



**US Army Corps
of Engineers** ®
Rock Island District

PUBLIC NOTICE

Applicant: South River Industrial Levee Subdistrict Date: November 18, 2021

Expires: December 17, 2021

CEMVR-RD-2020-1454 Section 10/404

408-MVR-2021-009 Section 408

US Army Corps of Engineers

1. **Applicant:** South River Industrial Levee Subdistrict, P.O. Box 191, Palmyra, Missouri 63461.

2. **Project Location:**

- IL-Quincy SW USGS quad sheet.
- Section 11, Township 58 North, Range 5 West.
- 3150 Hwy J, Palmyra, Marion County, Missouri 63461
- Datum NAD-83. UTM Zone 15, Northing: 4410627.79, Easting: 634596.49.
- Latitude: 39.835. Longitude: -91.427. Mississippi River mile 320 and the South River.

3. **Project Description.**

a. Previous Authorizations:

- CEMVR-OD-P-2019-533 and 534 (404 permit) and MVR-2019-0008 (408 permit): The 404 and 408 permits were for the replacement of existing utility effluent lines, new support structures along the Mississippi River and bank restoration.
- CEMVR-RD-373650: Following the 1993 flood, there was concern that a failure of the 50-year protection level levee for South River Drainage District near the Subdistrict 500-year protection levee could damage the cross-levee and result in flooding of the sub-district. Approx. 1,200 feet of the 50-year levee was elevated to reduce the chance of failure near the subdistrict.
- CEMVR-RD-399490: Approximately 500 linear feet of the Mississippi River, riverbank was armored with rock blanket.
- CEMVR-OD-397580: Approximately 600 linear feet of the South River, riverbank was armored with rock blanket.

b. Current Request: The purpose of the project is bank stabilization. High water and flooding have caused continued bank erosion along the Mississippi River (MR) and South River (SR). Bank migration is encroaching on the SIRLS levee systems, mainly the MR levee and the SR levee. Continued migration could drastically impact levee stability and functionality.

The purpose of this project is to stabilize riverbanks where erosion is actively occurring and mitigate risk of continued erosion on integrity of SIRLS levee systems. This project will mitigate approximately 8,000 feet of eroding riverbank along the MR and SR. Mitigation will be accomplished using rip-rap rock blankets, longitudinal peaked stone toe protection (LPSTP), and native plantings along the banks. Trees and brush along the MR will be temporarily removed to facilitate stabilization efforts. After construction, disturbed areas will be re-vegetated with native plantings. The LPSTP will use tiebacks keyed into the bank; upstream and downstream ends will also be tied back and keyed into banks. Native plantings are planned between tiebacks. As a part of emergency preparedness due to recent flood event in 2019, approximately, 400 linear feet of rock (2,000 Ton) was placed in between stations 228+00 and 237+00 while, 200 linear feet of rock in between levee station 250+00 and 254+00. About 200 linear feet of Type Z Sheet-Pile with minimum section modulus 20 in³/feet and minimum embedment depth of 20 feet was installed between levee station 237+00 and 250+00. The geo-technical basis for rock placement was rip-rap revetment and sheet pile installation was interlocking the rip rap revetment.

c. Permit Area: The permit area consists of the proposed bank stabilization areas along 6050 feet of the MR and 2300 feet on the SR, and 0.86 acres of adjacent wetland on SR and 2.35 acres of adjacent wetland on MR.

d. Project Impacts: A total of 8350 feet of stream will be affected; 2300 feet on SR and 6050 feet on MR. A total of 3.21 acres (2.69 permanent and 0.52 temporary) of mixed emergent/forested/scrub-shrub wetland will be affected; 0.86 acres on SR and 2.35 acres on MR. This includes the riprap and the tree clearing.

e. Mitigation: All proposed wetland impacts listed above were entered into the Missouri Wetland Mitigation Method (MWMM), to determine the number of required wetland credits of mitigation for this project. The MWMM calculated that 23.10 credits of mitigation would be necessary for mitigation for this project. These wetland credits will be purchased from the Land Learning Foundation In-Lieu Fee Mitigation Program in the State of Missouri. Stream impacts for this project were determined to be self-mitigating as the nature of the project is for bank stabilization and protection along the MR and SR.

4. Agency Review:

a. Department of the Army, Corps of Engineers. The individual permit is being processed under the provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

b. Per Section 14 of the Rivers and Harbors Act of 1899, as amended (33 U.S.C. 408), no project that has the potential to take possession of or make use of for any purpose, or build upon, alter, deface, destroy, move, injure, or obstruct a Corps civil works constructed work or project, including, but not limited to, levees, dams, jetties, navigation channels, borrow areas, dredged material disposal sites, flood control projects, etc., shall be permitted unless the project has been reviewed and approved by the appropriate Corps approval authority. The **USACE 408 Office** has an interest in the project area and is currently in review for impacts to 408 federal interests.

c. State of Missouri. The project plans have been forwarded the Missouri Department of Natural Resources, Section 401 Water Quality Certification Coordinator at wpsc401cert@dnr.mo.gov or 573/522-1131, for review and coordination for Section 401 Water Quality Certification.

5. **Historical/Archaeological**: The District Archaeologist consulted with the Missouri geographic information systems archeological site and survey databases online. In addition, the District consulted “*An Investigation of Submerged Historic Properties in the Upper Mississippi River and Illinois Waterway*” (October 1997) prepared by American Resources Group, Ltd. for the Corps (Contract No. DACW25-93-D-0012, Delivery Order No. 37). No shipwrecks or other

historic properties were identified in the proposed permit area. The permit areas have been covered by multiple previous cultural resource assessments with no historic properties having been identified. In addition, portions of the permit area have been subject to previous disturbance through the construction of the levees, emergency placement of rip rap materials during flood events and ongoing maintenance of the levees. Therefore, it is the recommendation of the District Archaeologist that there will be **no historic properties affected** by the issuance of the permit because “the nature, scope, and magnitude of the work, and/or structures to be permitted are such that there is little likelihood that a historic property exists or may be affected” (33 CFR Part 325, Appendix C.3.b).

6. Endangered Species.

a. District staff have performed a preliminary review of this application for the potential impact on threatened or endangered species pursuant to Section 7 of the Endangered Species Act as amended. The following threatened or endangered species are listed by the United States Fish and Wildlife Service as occurring in Marion County, Missouri:

(<http://www.fws.gov/midwest/endangered/lists/missouri-cty.html>)

- Indiana bat. The Federally endangered Indiana bat (*Myotis sodalis*) is considered to potentially occur in any area with forested habitat in Marion County Missouri. Indiana bats migrate seasonally between winter hibernacula and summer roosting habitats. Winter hibernacula include caves and abandoned mines. Females form nursery colonies under the loose bark of trees (dead or alive) and/or cavities, where each female gives birth to single young in June or early July. A single maternity colony may utilize a number of trees during the summer, typically a primary roost tree and several alternates. The species or size of tree does not appear to influence whether Indiana bats use a tree for roosting provided the appropriate bark structure is present.
 - The project will follow the procedures and conservation measures outlined in the 2019 U.S. Army Corps of Engineers’ Biological Evaluation – Programmatic Informal Consultation for Regulatory Program Actions affecting Missouri Bat Species, also known as the MO Bat PA. Following these procedures and conservation measures will result in a determination of “may affect, not likely to adversely affect” federally listed bat species in Missouri.
- Gray bat. The Federally endangered Gray bat (*Myotis grisescens*) live in caves or cave-like habitats year-round in Marion County Missouri. During the winter, they hibernate in deep, vertical caves. In the summer, they roost in caves which are scattered along rivers, in limestone karst areas in Missouri. in caves and mines and swarms in surrounding wooded areas in autumn.
 - The project will follow the procedures and conservation measures outlined in the 2019 U.S. Army Corps of Engineers’ Biological Evaluation – Programmatic Informal Consultation for Regulatory Program Actions affecting Missouri Bat Species, also known as the MO Bat PA. Following these procedures and conservation measures will result in a determination of “may affect, not likely to adversely affect” federally listed bat species in Missouri.
- Northern long-eared bat. The Federally threatened northern long-eared bat (*Myotis septentrionalis*) is considered to potentially occur in any area with forested habitat in Marion County Missouri. It hibernates in caves and mines and swarms in surrounding wooded areas in autumn. It roosts and forages in upland forests and woods.

- The project will follow the procedures and conservation measures outlined in the 2019 U.S. Army Corps of Engineers' Biological Evaluation – Programmatic Informal Consultation for Regulatory Program Actions affecting Missouri Bat Species, also known as the MO Bat PA. Following these procedures and conservation measures will result in a determination of “may affect, not likely to adversely affect” federally listed bat species in Missouri.
- Higgins' Eye Pearly Mussel. The Federally endangered Higgins eye pearly mussel (*Lampsilis higginsii*) is a freshwater mussel of larger rivers where it is usually found in deep water with moderate currents. The animals bury themselves in sand and gravel river bottoms with just the edge of their partially opened shells exposed.
 - A mussel survey was performed by EcoAnalysts, Inc. on August 23-24, 2018. A total of 127 mussels of 13 different species were collected. No threatened or endangered species were found. EcoAnalysts, Inc. determined that “few unionids will likely be affected by placement of the rock blanket at these locations. Based on the information from this recent mussel survey we have determined that the project will “may affect, not likely to adversely affect” federally listed mussel species.
- Spectaclecase Mussel. The freshwater spectaclecase mussel (*Cumberlandia monodonta*) is a Federally Endangered species. The spectaclecase mussel are found in large rivers where they live in areas sheltered from the main force of the river current. This species often clusters in firm mud and in sheltered areas, such as beneath rock slabs, between boulders and under tree roots.
 - A mussel survey was performed by EcoAnalysts, Inc., on August 23-24, 2018. A total of 127 mussels of 13 different species were collected. No threatened or endangered species were found. EcoAnalysts, Inc. determined that “few unionids will likely be affected by placement of the rock blanket at these locations. Based on the information from this recent mussel survey we have determined that the project will “may affect, not likely to adversely affect” federally listed mussel species.
- Sheepnose Mussel. The freshwater sheepnose mussel (*Plethobasus cyphus*) is a Federally Endangered species. The sheepnose mussel is primarily a larger-stream species occurring mainly in shallow shoal habitats with moderate to swift currents over coarse sand and gravel but includes mud, cobble, and boulders as well. This includes larger rivers with deep runs, while those specimens found in streams occur mainly in stable flow refuges with little sediment turbidity.
 - A mussel survey was performed by EcoAnalysts, Inc. on August 23-24, 2018. A total of 127 mussels of 13 different species were collected. No threatened or endangered species were found. EcoAnalysts, Inc. determined that “few unionids will likely be affected by placement of the rock blanket at these locations. Based on the information from this recent mussel survey we have determined that the project will “may affect, not likely to adversely affect” federally listed mussel species.
- Monarch Butterfly. The monarch butterfly (*Danaus plexippus*) is a Federal Candidate species. The monarch butterfly can be found in fields, roadsides, open areas, prairies, wetlands, or urban areas in Marion County Missouri. The monarch requires milkweed and flowering plants for their habitat. Adult monarchs feed on the nectar of many flowers, but they breed only where milkweeds are found.

- The permit action area of the project does not include monarch habitat consisting of open fields, roadsides, open areas, prairies, wetlands or urban areas with flowering plants and milkweed. It is assumed that the monarch butterfly would not be present within the permit action area and there will be “**no effect**” to the monarch butterfly.
- Pallid Sturgeon. The federally endangered pallid sturgeon (*Scaphirhynchus albus*) extended into the upper Mississippi River. However, during a 2009 survey, no specimens were collected above Lock & Dam 25.
 - Based on the survey information from 2009, and this project being located several river miles from Lock and Dam 25, it is assumed that the Pallid sturgeon would not be present within the permit area. There will be “**no effect**” to Pallid sturgeon.

b. Based upon the information provided and available at this time, our preliminary determination is that the proposed activity would “**may affect, not likely to affect**” on the following Federally listed species:

- Indiana bat
- Northern long-eared bat
- Gray bat
- Higgins’ Eye Pearly Mussel
- Spectaclecase Mussel
- Sheepnose Mussel

And “**no effect**” on the following listed species:

- Monarch Butterfly
- Pallid Sturgeon

c. While informal consultation has been initiated with the United States Fish and Wildlife Service (FWS) at this time, we are further coordinating this application with the FWS and the respective resource agencies through this public notice. Any comments they may have concerning Federally listed threatened or endangered species or their critical habitat will be considered in the final assessment of the proposed project. Accordingly, our preliminary determination is subject to change should further information become available.

7. Public Interest Review. The decision whether to issue the Corps permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people.

8. Who Should Reply. The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an

Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. These statements should be submitted on or before the expiration date specified at the top of page 1. These statements should bear upon the adequacy of plans and suitability of locations and should, if appropriate, suggest any changes considered desirable.

9. Public Hearing Requests. Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. A request may be denied if substantive reasons for holding a hearing are not provided.

10. Reply to the Corps of Engineers. For additional information and comments concerning the Corps permit should be addressed to Mr. James Kelley by telephone 309-794-5373 or by e-mail: james.c.kelley@usace.army.mil.

Attach Plan

Mr. James C. Kelley
Project Manager, Eastern Branch
Regulatory Division

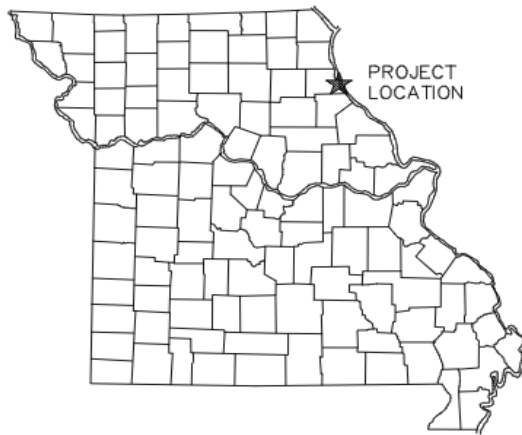
REQUEST TO POSTMASTERS: Please post this notice conspicuously and continuously until the expiration date specified at the top of page 1.

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South River Industrial Levee Sub-district Stream Bank Stabilization

Marion County, Missouri

April 2021

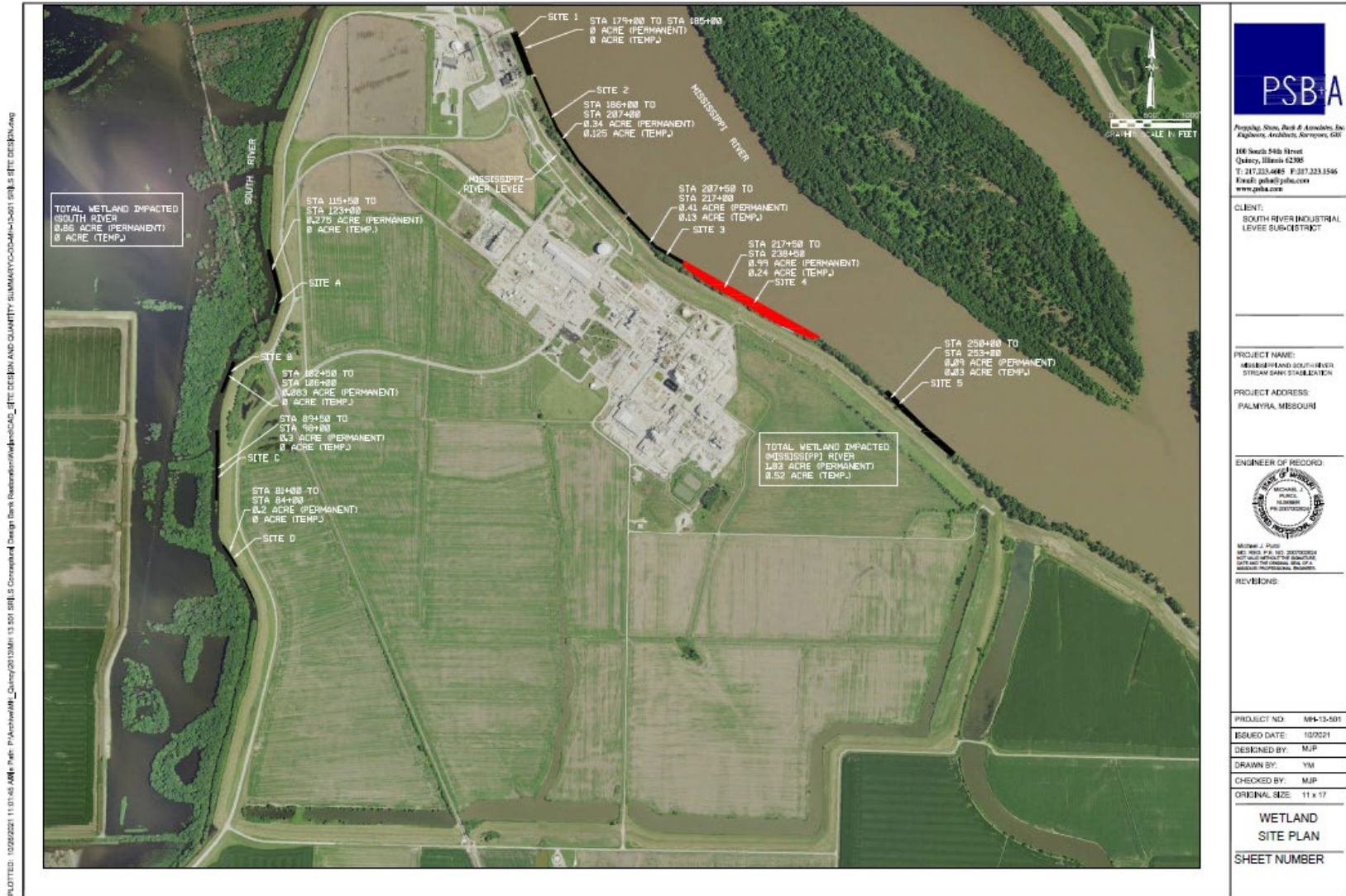


PROJECT
LOCATION

MARION COUNTY, MISSOURI



SOUTH RIVER INDUSTRIAL LEVEE SUB-DISTRICT



PLOTTED: 10/26/2021 11:01:46 AM - File: P:\Arch\WMP_Cemvrd\2020\1454\13-501-001-001.dwg - Design: 13-501-001-001.dwg - Design: 13-501-001-001.dwg

PSB+A
Planning, Survey, and Construction, Inc.
Engineers, Architects, Surveyors, GIS

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CLIENT:
SOUTH RIVER INDUSTRIAL
LEVEE SUB-DISTRICT

PROJECT NAME:
MISSISSIPPI AND SOUTH RIVER
STREAM BANK STABILIZATION

PROJECT ADDRESS:
PALMYRA, MISSOURI

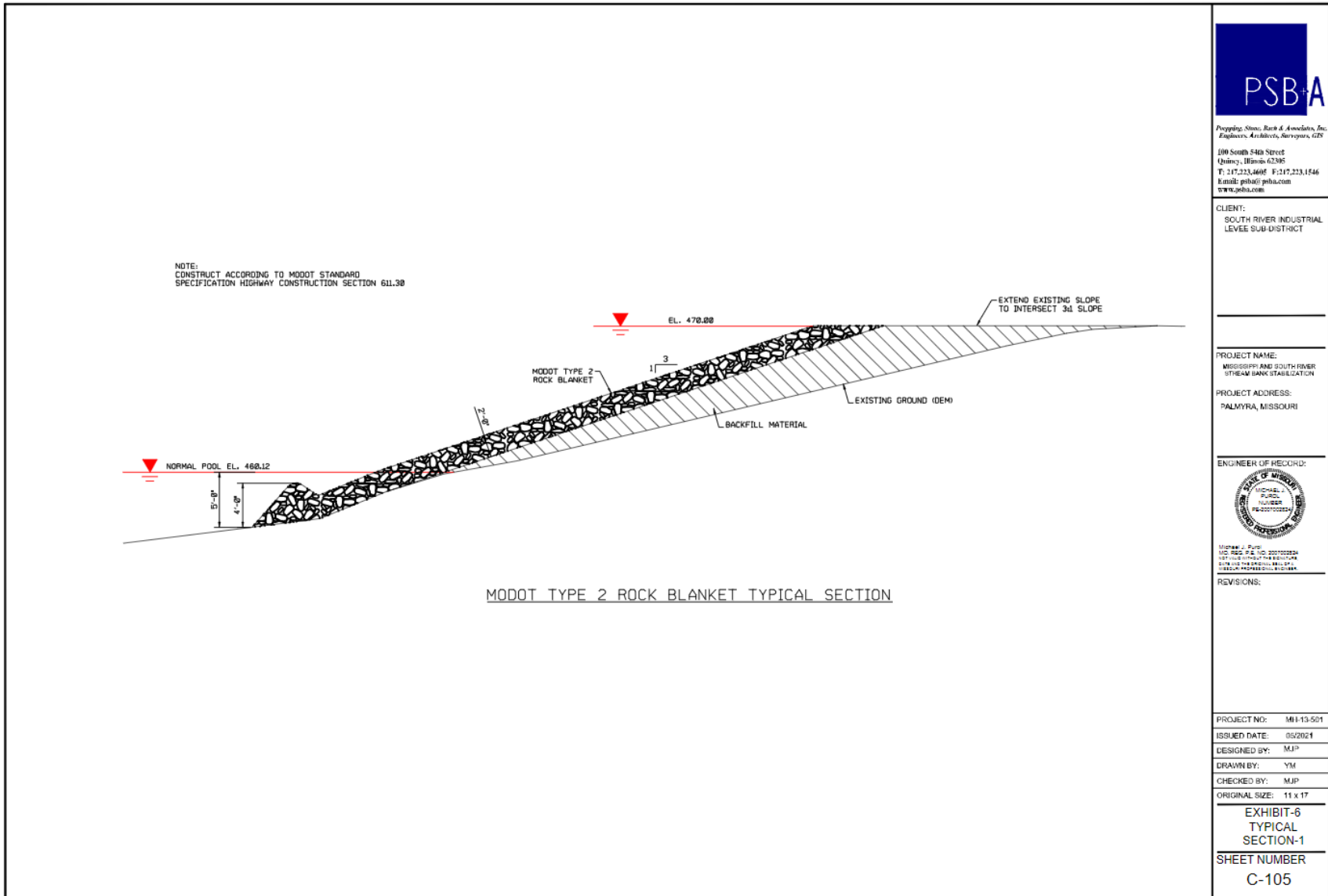
ENGINEER OF RECORD:
MICHAEL J. PUGH
REGISTERED PROFESSIONAL ENGINEER
STATE OF MISSOURI
NO. 000000000

REVISIONS:

PROJECT NO:	WR-13-501
ISSUED DATE:	10/20/21
DESIGNED BY:	MJP
DRAWN BY:	YM
CHECKED BY:	MJP
ORIGINAL SIZE:	11 x 17

**WETLAND
SITE PLAN**

SHEET NUMBER



Propping, Stone, Ross & Associates, Inc.
Engineers, Architects, Surveyors, GIS
100 South 54th Street
Des Moines, IA 50319
T: 319.233.4600 F: 319.233.1546
Email: psba@psba.com
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CLIENT:
SOUTH RIVER INDUSTRIAL
LEVEE SUB-DISTRICT

PROJECT NAME:
MISSISSIPPI AND SOUTH RIVER
STREAM BANK STABILIZATION

PROJECT ADDRESS:
PALMYRA, MISSOURI

ENGINEER OF RECORD:



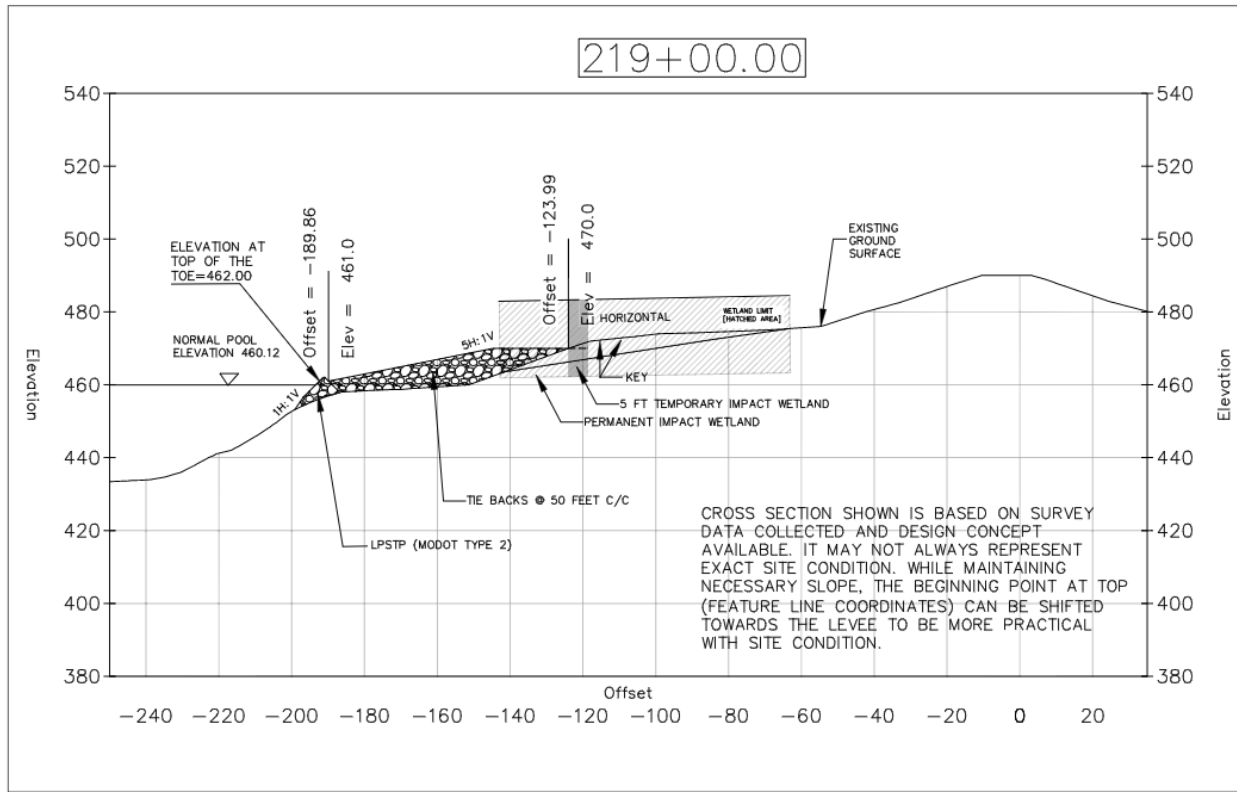
Michael J. Papp
1000000000
1000000000
1000000000
1000000000
1000000000

REVISIONS:

PROJECT NO: MI-13-501
ISSUED DATE: 05/2021
DESIGNED BY: MJP
DRAWN BY: YJM
CHECKED BY: MJP
ORIGINAL SIZE: 11 x 17

EXHIBIT-6
TYPICAL
SECTION-1
SHEET NUMBER
C-105

MISSISSIPPI RIVER EMBANKMENT PROTECTION; LPSTP
 SITE 4: STATION 217+50 TO 238+00
 SITE GRADING; CROSS SECTION 4



NOTES:

1. CONTINUE WITH ESTIMATED DESIGN LEVELS UNTIL FOLLOWING STATION FOR ROCK TOE (SEE TYPICAL PLAN FOR DETAILS)
3. PLACE TIEBACKS @ 50 FEET C/C EACH WITH WITH PLAN WIDTH OF 5 FEET, EXTEND TO EROSION LIMIT/DESIGN LEVELS (SEE TYPICAL PLAN FOR DETAILS)
4. PROVIDE 50 FEET UPSTREAM KEY AND 50 FEET DOWNSTREAM KEY AT 45 DEGREE INCLINATION TO DIRECTION OF ROCK TOE (SEE TYPICAL PLAN FOR DETAILS)
4. MODOT STANDARDS SHALL BE FOLLOWED
5. ENGINEERS APPROVAL SHALL BE NEEDED FOR SITE SPECIFIC CONCERNS OR DESIGN DEVIATIONS



Planning, Survey, Road & Construction, Inc.
 Engineers, Architects, Surveyors, etc.
 106 South 24th Street
 Quincy, Illinois 62305
 T: 217.223.4663 F: 217.223.1546
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CLIENT:
 SOUTH RIVER INDUSTRIAL
 LEVEE SUB-DISTRICT

PROJECT NAME:
 MISSISSIPPI AND SOUTH RIVER
 STREAM BANK STABILIZATION
 PROJECT ADDRESS:
 PALMYRA, MISSOURI



REVISIONS:

PROJECT NO:	MH-13-501
ISSUED DATE:	08/2021
DESIGNED BY:	Y.M
DRAWN BY:	Y.M
CHECKED BY:	M.J.P
ORIGINAL SIZE:	11 x 17
SITE GRADING PLAN SCALE: 1:50 CROSS SECTIONS SCALE: 1:30	
SHEET NUMBER	X4-4