

STORM WATER POLLUTION PREVENTION PLAN

for

City of Gulfport
Commerce Corridor Project

16th Street, Harrison County, Mississippi
NS Job 18127

On behalf of

City of Gulfport

by



NEEL-SCHAFFER, INC.

795 Howard Avenue
Biloxi, MS 39530
(228) 374-1211

July 2026

Table of Contents

1. NARRATIVE	2
1.1 Project and Site Description	2
1.2 Contact Information	2
1.3 Site Information	2
1.4 Receiving Waters	3
1.5 Soils	4
1.6 Adjacent Properties	4
2. PLANNED EROSION, SEDIMENT AND STORMWATER CONTROLS	4
2.1 Vegetative Controls	4
2.2 Structural Controls	5
2.2.1 General Construction Activities	5
2.2.2 Sediment Basin	5
2.2.3 Temporary Silt Fence	5
2.2.4 Storm inlet protection	5
2.2.5 Wattles	5
2.3 Post Clearing Erosion Control	6
2.4 Housekeeping Practices	6
2.4.1 Temporary Storage and Laydown Yards	6
2.4.2 Above Ground Storage Tanks/Fuel Handling Areas	6
2.4.3 Spill Kit	6
2.4.4 Non-Stormwater Discharge Management	6
2.4.5 Sediment and Debris Tracked from Site	6
2.5 Post Construction Control Measures	7
3. IMPLEMENTATION SEQUENCE	7
4. MAINTENANCE PLAN	7
5. INSPECTIONS	7
6. SANITARY WASTEWATER	8
7. TRAINING	8
8. RECORDS RETENTION	8
FIGURES	9
Figure 1 - Site Location	10
Figure 2 - Topographic Map	11
Figure 3 - Aerial Photograph	12
APPENDICES	13
Appendix A – Project Plans	14
Appendix B – Large Construction General Permit NOI and Forms	15
Appendix C – MS4 Correspondence	16
Appendix D – Soil Report	17
Appendix E – Erosion & Sedimentation Controls, Construction Entrance Details, Silt Fence Details	18

1. NARRATIVE

1.1 Project and Site Description

The City of Gulfport (COG) is planning a project to improve traffic circulation and safety along the 16th Street corridor at Canal Road in Gulfport, Mississippi. The project is in Gulfport in Harrison County, Mississippi. It is located north of Interstate 10 (I-10) and east of Canal Road in Sections 17, 18, 19, and 20 in Township 7 South, Range 11 West, and Sections 13 and 24 in Township 7 South, Range 12 West. The approximate center of the site is at latitude 30.4273813°N, longitude -89.1261324°W. A Project Location Map is shown on Figure 1. A topographic map is shown on Figure 2.

Project plans are included in Appendix A.

This SWPPP addresses construction stormwater management for the project area which is approximately 24 acres total. Because the proposed project would impact greater than 5 acres, a Large Construction Notice of Intent has been prepared and will be submitted to MDEQ. See Appendix B for the LCNOI and forms.

1.2 Contact Information

The site contact will be

City of Gulfport
c/o Jeremy Harrison – Director Department of Engineering
4050 Hewes Avenue
Gulfport, MS 39502
Phone: 228-868-5740
Email: Email: jharrison@gulfport-ms.gov
SIC code - 1611

The prime contractor has not been determined. A Prime Contractor Certification Form will be submitted upon contract award.

1.3 Site Information

The project will improve and extend 16th Street from Canal Road to the east and north to provide additional access to the Gulfport Sportsplex facilities to the north. Traffic circles will be added at the Canal Road/16th Street intersection, at the JFN Parkway/16th street intersection and at the intersection of the 16th Street extension and an un-named road at the eastern end of the project area. This unnamed road connects to the existing I-10 frontage road at the eastern end of the 16th Street extension and will be improved by widening and adding drainage ditches. 16th Street is currently approximately 22 feet wide and does not have improved shoulders. Drainage ditches border both sides of the roadway in some places. The road will be widened to 24 feet wide (edge of pavement). New drainage features will be added throughout the corridor. Most drainage will be to underground piping. See Appendix A.

The project area is located within the Harrison County Municipal Separate Storm Sewer System (MS4) coverage area. The City of Gulfport agent (Neel-Schaffer) contacted the City of Gulfport Public Works Department Director, Mark Kraninger, who has responsibility for administration of the program. Mr. Kraninger responded via email that he would need a copy of the SWPPP and LCNOI for their files. See Appendix C.

1.4 Receiving Waters

The project area is within the Bernard Bayou-Big Lake subwatershed (HUC 031700090602), within the Back Bay of Biloxi-Biloxi Bay watershed (HUC 0317000906). The site hydrology consists of surface water flow associated with rain events which ultimately flows into Turkey Creek. The western portion of the study area drains south and southeast via ditches, artificial paths, and wetland areas to Turkey Creek. The hydrology of the study area west of the 16th Street and Canal Road intersection flows west via roadside ditches into Turkey Creek. Turkey Creek flows south and eventually discharges into Bayou Bernard which flows into Back Bay of Biloxi. An aerial photograph of the project and surrounding area is shown on Figure 3.

Based on the review of the STATE OF MISSISSIPPI WATER QUALITY CRITERIA FOR INTRASTATE, INTERSTATE AND COASTAL WATERS adopted by the Mississippi Commission on Environmental Quality February 24, 2022, there are TMDLs established for nearby surface water bodies including Turkey Creek, Bernard Bayou and the Back Bay of Biloxi.

The TMDLs are as follows:

Turkey Creek TMDLs

Turkey Creek Final Fecal_TMDL_9444

Turkey Creek Final pH_TMDL- 1688

Turkey Creek - Fecal Coliform TMDL for Turkey Creek Revised Report June 2016

Water use classification for Turkey Creek (segment 202211) is Fish and Wildlife which includes Secondary Contact Recreation, and Recreation (segment 202214). Waters with this classification are intended for fishing, propagation of fish aquatic life and wildlife. These waters would also be suitable for secondary contact recreation, which includes incidental contact with water including wading and occasional swimming.

Bernard Bayou TMDLs

Toxicity_Bernard Bayou_ Industrial Seaway_ TMDL_Final

Bernard Bayou Industrial Seaway DO and Nutrients _final 2513

Bernard Bayou Industrial Seaway Phenol Final TMDL

Pathogens

Water use classification for Bernard Bayou is Fish and Wildlife/Aquatic Life Support. Waters with this classification are intended for fishing, propagation of fish aquatic life and wildlife. These waters would also be suitable for secondary contact recreation, which includes incidental contact with water including wading and occasional swimming.

Back Bay of Biloxi TMDLs

Back Bay of Biloxi Final Biloxi Bay Fecal Coliform TMDL 3761

The water use classification for Back Bay is Secondary Contact and Shellfishing.

Based on the proposed implementation of Best Management Practices outlined below, the project does not appear to have adverse impacts to the water quality criteria established for the state. Based on the distance from the project area to the Turkey Creek outfall (approximately 1 mile) and to Bernard Bayou (approximately 3 miles), use of best management practices and the use of fill material from an approved source permitted by MDEQ, it is not likely that the TMDLs will be affected by the project.

1.5 Soils

Soils at the project area were identified by review of the USDA web soil survey. Soils include the as the Atmore silt loam, 0 to 2 percent slopes (At), Harleston fine sandy loam, the Plummer loamy sand, the Poarch fine sandy loam and the Smithton fine sandy loam (USDA-NRCS. Accessed July 2026).

According to the Web Soil Survey, the Atmore series consists of very deep, poorly drained, moderately slowly permeable soils in depressions and interstream divides. They formed in sandy and loamy marine sediments in the Southern Coastal Plain. Near the type location the mean annual air temperature is about 62 degrees F., and the mean annual precipitation is about 58 inches. Slopes range from 0 to 8 percent.

The Harleston series consists of very deep, moderately well drained, moderately permeable soils on terraces and uplands of the Southern Coastal Plain (MLRA 133A) and the Eastern Gulf Coast Flatwoods (MLRA 152A) Major Land Resource Areas. They formed in marine or stream deposits consisting of thick beds of sandy and loamy material. Near the type location, the mean annual temperature is about 65 degrees F., and the mean annual precipitation is about 62 inches. Slopes range from 0 to 12 percent.

The Plummer soil series is a deep, poorly drained sandy soil found throughout the southeastern United States. It typically has a thick, light-gray sandy surface over a mottled, wet subsurface. Because of its high water table, this soil is mostly used for commercial pine forestry, pasture, or wildlife.

The Poarch series consists of very deep, moderately well and well drained, moderately permeable soils on uplands of the Southern Coastal Plain Major Land Resource Area (MLRA 133A). They formed in unconsolidated sandy and loamy marine sediments. Near the type location, the mean annual temperature is about 66 degrees F., and the mean annual precipitation is about 56 inches. Slopes range from 0 to 8 percent.

Smithton fine sandy loam (SW) is a frequently flooded soil found on densely forested flats in drainageways on stream terraces that are subject to stream overflow and covered by standing water for long periods. The permeability is moderately slow and available water capacity medium. Runoff is very slow, and the erosion hazard is slight.

A copy of the soil report obtained from NRCS is included in Appendix D.

1.6 Adjacent Properties

Dominant land use in the study area is medium-intensity development, developed open space, and woody wetlands with some emergent herbaceous wetlands. Development in the study area includes a fuel station, RV park, and restaurant. There are also vacant properties with evidence of former development.

2. PLANNED EROSION, SEDIMENT AND STORMWATER CONTROLS

The intent of the control measures prepared herein are to prevent sediment-laden storm water runoff from occurring, to prevent sediment from leaving the site and erosion from taking place on the property.

2.1 Vegetative Controls

Exposed soils will be seeded with grass as soon as practicable after grading and construction. If exposed soils are to be left undisturbed for 14 days or more, those soils will be seeded immediately with grass (interpreted to mean one working day). A 50-foot undisturbed vegetated buffer will be maintained around waters of the United States where possible. Where not feasible, structural controls (a double row of silt fence) will be used to prevent discharge to undisturbed areas.

2.2 Structural Controls

Structural controls will be described for specific areas and for specific types of construction activities at the site. A drawing showing the location of sedimentation and erosion controls is included in Appendix D. Details of best management practices to be used during construction are shown on drawings included in Appendix E.

2.2.1 General Construction Activities

A construction entrance will be created at JFM Parkway where the project includes clearing of new right of way. This will help to remove sediment from construction vehicles and prevent sediment from leaving the property and onto roadways. Soil compaction will be avoided and preservation of topsoil will be accomplished by keeping heavy equipment within construction areas and not travelling over non-construction areas. Topsoil will be stockpiled to be used in areas to be revegetated after construction. Steep slopes are not present on site. Details of the construction entrance are shown on the attached site plan and detail sheet in Appendix E.

2.2.2 Sediment Basin

The project area consists of linear construction of roadway and drainage features. Since the area will be cleared in less than ten acre increments, a sediment basin will not be necessary.

2.2.3 Temporary Silt Fence

Temporary silt fence will be placed around the perimeter of the disturbed area to prevent sediment from leaving the site. The fence will be installed and maintained in accordance with specifications set forth in the Mississippi Department of Environmental Quality, "Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas, Volume 1, Erosion and Sediment Control Manual, Volume 2, Volume 2 Stormwater Runoff Management Manual, and Volume 3, Appendices: Developing Plans & Designing Best Management Practices" published 2011. Silt fence details are shown on attached drawing. Where a 50-foot buffer is not possible between the construction zone and a wetland, two rows of silt fence will be utilized.

Accumulated sediment will be removed when it has reached approximately six inches deep or $\frac{1}{2}$ the height of the silt fence.

2.2.4 Storm inlet protection

Storm drain inlets that could receive storm water from construction activities will be protected by surrounding or covering with a filter material until final stabilization has been achieved. This will be accomplished by using staked wattles.

2.2.5 Wattles

Wattles will be installed along drainage swales during construction to slow overland flows and prevent erosion from heavy rains during construction. Wattles will be installed and staked as shown on the attached drawing in Appendix E.

2.3 Post Clearing Erosion Control

If exposed soils are to be left undisturbed for 14 days or more, those soils will be seeded with grass immediately, interpreted to mean within one working day.

2.4 Housekeeping Practices

Scheduled equipment maintenance or repair will not be conducted on site. Should unforeseen equipment maintenance or repair be required, and fluids are accidentally released, they will be soaked up and visibly stained soils will be removed and properly disposed. Paints, solvents, fertilizers, chemicals, or any other potentially toxic materials will not be stored on site. Waste receptacles will be supplied and regularly maintained at convenient locations throughout the duration of construction. Temporary restroom facilities will be available and maintained throughout the construction process. Dust suppression activities will be conducted on a regular basis/as needed on the roads, work areas and construction entrance to prevent windblown dirt/dust from leaving the site. Dust suppression will be via water trucks. The amount of water sprayed will be controlled to prevent run-off. A concrete wash out area will be located near the east end of 16th Avenue and will be surrounded by silt fence to prevent discharge to the surrounding area. The waste concrete will be removed by the contractor at the end of the project. The wash out area is shown on drawing ECT-2 (Appendix E).

2.4.1 Temporary Storage and Laydown Yards

Equipment will be temporarily stored onsite during construction activities. Inspections will be made daily for leaks or spills from heavy equipment. Drip pans will be used when leaks occur, and any impacted soil will be cleaned up immediately. Oil-stained soil will be placed in appropriate containers and disposed of properly.

2.4.2 Above Ground Storage Tanks/Fuel Handling Areas

Fuel storage tanks may be stored on site for heavy equipment use. The AST's will be double walled or will be placed within a bermed area, on visqueen or on concrete to avoid release to the environment.

2.4.3 Spill Kit

A spill kit will be available on site to address any leaks or spills from heavy equipment or from any fuel storage tanks. The spill kit will also be available to protect from spills that approach storm drains, ditches, or inlets.

2.4.4 Non-Stormwater Discharge Management

There will be no non-stormwater discharges allowed on site during construction activities other than dust control discharges. If necessary, during construction, the contractor will spray clean water available from nearby fire hydrants or water trucks, as a dust control measure. The amount sprayed will be managed to prevent any run-off from occurring.

2.4.5 Sediment and Debris Tracked from Site

Sediment or debris that is tracked from the site will be removed by sweeping and collected to return to within the project boundaries, or by use of a vacuum street sweeper. If a street sweeper is used the collected sediment will be disposed of at an approved landfill.

2.5 Post Construction Control Measures

Final stabilization will include seeding any non-paved areas within 7 days of construction completion. Silt fences will be left in place until vegetation is 90 percent established.

3. IMPLEMENTATION SEQUENCE

1. Obtain plan approval, and all applicable permits.
2. Mark off areas of disturbance and sensitive areas (areas to be avoided).
3. Hold pre-construction meeting with contractor to review schedule and implementation of erosion control procedures.
4. Build construction entrance.
5. Install silt fencing where necessary.
6. Begin clearing.
7. If construction activities are not to begin within 14 days, cleared areas will be seeded within one working day.
8. Construction activities begin.
9. Landscaping and final stabilization.

4. MAINTENANCE PLAN

1. All erosion and sediment controls and outfall discharge points will be checked for stability and operation at least once per week (for a minimum of four times per month) and following every runoff-producing rainfall. Any needed repairs will be made "immediately", interpreted to mean within the next working day.
2. Excessive sediment will be removed from in front of the structural BMPs when sediment has reached 1/3 to 1/2 the height of the control. The silt fencing will be replaced or re-seated as necessary.
3. All seeded areas will be fertilized and reseeded as necessary to maintain vigorous, dense vegetation. Where a disturbed area will be left undisturbed for 14 days or longer, vegetative controls will be implemented "immediately", interpreted to mean no later than the next workday.
4. New or additional employees will be acquainted with the plan as necessary.
5. All permanent measures will be monitored at least annually, and maintenance or modification made as needed.
6. Any necessary repair, replacement or supplementation of controls will be completed within 24 hours of noticed failure or as soon as field conditions allow.

5. INSPECTIONS

Inspections of all receiving streams (if feasible), outfalls, erosion and sediment controls, and other SWPPP requirements will be performed at least once per week (for a minimum of four times per month) and following every run-off producing rainfall. Inspections will be performed by qualified personnel.

Before conducting the site inspection, the inspector should review Chapter 4, Inspector's Checklist and Troubleshooting Chart found in MDEQ's Field Manual for Erosion and Sediment Control on Construction Sites in Mississippi. The inspections must be documented on copies of the Monthly Inspection Report and Certification Form (Appendix B).

The Prime Contractor(s) has been designated to conduct weekly inspections as required by LCGP MSR105737. A Prime Contractor Certification Form (included as Appendix B) will be executed

and submitted to MDEQ as soon as contracts are awarded. It is the Prime Contractor's responsibility to conduct inspections at least weekly for a minimum of four inspections per month and as often as necessary to ensure that appropriate erosion and sediment controls have been properly constructed and maintained and to determine if additional or alternative control measures are required. Implementation of corrective actions is the Prime Contractor's responsibility

6. SANITARY WASTEWATER

Portable restrooms will be available during construction activities. Sanitary sewer facilities are not planned for the Intermodal Yard.

7. TRAINING

A "stormwater team" will be established with the permittee and the contractor to carry out compliance activities associated with the requirements in this permit. All personnel on the team will be trained on the requirements of the permit and their responsibilities.

At a minimum, members of the stormwater team must be trained to understand the following if related to the scope of their job duties as appropriate:

- The permit deadlines associated with installation, maintenance, and removal of stormwater controls and with stabilization;
- The location of all stormwater controls on the site required by this permit and how they are to be maintained;
- The proper procedures to follow with respect to the permit's pollution prevention requirements; and
- When and how to conduct inspections, record applicable findings, and take corrective actions.

An electronic or paper copy of applicable portions of this permit, the most updated copy of the SWPPP, and other relevant documents or information that must be kept with the SWPPP will be available to all personnel working on the project.

The permittee will maintain records for their employees who are trained as appropriate. Contractor employee training will be conducted by the contractor who will be required to provide proof of training on the Employee Training Log (from MDEQ web site). Employee training documentation shall be maintained on-site with the SWPPP and made available to MDEQ personnel for inspection upon request.

8. RECORDS RETENTION

All records, reports, forms, and information resulting from activities required by this permit shall be retained for a period of at least three (3) years from the date that the document was generated. Any document required by this permit may be kept electronically but must be readily available during site inspection or upon request.

FIGURES

17

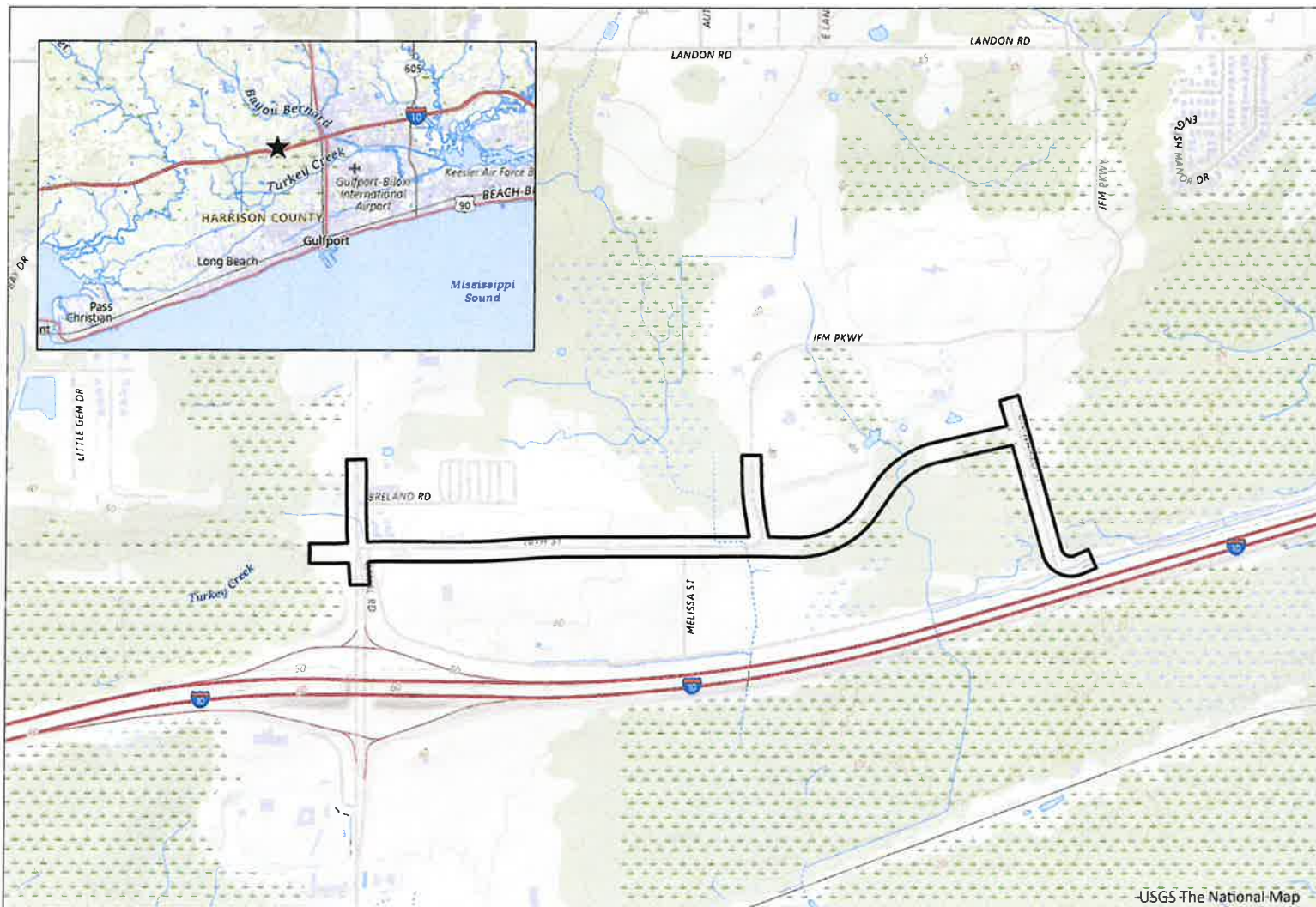
18

19

FIGURE 1 – SITE LOCATION



FIGURE 2 – TOPOGRAPHIC MAP



GULFPORT COMMERCE CORRIDOR
CITY OF GULFPORT, HARRISON COUNTY, MS

 PROJECT AREA

0 500 1,000
ft



FIGURE 3 – AERIAL PHOTOGRAPH



Map: Microsoft, Sources: Esri, TomTom, Garmin, FMO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

GULFPORT COMMERCE CORRIDOR
CITY OF GULFPORT, HARRISON COUNTY, MS

 PROJECT AREA

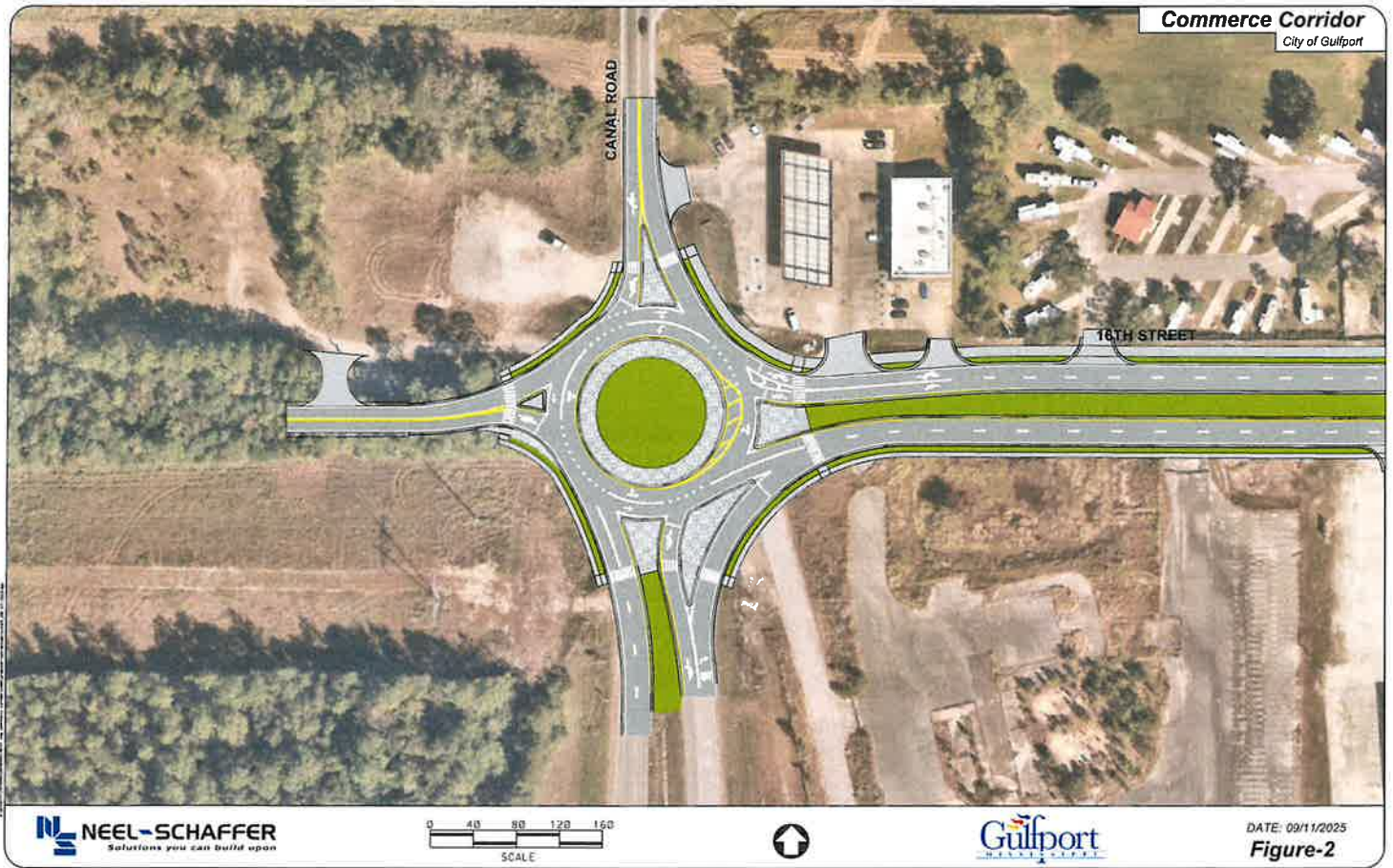
0 500 1,000
ft



APPENDICES

APPENDIX A - PROJECT PLANS













APPENDIX B – LARGE CONSTRUCTION GENERAL PERMIT NOI AND FORMS



MISSISSIPPI DEPARTMENT OF
ENVIRONMENTAL QUALITY

LARGE CONSTRUCTION NOTICE OF INTENT (LCNOI) FOR COVERAGE UNDER THE LARGE CONSTRUCTION STORM WATER GENERAL NPDES PERMIT

INSTRUCTIONS

The Large Construction Notice of Intent (LCNOI) is for coverage under the Large Construction General Permit for land disturbing activities of five (5) acres or greater; or for land disturbing activities, which are part of a larger common plan of development or sale that are initially less than five (5) acres but will ultimately disturb five (5) or more acres. Applicant must be the owner or operator. For construction activities, the operator is typically the prime contractor. The owner(s) of the property and the prime contractor associated with regulated construction activity on the property have joint and severable responsibility for compliance with the Large Construction Storm Water General Permit MSR10.

If the company seeking coverage is a corporation, a limited liability company, a partnership, or a business trust, attach proof of its registration with the Mississippi Secretary of State and/or its Certificate of Good Standing. This registration or Certificate of Good Standing must be dated within twelve (12) months of the date of the submittal of this coverage form. Coverage will be issued in the company name as it is registered with the Mississippi Secretary of State.

Completed LCNOIs should be filed at least thirty (30) days prior to the commencement of construction. Discharge of storm water from large construction activities without written notification of coverage is a violation of state law.

Submittals with this LCNOI must include:

- A site-specific Storm Water Pollution Prevention Plan (SWPPP) developed in accordance with ACT5 of the General Permit
- A detailed site-specific scaled drawing showing the property layout and the features outlined in ACT5 of the General Permit
- A United States Geological Survey (USGS) quadrangle map or photocopy, extending at least one-half mile beyond the facility property boundaries with the site location and outfalls outlined or highlighted. The name of the quadrangle map must be shown on all copies. Quadrangle maps can be obtained from the MDEQ, Office of Geology at 601-961-5523.

Additional submittals may include the following, if applicable:

- Appropriate Section 404 documentation from U.S. Army Corps of Engineers
- Appropriate documentation concerning future disposal of sanitary sewage and sewage collection system construction
- Appropriate documentation from the MDEQ Office of Land & Water concerning dam construction and low flow requirements
- Approval from County Utility Authority in Hancock, Harrison, Jackson, Pearl River and Stone Counties
- Antidegradation report for disturbance within Waters of the State

ALL QUESTIONS MUST BE ANSWERED (Answer "NA" if the question is not applicable)

MSR10 _____

(NUMBER TO BE ASSIGNED BY STATE)

APPLICANT IS THE: ☒ OWNER ☐ PRIME CONTRACTOR

OWNER CONTACT INFORMATION

OWNER CONTACT PERSON: Jeremy Harrison

OWNER COMPANY LEGAL NAME: City of Gulfport

OWNER STREET OR P.O. BOX: 4050 Hewes Avenue

OWNER CITY: Gulfport STATE: MS ZIP: 39502

OWNER PHONE #: (228) 868-5740 OWNER EMAIL: jharrison@gulfport-ms.gov

PREPARER CONTACT INFORMATION

IF NOI WAS PREPARED BY SOMEONE OTHER THAN THE APPLICANT

CONTACT PERSON: Lisa Morrison

COMPANY LEGAL NAME: Neel-Schaffer, Inc.

STREET OR P.O. BOX: 795 Howard Avenue

CITY: Biloxi STATE: MS ZIP: 39530

PHONE # () 228-760-0643 EMAIL: lisa.morrison@neel-schaffer.com

PRIME CONTRACTOR CONTACT INFORMATION

PRIME CONTRACTOR CONTACT PERSON: TBD

PRIME CONTRACTOR COMPANY LEGAL NAME: _____

PRIME CONTRACTOR STREET OR P.O. BOX: _____

PRIME CONTRACTOR CITY: _____ STATE: _____ ZIP: _____

PRIME CONTRACTOR PHONE #: () _____ PRIME CONTRACTOR EMAIL: _____

FACILITY SITE INFORMATION

FACILITY SITE NAME: Gulfport Commerce Corridor

FACILITY SITE ADDRESS (If the physical address is not available, please indicate the nearest named road. For linear projects indicate the beginning of the project and identify all counties the project traverses.)

STREET: 16th Avenue

CITY: Gulfport STATE: MS COUNTY: Harrison ZIP: 39502

FACILITY SITE TRIBAL LAND ID (N/A If not applicable): _____

LATITUDE: 30 degrees 25 minutes 38.93 seconds LONGITUDE: -89 degrees 07 minutes 34.99 seconds

LAT & LONG DATA SOURCE (GPS (Please GPS Project Entrance/Start Point) or Map Interpolation): Google Earth

TOTAL ACREAGE THAT WILL BE DISTURBED ¹: 40

IS THIS PART OF A LARGER COMMON PLAN OF DEVELOPMENT? YES ☐ NO ☒

IF YES, NAME OF LARGER COMMON PLAN OF DEVELOPMENT: _____
AND PERMIT COVERAGE NUMBER: MSR10 _____

ESTIMATED CONSTRUCTION PROJECT START DATE: 2027-06-01
YYYY-MM-DD

ESTIMATED CONSTRUCTION PROJECT END DATE: 2027-12-31
YYYY-MM-DD

DESCRIPTION OF CONSTRUCTION ACTIVITY: Clearing, grubbing, construction of roadway and storm drainage features

PROPOSED DESCRIPTION OF PROPERTY USE AFTER CONSTRUCTION HAS BEEN COMPLETED:
Extension of 18th avenue with three roundabouts and improved connection to I-10 frontage road.

SIC Code: 1611 NAICS Code 237310

NEAREST NAMED RECEIVING STREAM: Turkey Creek

IS RECEIVING STREAM ON MISSISSIPPI'S 303(d) LIST OF IMPAIRED WATER BODIES? (The 303(d) list of impaired waters and TMDL stream segments may be found on MDEQ's web site: http://www.deq.state.ms.us/MDEQ.nsf/page/TWB_Total_Maximum_Daily_Load_Section) YES ☒ NO ☐

HAS A TMDL BEEN ESTABLISHED FOR THE RECEIVING STREAM SEGMENT? YES ☒ NO ☐

FOR WHICH POLLUTANT:

ARE THERE RECREATIONAL STREAMS, PRIVATE/PUBLIC PONDS OR LAKES WITHIN 1/2 MILE DOWNSTREAM OF PROJECT BOUNDARY THAT MAY BE IMPACTED BY THE CONSTRUCTION ACTIVITY? YES ☐ NO ☒

EXISTING DATA DESCRIBING THE SOIL (for linear projects please describe in SWPPP):
See SWPPP

WILL FLOCCULANTS BE USED TO TREAT TURBIDITY IN STORM WATER? YES ☐ NO ☒

IF YES, INDICATE THE TYPE OF FLOCCULANT. ☐ ANIONIC POLYACRYLAMIDE (PAM)
☐ OTHER _____

IF YES, DOES THE SWPPP DESCRIBE THE METHOD OF INTRODUCTION, THE LOCATION OF INTRODUCTION AND THE LOCATION OF WHERE FLOCCULATED MATERIAL WILL SETTLE?

IS A SDS SHEET INCLUDED FOR THE FLOCCULATE? YES ☐ NO ☐

WILL THERE BE A 50 FT BUFFER BETWEEN THE PROJECT DISTURBANCE AND THE WATERS OF THE STATE? YES ☐ NO ☐

IF NOT, PROVIDE EQUIVALENT CONTROL MEASURES IN THE SWPPP.

¹ Acreage for subdivision development includes areas disturbed by construction of roads, utilities and drainage. Additionally, a housesite of at least 10,000 ft² per lot (entire lot, if smaller) shall be included in calculating acreage disturbed.

DOCUMENTATION OF COMPLIANCE WITH OTHER REGULATIONS/REQUIREMENTS

COVERAGE UNDER THIS PERMIT WILL NOT BE GRANTED UNTIL ALL OTHER REQUIRED
MDEQ PERMITS AND APPROVALS ARE SATISFACTORILY ADDRESSED

IS LCNOI FOR A FACILITY THAT WILL REQUIRE OTHER PERMITS?

YES ☒

NO ☐

IF YES, CHECK ALL THAT APPLY: ☐ AIR ☐ HAZARDOUS WASTE ☐ PRETREATMENT
☐ WATER STATE OPERATING ☐ INDIVIDUAL NPDES ☒ OTHER: Section 404

IS THE PROJECT REROUTING, FILLING OR CROSSING A WATER CONVEYANCE OF ANY KIND? (If yes, contact the U.S. Army Corps of Engineers' Regulatory Branch for permitting requirements.) YES ☒ NO ☐

IF THE PROJECT REQUIRES A CORPS OF ENGINEER SECTION 404 PERMIT, PROVIDE APPROPRIATE DOCUMENTATION THAT:

- The project has been approved by individual permit, or
- The work will be covered by a nationwide permit and NO NOTIFICATION to the Corps is required, or
- The work will be covered by a nationwide or general permit and NOTIFICATION to the Corps is required

IS THE PROJECT REROUTING, FILLING OR CROSSING A STATE WATER CONVEYANCE OF ANY KIND? (If yes, please provide an antidegradation report.) YES ☐ NO ☒

IS A LAKE REQUIRING THE CONSTRUCTION OF A DAM BEING PROPOSED? (If yes, provide appropriate approval documentation from MDEQ Office of Land and Water, Dam Safety.) YES ☐ NO ☒

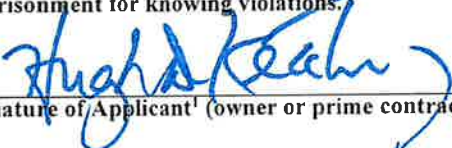
IF THE PROJECT IS A SUBDIVISION OR A COMMERCIAL DEVELOPMENT, HOW WILL SANITARY SEWAGE BE DISPOSED? Check one of the following and attach the pertinent documents.

- ☐ Existing Municipal or Commercial System. Please attach plans and specifications for the collection system and the associated "Information Regarding Proposed Wastewater Projects" form or approval from County Utility Authority in Hancock, Harrison, Jackson, Pearl River and Stone Counties. If the plans and specifications can not be provided at the time of LCNOI submittal, MDEQ will accept written acknowledgement from official(s) responsible for wastewater collection and treatment that the flows generated from the proposed project can and will be transported and treated properly. The letter must include the estimated flow.
- ☐ Collection and Treatment System will be Constructed. Please attach a copy of the cover of the NPDES discharge permit from MDEQ or indicate the date the application was submitted to MDEQ (Date: _____.)
- ☐ Individual Onsite Wastewater Disposal Systems for Subdivisions Less than 35 Lots. Please attach a copy of the Letter of General Acceptance from the Mississippi State Department of Health or certification from a registered professional engineer that the platted lots should support individual onsite wastewater disposal systems.
- ☐ Individual Onsite Wastewater Disposal Systems for Subdivisions Greater than 35 Lots. A determination of the feasibility of installing a central sewage collection and treatment system must be made by MDEQ. A copy of the response from MDEQ concerning the feasibility study must be attached. If a central collection and wastewater system is not feasible, then please attach a copy of the Letter of General Acceptance from the State Department of Health or certification from a registered professional engineer that the platted lots should support individual onsite wastewater disposal systems.

INDICATE ANY LOCAL STORM WATER ORDINANCE (I.E. MS4) WITH WHICH THE PROJECT MUST COMPLY:

City of Gulfport MS4

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.


Signature of Applicant¹ (owner or prime contractor)

Hugh D. Keating

Printed Name¹

08/12/2026

Date Signed

Mayor

Title

¹This application shall be signed as follows:

- For a corporation, by a responsible corporate officer.
- For a partnership, by a general partner.
- For a sole proprietorship, by the proprietor.

For a municipal, state or other public facility, by principal executive officer, mayor, or ranking elected official

Please submit the LCNOI form to:

Chief, Environmental Permits Division
MS Department of Environmental Quality, Office of Pollution Control
P.O. Box 2261
Jackson, Mississippi 39225

Electronically:

<https://www.mdeq.ms.gov/construction-stormwater/>

Revised 3/23/22

APPENDIX C – MS4 CORRESPONDENCE

From: [Lisa Morrison](#)
To: mkraninger@gulfport-ms.gov
Cc: [Jeremy R. Harrison](#); [Damon Torricelli](#)
Subject: MS4 Gulfport Commerce Corridor project
Date: Tuesday, July 14, 2026 10:59:00 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Mr. Kraninger, Neel-Schaffer is working on the Commerce Corridor, a project to extend 16th Street to the east toward the Gulfport Sportsplex, and is preparing a Stormwater Pollution Prevention Plan and Large Construction Notice of Intent for submittal to the Mississippi Department of Environmental Quality. We are also preparing a Water Quality Certification request to submit to MDEQ as part of the Clean Water Act Section 404 (wetlands) permit application. As part of the SWPPP and LCNOI we must document coordination with the local MS4 program, on stormwater discharges and management. We are planning on implementing Best Management Practices during construction and do not anticipate a significant increase in stormwater from the area after construction. Is there anything that the MS4 program would need from the City to ensure compliance with the MS4 program?

Please let me know if you have any questions or need any additional information on the project plans. We appreciate your help with this important project for the City of Gulfport.



Lisa D. Morrison, RPG

Geologist III

Neel-Schaffer, Inc.

795 Howard Ave, Biloxi, MS 39530

O: 228.374.1211 | D: 228.232.0517 | M: 228.233.6969

www.neel-schaffer.com



From: [Mark E. Kraninger](#)
To: [Lisa Morrison](#)
Cc: [Jeremy R. Harrison](#); [Damon Torricelli](#); [Tyler Gentry](#); [Robert E. Lee](#)
Subject: Re: MS4 Gulfport Commerce Corridor project
Date: Tuesday, July 14, 2026 12:50:51 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[Outlook-Signature](#)

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Ms. Lisa,

The only thing we need are copies of the approved SWPP and LCNOI for our records. We are already aware of this project and will inspect during construction for BMP's in compliance of the SWPP. Thanks for reaching out!

R/Mark

Mark E. Kraninger
MS4/Streets & Drainage Inspector
Gulfport, MS 39501
PH: (228) 868-5740 Ext 6619
Cell: (228) 297-2495
mkraninger@gulfport-ms.gov



From: Lisa Morrison <lisa.morrison@neel-schaffer.com>
Sent: Tuesday, July 14, 2026 10:59 AM
To: Mark E. Kraninger <mkraninger@gulfport-ms.gov>
Cc: Jeremy R. Harrison <jharrison@gulfport-ms.gov>; Damon Torricelli <damon.torricelli@neel-schaffer.com>
Subject: MS4 Gulfport Commerce Corridor project

Mr. Kraninger, Neel-Schaffer is working on the Commerce Corridor, a project to extend 16th Street to the east toward the Gulfport Sportsplex, and is preparing a Stormwater Pollution Prevention Plan and Large Construction Notice of Intent for submittal to the

Mississippi Department of Environmental Quality. We are also preparing a Water Quality Certification request to submit to MDEQ as part of the Clean Water Act Section 404 (wetlands) permit application. As part of the SWPPP and LCNOI we must document coordination with the local MS4 program, on stormwater discharges and management. We are planning on implementing Best Management Practices during construction and do not anticipate a significant increase in stormwater from the area after construction. Is there anything that the MS4 program would need from the City to ensure compliance with the MS4 program?

Please let me know if you have any questions or need any additional information on the project plans. We appreciate your help with this important project for the City of Gulfport.



Lisa D. Morrison, RPG

Geologist III

Neel-Schaffer, Inc.

795 Howard Ave, Biloxi, MS 39530

O: 228.374.1211 | D: 228.232.0517 | M: 228.233.6969

www.neel-schaffer.com



Neel-Schaffer, Inc. Confidentiality Note:

Information contained in this message along with any attachment(s) may be confidential and protected by legal privilege. This message is meant solely for the use of the individual(s) to whom it is addressed. Viewing or the use of information and attachment(s) within this message without the expressed permission of Neel-Schaffer, Inc. is prohibited. If you are not the intended recipient of this message, Neel-Schaffer, Inc. requests you take immediate action to notify the sender of the error and that you delete this message and all attachments without modifying, copying or distributing its content.

APPENDIX D – SOIL REPORT

Soil Map—Harrison County, Mississippi
(Gulfport Commerce Corridor)



Soil Map—Harrison County, Mississippi
(Gulfport Commerce Corridor)

MAP LEGEND

Area of Interest (AOI)			Area of Interest (AOI)		Spoil Area
Soils			Soil Map Unit Polygons		Stony Spot
			Soil Map Unit Lines		Very Stony Spot
			Soil Map Unit Points		Wet Spot
Special Point Features			Blowout		Other
			Borrow Pit		Special Line Features
			Clay Spot	Water Features	
			Closed Depression		Streams and Canals
			Gravel Pit	Transportation	
			Gravelly Spot		Rails
			Landfill		Interstate Highways
			Lava Flow		US Routes
			Marsh or swamp		Major Roads
			Mine or Quarry		Local Roads
			Miscellaneous Water	Background	
			Perennial Water		Aerial Photography
			Rock Outcrop		
			Saline Spot		
			Sandy Spot		
			Severely Eroded Spot		
			Sinkhole		
			Slide or Slip		
			Sodic Spot		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Harrison County, Mississippi
Survey Area Data: Version 21, Sep 6, 2024

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

Date(s) aerial images were photographed: Feb 13, 2023—Feb 19, 2023

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
At	Atmore silt loam, 0 to 2 percent slopes	0.6	1.9%
HIA	Harleston fine sandy loam, 0 to 2 percent slopes	0.5	1.6%
HIB	Harleston fine sandy loam, 2 to 5 percent slopes	2.9	9.1%
Pm	Plummer loamy sand	8.1	25.7%
PoA	Poarch fine sandy loam, 0 to 2 percent slopes	1.8	5.6%
PoB	Poarch fine sandy loam, 2 to 5 percent slopes	8.3	26.2%
Ps	Ponzer and Smithton soils	0.1	0.3%
St	Smithton fine sandy loam	9.4	29.7%
Totals for Area of Interest		31.5	100.0%

Map Unit Description

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

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

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

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

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

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

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

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

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

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

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

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description

Harrison County, Mississippi

At—Atmore silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2t42g

Elevation: 20 to 270 feet

Mean annual precipitation: 57 to 69 inches
Mean annual air temperature: 61 to 70 degrees F
Frost-free period: 215 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition

Atmore and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Atmore**Setting**

Landform: Flats on divides, terraces, depressions
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluvium, tread, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Silty alluvium over fine-loamy alluvium derived from sedimentary rock

Typical profile

A - 0 to 5 inches: silt loam
Eg - 5 to 9 inches: silt loam
E/Bg - 9 to 30 inches: silt loam
Btg - 30 to 39 inches: silt loam
Btgv1 - 39 to 51 inches: silt loam
Btgv2 - 51 to 78 inches: clay loam
2C - 78 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 24 to 50 inches to plinthite
Drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 1.28 in/hr)
Depth to water table: About 0 to 8 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Minor Components**Harleston**

Percent of map unit: 5 percent
Landform: Stream terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Poarch

Percent of map unit: 5 percent
Landform: Fluvio-marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Escambia

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

HIA—Harleston fine sandy loam, 0 to 2 percent slopes**Map Unit Setting**

National map unit symbol: 2t42d
Elevation: 0 to 300 feet
Mean annual precipitation: 52 to 69 inches
Mean annual air temperature: 52 to 70 degrees F
Frost-free period: 215 to 270 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Harleston and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Harleston**Setting**

Landform: Stream terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loamy alluvium derived from sedimentary rock

Typical profile

A - 0 to 4 inches: fine sandy loam

E - 4 to 9 inches: fine sandy loam

BE - 9 to 13 inches: fine sandy loam

Bt1 - 13 to 24 inches: sandy loam

Bt2 - 24 to 43 inches: fine sandy loam

Bt3 - 43 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: B/D

Ecological site: F152AY010AL - West Central Loamy Flat

Hydric soil rating: No

Minor Components

Bibb

Percent of map unit: 5 percent

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Concave

Hydric soil rating: Yes

Stough

Percent of map unit: 5 percent

Landform: Terraces

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F152AY010AL - West Central Loamy Flat

Hydric soil rating: No

Smithton

Percent of map unit: 5 percent

Landform: Drainageways on flats

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread, talf

Down-slope shape: Linear

Across-slope shape: Concave, linear

Hydric soil rating: Yes

HIB—Harleston fine sandy loam, 2 to 5 percent slopes**Map Unit Setting**

National map unit symbol: 2t42f

Elevation: 20 to 250 feet

Mean annual precipitation: 57 to 69 inches

Mean annual air temperature: 61 to 70 degrees F

Frost-free period: 200 to 270 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Harleston and similar soils: 85 percent

Minor components: 15 percent

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

Description of Harleston**Setting**

Landform: Marine terraces

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Concave

Parent material: Loamy alluvium derived from sedimentary rock

Typical profile

Ap - 0 to 4 inches: fine sandy loam

E - 4 to 9 inches: fine sandy loam

BE - 9 to 13 inches: sandy loam

Bt1 - 13 to 43 inches: fine sandy loam

Bt2 - 43 to 80 inches: sandy clay loam

Properties and qualities

Slope: 2 to 5 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): 2w

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: B/D

Ecological site: F152AY010AL - West Central Loamy Flat

Hydric soil rating: No

Minor Components**Bibb**

Percent of map unit: 7 percent

Landform: Flood plains

Landform position (three-dimensional): Dip

Down-slope shape: Linear

Across-slope shape: Concave

Hydric soil rating: Yes

Smithton

Percent of map unit: 4 percent

Landform: Drainageways, depressions

Landform position (three-dimensional): Tread, talf

Down-slope shape: Linear, concave

Across-slope shape: Concave, linear

Hydric soil rating: Yes

Stough

Percent of map unit: 4 percent

Landform: Terraces

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F152AY010AL - West Central Loamy Flat

Hydric soil rating: No

Pm—Plummer loamy sand**Map Unit Setting**

National map unit symbol: c4xw

Elevation: 20 to 400 feet

Mean annual precipitation: 40 to 75 inches

Mean annual air temperature: 63 to 72 degrees F

Frost-free period: 240 to 335 days

Farmland classification: Not prime farmland

Map Unit Composition

Plummer and similar soils: 85 percent

Minor components: 15 percent

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

Description of Plummer

Setting

Landform: Flats
Landform position (three-dimensional): Dip
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy marine deposits

Typical profile

H1 - 0 to 50 inches: loamy sand
H2 - 50 to 72 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water
(Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F152AY014AL - West Central Loamy Lowland
Hydric soil rating: Yes

Minor Components

Ocilla

Percent of map unit: 6 percent
Landform: Stream terraces
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F152AY010AL - West Central Loamy Flat
Hydric soil rating: No

Atmore

Percent of map unit: 5 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Nugent

Percent of map unit: 4 percent

Landform: Natural levees

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Rise

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

PoA—Poarch fine sandy loam, 0 to 2 percent slopes**Map Unit Setting**

National map unit symbol: 2t42k

Elevation: 30 to 340 feet

Mean annual precipitation: 57 to 69 inches

Mean annual air temperature: 61 to 70 degrees F

Frost-free period: 215 to 270 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Poarch and similar soils: 85 percent

Minor components: 15 percent

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

Description of Poarch**Setting**

Landform: Fluvio-marine terraces

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Interfluvium

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Loamy fluvio-marine deposits derived from sedimentary rock

Typical profile

Ap - 0 to 7 inches: fine sandy loam

E - 7 to 12 inches: loam

Bt - 12 to 32 inches: loam

Btv1 - 32 to 66 inches: loam

Btv2 - 66 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: About 39 to 60 inches

Frequency of flooding: None

Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components**Atmore**

Percent of map unit: 5 percent
Landform: Interfluves, flats
Landform position (two-dimensional): Summit, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Escambia

Percent of map unit: 5 percent
Landform: Interfluves on terraces
Landform position (two-dimensional): Footslope, toeslope, summit
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: No

Malbis

Percent of map unit: 5 percent
Landform: Fluvio-marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

PoB—Poarch fine sandy loam, 2 to 5 percent slopes**Map Unit Setting**

National map unit symbol: 2t42h
Elevation: 30 to 340 feet
Mean annual precipitation: 57 to 69 inches
Mean annual air temperature: 61 to 70 degrees F
Frost-free period: 215 to 270 days
Farm-land classification: All areas are prime farmland

Map Unit Composition

Poarch and similar soils: 85 percent

Minor components: 15 percent

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

Description of Poarch

Setting

Landform: Fluvio-marine terraces

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Interfluvium

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Loamy fluvio-marine deposits derived from sedimentary rock

Typical profile

Ap - 0 to 7 inches: fine sandy loam

E - 7 to 12 inches: loam

Bt - 12 to 32 inches: loam

Btv1 - 32 to 66 inches: loam

Btv2 - 66 to 80 inches: fine sandy loam

Properties and qualities

Slope: 2 to 5 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: About 39 to 60 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: B

Hydric soil rating: No

Minor Components

Escambia

Percent of map unit: 5 percent

Landform: Interfluvium, terraces

Landform position (two-dimensional): Summit, footslope, toeslope

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

Down-slope shape: Concave, linear

Across-slope shape: Concave

Hydric soil rating: No

Malbis

Percent of map unit: 5 percent

Landform: Fluvio-marine terraces

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Crest

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Harleston

Percent of map unit: 5 percent

Landform: Marine terraces

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Concave

Hydric soil rating: No

Ps—Ponzer and Smithton soils**Map Unit Setting**

National map unit symbol: c4y0

Elevation: 0 to 300 feet

Mean annual precipitation: 60 to 75 inches

Mean annual air temperature: 64 to 70 degrees F

Frost-free period: 270 to 335 days

Farmland classification: Not prime farmland

Map Unit Composition

Ponzer and similar soils: 59 percent

Smithton and similar soils: 18 percent

Minor components: 23 percent

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

Description of Ponzer**Setting**

Landform: Drainageways

Landform position (three-dimensional): Dip

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Decomposed organic material over loamy alluvium

Typical profile

Oa - 0 to 24 inches: muck

H2 - 24 to 52 inches: loam

H3 - 52 to 72 inches: loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: High (about 11.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Description of Smithton**Setting**

Landform: Terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

Typical profile

H1 - 0 to 1 inches: fine sandy loam
H2 - 1 to 10 inches: fine sandy loam
H3 - 10 to 38 inches: fine sandy loam
H4 - 38 to 72 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Minor Components**Hyde**

Percent of map unit: 8 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

St. lucie

Percent of map unit: 8 percent
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Handsboro

Percent of map unit: 7 percent
Landform: Tidal flats
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

St—Smithton fine sandy loam**Map Unit Setting**

National map unit symbol: c4yc
Elevation: 100 to 300 feet
Mean annual precipitation: 60 to 75 inches
Mean annual air temperature: 64 to 70 degrees F
Frost-free period: 270 to 335 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Smithton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Smithton**Setting**

Landform: Terraces
Landform position (three-dimensional): Tread, dip
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

Typical profile

H1 - 0 to 1 inches: fine sandy loam
H2 - 1 to 10 inches: fine sandy loam
H3 - 10 to 38 inches: fine sandy loam
H4 - 38 to 72 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water
(Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Minor Components**Saucier**

Percent of map unit: 7 percent
Landform: Coastal plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Escambia

Percent of map unit: 4 percent
Landform: Coastal plains
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Ponzer

Percent of map unit: 4 percent
Landform: Drainageways
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear

Hydric soil rating: Yes

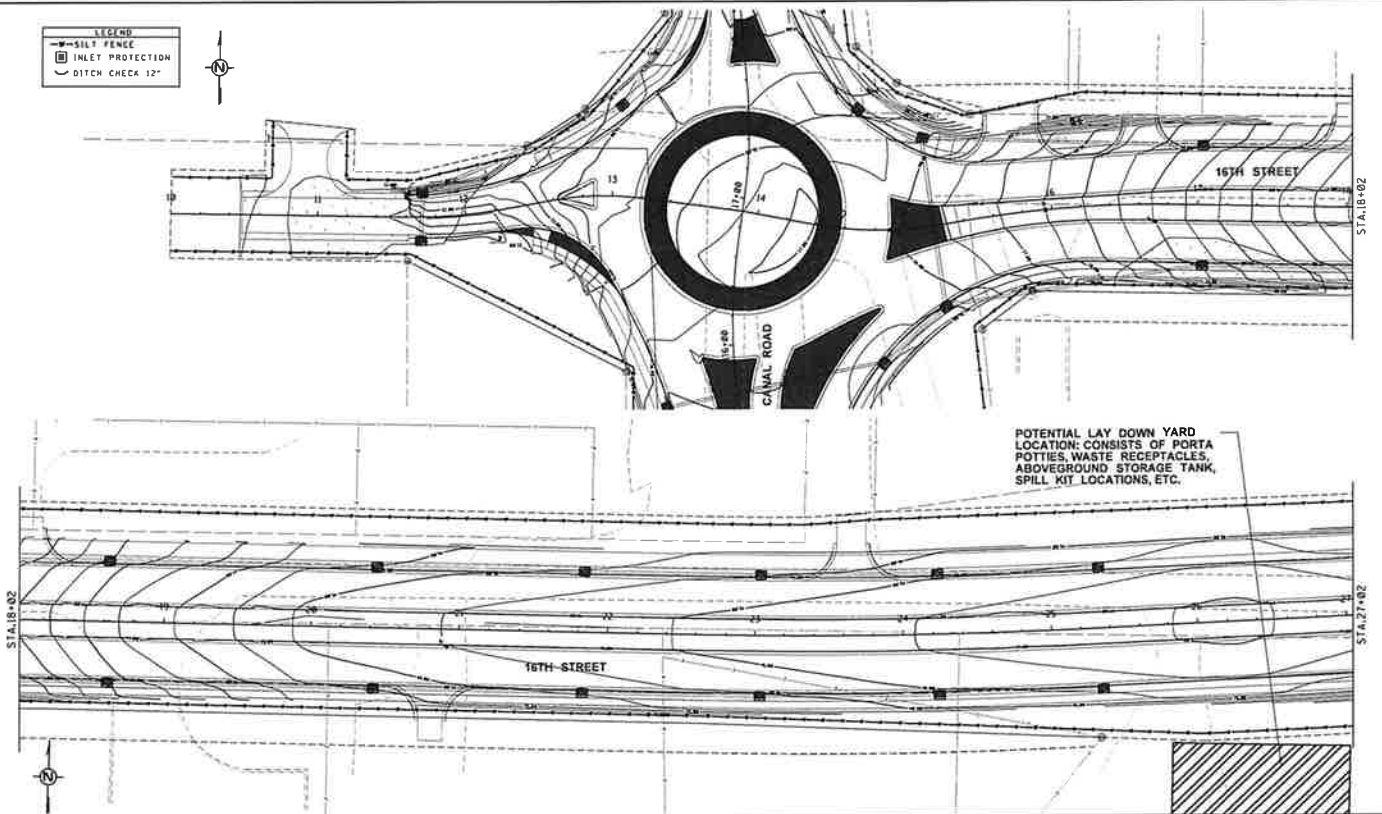
Data Source Information

Soil Survey Area: Harrison County, Mississippi

Survey Area Data: Version 21, Sep 6, 2024

APPENDIX E – EROSION AND SEDIMENT CONTROLS DRAWINGS

LEGEND	
	SILT FENCE
	INLET PROTECTION
	DITCH CHECK 12"



POTENTIAL LAY DOWN YARD
LOCATION: CONSISTS OF PORTA
POTTIES, WASTE RECEPTACLES,
ABOVEGROUND STORAGE TANK,
SPILL KIT LOCATIONS, ETC.

NOTICE TO DRAWING HOLDER

NEEL-SCHAFER, INC. HEREBY REFERS TO ALL THE ENGINEER'S
HAS REVIEWED AND FORWARDED THIS DRAWING TO THE OWNER FOR USE
ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON
EXTENSIONS OF THIS PROJECT OR ON ANY OTHER PROJECT. ANY REUSE
OF THIS DRAWING WITHOUT PERMISSION OR APPROVAL BY THE
ENGINEER SHALL BE AT THE USER'S SOLE RISK AND THE USER
SHALL THEREAFTER HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS,
DAMAGES, LOSSES AND EXPENSES INCLUDING ATTORNEY'S FEES ARISING
OUT OF OR RESULTING THEREFROM.

REVISIONS		DRAWING INFORMATION	
NO.	DATE BY	DESCRIPTION	DATE

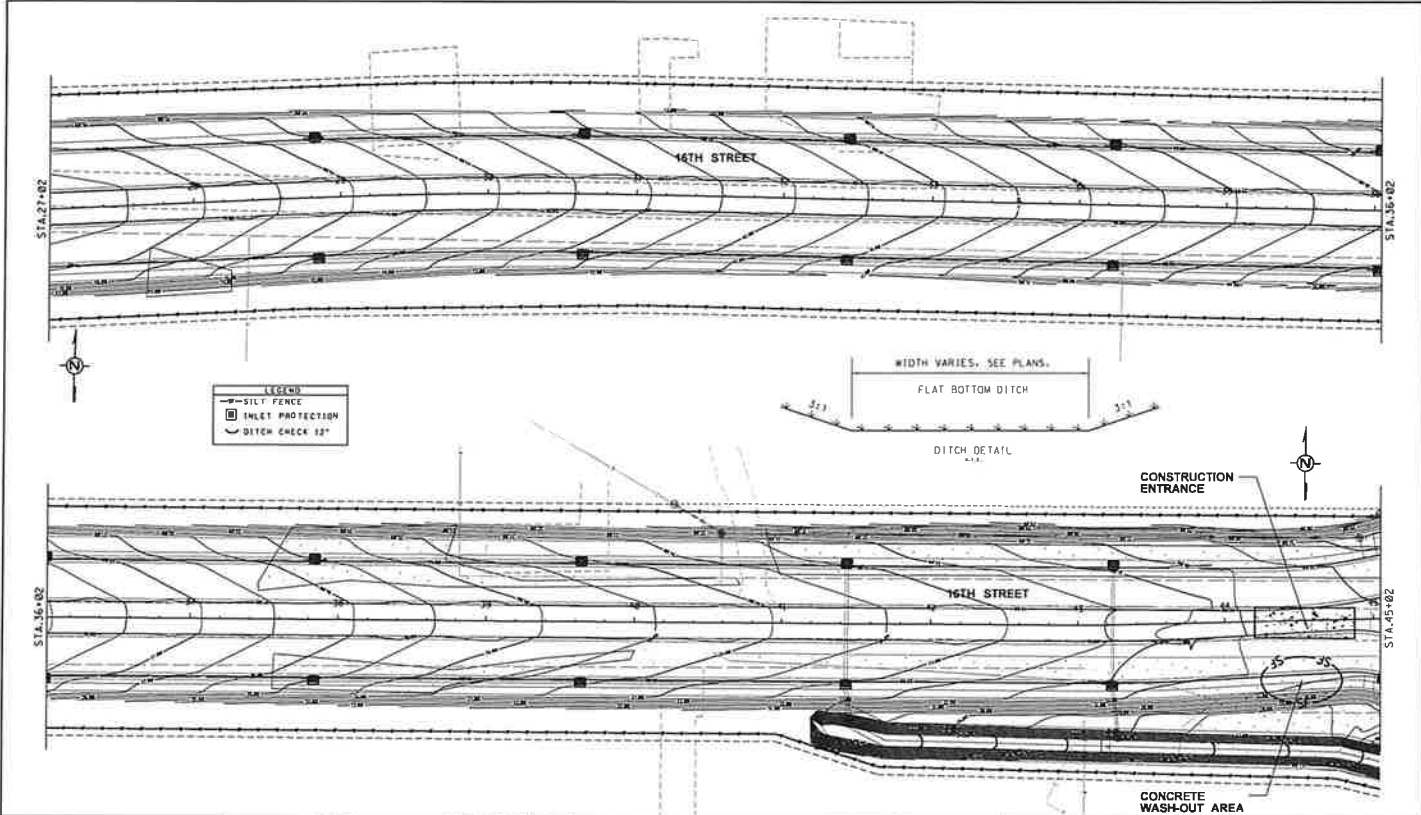
COG COMMERCE CORRIDOR

HARRISON COUNTY
CITY OF GULFPORT, MISSISSIPPI

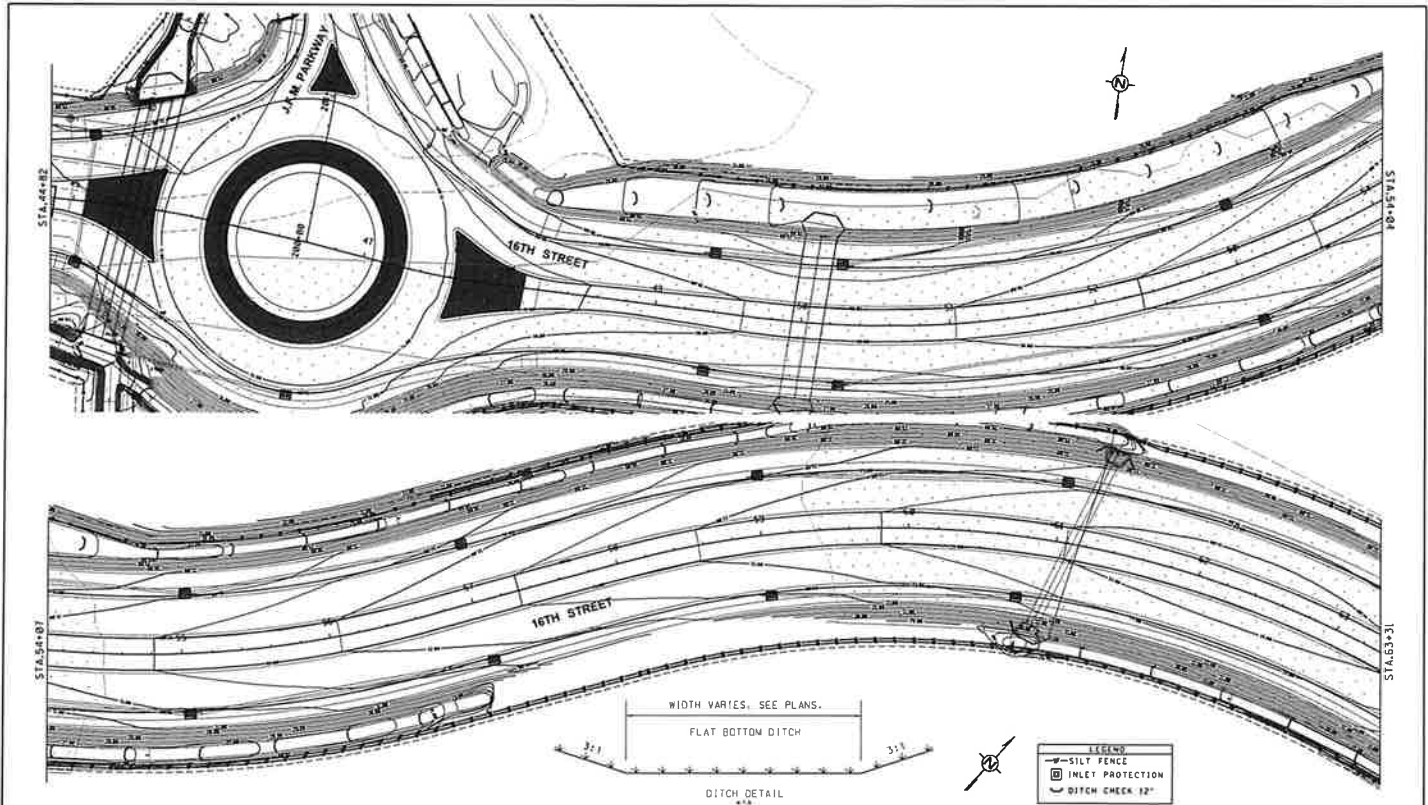
NEEL-SCHAFER

EROSION CONTROL PLAN
16TH STREET
STA. 10+00 TO STA. 27+02

WORKING NUMBER:	DRAWING NUMBER:
ECT-1	43



NOTICE TO DRAWING HOLDER NEEL-SCHAFER, INC. HEREBY CERTIFIES TO ALL THE ENGINEERS, ARCHITECTS AND SURVEYORS THAT THIS DRAWING IS THE PROPERTY OF NEEL-SCHAFER, INC. AND IS NOT TO BE REPRODUCED OR USED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF NEEL-SCHAFER, INC. ANY REUSE OR REPRODUCTION OF THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF NEEL-SCHAFER, INC. SHALL BE AT THE USER'S SOLE RISK AND THE USER SHALL HOLD NEEL-SCHAFER, INC. HARMLESS FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES ARISING OUT OF OR RESULTING THEREFROM.	REVISIONS		DRAWING INFORMATION		COG COMMERCE CORRIDOR HARRISON COUNTY CITY OF GULFPORT, MISSISSIPPI	NEEL-SCHAFER	EROSION CONTROL PLAN 16TH STREET STA. 27+02 TO STA. 45+02	WORKBOOK NUMBER ECT-2	DRAWING NUMBER 44			
	NO.	DATE	BY	DESCRIPTION						W/S SUBJECT NO. (10/1)	SCALE: 1" = 30'	SHEET NUMBER BY:



NOTICE TO DRAWING HOLDERS

NEEL-SCHAFER, INC. HEREBY CERTIFIES TO AS THE ENGINEER, HAS PREPARED AND SUPERVISED THIS DRAWING TO THE BEST OF HIS SKILL AND KNOWLEDGE. THIS DRAWING IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. ANY REUSE OF THIS DRAWING FOR ANY OTHER PROJECT OR SITE WITHOUT THE WRITTEN PERMISSION OF NEEL-SCHAFER, INC. IS PROHIBITED. THE ENGINEER SHALL BE AT THE READY TO SIGN AND SEAL ANY REUSE OF THIS DRAWING. NEEL-SCHAFER, INC. SHALL NOT BE RESPONSIBLE FOR ANY REUSE OF THIS DRAWING. NEEL-SCHAFER, INC. SHALL NOT BE RESPONSIBLE FOR ANY REUSE OF THIS DRAWING.

REVISIONS		DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION

COG COMMERCE CORRIDOR

HARRISON COUNTY
CITY OF GULFPORT, MISSISSIPPI

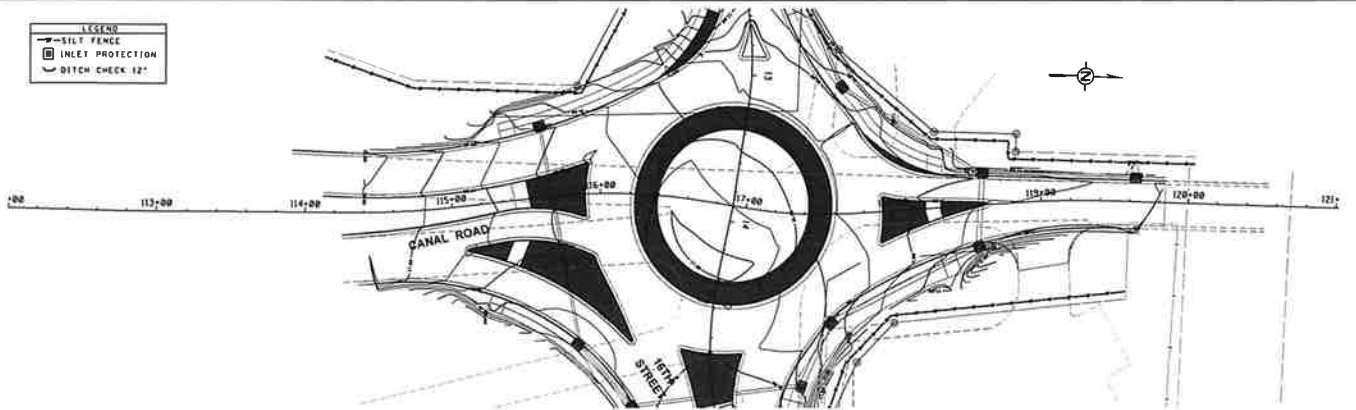
NEEL-SCHAFER

EROSION CONTROL PLAN
16TH STREET
STA. 44+82 TO STA. 63+31

WORKING NUMBER:
ECT-3

DRAWING NUMBER:
45

LEGEND	
	ELEVATION FENCE
	INLET PROTECTION
	DITCH CHECK 12"



NOTICE TO DRAWING USER

NEEL-SCHAFER, INC. HEREBY REFERS TO AS THE ENGINEER, HAS PREPARED AND FORWARDED THIS DRAWING TO THE OWNER FOR USE ON THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON ANY OTHER PROJECT OR FOR ANY OTHER PURPOSE. THE USER OF THIS DRAWING SHALL BE AT THE USER'S SOLE RISK AND THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE OR INJURY TO PERSONS OR PROPERTY THAT MAY RESULT FROM THE USE OF THIS DRAWING. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL FEE RECEIVED BY THE ENGINEER.

REVISIONS		DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION

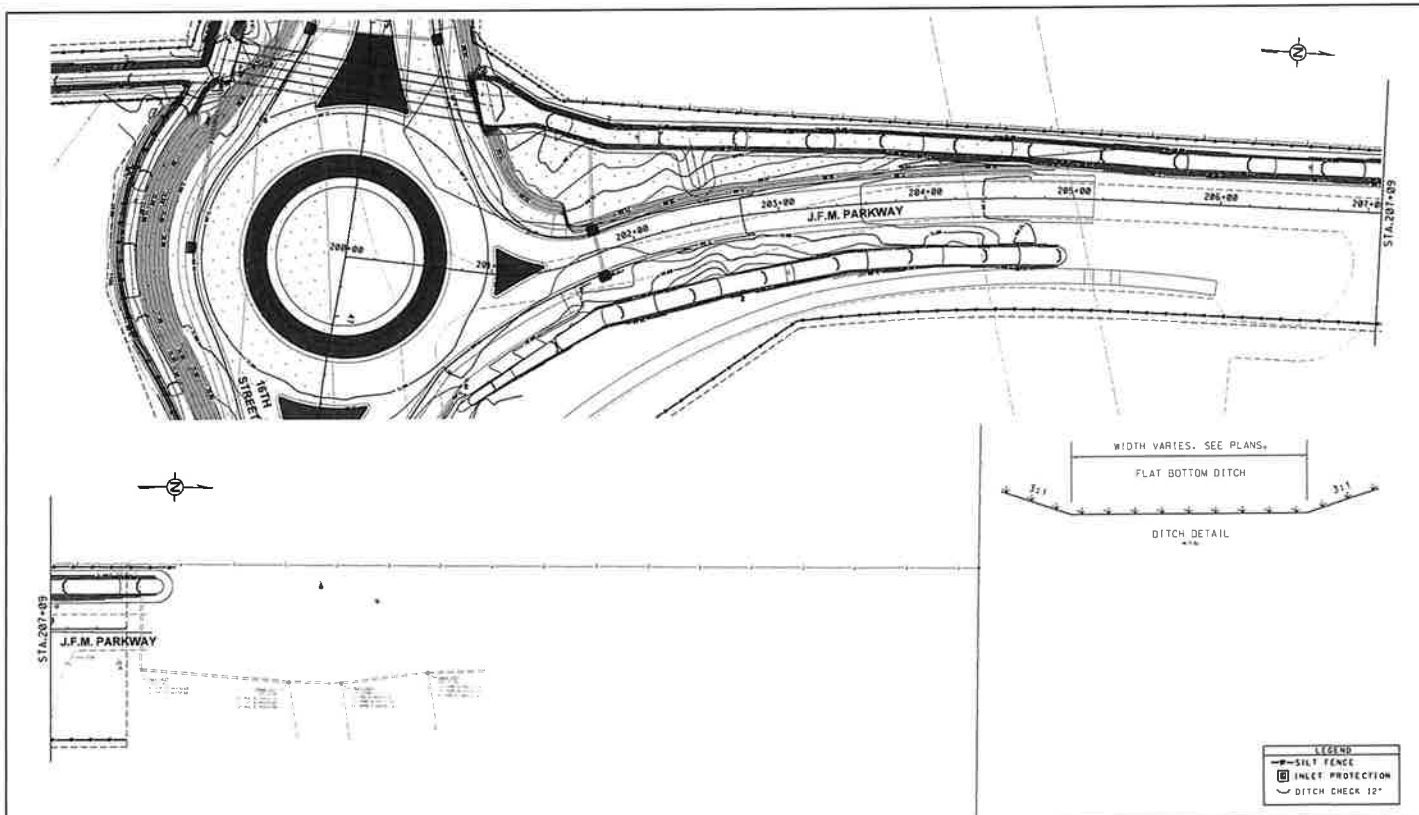
COG COMMERCE CORRIDOR

HARRISON COUNTY
CITY OF GULFPORT, MISSISSIPPI



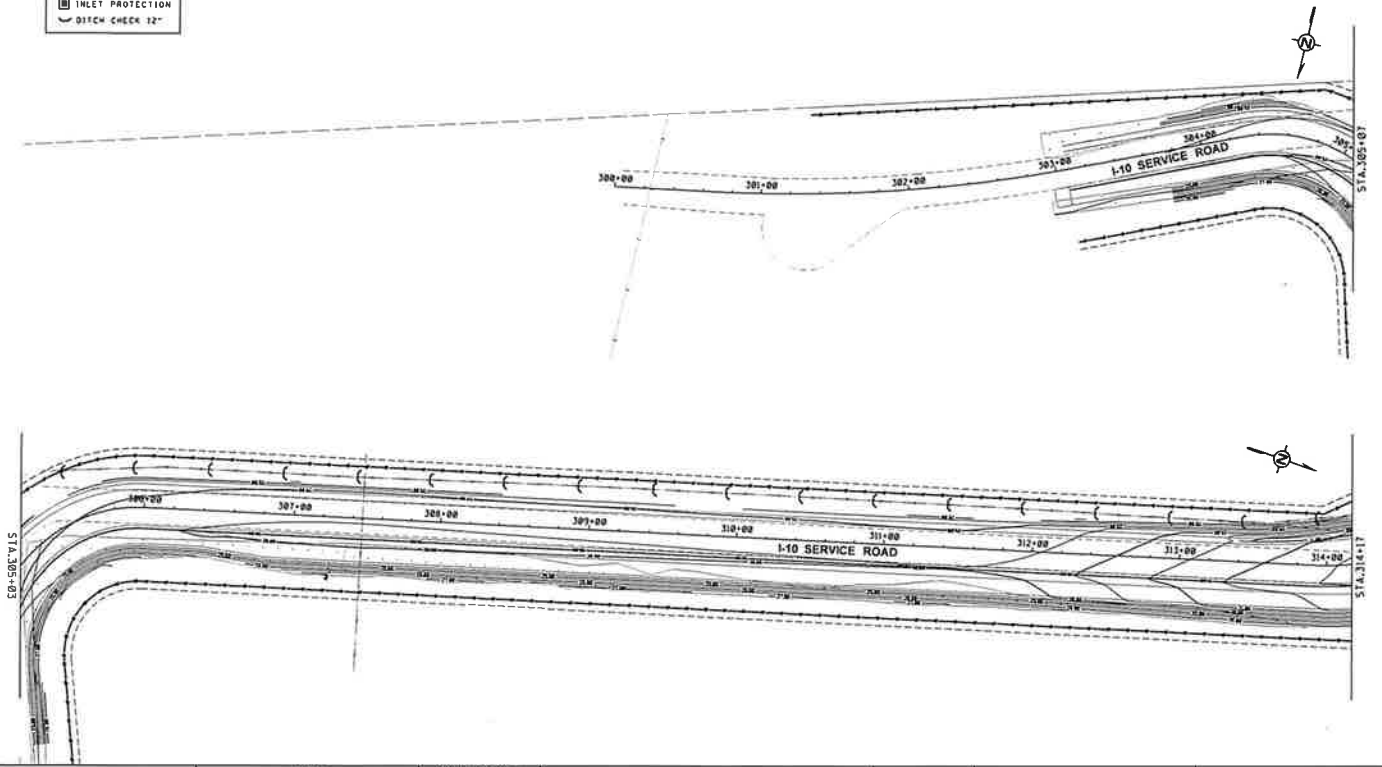
EROSION CONTROL PLAN
CANAL ROAD
STA. 112+00 TO E.O.P.

REVISION NUMBER	DRAWING NUMBER
ECT-5	47



NOTICE TO DRAWING HOLDERS NEEL-SCHAFER INC. HEREBY REFERS TO AS THE ENGINEER, HAS PREPARED AND FORWARDED THIS DRAWING TO THE OWNER FOR USE OF THIS PROJECT ONLY. THIS DRAWING SHOULD NOT BE USED ON ANY OTHER PROJECTS. ANY REUSE OF THIS DRAWING WITHOUT WRITTEN PERMISSION OR AUTHORIZATION OF THE ENGINEER SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY. NEEL-SCHAFER INC. AND ITS EMPLOYEES INCLUDING ATTORNEYS FEEL ADVISED NOT TO BE RESPONSIBLE THEREFOR.	REVISIONS		DRAWING INFORMATION		COG COMMERCE CORRIDOR HARRISON COUNTY CITY OF GULFPORT, MISSISSIPPI	 NEEL-SCHAFER	EROSION CONTROL PLAN J.F.M. PARKWAY STA. 200+00 TO E.O.P. DESIGN NUMBER: ECT-6 DRAWING NUMBER: 48	
	NO.	DATE	BY	DESCRIPTION				FILE NAME: 001-ECT-6.dwg
								SCALE: 1" = 10'
								SURVEYED BY:
								DRAWN BY: DATE:
								CHECKED BY: DATE:
								DESIGNED BY: DATE:
								DATE:
								DATE:
								DATE:

LEGEND	
	SILT FENCE
	INLET PROTECTION
	DITCH CHECK 32"



NOTICE TO DRAWING HOLDER

NEEL-SCHAFER, INC. HEREBY REFERS TO AN ENGINEER, ARCHITECT, AND SURVEYOR WHO OBTAINS THE RIGHT TO USE OR THIS PROJECT ONLY. THE DRAWING SHALL NOT BE USED OR EXTENDED TO THIS PROJECT OR ANY OTHER PROJECT. ANY USE OF THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER SHALL BE AT THE USER'S SOLE RISK AND THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE, LOSS, OR INJURY TO PERSONS OR PROPERTY. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE, LOSS, OR INJURY TO PERSONS OR PROPERTY. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE, LOSS, OR INJURY TO PERSONS OR PROPERTY.

REVISIONS		DRAWING INFORMATION	
NO.	DATE	BY	DESCRIPTION

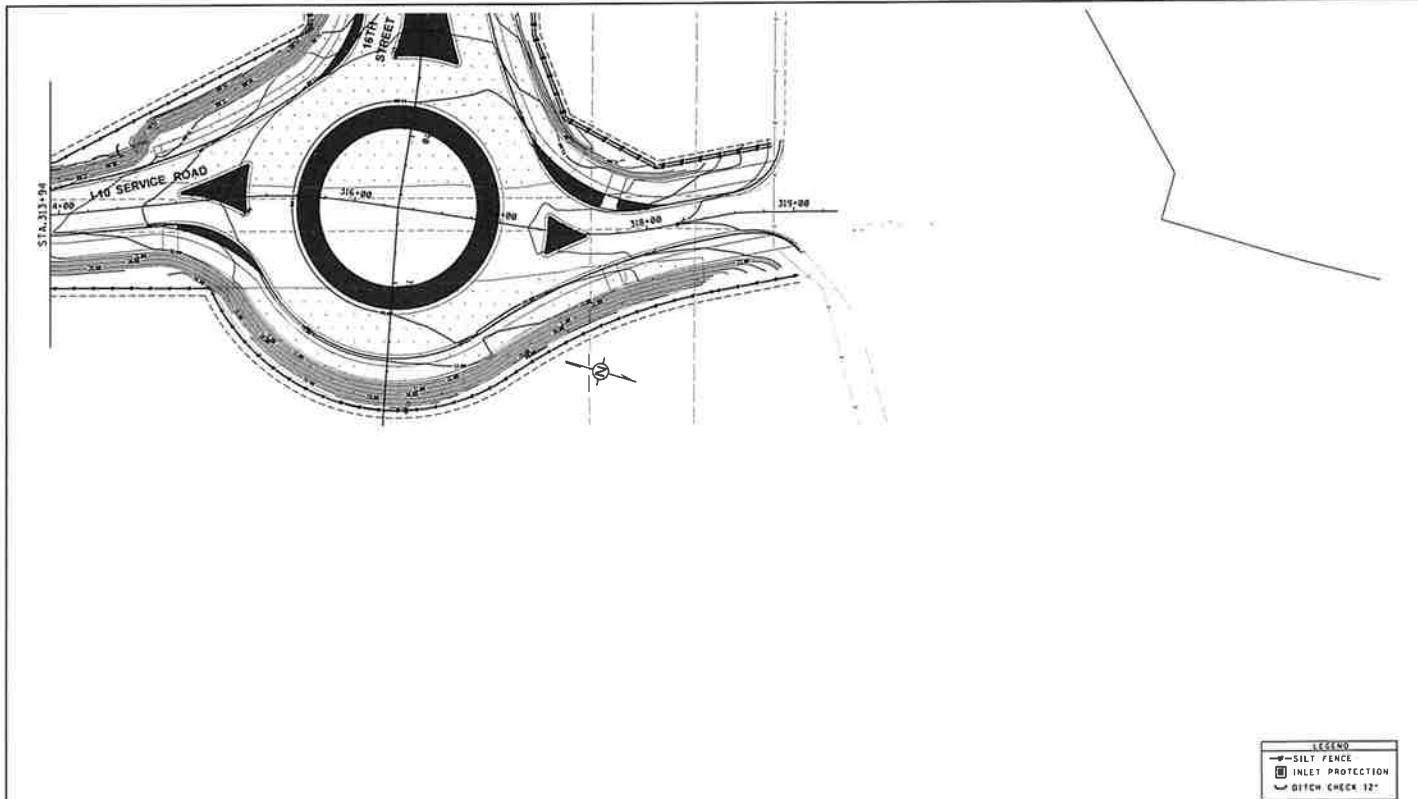
COG COMMERCE CORRIDOR

HARRISON COUNTY
CITY OF GULFPORT, MISSISSIPPI

NEEL-SCHAFER

EROSION CONTROL PLAN
I-10 SERVICE ROAD
STA. 300+00 TO
STA. 314+17

WORKING NUMBER: ECT-7
DRAWING NUMBER: 49



NOTICE TO DRAWING HOLDER
 NEEL-SCHAFER INC. HEREBY DISCLAIMS ALL LIABILITY TO THE ENGINEER, ARCHITECT, AND/OR OWNER FOR ANY AND ALL DAMAGES, LOSSES AND EXPENSES, INCLUDING ATTORNEY'S FEES, ARISING OUT OF OR IN CONNECTION WITH THE USE OF THIS DRAWING. THIS DRAWING IS THE PROPERTY OF NEEL-SCHAFER INC. AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF NEEL-SCHAFER INC.

REVISIONS		DATE	
NO.	DATE	BY	DESCRIPTION

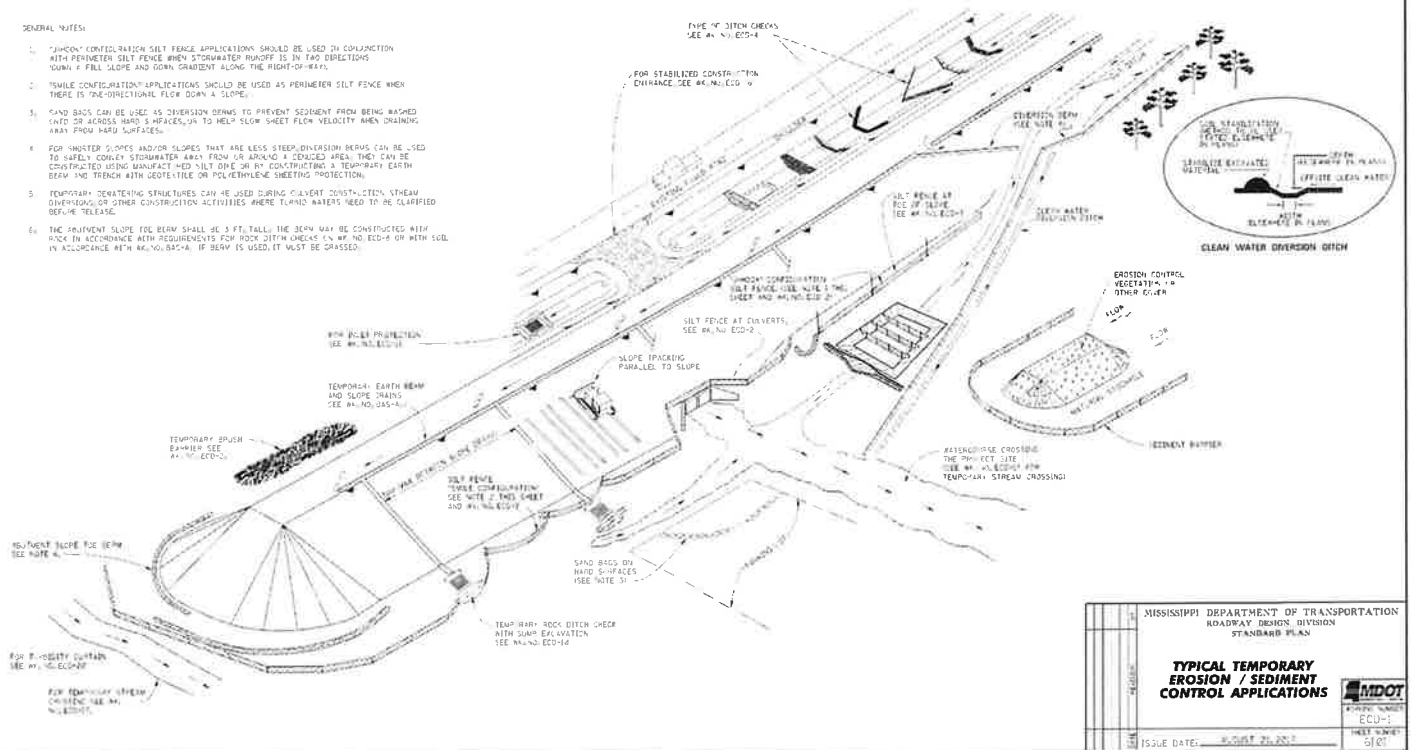
COG COMMERCE CORRIDOR
 HARRISON COUNTY
 CITY OF GULFPORT, MISSISSIPPI



EROSION CONTROL PLAN	
I-10 SERVICE ROAD	
STA. 314+94 TO E.O.P.	
REVISION NUMBER	DRAWING NUMBER
ECT-8	50

GENERAL NOTES:

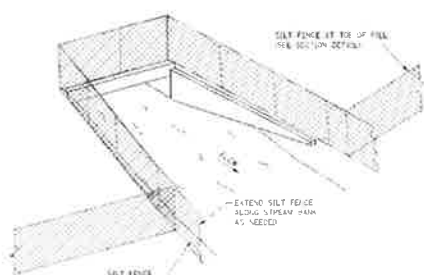
14. "JUNCTION" CONFIGURATION SLOPE UTILIZATION SHOULD BE USED TO CONJUNCTION WITH PERIMETER SLOPE SLOPE FORCE WHEN "STORMWATER RUNOFF IS TO TWO DIRECTIONS TOWARD A FILL SLOPE AND SOILS GRADIENT ALLOW THE RIGHT-OF-WAY".
15. "SWALE" CONFIGURATION UTILIZATION SHOULD BE USED AS PERIMETER SLOPE FORCE WHEN THE TWO DIRECTIONS TOWARD A FILL SLOPE.
16. "AND" BASS CAN BE USED AS DIVERSION DRAIN TO PREVENT SEDIMENT FROM BEING WASHED INTO OR ACROSS HARD SURFACES, SUCH AS TO HELP SLOW SHEET FLOW VELOCITY WHEN DRAINING FROM HARD SURFACES.
17. FOR SHOULDER SLOPES AND/OR SLOPES THAT ARE LESS STEEP, DIVERSION BASINS CAN BE USED TO COLLECT STORMWATER EITHER FROM A SLOPE OR A DITCHED AREA. THEY CAN BE CONSTRUCTED USING MANHOLE AND "J" DITCH OR "A" CONSTRUCTION, A TEMPORARY EARTHEN DITCH WITH A SLOPE OF 3:1 OR 4:1, OR A "V" DITCH WITH A SLOPE OF 3:1 OR 4:1.
18. "TEMPORARY" DIVERTING STRUCTURES CAN BE USED DURING CONSTRUCTION OF STREAM DIVERSIONS AND OTHER CONSTRUCTION ACTIVITIES. AFTER WORKS WOULD BE TO BE COMPLETED, RELEASE.
19. THE ADJACENT SLOPE TO BE BUILT SHALL BE 3:1 FT. TALL. THE 3:1:1 WOULD BE CONSTRUCTED WITH 12" IN ASSURANCE OF PROPER CONSTRUCTION. THE 3:1:1 WOULD BE CONSTRUCTED WITH 12" IN ASSURANCE OF PROPER CONSTRUCTION. IF BEING USED, IT WOULD BE GRASS.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

TYPICAL TEMPORARY EROSION / SEDIMENT CONTROL APPLICATIONS



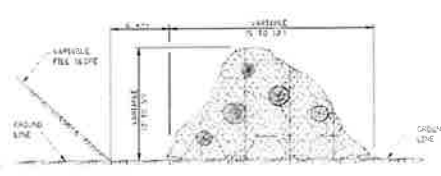
ISSUE DATE: 20/05/2022	ECU-1
	5/21



SEDIMENT BARRIER AT CROSS DRAIN



FRONT ELEVATION



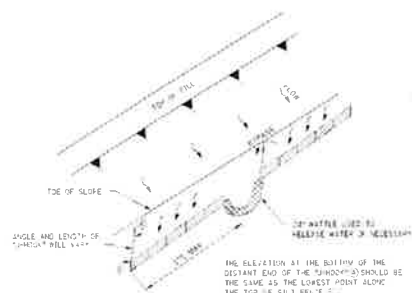
SIDE ELEVATION

TEMPORARY BRUSH BARRIER

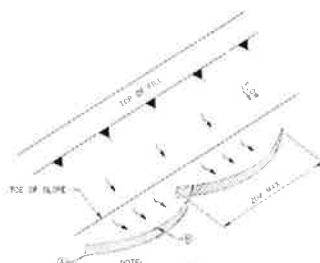
NOTES:

1. BRUSH BARRIER MAY BE USED WHERE NATURAL GROUND IS LEVEL OR SLOPING AWAY FROM PROJECT.
2. PLACE HUSH LOG AND TREE LAPS APPROXIMATELY PARALLEL TO TOE OF FILL SLOPE WITH SOME OF THE HEAVIER MATERIALS BEING PLACED ON TO TO MAINTAIN SECURE THE BARRIER AS DETAILED AT LOCATIONS SHOWN ON PLANS OF AS DIRECTED OR PERMITTED BY THE ENGINEER.
3. TO ALLOW WATER TO SEEP THROUGH BRUSH BARRIER, INTERSPERSE THE HUSH LOG AND TREE LAPS SO AS NOT TO FORM A SOLID DAM.
4. THE BRUSH BARRIER MAY BE CHECKED WITH FILTER FABRIC, THE COST OF FABRIC TO BE INCLUDED IN OTHER ITEMS BID.
5. TEMPORARY BRUSH BARRIER WILL NOT BE VIEWED FOR SEPARATE PAYMENT.

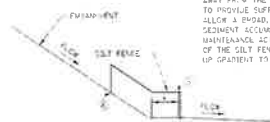
NOTE: ANCHOR AND INSTALL SILT FENCE PER DETAILS SHOWN ON MS-VD-02-7



"J-HOOK" SILT FENCE APPLICATION

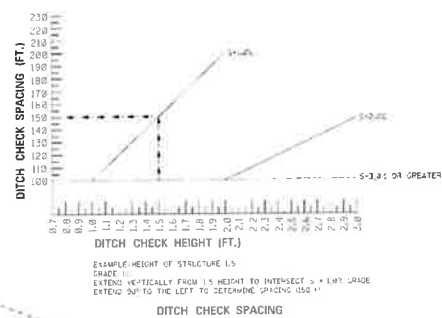
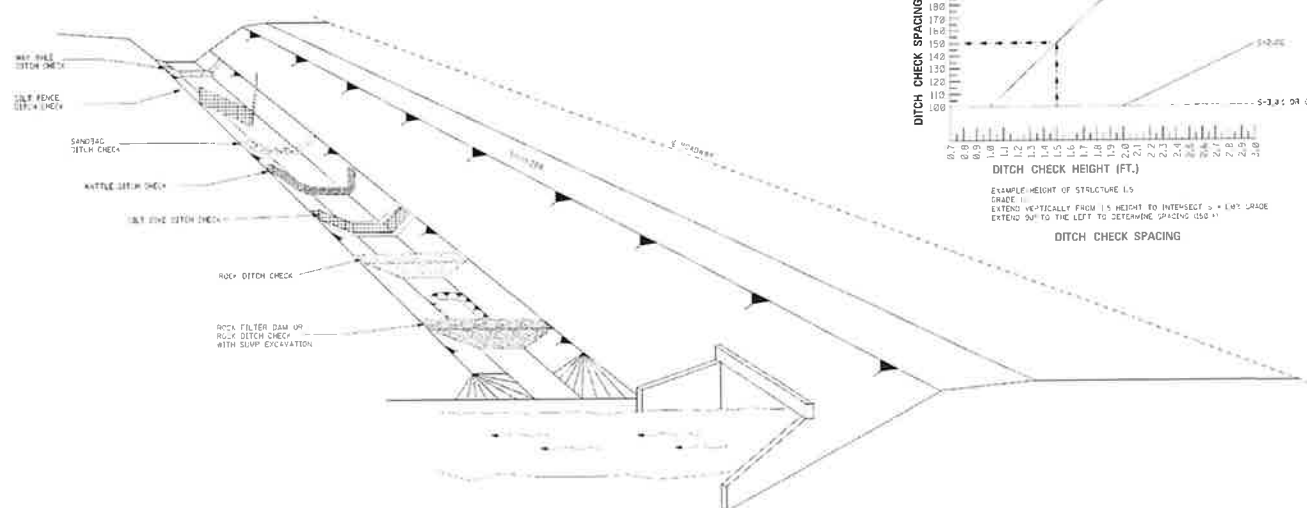


"SMILE-CONFIGURATION" SILT FENCE APPLICATION



SILT FENCE SECTION AT TOE OF FILL

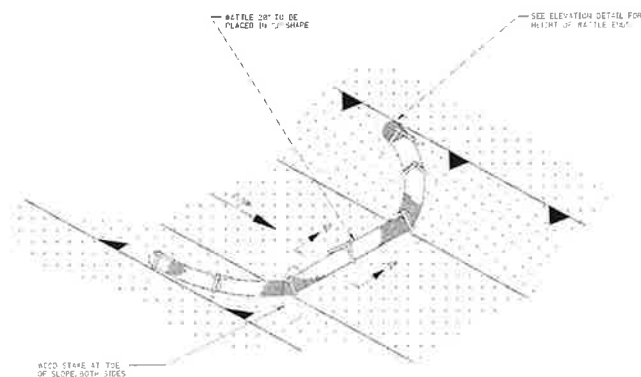
MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
ROADWAY DESIGN DIVISION	
STANDARD PLAN	
DETAILS OF SEDIMENT BARRIER APPLICATIONS	
	
ISSUE DATE:	6/20/2011
SHEET NUMBER:	5102



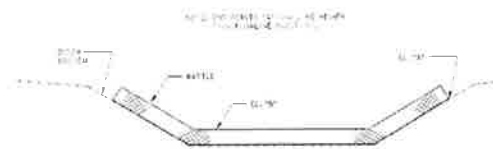
GENERAL NOTES:

1. THE DITCH CHECK IN PERSPECTIVE ILLUSTRATES A TOOL BOX OF TEMPORARY PRACTICES THAT MAY BE USED. DITCH CHECKS ARE INSTALLED TO CONTROL FLOW VELOCITY AND THUS REDUCE EROSION AND PROVIDE FOR TRAPPING OF SEDIMENTS.
2. SELECTION OF THE APPROPRIATE DITCH CHECK SHOULD BE A FUNCTION OF CONSTRUCTION PHASE, DRAINAGE AREA, DITCH GRADIENT, SOIL TYPE, ECONOMY AND SAFETY.
3. DITCH CHECKS CAN BE REMOVED FOR MAINTENANCE AND/OR REPLACEMENT BUT MUST REMAIN IN PLACE UNTIL EROSION CHECK HAS BEEN PERMANENTLY STABILIZED. MAINTENANCE INCLUDES REMOVAL OF SEDIMENT REMAINING WHEN SEDIMENT ACCUMULATION REACHES IN THE CUPPER 20% HEIGHT OF THE STRUCTURE AND REMAIN ALLOWING FOR SEDIMENT TO ACCUMULATE MORE THAN 25% THE VOLUME OR HEIGHT OF THE DITCH CHECK STRUCTURE.
4. HAY BALES SHOULD BE USED TO INTERCEPT LOW VOLUME FLOWS IN LOW TO MODERATE GRADIENT DITCHES.
5. SILT FENCE DITCH CHECKS SHOULD BE USED WHERE IT HAS BEEN DETERMINED THAT HAY BALES CHECKS ARE "NAUSEGATE". SILT FENCE DITCH CHECKS SHOULD BE USED TO INTERCEPT LOW VOLUME FLOWS IN LOW TO MODERATE GRADIENT DITCHES.
6. SANDBAG DITCH CHECKS SHOULD BE USED FOR VELOCITY REDUCTION AND MINIMAL SEDIMENT TRAPPING IN CONCRETE PAVED STREAMS OR IN DITCHES THAT HAVE ROCK BOTTOMS.
7. MATTRESS DITCH CHECKS CAN BE USED FOR VELOCITY REDUCTION AND CONTROL OF SEDIMENT TRANSPORT UNDER LOW TO MODERATE FLOW CONDITIONS.
8. SILT CHECKS CAN BE USED IN DITCHES WITH CONCENTRATED FLOWS WITHIN THE CLEAR ZONE WHERE RIPRAP CAN NOT BE USED, AS CONSTRUCTION PROCEEDS.
9. ROCK DITCH CHECKS WITH SUMP EXCAVATION CAN BE PLACED IN DITCHES TO ALLOW OVERFLOW SEDIMENT TO TRAP SEDIMENTS AND HAY DITCH CHECKS WITH SUMP EXCAVATION TO BE USED WHEN DITCHES RECEIVE GOODWATER FROM CULVERTS OR OTHER STRUCTURES WHERE SOIL EROSION IS EXPECTED. SPILLAGE AREA FOR SUMP EXCAVATION SHOULD BE LOCATED TO THE LEFT OF THE CHECK TO BE USED TO TRAP SEDIMENT REMAINING AFTER THE CHECK.
10. DITCH CHECKS, IN NO CASE, SHALL BE PLACED IN LIVE STREAMS.
11. CONSTRUCTION AND SPACING MAY BE ADJUSTED IF APPROVED BY THE ENGINEER TO ACCOMMODATE TRAVELER SAFETY, WATER FLOW, OR SOIL AND INSTALLATION CHALLENGES.

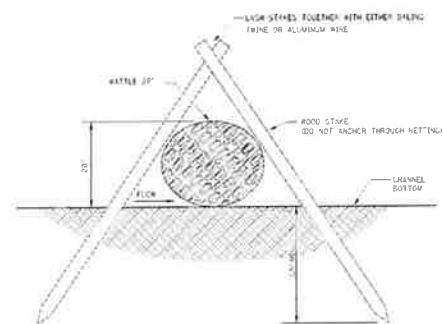
MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN	
DITCH CHECK STRUCTURES, TYPICAL APPLICATIONS AND DETAILS	
ISSUE DATE: 8/10/17	MDOT ECO-1 SHEET NUMBER 6104



DETAIL (DITCH CHECK)



ELEVATION DETAIL



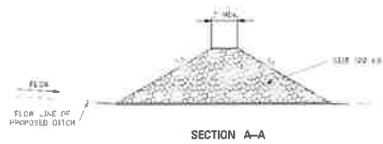
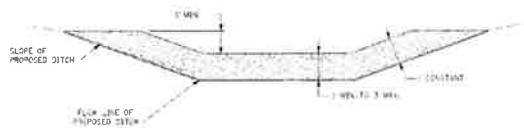
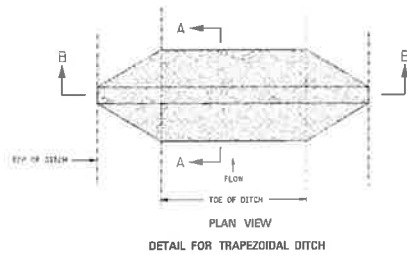
SECTION A-A

NOTES

1. WATTLE DITCH CHECKS CAN BE USED FOR VELOCITY REDUCTION AND CONTROL OF SEDIMENT TRANSPORT AT LOWER LOW TO MEDIUM FLOW CONDITIONS.
2. THE PLACEMENT INTERVAL BETWEEN WATTLE DITCH CHECKS SHALL BE 100 UNLESS SHOWN OTHERWISE ON THE PLANS OR EROSION CONTROL PLAN APPROVED BY THE ENGINEER. SEE SPACING GUIDANCE IN R&M 102-14.
3. ANCHORING WOOD STAKES SHALL BE SIZED, SPACED, ORIENTED AND BY OF A WATERPILL THAT EFFECTIVELY SECURES THE CHECK. STAKE SPACING SHALL BE A MAXIMUM OF 14 FEET. ALL NON-SEPARABLE MATERIALS SHALL BE REMOVED WHEN NO LONGER NEEDED.
4. TRENCHING OF WATTLES MAY BE NECESSARY IF PIPING BECOMES EVIDENT.
5. WATTLES SHOULD NOT BE USED IN HARD BOTTOM CHANNELS.
6. IN THE EVENT WATTLES CANNOT BE SECURED IN PLACE USING WOOD STAKES, SAND BAGS MAY BE USED IN LIEU OF WOOD STAKES IN ORDER TO SECURE THE WATTLES IN PLACE. IF SAND BAGS ARE USED IN THIS APPLICATION THEY WILL NOT BE A SEPARATE PAY ITEM.

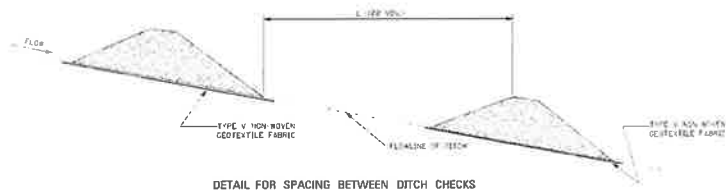
MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN	
DETAILS OF EROSION CONTROL WATTLE DITCH CHECK	
ISSUE DATE: <u>8/1/2017</u>	MDOT DESIGN DIVISION STANDARD PLAN SHEET 6106

STATE	PROJECT NO.
MISS.	

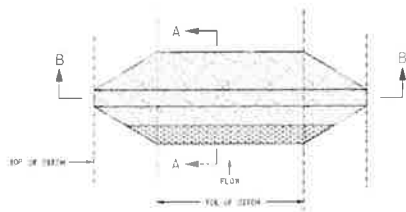


- NOTES:
1. ROCK DITCH CHECKS SHOULD ONLY BE USED FOR REDUCING THE VELOCITY OF FLOWING WATER.
 2. MINIMUM SPACING FOR ROCK DITCH CHECKS IS 100 FEET UNLESS OTHERWISE SHOWN ON THE PLANS OR EROSION CONTROL PLAN APPROVED BY THE ENGINEER. SEE SPACING GUIDANCE ON PM NO. ECD-4.
 3. ROCK DITCH CHECKS SHOULD ONLY BE USED IN CONJUNCTION OF AND ALONG WITH ANTERIORAL DOWN-CUTTING EROSION CONTROL BEST MANAGEMENT PRACTICES (BMPs).
 4. THE COST OF FABRIC SHALL BE INCLUDED IN OTHER ITEMS BID.

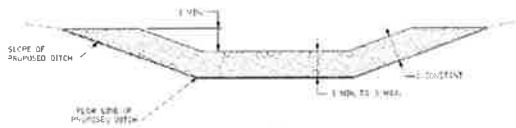
TEMPORARY ROCK DITCH CHECKS IN ROADSIDE DITCHES



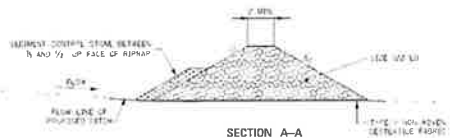
MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY IMPROVEMENT DIVISION STANDARD PLAN	
ROCK DITCH CHECK	
	
ISSUE DATE:	8/10/2017
PROJECT NUMBER:	6128



PLAN VIEW
DETAIL FOR TRAPEZOIDAL DITCH

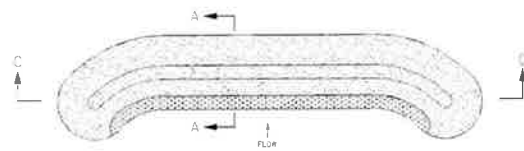


SECTION B-B

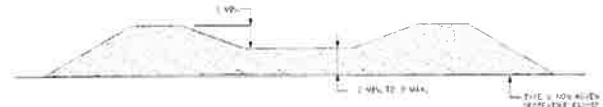


SECTION A-A

TEMPORARY ROCK DITCH CHECKS IN ROADSIDE DITCHES



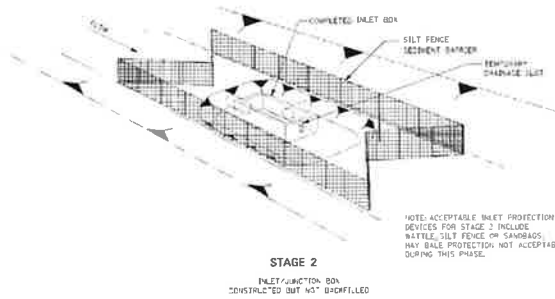
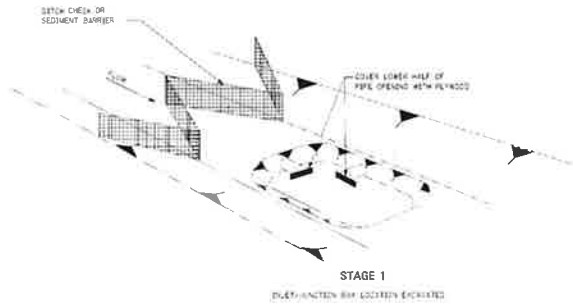
PLAN VIEW
DETAIL FOR USE OTHER THAN DITCH



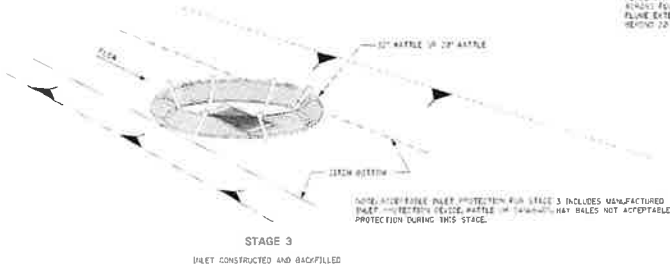
SECTION C-C

GENERAL NOTES

1. ROCK FILTER DAMS ORDIINARILY BE USED AS A DISCHARGE STRUCTURE WHILE WORKING WITH HIGHLY ERODITIVE SOILS. RIPS MAY BE USED AS PART OF A RIP TRAIN AND MAY BE USED IN SUCCESSION AT A MINIMUM SPACING OF 100 FT. OR PER THE EROSION CONTROL PLAN APPROVED BY THE ENGINEER.
2. THE COST OF THE FABRIC SHALL BE INCLUDED IN OTHER ITEMS NOTED.

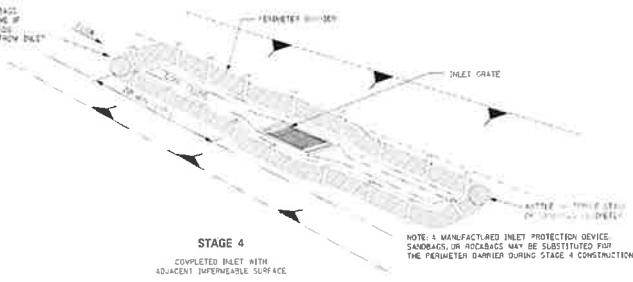


NOTE: ACCEPTABLE INLET PROTECTION DEVICES FOR STAGE 2 INCLUDE: WATTLE, SILT FENCE OR SANDBAGS. MAY BALE PROTECTION NOT ACCEPTABLE DURING THIS PHASE.



NOTE: ACCEPTABLE INLET PROTECTION FOR STAGE 3 INCLUDES MANUFACTURED INLET PROTECTION DEVICES, WATTLE OR SANDBAGS. MAY BALE PROTECTION NOT ACCEPTABLE DURING THIS PHASE.

PLACE SANDBAGS UPSTREAM FROM INLET BOX TO PREVENT FLOODING



NOTE: A MANUFACTURED INLET PROTECTION DEVICE, SANDBAGS OR ROCKBAGS MAY BE SUBSTITUTED FOR THE PERIMETER BARRIER DURING STAGE 4 CONSTRUCTION.

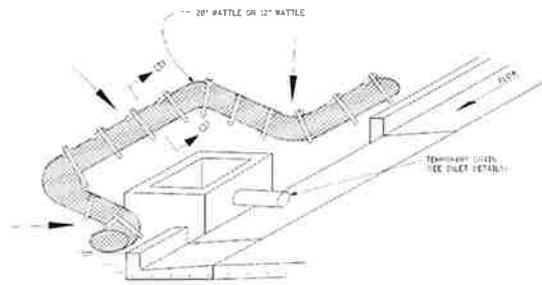
DITCH INLET CONSTRUCTION STAGES

NOTES

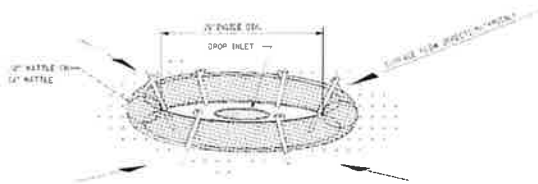
1. GRAINAGE STRUCTURE BACKFILL SHOULD BE PLACED IN STAGE 1 IMMEDIATELY AFTER PIPE INSTALLATION. INLET CONSTRUCTION SHOULD COMMENCE AS SOON AS POSSIBLE AND BE CONTINUOUS THROUGH COMPLETION.
2. CONFIGURATIONS MAY BE ADJUSTED WITH APPROVAL OF THE ENGINEER FOR TRAVELWAY SAFETY, WATER FLOW, OR SOIL AND INSTALLATION CHALLENGES.
3. DURING STAGE 1 AND STAGE 2, SILT FENCE MAY BE REQUIRED UPSTREAM OF THE INLET EXCAVATION AS DIRECTED BY THE ENGINEER.
4. IF SILT FENCE IS INSTALLED AROUND THE INLET INSTALLATION IT SHOULD BE IN A CONFIGURATION THAT WILL ALLOW INLET CONSTRUCTION.
5. FOR INLET PROTECTION TO BE USED IN STAGES 3 AND 4, IT MUST BE INSTALLED WITH NO SPACES.

STATE	PROJECT NO.
MISS.	

NOTE: SALT PEACE OR SANDBAGS MAY ALSO BE USED FOR THIS APPLICATION.
HAY BALES NOT ACCEPTABLE DURING THIS STAGE.



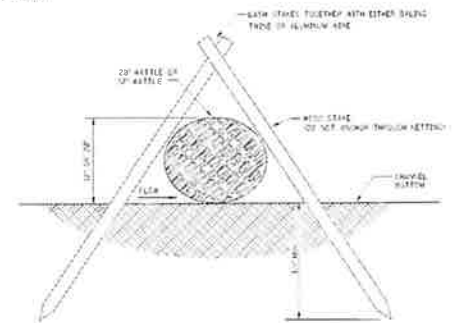
CURB INLET PROTECTION (STAGE 2)
SINGLE OR DOUBLE WING INLET



DROP INLET PROTECTION

NOTES:

1. ANCHORING STAKES SHALL BE SPACED, AND BE OF A MATERIAL THAT EFFECTIVELY SECURES THE WATTLE. STAKE SPACING SHALL BE A MAXIMUM OF THREE FEET.
2. OVERLAP ENDS OF WATTLES PER MANUFACTURER'S RECOMMENDATIONS (IF AVAILABLE).
3. TROUBLESHOOTING OF WATTLES MAY BE NECESSARY IF PIPING BECOMES EVIDENT.
4. IN THE EVENT WATTLES CANNOT BE SECURED IN PLACE USING WOOD STAKES, SANDBAGS MAY BE USED IN LIEU OF WOOD STAKES IN ORDER TO SECURE WATTLES IN PLACE. COST OF SANDBAGS USED IN THIS APPLICATION SHALL BE INCLUDED IN OTHER ITEMS BIDS.



SECTION B-B

MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN	
INLET PROTECTION DETAILS OF WATTLES	
ISSUE DATE: 6/20/17	6/20/17



1. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT POINTS OF ENTRY FROM UNSTABILIZED AREAS OF THE PROJECT TO PUBLIC ROADS OR OTHER ADJACENT AREAS OF LAND. THE PROJECT SHALL BE DIRECTED TOWARD THE STABILIZED ENTRANCE. DRIVERS, FLAGMEN, AND OTHER POSITIVE MARKS SHALL BE USED AS REQUIRED TO LIMIT AND DIRECT VEHICLE TRAVEL ALONG ACROSS THE STABILIZED ENTRANCE.

2. THE CONTRACTOR MAY PROPOSE AN ALTERNATIVE MEASURE TO MINIMIZE OFFROAD TRAVEL AND TO MAINTAIN THE ALTERNATIVE MUST BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ITS USE.

3. ALL MATERIALS SPILLED, DROPPED, OR FLOWED ONTO PUBLIC ROADS INCLUDING THE STABILIZED CONSTRUCTION ENTRANCE AND CONSTRUCTION ROAD MUST BE REMOVED IMMEDIATELY BY THE ENGINEER, IF SO DIRECTED BY THE ENGINEER.

4. SIZE III STABILIZED AGGREGATE OR LARGER SHALL BE USED.

5. THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL ALLOW IT TO PERFORM ITS FUNCTION TO STABILIZE THE STABILIZED CONSTRUCTION ENTRANCE. THE CONTRACTOR SHALL BE PERMITTED TO MAKE ANY NECESSARY TO WEAR AGGREGATE AND FLOWERS TO THE POINT. ADDITIONAL STABILIZATION OF THE ENTRANCE AND ROAD TO THE STABILIZED ENTRANCE MAY BE REQUIRED TO LIMIT THE ROAD TRAFFIC.

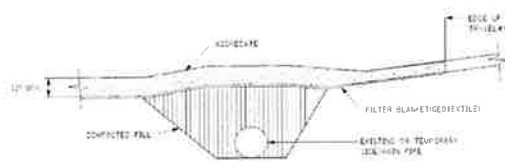
6. THE NOMINAL SIZE OF A STANDARD STABILIZED CONSTRUCTION ENTRANCE IS 15" TO UNLESS OTHERWISE SHOWN IN THE CROSS SECTION DRAWING.

7. CHECKS OF ALL ITEMS ON THIS SHEET SHALL, BE INCLUDED IN OTHER ITEMS AND

TRANSITION DETAIL



SECTION A-A



RURAL CONNECTION DETAIL

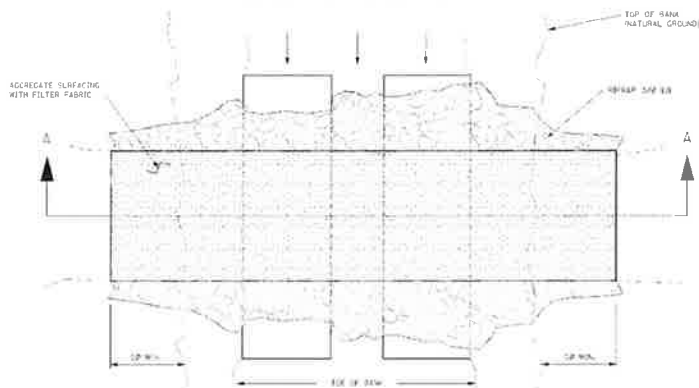
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

**STABILIZED
CONSTRUCTION ENTRANCE**

DATE _____ ISSUE DATE: AUGUST 26, 1987 SHEET NO.: 6016

MDO
ECD-1A
SHEET PLANS
6016

TEMPORARY CULVERT STREAM CROSSING

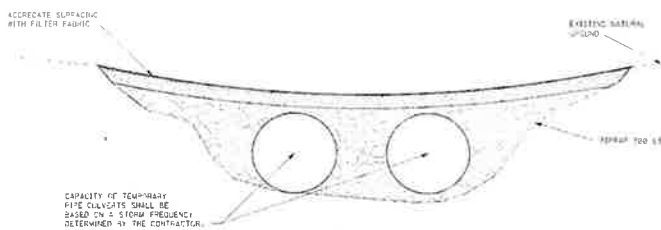


PLAN VIEW

GENERAL NOTES:

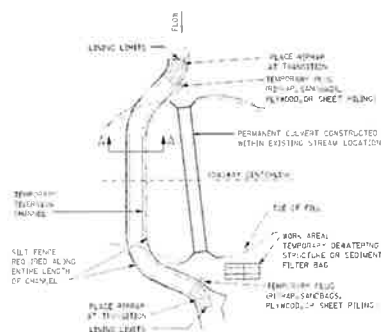
1. TEMPORARY CULVERT STREAM CROSSINGS PROVIDE A MEANS FOR VEHICLES AND EQUIPMENT TO SAFELY CROSS A WATERCOURSE WHILE MAINTAINING DRAINAGE TO THE CHANNEL AND/OR BANKS.
2. TEMPORARY CULVERT STREAM CROSSINGS WHEN PERMITTED BY THE ENGINEER, SHALL BE CONSTRUCTED TO SAFELY PASS EXPECTED MEAN WATER FLOW OF THE STREAM FOR THE TIME OF YEAR AND LENGTH OF TIME THAT THEY ARE INSTALLED.
3. TEMPORARY STREAM CROSSINGS SHALL BE DESIGNED TO ENSURE STRUCTURAL INTEGRITY AND STABILITY, AND MAINTAIN NORMAL DOWNSTREAM FLOWS. THE USE OF DOWNSTREAM CROSSINGS AND INSTREAM AGGREGATE FILL SHOULD BE MINIMIZED TO THE EXTENT PRACTICABLE.
4. A CONTINUOUS PROGRAM OF EFFECTIVE EROSION AND SEDIMENT CONTROL MEASURES SHOULD BE IMPLEMENTED PRIOR TO AND CONCURRENT WITH ANY TYPE OF CONSTRUCTION ACTIVITY WITHIN THE BANKS OF A STREAM. PRIOR A FLOODING TO TO EROSION CONTROL MEASURES AND STREAM BANKS SHALL BE REQUIRED TO PRE-EXISTING CONDITIONS, OR SUCH A CONDITION THAT PROVIDES SUBSTANTIALLY EQUIVALENT PROTECTION OF WATER QUALITY.
5. LOCATIONS OR TYPES OF TEMPORARY CULVERT STREAM CROSSINGS WILL NOT BE SHOWN ON THE PLANS AS REQUIRED ITEMS.
6. THE CONTRACTOR MAY PROPOSE OTHER OPTIONS FOR TEMPORARY CROSSINGS SUCH AS STEEL/TIMBER BRIDGE OR MATS.
7. THE DETAILS PROVIDED DEPICT A TYPICAL TEMPORARY CULVERT STREAM CROSSING.
8. ALL COSTS FOR MATERIALS, LABOR, EQUIPMENT, CONSTRUCTION, REMOVAL, AND MAINTENANCE SHALL BE INCLUDED IN OTHER ITEMS BIDD.

TEMPORARY CULVERT STREAM CROSSING

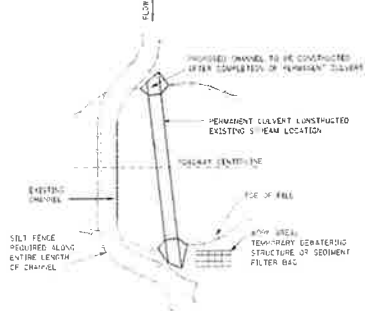


SECTION A-A

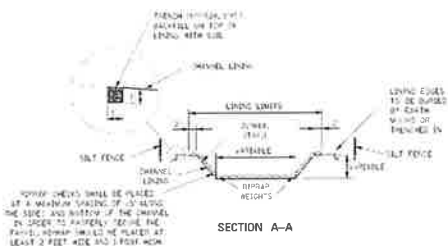
MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN	
TEMPORARY CULVERT STREAM CROSSING	
ISSUE DATE:	AUGUST 21, 2017
	
PROJECT NUMBER: 0-17	



CULVERT CONSTRUCTED
WITHIN EXISTING STREAM

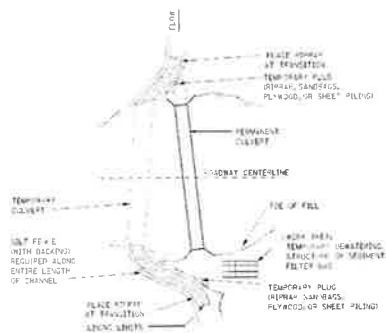


CULVERT CONSTRUCTED
OUTSIDE EXISTING STREAM



SECTION A-A

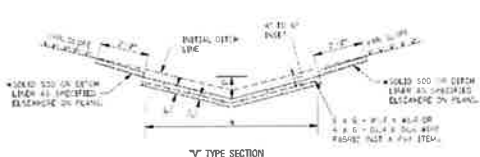
TEMPORARY DIVERSION CHANNEL
WITH GEOTEXTILE FABRIC



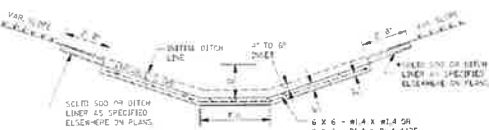
TEMPORARY CULVERT
USED DURING CONSTRUCTION

GENERAL NOTES

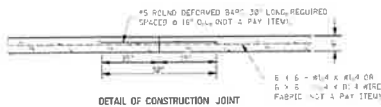
- TEMPORARY DIVERSION CHANNELS MAY BE USED TO DIVERT NORMAL STREAM PATH FLOW FROM AN EROSION AREA UNTIL SUCH AREAS CAN BE STABILIZED.
- TYPE III FILTER FABRIC OR PREPARED DATA LINER MAY BE USED FOR CHANNEL LINING.
- TEMPORARY FILTER FABRIC MAY BE USED FOR CHANNEL FLOW VELOCITIES OF 3 FPM TO 4 FPM. THE HOPPER SHALL BE USED FOR SUCH AREAS.
- LOCATIONS FOR TEMPORARY DIVERSIONS WILL NOT BE SHOWN ON THE PLANS.
- DIVERSION CHANNEL SHALL BE STABILIZED AND INSPECTED BY THE ENGINEER BEFORE FLOW IS DIVERTED.
- DURING CONSTRUCTION OF DIVERSION CHANNEL, DAMAGE TO THE EXISTING STREAM, CANOPY REMOVAL, AND DEPTH OF THE CHANNEL CONSTRUCTION SHALL BE MINIMIZED.
- CONSTRUCTION OF THE CHANNEL RELOCATIONS AND CULVERTS SHALL PROCEED AS FOLLOWS:
 - CONSTRUCT A TEMPORARY DIVERSION CHANNEL (HOPPER) ADJACENT TO THE PROPOSED CULVERT TO DIVERT WATER TEMPORARILY DURING THE CULVERT CONSTRUCTION. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
 - RELOCATE CHANNEL AND CONSTRUCT CULVERT SIMULTANEOUSLY.
 - SOIL AND/OR HOPPER RECONSTRUCTED BANKS AT TRANSITION. THE LOWER CHANNEL PLUG IS TO REMAIN IN PLACE UNTIL 3 MONTHS TO 1 YEAR AFTER THE RECONSTRUCTION IS COMPLETED TO INSURE THAT ALL CONSTRUCTION IS IN THE DRY.
 - IF AN EARTH PLUG IS NECESSARY AT THE DOWNSTREAM END OF THE CHANNEL IT SHOULD BE REMOVED FIRST, THEN REMOVE THE UPPER PLUG TO ALLOW FLOW INTO THE RECONSTRUCTED CHANNEL.
 - PLUGS SHOULD REMAIN IN PLACE UNTIL PERMANENT STABILIZATION OF THE NEW WATER COURSE IS COMPLETED. REMOVAL OF PLUGS SHOULD ONLY BE PERMITTED FOLLOWING ACCEPTANCE OF ALL STABILIZATION WORK BY THE ENGINEER.
- THE DETAILS PROVIDED DEPICT TYPICAL TEMPORARY DIVERSION CHANNELS.
- THE CONTRACTOR MAY FORGO THE USE OF OTHER DIVERSION OPTIONS SUCH AS PILING, PUMPING OR STAGED CONSTRUCTION.
- THE EFFECTIVE AREA OF FLOW IN THE TEMPORARY CHANNEL OR CULVERT SHALL BE A MINIMUM OF ONE-HALF THAT OF THE EXISTING STRUCTURE.
- INSTALLATION OF FILTER FABRIC SHALL BEGIN AT THE DOWNSTREAM END AND PROGRESS UPSTREAM. EDGES OF ADJACENT FILTER FABRIC SHALL OVERLAP AT LEAST 1 FOOT. THE ENDS OF THE FILTER FABRIC SHALL BE SECURELY HELD IN PLACE WITH RIFTS.
- THE COST OF THE TEMPORARY DEREGATING STRUCTURE OR SEGMENT FILTER BAG SHALL BE INCLUDED IN OTHER ITEMS BID.



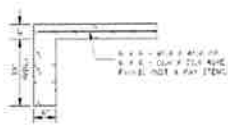
V-TYPE SECTION



FLAT BOTTOM SECTION



DETAIL OF CONSTRUCTION JOINT



DETAIL OF TOE WALL

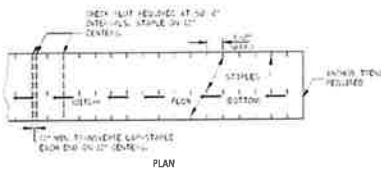
CONCRETE PAVED DITCH

- NOTES:
1. CONCRETE PAVED DITCHES SHALL BE PROVIDED AT 20'-25' INTERVALS. THE GROOVES SHALL BE CUT TO A DEPTH OF NOT LESS THAN 1".
 2. DIMENSIONS D & A ARE AS FOLLOWS:
D - MINIMUM 6"
A - MINIMUM 12"
 3. CHAIR SUPPORTS FOR THE WIRE MESH WILL NOT BE REQUIRED; HOWEVER, THE CONTRACTOR SHALL PLACE THE WIRE MESH IN A SATISFACTORY AND NORMANLIKE MANNER TO ENSURE THAT THE FINAL POSITION IS AS SHOWN & NEAR THE POSITION INDICATED.
 4. CENTER ROW OF STAPLES MAY BE OMITTED ON DITCH LINER.

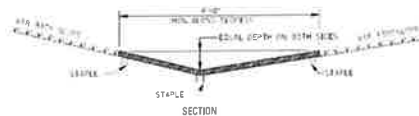


ANCHOR TRENCH DETAIL

NOTE: ANCHOR TRENCH REQUIRED AT THE BEGINNING AND ENDING OF EACH AREA TO BE COVERED, EXCEPT DOWNSTREAM END ADJOINING A STRUCTURE.



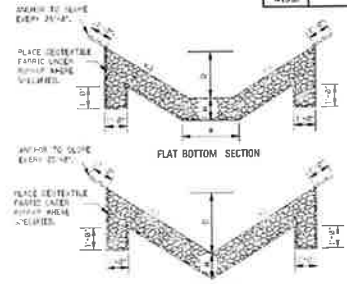
PLAN



SECTION

DITCH LINER TREATMENT (EXCERIOR BLANKET, JUTE MESH OR EROSION CONTROL FABRIC)

NOTE: DITCHES TREATED WITH DITCH LINER WILL BE VEGETATED PRIOR TO TREATMENT, UNLESS OTHERWISE INDICATED.



FLAT BOTTOM SECTION

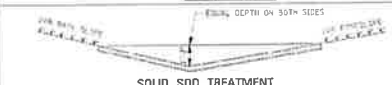


V-TYPE SECTION

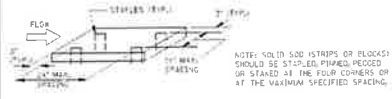
RIPRAP TREATMENT

- NOTES:
1. DIMENSIONS D & A ARE VARIABLE AND ARE SHOWN ELSEWHERE ON THE PLANS.
 2. THE RIPRAP SIZE AND MINIMUM DEPTH 'H' FOR RIPRAP TREATMENT ARE AS FOLLOWS:

DESIGN SPEED (MPH)	MINIMUM DEPTH 'H' (ft)	MINIMUM SIZE (in)
0-20	1.0	12
21-30	1.5	18
31-40	2.0	24
41-50	2.5	30
51-60	3.0	36
61-70	3.5	42
71-80	4.0	48
81-90	4.5	54
91-100	5.0	60



SOLID SOD TREATMENT



- GENERAL NOTES:
1. FOR LOCATION OF APPROPRIATE DITCH TREATMENTS, SEE PLAN SHEETS AS INDICATED BY THE FOLLOWING LEGEND OR AS DIRECTED BY THE ENGINEER:
- 1. DITCH LINER
 - 2. SOLID SOD
 - 3. CONCRETE PAVED DITCH
 - 4. RIPRAP

EXHIBIT B-1

ADDITIONAL ENGINEERING SERVICES SCOPE OF WORK

The CONSULTANT will be providing additional services as follows

Survey Control Reestablishment

Survey control points established for the survey and design of the Project will be reestablished in accordance with the MDOT Survey Manual prior to construction.

Seepage Study

A seepage study will be performed around the perimeter of the detention pond where groundwater levels within the adjacent wetlands are higher than the bottom elevation of the pond. This will include the development of an analytical model for seepage analyses to identify required locations for the installation of seepage mitigation measures.

Geotechnical Studies as required by CPKC Railroad

The Contractor will perform three (3) CPKC jack and bore (J&B) installations along the proposed Airport Road Extension. A 56-ft long, 36-in. diameter coated steel storm sewer pipe will be installed below a CPKC side track at Airport Road Sta. 23+40, a 125-ft long, 18-in. diameter coated steel pipe will be installed, without a carrier pipe and capped, for the future water main below the CPKC railroad tracks at future Airport Road Sta. 42+12, and a 210-ft long, 18-in. diameter coated steel pipe will be similarly installed without a carrier pipe and capped for the future water main below the CPKC railroad tracks at future Airport Road Sta. 81+56.

A temporary piezometer will be installed at the entry bore pit boring for each J&B location. The groundwater depth will be measured in the temporary piezometers two times after installation, once after 24 hours and at a later time once the piezometric groundwater level at each location has stabilized. Subsurface soil conditions will be explored at each J&B location by means of two (2) exploratory soil borings made to an exploration depth of 30 ft. Undisturbed Shelby tube samples of fine-grained soils and disturbed split-spoon samples of any granular materials will be obtained in the borings at approximate 3-ft intervals to a depth of 15 ft and then at 5-ft intervals of depth thereafter.

All of the soil samples will be visually examined in the laboratory, and tests will be performed on the samples to investigate the strengths, classifications and volume change properties of the soils encountered. Unconfined compression tests will be performed on selected undisturbed Shelby tube samples to evaluate undrained shear strength characteristics of fine-grained soils. Atterberg liquid and plastic limit tests will be conducted on representative samples to investigate the classifications and volume change properties of fine-grained soils. Sieve analyses and partial sieve analyses will be performed on selected samples to evaluate the classifications of coarse-grained soils. Water content tests will be performed to corroborate field classifications and to extend the usefulness of the strength and plasticity data.

The soil boring and laboratory test data will be analyzed, and three (3) reports will be prepared. The reports will include a plan showing the locations of the borings/piezometers, graphical logs of the borings, the results of all laboratory tests, a description of all services performed, our findings and guideline geotechnical-related recommendations. All work on this project will be performed under the direct supervision of a professional geotechnical engineer registered to practice in Mississippi.

The need for dewatering will be evaluated based on the subsurface conditions encountered at boring locations and the groundwater levels measured in the temporary piezometers. Guideline