

**MISSOURI DEPARTMENT OF TRANSPORTATION
GENERAL SERVICES- PROCUREMENT
DISTRICT 6, 2309 BARRETT STATION RD,
BALLWIN,MO 63021**

REQUEST NO.rev.	SL15-050-RW
DATE	October 15, 2014
PAGE NO.	1
NO. OF PAGES	22

SEALED BIDS, SUBJECT TO THE ATTACHED CONDITIONS WILL
BE RECEIVED AT THIS OFFICE UNTIL

10:00 a.m., Local Time, October 28, 2014

AND THEN PUBLICLY OPENED AND READ FOR FURNISHING
THE FOLLOWING SUPPLIES OR SERVICES.

**BIDS TO BE BASED F.O.B. MISSOURI DEPARTMENT OF
TRANSPORTATION**

Submit net bid as cash discount stipulations will not be considered

THE BIDDER MUST SIGN AND RETURN BEFORE DATE AND TIME SET FOR OPENING.

BUYER: _Teresa(Terri) Mount
BUYER EMAIL:
Teresa.Mount@modot.mo.gov

BUYER TELEPHONE: 314-301-1431
BUYER FAX:
573-526-0016

SUPPLIES OR SERVICES

Pavement and Drainage Repair, Jefferson County, MO.

COMPLETION DATE: April 1, 2015 OR Before

Bidders are encouraged to obtain minority business enterprise (MBE) and women business enterprise (WBE) participation in this work through the use of subcontractors, suppliers, joint ventures, or other arrangements that afford meaningful participation for M/WBES. Bidders are encouraged to obtain 10% MBE and 5% WBE participation.

Components of Agreement: The Agreement between MHTC and the successful Bidder shall consist of: the RFB and any written amendments thereto, the "Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions" that are attached to this RFB, the bid submitted by the Bidder in response to the RFB and the post-award contract agreement signed between the parties. However, MHTC reserves the right to clarify any relationship in writing and such written clarification shall govern in case of conflict with the applicable requirements stated in the RFB or the Bidder's bid. The Bidder is cautioned that its bid shall be subject to acceptance by MHTC without further clarification.

Return sealed bid to the address shown at the top of this page.

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(SEE ATTACHED FOR TERMS, CONDITIONS, AND INSTRUCTIONS)

In compliance with the above Request For Bid, and subject to all conditions thereof, the undersigned bidder agrees to furnish and deliver any or all the items on which prices were bid within the timeframe specified herein, after receipt of

Date: _____
Telephone No.: _____
Fax No.: _____
Federal I.D. No. _____
Email Address: _____

Firm Name: _____
Address: _____

By (Signature): _____
Type/Print Name _____

**Is your firm MBE
certified?** ☐ Yes ☐ No
Form E-103 (Rev. 11-04)

Title: _____
**Is your firm WBE
certified?** ☐ Yes ☐ No

INTRODUCTION AND GENERAL INFORMATION

1.1 Introduction:

1.1.1 This Request For Bid seeks bids from qualified organizations to provide services to repair and replace damaged drainage pipes, replace damaged roadway concrete slabs and raise settled concrete slabs, in Jefferson County, MO., as indicated below and in accordance with terms and specifications of this RFB.

- Rte. 21 approximately 0.43 miles south of Old Rte. 21 near mile marker 172.

Each bid must be mailed or hand delivered in a sealed envelope to Ms. Teresa (Terri) Mount, Procurement Unit, Operations Complex, 2309 Barrett Station Rd., Ballwin, Mo. 63021.

All questions regarding the RFB shall be submitted to Ms. Teresa (Terri) Mount. Bids must be returned to the office of Ms. Mount no later **than 10:00 a.m., Local Time October 28, 2014.**

RFB Coordinator:

**Ms. Teresa (Terri) Mount Sr. Procurement Agent
Missouri Department of Transportation
2309 Barrett Station Road, Ballwin, MO. 63021**

**PHONE: 314-301-1431
FAX: 573-522-0016
EMAIL: Teresa.Mount@modot.mo.gov**

1.2 General Information:

This document constitutes an invitation for competitive, sealed bids for the procurement of services to repair and replace damaged drainage pipes and associated concrete work at the designated location, as specified in these provisions.

1.2.1 Organization - This document, referred to as a Request for Bid (RFB), is divided into the following parts:

- 1) Introduction and General Information
- 2) Scope of Work
- 3) Bid Submission
- 4) Pricing Page(s)
- (5) Exhibit(s)
- (6) Terms and Conditions
- (7) Plans, separate PDF files.

1.2.2 This document contains requirements related to the newly revised statute.

Effective January 1, 2009 and pursuant to RSMo 285.530 (1), no business entity or employer shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri. Additional specific information is included herein.

<http://www.moga.mo.gov/statutes/C200-299/2850000530.HTM>

E-Verify is an example of a federal work authorization program. For vendors that are not already enrolled and participating in a federal work authorization program, E-Verify is available at:

http://www.dhs.gov/xprevprot/programs/gc_1185221678150.sht

2.1 General Requirements:

2.1.1 The contractor shall furnish all equipment and personnel and materials to complete all requirements to repair and replace damaged drainage pipes and associated concrete work as specified for the Missouri Highway and Transportation Commission (MHTC) and Missouri Department of Transportation (MoDOT), in accordance with the provisions and requirements stated herein.

2.1.2 The contractor shall provide all deliverables/services to the sole satisfaction of MoDOT.

2.1.3 Unless otherwise specified herein, the contractor shall furnish all material, labor, facilities, equipment, and supplies necessary to provide the deliverables/services required herein.

2.2 Specific Requirements:

2.2.1 The contractor shall provide MoDOT with services in accordance with applicable specifications or as specifically noted in the following provisions.

2.2.2 Required Specifications – All materials, equipment, and/or services bid upon must comply with all pertinent standards and specifications as accessible on the Missouri Department of Transportation website (www.modot.mo.gov) under “Business With MoDOT”, and “Standards and Specifications”. The effective version will be determined by the letting date of the project.

2.2.3 The supplemental bidding documents mentioned above contain all current revisions to the bound printed version and have important legal consequences. It shall be conclusively presumed that they are in the bidders’ possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted for this project.

2.3 Invoicing and Payment Requirements:

2.3.1 The contractor shall submit an itemized invoice to the following address after the completion of deliverables, as specified herein.

Missouri Department of Transportation
Business & Benefits
1590 Woodlake
Chesterfield, MO. 63017-5712

2.3.2 Each invoice should be itemized in accordance with items listed on the purchase order and/or contract. The statewide financial management system has been designed to capture certain receipt and payment information. Therefore, each invoice submitted must reference the purchase order number and must be itemized in accordance with items listed on the purchase order. Failure to comply with this requirement may delay processing of invoices for payment.

2.3.3 The contractor shall be paid in accordance with the firm, fixed prices stated on the pricing page(s) of this document after completion of deliverables specified herein and acceptance by MoDOT.

- 2.3.4 Other than the payment specified above, no other payments or reimbursements shall be made to the contractor for any reason whatsoever.
- 2.3.5 MoDOT is exempt from paying Missouri Sales Tax, Missouri Use Tax and Federal Excise Tax. However, the contractor may themselves be responsible for the payment of taxes on materials they purchase to fulfill the contract. A Federal Excise Tax Exemption Certificate will be furnished to the successful bidder upon request.
- 2.3.6 Unless otherwise provided for in the solicitation documents, payment for all equipment, supplies, and/or services required herein shall be made in arrears. The Missouri Highways and Transportation Commission (MHTC) shall not make any advance deposits.
- 2.3.7 Notarized weekly payroll documentation for prime and subcontractors will be required from start to finish of this contract showing compliance with prevailing wage rates. Lien Waivers from materials suppliers shall also be provided. Additional documents shall be furnished as required by other provisions in the bid package. These documents shall be submitted to the attention of the MoDOT General Services – Procurement Buyer for this particular contract at the address below:
Missouri Department of Transportation
General Services – Procurement
St. Louis District
2309 Barrett Station Rd
Ballwin, MO 63021
- 2.3.8 Payment shall be made per contractor invoice upon satisfactory completion of all work items and the receipt of required documentation

2.4 Other Contractual Requirements:

- 2.4.1 **RSMo 285.530** - The contractor understands and agrees that by entering into a contractual agreement with MoDOT, they certify the following:
- a. The contractor shall only utilize personnel authorized to work in the United States in accordance with applicable federal and state laws. This includes, but is not limited to, the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) and INA Section 274A.
 - b. If the contractor is found to be in violation of this requirement or the applicable state, federal and local laws and regulations, and if the State of Missouri has reasonable cause to believe that the contractor has knowingly employed individuals who are not eligible to work in the United States, the state shall have the right to cancel the contract immediately without penalty or recourse and suspend or debar the contractor from doing business with the state.
 - c. The contractor agrees to fully cooperate with any audit or investigation from federal, state or local law enforcement agencies.
 - d. In addition, the contractor shall maintain enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services included herein.

2.4.2 Prevailing Wage:

- a. **General Wage Order # 58, to apply, Jefferson County, MO.**

2.4.3 Construction Safety Program:

Missouri law, 292.675 RSMo, requires the 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 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 Commission 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.

2.4.4 Insurance:

The Contractor shall maintain or cause to be maintained at Contractor's own expense commercial general liability, automobile liability, worker's compensation insurance against negligent acts, errors or omissions of the Contractor, or its subcontractors and anyone directly or indirectly employed by any of them. Any insurance policy required as specified in this Section shall be written by a company that is licensed and authorized to issue such insurance in the state of Missouri and shall provide insurance coverage for not less than the following limits of liability:

- 1) General Liability: Not less than \$500,000 for any one person in a single accident or occurrence, and not less than \$3,000,000 for all claims arising out of a single occurrence;
- 2) Automobile Liability: Not less than \$500,000 for any one person in a single accident or occurrence, and not less than \$3,000,000 for all claims arising out of a single occurrence;
- 3) Missouri State Workmen's Compensation policy or equivalent in accordance with state law.

Upon request from the Commission, the Contractor shall provide the Commission with certificates of insurance evidencing the required coverage and that such insurance is in effect.

2.4.5 Personal Protective Equipment:

- a. All contractor and subcontractor employees utilized in the performance of work resulting from this request must adhere to OSHA standards and at a minimum shall utilize appropriate head, eye and foot protection in the performance of work.
- b. All workers within highway right of way shall wear approved ANSI/ISEA 107 Performance Class 2 or 3 safety apparel and more specifically as follows:
 - 1) **Daytime Flagger.** During daytime activities, flaggers shall wear a high visibility hard hat, safety glasses, a Performance Class 3 top OR a Performance Class 2 top, and safety footwear. Hard hats other than high visibility orange or green shall be covered with a high visibility covering.
 - 2) **Daytime Worker.** During daytime activities, workers shall wear a hard hat, safety glasses, a Performance Class 3 top OR a Performance Class 2 top, and safety footwear.
 - 3) **Nighttime Flagger.** During nighttime activities, flaggers shall wear a high visibility/reflective hard hat, safety glasses, a Performance Class 3 top AND Class E bottoms, OR Performance Class 2 top AND Class E bottoms, and safety footwear. Hard hats shall be reflective or covered with a high visibility covering.
 - 4) **Nighttime Worker.** During nighttime activities, workers shall wear a hard hat, safety glasses, a Performance Class 3 top OR Performance Class 2 top AND Class E bottoms, and safety footwear.

. 2.4.6 **Liquidated damages:**

- a. It is the objective of the District to obtain performance in accordance with the terms of the specifications and at the standards set forth in this contract. The Commission, the traveling public, and state and local police and governmental authorities will be damaged in various ways, including but not limited to, increased administration cost, potential liability, traffic and traffic flow regulation cost, with its resulting cost to the traveling public. These damages are not reasonably capable of being computed or quantified. Therefore, the Offeror will be charged with liquidated damages specified in the amount of **\$1800.00** per day for each day in excess of the completion date.
- b. The said liquidated damages specified will be assessed regardless if whether it would otherwise be charged as liquidated damages under the Missouri Standard Specification for Highway Construction, as amended elsewhere in this contract. Days that the Department has suspended the project operations will not be assessed liquidated damages.
- c. The Offeror shall further agree and understand that such liquidated damages shall either be deducted from the total amount due the contractor or paid by the Offeror as a direct payment to MoDOT, at the sole discretion of MoDOT.
- d. The contractor shall agree and understand that the liquidated damages described herein shall not be construed as a penalty.
- e. The contractor shall agree and understand that all assessments of liquidated damages shall be within the discretion of MoDOT and shall be in addition to, not in lieu of, the rights of the MoDOT to pursue other appropriate remedies.

3.0

BID SUBMISSION

Bid Submission Information:

- 3.1.1 Submit completed Contractor Questionnaire with attachments not later than seven (7) days prior to the date and hour of the bid opening. See Sec 102.2 of the Missouri Standard Specifications for Highway Construction, and Rule 7 CSR 10-15.900, "Prequalifications to Bid of Certain Contractors". Questionnaire and Contact information are provided on MoDOT's website at: <http://www.modot.org/business/BecomeAMoDOTPrimeContractor.htm>
- 3.1.2 All bids must be received in a sealed envelope clearly marked **"SL15-050-RW Repair Drainage Pipes"**.
- 3.1.3 All bids must be received at the following address no later than **October 28, 2014 at 10:00 a.m., Local Time**.

The Missouri Department of Transportation
Procurement Division
Attn: Teresa (Terri Mount)
2309 Barrett Station Rd.
Ballwin, MO. 63021

- 3.1.4 The bidder may withdraw, modify or correct his bid after it has been deposited with the Department provided such request is submitted in writing and received at the location designated for the bid opening prior to the time specified for opening bids. Such a request received as specified will be attached to the bid and the bid will be considered to have been modified accordingly. No bid may be modified after the time specified for the opening of bids.
- 3.1.5 Open Competition / Request For Bid Document:
 - a. It shall be the bidder's responsibility to ask questions, request changes or clarification, or otherwise advise MoDOT if any language, specifications or requirements of an RFB appear to be ambiguous, contradictory, and/or arbitrary, or appear to inadvertently restrict or limit the requirements stated in the RFB to a single source. Any and all communication from bidders regarding specifications, requirements, competitive bid process, etc., must be directed to the buyer from MoDOT, unless the RFB specifically refers the bidder to another contact. Such communication should be received at least three (3) working days prior to the official bid opening date.
 - b. Every attempt shall be made to ensure that the bidder receives an adequate and prompt response. However, in order to maintain a fair and equitable bid process, all bidders will be advised, via the issuance of an amendment to the RFB, of any relevant or pertinent information related to the procurement. Therefore, bidders are advised that unless specified elsewhere in the RFB, any questions received less than three (3) working days prior to the RFB opening date may not be answered.
 - c. Bidders are cautioned that the only official position of the MoDOT is that which is issued by MoDOT in the RFB or an amendment thereto. No other means of communication, whether oral or written, shall be construed as a formal or official response or statement.
 - d. MoDOT monitors all procurement activities to detect any possibility of deliberate restraint of competition, collusion among bidders, price-fixing by bidders, or any other anticompetitive conduct by bidders which appears to violate state and federal antitrust laws. Any suspected violation shall be referred to the Missouri Attorney General's Office for appropriate action.

- 3.1.6 Pursuant to 285.530 RSMo, the bidder must affirm enrollment and participation in a federal work authorization program with respect to the employees proposed to work in connection with the services requested herein by:
- a. Submitting a completed Signature and Identity of Bidder form, attached herein,
 - b. Submitting a completed, notarized copy of the applicable portion of Exhibit A, WORKER ELIGIBILITY VERIFICATION AFFIDAVIT **or** APPLICANT AFFIDAVIT FOR SOLE-PROPRIETORSHIP OR PARTNERSHIP, and
- 3.1.7 Proposal/Bid Guaranty/Contract Bond:
- a. Each bid shall be accompanied by a Bid Bond, Certified Check, Cashier's Check or Bank Money Order payable to the Director of Revenue – Credit State Road Fund for an amount equal to Five Percent (5%) of the amount of the BID submitted. This is to act as a guarantee that the bidder, if awarded the contract, will furnish an acceptable performance and payment bond (Contract Bond) or a cashier's check, a bank money order or a certified check made payable to "Director of Revenue--Credit State Road Fund" in an amount equal to One Hundred (100%) of the contract price.
 - b. If a BID BOND is used (in lieu of a certified check, cashier's check, or bank money order), it must be in the form provided and executed by the bidder as principal and by a surety company authorized to do business in the MoDOT as surety. The agent executing the same on behalf of the surety company must attach a current Power of Attorney setting forth his authority to execute the bond involved.
 - c. Certified Checks, Cashier's Checks or Bank Money Orders of unsuccessful bidders will be returned as soon as the award is made. The checks or bank money orders of the successful bidder(s) will be retained until the contract is executed and a satisfactory Performance and Payment (Contract Bond) is furnished. Bid Bonds will not be returned except on specific request of the bidder.
- 3.1.8 Bids will be reviewed to determine if the bid complies with the mandatory requirements, and to determine the lowest and best responsible bid.
- 3.1.9 Cost Determination - The low bid shall be determined by adding all of the firm, fixed prices on the pricing page for the original contract period to obtain a total price.
- 3.1.10 Contract Award – The contract will be awarded to the lowest responsible bidder determined as specified above.
- a. Award of this bid will be made on an “All Or Nothing” basis using the “lowest and best responsible” principle of award.
 - b. Notification of award will be at the time the tabulation is posted to the Internet. It is the sole responsibility for all bidders to check the website for bid results

4. PRICING PAGE SL15-050-RW

4.1 The bidder shall provide a firm, fixed price in the table below for the original contract period for providing the deliverables/services in accordance with the provisions and requirements of this RFB. All costs associated with providing the required deliverables/services shall be included in the prices stated below.

Item #	Description	U/M	QTY	COST U/M	EXTENDED COST
001	Removal of Improvements	Lump Sum	1		
002	Class 3 Excavation	CUYD	29		
003	Linear Grading Class 1	Stations	0.2		
004	Type 1 Rock ditch Liner	CUYD	6		
005	Placing type I Rock ditch Liner	CUYD	6		
006	Furnishing and placing concrete material for full depth pavement repair	SY	178.3		
007	Subgrade compaction (6" depth) pavement repair	SY	18.0		
008	Type I or 5 Aggregate for Base (4" thick) pavement repair	SY	18.0		
009	Full Depth Pavement Repair Saw cut (for perimeter and internal saw cuts)	LF	336.0		
010	Dowel bar (drilling, furnishing and installation for full depth repair)	EACH	80		
011	Dowel bar (furnishing and installation with baskets for full depth pavement repair)	EACH	50		
012	Tie Bar (drilling, furnishing and installation for full depth pavement repair Type 1)	EACH	30		
013	Construction Signs	SF	164		
014	Advanced Warning Rail System	EACH	2		
015	Flag Assembly	EACH	8		
016	Channelizer (Trim Line)	EACH	30		
017	Direction Indicator Barricade	EACH	13		
018	Flashing Arrow Panel	EACH	1		
019	Work Zone Lighting	LUMP SUM	1		
020	Mobilization	LUMP SUM	1		
021	Flowable Backfill (12" pipe cleanout Incidental)	CUYD	7.0		
022	Polyurethane Expanding Foam	LB	5000		
023	Contractor Furnished Surveying and Staking	LUMP SUM	1		

024	12" Pipe Group A	LF	58		
025	12" Group A Flared End Section	EACH	1		
026	Cured in Place Pipe Lining (12" Pipe)	LF	64		
027	Seed and Mulch	ACRES	0.2		
028	TOTAL EXTENDED COST				

COMPANY:

DATE:

SIGNATURE:

PRINTED NAME:

Exhibit I
PREFERENCE IN PURCHASING PRODUCTS

DATE: _____

The bidders attention is directed to Section 34.076 RSMo 2000 which gives preference to Missouri corporations, firms, and individuals when letting contracts or purchasing products.

Bids/Quotations received will be evaluated on the basis of this legislation.

All vendors submitting a bid/quotation must furnish ALL information requested below.

FOR CORPORATIONS:

State in which incorporated: _____
FOR OTHERS:

State of domicile: _____
FOR ALL VENDORS:

List address of Missouri offices or places of business:

THIS SECTION MUST BE COMPLETED AND SIGNED:

FIRM NAME: _____

ADDRESS: _____

CITY: _____ **STATE:** _____ **ZIP:** _____

BY (signature required): _____

Federal Tax I.D. #: _____ **if no Federal Tax I.D. # - list Social Security #:** _____

NOTE: For bid to be considered, the "Preference in Purchasing Products" form must be on file in the General Services (Procurement) Division and must be dated in the current calendar year.

Exhibit II

MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT

The bidder's attention is directed to the Missouri Domestic Products Procurement Act, Sections 34.350 to 34.359, RsMO, which requires all manufactured goods or commodities used or supplied in the performance of this contract or any subcontract to be manufactured or produced in the United States.

Section 34.355, RsMO, requires the vendor or contractor to certify his compliance with Section 34.353 and, if applicable, Section 34.359, RsMO, at the time of bidding **and** prior to payment. Failure to comply with Section 34.353, RsMO, during the performance of the contract **and** to provide certification of compliance prior to payment will result in nonpayment for those goods or commodities.

Section 34.353.2, RsMO, specifies that it does not apply where the total contract is less than Twenty-Five Thousand Dollars (\$25,000.00). If your total bid is Twenty-Five Thousand Dollars (\$25,000.00) or more, you **must** complete this form as directed below.

Failure to complete and return this document with this bid will cause the State to presume the manufactured goods or products listed in the bid are not manufactured or produced in the United States, and the bid will be evaluated on that basis. Please read the certification appearing below on this form.

- ☐ If all the goods or products specified in the attached bid which the bidder proposes to supply to the State shall be manufactured or produced in the "United States" as defined in Section 34.350, RsMO, check the box at left.
- ☐ If only one item of any particular goods or products specified in the attached bid is manufactured or produced in the "United States" as defined in Section 34.350, RsMO, check the box at left and list the items (or item number) here:

- ☐ If any or all of the goods or products specified in the attached bid which the bidder proposes to supply to the State are **not** manufactured or produced in the "United States" as defined in Section 34.350, RsMO, then: (a) check the box at left; (b) list below, by item (or item number), the country other than the United States where each good or product is manufactured or produced; and (c) check the boxes to the left of the paragraphs below if applicable and list the corresponding items (or item numbers) in the spaces provided.

Item (or item number)	Location Where Item Manufactured or Produced

(attach an additional sheet if necessary)

- ☐ The following specified goods or products cannot be manufactured or produced in the United States in sufficient quantities or in time to meet the contract specifications. Items (or item numbers): _____
- ☐ The following specified goods or products must be treated as manufactured or produced in the United States, in accordance with an existing treaty, law, agreement, or regulation of the United States, including a treaty between the United States and any foreign country regarding export-import restrictions or international trade. Items (or item numbers): _____

CERTIFICATION

By submitting this document, completed as directed above, with a bid, the bidder certifies under penalty of making false declaration (Section 575.060, RsMO) that the information contained in this document is true, correct and complete, and may be relied upon by the State in determining the bidders qualifications under and in compliance with the Missouri Domestic Products Procurement Act.

The bidder's failure to complete and return this document with the bid as directed above will cause the State to presume the manufactured goods or products listed in the bid are not manufactured or produced in the United States, and the bid will be evaluated on that basis pursuant to Section 34.353.3(2), RsMO.

Exhibit III

SIGNATURE AND IDENTITY OF BIDDER

The undersigned states that the correct LEGAL NAME and ADDRESS of (1) the individual Bidder, (2) each partner or joint venture (whether individuals or corporations, and whether doing business under a fictitious name), or (3) the corporation (with the state in which it is incorporated) are shown below; that (if not signing with the intention of binding himself to become the responsible and sole contractor) he is the agent of, and duly authorized in writing to sign for the Bidder or Bidders; and that he is signing and executing this (as indicated in the proper spaces below) as the proposal of a

() sole individual

() partnership

() joint venture

() corporation, incorporated under laws of state of _____

Dated _____.

Name of individual, all partners,
or joint ventures:

Address of each:

doing business under the name of:

Address of principal place of business in Missouri

(If using a fictitious name, show
this name above in addition
to legal names)

(If a corporation, show its name above)

ATTEST: (SEAL)

Secretary

Title

(NOTE: If the Bidder is doing business under a FICTITIOUS NAME, the Proposal shall be executed in the legal name of the individual, partners, joint ventures, or corporation, with the legal address shown, and REGISTRATION OF FICTITIOUS NAME filed with the Secretary of

State, as required by Sections 417.200 to 417.230, RS Mo. 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 351.570 and following, RS Mo. 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, Sec 102.6.6 and.

Exhibit IV
WORKER ELIGIBILITY VERIFICATION AFFIDAVIT FOR ALL
MHTC/MODOT CONTRACT AGREEMENTS IN EXCESS OF \$5,000
(for joint ventures, a separate affidavit is required for each business entity)

STATE OF _____)
) ss
COUNTY OF _____)

On this _____ 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, deposed as follows:

My name is _____, and I 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 am the _____ of _____, and I am duly authorized, directed, and/or empowered to act officially and properly on behalf of this business entity. I 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 to verify information of newly hired employees, and the aforementioned business entity shall participate in said program with respect to all employees working in connection to work under the within state contract agreement with the Missouri Highways and Transportation Commission (MHTC). 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. In addition, I hereby affirm and warrant that the aforementioned business entity does not and shall not knowingly employ, in connection to work under the within state contract agreement with MHTC, 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 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 through 285.550, RSMo, for subcontractors that knowingly employ or continue to employ any unauthorized alien to work within the state of Missouri.

I acknowledge that I am signing this affidavit as a free act and deed of the aforementioned business entity and not under duress.

Affiant Signature

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

Notary Public

My commission expires:

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

APPLICANT AFFIDAVIT FOR SOLE-PROPRIETORSHIP OR PARTNERSHIP
(a separate affidavit is required for each owner and general partner)(**if applicable**)

STATE OF _____)
) ss

COUNTY OF _____)

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

My name is _____, and I am of sound mind, capable of making this affidavit, and personally certify the facts herein stated, as required by Section 208.009, RSMo, for failure to provide affirmative proof of lawful presence in the United States of America:

☐ I am the _____ of _____, which is applying for a
owner or partner public benefit (grant, contract, and/or loan) administered/provided by the Missouri Highways and Transportation Commission (MHTC), acting by and through the Missouri Department of Transportation (MoDOT). I am classified by the United States of America as: (check the applicable box)a
United States citizen.an alien lawfully admitted for permanent residence.

I am aware that Missouri law provides that any person who obtains any public benefit by means of a willfully false statement or representation, or by willful concealment or failure to report any fact or event required to be reported, or by other fraudulent device, shall be guilty of the crime of stealing pursuant to Section 570.030, RSMo, which is a Class C felony for stolen public benefits valued between \$500 and \$25,000 (punishable by a term of imprisonment not to exceed 7 years and/or a fine not more than \$5,000 – Sections 558.011 and 560.011, RSMo), and is a Class B felony for stolen public benefits valued at \$25,000 or more (punishable by a term of imprisonment not less than 5 years and not to exceed 15 years – Section 558.011, RSMo).

I recognize that, upon proper submission of this sworn affidavit, I will only be eligible for temporary public benefits until such time as my lawful presence in the United States is determined, or as otherwise provided by Section 208.009, RSMo.

I understand that Missouri law requires MHTC/MoDOT to provide assistance in obtaining appropriate documentation to prove citizenship or lawful presence in the United States, and I agree to submit any requests for such assistance to MHTC/MoDOT in writing.

I acknowledge that I am signing this affidavit as a free act and deed and not under duress.

Affiant Signature

Affiant's Social Security Number or
Applicable Federal Identification Number

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

Notary Public

My commission expires:

Exhibit V SL15-050-RW

(Revised 08/96)

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS, that we _____

as principal and _____

as surety, are held and firmly bound unto the state of Missouri (acting by and through the Missouri Highways and Transportation Commission) in the penal sum of _____

Dollars (\$) to be paid to the commission to be credited to the state road fund, the principal and surety binding themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

Sealed with our seals and dated this _____

THE CONDITION OF THIS OBLIGATION is such that

WHEREAS the principal is submitting herewith a bid to the commission on route(s) I-70 _____

in County(ies),

project (s) St. Charles, SL15-038-RW _____

for construction or improvement of state highway as set out in said bid;

NOW THEREFORE, if the commission shall accept the bid of the principal and if the principal shall properly execute and deliver to the commission the contract, contract bond, and evidence of insurance coverage in compliance with the requirements of the bid, the specifications, and the provisions of section 227.100 RSMo, to the satisfaction of the commission, then this obligation shall be void and of no effect, otherwise to remain in full force and effect.

In the event the said principal shall, in the judgment of the commission, fail to comply with any requirement as set forth in the preceding paragraph, then the state of Missouri, acting by and through the commission, shall immediately and forthwith be entitled to recover the full penal sum above set out, together with court costs, attorney's fees, and any other expense of recovery.

The principal and surety hereby certify that the document is the original or a verbatim copy of the bid bond form furnished by the Commission, in accordance with Sec 102.9 of the Missouri Standard Specifications for Highway Construction.

Principal

SEAL By _____

Signature

Surety

SEAL By _____

Signature of Attorney in Fact

NOTE: This bond must be executed by the principal, and by a corporate surety authorized to conduct surety business in the state of Missouri.

Exhibit VI

MISSOURI SERVICE-DISABLED VETERAN BUSINESS PREFERENCE

By virtue of statutory authority, RSMo 34.074, a preference will be given all contracts for the performance of any job or service to service-disabled veteran business either doing business as Missouri firms, corporations, or individuals; or which maintain Missouri offices or places of business, when the quality of performance promised is equal or better and the price quoted is the same or less or whenever competing bids, in their entirety, are comparable.

Definitions:

Service-Disabled Veteran is defined as any individual who is disabled as certified by the appropriate federal agency responsible for the administration of veterans' affairs.

Service-Disabled Veteran Business is defined as a business concern:

- a. Not less than fifty-one (51) percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than fifty-one (51) percent of the stock of which is owned by one or more service-disabled veterans; and
- b. The management and daily business operations of which are controlled by one or more service-disabled veterans.

If a bidder meets the definitions of a service-disabled veteran and a service-disabled veteran business as defined in 34.074 RSMo and is either doing business as a Missouri firm, corporation, or individual; or maintains a Missouri office or place of business, the bidder **must** provide the following with the bid in order to receive the Missouri service-disabled veteran business preference over a non-Missouri service-disabled veteran business when the quality of performance promised is equal or better and the price quoted is the same or less or whenever competing bids, in their entirety, are comparable:

- a. A copy of a letter from the Department of Veterans Affairs (VA), or a copy of the bidder's discharge paper (DD Form 214, Certificate of Release or Discharge from Active Duty) from the branch of service the bidder was in, stating that the bidder has a service-connected disability rating ranging from 0 to 100% disability; and
- b. A completed copy of this exhibit

(NOTE: For ease of evaluation, please attach copy of the above-referenced letter from the VA or a copy of the bidder's discharge paper to this Exhibit.)

By signing below, I certify that I meet the definitions of a service-disabled veteran and a service-disabled veteran business as defined in 34.074 RSMo and that I am either doing business as a Missouri firm, corporation, or individual; or maintain Missouri offices or places of business at the location(s) listed below.

Veteran Information

Service-Disabled Veteran's Name, (Please Print)

Business Information

Service-Disabled Veteran Business Name

Service-Disabled Veteran's Signature

Missouri Address of Service-Disabled Veteran
Business

STANDARD SOLICITATION PROVISIONS

- a. The solicitation for the procurement of the supplies referenced therein, to which these "Standard Bid Provisions, General Terms and Conditions and Special Terms and Conditions" are attached, is being issued under, and governed by, the provisions of Title 7 – Missouri Department of Transportation, Division 10 – Missouri Highways and Transportation Commission, Chapter 11 – Procurement of Supplies, of the Code of State Regulations. The Missouri Highways and Transportation Commission (MHTC), acting by and through its operating arm, the Missouri Department of Transportation (MoDOT), draws the Bidder's attention to said 7 CSR 10-11 for all the provisions governing solicitation and receipt of bids/quotes and the award of the contract pursuant to this solicitation.
- b. All bids/quotes must be signed with the firm name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled.

GENERAL TERMS AND CONDITIONS

Definitions

Capitalized terms as well as other terms used but not defined herein shall have the meaning assigned to them in section 7 CSR 10-11.010 Definition of Terms.

Nondiscrimination

- a. The Contractor shall comply with all state and federal statutes applicable to the Contractor relating to nondiscrimination, including, but not limited to, Chapter 213, RSMo; Title VI and Title VII of Civil Rights Act of 1964 as amended (42 U.S.C. Sections 2000d and 2000e, *et seq.*); and with any provision of the "Americans with Disabilities Act" (42 U.S.C. Section 12101, *et seq.*).
- b. **Sanctions for Noncompliance:** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, MHTC shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
 - i. withholding of payments to the Contractor under the contract until the Contractor complies, and/or,
 - ii. cancellation, termination or suspension of the contract, in whole or in part.

Contract/Purchase Order

- a. By submitting a bid/quote, the Bidder agrees to furnish any and all equipment, supplies and/or services specified in the solicitation documents, at the prices quoted, pursuant to all requirements and specifications contained therein.
- b. A binding contract shall consist of: (1) the solicitation documents, amendments thereto, and/or Best and Final Offer (BAFO) request(s) with any changes/additions, (2) the Contractor's bid response, and (3) the MHTC's acceptance of the bid by post-award contract or purchase order.
- c. A notice of award does not constitute an authorization for shipment of equipment or supplies or a directive to proceed with services. Before providing equipment, supplies and/or services, the Contractor must receive a properly authorized notice to proceed and/or purchase order.

Applicable Laws and Regulations

- a. The contract shall be construed according to the laws of the State of Missouri. The Contractor shall comply with all local, state, and federal laws and regulations related to the performance of the contract. The exclusive venue for any legal proceeding relating to or arising, out of the contract shall be in the Circuit Court of Cole County, Missouri.
- b. The Contractor must be registered and maintain good standing with the Secretary of State of the State of Missouri, Missouri Department of Revenue, and other regulatory agencies, as may be required by law or regulations. Prior to the issuance of a purchase order and/or notice to proceed, the Contractor may be required to submit to MHTC a copy of their current Authority Certificate from the Secretary of State of the State of Missouri and/or a copy of their Certificate of No Tax Due from the Missouri Department of Revenue.
- c. Prior to the issuance of a purchase order and/or notice to proceed, all **out-of-state** Contractors **providing services** within the state of Missouri must submit to MHTC a copy of their current Transient Employer Certificate from the Missouri Department of Revenue, in addition to a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.

Executive Order:

The Contractor shall comply with all the provisions of Executive Order 07-13, issued by the Honorable Matt Blunt, Governor of Missouri, on the sixth (6th) day of March, 2007. This Executive Order, which promulgates the State of Missouri's position to not tolerate persons who contract with the state engaging in or supporting illegal activities of employing individuals who are not eligible to work in the United States, is incorporated herein by reference and made a part of this Agreement.

- 1) "By signing this Agreement, the Contractor hereby certifies that any employee of the Contractor assigned to perform services under the contract is eligible and authorized to work in the United States in compliance with federal law."
- 2) In the event the Contractor fails to comply with the provisions of the Executive Order 07-13, or in the event the Commission has reasonable cause to believe that the contractor has knowingly employed individuals who are not eligible to work in the United States in violation of federal law, the Commission reserves the right to impose such contract sanctions as it may determine to be appropriate, including but not limited to contract cancellation, termination or suspension in whole or in part or both.
- 3) The Contractor shall include the provisions of this paragraph in every subcontract. The Contractor shall take such action with respect to any subcontract as the Commission may direct as a means of enforcing such provisions, including sanctions for noncompliance.

Preferences

- a. In the evaluation of bids/quotes, preferences shall be applied in accordance with 7 CSR 10-11.020(7). Contractors should apply the same preferences in selecting subcontractors. The attached document entitled "**VENDOR INFORMATION AND PREFERENCE CERTIFICATION FORM**" must be completed and returned with the solicitation documents.
- b. Bidders are encouraged to obtain minority business enterprise (MBE) and women business enterprise (WBE) participation in this work through the use of subcontractors, suppliers, joint ventures, or other arrangements that afford meaningful participation for M/WBEs. Bidders are encouraged to obtain 10% MBE and 5% WBE participation.

Cancellation of Contract

The MHTC may cancel the Contract at any time for a material breach of contractual obligations or for convenience by providing Contractor with written notice of cancellation. Should the MHTC exercise its right to cancel the contract for such reasons, cancellation will become effective upon the date specified in the notice of cancellation sent to the Contractor.

Bankruptcy or Insolvency

Upon filing for any bankruptcy or insolvency proceeding by or against the Contractor, whether voluntarily, or upon the appointment of a receiver, trustee, or assignee, for the benefit of creditors, the Commission reserves the right and sole discretion to either cancel the Agreement or affirm the Agreement and hold the Contractor responsible for damages.

Warranty

The Contractor expressly warrants that all equipment, supplies, and/or services provided shall: (1) conform to each and every specification, drawing, sample or other description which was furnished to or adopted by the MHTC, (2) be fit and sufficient for the purpose expressed in the solicitation documents, (3) be merchantable, (4) be of good materials and workmanship, and (5) be free from defect.

Status of Independent Contractor

The Contractor represents itself to be an independent Contractor offering such services to the general public and shall not represent itself or its employees to be an employee of the MHTC. Therefore, the Contractor shall assume all legal and financial responsibility for taxes, FICA, employee fringe benefits, workers' compensation, employee insurance, minimum wage requirements, overtime, etc., and agrees to indemnify, save and hold the MHTC, its officers, agents and employees harmless from and against any and all losses (including attorney fees) and damage of any kind related to such matters.

Non-Waiver

If one of the parties agrees to waive its right to enforce any term of this Contract, that party does not waive its right to enforce such term at any other time or to enforce any or all other terms of this Contract.

Indemnification

The Contractor shall defend, indemnify and hold harmless MHTC, including its members and department employees, from any claim or liability whether based on a claim for damages to real or personal property or to a person for any matter relating to or arising out of the Contractor's performance of its obligations under the contract awarded pursuant to this solicitation.

SPECIAL TERMS AND CONDITIONS

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MHTC is exempt from paying Missouri Sales Tax, Missouri Use Tax and Federal Excise Tax. However, the Contractor may themselves be responsible for the payment of taxes on materials they purchase to fulfill the contract. A Project Tax Exemption Certificate will be furnished to the successful Bidder upon request if applicable.

The Contractor shall maintain or cause to be maintained at Contractor's own expense commercial general liability, automobile liability, worker's compensation insurance against negligent acts, errors or omissions of the Contractor, or its subcontractors and anyone directly or indirectly employed by any of them. Any insurance policy required as specified in this Section shall be written by a company that is licensed and authorized to issue such insurance in the state of Missouri and shall provide insurance coverage for not less than the following limits of liability:

- 2) General Liability: Not less than \$500,000 for any one person in a single accident or occurrence, and not less than \$3,000,000 for all claims arising out of a single occurrence;
- 2) Automobile Liability: Not less than \$500,000 for any one person in a single accident or occurrence, and not less than \$3,000,000 for all claims arising out of a single occurrence;
- 3) Missouri State Workmen's Compensation policy or equivalent in accordance with state law.

Upon request from the Commission, the Contractor shall provide the Commission with certificates of insurance evidencing the required coverage and that such insurance is in effect.

Bid Guaranty/Contract Bond

- d. Each bid shall be accompanied by a Bid Bond, Certified Check, Cashier's Check or Bank Money Order payable to the Director of Revenue – Credit State Road Fund for an amount equal to Five Percent (5%) of the amount of the bid submitted. This is to act as a guarantee that the bidder, if awarded the contract, will furnish an acceptable performance and payment bond (Contract Bond) or a cashier's check, a bank money order or a certified check made payable to "Director of Revenue--Credit State Road Fund" in an amount equal to One Hundred (100%) of the contract price.
- e. If a BID BOND is used (in lieu of a certified check, cashier's check, or bank money order), it must be in the form provided and executed by the bidder as principal and by a surety company authorized to do business in the State of Missouri as surety. The agent executing the same on behalf of the surety company must attach a current Power of Attorney setting forth his authority to execute the bond involved.
- f. Certified Checks, Cashier's Checks or Bank Money Orders of unsuccessful bidders will be returned as soon as the award is made. The checks or bank

money orders of the successful bidder(s) will be retained until the contract is executed and a satisfactory Performance and Payment (Contract Bond) is furnished. Bid Bonds will not be returned except on specific request of the bidder.

- d. Failure to execute the contract and file acceptable performance payment (Contract Bond) or cashier's check, bank money order or certified check within **15 days** after the contract has been mailed to the bidder shall be just cause for the cancellation of the award and the forfeiture of the proposal guaranty. Award may then be made to the next lowest responsible bidder, or the work may be re-advertised and performed under contract or otherwise, as the Commission may decide. No contract shall be considered effective until it has been executed by all parties thereto.

Prohibition Of Employment Of Unauthorized Aliens:

- a. **Non-employment of Unauthorized Aliens:** Pursuant to Section 285.530, RSMo., no business entity or employer 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 any contract or grant in excess of five thousand dollars by the State or by any political subdivision of the State to a business entity, or for any business entity receiving a state-administered or subsidized tax credit, tax abatement, or loan from the state, the business entity shall:
- 1) 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. E-Verify is an example of a federal work authorization program. The business entity must affirm its enrollment and participation in the E-Verify federal work authorization program with respect to the employees proposed to work in connection with the services requested herein by providing acceptable enrollment and participation documentation consisting of **completed** copy of the E-Verify Memorandum of Understanding (MOU). For business entities that are not already enrolled and participating in a federal work authorization program, E-Verify is available at http://www.dhs.gov/files/programs/qc_1185221678150.shtm
 - 2) By sworn affidavit, affirm that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services. A copy of the affidavit referenced herein is provided within this document, attached as ExhibitT
- b. **Proof of Lawful Presence For Sole Proprietorships and Partnerships:** If the business entity is a sole proprietorship or partnership, pursuant to Section 208.009, RSMo., each sole proprietor and each general partner shall provide affirmative proof of lawful presence in the United States. Such sole proprietorship or partnership is eligible for temporary public benefits upon submission by each sole proprietor and general partner of a sworn affidavit of his/her lawful presence on the United States until such lawful presence is affirmatively determined, or as otherwise provided by Section 208.009, RSMo. A copy of the affidavit reference herein is provided within this document, attached as ExhibitT.

Construction Safety Program

Missouri law, 292.675 RSMo, requires the 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 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 Commission 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.

Prevailing Wage

The work to be performed under this solicitation is governed by the provisions of Chapter 290 RSMo, as amended, related to prevailing wages to be paid on public works.

- a. If the bid/quote is accepted, the vendor will be required to comply with the prevailing wages as fixed by the Missouri Department of Labor and Industrial Relations, in effect as of the date of the issuance of the solicitation, for each affected craft and type of workmen in the following county(ies): **Jefferson**
General Wage Order # 58 is attached to the bid documents
- b. Pursuant to the requirements of the Chapter 290 RSMo., not less than the prevailing hourly rate of wages, as set out in the wage order attached to and made part of the specification for work under the contract, must be paid to all workers performing work under the contract.
- c. The Contractor shall provide all information, reports and other documentation as required by MHTC to ensure compliance with Chapter 290 RSMo., as amended, relating to prevailing wages to be paid on public works.
- d. The Contractor shall forfeit a penalty to the contracting public body of \$100 per day (or portion of a day) for each worker that is paid less than the prevailing rate for any work done under the contract by the contractor or by any subcontractor.

Permits, Licenses and Safety Issues

The contract price shall include any necessary permits and licenses required by law incidental to the work. Local ordinances requiring building permits are not applicable to state agencies.

- a. The following days shall be construed as **official holidays** under the terms of the contract:

January 1	New Year's Day
Third Monday in January	Martin Luther King, Jr.'s Birthday
February 12	Lincoln's Birthday
Third Monday in February	Washington's Birthday
May 8	Truman's Birthday
Last Monday in May	Memorial Day
July 4	Independence Day
First Monday in September	Labor Day

Second Monday in October	Columbus Day
November 11	Veteran's Day
Fourth Thursday in November	Thanksgiving Day
December 25	Christmas Day

- b. When any of the above **holidays falls** on a **Sunday**, the holiday will be observed on the following **Monday**; when any of the above **holidays falls** on a **Saturday**, the **holiday** will be observed on the immediately preceding **Friday**.
- c. Contractor will not be required to provide dozers, loaders, motor graders, or other equipment for shaping of stockpiles, constructing ramps or runways, or leveling of the top of a completed lift, unless otherwise noted herein.

Temporary Suspension of Work

- a. The **District Engineer** shall have authority to suspend work wholly or in part for such period or periods as may be deemed necessary when weather or other conditions are such that in the opinion of the engineer, the work may be done at a later time with advantage to MoDOT or for failure on the part of the Contractor to comply with any of the provisions of the Contract.
- b. If MoDOT suspends the work for its own advantages and not because of the Contractor's failure to comply with the Contract, the Contractor will be allowed an equal number of calendar days after the completion date for the completion of the work. MoDOT may at its discretion give the Contractor an extension of time for completing the work where the Contractor incurs delays for causes beyond his control.
- c. Normal rainfall is not considered a cause qualifying for an extension of time. Claim for extension of time for all causes must be submitted by the Contractor in writing within **30 Days** after the claimed cause for the delay has ceased to exist.

Preferences

- a. By virtue of statutory authority, RSMo. 34.076 and 34.350 to 34.359, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown within the State of Missouri. Such preference shall be given when quality is equal or better and delivered price is the same or less.
 - 1) If attached, the document entitled **"PREFERENCE IN PURCHASING PRODUCTS"** should be completed and returned with the solicitation documents.
 - 2) If attached, the document entitled **"MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT"** should be completed and returned with the solicitation documents. **Applies if bid is Twenty-Five Thousand Dollars (\$25,000.00) or more.**
- b. By virtue of statutory authority, RSMo 34.074, a preference will be given all contracts for the performance of any job or service to service-disabled veteran business either doing business as Missouri firms, corporations, or individuals; or which maintain Missouri offices or places of business, when the quality of performance promised is equal or better and the price quoted is the same or less or whenever competing bids, in their entirety, are comparable. 1) If attached, the document entitled **"MISSOURI SERVICE-DISABLED VETERAN PREFERENCE"** should be completed and returned with the solicitation documents.

Personal Protective Equipment

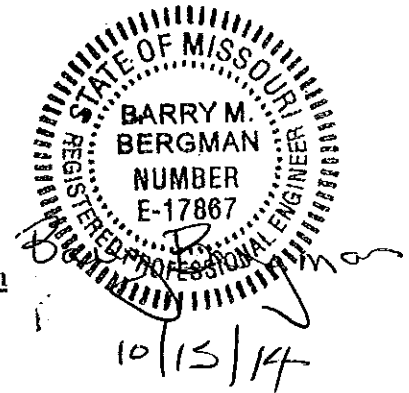
All contractor and subcontractor employees utilized in the performance of work resulting from this request must adhere to OSHA standards and at a minimum shall utilize appropriate head, eye and foot protection in the performance of work.

- c. All workers within highway right of way shall wear approved ANSI/ISEA 107 Performance Class 2 or 3 safety apparel and more specifically as follows:
 - 5) **Daytime Flagger.** During daytime activities, flaggers shall wear a high visibility hard hat, safety glasses, a Performance Class 3 top OR a Performance Class 2 top, and safety footwear. Hard hats other than high visibility orange or green shall be covered with a high visibility covering.
 - 6) **Daytime Worker.** During daytime activities, workers shall wear a hard hat, safety glasses, a Performance Class 3 top OR a Performance Class 2 top, and safety footwear.
 - 7) **Nighttime Flagger.** During nighttime activities, flaggers shall wear a high visibility/reflective hard hat, safety glasses, a Performance Class 3 top AND Class E bottoms, OR Performance Class 2 top AND Class E bottoms, and safety footwear. Hard hats shall be reflective or covered with a high visibility covering.
 - 8) **Nighttime Worker.** During nighttime activities, workers shall wear a hard hat, safety glasses, a Performance Class 3 top OR Performance Class 2 top AND Class E bottoms, and safety footwear.

SCOPE OF WORK

St. Louis District,
Pavement and Drainage Repair
Job Number WRJEO21B

Miscellaneous Contract Requirements and Specification



A. Work Description and Location

The purpose of this project is to repair and replace damaged drainage pipes, replace damaged roadway concrete slabs and raise concrete slabs that have settled. The repairs for this project are located on Rte. 21 approximately 0.43 miles south of Old Rte. 21 near Mile Marker 172. The Work Location is shown on the title sheet of the contract documents.

B. Tabulation of Quantities

Removal of Improvements	1 Lump Sum
Class 3 Excavation	29 Cubic Yards
Linear Grading Class 1	0.2 Stations
Furnishing Type 1 Rock Ditch Liner	6 Cubic Yards
Placing Type 1 Rock Ditch Liner	6 Cubic Yards
Furnishing and Placing Concrete Material	
For Full Depth Pavement Repair	178.3 Square Yards
Subgrade Compaction (6" Depth)	
(Pavement Repair)	18.0 Square Yards
Type 1 or 5 Aggregate For Base (4" Thick)	
(Pavement Repair)	18.0 Square Yards
Full Depth Pavement Repair Saw Cut	
(For Perimeter and Internal Saw Cuts)	336.0 Linear Feet
Dowel Bar (Drilling, Furnishing and Installation)	
For Full Depth Pavement Repair	80 Each
Dowel Bar (Furnishing and Installation with Baskets)	
For Full Depth Pavement Repair	50 Each
Tie Bar (Drilling, Furnishing and Installation)	
For Full Depth Pavement Repair (Type 1)	30 Each
Construction Signs	164 Square Feet
Advanced Warning Rail System	2 Each
Flag Assembly	8 Each
Channelizer (Trim Line)	30 Each
Direction Indicator Barricade	13 Each
Flashing Arrow Panel	1 Each
Work Zone Lighting	1 Lump Sum
Mobilization	1 Lump Sum

Pavement and Drainage Repair
Rte. 21 s/o Old Rte. 21
Jefferson County
Exhibit A

Flowable Backfill (12" Pipe Cleanout Incidental)	7.0 Cubic Yards
Polyurethane Expanding Foam	5,000 Lbs.
Contractor Furnished Surveying and Staking	1 Lump Sum
12" Pipe Group A	58 Linear Feet
12" Group A Flared End Section	1 Each
Cured in Place Pipe Lining (12" Pipe)	64 Linear Feet
Seed and Mulch	0.2 Acres

C. Work Zone Traffic Management Plan

1.0 Description. Work zone traffic management shall be in accordance with applicable portions of Division 100 and Division 600 of the Standard Specifications, and specifically as follows.

2.0 Traffic Management Schedule.

2.1 Traffic management schedules and any revisions shall be submitted to the engineer for review and approval prior to the start of work affected. The traffic management schedule shall include the proposed traffic control measures, hours traffic control will be in place, and work hours.

2.2 The contractor shall notify the engineer a minimum of two weeks prior to lane closures.

2.3 The engineer shall be notified as soon as practical of any postponement due to weather, material or other circumstances.

2.4 To ensure minimal traffic disruption, the contractor shall schedule lane closures for the absolute minimum amount of time required to complete the work. Lanes shall not be closed until material is available for continuous construction and the contractor is prepared to diligently pursue the work until the closed lane is opened to traffic.

2.5 Traffic Congestion. The contractor shall, upon approval of the engineer, take proactive measures to reduce traffic congestion in the work zone.

2.5.1 Traffic Delay. The contractor shall be responsible for maintaining the existing traffic flow through the job site during construction. If disruption of the traffic flow occurs and traffic is backed up in queues of 10 minute delays or longer, then the contractor shall review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from occurring again.

2.5.2 Traffic Safety.

2.5.2.1 Where traffic queues routinely extend to within 1000 feet (300 m) of the ROAD WORK AHEAD, or similar, sign on a divided highway, the contractor shall extend the advance warning area, as approved by the engineer.

2.5.2.2 When a traffic queue extends to within 1000 feet (300 m) of the ROAD WORK AHEAD, or similar, sign on a divided highway due to non-recurring congestion, the contractor shall deploy a means

of providing advance warning of the traffic congestion, as approved by the engineer. The warning location shall be no less than 1000 feet (300 m) and no more than 0.5 mile (0.8 km) in advance of the end of the traffic queue on divided highways and no less than 500 feet (150 m) and no more than 0.5 mile (0.8 km) in advance of the end of the traffic queue on undivided highways.

3.0 Work Hour Restrictions.

3.1 There are six major holiday periods per year: Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, and New Years Day. All lanes shall be scheduled to be open to traffic during these holiday periods, from 12:00 noon on the last working day proceeding the holiday until 9:00 a.m. on the first working day subsequent to the holiday.

3.2 Lane closure times will be restricted to the following except as approved by the engineer. The contractor shall not perform any work except in compliance with the following Monday thru Friday work hour restrictions. Working hours for weekends and holidays shall be as determined by the engineer.

Route 21 Working Hours

The northbound lanes can be closed for a five day period starting from 9:00AM Monday through 5:00AM Friday as approved by the Engineer. MoDOT Maintenance forces will provide the traffic control for the northbound closure.

A southbound single lane closure is allowed from 9:00PM to 3:00PM, Monday through Friday. The contractor will be responsible for the traffic control for this closure. MoDOT will supply a Changeable Message Sign for the southbound lane closure.

Weekend hours will be determined by the Engineer.

4.0 Lane Closures.

4.1 MoDOT will provide for the contractor's use a changeable message sign notifying southbound Rte. 21 motorists of future traffic disruptions and possible traffic delays one week prior to the lane closure. The changeable message sign shall be installed at a location as approved or directed by the engineer.

The contractor shall provide the engineer notice two (2) weeks prior to lane closures. MoDOT will issue a press release to the local news media, newspaper, radio and television prior to lane closure. The press release will advise motorists to take alternate routing to avoid traffic congestion at the construction site and to anticipate a slowdown in traffic flow.

In the event of any weather, material, or related postponement, notification shall be made to the engineer of the postponement and the re-scheduling of the roadway lane closure to a new date.

The contractor shall note that on a weekly basis, MoDOT's Maintenance of Traffic (MOT) Team reviews all work zones scheduled for the following week and month for the entire St. Louis District. If two or

more work zones negatively impact each other's flow of traffic and traffic mitigation is not feasible or practical, MoDOT's MOT reserves the right to reject or alter those work zones.

5.0 Coordination with other Projects. The contractor shall coordinate traffic management between this project and any other projects on Route 21.

5.2 The contractor shall be aware that there may be other projects including, but not limited to, Utilities, Jefferson County, Private, MoDOT Maintenance, Permit, or other projects that may impact project construction or traffic control in the vicinity of this project. It shall be the responsibility of the contractor to determine what, if any projects other than the ones listed above may impact this project and work to coordinate construction and traffic management efforts between this project and any other project involved.

6.0 Traffic Control Plan Revisions.

6.1 The plans provide a traffic control plan with quantities of traffic control devices. The contractor is allowed to propose changes to the traffic control plan if the construction time frame can be shortened, and/or the number of days traffic lanes are restricted can be reduced. If the contractor proposes modifying the traffic control plans, there will be no additional payment for additional traffic control items.

6.2 Any modification to the Traffic Control Plans or alternate traffic control plan must meet the minimum requirements of this provision. The Modified Traffic Control Plan must be signed and sealed by a Professional Engineer registered in the State of Missouri and must comply to the current edition of the MUTCD and MoDOT standards, whichever is more conservative.

6.3 Any Modified Traffic Control Plan Sheets must be submitted 3 weeks prior to implementation to allow ample time for review and approval.

7.0 Documentation Records of Traffic Control

7.1 The contractor shall measure and/or count all temporary traffic control items used on this project. A document will be filled out by the contractor listing the items, along with the quantity and location on the roadway. This document will be similar in form to a MoDOT Documentation Record.

7.2 These Documentation Records will be submitted to the engineer three working days prior to the estimate so the engineer can verify the information and quantities may be included for pay where applicable. They shall have the following certification statement and be signed by the Director of Traffic Management.

"In keeping with United States Code, Title 18, Section 1020, regarding False Statements, I certify, to the best of my ability, the above information is correct and accurate with regards to date placed, quantity, length and location". Signature & Date _____.

8.0 Basis of Payment. No direct payment shall be made for additional expenses incurred by the contractor for the cost of equipment, labor, materials, incidentals, or time required to fulfill the above provisions.

D. Time for Completion of the Work

1.0 Description. Completion of this contract shall be in accordance with Sec 108.7 and will be administered on both a calendar date completion basis and by working days completion basis.

1.1 Regardless of when the work is begun on this contract, all work shall be completed on or before the date specified below. Completion by this date shall be in accordance with the requirements of Sec 108.7.

Completion Date: April 1, 2015.

1.2 In addition, working days for the completion of this contract have been established. The count of working days will start on the date the contractor starts any construction operations. All work shall be completed within the working days specified below. Completion of the work by working days shall be in accordance with the requirements of Sec 108.7.

Working Days: 10

1.3 Should the contractor, or in case of default, the surety, fail to complete the work within the above specified working days or the completion date, whichever occurs first, a deduction of the amount shown below will be made for each day that the contract remains uncompleted in accordance with the requirements of Sec 108.8. These damages are in addition to any other damages as specified elsewhere in this contract.

Liquidated Damages Per Day: \$1,800.00

1.4 If all Work is not complete prior to the specified overall contract completion date, the contractor will be charged with an overall liquidated damage specified in the amount of **\$1,800.00** per day for each full day that the Work is not fully completed. This damage will be assessed independently of the liquidated damages (per project) as specified above.

E. Emergency Provisions and Incident Management

1.0 The contractor shall have communication equipment on the construction site or immediate access to other communication systems to request assistance from the police or other emergency agencies for incident management. In case of traffic accidents or the need for police to direct or restore traffic flow

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through the job site, the contractor shall notify police or other emergency agencies immediately as needed. The area engineer's office shall also be notified when the contractor requests emergency assistance.

2.0 In addition to the 911 emergency telephone number for ambulance, fire or police services, the following agencies may also be notified for accident or emergency situation within the project limits.

Missouri State Highway Patrol
Troop C Headquarters
891 Technology Dr.
Weldon Spring, MO 63304
(636) 300-2800

MoDOT Transportation Management Center (TMC)
14301 South Outer 40 Rd.
Chesterfield, MO 63017
(314) 275-1500

Jefferson County
Sheriff's Department
P.O. Box 100
Hillsboro, Missouri 63050
636 797-5000

2.1 This list is not all inclusive. Notification of the need for wrecker or tow truck services will remain the responsibility of the appropriate police agency.

2.2 The contractor shall notify enforcement and emergency agencies before the start of construction to request their cooperation and to provide coordination of services when emergencies arise during the construction at the project site. When the contractor completes this notification with enforcement and emergency agencies, a report shall be furnished to the engineer on the status of incident management.

3.0 No direct pay will be made to the contractor to recover the cost of the communication equipment, labor, materials or time required to fulfill the above provisions.

F. Utilities

1.0 Missouri Standard Specification Book for Highway Construction, Section 105

2.0 Control of Work, 105.7 Cooperation With Utilities: Contractor shall adhere to all specifications.

3.0 There are no known utility conflicts on this project.

G. Cured-in-Place-Pipe Lining

1.0 Description. This section specifies a 12" reinforced concrete storm sewer pipe rehabilitation using cured-in-place pipe (CIPP) including all labor, materials, and equipment necessary to complete the Work as specified herein.

1.1 References. This section contains references to the following standards. They are a part of this section as specified and modified. In case of conflict between the requirements of this section and those of the listed documents, the requirements affording the greatest protection to the Owner shall apply, as determined by the Engineer.

<u>Reference</u>	<u>Title</u>
ASTM D570	Standard Test Method for Water Absorption of Plastics
ASTM D638	Standard Test Method for Tensile Properties of Plastics
ASTM D543	Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents
ASTM D695	Standard Test Method for Compressive Properties of Rigid Plastics
ASTM D790	Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
ASTM D1042	Standard Test Method for Linear Dimensional Changes of Plastics Under Accelerated Service Conditions
ASTM D2990	Test Method for Tensile, Compressive And Flexural Creep and Creep-Rupture Of Plastics
ASTM D3574	Standard Test Methods for Flexible Cellular Materials—Slab, Bonded, and Molded Urethane Foams
ASTM D5813	Standard Specification for Cured-In-Place Thermosetting Resin Sewer Piping Systems
ASTM F1216	Rehabilitation of Existing Pipelines and Conduits by Inversion and Curing of a Resin Impregnated Tube
ASTM F1743	Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP)

ASTM F2019	Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pulled in Place Installation of Glass Reinforced Plastic (GRP) Cured-in-Place Thermosetting Resin Pipe (CIPP)
ASTM F2304	Standard Practices for Rehabilitation of Sewers Using Chemical Grouting

Other sections, not referenced herein, may also be related to the proper performance of the work. It is the Contractor's responsibility to perform all the work required by the Contract Documents.

1.2 Submittals

1.2.1 Cured-in-place pipe

1. Shop drawings detailing short and long-term properties (providing all supporting third party test data) of all component materials and construction and recommendations for material storage and temperature control, CIPP handling, insertion, curing, trimming and finishing, and QA/QC procedures. The submittal shall also include structural calculations for the CIPP liner and application to include size and the recommended thicknesses. CIPP end seal and connection sealing/lining materials, methods and equipment.
2. Detailed method for addressing CIPP sampling requirements including location and size of each sample, method of removal, method of liner repair and chain of custody.
3. CIPP manufacturer's recommended installation procedures for all applications, including resin manufacturer's heating requirements.
4. Contractor shall submit 10,000-hour third party, 50-year flexural creep modulus test data. Test shall be in accordance with ASTM D-2990 at 10,000 hours or equal test as approved by the Engineer. If approved 10,000 hour tests are not available, Contractor shall use a minimum 50% reduction (50% retention) of flexural modulus of elasticity (per ASTM F 1216) for all formula calculations.
5. Certification stating CIPP tube has been manufactured in accordance with ASTM F1216, and resin is suitable for its intended use.
6. Gap filler materials and application methods.

1.2.2 Chemical safety plan.

1. A safety plan in accordance with EMC's Safety Manual for all hazardous chemicals used or expected to be onsite including resin, catalyst, cleaners and repair agents.

1.3 Warranty

1. The Contractor shall provide a two-year written warranty from the liner manufacturer for the entire liner system, including all repair material, defect fillers, primers, and the liner composite. Two-year written warranty is to begin upon Contractor's successful receipt of substantial completion.
2. Liner failure is defined as blistering, cracking, embrittlement, softening and end and connection sealing failure.
3. The Contractor shall submit written warranties as required.

2.0 Material.

2.1 Cured-in-place pipe

1. The Contractor shall be responsible for control of all material and process variables to provide a finished CIPP possessing the minimum properties specified in ASTM F1216 and required herein.
2. CIPP resin and fabric system meeting the requirements of ASTM F1216.
3. Component Properties:
 - a. Fabric Tubing:
 1. The fabric tube shall be free from tears, holes, cuts, foreign materials and other surface defects.
 2. The fabric tube material shall be designed for use in gravity storm sewers and shall be in strict conformance with all applicable sections of ASTM F1216, F2019 or a seamless version of F2019. The tube should be fabricated to a size that, when installed, will tightly fit the internal circumference and length of the original sewer pipe. Allowance should be made for circumferential stretching during the installation and shrinkage of resin.
 - b. Resins:
 1. The resin used shall be compatible with the CIPP system used and designed for use in gravity storm sewers. The resin shall be a general purpose, unsaturated polyester and catalyst system compatible with the CIPP system that provides the cured physical strengths and properties specified herein.
 2. Resins shall be tinted for adequate visibility suitable for internal inspection and provide positive indication of adequate liner wet out.

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4. Chemical Resistance: The cured pipe shall be resistant to a variety of chemical effluents as described in ASTM D543.
5. Cured CIPP Properties: The physical properties of the cured CIPP shall have minimum initial test values as defined in Table 1 of ASTM F1216 and supplemented below for polyester resin. Properties for the polyester or any other enhanced resins shall be substantiated with third party test data.
 - a. Flexural strength: 4,500 psi per ASTM D790
 - b. Flexural modulus: 300,000 psi per ASTM D790
 - c. 50-year flexural creep modulus: 150,000 psi per ASTM D2990
6. Dimensions.
 - a. The Contractor shall make allowances in determining the felt tube length and circumference for stretch during installation and shrinkage during curing and aging. The minimum length shall be that which continuously spans the distance from the center of the inlet manhole to the center of the outlet manhole. The Contractor shall verify the lengths in the field before the liner tube is cut and impregnated. Individual installation runs may include one or more inlet to inlet sections as authorized by the Engineer.
 - b. The actual diameter of the existing pipes may be larger than the approximate nominal inside diameter due to corrosion of the concrete. It is the Contractor's responsibility to determine the required diameter of the liner.
 - c. The nominal CIPP thickness shall be at least the calculated design thickness, per ASTM F1216, except where fabric layers overlap, in which case it may be in excess of this value.
 - d. The wall thickness of the felt tube shall be ordered to the next standard 1.5 mm incremental thickness above the minimum calculated design thickness.
 - e. Unless otherwise specified to provide for excess resin migration, the gap thickness of the wetting out equipment shall be sized to allow an excess of 5 to 10 percent resin to pass during impregnation.
7. Design Criteria:
 - a. The liner shall be designed in accordance with the procedures of ASTM F1216, as appropriate. All material properties used in design calculations shall be long-term (time-corrected) values.
 - b. The Contractor shall calculate and submit to the Engineer for review the required minimum thickness for the CIPP to be installed in the pipe reach based on the pipeline information shown on the project Drawings, pre-

construction internal inspection data, actual field conditions or assumptions, and the CIPP manufacturer's specifications. After award of contract, Contractor shall not order material until field verification of pipe sizes are performed and final design calculations are approved by the Engineer.

- c. The following parameters shall be assumed for the liner design:
 1. Fully deteriorated host pipe.
 2. Safety factor of 2.0.
 3. Head of groundwater of 5' above top of pipe or grade level, whichever is less.
 4. Modulus of Soil Reaction, $E' = 700$ psi.
 5. Unit weight of soil = 125 pcf
 6. Minimum ovality = 2%
 7. AASHTO H-20 loading except for railroad crossings in which case use Cooper E-80.
8. CIPP End Seal: Use epoxy cement compatible with liner for end seal. Coat all concrete surfaces.
9. Gap Filler Materials: Type V, non-shrink, non-metallic grout as filler material for gaps between CIPM liners and the CIPP, to be covered entirely by epoxy sealant or CIPM liner.
10. PVC Sleeve Pre-liner:
 - a. PVC Sleeve meeting the following requirements:
 1. Tensile strength: 7940 psi per ASTM D638.
 2. Compressive strength: 8,000 psi per ASTM D695
 3. Flexural strength: 14,500 psi per ASTM D790
 4. Water absorption: 0.05% in 24 hours @ 73° F per ASTM D570.
 5. Modulus of elasticity in tension: 4.2×10^5 psi per ASTM D638.

3.0 Execution

3.1 General

1. Temporary bypass pumping shall be performed by the Contractor at all times during installation and curing to maintain sewer flow.
2. Prior to cleaning and lining operations, Contractor shall review the CCTV inspection completed by the Engineer. Owner shall provide to the Contractor a copy of the CCTV inspection information.
3. Sections of the existing host pipe that have shifted, dropped, or severely deteriorated, shall be ground down, grouted, or otherwise repaired to provide a

smooth continuous surface for the CIPP installation that will not reduce the cross-sectional area of the interior of the relined pipe or reduce wall thickness to less than the minimum specified thickness. This may require installation of a PVC Sleeve Pre-Liner if the host pipe cannot accommodate CIPP inversion. Contractor shall clear existing storm sewer of obstructions such as solids, hanging or intrusive collapsed pipe that will prevent CIPP installation using point repairs or replace sections of pipe as authorized by the Engineer.

4. Contractor shall clean pipe prior to installation of CIPP.
5. Storage and Delivery:
 - a. The Contractor shall be responsible for the delivery, storage and handling of all materials for CIPP and connection liners in accordance with the written requirements of the manufacturer.
 - b. Contractor shall exercise adequate care during transportation, handling and installation to ensure the material is not torn, cut, or otherwise damaged.
 - c. If any part or parts of the material becomes torn, cut or otherwise damaged before or during installation, it shall be repaired or replaced in accordance with the manufacturer's recommendations before proceeding further and at no additional cost to the Owner.

3.1 Installation Procedures

3.1 Cured-in-place pipe

1. The Contractor shall designate the offsite location where the CIPP will be impregnated with resin ("wet-out"). Locations shall be subject to approval by the Engineer. The Contractor shall allow the Engineer to inspect the materials and "wet-out" procedure.
2. The impregnated CIPP tube shall be transported to site under controlled environmental conditions. Transport vehicles shall include a tamper resistant, sealed temperature recording device that records the temperature of the liner at all times after leaving the wet-out site. The Contractor shall decide when to transport the impregnated CIPP tube to site and when to commence insertion with respect to weather conditions.
3. Weather Conditions: No CIPP installations shall be undertaken in weather conditions that could jeopardize the installation of the CIPP, or be detrimental to the long-term performance of the CIPP.
4. Water Inversion Method (for all pipe diameters): The tube shall be impregnated with a liquid thermosetting resin and lowered into the insertion pit through an inversion tube. The inversion tube will then be filled with water where the weight of the water will push the tube through the damaged pipe inside out, while pressing

the resin impregnated side firmly against the inside walls of the damaged pipe. The smooth coated side of the liner shall become the new interior surface of the pipe. After the tube is inverted through the pipe section, the Contractor shall heat the water by circulating it through a boiler, where the hot water will cause the resin to cure.

5. Air Inversion Method (optional for pipes up to and including 21-inches in diameter): The tube shall be impregnated with a liquid thermosetting resin and lowered into the insertion pit through an inversion tube. The inversion tube will then be filled with air where the force of the air will push the tube through the damaged pipe inside out, while pressing the resin impregnated side firmly against the inside walls of the damaged pipe. The smooth coated side of the liner shall become the new interior surface of the pipe. After the tube is inverted through the pipe section, the Contractor shall insert steam into the inverted tube which will cause the resin to cure.
6. Curing and Cool Down:
 - a. The curing process shall follow a step cure or similar approach recommended by the manufacturer and approved by the Engineer, and shall be held at the top step for an adequate length of time to ensure that the design physical properties are attained. Steam or water will be used to cure pipes up to and including 21-inches in diameter, and pipes larger than 21-inches will use water curing only. Circulation water or steam shall cool down to at least 100 degrees F for 1 hour before releasing the hydrostatic head. The water or steam shall be evacuated from the pipe at a controlled rate to prevent negative pressure in the pipe.
 - b. The rate of temperature rise and fall during heating and cooling shall not exceed 2 degrees F per minute. For CIPP liner thicknesses greater than 0.75 inch, or where the existing pipe, soil and groundwater combination is likely to provide a significant heat sink, affecting the temperature gradient across the CIPP liner material, the temperature of the exotherm shall be monitored by remote temperature sensors placed at the interface of the existing pipe and the CIPP. A minimum of two temperature sensors shall be installed, one at either end of the length being lined.
 - d. The curing process shall not be terminated until the temperature sensor readings indicated that a satisfactory cure has been completed.
 - e. Any extended cure times shall not adversely affect the properties of the CIPP lining material.
7. CIPP Samples and Testing:

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Jefferson County
Exhibit A

- a. Sampling Frequency: Sampling shall be performed for each separate installation of CIPP. As an example - one sample from each pipeline reach where the liner is installed will be provided.
- b. Contractor shall prepare a sample of the installed CIPP liner for subsequent testing of its physical properties. The sample shall be prepared using the flat plate sampling method in accordance with the procedures in ASTM F1216, as is applicable.
- c. The Owner reserves the right to take five (5) random core samples of the installed CIPP liner at no additional cost in accordance with the procedures in ASTM D5813, as is applicable. The method of repair will be as recommended by the Contractor.
- d. The flat plate sample shall be large enough to provide five sample specimens each for Short Term Flexural (Bending) properties, as per ASTM D790. The sample will be clamped in a mold and placed in the downtube during the curing of the CIPP tube.
- e. The sample shall be removed after all the water is removed from the cured pipe tube. The samples shall be identified by: Date, Project Name, Size, Thickness, Location, Resin and Catalyst. The cured sample shall be tested by an independent testing laboratory as recommended by the CIPP liner manufacturer and approved by the Engineer, for the bending properties as per ASTM D790. The sample shall be double bagged and sealed.
- f. The Contractor shall provide liner test results for long-term properties in accordance with ASTM D2990. The Contractor shall provide a delivery manifest for each liner with the following information:
 - 1. The inversion location where the liner will be installed.
 - 2. Provide the manhole numbers for either end of the inversion.
 - 3. If the Contractor has assigned an inversion number provide that number as well.
 - 4. Liner diameter, length and thickness.

After the Engineer has confirmed that the liner is the correct product for the planned inversion, the Contractor shall prepare a Chain of Custody form for the CIPP sample(s). A CIPP sample shall be taken for each inversion. The Chain of Custody prepared by the Contractor and submitted to the Engineer for approval, shall document that the sample being sent for testing is from the inversion placed in the down tube for curing at the inversion location. After the CIPP sample has been cured, the sample shall be labeled with the inversion location. The information on the Chain of Custody shall include the inversion location, and when the sample was removed and bagged. The signed and verified Chain of Custody form shall be presented to the Owner's inspector, who will independently verify that the sample is the

correct sample and has been properly bagged and labeled for shipment. The Owner's inspector will sign the Chain of Custody form so attesting. A copy of the delivery manifest and Chain of Custody form will be given to the Owner after all signatures are affixed and the sample is ready for shipment.

The Owner will review all invoices to confirm that a request for a progress payment has the required delivery manifest and Chain of Custody form on file. Progress payments will not be paid without prior verification of the inversion documentation.

- h. The Contractor shall be responsible for any deviation from the specified physical properties and those evaluated through testing. Failure to meet the specified physical properties will result in the CIPP being considered defective work.
 - i. The Contractor shall be responsible for all costs associated with the testing of the liner physical properties. The Contractor shall submit all test results.
8. CIPP End Seals:
- a. The Contractor shall secure the connections between the CIPP and the connection liner end seals. The securing epoxy materials shall adequately bond with the host CIPP pipe per CIPP manufacturer's specifications.
 - b. The Contractor shall furnish and apply epoxy resin to CIPP liner end seal at all upstream and downstream ends of the CIPP liner to form a watertight seal.

3.2 Finished cured-in-place pipe

- 1. The finished CIPP shall be continuous over the entire length of an inlet to manhole section of pipe.
- 2. Wrinkles in the finished CIPP that cause a backwater of one (1) inch or more are unacceptable. Contractor shall repair or replace that section of the pipe at no additional cost to the Owner. Methods of repair shall be proposed by the Contractor and submitted to the Engineer for approval.
- 3. Wrinkles in the finished CIPP that reduce the structural integrity of the CIPP are unacceptable. Contractor shall repair or replace that section of the pipe at no additional cost to the Owner. Methods of repair shall be proposed by the Contractor and submitted to the Engineer for approval.
- 4. Defects such as foreign inclusions, dry spots, pinholes, delamination, lifts and wrinkling beyond the specification allowances, as determined by the Engineer as affecting the integrity or strength of the CIPP, or as adversely affecting the hydraulic capacity of the pipe, shall be repaired or replaced. Contractor shall repair or replace that section of the pipe at no additional cost to the Owner. Methods of

repair shall be proposed by the Contractor and submitted to the Engineer for approval.

5. If a void between the wrinkle and the existing pipe wall exists, the Contractor shall repair or replace that section of the pipe at no additional cost to the Owner. Methods of repair shall be proposed by the Contractor and submitted to the Engineer for approval.

3.2 Acceptance

1. Perform internal CCTV inspection as specified of CIPP after reinstatement of service laterals but prior to the installation of the connection liner, and provide inspection data to Engineer.
2. Perform internal CCTV inspection after installation of the connection liners. Provide inspection data to Engineer.

3.2 Clean up

1. Following inspection, the Contractor shall clean up the entire project area. All material and debris, not incorporated into the permanent installation, shall be disposed off-site by the Contractor.

4.0 Basis of Payment. Payment for compliance with this provision shall include all excavation, materials, equipment, tools, labor, and work incidental thereto, and shall be considered to be completely covered by the contract unit price for, Cured in Place Pipe Lining, per linear foot as indicated in the plans.

H. Polyurethane Expanding Foam

1.0 The polyurethane expanding foam shall be injected prior to the slab replacements on Rte. 21.

I. Fertilizing, Seeding and Mulch

1.0 Soil Neutralization. In accordance with Section 801.2.2, application of effective calcium shall be 1,600 lbs. per acre.

In accordance with Section 801.2.3 the following fertilizer shall be applied at the rate specified.

Nitrogen (N)	80 pounds per acre
Phosphorous (P2O5)	160 pounds per acre
Potash (K2O)	80 pounds per acre

Seeding: The following seed mixture shall be applied at the rate specified:

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<u>SEEDING MIXTURE</u>	<u>POUNDS PER LIVE SEED/ACRE</u>
Annual Ryegrass	8
Tall Fescue	40
White Clover	2.5

Mulching will be used as specified in Section 802.

The accepted quantity of seeding and mulching will be paid for at the contract unit price for Seed and Mulch. No direct payment will be made for soil neutralization or fertilizing seeded areas.

J. High Early Strength Concrete

The use of high early strength concrete will be required to meet the schedule for the reopening of Rte. 21 to traffic.

No direct payment will be made for the use of high early strength concrete.

K. Standard Specifications

All items and materials used for this contract shall be in accordance with the applicable portions of the Missouri Standard Specification Book for Highway Construction, and specifically as follows;

Section 203	Roadway and Drainage Excavation, Embankment and Compaction
Section 502	Portland Cement Concrete Base and Pavement
Section 606	Temporary Traffic Control
Section 609	Paved Drainage
Section 611	Embankment Protection
Section 613	Pavement Repair
Section 724	Pipe Culverts
Section 801	Lime and Fertilizer
Section 802	Mulching
Section 805	Seeding
Section 1054	Concrete Admixtures

This list is not all-inclusive. It shall be the Contractor's responsibility to perform all work in accordance with the prevailing Standard Specifications on the letting date of this contract.

L. Standard Plans

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Jefferson County
Exhibit A

All material, equipment and construction requirements for items specified in this project shall be in accordance with the Missouri Standard Plans for Highway Construction.

DESIGN DESIGNATION

FUNCTIONAL CLASSIFICATION-

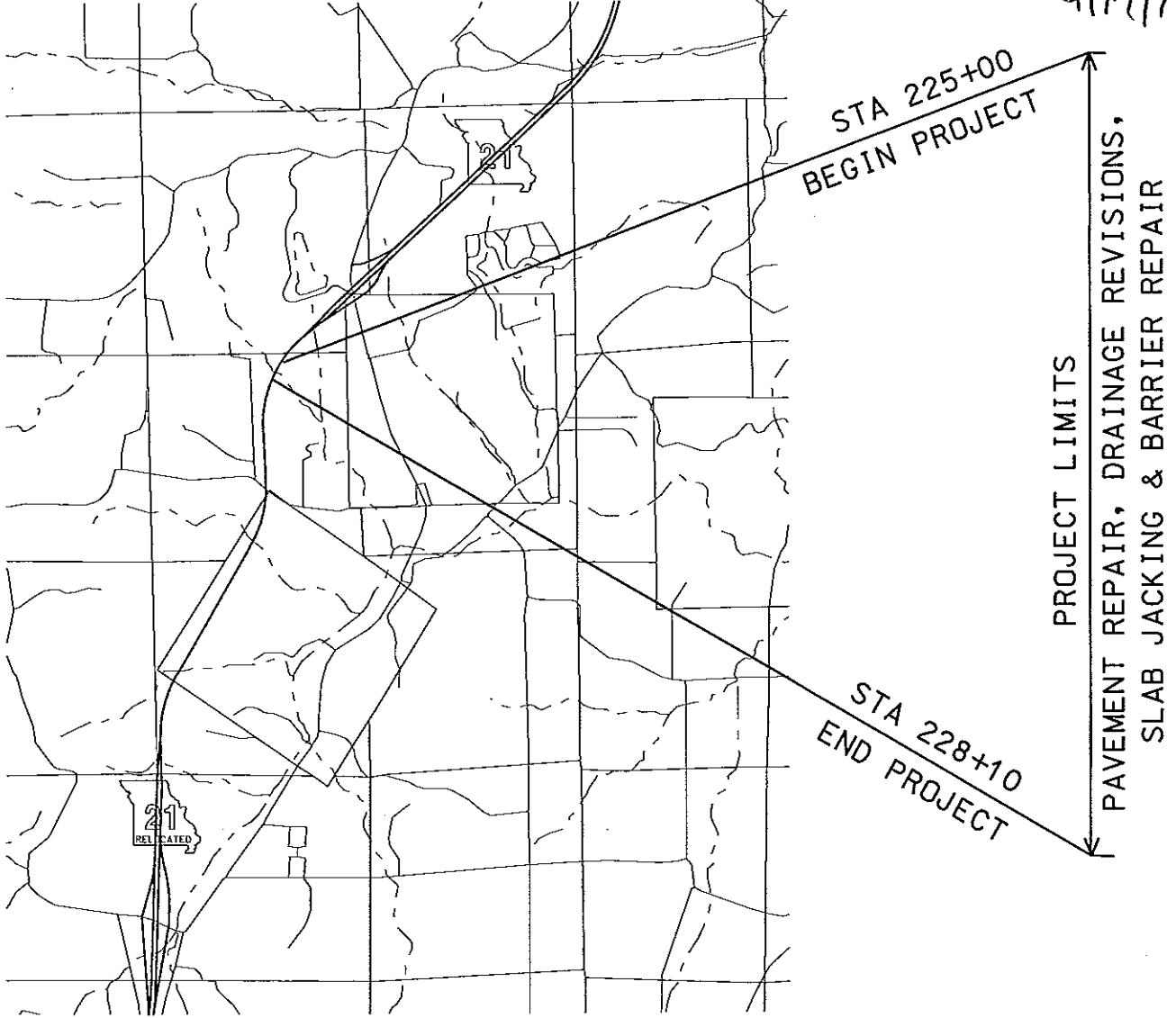
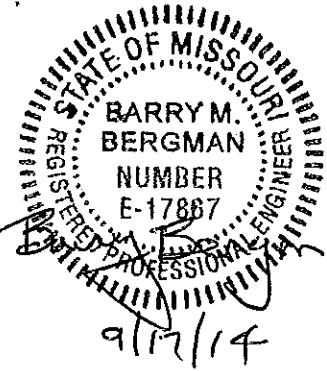
NO RW WILL BE REQUIRED FOR THIS PROJECT

CONVENTIONAL SYMBOLS
(USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS		
OVERHEAD TELEPHONE		
UNDERGROUND TELEPHONE		
OVERHEAD POWER		
UNDERGROUND POWER		
GAS		
WATER		
MANHOLE		
FIRE HYDRANT		
WATER VALVE		
WATER METER		
DROP INLET		
DITCH BLOCK		
GROUND MOUNTED SIGN		
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL		
FENCE		
CHAIN LINK		
WOVEN WIRE		
GATE POST		
BENCHMARK		

NOTE: DASHED OR OPEN SYMBOLS INDICATE
EXISTING FEATURES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY
JEFFERSON COUNTY



DISCLAIMER
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SPECIFICATION, ESTIMATES, REPORTS, OR OTHER
DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE
UNDERSIGNED PROFESSIONAL RELATING TO OR
INTENDED TO BE USED FOR ANY PART OR PARTS OF
THE PROJECT TO WHICH THIS PAGE REFERS.

DATE PREPARED	9/17/2014
ROUTE	21
STATE	MO
DISTRICT	SL
SHEET NO.	1
COUNTY	JEFFERSON
JOB NO.	WRJE021B
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

LOCATION SKETCH

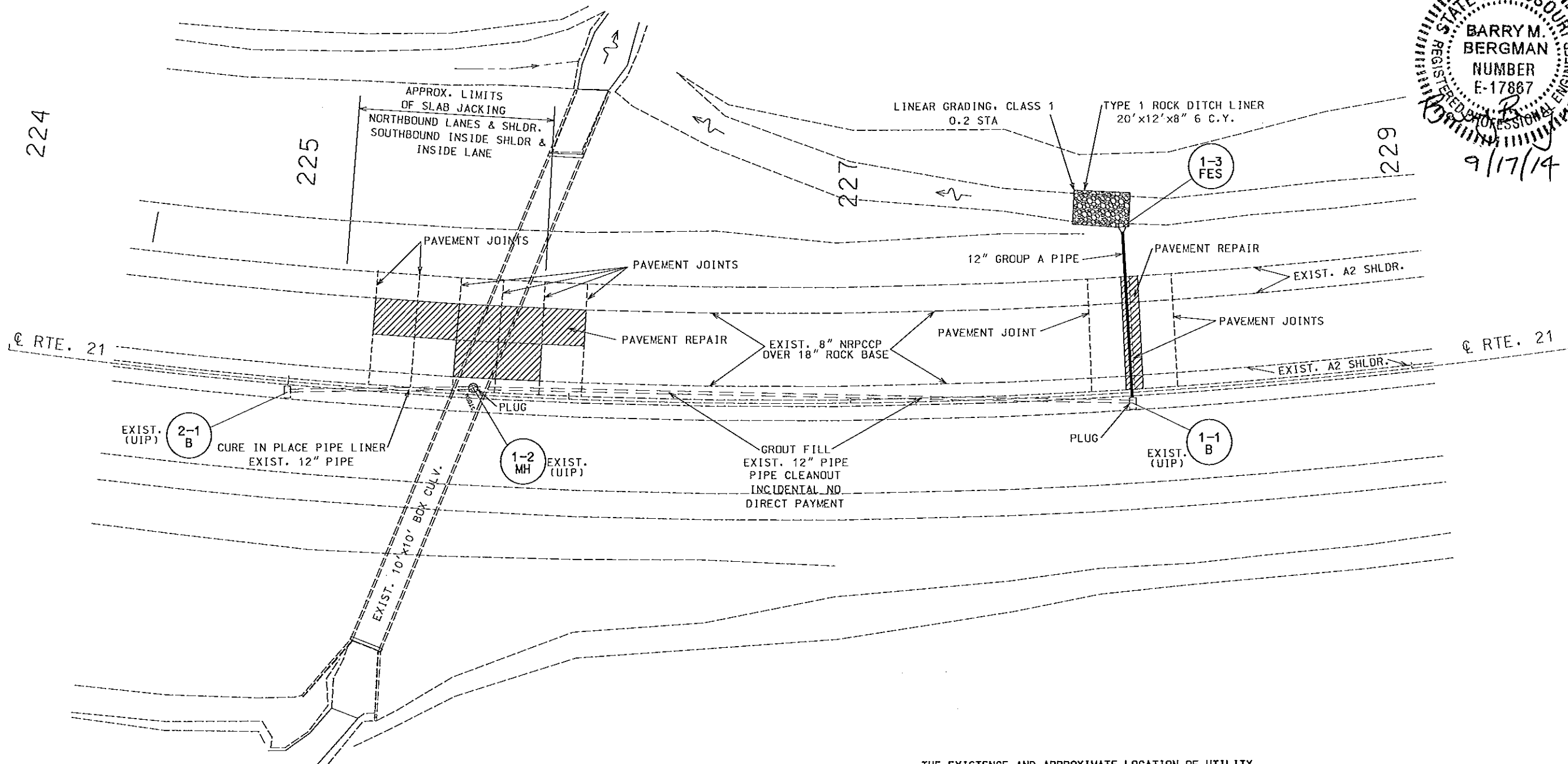
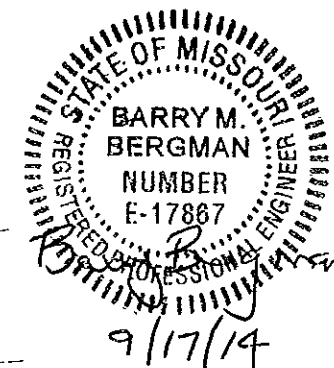
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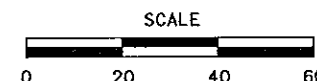
105 WEST CAPITOL
JEFFERSON CITY, MD 65102
1-888-ASK-MDOT (1-888-275-6636)

CURVE S1
 TOTAL PI 226+67.91
 SC 217+33.29
 CS 234+15.35
 TOTAL Δ 56° 42' 52.5" (LT)
 D 2' 46" 58.0"
 Lo 1.682.06'
 Ls 356.00'
 Ts 1.290.62'
 R 2.058.94'
 Os 4° 57' 12.0"
 Xs 355.73'
 Ys 10.25'
 S.E. 7.90% (EXIST.)

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DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

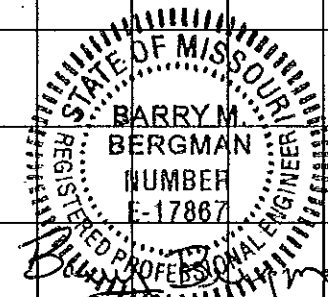
PLAN SHEET

SHEET 1 OF 1

DATE PREPARED 9/17/2014	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 3
COUNTY JEFFERSON	
JOB NO. WRJE021B	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

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DATE PREPARED
9/17/2014
ROUTE 21 STATE MO
DISTRICT SL SHEET NO. 4
COUNTY JEFFERSON
JOB NO. WRJE021B
CONTRACT ID.
PROJECT NO.
BRIDGE NO.



1-3 FES
STA 228+00
58.3' LT OF C

1-3
FES

1-1 B EXIST.
STA 228+00
3.25 RT OF C
2' X 4' PRECAST DI WITH
TYPE B COVER
(U.I.P.)

1-1
B

EXIST (UIP)

PLUG

FL 558.15

TYPE 1 ROCK DITCH LINER

565
560
555
550

FL 555.55

4.37%

58' - 12" GROUP A PIPE
CL. 3 EXC. = 29 CY

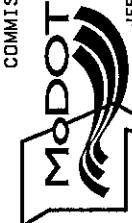
5'

THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY
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DESCRIPTION

DATE

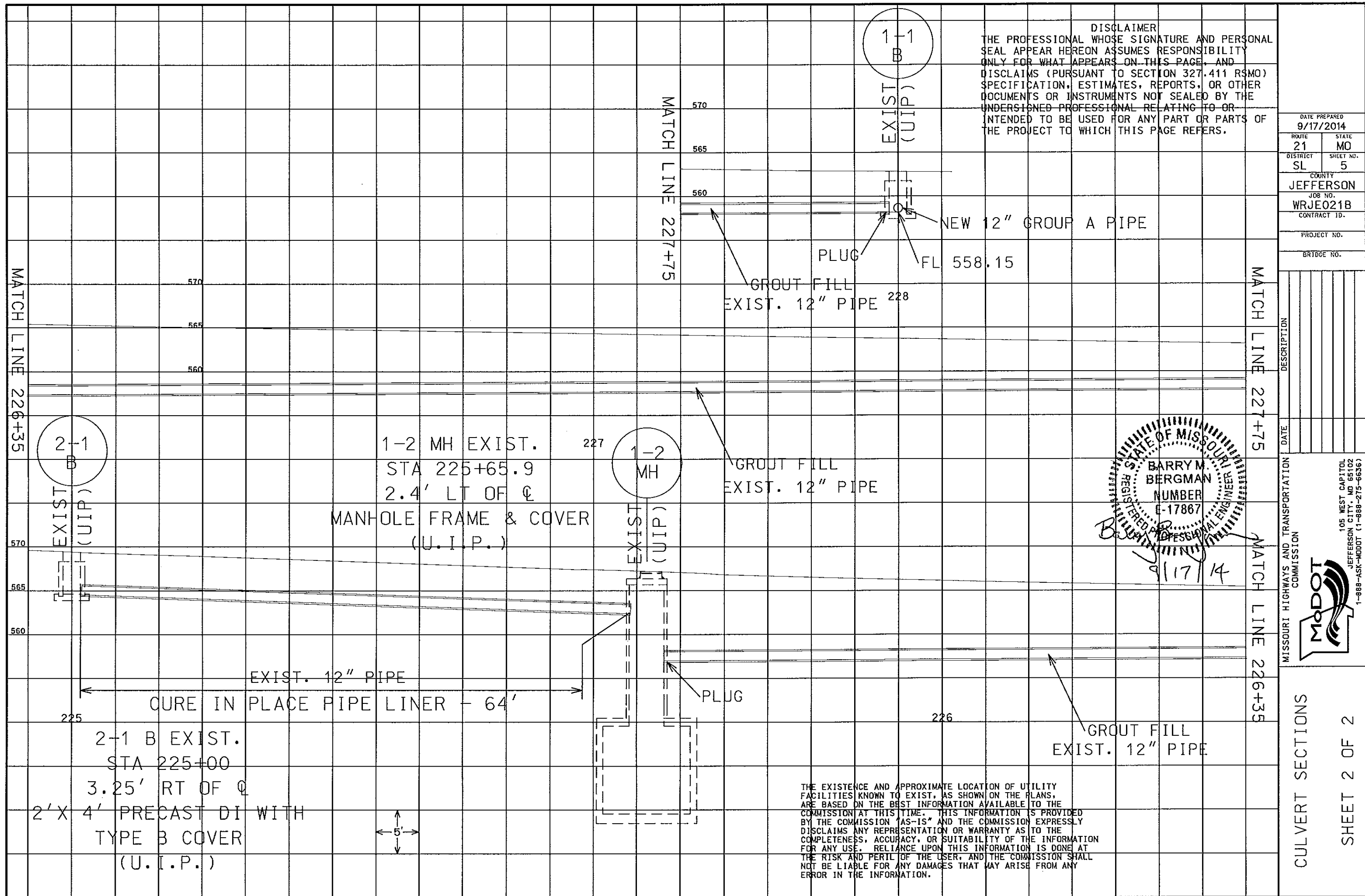
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

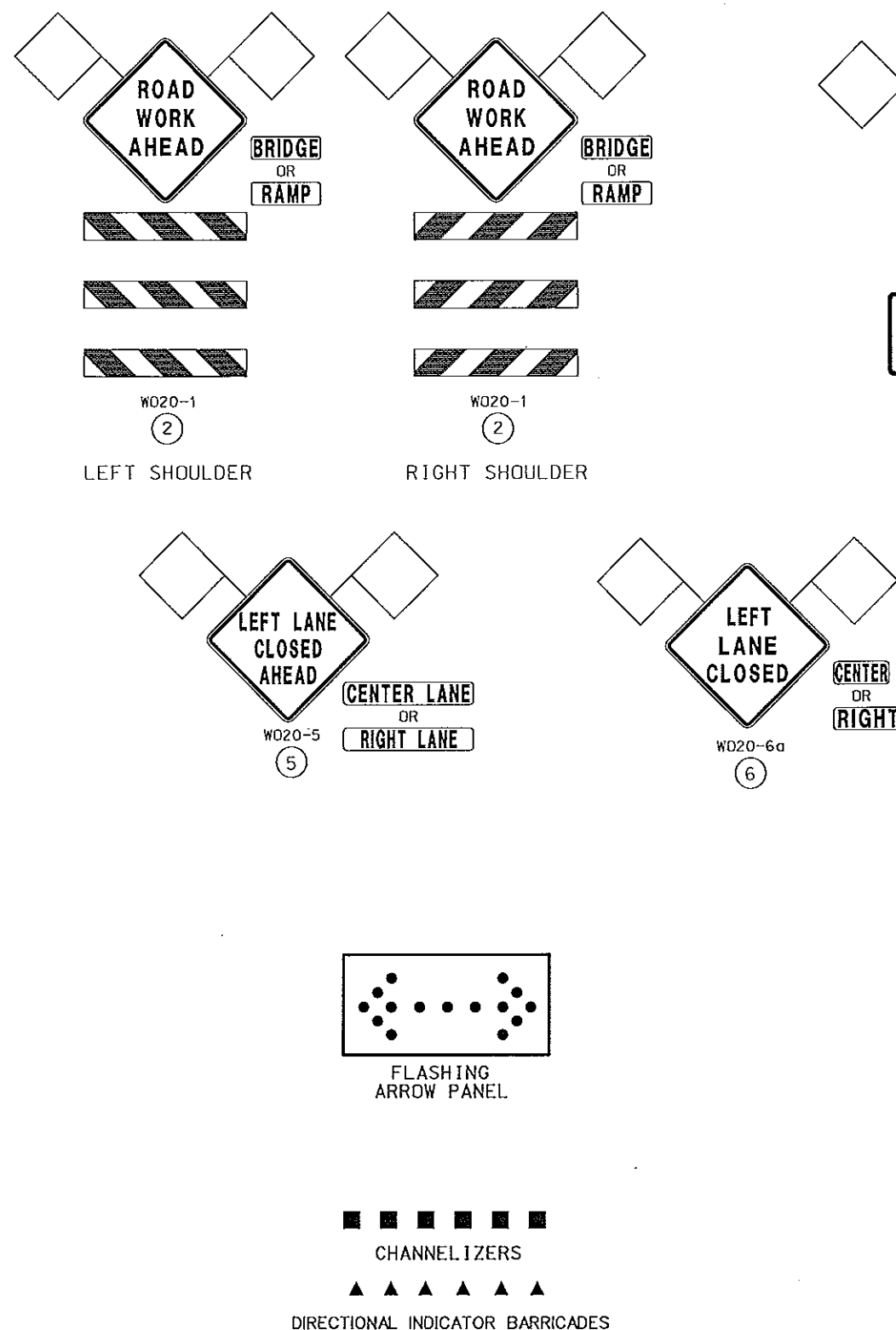


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CULVERT SECTIONS

SHEET 1 OF 2





SHEET 1 OF 1

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