St. Mary Ready Street Outfall Improvements
May 25, 2017

1.0 Introduction

The City of St. Marys (Applicant) is seeking authorization under Section 404 of the Clean Water Act (CWA), Section 10 of the Rivers & Harbors Act of 1899 (RHA) and the Coastal Marshlands Protection Act of 1970 (CMPA) to pipe an existing tidal drainage ditch along the east side of Ready Street, between Stable Alley and St. Marys Street in downtown St. Marys, Camden County, Georgia.

The proposed project will improve the conveyance of existing storm water from adjacent land and public roads. Permanent impacts of 0.07 acre will result from the installation of the pipe and outfall, and an additional 0.02 acre section of ditch located north of the project area will no longer receive tidal flows once the outfall structure is installed. The impacts associated with the proposed project are less than 0.10 acre, and therefore the project qualifies as a minor alteration under O.C.G.A. § 12-5-282(9).

2.0 Existing Conditions

The jurisdictional limits within the project limits of the structure subject to this application have been delineated in accordance with 33 CFR Part 328, 33 CFR Part 329, and the CMPA. The limits of jurisdiction under the CMPA in the project footprint were verified by Georgia Department of Natural Resources, Coastal Resources Division (CRD) staff via letter of November 25, 2015, and consist of a 260' long by +/-13' to 14' wide man-made roadside ditch. An additional section of maintained roadside ditch located north of the project footprint, approximately 108' x 10' (1,080 ft^2, 0.02-acre), was identified as jurisdictional by CRD staff. The limits of jurisdiction under the CWA/RHA in the project footprint were verified by the Savannah District Corps of Engineers via letter of 23 June, 2014 (SAS-2013-00812) and are depicted along with the CMPA jurisdiction area on the survey produced by Jackson Surveying, Inc., signed by Phillip Jackson GARLS No. 2804, titled *Map to Show DNR Jurisdiction Line & Modified Topographical Survey Of A Parcel Of Land Lying In The City Of St. Marys, 29th G.M.D., Camden County, Georgia*, dated October 10, 2012 and revised May 22, 2014 (Attachment H).

The project area consists of developed uplands within the City of St. Marys. Paved public roads (Ready Street and St. Marys Street) border the project area to the west, and a city park borders the project to the east. The St. Marys River defines the southern boundary of the project area, and residential development and city streets are located to the north. An existing wood pedestrian bridge allows access across the ditch from Ready Street to the park.

The ditch that requires piping is man-made and currently collects stormwater from adjacent uplands and discharges it into the St. Marys River. The ditch receives tidal

back-flow from the river during higher tides. The ditch is regularly maintained as part of the City stormwater drainage systems to remove debris, silt, and vegetation that can impede flow (site photographs, Attachment J).

3.0 Project Description

The existing ditch section is open cut and requires routine maintenance to remain functional. The proposed project would replace the open cut ditch with 260' of 19" x 30' reinforced concrete elliptical pipe (RCEP; Sheet C3.1). A grass swale would be constructed over the buried RCEP and sloped at varying elevations to drain into three (3) grate inlets which would allow stormwater to enter the pipe. The existing road shoulder would be graded to provide positive drainage into the constructed swale and associated grate inlets. A concrete headwall would be constructed immediately north of Shell Drive at the beginning of the improvements. A concrete headwall would be constructed at the discharge point near the St. Marys River. The pipe would be fitted with a flapgate to provide positive outflow, but prevent inflow from tidewater during higher tide events. Approximately 15 yd^2 of rip-rap (0.37 yds^3/ft) would be placed along the toe of the discharge headwall to prevent scouring during high velocity discharges. The existing wood pedestrian bridge would be replaced with an at-grade crossing, constructed of brick to match a planned multi-use path to be constructed on the park property. The proposed project would result in the permanent alteration of 0.07 acre of tidal ditch by piping, and the alteration of tidal flow to an additional 0.02 acre of man-made roadside ditch located north of the project footprint.

4.0 Marshlands Component

The proposed project includes the placement of a pipe in an existing tidal ditch. The marshlands component consists of the existing ditch.

5.0 Upland Component

Since the project consists of only improvements to an existing stormwater ditch, there are no access points or other associated upland features that are relevant to the marshlands component. Due to the nature of the project, there is no upland component associated with the project.

6.0 Alternatives Considered

The project purpose is to improve stormwater management within the city limits of St. Marys. Due to the location of the project, alternatives that do not involve alteration of the existing tidal ditch are not available.

Project designs that were considered included the following:

1. No action Alternative:

This alternative was rejected since maintaining the ditch in its current state would result in continued flooding of adjacent streets during spring tides, jeopardizing the integrity of the road system and adjacent public and private properties.

2. Widen/deepen Existing Ditch:
This alternative was rejected due to the space limitations due to existing infrastructure. Widening and/or deepening of the ditch would result in the degradation of stability of existing road bed, and loss of large trees positioned along the park boundary. This alternative would also not alleviate flooding during spring tides.

3. Pipe Existing Ditch and Install Headwall & Flapgate (Preferred Alternative)
The preferred alternative would result in the most feasible option to convey existing stormwater flow and prevent back-flooding from spring tides. This alternative would allow for limited treatment of stormwater within the created vegetated swale prior to entering the pipe.

7.0 Bait Shrimp, Oyster, and Crabbing Areas

The proposed project is located near a designated bait shrimp zone according to Georgia Department of Natural Resources *Saltwater Fishing Maps* for Glynn and Camden Counties. No public shellfish picking zones are located in the immediate project area. The project area is not listed on the *Georgia Harvester Reported Crabbing Areas* list.

8.0 Impaired Waters

The subject waterway is not listed on the U.S. Environmental Protection Agency 303(d) list for impaired water bodies.

9.0 Supplemental Information

This additional information is provided for compliance with Coastal Marshlands Protection Act of 1970 information requirements:

OCGA 12-5-286. Permits to fill, drain, etc., marshlands.
(b) Each application for such permit shall be, properly executed, filed with the department on forms as prescribed by the department, and shall include:

(1) The name and address of the Applicant-
City of St. Marys
Attn: Mr. Bobby Marr,
418 Osborne St.

St. Marys, Ga 31558

(2) A plan or drawing showing the Applicant's proposal and the manner or method by which such proposal shall be accomplished. Such plan shall identify the coastal marshlands affected- Please refer to attached drawings produced by Thomas & Hutton titled ***Site Development Plans of Ready Street Outfall Improvements***, dated June 24, 2015, revised May 22, 2017. The work will be accomplished by construction equipment such as backhoe, excavator, tractor, bulldozer, etc. No equipment will be placed in vegetated marshlands during construction.

(3) A plat of the area in which the proposed work will take place- *A plat produced by* Jackson Surveying, Inc., signed by Phillip Jackson GARLS No. 2804, titled *Map to Show DNR Jurisdiction Line & Modified Topographical Survey Of A Parcel Of Land Lying In The City Of St. Marys, 29th G.M.D., Camden County, Georgia*, dated October 10, 2012 and revised May 22, 2014 is included in Attachment H.

(4) A copy of the deed or other instrument under which the Applicant claims title to the property or, if the Applicant is not the owner, then a copy of the deed or other instrument under which the owner claims title together with written permission from the owner to carry out the project on his land. In lieu of a deed or other instrument referred to in this paragraph, the committee may accept some other reasonable evidence of ownership of the property in question or other lawful authority to make use of the property; The committee will not adjudicate title disputes concerning the property which is the subject of the application; provided, however, the committee may decline to process an application when submitted documents show conflicting deeds- Work will be conducted within an existing road right-of-way. Ownership information is included in Attachment C.

(5) A list of all adjoining landowners together with such owners' addresses, provided that if the names or addresses of adjoining landowners cannot be determined, the Applicant shall file in lieu thereof a sworn affidavit that a diligent search, including, without limitation, a search of the records for the county tax assessor's office, has been made but that the Applicant was not able to ascertain the names or addresses, as the case may be, of adjoining landowners- Adjacent landowner information is provided in Attachment I.

(6) A letter from the local governing authority of the political subdivision in which the property is located, stating that the Applicant's proposal is not in violation of any zoning law; A letter from the City of St. Marys Community Development Department, dated September 8, 2015, is included at Attachment F.

RLC

August 23, 2016

Skye Stockel
Coastal Permit Coordinator
Marsh and Shore Management Program
Coastal Resources Division GADNR
One Conservation Way
Brunswick, GA 31520-8686

RE: City of St. Marys Ready Street Drainage Improvements
Camden County, Georgia
CMP20160021 / SAS-2013-00812

Dear Ms. Stockel:

I refer to your email of May 26, 2016, regarding the Coastal Marshlands Protection Committee permit application for the proposed stormwater management improvements located east of Ready Street, in downtown St. Marys, Georgia (Latitude 30.7203, Longitude -81.5462)

As stated in your email, you have determined that additional information is required before the project can be placed on public notice. Listed below are your comments, followed by the applicant's response:

1. Basic project description.

Applicant's Response: The project purpose as stated by the applicant is "too aid the conveyance of existing stormwater from adjacent land and help manage surface water runoff which will discharge into the St. Marys River". Currently, the subject ditch conveys stormwater from developed residential areas of St. Marys to the river. The proposed project would pipe approximately 260' of the ditch, install grate inlets in a grassed swale constructed over the pipe, and install a concrete headwall and outfall structure with a flapgate and rip-rap protection. The current manner in which the ditch conveys the water from the City's stormwater drainage system is inefficient. The ditch requires constant maintenance and the flooding of Ready Street due to the ditch overflowing its banks necessitates that it be modified to more effectively accomplish its purpose.

2. Brief discussion on why the permit should be granted.

Applicant's Response: The ditch is existing, and is the only means by which the upstream stormwater can reach the river. The proposal is therefore to improve, or "aid" the manner in which existing stormwater reaches the outfall location. Therefore, the applicant's stated purpose and need is sufficient to warrant authorization under the CMPA. The current manner in which the ditch conveys the water from the City's stormwater drainage system is inefficient. The ditch requires constant maintenance and the flooding of Ready Street due to the ditch overflowing its banks necessitates that it be modified to more effectively accomplish its purpose.

3. An Alternative Site Description.

Applicant's Response: The project purpose is to improve the existing conveyance of stormwater. The stormwater that needs to be conveyed through the project area already exists, and the proposed project will neither increase or decrease conditions upstream, and the stormwater must continue to be discharge through the project area. The applicant is merely modifying the means by which the stormwater is transported. Since the water must be discharged into a receiving basin through the project area, in this case the St. Marys River, the project is water-dependent and therefore there are no non-marsh alternatives sites available. The applicant is thus forced to choose between only 2 water dependent alternatives, only one of which is practicable. Using the ditch in its

current state does not solve the problems with maintenance and flooding. Making the ditch wider and deeper also does not solve the problem, as continual maintenance would remain, and the flooding tides that back up the ditch would equalize to the new ditch dimensions and continue. Additionally, there is no room to widen the ditch due to the existing road to the west and the park to the east. Deepening the ditch could cause structural integrity problems with the road. The only practicable alternative is to pipe the ditch and install a tide-control structure at its terminal discharge location. This option will eliminate maintenance and flooding issues and will not increase or decrease the existing discharge rate.

4. Signed project plans from Local Government.

Applicant's Response: A copy of the plans certified by the local zoning authority is attached.

5. A description and depiction of the upland component of the project.

Applicant's Response: The proposed project consists of the improvement of a public stormwater management system. The marshland component, being the piping of an existing stormwater conveyance ditch, does not provide access to coastal marshlands. Therefore, there is no upland component associated with the project that would serve or augment the marshland component as defined under the Rules of Georgia Department of Natural Resources, Coastal Resources Division Chapter 391-2-3.02(2)(q).

6. A calculation of the effective impervious coverage of the upland component of the project;

Applicant's Response: As stated in item 5, there is no upland component associated with this project. Therefore, it is not possible or necessary to calculate impervious coverage.

7. A stormwater management plan for the upland component of the project;

Applicant's Response: As stated in item 5, there is no upland component associated with this project. Therefore, it is not possible or necessary to provide a stormwater management plan. The project itself consists of the improvement of an existing stormwater conveyance ditch. Piping of the open ditch will not increase or decrease stormwater discharge from the project footprint.

8. The proposed application is classified as a moderate structure application in relationship to the application fee schedule. $250.00 check made payable to the Georgia Department of Natural Resources.

Applicant's Response: A check in the amount of $250.00 is attached.

We trust that this information is sufficient to complete the processing of this application. If you have any questions or require additional information, please contact me at your earliest convenience at (912) 443-5896.

Sincerely,
RESOURCE & LAND CONSULTANTS

Daniel H. Bucey
Principal

Enclosures

cc: Mr. Bobby Marr; City of St. Marys

CITY OF ST. MARYS
418 OSBORNE STREET
ST. MARYS, GEORGIA 31558

COMMUNITY DEVELOPMENT DEPARTMENT
TELEPHONE: 912-510-4032 FAX: 912-510-4014

September 8, 2015

Mr. Daniel H. Bucey
Resource & Land Consultants
41 Park of Commerce Way
Suite 303
Savannah, GA 31404

RE: Ready Street Outfall Improvements
St. Marys, Camden County, GA

Mr. Bucey:

Thank you for your notice, on behalf of the City of St. Marys, regarding the Ready Street outfall improvements. Our zoning ordinances exempt such "fixed constructs" from our Maritime Heritage Overlay District, where the stated project is planned. This exemption allows for the proposed project under our standing ordinances granting this project preliminary approval in accordance with O.C.G.A § 12-5-286b(6).

As your letter states this zoning determination does not constitute approval of the project itself or any associated facilities. The applicant still must comply with all necessary permitting and approvals for activities associated with the construction prior to construction.

If you have any further questions regarding this project, please do not hesitate to contact us at the Community Development Department.

Sincerely,

Jeffrey S. Adams, PhD,
Community Development Director
City of St. Marys

Enclosures
Mr. Bobby Marr-City of St. Marys
Mr. John Holman, City of St. Marys
Ms. Jennifer Roach-Thomas & Hutton

SITE DEVELOPMENT PLANS
OF
READY STREET OUTFALL IMPROVEMENTS

ST. MARYS, GA

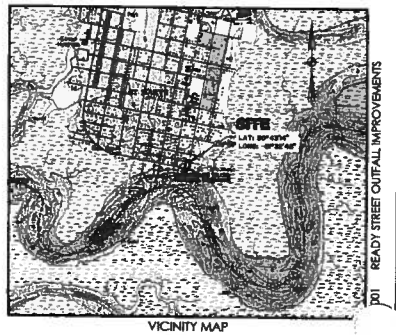
PREPARED FOR:
CITY OF ST. MARYS
819 POINT PETER ROAD
ST. MARYS, GEORGIA 31588

JUNE 24, 2015
REVISED: AUGUST 8, 2016

J-25144.0001

PREPARED BY:

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



VICINITY MAP
SCALE: 1" = 2000'

READY STREET OUTFALL IMPROVEMENTS

Sheet List Table

Sheet Number	Sheet Title
CO	COVER SHEET
G1.1	GENERAL NOTES AND INDEX
V2.1	EXISTING CONDITIONS
CD1.1	DEMOLITION PLAN
C1.1	SITE LAYOUT PLAN
C3.1	PAVING, GRADING AND DRAINAGE PLAN
C3.2	PAVING, GRADING AND DRAINAGE DETAILS
EC1.1	ES & PC NOTES
EC1.2	ES & PC NOTES
EC1.3	ES & PC NOTES
EC2.1	ES & PC PLAN
EC3.1	ES & PC DETAILS
S1.1	HEADWALL PLANS, SECTIONS AND DETAILS

REVISION HISTORY

REV. NO.	REVISION	BY	DATE
1	ARMY CORPS OF ENGINEERS COMMENTS	JAB	8/8/16

SUBMITTAL HISTORY

SUBMITTED TO	DATE

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

THOMAS & HUTTON
50 Park of Commerce Way
Savannah, GA 31405
p.912.234.5300 f.912.234.2950

GA DNR
AUG 24 2016
Marsh & Shore Mgt. Program

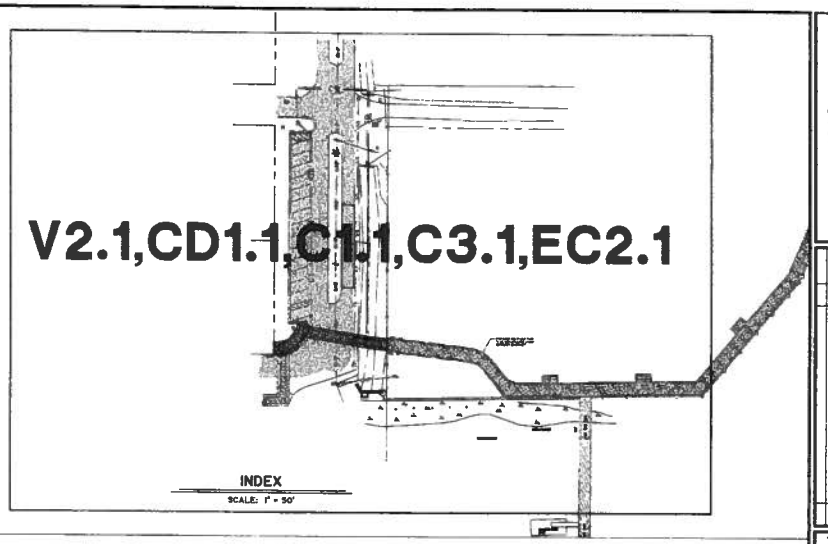
Signed Plans
local gov't 1 of 13

GENERAL NOTES

1. THE PROJECT AREA IS LOCATED ALONG THE EAST SIDE OF READY STREET BETWEEN STABLE ALLEY AND ST. MARYS STREET. THE TOTAL PROJECT AREA/DISTURBED AREA IS 0.2 ACRES.
2. THE PROJECT AREA IS WITHIN FLOOD ZONE AE (EL. 10 AS AND ZONE VE (EL. 10 AS SHOWN ON THE CAMDEN COUNTY, GEORGIA FLOOD INSURANCE RATE MAP PANEL 13039C0046F, LAST REVISED 12/16/2006.
3. ALL ON SITE ELEVATIONS REFER TO NAVD88 DATUM, WITH ALL COORDINATES BASED ON GEORGIA STATE PLANE EAST ZONE COORDINATE SYSTEM US FOOT NAD83. EXISTING CONDITIONS PLAN BASED ON SURVEY PROVIDED BY JACKSON SURVEYING, INC. DATED 6/06/2016.
4. THERE ARE TIDAL WETLANDS LOCATED WITHIN THE PROJECT BOUNDARY.
5. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH CONSTRUCTION PLANS AND SPECIFICATIONS.
6. TREE PROTECTION BARRICADES, IF REQUIRED, SHALL BE INSTALLED PRIOR TO ANY CLEARING ACTIVITY AND MAINTAINED UNTIL INSTRUCTED BY THE OWNER OR ENGINEER TO REMOVE THEM.
7. ST. MARYS FIRE DEPARTMENT MUST BE NOTIFIED OF ANY ROAD CLOSURES AND TRAFFIC CONTROL MEASURES MUST BE EMPLOYED AT LEAST 72 HOURS IN ADVANCE OF ANY ROAD CLOSURES.
8. THE CONTRACTOR SHALL CONTACT ALL LOCAL UTILITY COMPANIES BEFORE WORK COMMENCES, VERIFY UTILITIES WITHIN THE PROJECT LIMITS AND NOTIFY THE ENGINEER OF CONFLICTS OR VARIANCES TO THE PLANS PRIOR TO BEGINNING WORK OR PURCHASE OF MATERIALS.
9. THE CONTRACTOR SHALL COORDINATE DEMOLITION AND IMPROVEMENTS TO MINIMIZE TRAFFIC INTERFERENCE AND OPERATIONS OF FACILITIES
10. ALL UTILITY POLES ADJACENT TO PROPOSED CONSTRUCTION MUST BE SECURED PRIOR TO ANY ADJACENT DISTURBANCE AND THE CONSTRUCTION PROCEDURE MUST BE ACCEPTABLE TO THE UTILITY COMPANY.
11. EACH EXISTING ROAD WILL BE CLEANED UP AND RESTORED DAILY.
12. NEW PAVEMENT TO BE FLUSH WITH EDGE OF EXISTING PAVEMENT.
13. NOTIFY THE ENGINEER AND THE CITY OF ST. MARYS ENGINEER 48 HOURS BEFORE BEGINNING CONSTRUCTION.
14. IT IS THE OBLIGATION OF THE CONTRACTOR TO MAKE THEIR OWN INTERPRETATION OF ALL SURFACE AND SUBSURFACE DATA AVAILABLE AS TO THE NATURE AND EXTENT OF THE MATERIALS TO BE EXCAVATED, WASTED, GRADED, AND COMPACTED. THE INFORMATION SHOWN ON THESE PLANS IS NO WAY GUARANTEED THE AMOUNT OR NATURE OF THE MATERIAL TO BE ENCOUNTERED.
15. FOREIGN BORROW NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE PROVIDED BY THE CONTRACTOR FROM SOURCES DEVELOPED BY THE CONTRACTOR. ALL COST FOR THIS SERVICE SHALL BE PAID IN FULL BY CONTRACTOR.
16. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CONSTRUCTED SIMULTANEOUSLY WITH THE DISTURBANCE OF THE LAND, INCLUDING DEMOLITION, AND SHALL REMAIN FUNCTIONAL UNTIL THE CONTRIBUTING DISTURBED AREAS ARE STABILIZED. SILT BARRIERS WILL BE INSTALLED AS NECESSARY TO PREVENT EXCESSIVE SEDIMENTATION OUTSIDE THE PROJECT LIMITS.
17. TOPOGRAPHIC SURVEY BY JACKSON SURVEYING INC. ALL ELEVATIONS REFER TO NAVD 1988 DATUM.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION OF CONSTRUCTION ACTIVITIES WITH LOCAL UTILITY COMPANIES AND ADJACENT PROPERTY OWNERS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF UNDERGROUND UTILITIES AND COORDINATION OF PROTECTION OF UTILITIES WITH THE UTILITY PROVIDER. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR. UTILITIES LOCATIONS SHOWN ON THE PLAN ARE APPROXIMATE AND SHOULD BE CONFIRMED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE UTILITY ONE-CALL BUREAU 1-800-282-7411 OR 811 TO VERIFY ALL EXISTING UTILITIES AFFECTED BY THE WORK PRIOR TO ANY EXCAVATION & NOTIFY ENGINEER OF ANY DISCREPANCIES.
19. CONTRACTOR TO VERIFY ELEVATION, SIZE, AND LOCATION OF ALL EXISTING PIPES PRIOR TO CROSSING STRUCTURES OR COMMENCING CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES FROM INFORMATION DEPICTED ON PLANS.
20. CONTRACTOR SHOULD CONFIRM PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCING CONSTRUCTION.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CLEARING, GRUBBING, DEMOLITION, AND DISPOSAL NECESSARY TO CONSTRUCT THE PROPOSED UTILITIES AND DRAINAGE STRUCTURES. NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE UNLESS NOTED OTHERWISE.
22. THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION IN ACCORDANCE WITH THE EROSION AND SEDIMENTATION ACT OF 1975, AS AMENDED AND THE NPDES GENERAL STORM WATER PERMIT. PROVISIONS SHALL BE MADE DURING CONSTRUCTION TO PREVENT SILT FROM WASHING INTO DITCHES AND ADJACENT FLOODPLAINS. ALL SOIL EROSION & SEDIMENTATION CONTROL SHALL BE SUBJECT TO REVIEW BY THE ENGINEER. SEE EROSION CONTROL NOTES FOR FURTHER DETAIL.
23. ALL STORM DRAINAGE PIPE SHALL BE ASTM C76 CLASS III REINFORCED CONCRETE PIPE OR REINFORCED CONCRETE ELLIPTICAL PIPE (ASTM C-507)WITH RUBBER GASKET JOINTS UNLESS OTHERWISE NOTED. NO LIFTING HOLES WILL BE ALLOWED.
24. ANY DEFECTIVE, DAMAGED OR UNSOUND PIPE SHALL BE REJECTED. ALL FOREIGN MATTER OR DIRT SHALL BE REMOVED FROM THE INSIDE OF THE PIPE BEFORE IT IS LOWERED INTO ITS POSITION IN THE TRENCH AND SHALL BE KEPT CLEAN DURING AND AFTER LAYING. CARE SHALL BE TAKEN TO PREVENT DIRT FROM ENTERING THE JOINT SPACE. AT TIMES WHEN PIPE LAYING IS NOT IN PROGRESS, THE OPEN ENDS OF THE PIPE SHALL BE CLOSED BY ACCEPTABLE MEANS AND NO TRENCH WATER SHALL BE PERMITTED TO ENTER PIPE.
25. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY NUMBER OF TREES TO PROTECT OR REMOVE BY CONDUCTING A FIELD WALK THROUGH PRIOR TO BEGINS THE WORK. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL WALK THE SITE WITH THE CITY OF ST MARYS TO CONFIRM TREES TO BE SAVED/REMOVED.
26. RECORD DRAWINGS MUST BE PROVIDED BY THE CONTRACTOR UPON PROJECT COMPLETION AND BEFORE PUNCHLIST WALK THROUGH. ALL STRUCTURES, PIPES, PAVEMENTS, ETC INSTALLED AS A PART OF THE PROJECT SHALL BE DOCUMENTED. THE RECORD DRAWINGS SHALL INCLUDE FINISHED GRADE OF WALKWAYS AND RAMPS. THE RECORD DRAWINGS SHALL INCLUDE INVERT ELEVATIONS AND LOCATIONS OF ALL PIPES & STRUCTURES. RECORD DRAWINGS MUST BE CERTIFIED BY A REGISTERED LAND SURVEYOR IN THE STATE OF GEORGIA.
27. THE FOLLOWING UTILITY OWNERS MAY HAVE FACILITIES WHICH CONFLICT WITH CONSTRUCTION ON THIS PROJECT: CITY OF ST MARYS WATER & SEWER DEPARTMENT, BOBBY BANN, (912) 882-4415
28. SEE EROSION CONTROL SHEETS, NOTES AND DETAILS FOR EROSION AND POLLUTION CONTROL MEASURES TO BE IMPLEMENTED. CONTRACTOR SHALL FOLLOW ALL NPDES PERMIT CONDITIONS AS SET FORTH IN THE GAR No. 100006.
29. PERMANENT COVER SHALL BE ESTABLISHED AND SHALL BE MAINTAINED FOR A WARRANTY PERIOD OF ONE YEAR FROM THE DATE OF THE FINAL ACCEPTANCE OF THE PROJECT.
30. SUITABLE MATERIAL EXCAVATED DURING CONSTRUCTION SHALL BE USED ON SITE TO THE EXTENT POSSIBLE. THE CONTRACTOR SHALL NOTIFY THE OWNER IF UNSUITABLE MATERIAL IS DISCOVERED PRIOR TO BEGINNING ANY REMOVAL OPERATION. ANY EXCESS SUITABLE OR UNSUITABLE MATERIAL SHALL BE HAULED OFFSITE AT THE CONTRACTOR'S EXPENSE.
31. THE CONTRACTOR SHALL IMMEDIATELY REPAIR EXISTING WATER & SEWER SERVICES DAMAGED DURING CONSTRUCTION AT THE CONTRACTOR'S EXPENSE.
32. BACKFILL NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE PROVIDED BY THE CONTRACTOR FROM SOURCES DEVELOPED BY THE CONTRACTOR AND ACCEPTABLE TO THE CITY OF ST MARYS.
33. ALL PIPE JOINTS SHALL BE WRAPPED TRICE WITH FILTER FABRIC (MIRAFI 140-N OR EQUIVALENT. SEE SPECIFICATIONS FOR WIDTH AND OVERLAP.
34. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY SHORING, SHEETING AND DEWATERING TO COMPLETE THE PROJECT, AND PROTECT THE CONSTRUCTION WORKERS AND ALL ADJACENT STRUCTURES, TREES, AND LANDSCAPING. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIR AND COST TO RETURN AREA TO ORIGINAL ORIGINAL CONDITION.
35. PROPERTY CORNERS DISTURBED BY CONSTRUCTION SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR PROVIDED BY THE CONTRACTOR AT THE CONTRACTORS EXPENSE.
36. CONTRACTOR SHALL CLEAN ALL INLETS AND PIPES AT THE COMPLETION OF CONSTRUCTION TO REMOVE SILT AND DEBRIS. SILT AND DEBRIS ARE TO BE COLLECTED AND DISPOSED OF PROPERLY. THE CLEANING OF INLETS AND PIPES SHALL BE CONSIDERED PART OF THE COST FOR THE PIPE ON THE PROJECT.
37. TRAFFIC CONTROL DEVICES USED IN ALL WORK ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE " MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" CURRENT EDITION. CONTRACTOR SHALL FURNISH TRAFFIC CONTROL PLAN THAT WILL BE REVIEWED BY THE OWNER.
38. CONTRACTOR SHALL MAINTAIN TRAFFIC ONE LANE OF TRAFFIC AT ALL TIMES DURING CONSTRUCTION. ANY ITEMS REQUIRED TO MAINTAIN TRAFFIC SHALL BE INCLUDED IN THE ITEM "TRAFFIC CONTROL," UNLESS OTHERWISE INDICATED.
39. CONTRACTOR SHALL MAINTAIN ENTRIES/EXITS TO ALL PROPERTIES DURING CONSTRUCTION. ALL MATERIAL, LABOR AND EQUIPMENT NECESSARY SHALL BE INCLUDED IN THE ITEM "TRAFFIC CONTROL". CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH ADJACENT PROPERTY OWNERS. CONTRACTOR SHALL MAKE PROVISIONS FOR MAINTAINING CONTINUOUS ACCESS FOR LANDOWNERS AT ALL TIMES DURING CONSTRUCTION.
40. ALL DAMAGE CAUSED BY CONTRACTOR OR ITS SUB-CONTRACTORS DURING CONSTRUCTION IS TO BE REPAIRED TO ORIGINAL CONDITIONS AT THE CONTRACTORS EXPENSE. CONTRACTOR TO PAY ALL FINES, PENALTIES & FEES AND HOLD HARMLESS OWNER AND ENGINEER.
41. CONTROL OF STORMWATER THROUGHOUT THE CONSTRUCTION PERIOD SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. EXISTING DRAINAGE PATTERNS SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. ALL PENALTIES, CLAIMS, AND FINES IMPOSED ON THE OWNER AS A RESULT OF DAMAGE CAUSED BY ACTIONS OF THE CONTRACTOR, HIS EMPLOYEES, OR SUBCONTRACTORS SHALL BE BORNE IN FULL BY THE CONTRACTOR.
42. ALL CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN AN ACCEPTABLE WASTE DISPOSAL AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL CONSTRUCTION DEBRIS.ALL WORK SHALL CONFORM TO APPLICABLE STATE, COUNTY, AND MUNICIPAL REQUIREMENTS, CODES, AND PERMITS ACQUIRED FOR CONSTRUCTION.
43. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE PRIOR TO BEGINNING WORK.
44. WETLANDS WITHIN THE PROJECT ARE WITHIN THE JURISDICTION OF THE US ARMY CORPS OF ENGINEERS AND/OR THE GEORGIA DEPARTMENT OF NATURAL RESOURCES, WHICH REQUIRE A PERMIT FROM THE AGENCY FOR ANY DISTURBANCE ACTIVITY. CONTRACTOR SHALL NOT COMMENCE CONSTRUCTION ACTIVITY WITHIN JURISDICTIONAL WETLANDS WITHOUT CONFIRMATION OF PERMIT AUTHORIZATION
45. PROJECT AREA SHALL BE LIMITED TO THE RIGHT-OF-WAY OF CITY OF ST MARYS. CONTRACTOR, PERSONNEL, EQUIPMENT, OR MATERIAL SHALL NOT ENTER ONTO PRIVATE PROPERTY WITHOUT PRIOR WRITTEN CONSENT FROM CITY AND PROPERTY OWNER.
46. SHOULD WATER & SEWER UTILITIES REQUIRE RELOCATION:
    - 46.1. MAINTAIN A 10' HORIZONTAL SEPARATION BETWEEN ALL SANITARY SEWERS AND ALL WATER MAINS. WHERE THIS SEPARATION CANNOT BE MAINTAINED, OR WHERE LINES CROSS, PROVIDE AN 18" MINIMUM VERTICAL SEPARATION BETWEEN THE OUTSIDE OF THE PIPES. IF THESE REQUIREMENTS CANNOT BE MET, PROPOSED WATERLINE WILL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH, REQUIREMENTS ARE MET.
    - 46.2. ANY REQUIRED SHUTDOWN OF WATER AND SANITARY SEWER LINES SHALL BE COORDINATED WITH THE OWNER/OPERATION OF THE SYSTEM. ALL REQUESTS FOR DISRUPTION SHALL BE MADE A MINIMUM OF 72 HOURS IN ADVANCE OF THE REQUIRED SHUTDOWN.

DEMOLITION NOTES

47. UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NOT REPRESENT ACTUAL AND ALL LOCATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN AVAILABLE RECORD DRAWINGS AND COORDINATE WITH THE PROVIDER TO LOCATE ALL UTILITIES PRIOR TO DEMOLITION.
48. UTILITIES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
49. THE CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING BARRICADES, ENCLOSURES, ETC., TO THE BEST PRACTICES.
50. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
51. PRIOR TO COMMENCING DEMOLITION OF EXISTING SITE, CONTRACTOR SHALL IMPLEMENT PHASING OF EROSION & SEDIMENTATION CONTROL PRACTICES.



PREPARED FOR:
CITY OF ST. MARYS
819 POINT PETER ROAD
(912) 882-4415

GENERAL INFORMATION

OWNER:
CITY OF ST. MARYS
819 POINT PETER ROAD
ST. MARYS, GA 31558
(912) 882-4415

SURVEYOR:
JACKSON SURVEYING, INC
3528 DARIEN HWY, SUITE E7
BRUNSWICK, GA 31525
(912) 265-5856

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

COUNTY	CAMDEN COUNTY
CITY	CITY OF ST MARYS

ABBREVIATIONS

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

LEGEND:

DESCRIPTION	EXISTING	PROPOSED
WATER LINE	8"W	
WATER VALVE		
FIRE HYDRANT		
WATER MANHOLE	W	
SANITARY SEWER LINE	8"S	
SANITARY SEWER MANHOLE	S	
STORM LINES		
DITCH CENTER LINE		
STORM MANHOLE	D	
GRATE INLET		
DITCH INLET		
LIGHT POLE		
POWER POLE		
POWER POLE W/ GUY		
OVERHEAD POWER	OHP	
SPOT ELEVATION	7.70 gr	
PROPERTY LINE		
LOT LINE		
RIGHT-OF-WAY		
PROPERTY & R/W MARKERS		
SURVEY LOCATION MARKERS IRON PIN, NAIL, REBAR, PKNAIL FOUND		
FENCE		
OVERHEAD TELEPHONE	OHT	
TELEPHONE PEDESTAL	T	
WELL		
UTILITY MANHOLE		
WETLANDS		
RIP-RAP		
LIMITS OF DISTURBANCE		

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ENGINEERING | SURVEYING | PLANNING | GIS | CONSULTING
50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300
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NO.	REVISIONS	BY	DATE

CITY OF ST. MARYS
ST. MARYS, GA
READY STREET OUTFALL IMPROVEMENTS
GENERAL NOTES / LEGEND

JOB NO.	P-0014.0000
DATE	6/24/2016
DRAWN	MCS
CHECKED	JLB
REVISIONS	
APPROVED	KMS
SCALE	NOT TO SCALE

G1.1

AUG 24 2016
Marsh & Shore Mgt. Program
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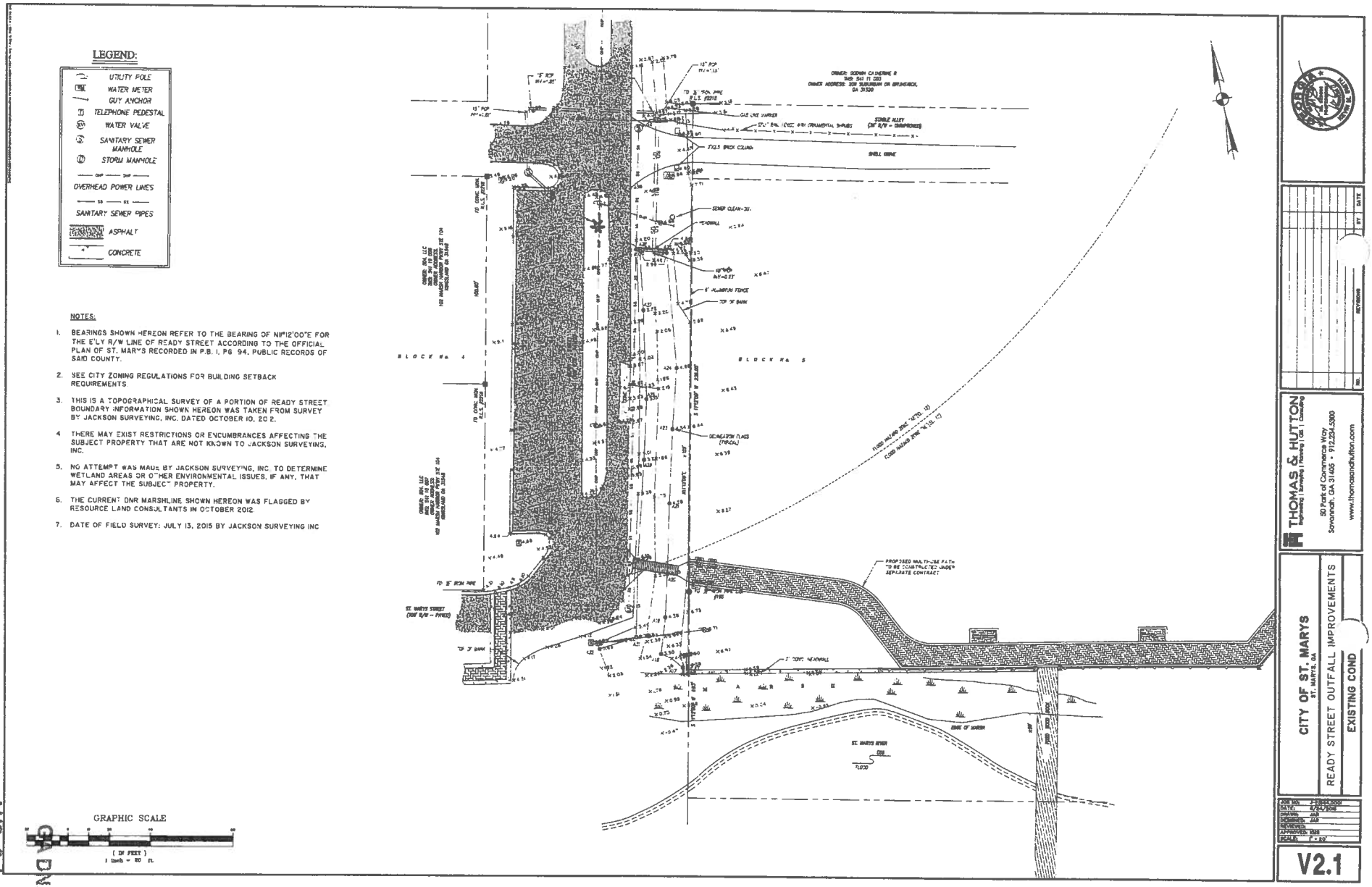

AUG 24 2016
GA DNR

Marsh & Shore Mgt. Program

Signed Survey 3 of 13

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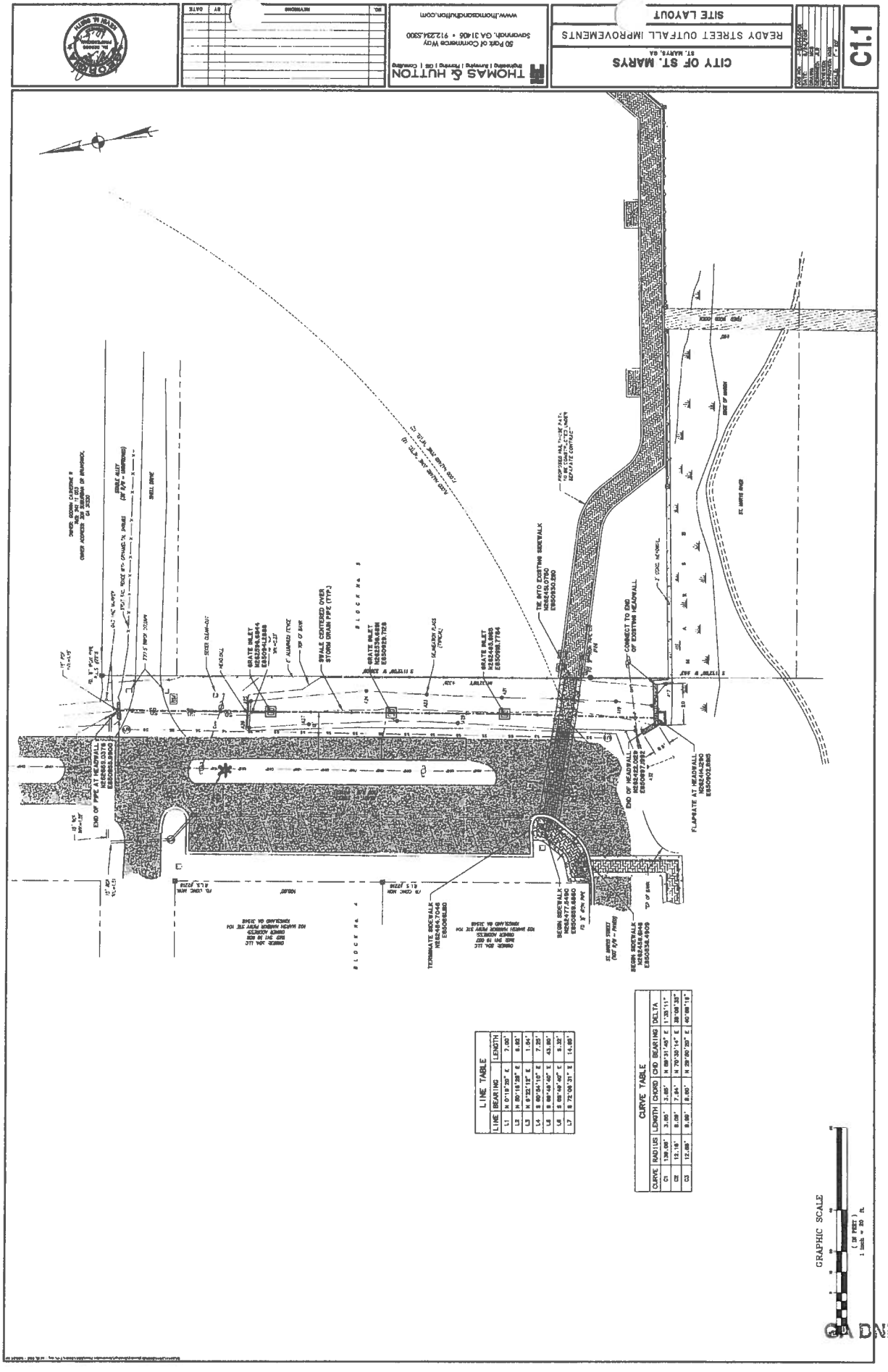
AUG 24 2016

Marsh & Shore Mgt. Program


C1.1
CITY OF ST. MARYS
ST. MARYS, GA
READY STREET OUTFALL IMPROVEMENTS
SITE LAYOUT
THOMAS & HUTTON
Engineering | Surveying | Planning | GIS | Consulting
50 Park of Commerce Way
Savannah, GA 31406 • 912.234.5300
www.thomasandhutton.com
NO. REVISIONS BY DATE
GRAPHIC SCALE
1 inch = 20 ft.
(IN FEET)
LINE TABLE
LINE | BEARING | LENGTH
L1 | N 0°19'29" E | 7.00'
L2 | N 89°19'38" E | 6.65'
L3 | N 0°32'13" E | 1.54'
L4 | S 89°54'10" E | 7.25'
L5 | S 89°48'40" E | 43.80'
L6 | S 89°48'40" E | 9.35'
L7 | S 72°04'31" E | 14.85'
CURVE TABLE
CURVE | RADIUS | LENGTH | CHORD | CHD BEARING | DELTA
C1 | 138.00' | 3.00' | 3.00' | N 89°31'45" E | 1°39'11"
C2 | 13.15' | 8.09' | 7.94' | N 70°30'14" E | 35°56'35"
C3 | 12.00' | 8.99' | 8.80' | N 29°00'35" E | 42°56'19"
GA DNR
AUG 24 2016
Marsh & Shore Mgt. Progra

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Marsh & Shore Mgt. Program

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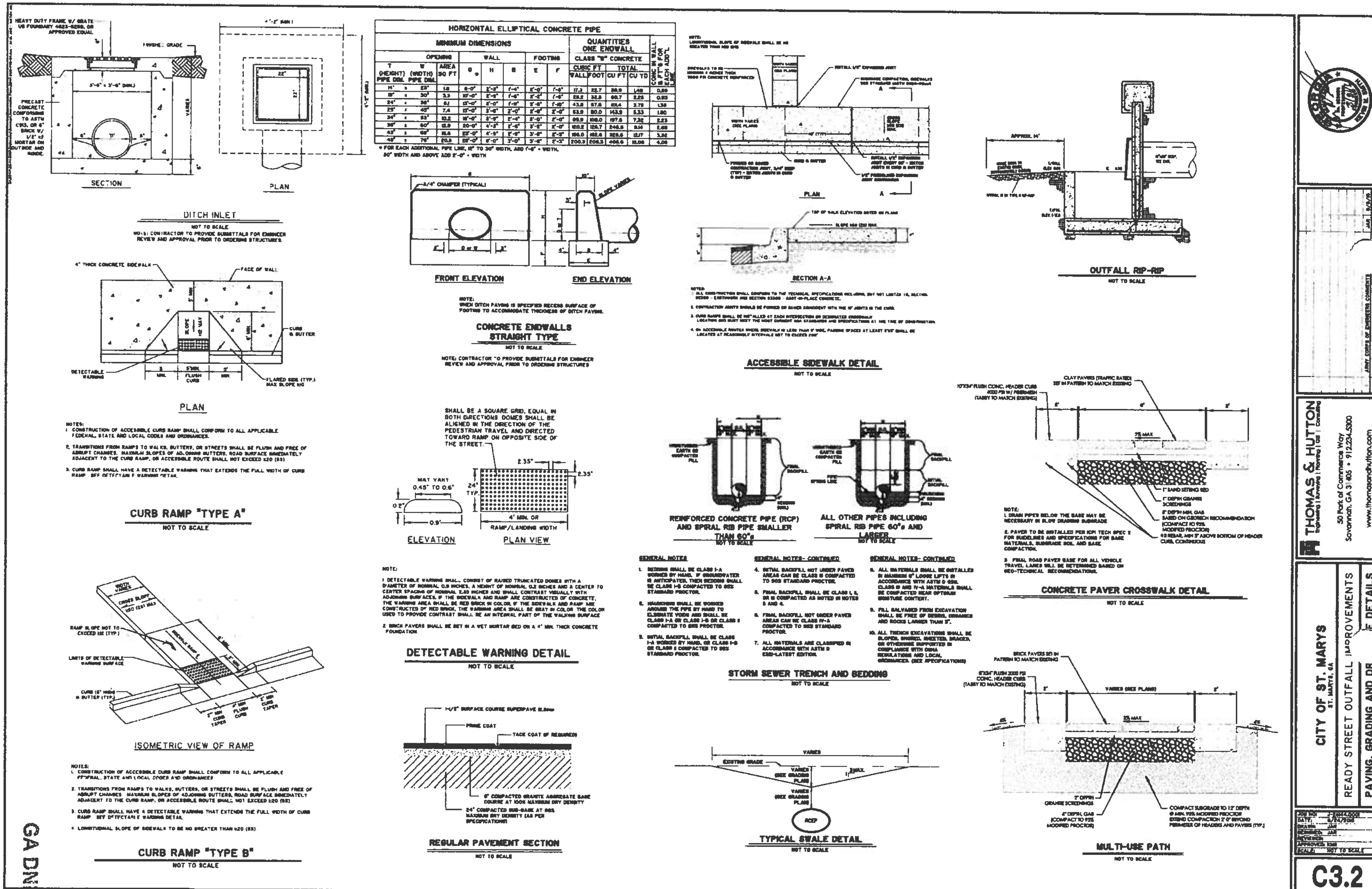
DITCH INLET
NOT TO SCALE
NOTE: CONTRACTOR TO PROVIDE SUBMITTALS FOR ENGINEER REVIEW AND APPROVAL PRIOR TO ORDERING STRUCTURES.
SECTION
PLAN
CURB RAMP "TYPE A"
NOT TO SCALE
ISOMETRIC VIEW OF RAMP
CURB RAMP "TYPE B"
NOT TO SCALE
FRONT ELEVATION
END ELEVATION
CONCRETE ENDWALLS
STRAIGHT TYPE
NOT TO SCALE
NOTE: WHEN DITCH PAVING IS SPECIFIED RECESS SURFACE OF FOOTING TO ACCOMMODATE THICKNESS OF DITCH PAVING.
NOTE: CONTRACTOR TO PROVIDE SUBMITTALS FOR ENGINEER REVIEW AND APPROVAL PRIOR TO ORDERING STRUCTURES
SHALL BE A SQUARE GRID, EQUAL IN BOTH DIRECTIONS DOMES SHALL BE ALIGNED IN THE DIRECTION OF THE PEDESTRIAN TRAVEL AND DIRECTED TOWARD RAMP ON OPPOSITE SIDE OF THE STREET.
ELEVATION
PLAN VIEW
DETECTABLE WARNING DETAIL
NOT TO SCALE
REGULAR PAVEMENT SECTION
NOT TO SCALE
SECTION A-A
ACCESSIBLE SIDEWALK DETAIL
NOT TO SCALE
REINFORCED CONCRETE PIPE (RCP) AND SPIRAL RIB PIPE SMALLER THAN 60"ø
ALL OTHER PIPES INCLUDING SPIRAL RIB PIPE 60"ø AND LARGER
STORM SEWER TRENCH AND BEDDING
NOT TO SCALE
TYPICAL SWALE DETAIL
NOT TO SCALE
OUTFALL RIP-RAP
NOT TO SCALE
CONCRETE PAVER CROSSWALK DETAIL
NOT TO SCALE
MULTI-USE PATH
NOT TO SCALE
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CITY OF ST. MARYS
ST. MARYS, GA
READY STREET OUTFALL IMPROVEMENTS
PAVING, GRADING AND DRAINAGE DETAILS
C3.2

HORIZONTAL ELLIPTICAL CONCRETE PIPE

MINIMUM DIMENSIONS								QUANTITIES ONE ENDWALL CLASS "B" CONCRETE				CONC IN WALL IN FT³ FOR EACH ADD'L LINE
OPENING			WALL			FOOTING		CUBIC FT		TOTAL		
T (HEIGHT) PIPE DIM.	W (WIDTH) PIPE DIM.	AREA SQ FT	G *	H	B	E	F	WALL	FOOT	CU FT	CU YD	
14"	23"	1.8	8'-0"	2'-3"	1'-4"	2'-0"	1'-6"	17.3	22.7	39.9	1.48	0.59
19"	30"	3.3	10'-0"	2'-9"	1'-6"	2'-2"	1'-6"	28.2	32.5	60.7	2.25	0.93
24"	38"	5.1	12'-0"	3'-0"	1'-9"	2'-6"	1'-10"	43.8	57.6	101.4	3.75	1.38
29"	45"	7.4	13'-0"	3'-6"	2'-0"	2'-9"	2'-0"	53.9	90.0	143.9	5.33	1.80
34"	53"	10.2	16'-0"	3'-9"	2'-4"	3'-0"	2'-0"	89.9	108.0	197.8	7.32	2.23
38"	60"	12.9	20-0"	4'-3"	2'-6"	3'-2"	2'-0"	120.2	126.7	246.8	9.14	2.68
43"	68"	16.6	23'-0"	4'-9"	2'-9"	3'-6"	2'-3"	166.0	162.6	328.6	12.17	3.32
48"	76"	20.5	28'-0"	5'-0"	3'-0"	3'-6"	2'-3"	200.3	208.3	408.6	15.06	4.08

* FOR EACH ADDITIONAL PIPE LINE, 12" TO 30" WIDTH, ADD 1'-6" + WIDTH, 30" WIDTH AND ABOVE ADD 2'-0" + WIDTH

GA DNR

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Marsh & Shore Mgt. Program

Signed sht 7 of 13

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST - INFRASTRUCTURE CONSTRUCTION PROJECTS

SWCD: COASTAL
PROJECT NAME: READY STREET OUTFALL IMPROVEMENTS
CITY/COUNTY: CAMDEN

ADDRESS: N/A
DATE ON PLANS: JUNE 2015
REVISED DATE:

ECU | YES 1. THE APPLICABLE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN CHECKLIST ESTABLISHED BY THE COMMISSION AS OF JANUARY 1 OF THE YEAR IN THE LAND-DISTURBING ACTIVITY WAS PERMITTED. (THE COMPLETED CHECKLIST MUST BE SUBMITTED WITH THE ESPC PLAN OR THE PLAN WILL NOT BE REVIEWED)

PLEASE FIND THE CURRENT INFRASTRUCTURE EROSION, SEDIMENTATION AND POLLUTION CONTROL CHECKLIST ATTACHED WITH THIS PLAN

ECU-SCEM YES 2. LEVEL II CERTIFICATION NUMBER ISSUED BY THE COMMISSION, SIGNATURE AND SEAL OF THE CERTIFIED DESIGN PROFESSIONAL. (SIGNATURE, SEAL, AND LEVEL II NUMBER MUST BE ON EACH SHEET PERTAINING TO ESPC PLAN OR THE PLAN WILL NOT BE REVIEWED)

PLEASE FIND ON EACH SHEET OF THIS PLAN THE GSWCC LEVEL II CERTIFICATION NUMBER, SIGNATURE AND SEAL IN THE TITLE BLOCK.

ECU | YES 3. THE NAME AND PHONE NUMBER OF 24-HOUR LOCAL CONTACT RESPONSIBLE FOR EROSION, SEDIMENTATION AND POLLUTION CONTROLS.

CITY OF ST. MARYS
innovation PORT PETER ROAD
ST. MARYS, GA 31558
(912) 882-4405

ECU | YES 4. PROVIDE NAME, ADDRESS AND PHONE NUMBER OF PRIMARY PERMITTEE.

CITY OF ST. MARYS
innovation PORT PETER ROAD
ST. MARYS, GA 31558
(912) 882-4405

ECU | YES 5. NOTE TOTAL AND DISTURBED ACREAGE OF THE PROJECT OR PHASE UNDER CONSTRUCTION.

TOTAL ACREAGE FOR THE PROJECT IS 0.2 ACRES. DISTURBED ACREAGE FOR THE PROJECT SITE IS 0.2 ACRES.

ECU | YES 6. PROVIDE THE GPS LOCATIONS OF THE BEGINNING AND END OF THE INFRASTRUCTURE PROJECT. GIVE THE LATITUDE AND LONGITUDE IN DECIMAL DEGREES.

BEGINNING:	END:
LAT: 30.7308	LAT: 32.7301
LONG: (-)81.5467	LONG: (-)81.5429

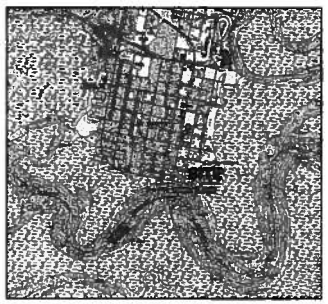
ECU-SCEM YES 7. INITIAL DATE OF THE PLAN AND THE DATES OF ANY REVISIONS MADE TO THE PLAN INCLUDING THE ENTITY WHO REQUESTED THE REVISIONS.

PLEASE FIND THE INITIAL DATE OF THE PLAN AND ALL REVISIONS ON THE COVER SHEET AS WELL AS EACH INDIVIDUAL SHEET OF THE PLAN.

ECU | YES 8. DESCRIPTION OF THE NATURE OF CONSTRUCTION ACTIVITY.

THE PROPOSED PROJECT CONSISTS OF INSTALLATION OF APPROXIMATELY 270 LF OF STORM DRAINAGE PIPE, CONSTRUCTION OF GRATE INLETS AND SWALES AND FILLING OF ROADSIDE DITCH. OTHER IMPROVEMENTS INCLUDE INSTALLTION OF SIDEWALKS, ADA RAMPS AND CROSSWALKS.

EAU | YES 9. PROVIDE VICINITY MAP SHOWING SITE'S RELATION TO SURROUNDING AREAS. INCLUDE DESIGNATION OF SPECIFIC PHASE, IF NECESSARY.



ECU | YES 10. IDENTIFY THE PROJECT RECEIVING WATERS AND DESCRIBE ALL SENSITIVE ADJACENT AREAS INCLUDING STREAMS, LAKES, RESIDENTIAL AREAS, WETLANDS, ETC. WHICH MAY BE AFFECTED.

THE PROJECT IS INTENDED TO MAINTAIN AND EXPAND EXISTING CONVEYANCE OF STORMWATER FROM ADJACENT LANDS. SURFACE RUNOFF FROM THE SITE FLOWS THROUGH A SERIES OF PIPES, DITCHES, AND WETLANDS, WHICH ULTIMATELY DISCHARGE INTO THE ST MARYS RIVER. CONSTRUCTION OF THIS PROJECT REQUIRES IMPACTS TO SALT MARSH.

ECU | YES 5. DESIGN PROFESSIONAL'S CERTIFICATION STATEMENT AND SIGNATURE THAT THE SITE WAS VISITED PRIOR TO DEVELOPMENT OF THE ESPC PLAN AS STATED ON PAGE 15 OF THE PERMIT.

I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR AUTHORIZED AGENT UNDER MY SUPERVISION.

SIGNATURE OVER SEAL ACKNOWLEDGES CERTIFICATION

ECU | YES 12. DESIGN PROFESSIONAL'S CERTIFICATION STATEMENT AND SIGNATURE THAT THE PERMITTEE'S ESPC PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BMP'S AND SAMPLING TO MEET PERMIT REQUIREMENTS AS STATED ON PAGE 15 OF THE PERMIT.

I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100001.

SIGNATURE OVER SEAL ACKNOWLEDGES CERTIFICATION

ECU | YES 13. DESIGN PROFESSIONAL CERTIFICATION STATEMENT AND SIGNATURE THAT THE PERMITTEE'S ESPC PLAN PROVIDES FOR REPRESENTATIVE SAMPLING AS STATED ON PAGE 25 OF PERMIT AS APPLICABLE.

I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF: (A) ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES, OR (B) WHERE ANY SUCH SPECIFIC IDENTIFIED PERENNIAL OR INTERMITTENT STREAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED, I HAVE DETERMINED IN MY PROFESSIONAL JUDGEMENT, UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR 100001, THAT THE INCREASE IN THE TURBIDITY OF EACH SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER.

SIGNATURE OVER SEAL ACKNOWLEDGES CERTIFICATION

ECU | YES 14. CLEARLY NOTE THE STATEMENT THAT "THE DESIGN PROFESSIONAL WHO PREPARED THE ESPC PLAN IS TO INSPECT THE INSTALLATION OF THE INTIAL SEDIMENT STORAGE REQUIREMENTS, PERIMETER CONTROL BMP'S, AND SEDIMENT BASINS IN ACCORDANCE WITH PART IV.A.5 WITHIN 7 DAYS AFTER INSTALLATION."

THE DESIGN PROFESSIONAL WHO PREPARED THE ESPC PLAN IS TO INSPECT THE INSTALLATION OF THE INTIAL SEDIMENT STORAGE REQUIREMENTS, PERIMETER CONTROL BMP'S AND SEDIMENT BASINS IN ACCORDANCE WITH PART IV.A.5 WITHIN 7 DAYS AFTER INSTALLATION.

DESIGN PROFESSIONAL 7-DAY VISIT CERTIFICATION

DATE OF INSPECTION: _____

I CERTIFY THE SITE WAS _____ WITH THE ESPC PLAN ON THE DATE OF INSPECTION.

_____ _____
GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION #

INSPECTION REVEALED THE FOLLOWING DISCREPANCIES FROM THE ESPC PLAN

_____
_____
_____
_____

THESE DEFICIENCIES MUST BE ADDRESSED IMMEDIATELY AND A RE-INSPECTION SCHEDULED. WORK SHALL NOT PROCEED ON THE SITE UNTIL DESIGN PROFESSIONAL CERTIFICATION IS OBTAINED.

ECU | YES 15. CLEARLY NOTE THE STATEMENT THAT "NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS."

NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

ECU | YES 16. CLEARLY NOTE THE STATEMENT THAT "AMENDMENTS/REVISIONS TO THE ESPC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL."

AMENDMENTS/REVISIONS TO THE ESPC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

ECU | YES 17. CLEARLY NOTE THE STATEMENT THAT "WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

ECU | YES 18. CLEARLY NOTE THE STATEMENT THAT "THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES."

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

ECU | YES 19. CLEARLY NOTE THE STATEMENT THAT "EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE."

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

ECU | YES 20. CLEARLY NOTE THE STATEMENT "ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN N DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN N DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

N/A | N/A 21. ANY CONSTRUCTION ACTIVITY WHICH DISCHARGES STORM WATER INTO AN IMPAIRED STREAM SEGMENT, OR WITHIN 1 LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF A 303(d) IMPAIRED STREAM SEGMENT MUST COMPLY WITH PART V.C. OF THE PERMIT. INCLUDE THE COMPLETED APPENDIX I LISTING ALL THE BMP'S THAT WILL BE USED FOR THOSE AREAS OF THE SITE WHICH DISCHARGE TO THE IMPAIRED STREAM SEGMENT.

THE STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES DOES NOT DISCHARGE INTO AN IMPAIRED STREAM SEGMENT OR WITHIN 1 MILE UPSTREAM OF AND IN THE SAME WATERSHED AS AN IMPAIRED STREAM SEGMENT WITH THE CRITERIA LISTED ABOVE.

N/A | N/A 22. IF A TMDL IMPLEMENTATION PLAN FOR SEDIMENT HAS BEEN FINALIZED FOR THE IMPAIRED STREAM SEGMENT IDENTIFIED IN ITEM 21 ABOVE) AT LEAST 6 MONTHS PRIOR TO SUBMITTAL OF NOI, THE ESPC PLAN MUST ADDRESS ANY SITE-SPECIFIC CONDITIONS OR REQUIREMENTS INCLUDED IN THE TMDL IMPLEMENTATION PLAN.

N/A

ECU | YES 23. BMP'S FOR CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF THE VEHICLES. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

CONTRACTOR SHALL PROVIDE BMP'S FOR CONCRETE WASHDOWN OF TOOLS. CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF VEHICLES. NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE.

ECU | YES 24. PROVIDE BMP'S FOR THE REMEDIATION OF ALL PETROLEUM SPILLS AND LEAKS.

PETROLEUM BASED PRODUCTS- CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE FOR SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS. HAVE EQUIPMENT TO CONTAIN AND CLEAN UP PETROLEUM SPILLS IN FUEL STORAGE AREAS OR ON MAINTENANCE AND FUELING VEHICLES. STORE IN COVERED AREAS PROTECTED WITH DIKES. REGULARLY INSPECT FOR CRACKS OR LEAKAGE IN CONTAINERS/TANKS.

SPILL CLEANUP AND CONTROL PRACTICES

- LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.
- MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, SCRAPER, CAT LITTER, SAND, SAWDUST, AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.
- SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
- ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE, AND FEDERAL REGULATIONS.
- FOR SPILLS THAT IMPACT SURFACE WATER LEAVE A SHEEN ON SURFACE WATER, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.
- FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.
- FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS.
- FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 660 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

ECU | YES 25. DESCRIPTION OF THE MEASURES THAT WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED.

STORM DRAIN OUTLET PROTECTION AND DITCH STABILIZATION WILL BE LEFT IN PLACE TO HELP REDUCE POST-CONSTRUCTION POLLUTANTS.

ECU | YES 26. DESCRIPTION OF THE PRACTICES THAT WILL BE USED TO REDUCE THE POLLUTANTS IN STORM WATER DISCHARGES.

POLLUTANT PREVENTION
THE FOLLOWING MATERIALS ARE EXPECTED ONSITE DURING CONSTRUCTION: PETROLEUM BASED FUELS AND LUBRICANTS FOR EQUIPMENT, ADDITIVES FOR SOIL STABILIZATION, PESTICIDES, FERTILIZERS, HERBICIDES, CRUSHED STONE, CONCRETE PRODUCTS, ASPHALT, TAR, METAL BUILDING MATERIALS, LUMBER, SHEET ROCK, FLOOR COVERINGS, ELECTRICAL, HVAC AND FIXTURES, PAINTS/STAINS/FINISHING TREATMENTS, PAINT SOLVENTS, CLEANING SOLVENTS, PLASTICS AND METAL PIPES.

PRACTICES SUCH AS GOOD HOUSEKEEPING, PROPER HANDLING OF HAZARDOUS PRODUCTS AND PROPER SPILL CONTROL PRACTICES WILL BE FOLLOWED TO REDUCE THE RISK OF SPILLS FROM DISCHARGING INTO STORM WATER RUNOFF.

GOOD HOUSEKEEPING

- QUANTITIES ONSITE WILL BE LIMITED TO THE AMOUNT NEEDED FOR THE JOB.
- PRODUCTS AND MATERIALS WILL BE STORED IN A NEAT, ORDERLY MANNER IN APPROPRIATE CONTAINERS PROTECTED FROM RAINFALL, WHERE POSSIBLE.
- PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH MANUFACTURER'S LABELS LEGIBLE AND VISIBLE.
- PRODUCT MIXING, DISPOSAL, AND DISPOSAL OF PRODUCT CONTAINERS WILL BE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR WILL INSPECT SUCH MATERIALS TO ENSURE PROPER USE, STORAGE AND DISPOSAL.

PRODUCT SPECIFIC PRACTICES
FERTILIZER/HERBICIDE/PESTICIDES/DETERGENTS- THESE WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND

SEDIMENTATION CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF OR SEALED CONTAINERS. DO NOT DISCHARGE WASH WATER INTO STORM WATER SYSTEM. INSTALL CURBS OR DIKES AROUND STORAGE AREA TO PROTECT AGAINST SPILLS. LIMIT USE OF DETERGENTS ON-SITE.

PAINTS/THINNER/SOLVENTS- ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

CONCRETE TRUCK WASHING- NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE.

BUILDING MATERIALS- NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

ECU | YES 27. DESCRIPTION AND CHART OR TIMELINE OF THE INTENDED SEQUENCE OF MAJOR ACTIVITIES WHICH DISTURB SOILS FOR THE MAJOR PORTIONS OF THE SITE (I.E. INITIAL PERIMETER AND SEDIMENT STORAGE BMP'S, CLEARING AND GRUBBING ACTIVITIES, EXCAVATION ACTIVITIES, UTILITY ACTIVITIES, TEMPORARY AND FINAL STABILIZATION).

A SPECIFIED WORK SCHEDULE IS NEEDED TO COORDINATE THE TIMING OF LAND DISTURBING ACTIVITIES WITH THE INSTALLATION OF EROSION AND SEDIMENTATION CONTROL MEASURES.

THE PURPOSE OF THE SCHEDULE IS TO REDUCE ON-SITE EROSION AND OFF-SITE SEDIMENTATION BY PERFORMING LAND DISTURBING ACTIVITIES AND INSTALLING EROSION AND SEDIMENTATION CONTROL PRACTICES IN ACCORDANCE WITH A PLANNED SCHEDULE.

IN PLANNING CONSTRUCTION WORK, IT MAY BE HELPFUL TO OUTLINE ALL LAND DISTURBING ACTIVITIES NECESSARY TO COMPLETE THE PROPOSED PROJECT. THEN LIST ALL PRACTICES NEEDED TO CONTROL EROSION AND SEDIMENTATION ON THE SITE. THESE TWO LISTS CAN THEN BE COMBINED IN LOGICAL ORDER TO PROVIDE A PRACTICAL AND EFFECTIVE CONSTRUCTION SEQUENCE SCHEDULE THAT BECOMES PART OF THE EROSION AND SEDIMENTATION CONTROL PLAN.

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CITY OF ST. MARYS
ST. MARYS, GA
READY STREET OUTFALL IMPROVEMENTS
ES & PC NO

JOB NO:	21814.0009
DATE:	6/30/2015
DRAWN:	MDS
CHECKED:	JLH
REVIEWED:	
APPROVED:	KMS
SCALE:	AS NOTED

EC1.1

Signed Sealed 8 of 13

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST - INFRASTRUCTURE CONSTRUCTION PROJECTS

SWCD: COASTAL
PROJECT NAME: READY STREET OUTFALL IMPROVEMENTS
CITY/COUNTY: CAMDEN

ADDRESS: N/A
DATE ON PLANS: JUNE 2016
REVISED DATE:

CONSTRUCTION ACTIVITY	SCHEDULE CONSIDERATION
1. OBTAIN ALL PLAN APPROVALS AND OTHER APPLICABLE PERMITS.	
2. FLAG THE WORK LIMITS AND MARK THE TREES AND BUFFER AREAS FOR PROTECTION.	
3. HOLD PRE CONSTRUCTION CONFERENCE AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION.	
4. CONSTRUCTION ACCESS - CONSTRUCTION ENTRANCE, CONSTRUCTION ROUTES, EQUIPMENT PARKING AREAS.	FIRST LAND DISTURBING ACTIVITY - STABILIZE BARE AREAS IMMEDIATELY WITH GRAVEL AND TEMPORARY VEGETATION AS CONSTRUCTION TAKES PLACE.
5. SEDIMENT TRAPS AND BARRIERS - BASIN TRAPS, SEDIMENT FENCES, AND OUTLET PROTECTION.	INSTALL PRINCIPAL BASINS AFTER CONSTRUCTION SITE IS ACCESSED. INSTALL ADDITIONAL TRAPS AND BARRIERS AS NEEDED DURING GRADING.
6. RUNOFF CONTROL - DIVERSIONS, PERIMETER DIKES, WATER BARS, AND OUTLET PROTECTION.	INSTALL KEY PRACTICES AFTER PRINCIPAL SEDIMENT TRAPS AND BEFORE LAND GRADING. INSTALL ADDITIONAL RUNOFF CONTROL MEASURES DURING GRADING.
7. RUNOFF CONVEYANCE SYSTEM- STABILIZE STREAM BANKS, STORM DRAINS, CHANNELS, INLET AND OUTLET PROTECTION, SLOPE DRAINS.	WHERE NECESSARY, STABILIZE STREAM BANKS AS EARLY AS POSSIBLE. INSTALL PRINCIPAL RUNOFF CONVEYANCE SYSTEM WITH RUNOFF CONTROL MEASURES. INSTALL REMAINDER OF SYSTEM AFTER GRADING.
8. LAND CLEARING AND GRADING - SITE PREPARATION CUTTING, FILLING AND GRADING. SEDIMENTATION TRAPS, BARRIERS, DIVERSIONS, DRAINS, SURFACE ROUGHENING.	BEGIN MAJOR CLEARING AND GRADING AFTER PRINCIPAL SEDIMENT AND KEY RUNOFF CONTROL MEASURES ARE INSTALLED. INSTALL ADDITIONAL CONTROL MEASURES AS GRADING PROGRESSES. MARK TREES AND BUFFER AREAS FOR PRESERVATION.
9. SURFACE STABILIZATION - TEMPORARY AND PERMANENT SEEDING, MULCHING, SODDING, RIPRAP.	APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS DELAYED OR COMPLETE.
10. BUILDING CONSTRUCTION- BUILDING UTILITIES, PAVING.	INSTALL NECESSARY EROSION AND SEDIMENTATION CONTROL PRACTICES AS WORK TAKES PLACE.
11. LANDSCAPING AND FINAL STABILIZATION - TOPSOILING, TREES AND SHRUBS, PERMANENT SEEDING, MULCHING, SODDING RIPRAP.	LAST CONSTRUCTION PHASE--STABILIZE ALL OPEN AREAS, INCLUDING BORROW AND SPOIL AREAS. REMOVE AND STABILIZE ALL TEMPORARY CONTROL MEASURES.

CONSTRUCTION SCHEDULE

ACTIVITY	MONTH 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PERIMETER BMPS																		
UTILITIES																		
TEMPORARY SEDIMENT CONTROL BMPS																		
SITE GRADING																		
TEMPORARY GRASSING																		
PAVING																		
PERMANENT GRASSING																		
FINAL STABILIZATION/ BMP REMOVAL																		
BMP MAINTENANCE																		

CALC	YES	
		28. PROVIDE COMPLETE REQUIREMENTS OF INSPECTIONS AND RECORD KEEPING BY THE PRIMARY PERMITTEE

INSPECTIONS AND RECORD KEEPING BY PRIMARY PERMITTEE:

ST. EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL, PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT:

- ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT.
- ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.

THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

B. MEASURE RAINFALL ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY UNTIL A NOTICE OF TERMINATION IS SUBMITTED. ANOMALOUS OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION.

C. CERTIFIED PERSONAL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER UNLESS SUCH STORM ENDS AFTER 5:00PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY, OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY. WHICHEVER OCCURS FIRST)

- DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE THAT HAVE NOT UNDERGONE FINAL STABILIZATION
- AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION THAT HAVE NOT UNDERGONE FINAL STABILIZATION
- STRUCTURAL CONTROL MEASURES.

D. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION. THE PERMITTEE MUST COMPLY WITH PART IV.D.6.a(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

E. CERTIFIED PERSONNEL (PROVIDED BY PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT 8a. UNTIL A NOTICE OF TERMINATION IS RECEIVED BY EPD) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).

F. BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IS NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.

G. A REPORT (I.E. NOT BEYOND) INSPECTION FORMS) SUMMARIZING THE SCOPE OF EACH INSPECTION AND THE NAME(S) OF PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E. INITIAL, INTERMEDIATE, OR FINAL), MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.A.4.a.(8) OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE. WHEN THE REPORT DOES NOT IDENTIFY ANY INCIDENTS ON NON-COMPLIANCE, THE REPORT SHALL CONTAIN A CERTIFICATION THAT THE THE FACILITY IS IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN AND THIS PERMIT. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.B.2. OF THIS PERMIT.

AN "EROSION & SEDIMENTATION INSPECTION AND MAINTENANCE REPORT" SHEET IS ATTACHED. SHOULD THE INSPECTION REVEAL ANY DEFICIENCIES, A COPY SHALL BE SENT TO:

MR. KEVIN M. SMITH
THOMAS & HUTTON
50 PARK OF COMMERCE WAY
SAVANNAH, GA 31406
912.234.5300

CITY OF ST. MARYS
520 POINT PETER ROAD
ST. MARYS, GA 31558
912.882-4429

CALC	YES	
		29. PROVIDE COMPLETE REQUIREMENTS OF SAMPLING FREQUENCY AND REPORTING OF SAMPLING RESULTS.

SAMPLING REQUIREMENTS

STORM WATER IS TO BE SAMPLED FOR NEPHELOMETRIC TURBIDITY UNITS (NTU) AT THE SAMPLING LOCATIONS INDICATED ON SHEET EC2.1. A DISCHARGE OF STORM WATER RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH CONDITION RESULTS IN THE TURBIDITY OF THE DISCHARGE EXCEEDING 50 AT THE LOCATION. THE VALUE THAT WAS SELECTED FROM APPENDIX B OF PERMIT NO. GAR 100001. THE NTU IS BASED UPON THE DISTURBED ACREAGE OF 0.2 ACRE FOR THE PROJECT SITE. THE SURFACE WATER DRAINAGE AREA OF LESS THAN 4.99 SQUARE MILES AND RECEIVING WATER WHICH SUPPORTS WARM WATER FISHERIES.

THE MONITORING OF NEPHELOMETRIC TURBIDITY IN RECEIVING WATERS OR OUTFALLS SHALL BE IN ACCORDANCE WITH PERMIT NO. GAR100001. STORM WATER SAMPLES ARE TO BE ANALYZED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 AND THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT EPA 833-B-92-001." THE FOLLOWING PROCEDURES CONSTITUTE EPDS GUIDELINES FOR SAMPLING TURBIDITY.

SAMPLING REQUIREMENTS SHALL INCLUDE THE FOLLOWING:

- A USGS TOPOGRAPHIC MAP , A TOPOGRAPHIC MAP OR A DRAWING (REFERRED TO AS A TOPOGRAPHIC MAP) THAT IS A SCALE EQUAL TO OR MORE DETAILED THAN A 1:24000 MAP SHOWING THE LOCATION OF THE INFRASTRUCTURE CONSTRUCTION: (A) THE LOCATION OF ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES AS SHOWN ON A USGS TOPOGRAPHIC MAP, AND ALL OTHER PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES LOCATED DURING MANDATORY FIELD VERIFICATION, INTO WHICH THE STORM WATER DISCHARGED AND (B) THE RECEIVING WATER AND/OR OUTFALL SAMPLING LOCATIONS FOR EACH REPRESENTATIVE STORM WATER OUTFALL. WHEN THE PERMITTEE HAS CHOSEN TO USE A USGS TOPOGRAPHIC MAP AND THE RECEIVING WATERS ARE NOT SHOWN ON THE USGS TOPOGRAPHIC MAP, THE LOCATION OF THE RECEIVING WATER(S) MUST BE HAND-DRAWN ON THE USGS TOPOGRAPHIC MAP FROM WHERE THE STORM WATERS ENTER THE RECEIVING WATER TO THE POINT WHERE THE RECEIVING WATERS CONVERGE WITH FIRST BLUE LINE STREAM SHOWN ON THE USGS TOPOGRAPHIC MAP.
- A WRITTEN NARRATIVE OF SITE SPECIFIC ANALYTICAL METHODS USED TO COLLECT AND ANALYZE THE SAMPLES INCLUDING QUALITY/CONTROL ASSURANCE PROCEDURES. THIS NARRATIVE MUST INCLUDE PRECISE SAMPLING METHODOLOGY FOR EACH SAMPLING LOCATION.
- WHEN THE PERMITTEE HAS DETERMINED THAT SOME OR ALL OUTFALLS WILL BE SAMPLED, A RATIONALE MUST BE INCLUDED ON THE PLAN FOR THE NTU LIMITS SELECTED FROM APPENDIX B. THIS RATIONALE MUST INCLUDE THE SIZE OF THE CONSTRUCTION SITE, THE CALCULATION OF THE SIZE OF THE SURFACE WATER DRAINAGE AREA, AND THE TYPE OF RECEIVING WATERS. (I.E. TROUT STREAM OR SUPPORTING WARM WATER FISHERIES.)
- ANY ADDITIONAL INFORMATION EPD DETERMINES NECESSARY TO BE PART OF THE PLAN. EPD WILL PROVIDE WRITTEN NOTICE TO THE PERMITTEE OF THE INFORMATION NECESSARY AND THE TIMELINE FOR SUBMITTAL.

SAMPLING TYPE

ALL SAMPLING SHALL BE COLLECTED BY "GRAB SAMPLES" AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED); THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE, EPA 833-B-92-001" AND GUIDANCE DOCUMENTS PREPARED BY THE EPD.

PER NPDES PERMIT, GAR 100001. "SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES. SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER. LARGE-MOUTH, WELL CLEANED AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION. MANUAL, AUTOMATIC AND RINSE STAGE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THIS PERMIT SHOULD BE ANALYZED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER, SAMPLES FROM AUTOMATIC SAMPLERS MUST BE COLLECTED NO LATER THEN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION, UNLESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED. IF AUTOMATIC SAMPLING IS UTILIZED AND THE AUTOMATIC SAMPLER IS NOT ACTIVATED DURING THE QUALIFYING EVENT, THE PERMITTEE MUST UTILIZE MANUAL SAMPLING OR RINSE STAGE SAMPLING DURING THE NEXT QUALIFYING EVENT. DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE ANALYZED DIRECTLY WITH A PROPERLY CALIBRATED TURBIDIMETER. SAMPLES ARE NOT REQUIRED TO BE COOLED. SAMPLING AND ANALYSIS OF THE RECEIVING WATERS OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED TO EPD AS SPECIFIED IN PART IV.E.

SAMPLING POINTS

THERE IS ONE STORM WATER SAMPLING LOCATION. THE LOCATION WILL BE INDICATED ON THE EROSION SEDIMENTATION AND POLLUTION CONTROL PLANS. THE PRIMARY PERMITTEE OR HIS REPRESENTATIVE MUST COMPLETE ALL SAMPLING.

A. FOR CONSTRUCTION ACTIVITIES THE PRIMARY PERMITTEE MUST SAMPLE ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES, OR ALL OUTFALLS INTO SUCH STREAMS AND OTHER WATER BODIES, OR A COMBINATION THEREOF. HOWEVER, PROVIDED FOR IS AND IS ACCORDANCE WITH PART IV.D.6.C.(2). OF THIS PERMIT, PRIMARY PERMITTEES ON AN INFRASTRUCTURE CONSTRUCTION PROJECT MAY SAMPLE THE REPRESENTATIVE PERENNIAL AND INTERMITTENT STREAMS, OTHER WATER BODIES OR OUTFALLS, OR A COMBINATION THEREOF. SAMPLES TAKEN FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY AND REPRESENTATIVE OF THE WATER QUALITY OF THE RECEIVING WATERS AND/OR THE STORM WATER OUTFALLS USING THE FOLLOWING MINIMUM GUIDELINES:

- THE UPSTREAM SAMPLE FROM EACH RECEIVING WATER MUST BE TAKEN IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF THE FIRST STORM WATER DISCHARGE FROM THE PERMITTED ACTIVITY BUT DOWNSTREAM OF ANY OTHER STORM WATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATERS MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE UPSTREAM TURBIDITY VALUE.
- THE DOWNSTREAM SAMPLE FOR EACH RECEIVING WATER MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORM WATER DISCHARGE FROM THE PERMITTED ACTIVITY BUT UPSTREAM OF ANY STORM WATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATERS MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE DOWNSTREAM VALUE.
- EQUALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATERS OR THE STORM WATER OUTFALL CHANNEL.
- CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATERS OR IN THE OUTFALL STORM WATER CHANNEL.
- THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.
- THE SAMPLE SHOULD BE KEPT FREE FROM FLOATING DEBRIS.
- PERMITTEES DO NOT HAVE TO SAMPLE SHEETFLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT. FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES, 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% GREATER, OR LANDSCAPED ACCORDING TO THE PLAN (UNIFORMLY COVERED WITH LANDSCAPING MATERIALS IN PLANNED LANDSCAPE AREAS), OR EQUIVALENT PERMANENT STABILIZATION MEASURES ARE DEFINED IN THE MANUAL (INCLUDING A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET CROP PERENNIALS APPROPRIATE FOR THE REGION). FOR INFRASTRUCTURE CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL OR SILVICULTURAL PURPOSES, FINAL STABILIZATION MAY BE ACCOMPLISHED BY STABILIZING THE DISTURBED LAND FOR ITS AGRICULTURAL OR SILVICULTURAL USE.
- ALL SAMPLING PURSUANT TO THIS PERMIT MUST BE DONE IN SUCH A WAY AS TO ACCURATELY REFLECT WHETHER STORM WATER RUNOFF FROM THE CONSTRUCTION SITE IS IN COMPLIANCE WITH THE STANDARD SET FORTH IN PARTS B.D.3. OR B.D.4., WHICHEVER IS APPLICABLE.

B. FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, THE PERMITTEE IS NOT REQUIRED TO SAMPLE A PERENNIAL OR INTERMITTENT STREAM OR OTHER WATER BODIES IF THE DESIGN PROFESSIONAL PREPARING THE PLAN CERTIFIES THAT AN INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED RECEIVING WATER TO BE SAMPLED WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER. A WRITTEN JUSTIFICATION AND DETAILS ANALYSIS SHALL BE PREPARED BY THE DESIGNS PROFESSIONAL JUSTIFYING SUCH PROPOSED SAMPLING. A SUMMARY CHART OF THE JUSTIFICATION AND ANALYSIS FOR THE REPRESENTATIVE SAMPLING MUST BE INCLUDED IN THE PLAN. THE JUSTIFICATION AND ANALYSIS SHALL INCLUDE THE LOCATION AND DESCRIPTION OF THE SPECIFIED SAMPLED AND UN-SAMPLED RECEIVING WATER AND SHALL CONTAIN A DETAILED COMPARISON AND DISCUSSION OF EACH SUCH RECEIVING WATER IN THE FOLLOWING AREAS:

- SITE LAND DISTURBANCE AND CHARACTERISTICS
- RECEIVING WATER WATERSHED SIZES AND CHARACTERISTICS; AND
- SITE AND WATERSHED RUNOFF CHARACTERISTICS UTILIZING THE METHODS IN APPENDIX A-1 OF DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICES TR-55, URBAN HYDROLOGY FOR SMALL WATERSHEDS OF THE MOST RECENT VERSION OF THE MANUAL FOR EROSION AND SEDIMENTATION CONTROL IN GEORGIA" FOR THE VARIOUS PRECIPITATION EVENTS AND ANY OTHER SUCH CONSIDERATIONS NECESSARY TO SHOW THAT THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASES IN THE TURBIDITY OF A SPECIFIED IDENTIFIED UN-SAMPLED RECEIVING WATERS.

C. FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, WHEN THE PERMITTEE DETERMINES THAT SOME RECEIVING WATERS WILL NOT BE SAMPLED DUE TO REPRESENTATIVE SAMPLING, THE DESIGN PROFESSIONAL MAKING THIS DETERMINATION AND PREPARING THE PLAN MUST INCLUDE AND SIGN THE FOLLOWING CERTIFICATION IN THE PLAN:

"I CERTIFY THAT THE PERMITTEES EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF: (A) ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES, OR (B) WHERE ANY SUCH SPECIFIC IDENTIFIED PERENNIAL OR INTERMITTENT STREAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED, I HAVE DETERMINED IN MY PROFESSIONAL JUDGEMENT, UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR 100001, THAT THE INCREASE IN THE TURBIDITY OF EACH SPECIFIED IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER."

D. FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, IF AT ANY TIME DURING THE LIFE OF THE PROJECT A SELECTED RECEIVING WATER NO LONGER REPRESENTS ANOTHER RECEIVING WATER, THE THE PERMITTEE SHALL SAMPLE THE LATTER RECEIVING WATER UNTIL SELECTION OF AN ALTERNATE REPRESENTATIVE RECEIVING WATER.

E. FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, IF AT ANY TIME DURING THE LIFE OF THE PROJECT A RECEIVING WATER IS DETERMINED NOT TO BE REPRESENTED AS CERTIFIED IN THE PLAN, THE PERMITTEE SHALL SAMPLE THAT RECEIVING WATER UNTIL A NOTICE OF TERMINATION IS SUBMITTED OR UNTIL THE APPLICABLE PHASE IS STABILIZED IN ACCORDANCE WITH THIS PERMIT.

F. FOR INFRASTRUCTURE CONSTRUCTION PROJECTS, MONITORING OBLIGATIONS SHALL CEASE FOR ANY PHASE OF THE PROJECT THAT HAS BEEN STABILIZED IN ACCORDANCE WITH PART IV.D.6.C.(5.(b).

SAMPLING FREQUENCY

THE PRIMARY PERMITTEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITTEE SHALL SAMPLING AT THE BEGINNING OF ANY STORM WATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL LOCATION WITHIN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE.

HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN PERMIT NO. GAR100001) OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORM WATER DISCHARGE.

SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING QUALIFYING EVENTS:

A. FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.2 INCH AND ALLOWS FOR MONITORING DURING NORMAL BUSINESS HOURS (MONDAY THROUGH FRIDAY, 8:00 AM TO 5:00 PM AND SATURDAY 8:00 AM TO 5:00 PM WHEN CONSTRUCTION ACTIVITY IS BEING CONDUCTED BY THE PERMITTEE WITHIN THAT DRAINAGE AREA. THIS DOES NOT INCLUDE ANY CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION;

B. IN ADDITION TO (A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.3 INCH AND ALLOWS FOR MONITORING DURING NORMAL BUSINESS HOURS THAT OCCURS EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO SUBMITTAL OF A N.O.T., IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION, WHICHEVER COMES FIRST.

C. AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE, IF BMP'S ARE C. FOUND TO BE PROPERLY DESIGNED, INSTALLED AND MAINTAINED, NO FURTHER ACTION IS REQUIRED. IF BMP'S IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN 5 BUSINESS DAYS, AND THEREAFTER SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.3 INCH. INSPECTIONS SHALL DETERMINE THAT BMP'S ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED.

D. WHERE SAMPLING PURSUANT TO (A), (B) OR(C) ABOVE IS REQUIRED BUT NOT POSSIBLE (OR NOT REQUIRED BECAUSE THERE WAS NO DISCHARGE), THE PERMITTEE, IN ACCORDANCE WITH PART IV.D.6.A.(6), MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLES WAS NOT PERFORMED. PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSEQUENT SAMPLING OBLIGATIONS UNDER (A), (B) OR (C) ABOVE.

E. EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE NOT THE SAMPLING REQUIRED BY (A) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (B). THOSE EXISTING

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CITY OF ST. MARYS
ST. MARYS, GA

READY STREET OUTFALL IMPROVEMENTS

ES & PC NOT

NO.	REVISIONS	BY	DATE

JOB NO.	J-23344.000M
DATE:	6/21/2016
DRAWN:	MCB
DESIGNED:	AJR
REVIEWED:	
APPROVED:	KMS
SCALE:	NONE

EC1.2

KEVIN M. SMITH, P.E.
GEORGIA LICENSED PROFESSIONAL ENGINEER
CONSTRUCTION & DEVELOPMENT
EXPIRATION 6/30/18

GA DNR
AUG 24 2016
Marsh & Shore Mgt. Program

Signed
9 of 13

INFRASTRUCTURE CONSTRUCTION PROJECTS

SWCD: COASTAL
PROJECT NAME: READY STREET OUTFALL IMPROVEMENTS
CITY/COUNTY: CAMDEN

ADDRESS: N/A
DATE ON PLANS: JUNE 2015
REVISED DATE:

CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (B) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (C) ABOVE.

* NOTE THAT THE PERMITTEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (A) AND (B) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHED OR EXCEEDS 0.5 INCH AND ALLOWS FOR SAMPLING AT ANY TIME OF THE DAY OR WEEK.

REPORTING

APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULT TO GA EPD, CHATHAM COUNTY ENGINEERING DEPARTMENT, AND THOMAS & HUTTON BY THE 15TH OF THE MONTH FOLLOWING THE SAMPLING EVENT.

THE REPORT SUMMARY SHALL INCLUDE:

- THE RAINFALL AMOUNT, NAME, EXACT PLACE, DATE AND TIME OF SAMPLING OR MEASUREMENTS;
- THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING & MEASUREMENTS;
- THE DATE(S) ANALYSES WERE PERFORMED;
- THE TIME(S) ANALYSES WERE INITIATED;
- THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;
- REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED. A QUALITY CONTROL/QUALITY ASSURANCE PROGRAM MUST BE INCLUDED IN THE WRITTEN PROCEDURE;
- THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISC OR TAPES, ETC. USED TO DETERMINE THESE RESULTS.
- RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU" CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

ALL WRITTEN CORRESPONDENCE REQUIRED BY PERMIT NO. GAR000003 SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE PERMITTEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. IF AN ELECTRONIC SUBMITTAL IS PROVIDED BY EPD THEN THE WRITTEN CORRESPONDENCE MAY BE SUBMITTED ELECTRONICALLY; IF REQUIRED. A PAPER COPY MUST ALSO BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL OR SIMILAR SERVICE.

THOMAS & HUTTON: KEVIN M. SMITH
THOMAS & HUTTON
50 PARK OF COMMERCE WAY
SAVANNAH, GA 31406
912.234.5300

GOVERNING AGENCY: CITY OF ST. MARYS
613 PONY PETER ROAD
ST. MARYS, GA 31558
(912) 882-4462

EPD OFFICE: COASTAL DISTRICT - BRUNSWICK OFFICE
GEORGIA ENVIRONMENTAL PROTECTION DIVISION
400 COMMERCE CENTER DRIVE
BRUNSWICK, GA 31523-8161
912.264.7284

ECLS | YES 30. PROVIDE COMPLETE DETAILS FOR RETENTION OF RECORDS AS PER PART IV.F. OF THE PERMIT.

RETENTION OF RECORDS

THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A N.O.T. IS SUBMITTED IN ACCORDANCE WITH PART VI:

- A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
- A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THE PERMIT;
- THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.8. OF THE PERMIT;
- A COPY OF ALL MONITORING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THE PERMIT;
- A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THE PERMIT;
- A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART II.D.2. OF THE PERMIT; AND
- DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2) OF THE PERMIT.

COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, REPORTS, PLANS, MONITORING REPORTS, MONITORING INFORMATION, INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THE PERMIT AND ALL OTHER RECORDS REQUIRED BY THE PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOT IS SUBMITTED IN ACCORDANCE WITH PART VI OF THE PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

ECLS | YES 31. DESCRIPTION OF ANALYTICAL METHODS TO BE USED TO COLLECT AND ANALYZE THE SAMPLES FROM EACH LOCATION.

STORM WATER SAMPLES ARE TO BE ANALYZED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 AND THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT EPA 833-B-92-001

ECLS | YES 32. APPENDIX B RATIONALE FOR NTU VALUES AT ALL OUTFALL SAMPLING POINTS WHERE APPLICABLE.

STORM WATER IS TO BE SAMPLED FOR NEPHELOMETRIC TURBIDITY UNITS (NTU) AT THE OUTFALL LOCATION. A DISCHARGE OF STORM WATER RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH CONDITION RESULTS IN THE TURBIDITY OF THE DISCHARGE EXCEEDING 50, THE VALUE THAT WAS SELECTED FROM APPENDIX B OF PERMIT No. GAR 000003. THE NTU IS BASED UPON THE DISTURBED ACREAGE OF 0.2 ACRE FOR THE PROJECT SITE, THE SURFACE WATER DRAINAGE AREA OF LESS THAN 4.99 SQUARE MILES AND RECEIVING WATER WHICH SUPPORTS WARM WATER FISHERIES. APPENDIX B WAS USED TO DETERMINE THE NTU ALLOWABLE AND DOWNSTREAM SAMPLING WILL BE PERFORMED FOR THIS PROJECT.

EDLI | YES 33. DELINEATE ALL SAMPLING LOCATIONS, PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES INTO WHICH STORM WATER IS DISCHARGED.

PLEASE SEE PLAN SHEET FOR DELINEATION OF ALL SAMPLING LOCATIONS, PERENNIAL, INTERMITTENT STREAMS AND OTHER WATER BODIES INTO WHICH STORM WATER IS DISCHARGED.

EDLI | YES 34. A DESCRIPTION OF APPROPRIATE CONTROLS AND MEASURES THAT WILL BE IMPLEMENTED AT THE CONSTRUCTION SITE INCLUDING (1) INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMP'S, (2) INTERMEDIATE GRADING AND DRAINAGE BMP'S, AND (3) FINAL BMP'S. FOR CONSTRUCTION SITES WHERE THERE WILL BE NO MASS GRADING AND THE INITIAL PERIMETER CONTROL BMP'S, INTERMEDIATE GRADING AND DRAINAGE BMP'S, AND FINAL BMP'S ARE THE SAME, THE PLAN MAY COMBINE ALL OF THE BMP'S INTO A SINGLE PHASE.

THE ESSPC PLAN WILL INCLUDE THE INSTALLATION OF SILT FENCE, INLET PROTECTION AND A TURBIDITY CURTAIN. TEMPORARY SEEDING WILL BE IMPLEMENTED AS NECESSARY. THE INLET SEDIMENT TRAPS WILL REMAIN IN PLACE UNTIL ALL ACTIVITIES ARE COMPLETE. PERMANENT SEEDING WILL BE IMPLEMENTED FOR FINAL STABILIZATION. TEMPORARY EROSION CONTROL BMP'S WILL BE REMOVED ONCE FINAL STABILIZATION HAS BEEN ESTABLISHED.

EDLI | YES 35. GRAPHIC SCALE AND NORTH ARROW.

GRAPHIC SCALE AND NORTH ARROW ARE LOCATED ON EACH PLAN SHEET.

EDLI | YES 36. EXISTING AND PROPOSED CONTOUR LINES WITH CONTOUR LINES DRAWN AT AN INTERVAL IN ACCORDANCE WITH THE FOLLOWING:

EXISTING AND PROPOSED GRADE ARE SHOWN ON EACH PLAN SHEET.

| NO 37. USE OF ALTERNATIVE BMP'S WHOSE PERFORMANCE HAS BEEN DOCUMENTED TO BE EQUIVALENT TO OR SUPERIOR TO CONVENTIONAL BMP'S AS CERTIFIED BY A DESIGN PROFESSIONAL SHALL BE DISAPPROVED BY EPD ON THE "GEORGIA SOIL AND WATER CONSERVATION COMMISSION, PLEASE REFER TO THE ALTERNATIVE BMP GUIDANCE DOCUMENT FOUND AT www.gaswcc.org.

ALTERNATIVE BMPS WILL NOT BE USED AS PART OF THIS PROJECT.

| NO 38. DELINEATION OF THE APPLICABLE 25-FOOT OR 50-FOOT UNDISTURBED BUFFERS ADJACENT TO STATE WATERS AND ANY ADDITIONAL BUFFERS REQUIRED BY THE LOCAL ISSUING AUTHORITY. CLEARLY NOTE AND DELINEATE ALL AREAS OF IMPACT.

THERE ARE NO STATE WATERS OR ANY ADDITIONAL BUFFERS REQUIRED BY THE LOCAL ISSUING AUTHORITY ON-SITE.

EDLI | YES 39. DELINEATION OF ON-SITE WETLANDS AND ALL STATE WATERS LOCATED ON AND WITHIN 200 FEET OF THE PROJECT SITE.

ALL ON-SITE WETLANDS AND ALL STATE WATERS LOCATED ON AND WITHIN 200 FEET OF THE PROJECT SITE ARE CLEARLY DELINEATED ON THE PLAN SHEETS.

EXHIBIT | YES 40. DELINEATION AND ACREAGE OF CONTRIBUTING DRAINAGE BASINS ON THE PROJECT SITE.

ALL CONTRIBUTING DRAINAGE BASINS ON THE PROJECT SITE ARE CLEARLY DELINEATED ON THE ATTACHED EXHIBIT.

EXHIBIT | YES 41. PROVIDE HYDROLOGY STUDY AND MAPS OF DRAINAGE BASINS FOR BOTH PRE- AND POST-DEVELOPMENT CONDITIONS.

PLEASE SEE ATTACHED EXHIBIT.

ECLS | YES 42. AN ESTIMATE OF THE RUNOFF COEFFICIENT OR PEAK DISCHARGE FLOW OF THE SITE PRIOR TO AND AFTER CONSTRUCTION ACTIVITIES ARE COMPLETED.

THE PROPOSED LAND USE WILL BE THE SAME AS THE EXISTING LAND USE. NO ADDITIONAL RUNOFF WILL BE GENERATED.

EDLI | YES 43. STORM-DRAIN PIPE AND WEIR VELOCITIES WITH APPROPRIATE OUTLET PROTECTION TO ACCOMMODATE DISCHARGES WITHOUT EROSION. IDENTIFY/DELINEATE ALL STORM WATER DISCHARGE POINTS.

PLEASE FIND INCLUDED ON THE PLAN SHEETS STORM-DRAIN PIPE AND WEIR VELOCITIES WITH APPROPRIATE OUTLET PROTECTION TO ACCOMMODATE DISCHARGES WITHOUT EROSION. ALL STORM WATER DISCHARGE POINTS ARE IDENTIFIED/DELINEATED ON THE PLAN SHEETS.

EDLI | YES 44. SOIL SERIES FOR THE PROJECT SITE AND THEIR DELINEATION.

SOILS FOR THE PROJECT SITE ARE CASHOW (CaB) IT IS CLASSIFIED AS HYDROLOGIC SOIL GROUP A.

EDLI | YES 45. THE LIMITS OF DISTURBANCE FOR EACH PHASE OF CONSTRUCTION.

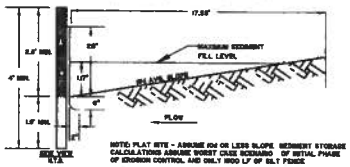
PLEASE SEE THE PLAN FOR THE DELINEATION OF THE LIMITS OF DISTURBANCE FOR EACH PHASE OF CONSTRUCTION.

EDLI | YES 46. PROVIDE A MINIMUM OF 67 CUBIC YARDS OF SEDIMENT STORAGE PER ACRE DRAINED UNLESS A TEMPORARY SEDIMENT BASIN, RETROFITTED DETENTION POND, AND/OR EXCAVATED SILT SEDIMENT TRAPS FOR EACH COMMON DRAINAGE LOCATION, SEDIMENT STORAGE VOLUME MUST BE IN PLACE PRIOR TO AND DURING ALL LAND DISTURBANCE ACTIVITIES UNTIL FINAL STABILIZATION OF THE SITE HAS BEEN ACHIEVED. A WRITTEN JUSTIFICATION EXPLAINING THE DECISION TO USE EQUIVALENT CONTROLS WHEN A SEDIMENT BASIN IS NOT ATTAINABLE MUST BE INCLUDED IN THE PLAN FOR EACH COMMON DRAINAGE LOCATION IN WHICH A SEDIMENT BASIN IS NOT PROVIDED. A WRITTEN JUSTIFICATION AS TO WHY 67 CUBIC YARDS OF STORAGE IS NOT ATTAINABLE MUST ALSO BE GIVEN. WORKSHEETS FROM THE MANUAL MUST BE INCLUDED FOR STRUCTURAL BMP'S AND ALL CALCULATIONS USED BY THE DESIGN PROFESSIONAL TO OBTAIN THE REQUIRED SEDIMENT STORAGE WHEN USING EQUIVALENT CONTROLS. WHEN DISCHARGING FROM SEDIMENT BASINS AND IMPOUNDMENTS, PERMITTEES ARE REQUIRED TO UTILIZE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE, UNLESS INFEASIBLE. IF OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE ARE NOT FEASIBLE, A WRITTEN JUSTIFICATION EXPLAINING THIS DECISION MUST BE INCLUDED IN THE PLAN.

SEDIMENT STORAGE - SILT FENCE WILL BE USED TO ACHIEVE SEDIMENT STORAGE. THIS SELECTION WAS MADE BECAUSE OF THE LINEAR NATURE OF THE PROJECT.

TOTAL DISTURBED ACREAGE = 0.2 ACRES
TOTAL REQUIRED SEDIMENT STORAGE = 0.2 ac X 67 cy/ac = 13.4 cy
SILT FENCE STORAGE AREA / ft = 67.65 ft X 1.7 ft/2 = 57.57 sf/ft = 0.53 cy/ft
LENGTH OF SILT FENCE = 484 ft
STORAGE PROVIDED = 484 ft X 0.53cy/ft = 172.5 cy
THE STORAGE PROVIDED (172.5 cy) EXCEEDS THE STORAGE REQUIRED (13.4 cy)

STORAGE VOLUME PER LINEAR FOOT OF SILT FENCE



NOTE: FLAT SITE - ASSUME 20# OR LESS SLOPE. SEDIMENT STORAGE CALCULATIONS ASSUME WORST CASE SCENARIO OF INITIAL PHASE OF EROSION CONTROL AND ONLY 1600 LF OF SILT FENCE

EDLI | YES 47. LOCATION OF BEST MANAGEMENT PRACTICES THAT ARE CONSISTENT WITH AND NO LESS STRINGENT THAN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. USE UNIFORM CODING SYMBOLS FROM THE MANUAL, CHAPTER 6, WITH LEGEND.

PLEASE SEE THE PLAN SHEETS FOR THE LOCATION OF BEST MANAGEMENT PRACTICES THAT ARE CONSISTENT WITH AND NO LESS STRINGENT THAN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA USING THE UNIFORM CODING SYMBOLS FROM THE MANUAL, CHAPTER 6 WITH ACCOMPANYING LEGEND.

EDLI | YES 48. PROVIDE DETAILED DRAWINGS FOR ALL STRUCTURAL PRACTICES. SPECIFICATIONS MUST, AT A MINIMUM, MEET THE GUIDELINES SET FORTH IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.

PLEASE SEE THE DETAIL SHEETS FOR DETAILED DRAWINGS FOR ALL STRUCTURAL PRACTICES WITH SPECIFICATIONS MEETING THE GUIDELINES SET FORTH IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.

EDLI | YES 49. PROVIDE VEGETATIVE PLAN, NOTING ALL TEMPORARY AND PERMANENT VEGETATIVE PRACTICES, INCLUDE SPECIES, PLANTING DATES AND SEEDING, FERTILIZER, LIME AND MULCHING RATES. VEGETATIVE PLAN SHALL BE SITE SPECIFIC FOR APPROPRIATE TIME OF YEAR THAT SEEDING WILL TAKE PLACE AND FOR APPROPRIATE GEOGRAPHIC REGION OF GEORGIA.

PLEASE SEE THE PLAN AND DETAIL SHEETS FOR THE VEGETATIVE PLAN NOTING ALL TEMPORARY AND PERMANENT VEGETATIVE PRACTICES INCLUDING SPECIES, PLANTING DATES AND SEEDING, FERTILIZER, LIME AND MULCHING RATES. THIS PLAN IS SPECIFIC TO THE SITE AND APPROPRIATE FOR TIME OF YEAR THAT SEEDING WILL TAKE PLACE AND FOR THE APPROPRIATE GEOGRAPHIC REGION OF GEORGIA.

GA DNR
AUG 24 2016
Marsh & Shore Mgt. Program

Signed opal

KEVIN M. SMITH, P.E.
GEORGIA LICENSED #
PROFESSIONAL ENGINEER
CERTIFICATION #
EXPIRATION DATE

NO.	DESCRIPTION	BY	DATE

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CITY OF ST. MARYS
ST. MARYS, GA

READY STREET OUTFALL IMPROVEMENTS

ES & PC NOT

JOB NO. P-0941.0008
DATE 6/15/2015
DRAWN MCS
CHECKED KJS
REVIEWED
APPROVED KMS
SCALE NONE

EC1.3

EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
DISTURBED AREA STABILIZATION (MULCHING ONLY)	Ds1
DISTURBED AREA STABILIZATION (TEMPORARY SEEDING)	Ds2
DISTURBED AREA STABILIZATION (PERMANENT VEGETATION)	Ds3
DUST CONTROL	Du
CONSTRUCTION EXIT	Co
SILT FENCE - TYPE A	Sd1-NS
SILT FENCE - TYPE C	Sd1-S
TREE PROTECTION	Tr
INLET SEDIMENT TRAP (FILTER FABRIC WITH FRAME)	Sd2-F
INLET SEDIMENT TRAP (GRAVEL)	Sd2-Bg
TURBIDITY CURTAIN (FLOATING)	

CONSTRUCTION ACTIVITY	SCHEDULE CONSIDERATION
1. OBTAIN ALL PLAN APPROVALS AND OTHER APPLICABLE PERMITS.	
2. FLAG THE WORK LIMITS AND MARK THE TREES AND BUFFER AREAS FOR PROTECTION.	
3. HOLD PRE CONSTRUCTION CONFERENCE AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION.	
4. CONSTRUCTION ACCESS - CONSTRUCTION ENTRANCE, CONSTRUCTION ROUTES, EQUIPMENT PARKING AREAS.	FIRST LAND DISTURBING ACTIVITY - STABILIZE BARE AREAS IMMEDIATELY WITH MULCH. ADD TEMPORARY VEGETATION AS CONSTRUCTION TASKS PLACE.
5. SEDIMENT TRAPS AND BARRIERS - BASIN TRAPS, SEDIMENT FENCES, AND OUTLET PROTECTION.	INSTALL PRINCIPAL BARRIS AFTER CONSTRUCTION SITE IS ACCESSED. INSTALL ADDITIONAL TRAPS AND BARRIERS AS NEEDED DURING GRADING.
6. RUNOFF CONTROL - DIVERSIONS, PERIMETER DIKES, WATER BARS, AND OUTLET PROTECTION.	INSTALL KEY PRACTICES AFTER PRINCIPAL SEDIMENT TRAPS AND BEFORE LAND GRADING. INSTALL ADDITIONAL RUNOFF CONTROL MEASURES DURING GRADING.
7. RUNOFF CONVEYANCE SYSTEM- STABILIZE STREAM BANKS, STORM DRAINS, CHANNELS, INLET AND OUTLET PROTECTION, SLOPE DRAINS.	WHERE NECESSARY, STABILIZE STREAM BANKS AS EARLY AS POSSIBLE. INSTALL PRINCIPAL RUNOFF CONVEYANCE SYSTEM WITH RUNOFF CONTROL MEASURES. INSTALL REMAINDER OF SYSTEM AFTER GRADING.
8. LAND CLEARING AND GRADING - SITE PREPARATION CUTTING, FILLING AND GRADING, SEDIMENTATION TRAPS, BARRIERS, DIVERSIONS, DRAINS, SURFACE ROUGHENING.	BEGIN MAJOR CLEARING AND GRADING AFTER PRINCIPAL SEDIMENT AND KEY RUNOFF CONTROL MEASURES ARE INSTALLED. INSTALL ADDITIONAL CONTROL MEASURES AS GRADING PROGRESSES. MARK TREES AND BUFFER AREAS FOR PRESERVATION.
9. SURFACE STABILIZATION - TEMPORARY AND PERMANENT SEEDING, MULCHING, SODDING, RIPRAP.	APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS DELAYED OR COMPLETE.
10. BUILDING CONSTRUCTION- BUILDING UTILITIES, PAVING.	INSTALL NECESSARY EROSION AND SEDIMENTATION CONTROL PRACTICES AS WORK TASES PLACE.
11. LANDSCAPING AND FINAL STABILIZATION - TREE PLANTING, TREES AND SHRUBS, PERMANENT SEEDING, MULCHING, SODDING REPAIR.	LAST CONSTRUCTION PHASE—STABILIZE ALL OPEN AREAS, INCLUDING BORROW AND SPOIL AREAS. REMOVE AND STABILIZE ALL TEMPORARY CONTROL MEASURES.

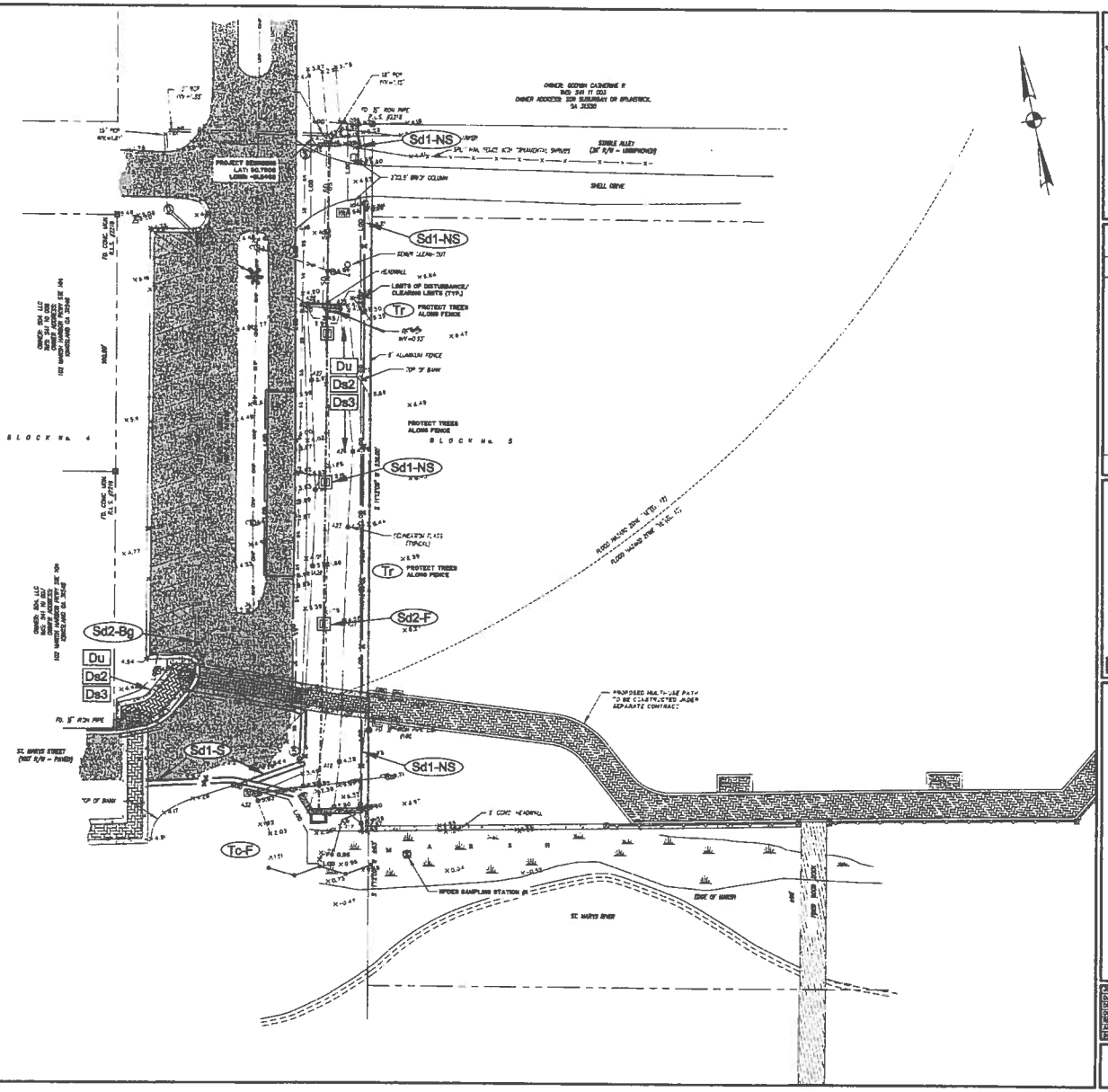
THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.



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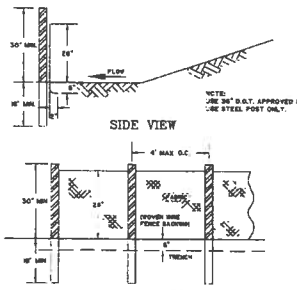
ST. MARYS, GA
READY STREET OUTFALL IMPROVEMENTS
ES & PC PL

JOB NO.	J-XXXXXXXX
DATE	6/24/2016
DRAWN	MCS
DESIGNED	AJH
REVIEWED	
APPROVED	KMH
SCALE	1" = 60'

EC2.1

GA DNR
AUG 24 2016
Marsh & Shore Mgt. Program

Signed
Sheet 11 of 13



TYPE C SILT FENCE (36")

USE: I. WHERE RUNOFF FLOWS OR VELOCITIES ARE PARTICULARLY HIGH OR WHERE SLOPES EXCEED A VERTICAL HEIGHT OF 10 FEET 2. WHERE THE SLOPE GRADIENT IS STEEPER THAN 2:1

POST SIZE		
MIN. LENGTH	TYPE OF POST	SIZE OF POST
4'	STEEL	1 LB./FT. MIN.

NOTE: FILTER FABRIC MAY ALSO BE ATTACHED TO THE POST 6" WIRE, CORD, AND POCKETS.

FENCE						
TENSILE STRENGTH (LBS. MIN.) (2) (MTH D-4632)	ELONGATION (2) (MAX.) (MTH D-4632)	ASE OPENING SIEVE SIZE (MAX. SIEVE SIZE) (MTH D-4751)	FLOW RATE (GAL/MIN/SQ. FT.) (CRT-077)	ULTRAVIOLET STABILITY (2) (MTH D-4632 AFTER 500 HOURS WEATHERING IN ACCORDANCE WITH MTH D-4355)	BURSTING STRENGTH (PSI MIN.) (MTH D-3786, DIAPHRAGM BURSTING STRENGTH TESTER)	MIN. FABRIC WIDTH (INCHES)
WARF-250 F.S.A.-250	45	#30	70	80	175	36

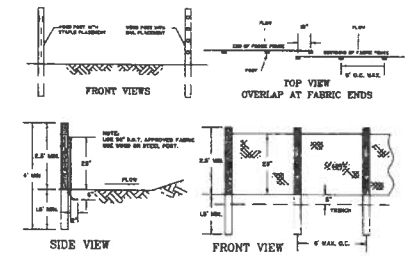
(2) MIN. ROLL AVERAGE OF FIVE SPECIMENS. (3) PERCENT OF RETAINED (MTH. MIN. TENSILE STRENGTH

NOTE:
SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER. FILTER FABRIC SHALL BE REPLACED WHENEVER IT HAS DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE FABRIC IS REDUCED (APPROXIMATELY SIX MONTHS). TEMPORARY SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL SEDIMENT ACCUMULATED AT THE BARRIER SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE BARRIER IS REMOVED.

SILT FENCE - SENSITIVE AREAS

NOT TO SCALE

Sdl-S



TYPE A SILT FENCE (24")

USE:
1. ON LEVEL GROUND WHERE THE LIFE OF THE PROJECT IS GREATER THAN OR EQUAL TO 3 MONTHS.
2. WHERE THE SLOPE GRADIENT IS STEEPER THAN 5:1.

POST SIZE		
MIN. LENGTH	TYPE OF POST	SIZE OF POST
4'	WOOD (STAKE)	2" X 2" NOM.
4'	STEEL	1.33 LB./FT. MIN.
5'	WOOD	2" X 2" NOM.
5'	STEEL	1.33 LB./FT. MIN.

FASTENERS FOR WOOD POST (TYPE STAPLER)			
GAUGE	LENGTH	TYPE	STAPLE SPACING
17 MIN.	1/2" MIN.	T-50 OR EQUIVALENT	8" MAX.

FASTENERS FOR STEEL POST (TIE WIRE)		
GAUGE	LENGTH	SPACING
16 MIN.	ORTHOGONAL WIRES	24" MAX.

NOTE: FILTER FABRIC MAY ALSO BE ATTACHED TO THE POST BY WIRE, CORD, AND POCKETS.

*FENCE						
TENSILE STRENGTH (LBS. MIN.) (2) (MTH D-4632)	ELONGATION (2) (MAX.) (MTH D-4632)	ASE OPENING SIEVE SIZE (MAX. SIEVE SIZE) (MTH D-4751)	FLOW RATE (GAL/MIN/SQ. FT.) (CRT-077)	ULTRAVIOLET STABILITY (2) (MTH D-4632 AFTER 500 HOUR WEATHERING IN ACCORDANCE WITH ASTM D-4355)	BURSTING STRENGTH (PSI MIN.) (MTH D-3786, DIAPHRAGM BURSTING STRENGTH TESTER)	MIN. FABRIC WIDTH (INCHES)
WARF-250 F.S.A.-250	45	#30	25	80	175	36

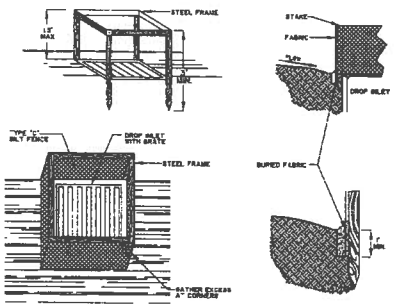
(2) MIN. ROLL AVERAGE OF FIVE SPECIMENS.
(3) PERCENT OF RETAINED (MTH. MIN. TENSILE STRENGTH

NOTE:
SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER. FILTER FABRIC SHALL BE REPLACED WHENEVER IT HAS DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE FABRIC IS REDUCED (APPROXIMATELY SIX MONTHS). TEMPORARY SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL SEDIMENT ACCUMULATED AT THE BARRIER SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE BARRIER IS REMOVED.

SILT FENCE - NON-SENSITIVE AREAS

NOT TO SCALE

Sdl-NS



NOTE:
1. THE STAKES SHALL BE SPACED EVENLY AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART, AND SECURELY DRIVEN INTO THE GROUND, APPROXIMATELY 16 INCHES DEEP. THE FABRIC SHALL BE EXTENDED 8 INCHES AND BACKFILLED WITH CRUSHED STONE OR COMPACTED SOIL. FABRIC AND WIRE SHALL BE SECURELY FASTENED TO THE POSTS, AND FABRIC ENDS MUST BE OVERLAPPED A MINIMUM OF 18 INCHES OR WRAPPED TOGETHER AROUND A POST TO PROVIDE A CONTINUOUS BARRIER AROUND THE INLET.

2. THE TRAP SHALL BE INSPECTED DAILY AND REPAIRS MADE AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE HEIGHT OF THE TRAP.

3. SEDIMENT SHALL NOT BE WASHED INTO THE INLET. IT SHALL BE REMOVED FROM THE SEDIMENT TRAP AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT AGAIN ENTER THE INLET WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, ALL MATERIALS AND ART SEDIMENT SHALL BE REMOVED AND EITHER DISPERSED OR DISPOSED OF PROPERLY. THE DISTURBED AREA SHALL BE BROUGHT TO PROPER GRADE, THEN SMOOTHED AND COMPACTED. APPROPRIATELY STABILIZE ALL DISTURBED AREAS AROUND THE INLET.

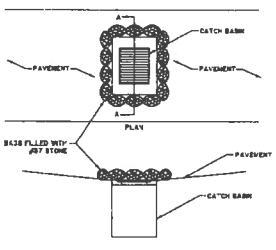
INLET SEDIMENT TRAP FILTER FABRIC W/ SUPPORTING FRAME

NOT TO SCALE

Sd2-F

SEEDING RATES FOR TEMPORARY & PERMANENT COVER						
MONTH	TEMPORARY COVER	RATE PER ACRE		PERMANENT COVER	RATE PER ACRE	
		SEEDED ALONE	ADDED TO MIX		SEEDED ALONE	ADDED TO MIX
JANUARY	• LESPEDEZA, ANNUAL • RYEGRASS, ANNUAL • WHEAT	40 lbs. 40 lbs. 3 bu.	20 lbs. 5 bu. .5 bu.	• BAHIA, PENSACOLA • BERMUDA, HULLED • CENTIPEDE, 360 • LESPEDEZA, SERICEA 1	60 lbs. 20 lbs. - 75 lbs.	30 lbs. 5 lbs. - 2 lbs.
FEBRUARY	LESPEDEZA, ANNUAL • RYEGRASS, ANNUAL • RYE • RYEGRASS, ANNUAL	40 lbs. 4 or 3 bu. 40 lbs.	10 lbs. 2 bu. .5 bu. -	• BAHIA, PENSACOLA CENTIPEDE, 360 • LESPEDEZA, SERICEA 1 • LESPEDEZA, SERICEA 2 • LOVEGRASS, WEEPING	60 lbs. 75 lbs. - 75 lbs.	30 lbs. - - 2 lbs.
MARCH	• LESPEDEZA, ANNUAL LOVEGRASS, WEEPING • RYEGRASS, ANNUAL • BARMUDAGRASS	40 lbs. 4 lbs. 30 lbs. 60 lbs.	10 lbs. 2 lbs. - -	BAHIA, PENSACOLA BERMUDA, HULLED CENTIPEDE, 360 • LESPEDEZA, SERICEA 1 • LESPEDEZA, SERICEA 2 • LOVEGRASS, WEEPING	60 lbs. 20 lbs. - 75 lbs. 75 lbs. 4 lbs.	30 lbs. 5 lbs. - - - 1 lb.
APRIL	LOVEGRASS, WEEPING MILLET, BROOMTOP • MILLET, PEARL • BERMUDAGRASS	4 lbs. 40 lbs. 30 lbs. 60 lbs.	2 lbs. 10 lbs. - -	BAHIA, PENSACOLA BERMUDA, HULLED CENTIPEDE, 360 • LESPEDEZA, SERICEA 1 • LESPEDEZA, SERICEA 2 • LOVEGRASS, WEEPING	60 lbs. 20 lbs. - 75 lbs. 75 lbs. 4 lbs.	30 lbs. 5 lbs. - - - 1 lb.
MAY	LOVEGRASS, WEEPING MILLET, BROOMTOP • MILLET, PEARL • BERMUDAGRASS	4 lbs. 40 lbs. 30 lbs. 60 lbs.	2 lbs. 10 lbs. - -	BAHIA, PENSACOLA BERMUDA, HULLED CENTIPEDE, 360 • LESPEDEZA, SERICEA 1 • LESPEDEZA, SERICEA 2 • LOVEGRASS, WEEPING	60 lbs. 20 lbs. - 75 lbs. 75 lbs. 4 lbs.	30 lbs. 5 lbs. - - - 1 lb.
JUNE	• LOVEGRASS, WEEPING MILLET, BROOMTOP • MILLET, PEARL • BERMUDAGRASS	4 lbs. 40 lbs. 30 lbs. 60 lbs.	2 lbs. 10 lbs. - -	BAHIA, PENSACOLA BERMUDA, HULLED • LESPEDEZA, SERICEA 1 • LESPEDEZA, SERICEA 2 • LOVEGRASS, WEEPING	60 lbs. 20 lbs. 75 lbs. 75 lbs. 4 lbs.	30 lbs. 5 lbs. - - 2 lbs.
JULY	• MILLET, BROOMTOP MILLET, PEARL • BERMUDAGRASS	40 lbs. 30 lbs. 60 lbs.	10 lbs. - -	• BAHIA, PENSACOLA • LESPEDEZA, SERICEA 2	60 lbs. 75 lbs.	30 lbs. -
AUGUST	• MILLET, PEARL • BERMUDAGRASS	30 lbs. 60 lbs.	- -	• BAHIA, PENSACOLA • LESPEDEZA, SERICEA 2	60 lbs. 75 lbs.	30 lbs. -
SEPTEMBER	• BARLEY • OATS • RYE • RYEGRASS, ANNUAL • WHEAT	3 bu. 4 bu. 3 bu. 40 lbs. 3 bu.	2 bu. 1 bu. .5 bu. - .5 bu.	• BAHIA, PENSACOLA LESPEDEZA, SERICEA 2	60 lbs. 75 lbs.	30 lbs. -
OCTOBER	BARLEY OATS RYE RYEGRASS, ANNUAL WHEAT	3 bu. 4 bu. 3 bu. 40 lbs. 3 bu.	2 bu. 1 bu. .5 bu. - .5 bu.	• BAHIA, PENSACOLA LESPEDEZA, SERICEA 2	60 lbs. 75 lbs.	30 lbs. -
NOVEMBER	BARLEY OATS RYE RYEGRASS, ANNUAL WHEAT	3 bu. 4 bu. 3 bu. 40 lbs. 3 bu.	2 bu. 1 bu. .5 bu. - .5 bu.	• BAHIA, PENSACOLA BERMUDA, HULLED CENTIPEDE, 360 LESPEDEZA, SERICEA 2	60 lbs. 20 lbs. 75 lbs.	30 lbs. 5 lbs. -
DECEMBER	BARLEY OATS RYE RYEGRASS, ANNUAL WHEAT	3 bu. 4 bu. 3 bu. 40 lbs. 3 bu.	2 bu. 1 bu. .5 bu. - .5 bu.	• BAHIA, PENSACOLA BERMUDA, HULLED CENTIPEDE, 360 • LESPEDEZA, SERICEA 1	60 lbs. 20 lbs. 75 lbs.	30 lbs. 5 lbs. -

NOTES:
ALL PERMANENT GRASS PLANTINGS SHALL BE MULCHED
• INDICATES MARGINAL (NOT RECOMMENDED) PLANTING DATE
1. DISC-HULLED
2. SCARIFIED
3. CENTIPEDE SOD CAN BE USED AS PERMANENT COVER ANYTIME EXCEPT NINE TENS OCTOBER

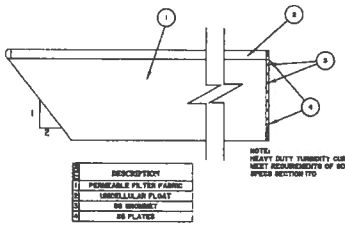


NOTE: INSTALL FILTER AFTER ART ASPHALT PAVEMENT INSTALLATION

INLET SEDIMENT TRAP GRAVEL BAGS

NOT TO SCALE

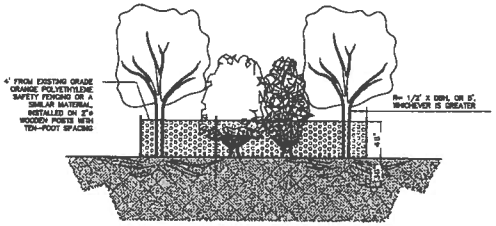
Sd2-Gb



ITEM	DESCRIPTION
1	PERMEABLE FILTER FABRIC
2	UNBALLAST FLOAT
3	SS BRACKET
4	SS PLATES

TURBIDITY CURTAIN

NOT TO SCALE

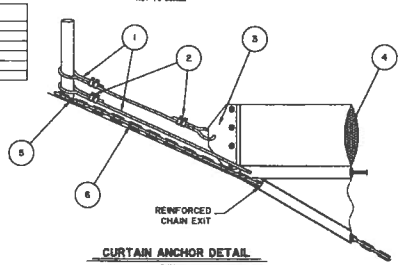


TREE PROTECTION DETAIL

NOT TO SCALE

Tr

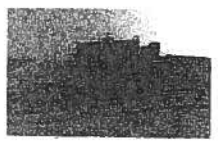
ITEM	DESCRIPTION
1	SS CABLE
2	SS CABLE CLAMPS
3	10.5" x 4.5" x .25" SS BRACKET
4	UNBALLAST FLOAT
5	SS QUICK LINK
6	SS CHAIN



CURTAIN ANCHOR DETAIL

NOT TO SCALE

Tc-F



SEEDING	MULCH APPLIED	MULCH TYPE	APPLICATION TYPE AND RATE
ANNUAL RYEGRASS, SMALL GRAIN	YES	CHOPPED STRAW*	LOOSE
LATER SEASONS	ALSO	FINE SPRAY	500
HYDRO-SEEDING	ALSO	FINE SPRAY	500

DUST CONTROL

NOT TO SCALE

Du

FERTILIZER REQUIREMENTS				
TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	TOP DRESSING RATE
1. [illegible]	FIRST MAINTENANCE	[illegible]	[illegible]	50-100 lbs./ac. or 1 lb. per [illegible]
2. [illegible]	FIRST MAINTENANCE	[illegible]	[illegible]	50-100 lbs./ac. or [illegible]
3. GROUND COVERS	FIRST MAINTENANCE	[illegible]	[illegible]	-
4. PINE SEEDLINGS	FIRST	50-40-0	SEE NURSERY RECOMMENDATIONS FOR CLASS OF STOCK	-
5. [illegible]	FIRST MAINTENANCE	[illegible]	[illegible]	-
6. [illegible]	FIRST	0-40-0	100 lbs./ac.	50 lbs./ac. or [illegible]
7. [illegible]	FIRST MAINTENANCE	[illegible]	[illegible]	[illegible]
8. [illegible]	FIRST MAINTENANCE	[illegible]	[illegible]	50-100 lbs./ac. or [illegible]

* 1 APPLY IN SPRING FOLLOWING SEEDING.
* 2 APPLY IN SPLIT APPLICATIONS WHEN FIGURE RATES ARE USED.
* 3 APPLY IN 3 SPLIT APPLICATIONS.
* 4 APPLY WHEN PLANTS ARE PLANTED.
* 5 APPLY TO GRASS SPECIES ONLY.
* 6 APPLY WHEN PLANTS GROW TO A HEIGHT OF 2 TO 4 INCHES.

LIME RATES AND ANALYSIS
- AGRICULTURAL LIME SHALL BE APPLIED AT THE RATE OF ONE TO TWO TONS PER ACRE UNLESS SOIL TESTS INDICATE OTHERWISE. SEEDED AREAS REQUIRE LIME APPLICATION. IF LIME IS APPLIED WITHIN SIX MONTHS OF PLANTING PERMANENT PERENNIAL VEGETATION, ADDITIONAL LIME IS NOT REQUIRED. AGRICULTURAL LIME SHALL BE WITHIN THE SPECIFICATIONS OF THE GEORGIA DEPARTMENT OF AGRICULTURE.

MULCHING MULCHING IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% SOIL COVER. SELECT THE MULCHING MATERIAL FROM THE FOLLOWING AND APPLY AS INDICATED:

- DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS CAN BE USED. DRY STRAW SHALL BE APPLIED AT THE RATE OF TWO TONS PER ACRE. DRY HAY SHALL BE APPLIED AT THE RATE OF 2 1/2 TONS PER ACRE.
- WOOD CELLULOSE MULCH OR WOOD PULP FIBER SHALL BE USED WITH HYDRAULIC SEEDING. IT SHALL BE APPLIED AT A RATE OF 500 POUNDS PER ACRE. DRY STRAW OR DRY HAY SHALL BE APPLIED (AT THE RATE INDICATED BELOW) AFTER HYDRAULIC SEEDING.
- ONE THOUSAND POUNDS OF WOOD CELLULOSE OR WOOD PULP FIBER, WHICH INCLUDES TACKIFIER, SHALL BE USED WITH HYDRAULIC SEEDING ON SLOPES 4:1 OR STEEPER.
- SERICEA LESPEDEZA HAY CONTAINING MATURE SEED SHALL BE APPLIED AT A RATE OF 3 TONS PER ACRE.
- PINE STRAW OR PINE BARK SHALL BE APPLIED AT A THICKNESS OF 3 INCHES FOR SEEDING PURPOSES. OTHER SUITABLE MATERIALS IN SUFFICIENT QUANTITY MAY BE USED WHERE ORNAMENTALS OR OTHER GROUND COVERS ARE PLANTED. THIS IS NOT APPROPRIATE FOR SEEDED AREAS.
- WHEN USING TEMPORARY EROSION CONTROL BLANKETS OR BLACK SOD, MULCH IS NOT REQUIRED.

KEVIN M. SMITH, P.E.
GEORGIA LICENSE #
EXPIRATION DATE
CERTIFICATION #

NO.	BY	DATE	REVISIONS

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CITY OF ST. MARYS
ST. MARYS, GA

READY STREET OUTFALL IMPROVEMENTS

ES & PC DETA

JOB NO.	P-0804.0000
DATE	6/24/2016
DRAWN	MCS
DESIGNED	JLH
REVIEWED	
APPROVED	KMS
SCALE	NOT TO SCALE

EC3.1

Sheet 12 of 13

GENERAL:

1. ALL CONSTRUCTION SHALL CONFORM TO THE INTERNATIONAL BUILDING CODE 2012 EDITION. REFERENCE TO OTHER STANDARD SPECIFICATIONS OR CODES SHALL MEAN THE LATEST STANDARD OR CODE ADOPTED AND PUBLISHED.
2. DRAWINGS SHOW TYPICAL AND CERTAIN SPECIFIC CONDITIONS ONLY. FOR DETAILS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS SIMILAR TO THOSE SHOWN.
3. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS BEFORE STARTING WORK. NOTIFY THE ENGINEER OF ANY DISCREPANCY.
4. NOTIFY THE ENGINEER OF CONDITIONS ENCOUNTERED IN THE FIELD CONTRADICTORY TO THOSE SHOWN ON THE CONTRACT DOCUMENTS.
5. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, ADEQUACY, AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. THE STRUCTURAL ELEMENTS ARE NOT STABLE UNTIL THE STRUCTURE IS COMPLETE.

REINFORCED CONCRETE

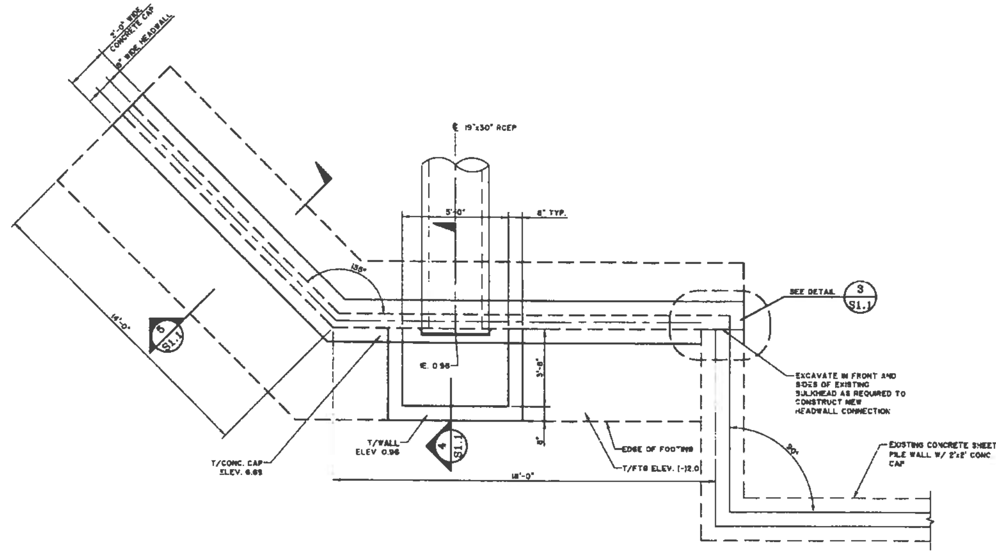
1. ALL CONCRETE WORK SHALL CONFORM TO ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", LATEST EDITION. DESIGN IS BASED ON ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", LATEST EDITION.
2. UNLESS NOTED OTHERWISE ALL CONCRETE SHALL BE NORMAL WEIGHT AND HAVE THE FOLLOWING MINIMUM 28 DAY STRENGTHS:

   ALL CONCRETE ______________ 4,000 PSI
3. CONCRETE MIX DESIGNS, IN ACCORDANCE WITH ACI 318 SECTION 5.3, SHALL BE SUBMITTED TO THE ENGINEER AND TESTING AGENCY FOR MIX DESIGN ACCEPTANCE. RESPONSIBILITY FOR OBTAINING THE REQUIRED CONCRETE DESIGN STRENGTH IS THE CONTRACTOR'S.
4. USE OF CALCIUM CHLORIDE IONS, OR OTHER SALTS IN CONCRETE IS NOT PERMITTED.
5. THE AIR CONTENT IN ALL CONCRETE EXPOSED TO WEATHER SHALL BE BETWEEN 3% AND 6%.
6. COAT ALL SLABS WITH CURING COMPOUND WITHIN 24 HOURS OF PLACING. PRODUCT USED SHALL CONFORM WITH ASTM C309, AND SHALL BE COMPATIBLE WITH ADHERED FINISHES. A DISSIPATING FORMULATION SHALL BE USED AT CEMENTITIOUS FINISHES.
7. CHAMFER OR ROUND ALL EXPOSED CORNERS MINIMUM 3/4".
8. DETAIL CONCRETE REINFORCEMENT AND ACCESSORIES IN ACCORDANCE WITH ACI 315 "DETAILING MANUAL", LATEST EDITION. SUBMIT SHOP DRAWINGS FOR REVIEW SHOWING ALL FABRICATION DIMENSIONS AND LOCATIONS FOR PLACING REINFORCING STEEL AND ACCESSORIES. DO NOT BEGIN FABRICATION UNTIL SHOP DRAWINGS ARE COMPLETED AND ACCEPTED.
9. DETAIL ALL CONCRETE WALLS AND BEAMS IN ELEVATION UNLESS SPECIFICALLY ACCEPTED OTHERWISE. CUT SECTIONS SHOWING BAR LOCATIONS AND CONCRETE COVER.
10. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 UNLESS NOTED OTHERWISE.
11. WELDED WIRE FABRIC (MESH) SHALL CONFORM TO ASTM A185 AND SHALL BE PROVIDED IN FLAT SHEETS (ROLLS NOT PERMITTED). LAP TWO SQUARES AND STAGGER EACH SPLICE.
12. TIE ALL REINFORCING STEEL AND EMBEDMENTS SECURELY IN PLACE PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO MAINTAIN POSITION OF REINFORCEMENT WITHIN SPECIFIED TOLERANCES DURING ALL CONSTRUCTION ACTIVITIES. "STICKING" DOWELS INTO WET CONCRETE IS NOT PERMITTED.
13. PROVIDE CONTINUOUS REINFORCEMENT WHEREVER POSSIBLE; SPLICE ONLY AS SHOWN OR ACCEPTED; STAGGER SPLICES WHERE POSSIBLE; USE TENSION SPLICE (CLASS "B") UNLESS NOTED OTHERWISE. DOWELS SHALL MATCH THE SIZE AND SPACING OF THE SPECIFIED REINFORCEMENT AND SHALL BE LAPPED WITH TENSION SPLICES (CLASS "B"). UNLESS NOTED OTHERWISE LAP LENGTHS EXPRESSED IN NUMBER OF BAR DIAMETERS SHALL BE AS FOLLOWS:

BAR SIZE	NORMAL WEIGHT CONCRETE, f'c (PSI)		
	3,000	4,000	5,000
#6 OR SMALLER	57 DIAM	49 DIAM	44 DIAM
#7 OR LARGER	71 DIAM	62 DIAM	55 DIAM

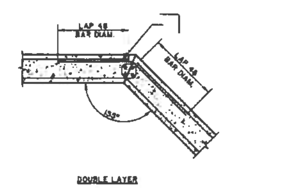
   INCREASE THE ABOVE LAP LENGTHS BY 1.3 FOR TOP BARS WITH MORE THAN 12" OF CONCRETE BELOW.
14. REINFORCING STEEL SHALL HAVE THE FOLLOWING CONCRETE COVER UNLESS NOTED OTHERWISE:

   CONCRETE CAST AGAINST EARTH (NOT FORMED) ______ 3"
   FORMED CONCRETE EXPOSED TO EARTH OR WEATHER
   #6 THROUGH #18 BARS ______ 2"
   #5 BARS AND SMALLER ______ 1 1/2"
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER
   SLABS, JOISTS AND WALLS ______ 1"
   BEAMS (STIRRUPS) ______ 1 1/2"
15. DO NOT WELD OR TACK WELD REINFORCING STEEL UNLESS ACCEPTED OR DIRECTED BY THE STRUCTURAL ENGINEER.

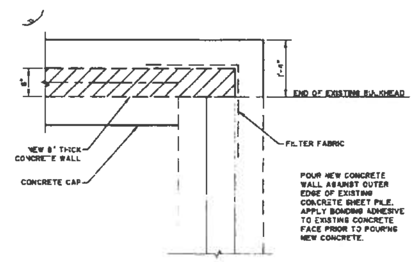


℄ 19"x30" RCEP
5'-0"
8" TYP.
SEE DETAIL 3 S1.1
EXCAVATE IN FRONT AND SIDES OF EXISTING BULKHEAD AS REQUIRED TO CONSTRUCT NEW HEADWALL CONNECTION
EXISTING CONCRETE SHEET PILE WALL W/ 2'x2' CONC CAP
EDGE OF FOOTING
T/FTG ELEV. (-12.0)
T/WALL ELEV 0.96
IE. 0.96
T/CONC. CAP ELEV. 6.69
18'-0"
14'-0"

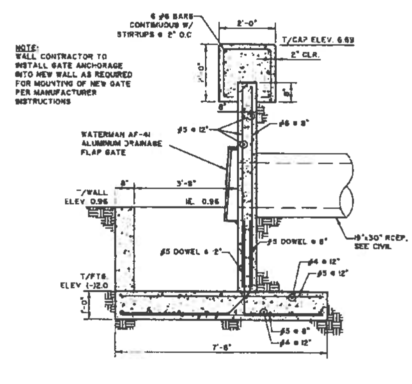
1 S1.1 **HEADWALL STRUCTURE - PLAN**
SCALE: 3/8"=1'-0"



2 S1.1 **WALL BEND DETAIL**
SCALE: 3/4"=1'-0"

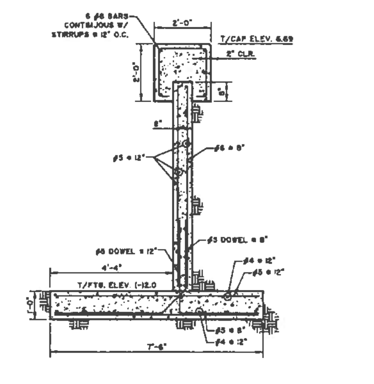


3 S1.1 **DETAIL**
SCALE: 3/4"=1'-0"



NOTE:
WALL CONTRACTOR TO INSTALL GATE ANCHORAGE INTO NEW WALL AS REQUIRED FOR MOUNTING OF NEW GATE PER MANUFACTURER INSTRUCTIONS
6 #6 BARS CONTINUOUS W/ STIRRUPS @ 12" O.C.
2'-0"
T/CAP ELEV. 6.69
2" CLR.
WATERMAN AF-41 ALUMINUM DRAINAGE FLAP GATE
T/WALL ELEV 0.96
IE. 0.96
19"x30" RCEP, SEE CIVIL
#5 DOWEL @ 8"
T/FTG ELEV (-12.0
7'-6"

4 S1.1 **DETAIL @ PIPE**
SCALE: 1/2"=1'-0"



5 S1.1 **TYPICAL WALL DETAIL**
SCALE: 1/2"=1'-0"

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HEADWALL PLANS, SECTIO[illegible] D DETAILS

S1.1

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AUG 24 2016

Marsh & Shore Mgt. Program

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