

PROJECT SPECIFICATIONS
FOR
OLD LEMAY FERRY ROAD STRUCTURE
REPLACEMENT
PW15113BXC



County of Jefferson, Missouri
P.O. BOX 100
HILLSBORO, MO 63050
February 2, 2016

REQUEST FOR BID

BID OF

Bidder Name: _____

Bidder Address: _____

FOR CONSTRUCTING:
A Structure Replacement over a Tributary to Glaze Creek
In Jefferson County, Missouri

APPROVED FOR CONSTRUCTION

BY:

(County Engineer)

DATE: 12/28/15



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BID NOTICE

Sealed bids for **OLD LEMAY FERRY ROAD STRUCTURE REPLACEMENT PW15113BXC** will be received at the office of The Department of the County Clerk, Jefferson County Administration Center, 729 Maple Street, Hillsboro, Missouri until 2:00 o'clock P.M. (**CDST**) on **February 2, 2016**, and at that time will be publicly opened and read. All bids shall be submitted in triplicate in an opaque sealed envelope, marked with the Project title, name and address of the Bidder, and accompanied by the other required documents. Bids submitted via fax or electronic will be rejected. Late Bids will not be accepted and will be returned to the sender, unopened.

The proposed work includes:

The removal of the existing box culvert and the construction of with a new bridge structure and associated road improvements on Old Lemay Ferry Road. The work in general will consist of box culvert removal, bridge construction, excavation, placing fill, bituminous surfacing, guardrail installation, rock blanket and driveway approaches. The total length of project is 379 feet.

Work shall be in accordance with the provided Specifications, and Job Special Provisions and Plans. Where not specifically covered by the Specifications, or Job Special Provisions or Plans, the Contractor shall adhere to the 2011 Edition of the "Missouri Standard Specifications for Highway Construction", and all supplemental revisions.

Plans and specifications for this project will be available, at no cost, as a downloadable file from the Jefferson County website (<http://www.jeffcomo.org/PublicWorksProjects.aspx?nodeID=Purchasing>), beginning Friday, January 8, 2016. The bidder will be responsible to check the County's website for addendum(s) regarding this project prior to bid opening. All potential bidders must complete the "Plan Holder Contact Information" form and submit this form to Public Works at pwprojects@jeffcomo.org and request placement on the bidder's list.

All labor used in the construction of this public improvement shall be paid a wage no less than the prevailing hourly rate of wages of work of a similar character in this locality as established by the State of Missouri's "Annual Wage Order" that is currently effective 10 calendar days prior to bid opening.

The County of Jefferson, Missouri hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, businesses owned and controlled by socially and economically disadvantaged individuals will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, religion, creed, sex, age, ancestry, or national origin in consideration for an award.

All bidders must be on MoDOT's Qualified Contractor List per Section 102.2 of the Missouri Standard Specifications for Highway Construction, 2011 Edition including all revisions. **The contractor questionnaire must be on file 7 days prior to bid opening.**

Contractors and sub-contractors who sign a contract to work on public works project must provide a 10-Hour OSHA construction safety program, or similar program approved by the Department of Labor and Industrial Relations, to be completed by their on-site employees within sixty (60) days of beginning work on the construction project.

A certified or cashier's check or a bid bond in the amount of 5% shall be submitted with each proposal. **A certificate of insurance shall be submitted with each proposal.**

All bids shall be made on the forms provided. The County of Jefferson, Missouri reserves the right to reject any or all bids, to waive any informality in the bids received, and to award the contract to the lowest, responsive, responsible bidder with MoDot concurrence.

No 2nd tier subcontracting will be allowed on this project.

END BID NOTICE

BID SUBMITTAL PACKAGE



JEFFERSON COUNTY, MISSOURI DEPARTMENT OF PUBLIC WORKS

PROJECT NAME: OLD LEMAY FERRY ROAD STRUCTURE REPLACEMENT

PROJECT NUMBER: PW15113BXC

BID OPENING DATE: February 2, 2016 @ 2:00 o'clock P.M. (CDST)

Funding Source: County Road Tax

County Project Manager: Brian Dugan (636)797-6080 bdugan@jeffcomo.org

BIDDER'S NAME: _____

IN ORDER TO BE CONSIDERED A RESPONSIVE, RESPONSIBLE BIDDER, THE CONTRACTOR MUST READ, UNDERSTAND, COMPLETE AND SUBMIT 3 COPIES OF ALL FORMS WITHIN THIS BID SUBMITTAL PACKAGE (INCLUDING THIS COVER AND ALL SHEETS WITH THE BID SUBMITTAL BORDER), ALONG WITH OTHER SUBMITTAL REQUIREMENTS AS STATED ON THE BIDDER CHECKLIST.

The County does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

PLAN HOLDER CONTACT INFORMATION

All potential bidders **must** complete this form and submit it to the Jefferson County email address listed below in order to provide contact information as required. All other plan holders may submit this form at their own option. Addendums will be posted on the county website. In the event of disruption of website services, all such information will be communicated to all registered plan holders.

Project:	OLD LEMAY FERRY ROAD STRUCTURE REPLACEMENT PW15113BXC
Plans & Specifications:	\$0.00 AVAILABLE ONLINE
Bid Opening Date:	February 2, 2016
Estimate:	\$495,000.00

Company Name*:	<input type="text"/>
Contact Name*:	<input type="text"/>
Address*:	<input type="text"/>
Phone*:	<input type="text"/>
Email*:	<input type="text"/>

*required information

Email this completed form to:

pwprojects@jeffcomo.org

BIDDER CHECKLIST

- 1. 3 collated copies of all of the following documents encompass a complete bid submittal
 - a) Complete and Submit Plan Holder's List Form prior to bid submittal (email before bid opening)
 - b) Bid Submittal Cover Sheet with bidder's name printed or typed
 - c) Instructions and Notices to Contractors initialed on each page, all spaces filled, signed.
 - d) Balanced Bid Form, complete, signed, and embossed (if corporation), **addenda acknowledged and attached**
 - e) Bid Guaranty/Bid Bond (Assurance Company's form is valid substitute to generic form herein)
 - f) Bidder's Acknowledgement completed and signed
 - g) Affidavit of Federal Employment Authorization (Annual Worker Eligibility Verification Affidavit)
 - h) Disadvantaged Business Enterprise (DBE) Identification (within 3 days of bid opening)
 - i) Certification Regarding Anti-collusion (see notice 12)
 - j) Certification Regarding Use of Contract Funds for Lobbying (see notice 12)
 - k) Certification Regarding Debarment and Suspension (see notice 12)
 - l) Certification Regarding Affirmative Action and Equal Opportunity (see notice 12)
 - m) Bid to be submitted in ink with proper signatures with no white out or initialed changes
 - n) Enclose Certificate of Insurance
- 2. Submit completed Contractor Questionnaire and/or Contractor Prequalification Questionnaire with attachments not later than seven (7) days prior to the date and hour of the bid opening. See Secs 101-103 of the Standard Specifications, and Rule 7 CSR 10-15.900, "Prequalification to Bid of Certain Contractors". Questionnaire and Contact information are provided on MoDOT's website (required on highway and bridge projects)
- 3. For submittal of paper bids, the complete set of bidding documents includes all information through the DBE form. The Technical Specifications/Job Special Provisions are for the bidder's information only and is not to be returned with the bid.
- 4. If submitting the bid by mail, it is to be completed, executed, and submitted in a sealed envelope addressed to County of Jefferson, Missouri. **Provide the vendor name, vendor address, vendor number, county, route and federal project number on the outside of the envelope (if applicable).**
- 5. Please read all items in the bidding document carefully. For paper bids, complete all items in **ink** or by **typing** in the information.
- 6. Sign this bidding document properly. If submitted in the name of a firm or corporation, the legal name of the firm or corporation should appear in the space designated, and be signed for by one or more persons legally qualified to execute papers in the name of said firm or corporation. Affix Corporate Seal if the Bidder is a Corporation.
- 7. For paper bids, submit a bid bond executed by bidder and surety, or attach cashier's check to the bid bond form.
- 8. For paper bids, staple addenda (if applicable) to the bid in the appropriate part of the bid. The letter accompanying the addenda should be stapled to the inside of the back cover of the bid and returned. The bidder should retain a duplicate copy.
- 9. Common Mistakes:
 - a) Not signing the bid
 - b) Not incorporating the addendum into the bidding documents, including attaching the letter to the bid
 - c) Not providing a bid bond
 - d) Using a different bid bond form than the one provided
 - e) Using pencil to fill out the bid
 - f) Using white out to make corrections to the itemized bid sheets
 - g) Not initialing changes made

All questions concerning the bid document preparation can be directed to the Jefferson County Public Works Department at 636-797-6080. Project specific questions can be directed to Brian Dugan.

Special Needs: If you have special needs addressed by the Americans with Disabilities Act, please notify Jefferson County Public Works Department, at 636-797-5340 or through Missouri Relay System, TDD 1-800-735-2966, at least five (5) working days prior to the bid opening.

INSTRUCTIONS AND NOTICES TO CONTRACTORS

BIDDER SHALL INITIAL EACH SHEET ACKNOWLEDGING UNDERSTANDING AND ACCEPTANCE

Sealed bids for the proposed work will be addressed and delivered to the office of The County Clerk, 729 Maple Street, Jefferson County Administration Center, Hillsboro, Missouri until 2:00 o'clock P.M. (CDST) on February 2, 2016 , and at that time will be publicly opened. All bids shall be submitted in triplicate in an opaque sealed envelope, marked with the Project title, name and address of the Bidder, and accompanied by the other required documents. Bids submitted via fax or electronic will be rejected. Late Bids will not be accepted and will be returned to the sender, unopened.

This project has Federal Funding so the following terms apply:

- The prime contractor must be on MoDOT's approved contractor listing at least 7 days before the day of the bid opening in order for MoDOT to concur with the award of this project.
- Only work performed by DBE subcontractors that appear on MoDOT's approved listing at the time of the bid opening will be applied towards calculating the DBE Goal.
- All prospective bidders shall read and have an understanding of the DBE Contract Provisions. The low bidder and the second low bidder shall submit the DBE Submittal forms within three working days after the letting date. Failure to do so may be cause for rejection of the bid. No extension of time will be allowed for any reason and failure to deliver the completed DBE Submittal forms by 4:00 p.m. on the third working day after the letting will be cause for rejection of the low bid and the proposed guaranty will become the property of the Owner.
- MoDOT will only concur with awarding the contract to a responsible bidder who has submitted the lowest, responsive bid. A responsive bid is one that meets all requirements of the advertisement and proposal, and "responsible" is defined as one who is physically organized and equipped with the financial wherewithal to undertake and complete the contract.

(1) PROPOSED WORK:

The removal of the existing box culvert and the construction of with a new bridge structure and associated road improvements on Old Lemay Ferry Road. The work in general will consist of box culvert removal, bridge construction, excavation, placing fill, bituminous surfacing, guardrail installation, rock blanket and driveway approaches. The total length of project is 379 feet.

(2) PLANS AND SPECIFICATIONS: Plans (if applicable) and specifications for this project are available through the Jefferson County, Missouri Government website (Jeffcomo.org) under the "Invitation for Bids/Request for Proposals" tab in the "Quick Links" box in the upper right corner of the homepage. It is the bidder's responsibility to obtain these documents from the provided source, including copies for use in construction if awarded the project. Paper copies of any documents will require advance notice and are subject to administrative fees for labor and material costs, similar to that of a "Freedom of Information Act" request. Plans, specifications, and any other project documents are made available only for the purposes of obtaining bids, and as a resource to the awarded contractor. These documents do not confer a license or grant for any other use.

(3) CONTRACT DOCUMENTS AND SITE CONDITIONS: Before submitting a Bid, each Bidder must (a) examine the Contract Documents thoroughly, (b) visit the site to familiarize himself with local conditions that may in any manner affect cost, progress or performance of the Work, (c) familiarize himself with federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress or performance of the Work; and (d) study and carefully correlate Bidder's observations with the Contract Documents. Each bidder will, at his own expense, make such investigations and tests as the bidder may deem necessary to determine his Bid for performance of the Work in accordance with the time, price and other terms and conditions of the Contract Documents. On request, the County will provide each bidder access to the site to conduct such investigations and tests, as each bidder deems necessary for submission of his Bid. The lands upon which the Work is to be performed rights - of - way for access thereto and other lands designated for use by the Contractor in performing the work are identified in the projects specifications or plans.

BIDDER'S INITIALS INDICATING UNDERSTANDING AND ACCEPTANCE _____

(4) COMPLIANCE WITH CONTRACT PROVISIONS: The bidder, having examined and being familiar with the local conditions affecting the work, and with the contract, contract documents, including the Missouri Highways and Transportation Commission's "Missouri Standard Specifications for Highway Construction, 2011," and "Missouri Standard Plans for Highway Construction, 2009" and Supplemental Revisions (if applicable), their revisions, and the request for bid, including appendices, the special provisions and plans, hereby proposes to furnish all labor, materials, equipment, services, etc., required for the performance and completion of the work. All references are to the Missouri Standard Specifications for Highway Construction, as revised, unless otherwise noted. All questions about the meaning or intent of the Contract Documents shall be submitted to the county project manager as stated on the "Bidder Checklist." Replies will be issued by Addenda, mailed or electronically delivered, to all parties recorded by the County Engineer as having received the Bidding Documents. Oral and other interpretations or clarifications will be without legal effect.

The following documents are available on the Missouri Department of Transportation web page at www.modot.mo.gov under "Business with MoDOT" "Standards and Specifications". The effective version shall be determined by the letting date of the project.

General Provisions & Supplemental Specifications

Supplemental Plans to October 2009 Missouri Std. Plans
For Highway Construction (if applicable)

These supplemental bidding documents contain all current revisions to the bound printed versions and have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

Please note that within the above-listed documents, the term "Commission" shall be replaced with the term, "County of Jefferson", and the term "Engineer" is a reference to the County Director of Public Works/Highway Engineer.

The contracting authority for this contract is Jefferson County Public Works.

(5) PRIME CONTRACTOR REQUIREMENTS: The prime contractor must be on MoDOT's approved contractor listing at least 7 days before the day of the bid opening in order for MoDOT to concur with the award of this project. The limitation in Sec 108.1.1 of the Missouri Standard Specifications for Highway Construction that "the contractor's organization shall perform work amounting to not less than 40 percent of the total contract cost" is waived for this contract. Instead, the less restrictive terms of the Federal Highway Administration's rule at Title 23 Code of Federal Regulations (CFR) § 635.116(a) shall apply, so that the contractor must perform project work with its own organization equal to and not less than 30 percent of the total original contract price. Second-tier subcontracting will not be permitted on this contract. All other provisions in Sec 108.1.1 et seq. of the Missouri Standard Specifications for Highway Construction shall remain in full force and effect, and shall continue to govern the contractor and its subcontractors, in accordance with the provisions of Title 23 CFR § 635.116.

(6) SUBCONTRACTORS: No subcontract may be awarded by the prime contractor under this contract to anyone without approval of the County. In order for such approval to be obtained the Contractor shall submit a request to subcontract. This is not required for bid submittal. The proposed subcontractor must also submit, through the Contractor, the following documents in an acceptable form:

- a. Copy of any subcontracts, if requested
- b. Certification by proposed subcontractor regarding equal employment opportunity;
- c. Certification by proposed subcontractor concerning labor standards and prevailing wage requirements;
- d. Any such other documents and evidence as the County may reasonably request to show that the subcontractor has fully complied with any reporting requirements to which it is or was subject.
- e. Affidavit of Federal Employment Authorization to be completed and turned in by proposed subcontractors.
- f. Subcontractor shall have certificate of insurance with the same limits as the prime contractor listing Jefferson County Public Works as Additional Insured and as a certified holder. The endorsement is also required.
- g. E-verify MOU in its entirety.

The documents by proposed subcontractors are not required to be attached to the Contractor's Bid.

BIDDER'S INITIALS INDICATING UNDERSTANDING AND ACCEPTANCE _____

(7) **SUBCONTRACTOR DISCLOSURE:** Requirements contained within Sec 102.7.12 of the Missouri Standard Specification for Highway Construction shall be waived for this contract.

(8) **SALES AND USE TAX EXEMPTION:** County of Jefferson, a tax exempt entity, will furnish a Missouri Project Exemption Certificate as described in Section 144.062 RSMo to the awarded contractor who in turn may use the certificate to purchase materials for a specific project performed for the tax exempt entity. Only the materials and supplies incorporated or consumed during the construction of the project are exempt. The certificate will be issued to the contractor for a specific project for a defined period of time.

(9) **PERIOD OF PERFORMANCE:** If the bid is accepted, the bidder agrees that work shall be diligently prosecuted at such rate and in such manner as, in the judgment of the engineer, is necessary for the completion of the work within the time specified as follows in accordance with Sec 108:

50 Working Days

(10) **LIQUIDATED DAMAGES:** The bidder agrees that, should the bidder fail to complete the work in the time specified or such additional time as may be allowed by the engineer under the contract, the amount of liquidated damages to be recovered in accordance with Sec 108 shall be as follows:

Liquidated damages per day: **\$700.00**

(11) **BID GUARANTY:** The bidder shall submit a Bid Guaranty. The project bid bond form is included in the bid book. The bidder shall mark the box below to identify the type of Bid Guaranty.

Paper Bid Bond
 Cashier's Check

Bid Guaranty shall be made payable to the Owner, in the amount of five percent of the Bidder's maximum Bid price and in the form of a certified or bank check or a Bid Bond (on form attached, if a form is prescribed) issued by a Surety.

The Bid security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required Contract Security within 15 days of the Notice of Award. Failure to do so may result in the annulment of the Notice of Award and forfeiture of the Bid Security. The Bid Security of any Bidder whom the Owner believes to have a reasonable chance of receiving the award may be retained by the Owner until the earlier of the seventh day after the "effective date of the Agreement" (which is the date when the agreement has been executed by all parties) by Owner to Contractor and the required Contract Security is furnished or the sixty-first day after the Bid opening. Bid Security of other Bidders will be returned within seven days of the Bid opening.

(12) **CERTIFICATIONS FOR FEDERAL JOBS:** By signing and submitting this bid, the bidder makes the certifications appearing in Sec. 102.18.1 (regarding affirmative action and equal opportunity), Sec. 102.18.2 (regarding disbarment, eligibility, indictments, convictions, or civil judgments), Sec. 102.18.3 (regarding anti-collusion), and Sec. 102.18.4 (regarding lobbying activities). Any necessary documentation is to accompany the bid submission, as required by these sections. As provided in Sec. 108.13, the contracting authority may terminate the contract for acts of misconduct, which includes but is not limited to fraud, dishonesty, and material misrepresentation or omission of fact within the bid submission.

(13) **SUBSTITUTE MATERIALS, EQUIPMENT, AND VALUE ENGINEERING:** The Contract, if awarded, will be on the basis of material and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by a Contractor, it must first be approved to be acceptable by the county. Proposals to alter the project design or specifications, otherwise known as "Value Engineering" must also be proposed, submitted, and accepted. Application for such acceptance will not be considered by County Engineer until after the "effective date of the Agreement". Bidders should assume that no modifications to the contract or design will be allowed for it is not guaranteed that a modification will be allowed. Bid on the plans and Specifications "As-Is" or with any issued addendum during the bidding phase.

BIDDER'S INITIALS INDICATING UNDERSTANDING AND ACCEPTANCE _____

(14) MATERIALS INSPECTION: All technicians who perform, or are required by the FHWA to witness, such sampling and testing shall be deemed as qualified by virtue of successfully completing the requirements of EPG 106.18 Technician Certification Program, for that specific technical area.

(15) BUY AMERICA REQUIREMENTS: Construction contracts shall assure compliance with Section 165 of the Surface Transportation Assistance Act of 1982, Section 337 of the Surface Transportation and Uniform Relocation Assistance Act of 1987, and 23 CFR 635.410 regarding Buy America provisions on the procurement of foreign products and materials. On all contracts involving Federal-aid, all products of iron, steel, or a coating of steel which are incorporated into the work must have been manufactured in the United States. The Contracting Authority may allow minimal amounts of these materials from foreign sources, provided the cost does not exceed 0.1 percent of the contract sum or \$2,500, whichever is greater. The Contractor certifies that these materials are of domestic origin. Additional information regarding the "Buy America" requirements can be found at:

<http://www.fhwa.dot.gov/programadmin/contracts/b-amquck.cfm>

(16) FEDERAL AND STATE INSPECTION: The Federal Government is participating in the cost of construction of this project. All applicable Federal laws, and the regulations made pursuant to such laws, shall be observed by the contractor, and the work will be subject to the inspection of the appropriate State or Federal Agency in the same manner as provided in Sec 105.10 of the Missouri Standard Specifications for Highway Construction with all revisions applicable to this bid and contract.

(17) PREVAILING WAGE (FEDERAL AND STATE): This contract requires payment of the prevailing hourly rate of wages for each craft or type of worker required to execute the contract as determined by the Missouri Department of Labor and Industrial Relations. The applicable State Wage Rates for this contract are detailed in "Annual Wage Order No. 22", that is attached to this bidding document. These supplemental bidding documents have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

(18) WORKER ELIGIBILITY REQUIREMENTS: Execution of the construction contract for this project is dependent upon the awarded bidder providing an Affidavit of Compliance AND E-Verify Memorandum-of-Understanding (MOU) between the bidder and Department of Homeland Security to the Contracting Authority as required by section 285.530 RSMo. **The cover page and signature page of the E-Verify MOU and the Affidavit must be submitted with the bid.** A sample Affidavit of Compliance can be found at the Missouri Attorney General's website at the following link:

http://ago.mo.gov/forms/Affidavit_of_Compliance.pdf

All bidders must also be enrolled in the E-Verify Program, and include their MOU prior to contract execution. Bidders who are not enrolled will need to go to the following website link and select "Enroll in the Program" to get started. After completing the program, they will receive their E-Verify MOU with Department of Homeland Security. This document will need to be printed out and kept on file so that a copy can be attached to the Affidavit of Compliance.

http://www.dhs.gov/files/programs/gc_1185221678150.shtm

This requirement also applies to subcontractors and contract labor, but this contract only requires submittal of the verification documents for the prime contractor. It is the prime contractor's responsibility to verify the worker eligibility of their subcontractors in order to protect their own company from liability as required by section 285.530 RSMo.

BIDDER'S INITIALS INDICATING UNDERSTANDING AND ACCEPTANCE _____

(19) **ANTIDISCRIMINATION:** The Contracting Authority hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, businesses owned and controlled by socially and economically disadvantaged individuals will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, religion, creed, sex, age, ancestry, or national origin in consideration for an award.

(20) **OSHA TEN HOUR TRAINING REQUIREMENTS:** Missouri Law, 292.675 RSMO, requires any awarded contractor and its subcontractor(s) to provide a ten-hour Occupational Safety and Health Administration (OSHA) Construction Safety Program (or a similar program approved by the Missouri Department of Labor and Industrial Relations as a qualified substitute) for their on-site employees (laborers, workmen, drivers, equipment operators, and craftsmen) who have not previously completed such a program and are directly engaged in actual construction of the improvement (or working at a nearby or adjacent facility used for construction of the improvement). The awarded contractor and its subcontractor(s) shall require all such employees to complete this ten-hour program, pursuant to 292.675 RSMO, unless they hold documentation on their prior completion of said program. Penalties, for Non-Compliance include contractor forfeiture to the Contracting Authority in the amount of \$2,500, plus \$100 per contractor and subcontractor employee for each calendar day such employee is employed beyond the elapsed time period for required program completion under 292.675 RSMO.

(21) **TRAINEES:** By submitting this bid, the bidder certifies that the bidder is familiar with the Training Provision in the Missouri Highways and Transportation Commission's "General Provisions and Supplement Specifications" which are available on the Missouri Department of Transportation web page at www.modot.mo.gov under "Business with MoDOT" "Standards and Specifications". The number of trainee hours provided under this contract will be **0 slots** at 1000 hours per slot or **0 hours**.

(22) **ADDENDUM ACKNOWLEDGEMENT:** An addendum, if issued, will be posted on the County's website (Jeffcomo.org in same location as these specifications), and will be emailed to the provided contact on the "Plan Holder Information Request" form. Bidder must submit the plan holder form with a valid contact to receive any addenda. By submitting a bid, the bidder acknowledges he or she was afforded equal opportunity to gain access and knowledge of any addenda. The County shall not be held liable for a bidder's failure to provide contact information leading to the failure to be aware of any contract modifications. The undersigned states that all addenda (if applicable) have been received, acknowledged and incorporated into their bid, prior to submittal. For paper bids, staple addenda to the bid in the appropriate part of the bid.

No Addenda I have checked the County's website for addenda and acknowledge there are no addenda

Addenda I have checked the County's website for addenda and acknowledge the contract modifications

BIDDER'S INITIALS INDICATING UNDERSTANDING AND ACCEPTANCE _____

(THIS SPACE INTENTIONALLY LEFT BLANK)

(23) SIGNATURE AND IDENTITY OF BIDDER: The undersigned states that the following provided information is correct and that (if not signing with the intention to bind themselves to become the responsible and sole bidder) they are the agent of, and they are signing and executing this, as the bid of

_____, which is the correct LEGAL NAME as stated on the contractor questionnaire (if applicable).

a) The organization submitting this bid is a(n) (1) individual bidder, (2) partnership, (3) joint venturer (whether individuals or corporations, and whether doing business under a fictitious name), or (4) corporation. Indicate by marking the appropriate box below.

sole individual

partnership

joint venture

corporation, incorporated under laws of state of _____.

b) If the bidder is doing business under a fictitious name, indicate below by filling in the fictitious name

Executed by bidder this _____ day of _____ 20_____.

THE BIDDER CERTIFIES THAT THE BIDDER AND ITS OFFICIALS, AGENTS, AND EMPLOYEES HAVE NEITHER DIRECTLY NOR INDIRECTLY ENTERED INTO ANY AGREEMENT, PARTICIPATED IN ANY COLLUSION, OR OTHERWISE TAKEN ANY ACTION IN RESTRAINT OF FREE COMPETITIVE BIDDING IN CONNECTION WITH THIS BID, AND THAT THE BIDDER INTENDS TO PERFORM THE WORK WITH ITS OWN BONAFIDE EMPLOYEES AND SUBCONTRACTORS, AND DID NOT BID FOR THE BENEFIT OF ANOTHER CONTRACTOR.

THE BIDDER ACKNOWLEDGES THAT THIS IS AN UNSWORN DECLARATION, EXECUTED UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE UNITED STATES AND/OR FALSE DECLARATION UNDER THE LAWS OF MISSOURI, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS. THE FAILURE TO PROVIDE THIS CERTIFICATION IN THIS BID MAY MAKE THIS BID NON-RESPONSIVE, AND CAUSE IT TO BE REJECTED.

THE BIDDER CERTIFIES THAT THE BIDDER'S COMPANY KNOWINGLY EMPLOYS ONLY INDIVIDUALS WHO ARE AUTHORIZED TO WORK IN THE UNITED STATES IN ACCORDANCE WITH APPLICABLE FEDERAL AND STATE LAWS AND ALL PROVISIONS OF MISSOURI EXECUTIVE ORDER NO. 07-13 FOR CONTRACTS WITH THE CONTRACTING AUTHORITY.

Check this box ONLY if the bidder REFUSES to make any or all of these certifications. The bidder may provide an explanation for the refusal(s) with this submittal.

Signature of Bidder's Owner, Officer, Partner or Authorized Agent

Please print or type name and title of person signing here

Attest:

Secretary of Corporation if Bidder is a Corporation

Affix Corporate Seal (If Bidder is a Corporation)

NOTE: If bidder is doing business under a fictitious name, the bid shall be executed in the legal name of the individual, partners, joint ventures, or corporation, and registration of fictitious name filed with the secretary of state, as required by sections 417.200 to 417.230 RSMo. If the bidder is a corporation not organized under the laws of Missouri, it shall procure a certificate of authority to do business in Missouri, as required by section 351.572 et seq RSMo. A certified copy of such registration of fictitious name or certificate of authority to do business in Missouri shall be filed with the Missouri Highways and Transportation Commission, as required by the standard specifications.

(24) MODIFICATION AND WITHDRAWAL OF BIDS: Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

If, within twenty-four hours after Bids are opened, any Bidder files a duly signed written notice with the County and promptly thereafter demonstrates to the reasonable satisfaction of the County that there was a material and substantial mistake in the preparation of his Bid, that Bidder may withdraw his bid. Thereafter, that Bidder will be disqualified from further bidding on the Work.

(25) OPENING OF BIDS: Bids will be opened publicly. All Bids shall remain open for sixty days after the day of the Bid opening, but the County may at their sole discretion, release any Bid and return the Bid Security prior to that date. The County reserves the right to reject any and all bids, to waive any and all informalities, and the right to reject non-responsive bids with MoDOT concurrence. In evaluating Bids, the County shall require Bidders to be on MoDOT's approved contractor listing at least 7 days before the day of the bid opening, and consider whether the Bid meets all requirements of the advertisement and proposal, and any alternates and all unit prices requested in the Bid forms are provided.

(26) AWARD OF CONTRACT: This project will be awarded to the lowest, responsive, responsible bidder.

The County may consider the qualifications and experience of Subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the work as to which the identity of Subcontractors and other persons and organizations must be submitted as provided. Operating costs, maintenance considerations, performance data and guarantees of materials and equipment may also be considered by the County. The County may conduct such investigations as they deem necessary to assist in the evaluation of whether any Bid is responsive in accordance with the Contract Documents to the County's satisfaction within the prescribed time. If the contract is to be awarded, the County will give the Successful Bidder a Notice of Award within sixty days after the date of the Bid opening.

Section 39 of the General Provisions set forth the County's requirements as to performance and other Bonds. When the Successful Bidder delivers the executed Agreement to the County it shall be accompanied by the required Contract Security.

When the County gives a Notice of Award to the Successful Bidder, it will be accompanied by at least four unsigned counterparts of the Agreement and all other Contract Documents. Within fifteen days thereafter Contractor shall sign and deliver at least four counterparts of the Agreement to the County with all other Contract Documents attached. The County will return one executed Contract Agreement to the Contractor.

(27) FAILURE TO EXECUTE AGREEMENT: Failure to execute the agreement and to file the acceptable contract bonds within 15 days after the unexecuted agreement has been mailed to the bidder shall be just cause for the cancellation of the award and the forfeiture of the bid guaranty. A bidder failing to file an acceptable bid or contract bond from an approved surety or failing to execute the agreement within the time provided, resulting in a cancellation of the award to that bidder, disqualifies that bidder, and any other firm having common ownership or control with that bidder, from performing any work on the County project or projects which are the subject of that bid, as a prime contractor, a subcontractor or a supplier.

BIDDER'S INITIALS INDICATING UNDERSTANDING AND ACCEPTANCE _____

(THIS SPACE INTENTIONALLY LEFT BLANK)

(28) ITEMIZED BID: Bid Forms must be completed in ink or by typewriter. The Bidder shall indicate, in figures, a unit price for each item on the form, the product of the respective quantities and unit prices in the column provided, the subtotal for each item group, and the gross sum (Total Bid).

In case of discrepancy between the gross sum shown on the bid and that obtained by adding the products of the quantities of work and the unit prices, the bidder agrees that the unit prices shall govern, and any errors found in said products and gross sum may be corrected by the County.

Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.

The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which shall be filled in on the Bid Form).

The address, phone number, and email to which communications regarding the Bid are to be directed must be shown.

Bids shall be submitted, in triplicate, at time and place indicated in the Invitation to Bid and shall be included in an opaque sealed envelope, marked with the Project title and name and address of the Bidder and accompanied by the other required documents.

If the Bid is sent through the mail or other delivery system the sealed envelope shall be enclosed in a separate envelope with the notation "**BID ENCLOSED**" on the face thereof

Failure to submit the following required documents prior to the bid opening will make the bid non-responsive and not eligible for award consideration:

- a. Complete and Submit Plan Holder's List Form prior to bid submittal (email before bid opening)
- b. Bid Submittal Cover Sheet with bidder's name printed or typed
- c. Instructions and Notices to Contractors initialed on each page, all spaces filled, signed.
- d. Balanced Bid Form, complete, signed, and embossed (if corporation), **addenda acknowledged and attached**
- e. Bid Guaranty/Bid Bond (Assurance Company's form is valid substitute to generic form herein)
- f. Bidder's Acknowledgement completed and signed
- g. Affidavit of Federal Employment Authorization (Annual Worker Eligibility Verification Affidavit)
- h. Disadvantaged Business Enterprise (DBE) Identification (within 3 days of bid opening)
- i. Certification Regarding Anti-collusion (see notice 12 above)
- j. Certification Regarding Use of Contract Funds for Lobbying (see notice 12 above)
- k. Certification Regarding Debarment and Suspension (see notice 12 above)
- l. Certification Regarding Affirmative Action and Equal Opportunity (see notice 12 above)
- m. Bid to be submitted in ink with proper signatures with no white out or initialed changes
- n. Enclose Certificate of Insurance

IN ORDER TO BE CONSIDERED A RESPONSIVE, RESPONSIBLE BIDDER, THE CONTRACTOR MUST READ, UNDERSTAND, COMPLETE AND SUBMIT 3 COPIES OF ALL FORMS WITHIN THIS BID SUBMITTAL PACKAGE, ALONG WITH OTHER SUBMITTAL REQUIREMENTS AS STATED ABOVE AND ON THE BIDDER CHECKLIST.

The County does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

The bidder should complete the following section in accordance with Sec 102.7. The bidder proposes to furnish all labor, materials, equipment, services, etc. required for the performance and completion of the work, as follows:

BID FORM

TO: JEFFERSON COUNTY, MISSOURI
BID FOR: OLD LEMAY FERRY ROAD STRUCTURE REPLACEMENT
FEDERAL PROJECT NO. PW15113BXC

1. The undersigned BIDDER proposes and agrees, if this BID is accepted, to enter into an Agreement with the County in the form included in the Contract Documents to complete all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the Contract Documents.
2. BIDDER accepts all of the terms and conditions of the Instructions to Bidders. This Bid will remain open for sixty days after the day of Bid opening. BIDDER will sign the Agreement and submit all documents required within fifteen (15) days after the COUNTY'S Notice of Award.
3. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:
 - (a) BIDDER has examined the site and locality where the Work is to be performed, the legal requirements (federal, state and local laws, ordinances, rules and regulations) and the conditions affecting cost, progress or performance of the Work and has made such independent investigations as BIDDER deems necessary; and
 - (b) This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or a corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for himself any advantage over any other Bidder or over the County.
4. Bidder will complete project for the following unit prices. It is understood that the quantities given for the following bid items are not guaranteed by the Jefferson County Public Works Department and are used solely for the purpose of comparing bids and awarding the contract, and may or may not represent the actual quantities encountered on the job, and that the sum of quantities listed below, multiplied by the unit price shall constitute the gross sum bid:

(Enter Unit Prices Beginning on Next Sheet Below)

BID ITEMS:**ROADWAY ITEMS:**

Item No.	Item Description	Unit	Quantity	Unit Cost	\$ Amount
201-30.00	Clearing & Grubbing	ACRE	0.7		
202-20.10	Removal of Improvements	LS	1		
203-50.00	Unclassified Excavation	CY	353		
203-60.00	Compacting Embankment	CY	338		
304-05.04	Type 5 Aggregate for Base (4 in. thick)	SY	1050		
310-10.03	Gravel (Type A)	SY	117.0		
401-12.09	Bituminous Pavement Mixture PG64-22 (BP-1)	TONS	120.7		
401-30.00	Bituminous Pavement Mixture PG64-22 (Base)	TONS	488.3		
606-10.10	Guardrail Type A	LF	125		
606-23.00A	Transition Section, 6.5 Ft. Posts	EACH	4		
606-24.00	Bridge Anchor Section (Thrie Beam)	EACH	4		
606-30.15	Type A Crashworthy End Terminal	EACH	4		
611-30.20	Furnishing Type 2 Rock Blanket	CY	300		
611-30.40	Placing Type 2 Rock Blanket	CY	300		
618-10.00	Mobilization	LS	1		
624-01.03A	Permanent Erosion Control Geotextile	SY	691		
627-40.00	Contractor Furnished Surveying and Staking	LS	1		
806-10.17	Temporary Seeding and Mulching	ACRE	0.3		
806-10.19	Silt Fence	LF	456		
806-10.22	Type I Ditch Check	EACH	3		

Roadway Subtotal = **BRIDGE ITEMS**

Item No.	Item Description	Unit	Quantity	Unit Cost	\$ Amount
206-10.00	Class 1 Excavation	CY	110		
216-05.00	Removal of Bridges	LS	1		
503-10.10	Bridge Approach Slab (Bridge)	SY	222		
702-10.12	Structural Steel Piles (12 in.)	LF	282		
702-70.00	Pile Point Reinforcement	EACH	12		

703-20.03	Class B Concrete (Substructure)	CY	35.2		
703-42.26	Reinforced Concrete Slab Overlay	SY	176		
705-60.66	17", Prestressed Concrete Adjacent Box Beam	LF	396		
710-10.00	Reinforcing Steel (Epoxy Coated)	LBS	6450		
711-07.00	Penetrating Sealer	SY	22		
713-40.00	Bridge Guardrail (Thrie Beam)	LF	88		
715-10.01	Vertical Drain at End Bents	EACH	2		
716-10.00	Plain Neoprene Bearing Pad	EACH	22		

Bridge Subtotal = **SIGNING/STRIPING ITEMS**

Item No.	Item Description	Unit	Quantity	Unit Cost	\$ Amount
616-10.05	Construction Signs	SF	220		
616-10.31	Type III Moveable Barricade with Light	EACH	6		
616-10.98	Changeable Message Sign, Contractor Furnished, Contractor Retained	EACH	2		
620-60.00B	4 In. White Acrylic Waterborne Pavement Marking Paint	LF	777		
620-60.01B	4 In. Yellow Acrylic Waterborne Pavement Marking Paint	LF	777		

Signing/Striping Subtotal = **LANDSCAPING ITEM**

Item No.	Item Description	Unit	Quantity	Unit Cost	\$ Amount
805-10.00A	Seeding - Cool Season Mixtures	ACRE	0.3		

Landscaping Subtotal = PROJECT TOTAL = **NOTICE TO BIDDER-** Bidders must complete the submitted section in its entirety.

5. BIDDER agrees that the work will be completed within **50 Working Days** or the CONTRACTOR shall pay the COUNTY, not as a penalty but as **liquidated damages**, a sum equal to **Seven Hundred Dollars (\$700.00)** for each day, as defined by Sec 108 of the 2011 Edition of the "Missouri Standard Specifications for Highway Construction", elapsing between the expiration of such time limit plus such extensions as may be necessary to cover contingencies beyond the CONTRACTOR'S control and the date of the full completion.

The County reserves the right to negotiate additional terms for the time of completion with the successful bidder.

6. Communications concerning this Bid shall be addressed to the following:

Name: _____ Title: _____ Phone () -

Email: _____ Address: _____

7. The terms used in this Bid which are defined in the General Provisions of the Construction Contract included as part of the Contract Documents have the meanings assigned to them in the General Provisions.

8. **CERTIFICATIONS FOR FEDERAL JOBS:** By signing and submitting this bid, the bidder makes the certifications appearing in Sec. 102.18.1 (regarding affirmative action and equal opportunity), Sec. 102.18.2 (regarding disbarment, eligibility, indictments, convictions, or civil judgments), Sec. 102.18.3 (regarding anti-collusion), and Sec. 102.18.4 (regarding lobbying activities). Any necessary documentation is to accompany the bid submission, as required by these sections. As provided in Sec. 108.13, the contracting authority may terminate the contract for acts of misconduct, which includes but is not limited to fraud, dishonesty, and material misrepresentation or omission of fact within the bid submission.

9. BIDDER has examined copies of all the Contract Documents including but not limited to the Bidder's Checklist, Bid Notice, Instructions and Notices to Contractors, and the following Addenda, if applicable. Bidder must acknowledge all addenda to be considered responsive.

NO.	Date Released	Bidder's Initials	
1	/ /2016		
2	/ /2016		
3	/ /2016		
4	/ /2016		Initial Above if No Addenda is Acknowledged

COMPLETE BID SUBMITTED on _____, 2016

By _____
(Corporation Name)

_____ (State of Incorporation) _____ (dba Name if Applicable)

By _____
(Typed Name of Person Authorized to Sign) X _____
(Signature of Authorized Person)

_____ (Title) _____ (Affix Corporate Seal)

Attest _____
(Typed Name of Secretary)

X _____
(Signature of Secretary)

Business Phone: () -

Business Address: _____

BID BOND

Suitable bid security in the amount of:

(\$_____) Dollars and equal to five (5%) percent as called for in the advertisement for bids which accompanies this proposal. This sum is to be forfeited to the County of Jefferson if the party or parties making the proposal fail to enter into a contract with the approved securities within fifteen (15) days after the Notice of Award has been made. The undersigned has examined the Plans and Specifications for the work to be done and has satisfied himself as to the work to be done and the conditions under which it must be carried out.

The Contractor shall commence work within three (3) days after the date of a written Notice to Proceed from the County and shall fully complete all work under this proposal within the scheduled time established by the Contract Documents. This proposal shall be equally binding to all heirs, administrators, executors, successors and assigns.

FIRM NAME _____

BY _____

TITLE _____

ATTEST _____

TITLE _____

ADDRESS _____

TELEPHONE _____

BIDDER'S ACKNOWLEDGMENT

(Complete and fill out all parts applicable, and strike out all parts not applicable)

STATE OF _____)
)
COUNTY OF _____) SS.

On this _____ day of _____ 20_____, before me appeared _____ to me personally known, who, being by me first duly sworn, did say that he executed the forgoing Proposal with full knowledge and understanding of all its terms and provisions and of the plans and specifications; that the correct legal name and address of the Bidder (including those of all partners or joint ventures) is fully and correctly set out above; that all statements made therein by or for the Bidder are true; and

(if a sole individual) acknowledged that he executed the same as his free act and deed.

(if a partnership or joint venture) acknowledged that he executed the same, with written authority from, and as the free act and deed of, all said partners or joint venturers.

(if a corporation) that he is the _____
(President or other agent)

of _____; that the above Proposal was signed and sealed in behalf of said corporation by authority of its board of directors; and he acknowledged said proposal to be the free act and deed of said corporation.

Witness my hand and seal at _____, _____
The day and year first above written.

(SEAL) _____ Notary Public

My commission expires 20

ANNUAL WORKER ELIGIBILITY VERIFICATION AFFIDAVIT

(for joint ventures, a separate affidavit is required for each business entity)

On the _____ day of _____, 20____, before me appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be a person whose name is subscribed to this affidavit, who being by me duly sworn, stated as follows:

- I, the Affiant, am of sound mind, capable of making this affidavit, and personally certify the facts herein stated, as required by Section 285.530, RSMo, to enter into any contract agreement with the state to perform any job, task, employment, labor, personal services, or any other activity for which compensation is provided, expected, or due, including but not limited to all activities conducted by business entities.
- I, the Affiant, am the _____ of _____, and I am duly authorized, directed, and/or empowered to act officially and properly on behalf of this business entity.
- I, the Affiant, hereby affirm and warrant that the aforementioned business entity is enrolled in a federal work authorization program operated by the United States Department of Homeland Security, and the aforementioned business entity shall participate in said program to verify the employment eligibility of newly hired employees working in connection with any services contracted by the Jefferson County. I have attached documentation to this affidavit to evidence enrollment/participation by the aforementioned business entity in a federal work authorization program, as required by Section 285.530, RSMo.
- I, the Affiant, also hereby affirm and warrant that the aforementioned business entity does not and shall not knowingly employ, in connection with any services contracted by Jefferson County, any alien who does not have the legal right or authorization under federal law to work in the United States, as defined in 8 U.S.C. § 1324a(h)(3).
- I, the Affiant, am aware and recognize that, unless certain contract and affidavit conditions are satisfied pursuant to Section 285.530, RSMo, the aforementioned business entity may be held liable under Sections 285.525 though 285.550, RSMo, for subcontractors that knowingly employ or continue to employ any unauthorized alien to work within the state of Missouri.
- I, the Affiant, acknowledge that I am signing this affidavit as a free act and deed of the aforementioned business entity and not under duress.

Affiant Signature

Notary Public

My commission expires:

[documentation of enrollment/participation in a federal work authorization program attached]

AGREEMENT FORM

THIS AGREEMENT is dated as of _____, in the year ____ by and between JEFFERSON COUNTY, MISSOURI (hereinafter called OWNER OR COUNTY) and _____ (hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants herein after set forth and in the amount of _____, agree as follows:

ARTICLE 1. WORK

CONTRACTOR shall complete all work as specified or indicated in the Contract Documents for the OLD LEMAY FERRY ROAD STRUCTURE REPLACEMENT. The work is generally described as follows:

The proposed work includes:

The removal of the existing box culvert and the construction of with a new bridge structure and associated road improvements on Old Lemay Ferry Road. The work in general will consist of box culvert removal, bridge construction, excavation, placing fill, bituminous surfacing, guardrail installation, rock blanket and driveway approaches. The total length of project is 379 feet.

ARTICLE 2. ENGINEER

The County has designated the Director of Public Works, who is hereinafter called ENGINEER and who has the authority assigned to OWNER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 3. CONTRACT TIME

3.1 The work will be completed and ready for final payment in accordance with Section 30 of the General Provisions within **50 Working Days** after the date when the Contract Time commences to run. Allowances will be made for weather conditions and other occurrences beyond the control of the CONTRACTOR.

If the CONTRACTOR is unable to begin work as required, the ENGINEER shall be notified in writing. Unless the ENGINEER gives written approval for a delay in beginning the work, calendar days will begin to be counted for liquidated damages. The count will continue until the CONTRACTOR begins full operation. The count will resume when work is suspended, or full operation is not maintained.

3.2 Liquidated Damages. The Contractor agrees that should he fail to complete work in the time specified or such additional time as may be allowed by the Owner under this contract, the Contractor shall pay the County, not as a penalty but as **liquidated damages**, a sum equal to **Seven Hundred Dollars (\$700.00)** for each day, as defined by Sec 108 of the 2011 Edition of the "Missouri Standard Specifications for Highway Construction", elapsing between the expiration of such time limit plus such extensions as may be necessary to cover contingencies beyond the CONTRACTOR'S control and the date of the full completion.

ARTICLE 4. CONTRACT PRICE

4.1 Owner shall pay Contractor for performance of the work in accordance with the contract documents in current funds.

BID ITEMS:

ROADWAY ITEMS:					
Item No.	Item Description	Unit	Quantity	Unit Cost	\$ Amount
201-30.00	Clearing & Grubbing	ACRE	0.7		
202-20.10	Removal of Improvements	LS	1		
203-50.00	Unclassified Excavation	CY	353		
203-60.00	Compacting Embankment	CY	338		
304-05.04	Type 5 Aggregate for Base (4 in. thick)	SY	1050		
310-10.03	Gravel (Type A)	SY	117.0		
401-12.09	Bituminous Pavement Mixture PG64-22 (BP-1)	TONS	120.7		
401-30.00	Bituminous Pavement Mixture PG64-22 (Base)	TONS	488.3		
606-10.10	Guardrail Type A	LF	125		
606-23.00A	Transition Section, 6.5 Ft. Posts	EACH	4		
606-24.00	Bridge Anchor Section (Thrie Beam)	EACH	4		
606-30.15	Type A Crashworthy End Terminal	EACH	4		
611-30.20	Furnishing Type 2 Rock Blanket	CY	300		
611-30.40	Placing Type 2 Rock Blanket	CY	300		
618-10.00	Mobilization	LS	1		
624-01.03A	Permanent Erosion Control Geotextile	SY	691		
627-40.00	Contractor Furnished Surveying and Staking	LS	1		
806-10.17	Temporary Seeding and Mulching	ACRE	0.3		
806-10.19	Silt Fence	LF	456		
806-10.22	Type I Ditch Check	EACH	3		

Roadway Subtotal =

BRIDGE ITEMS					
Item No.	Item Description	Unit	Quantity	Unit Cost	\$ Amount
206-10.00	Class 1 Excavation	CY	110		
216-05.00	Removal of Bridges	LS	1		

503-10.10	Bridge Approach Slab (Bridge)	SY	222		
702-10.12	Structural Steel Piles (12 in.)	LF	282		
702-70.00	Pile Point Reinforcement	EACH	12		
703-20.03	Class B Concrete (Substructure)	CY	35.2		
703-42.26	Reinforced Concrete Slab Overlay	SY	176		
705-60.66	17", Prestressed Concrete Adjacent Box Beam	LF	396		
710-10.00	Reinforcing Steel (Epoxy Coated)	LBS	6450		
711-07.00	Penetrating Sealer	SY	22		
713-40.00	Bridge Guardrail (Thrie Beam)	LF	88		
715-10.01	Vertical Drain at End Bents	EACH	2		
716-10.00	Plain Neoprene Bearing Pad	EACH	22		

Bridge Subtotal =

SIGNING/STRIPING ITEMS					
Item No.	Item Description	Unit	Quantity	Unit Cost	\$ Amount
616-10.05	Construction Signs	SF	220		
616-10.31	Type III Moveable Barricade with Light	EACH	6		
616-10.98	Changeable Message Sign, Contractor Furnished, Contractor Retained	EACH	2		
620-60.00B	4 In. White Acrylic Waterborne Pavement Marking Paint	LF	777		
620-60.01B	4 In. Yellow Acrylic Waterborne Pavement Marking Paint	LF	777		

Signing/Striping Subtotal =

LANDSCAPING ITEM					
Item No.	Item Description	Unit	Quantity	Unit Cost	\$ Amount
805-10.00A	Seeding - Cool Season Mixtures	ACRE	0.3		

Landscaping Subtotal = PROJECT TOTAL =

ARTICLE 5. PAYMENT PROCEDURES

Contractor shall submit Application for Payment in accordance with Section 33 of the General Provisions. The Engineer as provided in the General Provisions will process application for Payment.

5.1 Progress Payment. Owner will make progress payments per the Contract Bid Price on the basis of the Contractor's Application of Payment as recommended by the Engineer, on or about the First day of each month during the construction as provided below. All progress payments will be on the basis of the Work measured on the job site according to unit of measurement as shown within the job special provisions or Missouri Standard Specifications.

5.1.1 The Owner may initiate withholding of retainage as provided by Section 109.9 of the Missouri Standard Specifications for Highway Construction. Release of any retained percentage shall be as provided by Section 109.9.

5.1.2 When the Contractor receives any payment from the Owner, the Contractor shall make prompt payment to subcontractors and suppliers as provided by Section 109.13 of the Missouri Standard Specifications for Highway Construction.

5.2 Final Payment. Upon final completion and acceptance of the Work in accordance with Section 33 of the General Provisions, Owner shall pay the remainder of the Contract Price as recommended by the ENGINEER.

ARTICLE 6. CONTRACTOR'S REPRESENTATIONS

In order to induce the County to enter into this Agreement CONTRACTOR makes the following representations:

6.1 CONTRACTOR has familiarized himself with the nature and extent of the Contract Documents, Work, locality, and with all local conditions and federal laws, state and local laws, ordinances, rules and regulations that in any manner may affect cost, progress or performance of the Work.

6.2 CONTRACTOR has studied carefully all reports of investigations and tests of subsurface and latent physical conditions at the site of otherwise affecting cost, progress or performance of the Work which were relied upon by the ENGINEER in the preparation of the Drawings and Specifications. When the information is available it will either be included in the bid documents or made available at the Jefferson County Public Works Department for the Contractor's review.

6.3 CONTRACTOR has made or caused to be made examinations, investigations and tests and studies of such reports and related data in addition to those referred to in Article 9 as he deems necessary for the performance of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract documents; and no additional examinations, investigations, tests, reports or similar data will be required by CONTRACTOR for such purposes.

6.4 CONTRACTOR has correlated the results of all such observations, examinations, investigations, tests, reports and data with the terms and conditions of the Contract Documents.

6.5 CONTRACTOR has given ENGINEER written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

ARTICLE 7. CONTRACT DOCUMENTS

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR are attached to this Agreement, made a part hereof and consists of the following:

- 7.1 This Agreement
- 7.2 Exhibits to this Agreement (if any)
- 7.3 Contract Performance and Payment and Materials Bonds, consisting of 3 pages.
- 7.4 Notice of Award
- 7.5 General Provisions (page 1 to 13, inclusive).
- 7.6 Specifications bearing the title PROJECT SPECIFICATIONS FOR OLD LEMAY FERRY ROAD STRUCTURE REPLACEMENT, PW15113BXC and consisting of all pages as listed in the table of contents thereof.
- 7.7 Addenda numbers ____ to ____ , inclusive.
- 7.8 CONTRACTOR'S Bid and all attachments
- 7.9 Documentation submitted by CONTRACTOR prior to Notice of Award
- 7.10 Any Modification, including Change Orders, duly delivered after execution of agreement.

There are no Contract Documents other than those listed above in this Article 7. The Contract Documents may only be altered, amended or repealed by a Modification (as defined in Section 35 of the General Provisions).

ARTICLE 8. MISCELLANEOUS

- 8.1 Terms used in this Agreement which are defined in Section 1 of the General Provisions shall have the meanings indicated in the General Provisions.
- 8.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 8.3 The County and CONTRACTOR each binds himself, his partners, successors, assigns and legal representatives to the other party hereto, his partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.

ARTICLE 9. OTHER PROVISIONS

9.1 Access to records. In connection with this Contract the County shall have access to any books, documents, papers, and records of the CONTRACTOR, which are directly pertinent to this project for the purpose of making an audit, examination, excerpts, and transcriptions.

9.2 Applicable Laws and Regulations. The CONTRACTOR expressly agrees to comply with all applicable rules and regulations as set forth in the Contract Documents or as may be required by law, and further agrees to submit all certifications, notices, and affirmative action plans as may now or hereafter be required, and to place such conditions and provisions in any and all subcontracts as may be required.

9.3 Conflict of Interest. The CONTRACTOR covenants that he or she presently has not interest of any kind and shall not acquire any type of interest, direct or indirect, in the program or any property therein, which would conflict in any manner or degree with the performance of his or her services and obligation hereunder. The CONTRACTOR further covenants that in the performance of this contract, no person known to have any conflicting interest shall be knowingly employed in the performance of this Contract.

ARTICLE 10. VENUE

10.1 It is agreed by the parties that any action at law, suit in equity, or other judicial proceeding to enforce or construe this Agreement, or regarding its alleged breach, shall be instituted only in the Circuit Court of Jefferson County, Missouri.

IN WITNESS WHEREOF, the parties hereto have signed this agreement in quadruplicate. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or by ENGINEER on their behalf.

FOR: JEFFERSON COUNTY, MISSOURI

BY: _____ Date: _____
COUNTY EXECUTIVE

ATTEST: _____
COUNTY CLERK _____ DEPUTY CLERK

FOR: _____

BY: _____ Date: _____
CONTRACTOR

ATTEST: _____

I hereby certify under section 50.660 RSMo there is either: (1) a balance of funds, otherwise unencumbered, to the credit of the appropriation to which the obligation contained herein is chargeable, and a cash balance otherwise unencumbered, in the treasury, to the credit of the funds from which payment is to be made, each sufficient to meet the obligation contained herein; or (2) bonds or taxes have been authorized by vote of the people and there is a sufficient unencumbered amount of the bonds yet to be sold or of the taxes levied and yet to be collected to meet the obligation in case there is not a sufficient unencumbered cash balance in the treasury.

COUNTY AUDITOR

APPROVED AS TO FORM

COUNTY COUNSELOR

CONTRACT PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the Undersigned _____

of _____
(firm)

*a (corporation) duly authorized by law to do business as a construction contractor in the
(partnership)

State of _____ (hereinafter called the "Contractor"), and _____

_____ (hereinafter called the "Surety"), a corporation

duly authorized to do a Surety business under the laws of the State of Missouri, are held

firmly bound unto Jefferson County, (hereinafter called the "County"), in the penal sum

of _____ Dollars (\$_____), lawful money of the United States, for the

payment of which to be made unto said County; we bind ourselves, our heirs, executors,

administrators, successors and assigns, jointly and severally, firmly by these presents as

follows:

The conditions of this obligation are such that, whereas on the _____ day
of _____, 20____, the said Principal entered into a written Agreement, which
Agreement is hereby made a part hereof, with the said County for the construction of
_____.

NOW THEREFORE, if the said Principal shall faithfully and properly perform the
foregoing Contract according to all the terms thereof, and shall, as soon as the work
contemplated by said contract is completed, pay to the proper parties all amounts due for
all labor and material required by this contract in the construction work, and all insurance
premiums for both compensation and all other kinds of insurance on said work, and for
all labor performed in such work whether by subcontractor or otherwise, then this obligation
shall be void, otherwise it shall remain in full force and effect, and may be sued on for the

use and benefit by any person furnishing material or performing labor, either as an individual or as a subcontractor, for any contractor in the name of said County.

Every Surety on this bond shall be deemed held, any contract on the contrary notwithstanding, to consent without notice.

- a) To the extension of time to the Contractor in which to perform the contract.
- b) To changes in the plans, specifications, amount of work or contract.

IN TESTIMONY WHEREOF, the Parties hereunto have caused the execution hereof in _____ original counterparts as of the _____ day of _____, 20____.

(SEAL) _____

Attest:

_____ By _____

(SEAL) _____

Attest:

_____ By _____

PAYMENT AND MATERIALS BOND

KNOW ALL MEN BY THESE PRESENT, that we, _____
Principal and Address

_____, as Principal, and _____
Surety and Address
as Surety, are held and firmly bond unto The County of Jefferson, Missouri, hereinafter called Obligee,
in the amount of \$_____, for the payment of which we jointly and severally bind ourselves,
our heirs, executors, administrators, successors, trustees, and assigns firmly by these presents.

WHEREAS, the Principal has entered into a contract with Obligee for

_____; and
describe briefly

WHEREAS, the Obligee requires that the Principal enter into a surety bond satisfying the terms of
Section 107.170 R.S.Mo.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such, that if the Principal shall pay,
or cause to be paid in full, the claims of all persons performing labor upon, or furnishing materials to
be used in, or furnishing appliances, equipment or power contributing to such work under said
contract, then this obligation shall be void; otherwise to remain in full force and effect. The total
amount of surety's liability under this bond shall in no event exceed the amount hereof, and in no
event shall the undertaking hereby be construed to impose liability on the surety beyond that
required by the terms of Section 107.170 R.S.Mo.

Signed and sealed this _____ day of _____, 20____.

PRINCIPAL

By _____

SURETY

By _____

(ACKNOWLEDGMENT FOR PRINCIPAL)
(ACKNOWLEDGMENT AND POWER OF ATTORNEY FOR SURETY)

GENERAL PROVISIONS

- 1) **DEFINITIONS:** The following terms as used in these Contract Documents are respectively defined as follows:
 - a) "Owner" - A person, firm, corporation, municipality or Government agency, by which the Contract will be awarded. Where ever the Owner is specified, it shall also be construed to mean his authorized representative.
 - b) "Consultant" - The Engineering firm responsible for the preparation of construction plans.
 - c) "Contractor" - The person, firm, or corporation to whom the contract is awarded.
 - d) "Subcontractor" - A person, firm, or corporation, performing any part of the Contractor's obligations hereunder at the site of work excluding, however, the furnishing of standard materials, such as cement, lumber, and other materials not worked to a special design under the plans and specifications for the work.
 - e) "Contract Documents" - The agreement subscribed by the parties, the Invitation to Bidders, Information for Bidders, the Proposal, and the Plans and Specifications.
 - f) "Work" - The furnishing of all labor, materials, equipment and other incidentals necessary or convenient to the successful completion and carrying out of all duties and obligations of the Contractor under the Contract Documents.
 - g) "Days" - Except where otherwise specifically provided in the Contract Documents, calendar days including Sundays and Holidays.
- 2) **NOTICE:** Unless otherwise specified herein, any notice required under the Contract Documents shall be deemed given if deposited in the United States mail, first class postage prepaid. Notice may also be given by hand delivery to the authorized representative
- 3) **INTENT OF THE CONTRACT DOCUMENTS:** The intention of the Contract Documents is to include in the contract price the cost of all labor and materials, water, fuel, tools, plant, equipment, light, transportation and all other expense as may be necessary for the proper execution of the work.

In interpreting the Contract Documents, words describing materials of work which have a well-known technical or trade meaning, unless otherwise specifically defined in the Contract Documents, shall be construed in accordance with such well-known meaning recognized by architects, engineers and the trade.

The work shall be executed in strict conformity with the plans and specifications.

The Contract Documents are complimentary and what is called for by any one shall be as binding as if called for by all. Anything stated in the specifications and not shown in the drawings, or shown in the drawings and not stated in the specifications, shall be of like effect as if shown or stated in both.

- 4) **PLANS / PROJECT SPECIFICATIONS:** Unless otherwise provided in the Contract Documents, the Plans, Project Specifications and subsequent addendums are available; free of charge, as a downloadable file from the Jefferson County website (<http://www.jeffcomo.org/PublicWorksProjects.aspx?nodeID=Purchasing>). The Contractor will be responsible for reproducing the plans necessary to carry out all the work.

In case of discrepancy in the plans, the matter shall be immediately submitted to the Consultant or Owner without whose decision said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

- 5) **SUPERVISION AND PERSONNEL:** The Contractor shall have at the work site at all times a job supervisor. That individual shall be capable of reading and understanding the project plans and specifications, have authority to order materials and equipment, and have authority to execute work as directed by the Owner. The Contractor shall provide the name and phone numbers of the person appointed as job supervisor prior to issuance of notice to proceed.

All workers shall have sufficient skill and experience to properly perform the work assigned to them. The owner may demand the dismissal of any person employed by the contractor in, about or upon the work who engages in misconduct, is incompetent or negligent in the due and proper performance of assigned duties, or who neglects or refuses to comply with any proper directions given. Such person shall not again be employed thereon without the written consent of the owner. Should the contractor continue to employ or re-employ any such person, the owner may suspend the work until the contractor complies with such orders.

6) COMPLIANCE WITH LAWS: The Contractor shall comply with all laws, ordinances, rules and regulations bearing in the conduct of the work and shall obtain at his expense all permits and licenses necessary for the prosecution of the work.

The Contractor shall be responsible for the payment of all Federal, State, municipal or local taxes, including but not limited to sales and use taxes, applicable to the performance of the contract and shall indemnify and hold harmless the Owner from the consequences of his failure to pay such taxes.

A sales tax exemption for construction materials is allowed by RSMo Section 144.062 RSMo, which applies to contractors for the County. Jefferson County will issue an exemption certificate to the contractors, subcontractors and suppliers for the purchase of materials used in construction.

7) USE OF JOB SITE: The Contractor shall confine his equipment, apparatus, the storage of materials and operations of his workmen to limits indicated by law, ordinance, permits, easements or plans and shall not encumber the premises with his materials.

The Contractor shall not load or permit any part of any structure to be loaded to the extent that its safety may be endangered.

8) SANITARY PROVISIONS: The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of his employees as may be necessary to comply with the sanitary requirements of law or ordinance.

9) SURVEYS: The Contractor shall provide all surveys necessary to the performance of his work. All work shall be done to the lines, grades and elevations shown on the plans. Any work done without being properly located may be ordered removed and replaced at the Contractor's expense.

The Owner or Consultant may, in his sole discretion, check from time to time the reference marks, lines, grades and measurements established by the Contractor but his exercise or failure to exercise such right shall not relieve the Contractor of his obligation under the preceding paragraph.

10) CONDITIONS AT THE SITE: The Contractor shall make such investigations of conditions above or below the surface of the ground, as he may deem necessary for the proper and timely performance of his work, including but not limited to the making of borings. No oral representations by any persons respecting such conditions shall in any manner be binding upon the Owner or the Consultant.

The Owner may have, for its own use, made borings at or near the site of the work. The boring data, if collected, will be made available to the Contractor, for his own convenience, if he desires to examine it.

Any interpretations or conclusions drawn by the Contractor from such data shall be his own and the Owner makes no representation or guaranty concerning the accuracy or completeness of such data.

11) UTILITIES AND OTHER OBSTRUCTIONS: It shall be the sole responsibility of the Contractor in the performance of the contract to locate and avoid all utilities, other structures and obstructions whether located below or above the surface of the ground. For that purpose he shall employ all necessary precautions and methods to prevent damage to utilities, other structures and obstructions. In the event such damage does occur, the Contractor shall be solely liable therefore and he shall notify the affected utility and Owner immediately, make or have made all necessary repairs and bear the expense thereof and all damage caused thereby.

If the Contractor finds he cannot safely work at a location designated in the plans and specifications, either because of utilities, other structures or obstructions that may be damaged, he shall notify the Owner immediately.

Certain information relating to piping and underground utilities and structures, such as gas mains, water mains, and electric duct lines, has been gathered by the Consultant for its purposes and has been shown on the plans for the convenience of the Contractor and for such use as he may, at his own risk, desire to make of it. Any interpretations or conclusions drawn by the Contractor from such data on the plans shall be his own and the Owner and the Consultant makes no representations or guaranty concerning the accuracy or completeness of such data.

12) STRUCTURES ENCOUNTERED AND PROTECTION OF LIFE AND PROPERTY: The Contractor shall, at his own expense, support and protect all buildings, bridges, conduits, wires, water pipes, sewers, pavements, curbing, sidewalks, equipment and fixtures of all kinds and all other public or private property that may be encountered or endangered in the execution of the work herein contemplated. He shall replace, repair or to otherwise make good any damage caused to any such property to the satisfaction of the Owner thereof.

In the event the Contractor does not perform his obligations under the preceding paragraph, the Owner reserves the right at its election to make good any damage to public or private property caused by the work of the Contractor and the cost thereof shall be borne by the Contractor.

In the event the Contractor refuses or fails to pay bills therefore upon presentation, the Owner may pursue any remedies available to it or may deduct the amount thereof from any money that may be due the Contractor hereunder from time to time.

Throughout the performance of the work, the Contractor shall construct and adequately maintain suitable and safe crossings over the trenches, and such detours as are necessary to care for the public and private traffic. The material excavated from trenches shall be deposited in such manner as shall give as little inconvenience as possible to the traveling public, to adjoining property owners, to other contractors or to the Owner.

The Contractor at his own expense shall provide the necessary watchmen and sufficient warning lights and barricades and take such other precautions as are necessary to protect life and property.

The Contractor shall provide watchmen or additional watchmen at any point where they may be requested by the proper official of any municipality or governmental body affected.

Nothing in this section shall be construed as requiring the Contractor to provide a road patrol.

13) PROTECTION OF WORK: The Contractor shall provide proper facilities, take all necessary precautions and assume the entire cost for protecting the work against adverse weather conditions and for handling all storm and flood water, sewage, seepage, ice or snow that may be encountered during the performance of the contract and the manner for providing for such contingencies and for carrying on the work in freezing weather shall meet with the approval of the Owner. If the Contractor shall fail to provide such protection or in the event of emergencies, the Owner may provide such protection at the Contractor's expense.

The contractor assumes all risk of damage to or destruction of the work covered by this contract until the work is completed and accepted by the Owner and shall repair or replace at his expense any work damaged or destroyed prior to such completion and acceptance regardless of cause.

14) ACCIDENT PREVENTION: Precaution shall be exercised at all times for the protection of persons (including employees) and property. The safety provisions of applicable laws and building and construction codes shall be observed.

15) BLASTING: The Contractor shall comply with all Federal, State, County and municipal laws, rules and regulations applicable to the transportation, storage or use of explosives.

The Contractor shall assume all responsibility for any injury or damage that may be done during the transportation, storage or use of any explosives.

16) OTHER CONTRACTS: The Owner may award other contracts for additional work, and the Contractor shall fully cooperate with such other contractors, and carefully schedule and fit his own work to that work provided under the other contract. The Contractor shall not commit or permit any act, which will interfere with the performance of work by any other contractor.

17) CUTTING AND PATCHING: The Contractor shall do all cutting, fitting, or patching of his work that may be required to make its several parts connect with the work of other contractors shown upon, or reasonably implied by the plans and specifications.

The Contractor shall not endanger any work by cutting, digging, or otherwise, and shall not cut or alter the work of any other contractor.

18) CLEANING UP: The Contractor shall at all times keep the premises free from accumulation of waste material or rubbish and at the completion of the work shall remove from and about the site all his rubbish, tools, equipment, scaffolding and surplus materials and shall leave his work clean and ready for use.

19) SURVEILLANCE: The Contractor shall provide safe, sufficient and proper facilities at all times for the surveillance of work by the Consultant, the Owner, the Missouri Department of Transportation, the Federal Highway Administration, or any other governmental agency, it being agreed that these agencies have the right of entry.

The Contractor shall within 24 hours after receiving written notice from the Owner proceed to remove all materials rejected by the Owner, whether worked or unworked, and take down all portions of the work, which shall be considered as unsound or improper, or in any way failing to conform to the plans and specifications.

Should it be considered necessary or advisable by the Owner at any time before acceptance of the entire work to make an examination of work already completed by removing or tearing out same, the Contractor shall, on written request, promptly furnish all necessary facilities, labor, and material for that purpose. If such work is found to be defective or nonconforming in any material respect, due to the fault of the Contractor or his subcontractors, he shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the contract, an equitable adjustment shall be made in the contract price to compensate the Contractor for the additional services involved in such examination and reconstruction and, if completion of the work has been delayed thereby, he shall, in addition, be granted a suitable extension of time.

Unless otherwise provided in this contract, acceptance by the Owner shall be made as promptly as practicable after completion of all work required by this contract. Acceptance shall be final and conclusive except as regards latent defects, fraud, or gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guarantee.

20) MATERIALS AND WORKMANSHIP: Unless otherwise stipulated in the specifications, all workmanship, equipment, materials and articles incorporated in the work covered by this contract are to be new and of the best grade of their respective kinds for the purpose. When required by the plans and specifications, the Contractor shall furnish the Owner or Consultant, for approval, certified copies of test results made of the materials or articles, which he contemplates incorporating in the work. Samples of materials shall be submitted for approval when so directed. Machinery, equipment, materials and articles installed or used without such approval shall be at the risk of subsequent rejection.

If not otherwise provided, material or work called for in this contract shall be furnished and performed in accordance with established practice and standards recognized by architects, engineers and the trade.

21) COOPERATION WITH UTILITIES: All utility facilities and appurtenances within the project limits shall be located or relocated by the utility owner, unless otherwise specified. Locations of these utilities will be provided by the utility owners and may not be exact, particularly with regard to underground installations. The contractor shall call for locates prior to the start of any work.

The contractor shall lead the efforts to coordinate with utility owners and the engineer in the location and relocation of utility facilities to minimize effects upon the contractor's work, interruption to utility service and duplication of work by the utility owners. Facilities or appurtenances that are to remain in place during construction shall be accounted for and protected by the contractor's work procedures.

In the event utility services are interrupted as a result of damage within the project limits, the contractor shall notify the appropriate utility authorities and cooperate with the utility owners until service has been restored. Work shall not begin around fire hydrants until provisions for continued service have been made and approved by the local fire authority.

When the failure of the owners of utility facilities to cooperate and coordinate their work with that of the contractor results in actual delay to the contractor in the overall completion of the contractor's work, such delay will be considered in the count of working days or date specified for completion as contractor's sole compensation from the County, provided the contractor notified the engineer in writing of the delay at the time the delay occurred.

The contractor shall use every precaution to prevent damage to all public and private utilities. Repairs to damaged utilities caused by negligent or wrongful acts or omissions on the part of the contractor shall be corrected at the contractor's expense. Damaged facilities shall be restored to a condition similar or equal to that existing before the damage occurred. The utility will designate who shall repair the damaged facility and the contractor shall not make repairs without utility approval.

Should there be located within the right of way any public or private utility facilities that are to remain in place and which will interfere with the contractor's proposed methods of operation, the contractor, in cooperation with the engineer, shall make all necessary arrangements with the owner for any temporary or permanent removal or relocation of such facilities desired for the contractor's convenience. Any cost involved shall be at the contractor's expense.

If utility facilities or appurtenances are found that are not noted in the contract documents and could not be discovered in accordance with [Sec 102.5 of the Missouri Standard Specifications](#), the engineer shall be notified in writing as soon as possible of the conflict and will determine whether relocation of the utility is necessary to accommodate construction. If relocation is necessary, the contractor will make the necessary arrangements with the utility owner. Compensation for the relocation of utilities will be worked out between the County and the utility owner prior to the relocation of any utility. No additional compensation will be made to the contractor for coordinating the location and/or relocation of utilities.

22) “OR EQUAL CLAUSE”: Whenever, in these specifications or in any of the Contract Documents, any article, appliance, device or material is designated by a manufacturer's or vendor's or proprietary or trade name and such words are not followed by the condition “or equal”, it shall be deemed that the words “or equal” do follow such designation unless the text clearly requires a contrary interpretation. Any article or material equaling the standards fixed may be used in place of that specifically mentioned by the specifications, provided that the material proposed is first submitted to and approved by the Owner or Consultant.

If by reason of the unavailability of material or equipment, a substitute item of material or equipment is approved by the Owner or Consultant, the Owner shall receive the benefit of any economy resulting from the substitution.

23) SUBLETTING OR ASSIGNING THE CONTRACT: The bidder is specifically advised that any person, firm or other party to whom it is proposed to award a subcontract under this contract must be acceptable to the County.

Second tier subcontracting will not be permitted on this project. It will be the responsibility of the Contractor to insure that his subcontractors do not, in turn, subcontract any portion of the work.

The Contractor shall furnish to the County a signed copy of all subcontracts at or before the pre-construction meeting. This applies to Federal and local projects.

The Prime Contractor must be on MoDOT's approved Contractor Listing unless otherwise stipulated in the contract. The Prime Contractor must also perform with its own organization, contract work amounting to not less than 30% of the total original contract price. This applies to Federal and local projects.

24) WARRANTIES AND GUARANTEES: Clauses that require the contractor to guarantee materials and workmanship and otherwise maintain the work for a specified period after satisfactory completion and final acceptance will not be approved. This is not even permissible as a non-participating bid item.

Routine warranties or guarantees provided by a manufacturer are valid. Contractors' warranties or guarantees providing for satisfactory in-service operation of mechanical and electrical equipment and relates components for a period not to exceed six (6) months following project acceptance are permissible

25) INSPECTION BY JEFFERSON COUNTY, MoDOT and FHWA: The Contractor shall assure that representatives of the County, MoDOT, and FHWA shall have the opportunity at any time to inspect and review the work done by the Contractor and his subcontractors on this project and shall grant them access to all parts of the work.

26) MATERIAL TESTING: All project sampling and testing of materials shall be performed by the County or by a consultant employed by the County. The Contractor shall assure that representatives of the County, consultants employed by the County, or MoDOT, has the opportunity to sample and test materials used on this project. Acceptance testing specified to be conducted by LPA or Consultant hired by LPA. Inspector must be MoDOT Certified (EPG

136.11.17.1 and EPG 106.18). Costs associated with providing the sample materials shall be incidental to the cost of the project.

27) **TRAFFIC CONTROL:** The Traffic Control Plan for this overlay project must follow the Federal Highway Administration's Manual On Uniform Traffic Control Devices (MUTCD 2009 including revision 1 and 2, May 2012) for all traffic control operations.

28) **STORM WATER POLLUTION PREVENTION PLAN (SWPPP):** The County's Storm Water Pollution Prevention Plan will be as stated in this General Provision and/or as shown on the plans.

The primary purpose of this plan is to protect the public and waterways from the adverse effects of construction.

For all of Jefferson County projects, the County's "Erosion and Sediment Control/Storm Water Management Design Manual" shall be followed. A copy of that manual is available on the Jefferson County website at:

<http://www.jeffcomo.org/StormwaterErosion.aspx?nodeID=StormwaterDivision>

For projects without a drawing showing erosion and sediment control measures, the Engineer or his representative will direct what measures are to be used and where they will be placed. Pay items for these measures will be in the table of "ESTIMATED QUANTITIES". Any measures not covered by a pay item or not specifically addressed on the Plans or Specifications will be by negotiated price.

Maintenance of any item utilized, will be considered incidental to that pay item. Maintenance shall be considered as the repair or replacement of any measure paid for, but not properly functioning before final acceptance of the project. Maintenance shall take place at the time as directed by the Engineer.

Concrete wash down pits shall be utilized for the washing of all concrete trucks. The pits shall be of adequate size to handle all wash down water. The pits shall be lined with a plastic liner (10 mil minimum) to prevent the seepage of the water into the adjoining ground. Berms may be necessary to prevent the migration of any splash water into the streams. The hardened waste from the wash down pits shall be removed and broken into pieces no larger than one cubic foot. The waste concrete pieces may be used as revetment, but will not be considered in measurement for payment. The cost of the wash down pits, berms and disposal shall be incidental to the cost of the concrete.

Any spillage of hazardous waste shall be cleaned up by the Contractor at no additional cost to the Owner. Measures shall be taken to ensure that no hazardous waste reaches a stream or adjoining property.

Any fines assessed for not following the SWPPP, will be the sole responsibility of the Contractor. If the Owner is fined by a State or Federal agency, liquidated damages in the amount of the fine will be charged to the Contractor by the Owner. Contractor agrees that it shall remit payment for said liquidated damages immediately upon request by Owner. Failure to do so may, at the Owner's option, be considered a breach of contract thereby entitling Owner to such other damages as may result. These damages shall be in addition to the liquidated damages described in this paragraph.

29) **SCHEDULE AND PROGRESS REPORTS:** The Contractor shall, within 15 calendar days after date of notice to proceed, submit to the Owner five copies of a diagram covering operations in the work for the County's review and approval subject to update. The diagram will be used as a basis for review of monthly progress reports until the project is completed. At the request of the Owner, the diagram may be updated to demonstrate actual progress.

30) **TIME OF COMPLETION AND LIQUIDATED DAMAGES:** The parties recognize that time is of the essence of this contract and, after the Contractor receives notice to proceed from the Owner, the work to be performed hereunder shall be commenced and shall be completed within the respective number of days specified in the proposal.

If the Contractor fails to complete the work within the time specified, or any extension thereof granted hereunder, the Contractor should pay the Owner the sum specified in the Contract for each day, as defined by Sec 108 of the 2011 Edition of the "Missouri Standard Specifications for Highway Construction", the Contractor is in default. It is agreed that said daily sum is to be paid, not as a penalty, but as compensation to the Owner as liquidated damages for loss which the Owner will suffer because of such default through increased administrative and engineering costs and other tangible and intangible costs. Such damages may be at the Owner's option, be deducted from any monies held by it which are payable to the Contractor.

The completion of the work included under this Contract is defined for purposes of determining liquidated damages, as that time when all of the structures and appurtenances have been completed and tested and are, in the opinion of the Owner, ready for continuous permanent use and occupancy for the purposes intended, which includes all grading, cleaning up, or other minor work which is required to provide a completed project in accordance with the plans and specifications. The date shall be the date of a letter from the Owner to the Contractor indicating substantial completion or final acceptance.

31) EXTENSION OF TIME: The Contractor shall not be entitled to any extension of time for completion of the work as herein above specified unless the Contractor, within 10 days from the beginning of any delay, notifies the Owner in writing of such delay and the cause thereof and the Owner shall determine:

- a. That such delay arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, acts of public enemy, acts of Government in either its sovereign or contractual capacity, acts of another contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or delays of subcontractors arising from such unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and such subcontractors; and
- b. That the Contractor cannot complete the work within the time specified solely by reason of such causes.

The Owner shall make a determination as soon as practicable after the Contractor's notice is received and shall decide the amount of additional time, if any, for completion of the work which conditions justify. Any time extensions will require approval of the Missouri Highway and Transportation Department and the Federal Highway Administration, as well as the Owner.

32) FORFEITURE OF CONTRACT: Should the Contractor at any time refuse, neglect or fail to supply a sufficient number of properly skilled workmen or sufficient equipment or materials of the proper quality, or execute the work with diligence and in accordance with approved schedules, or fail in the performance of any of the covenants herein contained, the Owner may, after three days written notice to the Contractor and his bonding company, provide any such labor, equipment or materials and deduct the cost thereof from any money then due or thereafter to become due to the Contractor under this contract.

Alternatively, the Owner, may after ten days written notice to the Contractor and his bonding company, terminate the employment of the Contractor for said works and enter upon the premises and take possession of all materials, tools and equipment thereon and finish or contract with others to finish the work. The Owner and such others may use such materials, tools and equipment to finish the work. The Contractor shall not be entitled to rental or other compensation for the use of his construction tools and equipment, but shall only be entitled to the return thereof in the condition existing when possession was taken, ordinary wear and tear excepted. In case of such discontinuance of the employment of the Contractor, the Contractor shall not be entitled to receive any further payment under this Contract until the said work shall be wholly finished, at which time, if the unpaid balance of the amount to be paid under this contract shall exceed the expenses incurred by the Owner to the Contractor, but if such expenses shall exceed such unpaid balance, the Contractor shall pay the difference from money then due or thereafter to become due to the Contractor under this contact. The expense incurred by the Owner as here provided for finishing the work and its cost incurred through such default shall be certified by the Consultant, whose certificate thereof shall be conclusive and binding upon the parties. The remedies of the Owner under this Article are exclusive of and in addition to any other contained in this contract, the Contractor's bonds, or provided by law.

33) PAYMENTS: The Contractor shall receive as full compensation for all work hereunder a sum equal to the value of the work done based in his proposal, attached hereto and made a part of this contract.

Payment shall be made to the Contractor monthly, based upon the approved pay request. The final payment shall be paid to the Contractor, subject to approval of the final change order, within 30 days after completion and acceptance of the entire work herein contracted for, and upon receipt by the County, and approval of, all final documentation. Final documentation shall include proof of the meeting of DBE goals, and the release by materials suppliers and subcontractors of having received full payment.

By the 15th of each month the Contractor shall submit to the Owner an invoice containing an estimate of the percentage

of the total work under the contract accomplished to the end of such month. The invoice shall be in such form and detail as required by the Owner.

The requirements set forth in Section 109 of the Missouri Standard Specifications For Highway Construction for payments, retained percentage, release of retained percentage, prompt payment to subcontractors and suppliers and final payment shall apply to all contracts where the Federal Government is participating in the cost of construction.

34) PAYMENTS NO EVIDENCE OF PERFORMANCE: No certificate for payment made under this contract except the final certificate of final payment, shall be evidence of the performance of this contract, either wholly or in part. No Payment shall be construed to be an acceptance of defective work or improper materials.

35) CHANGES: The Owner and/or the Consultant shall have the right to make changes within the scope of the work or change the quantities of the work to be performed. No such change shall be valid unless made in writing by the Owner or Consultant, and for all Federal Aid Contracts such changes shall first be approved by both the Missouri Highway and Transportation Department and the Federal Highway Administration.

In the event such changes cause an increase or decrease in the Contractor's cost of or time required for performance of the contract, the contract price and/or period of performance shall be equitably adjusted; provided, the increase or decrease in the amount of the work for which unit prices apply under the specifications shall be computed by multiplying the change in quantities (measured as provided in the contract documents) of such work by such contract prices.

In the absence of a bid price for a given item of work not provided for nor fairly included in the bid prices for other items of work, a written agreement may be made between the Owner and the Contractor to be included in the written order for such extra work.

Whenever the Contractor and the Owner are unable to agree on prices for extra work and the Owner directly or acting through the Consultant orders the Contractor to proceed with the work by force account, the work will be paid for in the manner herein described and the compensation thus provided shall constitute full payment for said work. Payment will be determined as follows:

For all materials purchased by the Contractor and used in the force account work, he will be paid the actual cost of such materials, including sales taxes if required, and freight and delivery charges as shown by original receipted bills, to which will be added an amount equal to 15 percent of the sum thereof. The Owner or Consultant, however, reserves the right to approve or to reject the materials to be used and the sources of supply of any materials furnished by the Contractor.

For all equipment and machinery used in the force account work, the Contractor will be paid reasonable operated and maintained rental prices to which no percentages will be added.

The Contractor will be paid the cost of wages for all labor while engaged in the force account plus the actual cost chargeable to the force account work of workmen's compensation insurance, social security taxes, unemployment compensation insurance and such additional amounts as are paid by the Contractor by reason of an employment contract generally applicable to his employees, to which total sum will be added an amount equal to 15 percent of wages and other costs listed above. In evidence of the costs of labor, equipment and materials for which payment is to be made under the force account order; the Contractor shall provide a certified statement of wages actually paid, together with copies of supporting payrolls, of equipment rental charges, and of bills for materials.

Wage rates used in determining the amount of the payment will be the actual wage rates paid by the Contractor for work under this contract, except that no rate used shall exceed the rate of comparable labor currently employed on the project.

Payment for services of foremen in direct charge of the specific operation will be made. Payment for the services of superintendents, timekeepers or other overhead personnel will not be made nor will payment for services of watchmen be made unless required specifically by the force account work. The actual function performed by an employee rather than his payroll title will be the criterion used in determining the eligibility of an employee's services for payment under this provision.

The types and amounts of equipment and machinery used by the Contractor in carrying out his work under the force

account order shall be in keeping with normal practice for work of a similar nature, except that the Owner or Consultant may, at his discretion, limit by specific instruction the type and amounts of equipment and machinery to be used.

In computing the hourly rental of such equipment, less than 30 minutes shall be considered ½ hour, except when the minimum rental to be paid shall be one hour. Rental time will not be allowed while equipment is inoperative due to breakdowns. The rental time of equipment to be paid for shall be the time the equipment is in operation on the force account work being performed, and, in addition, shall include the time required to move the equipment to the work and return it to its original location. When approved in advance by the Owner or Consultant, towing or transporting costs will be allowed when the equipment is moved by means other than its own power. No payment will be made for moving time, towing or transporting the equipment if it is used at the site of the work on other than force account work. No payment will be allowed for the use of small tools and minor items of equipment, which, as used herein, are defined as individual tools or pieces of equipment having a replacement value of \$50.00 each or less.

For additional premiums paid on Performance and Labor and Materials Bonds by reason of increases in the account of work over and above that called for in the original contract due to the inclusion of the force account work, and for additional premiums paid on Public Liability and Property Damage Insurance by reason of extra hazard inherent in the force account work of the type called for in the original contract, the Contractor will, on presentation of substantiating evidence from his bonding and insurance carriers, be paid the actual costs of the increase in premium, to which no percentages will be added. Payment for the cost of additional premiums paid on Workmen's Compensation Insurance by reason of extra hazard introduced into the Contractor's operations by the inclusion of force account work is covered by the provisions above, except that any claim for additional cost based on the application, by reason of extra hazard, of a higher insurance rate to any portion of the payroll over and above that chargeable to the force account work under the provisions above, must be substantiated by evidence from the Contractor's insurance carrier.

The Contractor and Owner shall compare records of the work performed on a force account basis at the end of each day. These records shall be prepared in triplicate by the Contractor and shall be signed by both the Owner and the Contractor's representative, one copy being retained by the Contractor and two copies retained by the Owner. Payment for force account work will be included in monthly progress payments.

36) LIENS AND CLAIMS: In addition to other remedies available the Owner hereunder, in all cases of non-payment by the Contractor or a subcontractor of any sums of money due for labor, materials, supplies, equipment or other items in performing in this contract, or if at any time there should be evidence of a lien or claim chargeable to the Contractor or a subcontractor for which, if established, the Owner might become liable, the Owner is hereby authorized and empowered to retain out of any payment then due or thereafter to become due to the Contractor, an amount sufficient to indemnify the Owner against any such lien or claim.

Alternatively, without limiting other remedies and rights of the Owner under the Contract, under the Contractor's bonds or under the law, the Owner may withhold, in addition to the 10 percent retention, a sufficient amount of payments otherwise due to the Contractor to cover payments that may be past due and payable by the Contractor or his subcontractors or suppliers for just claims for labor or materials furnished in and about the performance of the work under this contract and for failure of the Contractor to make proper payments to his subcontractors. The Owner shall disburse and shall have the right to act as agent for the Contractor in disbursing such funds as have been withheld pursuant to this paragraph to the party or parties who are entitled to payment there from. The Owner will render the Contractor a proper accounting of all such funds disbursed in behalf of the Contractor.

Final payment nor any part of the retained percentage shall become due until the Contractor shall deliver to the Owner a complete waiver or release by himself and his subcontractors and others of all liens and claims arising out of the work, or receipts in full lieu thereof, and if required, an affidavit that so far as he has knowledge or information the releases and receipts include all the labor and materials for which a lien could be filed.

37) RESPONSIBILITY: Nothing in the Contract Documents shall be construed as placing the work under the specific direction or supervision of the Owner or the Consultant or relieving the Contractor from his liability as an independent contractor and, as such, he shall perform his work, including, but not limited to, supervision and control of his own personnel and scheduling of the work as required to ensure its proper and timely performance, and he shall be solely responsible for the exercise of due care to prevent bodily injury and damage to property in the execution of the work.

The Owner or Consultant shall have the right of entry to the site for the purpose of verifying compliance with the plans and specifications.

38) INDEMNIFICATIONS AND INSURANCE:**Responsibility for Claims for Damage or Injury:**

The Contractor and surety shall indemnify and save harmless the County, and its members, agents and employees from all claims or suits made or brought for personal injury, death or property damage, caused or contributed to be caused by:

- (a) The negligence of the contractor, subcontractors, suppliers or their respective officers, agents or employees;
- (b) The creation or maintenance of a dangerous condition of or on the County's property or right of way, which condition occurred at least in part due to the acts or omissions of the contractor, subcontractors, suppliers or their respective officers, agents or employees; or
- (c) The failure of the contractor, subcontractors, suppliers of their respective officers, agents or employees, to perform the work in accordance with the plans and specifications.

Neither the County nor the Contractor, by execution of a contract, shall intend to or create a new or enlarge an existing cause of action in any third party. This provision shall not be interpreted to create any new liability which does not exist under the statutory limited waiver of sovereign immunity, or to waive or extinguish any defense which either party to this contract or their respective agents and employees may have to an action or suit by a third party.

Contractor's Responsibility for Work:

Until the County accepts the work, it shall be in the custody and under the charge and care of the Contractor. The Contractor shall restore and replace, at the Contractor's expense, any lost or stolen County-owned material in the Contractor's custody or control. Damages to any portion of the work before its completion and acceptance, caused by the action of the elements or from any other reason, shall be restored or replaced at the Contractor's expense. Issuance of a payment estimate on any part of the work done will not be considered as final acceptance of any work completed up to that time. The County may, in its discretion, make such adjustments as it considers being proper for damage to the work due to unforeseeable causes beyond the control of, and without fault or negligence on the part of the Contractor.

Liability Insurance Requirements

The Contractor shall procure and maintain at its own expense, until acceptance of the project by the County, liability insurance for all damages and losses imposed by law and assumed under the contract, of the kinds and in the amounts specified in the relevant sections shown herein. Before the Contractor commences the work, the Contractor shall require the insurance company or companies to furnish to the County evidence of such insurance showing compliance with these specifications. All insurance required herein shall be occurrence policies in a form acceptable to the County, and shall remain in force until all work required to be performed under the terms of the contract is satisfactorily completed as evidenced by its formal acceptance by the County.

Each policy or its declaration pages shall provide that the policy shall not be materially changed or canceled until the County has been given at least 30 days advance notice in writing. If any policy is canceled before the contract work is complete, a satisfactory replacement policy must be in force, with notice and evidence of insurance submitted to the County, prior to the effective date of cancellation of the former policy. All evidence of insurance and notices shall be submitted to: Director of Public Works, Jefferson County Public Works Department, 725 Maple Street, PO Box 100, Hillsboro, Missouri 63050. **The Contractor shall furnish the County with a complete copy of the policy prior to the time the Contractor commences work on the site of the project.** Failure to furnish evidence of proper insurance, or complete insurance policies will result in temporary suspension of work and may result in other claims or actions for breach of contract or otherwise, as may be recognized at law or in equity.

Workers' Compensation Liability Insurance

The Contractor shall furnish evidence to the County that, with respect to the operations it performs, it carries workers' compensation insurance, or is qualified as self-insured, sufficient to comply with all its obligations under state laws relating to worker's compensation. The Contractor shall also require each subcontractor on the project to furnish the same evidence

to the County. This evidence shall be furnished to and approved by the County prior to the time the Contractor or the subcontractor commences work on the site of the project.

Commercial General Liability Insurance

The Contractor shall obtain one or more occurrence-based policies of commercial general liability insurance (Form CG 00 01 or equivalent), which provide coverage for the contract work. The minimum limits of liability for commercial general liability insurance shall be: \$1,000,000 each bodily injury or property damage occurrence, combined single limit, \$2,000,000 general aggregate with a per project endorsement and \$1,000,000 products/completed operations aggregate. Each such policy shall be endorsed so as to cover liability arising from blasting if applicable, other inherently dangerous activities and underground property damage. Each such policy shall be endorsed to include broad form general liability, contractual liability and completed operations coverage.

Commercial Auto Liability Insurance

The Contractor shall obtain one or more occurrence-based policies of auto liability insurance, which provide for its owned, non-owned and hired vehicles of every type and description, which are used in the contract work. The minimum limits of liability for such insurance shall be \$1,000,000 combined single limit.

Additional Insureds

Each such policy of commercial general liability insurance shall name the County of Jefferson and its employees as additional insureds. Each commercial general liability insurance policy shall also contain a separation of insureds condition. The insurance afforded by the Contractor shall be primary insurance.

Subcontractor's Coverage

If any part of the contract is subcontracted, each subcontractor, or the Contractor on behalf of the subcontractor, shall obtain the same commercial general liability insurance and commercial automobile liability insurance coverage. The commercial general liability insurance shall name the same entities specified above as additional insureds, and shall have the same separation of insureds conditions.

Railroad Protective Liability Insurance

In addition to other required liability insurance, the Contractor shall provide railroad protective liability insurance if applicable, for and in behalf of the railroad as outlined in provisions for each project. The insurance policy shall be submitted to the County in original and duplicate for approval. No work will be permitted on the railroad right of way until such approval is granted.

Insurance with Other Than Missouri Companies

Any insurance policy required as specified above, if written by an insurance company organized in a state other than Missouri, shall be signed by an agent or broker licensed by the State of Missouri. In the case of policies written by companies organized in a state other than Missouri, the evidence of insurance submitted as authorized in the contract shall be signed by an agent or broker licensed by the State of Missouri. Nothing in this provision limits or waives the requirement that each insurance policy must be issued by a company authorized to issue such insurance in Missouri.

Third Party Liability

Neither the State of Missouri, the County of Jefferson nor the Contractor, by execution of the contract including these specifications, intend to create a right of action in a third party beneficiary except as specifically set out in these specifications and the contract. It is not intended by any required contractual liability in the contract or in these specifications that any third party beneficiary has a cause of action arising out of the condition of the project when completed in accordance with the plans and accepted by the County.

Personal Liability of Public Officials

There shall be no personal liability upon the County, or any member, employee or agent of the County in carrying out any of the provisions of the contract or in exercising any power or authority granted to them, it being understood that in such matters they act as agents and representatives of the County, with official and public duty doctrine immunity. If any provision of the contract appears to impose a duty on such an individual, the duty remains exclusively that of the County and is not a personal duty or obligation of the individual.

39) BOND: The Contractor at his expense shall, before commencing work hereunder, procure and deliver to the Owner a Performance Bond and a Labor and Materials Payment Bond in the amount of 100% of the contract as awarded, as security for the faithful performance of the contract and the payment of all obligations thereunder by the Contractor and his subcontractors. The Bonds shall be written in such form as may be satisfactory to the Owner and provided by a guaranty or surety company listed in the latest issue of U.S. Treasury Circular 570 and the penal sum shall be within the maximum specified for such company in said Circular 570. In substance, the condition of the obligation under said bond or bonds shall be as follows:

"The condition of this obligation is such that if the above bound Principal shall in all respects comply with the terms and conditions of said contract and his obligations thereunder, including the specifications and plans referred to therein, and such changes and alterations as may be made in said contract, specifications and plans and shall indemnify and save harmless the Owner against or from all costs, expenses, damages, injuries or losses to which the said Owner may be subjected by reason of any wrongdoing, misconduct, want of care or skill, negligence of default on the part of said Principal, his subcontractors, officers, agents or employees, in the execution of performance of said contract and shall promptly pay all just claims for damages for injury to property and for labor, equipment, materials and supplies incorporated in the work or consumed in the performance thereof incurred by said Principal, his subcontractors, officers, agents or employees, in or about the construction or improvement contracted for, then this obligation shall be void; otherwise, to remain in full force and virtue in law. The Surety hereby waives notice of any changes, alterations or modifications, including any extensions of the period of performance, in the contract, specifications and plans."

If any surety upon any bond furnished in connection with this contract becomes unacceptable to the Owner, or if any such surety fails to furnish reports as to his financial condition from time to time as requested by the Owner, the Contractor shall promptly furnish such additional security as may be required from time to time to protect the interests of the Owner and of persons supplying labor or materials in the prosecution of the work contemplated by this contract.

40) ROYALTIES AND PATENTS: The Contractor shall indemnify, defend and save harmless the Owner and the Consultant from all liabilities, decrees, judgments, claims or disbursements, including attorney fees and/or damages and expenses which may come against or be incurred by the Owner or the Consultant by reason of the use of any patented material, machinery, devices, equipment or processes furnished or used in the performance of the work under this contract or the use by the Owner of the completed structure or by reason of the use of patented designs furnished by the Contractor and accepted by the Owner. In the event any claim, action at law or suit in equity of any kind whatsoever is made or brought against the Owner, the Owner shall have the right, without impairment of the foregoing indemnification, to retain from the money due and to become due said Contractor a sufficient amount of money to protect itself against loss.

41) SPECIFICATION CONFLICTS: Where any provision of specifications referred to or incorporated into the Contract Documents is inconsistent or in conflict with the provisions of the Contract Documents, the provisions of the Contract Documents shall govern.

42) STANDARDS: Where materials and methods are indicated in the specifications as being in conformance with a standard specification, reference in all cases shall be to the latest edition of the specification and shall include all interim revisions, unless specifically stated otherwise.

43) FEDERAL EMPLOYMENT AUTHORIZATION: The Contractor shall comply with the requirements of the revised Statutes of the State of Missouri Chapter sections 285.525 to 285.555. If any part of the contract is subcontracted, each subcontractor shall comply with the same requirements of this specification.

No Contractor shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri.

As a condition for the award of the contract the Contractor shall, by sworn affidavit and provision of documentation,

affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. Every such Contractor shall also sign an affidavit affirming that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services.

A Contractor may enroll and participate in a federal work authorization program and shall verify the employment eligibility of every employee in the Contractor's hire whose employment commences after the Contractor enrolls in a federal work authorization program.

A general contractor or subcontractor of any tier shall not be liable under sections 285.525 to 285.550 when such general contractor or subcontractor contracts with its direct subcontractor who violates subsection 1 of this section, if the contract binding the contractor and subcontractor affirmatively states that the direct subcontractor is not knowingly in violation of subsection 1 of this section and shall not henceforth be in such violation and the contractor or subcontractor receives a sworn affidavit under the penalty of perjury attesting to the fact that the direct subcontractor's employees are lawfully present in the United States.

44) OSHA TRAINING: The Contractor shall comply with the requirements of the revised Statutes of the State of Missouri Chapter sections 292.675. If any part of the contract is subcontracted, each subcontractor shall comply with the same requirements of this specification.

Any Contractor signing a contract to work on the construction of public works for the Owner shall provide a ten-hour Occupational Safety and Health Administration (OSHA) construction safety program for their on-site employees which includes a course in construction safety and health approved by OSHA or a similar program approved by the department which is at least as stringent as an approved OS11A program. All employees are required to complete the program within sixty (60) days of beginning work on such construction project.

Any employee found on a worksite subject to this section without documentation of the successful completion of the course required under this section shall be afforded twenty (20) days to produce such documentation before being subject to removal from the project. The contractor shall forfeit as a penalty to the Owner two thousand five hundred dollars (\$2,500) plus one hundred dollars (\$100) for each employee employed by the contractor or subcontractor, for each calendar day, or portion thereof, such employee is employed without the required training. The penalty shall not begin to accrue until the time period in this section has elapsed.

The Owner shall withhold and retain all sums and amounts due and owing as a result of any violation of this section when making payments to the contractor under the contract. The contractor may withhold from any subcontractor, sufficient sums to cover any penalties the Owner has withheld from the contractor resulting from the subcontractor's failure to comply with the terms of this section. If the payment has been made to the subcontractor without withholding, the contractor may recover the amount of the penalty resulting from the fault of the subcontractor in an action maintained in the circuit court in the county in which the public works project is located from the subcontractor.

In determining whether a violation of this section has occurred, and whether the penalty of this section shall be imposed, the Department of Labor and Industrial Relations shall investigate any claim of violation. Upon completing such investigation, the Department shall notify the Owner and any party found to be in violation of this section of its findings and whether a penalty shall be assessed. Determinations under this section may be appealed in the circuit court in the county in which the public works project is located. The Department may establish rules and regulations for the purpose of implementing the provisions of this section.

This section shall take effect on August 28, 2009.

END OF GENERAL PROVISIONS

Technical Specifications

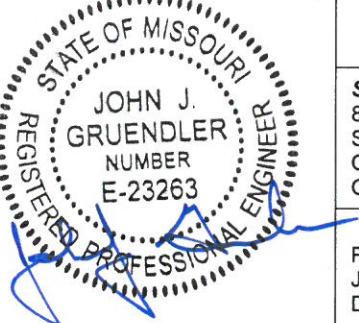
(see Table of Contents for documents and page numbers)

JOB SPECIAL PROVISIONS (BRIDGE)

(Job Special Provisions shall prevail over General Special Provisions whenever in conflict therewith.)

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- D. Existing Structure Removal
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- G. Calcium Nitrite Corrosion Inhibitor
- H. Reinforced Concrete Slab Overlay
- I. Additional Requirements for Bridge Deck Pours
- J. Reinforcing Steel (Bridges) and Reinforcing Steel (Epoxy Coated)
- K. Protective Surface Treatment for Concrete – Penetrating Sealers
- L. Bridge Relief Joint Sealer

	Jefferson County Department of Public Works P.O. Box 100 Hillsboro, MO 63050 Phone 636-797-5340
Structures, Inc. 8615 Gravois St. Louis, MO 63123 Certificate of Authority # E-2006035000 Consultant Phone # 314-638-6650	
PROJECT NO. PW15113BXC Jefferson County, MO Date Prepared: 4/30/15	
Date: 4/30/15	Addendum No./Date:
Only the following items of the Job Special Provisions (Bridge) are authenticated by this seal: A - L	

JOB SPECIAL PROVISIONS (BRIDGE)

A. CONSTRUCTION REQUIREMENTS

1.0 Description. This provision contains general construction requirements for this project.

2.0 Construction Requirements. Plans for the existing structure are unavailable.

2.1 Provisions shall be made to prevent any debris and materials from falling into the stream or onto the roadway. Any debris and materials that falls below the bridge shall be removed as approved by the engineer at the contractor's expense.

2.2 Provisions shall be made to prevent damage to any existing utilities. Any damage sustained to the utilities as a result of the contractor's operations shall be the responsibility of the contractor. All costs of repair and disruption of service shall be as determined by the utility owners and as approved by the engineer.

3.0 Method of Measurement. No measurement will be made.

4.0 Basis of Payment. Payment for the above described work will be considered completely covered by the contract unit price for other items included in the contract.

B. INSPECTION WAIVER

1.0 Description. This is not a bid item. The County requires inspection of materials and products and requires certifications from the manufacturers or suppliers for compliance with the specifications. This provision covers those requirements.

2.0 Certification Requirements. Supplier's material certifications shall be required for the following items:

- a) Prestressed Concrete Beams - Prestressing strands
 Concrete
 Reinforcing steel
 Bearing pads
- b) Guardrail - Steel and galvanizing
- c) Asphalt - Mix design required
 Weight tickets
 Prime
- d) Class B, B-1 or B-2 Concrete - Mix Design
- e) Reinforcing Steel - Mill Certification
- f) Pipe and Flared End Sections

3.0 Submittals. Contractor shall submit certifications, signed by the material suppliers and the contractor, that all materials meet specification requirements. Mix designs of asphalt mixes shall be submitted to the County for approval, prior to placement of material. Certified weight tickets shall be provided for verification of quantity for asphalt. The contractor shall provide the materials for field-testing at no additional payment.

4.0 Responsibilities of County. The County will be responsible for the following job control testing:

- a) Concrete (cylinders, air, and slump)
- b) Grading and Base Compaction
- c) Asphalt (extraction and compaction)

C. SUBSURFACE DATA

1.0 Description. The project geotechnical report is reprinted in this specification for information only and may or may not represent the actual conditions which will be found when the work is executed. The boring logs and related information depict subsurface conditions for the indicated location at the time the borings were taken, in September, 2014. Although borings were located as close as possible to the proposed foundations, unanticipated soil and rock conditions may be encountered. Boring locations are shown on the plans. The contractor's attention is directed to the Notice and Disclaimer Regarding Boring Log Data shown on the plans.

D. EXISTING STRUCTURE REMOVAL

1.0 Description. The removal of the existing structure, including the headwalls and wingwalls, shall be performed in accordance with Section 216.10 and the additional requirements covered by this provision.

1.1 Plans for the existing structure are unavailable. The locations and amount of reinforcing steel and other structural elements in the existing structure are unknown.

2.0 Removal Requirements. Modify Sec 216.10.2 to include the following:

2.1 The contractor has the option of removing the existing structure by whatever method he may choose, subject to the approval of the County. The use of explosives will not be permitted on this project. The contractor shall accept full responsibility for the safety and feasibility of his operation and approval of the County shall not relieve the contractor of this responsibility.

2.2 At a minimum, the structure shall be completely removed regardless of the final location of individual elements with respect to finished ground line.

2.3 Whatever method is selected, the contractor shall submit his proposed method and plan of structure removal to the County for review within two weeks after award of the contract and a minimum of 14 days before commencing such activities. The plan shall include the proposed method of demolishing and removing the existing structure. The proposed method of disposal shall also be included.

E. ACCEPTANCE OF PRECAST CONCRETE MEMBERS

1.0 Description. The following procedures have been established for the acceptance of precast double tee beams, I-girders, box girders, slab panels MSE wall systems, and other structural members.

2.0 Procedures. Shop drawings shall be submitted to the engineer of record for the County for review and approval. The approval will cover only the general design features, and in no case shall this approval be considered to cover errors or omissions in the shop drawings. The County or its engineer of record has the option of inspecting the precast units during fabrication or requiring the fabricator to furnish a certification of contract compliance and substantiating test reports. In addition, the following reports will be required:

- Certified mill test reports, including results of physical tests on the prestressing strands and reinforcing steel as required; and
- Test reports on concrete cylinder breaks.

The County or its engineer of record shall verify and document that the dimensions of the precast units were checked at the jobsite and found to be in compliance with the shop drawings.

F. PRESTRESSED CONCRETE BOX BEAMS

1.0 Description. Furnishing and placing prestressed concrete box beams, complete in place, shall be in accordance with Sec 705 and the additional provisions contained in this job special provision.

2.0 Material. Modify the material requirements of Sec 705.2 to include the following:

2.1 Transverse Tie Rod Assemblies and Dowel Rods. Transverse tie rod assemblies and dowel rods shall conform to the following:

- (a) Transverse Tie Rod Assemblies. Steel for transverse tie rod assemblies (i.e. rods, nuts, washers, and coupling nuts) shall be according to ASTM F 1554 Grade 55. After fabrication, the transverse tie assemblies shall be hot-dipped galvanized according to AASHTO M 232. The small articles may be zinc-coated by the mechanically deposited process conforming to AASHTO M 298, Class 50. The thickness of the mechanical galvanizing shall not exceed 6 mils.
- (b) Dowel Rods. Steel for dowel rods shall be according to ASTM F 1554 Grade 55 or A706 Grade 60. Dowel rods shall be either epoxy coated according to AASHTO M 284 or galvanized according to AASHTO M 111.

2.2 Nonshrink Grout. Nonshrink grout shall be one of the following approved, prepackaged products, mixed and placed according to the manufacturer's instructions, except the addition of aggregate to the prepackaged product will not be permitted, or an approved equal. Water shall not exceed the minimum needed for placement and finishing.

JOB SPECIAL PROVISIONS (BRIDGE)

Carter-Waters
1700 St. Louis Road
Collinsville, IL 62234
Phone: 618-398-4377
Attn: Mr. Jim Steck
www.carter-waters.com
"CW 100 PRECISION GROUT"

ChemMasters
300 Edwards St.
Madison, OH 44057
Phone: 800-486-7866
Attn: Mr. John Kirk
www.chemmasters.net
"CONSET GROUT"

Dayton Superior Corporation
4226 Kansas Avenue
Kansas City, KS 66106
Phone: 800-745-3700 x44187
Attn: Ms. Lisa Weaver
www.daytonsuperiorchemical.com
"SURE-GRIP HIGH PERFORMANCE GROUT"
"1107 ADVANTAGE GROUT"

MAPEI Corporation
1144 East Newport Center Drive
Deerfield Beach, FL 33442
Phone: 800-992-6273
Attn: Mr. Andrew Fulkerson
www.mapei.com
"PLANIGROUT 712"

Right Pointe Company
234 Harvestore Drive
DeKalb, IL 60115
Phone: 815-754-5700
Attn: Ms. Cricket Garancosky
www.rightpointe.com
"RIGHT GROUT"

Specco Industries
13087 Main Street
Lemont, IL 60439
Phone: 630-257-5060
Attn: Mr. Jeffrey Bencsik
www.specco.com
"SPECCRETE SUPERB GROUT 611"

3.0 Construction Requirements.

3.1 Shop Drawings. Shop drawings for prestressed concrete members shall be prepared in accordance with Sec 1029.6.1 and these additional provisions. The shop drawings for the precast units shall be required to include the alignment of the holes for the one-inch diameter tie rods. The holes shall be aligned in such a way as to prevent damage to the precast units during the placement of the precast units on the substructure and the installation and tensioning of the tie rods through the precast units.

3.1.1 Six (6) sets of shop drawings shall be submitted to the engineer for approval. Material shall not be ordered until the shop drawings have been approved. Four (4) sets of prints will be marked approved or approved subject to the corrections noted. The contractor shall promptly make the necessary corrections and resubmit for final approval. When shop drawings are finally approved, the contractor shall furnish as many additional prints as may be requested. The approval of shop drawings will cover only the general design features, and in no case shall this approval be considered to cover errors or omissions in shop drawings. The contractor shall be responsible for the accuracy of the shop drawings and the fabrication of the members. He shall also bear the cost of all extra work in the erection of the structure caused by errors in shop drawings and for any changes in fabrication necessary for the satisfactory construction of the structure. After shop drawings have been approved, no changes in dimensions or substitution of materials or construction methods shall be made without written approval. Shop drawings shall be revised to show any authorized changes and the required number of prints shall be furnished to the engineer.

3.2 Void Tubes. Unless otherwise provided, all box girders shall have void tube drains, equipped with bird/insect prevention screens, and air vents. The forming of the drains and vents, their location and the material used for the forming shall be approved by the County. When no longer needed, the air vents shall be filled as directed by the County. Void tubes or inside forms shall be as shown on the plans and approved by the County. They shall be composed of materials and of a design that will enable them to withstand the forces imposed upon them during the fabrication of the box beams without substantial deformation such as bulging, sagging or collapsing. It is the contractor's responsibility to fabricate a void that meets the requirements of the plans. Contractors who have not previously manufactured members with void tubes, or who are using a type of void tube or void tube materials not previously used or proven satisfactory, will be required to construct a test section of the member, not less than 10ft. in length, so the placement and behavior of the tube may be observed by the County prior to approval. Void tubes shall be protected against damage during storing and handling. Damaged void tubes shall not be used.

3.3 Forms and Formwork. The inside forms or void tubes for the box girders may be treated cardboard, plywood or other suitable materials. Provisions shall be made for holding the inside forms or void tubes accurately in place to prevent flotation and misalignment. A drip strip, three-quarter inch (3/4") unless otherwise shown on the plans, shall be placed on the bottom of the exterior beams, as detailed on the plans. The shear key shall be omitted from the exterior face of the exterior beams.

3.4 Placing and Compacting. The bottom slab shall be placed, consolidated with vibratory equipment and screed or tamped to the proper thickness before the inside forms or void tubes and the top bar reinforcement is placed. Workers will not be permitted to walk on top of the inside forms, and concrete will not be permitted to accumulate excessively on them during the period of placing the mixture between the outside and inside forms. In the case of members utilizing cylindrical void tubes, the County may approve the placing of the void tubes, and the

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positioning of the reinforcement before concrete operations begin, provided that it can be assured that the void tubes will be correctly located in the finished member. Fabric reinforcement when used shall be placed as shown on the plans before the side forms are set.

3.5 Finishing. The top surface of the box beams shall be screed with a straightedge and then finished with a hand float. Further finishing shall be delayed until the water sheen appears, but not to the point of rendering further manipulation ineffective. The top surface of box beams detailed with no wearing surface, a concrete wearing surface, or a bituminous wearing surface without a waterproofing membrane system shall then be textured with a broom finish. The top surface of box beams detailed with a waterproofing membrane shall not be broom finished but shall be free of depressions or high spots with sharp corners and the top edge of the shear keys shall be rounded or chamfered approximately $\frac{1}{4}$ in.

3.6 Strand Release. After strand release, all strands which are indicated to have a bent projection from the beam shall be cold bent, in a manner which will not injure the strand wires.

3.7 Curing. Air vents shall be in place, and shall be so arranged that no water can enter the void tubes during the curing of the members.

3.8 Damage Inspection. The completed members shall not be placed until they are inspected for damage at the jobsite by the Engineer. The members shall be inspected for damage again after placing and before decking begins.

3.9 Box Beam Erection Tolerance. The tolerance for the total width of the deck shall be the theoretical width plus $\frac{1}{2}$ in. per joint. The maximum distance between beams, measured below the keyway, shall be $\frac{3}{4}$ in. The deviation from the specified width for the transverse joints shall be $-\frac{1}{4}$ in. to $+\frac{1}{2}$ in. at expansion joints, and 0 to $+\frac{1}{2}$ in. at fixed joints.

3.9.1 The beams individually may comply with the dimensional tolerances and still not place satisfactorily in the structure. Acceptance of the beams, therefore, will be conditioned upon satisfactory placement.

3.10 Handling, Storing, and Transporting. The members shall be maintained in upright position at all times and shall be supported as described herein. During lifting, members shall be supported only by the inserts provided for that purpose. During transportation, wood blocks or other suitable material shall be placed under the tie down chains to prevent chipping of the concrete. If temporary storage is required at the jobsite the members shall be supported on timber, at least 4 in. wide, and shall be maintained in level position so that no twisting of the member will occur. For both transportation and temporary storage, the ends of box beams shall not extend a distance of more than 1 $\frac{1}{2}$ times their depth, and in no case more than 3 ft., beyond the supports. No stacking of box beams will be allowed at the jobsite.

3.10.1 Prior to shipment, keyway surfaces shall be cleaned to remove form oil or other bond breaking material. Cleaning shall be done by sandblasting the keyway areas between top of the beam and bottom edge of the key.

3.11 Erection. Erection of precast bridge beams shall commence at the centerline and proceed, one beam at a time, working out to the curb. As each beam is placed, the transverse tie bars shall be inserted and secured. Any shifting of the beams must be done while they are held free of the supports by the hoisting device or crane. The use of a steel pinch bar will not be permitted.

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3.11.1 The abutting edges of each unit shall be carefully cleaned of any concrete or extraneous matter in order that the beams can be bolted tightly together. Beams shall be placed on clean bridge seats and tops of bearing devices. Any shifting of beams shall be done while they are held free of the supports.

3.11.2 Precast members shall be handled with a suitable hoisting device or crane provided with a spreader sling of sufficient capacity to handle the members. The spreader shall be of sufficient length to prevent horizontal forces in the member due to lifting, and shall be equipped with leads and hooks at each end. For the purpose of engaging the threaded inserts provided in the member, the manufacturer shall provide a sufficient number of eye bolts of proper size.

3.11.3 Before lifting the member, all lifting inserts in each end shall be fully engaged with the spreader lead hooks. In the event that raising by alternate lifting and blocking of opposite ends is performed, the lifted end shall not be rotated unless a proper pivoting device for the opposite end has been provided.

3.11.4 Erection of box beams shall begin at the expansion end. During the initial placement of the beams, every effort shall be made by the contractor to achieve optimum match between beams. The contractor may be required to shift or interchange interior beams, or pairs of beams on skewed bridges, to achieve a better fit when directed by the County. As the beams are placed in their final position, and prior to securing transverse ties and drilling and grouting dowels, the beams shall be brought to firm even bearing on the seats through the use of the bearing pads and fabric shims furnished with the beams, and/or grinding of the concrete seats as required.

3.11.5 After box beams are properly placed and firm even bearing assured, the beams, either in pairs for skewed structures or all beams for right angle structures, shall be secured in lateral position by placing and tightening of the transverse tie assemblies. Dowels at the fixed ends of the deck beams shall be installed, nonshrink grout placed and cured for a minimum of 24 hours. If the bearing area is specified to be grouted it shall be done at the time of dowel placement. In addition, the cast-in-place concrete at the expansion end of the box beams shall be placed and cured.

3.11.6 In stage construction with box beams, the first stage shall be constructed as a complete deck including grouting according to Section 3.12 of this job special provision and the placement of the wearing surface if one is specified. The transverse ties for the first stage of construction shall not be released during construction of the next stage. Threaded sleeves shall be used to secure the deck beams to the previous stage and at no time shall the transverse tie nuts for the previous stage be loosened or removed.

3.11.7 The next stage of construction shall proceed as specified above, except the keyway along the stage construction line shall be aligned with clamping devices. This keyway shall be the last keyway to be grouted.

3.11.8 The contractor shall furnish all material for the clamping devices, including sufficient 1/16 in. and 1/8 in. steel shims to adjust for differential elevations between the two box beams.

3.11.9 The 2 in. holes for the clamping devices shall be cast at the locations shown on the plans. Care shall be taken to drill the holes perpendicular to the beams. The clamping devices shall be installed and pulled up tight so that a full, firm bearing is obtained between the clamping plates and the box beam concrete.

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3.12 Grouting. After the erection is completed, the longitudinal keyways between beams shall be filled with nonshrink grout. The contractor shall also place nonshrink grout between the ends of the box beams at fixed piers and for the transverse tie assembly pockets. During the curing period, no vehicular traffic, including the contractor's equipment, will be permitted on the beams. Grouting of the keyway at the staged construction line shall be done after the shear key clamping devices are fully secured. The clamping devices shall not be loosened or removed until the nonshrink grout has fully cured. After the clamping devices are removed the drilled holes and unfilled area of adjacent key shall be flushed out with water and then completely filled with grout.

3.12.1 The temperature of the grout at time of placement shall be a minimum of 50 °F and a maximum of 90 °F.

3.12.2 Surfaces to which the grout is applied shall be wetted a minimum of one hour before placement of grout. The surface shall be maintained in a dampened condition during that period. Prior to placement of grout, all excess water shall be removed and all openings between beam edges at the base of the longitudinal keyways shall be caulked or sealed with a suitable compressible material to prevent leakage. Keyways shall be clean and free of all oil, grease, laitance and other foreign substances.

3.12.3 A mechanical mixer shall be used to mix the nonshrink grout and the type of mixer and mixing procedures shall be per the manufacturer's recommendations. A drill with paddle may be used for mixing small quantities of nonshrink grout. The mechanical mixer shall have paddles or blades that are suitable for uniformly mixing the material, and shall have sufficient capacity to allow for a continuous work operation. Hand mixing will not be allowed.

3.12.3.1 During placement, the grout shall be worked into the area with a pencil vibrator. The surface shall be troweled to a smooth finish. The nonshrink grout shall be immediately cured with cotton mats according to Sec 703.3.6.1.4 for a minimum of seven days, and field testing will not be required. However, the cure time may be reduced provided the contractor molds specimens covers them, and performs cube tests according to ASTM C 1107. The tests shall verify the 6000 psi grout strength has been obtained, but in no case shall the cure time be less than three days.

3.12.3.2 For contractor cube tests, each sample shall consist of three test specimens and a minimum of two samples will be required for each day of grouting. Additional samples may be requested by the County. Specimens shall be cured underneath the cotton mats with the beams for a minimum of 48 hours before transport to the laboratory for testing. The laboratory shall be inspected for Hydraulic Cement – Physical Tests by the Cement and Concrete Reference Laboratory (CCRL).

3.12.4 The nonshrink grout for the longitudinal keyways and between the ends of box beams at fixed piers will be inspected by the County for cracks. When box beams are used as the final driving surface, any cracks 0.007 in. or wider shall be sealed using an epoxy crack injection system, as approved and directed by the County, at the contractor's expense.

3.12.5 If cracks propagate along the keyway from the ends of beams, it could indicate one or more beams are not firmly seated. Prior to sealing, the contractor shall check for beam wobble and shim any beams not firmly seated.

4.0 Basis of Payment. Accepted prestressed concrete members will be paid for at the contact unit price for each of the pay items included in the contract. The cost for the transverse tie

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assemblies, inserts, guardrail anchor devices, galvanized steel scuppers, nonshrink grout, joint filler, dowel rods installed at the abutments and intermediate bent caps, and other items required for the erection of the units shall be considered completely covered by the contract unit price for other items included in the contract. No additional payment will be made for shop drawing preparation.

G. CALCIUM NITRITE CORROSION INHIBITOR

1.0 Description. Calcium nitrite corrosion inhibitor shall be used in the construction of the precast, prestressed concrete box beams on this project.

2.0 Construction Requirements. Calcium nitrite, at the rate of 2 percent (2%) of calcium nitrite by weight of cement, shall be added to the concrete utilized in the manufacturing of the prestressed concrete box beams and the construction of the vertical curbs for the exterior beams, if applicable.

2.1 An aqueous solution of an approved calcium nitrite shall be added. The water in such solution shall be counted as mixing water for the purpose of determining the water-to-cement ratio of the concrete.

2.2 The calcium nitrite, which acts as an accelerator, may be used in conjunction with other compatible admixtures to control setting time and workability of concrete. It must be added to the mix immediately after the air-entraining and retarding admixtures have been introduced to the batch.

2.3 The use of a calcium nitrite admixture must be indicated on the shop drawings.

3.0 Basis of Payment. Payment for furnishing and using calcium nitrite corrosion inhibitor will be considered completely covered by the contract unit price for other items included in the contract.

H. REINFORCED CONCRETE SLAB OVERLAY

1.0 Description. This work consists of placing a concrete wearing surface, to the specified thickness, on precast concrete box beams. Included in this work is cleaning and preparing the concrete deck beam surface prior to placement of the concrete wearing surface. This work shall be according to the applicable articles of Sec 703 and the following. The terms "wearing surface" and "overlay" shall be understood to have the same meaning with respect to this job special provision.

2.0 Material. The concrete wearing surface shall meet the requirements for Class B-2 concrete, except the 28-day compressive strength shall be 5,000 psi.

3.0 Surface Preparation Equipment. Surface preparation equipment used shall be subject to the approval of the County and shall meet the following requirements:

3.1 Mechanical Blast Cleaning Equipment. Mechanical blast cleaning may be performed by high-pressure waterblasting or shotblasting. Mechanical blast cleaning equipment shall be capable of removing concrete laitance from the top surface of the box beams.

3.1.1 Mechanical high-pressure waterblasting equipment shall be mounted on a wheeled carriage and shall include multiple nozzles mounted on a rotating assembly, and shall be operated with a 7000 psi minimum water pressure. The distance between the nozzles and the deck surface shall be kept constant and the wheels shall maintain contact with the box beam surface during operation.

3.2 Hand-Held Blast Cleaning Equipment. Blast cleaning using hand-held equipment may be performed by high-pressure waterblasting or abrasive blasting. Hand-held blast cleaning equipment shall have oil traps.

3.2.1 Hand-held high-pressure waterblasting equipment that is used in areas inaccessible to mechanical blast cleaning equipment shall have a minimum water pressure of 7000 psi.

3.3 Vacuum Cleanup Equipment. The equipment shall be equipped with fugitive dust control devices capable of removing wet debris and water all in the same pass. Vacuum equipment shall also be capable of washing the deck with pressurized water prior to the vacuum operation to dislodge all debris and slurry from the deck surface.

4.0 Surface Preparation. Prior to placement of the concrete wearing surface, the top surface of the bridge box beams shall be clean and free of all foreign material and laitance.

4.1 Blast cleaning may be performed by either wet sandblasting, high pressure waterblasting, steel shot blasting, shrouded dry sandblasting, dry sandblasting with dust collectors, or other methods approved by the County. Oil traps on blast equipment will be required.

4.2 The method used shall be performed so as to conform with air and water pollution regulations of Missouri and also to conform to applicable safety and health regulations. Any method which does not consistently produce satisfactory work and does not conform to the above requirements shall be discontinued and replaced by an acceptable method.

4.3 All debris of every type, including dirty water, resulting from the cleaning operation shall be reasonably confined during the performance of the cleaning work and shall be immediately and thoroughly removed from the cleaned surfaces and all other areas where debris may have accumulated.

4.4 Prior to placement of the concrete wearing surface, the County will inspect the cleaned surface. All areas still contaminated shall be cleaned again at the contractor's expense.

5.0 Wearing Surface Placement. The concrete wearing surface placement shall be according to Sec 703.3.3. Dry sandblast cleaned areas to receive the overlay shall be either thoroughly or continuously wetted with water at least one hour before placement of the concrete wearing surface is started. When the surface is pre-wetted, any accumulations of water shall be dispersed or removed prior to placement of the concrete wearing surface.

5.1 Finishing shall be according to Sec 703.3.5, except that vibratory screed finishing shall be permitted.

5.1 Plans for anchoring support rails and the mixture-placing procedure shall be submitted to the County for approval.

6.0 Curing and Protection. The concrete shall be continuously wet cured for at least 14 days according to Sec 703.3.6.1.4. However, if the minimum specified compressive strength or

flexural strength is obtained prior to 14 days, the cure time may be reduced, but at no time shall the wet cure be less than 7 days. The concrete shall be protected from low air temperatures according to Sec 703.3.10. The protection method shall remain in place for the entire curing period.

7.0 Surface Sealing. Surface sealing for the concrete wearing surface shall be in accordance with Sec 703.3.8.

7.0 Opening to Traffic. The concrete wearing surface may be opened when test specimens have obtained a minimum compressive strength of 3750 psi, but not prior to the completion of the wet cure.

8.0 Method of Measurement. CONCRETE WEARING SURFACE and REINFORCED CONCRETE SLAB OVERLAY will be measured for payment in place and the area computed in square yards.

9.0 Basis of Payment. This work, including cleaning, surface preparation, forming, furnishing and placement of coated and uncoated reinforcing steel, surface sealing, and all incidental works necessary for the construction of the concrete wearing surface will be paid for at the contract unit price per square yard for REINFORCED CONCRETE SLAB OVERLAY, of the thickness specified.

I. ADDITIONAL REQUIREMENTS FOR BRIDGE DECK POURS

1.0 Description. In addition to the requirements of Section 703, the following requirements must be met by the contractor in preparation for all bridge deck, concrete wearing surface, and concrete slab overlay pours, where applicable.

2.0 Construction Requirements.

2.1 The following checklist must be completed to the full satisfaction of the County by 3:00 p.m. of the day preceding the pour in order for the pour to be permitted on the following day:

(1) The form work has been oiled in an acceptable manner	_____
(2) All jacks have been checked and secured	_____
(3) The line and grade of the forms have been checked and found to be acceptable	_____
(4) The headers are in place, have been checked for line and grade and found to be acceptable	_____
(5) Hardware for the temporary timber header is in place (if shown on the plans)	_____
(6) The dowel bars for the approach slabs are in place and tied securely	_____
(7) All reinforcing steel is in place	_____

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(8) All plain reinforcement is free from oil and rust _____

(9) All epoxy coated reinforcing steel has been checked for epoxy damage and any damage found has been corrected _____

(10) The top and bottom mats of deck reinforcing steel have been fully checked for conformance with Section 706.3, are secure, and any deficiencies have been corrected _____

(11) The deck steel reinforcement chairs have been checked for adequate epoxy coating and stability and any deficiencies have been corrected _____

(12) The finishing machine rails are located out of the concrete (unless prior written permission has been requested and granted), and have been verified as being sturdy enough to support the finishing machine _____

(13) The finishing machine rails have been checked for line and grade with any deficiencies corrected _____

(14) The finishing machine has been **fully** checked for line and grade with any deficiencies corrected _____

(15) The contractor has notified the County as to the equipment to be used for concrete placement and the backup equipment to be used _____

(16) A **minimum** of two (2) work bridges, with fully functional rollers, are on the job site and fully assembled _____

(17) The contractor has notified the County in writing of the concrete plant to be used, the earliest possible batch time, and the name of the fully responsible for concrete quality _____

(18) The mats for curing and curing compound are on the job site _____

(19) A tank for soaking the curing mats is on the job site _____

(20) The curing water source or storage tank, pumps and soaker hoses are on the job site _____

(21) Additional curing mats and plastic are on the job site for emergency use _____

2.1.1 Should any of the above items not be completed to the full satisfaction of the County by the above noted time, any scheduled bridge deck pour for the following day will be cancelled in writing by the County. No compensation will be made for any delays or additional costs resulting from meeting the above requirements.

2.2 The following items must be completed to the full satisfaction of the County prior to the dispatch of concrete ready mix trucks for the pour:

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- (1) A minimum of three (2 for use, 1 for back-up) concrete vibrators of an acceptable type are on the deck pour site and are operational _____
- (2) A minimum of two 10-foot straightedges are on the deck pour site and have been checked for straightness _____
- (3) Acceptable finishing tools are on the deck pour site _____
- (4) The concrete placement equipment indicated for use by the contractor is present on the job site and has been checked for adequacy in reaching all areas of the pour _____
- (5) The curing mats have been placed in the soak tank and have been covered with water _____
- (6) An adequate labor force is present on the job site, including people capable of performing carpentry and reinforcing steel corrections _____

2.2.1 Any concrete trucks leaving the plant prior to the completion of the above items, to the full satisfaction of the County will be rejected. Placing rejected concrete into any part of the bridge deck, wearing surface, overlay, diaphragms or wingwalls shall be cause for the rejection, removal and replacement of the entire bridge deck at the contractor's expense. No direct payment shall be made for any delay or additional cost incurred by the contractor as a result of this provision.

3.0 Basis of Payment. Payment for compliance with this job special provision will be considered completely covered by the contract unit price for other items included in the contract.

J. REINFORCING STEEL (BRIDGES) AND REINFORCING STEEL (EPOXY COATED)

1.0 Description. Furnishing and placing plain and epoxy coated reinforcing steel shall be in accordance with Sec 706 and Sec 710, as modified by this job special provision.

2.0 Construction Requirements. All reinforcing steel included in the bridge shall be 100% tied (i.e. tied at all intersections). The use of reinforcing steel wire tie guns will not be permitted unless otherwise approved by the County.

3.0 Basis of Payment. Payment for compliance with this job special provision will be considered completely covered by the contract unit price for other items included in the contract.

K. PROTECTIVE SURFACE TREATMENT FOR CONCRETE – PENETRATING SEALERS
JSP 07-08A

1.0 Description. This work shall consist of preparing and treating the exterior face and one foot on the underside of the outside beams with a penetrating sealer meeting this specification after the beams have been erected.

2.0 Materials. The protective surface treatment shall meet one of the three classes of penetrating sealers in accordance with this job special provision. The penetrating sealer

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selected by the contractor shall be submitted to the engineer for approval 30 days before application and shall be listed on MoDOT's Pre-Qualified Product List. The submittal shall include certified test data from an independent test laboratory and the application rate at which penetrating sealer was tested. The penetrating sealer shall be delivered pre-mixed and ready to use. Mixing/agitation shall be in accordance with the manufacturer's recommended procedures. The penetrating sealer shall be stored in tightly sealed containers in a dry location and as recommended by the manufacturer.

2.1 Class 1 Penetration Sealer – Water Soluble. The protective surface treatment shall be a 100 percent acrylic latex specialty additive or similar water soluble mixture with the percent solids clearly specified by the manufacturer. The treatment system shall meet the performance requirements listed in section 2.2.3 of this job special provision based on a single application at the manufacturer's recommended application rate.

2.1.1 Absorption. The absorption of the treated concrete under total immersion shall not exceed 1.0 percent after 48 hours or 2.0 percent after 50 days per ASTM C 642 as modified below for non-air entrained concrete. Concrete shall be proportioned and mixed in accordance with ASTM C 672.

2.1.1.1 In addition to ASTM C 642 section 4.1, one 4-inch (10 cm) diameter by 4 inch (10 cm) long core shall be retrieved from the surface of a Portland cement concrete to which penetrating sealer solution has been applied. The core shall be oven dried as designated by ASTM C 642 section 5.1. The core shall be sealed with a rapid setting coating on the sides and bottom. The coating shall overlap the top edge of the core 1/8" (3mm). The core shall be weighed to determine the oven dry weight (mass) of the core and coating. The weight (mass) shall be designated as "A".

2.1.1.2 The core, processed in accordance with section 2.1.1.1 of this job special provision, shall be immersed in a suitable receptacle and covered with tap water. The procedure as designated by ASTM C 642 section 5.2 shall be followed to determine the soaked surface dry weight (mass) of the core and coating. This weight (mass) shall be designated as "B".

2.1.1.3 The percent moisture absorption of the core shall be determined by ASTM C 642 section 6.1, equation (1). ASTM C 642 sections 5.3, 5.4, 6.1 and equations (2) through (7) shall not apply.

2.1.2 Salt water ponding. After 90 days ponding of 3 percent NaCl solution per ASSHTO T 259, the chloride ion content of the concrete shall not exceed 1.00 lbs/cu yd (0.45 kg/m³) at 1/2 to 1 inch (13 to 25 mm) depth.

2.1.3 Skid resistance. The skid resistance of the treated concrete deck shall not reduce by more than 10 percent as compared to the same untreated concrete deck. A 5 test average shall be performed in accordance with ASTM E 274 using ASTM E 501 ribbed tire at 40 mph (64 kph).

2.2 Class 2 Penetrating Concrete Sealer. The sealer shall meet the requirements of this job special provision. The sealer selected by the contractor shall be submitted to the engineer for approval two weeks before application and shall be listed on MoDOT's Pre-Qualified Product List. If the contractor chooses to submit a new product for MoDOT's Pre-Qualified Product List, the product shall be submitted to the engineer 30 days prior to application. Either submittal shall include certified test data from an independent test laboratory and the concrete mix design and curing procedure on the test specimens in which sealer was tested.

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2.2.1 The sealer shall be a solvent-free 100% solids isobutyltrialkoxysilane, with low oligomer and polymer compound content. The chemical composition shall meet the following requirements:

Property	Specification
Purity	98% minimum monomer by weight
Solvent	Less than 0.1% by weight
Siloxan or polymer Residue	Less than 0.1% by weight
Chloride Ion Content	Less than 40 PPM
Density	ASTM D2111: 7.2 to 7.4 pounds per gallon
Flash Point	ASTM D93: greater than 145 degrees F
Dry Time	ASTM D7539: less than one hour

2.2.2 The sealer shall meet the following performance criteria based on a single application at the manufacturer's recommended application rate. All test specimens shall be produced using MoDOT Class B-2 concrete in accordance with Section 501.

Test	Test Method	Duration	Max Absorption / Cl ⁻
Water Immersion	ASTM C 642	48 hours	0.5 percent by weight (mass)
Water Immersion	ASTM C 642	50 days	1.5 percent by weight (mass)
Salt Water Ponding (based on non-abraded specimen)	AASHTO T 259	90 days	0.50 lbs/cu yd (0.30 kg/m ³) Cl ⁻ Depth: (1/2 to 1") (13 to 25 mm)

2.2.3 Absorption. The absorption of the treated concrete under total immersion shall not exceed 0.5 percent after 48 hours or 1.5 percent after 50 days per ASTM C 642 as modified below for non-air entrained concrete.

2.2.4 In addition to ASTM C 642 section 4.1, one 4-inch diameter by 4 inch long core shall be retrieved from the surface of a concrete test specimen to which sealer has been applied. No cores shall be taken from the bridge deck. The core shall be oven dried as designated by ASTM C 642 section 5.1. The core shall be sealed with a rapid setting two part epoxy on the sides and bottom. The epoxy shall overlap the top edge of the core 1/8". The core shall be weighed to determine the oven dry weight of the core and coating. The weight shall be designated as "A".

2.2.5 The core, processed in accordance with section 2.2.1.1 of this job special provision, shall be immersed in a suitable receptacle and covered with tap water. The procedure as designated by ASTM C 642 section 5.2 shall be followed to determine the soaked surface dry weight of the core and coating. This weight shall be designated as "B".

2.2.6 The percent moisture absorption of the core shall be determined by ASTM C 642 section 6.1, equation (1). ASTM C 642 sections 5.3, 5.4, 6.1 and equations (2) through (7) shall not apply.

2.2.7 Salt water ponding. After 90 days ponding of 3 percent NaCl solution per ASSHTO T 259, the chloride ion content of the concrete shall not exceed 0.5 pounds per cubic yard (0.30 kg/m³) at 1/2 to 1 inch (13 to 25 mm) depth.

2.3 The sealer shall not permanently stain, discolor or darken the concrete. Application of the sealer shall not alter the surface texture or form a coating on the concrete surfaces. Treated concrete shall be surface dry within 60 minutes after application.

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2.4 The sealer shall be tinted with a fugitive dye to enable the coating to be visible on the treated concrete surface for at least 4 hours after application. The fugitive dye shall not be conspicuous more than 7 days after application when exposed to direct sunlight.

2.5 The sealer shall be delivered to the project in unopened containers with the manufacturer's label identifying the product and with the seal(s) intact. Each container shall be clearly marked by the manufacturer with the following information:

- Manufacturer's name and address.
- Product name.
- Date of manufacture and expiration date.
- Lot identification.
- Storage requirements.

2.6 Class 3 Penetrating Sealer – High Molecular Weight Methacrylate. The material used shall be a low viscosity, non-fuming, and high molecular weight methacrylate resin in accordance with the following:

Property	Test Method	Requirement
Viscosity	Brookfield RVT 100 RPM @ 72°F (22°C)	25 cps maximum
Pot Life	Application life before curing begins [@ 68°F (20°C) air temperature]	15 minutes minimum
Curing Time	On site at 50°F (10°C)	6 hours Maximum

3.0 Construction Requirements.

3.1 Equipment. Application equipment shall be as recommended by the manufacturer. The spray equipment, tanks, hoses, brooms, rollers, coaters, squeegees, etc. shall be thoroughly clean, free of foreign matter, oil residue and water prior to applying the treatment.

3.2 Cleaning and Surface Preparation. Surfaces, which are to be treated, shall meet the approved product's requirements for surface condition. Sealing shall not be done until all concrete repairs and any corrective actions needed have been completed and cured. The contractor shall furnish the engineer with written instructions for surface preparation requirements and a representative of the manufacturer shall be present to assure that the surface condition meets the manufacturer's requirements.

3.2.1 Sealing shall be done after the bridge deck and bridge approach slabs have been textured.

3.2.2 At a minimum, the surface shall be thoroughly cleaned to remove dust, dirt, oil, wax, curing components, efflorescence, laitance, coatings and other foreign materials. The manufacturer or manufacturer's representative shall approve the use of chemicals and other cleaning compounds to facilitate the removal of these foreign materials before use. The treatment shall be applied within 48 hours following surface preparation.

3.2.3 Cleaning equipment shall be fitted with suitable traps, filters, drip pans and other devices to prevent oil and other foreign material from being deposited on the surface.

JOB SPECIAL PROVISIONS (BRIDGE)

3.3 Test Application. Prior to final application, the contractor shall treat a measured test coverage area on horizontal and vertical surfaces of the different components of the structure to be treated for the purpose of demonstrating the desired physical and visual effect on an application or of obtaining a visual illustration of the absorption necessary to achieve the specified coverage rate. In the latter case, the applicator shall use at least $\frac{1}{2}$ gallon (1.9 liter) of treatment following the manufacturer's recommended method of application for the total of the test surfaces. Horizontal test surfaces shall be located on the deck and on the curb or sidewalk, and vertical test surfaces shall be located on a parapet or safety barrier curb so that the different textures are displayed.

3.4 Application. The concrete treatment shall be applied to concrete surfaces as designated on the plans or per the manufacturer's specification. The penetrating sealer shall be applied by thoroughly saturating the concrete surfaces at an application rate specified by the manufacturer and as shown in the approved certified test data.

3.4.1 The concrete surface temperature shall be above 35°F (2°C).

3.4.2 The treatment shall be spread from puddles to dry areas.

3.4.3 If the applicator is unable to complete the entire application continuously, the location where the application was stopped shall be noted and clearly marked.

3.5 Protection of Adjoining Surfaces and the Public.

3.5.1 When applying a treatment, the contractor shall protect adjoining surfaces of the structure that are not to be sealed by masking off or by other means. The contractor shall also make provision to protect the public when treating the fascia of a bridge that spans an area used by the public.

3.5.2 Asphalt and mastic type surfaces shall be protected from spillage and heavy overspray. Joint sealants, traffic paints and asphalt overlays may be applied to the treated surfaces 48 hours after the treatment has been applied. Adjoining and nearby surfaces of aluminum or glass shall be covered where there is possibility of the treatment being deposited on the surfaces. Plants and vegetation shall be protected from overspray by covering with drop cloths. Precautions shall be followed as indicated on the manufacturer's material and safety data sheet.

3.6 Opening to Traffic. Traffic shall be allowed on a deck only after a treated area does not track.

4.0 Method of Measurement. Measurement will be made to the nearest square yard (m^2) measured longitudinally from the exposed end of the outside beams to the exposed end of the outside beams and vertically from the top of the beams transversely one foot on the underside of the outside beams. No deduction will be made for gaps to avoid obstructions. Final measurement will not be made except for authorized changes during construction or where appreciable errors are found in the contract quantity. The revision or correction will be computed and added to or deducted from the contract quantity.

5.0 Basis of Payment. Payment for the above described work, including all material, equipment, labor and any other incidental work necessary to complete this item, will be considered completely covered by the contract unit price for "Penetrating Sealer".

JOB SPECIAL PROVISIONS (BRIDGE)

L. BRIDGE RELIEF JOINT SEALER

1.0 Description. This work shall consist of sealing transverse relief joints in the bridge decks.

2.0 Materials. Materials for joint sealer shall be in accordance with Sec 1057.5.

3.0 Construction Requirements

3.1 General. The relief joint opening shall be formed to produce a reservoir for the sealing material and shall be 1/4 in. (6 mm) wide by 3/4 in. (20 mm) deep. For concrete surfaces the relief joint shall be formed into the concrete. For HMA surfaces the relief joint shall be sawed into the surface. Immediately prior to pouring the sealer the joint opening shall be cleaned with compressed air so that it is free of all foreign and loose material and in a dry condition. The bridge deck relief joints to be sealed shall be free of cracked or spalled areas. Any cracked areas shall be chipped back to sound material before placing joint sealer.

3.1.1 The hot-poured joint sealer shall be placed when the weather conditions are suitable, the air temperature in the shade is at least 40 °F (5 °C), and the forecast is for rising temperatures.

3.1.2 Hot-poured joint sealer shall be stirred during heating to prevent localized overheating. The sealing material shall be applied to each joint opening according to the details shown on the plans or as directed by the Engineer, without spilling on the exposed deck surfaces.

3.1.3 All bridge relief joints shall be filled with sufficient sealer compound so that the top of the seal is flush with the top of the finished deck or wearing surface.

3.1.4 Any sealing compound that is not bonded to the relief joint wall or face 24 hours after placing shall be removed and the joint shall be cleaned and resealed.

4.0 Basis of Payment. This work will not be paid for as a separate item, but shall be considered as included in the unit price bid for the major item of construction involved.



SCI ENGINEERING, INC.

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Union, Missouri 63084
636-584-7991 Fax 636-584-7966
www.sciengineering.com

Geotechnical Report

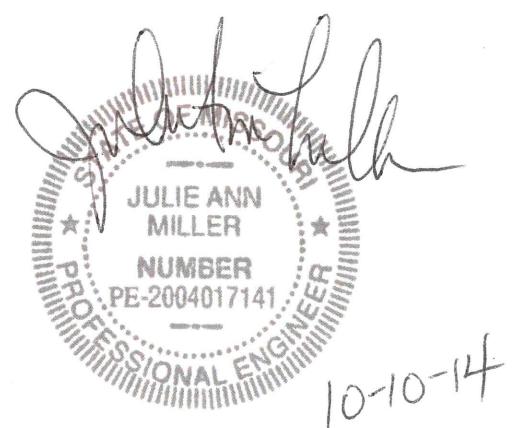
**OLD LEMAY FERRY ROAD CULVERT REPLACEMENT
JEFFERSON COUNTY, MISSOURI**

October 2014

**JEFFERSON COUNTY DEPARTMENT OF PUBLIC WORKS
Owner**

**STRUCTURES, INC.
Structural Engineer**

SCI No. 2014-5001.11



October 10, 2014

Mr. Jason Jonas
Director of Public Works
Jefferson County Department of Public Works
725 Maple Street
P.O. Box 100
Hillsboro, Missouri 63050

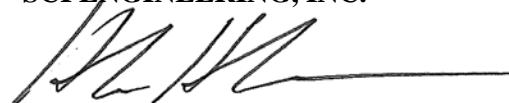
RE: Geotechnical Report
Old Lemay Ferry Road Culvert Replacement
Jefferson County, Missouri
SCI No. 2014-5001.11

Dear Mr. Jonas:

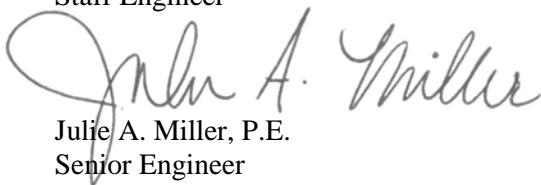
Attached is our *Geotechnical Report*, dated October 2014. This report should be read in its entirety, and our recommendations considered in the design and construction of the proposed bridge. Please call if you have any questions.

Respectfully,

SCI ENGINEERING, INC.



Hobson H. Fizette, P.E.
Staff Engineer



Julie A. Miller, P.E.
Senior Engineer

HHF/KTK/JAM/tlw

Enclosure
Geotechnical Report

C: Mr. Brian Dugan, Jefferson County (email only) BDugan@Jeffcomo.org
Mr. John Gruendler, Structures, Inc. (email only) jig@stlsi.com

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Geotechnical Report

OLD LEMAY FERRY ROAD CULVERT REPLACEMENT JEFFERSON COUNTY, MISSOURI

1.0 INTRODUCTION

At the request of Mr. Brian Dugan of The Jefferson County Department of Public Works, SCI Engineering, Inc. (SCI) conducted a geotechnical exploration for the proposed culvert replacement. The purpose of our exploration was to characterize and evaluate the subsurface conditions, provide recommendations for foundations, and address other geotechnical aspects. Our services were provided in general accordance with our proposal dated August 22, 2014 as authorized by Mr. Jason Jonas of Jefferson County on August 27, 2014.

2.0 SITE AND PROJECT DESCRIPTION

We understand that an existing culvert will be replaced along Old Lemay Ferry Road between the intersections with Oak Crest Drive and Kable Road in rural Jefferson County, Missouri. The location of the site is shown on the *Vicinity and Topographic Map*, Figure 1 and the existing site features are shown on the *Aerial Photograph*, Figure 2. The existing structure is a reinforced concrete box culvert with approximate dimensions of 30 feet in width, 16.5 feet in length, and 6.7 feet in height. Plans for the replacement structure were not available at the time of this report. However, based on conversations with Jefferson County and the project structural engineer from Structures, Inc. (Structures), we understand the culvert will be replaced with a single-span bridge. If a different replacement structure is proposed, SCI should be retained to review our recommendations.

SCI is currently performing Asbestos-containing Materials (ACM) and Heavy Metal Based Paint surveys for the existing structure. The results of those surveys will be presented under a separate cover. We have not reviewed, nor are we aware of, any other previous studies on this specific site, by SCI or others, that would affect the preparation of this report.

3.0 SUBSURFACE CONDITIONS

3.1 Mining and Karstic Activity

No visual evidence of subsurface mining, surface mining, or karstic activity was observed at the site. The University of Missouri – Columbia Center for Agricultural, Resource, and Environmental Systems (CARES) maintains records of active and abandoned mines and areas of karstic soils in the state. Based on their records, the site is not undermined and does not have any documented underground or surface mining of coal or other materials. Additionally, karstic features were not noted on or near the site.

In consideration of this information, there appears to be little, if any, risk of subsidence related to collapse of an underground mine or settlement of fill of a backfilled abandoned surface mine or from a sinkhole formed from karstic soils.

3.2 Exploration Procedures

A total of two borings, designated as B-1 and B-2, were drilled at the approximate locations shown on the *Aerial Photograph*, Figure 2 and on the *Site Plan*, Figure 3. The boring locations were staked in the field by SCI personnel by measuring from existing site features. Ground surface elevations at the boring locations were later surveyed in by Heideman Associates, Inc. and provided to SCI.

A CME 75 truck-mounted drill rig equipped with continuous flight augers (CFA) was used to advance the borings through the existing roadway. Standard Penetration Tests (SPTs) were performed with a split-spoon sampler at 2½-foot intervals to a depth of 10 feet, and at 5-foot intervals thereafter to the termination depth of the borings. The SPT soil samples were put into glass jars and then transported to our laboratory for further testing. Detailed information regarding the nature and thickness of the soils and rock encountered, and the results of the field sampling and laboratory testing are shown on the Borings Logs in Appendix A.

3.3 Subsurface Conditions

Below the surficial 8 to 10 inches of asphaltic concrete, fill soils consisting of crushed rock and lean clay (CL in accordance with the Unified Soil Classification System and ASTM D 2488-09a), were encountered to depths of approximately 6 and 8 feet (El. 645.2 to 647.1) in B-2 and B-1, respectively. SPT N-values within the fill ranged from 9 to 37 blows per foot (bpf), with an average of 24 bpf, while moisture contents ranged from 6 to 46 percent, with an average of 19 percent.

Beneath the fill, the natural soils consisting of fat clay (CH) with varying amounts of sand and coarse gravel extended to auger refusal depths of 25.5 to 26.5 feet (El. 626.6 to 627.7). Auger refusal is a designation applied to any material that cannot be further penetrated by the power auger without extraordinary effort, and is indicative of very hard material, usually boulders or bedrock. To further characterize the natural soil characteristics, Atterberg limits tests were performed on selected samples from Boring B-2 resulting in liquid limits of 85 and 116, with corresponding plasticity indices of 63 and 89, respectively. Additionally, moisture contents within the natural soils ranged from 12 to 28 percent, averaging 19 percent. SPT N-values within the natural soils ranged from 14 to in excess of 50 bpf, averaging 25 bpf, indicating the soils are stiff to hard in consistency.

3.4 Bedrock Geology

Documented geology, including the *Bedrock Geologic Map of Missouri*, indicates that bedrock at the site consists of the Decorah and Plattin formations of the Ordovician Period. The Decorah formation generally consists of shale with thin beds of limestone, while the Plattin formation generally consists of finely crystalline limestone with minor interbedded shale layers. The bedrock observed in our rock cores indicates that the bedrock is likely from the Plattin formation.

Both borings were advanced past auger refusal using rock coring techniques. A summary auger refusal depths and elevations is provided in Table 3.1 below. The bedrock consisted of slightly to moderately weathered limestone. Rock Quality Designations (RQDs) ranged from 78 to 86 percent, which is an indication of good rock quality using the ASTM D6032-08 *Standard Test Method For Determining Rock Quality Designation (RQD) of Rock Core*. Unconfined compression strengths of 181.8 to 302.2 kips per square foot (ksf) were measured on selected samples. Photographs of the rock core are enclosed in Appendix A.

Table 3.1 – Summary of Auger Refusal Depths

Location	Boring Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
B-1	653.12	25.5	626.6
B-2	653.24	26.5	627.7

3.5 Groundwater

Documented geology, including the *Bedrock Geologic Map of Missouri*, indicates that bedrock at the site consists of the Decorah and Plattin formations of the Ordovician Period. The Decorah formation generally consists of shale with thin beds of limestone, while the Plattin formation generally consists of finely crystalline limestone with minor interbedded shale layers. The bedrock observed in our rock cores indicates that the bedrock is likely from the Plattin formation.

Groundwater was noted at the time of drilling in both borings at depths of 23.0 and 25.0, as further detailed in Table 3.2 below. The groundwater level depends on seasonal and climatic variations, the water level in the stream, and may be present at different depths in the future. In addition, without extended periods of observation, accurate groundwater level measurements may not be possible, particularly in low permeability soils. At the time of our exploration, the stream bed was dry.

Table 3.2 – Summary of Groundwater Conditions

Location	Depth To Groundwater (ft)	Groundwater Elevation (ft)
B-1	25.0	628.1
B-2	23.0	630.2

4.0 DESIGN RECOMMENDATIONS

In order to provide design recommendations for the proposed bridge structure, the following evaluations were performed based on all available data collected and reviewed at the time of this report. This information includes the subsurface exploration performed by SCI and communications with Jefferson County and Structures personnel familiar with the project.

4.1 Seismic Considerations

4.1.1 *Design Earthquake*

According to the American Association of State Highway and Transportation Officials (AASHTO) LRFD Bridge Manual 2010 edition, the structure should be designed to a design earthquake with a 7 percent Probability of Exceedance (PE) over a 75-year exposure period (i.e. a 1,000-year design earthquake). The 1,000-year design earthquake has a Moment Magnitude (Mw) of 7.70 and a Peak Ground Acceleration (PGA) of 0.21g, as determined from data provided by the United States Geological Survey (USGS) National Seismic Hazard Mapping Project and procedures outlined in the Bridge Manual.

4.1.2 *Site Class Determination*

The seismic site soil classification for the bridge site was determined from the design earthquake data, the subsurface data, and the procedures described in the AASHTO Bridge Manual. The Site Class was evaluated using methods defined as B and C, which include evaluating the SPT N-values and undrained shear strength, S_u . Based on the shallow nature of the underlying bedrock and the undrained shear strength values, we recommend that Site Class C be used for the project. Based on Table 3.10.6-1 of the AASHTO Bridge Manual the Seismic Performance Zone is 2. Seismic design parameters for the site are summarized in Table 4.1.

Table 4.1 – Seismic Design Parameters

Seismic Design Parameters	
Site Class	C
F_a	1.20
F_v	1.70
Design Spectral Acceleration at 0.2 sec. (S_{DS})	0.43g
Design Spectral Acceleration at 1.0 sec. (S_{DI})	0.17g
Seismic Performance Zone	Zone 2

4.1.3 Liquefaction Potential Analysis

The liquefaction potential analysis for the site was conducted using field and laboratory data and the techniques common to the state of practice. The average seasonal groundwater elevation used in the analysis was estimated from the end of boring conditions and the seasonal weather conditions. Based on our analyses, the majority of the soils have sufficient strength and/or a plasticity index that make the threat of liquefaction minimal during the design earthquake.

While the amount of the seismically-induced settlement is dependent on the magnitude and distance from the seismic event, we estimate that the settlements from the design earthquake will be negligible so liquefaction mitigation techniques are not required.

4.2 Abutment Settlement

Based on conversations with personnel from Jefferson County, minimal grade changes on the order of less than 1 foot are currently anticipated at the proposed abutments. Due to the minimal grade changes anticipated, total settlements at the abutments are estimated to be 1-inch or less. Additionally, the effects of down drag on axial pile capacity were neglected. Therefore, mitigation techniques for settlement are not required for construction of the bridge abutments. If additional fill is required at the abutments, SCI should be retained to review our recommendations.

4.3 Bridge Approach Slabs

The bridge approach slabs should be designed to bear on newly placed low plastic structural fill. In evaluating the bearing resistance of the slabs, we recommend using a modulus of subgrade reaction of 150 pounds per square inch per inch of deflection (pci).

4.4 Slope Stability

SCI conducted slope stability analyses for the new bridge abutments. The slope stability analyses were conducted using limit equilibrium slope stability methods and the commercially available software program Slope/W (part of the GeoStudio 2012 software package developed by Geo-Slope International). A Morgenstern-Price analysis was used to search for a critical circular failure surface to calculate the factor of safety for the slope. The model considered the engineering soil properties from the subsurface exploration data, the given slope geometries, the peak ground acceleration (PGA) from the design earthquake, and the procedures for seismic slope stability outlined in Federal Highway Administration (FHWA) publication FHWA-HI-99-012 Geotechnical Earthquake Engineering were used. Based on the AASHTO LRFD Manual, a resistance factor (ϕ_G) of 0.65 was utilized for the overall global stability of the slopes. In this methodology, the Factors of Safety (FS) is solved for as in traditional Allowable Stress Design analyses, and the inverse of the FS compared to the resistance factor. A resistance factor of 0.65 is approximately equivalent to a FS of 1.5.

The end-slopes were evaluated using short-term, long-term and seismic loading conditions. A traffic load of 250 psf was used during the analyses. For the static, long-term slope stability analyses, effective stress values were used in a simplified soil profile developed for the bridge embankments and the failure surfaces were limited to the end slopes below the proposed structure. For the short-term analyses, total stress values were used. In each case, the embankments achieved the minimum factors of safety for the static conditions, as detailed in Table 4.2.

Table 4.2 – Summary of Slope Stability Factors of Safety

Location	Short-Term Static Condition		Long-Term Static Condition		Seismic Pseudostatic Condition	
	Required Minimum Factor of Safety	Estimated Factor of Safety	Required Minimum Factor of Safety	Estimated Factor of Safety	Required Minimum Factor of Safety	Estimated Factor of Safety
North Abutment (B-1)	1.5	3.7	1.5	1.8	1.1	1.8
South Abutment (B-2)	1.5	2.7	1.5	1.5	1.1	1.6

For the seismic condition, reduced total stress values were utilized in the analysis. The analysis considers a seismic resistance factor (ϕ_{GSeis}) of 0.9 and subsequent minimum FS of 1.1 while using the full PGA value for each abutment in seismic loading. The proposed profile achieved a FS equal to or greater 1.1. The individual output graphics from the analyses are presented in Appendix B.

4.5 Scour

Abutment foundations are an area of primary concern for damage from scour. Considerations should be made during the design process to include abutment protection from scour, such as placement of stone-dumped rip rap.

4.6 Bridge Foundations

As previously discussed, plans detailing the replacement structure were not available. However, we understand that a single-span bridge supported on metal H-Piles is currently proposed to replace the existing culvert.

The foundations supporting the proposed bridge must provide sufficient support to resist dead and live loads, including seismic loads. Based on the encountered subsurface conditions, and the information available to date, we recommend H-Pile foundations driven into rock to their maximum nominal required bearing for the abutments. The minimum H-Pile embedment required by MoDOT is 10 feet into natural ground.

4.6.1 Driven Steel H-Pile Recommendations

The structural capacity of driven piles depends on the allowable stress and cross sectional areas of steel or steel and concrete. Per *Section 751.36.3 – Design Procedure* of the *MoDOT Engineering Policy Guide* (EPG), the Maximum Nominal Compression Resistance for the recommended pile section is shown in Table 4.3.

For H-piles driven to refusal, skin friction was not considered during the design, only end bearing. As settlement and liquefaction are not a concern at the site, geotechnical losses were not considered necessary in the pile design. The use of driving shoes is recommended as “Hard driving” conditions may be encountered in the gravelly clay soils and in the layer immediately above bedrock.

We recommend a minimum driven pile center to center spacing of 2.5 pile diameters recommended by AASHTO LRFD Bridge Design Specifications 2010 Edition. Once the final spacing is determined, the group efficiency factor (η) should be calculated from section 10.7.3.9 of AASHTO Manual.

Table 4.3 – Summary of H-Pile Design Capacity

Pile Description	Structural Factored ($\phi = 0.5$) Compression Resistance, (kips)		Structural Factored ($\phi = 1.0$) Seismic Compression Resistance, (kips)	
	36 ksi	50 ksi	36 ksi	50 ksi
HP 10×42	220	310	446	620
HP 12×53	275	380	558	760
HP 14×73	385	535	770	1070

The values above assume the Gates Formula will be the method of pile driving acceptance criteria used during construction. The Gates formula is not considered accurate for pile loading exceeding 600 kips or 300 tons. When pile loading exceeds 600 kips, the wave equation analysis and a resistance factor of 0.4 should be used.

The pile lengths, as shown in Table 4.4 were estimated from the encountered top of bedrock elevations and the estimated top of pile elevations. The top of pile elevations were estimated to be embedded 2 feet into the abutment. We recommend that a minimum of one test pile, be driven to verify capacity and overall pile length. In addition, the test pile length should be longer than the estimated length to assure sufficient pile length. The production pile lengths should be adjusted based on the test pile results.

Table 4.4 – Summary of H-Pile Lengths

Pile Location	Estimated Pile Top Elevation (ft)	Estimated Pile Tip Elevation (ft)	Estimated Pile Length (ft)
North Abutment (B-1)	651.0	626.6	24.4
South Abutment (B-2)	651.0	627.7	23.3

The piles should be driven to practical refusal using a hammer chosen in accordance with Section 702 of the "Missouri Standard Specifications for Highway Construction" dated 2011 and any subsequent revisions.

4.7 Wingwalls

If wingwalls are utilized for the proposed bridge, they should be designed to withstand lateral earth pressures caused by the weight of the backfill, including slopes behind the walls. We recommend the equivalent fluid unit weights tabulated below in Table 4.5 for lateral earth pressures, in pounds per cubic foot, be used in the design of the wingwalls. The indicated values assume that drainage is provided to

prevent the development of hydrostatic pressure. Values for granular material should only be used if the granular backfill extends upwards and outwards the full height of the wall at a slope of 45 degrees or flatter from its base. In this case, the granular backfill should be capped with approximately 2 feet of cohesive soil to reduce the potential for surface water infiltration into the granular backfill. With clean granular backfill, filter fabric, such as Mirafi 140N or equivalent, should be placed along the interface between the soil and the granular backfill to reduce the potential for infiltration of the soil into the granular material.

Table 4.5 – Recommended Lateral Earth Pressures – Level Surface

Backfill Type	Equivalent Fluid Unit Weights	
	At-Rest Earth Pressures (pcf)	Active Earth Pressures (pcf)
Cohesive Soil	70	50
Granular Material (1-inch minus)	60	40
Free-Draining Granular Material (1-inch clean)	50	30

The above values are applicable when the surface of the backfill behind the wall is horizontal. In areas where an upward sloped or loaded backfill case occurs, additional pressures will need to be added. If the final design includes upward sloped backfills, SCI should be retained to review our recommendations.

4.8 Lateral Pile Response

A representation of the shaft response under lateral loading is required for design of the bridge structure. The lateral response can be developed by modeling the soil/shaft interaction with the computer program LPILE. Discrete elements are used in LPILE to represent the shaft and non-linear soil using springs. The non-linear soil springs are commonly referred to as P-Y curves.

Based on the encountered subsurface conditions, tables for each boring summarizing appropriate soil modulus parameters (k), phi angles, cohesion, effective unit weights, and values of strain at 50 percent of the maximum stress (E50) for the LPILE analyses are included in Appendix C (Reference: LPILE User's Manual, Ensoft, Inc., October 2000). When pile design details and load information are available, LPILE analyses can then be performed.

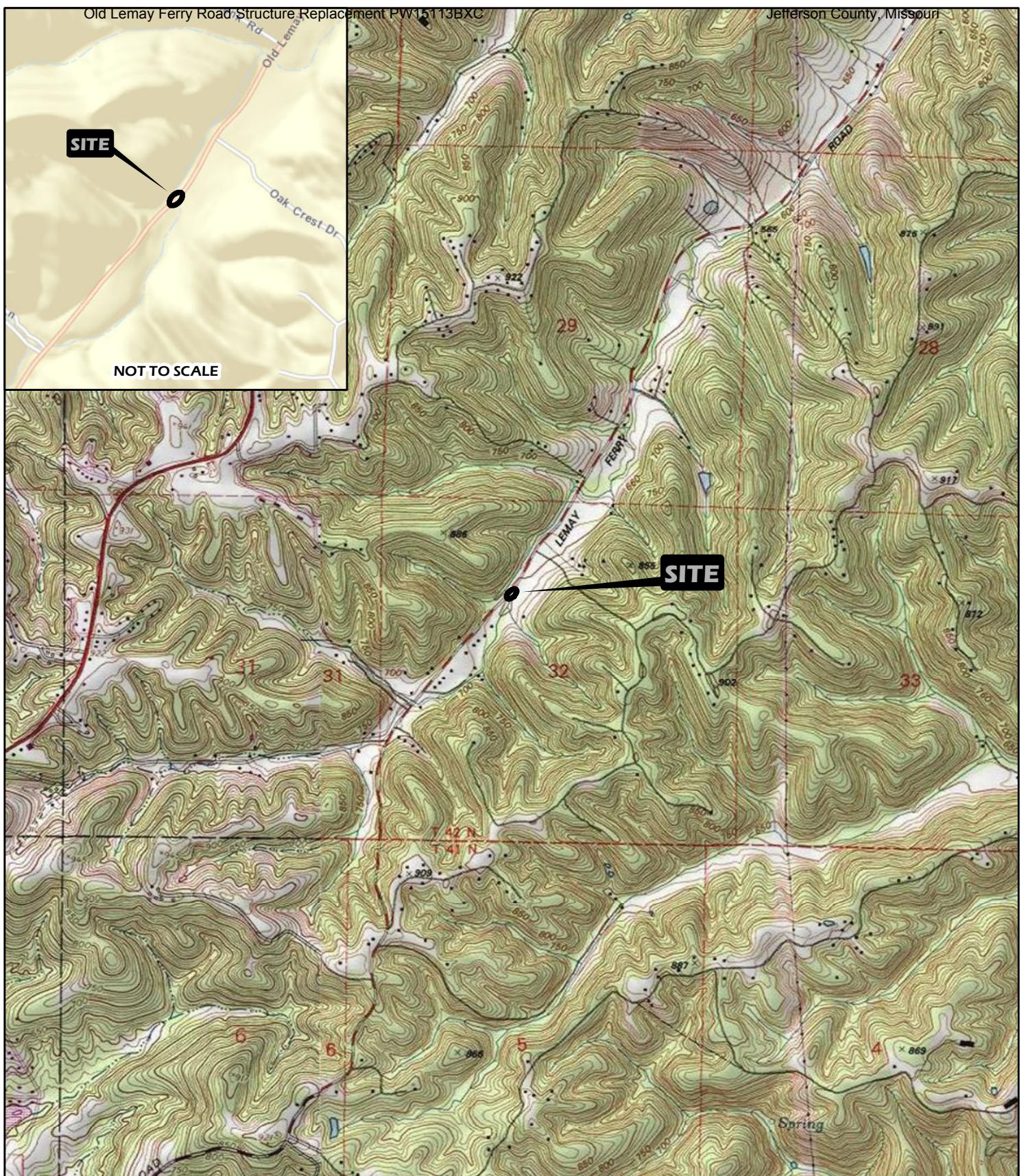
5.0 CONSTRUCTION CONSIDERATIONS

At this time, it has not been determined if staged construction will be used. If staged construction is used, the use of a temporary soil retention system will be required. Based on the depth to bedrock, temporary sheet piles may be feasible. However, due to the stiff soil conditions encountered in both borings, hard driving conditions may occur. The construction activities should be performed in accordance with the current *Missouri Department of Transportation (MoDOT) Standard Specifications for Road and Bridge Construction* and any pertinent Special Provisions or policies.

6.0 LIMITATIONS

The recommendations provided herein are for the exclusive use of our client, Jefferson County. They are specific only to the project described, and are based on subsurface information obtained at two boring locations adjacent to the existing project, our understanding of the project as described herein, and geotechnical engineering practice consistent with the standard of care. No other warranty is expressed or implied. SCI should be contacted if conditions encountered during construction are not consistent with those described.

We should also be provided with a set of final development plans, once they are available, to review whether our recommendations have been understood and applied correctly, and to assess the need for additional exploration or analysis. In addition, any changes in the planned project or changed site conditions may require revised or additional recommendations on our part.



	PROJECT NAME OLD LEMAY FERRY ROAD CULVERT REPLACEMENT JEFFERSON COUNTY, MISSOURI			GENERAL NOTES/LEGEND USGS TOPOGRAPHIC MAP BELEW CREEK, MISSOURI QUADRANGLE DATED 1954, PHOTO REVISED 1974 HERCULANEUM, MISSOURI QUADRANGLE DATED 1993 10' CONTOURS	
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checked by	HHF	10/2014		2014-5001.11	SCALE 1" = 2000'
					FIGURE 80 1



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PROJECT NAME
OLD LEMAY FERRY ROAD
CULVERT REPLACEMENT
JEFFERSON COUNTY, MISSOURI

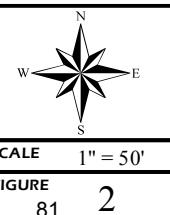
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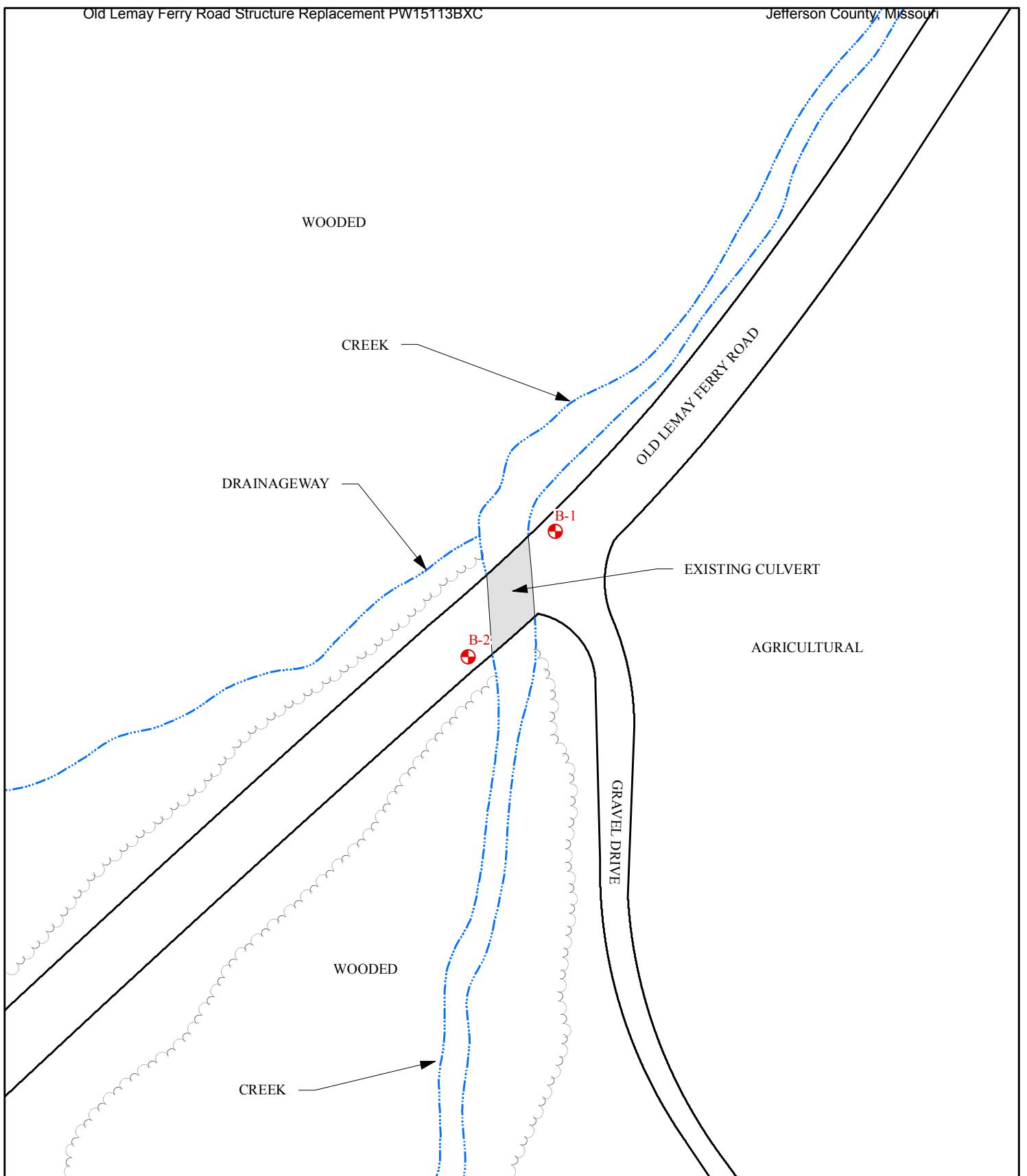
DRAWN BY	RCV	DATE	JOB NUMBER
CHECKED BY	HHF	10/2014	2014-5001.11

GENERAL NOTES/LEGEND

⊕ INDICATES APPROXIMATE SOIL BORING LOCATIONS.

AERIAL PHOTOGRAPH OBTAINED FROM BING MAPS VIA ARCGIS ONLINE.





PROJECT NAME
OLD LEMAY FERRY ROAD
CULVERT REPLACEMENT
JEFFERSON COUNTY, MISSOURI

SITE PLAN

DRAWN BY	RCV	DATE	JOB NUMBER
CHECKED BY	HHF	10/2014	2014-5001.11

GENERAL NOTES/LEGEND

● INDICATES APPROXIMATE SOIL BORING LOCATIONS.

DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ACTUAL MAY VARY.
DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT
FOR WHICH IT WAS GENERATED.

N	
W	E
S	
SCALE	1" = 50'
FIGURE	82 3

Appendix A



BORING LOG LEGEND AND NOMENCLATURE

Depth is in feet below ground surface. **Elevation** is in feet mean sea level, site datum, or as otherwise noted.

Sample Type

- SS** Split-spoon sample, disturbed, obtained by driving a 2-inch-O.D. split-spoon sampler (ASTM D 1586).
- NX** Diamond core bit, nominal 2-inch-diameter rock sample (ASTM D 2113).
- ST** Thin-walled (Shelby) tube sample, relatively undisturbed, obtained by pushing a 3-inch-diameter, tube (ASTM D 1587).
- CS** Continuous sample tube system, relatively undisturbed, obtained by split-barrel sampler in conjunction with auger advancement.
- SV** Shear vane, field test to determine strength of cohesive soil by pushing or driving a 2-inch-diameter vane, and then shearing by torquing soil in existing and remolded states (ASTM D 2573).
- BS** Bag sample, disturbed, obtained from cuttings.

Recovery is expressed as a ratio of the length recovered to the total length pushed, driven, cored.

Blows Numbers indicate blows per 6 inches of split-spoon sampler penetration when driven with a 140-pound hammer falling freely 30 inches. The number of total blows obtained for the second and third 6-inch increments is the N value (Standard Penetration Test or SPT) in blows per foot (ASTM D 1586). Practical refusal is considered to be 50 or more blows without achieving 6 inches of penetration, and is expressed as a ratio of 50 to actual penetration, e.g., 50/2 (50 blows for 2 inches).

For analysis, the N value is used when obtained by a cathead and rope system. When obtained by an automatic hammer, the N value may be increased by a factor of 1.3.

Vane Shear Strength is expressed as the peak strength (existing state) / the residual strength (remolded state).

Description indicates soil constituents and other classification characteristics (ASTM D 2488) and the Unified Soil Classification (ASTM D 2487). Secondary soil constituents (expressed as a percentage) are described as follows:

Trace	<5
Few	5-15
With	>15-30

Stratigraphic Breaks may be observed or interpreted, and are indicated by a dashed line. Transition between described materials may be gradual.

Laboratory Test Results

- Natural moisture content (ASTM D 2216) in percent.
- Dry density in pounds per cubic foot (pcf).
- Hand penetrometer value of apparently intact cohesive sample in kips per square foot (ksf).
- Unconfined compressive strength (ASTM D 2166) in kips per square foot (ksf).
- Liquid and Plastic Limits (ASTM D 4318) in percent.

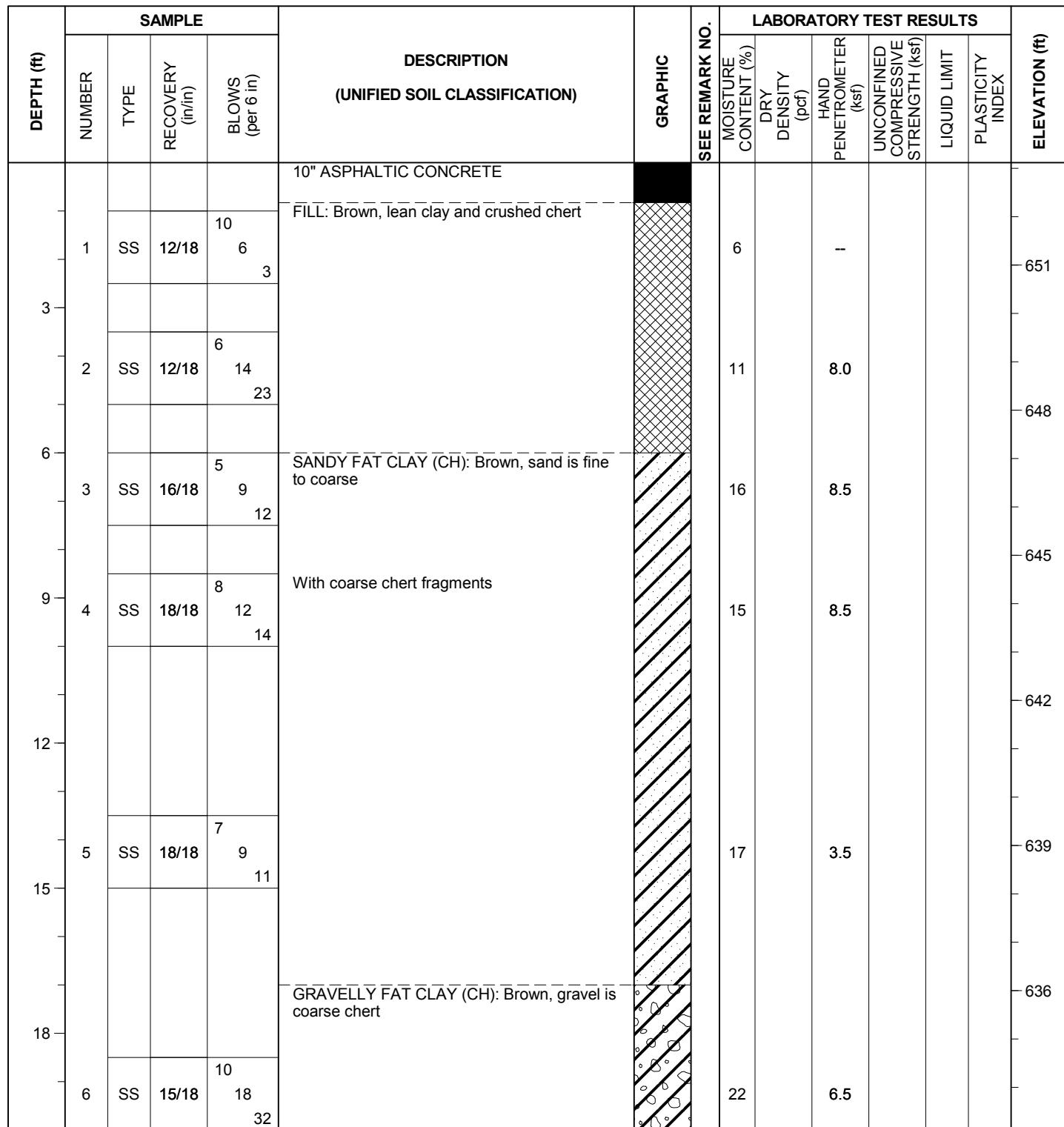
RQD (Rock Quality Designation) is the ratio between the total length of core segments 4 inches or more in length and the total length of core drilled. RQD (expressed as a percentage) indicates insitu rock quality as follows:

Excellent	90 to 100
Good	75 to 90
Fair	50 to 75
Poor	25 to 50
Very Poor	0 to 25



PROJECT Old Lemay Ferry Road Culvert Replacement
 LOCATION Jefferson County, Missouri
 DRILLER Midwest Drilling, Inc.
 EQUIPMENT CME-75 w/CFA
 NORTHING 910932.8

BORING NUMBER B-1 (N. Abut.)
 SHEET 1 of 2
 PROJECT NO. 2014-5001.11
 HAMMER Auto
 ELEVATION 653.12
 DATE DRILLED 09/04/14
 EASTING 823096.5



WATER LEVEL:		REMARKS:
25.0	NONE OBSERVED WHILE DRILLING	
--	ft WHILE DRILLING	
--	ft HRS AFTER DRILLING	
--	ft DAYS AFTER DRILLING	



PROJECT Old Lemay Ferry Road Culvert Replacement
 LOCATION Jefferson County, Missouri
 DRILLER Midwest Drilling, Inc.
 EQUIPMENT CME-75 w/CFA
 NORTHING 910932.8

BORING NUMBER B-1 (N. Abut.)
 SHEET 2 of 2
 PROJECT NO. 2014-5001.11
 DATE DRILLED 09/04/14

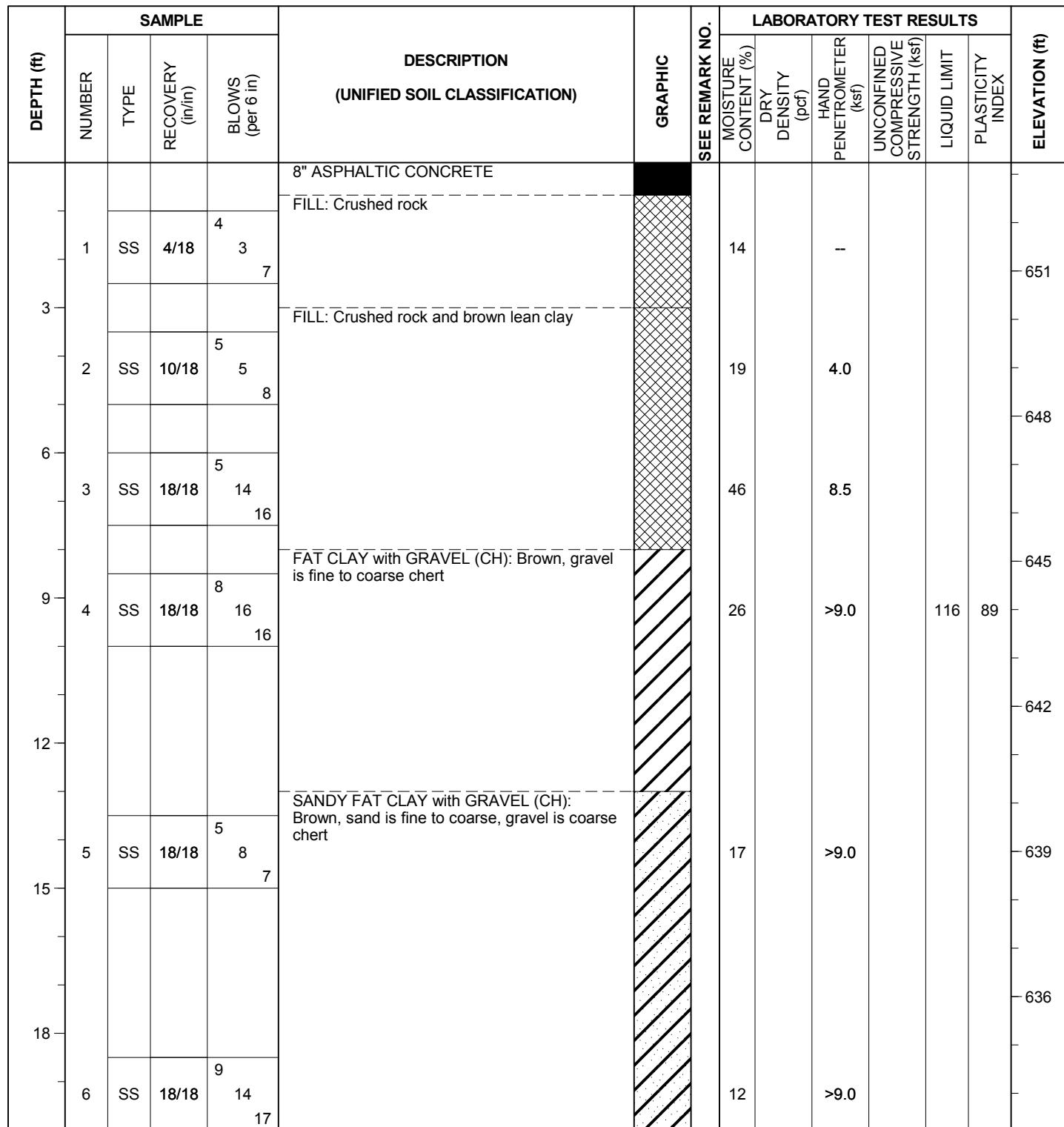
DEPTH (ft)	SAMPLE			DESCRIPTION (UNIFIED SOIL CLASSIFICATION)	GRAPHIC	SEE REMARK NO.	LABORATORY TEST RESULTS					ELEVATION (ft)	
	NUMBER	TYPE	RECOVERY (in/in)				MOISTURE CONTENT (%)	DRY DENSITY (pcf)	HAND PENETROMETER (ksf)	UNCONFINED COMPRESSIVE STRENGTH (ksf)	LIQUID LIMIT	PLASTICITY INDEX	
21				GRAVELLY FAT CLAY (CH): Brown, gravel is coarse chert (Continued)									633
24	7	SS	0/1	50/1"									630
27	8	NX	100/120	LIMESTONE: Gray, hard, finely crystalline, thick bedded, slightly to moderately weathered, with chert nodules and pitted with infilled sand		1				198.3			627
30													624
33													621
36													618
39				Boring terminated at 36.5 feet.									615

WATER LEVEL:	REMARKS:
25.0 ft WHILE DRILLING	NONE OBSERVED WHILE DRILLING
-- ft HRS AFTER DRILLING	1) RQD = 86%
-- ft DAYS AFTER DRILLING	



PROJECT Old Lemay Ferry Road Culvert Replacement
 LOCATION Jefferson County, Missouri
 DRILLER Midwest Drilling, Inc.
 EQUIPMENT CME-75 w/CFA
 NORTHING 910875.8

BORING NUMBER B-2 (S. Abut.)
 SHEET 1 of 2
 PROJECT NO. 2014-5001.11
 DATE DRILLED 09/04/14
 HAMMER Auto
 ELEVATION 653.24
 EASTING 823059.9



WATER LEVEL:	REMARKS:
23.0 ft WHILE DRILLING	NONE OBSERVED WHILE DRILLING
-- ft HRS AFTER DRILLING	
-- ft DAYS AFTER DRILLING	



PROJECT Old Lemay Ferry Road Culvert Replacement
 LOCATION Jefferson County, Missouri
 DRILLER Midwest Drilling, Inc.
 EQUIPMENT CME-75 w/CFA
 NORTHING 910875.8

BORING NUMBER B-2 (S. Abut.)
 SHEET 2 of 2
 PROJECT NO. 2014-5001.11
 DATE DRILLED 09/04/14

DEPTH (ft)	SAMPLE			DESCRIPTION (UNIFIED SOIL CLASSIFICATION)	GRAPHIC	SEE REMARK NO.	LABORATORY TEST RESULTS					ELEVATION (ft)	
	NUMBER	TYPE	RECOVERY (in/in)				MOISTURE CONTENT (%)	DRY DENSITY (pcf)	HAND PENETROMETER (ksf)	UNCONFINED COMPRESSIVE STRENGTH (ksf)	LIQUID LIMIT	PLASTICITY INDEX	
21				SANDY FAT CLAY with GRAVEL (CH): Brown, sand is fine to coarse, gravel is coarse chert (Continued)									633
24	7	SS		FAT CLAY (CH): Brown, trace medium sand			28	3.5		85	63		630
27				LIMESTONE: Gray, hard, finely crystalline, thick bedded, slightly to moderately weathered, with chert nodules and pitted with infilled sand									627
30	8	NX	114/120			1				302.2			624
33										181.8			621
36				Boring terminated at 35.5 feet.									618
39													615

WATER LEVEL:	REMARKS:
23.0 ft WHILE DRILLING	NONE OBSERVED WHILE DRILLING
-- ft HRS AFTER DRILLING	1) RQD = 78%
-- ft DAYS AFTER DRILLING	

B-1

DEPTH
26.5ft

Scale in Inches

RUN NO.	DEPTH, FT.	RECOVERY %	RQD %
1	26.5-36.5	83	86

SCI ENGINEERING, INC.
www.sciengineering.comOld Lemay Ferry Road Culvert Replacement
Jefferson County, Missouri

ROCK CORE PHOTOGRAPH

October 2014

SCI No. 2014-5001.11

B-2



SCI ENGINEERING, INC.
www.sciengineering.com

Old Lemay Ferry Road Culvert Replacement
Jefferson County, Missouri

ROCK CORE PHOTOGRAPH

October 2014

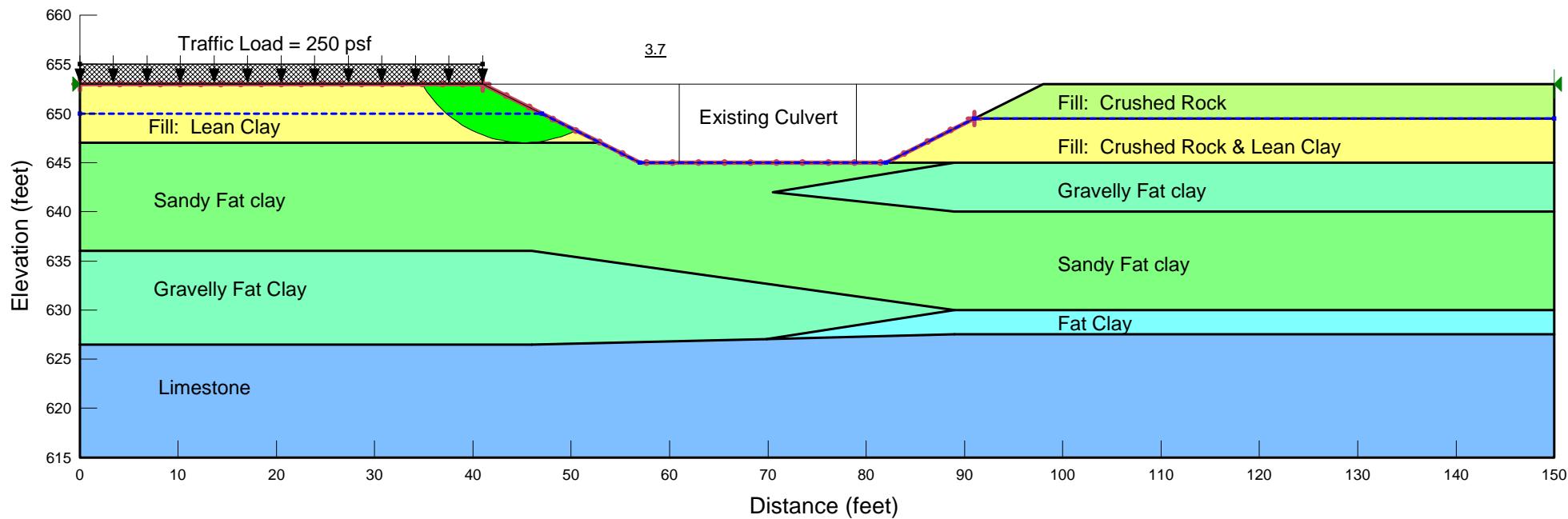
SCI No. 2014-5001.11

Appendix B

Old Lemay Ferry Road Culvert Replacement

North Abutment

Short Term Condition

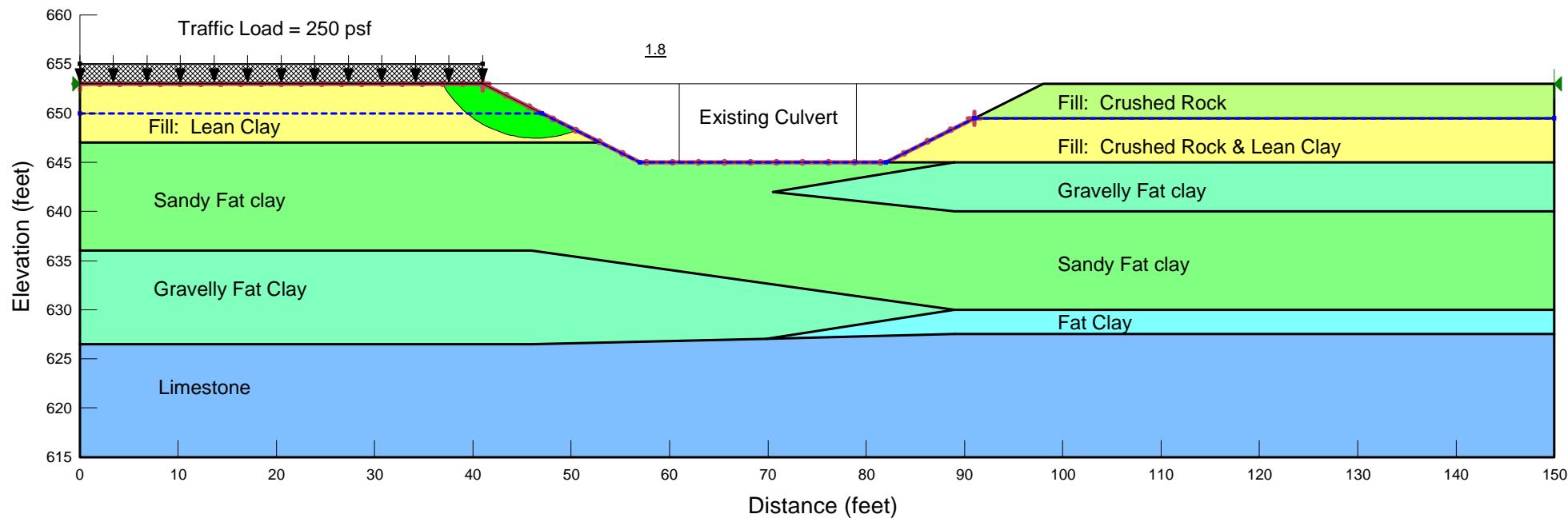


Name: Fill: Lean Clay Unit Weight: 120 pcf Cohesion': 500 psf Phi': 0 °
 Name: Fill: Crushed Rock Unit Weight: 120 pcf Cohesion': 0 psf Phi': 32 °
 Name: Sandy Fat Clay Unit Weight: 120 pcf Cohesion': 1,000 psf Phi': 0 °
 Name: Gravelly Fat Clay Unit Weight: 120 pcf Cohesion': 1,000 psf Phi': 0 °
 Name: Fat Clay Unit Weight: 120 pcf Cohesion': 1,000 psf Phi': 0 °
 Name: Limestone

Old Lemay Ferry Road Culvert Replacement

North Abutment

Long Term Condition

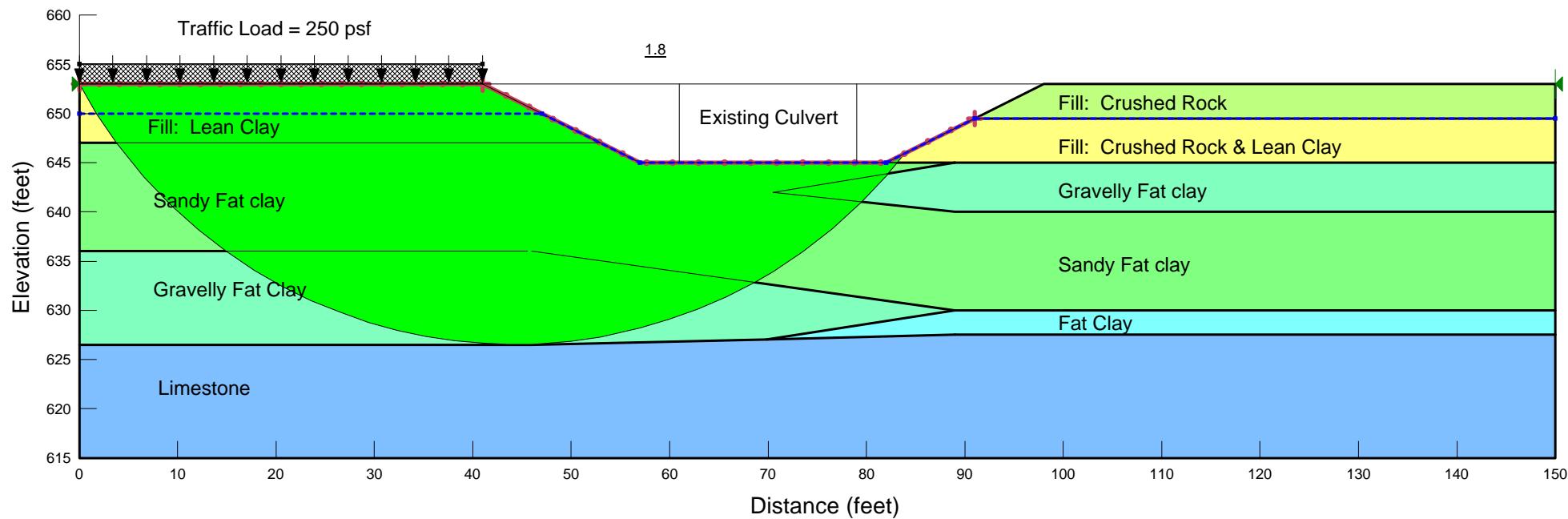


Name: Fill: Lean Clay Unit Weight: 120 pcf Cohesion': 125 psf Φ' : 22 °
 Name: Fill: Crushed Rock Unit Weight: 120 pcf Cohesion': 0 psf Φ' : 32 °
 Name: Sandy Fat Clay Unit Weight: 120 pcf Cohesion': 250 psf Φ' : 22 °
 Name: Gravelly Fat Clay Unit Weight: 120 pcf Cohesion': 250 psf Φ' : 20 °
 Name: Fat Clay Unit Weight: 120 pcf Cohesion': 250 psf Φ' : 20 °
 Name: Limestone

Old Lemay Ferry Road Culvert Replacement

North Abutment

Seismic Condition, PGA = 0.21g

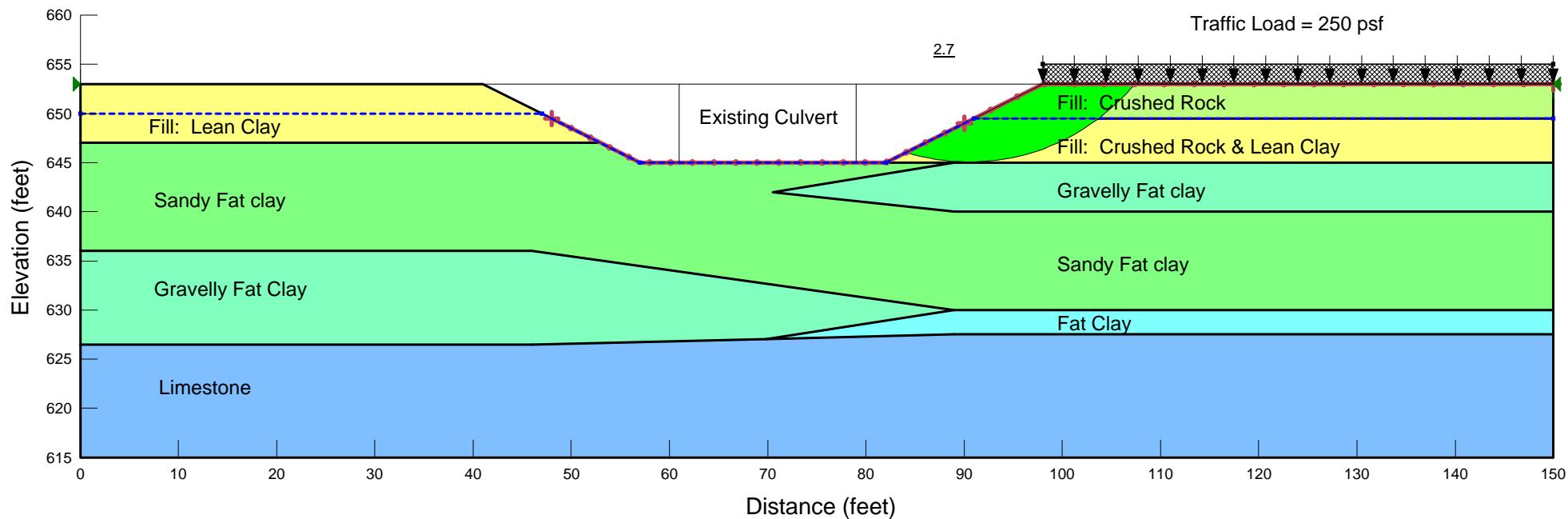


Name: Fill: Lean Clay Unit Weight: 120 pcf Cohesion': 400 psf Φ' : 6 °
 Name: Fill: Crushed Rock Unit Weight: 120 pcf Cohesion': 0 psf Φ' : 32 °
 Name: Sandy Fat Clay Unit Weight: 120 pcf Cohesion': 750 psf Φ' : 6 °
 Name: Gravelly Fat Clay Unit Weight: 120 pcf Cohesion': 750 psf Φ' : 6 °
 Name: Fat Clay Unit Weight: 120 pcf Cohesion': 750 psf Φ' : 5 °
 Name: Limestone

Old Lemay Ferry Road Culvert Replacement

South Abutment

Short Term Condition

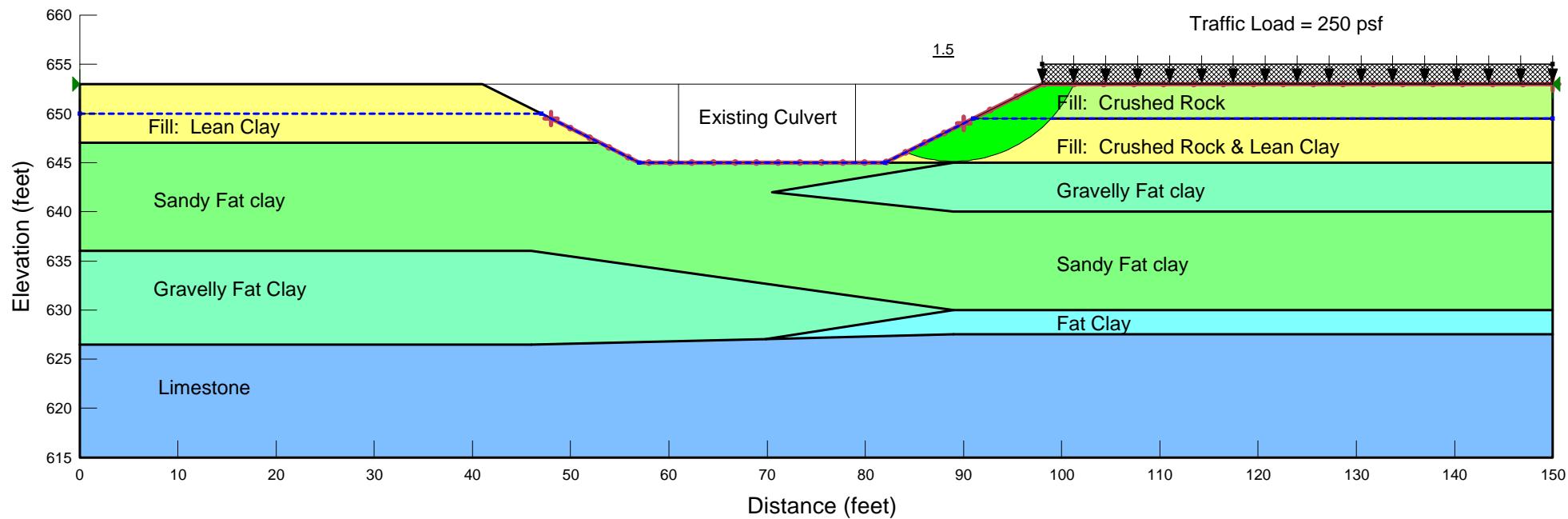


Name: Fill: Lean Clay Unit Weight: 120 pcf Cohesion': 500 psf Φ' : 0 °
 Name: Fill: Crushed Rock Unit Weight: 120 pcf Cohesion': 0 psf Φ' : 32 °
 Name: Sandy Fat Clay Unit Weight: 120 pcf Cohesion': 1,000 psf Φ' : 0 °
 Name: Gravelly Fat Clay Unit Weight: 120 pcf Cohesion': 1,000 psf Φ' : 0 °
 Name: Fat Clay Unit Weight: 120 pcf Cohesion': 1,000 psf Φ' : 0 °
 Name: Limestone

Old Lemay Ferry Road Culvert Replacement

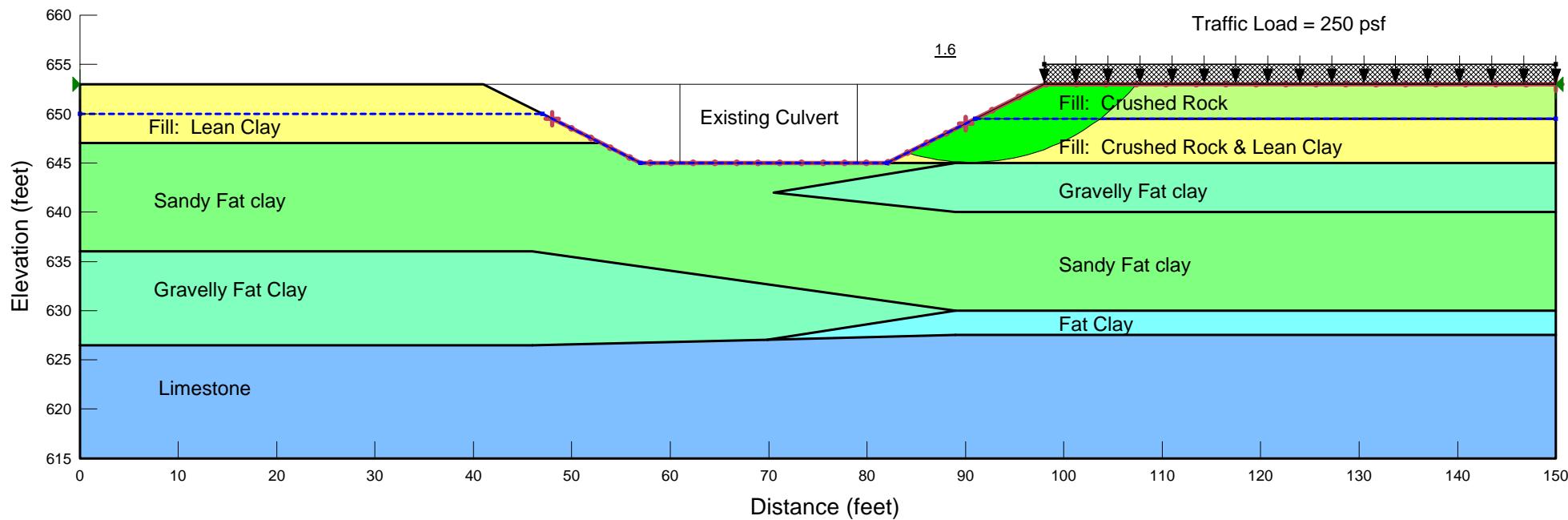
South Abutment

Long Term Condition



Name: Fill: Lean Clay Unit Weight: 120 pcf Cohesion: 125 psf Φ' : 22 °
 Name: Fill: Crushed Rock Unit Weight: 120 pcf Cohesion: 0 psf Φ' : 32 °
 Name: Sandy Fat Clay Unit Weight: 120 pcf Cohesion: 250 psf Φ' : 22 °
 Name: Gravelly Fat Clay Unit Weight: 120 pcf Cohesion: 250 psf Φ' : 20 °
 Name: Fat Clay Unit Weight: 120 pcf Cohesion: 250 psf Φ' : 20 °
 Name: Limestone

Old Lemay Ferry Road Culvert Replacement
South Abutment
Seismic Condition, PGA = 0.21g



Name: Fill: Lean Clay Unit Weight: 120 pcf Cohesion': 400 psf Φ' : 6 °
 Name: Fill: Crushed Rock Unit Weight: 120 pcf Cohesion': 0 psf Φ' : 32 °
 Name: Sandy Fat Clay Unit Weight: 120 pcf Cohesion': 750 psf Φ' : 6 °
 Name: Gravelly Fat Clay Unit Weight: 120 pcf Cohesion': 750 psf Φ' : 6 °
 Name: Fat Clay Unit Weight: 120 pcf Cohesion': 750 psf Φ' : 5 °
 Name: Limestone

Appendix C

APPENDIX C

PROJECT: Old Lemay Ferry Road Culvert Replacement
LOCATION: Jefferson County, Missouri
CLIENT: Jefferson County
STRUCTURE: Proposed Single-Span Bridge
SCI NO.: 2014-5001.11

Table C.1 – Soil Modulus Parameters (k) for Northern Abutment (B-1)

Depth (ft)	Elevation (ft)	Abbreviated Soil Description	Effective Unit Weight (pcf)	Cohesion (psf)	Phi (degrees)	Soil Modulus Parameter (pci)	E_{50}
0.0 to 6.0	653.1 to 647.1	Fill: Lean Clay	120	1,000	--	100	0.008
6.0 to 17.0	647.1 to 636.1	Sandy Fat Clay	58	1,500	--	300	0.007
17.0 to 26.5	636.1 to 626.6	Gravelly Fat Clay	58	2,000	--	500	0.006

Table C.2 – Rock Modulus Parameters (k) for Northern Abutment (B-1)

Depth (ft)	Elevation (ft)	Abbreviated Rock Description	Effective Unit Weight (pcf)	Elastic Modulus (ksi)	Uniaxial Compressive Strength (ksf)	RQD (%)	k_{rm}
Below 26.5	Below 626.6	Limestone	130	5,000	198	86	0.0003

Table C.3 – Soil Modulus Parameters (k) for Southern Abutment (B-2)

Depth (ft)	Elevation (ft)	Abbreviated Soil Description	Effective Unit Weight (pcf)	Cohesion (psf)	Phi (degrees)	Soil Modulus Parameter (pci)	E_{50}
0.0 to 3.0	653.3 to 650.2	Fill: Crushed Rock	125	--	32	20	--
3.0 to 8.0	650.2 to 645.2	Fill: Lean Clay	120	1,000	--	100	0.008
8.0 to 13.0	645.2 to 640.2	Fat Clay	58	1,500	--	300	0.007
13.0 to 23.0	640.2 to 630.2	Sandy Fat Clay	58	1,500	--	300	0.007
23.0 to 25.5	630.2 to 627.7	Fat Clay	58	1,000	--	100	0.008

Table C.4 – Rock Modulus Parameters (k) for Southern Abutment (B-2)

Depth (ft)	Elevation (ft)	Abbreviated Rock Description	Effective Unit Weight (pcf)	Elastic Modulus (ksi)	Uniaxial Compressive Strength (ksf)	RQD (%)	k_{rm}
Below 25.5	Below 627.7	Limestone	130	5,000	182	78	0.0003

Important Information about Your Geotechnical Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. No one except you should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one—not even you—should apply the report for any purpose or project except the one originally contemplated.*

Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,

- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ—sometimes significantly—from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are Not Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual

subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.*

A Geotechnical Engineering Report Is Subject to Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time to perform additional study.* Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that

have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations" many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely. Ask questions. Your geotechnical engineer should respond fully and frankly.*

Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, a number of mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

Rely on Your ASFE-Member Geotechnical Engineer for Additional Assistance

Membership in ASFE/THE BEST PEOPLE ON EARTH exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your ASFE-member geotechnical engineer for more information.



8811 Colesville Road/Suite G106, Silver Spring, MD 20910

Telephone: 301/565-2733 Facsimile: 301/589-2017

e-mail: info@asfe.org www.asfe.org

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REVISIONS TO MODOT STANDARD SPECIFICATIONS

Rev. 11/24/15

Modifications to the 2011 Missouri Standard Specifications for Highway Construction shall be as listed herein.

SECTION 102 **BIDDING REQUIREMENTS AND CONDITIONS**

All references to submitting electronic bids in Section 102 shall be deleted. Please refer to the "Bid Notice" for directions to submit bids on County projects.

Delete Section **102.3 Bidding** – in its entirety and replace it with the following:

102.3 Bidding Documents. Upon request, the Commission will furnish the bidding documents to the prospective bidder. The documents will state the location, description and requirements of the contemplated construction and will show the estimate of the various quantities and kinds of work to be performed or material to be furnished, and will have a schedule of items for which unit bid prices are invited. The bidding documents will state the time in which the work shall be completed, the amount of the bid guaranty, and the date, time and place of the opening of bids.

102.3.1 All papers bound with or attached to or referenced in the bidding documents are considered a part thereof and must not be detached or altered when the bid is submitted.

102.3.2 The prospective bidder will be required to pay the Commission the sum stated in the notice of bid opening for each copy of a project's bidding documents. The *Missouri Standard Specifications for Highway Construction, Missouri Standard Plans for Highway Construction*, including all revisions of these documents, and other items referenced in the bidding documents, whether attached or not, will be considered a part of the bid. A prospective bidder will be expected to separately purchase the current edition of the *Missouri Standard Specifications for Highway Construction* and the *Missouri Standard Plans for Highway Construction*, including all revisions of these documents.

102.3.3 It will be conclusively presumed that all of the bidding documents are in the bidder's possession and that these documents have been reviewed and used by the bidder in the preparation of any bid submitted. The effective dates of the *General Provision & Supplemental Specifications* and the *Supplemental Plans for Highway Construction* will be specified in the contract documents. A copy of the latest version of these documents is available on MoDOT's web site.

Delete Section **102.7 Preparation of Bidding Documents** – in its entirety and replace it with the following:

102.7 Preparation of Bidding Documents. All bids shall be properly signed, sealed and submitted in accordance with Sec 102.10. Each bidder shall specify in the bid, in figures, a unit price for each of the separate items listed in the bidding documents, except a unit price entry will not be necessary for those items having a quantity of one and only the amount for that item need be entered. Zero will be considered a valid bid. The bidder shall not enter zero in any "Unit Price" field unless zero is the intended bid for that item. A unit price left blank, with or without an extension, other than items having a quantity of one, will be considered as zero by the Commission. In case of alternate items, unit prices shall be entered for only one alternate, unless otherwise specified in the bidding documents. A unit price shall not exceed two decimal places. Bids shall not contain interlineations, alterations or erasures except as noted in Sec 102.7.1. The bidder shall show the products of the respective unit prices and quantities in the amount column provided for that purpose. The extension of each line item shall be rounded to the nearest second decimal place value, with half cents rounded up. These extensions shall be totaled and in case of errors or discrepancies in extensions, the unit prices shall govern. All entries in the bid shall be in ink or typewritten. If, in the sole discretion of the engineer, an obvious and apparent clerical error exists in the unit price listed for an item due to a misplaced decimal, but the extension appears to be correct and as intended in all respects, the engineer may correct the unit price bid in accordance with the extension listed. All errors in extensions or totals will be corrected by the engineer and such corrected extensions and totals will be used in comparing bids.

102.7.1 A bidder may alter or correct a unit price, lump sum bid or extension entered on the paper bid form or the computer-generated itemized paper bid form by crossing out the figure with ink and entering a new unit price, lump sum bid or extension above or below in ink, with the bidder's initials.

102.7.2 A bidder may submit a separate bid on any or all projects, except that bids shall be submitted for all projects in a required combination. Bidders not having the ability to simultaneously execute all contracts for bids submitted during a bid opening may state, in one of the bids, the maximum total value of contract awards the bidder is willing to accept for that bid opening. Only one statement of "Maximum Monetary Value of Awards Accepted this Bid Opening" shall be completed per bid opening. In the event a bidder submits multiple statements of maximum award, the lowest value stated will be used. The Commission reserves the right to select and award the combination of bids, not exceeding this maximum, that will be to the best interest of the State, provided these bids are in conformance with the requests for bids. Any corrected bid that exceeds the lowest specified maximum award may be declared non-responsive.

102.7.3 The bid of an individual, including those doing business under a fictitious name, shall include the signature and address of the individual. The signature shall be exactly the same as that appearing on the contractor questionnaire.

102.7.4 The bid by a partnership or joint venture, including individuals doing business under fictitious names or corporations, shall be executed by at least one of the partners followed by the title "Partner" or one of the joint venturers followed by the title "Joint Venturer" and the business address of the partnership or joint venturer shown. The true legal name and address of each partner and joint venturer shall also be shown and shall appear exactly the same as that shown on the contractor questionnaire.

102.7.5 The bid by a corporation, whether acting alone or as a joint venturer, shall show the address and name of the corporation exactly as shown on the contractor questionnaire, and shall include the signature or digital ID and title of a person authorized by its board of directors to bind the corporation.

102.7.6 Each bidder shall submit with each bid a sworn statement, executed by or on behalf of the bidder to whom a contract may be awarded, certifying that the bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with the bid or any contract that may result from its acceptance.

102.7.7 A bid will not be accepted or considered if the bid is the product of collusion among bidders, if the bidder is disqualified or determined not responsible or if the bid is irregular in accordance with Sec 102.8.

SECTION 105 **CONTROL OF WORK**

Delete Section 105.1- Authority and Duties of Commission in Contract Administration - items (a) through (h) that pertain exclusively to MoDOT and not to the County of Jefferson.

Revise Section 105.4 - Coordination of Contract Documents. - such that the governing ranking will be as follows:

- (a) Job Special Provisions
- (b) Project Specific Drawings
- (c) General Provisions
- (d) Revisions to MoDOT Standard Specifications
- (e) General Special Provisions
- (f) Supplemental Specifications
- (g) Standard Specifications
- (h) Standard Drawings
- (i) Bid Items or Quantities

SECTION 106 **CONTROL OF MATERIAL**

Delete Section 106.12 - Pre-Acceptance List of Material and Sources - in its entirety.

SECTION 107 **LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC**

Add Section 107.5.3.1 – Except for those driveways and entrances shown to be reconstructed within the project limits, the contractor, subcontractors, and suppliers shall not utilize any private driveways or entrances for equipment turn around

purposes, unless proper prior arrangements and permissions are obtained from the affected property owners. The contractor shall be held fully responsible for any property damages to the driveways and entrances arising from these arrangements.

Add Section 107.10.1.1 – Projects that have been issued a Corps of Engineers 404 Permit shall have the provisions of that permit hold precedence over any conflicting requirements of Section 107.10.

SECTION 109

MEASUREMENT AND PAYMENT

Delete Section 109.9.1.2 of Division 109.9 - Retained Percentage - in its entirety.

Delete Section 109.14 – Price Adjustment for Fuel - in its entirety.

SECTION 201

CLEARING AND GRUBBING

Add the following to Section **201.2.2.1 Clearing**:

(e) Areas obtained for utility easement corridor.

Add the following after Section **201.2.2.3 Selective Clearing and Grubbing**:

201.2.2.3.1 Selective Clearing. Remove all sound tree branches that extend over the roadway and hang within 20 feet of finished grade. Remove all dead or broken branches that extend over the roadway and hang within 30 feet of finished grade. Cut off branches close to the tree trunk for all trees designated to remain in the right of way and/or easement limits. Branches cut from trees that have trunks outside the right of way and/or easement limits shall be trimmed using generally accepted horticultural practices.

SECTION 203

ROADWAY AND DRAINAGE EXCAVATION, EMBANKMENT AND COMPACTION

Modify Section 203.3.1 of Section 203.3 – Borrow – as follows:

Replace the first sentence with the following: Borrow will consist of approved material required for the construction of embankment or for other portions of the work, and shall be obtained from borrow areas shown on the plans, from areas designated by the engineer, or from other approved sources.

Modify Section 203.4 as follows:

Delete the reference in Section 203.4.1 that states, “Finishing by hand methods will not be required”: Replace with the following:

Hand raking or fine grading by mechanical means of the disturbed areas shall be required to remove debris and stones. The soil shall be tilled to a depth of 4” and graded to a reasonably smooth surface.

Replace Section 203.4.1.1 with the following:

Field Stone. Before final project acceptance, the removal and disposal requirements of all loose field stones shall be guided by the following table:

<u>Location - limits</u>	<u>Limits</u>	<u>Maximum Stone Size</u>
Residential and business where lawns are maintained	All disturbed areas	Relatively free of stones – ½” maximum
Foreslopes, roadside ditches and backslopes outside of maintained lawn areas	Right of way	1” maximum
Rock cut sections	All disturbed areas	As directed by the Engineer

SECTION 206

EXCAVATION FOR STRUCTURES

Replace Section 206.4.13 – Excavation Classification – with the following: “Unless otherwise shown on the plans, excavation for structures will be classified as Class 1 Excavation, Class 1 Excavation in Rock, Class 2 Excavation, Class 2 Excavation in Rock, Class 3 Excavation, Class 3 Excavation in Rock, Class 4 Excavation and Class 4 Excavation in Rock. In general, Class 1 Excavation and Class 2 Excavation will apply to excavation for bridges and large retaining walls. Class 3 Excavation will apply to excavation for pipe culvert installations, utilities, retrofit pipe culverts, drop inlets, and manholes. Class 4 Excavation will apply to excavation for box culverts, small retaining walls and other miscellaneous structures. Class 1 Excavation will include all excavation above a specified elevation indicated on the plans while Class 2 Excavation will include all excavation below this specified elevation. The classification of excavation for all structures will be shown on the plans.

Replace Section 206.5.2 – with the following: “Final measurement of Class 3 Excavation for pipe culverts, utilities, retrofit pipe culverts, drop inlets or manholes will be made to reflect the actual computed quantity established from field measurements. The plan quantities were estimated based on the random boring data and visual observations of the adjacent existing ditch lines. The revision or correction will be computed and added to or deducted from the contract quantity. Measurement of Class 3 Excavation will be made to the nearest cubic yard for each structure of that volume of material actually removed from within the area bounded by vertical planes of 12 inch minimum to 18 inches maximum outside of the outer walls of the structure. The upper limits of the volume measured, will be the existing ground line, or the lower limits of the roadway excavation, whichever is lower. The lower limits of the volume measured will include excavation necessary for pipe bedding.

SECTION 304

BASES AND AGGREGATE SURFACES

Delete Section 304.3.5 - Substitutions for Aggregate Base - in its entirety.

Modify Section 304.5 – Method of Measurement – as follows:

Final measurement of the completed aggregate base course will be based on actual field measurements to the nearest square yard.

Replace Section 304.6 - Basis of Payment – with the following: “The accepted quantities of aggregate base course of the thickness and type specified will be paid for at the contract unit price for each of the pay items included in the contract. Payment will be considered full compensation for water used in performing this work.”

SECTION 401

PLANT MIX BITUMINOUS BASE AND PAVEMENT

Section 401.4 Job Mix Formula – The County may waive submission of representative mixture samples. The Contractor, at the time he submits his job mix formula, shall request in writing whether samples are required. The County will respond in writing and if samples are required, they shall be submitted within ten working days of receipt of the County’s letter.

Section 401.4.1 Mixture Design – Modify this paragraph as follows:

The mix design shall be submitted to the County for approval at least seven (7) days prior to mixture production. A mix design shall be submitted for all County projects. The composition of the mixture shall conform to the following limits by weight:

Total Mineral Aggregate	94.0-96.5 %
Asphalt Binder	3.5-6.0 %

Add the following item to Section 401.4.2 – Required Information:

(q) Unit weight of combined mixture.

Modify Section 401.4.3 Mixture Approval so that “the County” is substituted where it presently reads “Construction and Materials”.

Delete Section 401.4.6 Time Limit – in its entirety.

Delete Section 401.5.2 Substitutions - in its entirety.

Delete Section 401.6 Field Laboratory – in its entirety.

Delete Section 401.7.1 and replace with the following:

401.7.1 Weather Limitations. Bituminous mixtures shall not be placed (1) when either the air temperature or the temperature of the surface on which the mixture is to placed is below 40 F (5 C), (2) on any wet or frozen surface, or (3) when weather conditions prevent the proper handling or finishing of the mixture. Temperatures are to be obtained in accordance with MoDOT Test Method TM20.

If a rainfall event occurs (with rain duration lasting more than 5 min.) before 10am on any given workday, then paving operation shall be cancelled for the balance of that workday and the contractor is not charged for the workday. Once a rainfall event begins the contractor is to immediately shut down plant mix operation. No pavement materials will be accepted at the construction site until further notice from engineer. At the contractor’s request, the engineer may waive these requirements on an individual basis.

401.7.5.1 Irregularities. Add a sentence preceding the sentence “The outside edge alignment shall be uniform” as follows: The outside edges of the pavement shall be constructed to an angle of approximately 45 degrees with the surface of the roadbed and rolled with a hand roller for a smooth appearance.

Replace Section 401.8 Quality Control with the following:

The Contractor shall maintain equipment and qualified personnel or retain the services of a qualified testing laboratory to perform QC field inspection, sampling and testing in accordance with applicable portions of Section 403. The testing service shall be a firm different than the one retained by the County for testing services on that project. The Contractor shall notify the Engineer at the preconstruction meeting who he intends to use for testing services, the name of a contact person and his or her telephone number. A proposed third party testing service for dispute resolution shall be included with the mix design submittal.

Replace the last sentence in Section 401.8.4 Pavement Testing with the following:

The Contractor shall restore the surface from which samples have been taken immediately with the mixture under production or with a non-shrink concrete grout. A cold patch mixture will not be acceptable.

Replace Section 401.13 Method of Measurement with the following:

Measurement will be in accordance with Sec 403.22 and as modified by the job special provisions.

SECTION 402

PLANT MIX BITUMINOUS SURFACE LEVELING

Delete Section 402.2.2 – in its entirety.

Replace Section 402.3 Composition of Mixture with the following:

Mixture shall meet the requirements of the asphalt type specified in the contract and/or bidding documents. The mixture shall be in accordance with Sec 401.3.

Section 402.4 – Replace with the following:

402.4 Job Mix Formula. The mixture shall be in accordance with Sec 401.4 and shall conform to the following limits by weight:

Total Mineral Aggregate	92.0-96.5 %
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Asphalt Binder	3.5-8.0 %
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Delete Section 402.9 - in its entirety.

SECTION 403 **ASPHALTIC CONCRETE PAVEMENT**

Delete Section 403.4.1 – in its entirety.

Replace “Construction and Materials” in Section 403.4.3 with “the Engineer”.

Section 403.6 – Delete the first sentence in its entirety. Revise the fourth sentence to read: “The gyratory compactor shall be one from MoDOT’s Construction and Materials approved list.”

Delete Section 403.10.2 Substitutions – in its entirety.

Section 403.11.1 Field Mix Redesign – Replace “Central Laboratory” with “Engineer”.

Section 403.11.1.1 Approval – replace “Construction and Materials” with “the Engineer”. Delete the second sentence in this section.

Modify the first sentence of 403.17.1 Quality Control Operations – to read “The Contractor shall maintain or retain equipment and qualified personnel to perform all QC field inspection, sampling and testing as required by this specification.” Add the following sentence: “The personnel, if from an independent testing laboratory, shall be different than the company retained by the County for QC purposes.”

Section 403.17.2 Bituminous Quality Control Plan – Change “Construction and Materials” to “the Engineer”.

Revise the last sentence of 403.22.4.2 Surface Restoration to read: “If bituminous construction has been completed, the surface from which samples have been taken shall be restored within 48 hours with an approved commercial mixture or with an approved non-shrink concrete grout. Cold mix is not an acceptable patch.

Delete Sections 403.23.5 through 403.23.7.3 inclusive.

SECTION 407 **TACK COAT**

Revise the first sentence of Section 407.3 Equipment. - as follows:

“The Contractor shall provide a system for heating and applying the bituminous material and for applying blotter material.”

Add Section 407.4.1.1 Weather Limitations. Tack coat shall not be applied when either the air temperature or the temperature of the surface to be tacked is below 40 F. Temperatures are to be obtained in accordance with MoDOT Test Method TM20.

SECTION 408 **PRIME COAT**

Add Section 408.4.1.1 Weather Limitations. Bituminous material shall not be applied (1) when either the air temperature or the temperature of the surface to be primed is below 60 F or (2) when weather conditions prevent the proper construction of the prime coat. Temperatures are to be obtained in accordance with MoDOT Test Method TM20.

SECTION 413 **SURFACE TREATMENTS**

Replace “Construction and Materials” in Section 413.30.3 with “the Engineer”.

Replace “Construction and Materials” in Section 413.30.3.1 with “the Engineer”.

Revise Section 413.30.6.1 as follows: **Quality Control Operations.** Quality control shall be conducted in accordance with Sec 403.17 as modified herein by the “**REVISIONS TO MODOT STANDARD SPECIFICATIONS**”, except as follows.

SECTION 501

CONCRETE

Delete Section 501.2.2 - in its entirety.

Section 501.3 Mix Design. – Change the last sentence to read:

“The Contractor may be required to submit representative samples of each ingredient to the Engineer for laboratory testing.” Revise Section 501.8.2 (e), the fifth sentence, “The Engineer may allow the use of the test concrete for appropriate incidental construction”, shall be deleted. In its place add the following sentence – “Test concrete shall not be used in construction”.

Revise Section 501.8.10 to delete the Type 1 field laboratory at the proportioning plant.

SECTION 502

PORTLAND CEMENT CONCRETE BASE AND PAVEMENT

Delete Section 502.3.7 - in its entirety.

Revise the first sentence in Section 502.11.1 to read, “Prior to approval of concrete mix designs by the engineer, the contractor shall submit a QCP to the County.”

Delete Section 502.15.3 Smoothness Adjustment – in its entirety.

Delete Section 502.15.3.1 Incentives – in its entirety.

Table I shall be revised so that “Percent of Contract Price” does not exceed 100.

Delete Sections 502.15.6 Width, 502.15.7 Pay Factors, and 502.15.11 PWL Determination Table in their entirety.

SECTION 601

FIELD LABORATORIES

Delete this Section in its entirety.

SECTION 603

WATER LINE INSTALLATION

Revise Section 603.2 - Material. To include the following sentence after the table:

Materials other than those shown may be specified by the Engineer and shall meet AWWA, ASTM, ANSI and NSF specifications.

Revise Section 603.3.4 - Abandoned Water Mains. To include the following at the end of this section:

8” and larger abandoned water mains remaining under the completed road and or shoulder shall be abandoned by grout filling the line. Grout shall consist of Mortar for Grout as specified in Section 1066. The cost of the grout, plugs, labor, fuel and equipment shall be included in the lump sum unit cost for “Removal of Improvements”. Smaller watermains shall be abandoned as noted above by capping and covering the cap with concrete. PVC watermains may be capped with caps made of the same material, glued in place.

SECTION 605

UNDERDRAINAGE

Delete Sections 605.10.2.5 through 605.10.2.5.3 in their entirety. Video inspection of edge drains will not be required.

SECTION 620

PAVEMENT MARKING

Replace the second through fourth sentences of Section 620.2.3.1, with “The engineer will visually inspect the pavement markings for reflectivity. The inspection will take place no sooner than seven days after application. The contractor may clean any pavement markings at the contractor’s expense prior to the visual reflectivity inspection.

Replace Section 620.2.4.1 with the following:

620.2.4.1 Retroreflectivity inspection will be performed visually. Spotty or lack of reflectivity when driven during a nighttime visual inspection will be cause for reapplying the pavement marking at no additional cost to the County.

Revised Section 620.10.5.1 to read:

Final measurements of pavement markings of the type specified will be based on actual field measurements to the nearest lineal foot. Revisions or corrections will be computed and added or deducted from the contract quantity.

SECTION 622

PAVEMENT AND BRIDGE SURFACE REMOVAL AND TEXTURING

Revised Section 622.10.4 to read:

Final measurements of coldmilling of the type specified will be based on actual field measurements and computed the nearest square yard. Revisions or corrections will be computed and added or deducted from the contract quantity.

SECTION 627

CONTRACTOR SURVEYING AND STAKING

Add the following to the end of Section 627.2.1:

In addition, the Contractor shall protect and carefully preserve all official survey monuments, property marks, section markers and Geological Survey Monuments, or other similar monuments. The Contractor shall notify the Engineer of the presence of any such survey or property monuments as soon as they are discovered.

Revised Section 627.2.3 to read:

The engineer shall furnish and set control points with known coordinates. The engineer will furnish all coordinate data to lay out the job and locate benchmarks as shown on the plans. Except as specified herein, the contractor shall provide all other staking, including but not limited to, centerline stakes, right of way stakes, additional lines, connections, ramps, slope stakes, grade stakes, construction benchmarks and reference stakes locating all drainage, roadway and bridge structures, and utilities necessary for the successful prosecution of the work. Centerline staking shall be done before construction begins and shall be established at all PIs, PCs, PTs and at 100 foot intervals within the proposed project limits, including any temporary transition lengths outside the projects limits. Right of way staking shall be a maximum of 200 feet apart on tangents, at angle changes in the right of way and a maximum of 50 feet apart in horizontal curves, on both sides of the road, at all parcel property lines, and shall be done at the initial start of the project to facilitate relocation of utilities. Right of way stakes shall indicate cuts and fills to final grade for help in determination of utility placement. The contractor shall maintain construction stakes for the duration of the project at no additional cost to the County. All alignment control established by the contractor shall be referenced, and a copy of the references shall be furnished to the engineer.

Revised Section 627.2.4 to read:

Any surveying or measurements necessary for computing pay quantities, except for earthwork pay items which quantities are based on cross sections measurements, will be performed by the engineer. The contractor shall notify the engineer at least two working days prior to disturbing any areas used to calculate pay items.

Earthwork pay items which quantities are based on cross section measurements shall have “before” and “after” cross sections performed by the contractor. The contractor shall notify the engineer prior to surveying the cross sections so that a field representative, designated by the engineer, can be present to witness and record and/or verify the readings. The contractor shall cooperate with the designated field representative in coordinating the surveying activities.

Add the following to the end of Section 627.4:

Should it be necessary to disturb any survey or property monument (grading, install structure), a Missouri Professional licensed surveyor shall witness and reference their location, and reset such monument after construction work is completed and before final acceptance of project. The cost to protect, preserve and provide any surveying work to reset survey or property monuments will not be paid for separately, but shall be considered as included in the cost of the project, and no additional compensation shall be allowed.

SECTION 703 **CONCRETE MASONRY CONSTRUCTION**

Add a sentence to the end of Section 703.3.8 -Surface Sealing for Concrete – that reads: “Surface sealing shall not be applied until after all defects in the bridge deck surface have been patched per the Engineer’s requirements.”

SECTION 706 **REINFORCING STEEL FOR CONCRETE STRUCTURES**

Delete the last sentence in Section 706.2.2 that allows flame cutting of uncoated reinforcement. Reinforcement shall be saw cut or sheared.

Delete the sentence in Section 706.3.1 that reads: “At other locations, the bars shall be firmly tied at alternate crossings or closer.” Replace this sentence with: “All reinforcement, including superstructure and substructure, shall be tied at 100% of crossing locations.”

SECTION 712 **STRUCTURAL STEEL CONSTRUCTION**

Delete the sentence in Section 712.3 that reads: “Any material that has become bent shall be straightened before being assembled or shall be replaced, if necessary.” Replace it with the following: “Any material that has become bent from the intended shape shall be replaced at no cost to the County.”

The County will not issue qualification cards as stated in Section 712.6.3, but will require proof of the welder’s certification from an accredited AWS Certified Welder Program. Welding will not be allowed on County projects without a copy of the welder’s certification being delivered to the County prior to the beginning of welding. The welder shall not weld for any process and in the positions for which he is not certified.

SECTION 720 **MECHANICALLY STABILIZED EARTH WALL SYSTEMS**

Delete Section 720.3.1 - in its entirety and replace with the following:

The Contractor shall submit product information on the type of mechanically stabilized earth wall system he is proposing. The wall shall be in conformance with the Plans and Job Special Provisions. Shop drawings and design calculations shall be submitted and shall be signed and sealed by a Professional Engineer registered in the state of Missouri.

SECTION 724 **PIPE CULVERTS**

Revise Section 724.1.1 to read as follows:

The contract will specify the type of pipe to be used. Substitution of pipe types is not permissible.
Replace Section 724.1.2 with the following:

Metal pipe shall be constructed in accordance with Sec 725. Reinforced concrete pipe shall be constructed in accordance with Sec 726.

Revise Section 724.3.1 to read:

Inspection of pipe and pipe placement will be performed visually by the County during construction.

Delete Sections 724.3.2, 724.3.3, 724.3.4, 724.3.4.1, 724.3.5, 724.3.5.1, 724.3.6, 724.3.7, and 724.3.8.

Revise Section 724.4.1 to read:

Final measurements of pipe culverts of the type specified will be based on actual field measurements to the nearest lineal foot along the geometric center of the pipe. Revisions or corrections will be computed and added or deducted from the contract quantity.

Delete Section 724.4.4.

SECTION 725

METAL PIPE AND PIPE ARCH CULVERTS

Revise the first sentence of Section 725.1.2 to read: "If the contract specifies corrugated metallic-coated steel pipe or corrugated aluminum alloy pipe, the thickness of metal and size of corrugation for the respective pipe size shall be as shown on the plans unless otherwise specified.

Revise Section 725.4 to read:

Backfill material for metal culverts shall consist of crushed stone.

Revise Section 725.4.1 to read:

Crushed stone shall consist of a mixture of stone in accordance with Section 1009, Grade 4, Gradation B. For all pipe culverts under roadways or sidewalks crushed stone backfill shall be used for full depth of the trench, and to the subgrade of the road, and to a point two feet on either side of the pavement width. For backfill under grass areas, the granular backfill shall be brought to one foot above the top of the pipe, then completed with earthen backfill to the required grade. Bedding material shall be the same as that specified above for backfill.

SECTION 726

RIGID PIPE CULVERTS

Revise 726.1.1 to read:

If the contract specifies reinforced concrete pipe, the type of installation and the class of pipe shall be in accordance with the plans for the applicable allowable overfill height.

Delete Section 726.1.2.

Modify the sixth sentence in Section 726.3.1 to read:

All joints shall be sealed with an approved plastic compound, tubular joint seal, an external wrap, cement mortar or other approved methods to create a soil tight condition.

Modify 726.3.2 to read:

Bedding for reinforced concrete pipe shall consist of a mixture of stone in accordance with Section 1009, Grade 4, Gradation B.

Section 726.3.4 - Insert the following after the second sentence:

For all pipe culverts under roadways or sidewalks crushed stone backfill, meeting the requirements of Section 1009, Grade 4, Gradation B, shall be used for full depth of the trench, and to the subgrade of the road, and to a point two feet on either side of the pavement width. For backfill under grass areas, the granular backfill shall be brought to one foot above the top of the pipe, then completed with earthen backfill to the required grade.

SECTION 727

STRUCTURAL PLATE PIPE AND STRUCTURAL PLATE PIPE-ARCH CULVERTS

Delete 727.3.3 Bedding and Backfill material and replace with the following:

727.3.3 Bedding and Backfill Material. Bedding for structural plate pipe and structural plate pipe-arch culverts shall consist of a mixture of stone in accordance with Section 1009, Grade 4, Gradation B, except if rock is encountered, the trench shall be excavated to a minimum depth of 8 inches below the bottom of the culvert.

Delete Section 727.3.4.1 and Section 727.3.4.2 and replace with the following:

Backfill shall be with crushed stone consisting of a mixture of stone in accordance with Section 1009, Grade 4, Gradation B. Stone backfill shall be used for full depth of the trench, and to the subgrade of the road, and to a point two feet on either side of the pavement width. Layers of backfill shall be carefully tamped in place and shall be kept at approximately the same elevation on opposite sides of the structure at all times during the progress of work in order to equalize the loading.

SECTION 730

THERMOPLASTIC CULVERT PIPE

Delete this section – thermoplastic culvert pipe will not be used for County road projects.

SECTION 731

PRECAST REINFORCED CONCRETE MANHOLES AND DROP INLETS

Revise Section 731.4.1 to read:

Final measurements of precast concrete manholes and drop inlets will be based on actual field measurements to the nearest lineal foot along the geometric center of the manhole/drop inlet. Revisions or corrections will be computed and added or deducted from the contract quantity. The depth of the structure will be the vertical distance from the top of the uppermost precast section to the invert flowline.

SECTION 732

FLARED END SECTIONS

Delete Section 732.1.2.

Delete reference to HDPE and PVC in Section 732.1.3.

Delete the second sentence in Section 732.5 that reads:

When two different diameters of pipe are shown on the plans for a given location for Group B or Group C pipe, the contract unit price for the flared end section or safety slope end section that would be required for the larger diameter pipe will be used for payment purposes.

SECTION 801

LIME AND FERTILIZER

Revise the third sentence in Section 801.4.1 to read:

The soil shall be thoroughly broken up, worked, tilled and loosened to a minimum depth of 4 inches.

Revise the second sentence of 801.4.2 to read:

After application, the lime and fertilizer shall be thoroughly mixed into the soil to a minimum depth of 4 inches, except when applied hydraulically on slopes steeper than 2:1.

SECTION 803

SODDING

Add the following to Section 803.3 Construction Requirements:

Sodding placed at the downstream end of a flared end section or the downstream end of a pipe without a flared end section shall be securely fastened with metal clips. The sod shall be placed slightly lower than the flowline of the flared end section

or the flowline of the culvert. Sod washed away by flows through the culvert shall be cleaned up, disposed of and replaced by the Contractor at no additional charge to the County.

SECTION 804

TOPSOIL

Add Section 804.3.3 The Contractor shall be responsible for obtaining all necessary permits for removal of topsoil from an area. This shall include but not be limited to land disturbance, stormwater discharge, endangered species, farmland protection, wetlands, hazardous waste and cultural resources. Contact agencies for most of these are listed on MoDOT's website under Local Public Agency Manual.

SECTION 805

SEEDING

Revise the third sentence of Section 805.4 to read:

Permanent stabilization of an erodible seeded area shall be defined as a minimum uniform 70% perennial vegetative cover.

Add section 805.3.4 Seeding application methods shall be as follows:

Drop seeding shall only be allowed in small disturbed areas as approved by the engineer; Drill seeding shall be allowed for flat areas and slopes up to 3(H):1(V); and Hydro seeding shall be required on slopes 3(H):1(V) or steeper.

SECTION 806

POLLUTION, EROSION AND SEDIMENT CONTROL

Revise 806.4.4 to read as follows:

Erosion control features shall be in place prior to any clearing and grubbing of the construction site. Additional erosion control features may need to be installed as the project continues and problem areas become exposed. Until the site is stabilized, all erosion and sedimentation control BMPs must be maintained properly. Maintenance must include inspections of all erosion and sedimentation control BMPs after each rainfall event and on a weekly basis. A written inspection report by the contractor shall be submitted to the engineer after every inspection. The report shall state a summary of the site conditions, status of the erosion and sediment control BMPs, date, time and name of inspector. The Contractor shall maintain all erosion control features by removing silt buildup so that the erosion control feature is fully effective. Any erosion control features knocked down during construction shall be reinstalled at no additional cost to the County.

Add a paragraph to 806.80.3 as follows:

The Contractor shall maintain the temporary pipes throughout the length of the project. Pipes, backfill and road surface washed out shall be replaced at no additional cost to the County.

Add the following sentence to 806.100.3.2:

The Contractor shall maintain the temporary stream crossing throughout the length of the project. Pipes, backfill and road surface washed out shall be replaced at no additional cost to the County.

END OF "REVISIONS TO MODOT STANDARD SPECIFICATIONS"

General Contract Provisions

(see Table of Contents for documents and page numbers)

AFFIDAVIT

COMPLIANCE WITH THE PREVAILING WAGE LAW

Before me, the undersigned Notary Public, in and for the County of _____, State of _____, personally came and appeared_____

(Name)

_____ of _____

(Title)

(Company Name)

(a corporation)(a partnership)(a proprietorship) and after being duly sworn did depose and say that all provisions and requirements set out in Chapter 290, Sections 290.210 through and including 290.340, Missouri Revised Statutes, pertaining to the payment of wages to workers employed on public works projects have been fully satisfied and there has been no exception to the full and complete compliance with said provisions and requirements with Wage Determination No._____ or Annual Wage Order No._____ issued by the Division of Labor Standards on project_____,

(Job Number)

(Route or location, if building construction)

_____ County, Missouri, and completed on the ____ day of _____, 20____.

Signature

Subscribed and sworn to me this ____ day of _____, 20____.

My commission expires _____, 20____.

Notary Public

(Revised 03-23-00)

Guidelines for Obtaining Environmental Clearances

This article provides guidelines for obtaining environmental clearances for disturbed areas such as:

Borrow Sites, Haul Roads, Burn Pits, Staging Areas and Spoil Sites at project-specific locations.

The necessary clearances for disturbed areas such as those referenced above shall be obtained prior to using these areas for projects. The contractor is encouraged to consider using material from previously disturbed locations (substantial disturbance) or disturbed areas that have previously been cleared, precluding the need to address most, if not all, of the issues described below. The contractor should include the federal project number on all correspondence. Once the contractor has obtained all required documentation, it should be provided to Jefferson County & MODOT District contact. The following addresses the primary environmental issues related to clearance of disturbed areas such as borrow sites:

1. The Endangered Species Act

The Federal Endangered Species Act protects rare species and their habitats. The U.S. Fish and Wildlife Service (USFWS) administers the Act. Violations of this act can result in extensive project delays and severe fines. To determine if an activity will impact any rare species or their habitats, contact the Missouri Department of Conservation's Policy and Coordination Section at (573) 751-4115 to request a query of the MDC Heritage Database. All queries must be accompanied by a good quality map illustrating the location of the proposed site with a description of the activity. Allow at least three weeks for a response to all requests.

If there are no known records of rare species or sensitive habitats at the proposed site, and it is unlikely that any will be impacted by the activity, the contractor will be given clearance to proceed. However, if rare species are known or likely to occur at the site, or known critical habitat exists, further coordination with MDC and the USFWS will be necessary. Written clearance from the U.S. Fish and Wildlife Service may be required before the project can proceed.

Missouri Department of Conservation (MDC)
Planning Division
P.O. Box 180
Jefferson City MO 65102-0180
Telephone Number (573) 751-4115 or FAX (573) 751-4495

U.S. Fish and Wildlife Service (FWS)
Columbia Field Office
101 Park DeVille Drive - Suite A
Columbia, MO 65203-0057
Telephone Number (573) 234-2131 or Fax (573) 234-2182

2. Floodplain/Regulatory Floodway

An evaluation of floodplain impacts is mandated by Executive Order 11988, Floodplain Management, and subsequent federal floodplain management guidelines. When available, flood hazard boundary maps ([National Flood Insurance Program](#)) and flood insurance studies for the project area are used to determine the limits of the base (100-year) floodplain and the extent of encroachment.

The Federal Emergency Management Agency (FEMA) and Federal Highway Administration (FHWA) guidelines 23 CFR 650 have identified the base (100-year) flood as the flood having a one percent probability of being equaled or exceeded in any given year. The base floodplain is the area of 100-year flood hazard within a county or community. The [regulatory floodway](#) is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 100-year flood discharge can be conveyed without increasing the base flood elevation more than a specified amount. FEMA has mandated that projects can cause no rise in the regulatory floodway, and a one-foot cumulative rise for all projects in the base (100-year) floodplain. For projects that involve the state of Missouri, the State Emergency Management Agency (SEMA) issues [floodplain development permits](#). In the case of projects proposed within regulatory floodways, a ["No-Rise" Certification](#), if applicable, should be obtained prior to issuance of a permit.

Questions regarding floodplain and regulatory floodway should be addressed to:

SEMA
P.O. Box 116
Jefferson City, MO 65102
(573) 526-9141

Documentation of consultation with SEMA regarding the presence of 100-year floodplain/regulatory floodway should be included in the final collection of information to be submitted to MoDOT staff.

3. Federal Emergency Management Agency (FEMA) Buyout Lands

The Flood Disaster Protection Act of 1973, as amended by the Disaster Relief and Emergency Assistance Act of 1988 (The Stafford Act), identified the use of disaster relief funds under Section 404 for the Hazard Mitigation Grand Program (HMGP), including the acquisition and relocation of flood damaged property. The Volkmer Bill further expanded the use of HMGP funds under Section 404 to "buy out" flood damaged property, which had been affected by the Great Flood of 1993.

There are numerous restrictions on these FEMA buyout properties. No structures or improvements may be erected on these properties unless they are open on all sides. The site shall be used only for open space purposes, and shall stay in public ownership. These conditions and restrictions (among others), along with the right to enforce same, are deemed to be covenants running with the land in perpetuity and are binding on subsequent successors, grantees, or assigns. Any decision involving these properties should take into consideration that 2-3 years is necessary to process an exemption from FEMA to utilize this parcel. This exemption would likely be a permanent easement rather than a transfer of property. If any proposed site is located on a FEMA buyout property, an alternative site should be chosen.

4. Farmland Protection

In order to comply with the Farmland Protection Policy Act, which has the purpose of minimizing Federal programs' contributions to the unnecessary and irreversible conversion of farmland caused by nonagricultural uses, the Form AD-1006 will need to be completed. This can be accomplished through coordination with United States Department of Agricultural (USDA)-Natural Resources Conservation Service (NRCS), and the completion of Form AD-1006. To receive the Form AD-1006, call the NRCS State office in Columbia at (573) 876-9411. An aerial map of the site or sites will also be required with the area to be disturbed identified on the map. This aerial map can be obtained from the local SCS office. In some areas of the state this office may be located in an adjoining county.

The contractor will need to complete Parts I and III of Form AD-1006. The form should then be sent to the NRCS State Office for completion of Parts II, IV and V. The address for NRCS State Office is:

Mr. Dennis Potter
State Soil Scientist
Natural Resource Conservation Service
601 Business Loop 70 West
Parkade Center, Suite 250
Columbia, MO 65203
1-573-876-9411

After the NRCS office returns the form, the contractor will complete remaining Parts VI and VII. The contractor will provide a copy of the completed form to the MoDOT district contact to document compliance with the Farmland Protection Policy Act.

5. Wetlands

Federal executive order has decreed a national policy of "no net loss of wetlands." Under this policy, impacts to wetlands must be avoided if at all practical. Where wetlands are impacted, these impacts must be mitigated by construction or enhancement of a like quantity **and** quality of new wetlands. For these reasons, avoiding impacts to wetlands is a primary goal.

To determine whether wetlands occur on a site, contact the USDA, NRCS. The NRCS has identified and mapped wetlands as a requirement under the Food Security Act. These maps are available from county NRCS offices, usually located in the county seat. For all other non-farmland sites, consult the [US Fish and Wildlife Service's Wetlands Map](#). If wetlands are identified on Food Security Act wetland maps, a site visit may be needed to confirm the location of wetlands. If there are no wetland impacts, no other action need be taken.

If there are any questions about the extent of wetlands in the event that wetlands cannot be avoided, contact the U.S. Army Corps of Engineers (COE). If wetlands cannot be avoided, a COE Section 404 permit would be processed through the appropriate COE district. There are five COE districts in Missouri. Information about COE district locations, addresses and phone numbers is available on [the COE website](#).

6. Water Quality/Land Disturbance

The National Pollutant Discharge Elimination Systems (NPDES) program regulates construction activities where 1 acre or more of land is disturbed. If the project proponent has a general NPDES permit for all of their construction activities, this is adequate. If the project proponent does not have a valid general permit and the site to be disturbed is greater than 1 acre in size, a project-specific NPDES permit from DNR is required. If the project is entirely within MoDOT right of way, the sponsor may use MoDOT's general permit. In either case, the sponsor will need to develop a site-specific stormwater pollution prevention plan for the project. The sponsor shall contact the Missouri Department of Natural Resources (DNR) NPDES Storm Water Program office at (573) 751-1300 or (800) 361-4827 for further directions. A few cities (Kansas City, Columbia, and others) and counties have obtained their own land disturbance permits from DNR for generic land disturbance purposes; see additional discussion on stormwater and erosion control in 136.4 Environmental and Cultural Requirements of the LPA Policy.

7. Hazardous Waste Sites

More than likely, areas to be disturbed will be located in rural areas that have been used for agriculture or similar purposes. Hazardous wastes are most typically associated with commercial or previous industrial properties.

If the proposed area is basically farmland or pasture, and has not been used for any commercial activity or dumping, hazardous wastes are unlikely. The contractor should simply document the existing and historic land use of the parcel and tell how this assessment was obtained.

In nonrural, suburban or commercial areas a nonintrusive investigation may be used to "diagnose" the environmental conditions of a selected site. The following is a list of suggested items, but not inclusive, for a cursory nonintrusive investigation.

- Examine any noticeable contamination in the form of surface staining, oil sheen, odors, stressed vegetation, spills, leaks, illegal dumping, etc.
- Conduct interviews of local citizens and current owners to identify past land use practices and hazardous waste management practices.
- Consult with local and state (Missouri Department of Natural Resources, Hazardous Waste Program, 573-751-3176) environmental regulatory agencies to identify if any past problems (complaints, citations, etc.) have occurred at the site, if any permits/licenses have been filed for the site, or if enforcement actions have occurred.

If the above analyses produce negative results, the contractor should provide documentation to the MoDOT Design Division-Environmental Section as to who was contacted and the results of the contact. However, if through the search for information described above, potential problems are identified, it would be wise to locate another site.

The potential to encounter wastes from sites that are unknown should always be a consideration. Any unknown sites that are found will be handled in accordance with Federal and State Laws and Regulations.

8. Historic Preservation

All jobs requiring environmental clearance for historic preservation (archaeological sites, buildings, and structures) must be reviewed and approved by the State Historic Preservation office (SHPO), Department of Natural Resources. To initiate SHPO's review and clearance of a proposed site for cultural resources, a "Section 106 Project Information Form" must be completed and submitted to SHPO along with a copy of a United States Geological Survey (USGS) topographic map indicating the location of the project. In addition, photographs of any structures that will be impacted must be provided. The "Section 106 Project Information Form" can be obtained from the SHPO website or requested from the SHPO by telephone, (573) 751-7858, or mail:

Missouri Department of Natural Resources
State Historic Preservation Office
Attn: Section 106 Review
P.O. Box 176
Jefferson City, MO, 65102-0176

Based on the information supplied, SHPO may clear the project at that time or request that the contractor acquire the services of an archaeological consultant to conduct a historic preservation survey of the proposed area. A listing of currently acceptable and available archaeological consultants who can complete a survey if required can be viewed at the SHPO's website. Any questions can be directed to the Design Division-Historic Preservation Section, at (573) 751-0473.

9. Public Land

If borrow sites are proposed on any publicly owned land, contact the MoDOT district representative before proceeding. Section 4(f) of the Department of Transportation Act of 1966 (now codified as 49 U.S.C. 303 and 23 U.S.C. 138) protects certain public lands. Section 4(f) requires that all U.S. DOT-funded transportation projects must avoid impacts to public parkland and wildlife refuges (and cultural resources deemed eligible for the National Register of Historic Places), unless it is successfully demonstrated that no feasible and prudent alternative exists that avoid "use" or impacts to the park or refuge. It is strongly recommended that public lands not be considered as potential borrow sites.

Once the contractor has obtained all of the above information, it should be provided to the MoDOT district contact. The transmittal letter must include **county, route and job number** of the project, along with a map depicting the location and limits of the site(s).

**ENVIRONMENTAL/CULTURAL PERMITS,
LAND DISTURBANCE PERMIT(s),
APPROVAL LETTERS RAILROADS, ETC.**

The following permits have been acquired and are included herein:

1. Army Corp of Engineer's 404 Permit / MoDNR 401 Water Quality Permit
2. MoDNR Land Disturbance Permit
3. Jefferson County Land Disturbance Permit
4. Jefferson County Floodplain Development Permit
5. Lead and Asbestos Test Results



DEPARTMENT OF THE ARMY
 ST. LOUIS DISTRICT CORPS OF ENGINEERS
 1222 SPRUCE STREET
 ST. LOUIS, MISSOURI 63103-2833

April 3, 2015

REPLY TO
 ATTENTION OF:

Regulatory Branch
 File Number: MVS-2015-149

Mr. Brian Dugan
 Jefferson County Dept of Public Works
 725 Maple Street, P.O. Box 100
 Hillsboro, Missouri 63050

Dear Mr. Dugan:

This letter is in response to an application submitted on your behalf by Structures, Inc., concerning a proposal to: *Replace the Old Lemay Ferry Road Bridge with a new 40-foot wide, single-span bridge over an unnamed tributary to Glaize Creek.* Approximately 300 cubic yards of Type 2 rock blanket will be placed on top of geo-textile fabric to protect along approximately 125 linear feet of the stream banks under the bridge and continues along the channel on the northeast side of the new bridge structure. The added stabilization is required to protect the channel after it flows under the bridge and turns immediately and flows adjacent to the roadway. The project is located in Section 32, Township 42 North, Range 5 East, in Jefferson County, Missouri. Glaize Creek is a tributary the Meramec River, a tributary to the Mississippi River.

Based upon a review of the U.S. Geological Survey 7.5-minute topographical and the National Wetland Inventory maps and the Department of Agriculture - Natural Resources Conservation Service Soil Survey, we have determined that this tributary to Glaize Creek would possess an ordinary high water mark at this location and would be considered a jurisdictional water of the United States. Therefore, the placement of fill material below the ordinary high water elevation requires a permit from this office. **This letter authorizes the Old Lemay Ferry Road Bridge replacement activities in the unnamed tributary to Glaize Creek.**

The Corps of Engineers has determined that this activity will have no affect on endangered species, and is authorized under Section 404 of the Clean Water Act by an existing Department of the Army nationwide permit for *Linear Transportation Projects*, as described in the February 21, 2012, Federal Register, Reissuance of Nationwide Permits; Notice (77 FR 10273), Appendix A (B)(14). **This verification is valid until March 18, 2017**, unless the district engineer modifies, suspends, or revokes the nationwide permit authorization in accordance with 33 CFR 330.5(d). If you commence, or are under contract to commence, this activity before the nationwide permit expires, you will have 12 months after the date the nationwide permit expires or is modified, suspended, or revoked, to complete the activity under the present terms and conditions of this nationwide permit.

Enclosed is a copy of the nationwide permit and conditions and management practices with which you must comply.

In accordance with General Condition Number 30 of the Nationwide Permit, a compliance certification (Attachment A of this package) must be completed within 30 days of project completion or the permit issuance may be revoked and considered null and void.

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The Missouri Department of Natural Resources Water Protection Program (MDNR/WPP) has conditionally issued general Section 401 Water Quality Certification for this nationwide permit, subject to special conditions (see enclosures). These conditions are part of the Corps permit. If you have any questions regarding the water quality certification conditions, you may call Ms. Stacia Bax, MDNR/WPP, at 573-526-4586.

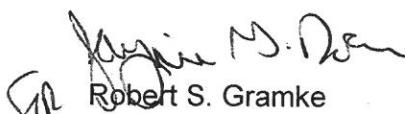
This determination is applicable only to the permit program administered by the Corps of Engineers. It does not eliminate the need to obtain other federal, state or local approvals before beginning work.

You are reminded that the permit authorization is based on submitted plans. Variations from these plans shall constitute a violation of Federal law and may result in the revocation of the permit. If this nationwide permit is modified, reissued, or revoked during this period, the provisions described at 33 CFR 330.6(b) will apply.

The jurisdictional determination for this project is considered a preliminary jurisdictional determination (PJD) in accordance with Corps regulations at 33 CFR Part 331. A PJD is an expedited determination that does not require interagency coordination, but is also not appealable. If you consent to the findings of this PJD, please sign and date the enclosed *Preliminary Jurisdictional Determination Form* and return it to this office at the letterhead address. If you do not agree with the PJD, you may request an Approved Jurisdictional Determination, which may be appealed, by contacting our office for further instruction.

If you have any questions please contact Kathrine Kelley at (314) 331-8813. Please refer to file number **MVS-2015-149**. The St. Louis District Regulatory Branch is committed to quality and timely service to our customers. In an effort to improve customer service, please take a moment to go to our Customer Service Survey found on our web site at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey.

Sincerely,


Robert S. Gramke
Missouri Section Chief
Regulatory Branch

Enclosures

Copy furnished:

Mr. John J. Gruendler, PE, SE
Structures, Inc.
8615 Gravois Road
St. Louis, Missouri 6323

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Copy Furnished By Email: (electronically w/o enclosures)

Ms. Stacia Bax, MDNR-Water Protection Program
Mr. Jason Daniel, U.S. Environmental Protection Agency
Ms. Judith Deel, MDNR-State Historic Preservation Office
Mr. Bryan Simmons, U.S. Fish & Wildlife Service
Ms. Audrey Beres, Missouri Department of Conservation

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ATTACHMENT A

COMPLETED WORK CERTIFICATION

Date of Issuance: April 3, 2015

File Number: MVS-2015-149

Name of Permittee: Jefferson County (Old Lemay Ferry Road Bridge over unnamed trib to Glaize Creek

River Basin/County/State: Missouri/Jefferson/Mississippi

Project Manager: Kelley

Upon completion of this activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

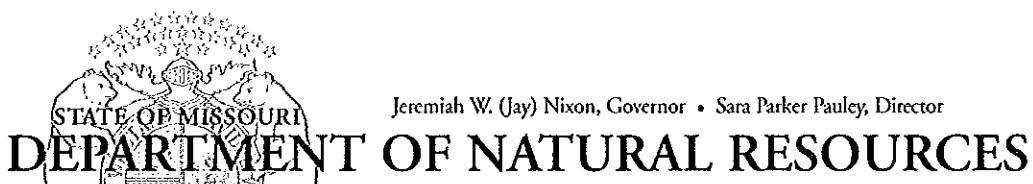
**U.S. Army Corps of Engineers
Attn: Regulatory Branch (OD-F)
1222 Spruce Street
St. Louis, Missouri 63103-2833**

(Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification or revocation.)

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date



www.dnr.mo.gov

MAY 28 2013

Jefferson County Public Works
725 Maple Street
Hillsboro, MO 63050

Dear Jefferson County Public Works:

Enclosed please find your Missouri State Operating Permit which authorizes land disturbance activities for Jefferson County Public Works. This permit has been issued at your request and is based upon information submitted in your application to the Department.

Please note that prior to the beginning of land disturbance activities other permits may also be required. Especially note the requirements for a Missouri Department of Natural Resources 401 Water Quality Certification and the U.S. Army Corps of Engineers 404 permit. A 401 Certification is needed when placing material, or fill, into the jurisdictional waters of the United States. Examples are culverts under road crossings, riprap along stream banks and storm water outfall pipes. The term jurisdictional waters refers to large lakes, rivers, streams and wetlands, including those that don't always contain water.

The permitting and certification process is shared between the Department and the U.S. Army Corps of Engineers. More details can be found at the US Army Corps of Engineer's Website at <http://www.usace.army.mil/>. Some of these activities are also described on page 2, item 3 of the enclosed permit.

This permit contains several requirements and should be thoroughly read and understood by you. If your permit requires environmental monitoring, copies of the necessary forms have been enclosed. In all future correspondence regarding your permit please reference your permit number as shown on page 1 of the permit.

Please contact the Water Pollution Enforcement and Compliance Unit if you would like to schedule an Environmental Assistance Visit (EAV) at 573-751-1300. During the visit, staff will review the requirements of the permit and answer any questions that you may have. Staff will also be available to walk the site to advise on Best Management Practices required by the permit. The Department's regional office staff may also contact you to schedule an EAV.

If you were adversely affected by this decision, you may be entitled to an appeal before the administrative hearing commission pursuant to 10 CSR 20-1.020 and Sections 644.051.6 and 621.250, RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission. Contact information for the AHC is as follows: Administrative Hearing Commission, Truman State Office Building, Room 640, 301 W. High Street, P.O. Box 1557, Jefferson City, MO 65102, Phone: 573-751-2422, Fax: 573-751-5018, Website: www.oa.mo.gov/ahc.

Please be aware that this facility may also be subject to any applicable county or other local ordinances or restrictions.

Sincerely,

WATER PROTECTION PROGRAM



John Madras
Director

JM/sb

Enclosure

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

General Operating Permit

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No: MOR100085

Owner: Jefferson County Public Works
Address: 725 Maple Street
HILLSBORO, MO 63050

Continuing Authority: Jefferson County Public Works
725 Maple Street
Hillsboro, MO 63050

Facility Name: Jefferson County Public Works
Facility Address: 725 Maple Street
HILLSBORO, MO 63050

Legal Description: NE 1/4, NW 1/4, Sec. 18, T43N, R04E, Jefferson County
UTM Coordinates: 707713.731/4260873.295
Receiving Stream: Tributary to Big River (U)
First Classified Stream - ID#: Meramec R. (P) 1841.00
USGS# and Sub Watershed#: 07140104 - 0407

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein.

FACILITY DESCRIPTION All Outfalls SIC #1629

All Outfalls - Construction or land disturbance activity (e.g., clearing, grubbing, excavating, grading and other activity that results in the destruction of the root zone and/or land disturbance activity that is reasonably certain to cause pollution of waters of the state)

This permit authorizes only wastewater, including storm water, discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System, it does not apply to other regulated areas. This permit may be appealed in accordance with RSMo Section 644.051.6 and 621.250, 10 CSR 20-6.020, and 10 CSR 20-1.020.

May 20, 2013

Issue Date

Sara Parker Pauley
Sara Parker Pauley, Director
Department of Natural Resources

May 30, 2017

Expiration Date

John Madras
John Madras
Director, Water Protection Program

A. APPLICABILITY

1. This general permit authorizes the discharge of stormwater and certain non-stormwater discharges from land disturbance sites that disturb one or more acres of land or disturb less than one acre when part of a larger common plan of development or sale that will disturb a cumulative total of one or more acres over the life of the project.

This general permit also authorizes the discharge of stormwater and certain non-stormwater discharges from smaller projects where the Missouri Department of Natural Resources (Department) has exercised its discretion to require a permit [10 CSR 20-6.200 (1)(B)].

This general permit is issued to a city, county, state or federal agency or other governmental jurisdiction for land disturbance projects performed by or under contract to the permittee. A stormwater control plan or stormwater pollution prevention plan (SWPPP) must be developed prior to issuance of this permit. These plans must include a narrative of the types and appropriate uses of Best Management Practices (BMPs) for erosion and sediment control and stormwater management.

All water pollution controls on land disturbance sites shall conform to the storm water control program and/or SWPPP of the city, county or other governmental jurisdiction in which the land disturbance activity is occurring. These storm water control programs and/or SWPPPs shall be developed prior to permit issuance. The requirements of the stormwater control program and/or SWPPP must be at least as stringent as those described in this permit and 10 CSR 20-6.200. If the permittee is a regulated municipal separate stormwater system (MS4), the stormwater program and/or SWPPP must comply with the permittee's MS4 permit. The Department may enforce the requirements of the stormwater program and/or SWPPP.

All projects covered under this permit must also be identified as part of the Missouri State Operating Permit covered area and must have a SWPPP developed specific to the project site. The site specific SWPPP shall be developed prior to removal of any vegetation or site disturbance. This SWPPP must contain all the SWPPP requirements of this permit.

Any site owner/operator subject to these requirements for stormwater discharges and who disturbs land *prior* to permit issuance from the Department or prior to the development of the SWPPP is in violation of both State and Federal Laws.

The legal owner of the property, the right-of-way or the easement on which the site is located and the operator are responsible for compliance with this permit.

2. This permit authorizes discharges from construction support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided that appropriate stormwater controls are designed, installed, maintained and provided:
 - a. The support activity is directly related to the construction site required to have permit coverage for stormwater discharges;
 - b. The support activity is not a commercial operation; and
 - c. The support activity does not continue to operate beyond the completion of the construction activity at the project it supports.

It is the permittee that is responsible for compliance with this permit for any construction support activities.

3. This permit authorizes non-stormwater discharges from the following activities provided that these discharges are addressed in the SWPPP required by this general permit:
 - a. De-watering activities if there are no contaminants other than sediment present in the discharge, and the discharge is treated as specified in Requirements, Section C.10.l. of this permit;
 - b. Flushing water hydrants and potable water lines;
 - c. Water only (i.e., without detergents or additives) rinsing of streets and buildings; and
 - d. Site watering to establish vegetation.
4. This general permit does not authorize the placement of fill materials in flood plains, the obstruction of stream flow, directing stormwater across private property not owned or operated by the permittee, or changing the channel of a defined drainage course. This general permit addresses only the quality of the stormwater runoff and the minimization of off-site migration of sediments and other water contaminants.
5. This general permit does not authorize any discharge to waters of the state of sewage or pollutants including but not limited to:
 - a. Any hazardous material, oil, lubricant, solid waste or other non-naturally occurring substance from the site, including fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
 - b. Soaps or solvents used in vehicle and equipment washing;
 - c. Hazardous substances or petroleum products from an on-site spill or handling and disposal practices,
 - d. Wash and/or rinse waters from concrete mixing equipment including ready mix concrete trucks, unless managed by an appropriate control. Any such pollutants must be adequately treated and addressed in the SWPPP, and cannot be discharged to waters of the state;
 - e. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
 - f. Wastewater generated from air pollution control equipment or the containment of scrubber water in lined ponds;
 - g. Domestic wastewaters, including gray waters; or
 - h. Industrial stormwater runoff.
6. The Department reserves the right to revoke or deny coverage under this general permit to applicants for stormwater discharges from land disturbance activities at sites that have contaminated soils that will be disturbed by the land disturbance activity or where such materials are brought to the site to use as fill or borrow. A site-specific permit may be required to cover such activities.
7. If Department may require any person authorized by a general permit to apply for and obtain an individual operating permit [10 CSR 20-6.010 (13) (C)].

The Department may require the permittee to apply for and obtain a site-specific or different general permit if:

- a. The permittee is not in compliance with the conditions of this general permit;
- b. The discharge no longer qualifies for this general permit due to changed site conditions and/or regulations; or
- c. Information becomes available that indicates water quality standards have been or may be violated.

8. The permittee will be notified in writing of the requirement to apply for a site-specific permit or a different general permit. When a site-specific permit or different general permit is issued to the authorized permittee, the applicability of this general permit to the permittee is automatically terminated upon the effective date of the site specific or different general permit.
9. Any owner/operator authorized by a general permit may request to be excluded from the coverage of the general permit and apply for a site-specific permit [10 CSR 20-6.010 (13)(D)].
10. This permit does not authorize land disturbance activity in jurisdictional waters of the United States as defined by the Army Corps of Engineers, unless the permittee has obtained the required 404/401 permit. Land disturbance activities may not begin in the affected portions of the site until the required 404/401 permits have been obtained.
11. This permit does not supersede compliance with the Historic Preservation Act or the Endangered Species Act.
12. This permit does not supersede any requirement for obtaining project approval under an established local authority.
13. This permit is not transferable to other owners or operators.

B. EXEMPTIONS FROM PERMIT REQUIREMENTS

1. Facilities that discharge all stormwater runoff directly to a combined sewer system are exempt from stormwater permit requirements.
2. Land disturbance activity as described in [10 CSR 20-6.200 (1) (B)] and [10 CSR 20-6.010 (1) (B)] where water quality standards are not exceeded.
3. Linear, strip, or ribbon construction (as described in [10 CSR 20-6.200 (1) (B) 8]) where water quality standards are not exceeded.
4. Sites that disturb less than one acre of total land area as described in [10 CSR 20-6.200 (1)(B)7], that are not part of a common plan or sale and that do not cause any violations of water quality standards, and are not otherwise designated by the Department as requiring a permit.
5. Agricultural stormwater discharges and irrigation return flows as described in [10 CSR 20-6.200 (1) (B) 6].

C. REQUIREMENTS

These requirements do not supersede nor remove any requirement to comply with county or other local ordinances [10 CSR 20-6.010(14) (D)]:

1. This permit is to ensure the design, the installation and the maintenance of effective erosion controls and sediment controls to minimize the discharge of pollutants. At minimum, such controls must be designed, installed and maintained to:
 - a. Control stormwater volume and velocity within the site to minimize soil erosion;
 - b. Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion;
 - c. Minimize the amount of soil exposed during construction activity;
 - d. Minimize the disturbance of steep slopes;

- e. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle size expected to be present on the site.;
- f. Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible; and
- g. Minimize soil compaction and, unless infeasible, preserve topsoil.

2. The primary requirement of this permit is the development and implementation of a SWPPP which incorporates site specific practices to best minimize the soil exposure, soil erosion, and the discharge of pollutants. The permittee shall fully implement the provisions of the SWPPP required under this part as a condition of this general permit throughout the term of all land disturbance projects covered under this permit.
3. The permittee must inspect all land disturbance sites as described in C.13 of this permit.
4. The permittee shall provide a list of active land disturbance sites to the Department on a quarterly basis. The list shall contain the name of the project, location (including the County), name of the primary receiving water(s) for each project, description of the project, number of acres disturbed, percent completion of the project and projected date of completion. The permittee shall submit quarterly reports each January, April, July and October. The Department must receive reports by the end of the specified month.
5. The permittee is required to keep a current copy of the SWPPP at an easily accessible location so that it can be made available at the time of an onsite inspection by the Department or local agency approving stormwater management plans.

The SWPPP must:

- a. List and describe all outfalls or primary receiving water(s) for the project;
- b. Incorporate required practices identified below;
- c. Incorporate erosion control practices specific to site conditions;
- d. Provide for maintenance and adherence to the plan;
- e. Discuss whether or not a 404/401 Permit is required for the project; and
- f. Name the person responsible for inspection, operation and maintenance of BMPs.

The purpose of the SWPPP is to ensure; the design, implementation, management and maintenance of Best Management Practices (BMPs) in order to prevent sediment and other pollutants in stormwater discharges associated with the land disturbance activities; compliance with the Missouri Water Quality Standards; and compliance with the terms and conditions of this general permit.

The permittee shall select, install, use, operate and maintain appropriate BMPs for the permitted site. The following manuals are acceptable resources for the selection of appropriate BMPs.

Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Activities (Document number EPA 833-R-06-004) published by the United States Environmental Protection Agency (USEPA) in May 2007. This manual as well as other information, including examples of construction SWPPPs, is available at the USEPA internet site at <http://cfpub1.epa.gov/npdes/stormwater/swppp.cfm>; and

The latest version of *Protecting Water Quality: A field guide to erosion, sediment and stormwater best management practices for development sites in Missouri*, published by the Missouri Department of Natural Resources. This manual is available on the Department's internet site at: <http://www.dnr.mo.gov/env/wpp/wpcp-guide.htm>.

The permittee is not limited to the use of these guidance manuals. Other guidance publications may be used to select appropriate BMPs. However, all BMPs should be described and justified in the SWPPP.

6. SWPPP Requirements: The following information and practices shall be provided for in the SWPPP:
 - a. **Nature of the Construction Activity:** The SWPPP briefly must describe the nature of the construction activity, including:
 - 1) The function of the project (e.g., low density residential, shopping mall, highway, etc.);
 - 2) The intended sequence and timing of activities that disturb the soils at the site;
 - 3) Estimates of the total area expected to be disturbed by excavation, grading, or other construction activities including off-site borrow and fill areas; and
 - 4) A general map (e.g., United States Geological Survey quadrangle map, a portion of a city or county map, or other map) with enough detail to identify the location of the construction site and waters of the United States within one mile of the site.
 - b. **Site Map:** The SWPPP must contain a legible site map showing the site boundaries and outfalls and identifying:
 - 1) Direction(s) of stormwater flow and approximate slopes anticipated after grading activities;
 - 2) Areas of soil disturbance and areas that will not be disturbed (or a statement that all areas of the site will be disturbed unless otherwise noted);
 - 3) Location of major structural and non-structural BMPs identified in the SWPPP;
 - 4) Locations where stabilization practices are expected to occur;
 - 5) Locations of off-site material, waste, borrow or equipment storage areas;
 - 6) Locations of all waters of the United States (including wetlands);
 - 7) Locations where stormwater discharges to a surface water; and
 - 8) Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.
 - c. **Site Description:** In order to identify the site, the SWPPP shall include facility and receiving water(s) information. The SWPPP shall have sufficient information to be of practical use to contractors and site construction workers to guide the installation and maintenance of BMPs.
 - d. **Effluent Limits:** The permittee must select control measurements (e.g., BMPs, controls, practices, etc.) to meet effluent limits found in Section E.1. of this permit. All control measures must be properly selected, installed and maintained in accordance with any relevant manufacturer specifications and good engineering practices to ensure stormwater outfall discharges do not cause water quality problems. The permittee must implement the control measures from commencement of the construction activity until final stabilization is complete unless the exception noted in Section C.6.i. of this permit applies.
 - e. **Selection of Temporary and Permanent Non-Structural BMPs:** The permittee shall select appropriate non-structural BMPs for use at the site and list them in the SWPPP. The SWPPP shall require existing vegetation to be preserved where practical. For surface waters located on or immediately adjacent to the site, the permittee must provide at minimum a 25-foot buffer of undisturbed natural vegetation between the disturbed portions of the site and the surface water unless infeasible or where there is a more stringent local requirement. The buffer is measured perpendicularly from the ordinary high water mark or the bank edge, whichever is further landward from the water. The time period for disturbed areas to be without vegetative cover is to be minimized to the maximum extent practicable. Examples of non-structural BMPs which the permittee should consider specifying in the SWPPP include preservation of trees and mature vegetation, protection of existing vegetation

for use as buffer strips, mulching, sodding, temporary seeding, final seeding, geotextiles, stabilization of disturbed areas, preserving existing stream channels as overflow areas when channel straightening or shortening is allowed, soil stabilizing emulsions and tackifiers, mulch tackifiers, stabilized site entrances/exports and other appropriate BMPs.

- f. **Selection of Temporary and Permanent Structural BMPs:** The permittee shall select appropriate structural BMPs for use at the site and list them in the SWPPP. Examples of structural BMPs that the permittee should consider specifying in the SWPPP include diverting flows from undisturbed areas away from disturbed areas, silt (filter fabric and/or straw bale) fences, earthen diversion dikes, drainage swales, sediment traps, rock check dams, subsurface drains (to gather or transport water for surface discharge elsewhere), pipe slope drains (to carry concentrated flow down a slope face), level spreaders (to distribute concentrated flow into sheet flow), storm drain inlet protection and outlet protection, reinforced soil retaining systems, gabions, temporary or permanent sediment basins and other appropriate BMPs.
- g. **Description of BMPs:** The SWPPP shall include a description of both structural and non-structural BMPs that will be used at the site.

The SWPPP shall provide the following general information for each BMP which will be used one or more times at the site:

- 1) Physical description of the BMP;
- 2) Site and physical conditions that must be met for effective use of the BMP;
- 3) BMP installation/construction procedures, including typical drawings; and
- 4) Operation and maintenance procedures for the BMP.

The SWPPP shall provide the following information for each specific instance where a BMP is to be installed:

- 1) Whether the BMP is temporary or permanent;
- 2) Where, in relation to other site features, the BMP is to be located;
- 3) When the BMP will be installed in relation to each phase of the land disturbance procedures to complete the project; and
- 4) Site conditions that must be met before removal of the BMP if the BMP is not a permanent BMP.

- h. **Disturbed Areas:** Slopes for disturbed areas must be defined in the SWPPP. A site map or maps defining the sloped areas for all phases of the project must be included in the SWPPP.

Temporary stabilization is to take place where soil disturbing activities will cease on any portion of the site and are not planned to resume for a period exceeding 14 calendar days. Temporary stabilization must be initiated immediately upon knowing the duration is more than 14 days. Temporary stabilization must be completed within 7 calendar days. Temporary stabilization shall consist of well-established and maintained BMPs that are reasonably certain to protect waters of the state from sediment pollution over an extended period of time. This may require adding more BMPs to an area than is normally used during daily operations. These BMPs may include a combination of sediment basins, check dams, sediment fences and mulch. The types of BMPs used must be suited to the area disturbed, taking into account the number of acres exposed and the steepness of the slopes. If the slope of the area is greater than 3:1 (3 feet horizontal to one foot vertical) or if the slope is greater than 3% and greater than 150 feet in length, then the permittee shall establish temporary stabilization within seven days of ceasing operations on that part of the site.

Final stabilization of disturbed areas must be initiated immediately and completed within 7 calendar days whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site.

Allowances to the 7 day completion period for temporary and final stabilization may be made due to weather and equipment malfunctions. The use of allowances shall be documented in the SWPPP.

- i. **Installation:** The permittee shall ensure the BMPs are properly installed at the locations and relative times specified in the SWPPP. Peripheral or border BMPs to control runoff from disturbed areas shall be installed or marked for preservation before general site clearing is started. Note that this requirement does not apply to earth disturbances related to initial site clearing and establishing entry, exit and access of the site, which may require that stormwater controls be installed immediately after the earth disturbance. Stormwater discharges from disturbed areas which leave the site shall pass through an appropriate impediment to sediment movement such as a sedimentation basin, sediment traps and silt fences prior to leaving the land disturbance site. A drainage course change shall be clearly marked on a site map and described in the SWPPP. The location of all BMPs must be indicated on a site map, included in the SWPPP.
- j. **Sedimentation Basins:** The SWPPP shall include a sedimentation basin for each drainage area with ten or more acres disturbed at one time. The sedimentation basin shall be sized to contain a volume of at least 3,600 cubic feet per each disturbed acre draining thereto. Accumulated sediment shall be removed from the basin when basin is 50% full. When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface unless infeasible. Discharges from the basin shall not cause scouring of the banks or bottom of the receiving stream. The SWPPP shall require the basin be maintained until final stabilization of the disturbed area served by the basin.

Where use of a sediment basin is impractical, the SWPPP shall evaluate and specify other similarly effective BMPs to be employed to control erosion and sediment delivery. These similarly effective BMPs shall be based on good engineering practices. The BMPs must provide equivalent water quality protection to achieve compliance with this permit. The SWPPP shall require both temporary and permanent sedimentation basins to have a stabilized spillway to minimize the potential for erosion of the spillway or basin embankment.

- k. **Pollution Prevention Measures:** The SWPPP shall include BMPs for pollution prevention measures. At minimum such measures must be designed, installed, implemented and maintained to:
 - 1) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge ;
 - 2) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to precipitation and to stormwater; and
 - 3) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures. Included but not limited to the installation of containment berms and use of drip pans at petroleum product and liquid storage tanks and containers.

1. **Dewatering:** Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls. The SWPPP shall include a description of any anticipated dewatering methods including the anticipated volume of water to be discharged and the anticipated maximum flow discharged from these dewatering activities expressed in gallons per minute. Maximum flow may be stated in the SWPPP as an estimate based on the type and capacity of equipment being used for dewatering. The SWPPP shall call for specific BMPs designed to treat water pumped from trenches and excavations and in no case shall this water be pumped off-site without being treated by the specified BMPs. When discharging from basins and impoundments utilize outlet structures that withdraw water from the surface, unless infeasible.
- m. **Roadways:** Where applicable, upon installation of or connection to roadways, all efforts should be made to prevent the deposition of earth and sediment onto roadways through the use of proper BMPs. Stormwater inlets susceptible to receiving sediment from the permitted land disturbance site shall have curb inlet protection. Where stormwater will flow off the end of where a roadway terminates, a sediment catching BMP such as gravel berm or silt fence shall be provided. Roadways and curb inlets shall be inspected weekly or following a rainfall that generates a run-off and cleaned as necessary to maintain a clean roadway and drainage system. Where practicable, construction entrance BMP controls shall be used to prevent sediment track-out.
7. Good housekeeping practices shall be maintained at all times to keep waste from entry into waters of the state. Solid and hazardous waste management include providing trash containers and regular site clean-up for proper disposal of solid waste such as scrap building material, product/material shipping waste, food containers and cups, and providing containers and proper disposal of waste paints, solvents and cleaning compounds. The provision of portable toilets for proper disposal of sanitary sewage and the storage of construction materials should be kept away from drainage courses and low areas.
8. All fueling facilities present shall at all times adhere to applicable federal and state regulations concerning underground storage, above ground storage and dispensers.
9. Hazardous wastes that are transported, stored, or used for maintenance, cleaning, or repair shall be managed according to the provisions of the Missouri Hazardous Waste Laws and Regulations.
10. All paint, solvents, petroleum products, petroleum waste products and storage containers such as drums, cans, or cartons shall be stored according to BMPs. The materials exposed to precipitation shall be stored in watertight, structurally sound, closed containers. All containers shall be inspected for leaks or spillage during the once per week inspection of BMPs.
11. **Amending/Updating the SWPPP:** The permittee shall amend and update the SWPPP as appropriate during the term of the land disturbance activity. The permittee shall amend the SWPPP at a minimum whenever the:
 - a. Design, operation, or maintenance of BMPs is changed;
 - b. Design of the construction project is changed that could significantly affect the quality of the stormwater discharges;
 - c. Permittee's inspections indicate deficiencies in the SWPPP or any BMP;
 - d. The Department notifies the permittee in writing of deficiencies in the SWPPP;
 - e. SWPPP is determined to be ineffective in minimizing or controlling erosion and sedimentation (e.g., there is visual evidence of excessive site erosion or excessive sediment deposits in streams or lakes);
 - f. Settleable Solids from a stormwater outfall exceed 2.5 ml/L; and
 - g. The Department determines violations of water quality standards may occur or have occurred.

12. An individual shall be designated by the permittee as responsible for environmental matters. The individual responsible for environmental matters shall have a thorough and demonstrable knowledge of the site's SWPPP and sediment and erosion control practices in general. The individual responsible for environmental matters or a designated inspector knowledgeable in erosion, sediment and stormwater control principles shall inspect all structures that function to prevent pollution of waters of the state including those for material, waste, borrow, or equipment storage and maintenance areas that are covered by this permit. These inspections shall be conducted in accordance with No. 13 of these requirements.
13. Site Inspection Reports: The permittee (or a representative of the permittee) shall conduct regularly scheduled inspections at least once per seven calendar days. These inspections shall be conducted by a qualified person, one who is responsible for environmental matters at the site, or a person trained by and directly supervised by the person responsible for environmental matters at the site. For disturbed areas that have not been finally stabilized, all installed BMPs and other pollution control measures shall be inspected for proper installation, operation and maintenance. All stormwater outfalls shall be inspected for evidence of erosion or sediment deposition. When practicable the receiving stream shall also be inspected for 50 feet downstream of the outfall. Any structural or maintenance problems shall be noted in an inspection report and corrected within seven calendar days of the inspection. If a rainfall causes stormwater runoff to occur on-site, the BMPs must be inspected. These inspections must occur within 48 hours after the rain event has ceased during a normal work day and within 72 hours on the next business day if the rain event ceases during a non-work day such as a weekend or holiday. The total rainfall measured for that day must be recorded. A properly maintained rain gauge must be kept on site or the storm event information may be obtained from a weather station that is representative of your location.

The SWPPP must explain how the person responsible for erosion control will be notified when stormwater runoff occurs. If weather conditions prevent correction of BMPs within 7 calendar days, the reasons for the delay must be documented (including pictures) and there must be a narrative explaining why the work cannot be accomplished within the 7 day time period. The documentation must be filed with the regular inspection reports. The permittee shall correct the problem as soon as weather conditions allow.

A log of each inspection and a current copy, of all the inspection reports shall be kept at the site or at an easily accessible location so that it can be made available at the time of an on-site inspection or at the request of the Department. The inspection report shall be signed by the permittee or by the person performing the inspection if duly authorized to do so. The inspection report is to include the following minimum information:

- a. Inspector's name;
- b. Date of inspection;
- c. Observations relative to the effectiveness of the BMPs;
- d. Actions taken or necessary to correct the observed problem; and
- e. Listing of areas where land disturbance operations have permanently or temporarily stopped.

14. Proper Operation and Maintenance: The permittee shall at all times maintain all pollution control measures and systems in good order to achieve compliance with the terms of this general permit.
15. Notification to All Contractors: The permittee shall be responsible for notifying each contractor or entity (including utility crews and city employees or their agents) that will perform work at the site of the existence of the SWPPP and what action or precautions shall be taken while on-site to minimize the potential for erosion and the potential for damaging any BMP. The permittee is responsible for any damage a subcontractor may do to established BMPs and any subsequent water quality violation resulting from the damage.

16. Public Notification: The permittee shall post a copy of the public notification sign described by the Department at the main entrance to the site. The public notification sign must be visible from the public road that provides access to the site's main entrance. An alternate location is acceptable provided the public can see it and it is noted in the SWPPP. The public notification sign must remain posted at the site until the permit has been terminated.

D. OTHER DISCHARGES

1. Hazardous Substance and Oil Spill Reporting: Refer to Section B, #14 of Part I of the Standard Conditions that accompany this permit.
2. Removed substances: Refer to Section B, #6 of Part I of the Standard Conditions that accompany this permit.
3. Change in discharge: In the event soil contamination or hazardous substances are discovered at the site during land disturbance activities, the permittee shall notify the Department's regional office by telephone as soon as practicable but no later than 24 hours after discovery. The permittee must also notify the Department's regional office in writing no later than 14 calendar days after discovery.

E. SAMPLING REQUIREMENTS AND EFFLUENT LIMITATIONS

1. Settleable Solids discharging from a stormwater outfall shall not exceed 2.5 ml/L per Standard Method 2540 F for storm events up to but not exceeding the local 2-year, 24-hour storm. The Settleable Solids limit does not apply during storm events that exceed the local 2-year, 24-hour storm.
2. The Department may require sampling and reporting as a result of illegal discharges, compliance issues, complaint investigations, or other such evidence of contamination from activities at the site. If such an action is needed, the Department will specify in writing any sampling requirements, including such information as location, extent and parameters.

F. RECORDS

1. The permittee shall retain copies of this general permit, the SWPPP and all amendments for the site named in the State Operating Permit, results of any monitoring and analysis and all site inspection records required by this general permit. The records shall be accessible during normal business hours. The records shall be retained for a period of at least three years from the date of the Letter of Termination.
2. The permittee shall provide a copy of the SWPPP to the Department, USEPA, or any local agency or government representative if they request a copy in the performance of their official duties.
3. The permittee shall ensure a copy of the SWPPP to those who are responsible for installation, operation, or maintenance of any BMP. The permittee, their representative, and/or the contractor(s) responsible for installation, operation and maintenance of the BMPs shall have a current copy of the SWPPP with them when on the project site.

G. LAND PURCHASE AND CHANGE OF OWNERSHIP

1. Federal and Missouri stormwater regulations [10 CSR 20-6.200] require a stormwater permit and erosion control measures for all land disturbances of one or more acres. These regulations also require a permit for less than one acre lots if the lot is part of a common plan of development or sale where that plan is at least one acre in size. If the permittee sells less than one acre of the permitted site to an entity for, commercial, industrial, or residential use, (unless sold to an individual for the purpose of building his/her own private residence and in accordance with No. 3 of this section) this land remains a part of the common sale and regulated by this permit. Therefore, the permittee is still responsible for erosion control on the sold property until termination of the permit.
2. If the permittee sells one or more acres of the permitted site to an entity, the new owner of the property must obtain a land disturbance permit for the purchased property. The original permittee must amend the SWPPP to show that the property (one acre or more) has been sold and therefore no longer under the original permit jurisdiction.
3. If the permittee has stabilized the less than one acre lot which is part of a larger common plan of development and the lot is sold to an individual for purposes of building his/her own private residence, the permittee is no longer responsible for erosion control on the lot.
4. Property of any size which is part of a larger common plan of development where the property has been stabilized and the original permit terminated will require application of a new land disturbance permit for any future land disturbance activity.
5. If the entire tract is sold to a single entity, then this permit shall be terminated when the new owner obtains a new land disturbance permit for the site.

H. TERMINATION

This permit may be terminated when the project is stabilized. The project is considered to be stabilized when perennial vegetation, pavement, buildings, or structures using permanent materials cover all areas that have been disturbed. With respect to areas that have been vegetated, vegetation cover shall be at least 70% plant density over 100% of the site. In order to terminate the permit, the permittee shall notify the Department.

The Cover Page (Certificate Page) of the Master General Permit for Land Disturbance specifies the "effective date" and the "expiration date" of the Master General Permit. The "issued date" along with the "expiration date" will appear on the State Operating Permit issued to the applicant. This permit does not continue administratively beyond the expiration date.

If the project or development completion date will be after the expiration date of this general permit, then the permittee must reapply to the Department for a new permit. The applicant must file a request to the Department for a new permit 180 days prior to the expiration of this permit.

If the permittee has not terminated the permit and the permit expires, and the permittee has not applied for a new permit the permittee will be consider "operating without a permit" if the site does not meet the requirements for termination.

I. MODIFICATION, REVOCATION, AND REOPENING

1. The U.S. Environmental Protection Agency (EPA) has proposed stormwater requirements that may direct the State to reopen this permit. The EPA is proposing to change its construction general permit (CGP) with more prescriptive requirements and design standards for buffers to prevent stormwater runoff, increased monitoring requirements and more frequent inspections. While the EPA permit is only effective in areas where EPA has permitting authority these requirements are likely to act as a template, setting a baseline for the agency's approval of state plans for permitting sites.
2. If at any time the Missouri Department of Natural Resources determines that the quality of waters of the state may be better protected by reopening this permit, or revoking this permit and requiring the owner/operator of the permitted site to apply for a site-specific permit, the Department may revoke a general permit and require any person to obtain such an operating permit as authorized by 10 CSR 20-6.010 (13) and 10 CSR 20-6.200(5).
3. If this permit is re-opened, modified or revoked pursuant to this Section, the permittee retains all rights under Chapter 536 and 644 Revised Statutes of Missouri upon the Department's reissuance of the permit as well as all other forms of administrative, judicial, and equitable relief available under law.

J. DUTY TO COMPLY

The permittee must comply with all conditions of this general permit. Any noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
Revised
October 1, 1980

PART I - GENERAL CONDITIONS
SECTION A - MONITORING AND REPORTING

1. **Representative Sampling**
 - a. Samples and measurements taken as required herein shall be representative of the nature and volume, respectively, of the monitored discharge. All samples shall be taken at the outfall(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
 - b. Monitoring results shall be recorded and reported on forms provided by the Department, postmarked no later than the 28th day of the month following the completed reporting period. Signed copies of these, and all other reports required herein, shall be submitted to the respective Department Regional Office, the Regional Office address is indicated in the cover letter transmitting the permit.
2. **Schedule of Compliance**
No later than fourteen (14) calendar days following each date identified in the "Schedule of Compliance", the permittee shall submit to the respective Department Regional Office as required therein, either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements, or if there are no more scheduled requirements, when such noncompliance will be corrected. The Regional Office address is indicated in the cover letter transmitting the permit.
3. **Definitions**
Definitions as set forth in the Missouri Clean Water Law and Missouri Clean Water Commission Definition Regulation 10 CSR 20.2.010 shall apply to terms used herein.
4. **Test Procedures**
Test procedures for the analysis of pollutant shall be in accordance with the Missouri Clean Water Commission Effluent Regulation 10 CSR 20-7015.
5. **Recording of Results**
 - a. For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:
 - (i) the date, exact place, and time of sampling or measurements;
 - (ii) the individual(s) who performed the sampling or measurements;
 - (iii) the date(s) analyses were performed;
 - (iv) the individual(s) who performed the analyses;
 - (v) the analytical techniques or methods used; and
 - (vi) the results of such analyses.
 - b. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or both.
 - c. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
6. **Additional Monitoring by Permittee**
If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Monitoring Report Form. Such increased frequency shall also be indicated.
7. **Records Retention**
The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recording for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

SECTION B - MANAGEMENT REQUIREMENTS

1. **Change in Discharge**
 - a. All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant not authorized by this permit or any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.
 - b. Any facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants shall be reported by submission of a new NPDES application at least sixty(60) days before each such change, or, if they will not violate the effluent limitations specified in the permit, by notice to the Department at least thirty(30) days before such changes.
2. **Noncompliance Notification**
 - a. If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit, the permittee shall provide the Department with the following information, in writing within five (5) days of becoming aware of such conditions:
 - (i) a description of the discharge and cause of noncompliance, and
 - (ii) the period of noncompliance, including exact dates and times or, if not corrected, the anticipated fine the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.
 - b. Twenty-four hour reporting. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally with 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided with five (5) days of the time the permittee becomes aware of the circumstances. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
3. **Facilities Operation**
Permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions. Operators or supervisors of operations at publicly owned or publicly regulated wastewater treatment facilities shall be certified in accordance with 10 CSR 209.020(2) and any other applicable law or regulation. Operators of other wastewater treatment facilities, water contaminant source or point sources, shall, upon request by the Department, demonstrate that wastewater treatment equipment and facilities are effectively operated and maintained by competent personnel.
4. **Adverse Impact**
The permittee shall take all necessary steps to minimize any adverse impact to waters of the state resulting from noncompliance with any effluent limitations specified in this permit or set forth in the Missouri Clean Water Law and Regulations (hereinafter the Law and Regulations), including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.



**STORMWATER DISCHARGES FROM
THIS LAND DISTURBANCE SITE ARE
AUTHORIZED BY THE MISSOURI STATE
OPERATING PERMIT NUMBER:**

**IF YOU HAVE QUESTIONS OR
CONCERNS ABOUT STORMWATER
DISCHARGES FROM THIS SITE, PLEASE
CONTACT THE MISSOURI
DEPARTMENT OF NATURAL
RESOURCES AT**

1-800-361-4827

FACT SHEET

MOR100085 LAND DISTURBANCE GENERAL PERMIT 2012 Reissue

The purpose of this fact sheet is for permit clarity. It is not an enforceable part of the permit. The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Fact Sheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

PART I. NPDES Stormwater General Permit

The vast majority of discharges associated with construction activity are covered under NPDES general permits. General permits cover a group of similar dischargers under one permit. General permits simplify the process for dischargers to obtain authorization to discharge, provide permit requirements for any discharger that applies for coverage, and reduce the administrative workload for NPDES permitting authorities.

This General Permit is for regulating stormwater discharge at land disturbance construction sites in Missouri. This program requires the owner or operator of a construction site disturbing land of one acre or greater, or less than one acre but part of a larger common plan of development, to obtain this permit prior to conducting any land disturbance activity.

PART II. The Need for Stormwater Regulations at Construction Sites

Stormwater runoff is a major source of urban water pollution endangering humans by polluting the water resources used for drinking, household purposes, recreation and fishing. Stormwater discharges often contain pollutants in amounts that could reduce water quality. The primary pollutants of concern from construction activities are silt and sediment, but other pollutants such as oils and grease, vehicle fluids, and debris are present as well.

Stormwater runoff from construction activities can have a significant impact on water quality. As stormwater flows over a construction site, it can pick up pollutants like sediment, debris, and chemicals and transport these to a nearby storm sewer system or directly to a river, lake, or coastal water. Polluted stormwater runoff can harm or kill fish and other wildlife. Sedimentation can destroy aquatic habitat, and high volumes of runoff can cause stream bank erosion. Debris can clog waterways and potentially reach the ocean where it can kill marine wildlife and impact habitat.

Construction activities increase pollutant loads in runoff. The volume and rate of runoff are typically increased, providing a larger capacity to transport pollutants to rivers and lakes. In addition, the removal of vegetation leaves bare soil which is much more vulnerable to erosion, resulting in sediment moving into receiving waters.

Additional stormwater information and requirements including application for a land disturbance permit can be found at <http://dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm>.

PART III. Key Component and Primary Requirement of this Permit

The key component of this permit are effluent limitations that require the permittee to minimize discharge of pollutants in stormwater by using control measures that reflect best engineering practices base on federal and state government best professional judgment. Dischargers must minimize their discharge of pollutants in stormwater using appropriate erosion and sediment controls and control measures for other pollutants such as litter, construction debris, and construction chemicals that could be exposed to stormwater and other wastewater. The primary requirement of this general permit is the development and implementation of a stormwater pollution prevention plan (SWPPP) to document the steps they will take to comply with the terms, conditions and effluent limitations of the permit. Note that the SWPPP is not an effluent limitation, nor does it include effluent limitations. Information including examples of a SWPPP can be found at the following <http://cfpub.epa.gov/npdes/stormwater/swppp.cfm#model>. These examples should be used for educational or training purposes only. Construction site SWPPPs must be developed following the requirements of Missouri's land disturbance permit and describe the specific conditions of the site and plans for development.

PART IV. Additional Information for the Purpose of Permit Clarity

Applicability

- “**Industrial stormwater run-off**” are activities that take place at industrial facilities, such as material handling and storage, that are often exposed to the weather. As runoff from rain or snowmelt comes into contact with these activities, it can pick up pollutants and transport them to a nearby storm sewer system or directly to a river, lake, or coastal water. To minimize the impact of stormwater discharges from industrial facilities, the NPDES program includes an industrial stormwater permitting component that covers 10 categories of industrial activity that require authorization under an NPDES industrial stormwater permit for stormwater discharges. More information on industrial permit requirements can be found at <http://dnr.mo.gov/env/wpp/stormwater/sw-industrial-permits.htm>.
- A “**larger common plan of development or sale**” is a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan. For example, if a developer buys a 20-acre lot and builds roads, installs pipes, and runs electricity with the intention of constructing homes or other structures sometime in the future, this would be considered a larger common plan of development or sale. If the land is parceled off or sold, and construction occurs on plots that are less than one acre by separate, independent builders, this activity still would be subject to stormwater permitting requirements if the smaller plots were included on the original site plan. Other than the less than one acre property sold to the individual for construction of their personal residence, property of any size which is part of a larger common plan of development where the property has been stabilized and the original permit terminated will require application of a new land disturbance permit for any future land disturbance activity. The larger common plan of development or sale also applies to other types of land development such as industrial parks or well fields. A permit is required if one or more acres of land will be disturbed, regardless of the size of any of the individually-owned or developed sites.

- The **SWPPP** required for permit issuance is a general document written in a manner that can be utilized for any project throughout the governmental jurisdiction as each individual project is planned and designed. Individual projects covered under this permit must have a SWPPP developed specific to the project site prior to any removal of any vegetation or site disturbance. Individual projects must be identified in the quarterly report.
- Documentation of Permit Eligibility Related to **Endangered Species**: The SWPPP must include documentation supporting a determination of permit eligibility with regard to Endangered Species.
For more information please visit the following links:

For information on understanding what critical habitat is, please go to the following link, www.fs.fed.us/r9/wildlife/tes/docs/esa_references/critical_habitat.pdf.

For information on listed species by State & County, please go to the following link, <http://cfpub.epa.gov/npdes/stormwater/esa.cfm>.

The Missouri Department of Conservation's internet site for the Natural Heritage Review may be very helpful and can be found at the following link, <http://mdcgis.mdc.mo.gov/heritage/newheritage/heritage.htm>. Also helpful are the local offices of the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS), these centers often maintain lists of federally listed endangered or threatened species on their internet sites.

If there are listed species in the county or township, check to see if critical habitat has been designated and if that area overlaps or is near the project area. Critical habitat designations and associated requirements may also be found at 50 CFR Parts 17 and 226. For additional information, use the mapview tool at <http://criticalhabitat.fws.gov/crithab/> to find data specific to your state and county.

- A Clean Water Act Section 404 Department of the Army Permit and the Department's Clean Water Act Section 401 Water Quality Certification (certification) are needed when placing material or fill into jurisdictional waters of the United States. Any impacts to jurisdictional streams or wetlands would require an application to be sent to the appropriate US Army Corps of Engineers District Regulatory Branch. A map of the district offices and contact information can be located online at: <http://www.dnr.mo.gov/env/wpp/401/corps-map3.gif>. Not all land disturbance projects will require a 404 permit; however, if a 404 permit is required, land disturbance activities are not to be conducted in the jurisdictional area of the project until the 404 permit has been obtained. A discussion on the need for a 404/401 permit as a requirement of this permit and is to be included in the SWPPP.

Exemptions from Permit Requirements

- The USEPA defines **linear projects** to include the construction of roads, bridges, conduits, substructures, pipelines, sewer lines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities in a long, narrow area. Missouri regulation 10 CSR 20-6.200 (1)(B) 8 exempts linear project construction from stormwater permit regulations which meet one of the following: A. Grading of existing dirt or gravel roads which does not increase the runoff coefficient and the addition of an impermeable surface over an existing dirt or gravel road; B. Cleaning or routine maintenance of roadside ditches, sewers, waterlines, pipelines, utility lines or similar facilities; C. Trenches two (2) feet in width or less; or D. Emergency repair or replacement of existing facilities as long as best management practices are employed during the emergency repair.

Permit Requirements

- The permit requires that the “**sequence and timing**” of activities for disturbing soils at the site be addressed in the SWPPP. For purposes of this requirement and to allow flexibility for contractors, “sequence and timing” can be replaced with “intended start and completion date” of activities.
- The requirement of a **buffer area** applies only to surface water as defined by the Environmental Protection Agency. The Department does not consider stormwater control features (e.g. stormwater conveyance channels, storm drain inlets, sediment basins) to constitute “surface waters” for the purpose of triggering the buffer area requirement. Areas that the permittee does not own or that are otherwise outside operational control may be considered areas of undisturbed natural buffer for purposes of compliance with this requirement.
- Areas that are no longer being disturbed, **stabilization of the area must be initiated immediately**. For purposes of this permit the following types of activities will constitute the initiation of stabilization:
 - a) prepping the soil for vegetative or non-vegetative stabilization;
 - b) applying mulch or other non-vegetative product to the exposed area;
 - c) seeding or planting the exposed area;
 - d) starting any of the activities in # 1 – 3 on a portion of the area to be stabilized, but not on the entire area; and
 - e) finalizing arrangements to have stabilization product fully installed in compliance with the applicable deadline for completing stabilization. This list of examples is not exhaustive.

The term “immediately” is used to define the deadline for initiating stabilization measures. In the context of this requirement, “immediately” means as soon as practicable, but no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased.

- The permit requires the submittal of a **quarterly report**. The required quarterly report should be sent to the Department by post mail to P.O. Box 176, Jefferson City MO 65102, and/or by email to wpsc401cert@dnr.mo.gov.
- The permittee is required to conduct inspections of the site. The person(s) inspecting the site may be a staff person or a hired third party to conduct such inspections. The permittee is responsible for ensuring that the person who conducts inspections is a “qualified person or personnel.” A “**qualified person**” is a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the skills to assess conditions at the construction site that could impact stormwater quality, and the skills to assess the effectiveness of any stormwater controls selected to control the quality of stormwater discharges from the construction activity.
- A sample **inspection report** has been developed as a helpful tool to aid in completing site inspections. This sample inspection report was created consistent with USEPA’s Developing Your Stormwater Pollution Prevention Plan and can be found at http://www.epa.gov/npdes/pubs/sw_swppp_inspection_form.doc. Both the guide and the sample inspection report (formatted in Microsoft Word) can be found at <http://cfpub.epa.gov/npdes/stormwater/swppp.cfm>.

- For common drainage locations that serve an area with 10 or more acres disturbed at one time, a temporary (or permanent) **sediment basin** that provides storage for a calculated volume of runoff from the drainage area from a 2-year, 24-hour storm, or equivalent control measures, must be provided where attainable until final stabilization of the site. Where no such calculation has been performed, a temporary (or permanent) sediment basin providing 3,600 cubic feet of storage per acre drained, or equivalent control measures, must be provided where attainable until final stabilization of the site. When computing the number of acres draining into a common location, it is not necessary to include flows from offsite areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. In determining whether installing a sediment basin is attainable, the operator may consider factors such as site soils, slope, available area on-site, etc. In any event, the operator must consider public safety, especially as it relates to children, as a design factor for the sediment basin, and alternative sediment controls must be used where site limitations would preclude a safe design.
- Public Notification: A public notification sign has been added to the permit. If a different sign is to be used it should be one of the same size sign and lettering and containing the same information as that of the one supplied with the permit. The required information includes a statement for those with questions or concerns, the permit number and the Department's toll free phone number. The permittee shall post a copy of the public notification sign described by the Department at the main entrance to the site. An alternate location is acceptable provided the public can see it and it is noted in the SWPPP. The public notification sign must remain posted at the site until the permit has been terminated.

Other Discharges

- Machinery should be kept out of the waterway as much as possible. Fuel, oil and other petroleum products, equipment and any solid waste should not be stored below the ordinary high water mark at any time or in the adjacent floodway beyond normal working hours. All precautions are to be taken to avoid the release of wastes or fuel as a result of this operation. Petroleum products spilled should be immediately cleaned up and disposed of properly. Any such **spills of petroleum or other chemicals** are to be reported as soon as possible to the Department's 24-hour Environmental Emergency Response number at (573) 634-2436.

Sampling Requirements and Other Effluent Limitations

- 40 CFR 450.21 Subpart B - Construction and Development (C&D) Effluent Guidelines are **non-numeric effluent limits** and are structured to require construction operators to first prevent the discharge of sediment and other pollutants through the use of effective planning and erosion control measures; and second, to control discharges that do occur through the use of effective sediment control measures. Permittees are also required to implement a range of pollution prevention measures to limit or prevent discharges of pollutants including those from dry weather discharges. The C&D rule's non-numeric effluent limits are available at the following internet site: <http://www.gpo.gov/fdsys/pkg/CFR-2010-title40-vol29/xml/CFR-2010-title40-vol29-sec450-21.xml>. The associated fact sheet can be found at: http://www.epa.gov/npdespub/pubs/cgp_proposedfs.pdf.

- The USEPA has proposed numeric **effluent limitation guidelines** (ELGs) to control the discharge of pollutants from construction sites of a certain size. The Department may modify this permit upon finalization of the USEPA effluent limitation guidelines. The proposed Effluent limitation guidelines can be view at the following website <http://water.epa.gov/scitech/wastetech/guide/construction/>.

Land Purchase and Change of Ownership

- A person having **operational control over only a portion of a larger project** (e.g., one of four homebuilders in a subdivision), is responsible for compliance with all applicable effluent limits, terms, and conditions of the permit as it relates to the activities on that portion of the construction site, including protection of endangered species, critical habitat, and historic properties, and implementation of control measures described in the SWPPP. This person must ensure either directly or through coordination with other permittees, that these activities do not render another party's pollutant discharge controls ineffective. This person must either implement their own portion of a common SWPPP or develop and implement their own SWPPP. For more effective coordination of BMPs and opportunities for cost sharing, a cooperative effort by the different operators at a site to prepare and participate in a comprehensive SWPPP is encouraged. Individual operators at a site may, but are not required to, develop separate SWPPPs that cover only their portion of the project provided referenced is made to other operators at the site. In instances where there is more than one SWPPP for a site, cooperation between the permittees is encouraged to ensure stormwater discharge control measures are consistent with one another (e.g., provisions to protect listed species and critical habitat).
- The Department does not allow the transfer of a land disturbance permit from one owner to another; however, to facilitate the change in the ownership status of a property the Department developed the "Application for Change of Ownership" form. This form will allow the new owner to receive a new permit and number. The form may also be used to terminate the original permit if all the property included in the original permit is no longer the responsibility of the original owner. The "Application for Change of Ownership" (form MO780-2051) can be found online at <http://www.dnr.mo.gov/forms/#StormWater>.

Termination

- To begin the process of terminating this permit, the permittee should submit Form H – "Request for Termination" (MO780-1409) to the Department. The form can be found at the following web location: <http://www.dnr.mo.gov/forms/#StormWater>.

PART V. Addendums to Fact Sheet**Addendum #1****Individual Lot Certification**

This form is not a requirement of the permit, but may be used by the permittee when selling individual lots that are part of the property that has been authorized by a Missouri Water Pollution Control General Permit under the NPDES for stormwater discharged associated with construction activity. This is a certification between the purchaser and the seller to cooperatively implement the SWPPP and the conditions of the NPDES permit and does not constitute a transfer of the permit. The permittee shall maintain this form on-site, or in a readily available location. The permittee shall provide individual lot certification forms or a copy of the contract for land sale having the equivalent wording to the Missouri Department of Natural Resources.

Addendum #2**Response to Comments**

The 30-day public notice period for this permit expired on May 30, 2012. These are the responses to comments received through the public notice comment process.

ADDENDUM #1
INDIVIDUAL LOT CERTIFICATION

For Storm Water Discharges Associated with Construction Activity Authorized by a Missouri Water Pollution Control General Permit under the National Pollutant Discharge Elimination System

TO BE COMPLETED BY THE NEW LOT OWNER

I certify, under penalty of law, that I have received a copy of the general NPDES permit referenced below, which authorized the original lot owner or developer to discharge storm water runoff from construction activities, and the Storm Water Pollution Prevention Plan (SWPPP) prepared by the original lot owner or developer. I have reviewed the terms and conditions of the general permit and the SWPPP. I accept responsibility for erosion and sediment control during construction of the home or building for each of the lot(s) listed below. In the event the Missouri Department of Natural Resources notifies the undersigned of water quality violations due to conditions at any lot listed below and I am unable or unwilling to take action within 30 days to further reduce erosion or control sediment, then I agree to allow the original lot owner or developer to have reasonable access to the site to implement erosion and sediment control measures. I understand this certification is an agreement between the purchaser and seller to cooperatively implement the SWPPP and the conditions of the general NPDES permit.

Facility Name: _____
(as listed on permit)

Permit Number: MOR _____

Lot Number(s): _____

New Owner's Signature: _____

Name (typed or printed): _____

Phone Number: _____

Complete Only if New Owner is a Corporation and not an Individual:

Company Name: _____

Company Address: _____

Company Phone #: _____

TO BE COMPLETED BY THE PERMIT HOLDER

As permittee for the overall tract wherein the above listed lot(s) are located, I certify that I have provided the above named lot purchaser with a copy of the general NPDES permit and the Storm Water Pollution Prevention Plan (SWPPP) for the project, and I have informed the lot purchaser of their responsibility to minimize erosion and control sedimentation. I understand this certification does not constitute a transfer of the permit and understand this certification is an agreement between the purchaser and seller to cooperatively implement the SWPPP and the conditions of the general NPDES permit.

Signature: _____

Name (typed or printed): _____

Phone Number: _____

The permittee shall maintain this form on-site, or in a readily available location. The permittee shall provide individual lot certifications forms or a copy of the contract for land sale having the equivalent wording to the Missouri Department of Natural Resources upon request.

Addendum #2

MOR100 Land Disturbance Permit Response to Public Notice Comments

(The Missouri Department of Natural Resources' public notice comment period for this permit expired on May, 30, 2012.)

GENERAL COMMENT RESPONSES

STANDARD LAND DISTURBANCE PERMIT - MORA

The Department received comments related to earlier drafts of the Standard Land Disturbance Permit (MORA) and/or comparisons between the MORA and the current draft MOR100 permit. Until there is one land disturbance permit, the two permits will have differences. The Department will as much as possible keep the number of differences at a minimum. There has been no change to the permit as a result of these comments.

FEDERAL REGULATION 40 CFR 450.21

As the NPDES authorized permitting authority, the Department is required to incorporate into the permit the federal regulation 40 CFR 450.21. These are non-numeric effluent limitations reflecting the best practicable technology currently available (BPT). The Department received a few comments regarding these requirements. These requirements will remain stated in the permit as required by the Environmental Protection Agency (EPA). An additional comment was to replace the word "prevent" located throughout the permit with the word "minimize" in order to be consistent with federal regulation. The draft permit's use of the word "minimize" is consistent with the federal regulation. There has been no change to the permit as a result of these comments.

TYPOS/DEFINITIONS/REFERENCES

The Department received comments regarding typos and similar items in the proposed permit. These entries have been corrected in the final permit. The Department received comments suggesting definition and clarification to several areas of the proposed permit. All suggestions were considered and many have been added to the permit Fact Sheet.

SPECIFIC COMMENT RESPONSES

SECTION A. APPLICABILITY

PERMIT ISSUANCE REQUIRMENT - DEVELOPMENT OF SWPPP

Section A.1. - The Department received a comment on the development of a Stormwater Pollution Prevention Plan (SWPPP) prior to the issuance of the permit. The SWPPP required for permit issuance is a general document written in a manner that can be utilized for any project throughout the governmental jurisdiction as each individual project is planned and designed. Project specific plans, maps, etc. as part of the SWPPP must be developed prior to any land disturbance conducted at the site. The Permit Fact Sheet will include more clarity on this section of the permit. Language has been changed to clarify the requirements.

PERMIT LANGUAGE & STORMWATER REGULATION

Section A.1. - The Department received a few comments regarding the applicability of permit coverage when compared to state stormwater regulations. The Department understands the issue of varying language between the draft permit and the state stormwater regulations. The Department is currently reviewing the stormwater regulations for revision. There has been no change to the draft permit as a result of this comment.

PROJECTS COVERED UNDER THIS PERMIT

Section A.1. - The Department received comments that suggested revisions to paragraph five of this section of the draft permit. The Department has revised the draft permit as suggested in order to better clarify this requirement.

OWNER/OPERATOR

Section A.1. - The Department received comments regarding the owner/operator statement and asked for clarification of primary responsibility for compliance with the permit. All parties are responsible. If there are enforcement actions the Department has the authority to involve all parties as necessary and to the extent possible. There has been no change to the permit as a result of this comment.

SECTION C. REQUIREMENTS

STORMWATER VOLUME

Section C.1. - The Department received a comment regarding this section of the draft permit which requires the permittee to minimize soil erosion through control of stormwater volume. As the NPDES authorized permitting authority, the Department is required to incorporate into the permit the federal regulation 40 CFR 450.21. For additional related discussion please refer to the earlier section of this document titled "General Comment Responses". The commenter questions the maximizing of infiltration in order to control stormwater volume at a land disturbance site. There are ways to reduce volume other than infiltration. The regulation and the permit do not prescribe one BPT over another. The language and goal of these provisions are to reduce

erosion. For example, one way to minimize the stormwater volume at a site is to reduce or eliminate run on to the site from up-hill off-site sources. This effectively reduces the volume of stormwater to be managed on-site. Another example is to reduce volume at individual outlet structures by having multiple outlet structures. This effectively reduces the volume at each individual outlet structure. By managing/directing the flow of runoff at the site you can also reduce the volume of water at individual outlet points. There has been no change to the draft permit as a result of this comment.

QUARTERLY REPORT

Section C.4., - The Department received comments regarding the quarterly report. To accommodate the complexity and number of outfalls associated with transportation projects language was changed to simplify reporting requirements. Instead of identifying each individual outfall, reports can simply refer to the receiving water.

ACCESSIBILITY OF THE SWPPP

Section C.5. The Department received a comment regarding onsite accessibility of the SWPPP. The permit will be revised to include additional wording regarding the SWPPP availability for inspections.

RECEIVING STREAMS & OUTFALL INFORMATION

Section C.5.a., and C.6.c. – The Department received comments concerning the use of outfall as the primary reference point. Often projects have a multitude of outfalls, particularly projects related to road construction. In these cases most outfalls have very similar BMPs, so listing individual outfalls is often not necessary. It was suggested that the Department add the word “primary” when naming the receiving streams in the SWPPP and remove the outfall information from the SWPPP requirement. Language in the permit was changed to simplify the requirements.

SEQUENCING & TIMING

Section C.6.a.2. - The Department received a couple of comments regarding the requirement found in this section of the draft permit. There has been no change as a result of this comment; however the Department will add clarification in the Permit Fact Sheet that “sequencing and timing” can also mean start and completion dates of intended activities.

BUFFER AREA

Section C.6.e. – The Department received a request to define “infeasible” when requiring the construction of a buffer area. The commenter referred to EPA’s Construct General Permit (CGP) as guidance. EPA’s permit defines what is not considered “surface water” and therefore would not require a buffer area. If a buffer area is infeasible, EPA’s permit requires the implementation of other sediment controls which must achieve the same sediment load reduction as a buffer area would have. The Department will add a similar note to the Permit Fact Sheet regarding what is not “surface water”. There has been no change to the permit as a result of these comments.

DISTURBED AREAS

Section C.6.h. – The Department received a comment to remove the word “immediately” from the requirement to initiate temporary and final stabilization of disturbed areas. This requirement is part the federal regulation which are non-numeric effluent limitations reflecting the best practicable technology currently available (BPT). As the NPDES authorized permitting authority, the Department is required to incorporate into the permit the federal regulation 40 CFR 450.21. For additional related discussion please refer to the earlier section of this document titled “General Comment Responses”. The Department also received a suggestion to include guidance as to what constitutes “initiation” of stabilization. The Department will include in the Permit Fact Sheet information similar to EPA’s regarding the context of this provision. There has been no change to the draft permit as a result of this comment.

GOOD ENGINEERING PRACTICES

Section C.6.j. – The Department received a comment to reword this section of the draft permit to include “... similar effective BMPs shall be based on good engineering practices.” The Department will revise the permit accordingly.

ROADWAYS & CURB INLETS

Section C.6.m. - The Department received a couple of comments regarding this section and has made a revision to the draft permit but did not include the additional language regarding the cleaning of inlet protection devices.

RESPONSIBLE PERSON

Section C.12. – The department received a comment noting an incorrect reference, and the language was changed to point correctly to the requirements of paragraph 13.

SITE INSPECTION REPORTS

Section C.13. - It was suggested that the Department consider revising this section of the draft permit to include an inspection requirement following a rainfall event of 0.25 inches or greater. The Department currently requires an inspection of BMPs anytime rainfall causes stormwater runoff to occur onsite. Further discussion and review of any proposal to change this requirement will be needed before considering a change to permit. There has been no change to the permit as a result of this comment.

Section C.13. - The Department received a couple of comments regarding site inspection reports kept on site. The Department will include a similar option in the permit, just as EPA has with the GCP that all site inspection reports can be kept at the site or at an easily accessible location so that it can be made available at the time of an onsite inspection or upon request by the Department.

Section C.13. – The Department received a comment suggesting that language be changed so that inspections are only required to occur during a project’s normal hours, so that inspections can occur on the next business day following a long holiday weekend. The language was changed to reflect this suggestion.

SECTION E. SAMPLING REQUIREMENTS AND EFFLUENT LIMITATIONS

Section E. - The Department received a couple of comments suggesting language to better clarify wording in Section E., 1 of the draft permit. The Department has revised the draft permit for better clarity.

SECTION F. RECORDS

Section F.3. – The Department received a comment requesting that the word “provide” be replaced with the word “ensure” in this section of the permit. The Department has made this change to the permit.

Jefferson County Land Disturbance Permit
Permit Number:
MO-JCLD-PW-COWIDE

In compliance with Jefferson County Unified Development Order Article 10 Land Disturbance and as amended hereinafter, the Missouri Clean Water Law,(Chapter 644 R.S.Mo. as amended, hereinafter, the law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Owner: **Jefferson County Government**
Address: **725 Maple St. Hillsboro, MO 63050**

Continuing Authority: **Jefferson County Government**
Address: **725 Maple St. Hillsboro, MO 63050**

Site Name: **Unincorporated Jefferson County**
Site Address: **Jefferson County**

Parcel Number:

Receiving Stream: **Tributaries of Jefferson County**

First Classified Stream and ID:

USGS Basin & Sub-watershed No.:

NPDES Outfall Number: **001-071**

Owner is authorized to discharge from the site described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

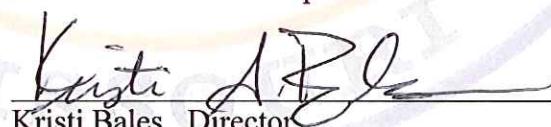
All outfalls in accordance with the SWPPP dated : **3/27/2013**

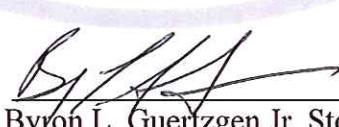
Construction or land disturbance activity (e.g., clearing, grubbing, excavating, grading, and other activity that results in the destruction of the root zone and/or land disturbance activity that is reasonably certain to cause pollution to the waters of the state and county).

This permit authorizes storm water discharged under Jefferson County Unified Development Order Article 10 Land Disturbance, The Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas.

Issue Date: **3/27/2013**

Expiration Date: **5/30/2017**


Kristi Bales Director


Byron L. Guertzgen Jr. Stormwater Analyst

FLOODPLAIN DEVELOPMENT PERMIT/APPLICATION complete thoroughlyPermit/Application #: 192818 Date of Application: 12/16/20151. Applicant Name: Jefferson County Public Works DEVELOPER ENGINEER OWNERApplicant Address: 725 Maple Street, P.O. Box 100 City, State, Zip Hillsboro, MO 63050Contact Phone #: 636-797-6080 FAX: 636-797-55652. Property Owner's Name Jefferson County Public Works Phone: 636-797-6080Property Owner's Address: 725 Maple Street, P.O. Box 100, Hillsboro, MO 63050Parcel Number: none (County ROW) Adjacent Parcel Number*: 08-9-0-32.0-0-000.0113. Address of Development Site: N/ADirections to Development Site: MO-21 N to Old MO 21, Right on Klable, Left on Old Lemay Ferry 0.6 miles to bridge

* for office tracking purposes only

Type of Construction: (ex: bridge, house, etc.) Bridge Replacement Project New Structure Addition to Remodel Repair Substantial Improvement Minor Improvement Construction Cost: \$495,000.00**Excavation Project:** Filling Grading**Mobile Home:** Private Property New or Additional Pads How Many? _____4. Is property located in a designated floodway? Yes No**IF THE PROPOSED CONSTRUCTION SITE IS IN A FLOODWAY, A NO-RISE CERTIFICATE MUST BE PROVIDED PRIOR TO THE ISSUANCE OF THIS PERMIT. THE FLOODWAY AND FLOODPLAIN BOUNDARIES MUST BE SHOWN ON SITE PLAN.**5. Is property located in a designated floodplain? Yes NoA. Elevation of the 100-year flood 654.87 MSL/NGVDB. Elevation of the proposed development site 654.24 MSL/NGVDC. Elevation/Flood proofing requirement 0.00 MSL/NGVD**THIS PERMIT IS ISSUED WITH THE CONDITION THAT THE FIRST FLOOR (INCLUDING THE BASEMENT FLOOR) IS CERTIFIED TO BE ELEVATED TO TWO (2') FEET ABOVE THE 100-YEAR FLOOD ELEVATION. IF THE PROPOSED DEVELOPMENT IS A COMMERCIAL BUILDING, THIS PERMIT IS ISSUED WITH THE CONDITION THAT THE FIRST FLOOR (INCLUDING THE BASEMENT FLOOR) IS CERTIFIED TO BE ELEVATED OR FLOODPROOFED TO ONE (1') FOOT ABOVE THE 100-YEAR FLOOD ELEVATION.**

D. Subdivision proposals of five acres or fifty lots, whichever is smaller, requires the following additional information:

1. Contour/Grading Plan
2. Location of the floodway and floodplain boundaries
3. Elevation of the 100-year flood
4. Location and lowest floor (including basement floor) elevation of proposed structures
5. Other flood data as required by County's floodplain management official

6. Other permits required: Corps of Engineers (COE) 404 Permit Yes NoMoDNR Land Disturbance Permit: Yes No Other: _____*This development shall comply with all provisions of the Jefferson County Flood Damage Prevention Ordinance:*Brian Dugan
Signature of Developer/OwnerAuthorat
Signature of Engineer or SurveyorPlans and Specifications approved this 27th day of December 20 15.Eric Larson
Authorizing Official

(Brian Dugan x (080))

County of Jefferson
CHECKLIST FOR
FLOODPLAIN DEVELOPMENT PERMIT APPLICATION

No application for a floodplain development permit will be accepted unless accompanied by this checklist.

For office use only:	Building Permit # <u>192818</u>
Floodplain Permit Number: _____	Date received: _____
Applicant: _____	
Received from: _____	
Clerk's Name: <u>Greg Smith</u>	Copy of this completed checklist should be given to the applicant.
Plan Reviewer's Signature	Copy one for the file also.

A surveyor or engineer should complete this floodplain permit application.

yes _____ Identify and describe the work to be covered by the floodplain development permit.

yes _____ Indicate the use or occupancy for which the proposed work is intended.

yes _____ Provide a description of land on which proposed work is to be done (ex: street address, lot, block, map parcel numbers, etc.)

yes _____ Provide site/grading plan signed and sealed by an engineer or surveyor.

yes _____ Indicate if the property or development is located in a floodplain or floodway.

yes _____ Identify the existing base flood elevation and the elevation of the proposed development.

yes _____ Provide plans and specifications for the proposed development (including fill and grading).

yes _____ Provide a flood study where applicable.

yes _____ Provide a copy of the appropriate FIRMette* identifying the site location and panel number.

yes _____ Provide the required local, state and federal permits, if required

yes _____ COE 404 Permit

yes _____ DNR 401 Permit (water quality)

yes _____ DNR 402 Permit (land disturbance of one acre or more)

yes _____ Jefferson County Land Disturbance Permit (land disturbance of one acre or more)

yes _____ Is the permit application signed by the permittee or authorized agent and the engineer or surveyor?

*FIRMette-go to the fema.gov website

Floodplain Development Permit Memo

Floodplain Permit #192818

Building Permit #

Planning and Zoning Permit # N/A

Applicant: Jefferson County Public Works

Property Owner: Jefferson County Public Works

Engineer or Surveyor: Brian Dugan/Jefferson County Public Works

Property Location: Old Lemay Road at Oak Crest Drive

Parcel Number: 08-9.0-32.0-000.011

Development location relative to the floodplain: FIRM Map #29099C0230E

Out of the SFHA as shown _____

Unstudied SFHA _____ Floodway _____

100 yr. floodplain 500 yr. floodplain _____

Base Floodplain Elevation: 654.87

Elevation of the proposed site: 654.24

Comments: Approved for the Director's signature for the construction of bridge replacement.

Reviewed by: Greg Smith

Date: 12-22-15



October 1, 2014

Mr. Brian Dugan
Jefferson County Public Works Department
725 Maple Street
P.O. Box 100
Hillsboro, Missouri 63050

RE: Heavy Metal-Based Paint and ACM Survey
Old Lemay Ferry Road Culvert Phase 2
Jefferson County, Missouri
SCI No. 2014-5001.25

Dear Mr. Dugan:

INTRODUCTION

SCI Engineering, Inc. (SCI) is pleased to submit this report summarizing heavy metal-based paint sampling and asbestos survey activities performed at the above-referenced location on September 23, 2014. The purpose of these survey activities was to identify the presence of heavy metal-based paint and suspect asbestos-containing materials (ACMs) on the bridge structure.

If elevated levels of heavy metals are present on brick, block, concrete or other masonry materials, the masonry material cannot be used as clean fill without further laboratory analysis. If steel, wood, or other non-masonry materials are painted with heavy metal-based paint, these items can be recycled or disposed of in a licensed landfill. If the case that heavy metal-based paint is present, the contractor(s) shall follow the applicable requirements and obligations specified by OSHA. Alternately, the heavy metal-based coatings could be removed prior to demolition, by a licensed contractor.

The asbestos survey activities were performed in attempt to identify suspect ACM that may be present on the bridge structure. This survey is intended to satisfy the requirements for the asbestos National Emission Standard for Hazardous Air Pollutant for demolition and renovation as well as for Occupational Safety and Health Administration (OSHA) compliance. If present, ACM may need to be properly abated prior to demolition activities.

SCI's heavy metal-based paint and asbestos survey activities are summarized below.

HEAVY METAL-BASED PAINT SURVEY

SCI performed a visual assessment of the bridge for the presence of painted steel, masonry or other building materials. No painted bridge components were observed during survey activities, and therefore, sampling was not performed.

ASBESTOS SURVEY

SCI performed a visual assessment of the bridge for the presence of suspect ACM. No evidence of suspect ACM was identified during the survey, and therefore, sampling was not performed.

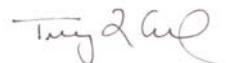
LIMITATIONS

SCI's heavy metal based paint and asbestos survey entailed visually accessible areas only. If any other potential heavy metal-based paint or suspected ACMs are discovered during demolition, please contact SCI, and we will make arrangements for assessment of these materials.

SCI appreciates the opportunity to be of service to you on this project, and we look forward to working with you in the future. Please contact us if you have any questions or comments regarding the information provided.

Respectfully,

SCI ENGINEERING, INC.



Trey L. Coad, CHMM
Senior Project Scientist



Karl E. Ruhmann, P.E., R.G.
Vice President

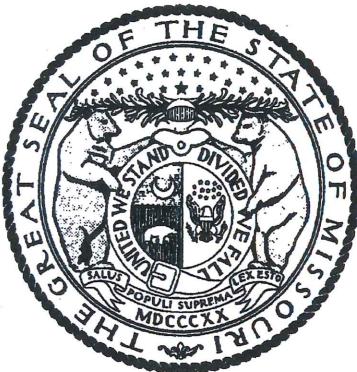
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\\\2014 PROJECTS\2014-5001 Jefferson County Public Works - On Call Testing\25 Old Lemay Culvert\14-5001.25 HMBP and Asb-Old Lemay Ferry Road Culvert.doc

Missouri

Division of Labor Standards

WAGE AND HOUR SECTION



JEREMIAH W. (JAY) NIXON, Governor

Annual Wage Order No. 22

Section 050
JEFFERSON COUNTY

In accordance with Section 290.262 RSMo 2000, within thirty (30) days after a certified copy of this Annual Wage Order has been filed with the Secretary of State as indicated below, any person who may be affected by this Annual Wage Order may object by filing an objection in triplicate with the Labor and Industrial Relations Commission, P.O. Box 599, Jefferson City, MO 65102-0599. Such objections must set forth in writing the specific grounds of objection. Each objection shall certify that a copy has been furnished to the Division of Labor Standards, P.O. Box 449, Jefferson City, MO 65102-0449 pursuant to 8 CSR 20-5.010(1). A certified copy of the Annual Wage Order has been filed with the Secretary of State of Missouri.

Original Signed by

John E. Lindsey, Director
Division of Labor Standards

This Is A True And Accurate Copy Which Was Filed With The Secretary of State: March 10, 2015

Last Date Objections May Be Filed: April 9, 2015

Prepared by Missouri Department of Labor and Industrial Relations

Building Construction Rates for
JEFFERSON County

REPLACEMENT PAGE

Section 050

OCCUPATIONAL TITLE	** Date of Increase	*	Basic Hourly Rates	Over-Time Schedule	Holiday Schedule	Total Fringe Benefits
Asbestos Worker (H & F) Insulator			\$38.06	55	60	\$20.71
Boilermaker	9/15		\$32.76	126	7	\$30.10
Bricklayer and Stone Mason	11/15		\$32.50	72	5	\$20.69
Carpenter	6/15	e	\$36.34	77	41	\$15.75
Cement Mason	6/15		\$30.56	80	6	\$17.30
Communication Technician	12/15		\$31.35	44	47	\$9.53 + 31.75%
Electrician (Inside Wireman)	8/15		\$34.20	82	71	\$10.78 + 39.5%
Electrician (Outside-Line Construction\Lineman)	9/15		\$42.52	43	45	\$5.00 + 36.5%
Lineman Operator	9/15		\$36.70	43	45	\$5.00 + 36.5%
Groundman	9/15		\$28.38	43	45	\$5.00 + 36.5%
Elevator Constructor	8/15	a	\$45.09	26	54	\$30.005
Glazier	6/15		\$33.13	87	31	\$19.58 + 10.53%
Ironworker	8/15		\$32.88	11	8	\$23.825
Laborer (Building):						
General		b	\$25.46	73	7	\$12.07
First Semi-Skilled		d	\$26.58	73	7	\$12.07
Second Semi-Skilled		c	\$25.96	73	7	\$12.07
Lather				USE CARPENTER RATE		
Linoleum Layer and Cutter	6/15		\$31.08	92	26	\$15.45
Marble Mason	10/15		\$31.43	76	51	\$14.17
Marble Finisher	10/15		\$26.18	76	51	\$13.47
Millwright	6/15		\$36.34	77	41	\$15.75
Operating Engineer						
Group I	6/15		\$32.16	3	66	\$24.16
Group II	6/15		\$32.16	3	66	\$24.16
Group III	6/15		\$30.26	3	66	\$24.16
Group III-A	6/15		\$32.16	3	66	\$24.16
Group IV	6/15		\$26.80	3	66	\$24.16
Group V	6/15		\$26.80	3	66	\$24.16
Painter	10/15		\$31.65	104	12	\$13.76
Pile Driver				USE CARPENTER RATE		
Pipe Fitter	7/15		\$37.00	91	69	\$26.68
Plasterer	7/15		\$31.06	67	3	\$17.53
Plumber	7/15		\$37.00	91	69	\$26.68
Roofing \ Waterproofer			\$30.70	15	73	\$16.67
Sheet Metal Worker	10/15		\$39.63	32	25	\$21.72
Sprinkler Fitter - Fire Protection	10/15		\$41.96	66	18	\$21.62
Terrazzo Worker	6/15		\$32.11	116	5	\$13.37
Terrazzo Finisher	10/15		\$30.35	116	5	\$11.84
Tile Setter	10/15		\$31.43	76	51	\$14.17
Tile Finisher	10/15		\$26.18	76	51	\$13.47
Traffic Control Service Driver			\$28.775	22	55	\$9.045
Truck Driver-Teamster			\$30.41	35	36	\$10.82

Fringe Benefit Percentage is of the Basic Hourly Rate

**Annual Incremental Increase

Building Construction Rates for JEFFERSON County Footnotes

REPLACEMENT PAGE

Section 050

* Welders receive rate prescribed for the occupational title performing operation to which welding is incidental.

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

- a - Vacation: Employees over 5 years - 8%; Employees under 5 years - 6%
- b - Projects over \$1 Million - \$25.46; Projects under \$1 Million - \$23.31
- c - Projects over \$1 Million - \$25.96.; Projects under \$1 Million - \$23.81
- d - Projects over \$1 Million - \$26.58; Projects under \$1 Million - \$24.83
- ** e - Projects over \$1 Million - \$36.34; Projects under \$1 Million - \$31.25

REPLACEMENT PAGE
JEFFERSON COUNTY
BUILDING CONSTRUCTION OVERTIME SCHEDULE

FED: Minimum requirement per Fair Labor Standards Act means time and one-half (1 ½) shall be paid for all work in excess of forty (40) hours per work week.

NO. 3: Means the regular workday shall consist of eight (8) consecutive hours, exclusive of a thirty (30) minute lunch period, with pay at the straight time rate. The regular workday shall begin between the hours of 6:00 a.m. and 9:00 a.m. The Employer may have the option to schedule the work week from Monday through Thursday at ten (10) hours per day at the straight time rate of pay with all hours in excess of ten (10) hours in any one day to be paid at the applicable overtime rate. If the Employer elects to work from Monday through Thursday and is stopped due to inclement weather, holiday or other conditions beyond the control of the Employer, they shall have the option to work Friday at the straight time rate of pay to complete the forty (40) hours for the workweek. All overtime work performed on Monday through Saturday shall be paid at time and one-half (1½) the hourly rate plus an amount equal to one-half (½) of the hourly Total Indicated Fringe Benefits. All work performed on Sundays and recognized holidays shall be paid at double (2) the hourly rate plus an amount equal to the hourly Total Indicated Fringe Benefits. Shifts may be established when considered necessary by the Employer. Shift hours and rates will be as follows. If shifts are established, work on the First Shift will begin between 6:00 a.m. and 9:00 a.m. and consist of eight (8) hours of work plus one-half hour unpaid lunch. Hours worked during the first shift will be paid at the straight time rate of pay. The second shift shall start eight hours after the start of the first shift and consist of eight (8) hours of work plus one-half hour unpaid lunch. Work on the second shift will begin between 2:00 p.m. and 5:00 p.m. and be paid the straight time rate plus \$2.50 per hour. The third shift shall start eight hours after the start of the second shift and consist of eight (8) hours plus one-half hour unpaid lunch. Work on the third shift will begin between 10:00 p.m. and 1:00 a.m. and be paid the straight time rate plus \$3.50 per hour. The additional amounts that are to be paid are only applicable when working shifts. Shifts that begin on Saturday morning through those shifts which end on Sunday morning will be paid at time and one-half these rates. Shifts that begin on Sunday morning through those shifts which end on Monday morning will be paid at double time these rates.

NO. 11: Means eight (8) hours shall constitute a day's work, with the starting time to be established between 6:00 a.m. and 8:00 a.m. from Monday to Friday. Time and one-half (1½) shall be paid for first two (2) hours of overtime Monday through Friday and the first eight (8) hours on Saturday. All other overtime hours Monday through Saturday shall be paid at double (2) time rate. Double (2) time shall be paid for all time on Sunday and recognized holidays or the days observed in lieu of these holidays.

NO. 15: Means the regular working day shall be scheduled to consist of at least eight (8) hours, but no more than ten (10) consecutive hours, exclusive of the lunch period. The regular working day may be scheduled to commence at any time between the hours of 5:00 a.m. and 10:00 a.m. All work performed in excess of forty (40) hours in one work week, or in excess of ten (10) hours in one work day shall be paid at the rate of one and one-half (1½) times the regular hourly wage scale. Any work performed on a Saturday shall be paid for at the rate of one and one-half (1½) times the regular hourly wage scale unless such Saturday work falls under the category of Saturday Make-Up Day. Any work performed by Employees anywhere on Sunday or recognized holidays, shall be paid for at the rate of double (2) time the regular wage scale. If, during the course of a work week, an Employee is unable to work for any reason, and, as a result, that Employee has not accumulated forty (40) hours of compensable time at the straight time rate, the Employer, at his option may offer the Employee the opportunity to work on Saturday at straight time; provided, however, if during the period worked by said Employee on Saturday, the Employee's compensable time at the straight time rate exceeds forty (40) hours, all time worked in excess of the forty (40) hours will be paid at the rate of one and one-half (1½) times the regular hourly wage scale.

NO. 22: Means a regular work week of forty (40) hours will start on Monday and end on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof may be worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A workday is to begin between 6:00 a.m. and 9:00 a.m. However, the project starting time may be advanced or delayed if mutually agreed to by the interest parties. For all time worked on recognized holidays, or days observed as such, double (2) time shall be paid.

REPLACEMENT PAGE
JEFFERSON COUNTY
BUILDING CONSTRUCTION OVERTIME SCHEDULE

NO. 26: Means that the regular working day shall consist of eight (8) hours worked between 6:00 a.m., and 5:00 p.m., five (5) days per week, Monday to Friday, inclusive. Hours of work at each jobsite shall be those established by the general contractor and worked by the majority of trades. (The above working hours may be changed by mutual agreement). Work performed on Construction Work on Saturdays, Sundays and before and after the regular working day on Monday to Friday, inclusive, shall be classified as overtime, and paid for at double (2) the rate of single time. The employer may establish hours worked on a jobsite for a four (4) ten (10) hour day work week at straight time pay for construction work; the regular working day shall consist of ten (10) hours worked consecutively, between 6:00 a.m. and 6:00 p.m., four (4) days per week, Monday to Thursday, inclusive. Any work performed on Friday, Saturday, Sunday and holidays, and before and after the regular working day on Monday to Thursday where a four (4) ten (10) hour day workweek has been established, will be paid at two times (2) the single time rate of pay. The rate of pay for all work performed on holidays shall be at two times (2) the single time rate of pay.

NO. 32: The regular working day shall consist of eight (8) hours of labor on the job between six (6) a.m. and four (4) p.m. and the regular working week shall consist of five (5) consecutive eight (8) hour day's of labor on the job beginning with Monday and ending with Friday of each week. The normal work week is 40 hours. All full-time or part-time labor performed during such hours shall be recognized as regular working hours and paid for at the regular hourly rate. All work performed during regular work hours on Saturdays will be paid at time and one-half (1 1/2). All work performed outside of regular working hours and performed during the regular work week, shall be at double (2) times the regular rate, except that the first two (2) hours following the regular work day shall be paid at one and one-half (1 1/2) times the regular rate. An early starting time of 6:00 a.m. may be used mutually agreed upon by the interested parties. SHIFT RATE: Shift work would start after 4:00 p.m. to 6:00 a.m. The first 8 hours would be at 115% of the basic wage rate. Overtime Monday through Friday would be at 1 1/2 of base shift rate. Saturday regular work day hours – 1 1/2 of base shift rate. Saturday – work after 8 hours – 2 times the basic wage rate. Sunday and Holidays – 2 times the basic wage rate. All work performed on recognized holidays and Sundays shall be paid double (2) time. Appropriate overtime rates to be based on fifteen minute increments.

NO. 35: Means a regular work week of forty (40) hours, will start on Monday and end on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof maybe worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A work day is to begin between 6:00 a.m. and 9:00 a.m. However, the project starting time maybe advanced or delayed if mutually agreed to by the interested parties. For all time worked on recognized holidays, or days observed as such, double (2) time shall be paid.

NO. 43: Eight (8) hours shall constitute a work day between the hours of 7:00 a.m. and 4:30 p.m. Forty (40) hours within five (5) days, Monday through Friday inclusive, shall constitute the work week. Work performed in the 9th and 10th hour, Monday through Friday, shall be paid at time and one-half (1 1/2) the regular straight time rate of pay. Contractor has the option to pay two (2) hours per day at the time and one-half (1 1/2) the regular straight time rate of pay between the hours of 6:00 a.m. and 5:30 p.m., Monday through Friday. Work performed outside the regularly scheduled working hours and on Saturdays, Sundays and recognized legal holidays, or days celebrated as such, shall be paid for at the rate of double (2) time.

NO. 44: Means forty (40) hours shall constitute a work week, Monday through Friday. Eight (8) hours shall constitute a work day. Hours of work shall be between the hours of 7:00 a.m. and 4:30 p.m. All work performed before 7:00 a.m. and after 4:30 p.m. and all work performed in excess of eight (8) hours in any one work day, over forty (40) hours in any work week and the first eight (8) hours of work on Saturday, shall be paid at the rate of one and one-half (1 1/2) times the regular rate of pay. All hours worked in excess of eight (8) hours on Saturday, all hours worked on Sunday and on holidays, or days that may be celebrated as such, and as designated by the federal government, shall be paid at two (2) times the regular rate of pay. All shifts for work performed between the hours of 4:30 p.m. and 1:00 a.m. shall receive eight (8) hours pay at the regular hourly rate of pay plus two dollars (\$2.00) per clock hour. All work performed between the hours of 12:30 a.m. and 9:00 a.m. on a third shift shall receive eight (8) hours pay at the regular hourly rate plus four dollars (\$4.00) per clock hour. All overtime work required after the completion of a regular shift shall be paid at one and one-half times (1 1/2 x) the "shift" hourly rate.

**REPLACEMENT PAGE
JEFFERSON COUNTY
BUILDING CONSTRUCTION OVERTIME SCHEDULE**

NO. 55: Means the regular work day shall be eight (8) hours between 6:00 a.m. and 4:30 p.m. The first two (2) hours of work performed in excess of the eight (8) hour work day, Monday through Friday, and the first ten (10) hours of work on Saturday, shall be paid at one & one-half (1½) times the straight time rate. All work performed on Sunday, observed holidays and in excess of ten (10) hours a day, Monday through Saturday, shall be paid at double (2) the straight time rate.

NO. 66: Means eight (8) hours shall constitute a day's work beginning at 7:00 a.m. (or 8:00) A.M. and ending at 3:30 (or 4:30) P.M. The work week shall be forty (40) hours beginning Monday at 7:00 a.m. (or 8:00) A.M. and ending Friday at 3:30 (or 4:30) P.M. The Employer at his option may use a flexible starting time between the hours of 6:00 a.m. and 8:00 a.m. All overtime, that is worked outside of the above established working hours of Monday through Friday, shall be paid at double (2) time, including Saturdays, Sundays and Holidays.

NO. 67: Means eight (8) hours shall constitute a day's work, with a flexible starting time to begin between 6:00 a.m. to 8:00 a.m., five (5) days a week, Monday through Friday. Any work over eight (8) hours in any one day shall be at the overtime rate, which is time & one-half (1½). Any work on Saturday shall be at time & one-half (1½), unless a Make-Up Day due to inclement weather is in effect. Any work on Sundays or holidays shall be at double (2) time. Four (4) days, ten (10) hours each day to be worked during Monday through Friday, shall be paid at straight time. A Make-Up Day Due To Inclement Weather Only - Employee(s) will be permitted to work an eight (8) hour make-up day on Saturday only, and the employee will receive the regular straight time wage rate.

NO. 72: Means that except as is otherwise provided herein, the work week shall be determined to begin at 8:00 a.m. Wednesday and end at 4:30 p.m. on the following Tuesday. Except as herein provided, working hours are from 8:00 a.m. to 11:55 a.m. and 12:30 p.m. to 4:25 p.m. and no more than the regular hours shall be worked during the forenoon or afternoon at the regular rate. In the case of days of inclement weather starting time and quitting time may be adjusted so long as the hours worked on such days do not exceed eight (8) and do not extend beyond 4:30 p.m. In circumstances where the Employee or Employees have regularly been working overtime on a particular day or days, no adjustment in the starting time shall operate to deprive Employees of overtime pay, which they would have otherwise received but for the change in the starting time. The parties understand that the application of the provisions of the preceding sentence will result in Employees receiving overtime pay even where they have not worked more than with (8) hours on a particular day. Regardless of the starting time, the forenoon working hours shall end at 11:55 a.m. and the afternoon working hours shall begin at 12:30 p.m. and end 8 hours and 25 minutes after the starting time fixed by the Employer for forenoon hours. Work performed by an employee on a non-holiday Saturday, except as hereinafter provided, or at night or before or after regular working hours on a non-holiday weekday, shall be considered overtime work, for which Employees working during such time shall be paid at the rate of one and one-half (1½) times their regular hourly wage rate for each hour or fraction thereof, worked during such time. Work performed on a Sunday or the recognized holidays shall be considered overtime work for which the Employee shall be paid twice the amount of his or her regular hourly wage rate for each hour or fraction thereof worked on any such day.

REPLACEMENT PAGE
JEFFERSON COUNTY
BUILDING CONSTRUCTION OVERTIME SCHEDULE

NO. 73: Means eight (8) hours shall constitute a day's work to begin at 8:00 a.m. and end at 4:30 p.m. The starting time may be advanced one (1) or two (2) hours. Employees shall receive time and one-half (1½) for all time they are required to work before 8:00 a.m., during the lunch period or after 4:30 p.m. unless the starting time is advanced as provided above. Forty (40) hours shall constitute a week's work, Monday through Friday, or any part thereof by reason of inclement weather (rain or mud), Saturday or any part thereof may be worked as a make-up day at the straight time rate. The Employer shall have the option of working five (5) eight (8) hour day's or four (4) ten (10) hour day's Monday through Friday. If an Employer elects to work five (5) eight (8) hour days during any work week, hours worked more than eight (8) per day or forty (40) per week shall be paid at time and one-half (1½) the hourly rate Monday through Friday. If an employer elects to work four (4) ten (10) hour days in any week, work performed more than ten (10) hours per day or forty (40) hours per week shall be paid at time and one-half (1½) the hourly rate Monday through Friday. If an Employer is working ten (10) hour days and loses a day due to inclement weather, he may work ten (10) hours Friday at straight time. All time over the regular workday as defined and all hours worked on Saturday shall be paid at the rate of one and one-half (1½) the regular rate of wages. If workmen are required to work recognized holidays or days observed as such, or on Sunday, they shall receive double (2) the regular rate of pay for such work. If a laborer is assisting another craft on a make-up day and the other craft is receiving overtime pay the laborer shall receive the same overtime multiple as the craft assisted. No overtime rates shall be broken down into less than thirty (30) minute units of time. Projects that cannot be performed during regular workday: Building construction work, if required by the owner, the contractor may perform work outside the normal hours and employees shall be paid applicable straight time hourly wage rate plus a premium of \$1.50 per hour for the first eight hours worked. Any hours worked in excess of eight hours shall be paid at the applicable overtime rate plus \$1.50 per hour premium. Shift work: The Employer may elect to work, one, two or three shifts on any work. When two or more shifts are worked on any operation, the first shift or day shift shall consist of eight (8) hours exclusive of lunch time; the second or swing shift consist of eight (8) hours' work for eight and one-half hours pay, exclusive of lunch time; the third or graveyard shift shall consist of eight (8) hours' work for nine (9) hours' pay exclusive of lunch time. The swing shift shall be paid twenty-five cents (\$.25) per hour above the regular rate of pay. The graveyard shift shall be paid fifty cents (\$.50) per hour above the regular rate of pay. Multiple shift (second or third shift) operation will not be construed on the entire project if at any time it is deemed advisable and necessary for the employer to a specific operation. However, no shift shall be started between midnight and 6:00 a.m. except the graveyard shift on a three (3) shift operation, or except in unusual or emergency, regardless if the project is working one (1) or two (2) shift. Shifts shall be established for a minimum of three (3) consecutive workdays. When 2-10 or 12 hour shifts are worked, the second shift shall receive \$.50 per hour above regular rate of pay. When the employer elects to work 2-10 or 12 hour shifts, the first 8 hours shall be at straight time rates. The remaining 2 or 4 hours shall be at the overtime rate of time and one-half.

NO. 76: Means the standard workday shall consist of eight (8) hours of work between the hours of 8:00 a.m. and 4:30 p.m. with a thirty (30) minute unpaid lunch hour occurring in the middle of the shift. The standard workweek shall consist of five standard workdays commencing on Monday and ending on Friday. The normal starting and quitting times may be changed by mutual consent of interested parties. All time worked before and after the established eight (8) hour workday, Monday through Friday, and all time worked on Saturday, shall be paid for at the rate of time & one-half (1½) the hourly base wage rate in effect. All time worked on Sunday and holidays shall be paid at the rate of double (2) the hourly wage in effect. All work done on Saturday will be done at time & one-half (1½), unless Saturday shall be used as a make-up day. If an employee should lose one or more days in a work week and use Saturday as a make-up day the pay shall be at the regular hourly base wage rate and benefits.

NO. 77: Means the regular workday shall consist of eight (8) consecutive hours, exclusive of a thirty (30) minute lunch period, with pay at the regular straight time hourly rate. The regular workday shall begin on the job site between the hours of 6:00 a.m. and 8:00 a.m. with the starting time to be determined by the Employer, unless project owner requires different starting time. This adjustable starting time can, at the Employer's option, be staggered to permit starting portions of the work force at various times within the prescribed hours. The Employer may establish a four (4) ten (10) hour shift exclusive of the thirty (30) minute lunch period at the straight time wage rate. Forty (40) hours per week shall constitute a week's work Monday through Thursday. In the event a job is down due to weather conditions, safety or other conditions beyond the control of the Employer, then Friday may, at the option of the employer, be worked as a make-up day at the straight time wage rate. Straight time is not to exceed ten (10) hours a day or forty (40) hours per week. Time and one-half (1 ½) shall be paid for all overtime hours worked during the week, Monday through Friday and for all work performed on Saturday. Double (2) time shall be paid for all time worked on Sunday and recognized holidays.

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NO. 80: Means eight (8) hours shall constitute the regular work day and forty (40) hours a work week, Monday through Friday. The Employer shall establish the starting time between 6:30 a.m. through 9:00 a.m. An Employer may further adjust the starting time up to 9:30 a.m. throughout the year. Time and one-half (1½) shall be paid after eight (8) consecutive hours worked after the established starting time and for hours worked before the established starting time. Time and one-half (1½) shall be paid for work performed on Saturdays. Work performed on Sundays and Holidays shall be paid at the double (2) time rate of pay. The Employer when working on Highway and Road Work may have the option to schedule the work week for his paving crew only from Monday through Thursday at ten (10) hours per day at the straight time rate of pay with all hours in excess of ten (10) hours in any one day to be at the applicable overtime rate of time and one-half (1½). If the Employer elects to work from Monday through Thursday and is stopped due to inclement weather (rain, snow, sleet falling), the Employer shall have the option to work Friday at the straight time rate of pay to complete the forty (40) hours.

NO. 82: Means the work day shall consist of eight (8) hours worked between 7:00 a.m. and 4:30 p.m. Forty (40) hours will constitute the work week from Monday through Friday, inclusive. Up to four (4) hours of overtime work per day performed before or after the assigned normal work day, (twelve (12) continuous hours, starting no earlier than 6:00 a.m., Monday through Friday), shall be paid at a rate of one and one-half times (1.5x) that employee's hourly rate. Any additional overtime, Monday through Friday, shall be paid at two times (2x) the regular rate of pay. The first eight hours of overtime work on Saturday shall be paid at the rate of one and one-half times (1.5x) the regular rate of pay. Hours worked in excess of eight (8) hours on Saturday shall be paid at two times (2x) the regular rate of pay. Double time shall be paid for work performed on Sundays, recognized legal holidays or days that may be celebrated as such as designated by the federal government. All shifts for work performed between the hours of 4:30 p.m. and 1:00 a.m. shall be paid at the regular hourly rate plus two dollars (\$2.00) per clock hour. All shifts for work performed between the hours of 12:30 a.m. and 9:00 a.m. shall be paid at the regular hour rate plus four dollars (\$4.00) per clock hour. All overtime work required after the completion of a regular shift shall be paid at one and one-half times (1.5x) the "shift" hourly rate.

NO. 87: Means eight (8) hours starting between 6:00 a.m. and 8:00 a.m. and ending between 2:30 p.m. and 4:30 p.m. at the Employers discretion shall constitute a day's work. Any work prior to 6:00 a.m. or after eight (8) hours shall be paid at the overtime rate. Five (5) days from Monday through Friday inclusive shall constitute a regular work week. All hours before and after these regular hours shall be considered overtime and shall be paid for at the rate of double (2) time. All work on Saturday and Sunday shall be paid at double (2) the prevailing scale of wages.

NO. 91: Means eight (8) hours shall constitute a day's work commencing at 7:00 a.m. and ending at 3:30 p.m., allowing one-half (½) hour for lunch. The option exists for the Employer to use a flexible starting time between the hours of 6:00 a.m. and 9:00 a.m. The regular workweek shall consist of forty (40) hours of five (5) workdays, Monday through Friday. The workweek may consist of four (4) ten (10) hour days from Monday through Thursday, with Friday as a make-up day. If the make-up day is a holiday, the employee shall be paid at the double (2) time rate. The employees shall be paid time and one-half (1½) for work performed on Saturdays, before the regular starting time or after the regular quitting time or over eight (8) hours per work day (unless working a 10-hour work day, then time and one-half (1½) is paid for work performed over ten (10) hours a day) or over forty (40) hours per work week. Work performed on Sundays and recognized holidays shall be paid at the double (2) time rate of pay. SHIFT WORK: When it is necessary for the project to operate in shifts, there will be three (3) eight (8) hour shifts commencing at 8:00 a.m. Shift work must continue for a period of not less than three (3) consecutive work days, two (2) days which must be regular work days (Monday through Friday). In the event the second or third shift of any regular work day shall fall into a Saturday or a holiday, such extension into a Saturday or holiday shall be considered as part of the previous workday and employees shall be paid at the regular shift rate. The first day shift shall work a regular eight (8) hour day at regular rates. The second shift shall be eight (8) hours regular time pay plus \$2.50 per hour premium for eight (8) hours work. Third shift will be for eight (8) hours regular time pay plus \$3.00 per hour premium for eight (8) hours work.

NO. 92: Means all work performed from 8:00 a.m. to 4:30 p.m., Monday through Friday, will be at straight time pay up to forty (40) hours per week. All work performed Monday through Friday before 8:00 a.m. and after 4:30 p.m. will be done at time and one-half (1½). All work done on Saturday will be done at time and one-half (1½), unless the employer and employee agree that Saturday shall be used as a make-up day. The Employer may use a flexible starting time of 7:00 a.m. to 8:00 a.m., and quitting time of 3:30 p.m. to 4:30 p.m., and any such different work starting time shall determine whether wages are payable at the straight rate or the premium rate. All work performed on Saturday shall be paid for at time and one-half (1½), unless the Saturday has been used as a make-up day. All work performed on Sunday and holidays shall be paid for at the rate of double (2) time.

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NO. 104: Means eight (8) hours per day shall constitute a standard work day between the hours of 6:00 a.m. and 8:00 p.m. The standard work week shall be forty (40) hours between 6:00 a.m. on Monday and ending 8:00 p.m. on Friday. An overtime rate of time and one-half (1½) the base hourly rate shall be paid on all hours in excess of eight (8) hours in a day Monday through Friday. Saturdays shall be considered overtime and work done on Saturday shall be paid at time and one-half (1½) the prevailing scale. Sundays and holidays shall be considered overtime and work done on these days shall be paid at double (2) the prevailing scale.

NO. 116: Means the standard work day shall consist of eight (8) hours of work between the hours of 8:00 a.m. and 4:30 p.m. The standard work week shall consist of five standard work days commencing on Monday and ending on Friday inclusive. All time worked before and after the established eight (8) hour work day, Monday through Friday, and all time worked on Saturdays, shall be paid for at the rate of time & one-half (1½) the hourly base wage rate in effect. All time worked on Sundays and recognized holidays shall be paid for at the rate of double (2) the hourly base wage rate in effect.

NO. 126: Means eight (8) hours per day shall constitute a day's work and forty (40) hours per week, Monday through Friday, shall constitute a week's work. The regular starting time shall be 8:00 a.m. If a second or third shift is used, the regular starting time of the second shift shall be 4:30 p.m. and the regular starting period for the third shift shall be 12:30 a.m. These times may be adjusted by the employer. The day shift shall work a regular eight (8) hours shift as outlined above. Employees working a second shift shall receive an additional \$0.25 above the regular hourly rate and perform seven and one-half (7½) hours work for eight (8) hours pay. Third shift employees shall be paid an additional \$0.50 above the regular hourly rate and work seven (7) hours for eight (8) hours pay. When circumstances warrant, the Employer may change the regular workweek to four (4) ten-hour days at the regular time rate of pay. All time worked before and after the established workday of eight (8) hours, Monday through Friday, and all time worked on Saturday shall be paid at the rate of time and one-half (1½) except in cases where work is part of an employee's regular Friday shift. All time worked on Sunday and recognized holidays shall be paid at the double (2) time rate of pay except in cases where work is part of an employee's previous day's shift. For all overtime hours worked \$28.81 of the fringe benefits portion of the prevailing wage shall be paid at the same overtime rate at which the cash portion of the prevailing wage is to be paid. The remaining \$1.29 of the fringe benefit portion of the prevailing wage may be paid at straight time.

JEFFERSON COUNTY HOLIDAY SCHEDULE – BUILDING CONSTRUCTION

NO. 3: All work done on New Year's Day, Decoration Day, July 4th, Labor Day, Veteran's Day, Thanksgiving and Christmas shall be compensated at the double (2) time rate of pay. When any of these holidays fall on a Sunday, the following Monday shall be observed.

NO. 5: All work that shall be done on New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day shall be paid at the double (2) time rate of pay.

NO. 6: The following days are recognized as holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day and any additional holidays which may be mutually agreed upon. Whenever any such holiday falls on a Sunday, the following Monday shall be recognized and observed as the holiday. Work performed on Sundays and holidays shall be paid at the double time rate of pay. No work shall be performed on Labor Day.

NO. 7: The following days are assigned days and are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. If a holiday falls on a Saturday, it shall be observed on the preceding Friday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This is applied to protect Labor Day. When a holiday falls during the normal workweek, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week. However, no reimbursement for these eight (8) hours is to be paid to the workman unless worked. If workman are required to work the above enumerated holidays or days observed as such, or on Sunday, they shall receive double (2) the regular rate of pay for such work.

NO. 8: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day, or the days observed in lieu of these holidays, shall be paid at the double time rate of pay.

NO. 12: All work done on New Year's Day, Decoration Day, Independence Day, Veteran's Day, Thanksgiving Day and Christmas Day shall be paid at the double time rate of pay. Should any of these days fall on Sunday, then the following day shall be observed as the holiday. Under no circumstances shall employees be permitted to work on Labor Day.

NO. 18: All work done on New Year's Day, Memorial Day, July 4th, Labor Day, Veteran's Day, Thanksgiving Day, the Friday following Thanksgiving and Christmas Day shall be paid at the double time rate of pay. When one of the above holidays falls on Sunday, the following Monday shall be considered the holiday, and when one of the above holidays falls on Saturday, the preceding Friday shall be considered the holiday, and all work performed on said day(s) shall be paid at the double time rate.

NO. 25: All work done on New Year's Day, Martin Luther King Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the day after Thanksgiving, Christmas Day, Presidential Election Day, or days locally observed as such, and Saturday and Sunday shall be recognized as holidays and shall be paid at the double (2) time rate of pay. If a named holiday falls on a Saturday, the holiday will be observed on the preceding Friday. When a named holiday falls on Sunday, the Monday after will be observed as the holiday. Appropriate overtime rates to be based on fifteen minute increments.

NO. 26: All work done on New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day shall be paid at the double time rate of pay. When a Holiday occurs on Saturday it shall not be observed on either the previous Friday or the following Monday. Such days shall be regular work days. If such a holiday occurs on Sunday it shall be observed on the following Monday.

NO. 31: All work done on New Year's Day, Presidents Day, Good Friday, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Day, and Employee's Birthday shall be paid at the double time rate of pay. If a holiday falls on Sunday, the following Monday will be observed as the recognized holiday. If a holiday falls on Saturday, the preceding Friday will be observed as the recognized holiday.

JEFFERSON COUNTY HOLIDAY SCHEDULE – BUILDING CONSTRUCTION

NO. 36: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workman unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make-up day when an observed holiday occurs during the work week. Employees have the option to work that make-up day. If workmen are required to work the above enumerated holidays, or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 41: The following days shall be observed as legal holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day. No work shall be performed on the Fourth of July, Labor Day or Christmas Day. Any work performed on the above holidays shall be paid for at two (2) times the regular straight time rate of pay. When any of the above holidays fall on Sunday, the following Monday shall be observed as such holiday. If a holiday falls on Saturday, it shall not be considered to be observed on the previous Friday or following Monday. Such days shall be regular workdays.

NO. 45: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the day after Thanksgiving, the day before Christmas, and Christmas Day, shall be paid at the double time rate of pay.

NO. 47: The following holidays are recognized: New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, the day after Thanksgiving and Christmas Day. When a holiday listed above falls on Saturday, it shall be celebrated on the Friday preceding the holiday. When a holiday falls on Sunday, the following Monday shall be observed. Holidays referred to above shall be paid for at the double (2) time rate of pay when worked.

NO. 51: All time worked on Sundays and recognized holidays shall be paid for at the rate of double (2) the hourly base wage rate in effect. The Employer agrees to recognize the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day. If the holiday falls on Sunday, it shall be recognized on the following Monday. If the holiday falls on a Saturday, it shall be recognized as a Saturday only holiday.

NO. 54: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day shall be paid at the double (2) time rate of pay. When a holiday falls on Saturday, it shall be observed on Friday. When a holiday falls on Sunday, it shall be observed on Monday.

NO. 55: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workmen unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make up day when an observed holiday occurs during the work week. Employees have the option to work that make up day. If workmen are required to work the above enumerated holidays, or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 60: All work performed on New Year's Day, Armistice Day (Veteran's Day), Decoration Day (Memorial Day), Independence Day (Fourth of July), Thanksgiving Day and Christmas Day shall be paid at the double time rate of pay. No work shall be performed on Labor Day except when triple (3) time is paid. When a holiday falls on Saturday, Friday will be observed as the holiday. When a holiday falls on Sunday, the following Monday shall be observed as the holiday.

JEFFERSON COUNTY HOLIDAY SCHEDULE – BUILDING CONSTRUCTION

NO. 66: All work performed on Sundays and the following recognized holidays, or the days observed as such, of New Year's Day, Decoration Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day, shall be paid at double (2) the hourly rate plus an amount equal to the hourly Total Indicated Fringe Benefits. Whenever any such holidays fall on a Sunday, the following Monday shall be observed as a holiday.

NO. 69: All work performed on New Year's Day, Memorial Day, July Fourth, Labor Day, Veteran's Day, Thanksgiving Day or Christmas Day shall be compensated at double (2) their straight-time hourly rate of pay. Friday after Thanksgiving and the day before Christmas are also holidays, however, if the employer chooses to work the normal work hours on these days, the employee will be paid at straight -time rate of pay. If a holiday falls on a Saturday, the holiday will be observed on Saturday; if a holiday falls on a Sunday, the holiday will be observed on the following Monday.

NO. 71: All work performed on the following recognized holidays, or days that may be celebrated as such, shall be paid at the double (2) time rate of pay: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving and Christmas Day. If a holiday falls on Sunday, it shall be celebrated on Monday. If a holiday falls on Saturday, it shall be celebrated on the Friday proceeding such Saturday.

NO. 73: The following days are recognized as holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day (or mutually agreed date of the Friday after Thanksgiving Day may be substituted for Veteran's Day), Thanksgiving Day and Christmas Day, or in the event that any of said Holidays falls on Sunday, then the day or days generally recognized as such. Any work performed anywhere on any of the aforesaid Holidays, or on the day or days recognized and observed as such, shall be paid for at double (2) time the regular hourly rate.

Heavy Construction Rates for
JEFFERSON County

REPLACEMENT PAGE

Section 050

OCCUPATIONAL TITLE	* Date of Increase	Basic Hourly Rates	Over-Time Schedule	Holiday Schedule	Total Fringe Benefits
Carpenter	6/15	\$35.68	23	16	\$15.55
Cement Mason	6/15	\$30.56	17	11	\$17.30
Electrician (Outside-Line Construction\Lineman)	9/15	\$42.52	9	12	\$5.00 + 36.5%
Lineman Operator	9/15	\$36.70	9	12	\$5.00 + 36.5%
Lineman - Tree Trimmer	10/15	\$24.99	32	31	\$9.95 + 3%
Groundman	9/15	\$28.38	9	12	\$5.00 + 36.5%
Groundman - Tree Trimmer	10/15	\$19.80	32	31	\$8.10 + 3%
Laborer					
General Laborer	6/15	\$29.11	2	4	\$12.82
Skilled Laborer	6/15	\$29.71	2	4	\$12.82
Millwright	6/15	\$35.68	23	16	\$15.55
Operating Engineer					
Group I	6/15	\$32.16	10	9	\$24.16
Group II	6/15	\$32.16	10	9	\$24.16
Group III	6/15	\$30.86	10	9	\$24.16
Group IV	6/15	\$27.40	10	9	\$24.16
Oiler-Driver	6/15	\$27.86	10	9	\$24.16
Pile Driver	6/15	\$35.68	23	16	\$15.55
Traffic Control Service Driver		\$28.775	26	25	\$9.045
Truck Driver-Teamster		\$30.41	25	21	\$10.82

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

If a worker is performing work on a heavy construction project within an occupational title that is not listed on the Heavy Construction Rate Sheet, use the rate for that occupational title as shown on the Building Construction Rate sheet.

**REPLACEMENT PAGE
JEFFERSON COUNTY
OVERTIME SCHEDULE - HEAVY CONSTRUCTION**

FED: Minimum requirement per Fair Labor Standards Act means time and one-half (1 ½) shall be paid for all work in excess of forty (40) hours per work week.

NO. 2: Means a regular workweek shall be forty (40) hours and will start on Monday and end on Friday. The Employer shall have the option of working five 8-hour days or four 10-hour days Monday through Friday. If an Employer elects to work five 8-hour days during any workweek, hours worked more than eight (8) per day or 40 per week shall be paid at time and one-half the hourly rate Monday through Friday. If an Employer elects to work four 10-hour days in a week, work performed more than ten (10) hours per day or 40 hours per week shall be paid at time and one-half the hourly rate Monday through Friday. When working a five 8-hour day schedule and an Employer is prevented from working forty (40) hours Monday through Friday, or any part thereof, by reason of inclement weather, Saturday or any part thereof may be worked as a make-up day at the straight time rate. If an Employer is working a four 10-hour day schedule and loses a day due to inclement weather, he may work 10 hours Friday at straight time. All hours worked over the 40 hours Monday through Friday will be paid at 1 ½ overtime rate. A workday shift is to begin at the option of the Employer, between 6:00 a.m. and not later than 9:00 a.m. However, the project starting time may be advanced or delayed if required. If workmen are required to work the enumerated holidays or days observed as such or Sundays, they shall receive double (2) the regular rate of pay for such work. Overtime shall be computed at one-half (1/2) hour intervals. Shift: The Contractor may elect to work one, two or three shifts on any work. When operating on more than one shift, the shifts shall be known as the day shift, swing shift, and graveyard shift as such terms are recognized in the industry. When two shifts are worked on any operation, the shifts will consist of eight (8) or ten (10) hours exclusive of lunchtime. When three shifts are worked the first day or day shift will consist of eight (8) hours exclusive of lunchtime. The second or swing shift shall consist of seven and one-half (7 1/2) hours work for eight hours pay, exclusive of lunchtime, and the third or the graveyard shift shall consist of seven (7) hours work for eight (8) hours pay, exclusive of the lunchtime. All time in excess of normal shifts shall be considered overtime. Multiple shift (the two or three shift) operation will not be construed on the entire project if at anytime it is deemed advisable and necessary for the Employer to multiple shift a specific operation. However, no shift shall be started between midnight and six a.m. except the graveyard shift on a three-shift operation, or except in an unusual or emergency situation. If an Employer starts a shift between midnight and 6 a.m. except the graveyard shift on a three-shift operation, he shall reimburse all employees for the entire shift at the double time rate. Completion of the second shift on a two-shift operation or completion of the graveyard shift on a three-shift operation that carries over into Saturday morning, shall be at the straight time rate. Overtime shall be computed at ½ hour intervals.

NO. 9: Eight (8) hours shall constitute a work day between the hours of 7:00 a.m. and 4:30 p.m. Forty (40) hours within five (5) days, Monday through Friday inclusive, shall constitute the work week. Work performed in the 9th and 10th hour, Monday through Friday, shall be paid at time and one-half (1½) the regular straight time rate of pay. Contractor has the option to pay two (2) hours per day at the time and one-half (1½) the regular straight time rate of pay between the hours of 6:00 a.m. and 5:30 p.m., Monday through Friday. Work performed in the first eight (8) hours on Saturday shall be paid at the rate of one and eight tenths (1.8) the regular straight time rate. Work performed outside these hours and on Sundays and recognized legal holidays, or days celebrated as such, shall be paid for at the rate of double (2) time.

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JEFFERSON COUNTY
OVERTIME SCHEDULE - HEAVY CONSTRUCTION

NO. 10: Means the regular workday for which employees shall be compensated at straight time hourly rate of pay shall, unless otherwise provided for, begin at 8:00 a.m. and end at 4:30 p.m. The regular workweek shall consist of five (5) days, Monday through Friday, beginning at 8:00 a.m. and ending at 4:30 p.m. except as may be modified. The starting time may be either advanced or delayed one hour or two hours at the discretion of the Employer. The Employer may have the option to schedule his work week from Monday through Thursday at ten (10) hours per day at the straight time rate of pay with all hours in excess of ten (10) hours in any one day to be at the applicable overtime rate. If the Employer elects to work Monday through Thursday and is stopped due to inclement weather, holidays or other conditions beyond the control of the Employer, he shall have the option to work Friday at the straight time rate of pay to complete the forty (40) hour workweek. All necessary overtime and work performed on Saturday, shall be paid at time and one-half (1½) the hourly rate, plus an amount equal to one-half (½) of the hourly Total Indicated Fringe Benefits. All work performed on Sundays and recognized holidays shall be paid at double (2) the hourly rate, plus an amount equal to the hourly Total Indicated Fringe Benefits. Shifts may be established when considered necessary by the Employer. Shift hours and rates will be as follows. If shifts are established, work on the First Shift will begin between 6:00 a.m. and 9:00 a.m. and consist of eight (8) hours of work plus one-half hour unpaid lunch. Hours worked during the first shift will be paid at the straight time rate of pay. The second shift shall start eight hours after the start of the first shift and consist of eight (8) hours of work plus one-half hour unpaid lunch. Work on the second shift will begin between 2:00 p.m. and 5:00 p.m. and be paid the straight time rate plus \$2.50 per hour. The third shift shall start eight hours after the start of the second shift and consist of eight (8) hours plus one-half hour unpaid lunch. Work on the third shift will begin between 10:00 p.m. and 1:00 a.m. and be paid the straight time rate plus \$3.50 per hour. The additional amounts that are to be paid are only applicable when working shifts. Shifts that begin on Saturday morning through those shifts which end on Sunday morning will be paid at time and one-half these rates. Shifts that begin on Sunday morning through those shifts which end on Monday morning will be paid at double time these rates.

NO. 17: Means eight (8) hours shall constitute the regular work day and forty (40) hours a work week, Monday through Friday. The Employer shall establish the starting time between 6:30 a.m. through 9:00 a.m. An Employer may further adjust the starting time up to 9:30 A.M. throughout the year. Time and one-half (1½) shall be paid after eight (8) consecutive hours worked after the established starting time and for hours worked before the established starting time. Time and one-half (1½) shall be paid for work performed on Saturdays. Work performed on Sundays and Holidays shall be paid at the double (2) time rate of pay. The Employer when working on Highway and Road Work may have the option to schedule the work week for his paving crew only from Monday through Thursday at ten (10) hours per day at the straight time rate of pay with all hours in excess of ten (10) hours in any one day to be at the applicable overtime rate of time and one-half (1½). If the Employer elects to work from Monday through Thursday and is stopped due to inclement weather (rain, snow, sleet falling), the Employer shall have the option to work Friday at the straight time rate of pay to complete the forty (40) hours.

NO. 23: Means the regular workweek shall start on Monday and end on Friday, except where the Employer elects to work Monday through Thursday, (10) hours per day. All work over ten (10) hours in a day or forty (40) hours in a week shall be at the overtime rate of one and one-half (1½) times the regular hourly rate. The regular workday shall be either eight (8) or ten (10) hours. If a job can't work forty (40) hours Monday through Friday because of inclement weather or other conditions beyond the control of the Employer, Friday or Saturday may be worked as a make-up day at straight time (if working 4-10's). Saturday may be worked as a make-up day at straight time (if working 5-8's). An Employer, who is working a four (4) ten (10) hour day work schedule may use Friday as a make-up day when a workday is lost due to a holiday. A workday is to begin at the option of the Employer but not later than 11:00 a.m. except when inclement weather, requirements of the owner or other conditions beyond the reasonable control of the Employer prevent work. Except as worked as a make-up day, time on Saturday shall be worked at one and one-half (1½) times the regular rate. Work performed on Sunday shall be paid at two (2) times the regular rate. Work performed on recognized holidays or days observed as such, shall also be paid at the double (2) time rate of pay. **For all overtime hours worked during the week or on Saturday \$14.55 of the fringe benefits portion of the prevailing wage shall be paid at time and one-half (1½). For all overtime hours worked on Sundays or recognized holidays \$14.55 of the fringe benefits portion of the prevailing wage shall be paid double time. The remaining \$.50 of the fringe benefit portion of the prevailing wage shall be paid at straight time.**

**REPLACEMENT PAGE
JEFFERSON COUNTY
OVERTIME SCHEDULE - HEAVY CONSTRUCTION**

NO. 25: Means a regular work week of forty (40) hours, starting on Monday and ending on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof maybe worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A work day is to begin between 6:00 a.m. and 9:00 a.m. However, the project starting time maybe advanced or delayed if mutually agreed to by the interest parties. All hours worked on recognized holidays, or days observed as such, double (2) time shall be paid.

NO. 26: Means a regular work week of forty (40) hours will start on Monday and end on Friday. The regular work day shall be either eight (8) or ten (10) hours. If a crew is prevented from working forty (40) hours Monday through Friday, or any part thereof by reason of inclement weather, Saturday or any part thereof may be worked as a make-up day at the straight time rate. Employees who are part of a regular crew on a make-up day, notwithstanding the fact that they may not have been employed the entire week, shall work Saturday at the straight time rate. A workday is to begin between 6:00 a.m. and 9:00 a.m. However, the project starting time may be advanced or delayed if mutually agreed to by the interest parties. For all time worked on recognized holidays, or days observed as such, double (2) time shall be paid.

NO. 32: Means the overtime rate shall be time and one-half the regular rate for work over forty (40) hours per week. Sundays and Holidays shall be paid at double the straight time rate.

**JEFFERSON COUNTY
HOLIDAY SCHEDULE – HEAVY CONSTRUCTION**

NO. 4: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, or observed as such, shall be paid at the double time rate of pay. When a Holiday falls on a Sunday, Monday shall be observed. No work shall be performed on Labor Day, except in case of jeopardy to life or property. This is applied to protect Labor Day.

NO. 9: All work performed on Sundays and the following recognized holidays, or the days observed as such, of New Year's Day, Decoration Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day, shall be paid at double (2) the hourly rate plus an amount equal to the hourly Total Indicated Fringe Benefits. Whenever any such holidays fall on a Sunday, the following Monday shall be observed as a holiday.

NO. 11: Means all work performed on New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, Christmas Day, and any additional holidays which may be mutually agreed upon shall be paid at the double (2) time rate of pay. Whenever any such holiday falls on a Sunday, the following Monday shall be recognized and observed as the holiday. No work shall be performed on Labor Day.

NO. 12: All work performed on New Year's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, Christmas Day, or days celebrated as such, shall be paid at the double time rate of pay. When one of the foregoing holidays falls on Sunday, it shall be celebrated on the following Monday. When one of the foregoing holidays falls on Saturday, it shall be celebrated on the Friday before the holiday.

NO. 16: The following days are recognized as holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on Sunday, it shall be observed on the following Monday. If a holiday falls on Saturday, it shall be observed on the preceding Friday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid to the worker unless worked. If workers are required to work the above recognized holidays or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 21: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workman unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make-up day when an observed holiday occurs during the work week. Employees have the option to work that make-up day. If workmen are required to work the above enumerated holidays, or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 25: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid the workmen unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make up day when an observed holiday occurs during the work week. Employees have the option to work that make up day. If workmen are required to work the above enumerated holidays, or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 31: All work performed on New Year's Day, Presidents' Day, Veterans' Day, Good Friday, Decoration Day, Fourth of July, Labor Day, Christmas Eve Day, Christmas Day, Thanksgiving Day and Day after Thanksgiving or days celebrated for the same.