

AI : 83868

Coverage # :
MSR109023

Rec'd via email:
07/05/2023



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)

O.C

MSR10 9023

(NUMBER TO BE ASSIGNED BY STATE)

APPLICANT IS THE: OWNER PRIME CONTRACTOR

OWNER CONTACT INFORMATION

OWNER CONTACT PERSON: J. Clay Cromwell
OWNER COMPANY LEGAL NAME: CAMLE, LLC
OWNER STREET OR P.O. BOX: P.O. 2836
OWNER CITY: Ridgeland STATE: MS ZIP: 39158
OWNER PHONE #: (601) 415-7485 OWNER EMAIL: clay@headwaters-inc.com

PREPARER CONTACT INFORMATION

IF NOI WAS PREPARED BY SOMEONE OTHER THAN THE APPLICANT

CONTACT PERSON: _____
COMPANY LEGAL NAME: _____
STREET OR P.O. BOX: _____
CITY: _____ STATE: _____ ZIP: _____
PHONE # () _____ EMAIL: _____

PRIME CONTRACTOR CONTACT INFORMATION

PRIME CONTRACTOR CONTACT PERSON: _____
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: Parkway Commons

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: Parkway East
CITY: Gluckstadt STATE: MS COUNTY: Madison ZIP: 39110

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

LATITUDE: 32 degrees 30 minutes 14 seconds LONGITUDE: 90 degrees 06 minutes 33 seconds
LAT & LONG DATA SOURCE (GPS (Please GPS Project Entrance/Start Point) or Map Interpolation): Map Interpolation

TOTAL ACREAGE THAT WILL BE DISTURBED ¹: +/-22.25

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: 07/01/2023
 YYYY-MM-DD

ESTIMATED CONSTRUCTION PROJECT END DATE: 07/01/2025
 YYYY-MM-DD

DESCRIPTION OF CONSTRUCTION ACTIVITY: Commercial subdivision

PROPOSED DESCRIPTION OF PROPERTY USE AFTER CONSTRUCTION HAS BEEN COMPLETED:
 Commercial retail office development as a planned commercial subdivision

SIC Code: 1542 NAICS Code 236220

NEAREST NAMED RECEIVING STREAM: Tilda Bogue

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? FOR WHICH POLLUTANT: YES NO

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): _____

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

IF YES, INDICATE THE TYPE OF FLOCCULANT. ANIONIC POLYACRYLIMIDE (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. Double row SF is planned

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: _____

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

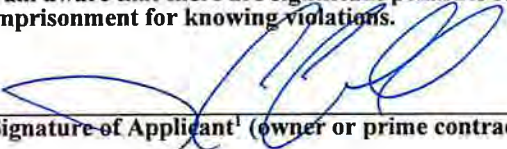
IS A LAKE REQUIRING THE CONSTRUCTION OF A DAM BEING PROPOSED? (If yes, provide appropriate approval documentation from MDEQ Office of Land and Water, Dam Safety.) YES NO

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:

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)

7/5/23
Date Signed

J. Clay Cromwell
Printed Name¹

Member
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

STORM WATER POLLUTION
PREVENTION PLAN
(SWPPP)

LARGE CONSTRUCTION STORM WATER
GENERAL NPDES PERMIT

for

CAMLE, LLC
PARKWAY COMMONS

Madison County, Mississippi

July 2023

PREPARED BY:

Headwaters, Inc.
P. O. Box 2836
Ridgeland, Mississippi 39158
(601) 634-0097



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I. INTRODUCTION

The purpose of the Storm Water Pollution Prevention Plan (SWPPP) is to provide a site-specific description of the best management practices to prevent contamination of the site storm water flows from potential pollutants associated with construction activities. The SWPPP has been prepared for CAMLE, LLC, as required by the Mississippi Department of Environmental Quality (MDEQ) in compliance with the applicable regulations for coverage under the Large Construction Storm Water General NPDES Permit. Headwaters, Inc. has developed this SWPPP to be incorporated into the routine construction activities associated with the proposed site development plans. The potential sources of pollution have been identified at the site and are described in the plan. Several pollution control measures are specified in the plan to prevent contamination of storm water runoff from those sources. The plan also outlines implementation, inspection and maintenance requirements. The erosion and sediment control practices should be monitored, and the plan revised if the quality of storm water runoff is not satisfactory.

II. SITE ASSESSMENT

- A. **Location:** The site is located within partial Sections 29 and 32, Township 8 North, Range 2 East, Madison County, Mississippi. The subject property is also referenced by Global Positioning System (GPS) N32.504025, - W90.109381. The subject property includes an approximately 22.25-acre parcel that will be disturbed, to some extent, to complete the planned mixed-use commercial subdivision considered as Parkway Commons. Access to the property is granted via Parkway East along the North boundary of the site ([Appendix I](#)).
- B. **Soils:** The site contains Ariel silt loam (Ar) and Grenada silt loam, 2 to 5 percent slopes, eroded ([Appendix II](#)).
- C. **Description of Work:** CAMLE, LLC plans to complete the Parkway Commons, mixed-use commercial subdivision to include approximately 22.25 acres for the construction of +/-10 commercial lots, asphalt paved streets, utilities, storm water detention basin and common spaces.

The planned development activities will include the construction of +/- 10 commercial lots as part of a planned development. The proposed project will also include the construction of interior roads/streets and utilities as a part of the planned development activities. The roads will include a curb and gutter underground drainage system to facilitate storm water runoff generally through the development into one (1) planned wet detention area located within the southern portion of the subject property. The basin has been designed in accordance with the MDEQ Specific Design Criteria and the City of Gluckstadt, Mississippi storm water management requirements by McMaster & Associates,

Inc. included within this report.

Construction Methodology:

The construction activities will consist of clearing, stripping, site grading, sub surface drainage, utilities, interior roads, detention basin and lot development. The construction sequence will therefore include the initial site clearing, construction of the detention basin, which will be used as a sediment basin during construction, roads, utilities and lot development. Post construction will include the completion of the wet detention basin and landscaping.

Construction Access:

CAMLE, LLC plans to utilize one (1) construction access along the north boundary at Parkway East. The construction access will transition to the primary access road for the project site.

Temporary Detention Basin:

The plan will include the construction and use of one (1) detention basin within the southern portion of the development. Surface water will be conveyed towards the detention basin then south off site into the receiving stream. The detention basin is designed to accept storm water runoff from the site where it will be detained in accordance with City of Gluckstadt and MDEQ storm water management requirements. The basin has been designed to detain surface water runoff and sediment utilizing a stone filter ring and a surface faircloth skimmer system. The maintenance plan will include the removal of accumulated sediment outside the stone filter ring when the basin reaches 50% capacity or sooner. Consideration for properly working faircloth skimmer systems and general house keeping items will also be included in the maintenance plan ([Appendix III](#)).

Wet Detention Basin:

Upon final stabilization of Parkway Commons, CAMLE, LLC will utilize a wet detention basin in the place of the temporary sediment basin. The basin has been designed in accordance with the City of Gluckstadt, Mississippi storm water management requirements and the MDEQ Specific Design Criteria by McMaster & Associates, Inc. included within this report.

General Storm Water Management Plan:

The storm water and erosion control design will include the utilization of a sediment basin within the southern portion of the development. All storm water runoff will be directed via overland flows and subsurface flows to the sediment basin during the construction phase of the project. The sediment basin will be designed to include a levee and structure on the down gradient side of the basin to control all sediment and erosion within the site. The structure has been designed to allow surface water collection with only surface water from a skimmer system to flow through the structure. Sediment would therefore settle

and deposit within the sediment basin and would not be transported downstream. Maintenance of the site would include the removal of all accumulated sediments from the sediment basin with all materials placed in a secure location, similarly, protected with erosion controls. Secondly, perimeter erosion controls to prevent any secondary movement of sediment off site will be completed. Upon the completion of the construction phase, the sediment basin will be cleaned and sized in accordance with the City of Gluckstadt, Mississippi and the MDEQ Storm Water Quality Criteria. The basin will be converted to a wet detention basin with a similar water control structure along the downstream side. Upon the completion of the project, storm water will be directed via overland flows within lots and green spaces, subsurface flows within the curb and gutter system to the wet detention basin. Storm water runoff would then be detained in accordance with City of Gluckstadt and MDEQ Storm Water Quality Criteria.

- D. **Potential Pollution Sources:** The most significant potential pollutants are soil particles subject to removal by storm water. Other potential pollutants subject to removal by storm water are spilled fuel and lubricants. Material may also be inadvertently tracked off-site or blown off-site when distributed by hauling equipment. The storm water which leaves the site shall meet the non-numeric limitations of being free from oil, scum, debris and other floating materials; eroded soils and other materials that will settle out of the storm water to form objectionable deposits in receiving waters; suspended solids, turbidity and color levels inconsistent with the receiving waters; chemicals in concentrations that would cause violations of the State Water Quality Criteria in the receiving waters.
- E. **Non-Storm Water Solid Materials:** The on-site generation of solid materials will be minimal, and its proper disposal will be closely monitored. All solid waste will be taken off-site for proper disposal.
- F. **Drainage Patterns:** Based upon our field assessments, storm water drainage on the subject property can be considered relatively good with storm water runoff flowing generally to the south. Storm water that leaves the site is conveyed through the detention area designed within the southern portion of the site. Surface water will continue through unnamed tributaries of Bear Creek, located to the south of the site.
- G. **Receiving Waters / Established TMDLs:** In accordance with the MDEQ 2022 303 (d) list of impaired streams, the nearest stream segment that is considered impaired is Bear Creek Waterbody ID MS431BE. This stream reach is located east of U.S. Interstate 55, north of Nissan Parkway, and south of the City of Canton, Madison County, Mississippi. The TMDL completed for MS431BE are Organic Enrichment, Low Dissolved Oxygen, Sediment, Total Nitrogen and Total Phosphorus. The design of the project will convey all surface water into

the temporary sediment basin through surface and subsurface drainage improvements. In addition, intermittent temporary erosion controls and the presence and maintenance of the temporary basins and post construction ponds within the watershed will provide initial and long-term protection from adverse impacts to the downstream resources. Surface water management will also support site management and remain in line with the TMDL's reference for Bear Creek located downstream from the project site. It should also be mentioned that the listed stream reach is approximately 7.23 miles to the north from our project site.

- H. Wetlands:** As part of the initial project planning, the subject property has been delineated for the presence of potentially jurisdictional wetlands and waters of the United States. Given the planned impacts to these features identified as part of this assessment, a USACE Section 404 Wetlands Permit Authorization will be required from the USACE Vicksburg District. The permit is referenced as MVK-2022-932. A copy of the approved jurisdictional determination is included within [Appendix IV](#) for your use.

III. BEST MANAGEMENT PRACTICES (BMPs)

- A. Erosion and Sediment Control:** Construction activities shall not cause more than minimal and temporal water quality degradation of any adjacent jurisdictional wetlands, streams or water body. Appropriately chosen and installed erosion and sediment control BMPs will be used to prevent sediment from leaving the site. All BMPs implemented for the site will be in accordance with the standards set forth in the most current edition of the MDEQ "Planning and Design Manual for the Control of Erosion, Sediment and Storm Water. The contractor will be responsible for installing, inspecting and maintaining the erosion and sediment controls for the duration of the project until final stabilization of the site is achieved. The site plan found in [Appendix III](#) will detail where each BMP will be used. Additional control measures could include but are not limited to the use of secured hay wattles, sediment/silt fencing, wooden or vinyl barriers and/or seeding or sodding of exposed or disturbed areas.

1. Structural Practices:

- Construction Entrance/Exit (Temporary Practice) - There will be one (1) construction entrance, located along the north boundary at Parkway East Road. The aggregate should be at least six (6) inches thick and 50 feet long using DOT #1 coarse aggregate. The entrance will be inspected weekly and periodic top dressing with new gravel may be necessary when it becomes clogged with dirt and/or debris to prevent the tracking of mud and dirt onto the roadway. In addition, dirt and debris that

accumulates on the roadway should be removed **immediately**. The GP interprets **immediately to mean no later than the next workday**.

- Silt Fence / Brush Barrier (Temporary Practice) – Silt fence and/or brush barrier will be installed as shown on the site plan. It will be placed between the area to be disturbed, the wetland areas and stream crossings as needed and at any other locations deemed necessary once construction begins. The fence will be maintained, and the sediment will be removed when the deposits reach **one-third (1/3) to one-half (1/2) the fence height**. Silt fence must be trenched into the ground a minimum of six (6) inches.
- Hay Wattles (Temporary Practice) – Wattles will be installed as shown on the site plan. They will be placed between the area to be disturbed, the wetland areas and stream crossings as needed and at any other locations deemed necessary once construction begins. Sediment will be removed when it reaches **one half (1/2) the height of the barrier**. Straw wattle must be at minimum eighteen (18) inches in diameter.

2. Vegetative Practices:

- Temporary Seeding (Temporary Practice) – When a disturbed area will be left undisturbed for fourteen (14) days or more, the appropriate temporary or permanent vegetative practices shall be implemented **immediately**.
- Mulching (Temporary) – Mulch will be used whenever possible to aid in slope stabilization to hold moisture, dampen temperature extremes and retard erosion on steep slopes until temporary or permanent seeding can be implemented.
- Permanent Seeding - The vegetative practices should be fertilized at one-half the initial rates at the beginning of the second growing season. Eroded areas should be shaped, smoothed and replanted at this time. See the MDEQ SWPPP Guidance Manual for seeding, mulching and fertilizing rates. All seed mix considered would be selected from the MDEQ approved listing ([Appendix V](#)).
- Vegetative Buffer – An approximate 50-foot undisturbed natural buffer will be left around waters of the United States where feasible. Where infeasible, additional sediment and erosion controls will be implemented.
- Dust Control - Dust will be controlled as much as possible during construction by temporary seeding and spraying with water. The construction accesses shall be stabilized and monitored during high traffic times to minimize the dust on construction roads.

- Tree Protection - Efforts will be made to maintain tree buffer areas around the site as stated in the Buffer Zone section of this report. Grading around these sites will be minimal to ensure the trees at these locations will remain as the buffer zone was designed.

B. Spill Prevention and Response Procedures: All above-ground fuel storage tanks (AST) shall be double-wall tanks and shall additionally include additional secondary containment measures (dike/berm per US EPA standards). If any fuel storage tanks are present on site, a dike should be constructed around them in order to contain any accidental spillage. All truck mounted tanks shall be double-walled tanks. It is understood that fuel will likely be transported via truck to equipment on the project site. In all circumstances, fuel that is transported on the project site shall be transported within a double-walled tank. The name and number of a competent hazardous waste disposal contractor shall be maintained by the contractor for use in the event of a spill.

- Fueling and Vehicle Maintenance Locations - Fueling and vehicle maintenance areas shall use BMP's for industrial activities to ensure that pollutants do not impact the storm water runoff. Impervious dikes and berms shall be used to contain potential spills. Drums and containers for holding and transporting contaminated materials should be on site.

C. Operation and Maintenance: The best management practices, once implemented, must be maintained to ensure that satisfactory operation continues. The sediment controls and diversions should routinely have excess sediment removed. This may be required following each major storm event. This material should be stockpiled and protected from possible re-entry into the storm water until it can be used.

Any poorly functioning erosion or sediment controls, non-compliant discharges or any other deficiencies observed during the inspections shall be corrected as soon as possible, but not to exceed 24 hours of the inspection unless prevented by unsafe weather conditions as documented on the inspection form.

D. Record Keeping: Records shall be retained for three (3) years of all maintenance activities, spills and inspections, including a description of the quality and quantity of storm water.

E. Employee Training: As a representative of CAMLE, LLE, Headwaters understands the requirements of the GP as it pertains to installation, routine maintenance, corrective action, and weekly inspections and will make sure that their contractors understand the need for Permit Compliance in accordance with General Permit Act5 T-20 and T-21. Pre-construction training with all on-site workers is required to discuss the requirements and

responsibilities of all environmental permitting required by the project. A training roster must be signed and maintained on site. All employees joining the project after the initial meeting must receive the environmental training and sign the roster.

F. Housekeeping Practices: Pollutants that may enter storm water from construction sites because of poor housekeeping include oils, grease, paints, gasoline, solvents, litter, debris and sanitary waste. During construction activities, the contractor is required to:

- designate areas for equipment maintenance and repair
- provide waste receptacles at convenient locations and provide regular collection of waste
- provide protected storage areas for chemicals, paints, solvents, fertilizers, and other potentially toxic materials. If needed, the permittee will utilize the Housekeeping Area that has been identified on the site map.
- provide adequately maintained concrete washout areas and sanitary facilities. Solids are disposed off in an approved dumpster or off site location.
- streets will be swept immediately to remove sediment or other debris that has been tracked from construction site. No later than the next workday.
- sediment or other pollutants will be periodically removed from control measures, conveyance channels or storm drain inlets

IV. CONSTRUCTION SEQUENCE

Below is the construction sequence for this project. This sequence could change depending on the sequence of letting bids, contracting, etc. The construction sequence will be updated if changes occur.

1. Obtain plan approval and all other permits as needed.
2. Have a pre-construction conference to review all needed BMPs.
3. Begin minor clearing to install stabilized construction entrances at initial points of egress, construct sediment basins and perimeter controls.
4. Control measures should be installed to coincide with subsequent construction activities and at the time they are deemed to be most effective.
5. Begin major clearing and grubbing operations after key sediment controls are installed.
6. Install temporary diversions, where applicable, along steep cleared and grubbed slopes to divert runoff toward silt basins or other controls.
7. Install sub surface and surface drainage improvements.
8. Install utilities and interior access roads.
9. Complete temporary stabilization of residential lots and along access roads.
10. Perform weekly reviews of site conditions along with erosion and sediment

practices to ensure compliance with the SWPPP. Inspection reports will be kept on site with an updated SWPPP.

11. As site is cleared, maintain BMPs as needed to ensure minimal erosion and sedimentation problems.
12. Perform any temporary seeding as needed and instructed throughout the construction process.
13. Final grading, seeding, sodding, mulching, and fertilizing.
14. Ensure final stabilization is achieved within the project site.
15. Removal of any temporary measures.

V. IMPLEMENTATION SCHEDULE

A. **Structural Measures:** The non-existing structural measures shall be installed as the weather permits, and the existing measures shall be re-conditioned as well. General implementation principles are:

1. Install down-slope and perimeter controls before other site work
2. build sediment basins before major site grading
3. divert upslope water around area before major site grading
4. do not disturb an area until it is necessary
5. time construction activities to limit impact from seasonal weather
6. cover or stabilize disturbed area as soon as possible
7. do not remove temporary controls until after site stabilization
8. The permittee shall limit clearing, excavation, and the placement of fill materials to areas essential to the project. The remainder of the property shall be left in its natural state.

B. **Proof of Coverage:** A copy of the Large Construction Storm Water General Permit certificate and a copy of the Storm Water Pollution Prevention Plan should be kept onsite or locally available. Copies of these documents are provided in the Appendix.

VI. INSPECTIONS AND REPORTING

A. **Inspections:** Inspections of the best management practices and other storm water pollution prevention plan requirements shall be performed as follows:

1. At least weekly for a minimum of four (4) inspections per month,
2. After any rain event that produces a discharge, and
3. As often as necessary to ensure that appropriate erosion and sediment controls have been properly implemented and maintained.

The minimum inspection requirement in no way relieves the permittee of

performing whatever inspections are needed to insure safe and pollution free facility operation. Any poorly functioning erosion controls or sediment controls, non-compliant discharges, or any other deficiencies observed during the inspections required under this permit shall be corrected as soon as possible, but not to exceed 24 hours of the inspection unless prevented by unsafe weather conditions as documented on the inspection form.

- B. Reporting:** The owner and/or contractor must inspect, as described in above section, and maintain controls and prepare weekly reports noting damages or deficiencies and corrective measures. These inspection reports are kept on-site until the Request for Termination (RFT) form is submitted.

As previously stated, all records, reports and information resulting from activities required by this plan and your permit coverage shall be retained for at least three (3) years from the date of the CNOI, inspection, or report.

A rain gauge shall be placed in a central location on the site and used to obtain rainfall amounts. This information will be needed for proper completion of the inspection report.

VII. REVISIONS

The storm water pollution prevention plan will be kept current by the company representative and will be revised as changes in site conditions warrant. The company representative may notify the SWPPP developer for assistance when necessary. Factors that would compel the SWPPP to be modified include:

- Inadequacies revealed by routine inspections.
- Changes in identified sources, non-storm water discharges or non-storm water solid wastes.
- Office of Pollution Control notification that the plan does not meet one or more of the minimum requirements.
- Changes in design, construction, operation or maintenance, which has affected the discharge of pollutants to waters of the State and which were not otherwise addressed in the SWPPP.
- Identification of any new contractor and/or subcontractor that will implement a measure of the SWPPP.
- Install additional erosion and sediment controls when existing controls prove to be ineffective.

A plan revision will be completed within 30 days of the date if determined that a revision is warranted. If the modification is in response to a request by the Office of Pollution Control, the permittee must submit to the OPC certification that the requested changes have been made.

VIII. TERMINATION OF COVERAGE

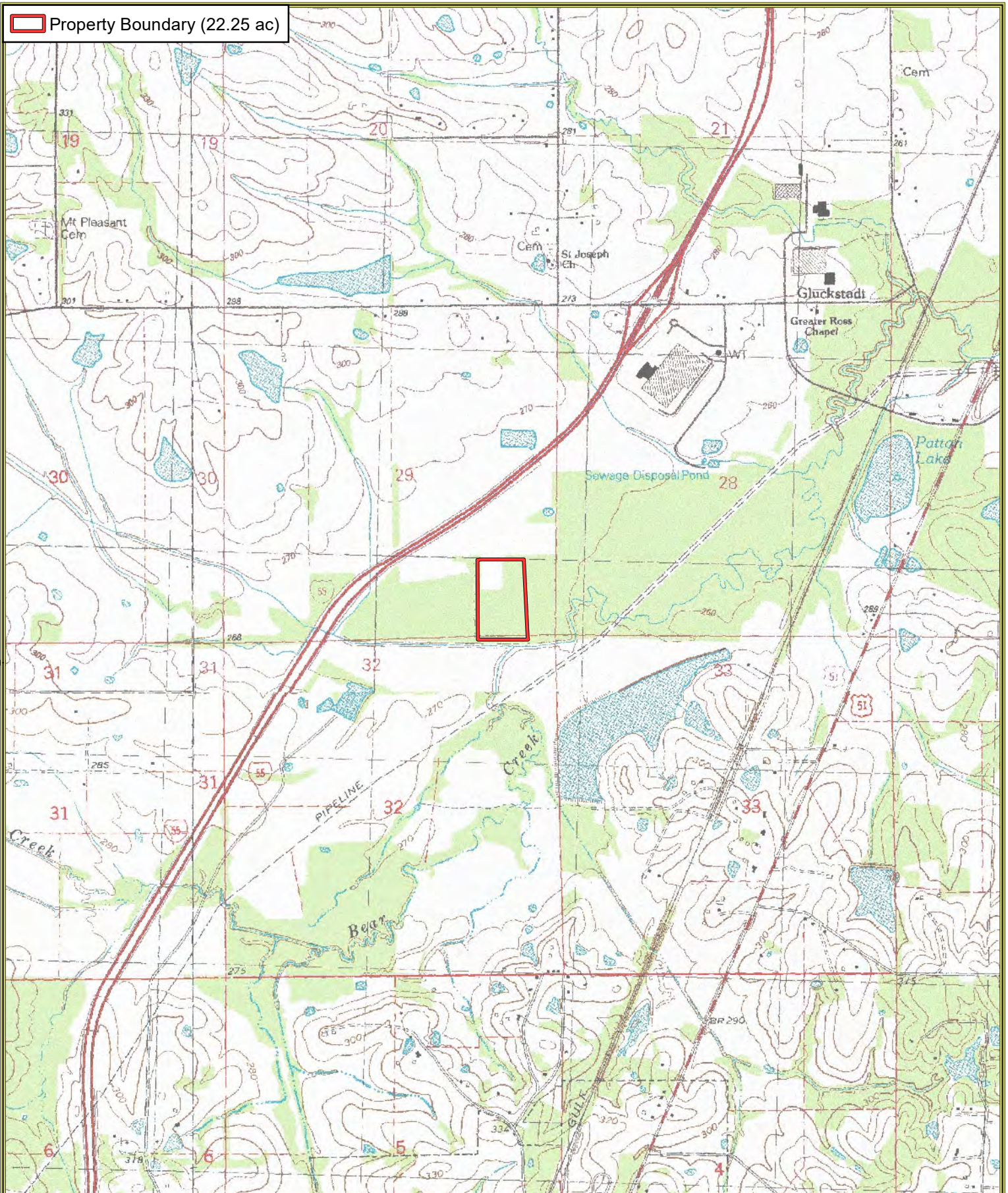
Within thirty (30) days of final stabilization, the Office of Pollution Control must be notified by a completed RFT of Coverage form (copy provided). MDEQ staff will inspect the site and if no sediment or erosion problems are identified and adequate permanent controls are established, the owner or operator will receive a termination letter. Coverage is not terminated until notified in writing by MDEQ.

IX. POST CONSTRUCTION MAINTENANCE

- a. **Management:** CAMLE, LLC, per Large Construction General Permit for land disturbing activities of five or more acres, will remain responsible for compliance with this general permit until a new owner or operator satisfies the requirements of S-4 (Commercial Development - Individual Lots or Parcels) of this act. Referencing S-4 of MDEQ Large Construction General Permit, Individual lots or parcels within a commercial development that are part of the "larger common plan of development or sale" are regulated regardless of size or owner. If the owner or developer obtains construction permit coverage for a development then sells lots or parcels within that development, permit coverage must continue those areas under new ownership. The original coverage recipient is responsible for all construction activities until individual lots or parcels within the development are sold to others and the new owner submits a LCNOI and obtains coverage under Mississippi's Large Construction General Permit or applies for an individual permit.
- b. **Maintenance Plan:** As part of the maintenance plan, CAMLE, LLC will complete post construction inspections and maintenance of the site, curb and gutter systems, drainage systems, retention systems and structures on a monthly basis, or as necessary, to ensure all infrastructure and controls remain stable and functioning in accordance with the City of Gluckstadt and MDEQ regulations. Upon individual lots being bought by other owners, the responsibility will then transfer to that of the new owners.
- c. **Adaptive Management Plan:** Upon the identification of a deficiency, the management company shall develop a plan to correct the deficiency. Consultation with McMaster & Associates, Inc. and/or Headwaters, Inc. may be considered as it relates to a design and regulatory authority. In general, the requirement of the management company will include the mitigation of the deficiency to ensure that the functions of the storm water management systems remain functioning as designed.

X. APPENDIX I - LOCATION MAPS

Property Boundary (22.25 ac)



Parkway Commons

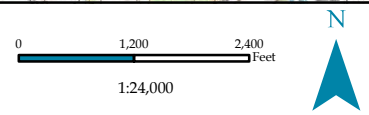
Sections 29 & 32, Township 8 North, Range 2 East
Madison County, Mississippi

[Site Location Map](#)



Date Created: 7/5/2023

Created by: JDL



1:24,000

NAD 1983 StatePlane Mississippi West FIPS 2302 Feet

USGS Canton (MS) Quad

Property Boundary (22.25 ac)



HEADWATERS
NATURAL RESOURCES CONSULTING
WWW.HEADWATERS-INC.COM

Date Created: 7/5/2023 Created by: JDL

Parkway Commons
Sections 29 & 32, Township 8 North, Range 2 East
Madison County, Mississippi
[Site Location Map](#)

0 1,200 2,400
Feet

1:24,000

N

NAD 1983 StatePlane Mississippi West FIPS 2302 Feet

USDA NAIP 2021 Imagery Basemap

Property Boundary (22.25 ac)



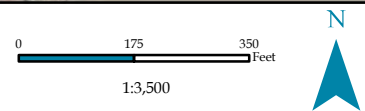
Date Created: 7/5/2023

Created by: JDL

Parkway Commons

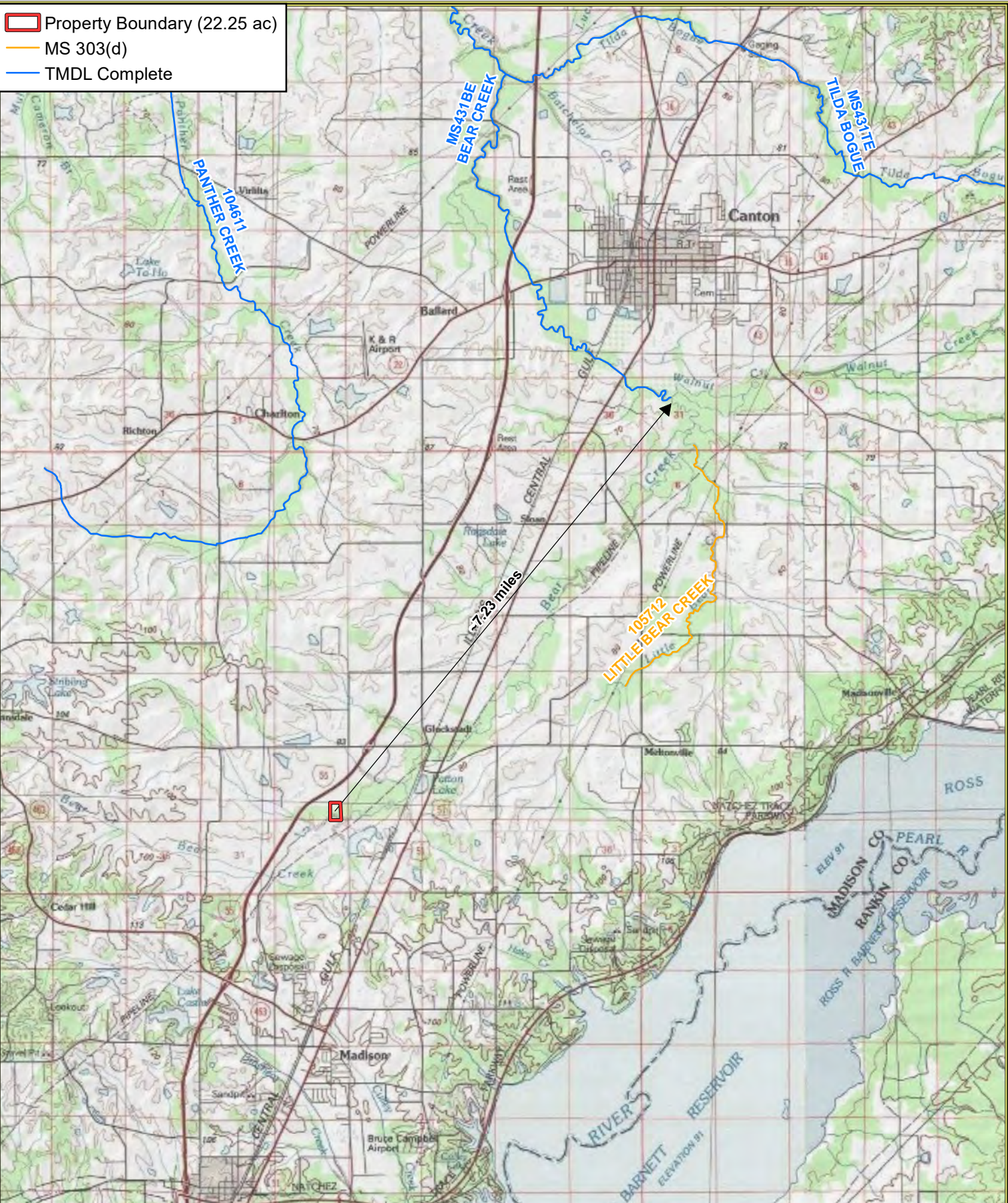
Sections 29 & 32, Township 8 North, Range 2 East
Madison County, Mississippi

[Site Location Map](#)



NAD 1983 StatePlane Mississippi West FIPS 2302 Feet

USDA NAIP 2021 Imagery Basemap



- Property Boundary (22.25 ac)
- MS 303(d)
- TMDL Complete

 **HEADWATERS** INC.
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Date Created: 7/5/2023 Created by: JDL

Parkway Commons
Sections 29 & 32, Township 8 North, Range 2 East
Madison County, Mississippi
[MS 303 \(d\) Location Map](#)

0 5,500 11,000
Feet

1:110,000

N

NAD 1983 StatePlane Mississippi West FIPS 2302 Feet

ESRI USA Topographic Basemap

XI. APPENDIX II - SOILS REPORT



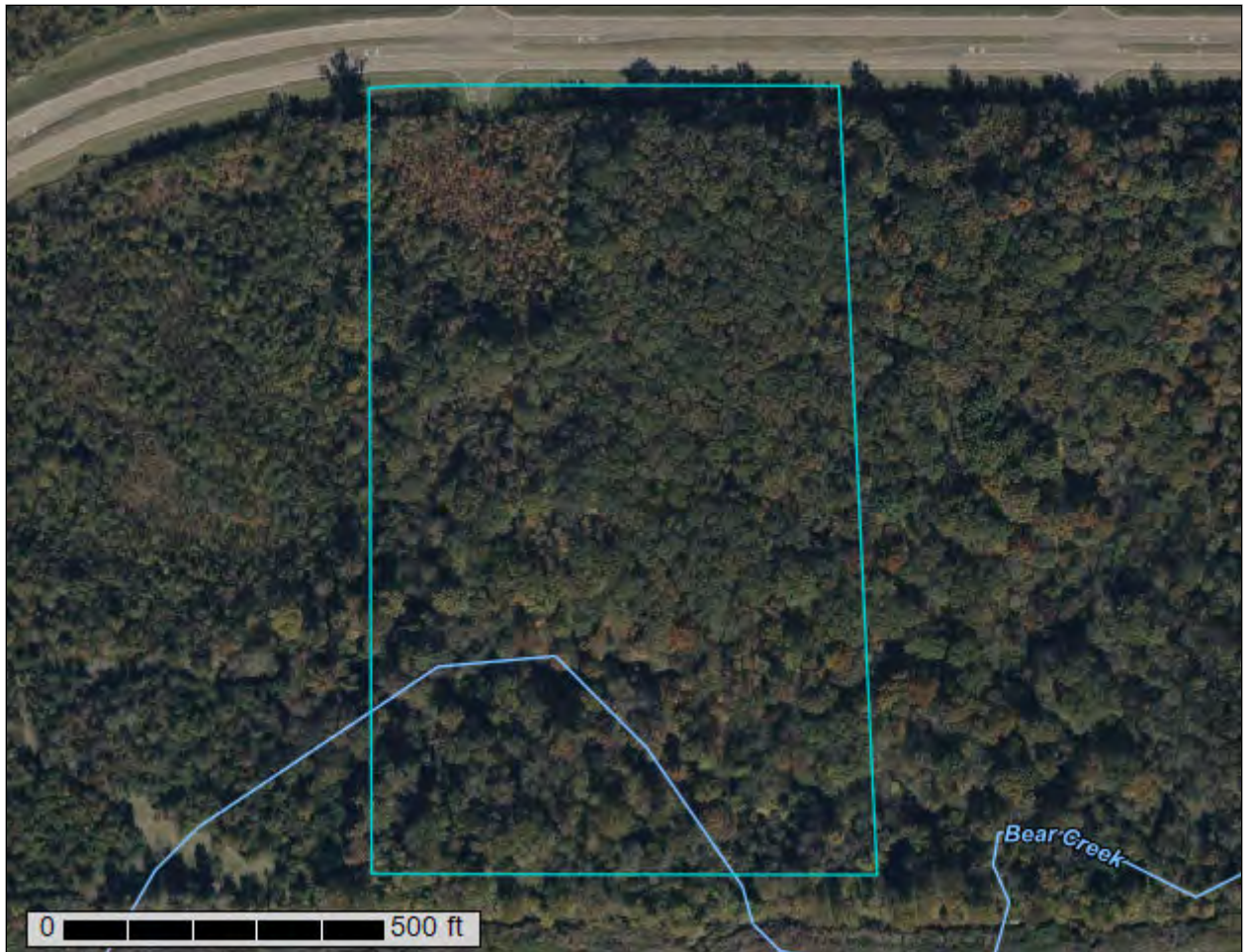
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

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

Custom Soil Resource Report for Madison County, Mississippi



Preface

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

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

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

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

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

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

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

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

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.




































Map Scale: 1:2,190 if printed on A portrait (8.5" x 11") sheet.

0 30 60 120 180 Meters

0 100 200 400 600 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

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: Madison County, Mississippi
 Survey Area Data: Version 17, Sep 9, 2022

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

Date(s) aerial images were photographed: Nov 8, 2021—Nov 29, 2021

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
Ar	Ariel silt loam	19.3	90.2%
GrB2	Grenada silt loam, 2 to 5 percent slopes, eroded	2.1	9.8%
Totals for Area of Interest		21.4	100.0%

Map Unit Descriptions

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

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

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

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onsite investigation is needed to define and locate the soils and miscellaneous areas.

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

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

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

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

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

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

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

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

Madison County, Mississippi

Ar—Ariel silt loam

Map Unit Setting

National map unit symbol: m288
Elevation: 150 to 670 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: All areas are prime farmland

Map Unit Composition

Ariel and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ariel

Setting

Landform: Flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty alluvium deposits

Typical profile

H1 - 0 to 5 inches: silt loam
H2 - 5 to 30 inches: silt loam
H3 - 30 to 65 inches: silt loam

Properties and qualities

Slope: 0 to 2 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 (0.20 to 0.60 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: NoneOccasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Unnamed hydric soils (134fp)

Percent of map unit: 10 percent
Landform: Flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear

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Across-slope shape: Linear
Hydric soil rating: Yes

GrB2—Grenada silt loam, 2 to 5 percent slopes, eroded

Map Unit Setting

National map unit symbol: m28r
Elevation: 100 to 640 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: All areas are prime farmland

Map Unit Composition

Grenada and similar soils: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Grenada

Setting

Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess deposits

Typical profile

H1 - 0 to 5 inches: silt loam
H2 - 5 to 21 inches: silt loam
H3 - 21 to 24 inches: silt loam
H4 - 24 to 42 inches: silt loam
H5 - 42 to 60 inches: silt loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: 18 to 36 inches to fragipan
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 27 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F134XY105MS - Southern Rolling Plains Loess Fragipan Upland -
PROVISIONAL

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Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Rating by Map Unit

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Custom Soil Resource Report

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

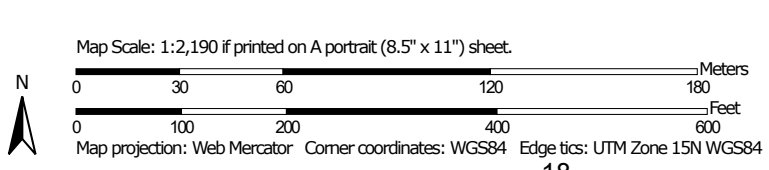
Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

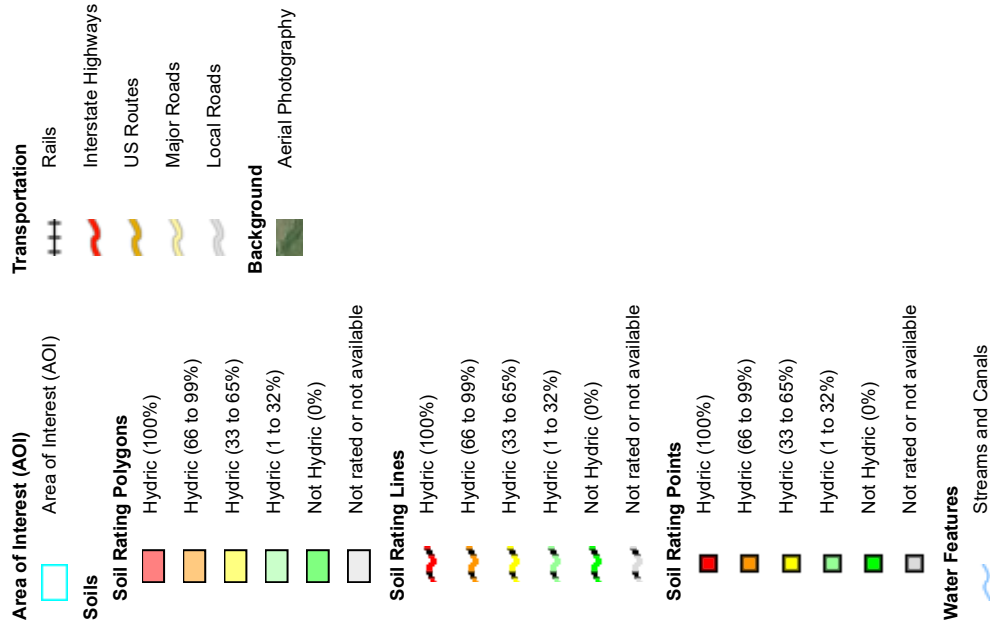
Custom Soil Resource Report Map—Hydric Rating by Map Unit



Soil Map may not be valid at this scale.



MAP LEGEND



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: Madison County, Mississippi
 Survey Area Data: Version 17, Sep 9, 2022

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

Date(s) aerial images were photographed: Nov 8, 2021—Nov 29, 2021

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.

Table—Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Ar	Ariel silt loam	10	19.3	90.2%
GrB2	Grenada silt loam, 2 to 5 percent slopes, eroded	0	2.1	9.8%
Totals for Area of Interest			21.4	100.0%

Rating Options—Hydric Rating by Map Unit

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
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- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

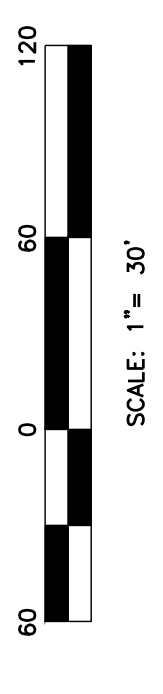
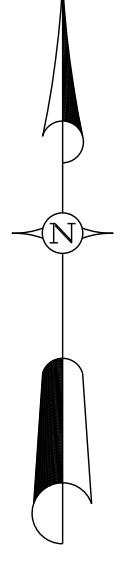
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United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

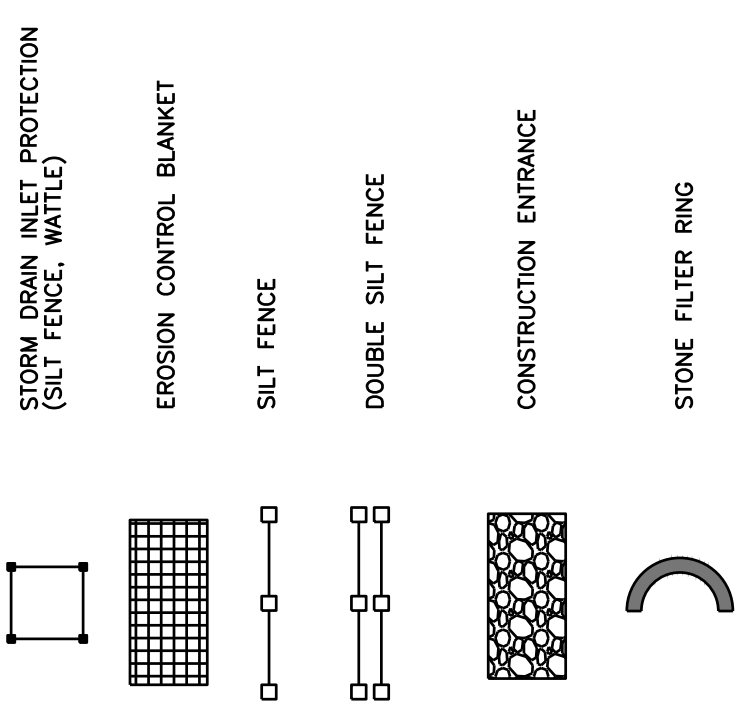
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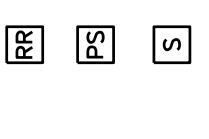
XII. APPENDIX III - STORM WATER MANAGEMENT PLANS



TEMPORARY EROSION CONTROL PRACTICES



PERMANENT EROSION CONTROL PRACTICES

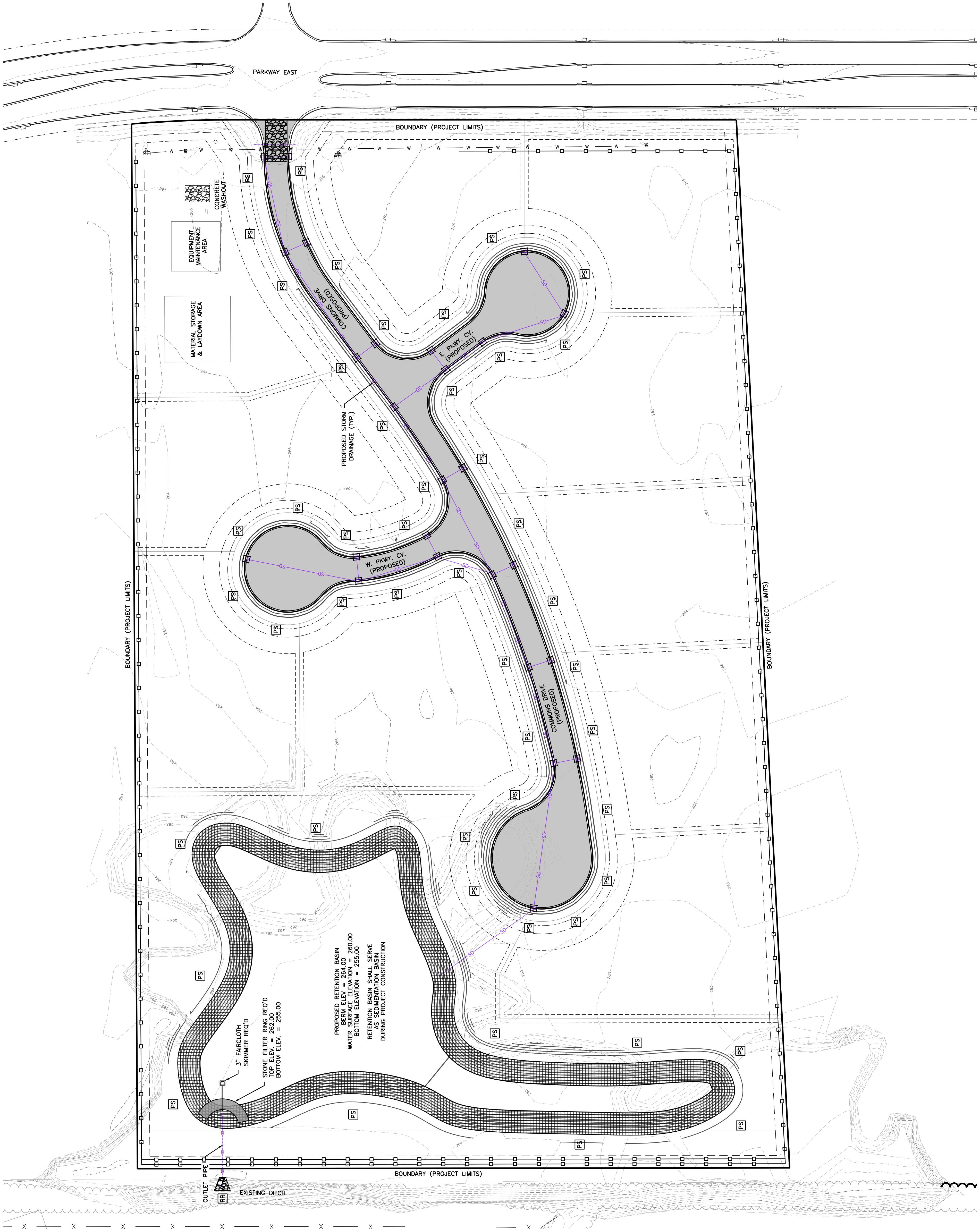


SEDIMENT BASIN CALCULATIONS

TOTAL DRAINAGE AREA: 10.89 AC.
 REQUIRED BASIN VOLUME: 10.89 AC. x 3,600 C.F./AC. = 39,204 C.F.
 PROVIDED BASIN VOLUME: 708,500 C.F.
 SKIMMER DISCHARGE RATE (3" SKIMMER): 9.774 C.F./DAY
 DEWATERING TIME: 39,204 C.F./9.774 C.F./DAY = 4.01 DAYS

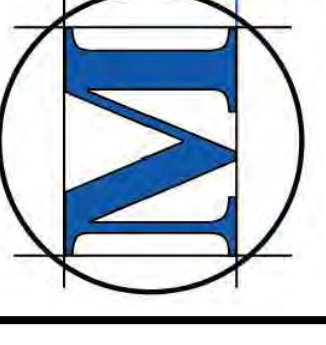
NOTES:

- CONTRACTOR SHALL MAKE EVERY EFFORT TO KEEP ALL EXISTING STREETS FREE AND CLEAN OF DEBRIS AND SEDIMENT DURING CONSTRUCTION.
- FOLLOWING COMPLETION OF CONSTRUCTION ACTIVITIES AND FINAL STABILIZATION, CONTRACTOR SHALL ACCUMULATED SEDIMENT FROM ALL EROSION CONTROL BASINS, RETENTION/SEDIMENTATION BASIN TO LINES, GRADES, AND DIMENSIONS AS SHOWN ON GRADING & DRAINAGE IMPROVEMENTS PLAN.
- AREAS RECEIVING EROSION CONTROL BLANKET SHALL BE PREPARED AND SEEDED IN ACCORDANCE WITH SPECIFICATION AND SHALL BE MULCHED WITH MULCH. MULCH IS NOT TO BE INSTALLED UNTIL AFTER THE EROSION CONTROL BLANKET IS NOT REQUIRED FOR AREAS RECEIVING EROSION CONTROL BLANKET.
- ALL DISTURBED AREAS OF THE SITE SHALL BE STABILIZED BY PERMANENT SEEDING.



PROPOSED RETENTION BASIN
 WATER SURFACE ELEVATION = 260.00
 BOTTOM ELEVATION = 255.00
 RETENTION BASIN SHALL SERVE
 AS SEDIMENTATION BASIN
 DURING PROJECT CONSTRUCTION

3" FAIRCLOTH SKIMMER RECD
 STONE FILTER RING RECD
 BOTTOM ELEV. = 255.00



M. McMASTER & ASSOCIATES, INC.
 CIVIL ENGINEERS & LAND SURVEYORS

212 WATERFORD SQUARE
 SUITE 300
 MADISON, MS 39110
 601.605.1090

PARKWAY COMMONS
 CAMLE, LLC
 GLUCKSTADT, MISSISSIPPI

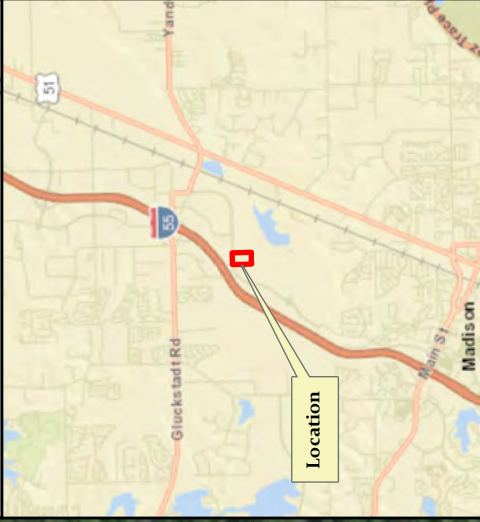
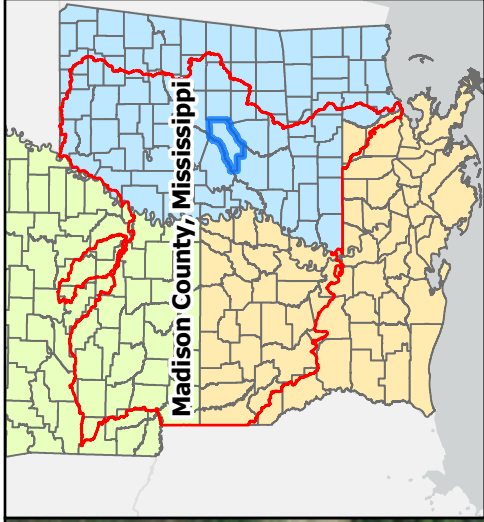
#	Date	By	App'd	Revisions

Project No.	M-1501-13	Designed By	J.B.H.
Date	06-27-23	Drawn By	J.B.H.
Scale	SEE ABOVE	Checked By	R.C.M.




EROSION CONTROL PLAN
C4.0

PRELIMINARY
 NOT FOR
 CONSTRUCTION

XIII. APPENDIX IV - USACE AJD



Legend

-  Property Boundary
-  Forested Wetlands (2.43 Ac.)
-  Open Water Feature (1.11 Ac.)



*There are jurisdictional wetlands and other waters within the project boundary; therefore, any work involving the discharge of dredged or fill material within said waters requires a permit.



XIV.

APPENDIX V - SEEDING CHART FOR STATE OF MS

SEEDING CHART FOR THE STATE OF MISSISSIPPI

*For a more comprehensive vegetation schedule, see “Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas (Three Volumes)”

SPECIES	SEEDING RATE/ACRE	PLANTING TIME	DESIRED pH RANGE	FERTILIZATION RATE/ACRE	METHOD OF ESTABLISHMENT	ZONE OF ADAPTABILITY	NATIVE/INTRODUCED
Common Bermuda	15 lbs. alone 10 lbs. mixture	3/1 - 7/15 9/1 - 11/30	6.0 - 7.0	600 lbs. 13-13-13	seed or sod	All	Introduced *Potential for Invasiveness
Bahia	40 lbs. alone 30 lbs. mixture	3/1 - 7/15 9/1 - 11/30	6.0 - 7.0	600 lbs. 13-13-13	seed	Central & South	Introduced
Fescue	40 lbs. alone 30 lbs. mixture	9/1 - 11/30	6.0 - 7.0	600 lbs. 13-13-13	seed	North & Central	Native
Saint Augustine	--	3/1 - 7/15	6.0 - 7.0	600 lbs. 13-13-13	sod only	Central & South	Native
Centipede	4 lbs. alone 2.5 lbs. mix	3/1 - 7/15	6.0 - 7.0	600 lbs. 13-13-13	seed or sod	All	Introduced
Carpet Grass	15 lbs. alone 10 lbs. mixture	3/1 - 7/15	6.0 - 7.0	600 lbs. 13-13-13	seed or sod	All	Native
Zoysia Grass	--	3/1 - 7/15	6.0 - 7.0	600 lbs. 13-13-13	sod only	All	Introduced
Creeping Red Fescue	30 lbs. alone 22.5 lbs. mix	9/1 - 11/30	6.0 - 7.0	600 lbs. 13-13-13	seed	All	Native
Weeping Lovegrass	10 lbs. alone 5 lbs. mix	3/1 - 7/15	6.0 - 7.0	600 lbs. 13-13-13	seed	All	Introduced
Sericea Lespedeza	40 lbs.	3/1 - 7/15 9/1 - 11/30	6.0 - 7.0	400 lbs. 6-24-24	seed	All	Introduced
*Wheat	90 lbs. alone	9/1 - 11/30	6.0 - 7.0	600 lbs. 13-13-13	seed	All	Native
*Ryegrass	30 lbs.	9/1 - 11/30	6.0 - 7.0	600 lbs. 13-13-13	seed	All	Native
*White Clover	5 lbs.	9/1 - 11/30	6.0 - 7.0	400 lbs. 6-24-24	seed	All	Introduced
*Crimson Clover	15 lbs.	9/1 - 11/30	6.0 - 7.0	400 lbs. 6-24-24	seed	All	Introduced
*Hairy Vetch	30 lbs.	9/1 - 11/30	6.0 - 7.0	400 lbs. 6-24-24	seed	All	Introduced
*Browntop Millet	40 lbs. alone 15 lbs. mix	4/1 - 8/30	6.0 - 7.0	600 lbs. 13-13-13	seed	All	Introduced

*Note on Annuals. For permanent seeding, annuals can only be used in a mixture with perennials.

North-north of Hwy. 82
Central- south of Hwy. 82 & north of Hwy. 84
South- south of Hwy. 84