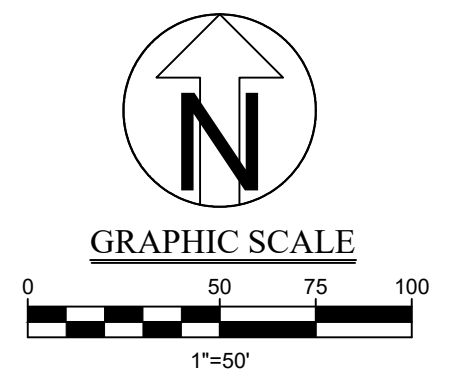
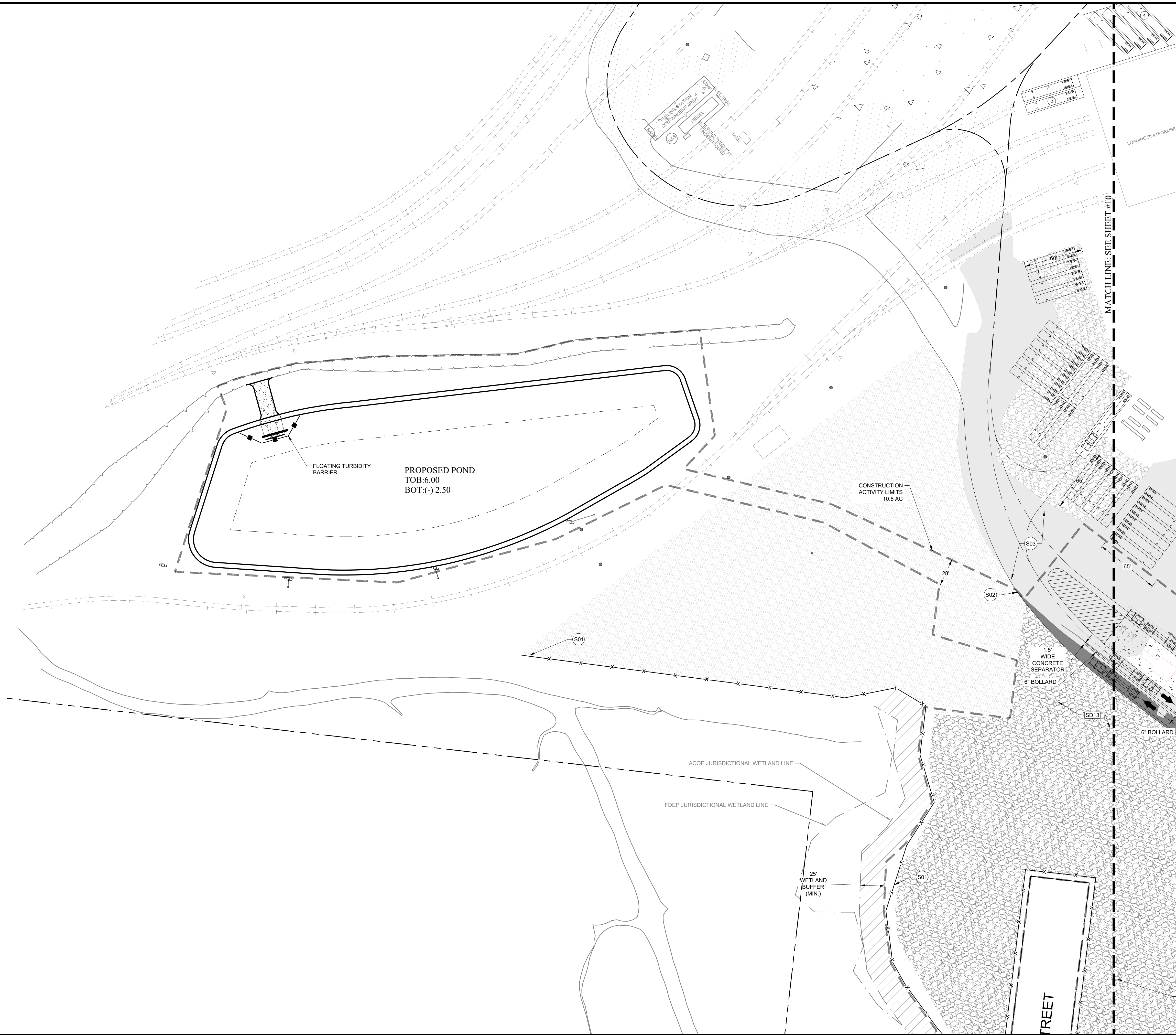
INFO@MATTHEWSDESIGN.NET

REGISTERED ENGINEER

FLORIDA

00000000

C:\PROJETS\180301-18037 - WESTROCK DROP YARD\CONSTRUCTION DOCUMENTS\18037 SITE PLANING - SITE PLAN.dwg, 12/29/2023 9:10 AM, Barrow Marshall MATTHEWS DESIGN GROUP, INC.



- SITE DETAILS**
- SD12 HEAVY DUTY PAVEMENT SECTION
 - SD13 #57 STONE GRANITE GRAVEL AREA
 - SD22 CONCRETE PAVEMENT SECTION

- SITE NOTES**
- S01 PROPOSED SECURITY CHAIN LINK FENCE
 - S02 MATCH EXISTING PAVEMENT EDGE
 - S03 EXISTING PAVEMENT/GRAVEL

NOTE:
STRIPING SHOWN FOR PLANNING OF SPACES ONLY. NO PAINTING OF STRIPES IS REQUIRED IN THE GRAVEL AREA.

SITE DATA TABLE		
TOTAL SITE	213 AC	9,278,280 SF
EXISTING IMPERVIOUS AREA		355,790 SF
EXISTING BUILDING		919,109 SF
PROPOSED BUILDING		0 SF
PROPOSED IMPERVIOUS AREA		394,399 SF
TOTAL IMPERVIOUS		1,579,298 SF
TOTAL PERVIOUS		7,698,982 SF
TOTAL IMPERVIOUS %		17%
TOTAL PERVIOUS %		83%
% BUILDING COVERAGE		0%
TOTAL FLOOR AREA		0 SF
FLOOR AREA RATIO (FAR)		0.0%
PARCEL NUMBER(S)	00-00-31-1860-0000-0000 00-00-31-1800-00-75-0010 00-00-31-1800-0074-0011 00-00-31-1800-0074-0030 00-00-31-1800-0065-0020, 00-00-31-1800-0064-000	
911 ADDRESS	600 N 8TH ST	
FEMA PANEL NUMBER	12069C023TG	
FLOOD ZONE	AE, X	

HATCH LEGEND	
PROPOSED PAVED ASPHALT	
PROPOSED CONCRETE	
PROPOSED GRAVEL	
EXISTING GRAVEL	
EXISTING PAVED ASPHALT	
EXISTING CONCRETE	

PARKING CALCULATIONS	
TOTAL TRUCK SPACES PROVIDED	= 355 SPACE
TOTAL CAR SPACES PROVIDED	= 121 SPACES
EXISTING PARKING SPACES	= 195 SPACES
TOTAL SPACES PROVIDED	= 671 SPACES

SHEET NO.: 9 OF 17

SITE PLAN

MATTHEWS DESIGN GROUP, INC.

P.O. BOX 3126, 7 WALDO STREET
ST. AUGUSTINE, FLORIDA 32084
PHONE: 904.826.1334
FAX: 904.826.4547
INFO@MATTHEWSDESIGN.NET

REVISIONS

NO.	DATE	DESCRIPTION
1	8/29/2019	UPDATES PER COFB TRC COMMENTS
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REGISTERED ENGINEER
CARYN MATTHEWS, P.E.
CARELESS, FL 46331

SAK

NO.	DATE	DESCRIPTION
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2	11/8/2019	UPDATED PER COFB TRC COMMENTS (2ND SUBMITTAL)

REGISTERED ENGINEER
CARYN MATTHEWS, P.E.
CARELESS, FL 46331

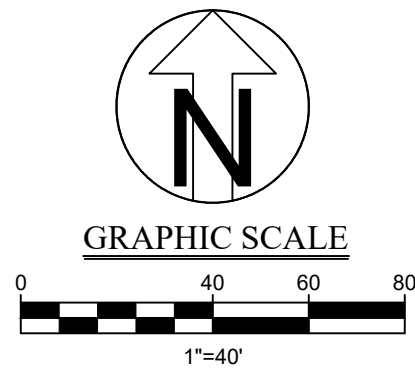
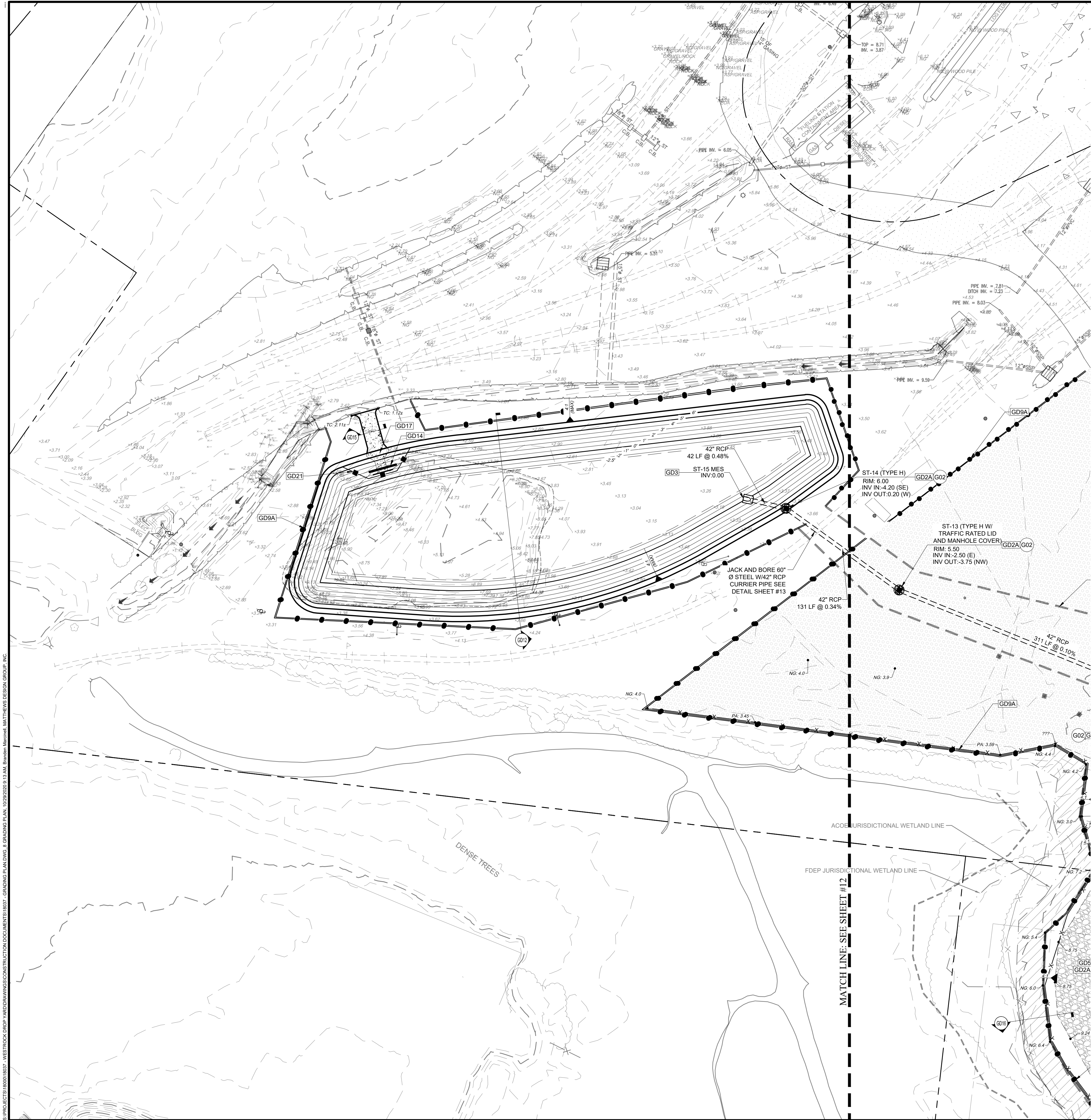
WESTROCK DROP YARD

FERNANDINA BEACH

PREPARED FOR

WESTROCK FERNANDINA MILL

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- GRADING DETAILS**
- GD2A HAYBALE INLET PROTECTION
 - GD3 MITERED END SECTION
 - GD4 TYPE C INLET
 - GD8D MANHOLE FRAME AND COVER
 - GD9A DOUBLE TYPE III SILT FENCE
 - GD12 POND CROSS SECTION
 - GD14 SKIMMER DETAIL
 - GD15 SWALE CROSS SECTION
 - GD16 GRAVEL PARKING CROSS SECTION
 - GD17 CONCRETE WEIR
 - GD18 TYPE D INLET
 - GD21 TURBIDITY BARRIERS

- GRADING NOTES**
- G01 MATCH EXISTING GRADE
 - G02 FDOT STD. TYPE H INLET PER FDOT STD. PLAN, INDEX 425-010

- LEGEND**
- CL CENTER LINE
 - EP EDGE OF PAVEMENT
 - NG NATURAL GRADE
 - PA TOP OF PAVEMENT

MATTHEWS DESIGN GROUP, INC.

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GRADING PLAN
WESTROCK DROP YARD
FERNANDINA BEACH
PREPARED FOR
WESTROCK FERNANDINA MILL

REVISIONS		DESCRIPTION	
NO.	DATE	NO.	DATE
1	8/29/2019	1	8/29/2019
2	11/8/2019	2	11/8/2019

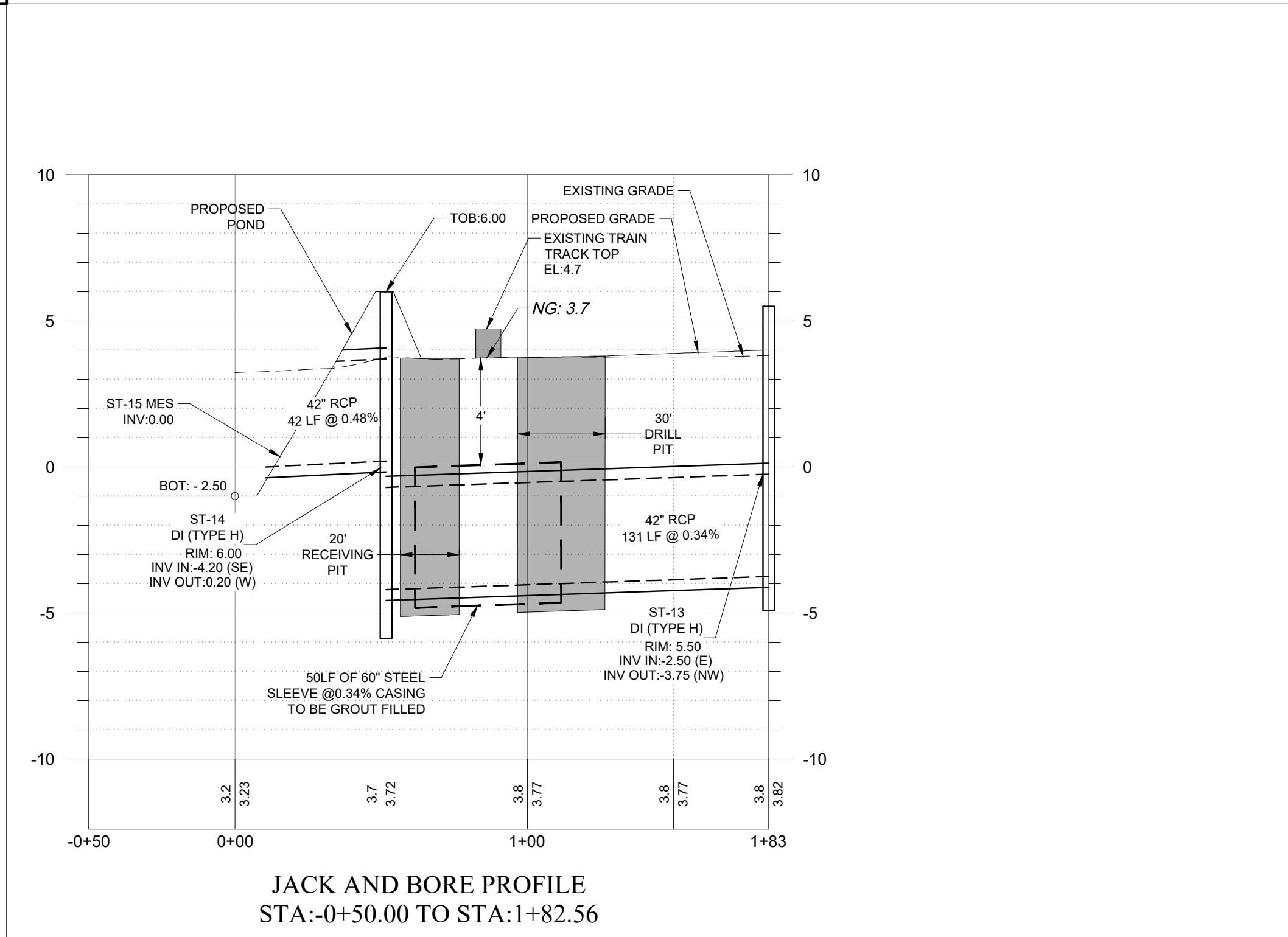
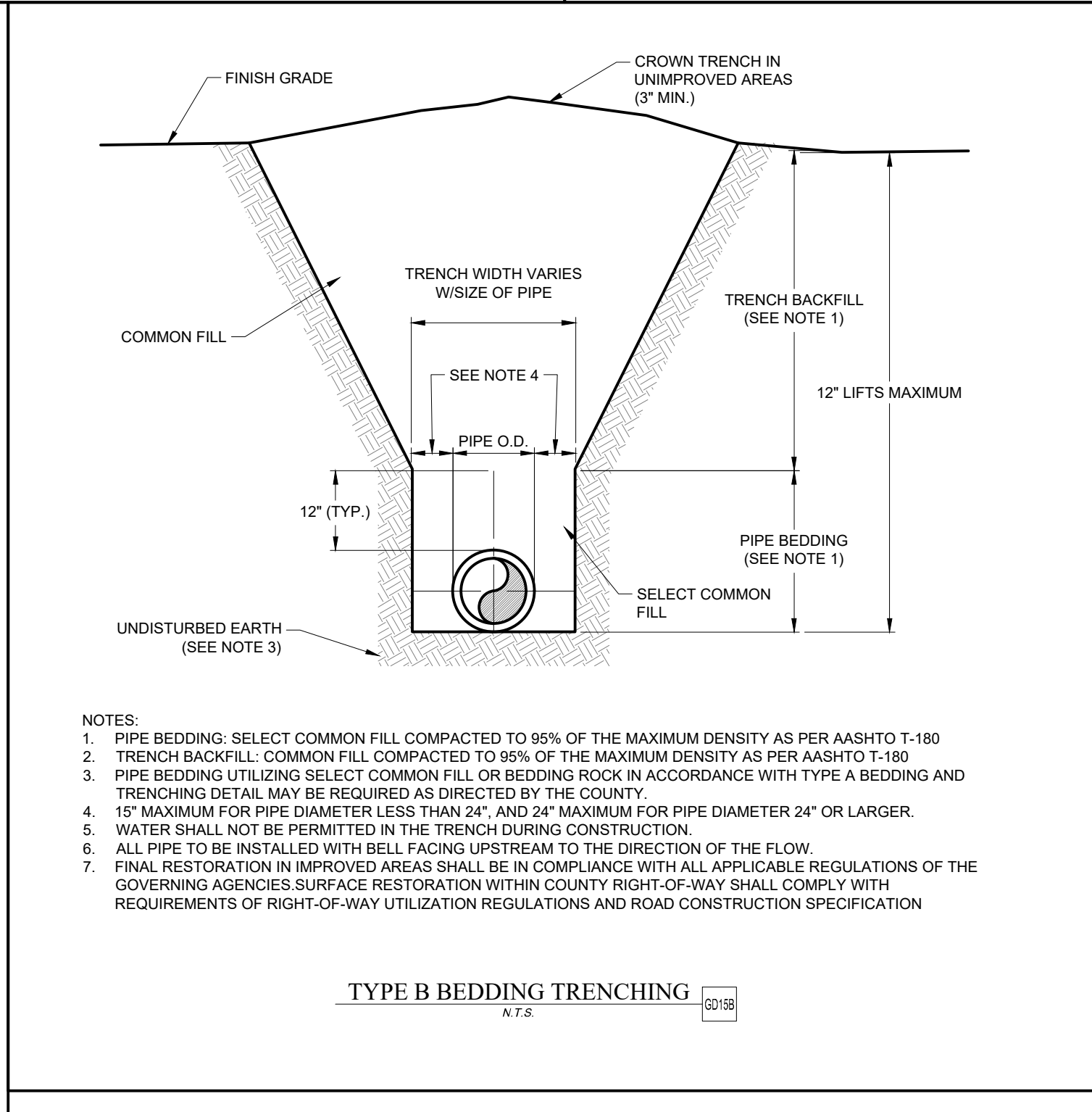
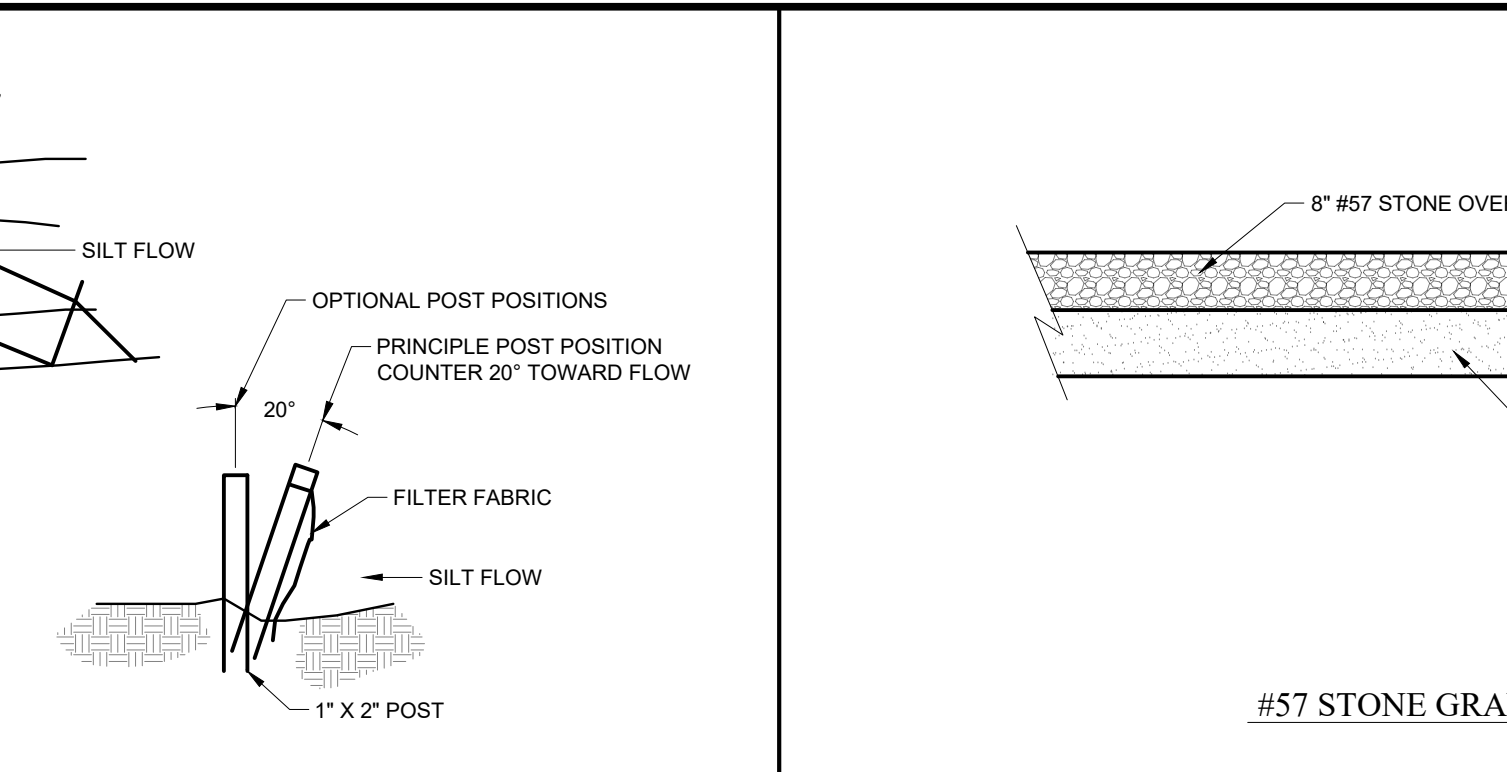
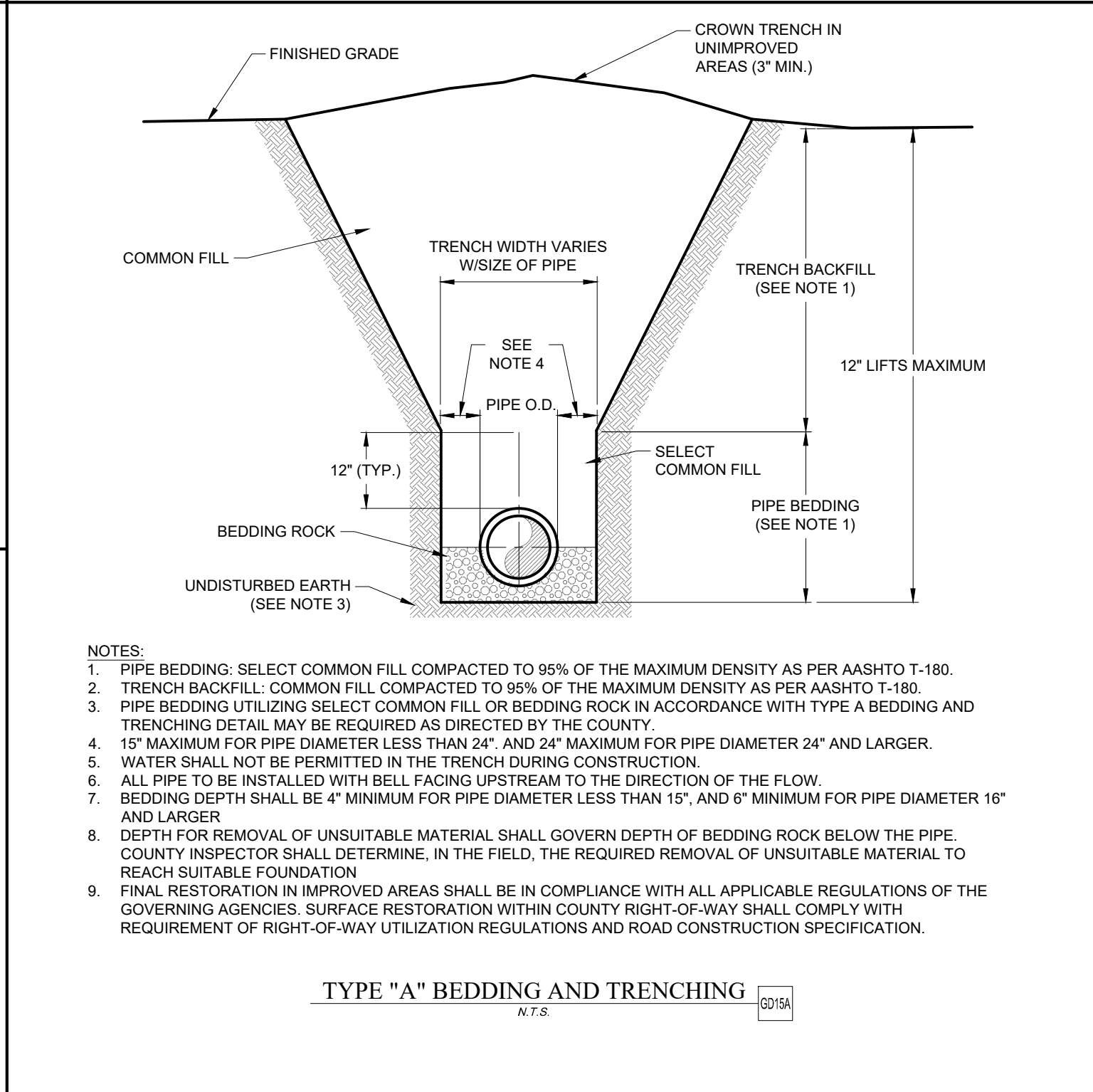
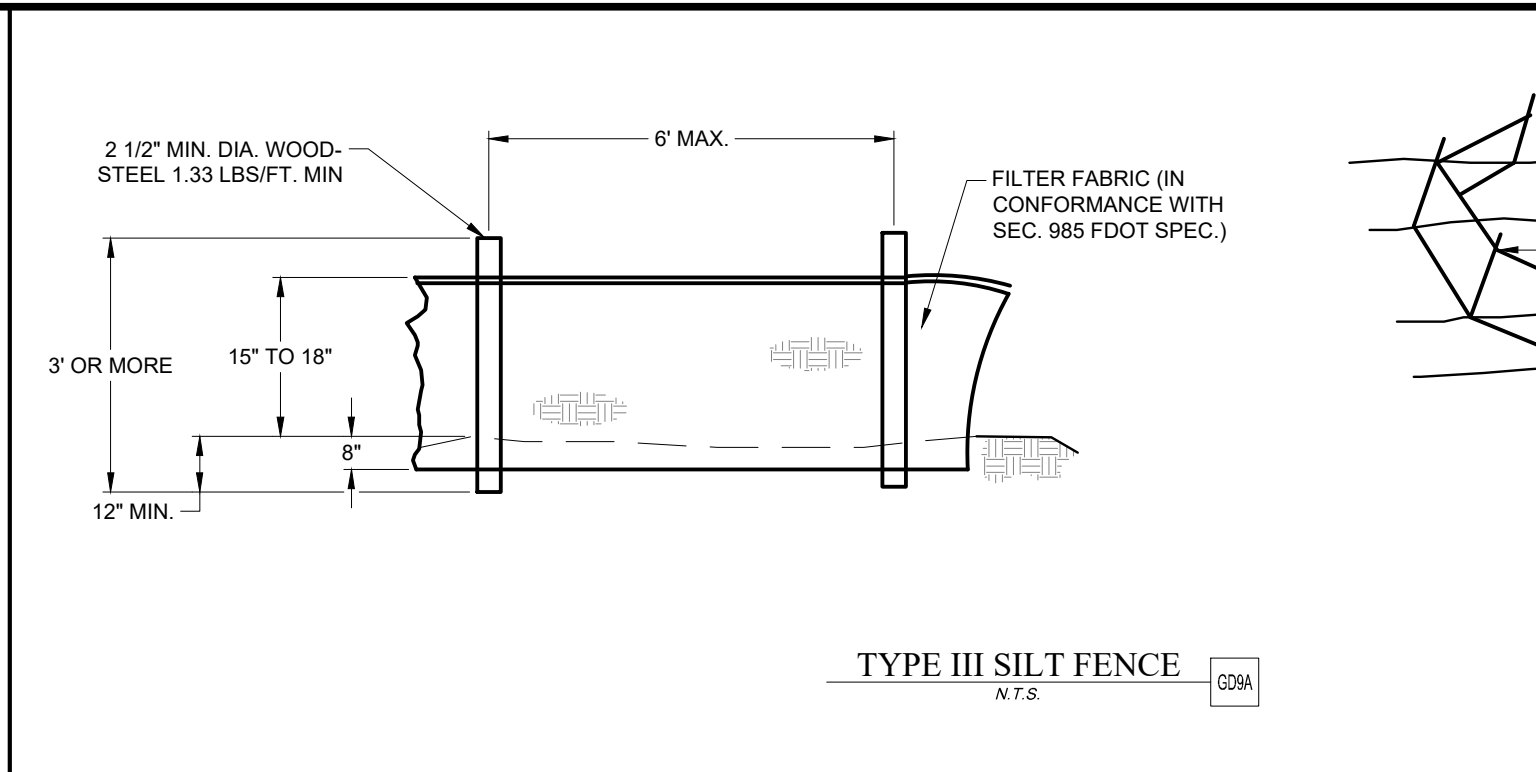
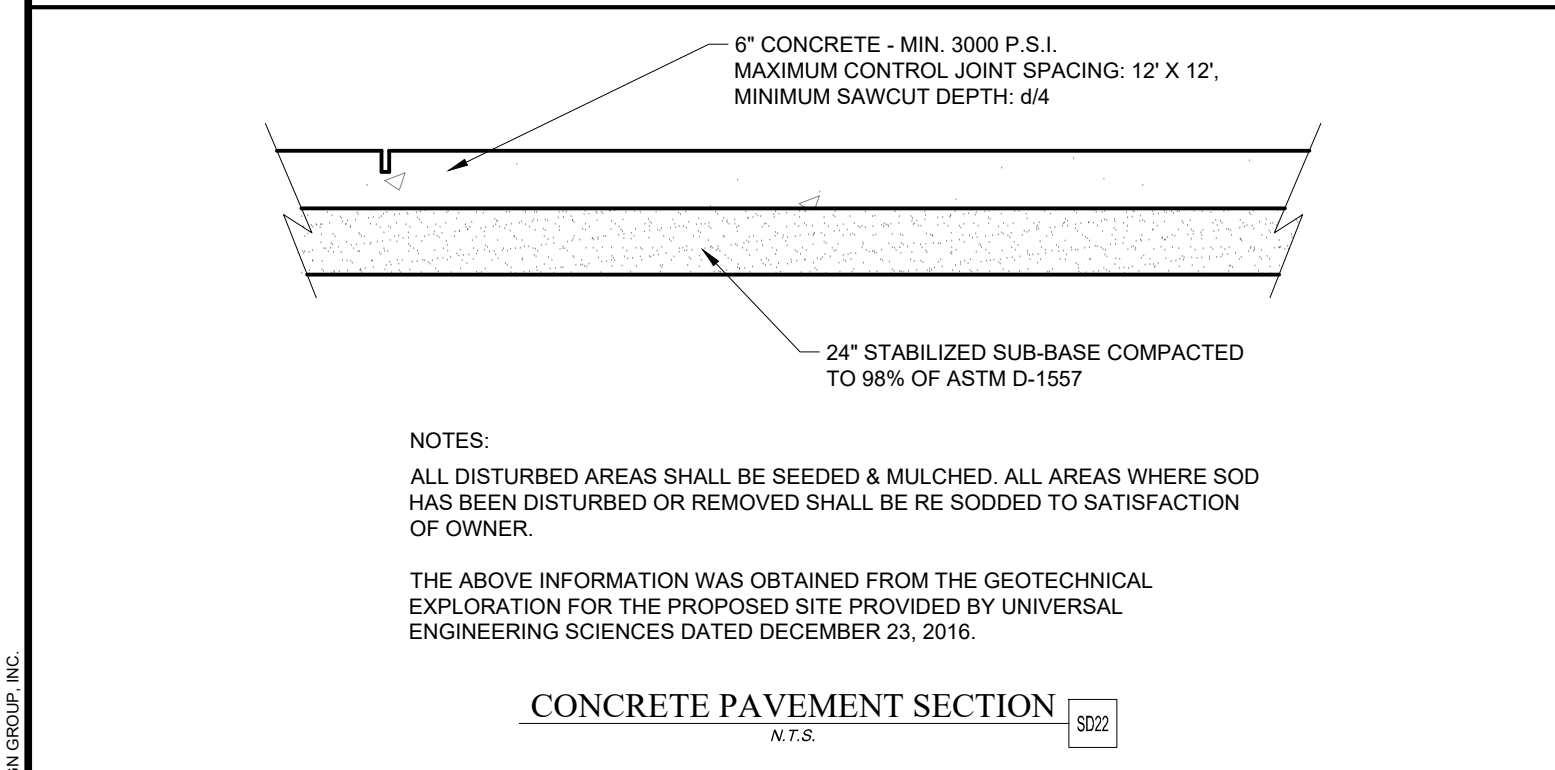
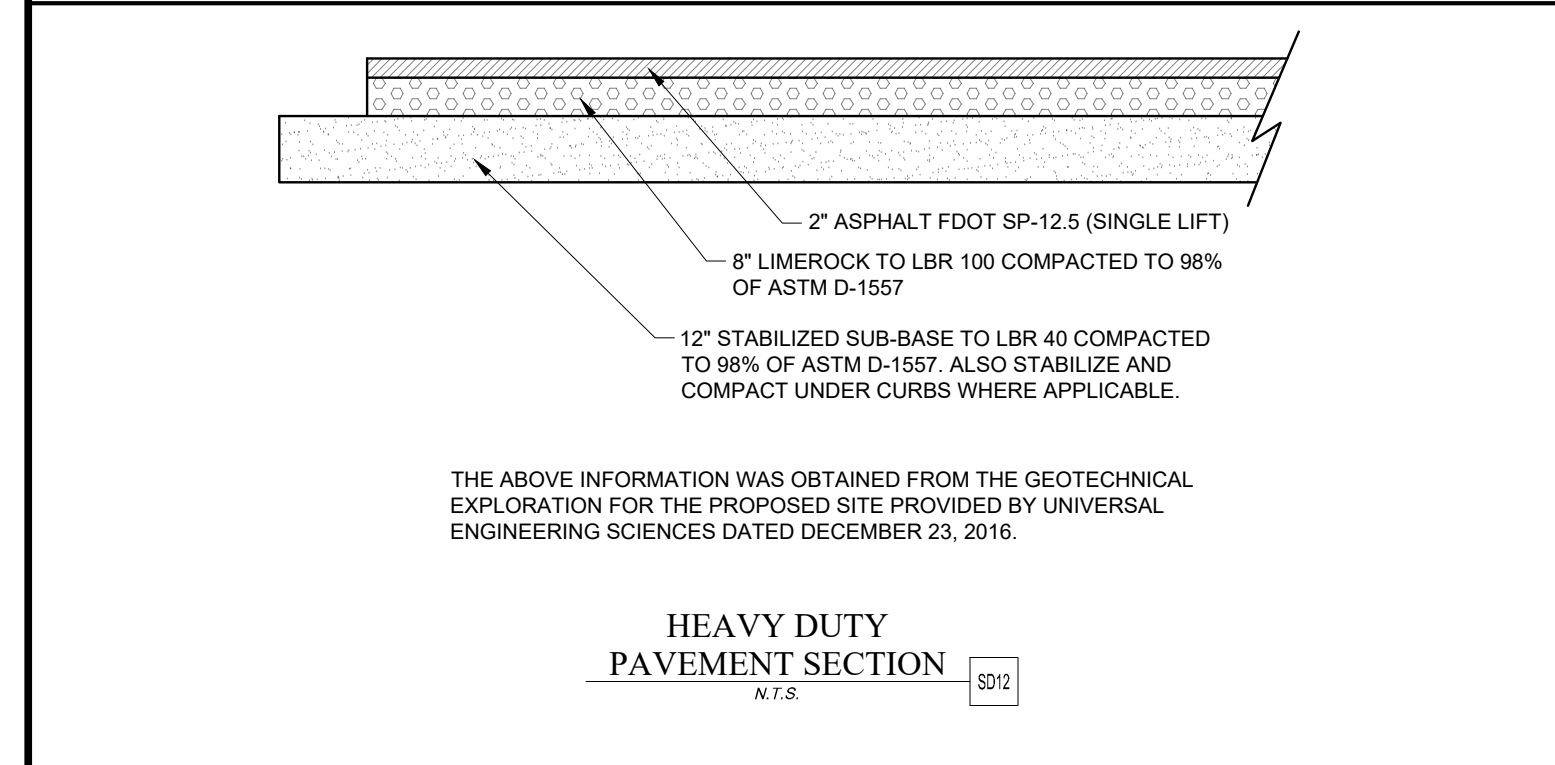
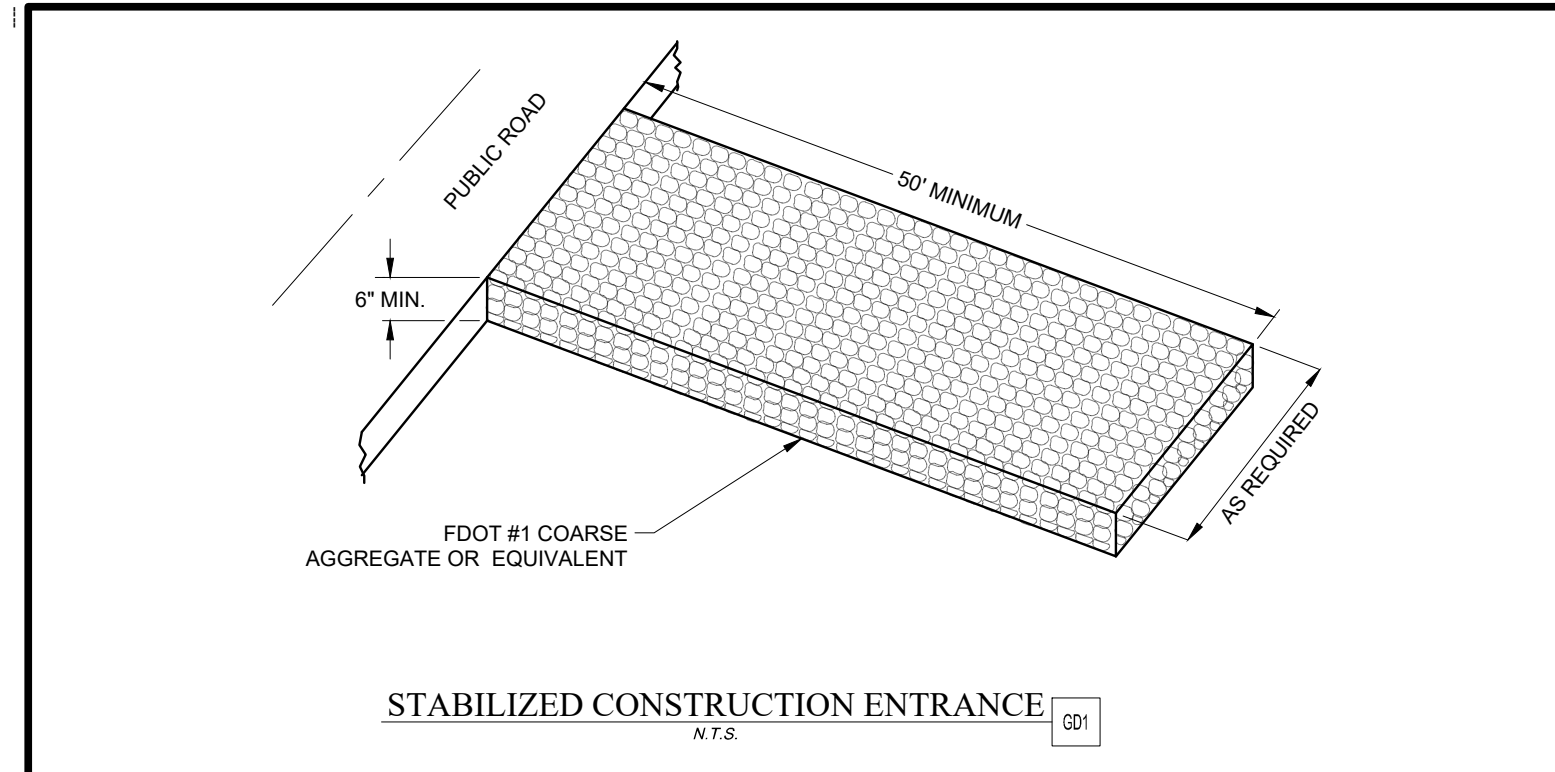
NO.	DATE	NO.	DATE
1	8/29/2019	1	8/29/2019
2	11/8/2019	2	11/8/2019

NO.	DATE	NO.	DATE
1	8/29/2019	1	8/29/2019
2	11/8/2019	2	11/8/2019

NO.	DATE	NO.	DATE
1	8/29/2019	1	8/29/2019
2	11/8/2019	2	11/8/2019

SHEET NO.		REVISION #1 11-28-2018 (PENDING FDEP APPROVAL)	
11	OF 17		

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REVISION #1 11-28-2018
(PENDING FDEP APPROVAL)

REVISIONS		DESCRIPTION	
NO.	DATE	NO.	DATE
1	8/29/2019	1	8/29/2019
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UPDATED PER COFB TRC COMMENTS		UPDATED PER COFB TRC COMMENTS (2ND SUBMITTAL)	
DESIGN BY: SAK		DESIGN BY: SAK	
DRAWN BY: MS & KJM		DRAWN BY: MS & KJM	
CHECKED BY: SAK		CHECKED BY: SAK	
DATE: 11/18/2019		DATE: 11/18/2019	
JOB NO.: 18037		JOB NO.: 18037	
REGISTERED ENGINEER		REGISTERED ENGINEER	
SCOTT A. KNOWLES, P.E.		SCOTT A. KNOWLES, P.E.	
CAP#6535 FL#65381		CAP#6535 FL#65381	

MATTHEWS DESIGN GROUP, INC.

P.O. BOX 3126, 7 WALDO STREET

ST. AUGUSTINE, FLORIDA 32084

PHONE: 904.826.1334

FAX: 904.826.4547

INFO@MATTHEWSDESIGN.NET

CONSTRUCTION DETAILS

WESTROCK DROP YARD

FERNANDINA BEACH

PREPARED FOR

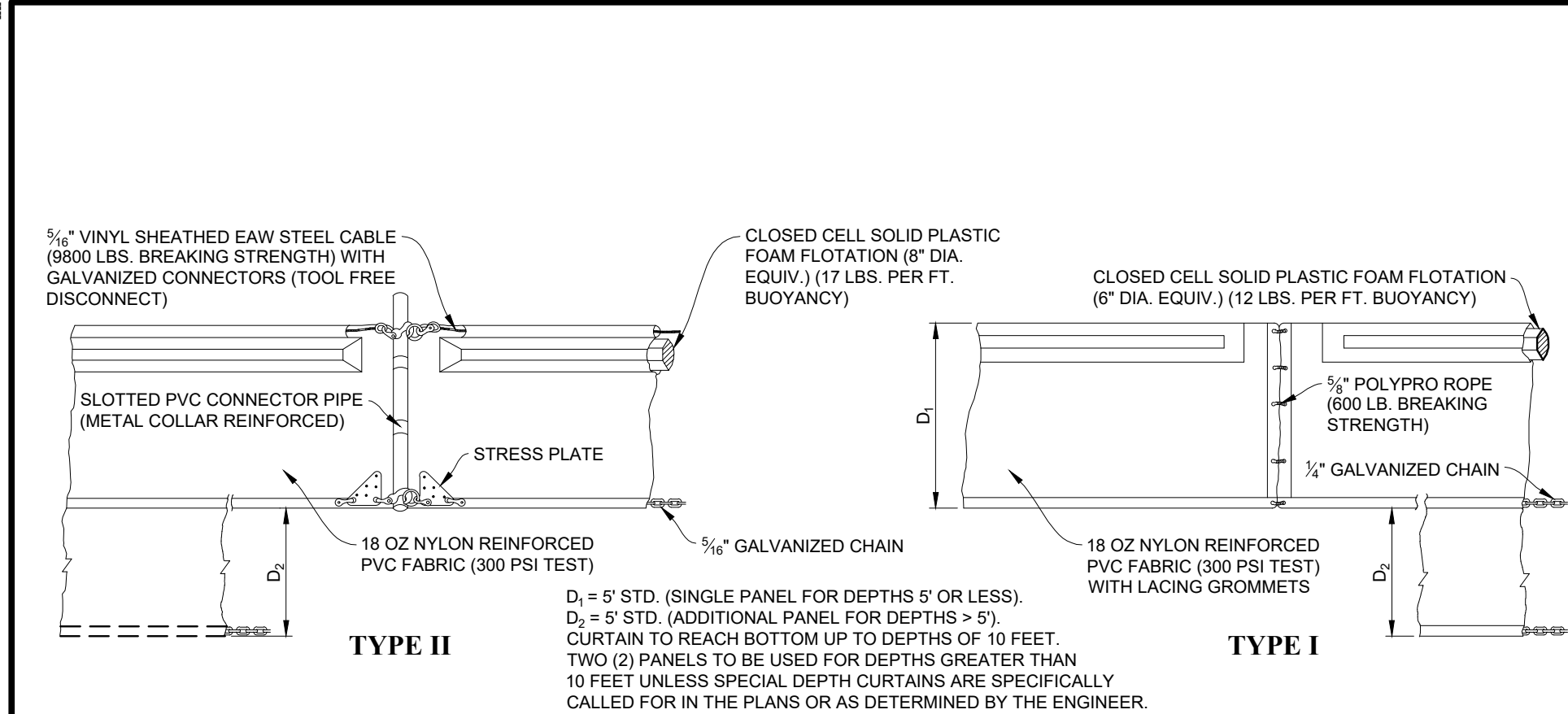
WESTROCK FERNANDINA MILL

SHEET No.

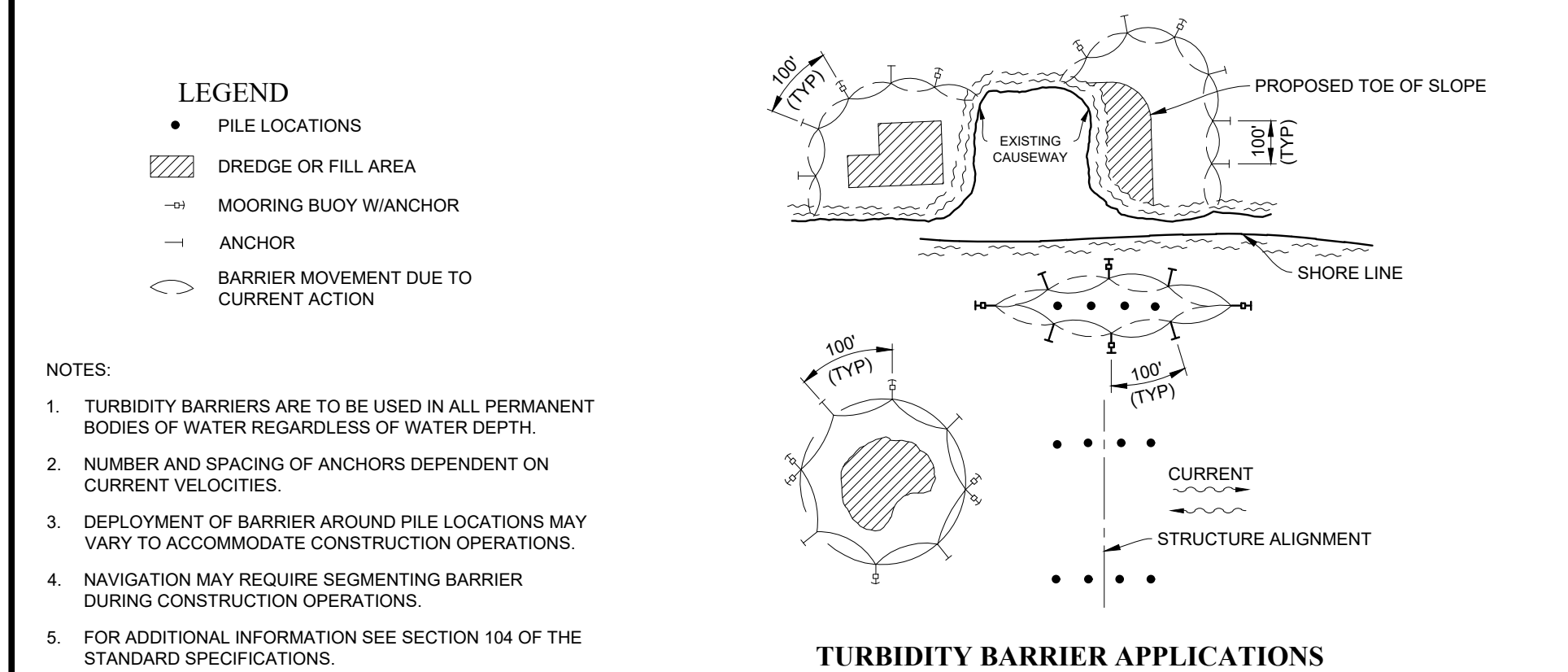
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OF 17

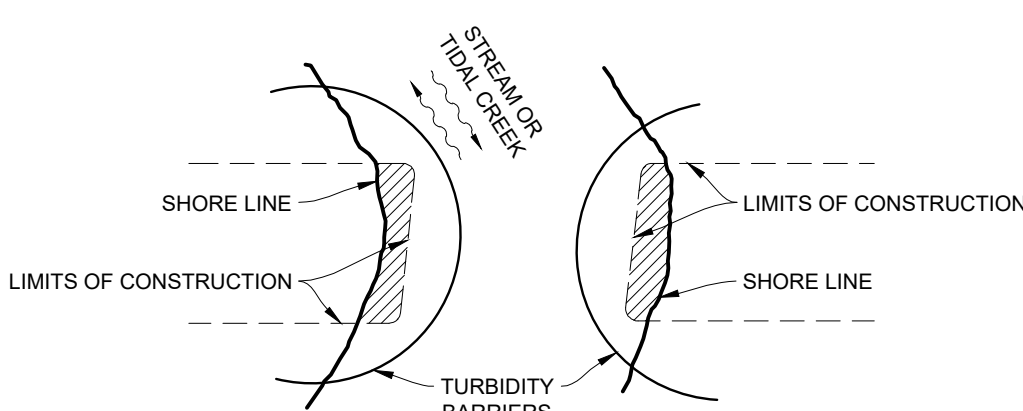
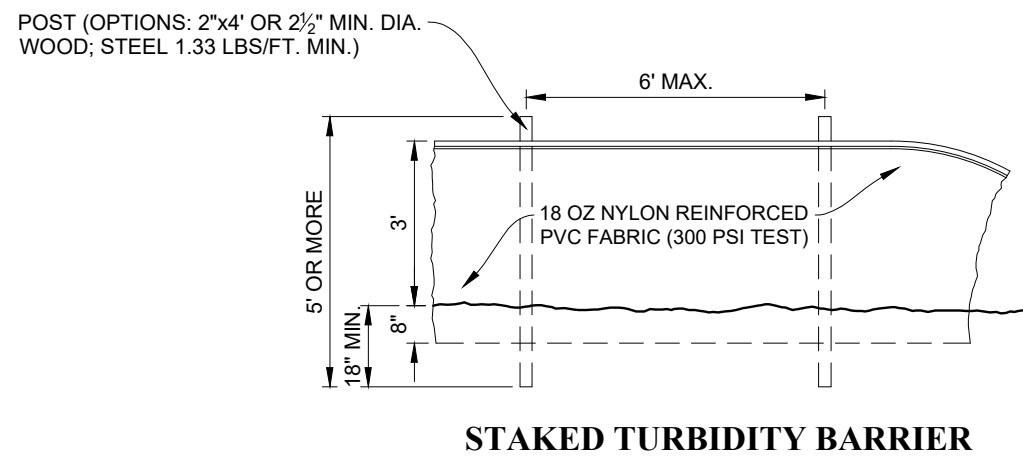
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FLOATING TURBIDITY BARRIERS



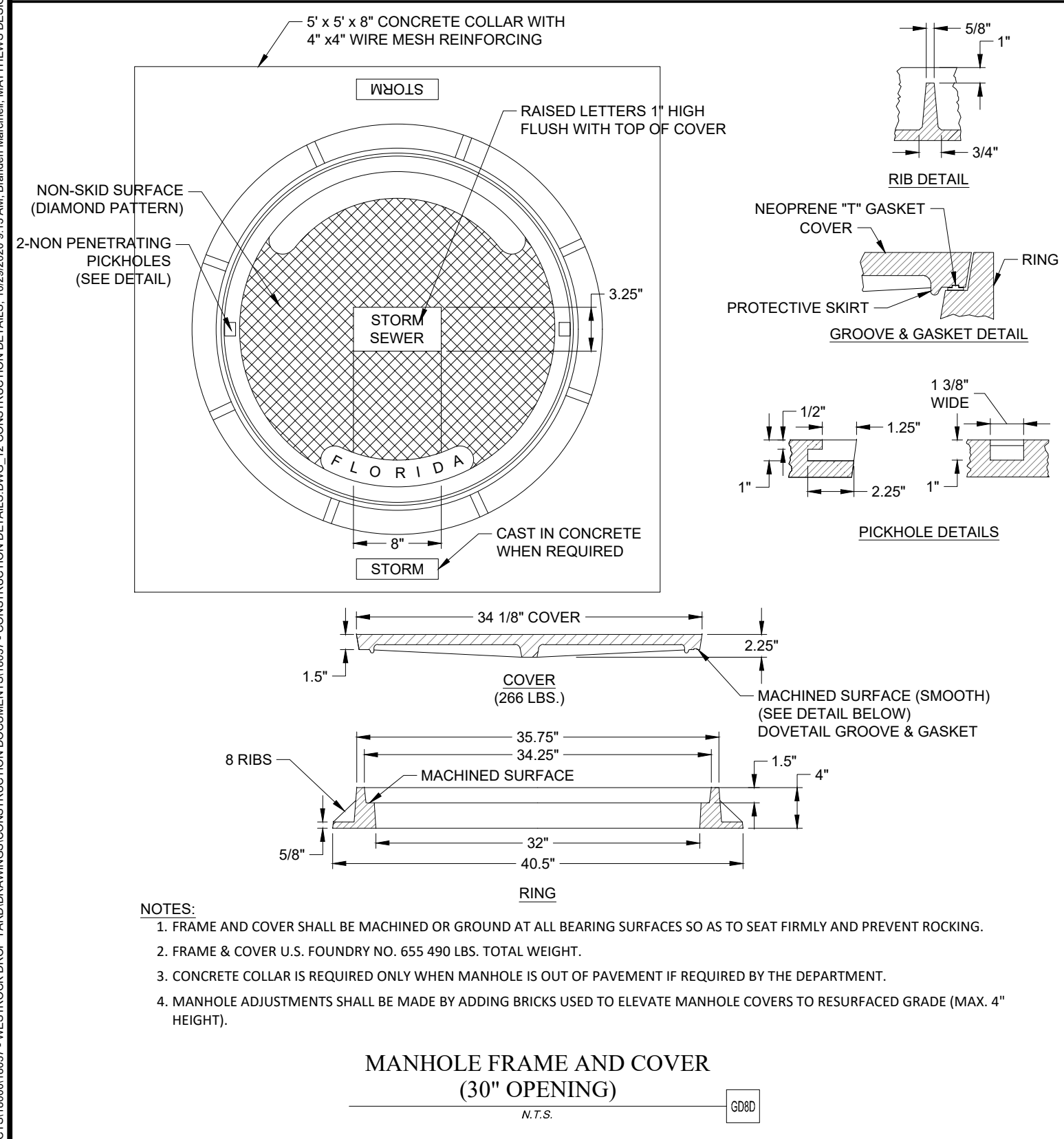
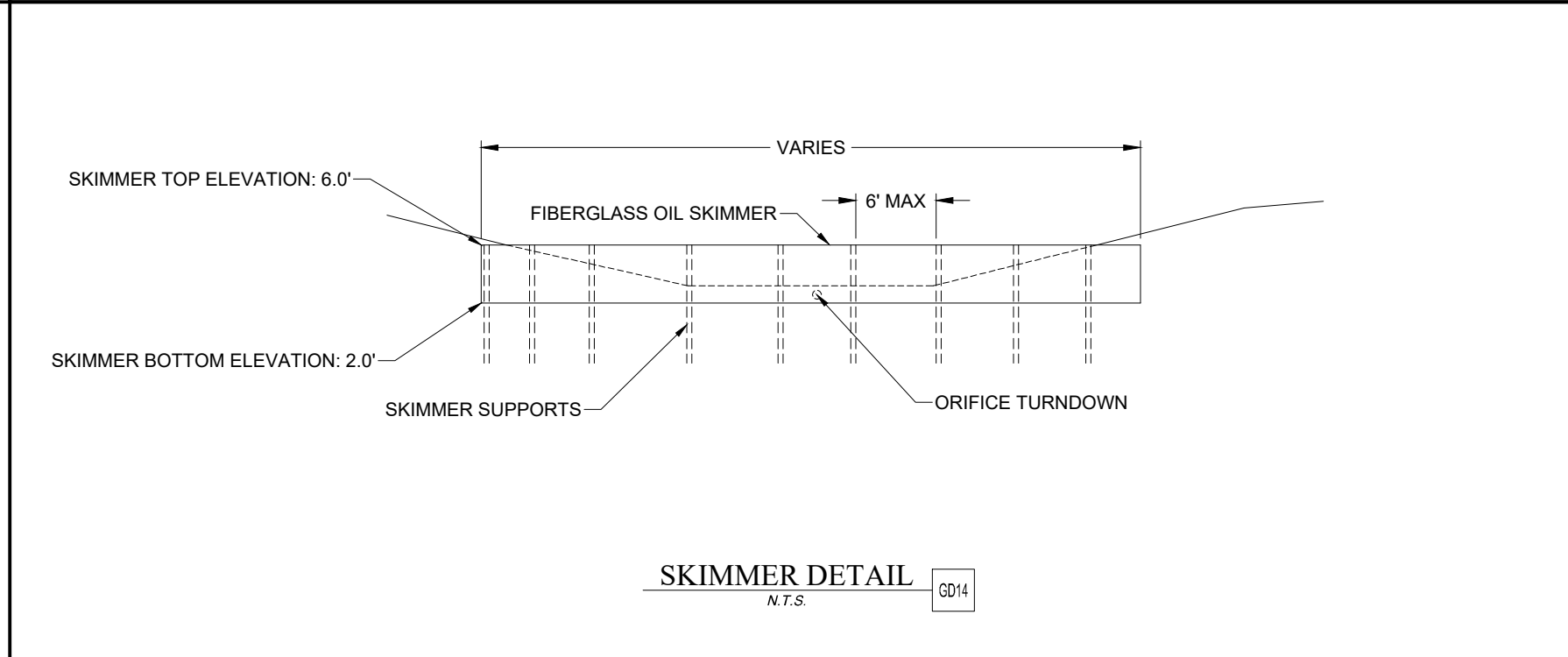
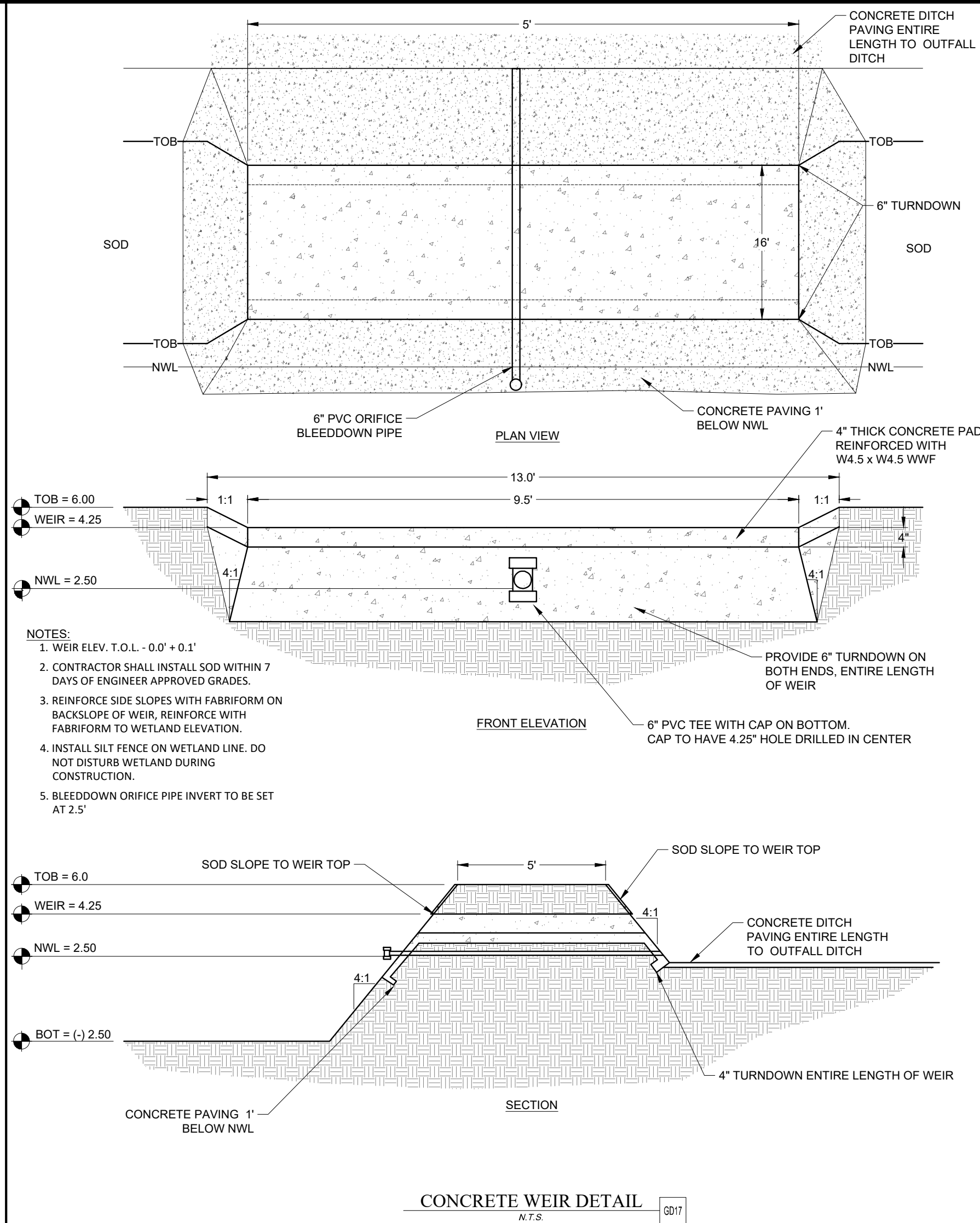
TURBIDITY BARRIERS 0201
N.T.S.



NOTE: TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATIONS OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTORS OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS. HOWEVER PAYMENT WILL BE UNDER THE PAY ITEM(S) ESTABLISHED IN THE PLANS FOR FLOATING TURBIDITY BARRIER AND/OR STAKED TURBIDITY BARRIER. POSTS IN STAKED TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

GENERAL NOTES

- FLOATING TURBIDITY BARRIERS ARE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR FLOATING TURBIDITY BARRIER, LF.
- STAKED TURBIDITY BARRIERS ARE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED TURBIDITY BARRIER, LF.



- NOTES:**
- FRAME AND COVER SHALL BE MACHINED OR GROUND AT ALL BEARING SURFACES SO AS TO SEAT FIRMLY AND PREVENT ROCKING.
 - FRAME & COVER U.S. FOUNDRY NO. 655-490 LBS. TOTAL WEIGHT.
 - CONCRETE COLLAR IS REQUIRED ONLY WHEN MANHOLE IS OUT OF PAVEMENT IF REQUIRED BY THE DEPARTMENT.
 - MANHOLE ADJUSTMENTS SHALL BE MADE BY ADDING BRICKS USED TO ELEVATE MANHOLE COVERS TO RESURFACED GRADE (MAX. 4" HEIGHT).

REVISIONS		DESCRIPTION	
NO.	DATE	NO.	DATE
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DATE: 11/18/2019		DATE: 11/18/2019	
JOB NO.: 18037		JOB NO.: 18037	
PROJECT: WESTROCK DROP YARD		PROJECT: WESTROCK DROP YARD	
SHEET NO.: 15		SHEET NO.: 15	
OF 17		OF 17	

CONSTRUCTION DETAILS

WESTROCK DROP YARD

FERNANDINA BEACH

PREPARED FOR

WESTROCK FERNANDINA MILL

MATTHEWS DESIGN GROUP, INC.

P.O. BOX 3126, 7 WALDO STREET

ST. AUGUSTINE, FLORIDA 32084

PHONE: 904.826.1334

FAX: 904.826.4547

INFO@MATTHEWSDESIGN.NET

REGISTERED ENGINEER

SCOTT A. KNOWLES, P.E.

CAMP6535 FL#65391

OWNER'S REQUIREMENTS

SITE DESCRIPTION

PROJECT NAME: WESTROCK DROP YARD

LOCATION: NASSAU COUNTY - FERNANDINA BEACH

LATITUDE: 30° 40' 53"

LONGITUDE: 81° 27' 28"

OWNER NAME AND ADDRESS: ROCKTENN CP LLC (MATT SCOLFORO, P. E.)
PO BOX 4098 NORCROSS, GA 30091

DESCRIPTION: EXPANSION OF WESTROCKS TRAILER DROP YARD
INCLUDING PAVEMENT IMPROVEMENTS AND STORM
SYSTEM / TREATMENT POND CONSTRUCTION.

SOIL DISTURBING ACTIVITIES WILL INCLUDE:
PAVING, DRAINAGE, AND EARTHWORK ACTIVITIES

RUNOFF CURVE NUMBERS:
1. PRE-CONSTRUCTION = 74
2. DURING CONSTRUCTION = 86
3. POST-CONSTRUCTION = 98

EXISTING SOILS TYPE: ARENTS, TISONIA, KERSHAW
ESTIMATED SHALES: 4.0

SITE MAPS:
* SEE ATTACHED GRADING PLAN FOR PRE & POST DEVELOPMENT GRADES,
AREAS OF SOILS DISTURBANCE, LOCATION OF SURFACE WATERS, WETLANDS,
PROTECTED AREAS, MAJOR STRUCTURAL AND NONSTRUCTURAL CONTROLS
AND STORM WATER DISCHARGE POINTS.
* SEE ATTACHED EROSION & TURBIDITY CONTROL PLAN FOR LOCATION OF
TEMPORARY STABILIZATION PRACTICES, AND TURBIDITY BARRIERS
* SEE GENERAL NOTES FOR REQUIREMENTS FOR TEMPORARY AND
PERMANENT STABILIZATION.

SITE AREA:
1. TOTAL AREA OF SITE = .213 ACRES
2. TOTAL AREA TO BE DISTURBED = 21.8 ACRES
NAME OF RECEIVING WATERS: ST. MARYS RIVER BASIN

OUTFALL 1:
DRAINAGE AREA: BASIN 1
LATITUDE: 30° 40' 48" N
LONGITUDE: 81° 27' 40" W
OUTFALL 2:
DRAINAGE AREA:
LATITUDE:
LONGITUDE:

CONTROLS

THIS PLAN UTILIZES BEST MANAGEMENT PRACTICES TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN OFF. AN EROSION AND TURBIDITY PLAN HAS BEEN PREPARED TO INSTRUCT THE CONTRACTOR ON PLACEMENT OF THESE CONTROLS. IT IS THE CONTRACTORS RESPONSIBILITY TO INSTALL AND MAINTAIN THE CONTROLS PER PLAN AS WELL AS ENSURING THE PLAN IS PROVIDING THE PROPER PROTECTION AS REQUIRED BY FEDERAL, STATE AND LOCAL LAWS. REFER TO "CONTRACTORS RESPONSIBILITY" FOR A DESCRIPTION OF THE CONTROLS THAT MAY BE IMPLEMENTED.

STORM WATER MANAGEMENT

STORM WATER DRAINAGE WILL BE PROVIDED BY (DESCRIPTION) _____
STANDARD CONSTRUCTION PRACTICES AND PROPOSED POND AREAS WHICH ARE NOT TO BE CONSTRUCTED ON, BUT WILL BE REGRADED SHALL BE STABILIZED IMMEDIATELY AFTER GRADING IS COMPLETE. WHEN CONSTRUCTION IS COMPLETE, A TOTAL OF 12.8 ACRES WILL HAVE BEEN REGRADED AND .200 ACRES LEFT UNDISTURBED. THE SITE DISCHARGES TO A WEI DETENTION SYSTEM. WHERE PRACTICAL, TEMPORARY SEDIMENT BASINS WILL BE USED TO INTERCEPT SEDIMENT BEFORE ENTERING THE PERMANENT DETENTION BASIN. THIS IS IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY THE WATER MANAGEMENT DISTRICT FOR THIS TYPE OF DEVELOPMENT AT THE TIME OF PERMITTING

BMPS TO BE IMPLEMENTED

BMF: SILT FENCE
LOCATION AND DESCRIPTION: CONSTRUCTION LIMITS BOUNDARY
BMF: CONSTRUCTION ENTRANCE
LOCATION AND DESCRIPTION: SOUTHWEST AREA OF SITE
BMF: FLOATING TURBIDITY BARRIER / INLET PROTECTION
LOCATION AND DESCRIPTION: POND MES OUTFALL / ALL APPLICABLE INLETS

CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS RELATED TO STORM WATER MANAGEMENT AND EROSION AND TURBIDITY CONTROLS, THE FOLLOWING PERMITS HAVE BEEN OBTAINED:

C.O.E DREDGE/FILL PERMIT # N/A
U.S ARMY CORPS OF ENGINEERS PERMIT # 5A3J2017-01889

POLLUTION PREVENTION PLAN CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNED: _____

DATED: _____

GENERAL

THE CONTRACTOR SHALL AT A MINIMUM IMPLEMENT THE CONTRACTORS REQUIREMENTS OUTLINED BELOW AND THOSE MEASURES SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IN ADDITION THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES REQUIRED TO BE IN COMPLIANCE WITH APPLICABLE PERMIT CONDITIONS AND STATE WATER QUALITY STANDARDS. DEPENDING ON THE NATURE OF MATERIALS AND METHODS OF CONSTRUCTION THE CONTRACTOR MAY BE REQUIRED TO ADD FLOCCULENTS TO THE RETENTION SYSTEM PRIOR TO PLACING THE SYSTEM INTO OPERATION.

SEQUENCE OF MAJOR ACTIVITIES

THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE

2. INSTALL SILT FENCES AND SYNTHETIC BALES AS REQUIRED

3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN

4. CONSTRUCT SEDIMENTATION BASIN

5. CONTINUE CLEARING AND GRUBBING

6. STOCK PILE TOP SOIL, IF REQUIRED

7. PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED

8. STABILIZE DENuded AREAS AND STOCKPILES AS SOON AS PRACTICABLE

9. INSTALL STORM SEWER, AND IRRIGATION

10. COMPLETE GRADING AND INSTALL PERMANENT SEEDING/GOOD AND PLANTING

11. REMOVE ACCUMULATED SEDIMENT FROM BASINS

12. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/GOOD AS REQUIRED

TIMING OF CONTROLS/MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, THE SILT FENCES AND HAY BALES, STABILIZED CONSTRUCTION ENTRANCE AND SEDIMENT BASIN WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL. IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED PERMANENTLY IN ACCORDANCE WITH THE PLAN. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAPS AND THE EARTH DIKES/SWALES WILL BE REGRADED/REMOVED AND STABILIZED IN ACCORDANCE WITH THE EROSION & TURBIDITY CONTROL PLAN.

CONTROLS

IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED, MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE IMPLEMENTED BY THE CONTRACTOR AS REQUIRED BY THE EROSION AND TURBIDITY CONTROL PLAN AND AS REQUIRED TO MEET THE EROSION AND TURBIDITY REQUIREMENTS IMPOSED ON THE PROJECT SITE BY THE REGULATORY AGENCIES.

EROSION AND SEDIMENT CONTROLS

STABILIZATION PRACTICES

1. SYNTHETIC BALE BARRIER: SYNTHETIC BALE BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS

A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.

B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.

C. WHERE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS.

D. EVERY EFFORT SHOULD BE MADE TO LIMIT THE USE OF SYNTHETIC BALE BARRIERS CONSTRUCTED IN LIVE STREAMS OR IN SWALES WHERE THERE IS THE POSSIBILITY OF A WASHOUT. IF NECESSARY, MEASURES SHALL BE TAKEN TO PROPERLY ANCHOR BALES TO INSURE AGAINST WASHOUT.

REFER TO THE DETAILS FOR CONSTRUCTING THE HAY BALE BARRIER. ALSO REFER TO THE DETAILS FOR PROPER LOCATION, MATERIAL AND USAGE.

2. FILTER FABRIC BARRIER: FILTER FABRIC BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS

A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.

B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.

REFER TO THE DETAIL SHEET FOR PROPER CONSTRUCTION OF THE FILTER FABRIC BARRIER.

3. BRUSH BARRIER WITH FILTER FABRIC: BRUSH BARRIER MAY BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WHERE ENOUGH RESIDUE MATERIAL IS AVAILABLE ON SITE.

4. LEVEL SPREADER: A LEVEL SPREADER MAY BE USED WHERE SEDIMENT-FREE STORM RUNOFF IS INTERCEPTED AND DIVERTED AWAY FROM THE GRADED AREAS ONTO UNDISTURBED STABILIZED AREAS. THIS PRACTICE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE

CONTRACTOR'S REQUIREMENTS

CONSTRUCTED ON UNDISTURBED SOIL, AND THE AREA BELOW THE LEVEL UP IS STABILIZED. THE WATER SHOULD NOT BE ALLOWED TO RECONCENTRATE AFTER RELEASE. LEVEL SPREADER SHALL BE CONSTRUCTED IN ACCORDANCE TO THE DETAILS.

5. STOCKPILING MATERIAL: NO EXCAVATED MATERIAL, SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORM WATER COLLECTION FACILITY.

6. EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 10 ACRES. THIS REQUIREMENT MAY BE WAIVED FOR LARGE PROJECTS WITH AN EROSION CONTROL PLAN WHICH DEMONSTRATES THAT OPENING OF ADDITIONAL AREAS WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS.

7. INLET PROTECTION: INLETS AND CATCH BASINS WHICH DISCHARGE DIRECTLY OFF-SITE SHALL BE PROTECTED FROM SEDIMENT-LADEN STORM RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.

8. TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE-EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 30 DAYS SHALL BE SEEDDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING.

9. TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 8 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL, PUT INTO THE SOIL OF THE SEEDED AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH.

10. TEMPORARY GRASSING: THE SEEDED OR SEEDDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDRO MULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER. TEMPORARY GRASSING SHALL BE THE SAME MIX & AMOUNT REQUIRED FOR PERMANENT GRASSING IN THE CONTRACT SPECIFICATIONS.

11. TEMPORARY REGRASSING: IF, AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75 PERCENT GOOD PORK COVER, THE AREA WILL BE RESEEDDED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER.

12. MAINTENANCE: ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.

13. PERMANENT EROSION CONTROL: THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES.

14. PERMANENT SEEDING: ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEEDDED. THE SEEDING MIX MUST PROVIDE BOTH LONG-TERM VEGETATION AND RAPID GROWTH SEASONAL VEGETATION. SLOPES STEEPER THAN 4:1 SHALL BE SEEDDED AND MULCHED OR SODDED.

15. TEMPORARY FLOATING TURBIDITY BARRIER: FLOATING TURBIDITY BARRIER MAY BE USED IN ALL PERMANENT BODIES OF WATER READILY ACCESSIBLE OF WATER DEPTH. FILTER CURTAIN SHALL REACH THE BOTTOM UP TO DEPTHS OF 10 FEET.

OTHER CONTROLS

WASTE DISPOSAL

WASTE MATERIALS

ALL WASTE MATERIALS EXCEPT LAND CLEARING DEBRIS SHALL BE COLLECTED AND STORED IN A SECURELY LOADED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER WILL BE EMPTIED AS NEEDED AND THE TRASH WILL BE HAULED TO A STATE APPROVED LANDFILL. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT. THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTE

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE SITE SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.

SANITARY WASTE

ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE TOILETS AS NEEDED TO PREVENT POSSIBLE SPILLAGE. THE WASTE WILL BE COLLECTED AND DEPOSED OF IN ACCORDANCE WITH STATE AND LOCAL WASTE DISPOSAL REGULATIONS FOR SANITARY SEWER OR SEPTIC SYSTEMS.

OFFSITE VEHICLE TRACKING

A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEEP DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARP/AULIN.

INVENTORY FOR POLLUTION PREVENTION PLAN

THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:

☐ Concrete

☐ Asphalt

☐ Tar

☐ Detergents

☐

☐ Fertilizers

☐ Petroleum Based Products

☐ Cleaning Solvents

☐ Paints

☐

☐ Wood

☐ Masonry Blocks

☐ Roofing Materials

☐ Metal Studs

☐

SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

GOOD HOUSEKEEPING

THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.

* AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.

* ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.

* PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURERS LABEL.

* SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.

* WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.

* MANUFACTURERS RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.

* THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ONSITE RECEIVE PROPER USE AND DISPOSAL.

SPILL PREVENTION

HAZARDOUS PRODUCTS

THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.

* PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.

* ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED. THEY CONTAIN IMPORTANT PRODUCT INFORMATION.

* IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURERS OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

PRODUCT SPECIFIC PRACTICES

THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ONSITE:

PETROLEUM PRODUCTS

ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS.

FERTILIZERS

FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED AREA. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A RESEALABLE PLASTIC BIN TO AVOID SPILLS.

PAINTS

ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCARDED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURERS INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

CONCRETE TRUCKS

CONCRETE TRUCKS SHALL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONLY AT DISCHARGE POINT PROVIDED. NO OFFSITE DISCHARGE WILL BE PERMITTED.

SPILL CONTROL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED ON SITE AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.

MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, LIQUID ABSORBENT (i.e. KITTY LITTER OR EQUAL), SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.

ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

SPILL OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE OF THE SPILL.

THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.

THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.

THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.

MAINTENANCE/INSPECTION PROCEDURES

EROSION AND SEDIMENT CONTROL, INSPECTION AND MAINTENANCE PRACTICES THE FOLLOWING ARE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.

* NO MORE THAN 10 ACRES OF THE SITE WILL BE DENUDED AT ONE TIME WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.

* ALL CONTROL MEASURES WILL BE INSPECTED BY THE SUPERINTENDENT. THE PERSON RESPONSIBLE FOR THE DAY TO DAY SITE OPERATION OR SOMEONE APPOINTED BY THE SUPERINTENDENT, AT LEAST ONCE A WEEK AND FOLLOWING ANY STORM EVENT OF 0.50 INCHES OR GREATER.

* ALL TURBIDITY CONTROL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT.

* BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.

REVISIONS

NO.	DATE	DESCRIPTION

SAK

MS & KJLM

SAK

1/18/2019

18037

CONTRACTORS CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERIC STORMWATER PERMIT ISSUED PURSUANT TO SECTION 40.08(b), F.S., THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

RESPONSIBLE FOR/UNITES

GENERAL CONTRACTOR

SUB-CONTRACTOR

SUB-CONTRACTOR

SUB-CONTRACTOR

SUB-CONTRACTOR

BUSINESS NAME AND ADDRESS OF CONTRACTOR / ALL SUBS

SIGNATURE / DATE

SWPPP

WESTROCK DROP YARD

FERNANDINA BEACH

PREPARED FOR

WESTROCK FERNANDINA MILL

SHEET NO.:

16

OF 17

[illegible]

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM

SEDIMENT BASIN

DEPTH OF SEDIMENT IN BASIN	DEPTH OF SEDIMENT SIDE BASIN	ANY EVIDENCE OF OVERTOPPING OF THE EMBANKMENT ?	CONDITION OF OUTFALL FROM SEDIMENT BASIN

MAINTENANCE REQUIRED FOR SEDIMENT BASIN: _____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

OTHER CONTROLS

STABILIZED CONSTRUCTION ENTRANCE

DOES MUCH SEDIMENT GET TRACKED ON TO ROAD ?	IS THE GRAVEL CLEAN OR IS IT FILLED WITH SEDIMENT?	DOES ALL TRAFFIC USE THE STABILIZED ENTRANCE TO LEAVE THE SITE ?	IS THE CULVERT BENEATH THE ENTRANCE WORKING? (IF APPLICABLE)

MAINTENANCE REQUIRED FOR STABILIZED CONSTRUCTION ENTRANCE: _____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

PAGE 3 OF 4

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM

STRUCTURAL CONTROLS

DATE: _____

EARTH DIKES/SWALES

DIKE OR SWALE	FROM	TO	IS DIKE/SWALE STABILIZED ?	IS THERE EVIDENCE OF WASHOUT OR OVERTOPPING

MAINTENANCE REQUIRED FOR EARTH DIKE/SWALE: _____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

CATCH BASIN/CURB INLET/OUTFALL TURBIDITY CONTROLS

STRUCTURE/ OUTFALL	ARE TURBIDITY CONTROLS IN PLACE	ANY EVIDENCE OF CLOGGING/WASHOUT OR BYPASSING ?	ARE TURBIDITY CONTROLS IN NEED OF REPLACING	DOES SILT NEED TO BE REMOVED FROM AROUND CONTROL

MAINTENANCE REQUIRED FOR CATCH BASIN/CURB INLETS/OUTFALLS TURBIDITY CONTROLS: _____

TO BE PERFORMED BY: _____ ON OR BEFORE: _____

PAGE 2 OF 4

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN: _____

REASONS FOR CHANGES: _____

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PARTICIPATED IN THE INSPECTION AND MAINTENANCE. I HAVE SUBMITTED THIS REPORT TO THE BOARD OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE: _____

DATE: _____

PAGE 4 OF 4

NOTE TO CONTRACTOR:

THIS IS THE CONTRACTORS CERTIFICATION REQUIRED BY THE EPA'S NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES), STORM WATER POLLUTION PREVENTION PLAN FOR CONSTRUCTION SITES OVER 5 ACRES. THIS CERTIFICATION MUST BE COMPLETED WEEKLY AND AFTER EVERY RAINFALL EVENT OVER 0.50 INCHES. IT IS SUGGESTED THAT THIS SHEET BE REMOVED FROM THE PLAN SET AND DUPLICATED AS NEEDED BY THE CONTRACTOR

SHEET No. 17 OF 17	SWPPP CERTIFICATION WESTROCK DROP YARD FERNANDINA BEACH PREPARED FOR WESTROCK FERNANDINA MILL	
---	---	--



MATTHEW'S DESIGN GROUP, INC.
P.O. BOX 3126, 7 WALDO STREET
ST. AUGUSTINE, FLORIDA 32084
PHONE: 904.826.1334
FAX: 904.826.4547
INFO@MATTHEWSDESIGN.NET

DESIGN BY: SAK		REVISIONS	
NO.	DATE	DESCRIPTION	
1	8/29/2019	UPDATES PER COFB TRC COMMENTS	
2	11/18/2019	UPDATED PER COFB TRC COMMENTS (2ND SUBMITTAL)	
DATE: 11/18/2019		DATE: 11/18/2019	DATE: 11/18/2019
JOB NO.: 18037		JOB NO.: 18037	JOB NO.: 18037



October 30, 2020

City of Fernandina Beach
Jacob Platt, Senior Planner
204 Ash Street
Fernandina Beach, FL 32034

**Re: Westrock Drop Yard Expansion
SPR 2018-09
Responses to Comments from Submittal #1
MDG Project No.: 18037**

Dear Jacob:

On behalf of our client, please find the following information enclosed for your review.

- One (1) RAI Response Letter
- Eight (8) Site Construction Plans (4 signed and sealed)
- One (1) CD of All Submittal Items

The following is a list of the comments provided to us by your email dated October 20, 2020, followed by responses by Matthews Design Group (MDG).

PLANNING

1. Sheets 7 & 8 noted with D04 for existing vegetation to be removed. Please correct note so that it doesn't not indicate removal outside of the construction limits. Specially, the area in the wetlands and wetland buffers.

MDG: A hatch pattern has been added to the specific areas to be cleared. Also, the D04 note call out, states that no clearing to occur outside of the construction limits, wetlands, or wetland buffers.

STORMWATER

2. Provide detail slopes on the west side of the drop yard where proposed grades transition to existing. Gravel is shown to the fence line. Please indicate how these areas will be stabilized.

MDG: Please see sheet 14 for the cross-sectional detail. Additionally, gravel limits have been updated.

3. Provide SJRWMD or FDEP permit when issued.

MDG: FDEP stormwater permit has been provided directly to the COFB via email on 10/29/20.

If you have any comments or questions, please do not hesitate to give me a call.

Sincerely yours,
Matthews Design Group

A handwritten signature in blue ink that reads "Karl Masters". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the name.

Karl Masters, EI
Project Manager

**Phase I Cultural Resource Assessment Survey
of the WestRock Drop Yard Expansion
Nassau County, Florida**

City of Fernandina Beach Application No. SPR 2018-09

**Prepared by
Dana Ste.Claire, M.A., RPA
Heritage Cultural Services, LLC**

November 2019

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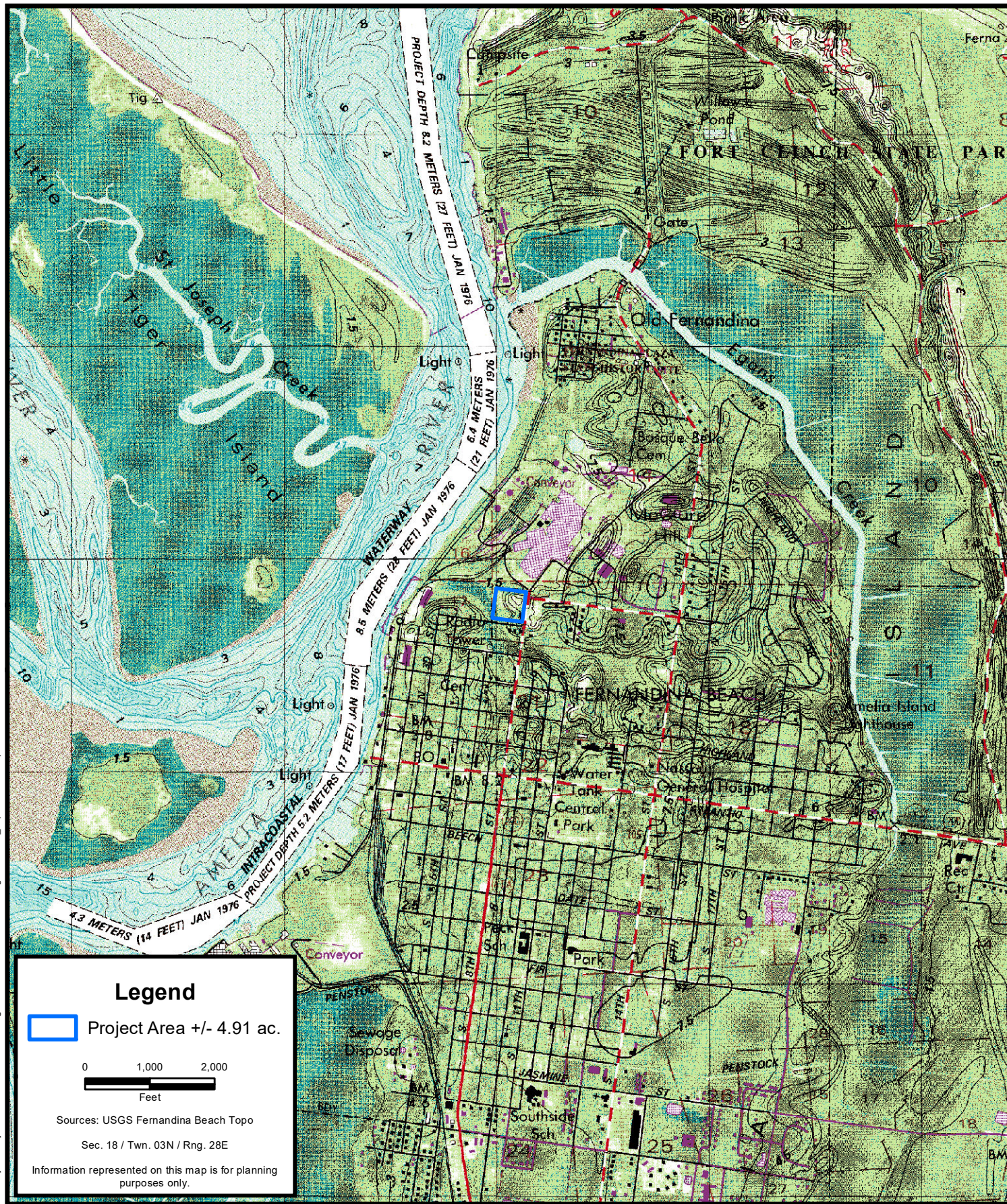
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Introduction

This document reports the findings of an archaeological and historical survey of the proposed 4.91-acre WestRock Drop Yard Expansion parcel, Nassau County, Florida, conducted for WestRock Company, Fernandina Beach, Florida. The survey was undertaken to address cultural resource requirements of the City of Fernandina, Florida, and in anticipation of satisfying state and federal cultural resource provisions contained in 36 CFR 800 and 33 CFR 325; Appendix C. The purpose of the cultural resource assessment survey was to locate any archaeological and/or historical sites within the project area and to assess their potential eligibility for nomination to the National Register of Historic Places. The authority for this procedure is Section 106 of the National Historic Preservation Act of 1966 (Public Law 89-665) as amended, and 36 CFR Part 800: Protection of Historic Properties. This final report of findings is designed to provide the Division of Historical Resources and the U.S. Army Corps of Engineers with information resulting from the subject cultural resource assessment survey for their review in regard to potential impact of the proposed development on historical and archaeological sites. The State Historic Preservation Office (SHPO) advises Federal agencies as they identify historic properties (listed or eligible for listing in the National Register of Historic Places), assess effects upon them, and consider alternatives to avoid or minimize adverse effects.

The 4.91-acre Westrock Drop Yard Expansion site is located at the northern end of Fernandina Beach in Nassau County, Florida. The subject parcel occupies a spatial position in the southwest section of the WestRock pulp/paper mill plant. The property is located in Section 18, Township 3 North, Range 29 East. In general, the subject property is bounded by the Amelia River (Intracoastal Waterway) to the west, Franklin Street to the south, and WestRock yards and facilities to the north and east (see Figures 1 and 2). Excepting delineated wetlands, these project perimeters bound the **Area of Potential Effect (APE)** as defined by Section 106 of the National Historic Preservation Act of 1966 (Public Law 89-665) as amended.

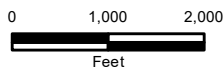
A TRS search of the Florida Master Site File, Tallahassee, on October 23, 2019, indicated that no archaeological or historical structures were recorded within the project boundaries, but multiple cultural resources in the immediate area of the subject parcel, particularly along the Amelia River and in the historic town of Fernandina Beach, have been recorded to the Florida Master Site File (see attached FMSF letter and documents, Attachment B of this report).



Legend



Project Area +/- 4.91 ac.



Sources: USGS Fernandina Beach Topo

Sec. 18 / Twn. 03N / Rng. 28E

Information represented on this map is for planning purposes only.

CARTER ENVIRONMENTAL SERVICES, INC.



42 Masters Drive
St. Augustine, FL 32084
904-540-1786

www.carterenv.com

Topographic Location Map

Westrock

Project: 5.19365

Nassau County, FL

Date: Oct 25 2019

Figure:

1





**CARTER ENVIRONMENTAL
SERVICES, INC.**



42 Masters Drive
St. Augustine, FL 32084
904-540-1786

www.carterenv.com

Aerial Map Westrock

Project: 5.19365

Nassau County, FL

Date: Oct 25 2019



Figure:

2

Cultural Prehistory of Northeast Florida and Nassau County

Aboriginal peoples have inhabited Florida for at least 15,000 years. The earliest stages are pan-Florida in extent while later cultures exhibited differing cultural traits in the various archaeological areas of the state. Milanich and Fairbanks (1980) and Milanich (1994) have synthesized the earlier work of John Goggin (1952) and others in east Florida in their model of cultural prehistory in Northeast Florida, of which Nassau County is part. Their chronology, as modified by recent archaeological research, will be followed in a brief overview of the prehistoric development in this region, which includes the project area. This cultural sequence provides a framework for the understanding and evaluation of archaeological sites in the project area.

The WestRock development project is located in the northeast (east-central) archaeological region of Florida as defined by Milanich and Fairbanks (1980:22) and Milanich (1994:xix). This region extends from the St. Marys River to the north and south to the vicinity of Vero Beach on the Atlantic Coast, and includes the St. Johns River drainage and most of the eastern coastal lagoon regions. Geographically, Nassau County lies within Russo's (1992) St. Mary's archaeological area which extends along the Atlantic coast from the St. Johns River in Florida to the Satilla River in Georgia.

PaleoIndian Period

The first discoverers of the New World were the Siberians of East Asia. More than 20,000 years ago, possibly as early as 40,000 years ago, prehistoric hunters crossed into North America from Asia over the Bering Strait land bridge, a continental link created by shrunken seas during the Ice Age.

Following food supplies, mainly roaming herds of large mammals such as mastodons and mammoths, the Asians migrated throughout the Americas, eventually finding their way into Florida some 15,000 years ago. Many archaeologists believe that these early Floridians, called PaleoIndians, relied, in part, on the coastal regions for food and other resources. If so, the areas they once inhabited are now under water because ancient coastlines were miles beyond where they are today due to the lower sea levels of the time. If they have survived the destructive nature of rising sea levels, these archaeological sites will be found offshore, possibly along relic river channels, the past freshwater environs where indigenous people tended to concentrate. This phenomenon may explain why archaeologists have such a difficult time finding evidence of early humans in Florida, especially along the coasts.

Recent research on Paleoindian sites in and along the Aucilla River in northwest Florida, particularly the Page-Ladson site, has changed the thinking on early prehistoric peoples in Florida and the Southeast (Dunbar 2012; Halligan 2012; Webb 2006). Based on these archaeological investigations and the data produced, it is generally believed that Paleoindian settlement was more specialized and sedentary than once thought, particularly in how Pleistocene megafauna such as mastodons were hunted and

processed. The lithic tool assemblage associated with these early prehistoric activities is sophisticated and specialized.

While it is likely that they inhabited the area, PaleoIndian artifacts are infrequently found in Nassau County and its surrounding areas. Most have been recovered from the St. Johns River by divers who often find them in association with the fossil remains of early mammals such as elephants and bison, which were hunted by the PaleoIndians. These associated remains seem to indicate that Florida's earliest residents were taking and later butchering animals at river fords where the large creatures were temporarily incapacitated as they waded across the water. Archaeologists refer to these locations as "kill sites."

The Florida environment during PaleoIndian times was much different than today. The climate was cooler and drier, and freshwater was more difficult to find due to lower sea levels. Forests of hardwoods, mostly oak and hickory, grew alongside of open prairies. Here, PaleoIndians coexisted with and hunted an unusual variety of Pleistocene mammals which once lived in Florida such as giant ground sloths, horse, bison, llamas, giant armadillos, huge tortoises, peccaries and several types of elephants. They hunted many species of smaller animals, as well. Subsistence was of primary concern to these early people whose lifestyles were largely dictated by the migratory patterns and movements of game. The principal PaleoIndian diet was supplemented by wild plants, nuts, berries and food resources from the coasts.

PaleoIndians used specialized stone tools, the most characteristic of which are slightly waisted spear tips known as Suwannee and Simpson projectile points. Hundreds of these points have been found throughout Florida in rivers, suggesting that they were lost during game ambushes at river crossings.

The Archaic Period

About 6,000 B.C., the Earth's climate changed and a warming trend caused glaciers to melt and release a tremendous amount of water into the ocean. Consequently, sea levels began to rise dramatically, changing the shape of the coastlines of Florida. The warmer temperatures and abundance of water caused a change in the environment and extensive hardwood forests gave way to pines and oaks, and swamp forests emerged. This was the end of the last great Ice Age.

It was during this period that the large mammals that once characterized Pleistocene Florida disappeared. In a new landscape that looked very similar to what Duval County does today, lesser mammals flourished. The new environment produced a variety of new food sources which prehistoric people adapted to with a new technology. These events marked the beginning of the Florida Archaic period.

About 6,000 years ago, Archaic period hunters and gatherers began to expand out of the central highlands of Florida around Ocala and Gainesville and move into areas along the St. Johns River where they discovered an abundant supply of fish, game, and freshwater

shellfish, mainly snail and mussel. By 4,000 B.C., prehistoric peoples were well established along the river, living there year-round rather than seasonally. For the first time, people became more sedentary in lifestyle, settling in one area. A stable supply of food found in the river environs attracted and supported more people and eventually large villages and ceremonial centers began to emerge. These Archaic populations are known archaeologically as the Mount Taylor culture, named after the Mount Taylor site, a freshwater shell mound on the St. Johns River.

Perhaps the most significant of these sites is the archaeologically acclaimed Tick Island site on the St. Johns River to the southwest. Evidence from this site suggests a large and complex society once lived there, which practiced organized ceremonialism. Some of the earliest pottery in North America has been recovered from Tick Island along with a spectacular array of artifacts. Unfortunately, most of these were salvaged as the shell mound was being mined for road fill in the 1960s. Radiocarbon dates associated with human burial remains recovered from the site prior to its destruction indicate that Tick Island was well established by 4,000 B.C.

The Orange Period

The Archaic tradition, or the way Archaic peoples lived, continued for some time. The practice of hunting, gathering of food, and fishing, including the taking of shellfish, provided the food resources for prehistoric peoples to subsist in many areas of Nassau County.

Around 4,000 years ago or about 2,000 B.C., the technology of pottery making was acquired by the Archaic people of Northeast Florida. The earliest forms of pottery were made from locally-gathered clays mixed with plant fibers. When fired, the bodies of these ceramic vessels became orange in color. This recognizable pottery type, evidenced by its color and the presence of fiber impressions throughout, is used by archaeologists to identify the Orange or Late Archaic cultural period in Nassau County, a continuation of the Archaic lifestyle with the advantage of pottery vessels. Orange period sites along the St. Johns River have produced the oldest dates for pottery in North America. The earliest pottery vessel forms are rectangular-shaped and were probably modeled after baskets.

It is generally believed that it was during the Orange period that prehistoric peoples were attracted to the coasts of Nassau County by a new food source created by a changing environment. An abundance of shellfish, produced by developing estuaries, caused inhabitants of the St. Johns River basin to migrate to the coastal regions of Northeast Florida and develop a new but similar means of subsistence. The settlement model for this period theorizes that the coastal resources supplemented the freshwater river lifestyle rather than replace it entirely. For some time, it was believed that prehistoric groups of this time made seasonal rounds to and from the coasts from their permanent villages along the St. Johns River. These seasonal migrations are suggested to have taken place during the winter months when foods other than marine shellfish were scarce or not available.

However, shell middens excavated near the mouth of the St. Johns River to the south indicate increased year-round utilization of upper northeastern Florida areas during the Late Archaic period (3,000 – 500 B.C.). By 3,700 B.C., preceramic Archaic groups were already living along the Atlantic coast of northern Florida throughout the year, subsisting mainly on estuarine fish and shellfish (Russo 1992:111). Archaeological research conducted throughout Nassau, Duval, St. Johns, Flagler and Volusia Counties have revealed that Orange period people were collecting and eating a variety of coastal resources throughout the year. Many of the sites researched are coquina middens, formed by the discarded remains of beach clams that were gathered from the seashore rather than estuaries. These tiny clams were collected in mass and cooked and eaten as a broth. Orange fiber-tempered pottery recovered from Late Archaic period coastal sites indicates that prehistoric peoples were using these areas about 4,000 years ago.

It is likely that Archaic period peoples were living in the coastal regions in other areas prior to the Orange period. Investigations at the Strickland Mount complex in Tomoka State Park in Volusia County have revealed extensive coquina middens that contain no pottery. These shell middens along with an early mounded burial may suggest that prehistoric groups had settled the east coast long before what is currently accepted. Rather than making seasonal rounds to and from the St. Johns River and the coast, it is likely that prehistoric people in Duval County and, in general, Northeast Florida, beginning with the Mount Taylor period, settled the two regions simultaneously, finding in both environments the resources necessary to support themselves year-round. Small Archaic period sites along the upper reaches of interior drainages may be short-term hunting or collecting stations, which were used by small groups who traveled from their permanent villages on the coast or river to gather food over a period of several days. These activities would allow people to maintain permanent residences in either location, with shellfish and fish providing the primary means of food, while gathering resources from surrounding areas.

In the Nassau County and extended region of northeast Florida and southern Georgia, the Late Archaic period is marked by a proliferation of linear and ring-shaped shell middens along the Atlantic coast. Zooarchaeological data from Georgia coastal shell middens and rings indicate a heavy dependence on vertebrate and invertebrate tidewater animals (Reitz 1988). Most Late Archaic sites in Nassau County are characterized as low to moderate density scatters of fiber-tempered pottery on the mainland, as well as Amelia Island, Crane Island and Martin's Island (Hendryx et al 2000). Numerous Late Archaic shell middens are known for Fort George Island and smaller, tidally inundated marsh islands immediately north of the St. Johns River (Russo et al 1993).

Woodland Period - St. Johns Period

The end of the Orange period is characterized by changes in pottery types resulting from different tempering agents, including sand, which were used along with or in place of fiber. By 500 B.C., Orange pottery was widely replaced by Deptford pottery and a

chalky ware known as St. Johns. Swift Creek is another Woodland Period cultural which is readily identified by its distinctive complicated-stamped, sand-tempered pottery. Swift Creek ceramics in Nassau County tends to be grit-tempered similar to its Georgia variants rather than sand-tempered to the south. The introduction of these ceramic types mark the beginning of the St. Johns cultural period, a way of life that spans two millennia, lasting until the arrival of European explorers in the 1500s. While much larger in number, prehistoric populations of this period practiced the same pattern of living developed by Archaic peoples centuries before, including shellfish harvesting, hunting, fishing, and plant collecting. It was also during this period that domesticated plants, mainly corn and squash, were used for the first time. The Mississippian period, or St. Johns II period, in northeastern Florida is marked by the characteristic St. Johns Check-Stamped pottery around A.D 750. Later, the St. Johns II period is supplanted by the St. Marys II period (A.D. 1250 – 1500) in the same region. Evidence suggests that St. Marys II groups, like their predecessors, lived along the coast year-round and subsisted mainly on estuarine resources such as fish and shellfish.

The St. Johns people occupied two major regions of Northeast Florida: the St. Johns River basin to the south and west and the environmentally rich estuaries of the intracoastal waterways of the east coast. Abundant resources in both areas allowed prehistoric populations to grow and expand throughout these regions of the county, establishing permanent villages and ceremonial and political centers at locations where food was most plentiful. Both the river and coastal regions are marked by enormous shell mounds, the remains of prehistoric foods – snail and mussel in the freshwater environs and oyster, clam and coquina on the coasts, all of which served as the staple for the St. Johns diet for centuries. In particular, it was the shell mounds of the east coast such as Turtle Mound in Canaveral National Seashore Park and Green Mound in Ponce Inlet that grew to colossal proportions. These coastal shell heaps represent the largest shell middens in North America.

Because of an abundance of fish and shellfish in the estuarine regions of Nassau County, St. Johns people lived in many areas along what are today known as the Intracoastal waterways (Amelia River, Nassau River) other than the densely populated areas of river basins, this evidenced by the numerous oyster middens and burial mounds known for the Intracoastal area in Nassau, Duval, St. Johns, Flagler and Volusia Counties.

St. Johns period sites abound along the St. Johns River, as well, indicating that prehistoric activity in the river basin during this cultural period was extensive. Here, enormous shell mounds and sprawling middens are composed of freshwater snail instead of oyster. The largest of these, Tick Island, was a focal point for St. Johns people as well as Archaic hunters and gatherers. Tick Island and other large sites likely were areas where St. Johns populations concentrated and consequently developed political and ceremonial systems to organize their complex societies.

Less is known about the inland occupations of St. Johns people, those that occur between river and coast. It is clear, however, that these areas were being used during the St. Johns period, this evidenced by interior sites such as Grand Haven Hammock (8FL181) and

Grand Haven Cove (8FL174). Freshwater snail and coquina middens found along inland lakes, ponds, swamps and other drainages suggest that some St. Johns people were well adapted to these areas, living selectively, seasonally or year-round within the interior portions of the region.

The late St. Johns period peoples were known historically as the Timucuan Indians in Nassau County and in Northeast Florida, a name that was given to them by the early European explorers. The ethnographic works of the French artist Jacques le Moyne in 1564 and other early descriptions provide archaeologists and historians with invaluable information regarding the lifestyles of the Saturiwa Timucua and their prehistoric ancestors. These early documentations, coupled with archaeological information, give us a relatively accurate profile of native life.

We know from this information that in addition to collecting shellfish from local waters for food, native Floridians also hunted, with bows and arrows and spears, deer and many other animals – even alligators, and fished, and trapped turtles and birds. Plants, roots, nuts, mainly acorns and hickory nuts, and berries were also gathered for food. A popular method of cooking foods involved the stewing and boiling of meats and plants in various combinations in a large pottery “kettle.” Fish and animals were barbecued whole and preserved on smoke racks made of wood and crop harvests were stored in corncribs. Later, some native groups learned to grow corn, beans, squash, pumpkins, and other domesticated plants, a renewable source of food that ensured a stable diet. It is thought by some archaeologists that in the spring some of these groups would abandon their large coastal villages, divide into smaller farming groups, and grow crops in the fertile grounds of the St. Johns River Valley and around the interior lakes of Central Florida.

Some Timucuan villages were fortified by a palisade line or a wall made of sharpened, upright timbers. A village often had a large community house in its center where ceremonies, religious activities, and political gatherings took place. This central structure was where the chief presided, as well. Surrounding the community center were smaller huts that housed families. These houses were circular and dome-shaped in form with palmetto-thatched walls and roofs. Inside, wooden benches were used for sitting and sleeping. While the Timucuan attire was brief, sometimes consisting of strands of Spanish moss, their practice of body ornamentation and use of jewelry made for some richly decorated natives. Chiefs and other important members of the community were often tattooed from head to foot, a symbol of authority. Men wore their hair up in a “top knot” usually with feathers or stuffed animals adorning their heads. Dyed fish-bladder ear plugs and long shell and bone pins were worn by both men and women. Jewelry, finely crafted and colorful, was made of shell, pearls, bone, wood, stone, and metal.

Accustomed to life near the water, the aborigines used dugout wooden canoes for transportation and hunting in the extensive waterways of the Intracoastal and the St. Johns River. The dugouts were made by felling a tree, usually a pine or cypress, and hollowing out the body by burning and scraping away the interior wood. Many of these wooden vessels have been recovered from the bottom of lakes and rivers throughout the county area.

Historical Background of Northeast Florida

Possession of Florida during its early historic days was by two very diverse and distinctly different European nations, Spain and Britain. Spain claimed first ownership, from 1513 until 1763, followed by Britain from 1763 until 1783, the year Spain again resumed possession. In 1819 Spain ceded Florida to the United States. This territorial period ended in 1845 when Florida officially was admitted as a State. Today, we define the majority of the early settlers from the 1513-1819 time period as either Hispanic or as citizens of the British Isles. Smaller numbers of other ethnic groups who immigrated to Florida as colonists came from the Mediterranean area of Europe. Hundreds and perhaps thousands of slaves from various African countries were brought into Florida as agricultural workers beginning as early as the British Period. All of these historic period settlers came into a land already occupied by thousands of Native Americans, whom they called Indians.

Florida's First Spanish Period occupation, from 1513 to 1763, was primarily by Spanish peoples. These early residents lived in defensible, rather tightly contained villages because their interface with the Native American population was often unpredictable. To date, historical documentation has not been found indicating that Spanish settlers from this period lived or farmed very far from the confines of St. Augustine, other than on Catholic mission sites. Many land grants were issued along Florida's east coast to Spanish citizens, but the majority of these properties were never developed.

The contact period in northeastern Florida began with Frenchman Jean Ribault's brief exploration of the mouth and northern reaches of the St. Johns River, as well as the Atlantic Coast, in 1562. Two years later, Rene Laudonniere, who had earlier accompanied Ribault, returned to establish Fort Caroline along the south bank of the St. Johns River approximately ten miles from its mouth. The French colony at Fort Caroline was very brief as it fell in 1565 to Spanish militia under the command of Pedro Menendez de Aviles, the founder of the settlement of St. Augustine to the south established in the same year. French documents and maps suggest that the extensive Timucuan village of Sarabay was located on Big Talbot Island. The Timucuan contact period of northeastern Florida including Nassau County is represented by San Pedro pottery, a distinctive grog-tempered ceramic (Ashley and Rolland 1997).

Soon after Spain established its garrison town at St. Augustine, Jesuit priests were set out to convert Native American populations throughout northwest Florida to Christianity through the establishment of missions (Gannon 1965; McEwan 1993; Milanich 1999). Beginning in the late 16th century, the coastal Timucua and Guale Indians farther north were the first to be organized in mission villages. Here, they were taught the Catholic religion and integrated into Spain's colonization system. This period was known as the Mission Period (A.D. 1587 – 1702) in Florida. Early mission period sites in the St. Marys region include San Juan del Puerto and San Pedro. In the mid-17th century, the Guale Indians from coastal Georgia were relocated to missions in northeastern Florida including one on Amelia Island, Mission Santa Maria (Sanders 2000; Worth 1995). Related Native

American sites of the 17th century and early 18th century in northeastern Florida are marked by a distinctive ceramic type known as San Marcos.

Negotiations with Spain through the Treaty of Paris in 1763 transferred Florida (an area at that time much larger than present-day Florida) and the Mediterranean island of Minorca to Britain, in exchange for Havana, Cuba, captured a year earlier by the British. Possession of this territory of Florida gave Britain an unbroken line of colonies along the Atlantic seaboard of North America, from Canada to Florida. These colonies were obtained from France during the same treaty. Britain's governmental decision regarding the management of its newest colony, Florida, saw the split of the territory into two parts, East Florida and West Florida, with seats of government in each. The Apalachicola River served as the line of division between the two sections. Pensacola was chosen as seat of West Florida's government and St. Augustine was selected as the East Florida seat. Both sections had a governor appointed by the British government. East Florida's first colonial governor, Colonel James Grant, was appointed June 8, 1763, but did not arrive in St. Augustine until August 1764.

The British established themselves in the Nassau County area because of its strategic maritime position and naturally deep ports. The island was named Amelia by the Governor of Georgia, James Oglethorpe, in honor of Princess Amelia, the daughter of King George II.

This British occupation of Florida is termed Florida's British Period, lasting only from 1763 to 1783, a twenty-year span. In 1783, another treaty between Britain and Spain returned Florida to Spanish ownership. This period, termed Florida's Second Spanish Period, ended in 1819 when Florida became an official territory of the United States.

Under the British Period ownership, with a desire to quickly populate its two new colonies, a system of land grants was implemented for which interested British subjects could apply. Governor Grant's plan for settling East Florida was based on the development of a plantation economy, with large land grants issued to people who would produce agricultural products for which Britain's economy and citizens would benefit. A thorough search through local archival resources for documentation of British land grants issued in the vicinity of the project area did not produce evidence of British occupation, although the English settlement is rumored to have taken place on the project tract.

A brief background on the formation of the British New Smyrna Colony and of its many European indentured colonists who immigrated to East Florida to work on this plantation is warranted. Dr. Andrew Turnbull and two wealthy, influential partners petitioned the British government in 1766 for large grants of land in East Florida. Two adjoining 20,000-acre tracts were surveyed south of the Ponce de Leon Inlet in Volusia County and granted to these partners. Andrew Turnbull's large grant joined the equally large William Duncan grant, located to the south adjoining Turnbull's land. The partners agreed, prior to actual development on this 40,000-acre plantation, that Turnbull himself would be plantation manager.

Rather than a completely slave-based enterprise (black slaves were in fact present on the plantation), Turnbull decided white Mediterranean people would be better suited for agricultural work in the semi-tropical, humid climate where the plantation would be sited. He first began recruiting colonists in Greece, then Italy and several other areas but did not find sufficient numbers of willing peoples. He turned to the island of Minorca, a recent British acquisition, and began campaigning for people willing to go to East Florida as indentured colonists.

On April 17, 1768, eight ships, carrying a total of 1,403 people (including Dr. Turnbull), sailed from Gibraltar for East Florida (Griffin1991: 28). Among the passengers, immigrating as indentured colonists, were Gaspar Hernandez, Margarita, his wife and their 12-year old son, Mariano (anglicized to Martin in later years). These family members were all natives of Minorca (re: St. Augustine Historical Society Library vertical file). Martin was born April 18, 1756 in Mahon, Minorca. Gaspar is listed in The Minorcans of Florida as a caulker (Rasico1990: 162). The New Smyrna Colony disbanded in 1777 when the colonists, including Martin Hernandez, left this plantation and moved to St. Augustine in hopes of a better life.

James Grant, East Florida's British Governor, considered a network of roads a top priority during his administration (Schafer 2001:163). He recognized that settlers needed a dependable overland transportation route but lacked sufficient funds to pay for this work at first. By 1772, savings in the Governor's contingency fund allowed work to begin on segments of the King's Road. This effort may have provided the greatest public benefit of any project undertaken by the British government. The road was to measure sixteen feet across, with ditches and pine logs laid crosswise in the wet portions (corduroy ribbing), causeways through the swamps and bridges across the many creeks and rivers.

In mid-1777, approximately 500 discontented colonists left the Smyrnea Settlement plantation on a three-day walk up the King's Road to St. Augustine, in search of a better life. Their Catholic priest and a number of colonists who had not departed earlier followed in November (Rasico 1990:54-55), thus ending the ambitious dreams of wealth for Dr. Turnbull and his partners.

A chronology of events regarding the Kings Road, from the end of the British Period up to 1845 when Florida officially became a State, is included in a report prepared by Adams, et al (Adams, et al 1997:1-4). Below is a summary of activities extracted from this report regarding road usage through today's Flagler County during the 18th and 19th centuries.

By 1784 British residents had left the province after Spain again regained control. This change in ownership and peoples affected repairs to segments of the route, particularly in areas remote to St. Augustine where there were now few or no settlers. The Patriot's War broke out in 1812 in East Florida, with rebel troops and Spanish militia using the road. The President of the United States was authorized in 1823 to open a road "in the old track of a road known by the name of the King's Road" from the St. Mary's River to New Smyrna. Official action was not taken until 1826 when the President officially authorized

the work. In 1825, Col. James Gadsden, assigned to perform survey work for road repairs, reported his observations of road conditions and repair cost estimates to the Quartermaster General (Carter 1958:304). Congress appropriated \$11,000 for the road work from the Georgia line to New Smyrna in 1827, with the use of Federal troops authorized. Repair work on the road south from St. Augustine to New Smyrna began in Jan. 1828. This work was completed to just south of the Tomoka River by Sept., 1830. A report in 1834 stated the road from the Matanzas River (Pellicer Creek) to New Smyrna was impassable for a horse. It was reported in Nov. 1835 that all wooden bridges along the road had been burned by Indians. The Second Seminole War began in December 1835 and most residents of farms and plantations south of St. Augustine evacuated to the city. A petition, sent in 1837 to Congress by some citizens living south of St. Augustine, solicited replacement of all bridges destroyed by the Seminoles as they ravaged plantations (Carter 1960:446-447). No action could or would be taken on this petition until after the end of the Second Seminole War in 1842. It is probable U.S. Army soldiers utilized as much as the King's Road as practicable during this war with the Seminoles. At the conclusion of the war in 1845, U.S. federal land surveyors resumed laying out township, range and section lines, suspended in 1835 because of Indian hostilities. They used the King's Road as a survey monument.

Florida's statehood in 1845 brought significant changes to administration of roads, with transfer of authority from Washington to Tallahassee, who then delegated responsibility to the counties. County commissions created local agencies to supervise construction and maintenance of roads. A committee was created in Feb. 4, 1880 by the Board of County Commissioners to lay out a public road leading southward from St. Augustine to Pellicer Creek. This was accomplished by August that year by constructing two roads, the Carter Road and the Moultrie Road which joined together about five miles south of the city, thus forming a single road to Pellicer Creek. The Carter Road followed the general path of the King's Road and was referred to by that designation in commission meetings (Adams, et al 1997:34).

No historical documentation was found to indicate that the King's Road was utilized by the military during the Civil War. Shortly after the end of the conflict, the U.S. Army began a thorough detailed mapping of the coast of Florida (Adams, et al 1997:34). It is probable that many portions of the King's Road were documented by these crews but a map depicting this was not found during research.

During the early 20th Century the Kings Road found itself part of both the Dixie Highway and U.S. Highway 1, both of which ran parallel to the ocean along the east coast (Adams, et al 1997:36). The Dixie Highway, first to be completed, reached Miami on Oct. 25, 1915. Demands of traffic compelled construction of a second, larger U.S. Highway 1 in the early 1920s (Adams, et al 1997:36).

Bockelman (1975:3) stated it was not until the 20th Century, with the expansion of automobile travel and the fame of Florida's climate, that improved modern highways were built. Until then, the King's Road was the only highway along the east coast of the State. Most of this old road still exists, some still unpaved. Some portions run through

private property. Portions have been realigned and some overlaid with modern-day highways. Some segments still carry on its old name, but now called the Old King's Road, in respect for its original developers. It is a heritage, left to us by past generations (Bockelman 1975:5).

The Kings Road route through Nassau, Duval, St. Johns, Flagler and Volusia Counties was officially documented with the Florida Site File office in 1997 by William R. Adams with Historic Property Associates, St. Augustine. Its assigned number is 8FL186 (Bureau of Archaeological Research). Data submitted by Adams to the Tallahassee office included maps showing what had been established as its formal route.

The period of 1870 – 1910 was known as the Golden Age of Amelia Island as several wealthy Americans built Victorian mansions in Fernandina Beach, an area known then as the Silk Stocking District. Northerners visited by way of steamboats to enjoy warm climate in Florida. The Talbot Islands, named for Charles Baron Talbot, Lord High Chancellor of England, were converted into lucrative plantations by Europeans. The Spicer plantation was located on the north end of the island and the Houston plantation to the south.

Previous Archaeological Research

A review of the Florida Master Site File, Tallahassee on October 23, 2019, identified a number of cultural resource assessment surveys previously conducted near and within the general range of the subject parcel (see attached FMSF documents).

The closest survey was conducted by Florida Archaeological Services in 2012 of an area to the immediate southeast of the subject parcel (*A Cultural Resource Reconnaissance Survey of the TECO Peoples Gas Main Extension Project, Duval and Nassau Counties, Florida*; Robert Johnson 2012). Four low density prehistoric and historic artifact scatters were found (8NA1262 – 8NA1265), none of which were determined by the archaeologist to be National Register eligible on the surveyed property. However, the SHPO suggested monitoring of sites 8NA1262 and 8NA1263 because of their close proximity to Mission period sites (8NA037 and 8NA038).

Bullen and Griffin (1952) recorded a series of prehistoric shell middens (8NA025, 8NA035, 8NA049 and 8NA067), some with burial components, along the shoreline of Amelia River south of the subject parcel (*An Archaeological Survey of Amelia Island, Florida*; *The Florida Anthropologist* 5 (3-4):37 – 64). Several of these sites were visited by 19th century archaeologist Clarence B. Moore.

Also notable are archaeological investigations conducted within the Amelia Island State Park grounds south of the subject parcel. Chambless et al (2011) in their *Cultural Resource Assessment Survey for Amelia Island Multi-Use Trail Along S.R. A1A from Amelia Island State Park to Peters Point Park, Nassau County, Florida* report documents three archaeological sites and two archaeological occurrences in the western regions of the park and trail corridor. 8NA1257 is a low-density prehistoric and historic artifact scatter; 8NA1258 is a low-density prehistoric artifact scatter and intermittent shell midden; and 8NA1259 is a very small, redeposited midden and ceramic scatter. All three sites exhibited subsurface disturbance and were described as having low research potential. None of the sites or archaeological occurrences were considered eligible for National Register of Historic Places (NRHP) listing.

These and other sites were the subject of additional investigation during a 2012 study by the University of South Florida (*Archaeological Resource Sensitivity Modeling in Florida State Parks District 2: The Northeast Florida Region*, Collins et al 2012). Three previously recorded archaeological sites were identified during the study, all of which are low-density shell middens, two of which have been redeposited (8NA1091 and 8NA1092). None of the sites were considered eligible for NRHP listing.

In the greater region, Russo et al (1992) documented multiple archaeological sites, mostly prehistoric shell middens, in the Timucuan Preserve to the immediate south of the project area (*The Timucuan Ecological and Historical Preserve Phase III Final Report, National Park Service, Southeastern Archaeological Center*; Michael Russo, Ann S. Cordell and Donna L. Ruhl, 1992). Keith Ashley and Robert L. Thunen in 2008 reassessed the archaeology of Big Talbot Island, also immediately south of the subject parcel

(*Reexamining an Archaeological Survey of Big Talbot Island*; Florida Anthropologist Volume 61, No. 3 – 4, 2008).

The comprehensive *Archaeological Survey of Unincorporated Nassau County, Florida* by Bland and Associates (2004) was also incorporated into the subject study. Also, the Fernandina Beach Historic Resources Survey by Brockington and Associates (2018) which recorded multiple historic structures to the south of the subject property was referenced during the Westrock survey. No historic structures identified during this study are located on the Westrock plant property.

Environmental Setting

The subject parcel has been greatly impacted by previous excavation, leveling and filling (see Figure 2). A remnant of natural vegetation that once existed on the property is represented by a spatially isolated maritime hammock located in the southern portions of the subject parcel. The canopy is dominated by live oak (*Quercus virginiana*), laurel oak (*Quercus hemisphaerica*), southern magnolia (*Magnolia grandiflora*), and red cedar (*Juniperus virginiana*) with lesser amounts of cabbage palm (*Sabal palmetto*). The understory and ground cover vegetation include such species as red cedar, red bay (*Persea borbonia*), saw palmetto (*Serenoa repens*), yaupon holly (*Ilex vomitoria*), and American holly (*Ilex opaca*). The wetlands (estuary) along the western border of the property are represented saltwater grasses and saltbush mixed with waxmyrtle.

The Soil Survey of Nassau County, Florida (U.S. Department of Agriculture, Soil Conservation Service 1991) indicates that the maritime hammock contains five soil types. The majority of the hammock contains Fripp fine sand. This is a gently rolling to hilly, excessively drained soil on narrow dunelike ridges along the coast. The seasonal high water table is at a depth of around 72 to 80 inches below the ground surface. Included within this mapping unit may be smaller inclusions of other soils such as Kureb fine sand and Resota fine sand which occur on broad, nearly level ridges. Kureb fine sand is also excessively well drained, while Resota fine sand is moderately well drained. The eastern edge of the area mapped with Fripp fine sand may, in fact, actually contain Newhan-Corolla, rarely flooded, fine sands.

Research Design and Field Methodology

Evaluations of archaeological or historical site significance are based on the potential of a site to contribute to the knowledge of regional prehistory or history. Thus, consideration of the project area within the context of a larger, regional settlement system is essential. While archaeological sites are known for the estuarine areas of Nassau County, less is known about prehistoric and early historic settlement along the Atlantic shoreline. These concerns were incorporated into the research design for the Westrock parcel.

The project area encompasses a remnant of maritime (coastal) hammock forest comprised mainly of hardwoods. A review of the prehistoric site distribution in the immediate area of the Westrock parcel indicates a settlement pattern of mainly estuarine habitation by prehistoric populations. Multiple studies (Ashley and Thunen 2008; Bullen and Griffin 1952; Russo et al 1992, among others – see Previous Archaeological Investigations section) document numerous shell middens and related sites in the estuary areas near the subject parcel. There are exceptions: Stokes (2005) found no cultural resources during a Phase I cultural resource assessment survey of the Heron Pointe Project, a parcel just south of the study area. Chambless et al 2011 and Collins et al 2012 document less dense shell scatters in Amelia Island State Park in areas moving east away from the estuaries and toward the Atlantic Ocean.

Prehistoric habitation and related expected site types therefore increased in areas on the Westrock parcel that were closer to the estuarine area of the Amelia River, and archaeological investigations focused on these areas. Also, these were the only intact areas of the subject parcel.

Most all of the locations of Spanish mission sites on Amelia Island and in Nassau County are known from historic records, but these early historic occupations and other historic sites were also incorporated into the study as an expected site type. Historic aeriels were reviewed for evidence of any early historic structures, prehistoric mounded architecture, and in general, topographic anomalies that would indicate cultural resources. No evidence of historic structures or other cultural resources were identified.

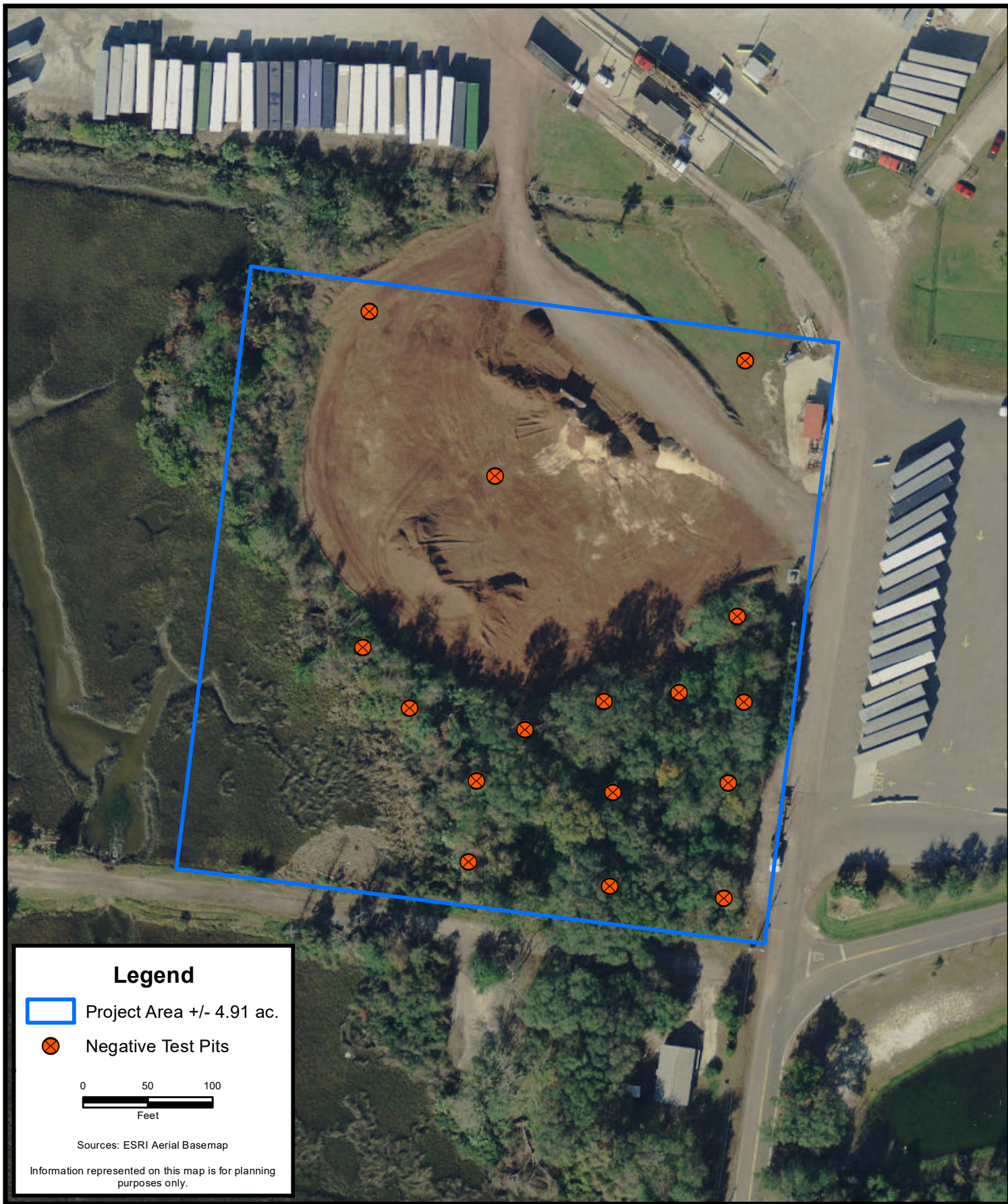
In areas of higher elevation (upland areas in the maritime hammock along the Amelia River), subsurface testing was conducted at intervals of 10 - 25 meters. In and around an established testing interval grid, the study area was tested at greater intervals and judgmentally (see Figure 3). Areas of low elevation relative to the surrounding terrain were considered less likely to contain evidence of prehistoric occupation, while those areas that were poorly drained were considered unsuitable for either habitation or cultivation during prehistoric or historic periods. All areas were surveyed in a comprehensive manner that included surface investigations and subsurface testing at greater intervals. Disturbed areas were visually inspected with test pits excavated to determine depth of disturbance.

Shovel tests, measuring approximately 50 centimeters in diameter, were excavated to a depth of at least one meter. All excavated soil was screened through a 1/4-inch mesh hardware cloth screen.

Most areas of the project tract were extensively cleared. These areas afforded exceptional surface visibility of exposed subsurface soils and cultural materials (see photographic plates). During the field investigations, these exposed surfaces were intensively examined.

During archaeological investigations and subsequent development activities, unmarked human burials and human skeletal remains discovered are brought to the attention of a District Medical Examiner if it is determined that the burial(s) represent an individual or individuals who have been dead less than 75 years, or to the attention of the State Archaeologist in the case that the remains are determined to be older than 75 years. Archaeological and development activities shall cease immediately until proper authorities, the District Medical Examiner or the State Archaeologist (SHPO, make a determination and authorizes the continuance of work through their respective jurisdiction as defined by Florida Statutes. Procedures outlined in Chapter 872.05, Florida Statutes, will be followed regarding site preservation and protection, or mitigation, and reporting, this through the authority and direction of the District Medical Examiner and/or the State Archaeologist. Other unexpected archaeological finds made during subsequent development will also be brought to the attention of the SHPO.

All records of archaeological investigation, including field notes, research notes, photographs, maps, forms, and manuscripts are stored in the Heritage Cultural Services repositories. No artifacts were collected, but had they been, Heritage Cultural Services would have served to store them. No informants were interviewed during the survey.



Legend

 Project Area +/- 4.91 ac.

 Negative Test Pits

0 50 100
Feet

Sources: ESRI Aerial Basemap

Information represented on this map is for planning purposes only.

CARTER ENVIRONMENTAL SERVICES, INC.



42 Masters Drive
St. Augustine, FL 32084
904-540-1786

www.carterenv.com

Archaeological Shovel Test Pit Location Map

Westrock

Project: 5.19365

Nassau County, FL

Date: Dec 04 2019

Figure: 3



Survey Results and Management Recommendations

Despite the presence of a small, spatially isolated high probability area (uplands adjacent to estuaries) archaeological investigations across the 4.91-acre WestRock Drop Yard Expansion parcel, Fernandina Beach, Nassau County, Florida, resulted in the discovery no archaeological or historical sites. Therefore, **it is the opinion of Heritage Cultural Services, LLC, that no cultural resources eligible for the National Register of Historic Places will be impacted by development of the Westrock Drop Yard Expansion.** No further archaeological work is recommended.

Photographic Plates



1 - Westrock CRAS general site view showing extensive exposure in industrial landscape.



2 - Westrock CRAS exposure



3 - Westrock CRAS showing extensive disturbance.



4 - Westrock CRAS backfill pile.



5 - Westrock CRAS embankment exposure.



6 - Westrock CRAS, remnant coastal hardwood hammock.



7 - Westrock CRAS, remnant oak hammock showing contemporary dump site.



8 - Westrock CRAS, adjacent estuary.



9 - Westrock CRAS, general site view.



10 - Westrock CRAS, industrial landscape.



11 - Westrock CRAS, paper production.



12 - Westrock CRAS aerial view of Westrock plant.

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Attachment A:

Survey Log Sheet

Florida Division of Historical Resources

Ent D (FMSF only) _____



Survey Log Sheet

Florida Master Site File
Version 4.1 1/07

Survey # (FMSF only) _____

Consult *Guide to the Survey Log Sheet* for detailed instructions.

Identification and Bibliographic Information

Survey Project (name and project phase) Westrock Drop Yard Expansion, Nassau County, Florida

Report Title (exactly as on title page) Phase I Cultural Resource Assessment Survey of the Westrock Drop Yard Expansion, Nassau County, Florida

Report Authors (as on title page, last names first) 1. Ste.Claire, Dana 3. _____
2. _____ 4. _____

Publication Date (year) 2019 Total Number of Pages in Report (count text, figures, tables, not site forms) 53

Publication Information (Give series, number in series, publisher and city. For article or chapter, cite page numbers. Use the style of *American Antiquity*.)
HSI Report Series 2019-62

Supervisors of Fieldwork (even if same as author) Names Dana Ste.Claire, M.A., RPA

Affiliation of Fieldworkers: Organization Heritage Services, Inc. City Ponte Vedra

Key Words/Phrases (Don't use county name, or common words like *archaeology, structure, survey, architecture, etc.*)

1. Industrial complex 3. Fernandina Beach 5. Coastal hammock 7. _____
2. Pulp/paper mill 4. Amelia River 6. No Cultural Materials 8. _____

Survey Sponsors (corporation, government unit, organization or person directly funding fieldwork)

Name Westrock, Inc. Organization Other

Address/Phone/E-mail Fernandina Beach, Florida

Recorder of Log Sheet Dana Ste.Claire Date Log Sheet Completed 11-21-2019

Is this survey or project a continuation of a previous project? ☒ No ☐ Yes: Previous survey #s (FMSF only) _____

Mapping

Counties (List each one in which field survey was done; attach additional sheet if necessary)

1. Nassau 3. _____ 5. _____
2. _____ 4. _____ 6. _____

USGS 1:24,000 Map Names/Year of Latest Revision (attach additional sheet if necessary)

1. Name FERNANDINA BEACH Year 1993 4. Name _____ Year _____
2. Name _____ Year _____ 5. Name _____ Year _____
3. Name _____ Year _____ 6. Name _____ Year _____

Description of Survey Area

Dates for Fieldwork: Start 11-16-2019 End 11-16-2019 Total Area Surveyed (fill in one) _____ hectares 4.91 acres

Number of Distinct Tracts or Areas Surveyed 1

If Corridor (fill in one for each) Width: _____ meters _____ feet Length: _____ kilometers _____ miles

Research and Field Methods

Types of Survey (check all that apply): ☒ archaeological ☐ architectural ☒ historical/archival ☐ underwater
☐ damage assessment ☐ monitoring report ☐ other(describe): _____

Scope/Intensity/Procedures Pedestrian survey and shovel testing at 10- 25 meter intervals; judgmental testing; .5 meter units screened through 1/4" mesh

Preliminary Methods (check as many as apply to the project as a whole)

☐ Florida Archives (Gray Building) ☒ library research- *local public* ☒ local property or tax records ☒ other historic maps
☐ Florida Photo Archives (Gray Building) ☒ library-special collection - *nonlocal* ☒ newspaper files ☒ soils maps or data
☒ Site File property search ☐ Public Lands Survey (maps at DEP) ☒ literature search ☐ windshield survey
☒ Site File survey search ☒ local informant(s) ☐ Sanborn Insurance maps ☒ aerial photography
☐ other (describe): _____

Archaeological Methods (check as many as apply to the project as a whole)

☐ Check here if **NO** archaeological methods were used.
☒ surface collection, controlled ☐ shovel test-other screen size ☐ block excavation (at least 2x2 m)
☐ surface collection, uncontrolled ☐ water screen ☐ soil resistivity
☒ shovel test-1/4" screen ☒ posthole tests ☒ magnetometer
☐ shovel test-1/8" screen ☐ auger tests ☐ side scan sonar
☐ shovel test 1/16" screen ☐ coring ☒ pedestrian survey
☒ shovel test-unscreened ☐ test excavation (at least 1x2 m) ☐ unknown
☐ other (describe): _____

Historical/Architectural Methods (check as many as apply to the project as a whole)

☐ Check here if **NO** historical/architectural methods were used.
☐ building permits ☐ demolition permits ☐ neighbor interview ☒ subdivision maps
☐ commercial permits ☒ exposed ground inspected ☐ occupant interview ☐ tax records
☐ interior documentation ☒ local property records ☐ occupation permits ☐ unknown
☐ other (describe): _____

Survey Results (cultural resources recorded)

Site Significance Evaluated? ☐ Yes ☒ No

Count of Previously Recorded Sites 0 Count of Newly Recorded Sites 0

Previously Recorded Site #'s with Site File Update Forms (List site #'s without "8". Attach additional pages if necessary.) _____

Newly Recorded Site #'s (Are all originals and not updates? List site #'s without "8". Attach additional pages if necessary.) _____

Site Forms Used: ☐ Site File Paper Form ☒ Site File Electronic Recording Form

*****REQUIRED: ATTACH PLOT OF SURVEY AREA ON PHOTOCOPY OF USGS 1:24,000 MAP(S)*****

SHPO USE ONLY

SHPO USE ONLY

SHPO USE ONLY

Origin of Report: ☐ 872 ☐ CARL ☐ UW ☐ 1A32 # _____ ☐ Academic ☐ Contract ☐ Avocational
☐ Grant Project # _____ ☐ Compliance Review: CRAT # _____
 Type of Document: ☐ Archaeological Survey ☐ Historical/Architectural Survey ☐ Marine Survey ☐ Cell Tower CRAS ☐ Monitoring Report
☐ Overview ☐ Excavation Report ☐ Multi-Site Excavation Report ☐ Structure Detailed Report ☐ Library, Hist. or Archival Doc
☐ MPS ☐ MRA ☐ TG ☐ Other: _____
 Document Destination: _____ Plotability: _____

Attachment B:

Correspondence

Florida Division of Historical Resources

Nassau County



This record search is for informational purposes only and does NOT constitute a project review. This search only identifies resources recorded at the Florida Master Site File and does NOT provide project approval from the Division of Historical Resources. Contact the Compliance and Review Section of the Division of Historical Resources at 850-245-6333 for project review information.

October 23, 2019



Dana Ste. Claire
Heritage Cultural Services, LLC
820 Turtle Lake Ct.
Ponte Vedra, FL 32082
Phone: 904.669.5318
Email: heritagesrvcs@aol.com

In response to your inquiry of October 23, 2019 the Florida Master Site File lists seven archaeological sites, six field surveys, one resource group, one historic cemetery and 64 historic structures at the designated area of Nassau County, Florida:

T03N, R28E, Sections 14, 16, 17, 18 & 21 with a quarter mile buffer as shown on the corresponding maps.

When interpreting the results of our search, please consider the following information:

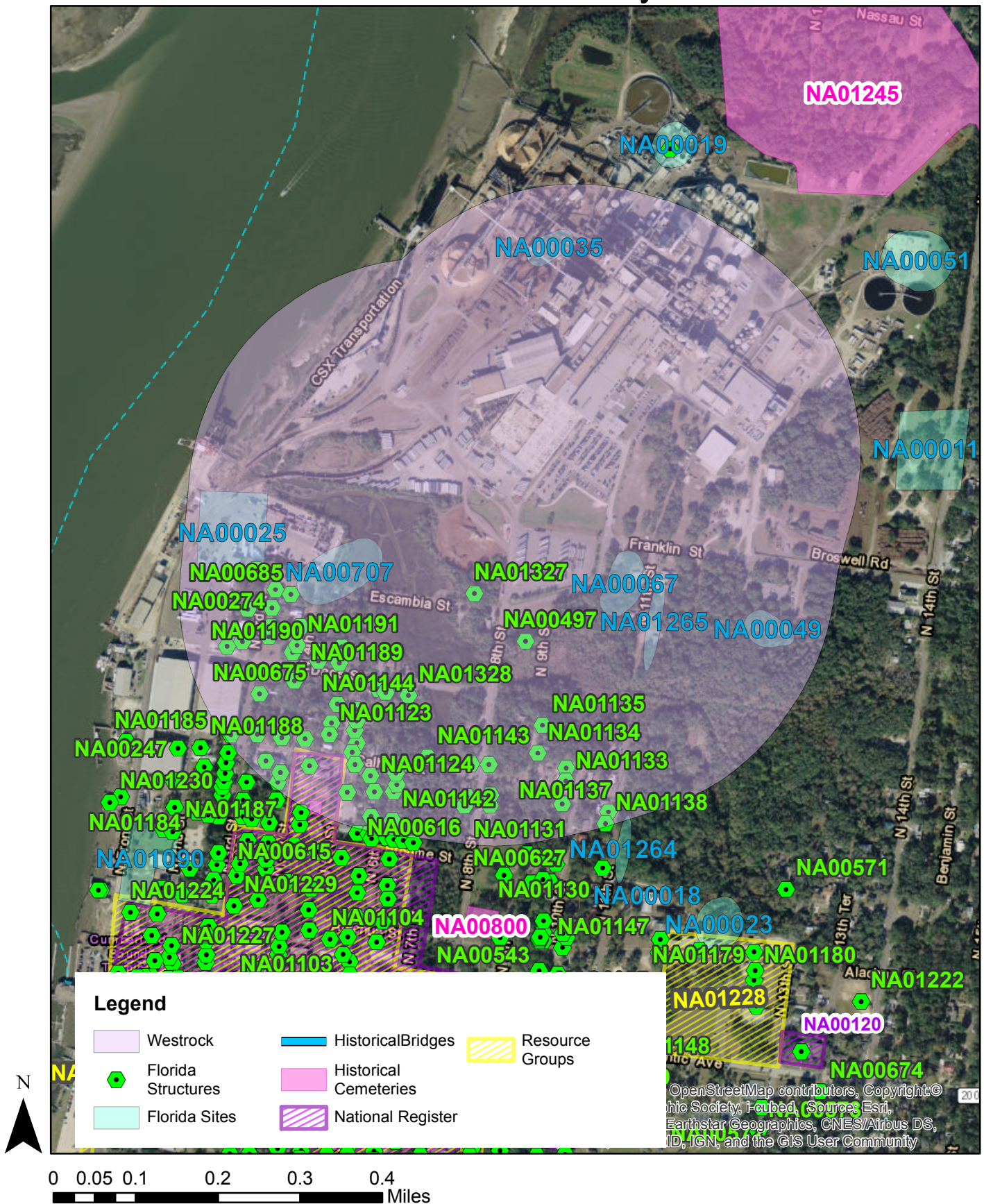
- **This search area may contain *unrecorded* archaeological sites, historical structures or other resources even if previously surveyed for cultural resources.**
- **Because vandalism and looting are common at Florida sites, we ask that you limit the distribution of location information on archaeological sites.**
- **While many of our records document historically significant resources, the documentation of a resource at the Florida Master Site File does not necessarily mean the resource is historically significant.**
- **Federal, state and local laws require formal environmental review for most projects. This search DOES NOT constitute such a review. If your project falls under these laws, you should contact the Compliance and Review Section of the Division of Historical Resources at 850-245-6333.**

Please do not hesitate to contact us if you have any questions regarding the results of this search.

Sincerely,

Cody VanderPloeg
Archaeological Data Analyst
Florida Master Site File
Cody.VanderPloeg@dos.myflorida.com

Cultural Resource Search Quarter Mile Buffer Nassau County





AR=7
SS=64
CM=1
RG=1
BR=0
Total=73

Cultural Resource Roster

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
NA00025	AR	N-25 OF BULLEN & GRIFFIN 1952				
NA00035	AR	N-35 OF BULLEN & GRIFFIN 1952		Human Remains May Be Present		
NA00049	AR	N-4 OF BULLEN & GRIFFIN 1952				
NA00067	AR	72-8 A				
NA00089	RG	FERNANDINA BEACH HISTORIC DISTRICT	FERNANDINA BEACH	Historical District - 122 Contrib Resources	Eligible	NR Listed - Jul 20, 1973
NA00092	SS	ST. MICHAEL'S SCHOOL	228 N 4th ST, Fernandina Beach	1882 Second Empire		NR Contrib - NA00089
NA00093	CM	VILLALONGA PARK	Fernandina Beach	Established 1883, Graves = 14		
NA00117	SS	MERROW HOUSE	501 N 3rd ST, Fernandina Beach	c1888 Frame Vernacular		NR Contrib - NA00089
NA00264	SS	301 N. 3RD ST.	301 N. 3RD ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00265	SS	302 N. 3RD ST.	302 N 3rd ST, Fernandina Beach	c1924 Mission		NR Contrib - NA00089
NA00266	SS	322 N. 3RD ST.	322 N 3rd ST, Fernandina Beach	c1885 Frame Vernacular		NR Contrib - NA00089
NA00267	SS	332 N. 3RD ST.	332 N. 3RD ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00268	SS	401 N. 3RD ST.	304 N 5th ST, Fernandina Beach	-RESOURCE DESTROYED- c1901 Frame Vernacular		
NA00269	SS	403 N. 3RD ST.	403 N 3rd ST, Fernandina Beach	c1935 Bungalow		NR Contrib - NA00089
NA00270	SS	412 N. 3RD ST.	412 N 3rd ST, Fernandina Beach	c1900 Frame Vernacular		NR Contrib - NA00089
NA00271	SS	416 N. 3RD ST.	416 N 3rd ST, Fernandina Beach	c1900 Frame Vernacular		NR Contrib - NA00089
NA00272	SS	421 N. 3RD ST.	421 N 3rd ST, Fernandina Beach	c1907 Queen Anne (Revival)		NR Contrib - NA00089
NA00273	SS	424 N. 3RD ST.	424 N 3rd ST, Fernandina Beach	c1901 Frame Vernacular		NR Contrib - NA00089
NA00274	SS	432 N.3RD ST.	432 N 3rd ST, Fernandina Beach	c1903 Frame Vernacular		NR Contrib - NA00089
NA00302	SS	221 N. 4TH ST.	221 N 4th ST, Fernandina Beach	c1903 Frame Vernacular		NR Contrib - NA00089
NA00303	SS	223 N. 4TH ST.	223 N 4th ST, Fernandina Beach	c1901 Frame Vernacular		NR Contrib - NA00089
NA00306	SS	331 N. 4TH ST.	331 Dade ST, Fernandina Beach	1900 Frame Vernacular		
NA00307	SS	404 N. 4TH ST.	404 N. 4TH ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00308	SS	406 N. 4TH ST.	406 N. 4TH ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00324	SS	222 N. 5TH ST.	222 N 5th ST, Fernandina Beach	c1884 Frame Vernacular		NR Contrib - NA00089
NA00325	SS	309 N. 5TH ST.	309 N 5th ST, Fernandina Beach	c1926 Bungalow		NR Contrib - NA00089
NA00326	SS	310 N. 5TH ST.	310 N 5th ST, Fernandina Beach	c1903 Frame Vernacular		NR Contrib - NA00089
NA00327	SS	314 N. 5TH ST.	314 N 5th ST, Fernandina Beach	c1903 Frame Vernacular		NR Contrib - NA00089
NA00328	SS	320 N. 5TH ST.	320 N 5th ST, Fernandina Beach	c1900 Frame Vernacular		NR Contrib - NA00089
NA00329	SS	411 N. 5TH ST.	411 N. 5TH ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00330	SS	413 N. 5TH ST.	413 N. 5TH ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00364	SS	209 N. 6TH ST.	209 N 6th ST, Fernandina Beach	c1925 Frame Vernacular		
NA00365	SS	221 N. 6TH ST.	221 N. 6TH ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00366	SS	224 N. 6TH ST.	212 N. 6TH ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00367	SS	228 N. 6TH ST.	228 N 6th ST, Fernandina Beach	c1900 Frame Vernacular		
NA00368	SS	232 N. 6TH ST.	232 N 6th ST, Fernandina Beach	c1903 Frame Vernacular		
NA00490	SS	221 N. 8TH ST.	221 N. 8TH ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00491	SS	222 N. 8TH ST.	222 N. 8TH ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00492	SS	223 N. 8TH ST.	223 N 8th ST, Fernandina Beach	c1925 Commercial		
NA00493	SS	226 N. 8TH ST.	226 N 8th ST, Fernandina Beach	1900 Frame Vernacular		
NA00494	SS	230 N. 8TH ST.	230 N. 8TH ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00495	SS	315 N. 8TH ST.	315 N. 8TH ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00496	SS	316 N. 8TH ST.	316 N. 8TH ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
NA00497	SS	428 N. 8TH ST.	428 N. 8TH ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00629	SS	315 CALHOUN ST.	315 Calhoun ST, Fernandina Beach	c1900 Colonial Revival		NR Contrib - NA00089
NA00630	SS	501 CALHOUN ST.	501 CALHOUN ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00631	SS	506 CALHOUN ST.	506 CALHOUN ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		NR Contrib - NA00089
NA00675	SS	209 DADE ST.	209 DADE ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		NR Contrib - NA00089
NA00677	SS	508 DADE ST.	508 DADE ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00678	SS	512 DADE ST.	512 DADE ST., FERNANDINA BEACH	-RESOURCE DESTROYED-		
NA00685	SS	310 ESCAMBIA ST.	310 Escambia ST, Fernandina Beach	c1900 Frame Vernacular		NR Contrib - NA00089
NA00707	AR	MORRIS BLUFF				
NA01121	SS	St. Joseph's Hall	225 N 4th ST, Fernandina Beach	c1900 Frame Vernacular		
NA01122	SS	304 North 4th St	304 Calhoun ST, Fernandina Beach	c1930 Bungalow		NR Contrib - NA00089
NA01123	SS	307 North 5th St	307 N 5th ST, Fernandina Beach	c1930 Bungalow		
NA01124	SS	St. Peter's Claver Parochial School	510 Calhoun ST, Fernandina Beach	1947 Masonry Vernacular		
NA01131	SS	914 Calhoun St	914 Calhoun ST, Fernandina Beach	1951 Masonry Vernacular		
NA01132	SS	305 North 10th ST	305 N 10th ST, Fernandina Beach	1900 Frame Vernacular		
NA01133	SS	911 Calhoun St	911 Calhoun ST, Fernandina Beach	1900 Frame Vernacular		
NA01134	SS	314 North 9th St	314 N 9th ST, Fernandina Beach	1948 Frame Vernacular		
NA01135	SS	320 North 9th St	320 N 9th ST, Fernandina Beach	1900 Frame Vernacular		
NA01137	SS	231 North 11th st	231 N 11th ST, Fernandina Beach	1950 Frame Vernacular		
NA01138	SS	227 North 11th St	227 N 11th ST, Fernandina Beach	1952 Frame Vernacular		
NA01142	SS	212 North 6th St	212 N 6th ST, Fernandina Beach	1969 Frame Vernacular		
NA01143	SS	Fernandina Beach Lift Station #5	615 Calhoun ST, Fernandina Beach	1970 Masonry Vernacular		
NA01144	SS	317 North 5th St	317 N 5th ST, Fernandina Beach	c1930 Frame Vernacular		
NA01189	SS	415 North 4th St	415 N 4th ST, Fernandina Beach	1952 Frame Vernacular		
NA01190	SS	403 North 4th St	403 N 4th ST, Fernandina Beach	c1950 Frame Vernacular		
NA01191	SS	407 North 4th St	407 N 4th ST, Fernandina Beach	1940 Masonry Vernacular		
NA01264	AR	N11/Broome Site	Fernandina Beach		Not Eligible	
NA01265	AR	N11/Franklin Site	Fernandina Beach		Not Eligible	
NA01327	SS	432 Escambia St.	432 Escambia ST, Fernandina Beach	c1949 Frame Vernacular		
NA01328	SS	330 N. 6th St.	330 N 6th ST, Fernandina Beach	c1970 Masonry Vernacular		

Cultural Resource Search

Quarter Mile Buffer

Nassau County





Total=6

Manuscript Roster

MS#	Title	Publication Information	Year
25320	Fernandina Beach Historic Resources Survey Update, City of Fernandina Beach, Nassau County, Florida, May 2018	Brockington and Associates, Inc. Mount Pleasant, South Carolina	2018
19067	A Cultural Resource Reconnaissance Survey of the TECO Peoples Gas Main Extension Project, Duval and Nassau Counties, Florida	Florida Archeological Services - Robert Johnson, prepared for Environmental Consulting and Technologies, Inc.	2012
14420	The Historic Properties Resurvey, City of Fernandina Beach, Nassau County, Florida	Bland & Associates, Inc., Jacksonville. BAI Report of Investigations No. 325. Submitted to the City of Fernandina Beach	2007
7620	Cultural Resource Assessment Survey of Proposed Fernandina Beach Cell Tower, Nassau County, Florida	Sponsoring agentL Southeastern Archaeological Research, Inc. Submitted to: Environ Resource Solutions	2003
1194	Historic properties survey of Fernandina Beach, Florida.	Historic property Associates, Inc., St. Augustine.	1985
539	An Archaeological Survey of Amelia Island, Florida	The Florida Anthropologist 5(3-4):37-64.	1952



MATTHEWS DESIGN GROUP

I N C O R P O R A T E D

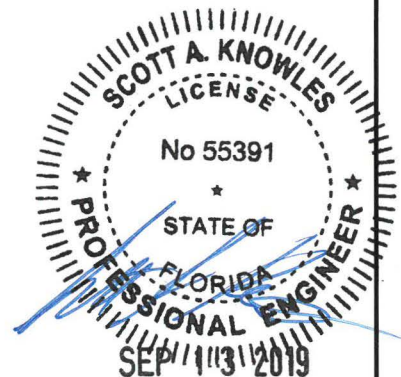
STORMWATER CALCULATIONS

WESTROCK DROP YARD ADDITION

MODIFICATION TO EXISTING FDEP ERP PERMIT NO. 45-0367519-001-EI

MDG #18037

March 11, 2019



PO Box 3126 • 7 Waldo Street • St. Augustine • Florida • 32084
Phone: 904.826.1334 • Fax: 904.826.4547
www.mdginc.com

Scott A. Knowles, P.E.
#55391
CA #26535

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MDG #18037 – Westrock Drop Yard

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1.	EXECUTIVE SUMMARY A. Project Summary
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SECTION 1
EXECUTIVE SUMMARY

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www.matthewsdesign.net

Section 1 - Executive Summary

A. Project Summary

The purpose of this report is to modify the existing FDEP ERP permit no. 45-0367519-001-EI. At the time of the original permit, there was not enough information regarding an existing untreated stormwater outfall that made it impracticable to treat through the proposed water management system. For this reason, the outfall was left unimproved. However, since the approval of the permit, the client (Westrock) has put in further resources to better identify the currently freely discharging waters origins. The FDEP has also worked with the client and MDG design team to coordinate a design that meets all requirements and allows for an overall improvement in discharge water quality.

The existing permit consisted of expansion of an overflow parking area and its associated infrastructure. In this report a separate, existing untreated outfall will be re-routed into the stormwater pond associated with the above-mentioned permit. The existing outfall control structure (Overland Weir and Orifice) will be modified to provide proper treatment and attenuation of the additional water volume. The existing detention pond will be used to treatment of an additional 4.48 acres. The 4.48-acre area is completely impervious and is comprised of an existing faculty parking lot and a roof drain leader system that services half of an existing buildings roof area. This area currently outfalls without any treatment directly into a wetland system that outfalls into the Amelia River. See the attached Site Development Map for an overview of drainage characteristics and outfalls.

This drainage analysis has been prepared in accordance with current requirements of the Florida Department of Environmental Protection, St. Johns River Water Management District and Fernandina Beach LDC.

Wet Detention Area Calculation Summary:

Pond ID	Bottom Elevation	TOB	Drawdown Control Elevation	Normal Water Level	Weir Elevation	Required Treatment Volume	Provided Treatment Volume	Required Permanent Pool Volume	Provided Permanent Pool Volume
-	(ft)	(ft)	(ft)	(ft)	(ft)	(cf)	(cf)	(cf)	(cf)
1	-2.5	6.0	2.50	2.50	4.25	107,236	125,630	207,332	214,781

The pond stage and peak flow results from the computer model analysis are as follows:

Pre-developed Analysis	SJRWMD Storm Event	Peak Pre-Developed (Pre-Basin 1)
		(cfs)
	Mean Annual	33.4
	10yr-24hr	56.8
	25yr-24hr	68.3
	100yr-24hr*	87.2

	SJRWMD Storm Event	Peak Post-Developed flow Basin A with Detention	Pond Stage
Basin A Analysis Results		(cfs)	(ft)
	Mean Annual	10.8	4.7
	10yr-24hr	43.1	5.4
	25yr-24hr	59.1	5.7
	100yr-24hr*	83.1	6.0

*100yr-24hr storm event analyzed for pond capacity only

	SJRWMD Storm Event	Pre-Developed	Post-Developed	Pre-Developed	Post-Developed
Site Total Discharge Summary		(cfs)	(cfs)	(ac-ft)	(ac-ft)
	Mean Annual	33.4	10.8	66.2	21.4
	10yr-24hr	56.8	43.1	112	85.4
	25yr-24hr	68.3	59.1	135	117
	100yr-24hr*	87.2	83.1	172	165

SECTION 2
INTRODUCTION

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Section 2 – Introduction

A. General Project Information:

This analysis is for the modification of an existing FDEP ERP permit (45-0367519-001-EI) to allow for an additional volume of water to be routed through and treated in the pond associated with the existing permit. The existing outfall structure has been modified to allow for the treatment of the additional flow. Attenuation is not a concern due to the similar outfall locations of the freely discharging stormwater with the existing ponds outfall.

Currently, stormwater collected from an existing onsite building and employee parking area freely discharges into the wetland to the south. Westrock would like to reroute this water through the existing pond and provide treatment to improve discharge water quality. The existing pond was originally designed to account for the development of a gravel overflow parking area. This ponds outfall structure and orifice have been redesigned to allow for proper treatment of the new inflow of stormwater.

B. Site Location:

The project site is located on a 213-acre parcel, located in Fernandina Beach, Florida (see Location Map, Attachment A). More particularly, the property address is 600 North 8th Street, Fernandina Beach, FL 32034. The site currently contains the Rocktenn CP LLC paper plant. The site will be expanded to the south into a currently mildly developed area.

As required by the Florida Department of Environmental Protection, Fernandina Beach, and St. Johns River Water Management District the following items are also included as reference material: Aerial Map (Attachment B), USGS Quad Map (Attachment C), and Flood Insurance Rate Map (Attachment D).

C. General Geotechnical Information:

Based on the NRCS Soil Survey of the Westrock drop yard, the soils present throughout the entire project site are: #2, Arenets; #9, Leon fine sand; #17, Urban Land; #28, Tisonia Mucky peat; #29, Resota fine sand; and #31, Kershaw fine sand. The NRCS Soil Survey has been attached with this submittal.

D. Methodology:

This drainage report has been prepared in accordance with current requirements of the Florida Department of Environmental Protection, St Johns River Water Management District and St. Johns County. In addition, storm events (frequencies), run off calculations, discharge criteria, pipe hydraulics, and evaluation methods (including computer software applications), etc., have been based on the guidelines/requirements of these permitting entities.

Stormwater design for this site will incorporate on-line wet detention systems. ICPR was used to route the various storms through the ponds and into the receiving waters. The SCS Unit Hydrograph Method was used to create the pre

and post-development run-off hydrographs. Peak flow and maximum stage considerations were given to the mean annual, 10yr-24hr and 25yr-24hr storms. The 100yr-24hour storm was also modeled to verify pond capacity only.

Manning "n" Values, SCS Runoff Coefficients (C), and Curve Numbers (CN) are based on recommended practices as published by the USDA in Technical Release 55 (TR-55) titled "Urban Hydrology for Small Watersheds." These guidelines are repeated in the FDOT Hydrology Drainage Handbook, which is also used as reference throughout this report.

SECTION 3
PRE-DEVELOPED (EXISTING) EVALUATION

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Section 3 – Pre-Developed (Existing) Evaluation

A. Project Area Information:

The site is designed to discharge into a single wet detention pond located on the southwestern side of the property. The proposed stormwater pond will be designed for treatment and attenuation of the stormwater runoff associated with the construction of new asphalt and concrete paving, as well as gravel container parking. In addition, existing stormwater currently directly discharging into the Amelia River Basin will be routed into this proposed pond for treatment. A sediment basin and littoral shelf are included in the proposed stormwater treatment facility design to provide further treatment.

The post developed condition is modeled as two drainage basins (Pre-Basin 1 And Pre-Basin 2) covering approximately 14.9 acres of which 7.63 acres are impervious and 5.23 acres are gravel. The basins both currently outfall to the same wetlands (Pre-Out Node). The wetlands discharges to the Amelia River.

B. Soils Data:

Based on the NRCS Soil Survey of the Westrock drop yard, the soils present throughout the entire project site are: #2, Arents (Hydrologic Group – A); Urban Land; #28, Tisonia Mucky peat (Hydrologic Group – A/D); #29, Resota fine sand; and #31, Kershaw fine sand (Hydrologic Group – A). The NRCS Soil Survey has been attached with this submittal.

C. Run-off Coefficient Calculations:

The site was modeled as 2 separate pre-basins. Pre-Basin 1 is shown as the “permitted site area” on the Site Development Map (Attachment G). This is the area where construction activities will take place. Pre-Basin 2 is shown as the “existing impervious area” on the Site Development Map (Attachment G). This area is an existing impervious surface (Asphalt/metal roof) that currently freely discharges to the wetland area. This basin will be routed though our proposed pond for treatment. The existing site hydrologic conditions and corresponding CN values used for the pre-developed runoff analysis are listed in the table below:

Runoff Curve Number Summary

Pre-Basin 1	Description	Area	CN	C
	Pervious “D” Soil (Poor Condition)	8.01	89	.20
	Impervious	2.44	95	.95
	Sum	10.4		
	Composite CN & C		90	.38
Pre-Basin 2	Description	Area	CN	C
	Impervious	4.48	95	.95
	Sum	4.48		
	Composite CN & C		95	.95

D. Time of Concentration:

The predeveloped time of concentration for the current Westrock site, Pre-Basin 1, was calculated as 25 minutes. For time of concentration worksheets, please see Attachment I.

Due to the high imperviousness of the Pre-Basin 2, the time of concentration (Tc) for the pre-developed basins is estimated to be:

- Pre-Basin 2 Tc = 10 minutes

E. Seasonal High Ground Water Level:

The normal water elevation for the pond was established to be an elevation of 2.75' based on the geotechnical report provided by Universal Engineering. Boring B-1 is in close proximity to the proposed pond and is expected to provide the best representation of that characteristics of the pond area outline by Universals Investigation (See Geotechnical Investigation). Boring B-1 (Approx. elevation of 4.0') shows a water table location 3.0' below existing ground. Further, Universal Engineering estimated SHGW will occur 0.0' to 0.5' above the encounter water levels, the NWL was conservatively established as 2.75'.

Ground Elevation – WT + SHGW = Estimated Pond Water Level;

$4.5' - 3' + .5' = 2.0' \Rightarrow 2.50'$ Conservative estimate

In addition, the outfall from the pond was provided a headwater equal to the Mean High-Water elevation as established by the Florida Sea Grant and NOAA. This MHW was established to be 2.39 feet per NOAA website (Fernandina Beach, FL – Station ID: 8720030).

F. Peak Rate Factor:

The pre-development site condition was modeled as grassed with moderate slopes to the west throughout the site.

Using the SJRWMD memorandum for a "Procedure for Selection of SCS Peak Rate Factors for Use in MSSE Permit Applications" dated April 25, 1990 as reference, this particular site most closely resembles the description given for watersheds with a SCS Peak Rate (K) Factor ranging between 256-484. For modeling purposes, a K factor of 323 was used for Pre-Basin 1 and 484 was used for Pre-Basin 2.

SECTION 4
POST-DEVELOPED (PROPOSED) EVALUATION

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INCORPORATED

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Section 4 – Post-Developed Evaluation

A. Introduction

This analysis is for the modification of an existing FDEP ERP permit (45-0367519-001-EI) to allow for an additional volume of water to be routed through and treated in the pond associated with the existing permit. The existing outfall structure has been modified to allow for the treatment of the additional flow. Attenuation is not a concern due to the similar outfall locations of the freely discharging stormwater with the existing ponds outfall. This ponds outfall structure and orifice have been redesigned to allow for proper treatment of the new inflow of stormwater.

The post developed condition is modeled as one drainage basin (Post Basin A) covering approximately 14.9 acres of which 7.63 acres is to be impervious and 5.23 acres to be gravel. The wet detention stormwater pond will discharge over a concrete overflow weir control structure and outfall into an existing ditch along the south western side of the site. This ditch discharges to localized wetland that directly feeds into the Amelia River.

In addition to the required stormwater faciality treatment, storm structures will utilize a minimum 1' sump (As indicated in the construction details associated with the construction plans) to provide additional treatment and sediment removal before the stormwater enters the pond. These structures will be added to the existing operation and maintenance schedule of the stormwater structures that already exist on site.

B. Runoff Coefficient Calculations:

The drainage basin's curve numbers are calculated as the composite of the impervious areas, pond and pervious areas. The following is a breakdown of the site surface coverage and runoff coefficient and curve number calculations:

Basin A	Description	Area	CN	C
	Pervious "A" Soil	.45	39	.20
	Impervious	7.63	95	.95
	Gravel	5.36	88	.95
	Pond	1.6	100	1.00
	Sum	14.9		
	Composite CN & C		91	.93

C. Time of Concentration:

Time of concentration as calculated in Attachment I, Post Basin 1 Tc Worksheet, and shown on Attachment H, Pre-Development Map. The time of concentration began at the furthest point hydrologically from the water management facility in the north east corner of our basin boundary. From this point, the water sheet flows over asphalt to the nearest inlet. After the proposed pipe system carries the water to the pond. Using TR 55 Tc guidelines, the Tc was estimated to be approximately 17 minutes.

- Post-Basin A Tc = 17 minutes

D. Peak Rate Factor:

The Standard Peak Rate (K) Factor of 484, which is typical for watersheds with significant drainage works, was used for the post development drainage basins.

E. SJRWMD Requirements:

The following tables are a summary of the stage – volume relationship for the pond.

Stage vs. Volume (Pond 1):

Stage	Area	Area	Incremental Volume	Incremental Volume	Volume Sum	Treatment Volume Sum
(ft)	(sf)	(ac)	(ft ³)	(ac-ft)	(ft ³)	(cf)
-2.5	32,764	0.752	-	-	-	-
-2	34,706	0.797	16,868	0.387	16,868	0
-1	38,678	0.888	36,692	0.842	53,560	0
0	42,773	0.982	40,726	0.935	94,285	0
1	46,982	1.079	44,878	1.030	139,163	0
2	51,300	1.178	49,141	1.128	188,304	0
2.5 (NWL)	54,608	1.254	26,477	0.608	214,781	0
3	55,724	1.279	27,583	0.633	242,364	27,583
4	60,248	1.383	57,986	1.331	300,350	85,569
5	64,873	1.489	62,561	1.436	362,910	148,130
6	69,599	1.598	67,236	1.544	367,586	215,366

1. Treatment Volume Calculations (Basin A)

Following FDEP direction the gravel area is established to shed 80% of the stormwater that lands on this medium due to void ratio in the aggregate. Calculation of SJRWMD Required Treatment Volume has been adjusted to treat the gravel at 80% impervious and the calculations for a wet detention system (WDA) is as follows:

1. 1-inch of rainfall over the improved drainage area (Basin B):

$$V_r = PA = (1\text{ inch} \times 655,282 \text{ sf}) / 12 \text{ in/ft} = 54,606\text{cf} = 1.24\text{ac-ft}$$

2. 2.5-inches of rainfall over the impervious area:

$$V_t = PA_{\text{imp}} = (2.5\text{ inch} / (332,394\text{sf} + .8 \times 233,515\text{sf}) / 12 \text{ in/ft} = 107,236 \text{ cf} = 2.46 \text{ ac-ft}$$

The required treatment volume is the greater of the two; therefore, the required treatment volume for the SJRWMD is 107,236 cubic feet or 2.46 ac-ft.

Setting the overflow weir elevation: The pond is designed to retain the required permanent pool volume and slowly release the treatment volume using the existing stormwater pump station. An overflow weir will be employed to discharge runoff volumes in excess of the treatment volume.

The minimum weir elevation is to be 4.25 ft using the pond stage volume table for the required treatment volume calculated previously.

Summary Table:

Required TV =	107,236 cf	2.46 ac-ft	At weir= 4.24
Provided TV=	107,683 cf	2.47 ac-ft	At weir= 4.25

It is worth noting that in the event of the 100-yr storm water will temporarily pool around inlet ST-11 to a depth of no more than 3" (100 yr storm elevation (6.0') – structure w/rim below 6' (5.75') = .25' = 3"). All other storms will be retained below proposed elevations.

2. Permanent Pool Volume Calculations (Basin A)

The permanent pool is calculated to provide a residence time of 21 days during the wet season (June-October) in the pond. The permanent pool is that portion of the pond which is designed to hold water at all times. This provides the wet detention pond the additional capacity to remove pollutants through uptake of nutrients by algae, absorption of nutrients and heavy metals onto the bottom, biological oxidation of organic materials and sedimentation.

The permanent pool volume (PPV) is calculated using equation 29-4 of the SJRWMD handbook which is:

$$PPV = \frac{(DA \times C \times R \times RT)}{(WS \times CF)} \times LZF$$

Where:

DA = Drainage area to pond

C = the runoff coefficient

R = wet seasonal rainfall depth = 30 inches

RT = minimum residence time = 21 days

WS = the length of the wet season = 153 days

CF = Conversion Factor = 12

LZF = Littoral Zone Factor = 1.0

$$PPV = \frac{(14.9 \text{ ac})(.93)(30 \text{ in})(21 \text{ days})}{(153 \text{ days}) 12 \text{ in/ft}} \times 1.0 = 4.76 \text{ ac} - \text{ft}$$

The pond volume below elevation 2.5' is 4.93 ac-ft (214,781 ft³), therefore adequate storage is provided to satisfy the permanent pool criteria.

3. Mean Depth Calculations (Pond 1)

The mean depth of a wet detention pond is required to be between 2-ft and 8-ft in accordance with the SJRWMD rules. The mean depth equation is the permanent pool volume divided by the pond surface area at the normal water level (NWL). The mean depth is checked as follows:

$$MD = \frac{PPV}{A} = \frac{214,781 \text{ ft}^3}{54,608 \text{ ft}^2} = 3.93 \text{ ft}$$

The design permanent pool mean depth of 3.93 ft complies with the requirement.

4. Orifice Bleed-down Calculations

Requirements state that the wet detention facility must recover $\frac{1}{2}$ of the treatment volume between 24 and 30 hrs and complete recovery from the treatment volume in under 60 hours. The recovery time has been checked and the calculations demonstrated in the following tables:

50% TV recovery in 24 – 30 hours

RECOVERY CHECK:			
H1 (Weir – NWL)	1.75	ft	
1/2 TV Req	53,618	cf	1.23 ac-ft
1/2 TV Stage	3.37	ft	
H2	0.87	ft	
H average	1.31	ft	
C (orifice coefficient)	0.60		
D (Orif Diam. Using)	4.25	in	
A (Area of orif. Using)	0.10	sf	
Q	0.54	cfs	
T (Recovery Time)	27.4	hr	

100% TV recovery in less than 60 hours

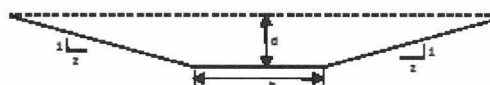
RECOVERY CHECK:			
H1 (Weir – NWL)	1.75	ft	
Full TV Req	107,236	cf	2.46 ac-ft
Full TV Stage	4.24	ft	
H2	1.74	ft	
H average	1.75	ft	
C (orifice coefficient)	0.60		
D (Orif Diam. Using)	4.25	in	
A (Area of orif. Using)	0.10	sf	
Q	0.63	cfs	
T (Recovery Time)	47.54	hr	

5. Outfall Swale Capacity Calculations

The pond's proposed outfall ditch was checked to ensure its ability to handle the increased flow capacity. The outfall ditch's worst-case scenario (100-yr outfall flow) was selected as the basis for calculations. See below for calculations;

Swale Capacity

100-Year Flow = Q = 81.4'
 100-Year Max Stage = 6.00'

Swale Capacity Calculations						
Project Name:		Westrock Drop Yard			MATTHEWS DESIGN GROUP INCORPORATED	
Project Number:		18037				
Designer	KJM	Date	1/25/2019			
Location: Swale - Road A						
Manning's Equation for Open Channel Flow						
				Parameters		Units
				z (sideslope) =		4 -
				z (sideslope) =		4 -
				b (btm width) =		3.5 ft
				d (depth) =		1.5 ft
Manning's Formula		Volume Equation		S (slope) =		0.129 ft/ft
Q = (1.486/n) * A * Rh ^{2/3} * S ^{1/2}		V = (1.49/n) * Rh ^{2/3} * S ^{1/2}		n (low) =		0.011 -
R = A/P		Q = V * A				
A = Cross Sectional Area		V = Velocity				
P = Wetted Perimeter						
S = Slope of Channel						
n = Manning's Roughness Coefficient						
Design Swale Capacity						
Depth (ft)	Area (sf)	Wetted Perimeter (ft)	Hydraulic Radius (ft)	n		
				Velocity (fps)	Flow (cfs)	
1.5	14.25	15.87	0.90	45.28	645.27	
Required Swale Capacity						
Q taken from ICPR Modeling				Q = 81.40 cfs		
Design Check						
Design Capacity = 645.27 cfs						
Required Capacity = 81.40 cfs						
YES		If "YES" the Swale design is adequate If "NO" the Swale design is not adequate				

SECTION 5
Pre/Post ICPR Analysis

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Pre/Post ICPR Analysis

A. Node Diagram

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18073 - WESTROCK DROP YARD
NODE DIAGRAM

Nodes

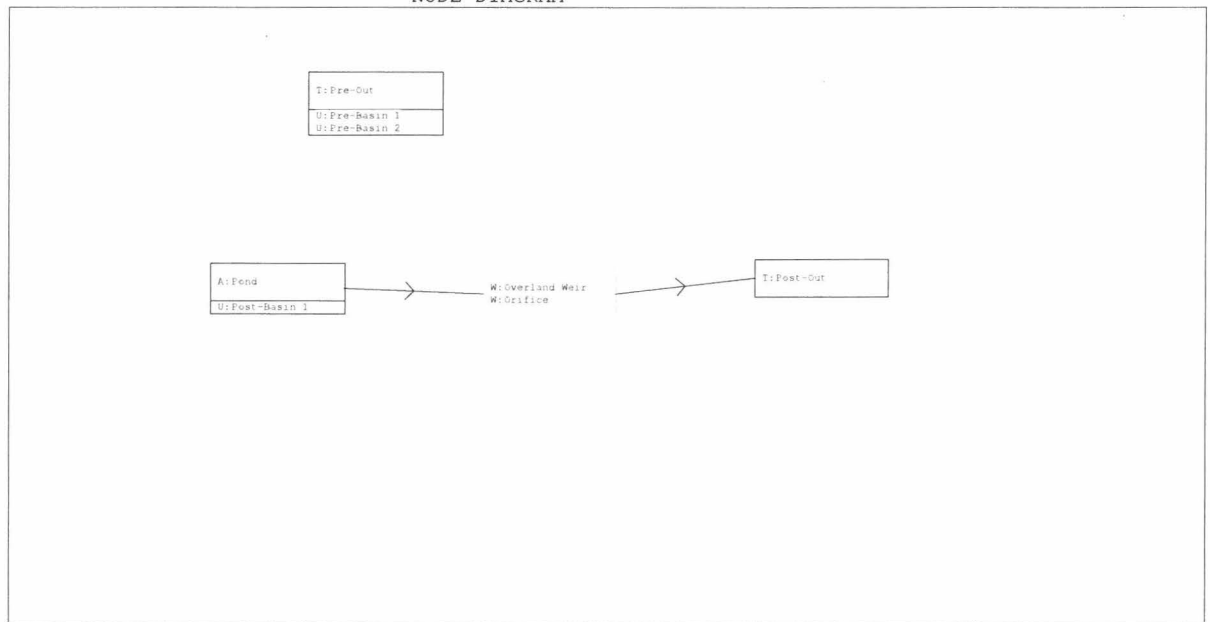
A Stage/Area
V Stage/Volume
T Time/Stage
M Manhole

Basins

O Overland Flow
U SCS Unit CN
S SBUH CN
Y SCS Unit GA
Z SBUH GA

Links

P Pipe
W Weir
C Channel
D Drop Structure
B Bridge
R Rating Curve
H Breach
E Percolation
F Filter
X Exfil Trench



Pre/Post ICPR Analysis

B. Input Report

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18073 - WESTROCK DROP YARD
Input Report

==== Basins =====

Name: Post-Basin 1 Node: Pond Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 17.00
Area(ac): 14.900 Time Shift(hrs): 0.00
Curve Number: 91.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 30.00

Name: Pre-Basin 1 Node: Pre-Out Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 25.00
Area(ac): 10.400 Time Shift(hrs): 0.00
Curve Number: 90.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: Pre-Basin 2 Node: Pre-Out Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: UH484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 4.480 Time Shift(hrs): 0.00
Curve Number: 95.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

==== Nodes =====

Name: Pond Base Flow(cfs): 0.000 Init Stage(ft): 2.500
Group: BASE Warn Stage(ft): 6.000
Type: Stage/Area

Stage(ft)	Area(ac)
2.500	1.2500
3.000	1.2800
4.000	1.3800
5.000	1.4900
6.000	1.6000

Name: Post-Out Base Flow(cfs): 0.000 Init Stage(ft): 2.390
Group: BASE Warn Stage(ft): 6.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	2.390
30.00	2.390

Name: Pre-Out Base Flow(cfs): 0.000 Init Stage(ft): 2.740
Group: BASE Warn Stage(ft): 6.000

18073 - WESTROCK DROP YARD
Input Report

Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	2.740
30.00	2.740

==== Weirs =====

Name: Orifice From Node: Pond
Group: BASE To Node: Post-Out
Flow: Both Count: 1
Type: Horizontal Geometry: Circular

Span(in): 4.25
Rise(in): 4.25
Invert(ft): 2.000
Control Elevation(ft): 2.500

TABLE

Bottom Clip(in): 0.000
Top Clip(in): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: Overland Weir From Node: Pond
Group: BASE To Node: Post-Out
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Trapezoidal

Bottom Width(ft): 9.50
Left Side Slope(h/v): 1.00
Right Side Slope(h/v): 1.00
Invert(ft): 4.250
Control Elevation(ft): 4.250
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

==== Hydrology Simulations =====

Name: 100yr-24hr
Filename: S:\Projects\15000\15073 - Hospice Thrift Store\ENG\Storm Calcs\ICPR\100yr-24hr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 12.00

Time(hrs)	Print Inc(min)
30.000	5.00

Name: 10yr-24hr
Filename: S:\Projects\15000\15073 - Hospice Thrift Store\ENG\Storm Calcs\ICPR\10yr-1hr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 8.00

Time(hrs)	Print Inc(min)
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18073 - WESTROCK DROP YARD
Input Report

30.000 5.00

Name: 25Yr-24hr
Filename: S:\Projects\15000\15073 - Hospice Thrift Store\ENG\Storm Calcs\ICPR\25Yr-24hr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 9.50

Time(hrs) Print Inc(min)

30.000 5.00

Name: MA-24
Filename: S:\Projects\15000\15073 - Hospice Thrift Store\ENG\Storm Calcs\ICPR\MA-24.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: Flmod
Rainfall Amount(in): 4.95

Time(hrs) Print Inc(min)

30.000 5.00

=====
=== Routing Simulations ===
=====

Name: 100yr-24hr Hydrology Sim: 100yr-24hr
Filename: S:\Projects\15000\15073 - Hospice Thrift Store\ENG\Storm Calcs\ICPR\100yr-24hr.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs) Print Inc(min)

30.000 5.000

Group Run

BASE Yes

Name: 10yr-24hr Hydrology Sim: 10yr-24hr
Filename: S:\Projects\15000\15073 - Hospice Thrift Store\ENG\Storm Calcs\ICPR\10yr-24hr.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs) Print Inc(min)

30.000 5.000

Group Run

18073 - WESTROCK DROP YARD
Input Report

BASE Yes

Name: 25yr-24hr Hydrology Sim: 25Yr-24hr
Filename: S:\Projects\15000\15073 - Hospice Thrift Store\ENG\Storm Calcs\ICPR\25yr-24hr.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
-----	-----
30.000	5.000
Group	Run
-----	-----
BASE	Yes

Name: MA-24 Hydrology Sim: MA-24
Filename: S:\Projects\15000\15073 - Hospice Thrift Store\ENG\Storm Calcs\ICPR\MA-24.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
-----	-----
30.000	5.000
Group	Run
-----	-----
BASE	Yes

Pre/Post ICPR Analysis
C. Basin Summary Report

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18073 - WESTROCK DROP YARD
Basin Report

Basin Name: Post-Basin 1
Group Name: BASE
Simulation: 100yr-24hr
Node Name: Pond
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 2.27
Comp Time Inc (min): 2.27
Rainfall File: Flmod
Rainfall Amount (in): 12.000
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 17.00
Time Shift (hrs): 0.00
Area (ac): 14.900
Vol of Unit Hyd (in): 1.001
Curve Number: 91.000
DCIA (%): 30.000

Time Max (hrs): 12.05
Flow Max (cfs): 117.67
Runoff Volume (in): 11.176
Runoff Volume (ft3): 604503

Basin Name: Pre-Basin 1
Group Name: BASE
Simulation: 100yr-24hr
Node Name: Pre-Out
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 3.33
Comp Time Inc (min): 3.33
Rainfall File: Flmod
Rainfall Amount (in): 12.000
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 25.00
Time Shift (hrs): 0.00
Area (ac): 10.400
Vol of Unit Hyd (in): 1.001
Curve Number: 90.000
DCIA (%): 0.000

Time Max (hrs): 12.17
Flow Max (cfs): 56.47
Runoff Volume (in): 10.767
Runoff Volume (ft3): 406477

Basin Name: Post-Basin 1
Group Name: BASE
Simulation: 10yr-24hr
Node Name: Pond
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 2.27
Comp Time Inc (min): 2.27
Rainfall File: Flmod
Rainfall Amount (in): 8.000
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 17.00
Time Shift (hrs): 0.00
Area (ac): 14.900
Vol of Unit Hyd (in): 1.001

18073 - WESTROCK DROP YARD
Basin Report

Curve Number: 91.000
DCIA (%): 30.000

Time Max (hrs): 12.05
Flow Max (cfs): 77.19
Runoff Volume (in): 7.207
Runoff Volume (ft3): 389783

Basin Name: Pre-Basin 1
Group Name: BASE
Simulation: 10yr-24hr
Node Name: Pre-Out
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 3.33
Comp Time Inc (min): 3.33
Rainfall File: Flmod
Rainfall Amount (in): 8.000
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 25.00
Time Shift (hrs): 0.00
Area (ac): 10.400
Vol of Unit Hyd (in): 1.001
Curve Number: 90.000
DCIA (%): 0.000

Time Max (hrs): 12.17
Flow Max (cfs): 36.50
Runoff Volume (in): 6.808
Runoff Volume (ft3): 257033

Basin Name: Post-Basin 1
Group Name: BASE
Simulation: 25Yr-24hr
Node Name: Pond
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 2.27
Comp Time Inc (min): 2.27
Rainfall File: Flmod
Rainfall Amount (in): 9.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 17.00
Time Shift (hrs): 0.00
Area (ac): 14.900
Vol of Unit Hyd (in): 1.001
Curve Number: 91.000
DCIA (%): 30.000

Time Max (hrs): 12.05
Flow Max (cfs): 92.41
Runoff Volume (in): 8.693
Runoff Volume (ft3): 470183

Basin Name: Pre-Basin 1
Group Name: BASE
Simulation: 25Yr-24hr
Node Name: Pre-Out
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323

18073 - WESTROCK DROP YARD
Basin Report

Peaking Fator: 323.0
Spec Time Inc (min): 3.33
Comp Time Inc (min): 3.33
Rainfall File: Flmod
Rainfall Amount (in): 9.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 25.00
Time Shift (hrs): 0.00
Area (ac): 10.400
Vol of Unit Hyd (in): 1.001
Curve Number: 90.000
DCIA (%): 0.000

Time Max (hrs): 12.17
Flow Max (cfs): 44.02
Runoff Volume (in): 8.289
Runoff Volume (ft3): 312927

Basin Name: Post-Basin 1
Group Name: BASE
Simulation: MA-24
Node Name: Pond
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 2.27
Comp Time Inc (min): 2.27
Rainfall File: Flmod
Rainfall Amount (in): 4.950
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 17.00
Time Shift (hrs): 0.00
Area (ac): 14.900
Vol of Unit Hyd (in): 1.001
Curve Number: 91.000
DCIA (%): 30.000

Time Max (hrs): 12.05
Flow Max (cfs): 46.00
Runoff Volume (in): 4.202
Runoff Volume (ft3): 227292

Basin Name: Pre-Basin 1
Group Name: BASE
Simulation: MA-24
Node Name: Pre-Out
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 3.33
Comp Time Inc (min): 3.33
Rainfall File: Flmod
Rainfall Amount (in): 4.950
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 25.00
Time Shift (hrs): 0.00
Area (ac): 10.400
Vol of Unit Hyd (in): 1.001
Curve Number: 90.000
DCIA (%): 0.000

Time Max (hrs): 12.17
Flow Max (cfs): 21.05
Runoff Volume (in): 3.830
Runoff Volume (ft3): 144580

Pre/Post ICPR Analysis

D. Node Min/Max Report



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18073 - WESTROCK DROP YARD
Node Report

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
Pond	BASE	100yr-24hr	12.24	6.02	6.00	0.0050	69792	12.08	116.45	12.24	83.05
Pond	BASE	10yr-24hr	12.32	5.42	6.00	0.0050	66926	12.08	76.47	12.32	43.14
Pond	BASE	25yr-24hr	12.27	5.68	6.00	0.0050	68169	12.08	91.49	12.27	59.13
Pond	BASE	MA-24	12.63	4.72	6.00	0.0050	63547	12.08	45.63	12.63	10.78
Post-Out	BASE	100yr-24hr	0.00	2.39	6.00	0.0000	0	12.24	83.05	0.00	0.00
Post-Out	BASE	10yr-24hr	0.00	2.39	6.00	0.0000	0	12.32	43.14	0.00	0.00
Post-Out	BASE	25yr-24hr	0.00	2.39	6.00	0.0000	0	12.27	59.13	0.00	0.00
Post-Out	BASE	MA-24	0.00	2.39	6.00	0.0000	0	12.63	10.78	0.00	0.00
Pre-Out	BASE	100yr-24hr	0.00	2.74	6.00	0.0000	0	12.08	87.21	0.00	0.00
Pre-Out	BASE	10yr-24hr	0.00	2.74	6.00	0.0000	0	12.08	56.82	0.00	0.00
Pre-Out	BASE	25yr-24hr	0.00	2.74	6.00	0.0000	0	12.08	68.25	0.00	0.00
Pre-Out	BASE	MA-24	0.00	2.74	6.00	0.0000	0	12.08	33.35	0.00	0.00

Pre/Post ICPR Analysis

E. Link Min/Max Report

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18073 - WESTROCK DROP YARD
Link Report

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
Overland Weir	BASE	100yr-24hr	12.24	82.16	-0.361	12.24	6.02	0.00	2.39
Overland Weir	BASE	10yr-24hr	12.32	42.33	-0.272	12.32	5.42	0.00	2.39
Overland Weir	BASE	25yr-24hr	12.27	58.28	-0.312	12.27	5.68	0.00	2.39
Overland Weir	BASE	MA-24	12.63	10.07	-0.084	12.63	4.72	0.00	2.39

SECTION 6
ATTACHMENTS

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ATTACHMENT A
LOCATION MAP

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LOCATION MAP



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Phone: 904.826.1334 • Fax: 904.826.4547

LOCATION MAP
WESTROCK DROP YARD
600 N 8TH ST, FERNANDINA BEACH, FL 32034

MDG# 18037
ST. AUGUSTINE, FLORIDA

ATTACHMENT B
AERIAL MAP

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AERIAL MAP



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Phone: 904.826.1334 • Fax: 904.826.4547

AERIAL MAP
WESTROCK DROP YARD
MDG# 18037

ST. AUGUSTINE, FLORIDA

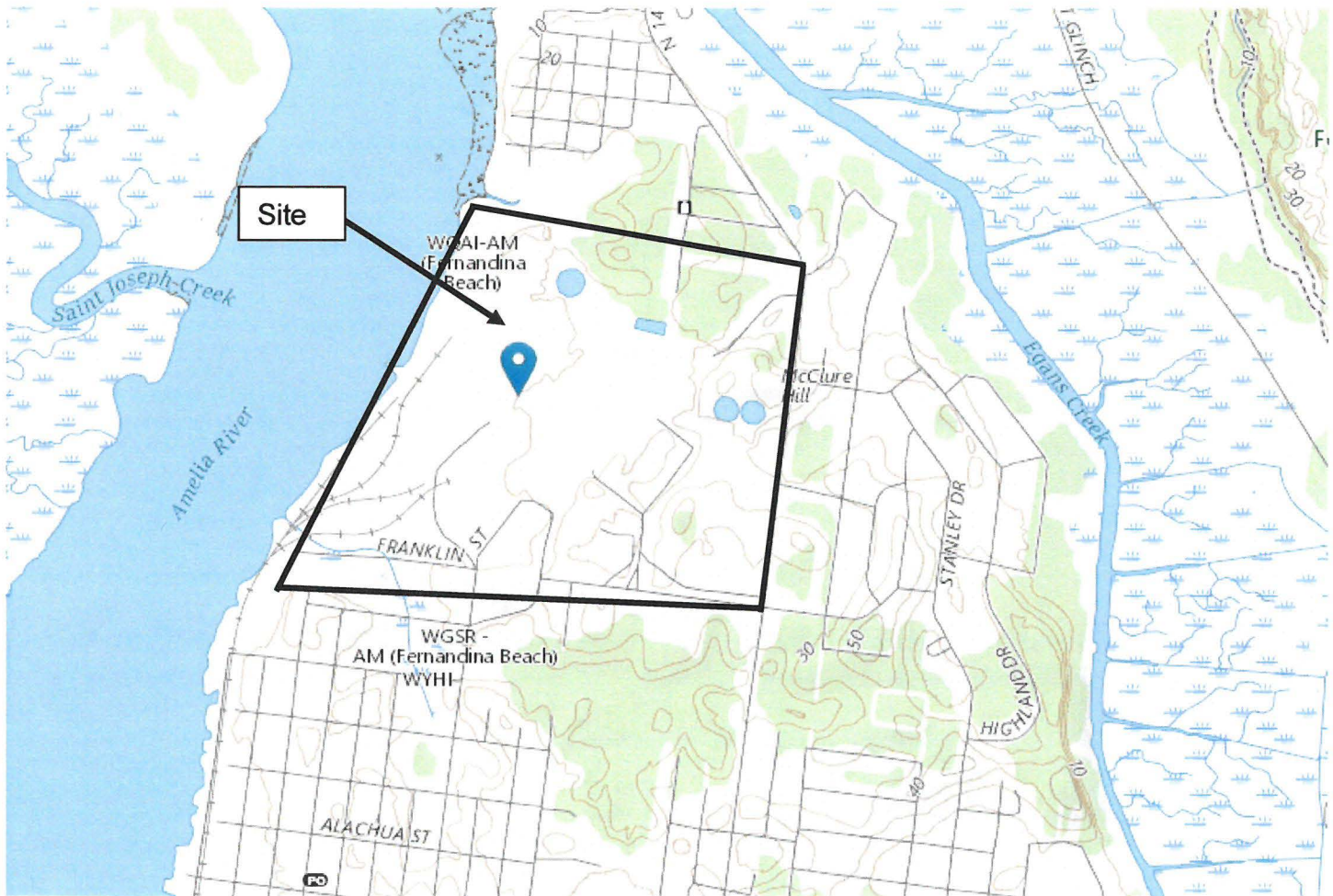
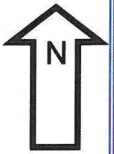
ATTACHMENT C

USGS MAP

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USGS QUAD MAP



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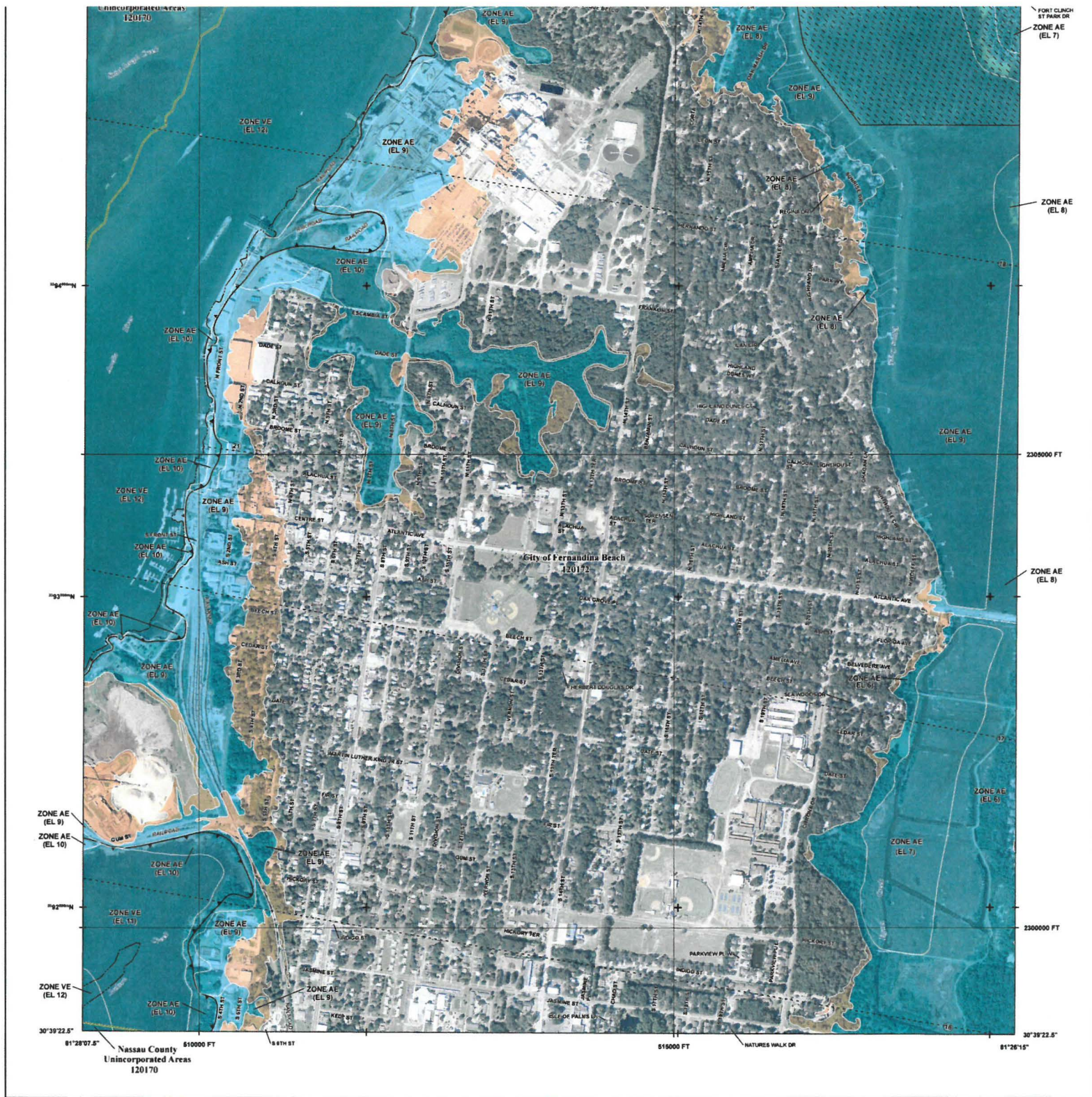
QUAD MAP
WESTROCK DROP YARD
MDG# 18037

FERNANDINA BEACH, FLORIDA

ATTACHMENT D
FLOOD INSURANCE RATE MAP (FIRM)

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FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING
DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT
[HTTP://MSC.FEMA.GOV](http://MSC.FEMA.GOV)

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A.V. A99
	With BFE or Depth Zone AE, AO, AH, VE, AR
OTHER AREAS OF FLOOD HAZARD	Regulatory Floodway
	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee Zone X
OTHER AREAS	NO SCREEN
	Area of Minimal Flood Hazard Zone X
GENERAL STRUCTURES	Area of Undetermined Flood Hazard Zone D
	Channel, Culvert, or Storm Sewer Levee, Dike, or Floodwall

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map data for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information Call Center at 1-877-FEMA-MAP (1-877-366-2627) or visit the FEMA Flood Map Service Center website at <http://www.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities desiring land use or zoning changes must obtain a current copy of the adjacent panel as well as the current FIRM index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map data refer to the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-426-8600.

Base map information shown on this FIRM was derived from digital orthorectified imagery collected by the U.S. Department of Agriculture Farm Service Agency. This imagery was flown in 2013 and was produced with a 1-meter ground sample distance.

LIMIT OF MODERATE WAVE ACTION: Zone AE has been divided by a Limit of Moderate Wave Action (LMWA). The LMWA represents the approximate landward limit of the 1-foot breaking wave. The effects of wave hazards between Zone VE and the LMWA (or between the shoreline and the LMWA for areas where Zone VE is not identified) will be similar to, but less severe than, those in Zone VE.

For community and countywide map data refer to the Flood Insurance Study report for this jurisdiction.

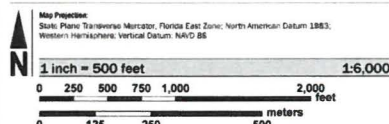
COASTAL BARRIER RESOURCES (CBRS)
This map includes approximate boundaries of the CBRS for informational purposes only. Flood insurance is not available within CBRS areas for structures that are newly built or substantially improved on or after the date(s) indicated on the map. For more information see <http://www.fema.gov/cbcrs>, the FIS Report, or call the U.S. Fish and Wildlife Service Customer Service Center at 1-800-344-WILD.

Limit of Moderate Wave Action (LMWA)

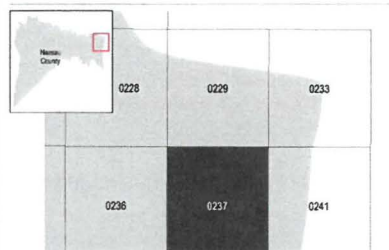
CBRS Area

Otherwise Protected Area

SCALE



PANEL LOCATOR



FEMA
National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
NASSAU COUNTY,
FLORIDA
and Incorporated Areas
PANEL 237 of 510

Panel Contains:
COMMUNITY
FERNANDINA BEACH, CITY OF
NASSAU COUNTY

NUMBER PANEL SUFFIX
120172 0237 6

ATTACHMENT E
SOILS MAP AND DESCRIPTION

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United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Nassau County, Florida

WestRock Drop Yard



March 27, 2018

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Nassau County, Florida

Survey Area Data: Version 17, Oct 27, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Apr 5, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Arents, nearly level	29.9	13.8%
9	Leon fine sand, 0 to 2 percent slopes	0.8	0.3%
17	Urban land	99.8	46.0%
28	Tisonia mucky peat, tidal	19.7	9.1%
29	Resota fine sand, 0 to 5 percent slopes	0.2	0.1%
31	Kershaw fine sand, 2 to 8 percent slopes	59.9	27.6%
99	Water	6.8	3.1%
Totals for Area of Interest		217.1	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it

Custom Soil Resource Report

was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Nassau County, Florida

2—Arents, nearly level

Map Unit Setting

National map unit symbol: 4g99
Mean annual precipitation: 47 to 55 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 305 to 335 days
Farmland classification: Not prime farmland

Map Unit Composition

Arents and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arents

Setting

Landform: Rises on marine terraces
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Altered marine deposits

Typical profile

AC - 0 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 50.02 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Very low (about 2.4 inches)

9—Leon fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2sxqv
Elevation: 0 to 250 feet
Mean annual precipitation: 47 to 61 inches
Mean annual air temperature: 55 to 81 degrees F
Frost-free period: 267 to 347 days
Farmland classification: Not prime farmland

Map Unit Composition

Leon, non-hydric, and similar soils: 89 percent

Minor components: 11 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leon, Non-hydric

Setting

Landform: Flatwoods

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Sandy marine deposits

Typical profile

A - 0 to 8 inches: fine sand

E - 8 to 18 inches: fine sand

Bh - 18 to 37 inches: fine sand

E' - 37 to 45 inches: fine sand

B'h - 45 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.06 to 2.00 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0
mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: A/D

Forage suitability group: Sandy soils on flats of mesic or hydric lowlands
(G153AA141FL)

Hydric soil rating: No

Minor Components

Leon, hydric

Percent of map unit: 5 percent

Landform: Flatwoods

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: Yes

Mandarin

Percent of map unit: 3 percent

Landform: Rises

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Landform position (three-dimensional): Talf, rise
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Mascotte

Percent of map unit: 3 percent
Landform: Flatwoods
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

17—Urban land

Map Unit Composition

Urban land: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform: Marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: No parent material

28—Tisonia mucky peat, tidal

Map Unit Setting

National map unit symbol: 4g9l
Elevation: 10 to 150 feet
Mean annual precipitation: 47 to 55 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 305 to 335 days
Farmland classification: Not prime farmland

Map Unit Composition

Tisonia, tidal, and similar soils: 98 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tisonia, Tidal

Setting

Landform: Tidal marshes on marine terraces
Landform position (three-dimensional): Talf

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Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Organic material over clayey alluvium

Typical profile

Oe - 0 to 40 inches: mucky peat
C - 40 to 65 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Very frequent
Frequency of ponding: None
Salinity, maximum in profile: Strongly saline (16.0 to 32.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 35.0
Available water storage in profile: Very high (about 15.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: A/D
Forage suitability group: Forage suitability group not assigned (G153AA999FL)
Other vegetative classification: Salt Marsh (R153AY009FL)
Hydric soil rating: Yes

Minor Components

Kingsland

Percent of map unit: 1 percent
Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Maurepas

Percent of map unit: 1 percent
Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

29—Resota fine sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 4g9m
Mean annual precipitation: 47 to 55 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 305 to 335 days
Farmland classification: Not prime farmland

Map Unit Composition

Resota and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Resota

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
E - 4 to 27 inches: fine sand
Bw - 27 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on rises, knolls, and ridges of mesic uplands (G153AA121FL)
Other vegetative classification: Sand Pine Scrub (R153AY001FL)
Hydric soil rating: No

Minor Components

Kureb

Percent of map unit: 3 percent

Landform: Dunes on marine terraces, ridges on marine terraces

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Other vegetative classification: Sand Pine Scrub (R153AY001FL)

Hydric soil rating: No

Ridgewood

Percent of map unit: 2 percent

Landform: Knolls on marine terraces, ridges on marine terraces

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

31—Kershaw fine sand, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: 4g9q

Elevation: 40 to 500 feet

Mean annual precipitation: 47 to 55 inches

Mean annual air temperature: 64 to 72 degrees F

Frost-free period: 305 to 335 days

Farmland classification: Not prime farmland

Map Unit Composition

Kershaw and similar soils: 98 percent

Minor components: 2 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kershaw

Setting

Landform: Knolls on marine terraces, ridges on marine terraces

Landform position (three-dimensional): Interfluve, side slope

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Sandy marine deposits

Typical profile

A - 0 to 7 inches: fine sand

C - 7 to 80 inches: fine sand

Properties and qualities

Slope: 2 to 8 percent

Depth to restrictive feature: More than 80 inches

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Natural drainage class: Excessively drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: A

Forage suitability group: Sandy soils on ridges and dunes of xeric uplands (G153AA111FL)

Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R153AY002FL)

Hydric soil rating: No

Minor Components

Ortega

Percent of map unit: 2 percent

Landform: Ridges on marine terraces

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

99—Water

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

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ATTACHMENT F
GEOTECHNICAL REPORT

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REPORT OF A GEOTECHNICAL EXPLORATION

**West Rock Stormwater Improvements
Fernandina Beach, Florida**

August 2, 2018

**PROJECT NO. 0930.1800172.0000
REPORT NO. 1587754**

Prepared For:

WestRock
600 North 8th Street
Fernandina Beach, Florida 32034

Prepared By:

UNIVERSAL ENGINEERING SCIENCES
5561 Florida Mining Boulevard South
Jacksonville, Florida 32257-3648
(904) 296-0757

CONSULTANTS:

**Geotechnical Engineering ▪ Environmental Engineering ▪ Construction Materials Testing
Threshold Inspection ▪ Private Provider Inspection**

OFFICES: Daytona Beach, FL ▪ Fort Myers, FL ▪ Fort Pierce, FL ▪ Gainesville, FL ▪ Jacksonville, FL ▪ Leesburg, FL ▪ Miami, FL ▪ Norcross, GA ▪ Ocala, FL ▪ Orange City, FL
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• Sarasota, FL
• St. Augustine, FL
• Tampa, FL
• West Palm Beach, FL

August 2, 2018

WestRock
600 North 8th Street
Fernandina Beach, Florida 32034

Attention: Mr. Manoharan Thamodharan

Reference: **REPORT OF A GEOTECHNICAL EXPLORATION**
West Rock Stormwater Improvements
Fernandina Beach, Florida
UES Project No. 0930.1800172.0000 and Report No. 1587754

Dear Mr. Thamodharan:

As requested, Universal Engineering Sciences, Inc. has completed a geotechnical exploration for the subject project. This report briefly presents our understanding of the proposed construction, describes the field exploration performed, presents the data obtained, and provides our geotechnical engineering evaluation of the subsurface conditions at the subject utility crossing with respect to the proposed construction.

PROJECT INFORMATION

Project information was provided to us in a recent correspondence with you. We were provided with a copy of a Grading Plan for the project prepared by Matthews Design Group dated 05/10/2018. This plan shows an aerial view of the site and surrounding areas and the requested boring locations.

It is understood that the proposed construction will consist of stormwater improvements at the existing West Rock facility in Fernandina Beach, Florida. The improvements will consist of installation of stormwater piping in some areas of the facility. It is desired to determine the suitability of the soils that will be excavated for use as backfill above the pipe.

This report presents the soil conditions encountered on the basis of traditional geotechnical procedures for site characterization. The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards. Universal Engineering Sciences would be pleased to perform these services if you desire.

Our work did not address the potential for surface expression of deep geological conditions. This evaluation requires a more extensive range of field services than performed in this study. We will be pleased to conduct an investigation to evaluate the probable effect of the regional geology upon the proposed construction if you desire.

FIELD EXPLORATION

A field exploration was performed on July 12, 2018. The approximate boring locations are shown on the attached Boring Location Plan in Appendix A. The approximate boring locations were determined in the field by our personnel using taped measurements from existing features at the site, and should be considered accurate only to the degree implied by the method of measurement used. Samples of the soils encountered will be held in our laboratory for your inspection for 60 days unless we are notified otherwise.

To explore the subsurface conditions within the area of the proposed improvements, we located and drilled four (4) Standard Penetration Test (SPT) borings to depths ranging from 10.5 to 30 feet below the existing ground surface in general accordance with the methodology outlined in ASTM D 1586. A summary of this field procedure is included in Appendix A. Split-spoon soil samples recovered during performance of the boring were visually classified in the field and representative portions of the samples were transported to our laboratory for further evaluation.

LABORATORY EXPLORATION

Representative soil samples obtained during our field exploration were returned to our office and classified by a geotechnical engineer. The samples were visually classified in general accordance with ASTM D 2488 (Unified Soil Classification System).

Four (4) fines content tests, four (4) moisture content tests, and one (1) Atterberg limits test were conducted in the laboratory on representative soil samples obtained from the borings. These tests were performed to aid in classifying the soils and to help quantify and correlate engineering properties. The results of these tests are presented on the Boring Logs in Appendix A. A brief description of the laboratory procedures used is also provided in Appendix A.

FINDINGS

Surface Conditions

The proposed project is located at the south end of the existing WestRock facility in Fernandina Beach, FL directly east of the St. Mary's River Inter-Coastal Waterway. The north portion of the site is a rail yard with tracks and storage area and the south end is an unpaved parking lot. The site has a slightly rolling topography.

General Soil Profile

The boring locations and detailed subsurface conditions are included in the Attachments on the Boring Location Plan and Boring Logs. The classifications and descriptions shown on the logs are generally based upon visual characterizations and laboratory results of the recovered soil samples. When reviewing these records, it should be understood that the soil conditions will vary across the site. The following table summarizes the soil conditions encountered.

TABLE 1A (Borings B-1) General Soil Profile		
Typical depth (ft)		Soil Descriptions
From	To	
0	4.8	Loose to medium dense slightly silty fine sand with limerock, wood, mulch, and debris (PT)
4.8	15	Very soft clay (CH)
* Termination Depth of Deepest Boring () Indicates Unified Soil Classification		

TABLE 1B (Borings B-2) General Soil Profile		
Typical depth (ft)		Soil Descriptions
From	To	
0	1.5	Very loose clayey fine sand (SC)
1.5	6.5	Very loose to medium dense slightly silty to silty fine sand (SP-SM/SM)
6.5	30	Very soft clay (CH)
* Termination Depth of Deepest Boring () Indicates Unified Soil Classification		

TABLE 1C (Borings B-3) General Soil Profile		
Typical depth (ft)		Soil Descriptions
From	To	
0	6.5	Very loose to loose fine sand (SP)
6.5	11.3	Very loose clayey fine sand (SC) and very soft clay (CH)
11.3	15	Medium dense fine sand (SP)
* Termination Depth of Deepest Boring () Indicates Unified Soil Classification		

TABLE 1D (Borings B-4) General Soil Profile		
Typical depth (ft)		Soil Descriptions
From	To	
0	1.5	Very loose fine sand (SP)
1.5	15	Medium dense fine sand (SP)
* Termination Depth of Deepest Boring () Indicates Unified Soil Classification		

The groundwater levels were encountered at the boring locations and recorded at the time of drilling at depths of 0.5 to 3.0 feet below the existing ground surface. The groundwater should be anticipated to fluctuate due to seasonal climatic variations, surface water runoff patterns, construction operations and other interrelated factors. We estimate the seasonal high water levels will occur approximately 0 to 0.5 feet above the level we encountered at the time of our exploration. These estimates are based upon our review of U.S.G.S. data, Nassau County Soils Survey, and regional hydrogeology.

GEOTECHNICAL ENGINEERING EVALUATION AND RECOMMENDATIONS

Directional Drilling and Jack and Bore Construction Recommendations

Geotechnical information to aid in planning the directional drilling procedure that may occur in the vicinity of the railroad track for the specific boring locations is shown in Tables 2A to 2D below:

TABLE 2A DESIGN PARAMETERS (B-1)							
Typical Depth ¹⁾ (ft)		Total Unit Weight (pcf)	Friction Angle ²⁾ (degrees)	Cohesion (psf)	Ko	Ka	Kp
From	To						
0	4.8	65	-	-	-	-	-
4.8	15	100	-	250	1.0	1.0	1.0

1) Depth below existing ground surface.

2) The indicated values are ultimate values. Appropriate factors of safety should be applied to these values for design purposes.

**TABLE 2B
DESIGN PARAMETERS (B-2)**

Typical Depth ¹⁾ (ft)		Total Unit Weight (pcf)	Friction Angle ²⁾ (degrees)	Cohesion (psf)	Ko	Ka	Kp
From	To						
0	1.5	105	26	-	0.56	0.39	2.56
1.5	3	110	28	-	0.53	0.36	2.77
3	6.5	105	26	-	0.56	0.39	2.56
6.5	30	100	-	250	1.0	1.0	1.0

1) Depth below existing ground surface.

2) The indicated values are ultimate values. Appropriate factors of safety should be applied to these values for design purposes.

**TABLE 2C
DESIGN PARAMETERS (B-3)**

Typical Depth ¹⁾ (ft)		Total Unit Weight (pcf)	Friction Angle ²⁾ (degrees)	Cohesion (psf)	Ko	Ka	Kp
From	To						
0	3	105	27	-	0.55	0.38	2.66
3	6.5	110	28	-	0.53	0.36	2.77
6.5	11	105	26	-	0.56	0.39	2.56
11	15	100	-	250	1.0	1.0	1.0

1) Depth below existing ground surface.

2) The indicated values are ultimate values. Appropriate factors of safety should be applied to these values for design purposes.

**TABLE 2D
DESIGN PARAMETERS (B-4)**

Typical Depth ¹⁾ (ft)		Total Unit Weight (pcf)	Friction Angle ²⁾ (degrees)	Cohesion (psf)	Ko	Ka	Kp
From	To						
0	1.5	105	27	-	0.55	0.38	2.66
1.5	15	110	31	-	0.48	0.32	3.12

1) Depth below existing ground surface.

2) The indicated values are ultimate values. Appropriate factors of safety should be applied to these values for design purposes.

The above parameters are based on the field data and limited laboratory testing data obtained from the site. It should be anticipated that soil strength parameters will vary between boring locations and may transition gradually between adjacent soil layers.

Seams and layers of denser/harder or looser/softer soils may be encountered within the soil layers shown above.

Launching and Receiving Pit Preparation

Based on our evaluation of the soil conditions encountered in this area, we offer the following recommendations for the proposed construction.

1. The proposed construction area should be dewatered as necessary and excavated to the required pit depths. Excavation work will be required to meet OSHA Excavation Standard Subpart P regulations, Type C Soils. Either a braced sheet pile structure or an excavation with temporary side slopes cut back at 1.5 horizontal to 1.0 vertical can be implemented, depending on the specific project requirements. The side slope of 1.5 horizontal to 1.0 vertical is contingent upon the dewatering system adequately controlling slope seepage. Sheet piling should be designed according to OSHA sheeting and bracing requirements. We recommend a Florida registered Professional Engineer design the sheeting/bracing system.
2. A dewatering system will likely be required for the project. The water table should be maintained at least two feet below the proposed bottom of the required excavation. The dewatering system should not be decommissioned until the excavation is backfilled two feet above the groundwater level at the time of construction.
3. The natural soil and backfill in the excavation bottom should be densified using hand-operated compaction equipment once the drilling procedures are completed. Based on the boring data, the soils classified as sand (SP) and slightly silty fine sand (SP-SM) that may be excavated from the pits areas, can be used as structural backfill. The soils classified as clayey sand (SC), silty sand (SM), and sandy clay (CH) should not be used as structural backfill due to the high fines and moisture content. Compaction should continue until a minimum density of 95 percent of the soils Modified Proctor maximum dry density (ASTM D 1557) has been achieved to a depth of one foot and in each lift of backfill.
4. All backfill should be placed in level lifts not exceeding six inches loose thickness. The fine sands and fine sands with silt excavated from the pits may be used as backfill. Any large roots should be removed prior to placing backfill.

Dewatering

The groundwater levels were encountered at a depth range of 2.1 to 6.8 feet below the ground surface. Based on the water conditions encountered, the need for dewatering operations may be necessary. The actual method(s) of dewatering should be

determined by the contractor. Regardless of the method(s) used, we suggest drawing down the water level at least two feet below the bottom of the excavations to preclude “pumping” and /or compaction related problems with the subgrade soils.

Dewatering should be accomplished with the knowledge that the permeability of the soils decreases with increasing silt and clay content. The sand (SP) type soils can usually be dewatered by well pointing. Permeability values for these type soils generally range from low 10^{-5} cm/sec to high 10^{-2} cm/sec.

Open Cut Site Preparation Procedures

We recommend the following site preparation procedures for open cut construction:

1. Implement temporary groundwater control measures. It is recommended the groundwater be maintained at least 18 inches below compacted surfaces, and also 18 inches below the depths of excavation required. Temporary groundwater control measures should be the responsibility of the contractor.
2. Excavate to the proposed bearing level. Maintain a minimum separation of at least one foot between the utility bearing depths and the top of the clayey fine sand (SC) or silty fine sand (SM). Clayey fine sand present within the recommended separation zone should be over-excavated and replaced with compacted structural backfill. Compact the exposed surface of sandy soils within the excavations with lightweight, hand equipment until a density of at least 95 percent of the Modified Proctor maximum dry density (ASTM D-1557) is achieved within the upper one foot. We recommend the compacted soils have a moisture content within 2 percent of the optimum value as determined by the Modified Proctor maximum dry density (ASTM-D1557). Please note that clayey fine sand (SC) could be difficult to work with during wet conditions due to its inherent natural moisture. The project budget should account for these possible difficult construction operations.

Should the soils experience pumping and soil strength loss during the compaction operations, compaction work should be immediately terminated and (1) the disturbed soils removed and backfilled with dry structural fill soils which are then compacted, or (2) the excess moisture content within the disturbed soils allowed to dissipate before recompacting.

FDOT No. 57 stone placed below the pipeline bearing depths in a thickness of one foot can be used in lieu of compacted structural backfill. It is recommended the stone be fully wrapped with a geotextile filter fabric such as Mirafi 140N, or equivalent. The excavations should be performed in accordance with OSHA specifications.

3. Test the compacted surface within the upper one foot for density at a frequency of not less than one test per 300 linear feet of pipeline.
4. Place fill material, as required. The fill should consist of "clean," fine sand with less than 5 percent soil fines. You may use fill materials with soil fines between 5 percent and 10 percent, but strict moisture control may be required. Place fill in uniform 10 to 12-inch loose lifts and compact each lift to a minimum density of 95 percent of the Modified Proctor maximum dry density. We recommend the compacted soils have a moisture content within 2 percent of the optimum value as determined by the Modified Proctor maximum dry density (ASTM-D1557).
5. Perform compliance tests within each lift of fill at a frequency of not less than one test per 300 linear feet of pipeline.

Borrow Suitability

The borings were planned, in part, to provide an indication of the suitability of excavated soils from the proposed construction for use as structural fill. Based on the boring results and classification of the soil samples, the soil described as sand (SP) and slightly silty fine sand (SP-SM) are considered suitable for use as structural fill depending on the moisture content of the soils at the time of placement and compaction. It should be understood that all soils excavated from below the water table may be excessively wet and may require stockpiling or spreading to dry prior to placement and compaction. Soils described as slightly silty fine sand (SP-SM) may take longer to dry than the soils described as fine sand (SP). The soils classified as clayey fine sand (SC), silty fine sand (SM), clay (CH), and slightly silty fine sand with limerock, wood, mulch, and debris (PT) are not considered suitable for structural fill material due to their plasticity characteristics and/or inherent moisture-related instability. Although not suitable for structural fill, due to excessive organic content, the organic materials may be used in landscape areas as long as positive drainage is maintained. Table 3 shows the depths of suitable fill for each boring performed.

TABLE 3	
Depths of Suitable Fill	
Boring	Depth Ranges of Suitable Fill (Feet)
B-1	None encountered
B-2	1.8-3, 4.8-6.3
B-3	0-6.3, 11-15
B-4	0-10.5

LIMITATIONS

During the early stages of most construction projects, geotechnical issues not addressed in this report may arise. Because of the natural limitations inherent in working with the subsurface, it is not possible for a geotechnical engineer to predict and address all possible problems. An Geotechnical Business Council (GBC) publication, "Important Information About Your Geotechnical Engineering Report" appears in Appendix B, and will help explain the nature of geotechnical issues.

We trust this report meets your needs and addresses the geotechnical issues associated with the proposed construction. We appreciate the opportunity to have worked with you on this project and look forward to a continued association. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Respectfully submitted,

UNIVERSAL ENGINEERING SCIENCES

Certificate of Authorization No. 549



Stephen R. Weaver, P.E.
Geotechnical Services Manager
FL P.E. Number 37389 ★

Date:

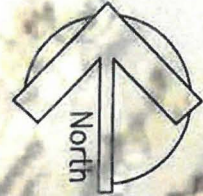
SRW/sw



Jacob Fuller
Staff Geotechnical Engineer

APPENDIX A

**BORING LOCATION PLAN
BORING LOGS
KEY TO BORING LOGS
FIELD EXPLORATION PROCEDURES
LABORATORY TESTING PROCEDURES**



LEGEND



SPT BORING LOCATIONS

GEOTECHNICAL EXPLORATION WESTROCK STORMWATER IMPROVEMENTS FERNANDINA BEACH, FLORIDA		CLIENT:		WESTROCK	
		DRAWN BY: TW		DATE: 7/24/18	
		CHECKED BY: JF		DATE: 7/24/18	
		SCALE: 1"= 100'			
BORING LOCATION PLAN		PROJECT NO: 0930.1800172.0000			
		REPORT NO:			
 UNIVERSAL ENGINEERING SCIENCES		PAGE NO:			
FIGURE 1					



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0930.1800172.0000

REPORT NO.:

PAGE: A-1

PROJECT: GEOTECHNICAL EXPLORATION
WESTROCK STORMWATER IMPROVEMENTS
FERNANDINA BEACH, FLORIDA

BORING DESIGNATION: **B-2**
SECTION: TOWNSHIP:

SHEET: **1 of 1**
RANGE:

CLIENT: WESTROCK
LOCATION: SEE BORING LOCATION PLAN
REMARKS:

G.S. ELEVATION (ft): DATE STARTED: 7/12/18
WATER TABLE (ft): .5 DATE FINISHED: 7/12/18
DATE OF READING: 7/12/18 DRILLED BY: DB/DH
EST. W.S.W.T. (ft): TYPE OF SAMPLING: ASTM D 21586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Very loose dark greenish-gray Clayey fine SAND with Limerock (SC)						
		WOH-2	2									
		4-8-3	11			Medium dense dark grayish-brown slightly Silty fine SAND with Brick fragments (SP-SM)						
		3-2-1	3			Very loose dark grayish-brown Silty fine SAND with trace red Brick Debris (SM)						
5		1-1-2	3			Very loose dark brown slightly Silty fine SAND with mixed Debris (SP-SM)						
		1-1-1	2			Very soft gray Silty CLAY with mixed Debris (CH)						
		WOH	WOH			Very soft dark greenish-gray Silty CLAY (CH)						
10		WOH	WOH				97.4	140.2				
15		WOH	WOH			Very soft dark greenish-gray Silty CLAY with some decaying Roots (CH)						
20		WOH	WOH									
25		WOH	WOH									
30		WOH	WOH									

BORING LOG 0930.1800172.0000-WESTROCK STORMWATER IMPROVEMENTS GPJ UNIENGSC.GDT 7/26/18



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0930.1800172.0000

REPORT NO.:

PAGE: A-2

PROJECT: GEOTECHNICAL EXPLORATION
WESTROCK STORMWATER IMPROVEMENTS
FERNANDINA BEACH, FLORIDA

BORING DESIGNATION: **B-3**
SECTION: TOWNSHIP:

SHEET: **1 of 1**
RANGE:

CLIENT: WESTROCK

G.S. ELEVATION (ft):

DATE STARTED: 7/12/18

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): 1.7

DATE FINISHED: 7/12/18

REMARKS:

DATE OF READING: 7/12/18

DRILLED BY: DB/DH

EST. W.S.W.T. (ft):

TYPE OF SAMPLING: ASTM D 21586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Very loose brown to light brown fine SAND (SP)						
		WOH-1-1	2									
		1-2-1	3			Very loose dark brown fine SAND with some Wood chips (SP)						
		2-3-4	7			Loose brown to dark grayish-brown fine SAND (SP)						
5		2-3-4	7				4.5	34.5				
		2-2-1	3			Very loose brown to dark brown Clayey fine SAND (SC)						
		WOH	WOH			Very soft greenish-gray CLAY (CH)						
10		WOH	WOH			Very loose greenish-gray Clayey fine SAND (SC)						
						Medium dense light greenish-gray fine SAND (SP)						
15		5-7-7	14									



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0930.1800172.0000

REPORT NO.:

PAGE: A-4

PROJECT: GEOTECHNICAL EXPLORATION
WESTROCK STORMWATER IMPROVEMENTS
FERNANDINA BEACH, FLORIDA

BORING DESIGNATION: **B-4**
SECTION: TOWNSHIP:

SHEET: **1 of 1**
RANGE:

CLIENT: WESTROCK

G.S. ELEVATION (ft):

DATE STARTED: 7/12/18

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): 3.0

DATE FINISHED: 7/12/18

REMARKS:

DATE OF READING: 7/12/18

DRILLED BY: DB/DH

EST. W.S.W.T. (ft):

TYPE OF SAMPLING: ASTM D 21586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Very loose to medium dense light brown to light gray fine SAND with reddish-brown seams (SP)						
		1-1-2	3				1.9	10.1				
		4-5-7	12									
		5-6-8	14									
5												
		8-8-8	16									
		8-8-8	16									
		4-6-8	14									
10												
		5-6-6	12									



SYMBOLS

SYMBOL DESCRIPTION

N	No. of blows of a 140-lb weight falling 30 inches required to drive standard spoon 1 foot.
WOR	Weight of Drill Rods
WOH	Weight of Drill Rods and Hammer
% REC	Percent Core Recovery from Rock Core Drilling
RQD	Rock Quality Designation
EOB	End Of Boring
BT	Boring Terminated
-200	Fines Content or % Passing No. 200 Sieve
MC	Moisture Content
LL	Liquid Limit
PI	Plasticity Index
K	Coefficient of Permeability
O.C.	Organic Content
▽	Estimated seasonal high groundwater level
▼	Measured groundwater level at time of drilling

RELATIVE DENSITY (sand-silt)

Very Loose - Less Than 4 Blows/Ft.
Loose - 4 to 10 Blows/Ft.
Medium - 11 to 30 Blows/Ft.
Dense - 31 to 50 Blows/Ft.
Very Dense - More Than 50 Blows/Ft.

CONSISTENCY (clay)

Very Soft - Less than 2 Blows/Ft.
Soft - 2 to 4 Blows/Ft.
Medium - 5 to 8 Blows/Ft.
Stiff - 9 to 15 Blows/Ft.
Very Stiff - 16 to 30 Blows/Ft.
Hard - More Than 30 Blows/Ft.

RELATIVE HARDNESS (Limestone)

Soft - 100 Blows for more than 2"
Hard - 100 Blows for less than 2"

UNIFIED CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines
			GP	Well-graded gravels and gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS	SW**	Well-graded sands and gravelly sands, little or no fines
			SP**	Well-graded sands and gravelly sands, little or no fines
		SANDS WITH FINES	SM**	Silty sands, sand-silt mixtures
			SC**	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS 50% or more passes No. 200 sieve*	SILTS AND CLAYS Liquid limit 50% or less	ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands	
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
		OL	Organic silts and organic silty clays of low plasticity	
	SILTS AND CLAYS Liquid limit greater than 50%	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic sils	
		CH	Organic clays or high plasticity, fat clays	
		OH	Organic clays of medium to high plasticity	
		PT	Peat, muck and other highly organic soils	

* Based on the material passing the 3-in. (75 mm) sieve.

** Use dual symbol (such as, SP-SM and SP-SC) for soil with more than 5% but less than 12% passing through No. 200 sieve.

MODIFIERS

These modifiers provide our estimate of the amount of minor constituents (SILT or CLAY sized particles) in the soil sample.

Trace - 5% or less
With SILT or with CLAY - 6% to 11%
SILTY or CLAYEY - 12% to 30%
Very SILTY or Very CLAYEY - 31% to 50%

These modifiers provide our estimate of the amount of organic components in the soil sample.

Trace - 1% to 2%
Few - 3% to 4%
Some - 5% to 8%
Many - Greater than 8%

These modifiers provide our estimate of the amount of other components (Shell, Gravel, Etc.) in the soil sample

Trace - 5% or less
Few - 6% to 12%
Some - 13% to 30%
Many - 31% to 50%

FIELD EXPLORATION PROCEDURES

Standard Penetration Test Borings

The penetration borings were made in general accordance with the latest revision of ASTM D 1586, "Penetration Test and Split-Barrel Sampling of Soils". The borings were advanced by rotary drilling techniques using a circulating bentonite fluid for borehole flushing and stability. At 2 ½ to 5 foot intervals, the drilling tools were removed from the borehole and a split-barrel sampler inserted to the borehole bottom and driven 18 inches into the soil using a 140 pound hammer falling on the average 30 inches per hammer blow. The number of blows for the final 12 inches of penetration is termed the "penetration resistance, blow count, or N-value". This value is an index to several in-place geotechnical properties of the material tested, such as relative density and Young's Modulus.

LABORATORY TESTING PROCEDURES

Natural Moisture Content

The water content of the sample tested was determined in general accordance with the latest revision of ASTM D 2216. The water content is defined as the ratio of “pore” or “free” water in a given mass of material to the mass of solid material particles.

Percent Fines Content

The percent fines or material passing the No. 200 mesh sieve of the sample tested was determined in general accordance with the latest revision of ASTM D 1140. The percent fines are the soil particles in the silt and clay size range.

Organic Loss on Ignition (Percent Organics)

The organic loss on ignition or percent organic material in the sample tested was determined in general accordance with ASTM D 2974. The percent organics is the material, expressed as a percentage, which is burned off in a muffle furnace at 550° Celsius.

Atterberg Limits

The Atterberg Limits consist of the Liquid Limit (LL) and the Plastic Limit (PL). The LL and PL were determined in general accordance with the latest revision of ASTM D 4318. The LL is the water content of the material denoting the boundary between the liquid and plastic states. The PL is the water content denoting the boundary between the plastic and semi-solid states. The Plasticity Index (PI) is the range of water content over which a soil behaves plastically and is denoted numerically by as the difference between the LL and the PL. The water content of the sample tested was determined in general accordance with the latest revision of ASTM D 2216. The water content is defined as the ratio of “pore” or “free” water in a given mass of material to the mass of solid material particles.

APPENDIX B

**IMPORTANT INFORMATION ABOUT YOUR
GEOTECHNICAL ENGINEERING REPORT**

CONSTRAINTS AND RESTRICTIONS

Important Information about This Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a civil engineer may not fulfill the needs of a constructor — a construction contractor — or even another civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. No one except you should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you — should apply this report for any purpose or project except the one originally contemplated.*

Read the Full Report

Serious problems have occurred because those relying on a geotechnical-engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

Geotechnical Engineers Base Each Report on a Unique Set of Project-Specific Factors

Geotechnical engineers consider many unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk-management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical-engineering report that was:

- not prepared for you;
- not prepared for your project;
- not prepared for the specific site explored; or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical-engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an

assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical-engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical-engineering report whose adequacy may have been affected by:* the passage of time; man-made events, such as construction on or adjacent to the site; or natural events, such as floods, droughts, earthquakes, or groundwater fluctuations. *Contact the geotechnical engineer before applying this report to determine if it is still reliable.* A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ — sometimes significantly — from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide geotechnical-construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are Not Final

Do not overrely on the confirmation-dependent recommendations included in your report. *Confirmation-dependent recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's confirmation-dependent recommendations if that engineer does not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A Geotechnical-Engineering Report Is Subject to Misinterpretation

Other design-team members' misinterpretation of geotechnical-engineering reports has resulted in costly

problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical-engineering report. Confront that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical-engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give constructors the complete geotechnical-engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure constructors have sufficient time to perform additional study. Only then might you be in a position to give constructors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.*

Read Responsibility Provisions Closely

Some clients, design professionals, and constructors fail to recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help

others recognize their own responsibilities and risks. *Read these provisions closely. Ask questions. Your geotechnical engineer should respond fully and frankly.*

Environmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold-prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold-prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical-engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

Rely, on Your GBC-Member Geotechnical Engineer for Additional Assistance

Membership in the Geotechnical Business Council of the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you GBC-Member geotechnical engineer for more information.



8811 Colesville Road/Suite G106, Silver Spring, MD 20910

Telephone: 301/565-2733 Facsimile: 301/589-2017

e-mail: info@geoprofessional.org www.geoprofessional.org

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CONSTRAINTS AND RESTRICTIONS

WARRANTY

Universal Engineering Sciences has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until excavation begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify Universal Engineering Sciences, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Universal Engineering Sciences of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of Universal Engineering Sciences to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

Universal Engineering Sciences is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data presented are made by others, those conclusions or recommendations are not the responsibility of Universal Engineering Sciences.

CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by Universal Engineering Sciences.

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations.

Bidders are urged to make their own soil borings, test pits, test caissons or other investigations to determine those conditions that may affect construction operations. Universal Engineering Sciences cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING

Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of driving resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS

Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water levels may not have been stabilized at the last reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides, and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.

LOCATION OF BURIED OBJECTS

All users of this report are cautioned that there was no requirement for Universal Engineering Sciences to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by Universal Engineering Sciences to locate any such buried objects. Universal Engineering Sciences cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME

This report reflects the soil conditions at the time of investigation. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional reviews may be required.

LIST OF APPENDICES

APPENDIX A

BORING LOCATION PLAN
BORING LOGS
KEY TO BORING LOGS
FIELD EXPLORATION PROCEDURES
LABORATORY TEST PROCEDURES

APPENDIX B

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL ENGINEERING REPORT
CONSTRAINTS AND RESTRICTIONS

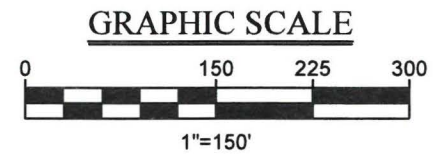
ATTACHMENT G
SITE DEVELOPMENT MAP

MATTHEWS
DESIGN GROUP
INCORPORATED

PO Box 3126 • 7 Waldo Street • St. Augustine • Florida • 32084
www.matthewsdesign.net

EXISTING IMPERVIOUS AREA
NOT INCLUDED IN
CALCULATIONS
OUTFALL WILL REMAIN AS IS

PROJECT AREA
LIMITS 15.0 AC



PERMITTED POND AREA
89,384 SF
(69,600 @ NWL)

EXISTING OUTFALL
CONVEYANCE

EXISTING IMPERVIOUS AREA TO
BE INCLUDED IN CALCULATIONS
AND ROUTED THROUGH POND
195,001 SF

EXISTING/PROPOSED
OUTFALL
LOCATION 2

PERMITTED SITE AREA
AREA = 365,309 SF
(227,926 SF GRAVEL AND 137,383 SF ASPHALT)

EXISTING
OUTFALL
LOCATION 1
TO BE
REMOVED

SITE TABLE		
TOTAL SITE	14.9 AC	649,704 SF
DETENTION POND (NWL)	69,600 SF	
GRAVEL PARKING	233,515 SF	
ASPHALT	131,794 SF	
ADDITIONAL IMPERVIOUS (ROOF/ASPHALT)	195,011 SF	
PERVIOUS (GRASS)	19,783 SF	

REVISIONS

NO.	DATE	DESCRIPTION

DESIGNED BY

SAK

MS & KIM

CHECKED BY

SAK

DATE

05-10-2018

JOB NO.

18037

MATTHEWS DESIGN GROUP, INC.

P.O. BOX 3126, 7 WALDO STREET
ST. AUGUSTINE, FLORIDA 32084

PHONE: 904.826.1334
FAX: 904.826.4547
INFO@MATTHEWSDESIGN.NET

SITE DEVELOPMENT MAP

WESTROCK DROP YARD

FERNANDINA BEACH

PREPARED FOR

TECHNICAL ASSOCIATES

SHEET NO.

H

OF H

ATTACHMENT H
PRE AND POST DEVELOPMENT MAP

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GRAPHIC SCALE



NOTE:
SEE CONSTRUCTION
GRADING PLAN FOR
MORE DETAILED
STORMWATER PIPE
AND STRUCTURE
INFORMATION

POST DEVELOPMENT PLAN
WESTROCK DROP YARD
FERNANDINA BEACH
PREPARED FOR
TECHNICAL ASSOCIATES

MATTHEWS DESIGN GROUP, INC.
P.O. BOX 3126, 7 WALDO STREET
ST. AUGUSTINE, FLORIDA 32084
PHONE: 904.826.1334
FAX: 904.826.4547
INFO@MATTHEWSDESIGN.NET



DSGN BY: SAK
DWG BY: MS & KJM
CHK BY: SAK
DATE: 05-10-2018
JOB No.: 18037

REVISIONS	
NO.	DESCRIPTION

REGISTERED ENGINEER
SCOTT A. KNOWLES, P.E.
CA#26535 FL#55391

ATTACHMENT I
PRE AND POST TC WORKSHEETS

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MATTHEWS DESIGN GROUP INCORPORATED

Project Name: Westrock
Project No: 18037

Designer: KJM
Date: 1/20/2019

TIME OF CONCENTRATION CALCULATIONS

Stormwater Basin: Pre Basin 1

Time of concentration for sheet flow from Manning-Kinematic wave equation (1976)

$$T_C = 0.007 * (n * L)^{0.8} / (P_2^{0.5} * S^{0.4})$$

Length:	400 ft	n:	0.15		
High Pt:	15.0 ft	Slope:	0.022 ft/ft		
Low Pt:	6.3 ft	P ₂ :	5.04 in/hr	2yr/24hr	
Surface:	Short grass prairie			T ₁ :	22.89 min

Time of concentration for shallow concentrated flow from SCS TR-55 velocity method.

Length:	41 ft	Slope:	0.021 ft/ft		
High Pt:	4.1 ft	Velocity:	2.323 ft/sec		
Low Pt:	3.3 ft				
Surface:	Unpaved			T ₂ :	0.29 min

Time of concentration for Rect./Vee/Trap.channel from Manning's Equation.

Length:	0 ft	Depth:	0.0 ft		
High Pt:	0.0 ft	Bottom:	0.0 ft		
Low Pt:	0.0 ft	Side Slope:	0 ft/ft		
Slope:	0.000 ft/ft	Type:	Rectangular		
Surface:	Clean	R _H :	0.00 ft		
n:	0	Velocity:	0.000 ft/sec		
				T ₃ :	0.00 min

Time of concentration for Storm Sewer flow assuming 2 fps velocity.

Length:	188 ft				
Velocity:	2.00 ft/sec				
				T ₄ :	1.57 min

T_C: 24.75 min

USE T_C: 25 min

MATTHEWS DESIGN GROUP INCORPORATED

Project Name: Westrock
Project No: 18037

Designer: KJM
Date: 1/20/2019

TIME OF CONCENTRATION CALCULATIONS

Stormwater Basin: Post Basin 1

Time of concentration for sheet flow from Manning-Kinematic wave equation (1976)

$$T_C = 0.007 * (n * L)^{0.8} / (P_2^{0.5} * S^{0.4})$$

Length:	206 ft	n:	0.012		
High Pt:	9.5 ft	Slope:	0.002 ft/ft		
Low Pt:	9.0 ft	P ₂ :	5.04 in/hr	2yr/24hr	
Surface:	Asphalt			T ₁ :	4.29 min

Time of concentration for shallow concentrated flow from SCS TR-55 velocity method.

Length:	0 ft	Slope:	0.000 ft/ft		
High Pt:	0.0 ft	Velocity:	0.000 ft/sec		
Low Pt:	0.0 ft				
Surface:	Unpaved			T ₂ :	0.00 min

Time of concentration for Rect./Vee/Trap.channel from Manning's Equation.

Length:	0 ft	Depth:	0.0 ft		
High Pt:	0.0 ft	Bottom:	0.0 ft		
Low Pt:	0.0 ft	Side Slope:	0 ft/ft		
Slope:	0.000 ft/ft	Type:	Vee		
Surface:	Weedy	R _H :	0.00 ft		
n:	0.03	Velocity:	0.000 ft/sec		
				T ₃ :	0.00 min

Time of concentration for Storm Sewer flow assuming 2 fps velocity.

Length:	1,473 ft				
Velocity:	2.00 ft/sec				
				T ₄ :	12.28 min

T_C: 16.56 min

USE T_C: 17 min

SITE ENGINEERING PLANS

FOR

COMMERCIAL RETAIL BUILDING VINTAGE AMELIA COMMERCIAL OUTPARCEL

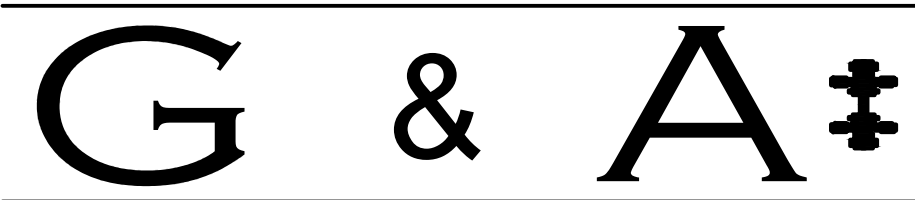
FOR

CONCEPT DEVELOPMENT, INC.

BY

GILLETTE & ASSOCIATES, INC.

CIVIL & ENVIRONMENTAL ENGINEERING
MECHANICAL & STRUCTURAL ENGINEERING
PERMITTING & CONSTRUCTION MANAGEMENT
20 SOUTH 4TH STREET AMELIA ISLAND, FLORIDA 32034
PHONE: 904/261-8819

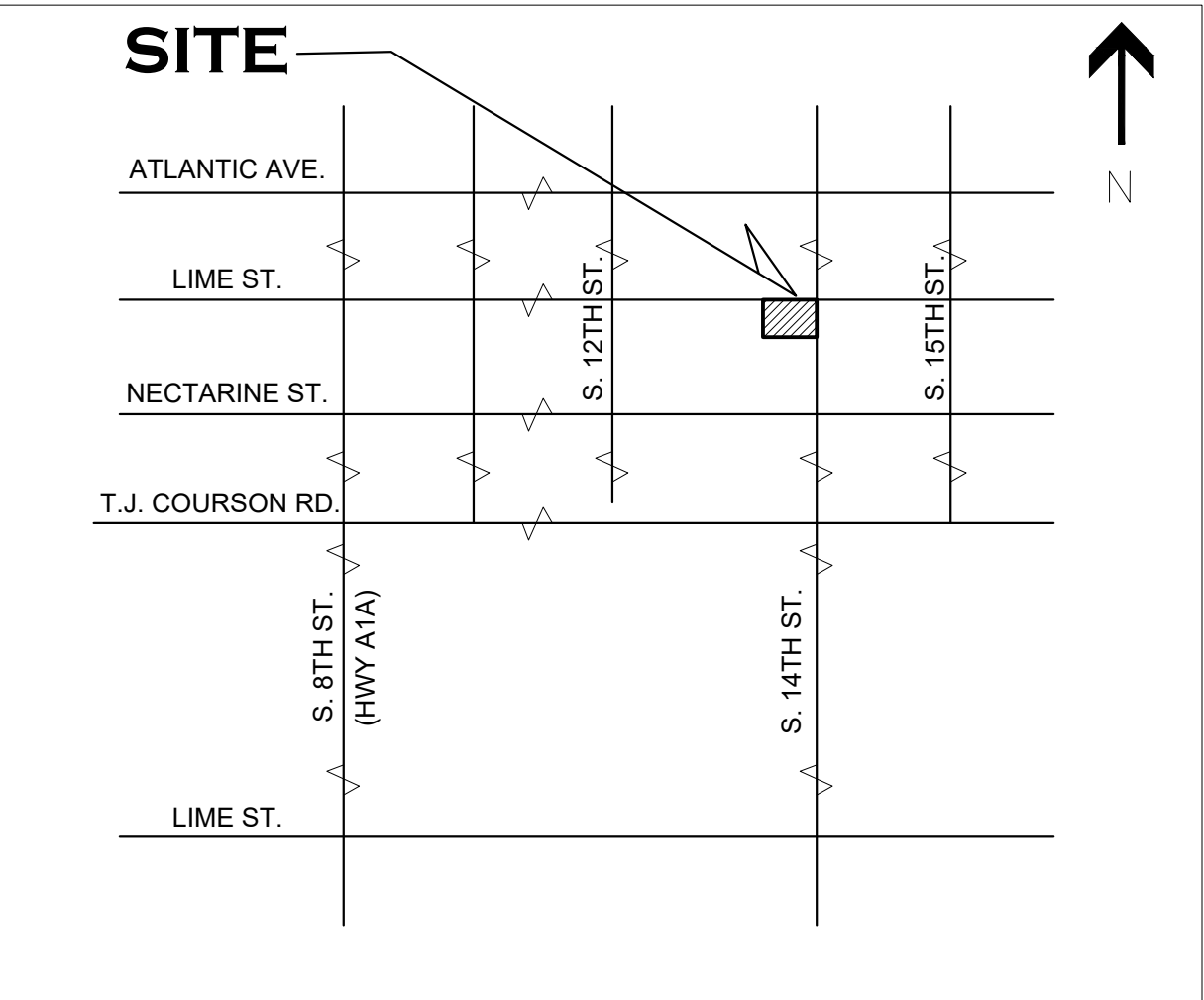


PERMITTING AGENCIES

CITY OF FERNANDINA BEACH
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

ISSUE DATE: SEPTEMBER 17, 2020
REVISION DATE: NOVEMBER 5, 2020

SITE LOCATION MAP



NOTE: SOME DETAILS IN THESE DRAWINGS ARE TO BE CONSIDERED TYPICAL AND MAY NOT BE CALLED OUT ON PLANS. CONTRACTOR SHALL BECOME FAMILIAR WITH AND FOLLOW ALL DETAILS DURING CONSTRUCTION IN ALL TYPICAL AREAS.

REGISTERED DESIGN PROFESSIONAL

REV

0

DATE

11/5/20

ITEM

ISSUE FOR C.O.F.B. TRC APPROVAL & CONSTRUCTION

GILLETTE & ASSOCIATES, INC.

CIVIL, ENVIRONMENTAL, MECHANICAL, & STRUCTURAL ENGINEERING

CERTIFICATE OF AUTHORIZATION NO. 9332

ASA R. GILLETTE, P.E. * FL PE NO. 56177

20 S. 4th STREET * FERNANDINA BEACH, FL 32034

PHONE: 904-261-8819 * www.gilletteassociates.com

COMMERCIAL RETAIL BUILDING
CONCEPT DEVELOPMENT, INC.

S. 14TH ST. & LIME ST.
FERNANDINA BEACH, FLORIDA

DATE:

11/5/20

SCALE:

DRAWING IS REDUCED IF LESS THAN 22" x 34"

COVER SHEET

North / Elev Key Sheet

W

E

N

S

CVR

Page

ASA R. GILLETTE, P.E.
FLORIDA P.E. NO. 56177

GENERAL NOTES		INDEX					
SITE / GEOMETRY		WATER NOTES					
1. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER. ALL SAFETY RULES AND GUIDELINES OF O.S.H.A. SHALL BE FOLLOWED. THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ANY INJURIES OF HIS EMPLOYEES, AND ANY DAMAGE TO PRIVATE PROPERTY OR PERSONS DURING THE COURSE OF THIS PROJECT. ALL COSTS ASSOCIATED WITH COMPLYING WITH REGULATIONS AND THE FLORIDA TRENCH SAFETY ACT MUST BE INCLUDED IN THE CONTRACTOR'S PRICE FOR PERFORMING THE WORK. 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE JOB SITE PRIOR TO PREPARING THE BID FOR THE PURPOSE OF FAMILIARIZING HIMSELF WITH THE NATURE AND THE EXTENT OF THE WORK AND LOCAL CONDITIONS, EITHER SURFACE OR SUBSURFACE, WHICH MAY AFFECT THE WORK TO BE PERFORMED, AND THE EQUIPMENT, LABOR AND MATERIALS REQUIRED. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER THIS CONTRACT. THE CONTRACTOR IS URGED TO TAKE COLOR PHOTOGRAPHS ALONG THE ROUTE OF THIS PROJECT TO RECORD EXISTING CONDITIONS PRIOR TO CONSTRUCTION, AND TO AID IN RESOLVING POSSIBLE FUTURE COMPLAINTS THAT MAY OCCUR DUE TO CONSTRUCTION OF THE PROJECT. ALL COSTS ASSOCIATED WITH PRELIMINARY INVESTIGATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. 3. ALL IMPROVEMENTS SHOWN ARE TO BE WARRANTED BY THE CONTRACTOR TO THE DEVELOPER. 4. ELEVATIONS ARE BASED ON NGVD DATUM OF 1929. TOPOGRAPHIC AND BOUNDARY INFORMATION WAS PROVIDED BY: MRE OF JAX ENTERPRISES, LLC, 6005 POWERS AVENUE, SUITE 104, JACKSONVILLE, FL 32217 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY BUILDING, RIGHT-OF-WAY PERMITS NOT PROVIDED AND INSURANCE REQUIRED FOR THE PROJECT. 6. THE CONTRACTOR SHALL COORDINATE THE WORK WITHIN CITY, COUNTY OR STATE RIGHT-OF-WAY WITH THE PROPER AGENCIES FOR MAINTENANCE OF TRAFFIC AND METHOD OF CONSTRUCTION & REPAIR. 7. THE CONTRACTOR SHALL ADVISE THE OWNER'S AUTHORIZED REPRESENTATIVE OF PLANNED WORK SCHEDULE. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION WITH ALL OTHER CONTRACTORS. IN THE EVENT OF ANY CONFLICT WHATSOEVER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD, AND THE OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION. 8. "AS-BUILT" DRAWINGS – AS-BUILTS ARE REQUIRED TO BE SIGNED AND SEALED BY A FLORIDA REGISTERED LAND SURVEYOR. THEREFORE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTRACT WITH A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA FOR THE PREPARATION, FIELD LOCATIONS, CERTIFICATION, AND SUBMITTAL OF AS-BUILT DRAWINGS. 9. "AS-BUILT" RECORD DATA AND INFORMATION SHALL BE MAINTAINED BY THE CONTRACTOR. RECORD DRAWINGS SHALL BE SUPPLIED TO THE ENGINEER. 10. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL SURVEY AND PROPERTY MONUMENTS. IF A MONUMENT IS DISTURBED, THE CONTRACTOR SHALL CONTRACT WITH THE SURVEYOR OF RECORD FOR REINSTALLATION OF THE MONUMENT. 11. ALL DEBRIS RESULTING FROM ALL ACTIVITIES SHALL BE DISPOSED OF OFF-SITE BY CONTRACTOR ON A DAILY BASIS. 12. ALL EXCESS SUITABLE AND UNSUITABLE MATERIALS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR UNLESS DIRECTED OTHERWISE BY THE ENGINEER. 13. ALL EXISTING TREES LISTED TO REMAIN SHALL BE PRESERVED AND PROTECTED. 14. THE LOCATION OF ALL EXISTING UTILITIES, STRUCTURES, AND IMPROVEMENTS ON THE DRAWINGS ARE BASED ON LIMITED INFORMATION AND MAY NOT HAVE BEEN FIELD VERIFIED. THE LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL NOTIFY RESPECTIVE UTILITY OWNERS AND FIELD VERIFY LOCATIONS OF EXISTING UTILITIES AND OTHER IMPROVEMENTS PRIOR TO COMMENCING ANY CONSTRUCTION. IF THE LOCATIONS SHOWN ARE CONTRARY TO ACTUAL FIELD LOCATIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER OF THE DISCREPANCY. THE DISCREPANCY SHOULD BE RESOLVED PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN AREAS NEAR EXISTING UTILITY IMPROVEMENTS AND SHALL BE RESPONSIBLE FOR REPAIRS OR PAYMENTS FOR ALL DAMAGE MADE TO EXISTING UTILITIES OR OTHER IMPROVEMENTS. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL GRADES, INVERTS, AND TYPE OF MATERIAL OF EXISTING UTILITIES TO WHICH THEY SHALL CONNECT. 15. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER ON ALL MATERIALS, FOR REVIEW AND APPROVAL, PRIOR TO PURCHASE OR CONSTRUCTION OF ANY UTILITY OR STRUCTURE. 17A. UNSUITABLE MATERIALS UNDER WATER, SEWER, OR STORM PIPE AND/OR STRUCTURES SHALL BE REMOVED AND REPLACED WITH SELECTED BACKFILL COMPACTED TO 98% OF IT'S MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D1557). 17B. ALL FINISH FLOORS SHOWN ON THE PLANS ARE MINIMUM ELEVATIONS		18. ALL WATER & SEWER CONSTRUCTION SHALL BE ACCOMPLISHED BY AN UNDERGROUND UTILITY CONTRACTOR LICENSED UNDER THE PROVISIONS OF CHAPTER 489 FLORIDA STATUTES. 19. WHEN DEWATERING CAPACITY REQUIRES A PERMIT (CUP), IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE PERMIT THROUGH THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT. 20. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SANITARY HAZARD. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. WHERE PARALLEL WATER AND SEWER MAINS HAVE LESS THAN 10 FOOT HORIZONTAL SEPARATION, 20 FOOT LENGTHS OF C900 (DR18) WATER QUALITY PIPE SHALL BE USED WITH THE JOINTS STAGGERED AT 10 FOOT INTERVALS. THE PIPES SHALL BE PLACED IN SEPARATE TRENCHES WITH THE WATER MAIN AT LEAST 18 INCHES ABOVE THE SEWER. 21. WATER MAINS CROSSING SANITARY HAZARDS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER MAIN. WHERE WATER AND SEWER MAINS CROSS WITH BETWEEN 18 INCHES AND 6 INCHES OF VERTICAL CLEARANCE, A 20 FOOT SECTION OF C900 (DR18) WATER QUALITY PIPE SHALL BE CENTERED ON THE POINT OF THE CROSSING. THE CONTRACTOR SHALL FIELD VERIFY THE VERTICAL SEPARATION. THE MINIMUM SEPARATION BETWEEN WATER AND SEWER PIPES IS TO BE 6 INCHES OUTSIDE DIAMETER TO OUTSIDE DIAMETER. 22. NO WATER MAIN PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SEWER MANHOLE. 23. BLANK 24. TRACER WIRE SHALL BE PROVIDED ON ALL WATER MAINS AND FORCE MAINS. TRACER WIRE SHALL BE #10 UF SOLID COPPER WIRE, COATED, AND SUITABLE FOR BURIAL. COATING SHALL BE BLUE FOR WATER AND GREEN FOR SEWER MAIN CONNECTIONS. WIRE SHALL BE ATTACHED DIRECTLY TO TOP OF PIPE AND BROUGHT INTO EACH VALVE BOX AND COILED TO ALLOW FOR EASY ACCESS AND EXTENSION ABOVE FINISHED GRADE FOR ATTACHMENT OF LOCATING EQUIPMENT. 25. ALL PIPE LENGTHS ARE APPROXIMATE DIMENSIONS. ALL DRAINAGE STRUCTURES SHALL BE CONSTRUCTED TO CONFORM WITH TYPICAL SECTIONS AND DETAILS AS SHOWN ON THE MISCELLANEOUS DETAILS SHEET AND IN ACCORDANCE WITH THE SPECIFICATIONS. 26. ALL UNDERGROUND UTILITIES MUST BE INSTALLED PRIOR TO PREPARATION OF SUBGRADE FOR PAVEMENT. 27. GRADES SHOWN ON PLANS ARE EDGE OF PAVEMENT FINISHED GRADES UNLESS OTHERWISE NOTED. 28. SHOULD THE SURFACE OR SUBSURFACE CONDITIONS VARY FROM WHAT IS SHOWN ON THE PLANS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER. 29. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE SEEDED AND MULCHED UNLESS OTHERWISE SPECIFICALLY STATED. 30. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTROL OF SEDIMENT-LADEN RUNOFF RESULTING FROM STORM EVENTS DURING THE CONSTRUCTION PHASE. EROSION CONTROL FACILITIES SHOULD BE INSTALLED EARLY DURING THE CONSTRUCTION PERIOD SO AS TO PREVENT THE TRANSPORT OF SEDIMENT INTO SURFACE WATERS. RE-VEGETATION AND STABILIZATION OF DISTURBED AREAS SHOULD BE ACCOMPLISHED IMMEDIATELY TO REDUCE THE POTENTIAL FOR FURTHER SOIL EROSION. 31. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND COUNTY/CITY BEFORE COMMENCING WORK. 32. MINIMUM COVER OVER PIPES SHALL BE 36" UNLESS OTHERWISE INDICATED. 33. ALL UNDERGROUND UTILITY COMPANIES SHALL BE CONTACTED AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION. 34. IN ADDITION TO THE SPECIFICATIONS AND DETAILS PROVIDED FOR THIS CONTRACT, THE NASSAU COUNTY STANDARD DETAILS AND SPECIFICATIONS (LATEST REVISION) SHALL ALSO BE USED FOR ANY ITEMS NOT COVERED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A SET OF STANDARD DETAILS AND SPECIFICATIONS FROM NASSAU COUNTY. 35. BACKFILL MATERIAL SHALL BE COMPACTED TO 100% (2%) PER CITY OF FB REQUIREMENTS UNDER EXISTING AND PROPOSED ROADWAYS. 36. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN TO BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER. 37. STATIONING REFERS TO THE CENTERLINE OF THE ROADWAY EXCEPT AS NOTED ON PLANS. WHERE PAVEMENT SPLITS, THE STATIONING FOLLOWS THE INSIDE EDGE OF PAVEMENT UNTIL ROADWAY TRANSITIONS BACK TO THE TYPICAL ROADWAY SECTION 38. ALL CONSTRUCTION, MATERIAL, AND WORKMANSHIP ARE TO BE IN ACCORDANCE WITH CITY OF FB AND COUNTY STANDARDS			PAGE #	SHEET	DESCRIPTION
	1	CVR	COVER SHEET				
	2	IN-1	INDEX SHEET				
	3	PRE-1	PREDEVELOPMENT PLAN				
	4	GE-1	GEOMETRY PLAN				
	5	DR-1	DRAINAGE PLAN				
	6	UT-1	UTILITY PLAN				
	7	TM-1	TREE MITIGATION PLAN				
	8	TM-2	TREE MITIGATION TABLE				
	9	LS-1	LANDSCAPE PLAN				
	10	DT-1	SITE DETAILS				
	11	DT-2	WATER & SEWER DETAILS				
	12	DT-3	GEO-GRID PLAN				

FIRE NOTES	
1. WHERE UNDERGROUND WATER MAINS AND HYDRANTS ARE TO BE PROVIDED, THEY SHALL BE INSTALLED, COMPLETED, AND IN SERVICE PRIOR TO COMMENCING CONSTRUCTION WORK ON ANY STRUCTURE. (NFPA 1, 18.4.3.1.3, 2009 EDITION) 2. CLEARANCES OF SEVEN AND ONE HALF FEET (7 FT-6 IN.) IN FRONT OF AND TO THE SIDES OF THE FIRE HYDRANT, WITH A FOUR FOOT CLEARANCE TO THE REAR OF THE HYDRANT. (NFPA 1, 18.3.4.1, 2009) 3. NEW FIRE HYDRANT(S) SHALL BE INSTALLED SO THAT POSITIONED NOT MORE THAN 7 FEET 6 INCHES AWAY FROM CURB OR BERM OF THE ROADWAY.	

LEGEND		SEWER NOTES		
	EXISTING VALVE		PROPOSED SPOT ELEVATION	
	EXISTING WATER LINE		DRAINAGE STRUCTURE	
	EXISTING SANITARY SEWER		PIPE	
	EXISTING FIRE HYDRANT		PROPOSED CONTOUR	
	PROPOSED SANITARY SEWER		PROPOSED EDGE OF PAVEMENT	
	PROPOSED WATER LINE		PROPOSED PROPERTY LINE	
	PROPOSED FIRE HYDRANT		PROPOSED R.O.W. LINE	
	EXISTING EDGE OF PAVEMENT		EXISTING CONTOUR	
	EXISTING PROPERTY LINE			
		1. THE CONTRACTOR SHALL PROVIDE, TO THE ENGINEER OF RECORD , A SCHEDULE OF INVERT ELEVATIONS OF ALL SANITARY MANHOLES PRIOR TO THE PLACEMENT OF THE LIME ROCK BASE COURSE. THIS SCHEDULE TO BE PROVIDED BY THE REGISTERED LAND SURVEYOR SUBMITTING THE "AS-BUILT" DRAWINGS FOR THIS PROJECT. 2. SANITARY SEWER SERVICES SHALL BE 6"PVC WITH A MINIMUM SLOPE OF 0.006 FEET PER FOOT AND SHALL BE TERMINATED AT THE RIGHT-OF-WAY LINE WITH A DEPTH OF 24" TO 48" FROM THE FINAL FINISHED GRADE OF THE DEVELOPED LOTS. DEPTHS GREATER THAN 48" FROM FINAL FINISHED GRADE SHALL BE READJUSTED BY THE DEVELOPER AT HIS COST. 3. GRAVITY SEWER TO BE CLEANED & TV TESTED BY DEVELOPER AT DEVELOPER'S EXPENSE 4. ALL MANHOLE FRAMES AND COVERS TO BE ADJUSTED TO FINAL FINISHED GRADE. 5. A SEPARATE SEWER SERVICE (6" MIN.) SHALL BE PROVIDED TO THE RIGHT-OF-WAY FOR EACH LOT BEING SERVED. AN "S" SHALL BE ETCHED INTO THE CURB DIRECTLY OVER EACH SERVICE LINE OR IN THE STREET SIDE OF A SIDEWALK IN LINE WITH THE CLEANOUT. 6. GRAVITY SEWER TO BE GREEN IN COLOR 7. NEW GRAVITY SEWER SYSTEM SHALL BE PLUGGED AT NEAREST EXISTING DOWNSTREAM MANHOLE AND SHALL NOT BE REMOVED WITHOUT AUTHORIZATION FROM THE UTILITY COMPANY. EXISTING MANHOLES TO BE COREBORED AND ARRANGEMENTS MADE TO BE REFURBISHED WITH COMPATIBLE MATERIALS IF THE EXISTING MANHOLE IS ALLOWED TO BE USED. 8. FINISHED FLOOR ELEVATIONS SHALL BE GREATER (HIGHER) THAN THE ELEVATION OF THE MANHOLE NEAREST THE SERVICE LATERAL IN ORDER TO AVOID A POTENTIAL BACKUP OF SEWAGE IN THE HOUSE OR BUILDING. 9. ALL GRAVITY SEWER PIPE TO A 10 FOOT DEPTH OF COVER SHALL BE SDR-26 PVC PIPE (MINIMUM). GRAVITY SEWER PIPE WITH COVER OF 15 FEET (AND IN EASEMENTS) AND GREATER SHALL BE C900 – DR18. JOINT SHALL BE OF THE BELL AND SPIGOT TYPE AND MEET THE REQUIREMENTS OF THE PIPE REFERRED BEING USED. 10. WHEN A PROPERTY LINE CAN NOT BE DEFINED, THE SEWER CLEANOUT SHALL BE PLACED IN AN UNPAVED AREA AT A DISTANCE NO GREATER THAN 30 FEET FROM THE SEWER MAIN. 11. NOTE: DR-18 TO BE USED ON SEWER LINE CROSSING WHERE STORM DRAIN IS WITHIN 24 INCHES ABOVE GRAVITY ALSO JOINT TO BE CENTERED AT CROSSING 12. ALL MANHOLES TO HAVE MINIMUM 24" HINGED RING AND COVER EAST JORDAN OR APPROVED EQUIVALENT 13. SEWER PLUGS USED DURING THE CONSTRUCTION OR CONNECTION TO A SYSTEM SHALL HAVE THE CONTRACTOR'S NAME PERMANENTLY STAMPED. 14. THE MANHOLE LINER SHALL BE SPECTRA SHIELD OR APPROVED EQUIVALENT. 15. IN ACCORDANCE WITH THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) REQUIREMENTS, LEAKAGE TESTING SHALL BE PERFORMED ON ALL SEGMENTS OF THE SEWER SYSTEM. TESTING MAY INCLUDE APPROPRIATE WATER OR LOW PRESSURE AIR TESTING. TEST METHODS SHALL TAKE INTO CONSIDERATION THE RANGE IN GROUNDWATER ELEVATIONS DURING THE TEST AND ANTICIPATED DURING THE DESIGNED LIFE OF THE SEWER. NO LEAKAGE ALLOWED IN SYSTEM. 16. ALL FORCE MAIN PIPING TO BE DR-18 GREEN OR BROWN. 17. CONTACT JOHN MANDRICK, COFB UTILITY DIRECTOR AT (904-310-3420) FOR PRE-CONSTRUCTION AND COORDINATION MEETING PRIOR TO WORK COMMENCING.		

NOTE: SOME DETAILS IN THESE DRAWINGS ARE TO BE CONSIDERED TYPICAL AND MAY NOT BE CALLED OUT ON PLANS. CONTRACTOR SHALL BECOME FAMILIAR WITH AND FOLLOW ALL DETAILS DURING CONSTRUCTION IN ALL TYPICAL AREAS.

REGISTERED DESIGN PROFESSIONAL

ASA R. GILLETTE, P.E.
FLORIDA P.E. NO. 56177

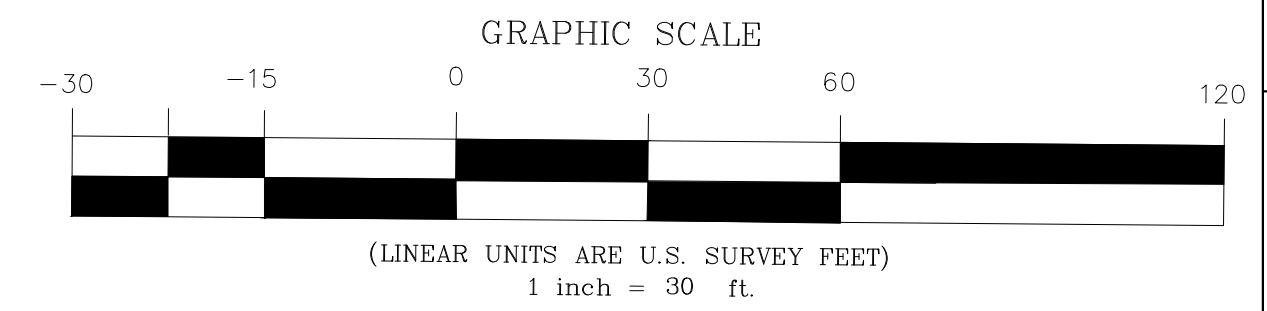
REV	DATE	ITEM
0	11/5/20	ISSUE FOR C.O.F.B. TRC APPROVAL & CONSTRUCTION

GILLETTE & ASSOCIATES, INC.
CIVIL, ENVIRONMENTAL, MECHANICAL, & STRUCTURAL ENGINEERING
CERTIFICATE OF AUTHORIZATION NO. 9332
ASA R. GILLETTE, P.E. • FL. PE NO. 56177
20 S. 4th STREET * FERNANDINA BEACH, FL 32034
PHONE: 904-261-8819 * www.gilletteassociates.com

COMMERCIAL RETAIL BUILDING
CONCEPT DEVELOPMENT, INC.

S. 14TH ST. & LIME ST.
FERNANDINA BEACH, FLORIDA

DATE: 11/5/20	
SCALE: NONE DRAWING IS REDUCED IF LESS THAN 22" x 34"	
INDEX SHEET & NOTES	
North / Elev Key Sheet W N E S	IN-1 Page



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REGISTERED DESIGN PROFESSIONAL

ASA K. GILLETTE, P.E.
FLORIDA P.E. NO. 56177

REV	DATE	ITEM
0	11/5/20	ISSUE FOR C.O.F.B. TRC APPROVAL & CONSTRUCTION

GILLETTE & ASSOCIATES, INC.
CIVIL, ENVIRONMENTAL, MECHANICAL, & STRUCTURAL ENGINEERING
CERTIFICATE OF AUTHORIZATION NO. 0370

CERTIFICATE OF AUTHORIZATION NO. 933Z
ASA R. GILLETTE, P.E. * FL. PE NO. 56177

STREET * FERNANDINA BEACH, FL 32034

PHONE: 904-261-8819 * www.gilletteassociates.com

COMMERCIAL RETAIL BUILDING
CONCEPT DEVELOPMENT, INC.

S. 14TH ST. & LIME ST.
FERNANDINA BEACH, FLORIDA

DATE: 11/5/20

SCALE: 1:30

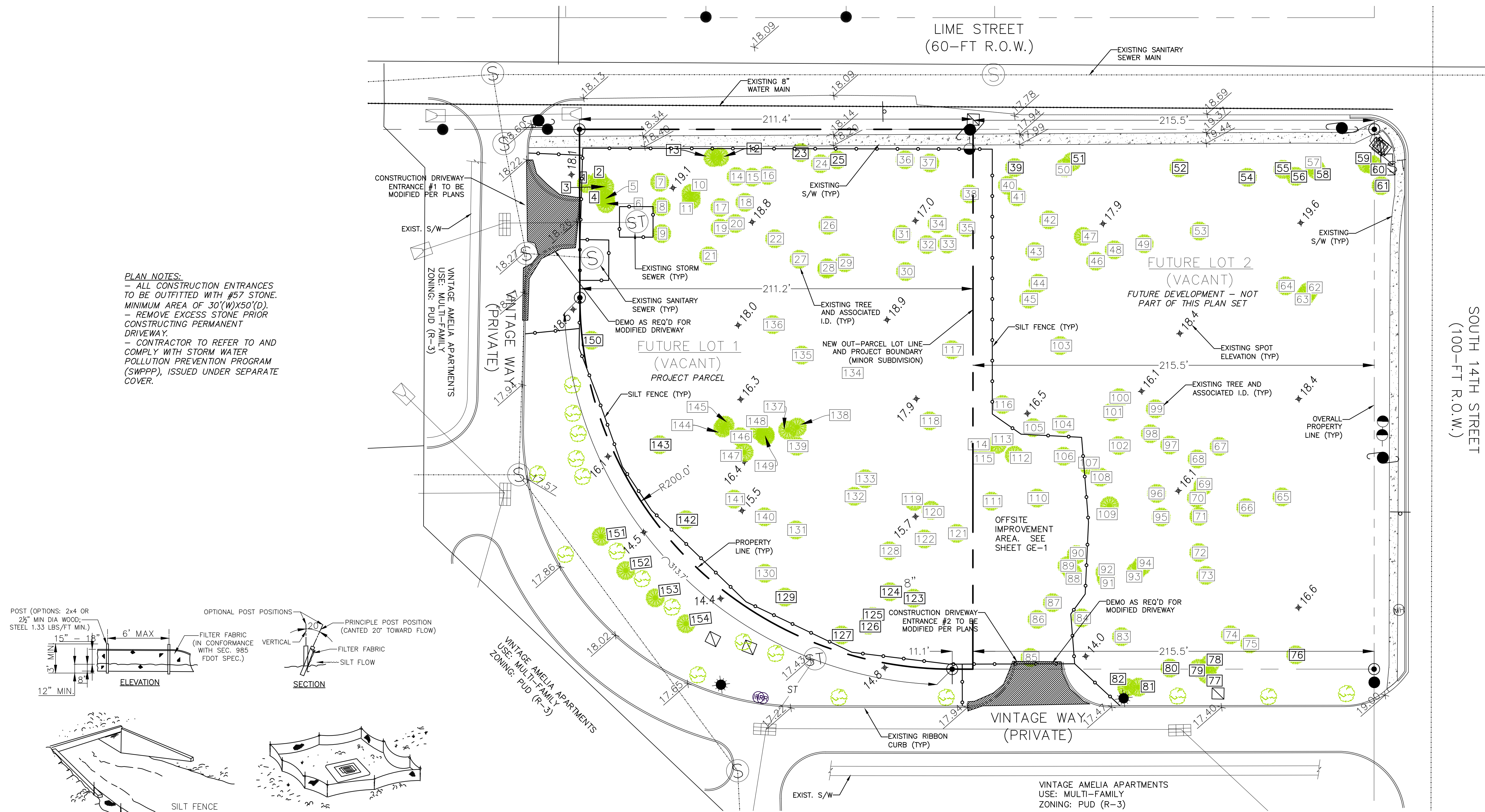
DRAWING IS REDUCED IF LESS
THAN 22" x 34"

PREDEVELOPED
PLAN

North / Elev	Key	Sheet
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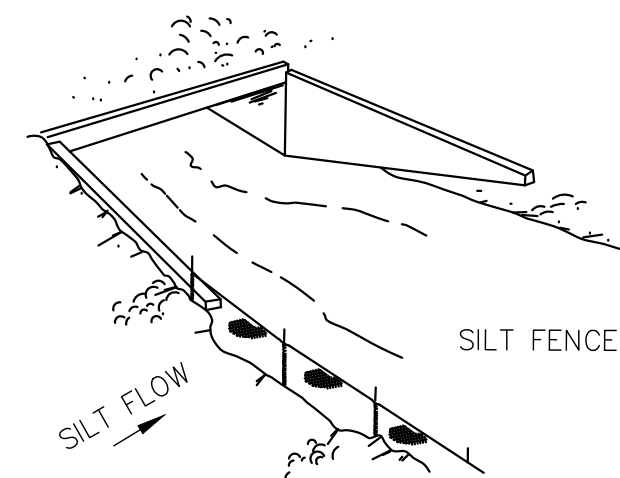
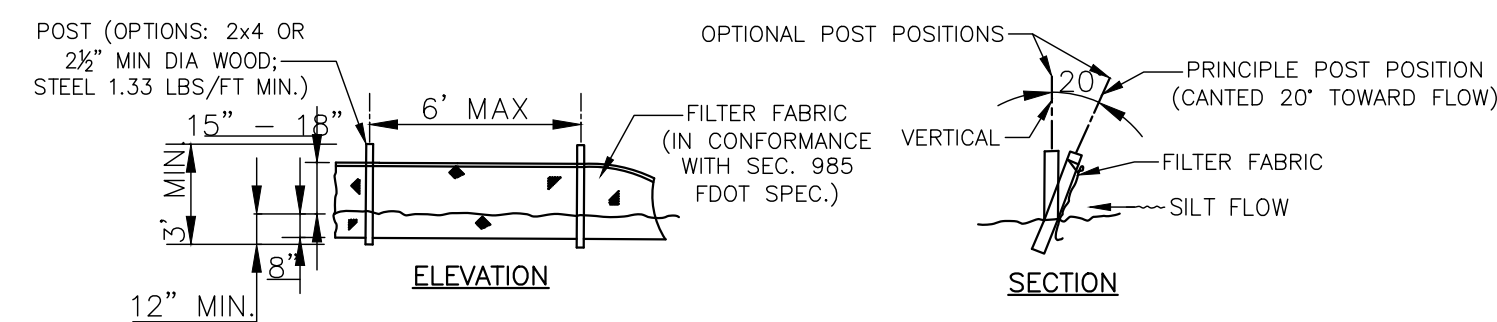
N PRE

PRE-1

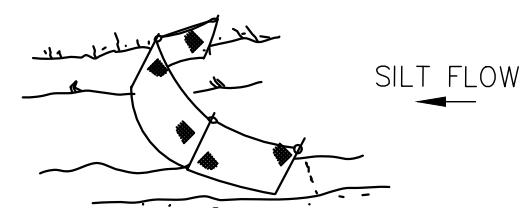


PLAN NOTES:

- ALL CONSTRUCTION ENTRANCES TO BE OUTFITTED WITH #57 STONE. MINIMUM AREA OF 30'(W)X50'(D).
- REMOVE EXCESS STONE PRIOR CONSTRUCTING PERMANENT DRIVEWAY.
- CONTRACTOR TO REFER TO AND COMPLY WITH STORM WATER POLLUTION PREVENTION PROGRAM (SWPPP), ISSUED UNDER SEPARATE COVER.



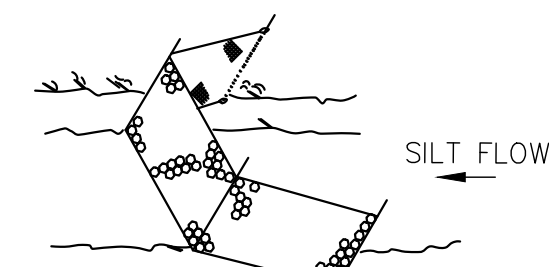
TYPE III OR TYPE IV



TYPE III SILT FENCE



TYPE III OR TYPE IV



TYPE IV SILT FENCE

SILT FENCE APPLICATIONS

SITE NOTES (PROJECT SITE)

PROPERTY

CURRENT O/A PARCEL I.D.:
00-00-31-1800-0197-0010
AREA: 2.64 Ac

PROJECT AREA: 1.19 Ac

ZONING: P.U.D. (C-2)
LAND USE: P.U.D. (COMMERCIAL)
PROPOSED O/A LOT SPLIT:
PROPOSED LOT 1: 1.19 Ac
PROPOSED LOT 2: 1.45 Ac
FLOOD ZONE: X
MIN. LOT WIDTH: 50-FT

BUILDINGS - PROPOSED LOT 1 ONLY

USE: COMMERCIAL / RETAIL
MAXIMUM BUILDING HEIGHT: 45-FT
PROPOSED BUILDING HEIGHT: 20-FT±
TOTAL BLDG. 1 AREA: 10,810 S.F.
MAXIMUM FLOOR TO AREA RATIO ALLOWED: 1.5
PROPOSED FLOOR TO AREA RATIO: 0.21

SETBACKS

FRONT YARD: 0
SIDE YARD: 0
REAR YARD: 0

TOTAL PROPOSED IMPERVIOUS AREA
(LOT 1 PLUS EASEMENT)

BUILDINGS: 10,810 SF
SIDEWALKS: 3,030 SF
DRIVING AISLES & PARKING: 15,950 SF
LESS PERVIOUS PARKING: (5,500 SF)

TOTAL IMPERVIOUS AREA: 24,290 SF = 0.558 Ac

LOT 1 AREA: 1.19 Ac
EASEMENT AREA: 0.132 Ac
TOTAL AREA FOR CALC: 1.19+0.132=1.322 Ac

MAXIMUM IMPERVIOUS AREA RATIO: 60%
PROPOSED IMPERVIOUS SURFACE RATIO:
(0.558 Ac)/(1.322 Ac) = 0.422 = 42.2%

UTILITIES:

- ELECTRIC: FLORIDA PUBLIC UTILITIES
- WATER: CITY OF FERNANDINA BEACH
- SEWER: CITY OF FERNANDINA BEACH
- GAS: FLORIDA PUBLIC UTILITIES
- CABLE/PHONE: VARIES

PARKING:

- RETAIL: 1 SPACE PER 300 S.F.
(10,810 S.F.)/(300 SF/SPACE) = 36 SPACES
TOTAL SPACES PROVIDED: 36
ADA SPACES: 2

PARKING SPACE DIMENSIONS SHOWN ARE CENTERLINE
OF STRIPE TO CENTERLINE OF STRIPE, U.N.O.

LANDSCAPE BUFFERS BETWEEN CERTAIN USES

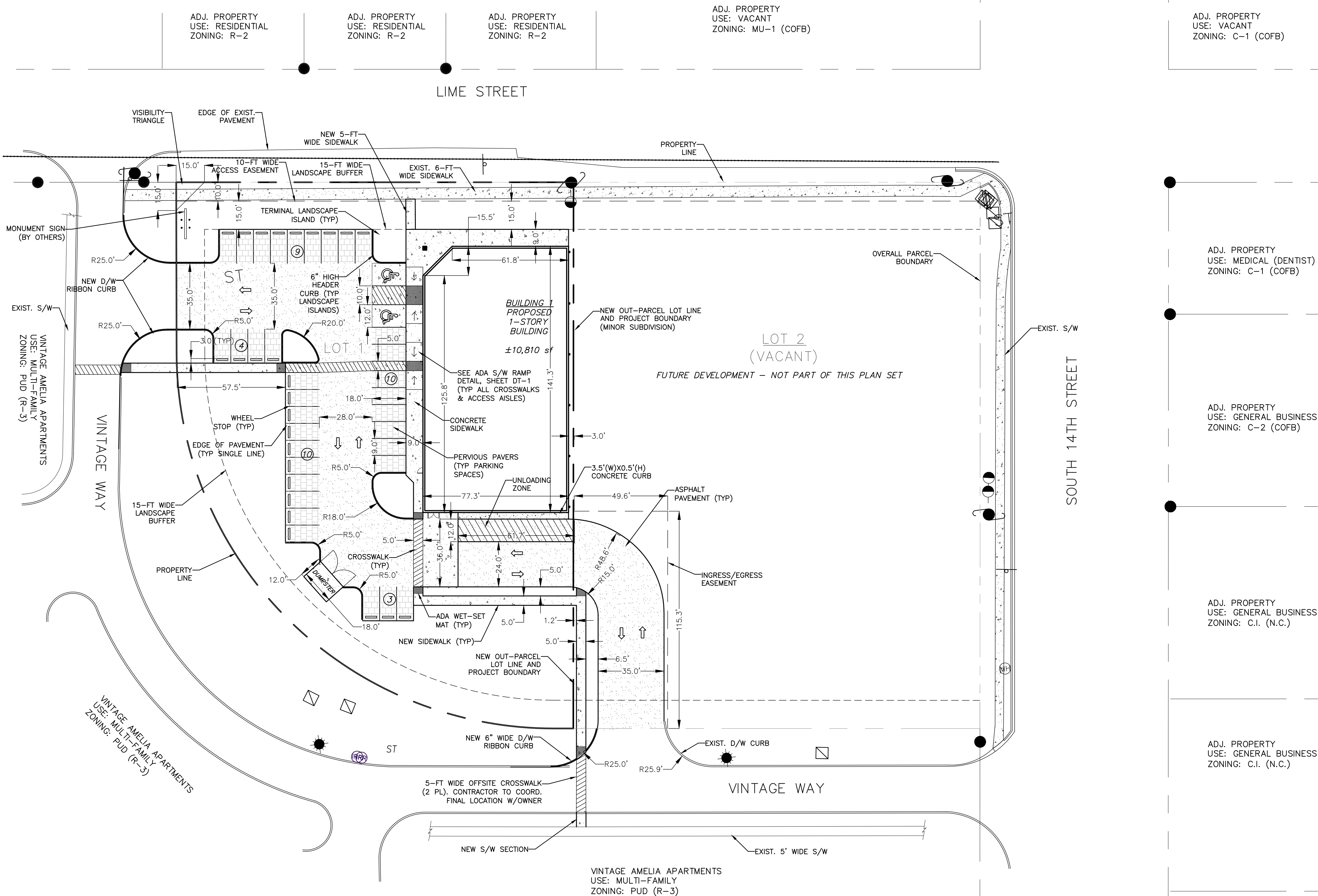
NORTH: R-2 --> TYPE C (15-FT)
WEST & SOUTH: R-3 --> TYPE B (15-FT)
EAST: COMMERCIAL --> NONE

LANDSCAPE & TREE PROTECTION REQUIREMENTS:

- MIN. 20% OF TOTAL GROSS AREA TO BE
LANDSCAPED
- MIN. ONE (1) SHADE TREE FOR EACH 1,500 SF OF
SITE
- 50% OF THE TOTAL D.B.H. OF THE PROTECTED
TREES SHALL BE EXEMPT FROM REPLACEMENT.
- IMPERVIOUS IMPROVEMENTS (OR W/IN 5-FT
THEREOF) REQUIRE REPLACEMENT OF 50% OF THE
TOTAL D.B.H. OF THE PROTECTED TREES.

PAVING LEGEND

PERVIOUS PAVERS:
3,000 PSI CONCRETE:
ASPHALT:



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GEOMETRY
PLAN
North / Elev Key Sheet
GE-1
Page

DRAINAGE STRUCTURE TABLE:		
LABEL	Type	PROPOSED ELEVATIONS
ST-1	INLET	TOP = 17.30 INV 15" HDPE (SE) = 13.80 INV 15" HDPE (W) = 13.80
ST-2	INLET	TOP = 16.83 INV 15" HDPE (E) = 13.29 INV 24" HDPE (NE) = 12.92 INV 24" HDPE (S) = 12.29
ST-3	MANHOLE	TOP = 17.43 INV 24" HDPE (SW) = 12.95
ST-4	INLET	TOP = 17.45 INV 15" HDPE (SW) = 13.40 INV 15" HDPE (SE) = 13.40 INV 24" HDPE (NW) = 12.96
ST-5	MES	INV 24" HDPE (SE) = 12.41
ST-6	MES	INV 30" HDPE (E) = 11.97
ST-7	INLET	TOP = 17.28 INV 24" HDPE (E) = 12.50 INV 24" HDPE (W) = 12.17
ST-8	MANHOLE	TOP = 18.06 INV 24" HDPE (W) = 12.85

SEWER STRUCTURE TABLE:		
LABEL	Type	AS-BUILT ELEVATIONS
SS-OFF	MANHOLE	TOP = 18.43 INV 8" PVC (S) = 5.90
SS-7	MANHOLE	TOP = 17.60 INV 8" PVC (N) = 6.84 INV 8" PVC (S) = 6.87 INV 8" PVC (W) = 6.90
SS-8A	MANHOLE	TOP = 18.27 INV 8" PVC (N) = 6.09 INV 8" PVC (S) = 6.15
SS-8	MANHOLE	TOP = 17.66 INV 8" PVC (N) = 6.36 INV 8" PVC (S) = 6.37 INV 8" PVC (E) = 6.37
SS-12	MANHOLE	TOP = N/A INV 8" PVC (N) = 7.66 INV 8" PVC (S) = 7.66
SS-13	MANHOLE	TOP = 18.14* INV 8" PVC (W) = 6.52

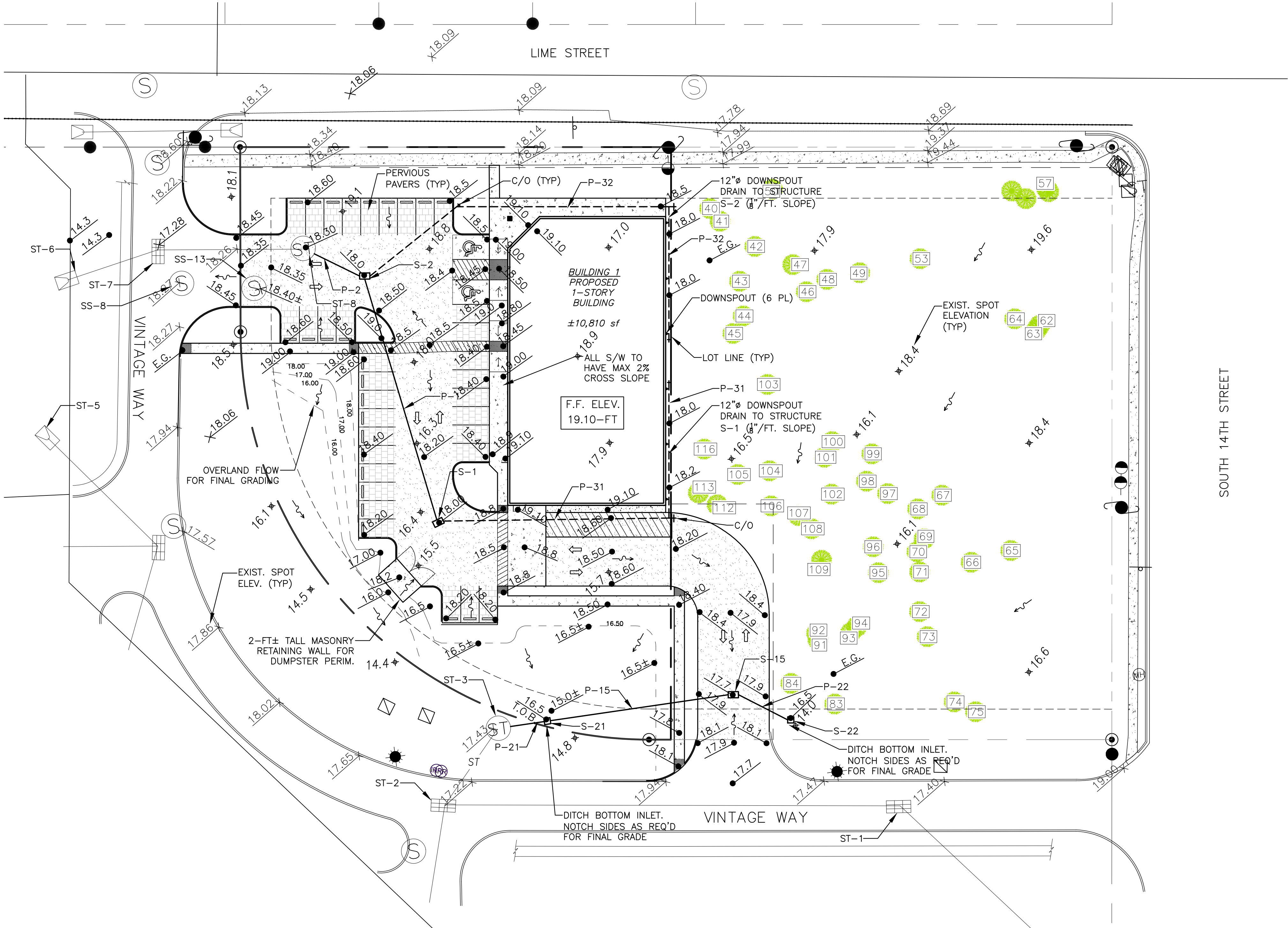
* - MISSING FROM SURVEY; FIELD VERIFY BY CONTRACTOR

NEW STRUCTURE TABLE					
NAME	TYPE	TOP/ INLET ELEV.	INVERT ELEVATION		
			N	S	E W
S-1	E	18.0	13.35	-	15.0± -
S-2	E	18.0	-	13.12	14.5± 13.12
ST-8*	M/H	18.35 **	-	-	13.07 12.85*
S-15	E	17.80	13.38	-	13.38 -
S-21	C	16.50	-	-	13.31 13.30
ST-3*	M/H	17.43	13.19	12.95*	- -
S-22	C	16.50	-	-	13.40

* - EXISTING STRUCTURE AND INVERT ELEVATION

** - EXISTING STRUCTURE W/NEW TOP ELEVATION

NEW PIPE TABLE					
NAME	FROM	TO	SIZE	LENGTH	MATERIAL
P-1	S-1	S-2	24"	118'	HDPE
P-2	S-2	ST-8	24"	30'	HDPE
P-15	S-15	S-21	24"	90'	HDPE
P-21	S-21	ST-3	24"	20'	HDPE
P-22	S-22	S-15	18"	28'	HDPE
P-31	BLDG	S-1	12"	180'	HDPE
P-32	BLDG	S-2	12"	225'	HDPE



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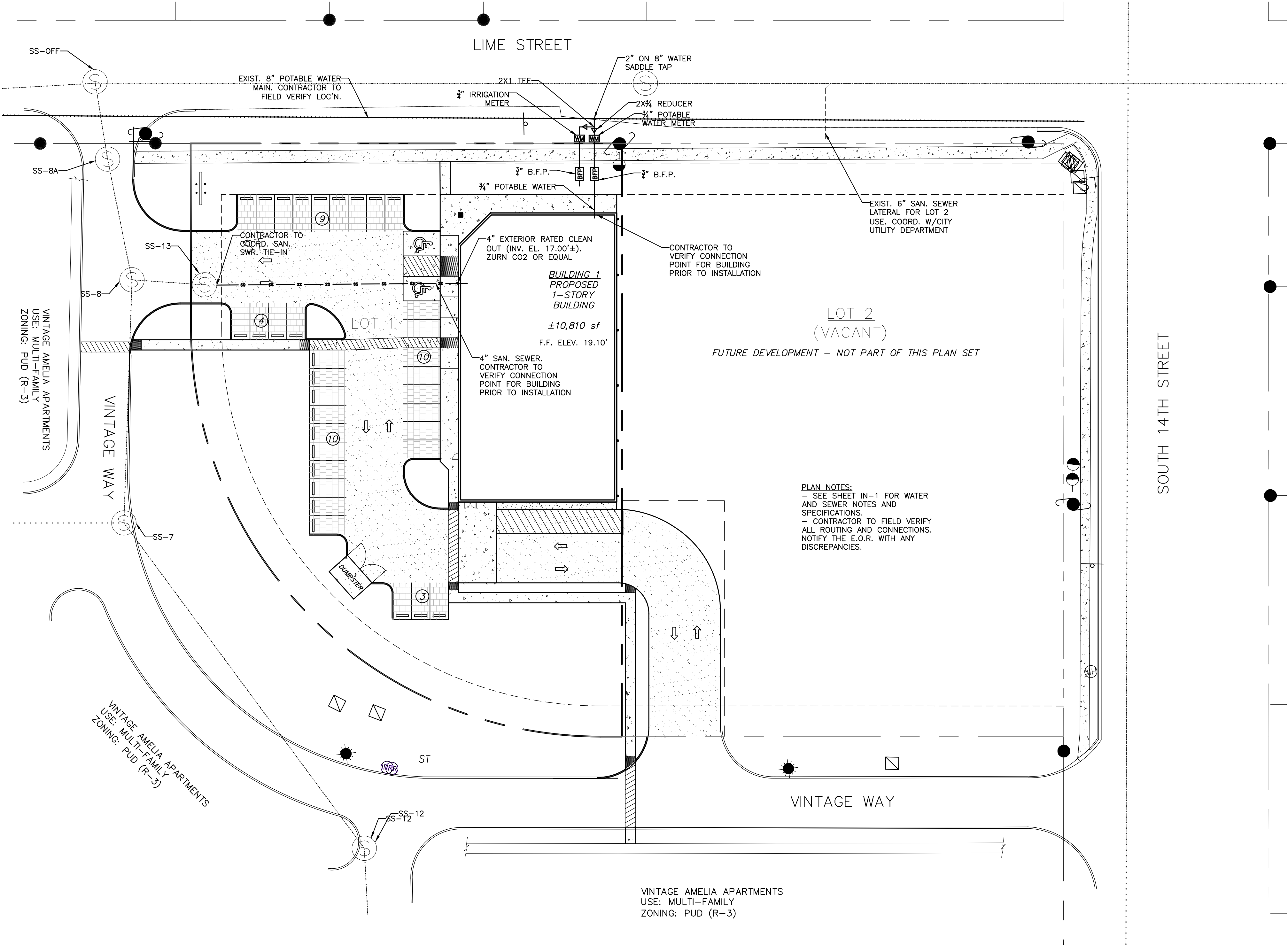
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DRAINAGE PLAN
North / Elev Key Sheet
DR-1
Page

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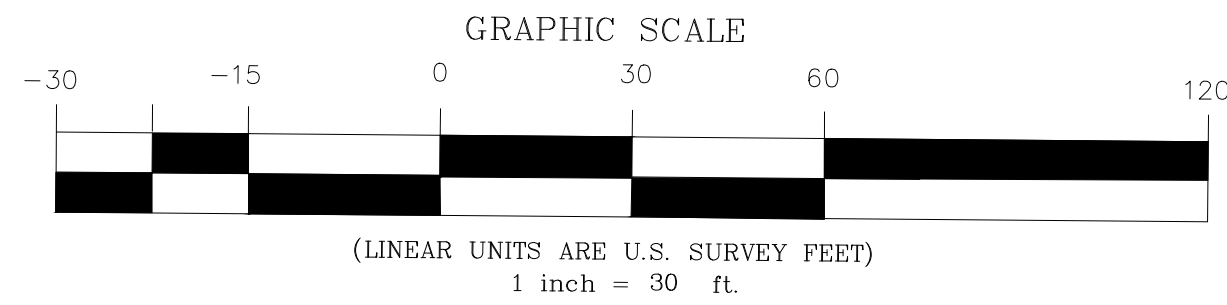
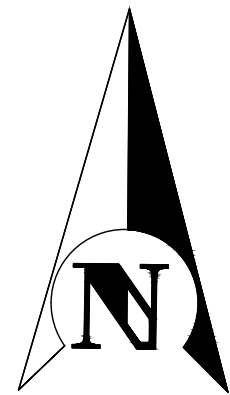
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UTILITY PLAN

North / Elev Key Sheet

UT-1

Page



OVERALL TREE MITIGATION

LOT 1 TO BE REMOVED: 721 inches
LOTS 1 & 2 TO BE REMOVED: 44 inches (1/2 to each)
TOTAL TO BE REMOVED: 765 inches
LOT 1 EXEMPT (50%): 382.5 inches

LOT 1 DBH TO BE PRESERVED: 382.5 inches
LESS LOT 1 DBH RETAINED: -245 inches
LOT 1 TO BE PLANTED/MITIGATED: 137.5 inches

LOT 1 DBH TO TREE FUND (UP TO 50%): 68.75 inches
NO. OF TREES (BASED ON 2.5" DBH): 28 trees

LOT 1 TREES TO PLANT ONSITE: 28 trees
LOT 2 TREES TO PLANT ONSITE NOW: 4 trees

LOT 1 TREES TO BE MITIGATED: 28 trees
LOT 2 TREES TO MITIGATE NOW: 4 trees

OT 1 MITIGATION COST FOR TREE FUND: \$ 12,760
(\$400 per tree)

OT 1 MITIGATION COST FOR REMOVAL: \$ 3,390
(\$500 first 3 trees; \$100 ea. add'l tree)

LOT 1 TOTAL MITIGATION COST: \$ 16,150

SEE SHEET TM-2 FOR TREE
INVENTORY AND BREAKDOWN

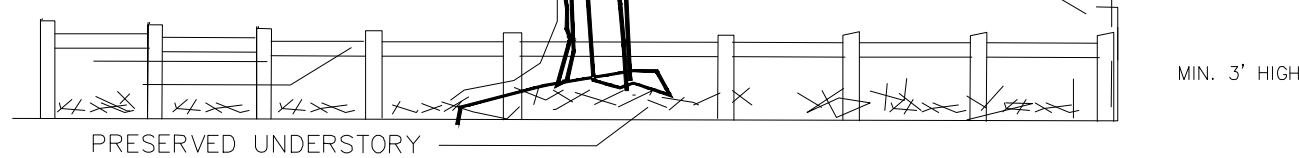
TREE PROTECTION DETAIL

BARRIER TO BE PLACED AROUND TREE SHALL
BE PLACED AROUND TREE PROTECTION ZONE AND
BE CONSISTENT WITH SPECIFICATIONS DEFINED
IN CHAPTER 4.05.14 OF THE FERNANDINA BEACH
LAND DEVELOPMENT CODE.

TREE PROTECTION ZONE IS AT MINIMUM A CIRCULAR
ZONE AROUND THE TREE TRUNK OF A RADIUS:

- 1) 6 FEET, IF THE DRIP LINE OF THE TREE IS LESS
THAN 6 FEET FROM THE TRUNK OF THE TREE.
- 2) 6-20 FEET ENCOMPASSING THE FULL DRIP LINE OF
THE TREE, IF THE DRIP LINE OF THE TREE IS BETWEEN
6 AND 20 FEET FROM THE TRUNK OF THE TREE.
- 3) 20 FEET, IF THE DRIP LINE OF THE TREE IS GREATER
THAN 20 FEET FROM THE TRUNK OF THE TREE. 3" MULCH
LAYER SHALL APPLIED TO THE REMAINING AREA BETWEEN
THE TREE PROTECTION ZONE AND DRIP LINE

2" x 2" x 4' WOODEN POSTS — 8' O.C.
WITH A 2" x 4" TOP RAILING AND 3" WIDE
TEMPORARY MESH WIRE, CHAIN-LINK, OR
SIMILAR BARRIER ATTACHED TO POSTS.



NOT TO SCALE

NO PARKING OF HEAVY EQUIPMENT OR VEHICLES; STOCKPILING OF MATERIALS; DEPOSITION OF SOIL, SEDIMENT, OR MULCH;
GRADING OR GRUBBING; EXCAVATION OR TRENCHING; CONSTRUCTION MATERIALS, DUMPING, BURIAL OR BURNING OF DEBRIS,
WITHIN THE ENTIRE CONSTRUCTION SITE; DUMPING PETROCHEMICALS, CHEMICALS, WASTEWATER, OR OTHER CONSTRUCTION
WASTE, ALL HAZARDOUS MATERIALS TO BE STORED AT A MAXIMUM DISTANCES FROM ANY TREE PROTECTION ZONE



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TREE
MITIGATION

North / Elev Key Sheet



TM-1

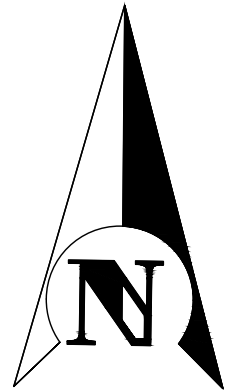
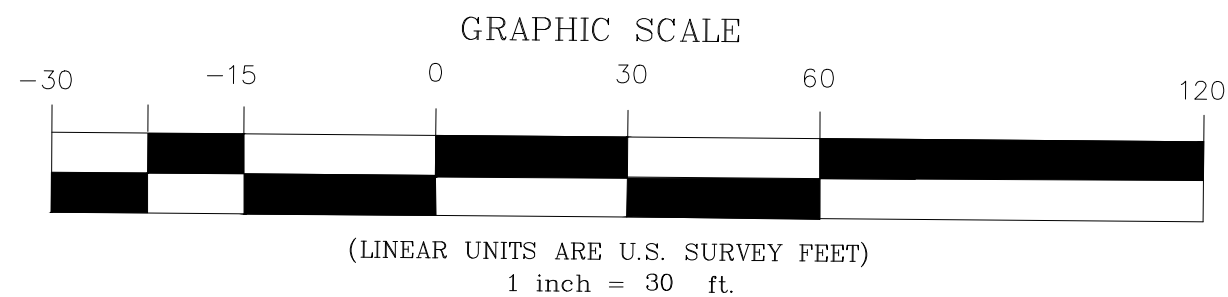
Page

COMMERCIAL RETAIL BUILDING VINTAGE COMMERCIAL OUTPARCEL TREE MITIGATION TABLE																	COMMERCIAL RETAIL BUILDING VINTAGE COMMERCIAL OUTPARCEL TREE MITIGATION TABLE																	
TREE ID	DBH (in)	TREE TYPE	TREE HEALTH	PRESERVATION SUITABILITY	EXEMPT (Y/N)	NET DBH (in)	SAVED? (Y/N)	DBH SAVED (in)	DBH REM. (in)	LOT NO. *	LOTS 1&2 SAVED	LOT 1 SAVED	LOT 2 SAVED	LOT 1 REM.	LOT 2 REM.	LOTS 1&2 REM.	TREE ID	DBH (in)	TREE TYPE	TREE HEALTH	PRESERVATION SUITABILITY	EXEMPT (Y/N)	NET DBH (in)	SAVED? (Y/N)	DBH SAVED (in)	DBH REM. (in)	LOT NO. *	LOTS 1&2 SAVED	LOT 1 SAVED	LOT 2 SAVED	LOT 1 REM.	LOT 2 REM.	LOTS 1&2 REM.	
1	18	PINE	4	Good	N	18	Y	18	0	1	0	18	0	0	0	0	89	8	MAPLE	4	Good	N	8	N	0	8	12	0	0	0	0	0	8	
2	18	PINE	4	Good	N	18	Y	18	0	1	0	18	0	0	0	0	90	6	MAPLE	4	Good	N	6	N	0	6	12	0	0	0	0	0	6	
3	6	OAK	4	Good	N	6	Y	6	0	1	0	6	0	0	0	0	91	6	OAK	4	Good	N	6	N	0	6	2	0	0	0	0	0	6	
4	12	PINE	4	Good	N	12	Y	12	0	1	0	12	0	0	0	0	92	6	D. MAPLE	4	Good	N	6	N	0	6	2	0	0	0	0	0	6	
5	18	PINE	3	Poor	Y	0	N	0	0	1	0	0	0	0	0	0	93	24	PINE	4	Good	N	24	N	0	24	2	0	0	0	0	0	24	
6	18	PINE	4	Good	N	18	N	0	18	1	0	0	0	18	0	0	94	8	MAPLE	4	Good	N	8	N	0	8	2	0	0	0	0	0	8	
7	24	PINE	4	Good	N	24	N	0	24	1	0	0	0	24	0	0	95	8	OAK	4	Good	N	8	N	0	8	2	0	0	0	0	0	8	
8	18	PINE	4	Good	N	18	N	0	18	1	0	0	0	18	0	0	96	6	MAPLE	4	Good	N	6	N	0	6	2	0	0	0	0	0	6	
9	24	TOTA	4	Good	N	24	N	0	24	1	0	0	0	24	0	0	97	12	OAK	4	Good	N	12	N	0	12	2	0	0	0	0	0	12	
10	6	UNKNOWN	4	Good	N	6	N	0	6	1	0	0	0	6	0	0	98	32	PINE	3	Moderate	N	32	N	0	32	2	0	0	0	0	0	32	
11	30	T. OAK-LO	4	Good	N	30	N	0	30	1	0	0	0	30	0	0	99	24	MAGNOLIA	4	Good	N	24	N	0	24	2	0	0	0	0	0	24	
12A	8	OAK	4	Good	N	8	Y	8	0	1	0	8	0	0	0	0	100	11	MAGNOLIA	4	Good	N	11	N	0	11	2	0	0	0	0	0	11	
12B	8	OAK	4	Good	N	8	Y	8	0	1	0	8	0	0	0	0	101	6	MAGNOLIA	4	Good	N	6	N	0	6	2	0	0	0	0	0	6	
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14	24	PINE	4	Good	N	24	N	0	24	1	0	0	0	24	0	0	104	30	OAK	4	Good	N	30	N	0	30	2	0	0	0	0	0	30	
15	6	D. MAPLE	4	Good	N	6	N	0	6	1	0	0	0	6	0	0	105	22	OAK	4	Good	N	22	N	0	22	2	0	0	0	0	0	22	
16	20	PINE	4	Good	N	20	N	0	20	1	0	0	0	20	0	0	106A	19	TUPELO	4	Good	N	19	N	0	19	2	0	0	0	0	0	19	
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19	15	MAGNOLIA	5	Good	N	15	N	0	15	1	0	0	0	15	0	0	107	12	MAGNOLIA	4	Good	N	12	N	0	12	2	0	0	0	0	0	12	
20	15	OAK-W	4	Good	N	15	N	0	15	1	0	0	0	15	0	0	108	8	UNKNOWN	4	Good	N	8	N	0	8	2	0	0	0	0	0	8	
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22	24	OAK	4	Good	N	24	N	0	24	1	0	0	0	24	0	0	110	24	MAGNOLIA	4	Good	N	24	N	0	24	12	0	0	0	0	0	24	
23	12	OAK-LO	4	Good	N	12	Y	12	0	1	0	12	0	0	0	0	111	30	PINE	4	Good	N	30	N	0	30	12	0	0	0	0	0	30	
24	8	OAK-LO	1	Poor	Y	0	N	0	0	1	0	0	0	0	0	0	112	12	MAGNOLIA	4	Good	N	12	N	0	12	2	0	0	0	0	0	12	
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26	12	OAK	3	Moderate	N	12	N	0	12	1	0	0	0	12	0	0	114	14	MAGNOLIA	4	Good	N	14	N	0	14	1	0	0	0	14	0	0	14
27	36	D. OAK	5	Good	N	36	N	0	36	1	0	0	0	36	0	0	115	12	UNKNOWN	4	Good	N	12	N	0	12	1	0	0	0	0	12	0	12
28	6	OAK	4	Good	N	6	N	0	6	1	0	0	0	6	0	0	116A	18	OAK-LO	4	Good	N	18	N	0	18	2	0	0	0	0	0	18	
29	12	OAK	4	Moderate	N	12	N	0	12	1	0	0	0	12	0	0	116B	18	OAK-LO	4	Good	N	18	N	0	18	2	0	0	0	0	0	18	
30	12	OAK	4	Good	N	12	N	0	12	1	0	0	0	12	0	0	116C	20	OAK-LO	4	Good	N	20	N	0	20	2	0	0	0	0	0	20	
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37	6	D. OAK-LO	2	Poor	Y	0	N	0	0	1	0	0	0	0	0	0	123	10	D. MAPLE	4	Good	N	10	Y	10	0	1	0	10	0	0	0	10	
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50	15	OAK-LO	2	Poor	Y	0	N	0	0	2	0	0	0	0	0	0	136	12	OAK	4	Good	N	12	N	0	12	1	0	0	0	12	0	12	
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52	13	D. OAK-LO	3	Moderate	N	13	Y	13	0	2	0	0	13	0	0	0	138	6	OAK	4	Good	N	6	N	0	6	1	0	0	0	6	0	6	
53	18	OAK	4	Good	N	18	N	0	18	2	0	0	0	0	18</																			

- MAINTENANCE REQUIREMENTS**
- ALL PLANTINGS SHALL BE CONTINUALLY MAINTAINED IN AN ATTRACTIVE AND HEALTHY CONDITION. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, WATERING, TILLING, FERTILIZING AND SPRAYING, MOWING, WEEDING, REMOVAL OF LITTER AND DEAD PLANT MATERIAL, AND NECESSARY PRUNING AND TRIMMING.
 - REQUIRED PLANTS THAT BECOME DISEASED OR DIE SHALL BE REPLACED NOT LATER THAN THREE (3) MONTHS FOLLOWING THE LOSS OF THE PLANT.
 - THE PROPERTY OWNER IS RESPONSIBLE FOR THE MAINTENANCE OF ALL REQUIRED LANDSCAPING IN A HEALTHY, THRIVING CONDITION.
 - TREES SHALL BE PRUNED ONLY AS NECESSARY TO PROMOTE HEALTHY GROWTH OR TO AVOID POWER LINES. TREES SHALL NOT BE SEVERELY PRUNED OR "HATRACKED" IN ORDER TO PERMANENTLY MAINTAIN GROWTH AT A REDUCED HEIGHT. PRUNING SHALL COMPLY WITH CURRENT NATIONAL ARBORISTS' SOCIETY STANDARDS.
- PLAN NOTES:**
- CANOPY TREE PLANTING SHOWN (4 TOTAL) FOR LOT 2 IS TO MITIGATE THE SHARED EGRESS/ACCESS EASEMENT AREA. THE REMAINING 4 TREES WILL BE PAID TO THE TREE FUND.
 - TREE MITIGATION FOR LOT 2 REMAINS UNENCUMBERED.
 - NEW TREES SHOWN MAY BE SUBSTITUTED OR NEW SPECIES ADDED PROVIDED THEY MEET THE INTENT OF CANOPY AND/OR SHADE TREE AS WELL AS DROUGHT TOLERANCE
- LANDSCAPE BUFFERS (LOT 1 ONLY):**
- TYPE B BUFFER:
MINIMUM WIDTH: 15-FT
4 UNDERSTORY TREES PER 100-FT
CONTINUOUS DOUBLE ROW, STAGGERED HEDGE
- TYPE C BUFFER:
MINIMUM WIDTH: 15-FT
2 SHADE TREES PER 100-FT
4 UNDERSTORY TREES PER 100-FT
CONTINUOUS DOUBLE ROW, STAGGERED HEDGE
- NORTH: TYPE C (210-FT)
8 UNDERSTORY TREES REQ'D
4 SHADE TREES REQ'D
WEST: TYPE B (150-FT)
6 UNDERSTORY TREES REQ'D
SOUTH: TYPE B (150-FT)
6 UNDERSTORY TREES REQ'D
EAST: NONE
- MINIMUM REQUIREMENTS (LOT 1 ONLY):**
- (52043 S.F.)/(1500 S.F. PER TREE) = 35 TREES
TREES PROVIDED: 37
 - TOTAL NEW TREES PLANTED: 28
 - TOTAL LANDSCAPED AREA: (15463/52043) = 29.7%

- LANDSCAPING NOTES**
- PLANT MATERIALS SHALL MEET THE STANDARDS FOR FLORIDA NO.1 OR BETTER, AS SET OUT IN GRADES AND STANDARDS FOR NURSERY PLANTS, DEPARTMENT OF AGRICULTURE, STATE OF FLORIDA.
 - SHRUBS SHALL BE AT LEAST EIGHTEEN (18) INCHES IN HEIGHT AT THE TIME OF INSTALLATION.
 - SHRUBS SHALL BE INSTALLED AT LEAST THIRTY-SIX (36) INCHES APART, MEASURED ON CENTER.
 - ALL SHRUBS AND INTERIOR LANDSCAPING TO RECEIVE 100% IRRIGATION COVERAGE.
 - ALL AREAS SHOWN WITHOUT IMPROVEMENTS AROUND EXISTING TREES SHALL BE LEFT IN THE NATURAL STATE (UNDISTURBED).
 - GRASSSED AREAS SHALL BE PLANTED WITH SPECIES NORMALLY GROWN ON PERMANENT LAWNS IN NASSAU COUNTY. GRASSSED AREAS MAY BE SODDED, PLUGGED, SPRIGGED, OR SEEDDED, PROVIDED THAT FULL COVERAGE SHALL BE ACHIEVED WITHIN ONE (1) YEAR AFTER PLANTING. SOLID SOD SHALL BE USED IN SWALES OR AREAS SUBJECT TO EROSION. GRASS SOD SHALL BE CLEAN AND REASONABLY FREE OF WEEDS AND NOXIOUS PESTS OR DISEASES. GRASS SEED SHALL BE DELIVERED TO THE JOB SITE IN BAGS WITH FLORIDA DEPARTMENT OF AGRICULTURE TAGS ATTACHED INDICATING THE QUALITY CONTROL PROGRAM.
 - INSTALLATION AND MAINTENANCE OF ALL PLANTINGS SHALL BE IN ACCORDANCE WITH ARTICLES 4.05.03 (D) AND 4.05.03 (E) OF THE CITY OF FERNANDINA BEACH LAND DEVELOPMENT CODE.

- LANDSCAPE & TREE PROTECTION NOTES:**
- MIN. 20% OF TOTAL GROSS AREA TO BE LANDSCAPED
 - MIN. ONE (1) SHADE TREE FOR EACH 1,500 SF OF SITE
 - 50% OF THE TOTAL D.B.H. OF THE PROTECTED TREES SHALL BE EXEMPT FROM REPLACEMENT.
 - IMPERVIOUS IMPROVEMENTS (OR W/IN 5-FT THEREOF) REQUIRE REPLACEMENT OF 50% OF THE TOTAL D.B.H. OF THE PROTECTED TREES.
- REFERENCE SHEET TM-2 FOR COMPLETE MITIGATION CALCULATIONS.



NOTE: SOME DETAILS IN THESE DRAWINGS ARE TO BE CONSIDERED TYPICAL AND MAY NOT BE CALLED OUT ON PLANS. CONTRACTOR SHALL BECOME FAMILIAR WITH AND FOLLOW ALL DETAILS DURING CONSTRUCTION IN ALL TYPICAL AREAS.

REGISTERED DESIGN PROFESSIONAL
ISSUE FOR C.O.F.E. TRC APPROVAL & CONSTRUCTION
ASA R. GILLETTE, P.E.
FLORIDA P.E. NO. 56177

REV	DATE	ITEM
0	11/5/20	

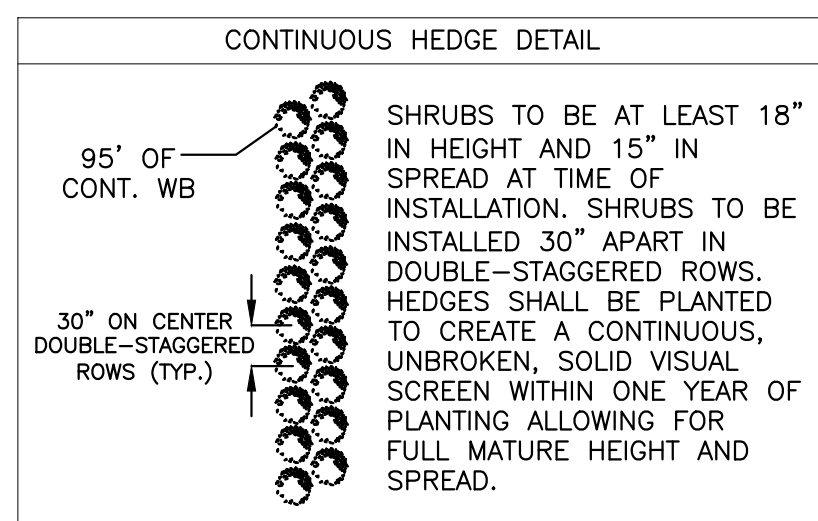
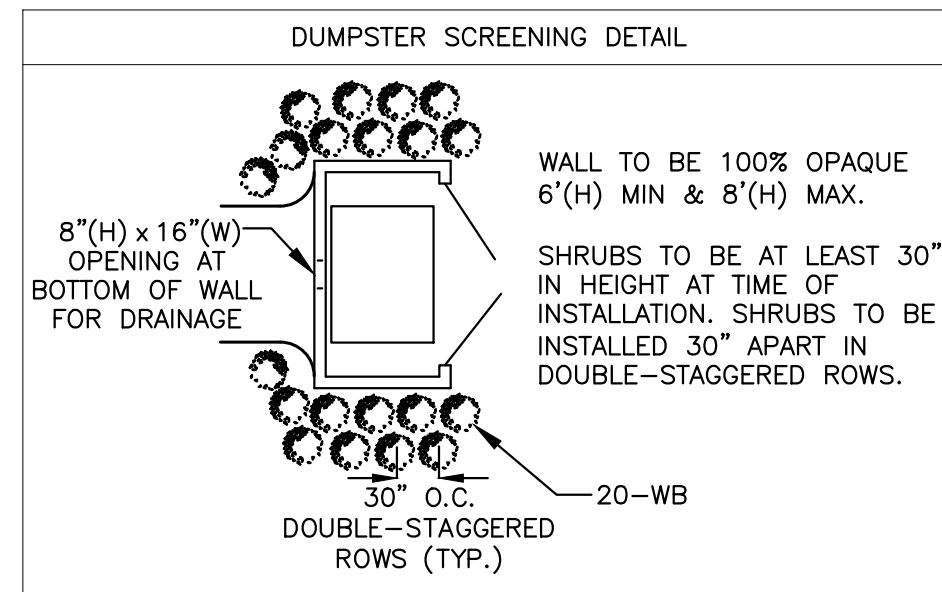
GILLETTE & ASSOCIATES, INC.
CIVIL, ENVIRONMENTAL, MECHANICAL, & STRUCTURAL ENGINEERING
CERTIFICATE OF AUTHORIZATION NO. 9332
ASA R. GILLETTE, P.E. * FL. PE. NO. 56177
20 S. 4th STREET * FERNANDINA BEACH, FL 32034
PHONE: 904-261-8819 * www.gilletteassociates.com

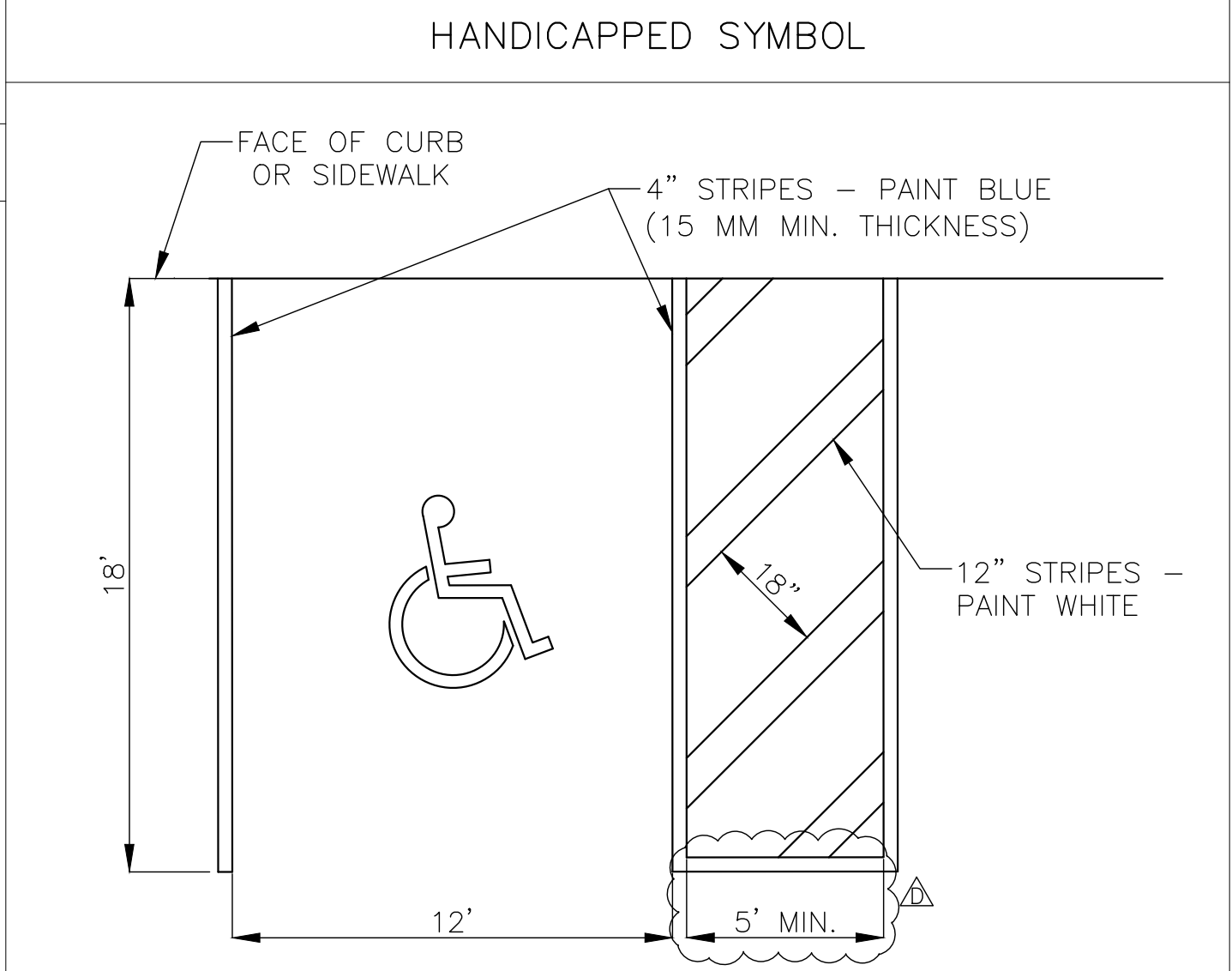
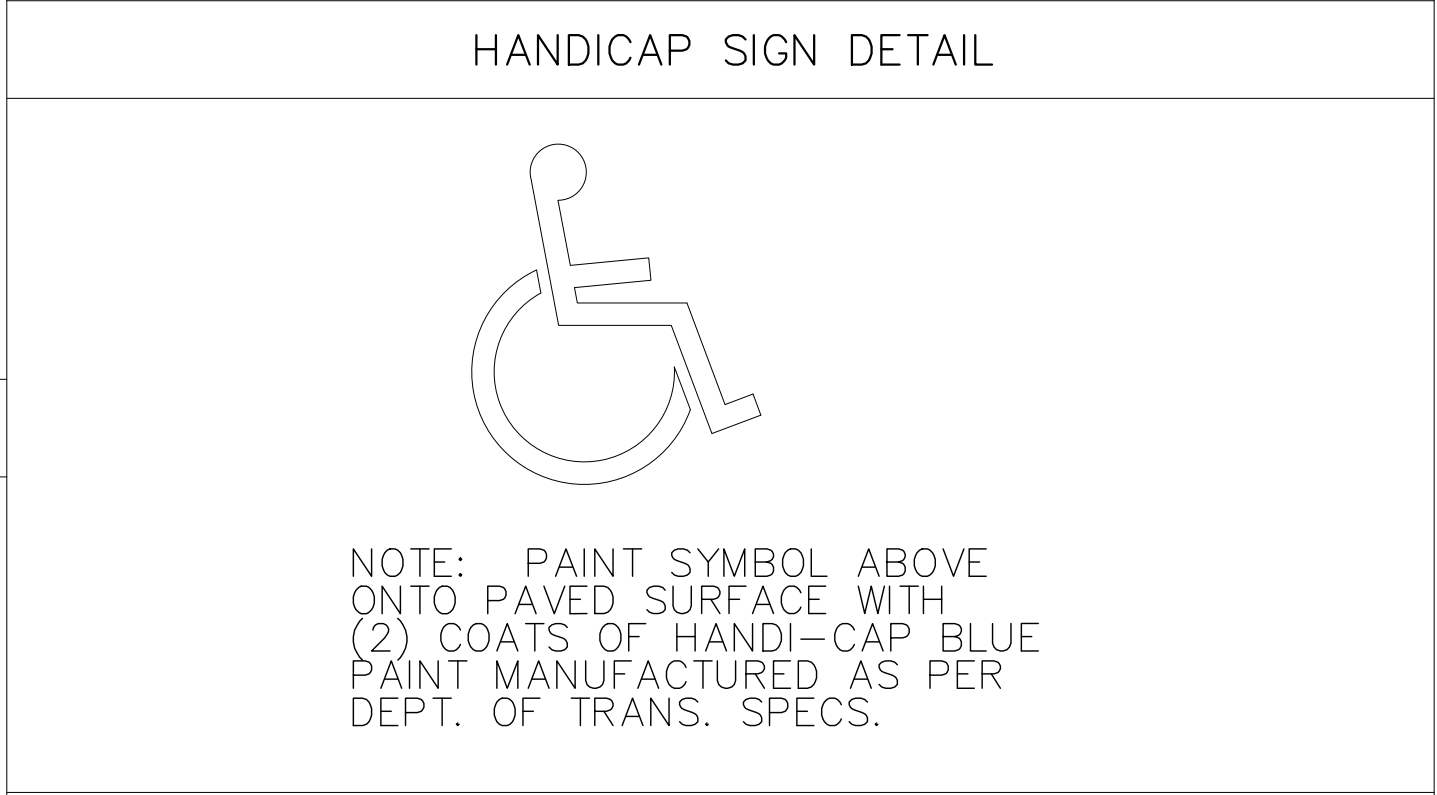
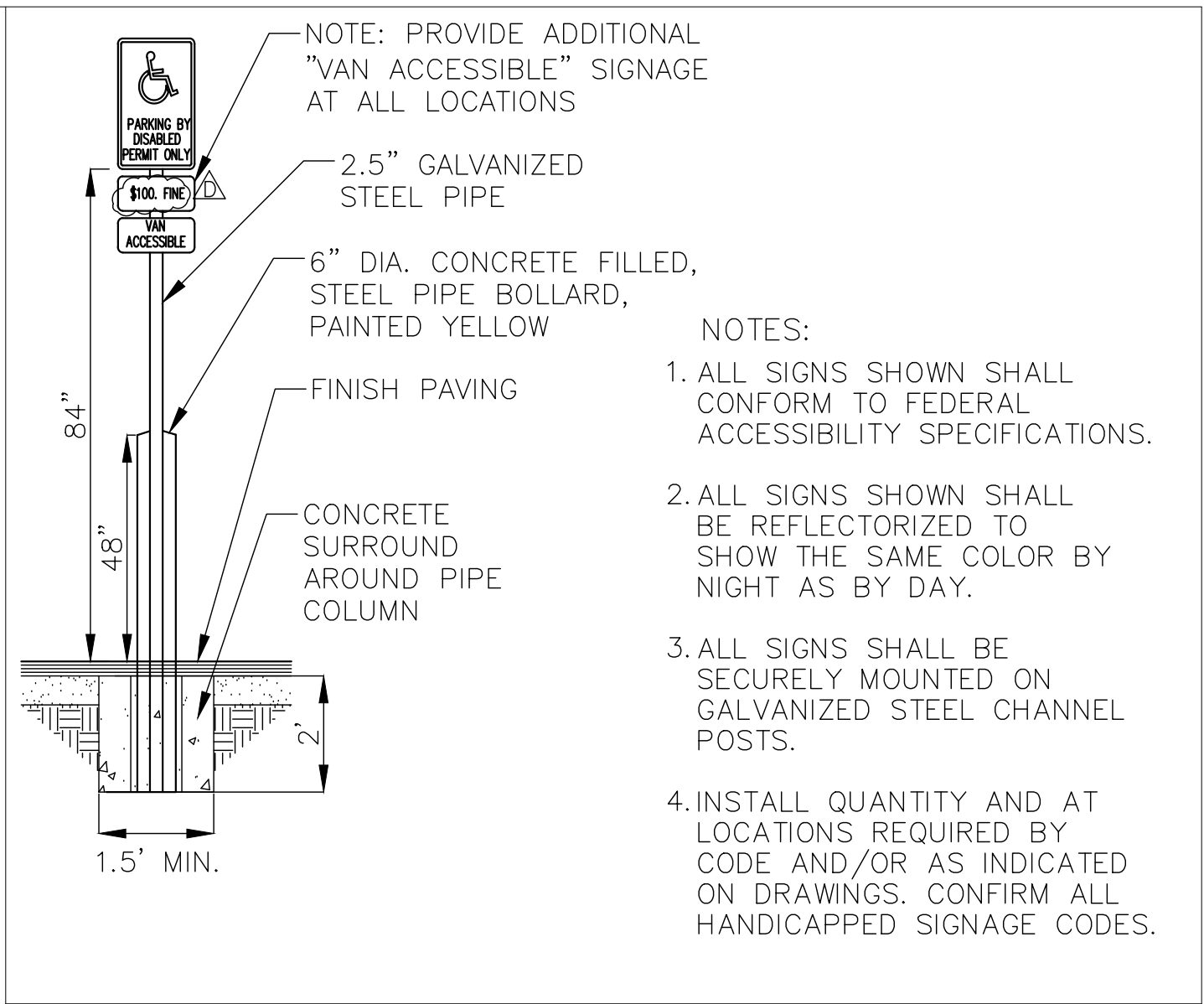
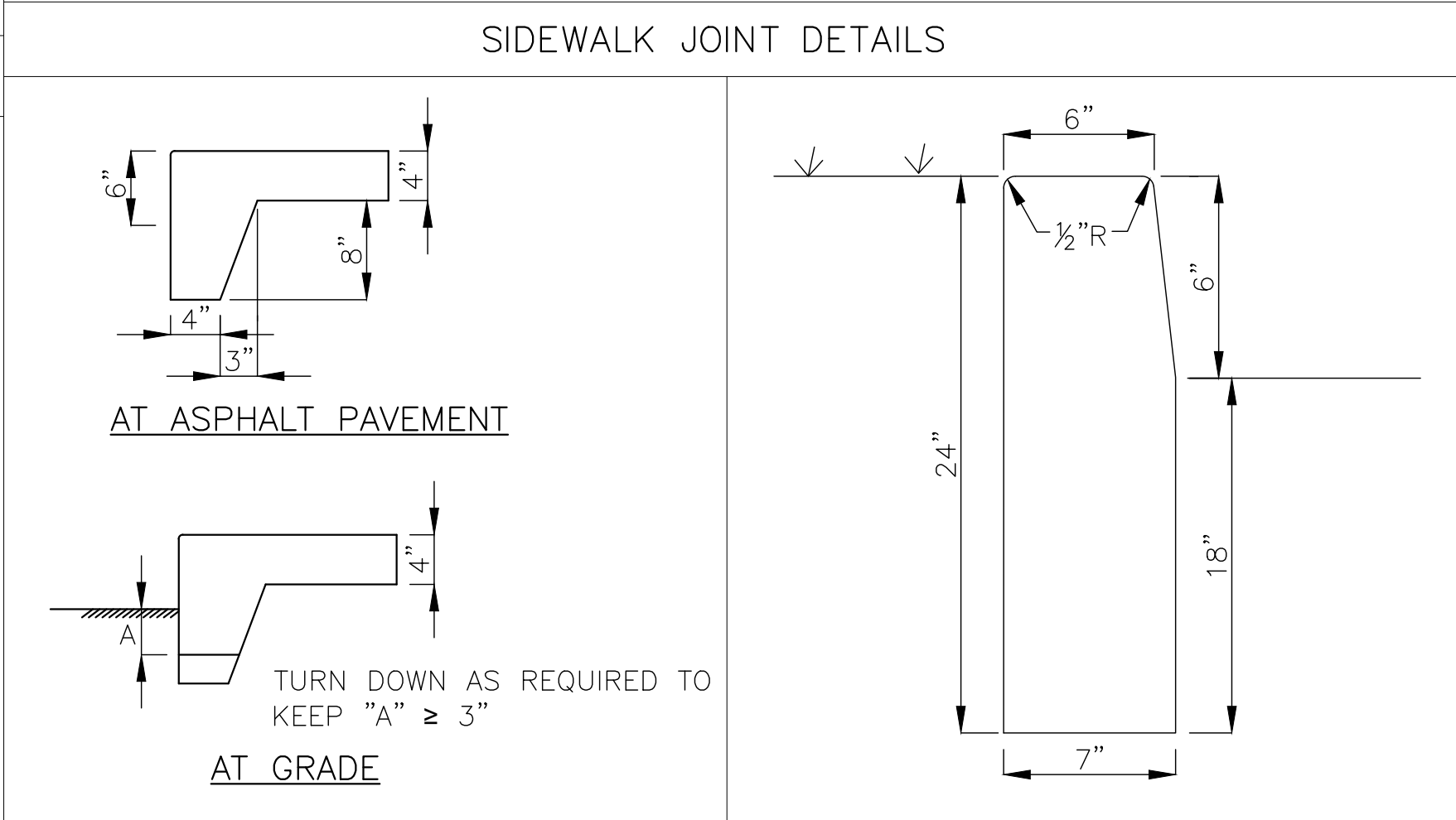
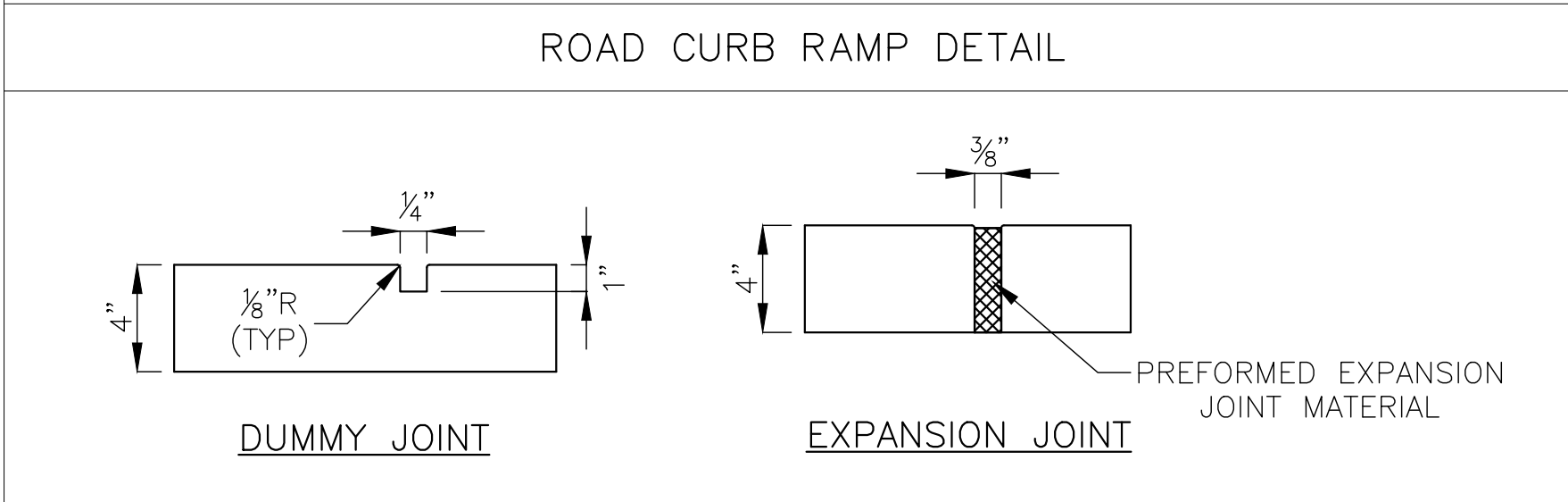
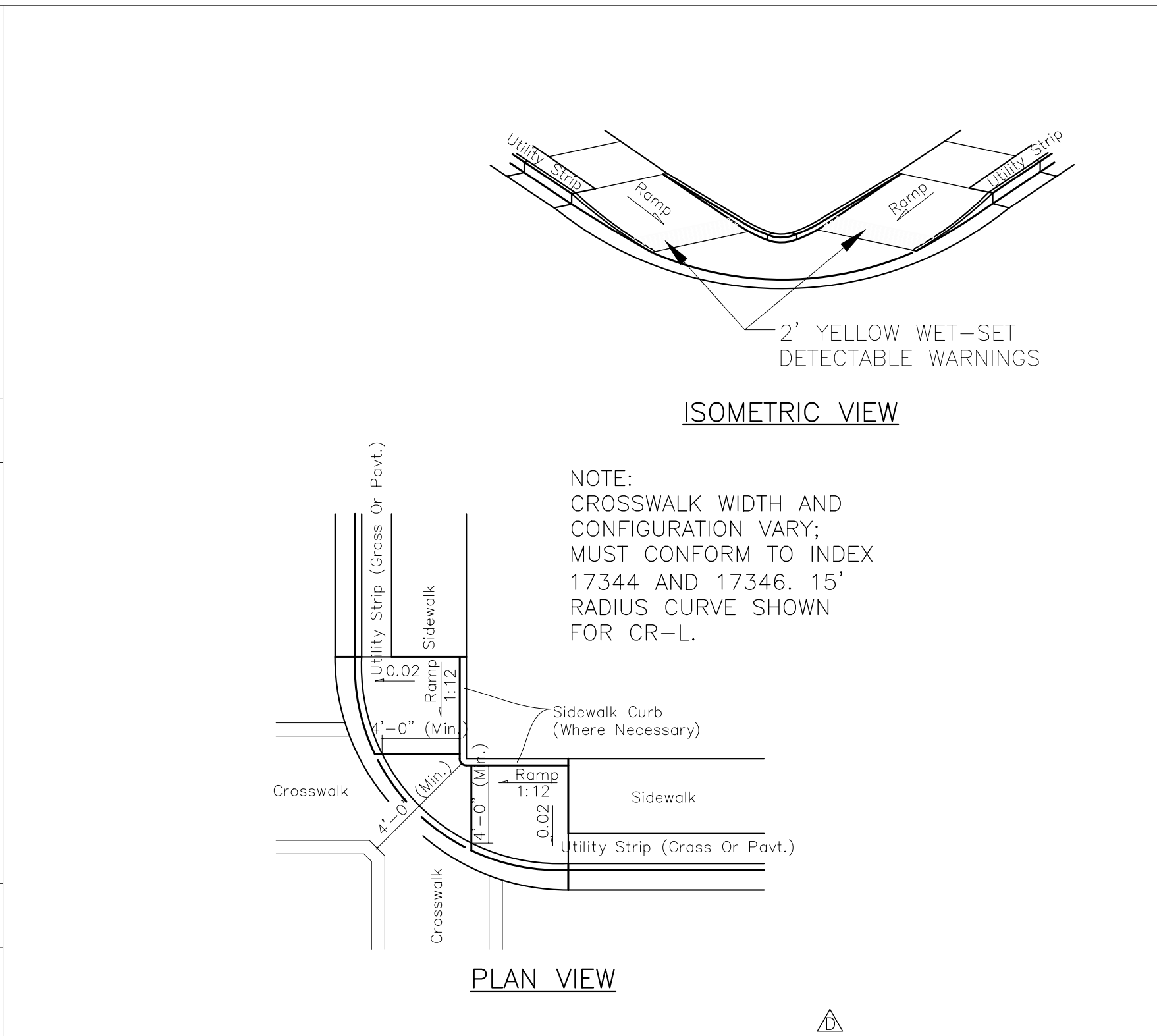
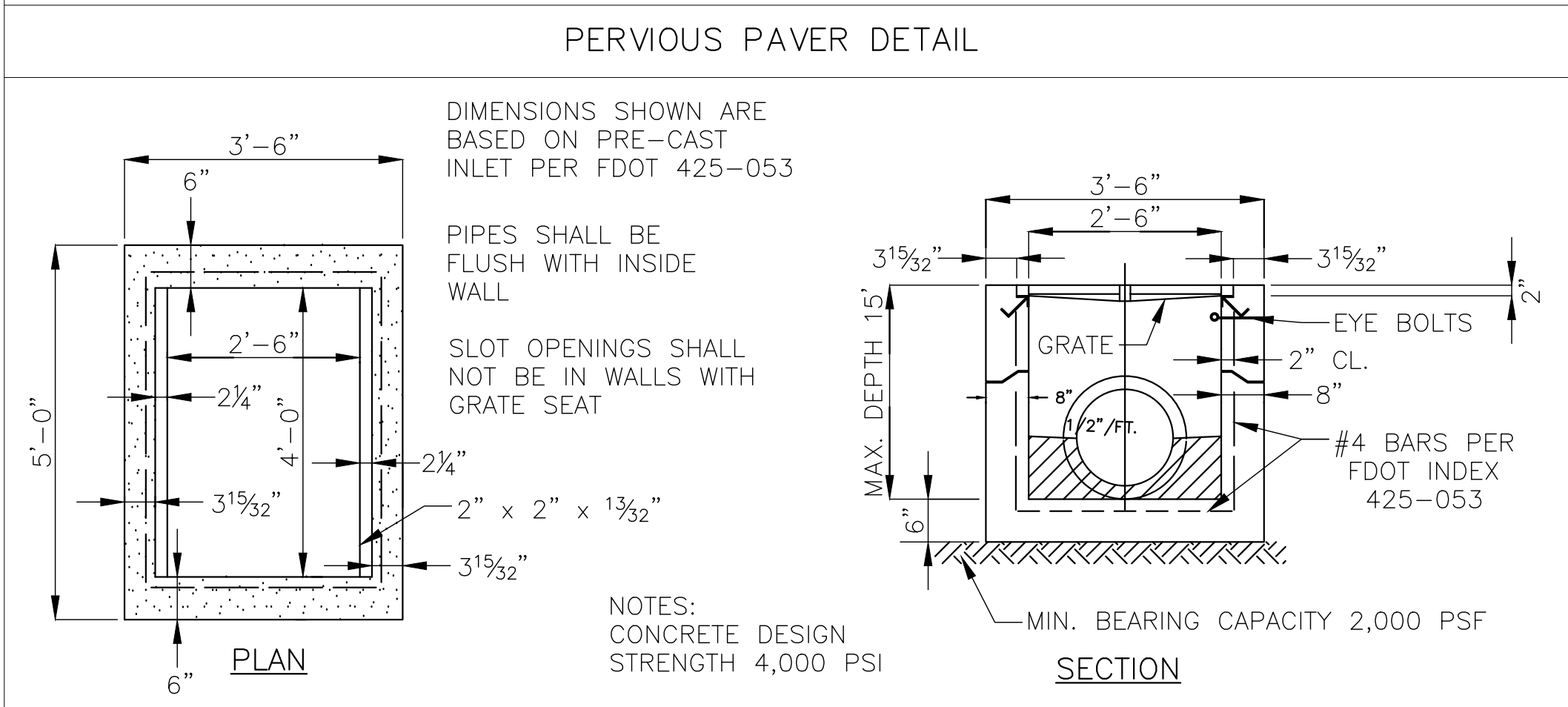
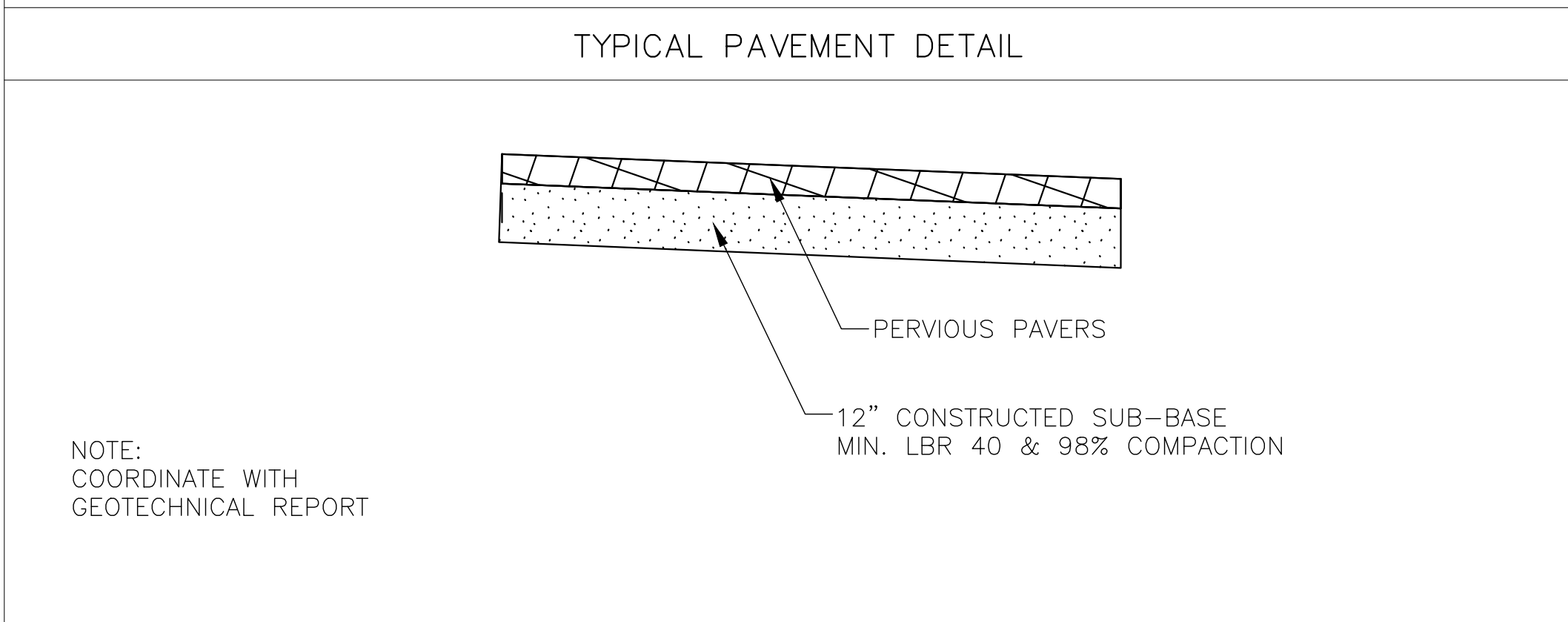
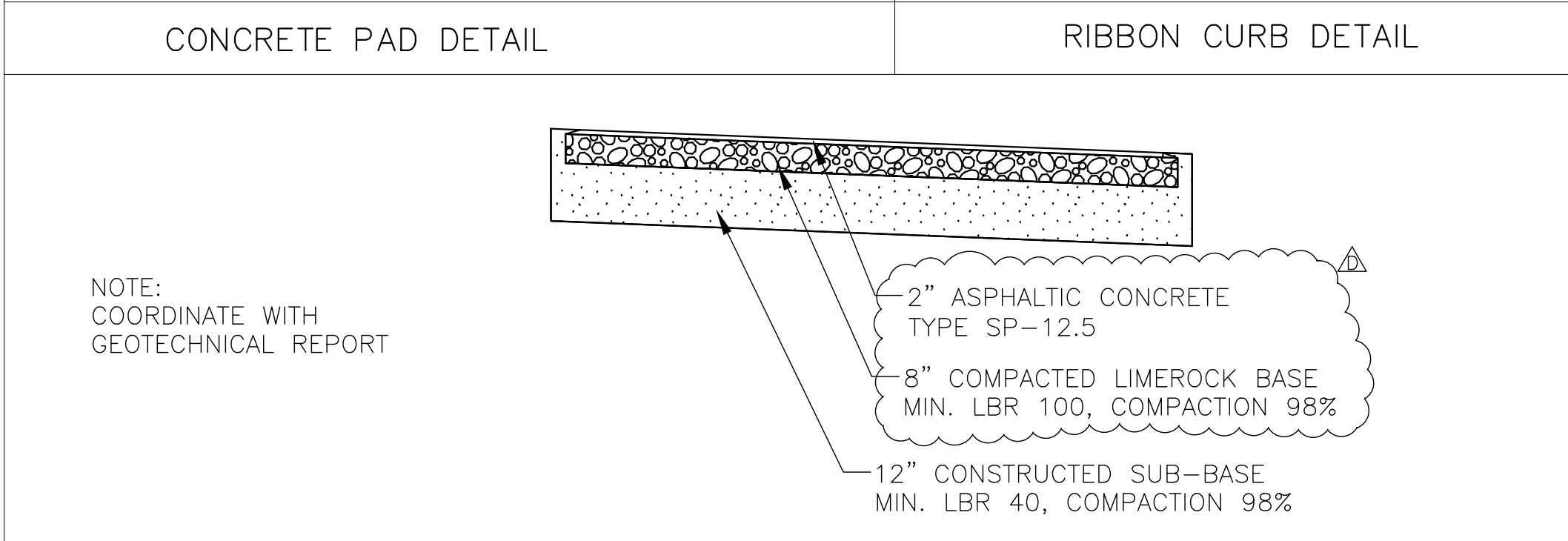
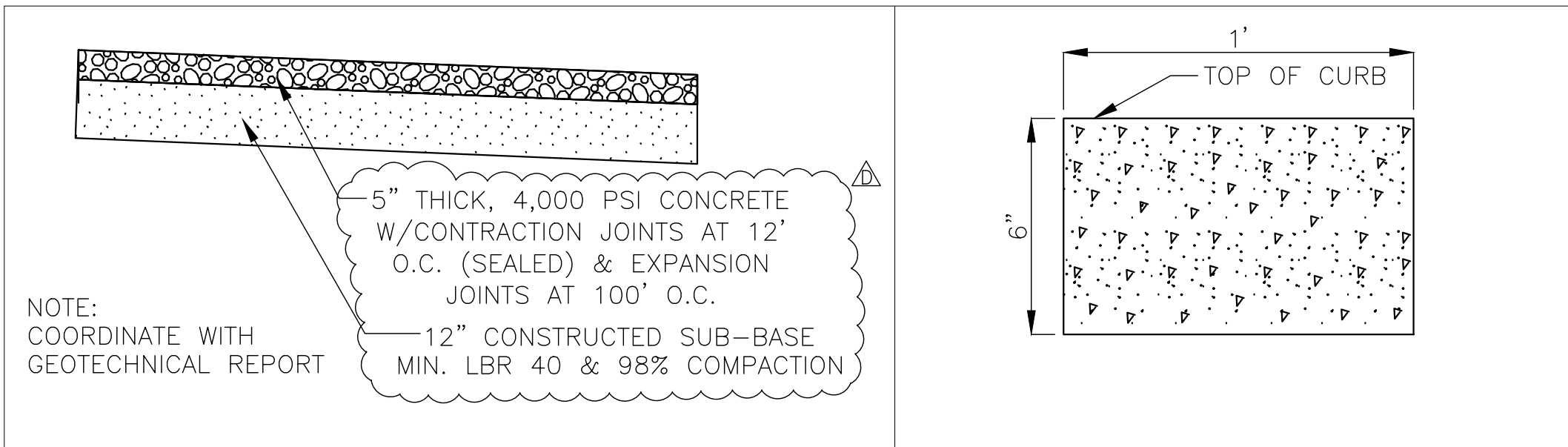
**COMMERCIAL RETAIL BUILDING
CONCEPT DEVELOPMENT, INC.**
S. 14TH ST. & LIME ST.
FERNANDINA BEACH, FLORIDA

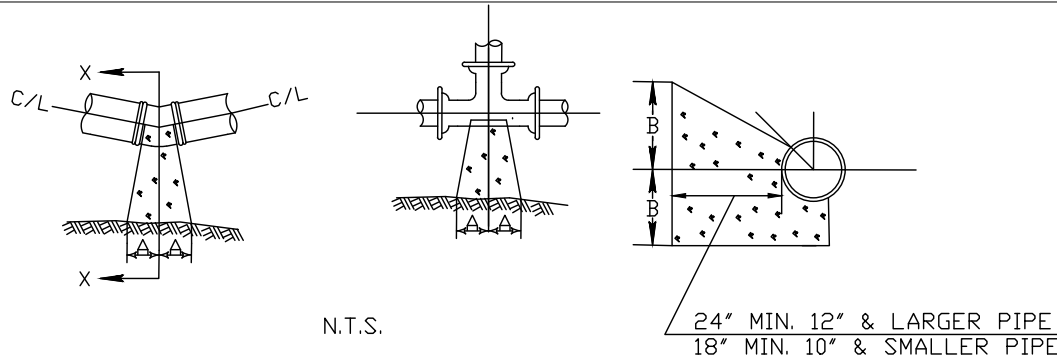
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SCALE: 1:30
DRAWING IS REDUCED IF LESS THAN 22" x 34"
LANDSCAPE PLAN
North / Elev Key Sheet
W N E S
LS-1
Page

NEW PLANT/MATERIAL SCHEDULE				
SYMBOL	QTY.	KEY	SPECIES	SIZE/REMARKS
	28	LO	QUERCUS VIRGINIANA LIVE OAK	2.5" DBH AND 8' HT. MIN. (CANOPY TREE)
	20	FG	CORNUS FLORIDA FLOWERING DOGWOOD	2.5" DBH AND 8' HT. MIN. (UNDERSTORY TREE)
	SEE NOTES, SHEET LS-1	WB	VIBURNUM OBOVATUM	18' HT AND 15' SPREAD MIN. FOR HEDGE
			WALTER'S VIBURNUM	30' HT MIN. FOR SCREENING SHRUBS
	3,360± SF	—	BOUTELOUA DACTYLOIDES BUFFALO GRASS	
	3,630± SF	—	MUHLENBERGIA CAPILLARIS MUHLY GRASS	

XERISCAPE LANDSCAPING SCHEDULE			
DESIGN	STANDARD	POINTS AVAILABLE	POINTS USED
IRRIGATION	MOISTURE SENSING CONTROLLER OTHER THAN RAIN SWITCH	5	5
GRASS	LANDSCAPE PLAN DEPICTS LOW, MODERATE AND HIGH WATER USAGE ZONES AND GROUPING OF PLANTS INTO HYDROZONES	5	
	25% TO 50% OF THE GRASS AREAS USE DROUGHT TOLERANT SPECIES	5	
	51% OR MORE OF THE GRASS AREAS USE DROUGHT TOLERANT SPECIES	10	10
	LESS THAN 75% OF THE LANDSCAPED AREA CONTAINS SOD	10	10
SHRUBS	COMPACTED MULCHED PLANTING BEDS AT LEAST 3" DEEP ARE USED IN ALL PLANTING AREAS EXCEPT GROUND COVER	10	10
	25% TO 50% OF THE REQUIRED SHRUBS ARE DROUGHT TOLERANT SPECIES	5	
	51% OR MORE OF THE REQUIRED SHRUBS ARE DROUGHT TOLERANT SPECIES	10	10
TREES	25% TO 50% OF THE REQUIRED TREES ARE DROUGHT TOLERANT SPECIES	5	5
	51% OR MORE OF THE REQUIRED SHRUBS ARE DROUGHT TOLERANT SPECIES	10	
	25% INCREASE OVER THE REQUIRED NUMBER OF SHADE TREES IN VEHICULAR USE AREAS, PROVIDED THE PLANTING AREA IS LARGE ENOUGH TO ENSURE THAT THE ADDITIONAL TREES WILL THRIVE	5	
	50% INCREASE OVER THE REQUIRED NUMBER OF SHADE TREES IN VEHICULAR USE AREAS, PROVIDED THE PLANTING AREA IS LARGE ENOUGH TO ENSURE THAT THE ADDITIONAL TREES WILL THRIVE	10	







1/4 BENDS				1/8 BENDS				1/16 BENDS				TEE			
SIZE	A	B	CONC.	A	B	CONC.	A	B	CONC.	SIZE	A	B	CONC.	A	B
6"	15"	10"	3.2	9"	10"	3.0	8"	8"	1.3	6"	10"	12"	3.5		
8"	20"	10"	7.5	12"	13"	3.9	8"	10"	2.1	8"	13"	16"	3.4		
10"	26"	17"	11.5	14"	17"	5.9	10"	13"	3.6	10"	16"	20"	9.4		
12"	29"	21"	21.1	16"	21"	8.6	11"	16"	6.6	12"	18"	24"	16.6		
14"	35"	24"	29.8	19"	24"	14.9	12"	20"	6.9	14"	22"	27"	23.2		
16"	38"	27"	37.8	21"	27"	18.1	12"	24"	11.2	16"	24"	30"	28.6		
20"	47"								20"						

NOTE:
1. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.
2. THESE TABLES SHOW MINIMUM SIZE THRUST BLOCKS FOR GOOD SOIL,
(A-1 THROUGH A-3, CLEAN SAND AND GRAVELS).
3. POOR SOIL (A-4 THROUGH A-8, SILTY SOILS, CLAYS, MUCK AND PEAT) WILL
REQUIRE LARGER THRUST BLOCKS.

1. ALL MANHOLES SHALL BE PRECAST CONCRETE AND CONFORM TO ASTM C-478 STANDARDS. MANHOLE CONES AND RISERS SHALL BE CONSTRUCTED OF 4,00 PSI, TYPE II CEMENT WITH RIVER ROCK OR GRANITE AGGREGATE.

2. ALL PIPES SHALL BE CONNECTED TO THE MANHOLE USING A LOCK JOINT FLEXIBLE MANHOLE SLEEVE (ASTM C-923) OR APPROVED EQUAL.

3. THE EXTERIOR AND INTERIOR OF THE MANHOLE SHALL BE COATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS WITH FABERTITE AS MANUFACTURED BY BRIGGS BITUMINOUS COMPOSITION COMPANY.

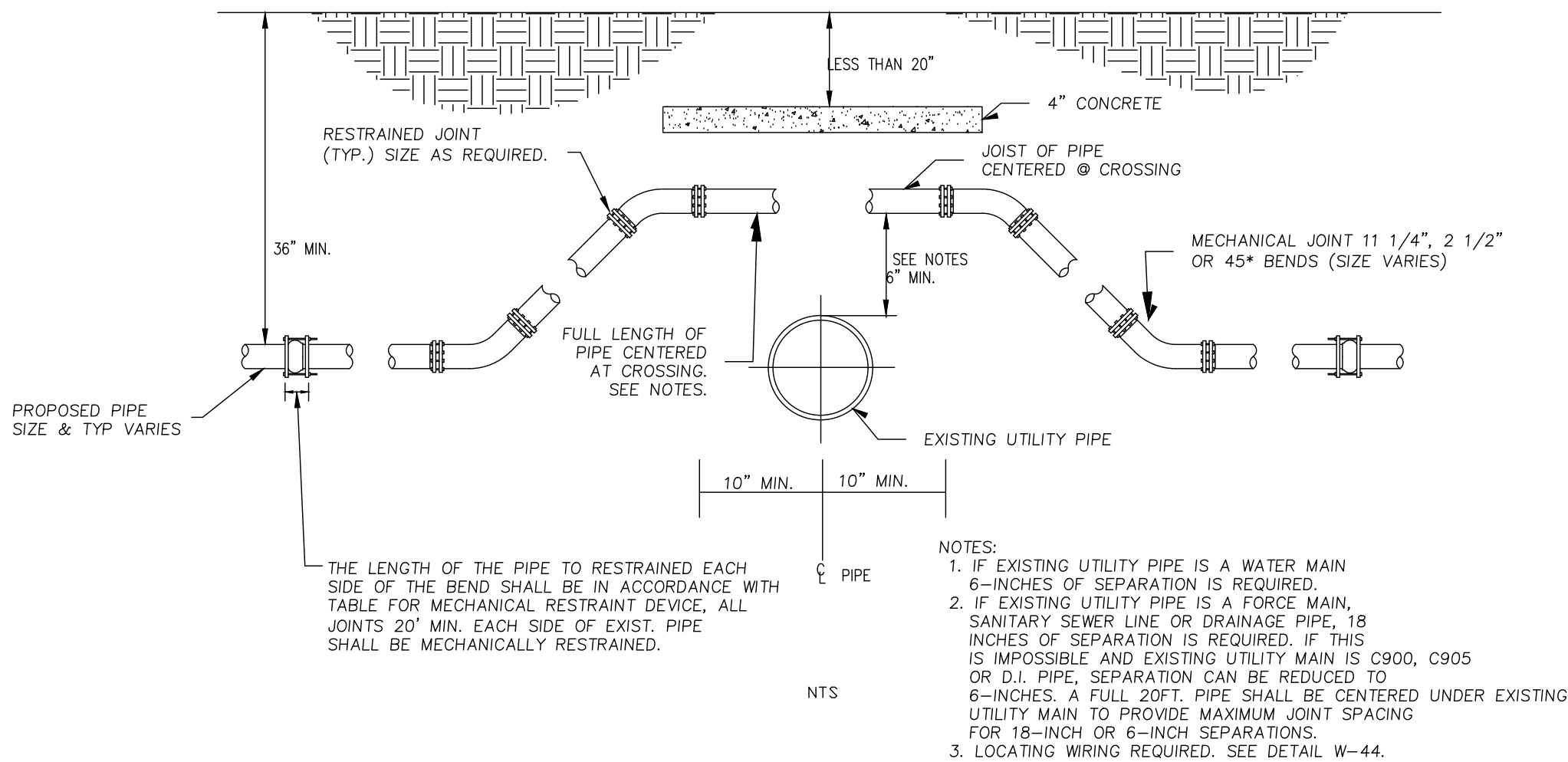
4. AN INSIDE PVC DROP MANHOLE (TYPE "B") SHALL BE REQUIRED FOR MANHOLES WHICH HAVE A DISTANCE OF 18 INCHES OR GREATER BETWEEN INFLUENT PIPE INVERT AND EFFLUENT PIPE INVERT. ALL OTHER DROPS SHALL HAVE A SLIDE CONSTRUCTED TO DIRECT THE FLOW INTO THE INVERT CHANNEL.

5. SEWER SERVICES SHALL BE CAST IRON IF 2FEET OF GROUND COVER CANNOT BE MAINTAINED OVER THE SERVICE LINE.

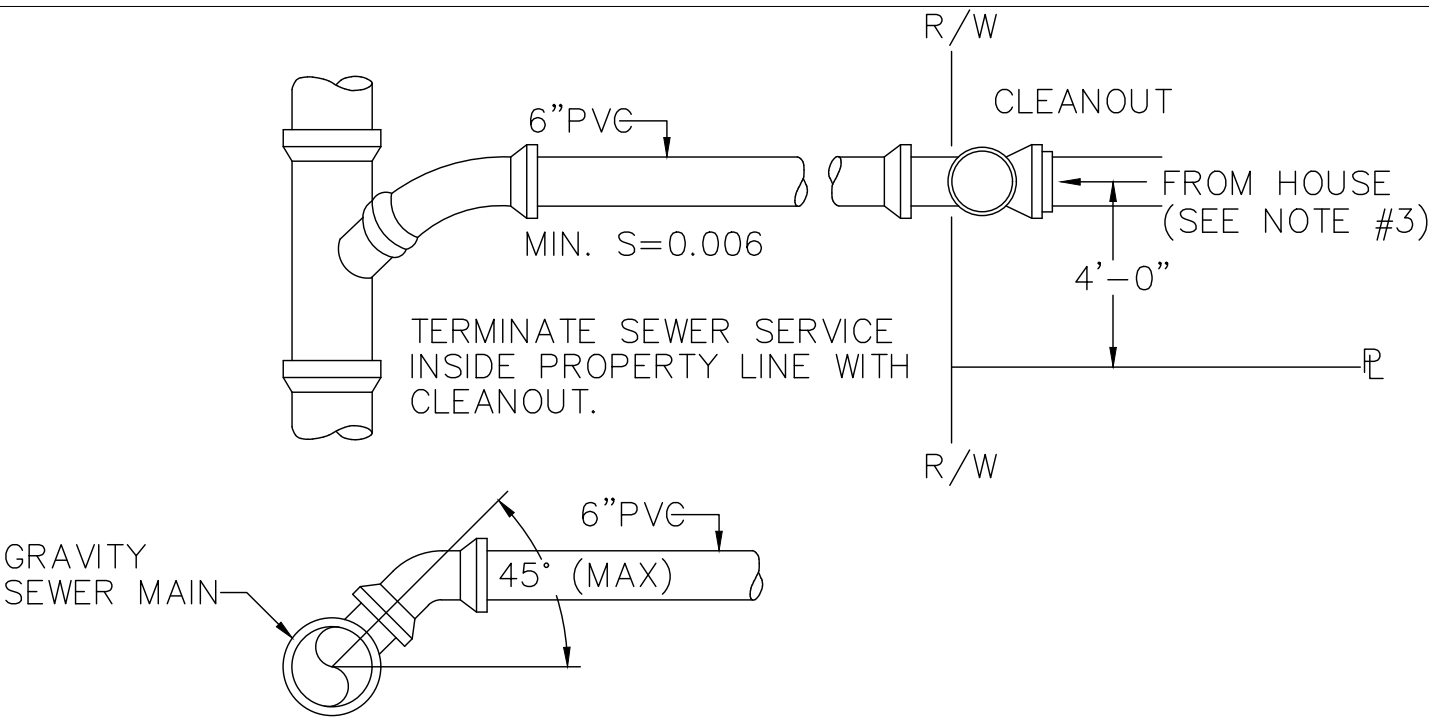
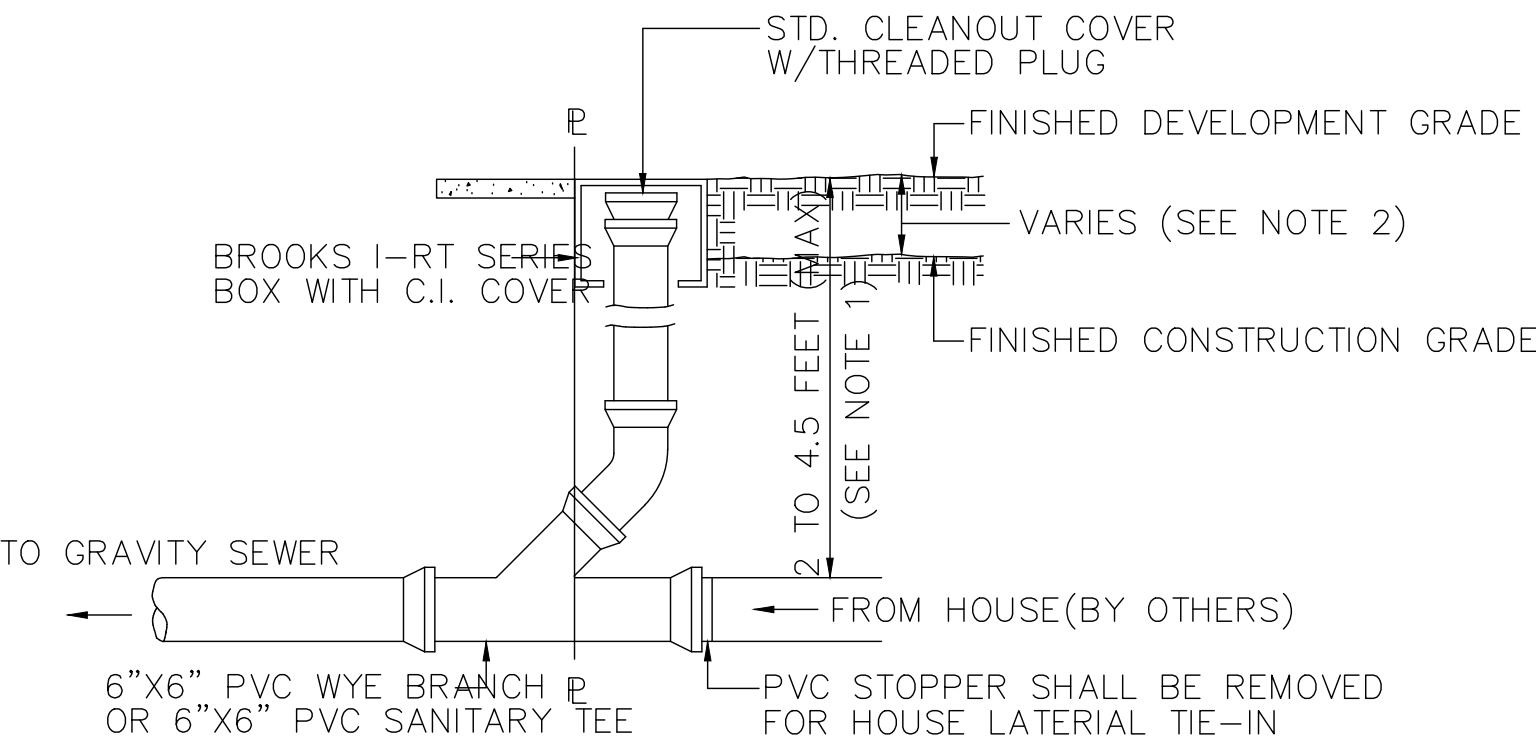
6. ALL DUCTILE IRON SEWER PIPE, WHERE SPECIFIED, SHALL BE CLASS 51 AND COMPLY WITH ANSI/AWWA C150/A21.50 AND ANSI/AWWA C151/A21.51. DUCTILE IRON PIPE SHALL BE PROVIDED WITH A FACTORY APPLIED INTERIOR POLYETHYLENE LINING IN ACCORDANCE WITH ANSI/ASTM D1248.

7. THE MAXIMUM NUMBER OF DIPS IS ONE, 1-INCH DIP PER 135 LF OF PIPE. NO MORE THAN ONE DIP PER 135 LF OF PIPE. A DIP IS DEFINED AS A CHANGE IN ELEVATION OF 0.5" OR GREATER.

THRUST BLOCKS FOR BENDS & TEE'S

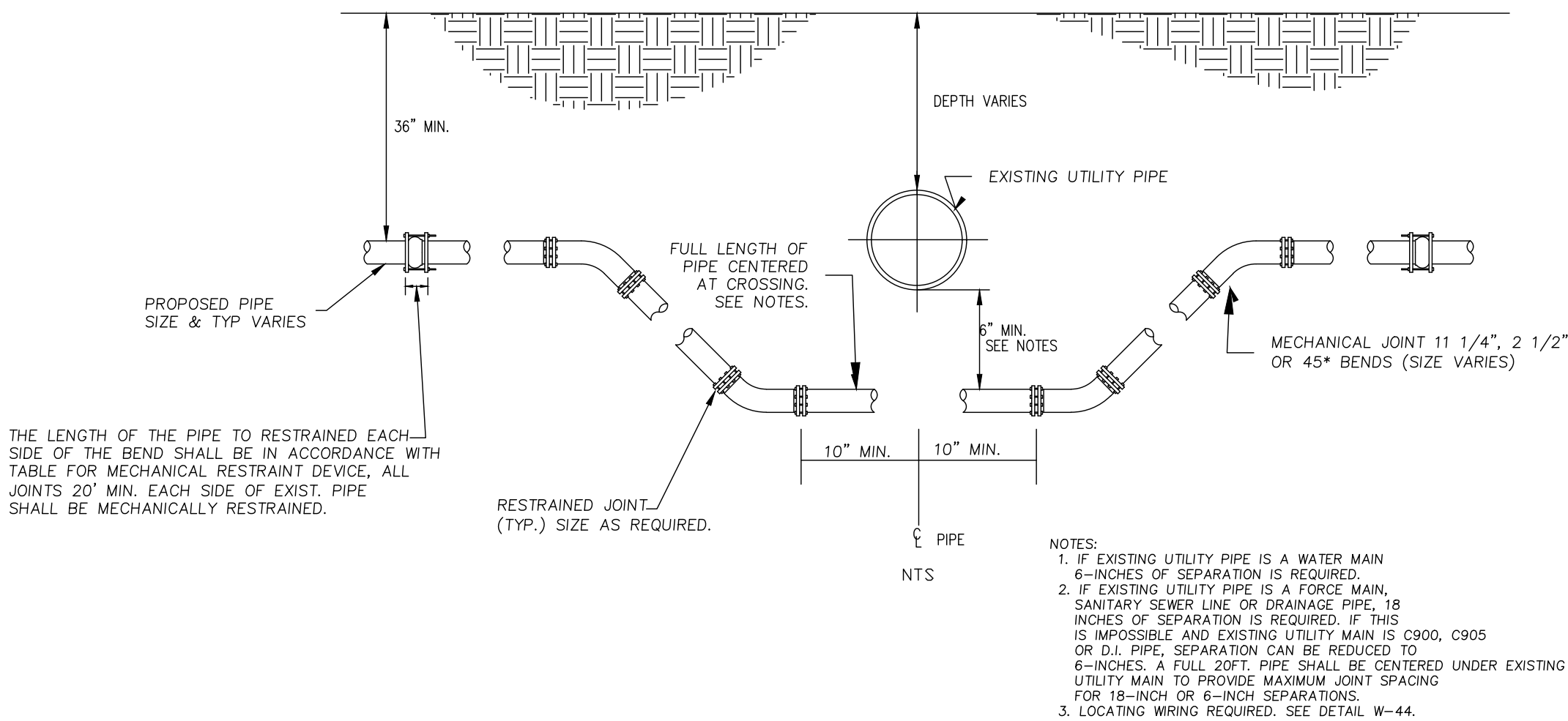


GRAVITY SEWER NOTES

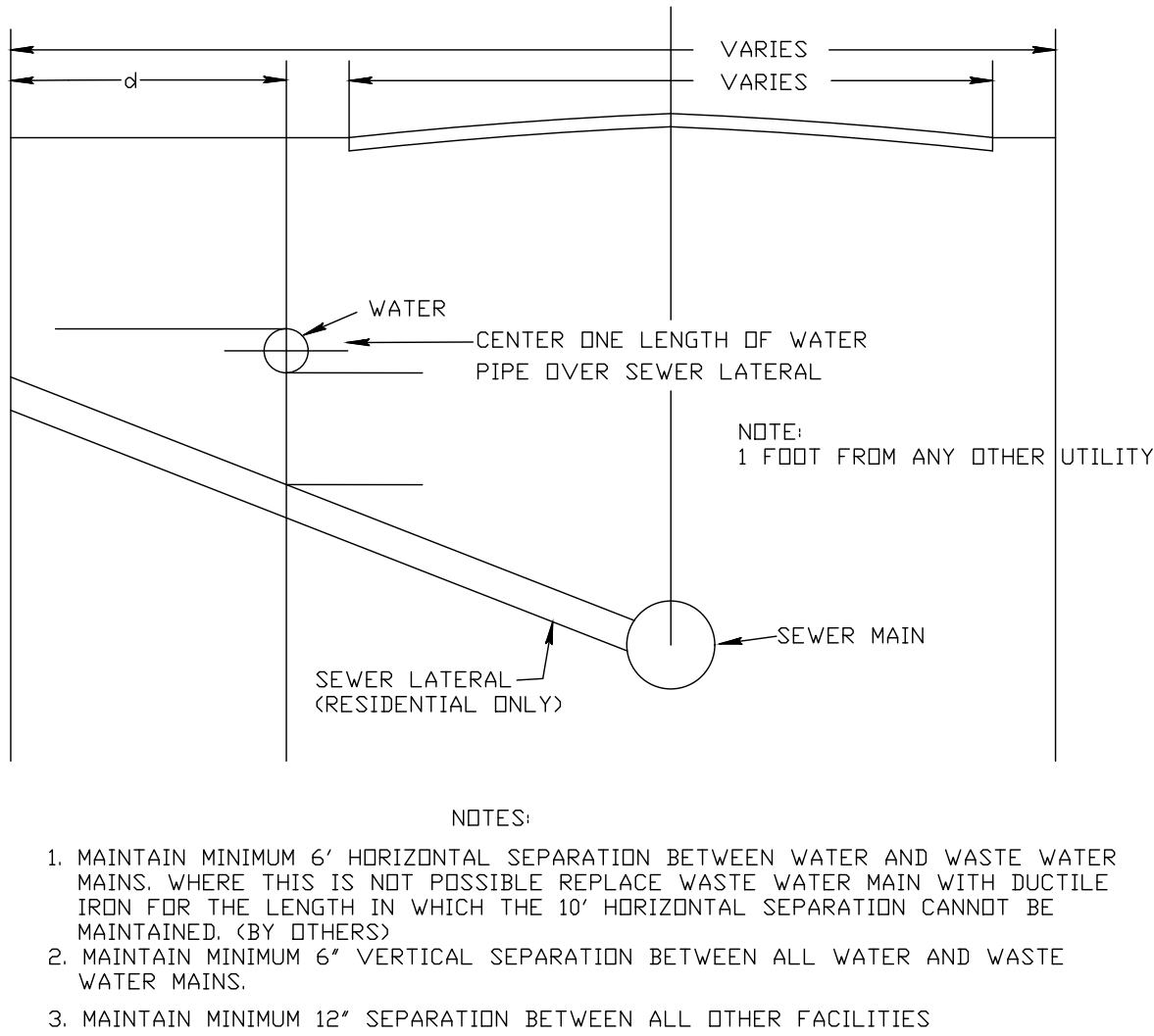


- NOTE:
- SEWER SERVICE SHALL BE INSTALLED 4'-0" INSIDE PROPERTY LINES.
 - TEMPORARY 4"x4"x8" POST, PAINTED RED AT TOP, TO BE INSTALLED FOR AIDING IN THE PROTECTION OF SEWER CLEAN OUTS. THE POST SHALL EXTEND 4' ABOVE GRADE.
 - CONNECTION FROM HOUSE TO UWF SYSTEMS SHALL BE A HARD CONNECTION. FLEXIBLE CONNECTIONS SHALL NOT BE USED.

UTILITY CONFLICT DETAIL "A"



CLEANOUT



TYPICAL SEWER SERVICE

CONTRACTORS ARE REQUIRED TO PAINT NEW HYDRANTS SAFETY YELLOW AND MARK HYDRANTS. THE TOPS AND NOZZLE CAPS SHALL BE PAINTED WITH THE FOLLOWING CAPACITY INDICATOR COLOR SCHEME:

BLUE (SW4079)	1500GPM AND HIGHER
GREEN (SW4085)	1000-1499 GPM
ORANGE (SW4083)	500-999 GPM
RED (SW4081)	LESS THAN 500 GPM

IT IS REQUIRED THAT ALL NEW AND RELOCATED WATER MAINS BE PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA STANDARD C600.

IT IS REQUIRED THAT ALL NEW AND RELOCATED WATER MAINS BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651 AND RULE 62-555.345, F.A.C..

ALL WATER MAINS WILL BE CONSTRUCTED WITH BLUE C900-DR25 PIPE. ALL WATER SERVICES WILL CONSTRUCTED WITH WHITE PVC SCHEDULE 80 PIPE. BLUE SPRAY PAINT WILL BE APPLIED TO THE TOP SURFACE. JOINT RESTRAINERS MAY BE USED IN PLACE OF THRUST BLOCKS ON C900, DR25 PIPE. WITH APPROVAL OF THE CITY UTILITIES DEPARTMENT.

UTILITY CONFLICT DETAIL "B"

HORIZONTAL AND VERTICAL CLEARANCES

POTABLE WATER NOTES

NOTE: SOME DETAILS IN THESE DRAWINGS ARE TO BE CONSIDERED TYPICAL AND MAY NOT BE CALLED OUT ON PLANS. CONTRACTOR SHALL BECOME FAMILIAR WITH AND FOLLOW ALL DETAILS DURING CONSTRUCTION IN ALL TYPICAL AREAS.

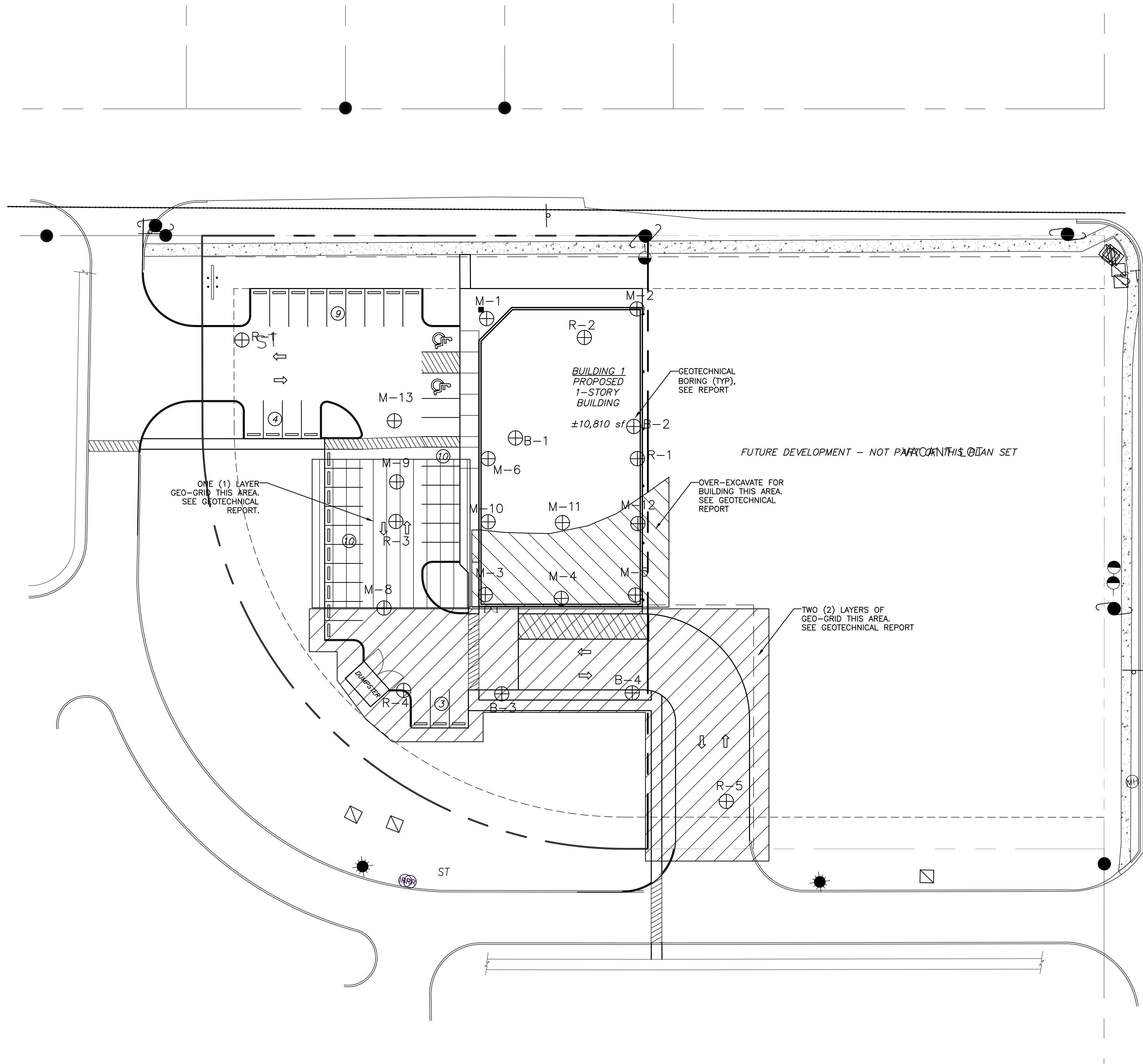
REGISTERED DESIGN PROFESSIONAL
ASA R. GILLETTE, P.E.
FLORIDA P.E. NO. 56177

REV	DATE	ITEM
0	11/5/20	ISSUE FOR C.O.F.B. TRC APPROVAL & CONSTRUCTION

GILLETTE & ASSOCIATES, INC.
CIVIL, ENVIRONMENTAL, MECHANICAL, & STRUCTURAL ENGINEERING
CERTIFICATE OF AUTHORIZATION NO. 9332
ASA R. GILLETTE, P.E. * FL. PE NO. 56177
20 S. 4th STREET * FERNANDINA BEACH, FL 32034
PHONE: 904-261-8819 * www.gilletteassociates.com

COMMERCIAL RETAIL BUILDING
CONCEPT DEVELOPMENT, INC.
S. 14TH ST. & LIME ST.
FERNANDINA BEACH, FLORIDA

DATE:	11/5/20
SCALE:	NONE
DRAWING IS REDUCED IF LESS THAN 22" x 34"	
WATER/SEWER DETAILS	
North / Elev Key Sheet	
DT-2	
Page	



NOTE: SOME DETAILS IN THESE DRAWINGS ARE TO BE CONSIDERED TYPICAL AND MAY NOT BE CALLED OUT ON PLANS. CONTRACTOR SHALL BECOME FAMILIAR WITH AND FOLLOW ALL DETAILS DURING CONSTRUCTION IN ALL TYPICAL AREAS.

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**COMMERCIAL RETAIL BUILDING
CONCEPT DEVELOPMENT, INC.**
S. 14TH ST. & LIME ST.
FERNANDINA BEACH, FLORIDA

DATE: 11/5/20
SCALE: 1:30
DRAWING IS REDUCED IF LESS THAN 22" x 34"
GEO-GRID PLAN
North / Elev Key Sheet
DT-3
Page