

Job No.: JSL0005
Route: Various
County: Various

JOB SPECIAL PROVISIONS TABLE OF CONTENTS (ROADWAY)

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

A.	General - Federal JSP-09-02J	1
B.	Contract Liquidated Damages JSP-13-01C	1
C.	Work Zone Traffic Management JSP-02-06N	2
D.	Emergency Provisions and Incident Management JSP-90-11A	8
E.	Project Contact for Contractor/Bidder Questions JSP-96-05	8
F.	Supplemental Revisions JSP-18-01AA	9
G.	Utilities	17
H.	Pavement Marking Construction Requirements	18
I.	Fixed Price/Variable Scope	18
J.	Bonds	20
K.	Airport Requirements JSP-15-09	21
L.	Coordination with Other Projects	21
M.	Lump Sum Temporary Traffic Control JSP-22-01A	22
N.	Special Consideration of Change Orders and Value Engineering JSP-21-07	23
O.	Contractor Quality Control NJSP-15-42	24
P.	Protection Of Missouri Eastern Railroad Facilities and Traffic	26
Q.	Special Provisions for Protection of Terminal Railroad Association of St. Louis Railway Interests	37
R.	Special Provisions for Protection of Bi-State Development (Metro) Interests	38
S.	Lane Reduction Arrow	42

	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65102 Phone 1-888-275-6636
	If a seal is present on this sheet, JSP's have been electronically sealed and dated.
	JOB NUMBER: JSL0005 VARIOUS COUNTIES, MO DATE PREPARED: October 30, 2023
	ADDENDUM DATE:
Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: All	

JOB
SPECIAL PROVISION

A. General - Federal JSP-09-02J

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

1.1 This contract requires payment of the prevailing hourly rate of wages for each craft or type of work required to execute the contract as determined by the Missouri Department of Labor and Industrial Relations and requires adherence to a schedule of minimum wages as determined by the United States Department of Labor. For work performed anywhere on this project, the contractor and the contractor's subcontractors shall pay the higher of these two applicable wage rates. State Wage Rates, Information on the Required Federal Aid Provisions, and the current Federal Wage Rates are available on the Missouri Department of Transportation web page at www.modot.org under "Doing Business with MoDOT", "Contractor Resources". Effective Wage Rates will be posted 10 days prior to the applicable bid opening. These supplemental bidding documents have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

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

General Provisions & Supplemental Specifications

Supplemental Plans to July 2023 Missouri Standard Plans
For Highway Construction

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

B. Contract Liquidated Damages JSP-13-01C

1.0 Description. Liquidated Damages for failure or delay in completing the work on time for this contract shall be in accordance with Sec 108.8. The liquidated damages include separate amounts for road user costs and contract administrative costs incurred by the Commission.

2.0 Period of Performance. Prosecution of work is expected to begin on the date specified below in accordance with Sec 108.2. Regardless of when the work is begun on this contract, all work on all projects (job numbers) shall be completed on or before the Contract Completion date specified below. Completion by this date shall be in accordance with the requirements of Sec 108.7.1.

Job No.: JSL0005
Route: Various
County: Various

Notice to Proceed Date: March 11, 2024
Contract Completion Date: October 1, 2024

2.1 Calendar Days. The count of calendar days will begin on the date the contractor starts any construction operations on the project.

Job Number	Calendar Days	Daily Road User Cost
JSL0005	N/A	\$11,400

3.0 Liquidated Damages for Contract Administrative Costs. Should the contractor fail to complete the work on or before the contract completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged contract administrative liquidated damages in accordance with Sec 108.8 in the amount of **\$750** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the above specified contract completion date or calendar days.

4.0 Liquidated Damages for Road User Costs. Should the contractor fail to complete the work on or before the contract completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged road user costs in accordance with Sec 108.8 in the amount specified in Section 2.1 for each calendar day, or partial day thereof, that the work is not fully completed. These damages are in addition to the contract administrative damages and any other damages as specified elsewhere in this contract.

C. Work Zone Traffic Management JSP-02-06N

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.

1.1 Maintaining Work Zones and Work Zone Reviews. The Work Zone Specialist (WZS) shall maintain work zones in accordance with Sec 616.3.3 and as further stated herein. The WZS shall coordinate and implement any changes approved by the engineer. The WZS shall ensure all traffic control devices are maintained in accordance with Sec 616, the work zone is operated within the hours specified by the engineer, and will not deviate from the specified hours without prior approval of the engineer. The WZS is responsible to manage work zone delay in accordance with these project provisions. When requested by the engineer, the WZS shall submit a weekly report that includes a review of work zone operations for the week. The report shall identify any problems encountered and corrective actions taken. Work zones are subject to unannounced inspections by the engineer and other departmental staff to corroborate the validity of the WZS's review and may require immediate corrective measures and/or additional work zone monitoring.

1.2 Work Zone Deficiencies. Failure to make corrections on time may result in the engineer suspending work. The suspension will be non-excusable and non-compensable regardless if road user costs are being charged for closures.

2.0 Traffic Management Schedule.

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

2.2 The traffic management schedule shall conform to the limitations specified in Sec 616 regarding lane closures, traffic shifts, road closures and other width, height and weight restrictions.

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

2.4 In order to ensure minimal traffic interference, 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. The contractor shall immediately implement appropriate mitigation strategies whenever traffic congestion reaches an excess of **15 minutes** to prevent congestion from escalating beyond this delay threshold. If disruption of the traffic flow occurs and traffic is backed up in queues equal to or greater than the delay time threshold listed above, then the contractor shall immediately review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from reoccurring. Traffic delays may be monitored by physical presence on site or by utilizing real-time travel data through the work zone that generate text and/or email notifications where available. The engineer monitoring the work zone may also notify the contractor of delays that require prompt mitigation. The contractor may work with the engineer to determine what other alternative solutions or time periods would be acceptable. When a Work Zone Analysis Spreadsheet is provided, the contractor will find it in the electronic deliverables on MoDOT's Online Plans Room. The contractor may refer to the Work Zone Analysis Spreadsheet for detailed information on traffic delays.

2.5.1 Traffic Safety.

2.5.1.1 Recurring Congestion. Where traffic queues routinely extend to within 1000 feet of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet of the ROAD WORK AHEAD, or similar, sign on an undivided highway, the contractor shall extend the advance warning area, as approved by the engineer.

2.5.1.2 Non-Recurring Congestion. When traffic queues extend to within 1000 feet of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet of the ROAD WORK AHEAD, or similar, sign on an undivided highway infrequently, 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 and no more than 0.5 mile in advance of the end of the traffic queue on divided highways and no less than 500 feet and no more than 0.5 mile in advance of the end of the traffic queue on undivided highways.

2.6 Traffic Management Center (TMC) Coordination. The Work Zone Specialist (WZS) or their designee shall contact by phone the MoDOT Traffic Management Center (Guide TMC at #314-275-1513) within five minutes of a lane or ramp closure beginning and within five minutes of a lane or ramp closure being removed. The WZS shall make this phone call 24 hours a day, 365 days of the year since the MoDOT Traffic Management Centers are always staffed.

3.0 Work Hour Restrictions.

3.1 Except for emergency work, as determined by the engineer, and long term lane closures required by project phasing, all lanes shall be scheduled to be open to traffic during the five major holiday periods shown below, from 12:00 noon on the last working day preceding the holiday until 6:00 a.m. on the first working day subsequent to the holiday unless otherwise approved by the engineer.

Memorial Day
Labor Day
Thanksgiving
Christmas
New Year's Day

3.1.1 Independence Day. The lane restrictions specified in Section 3.1 shall also apply to Independence Day, except that the restricted periods shall be as follows:

When Independence Day falls on:	The Holiday is Observed on:	Halt Lane Closures beginning at:	Allow Lane Closures to resume at:
Sunday	Monday	Noon on Friday	6:00 a.m. on Tuesday
Monday	Monday	Noon on Friday	6:00 a.m. on Tuesday
Tuesday	Tuesday	Noon on Monday	6:00 a.m. on Wednesday
Wednesday	Wednesday	Noon on Tuesday	6:00 a.m. on Thursday
Thursday	Thursday	Noon on Wednesday	6:00 a.m. on Friday
Friday	Friday	Noon on Thursday	6:00 a.m. on Monday
Saturday	Friday	Noon on Thursday	6:00 a.m. on Monday

3.2 The contractor shall not perform any construction operation on the roadway, roadbed or active lanes, including the hauling of material within the project limits, during restricted periods, holiday periods or other special events specified in the contract documents.

3.3 Any work requiring a reduction in the number of through lanes of traffic shall be completed in the work hours below. The contractor shall be aware that traffic volume data indicates construction operations on the roadbed between the following hours will likely result in traffic queues greater than 15 minutes. Based on this, the contractor's operations will be restricted accordingly unless it can be successfully demonstrated the operations can be performed without a 15 minute queue in traffic. It shall be the responsibility of the engineer to determine if the above work hours may be modified. Working hours for evenings, weekends and holidays will be determined by the engineer. The contractor may work during the following listed hours:

MO-141 North of MO-30:

Single Lane Closures: 8:00 a.m. - 3:00 p.m. or 6:00 p.m. – 5:00 a.m.

Double Lane Closures: 6:00 p.m. to 5:00 a.m.

I-270:

Single Lane Closures: 8:00 p.m. - 5:00 a.m.
Double Lane Closures: 8:00 p.m. to 5:00 a.m.
Triple Lane Closures: 9:00 p.m. to 5:00 a.m.

MO-180:

No restrictions with single lane closures

I-55:

No restrictions with single lane closures

Danby Road:

No restrictions while flagging

Route TT:

No restrictions while flagging

I-55 Outer Road:

No restrictions while flagging

US-61:

No restrictions while flagging

MO-110 at US-67:

Flagging: 8:00 p.m. - 6:00 a.m.

Remainder of MO-110:

Flagging: 9:00 a.m. – 3:00 p.m. or 5:00 p.m. - 6:00 a.m.

US-67:

No restrictions with single lane closures

Route V:

No restrictions while flagging

Route 21:

No restrictions while flagging
No restrictions on partial ramp closures at Hayden Road
No restrictions with single lane closures except between MO-110 and Route B 8:00 p.m.
- 6:00 a.m.

Route BB:

No restrictions while flagging

Route A:

Single Lane Closures: 8:00 p.m. - 6:00 a.m.

MO-21 Outer Road:

Flagging: 9:00 am – 3:00 p.m. or 5:00 p.m. – 6:00 a.m.

Hayden Road:
No restrictions while flagging

Glade Chapel Road:
No restrictions while flagging

MO-185:
No restrictions while flagging

I-44:
Single Lane Closures: 8:00 p.m. - 6:00 a.m.
Double Lane Closures: 9:00 p.m. – 5:00 a.m.

Route D over I-44:
No restrictions while flagging

US-50 Ramp to I-44:
No restrictions while placing a partial lane closure

MO-100:
Flagging: 8:00 p.m. - 6:00 a.m.

MO-30:
Single Lane Closures: 8:00 a.m. - 3:00 p.m. and 6:00 p.m. - 5:00 a.m.

MO-141 South of MO-30:
Single Lane Closures: 8:00 p.m. - 6:00 a.m.

Big Bend over MO-141:
Single Lane Closures: 8:00 p.m. - 5:00 a.m.
Full Closure allowed from 8:00 p.m. - 5:00 a.m.

Meramec Station Road:
No restrictions while flagging

Ramps to and from Route AB on MO-141:
Full ramp closures from 8:00 p.m. - 5:00 a.m.

MO-340 over MO-141:
Single Lane Closures: 8:00 p.m. - 5:00 a.m.
Full Closure allowed from 8:00 p.m. - 5:00 a.m.

MO-340 Bridge A1618:
Single Lane Closures: 8:00 a.m. - 3:00 p.m. or 6:00 p.m. – 5:00 a.m.

I-270 Ramps to MO-364:
Single Lane Closures: 8:00 p.m. - 5:00 a.m.

Dorsett Rd:
Single Lane Closures: 8:00 a.m. – 3:00 p.m. or 8:00 p.m. - 6:00 a.m.

West Port Plaza:

No restrictions with single lane closures

MO-340 Bridges K0690 and A6648:

Single Lane Closures: 8:00 a.m. - 3:00 p.m. or 6:00 p.m. – 5:00 a.m.

MO-340 over I-270:

Single Lane Closures: 8:00 p.m. - 5:00 a.m.

Double Lane Closures: 8:00 p.m. - 5:00 a.m.

Full Closure allowed from 8:00 p.m. - 5:00 a.m.

MO-340 over Woodcrest Executive Dr:

Single Lane Closures: 8:00 p.m. - 5:00 a.m.

Double Lane Closures: 9:00 p.m. - 5:00 a.m.

MO-340 over Chesterfield Parkway:

Single Lane Closures: 8:00 p.m. - 5:00 a.m.

3.4 The contractor shall not alter the start time, ending time, or a reduction in the number of through lanes of traffic or ramp closures without advance notification and approval by the engineer. The only work zone operation approved to begin 30 minutes prior to a reduction in through traffic lanes or ramp closures is the installation of traffic control signs. Should lane closures be placed or remain in place, prior to the approved starting time or after the approved ending time, 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 construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delays, with a resulting cost to the traveling public. These damages are not easily computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of **\$1000 per 15 minute increment** for each 15 minutes that the temporary lane closures are in place and not open to traffic in excess of the limitation as specified elsewhere in this special provision. It shall be the responsibility of the engineer to determine the quantity of unapproved closure time.

3.5.1 The said liquidated damages specified will be assessed regardless if it would otherwise be charged as liquidated damages under the Missouri Standard Specification for Highway Construction, as amended elsewhere in this contract.

4.0 Detours and Lane Closures.

4.1 When a changeable message sign (CMS) is provided, the contractor shall use the CMS to notify motorists of future traffic disruption and possible traffic delays one week before traffic is shifted to a detour or prior to lane closures. The CMS shall be installed at a location as approved or directed by the engineer. If a CMS with Communication Interface is required, then the CMS shall be capable of communication prior to installation on right of way. All messages planned for use in the work zone shall be approved and authorized by the engineer or its designee prior to deployment. When permanent dynamic message signs (DMS) owned and operated by MoDOT are located near the project, they may also be used to provide warning and information for the work zone. Permanent DMS shall be operated by the TMC, and any messages planned for use on DMS shall be approved and authorized by the TMC at least 72 hours in advance of the work.

4.2 Periods during which the contractor will be allowed to interrupt traffic will be designated by the engineer.

5.0 Basis of Payment. No direct payment will be made to the contractor to recover the cost of equipment, labor, materials, or time required to fulfill the above provisions, unless specified elsewhere in the contract document. All authorized changes in the traffic control plan shall be provided for as specified in Sec 616.

D. Emergency Provisions and Incident Management JSP-90-11A

1.0 The contractor shall have communication equipment on the construction site or immediate access to other communication systems to request assistance from law enforcement or other emergency agencies for incident management. In case of traffic accidents or the need for law enforcement to direct or restore traffic flow through the job site, the contractor shall notify law enforcement 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 law enforcement services, the following agencies may also be notified for accident or emergency situation within the project limits.

Missouri Highway Patrol (636) 300-2800		
City of Festus	City of Bridgeton	City of Sullivan
Fire: (636) 937-7661	Fire: (314) 739-3118	Fire: (573) 468-6161
Police: (636) 937-5184	Police: (314) 739-7557	Police: (573) 468-8001
St. Louis County Police: (636) 529-8210		
Jefferson County Police: (636) 797-5000		
Franklin County Police: (636) 583-2567		
MoDOT TMC Operating Hours 24/7/365 Dispatch: (314) 275-1500		

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 law enforcement agency.

2.2 The contractor shall notify law 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 law 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.

E. Project Contact for Contractor/Bidder Questions JSP-96-05

All questions concerning this project during the bidding process shall be forwarded to the project contact listed below.

Job No.: JSL0005
Route: Various
County: Various

Stacey Smith, P.E., Project Contact
Transportation Project Manager
MoDOT St. Louis District
1590 Woodlake Drive
Chesterfield, MO 63017
Phone: (314) 453-5084
Email: Anastasia.Smith@modot.mo.gov

All questions concerning the bid document preparation can be directed to the Central Office – Design at (573) 751-2876.

F. Supplemental Revisions JSP-18-01AA

Compliance with [2 CFR 200.216 – Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment](#).

The Missouri Highways and Transportation Commission shall not enter into a contract (or extend or renew a contract) using federal funds to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as substantial or as critical technology as part of any system where the video surveillance and telecommunications equipment was produced by Huawei Technologies Company, ZTE Corporation, Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

Stormwater Compliance Requirements

1.0 Description. This provision requires the contractor to provide a Water Pollution Control Manager (WPCM) for any project that includes land disturbance on the project site and the total area of land disturbance, both on the project site, and all Off-site support areas, is one (1) acre or more. Regardless of the area of Off-site disturbance, if no land disturbance occurs on the project site, these provisions do not apply. When a WPCM is required, all sections within this provision shall be applicable, including assessment of specified Liquidated Damages for failure to correct Stormwater Deficiencies, as specified herein. This provision is in addition to any other stormwater, environmental, and land disturbance requirements specified elsewhere in the contract.

1.1 Definitions. The project site is defined as all areas designated on the plans, including temporary and permanent easements. The project site is equivalent to the “permitted site”, as defined in MoDOT’s State Operating Permit. An Off-site area is defined as any location off the project site the contractor utilizes for a dedicated project support function, such as, but not limited to, staging area, plant site, borrow area, or waste area.

1.2 Reporting of Off-Site Land Disturbance. If the project includes any planned land disturbance on the project site, prior to the start of work, the contractor shall submit a written report to the engineer that discloses all Off-site support areas where land disturbance is planned, the total acreage of anticipated land disturbance on those sites, and the land disturbance permit number(s). Upon request by the engineer, the contractor shall submit a copy of its land disturbance permit(s) for Off-site locations. Based on the total acreage of land

disturbance, both on and Off-site, the engineer shall determine if these Stormwater Compliance Requirements shall apply. The Contractor shall immediately report any changes to the planned area of Off-site land disturbance. The Contractor is responsible for obtaining its own separate land disturbance permit for Off-site areas.

2.0 Water Pollution Control Manager (WPCM). The Contractor shall designate a competent person to serve as the Water Pollution Control Manager (WPCM) for projects meeting the description in Section 1.0. The Contractor shall ensure the WPCM completes all duties listed in Section 2.1.

2.1 Duties of the WPCM:

- (a) Be familiar with the stormwater requirements including the current MoDOT State Operating Permit for construction stormwater discharges/land disturbance activities; MoDOT's statewide Stormwater Pollution Prevention Plan (SWPPP); the Corps of Engineers Section 404 Permit, when applicable; the project specific SWPPP, the Project's Erosion & Sediment Control Plan; all applicable special provisions, specifications, and standard drawings; and this provision;
- (b) Successfully complete the MoDOT Stormwater Training Course within the last 4 years. The MoDOT Stormwater Training is a free online course available at MoDOT.org;
- (c) Attend the Pre-Activity Meeting for Grading and Land Disturbance and all subsequent Weekly Meetings in which grading activities are discussed;
- (d) Oversee and ensure all work is performed in accordance with the Project-specific SWPPP and all updates thereto, or as designated by the engineer;
- (e) Review the project site for compliance with the Project SWPPP, as needed, from the start of any grading operations until final stabilization is achieved, and take necessary actions to correct any known deficiencies to prevent pollution of the waters of the state or adjacent property owners prior to the engineer's weekly inspections;
- (f) Review and acknowledge receipt of each MoDOT Inspection Report (Land Disturbance Inspection Record) for the Project within forty eight (48) hours of receiving the report and ensure that all Stormwater Deficiencies noted on the report are corrected as soon as possible, but no later than stated in Section 5.0.

3.0 Pre-Activity Meeting for Grading/Land Disturbance and Required Hold Point. A Pre-Activity meeting for grading/land disturbance shall be held prior to the start of any land disturbance operations. No land disturbance operations shall commence prior to the Pre-Activity meeting except work necessary to install perimeter controls and entrances. Discussion items at the pre-activity meeting shall include a review of the Project SWPPP, the planned order of grading operations, proposed areas of initial disturbance, identification of all necessary BMPs that shall be installed prior to commencement of grading operations, and any issues relating to compliance with the Stormwater requirements that could arise in the course of construction activity at the project.

3.1 Hold Point. Following the pre-activity meeting for grading/land disturbance and subsequent installation of the initial BMPs identified at the pre-activity meeting, a Hold Point shall occur prior to the start of any land disturbance operations to allow the engineer and WPCM

the time needed to perform an on-site review of the installation of the BMPs to ensure compliance with the SWPPP is met. Land disturbance operations shall not begin until authorization is given by the engineer.

4.0 Inspection Reports. Weekly and post run-off inspections will be performed by the engineer and each Inspection Report (Land Disturbance Inspection Record) will be entered into a web-based Stormwater Compliance database. The WPCM will be granted access to this database and shall promptly review all reports, including any noted deficiencies, and shall acknowledge receipt of the report as required in Section 2.1 (f.).

5.0 Stormwater Deficiency Corrections. All stormwater deficiencies identified in the Inspection Report shall be corrected by the contractor within 7 days of the inspection date or any extended period granted by the engineer when weather or field conditions prohibit the corrective work. If the contractor does not initiate corrective measures within 5 calendar days of the inspection date or any extended period granted by the engineer, all work shall cease on the project except for work to correct these deficiencies, unless otherwise allowed by the engineer. All impact costs related to this halting of work, including, but not limited to stand-by time for equipment, shall be borne by the Contractor. Work shall not resume until the engineer approves the corrective work.

5.1 Liquidated Damages. If the Contractor fails to complete the correction of all Stormwater Deficiencies listed on the MoDOT Inspection Report within the specified time limit, the Commission will be damaged in various ways, including but not limited to, potential liability, required mitigation, environmental clean-up, fines, and penalties. These damages are not reasonably capable of being computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of \$2,000 per day for failure to correct one or more of the Stormwater Deficiencies listed on the Inspection Report within the specified time limit. In addition to the stipulated damages, the stoppage of work shall remain in effect until all corrections are complete.

6.0 Basis of Payment. No direct payment will be made for compliance with this provision.

Anti-Discrimination Against Israel Certification

By signing this contract, the Company certifies it is not currently engaged in and shall not, for the duration of the contract, engage in a boycott of goods or services from the State of Israel, companies doing business in or with Israel or authorized by, licensed by, or organized under the laws of the State of Israel, or persons or entities doing business in the State of Israel as defined by Section 34.600 RSMo. This certification shall not apply to contracts with a total potential value of less than One Hundred Thousand Dollars (\$100,000) or to contractors with fewer than ten (10) employees.

Ground Tire Rubber (GTR) Dry Process Modification of Bituminous Pavement Material

1.0 Description. This work shall consist of the dry process of adding ground tire rubber (GTR) to modify bituminous material to be used in highway construction. Existing GTR requirements in Section 1015 pertain to the wet process method of GTR modification that blends GTR with the asphalt binder (terminal blending or blending at HMA plant). The following requirements shall govern for dry process GTR modification. The dry process method adds GTR as a fine

aggregate or mineral filler during mix production. All GTR modified asphalt mixtures shall be in accordance with Secs 401, 402, or 403 as specified in the contract; except as revised by this specification.

2.0 Materials. The contractor shall furnish a manufacturer's certification to the engineer for each shipment of GTR furnished stating the name of the manufacturer, the chemical composition, workability additives, and certifying that the GTR supplied is in accordance with this specification.

2.1 Product Approval. The GTR product shall contain a Trans-Polyoctenamer (TOR) added at 4.5 % of the weight of the crumb rubber or an engineered crumb rubber (ECR) workability additive that has proven performance in Missouri. Other GTR additives shall be demonstrated and proven prior to use such as a five-year field performance history in other states or performance on a federal or state-sanctioned accelerated loading facility.

2.2 General. GTR shall be produced from processing automobile or truck tires by ambient or cryogenic grinding methods. Heavy equipment tires, uncured or de-vulcanized rubber will not be permitted. GTR shall also meet the following material requirements:

Table 1 – GTR Material Properties		
Property	Test Method	Criteria
Specific Gravity	ASTM D1817	1.02 to 1.20
Metal Contaminates	ASTM D5603	$\leq 0.01\%$
Fiber Content	ASTM D5603	$\leq 0.5\%$
Moisture Content	ASTM D1509	$\leq 1.0\%^*$
Mineral Filler	AASHTO M17	$\leq 4.0\%$

*Moisture content of the GTR shall not cause foaming when combined with asphalt binder and aggregate during mix production

2.3 Gradation. The GTR material prior to TOR or ECR workability additives shall meet the following gradation and shall be tested in accordance with ASTM D5603 and ASTM D5644.

Table 2 – GTR Gradation	
Sieve	Percent Passing by Weight
No. 20	100
No. 30	98-100
No. 40	50-70
No. 100	5-15

3.0 Delivery, Storage, and Handling. The GTR shall be supplied in moisture-proof packaging or other appropriate bulk containers. GTR shall be stored in a dry location protected from rain before use. Each bag or container shall be properly labeled with the manufacturer's designation for the GTR and specific type, mesh size, weight and manufacturer's batch or Lot designation.

4.0 Feeder System. Dry Process GTR shall be controlled with a feeder system using a proportioning device that is accurate to within ± 3 percent of the amount required. The system

shall automatically adjust the feed rate to always maintain the material within this tolerance and shall have a convenient and accurate means of calibration. The system shall provide in-process monitoring, consisting of either a digital display of output or a printout of feed rate, in pounds per minute, to verify feed rate. The supply system shall report the feed in 1-pound increments using load cells that will enable the user to monitor the depletion of the GTR. Monitoring the system volumetrically will not be allowed. The feeder shall interlock with the aggregate weight system and asphalt binder pump to maintain correct mixture proportions at all production rates.

Flow indicators or sensing devices for the system shall be interlocked with the plant controls to interrupt mixture production if GTR introduction rate is not within ± 3 percent. This interlock will immediately notify the operator if GTR introduction rate exceeds introduction tolerances. All plant production will cease if the introduction rate is not brought back within tolerance after 30 seconds. When the interlock system interrupts production and the plant has to be restarted, upon restarting operations; the modifier system shall run until a uniform feed can be observed on the output display. All mix produced prior to obtaining a uniform feed shall be rejected.

4.1 Batch Plants. GTR shall be added to aggregate in the weigh hopper. Mixing times shall be increased per GTR manufacturer recommendations.

4.2 Drum Plants. The feeder system shall add GTR to aggregate and liquid binder during mixing and provide sufficient mixing time to produce a uniform mixture. The feeder system shall ensure GTR does not become entrained in the exhaust system of the drier or plant and is not exposed to the drier flame at any point after introduction.

5.0 Testing During Mixture Production. Testing of asphalt mixes containing GTR shall not begin until at least 30 minutes after production or per additive supplier's recommendation.

6.0 Construction Requirements. Mixes containing GTR shall have a target mixing temperature of 325 F or as directed by the GTR additive supplier. The additive supplier's recommendations shall be followed to allow for GTR binder absorption/reaction. This may include holding mix in the silo to allow time for binder to absorb into the GTR. Rolling operations may need to be modified.

7.0 Mix Design Test Method Modification. A formal mixing procedure from the additive supplier shall be provided to the contractor and engineer that details the proper sample preparation, including blending GTR with the binder or other additives. Samples shall be prepared and fabricated in accordance with this procedure by the engineer and contractor throughout the duration of the project.

8.0 Mix design Volumetrics. Mix design volumetric equations shall be modified as follows:

8.1 Additional virgin binder added to offset GTR absorption of binder shall be counted as part of the mix virgin binder

8.2 GTR shall be included as part of the aggregate when calculating VMA of the mix.

8.2.1 GTR SPG shall be 1.15

8.3 Mix G_{sb} used to determine VMA shall be calculated as follows:

$$G_{sb(JMF)} = \frac{(100 - P_{bmv})}{\left(\frac{P_s}{G_{sb}} + \frac{P_{GTR}}{G_{GTR}}\right)}$$

where:

$G_{sb(JMF)}$ = bulk specific gravity of the combined aggregate including GTR

P_{bmv} = percent virgin binder by total mixture weight

P_s = percent aggregate by total mixture weight (not including GTR)

P_{GTR} = percent GTR by total mixture weight

G_{sb} = bulk specific gravity of the combined aggregate (not including GTR)

G_{GTR} = GTR specific gravity

8.4 G_{se} shall be calculated as follows:

$$G_{se} = \frac{(100 - P_b - P_{GTR})}{\left(\frac{100}{G_{mm}} - \frac{P_b}{G_b} - \frac{P_{GTR}}{G_{GTR}}\right)}$$

8.5 P_{be} shall be calculated as follows:

$$P_{be} = P_b - \frac{P_{ba}}{100} * (P_s + P_{GTR})$$

9.0 Minimum GTR Amount. The minimum dosage rate for GTR shall be 5 % by weight of total binder for an acceptable one bump grade or 10 % by weight of total binder for an acceptable two bump grade as detailed in the following table. Varying percentage blends of GTR and approved additives may be used as approved by the engineer with proven performance and meeting the specified requirements of the contract grade.

Contract Binder Grade	Percent Effective Virgin Binder Replacement Limits	Required Virgin Binder Grade	Minimum GTR Dosage Rate
PG 76-22	0 - 20	PG 70-22	5 %
		PG 64-22	10 %
PG 70-22	0 - 30	PG 64-22	5 %
		PG 58-28	10 %
PG 64-22	0 - 40*	PG 58-28	5 %
		PG 52-34	10 %
PG 58-28	0 - 40*	PG 52-34	5 %
		PG 46-34	10 %

* Reclaimed Asphalt Shingles (RAS) may be used when the contract grade is PG 64-22 or PG 58-28. RAS replacement shall follow the 2 x RAS criteria when calculating percent effective binder replacement in accordance Sec 401.

Delete Sec 403.19.2 and substitute the following:

403.19.2 Lots. The lot size shall be designated in the contractor's QC Plan. Each lot shall contain no less than four sublots and the maximum sublot size shall be 1,000 tons. The maximum lot size shall be 4,000 tons for determination of pay factors. Sublots from incomplete lots shall be combined with the previous complete lot for determination of pay factors. When no previous lot exists, the mixture shall be treated in accordance with [Sec 403.23.7.4.1](#). A new lot shall begin when the asphalt content of a mixture is adjusted in accordance with [Sec 403.11](#).

Delete Sec 106.9 and substitute the following:

106.9 Buy America Requirements

Buy America Requirements are waived if the total amount of Federal financial assistance applied to the project, through awards or subawards, is below \$500,000.

106.9.1 Buy America Requirements for Iron and Steel.

On all federal-aid projects, the contractor's attention is directed to Title 23 CFR 635.410 *Buy America Requirements*. Where steel or iron products are to be permanently incorporated into the contract work, steel and iron material shall be manufactured, from the initial melting stage through the application of coatings, in the USA except for "minimal use" as described herein. Furthermore, any coating process of the steel or iron shall be performed in the USA. Under a general waiver from FHWA the use of pig iron and processed, pelletized, and reduced iron ore manufactured outside of the USA will be permitted in the domestic manufacturing process for steel or iron material.

106.9.2 Buy America Requirements for Iron and Steel for Manufactured items.

A manufactured item will be considered iron and steel if it is "predominantly" iron or steel. Predominantly iron or steel means that the cost of iron or steel content of a product is more than 50 percent of the total cost of all its components.

106.9.2 Any sources other than the USA as defined will be considered foreign. The required domestic manufacturing process shall include formation of ingots and any subsequent process. Coatings shall include any surface finish that protects or adds value to the product.

106.9.3 "Minimal use" of foreign steel, iron or coating processes will be permitted, provided the cost of such products does not exceed 1/10 of one percent (0.1 percent) of the total contract cost or \$2,500.00, whichever is greater. If foreign steel, iron, or coating processes are used, invoices to document the cost of the foreign portion, as delivered to the project, shall be provided and the engineer's written approval obtained prior to placing the material in any work.

106.9.4 Buy America requirements include a step certification for all fabrication processes of all steel or iron materials that are accepted per Sec 1000. The AASHTO Product Evaluation and Audit Solutions compliance program verifies that all steel and iron products fabrication processes conform to 23 CFR 635.410 Buy America Requirements and is an acceptable standard per 23 CFR 635.410(d). AASHTO Product Evaluation and Audit Solutions compliant suppliers will not be required to submit step certification documentation with the shipment for some selected steel and iron materials. The AASHTO Product Evaluation and Audit Solutions compliant supplier shall maintain the step certification documentation on file and shall provide this documentation to the engineer upon request.

106.9.4.1 Items designated as Category 1 will consist of steel girders, piling, and reinforcing steel installed on site. Category 1 items require supporting documentation prior to incorporation

into the project showing all steps of manufacturing, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements. This includes the Mill Test Report from the original producing steel mill and certifications documenting the manufacturing process for all subsequent fabrication, including coatings. The certification shall include language that certifies the following. That all steel and iron materials permanently incorporated in this project was procured and processed domestically and all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410.

106.9.4.2 Items designated as Category 2 will include all other steel or iron products not in Category 1 and permanently incorporated in the project. Category 2 items shall consist of, but not be limited to items such as fencing, guardrail, signing, lighting and signal supports. The prime contractor is required to submit a material of origin form certification prior to incorporation into the project from the fabricator for each item that the product is domestic. The Certificate of Materials Origin form (link to certificate form) from the fabricator must show all steps of manufacturing, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements and be signed by a fabricator representative. The engineer reserves the right to request additional information and documentation to verify that all Buy America requirements have been satisfied. These documents shall be submitted upon request by the engineer and retained for a period of 3 years after the last reimbursement of the material.

106.9.4.3 Any minor miscellaneous steel or iron items that are not included in the materials specifications shall be certified by the prime contractor as being procured domestically. Examples of these items would be bolts for sign posts, anchorage inserts, etc. The certification shall read "I certify that all steel and iron materials permanently incorporated in this project during all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements procured and processed domestically in accordance with CFR Title 23 Section 635.410 Buy America Requirements. Any foreign steel used was submitted and accepted under minor usage". The certification shall be signed by an authorized representative of the prime contractor.

106.9.5 When permitted in the contract, alternate bids may be submitted for foreign steel and iron products. The award of the contract when alternate bids are permitted will be based on the lowest total bid of the contract based on furnishing domestic steel or iron products or 125 percent of the lowest total bid based on furnishing foreign steel or iron products. If foreign steel or iron products are awarded the contract, domestic steel or iron products may be used; however, payment will be at the contract unit price for foreign steel or iron products.

106.9.6 Buy America Requirements for Construction Materials other than iron and steel materials. Construction materials means articles, materials, or supplies that consist of only one of the items listed. Minor additions of articles, materials, supplies, or binding agents to a construction material do not change the categorization of the construction material. Upon request by the engineer, the contractor shall submit a domestic certification for all construction materials listed that are incorporated into the project.

- (a) Non-ferrous metals
- (b) Plastic and Polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables)
- (c) Glass (including optic glass)
- (d) Fiber optic cable (including drop cable)

- (e) Optical fiber
- (f) Lumber
- (g) Engineered wood
- (h) Drywall

106.9.6.1 Minimal Use allowance for Construction Materials other than iron or steel.

"The total value of the non-compliant products is no more than the lesser of \$1,000,000 or 5% of total applicable costs for the project." The contractor shall submit to the engineer any non-domestic materials and their total material cost to the engineer. The contractor and the engineer will both track these totals to assure that the minimal usage allowance is not exceeded.

106.9.7 Buy America Requirements for Manufactured Products.

Manufactured products means:

- (a) Articles, materials, or supplies that have been:
 - (i) Processed into a specific form and shape; or
 - (ii) Combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies.
- (b) If an item is classified as an iron or steel product, a construction material, or a section 70917(c) material under § 184.4(e) and the definitions set forth in this section, then it is not a manufactured product. However, an article, material, or supply classified as a manufactured product under § 184.4(e) and paragraph (1) of this definition may include components that are construction materials, iron or steel products, or section 70917(c) materials.

106.9.7.1 Manufactured products are exempt from Buy America requirements. To qualify as a manufactured product, items that consist of two or more of the listed construction materials that have been combined together through a manufacturing process, and items that include at least one of the listed materials combined with a material that is not listed through a manufacturing process, should be treated as manufactured products, rather than as construction materials.

106.9.7.2 Manufactured items are covered under a general waiver to exclude them from Buy America Requirements. To qualify for the exemption the components must comprise of 55% of the value of materials in the item. The final assembly must also be performed domestically.

G. Utilities

1.0 The Contractor shall be aware there are numerous utilities present along the routes in this contract. Utility locates were not performed during the design phase of the project; therefore, the extent of conflicts with utilities are unknown. It is the inherent risk of the work under this contract that the contractor may encounter these utilities above in the vicinity of any given job order which may interfere with their operations. The contractor expressly acknowledges and assumes this risk even though the nature and extent is unknown to both the contractor and the Commission at the time of bidding and award of the contract.

2.0 Ameren: The contractor shall be aware of the Ameren overhead lines within the limits of multiple bridge rehabs. These include Bridges A6485, A7743, A5856, A8116, and K0690.

2.1 Ameren Overhead Power lines. Contractors and their employees working in the vicinity of Ameren's power lines will adhere to the Missouri Overhead Power Line Act as set forth in Missouri Revised Statutes section 319, particularly the safety requirements in sections 319.075 through 319.090.

2.2 The contractor shall discuss the planned work as it relates to any energized power lines with Ameren Missouri and coordinate with Ameren Missouri for the installation of any insulation covers over the lines and/or any other designated requirements. The contractor is advised to contact Ameren Missouri regarding the current policy and so the anticipated cost to the contractor can be estimated and when payment is required. The Contractor shall contact Ameren Missouri at least two weeks in advance of when construction work is scheduled to begin to request covers to be placed at a given location. The contractor will need to contact Ameren at (314) 992-6619 to coordinate this work with their schedule. **The contractor is responsible for any charges from Ameren Missouri for this provision and payment will be directly to Ameren Missouri.**

3.0 If utility facilities are discovered the contractor shall contact the MoDOT Area Utility Coordinator, Chris Duffner at (314) 624-5383. The engineer will determine whether relocation of the utility is necessary to accommodate construction or if the work can be installed in accordance with Missouri Standard Plans for Highway Construction for the item of work specified.

4.0 Basis of Payment: No direct payment shall be made for compliance with this provision.

H. Pavement Marking Construction Requirements

The Contractor shall be required to provide the following project efforts and miscellaneous project requirements for the successful completion of this project:

1. The Contractor shall remove all durable intersection pavement marking prior to the application of the concrete crack filler. All long line striping that is thermoplastic may be used in place.
2. The Contractor shall prepare the surface by removing all surface concrete crack filler before placing thermoplastic.

I. Fixed Price/Variable Scope

1.0 Description. The scope of this project is to provide concrete crack filler and striping at the following locations.

1.1 The following locations are included in the initial bid quantities:

- a) A81151 (0.027 miles): MO-141 over the Missouri Eastern Railroad
- b) A12423 (0.070 miles): I-270 over the Missouri Eastern Railroad and Fee Fee Creek
- c) A46961 (0.007 miles): MO-180 over the Terminal Railroad
- d) A49671 (0.040 miles): MO-180 over the Metrolink
- e) A81181 (0.165 miles): MO-141 over Creve Coeur Creek
- f) A81171 (0.113 miles): MO-141 over Little Creve Coeur Creek

- g) A81161 (0.143 miles): MO-141 over Water Works Drive and Creve Coeur Creek
- h) A19891 (0.048 miles): Eastbound and Westbound Danby Road over I-55
- i) A19903 (0.054 miles): Eastbound and Westbound Route TT over I-55
- j) A19918 (0.039 miles): Northbound I-55 over Isle Dubois Creek
- k) A19917 (0.039 miles): Southbound I-55 over Isle Dubois Creek
- l) A20541 (0.026 miles): I-55 Outer Road over Isle Dubois Creek
- m) A77431 (0.024 miles): US-61 over Muddy Creek
- n) A51171 (0.064 miles): US-61 over Platin Creek
- o) A25932 (0.042 miles): MO-110 over US-67
- p) A67561 (0.048 miles): Route V over US-67
- q) A68101 (0.038 miles): Route V over Valles Mines Creek
- r) A22742 (0.026 miles): Route V over Joachim Creek
- s) A22731 (0.019 miles): Route V over McMullen Branch
- t) A34092 (0.042 miles): MO-110 over Fischer Creek
- u) A36151 (0.031 miles): MO-110 over Ball Creek
- v) A43141 (0.060 miles): MO-21 over Big River
- w) A44221 (0.038 miles): MO-21 over Cotter Creek
- x) A64871 (0.042 miles): Northbound MO-21 over Route BB
- y) A64881 (0.042 miles): Southbound MO-21 over Route BB
- z) A64861 (0.066 miles): Route A over MO-21
- aa) A67791 (0.072 miles): Northbound MO-21 over Sandy Creek
- bb) A64831 (0.024 miles): Northbound MO-21 over Hayden Creek
- cc) A67811 (0.044 miles): MO-21 Northbound to Hayden Rd over Sandy Creek
- dd) A67801 (0.072 miles): Southbound MO-21 over Sandy Creek
- ee) A64841 (0.024 miles): Southbound MO-21 over Hayden Creek
- ff) A67821 (0.044 miles): Hayden Road to MO-21 Southbound over Sandy Creek
- gg) A64851 (0.022 miles): Hayden Road over Sandy Creek
- hh) A67831 (0.040 miles): MO-21 OR over Sandy Creek
- ii) A64821 (0.023 miles): Glade Chapel Road over MO-21
- jj) A60561 (0.091 miles): MO-21 Northbound over Klable Road
- kk) A60571 (0.091 miles): MO-21 Southbound over Klable Road
- ll) A72781 (0.070 miles): MO-185 over I-44
- mm) A20472 (0.047 miles): Route D over I-44
- nn) L05474 (0.027 miles): I-44 Eastbound over Winsel Creek
- oo) A74441 (0.027 miles): I-44 Westbound over Winsel Creek
- pp) A86031 (0.023 miles): I-44 Eastbound over US-50
- qq) L08655 (0.061 miles): I-44 Eastbound over Bourbeuse River
- rr) K05245 (0.058 miles): I-44 Westbound over Bourbeuse River
- ss) L08665 (0.052 miles): I-44 Eastbound over Route O and Pin Oak Creek
- tt) L08666 (0.052 miles): I-44 Westbound over Route O and Pin Oak Creek
- uu) A51131 (0.046 miles): MO-100 Connector over I-44
- vv) A68791 (0.032 miles): MO-100 over I-44
- ww) A22174 (0.041 miles): MO-30 Westbound over MO-141
- xx) A22173 (0.041 miles): MO-30 Eastbound over MO-141

1.2 The following locations, in priority order, are included as the variable scope portion of the contract:

- a) A26823 (0.033 miles): MO-141 over Fenton Creek
- b) A26833 (0.036 miles): MO-141 Southbound over Saline Creek
- c) A26834 (0.036 miles): MO-141 Northbound over Saline Creek
- d) A26843 (0.027 miles): MO-141 Southbound over Sugar Creek

- e) A26844 (0.027 miles): MO-141 Northbound over Sugar Creek
- f) A26722 (0.053 miles): MO-141 over MO-21
- g) A58561 (0.030 miles): Big Bend Road over MO-141
- h) Z07783 (0.010 miles): Meramec Station Road over Grand Glaze Creek
- i) A78111 (0.106 miles): Ramp from Route AB to MO-141 Northbound over Creve Coeur Creek
- j) A78121 (0.103 miles): MO-141 over Creve Coeur Creek
- k) A78131 (0.106 miles): Ramp from MO-141 Northbound to Route AB over Creve Coeur Creek
- l) A78151 (0.027 miles): MO-340 over MO-141
- m) A16184 (0.035 miles): MO-340 over Creve Coeur Creek
- n) A76591 (0.039 miles): I-270 over Dorsett Road
- o) A78771 (0.039 miles): Ramp from I-270 Northbound to MO-364 Westbound over I-270
- p) A78761 (0.040 miles): Ramp from I-270 Northbound to MO-364 Westbound over Route D/MO-364
- q) A85861 (0.032 miles): Dorsett Road/Midland Blvd over US-67
- r) A35472 (0.050 miles): West port Plaza Drive over Route D
- s) K06903 (0.023 miles): MO-340 over River Des Peres
- t) A66481 (0.057 miles): MO-340 over US-67
- u) A59301 (0.037 miles): MO-340 over I-270
- v) A59321 (0.022 miles): MO-340 over Woodcrest Executive
- w) A46581 (0.042 miles): MO-340 Eastbound over Chesterfield Parkway West
- x) A46591 (0.0042 miles): MO-340 Westbound over Chesterfield Parkway West

2.0 Fixed Budget. The above locations are listed in priority order. The Commission has a \$1,500,000 maximum fixed budget for this project. The contractor shall begin installation on the first location and continue down the list completing as many whole locations as possible within the fixed budget. It is the responsibility of the contractor to not exceed the budget listed above. Any contract costs incurred above this amount will be the responsibility of the contractor, unless approved by change order.

3.0 Basis of Award. The award of the contract will be based on the lowest responsible bidder based on their total bid for the itemized quantities for the locations in Section 1.1 of this JSP in the proposal and unit price bid.

4.0 Variable Scope. Contract quantities will be adjusted after the award of the contract as necessary to match the budgeted amount stated in Section 2.0 of this JSP. In the event there is additional scope added to the contract as described in this Fixed Price/Variable Scope JSP Section 1.2, an extension of contract time will NOT be granted. There will be no adjustment made to the Mobilization and Traffic Control pay items resulting to any change orders for variable scope.

J. Bonds

1.0 The amount of the Bid Bond shall be 5% of the anticipated budget for this project.

2.0 The amount of the Performance Bond shall be 100% of the anticipated budget for this project.

K. Airport Requirements JSP-15-09

1.0 Description. The project is located near a public use airport or heliport or is more than 200 feet above existing ground level, which requires adherence to Federal Aviation Regulation Part 77 (FAA Reg Part 77). "Near" to a public use airport or heliport is defined as follows:

20,000 feet (4 miles) from an airport with a runway length of at least 3,200 feet
10,000 feet (2 miles) from an airport with runway length less than 3,200 feet
5,000 feet (1 mile) from a public use heliport

2.0 The maximum height of the improvement and the equipment operating while performing the improvements was assumed to be 15 feet above the current travelway during the process of evaluating the project for compliance with FAA Reg Part 77.

2.1 If the contractor's height of equipment or if the improvement itself is beyond the assumed height as indicated in Sec 2.0, the contractor will work with the resident engineer to fill out the Form 7460-1, or revise the original Form 7460-1 based upon the proposed height and resubmit, if necessary, for a determination by FAA on compliance with FAA Reg Part 77. Further information can be found in MoDOT's Engineering Policy Guide 235.8 Airports. If the Form 7460-1 must be filed, the associated work shall not be performed prior to the FAA determination, which could take up to 45 days.

2.2 If the contractor's height of equipment and the improvement itself is below the assumed height as indicated in Sec 2.0, no further action is necessary to fulfill the requirements set forth in FAA Reg Part 77.

3.0 Basis of Payment. There will be no direct payment for any work associated with this provision. Contract time extension will be given for the time necessary to obtain or revise the FAA permit. Any delays or costs incurred in obtaining the revised permit will be noncompensable.

L. Coordination with Other Projects

1.0 Description. The contractor shall coordinate traffic management between the following projects within or near the projects limits:

MoDOT Job Number J6I3526B Capacity improvements on I-55 from Route M to South of Route 67
MoDOT Job Number J6P3274 Resurfacing and ADA improvements on Route 100 from I-270 to Baxter Rd.

1.1 This list of projects is not all inclusive. The contractor shall be aware that there may be other projects including, but not limited to, utility, St. Louis County, Cities, private, MoDOT, maintenance, permit, or other projects that may impact construction or traffic control in the vicinity of the 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.

2.0 No direct payment will be made to the contractor to recover the cost of equipment, labor, materials or time required to fulfill the above provisions, unless specified elsewhere in the contract document.

M. Lump Sum Temporary Traffic Control JSP-22-01A

1.0 Delete Sec 616.11 and insert the following:

616.11 Method of Measurement. Measurement for relocation of post-mounted signs will be made to the nearest square foot of sign area only for the signs designated for payment on the plans. All other sign relocations shall be incidental. Measurement for construction signs will be made to the nearest square foot of sign area. Measurement will be made per each for each of the temporary traffic control items provided in the contract.

616.11.1 Lump Sum Temporary Traffic Control. No measurement will be made for temporary traffic control items grouped and designated to be paid per lump sum. The list of lump sum items provided in the plans or contract is considered an approximation and may be subject to change based on field conditions. This is not a complete list and may exclude quantities for duplicate work zone packages used in simultaneous operations. The contractor shall provide all traffic control devices required to execute the provided traffic control plans for each applicable operation, stage, or phase. No measurement will be made for any additional signs or devices needed except for changes in the traffic control plan directed by the engineer.

2.0 Delete Sec 616.12 and insert the following:

616.12 Basis of Payment. All temporary traffic control devices authorized for installation by the engineer will be paid for at the contract unit price for each of the pay items included in the contract. Whether the devices are paid individually, or per lump sum, no direct payment will be made for the following:

- (a) Incidental items necessary to complete the work, unless specifically provided as a pay item in the contract.
- (b) Installing, operating, maintaining, cleaning, repairing, removing, or replacing traffic control devices.
- (c) Covering and uncovering existing signs and other traffic control devices.
- (d) Relocating temporary traffic control devices, including permanent traffic control devices temporarily relocated, unless specifically included as a pay item in the contract.
- (e) Worker apparel.
- (f) Flaggers, AFADs, PFDs, pilot vehicles, and appurtenances at flagging stations.
- (g) Furnishing, installing, operating, maintaining, and removing construction-related vehicle and equipment lighting.
- (h) Construction and removal of temporary equipment crossovers, including restoring pre-existing crossovers.

- (i) Provide and maintaining work zone lighting and work area lighting.

616.12.1 Lump Sum Temporary Traffic Control. Traffic control items grouped together in the contract or plans for lump sum payment shall be paid incrementally per Sec 616.12.1.1. Alternately, upon request from the contractor, the engineer will consider a modified payment schedule that more accurately reflects completion of traffic control work. No payment will be made for any additional signs or devices needed except for changes in the traffic control plan directed by the engineer. Additional items directed by the engineer will be paid for in accordance with Sec 109.4. No adjustment to the price will be made for overruns or underruns of other work or for added work that is completed within existing work zones.

616.12.1.1 Partial payments. For purposes of determining partial payments, the original contract amount will be the total dollar value of all original contract line items less the price for Lump Sum Temporary Traffic Control (LSTTC). If the contract includes multiple projects, this determination will be made for each project. Partial payments will be made as follows:

- (a) The first payment will be made when five percent of the original contract amount is earned. The payment will be 50 percent of the price for LSTTC, or five percent of the original contract amount, whichever is less.
- (b) The second payment will be made when 50 percent of the original contract amount is earned. The payment will be 25 percent of the price for LSTTC, or 2.5 percent of the original contract amount, whichever is less.
- (c) The third payment will be made when 75 percent of the original contract amount is earned. The payment will be 20 percent of the price for LSTTC, or two percent of the original contract amount, whichever is less.
- (d) Payment for the remaining balance due for LSTTC will be made when the contract has been accepted for maintenance or earlier as approved by the engineer.

616.12.1.2 Temporary traffic control will be paid for at the contract lump sum price for Item:

Item No.	Unit	Description
616-99.01	Lump Sum	Misc. Lump Sum Temporary Traffic Control

N. Special Consideration of Change Orders and Value Engineering JSP-21-07

1.0 Description. Increased Federal Share has been approved by the FHWA for an innovative technology or practice. The Commission will receive an additional five percent Federal Share of the overall contract value due to innovations within the following pay item(s).

Pay Item Number	Pay Item Description	Innovation
N/A	N/A	Fixed Price/Variable Scope Delivery Method

Due to the increased Federal Share, the project components related to the innovation(s) described above must be constructed with the materials, quantities, methods and innovations as shown on the project plans and specifications. If the contractor requests materials, quantities,

methods or innovations other than those included in the plans and specifications, the request must be reviewed and approved by the Commission and FHWA. Approved changes to the innovation items above shall be at no additional cost to the Commission and shall not increase the contract time.

2.0 Special Consideration of Change Orders and Value Engineering Change Proposals (VECP). Change ordering and/or value engineering the pay item(s) listed in section 1.0 jeopardize the ability for the Commission to receive an additional Federal Share for the overall contract value. Special consideration should be given to the change order value for removing or modifying such item(s) from the contract ensuring the benefit outweighs the cost.

3.0 Contacting Financial Services. If it is determined that the proposed change order and/or VECP outweighs the additional overall five percent Federal Share value, the Engineer shall notify the MoDOT project manager.

O. Contractor Quality Control NJSP-15-42

1.0 The contractor shall perform Quality Control (QC) testing in accordance with the specifications and as specified herein. The contractor shall submit a Quality Control Plan (QC Plan) to the engineer for approval that includes all items listed in Section 2.0, prior to beginning work.

2.0 Quality Control Plan.

- (a) The name and contact information of the person in responsible charge of the QC testing.
- (b) A list of the QC technicians who will perform testing on the project, including the fields in which they are certified to perform testing.
- (c) A proposed independent third party testing firm for dispute resolution, including all contact information.
- (d) A list of Hold Points, when specified by the engineer.
- (e) The MoDOT Standard Inspection and Testing Plan (ITP). This shall be the version that is posted at the time of bid on the MoDOT website (www.modot.org/quality).

3.0 Quality Control Testing and Reporting. Testing shall be performed per the test method and frequency specified in the ITP. All personnel who perform sampling or testing shall be certified in the MoDOT Technician Certification Program for each test that they perform.

3.1 Reporting of Test Results. All QC test reports shall be submitted as soon as practical, but no later than the day following the test. Test data shall be immediately provided to the engineer upon request at any time, including prior to the submission of the test report. No payment will be made for the work performed until acceptable QC test results have been received by the engineer and confirmed by QA test results.

3.1.1 Test results shall be reported on electronic forms provided by MoDOT. Forms and Contractor Reporting Excel2Oracle Reports (CRE2O) can be found on the MoDOT website. All required forms, reports and material certifications shall be uploaded to a Microsoft SharePoint® site provided by MoDOT, and organized in the file structure established by MoDOT.

3.2 Non-Conformance Reporting. A Non-Conformance Report (NCR) shall be submitted by the contractor when the contractor proposes to incorporate material into the work that does not

meet the testing requirements or for any work that does not comply with the contract terms or specifications.

3.2.1 Non-Conformance Reporting shall be submitted electronically on the Non-Conformance Report form provided on the MoDOT Website. The NCR shall be uploaded to the MoDOT SharePoint® site and an email notification sent to the engineer.

3.2.2 The contractor shall propose a resolution to the non-conforming material or work. Acceptance of a resolution by the engineer is required before closure of the non-conformance report.

4.0 Work Planning and Scheduling.

4.1 Two-week Schedule. Each week, the contractor shall submit to the engineer a schedule that outlines the planned project activities for the following two-week period. The two-week schedule shall detail all work and traffic control events planned for that period and any Hold Points specified by the engineer.

4.2 Weekly Meeting. When work is active, the contractor shall hold a weekly project meeting with the engineer to review the planned activities for the following week and to resolve any outstanding issues. Attendees shall include the engineer, the contractor superintendent or project manager and any foreman leading major activities. This meeting may be waived when, in the opinion of the engineer, a meeting is not necessary. Attendees may join the meeting in person, by phone or video conference.

4.3 Pre-Activity Meeting. A pre-activity meeting is required in advance of the start of each new activity, except when waived by the engineer. The purpose of this meeting is to review construction details of the new activity. At a minimum, the discussion topics shall include: safety precautions, QC testing, traffic impacts, and any required Hold Points. Attendees shall include the engineer, the contractor superintendent and the foreman who will be leading the new activity. Pre-activity meetings may be held in conjunction with the weekly project meeting.

4.4 Hold Points. Hold Points are events that require approval by the engineer prior to continuation of work. Hold Points occur at definable stages of work when, in the opinion of the engineer, a review of the preceding work is necessary before continuation to the next stage.

4.4.1 A list of typical Hold Point events is available on the MoDOT website. Use of the Hold Point process will only be required for the project-specific list of Hold Points, if any, that the engineer submits to the contractor in advance of the work. The engineer may make changes to the Hold Point list at any time.

4.4.2 Prior to all Hold Point inspections, the contractor shall verify the work has been completed in accordance with the contract and specifications. If the engineer identifies any corrective actions needed during a Hold Point inspection, the corrections shall be completed prior to continuing work. The engineer may require a new Hold Point to be scheduled if the corrections require a follow-up inspection. Re-scheduling of Hold Points require a minimum 24-hour advance notification from the contractor unless otherwise allowed by the engineer.

5.0 Quality Assurance Testing and Inspection. MoDOT will perform quality assurance testing and inspection of the work, except as specified herein. The contractor shall utilize the

Job No.: JSL0005
Route: Various
County: Various

inspection checklists provided in the ITP as a guide to minimize findings by MoDOT inspection staff. Submittal of completed checklists is not required, except as specified in 5.1.

5.1 Inspection and testing required in the production of concrete for the project shall be the responsibility of the contractor. Submittal of the 501 Concrete Plant Checklist is required.

6.0 Basis of Payment. No direct payment will be made for compliance with this provision.

P. Protection Of Missouri Eastern Railroad Facilities and Traffic

To report an emergency on the Missouri Easter Railroad call: (833) 261-7790

The project location is at the following locations in St. Louis County:

1. Route 141 over US DOT 926870L MP 21.96; MoDOT bridge #'s A8115 in Maryland Heights
2. I-270 over US DOT 596331J MP 16.8; MoDOT bridge #s A1242 in Maryland Heights

1.0 Authority of Railroad Engineer and State Engineer.

1.1 The authorized representative of the Missouri Eastern Railroad, herein called "Railroad Engineer," shall have final authority in all matters affecting the safe maintenance and operation of railroad traffic.

1.2 The authorized representative of the Missouri Highways and Transportation Commission, herein called "Engineer", shall have authority over all other matters as prescribed herein and in the project specifications.

1.3 The right of way of the Missouri Eastern Railroad, herein called "Railroad," is located within the limits of this project and care shall be taken to insure that no debris or material is dropped on the Railroad's property.

2.0 Right of Entry. The contractor shall not commence any work upon, over nor under the Railroad's right of way until contractor has obtained a Right of Entry Permit and complied with the following conditions:

2.1 At least 5 working days in advance of the date the contractor proposes to begin work upon, over or under the Railroad's right of way, the contractor shall notify the Railroad Engineer (listed below) by e-mail or written notice to the address below with a copy to the Engineer.

Todd Nottmeier
Trainmaster
1027 South Main Street Suite 403
Joplin, MO 64801
Email: tnottmeier@jag-transport.com
Phone: (612) 772-1736

2.2 Contractor shall obtain an Executed Right of Entry Permit by mail or e-mail from the Railroad Engineer to begin work upon, over or under the Railroad's right of way, such authorization will include an outline of specific conditions with which the contractor shall comply.

3.0 Insurance. The amount of work to be performed upon, over or under Railroad's right of way is estimated to be one percent of the contractor's total bid for the project. Contractor shall secure railroad protective liability insurance naming only the Railroad as the insured with a combined single limit of \$2,000,000 per occurrence with a \$6,000,000 aggregate, and this insurance shall conform to all the requirements as specified by Sec 107.13.4 of the Missouri Standard Specifications for Highway Construction.

4.0 Job Briefing. Contactor will contact the Railroad Engineer, **Todd Nottmeier**, by phone (contact number above) at least 3 working days before beginning work upon, over or under the Railroad's right of way to make arrangements for a job briefing.

4.1 Railroad Engineer will arrange a meeting with the contractor's representative and a Railroad Employee each day work is scheduled to be performed upon, over or under the Railroad's right of way. A job briefing shall be held, usually at the job site and usually in the morning, to discuss the contractor's work to be performed that day and to discuss the relevant railroad operations. The meeting shall be held before any work is done within 25 feet of the centerline of any track. If any train movements are scheduled for that day, the train moves will be made under the direct supervision of the Railroad Engineer or a Railroad Representative after the contractor has cleared the work site. Flagging services typically provided by the Railroad may not be required depending on the Railroad's schedule of operations.

5.0 Reimbursement of Flagging Costs. The Commission may reimburse the Railroad directly for the cost of flagging services associated with the highway project if flagging services are provided. Flagging costs will be deducted from the contractor's payments from the Commission. If the contractor pays the flagger directly, the contractor must notify the MoDOT Engineer of such payments for flagging.

6.0 Payment for Cost of Compliance. No separate payment will be made for any extra cost incurred on account of compliance with this special provision. All such cost shall be included in contract unit price for other items included in the contract.

7.0 No Payment by Railroad pursuant to this JSP. Railroad will not be responsible for paying the contractor for any work performed under this special provision.

8.0 The Contractor must adhere to all other policies, procedures and insurance coverage not specifically mentioned in these special provisions. These can be found in the Contractor Occupancy/Access Agreement included below.

CONTRACTOR OCCUPANCY/ACCESS AGREEMENT

This Agreement (hereinafter "Agreement") made this **<Day>th** day of **<Month>** **<Year>** by and between **Missouri Eastern Railroad, LLC**, its successors, assigns or affiliated companies (hereinafter "Railroad"), whose address is 1027 South Main Street Suite 403, Joplin, MO 64801 and **<Contractor>** (hereinafter referred to as "Company"), whose address is **<Contractor Address>**.

WITNESSETH:

- 1 Upon payment of a **one-time fee of Two Thousand U.S. Dollars (\$2,000)** and compliance with the provisions herein contained, Railroad hereby permits Company to enter the

property of Railroad, at **Mile Post 21.96, in Maryland Heights/Chesterfield, St. Louis County Route 141**, and at **Mile Post 16.8, in Maryland Heights, St. Louis County Route I-270, Missouri**, for purpose of installation, maintenance, renewal or removal (hereinafter referred to as "Work"), of the **Crack Sealing of bridge decks over MER ROW**, (hereinafter "Structure"). Said permit is granted for a period not to extend beyond **sixty (60) days from the date of execution of this Agreement by Railroad**. Provided, however, this permit may be canceled by Railroad at any time Company is deemed by Railroad not to be in compliance with any of the terms herein.

2. The term "Contractor" shall be used to identify the party that will perform the Work as described in Section 1, whether or not Contractor is signatory to **MER-
<ContractNumber>A**. If Contractor is other than **<Contractor>**, Contractor warrants to Railroad that Contractor (hereinafter termed "Third Party"), has entered into a "Contract" with **<Contractor>** covering the Work to be performed in connection with Structure at said locations.
3. As additional consideration, Company agrees to reimburse Railroad for all cost and expense incurred by Railroad in connection with the Work. Such costs and expenses shall include, but are not limited to, furnishing of inspectors, watchmen and flagmen as Railroad deems necessary to protect its property, tracks, engines, trains and cars and the operation thereof, the installation and removal of any necessary falsework beneath the tracks of Railroad and the restoration of Railroad property. No vehicular crossing over Railroad's tracks shall be installed or used by Company without prior written permission of Railroad.
4. Company shall give Railroad at least five (5) days' notice in advance of any work done upon or adjacent to Railroad property under this Agreement. Company shall notify Railroad **General Manager** by calling **(612) 772-1736**, in advance of the start of the Work, give the General Manager notification of the date said Work is completed, and also the date the Contractor's work is accepted by Third Party. Upon completion of the Work, Company shall promptly remove from Railroad property all tools, equipment and materials placed thereon by Company and Company's agents. Company shall restore Railroad property to the same state and condition as when Company entered thereon and shall leave said property in a clean and presentable condition. Company, after completion of construction or termination of work, at its sole cost, hereby agrees to restore in a good and workman like manner all property disturbed by Company use or construction or maintenance activities from the date of execution of this document. Said restoration shall include, but not be limited to, any and all harm, damage or injury done to Railroad property and/or to any other public or private property by acts or occurrences subject to Federal, State or local environmental enforcement or regulatory jurisdiction, and shall include necessary and appropriate testing and cleanup.
5. Company's work shall be performed in accordance with plans and specifications approved by Railroad and in such manner and at such times as shall not endanger or interfere with the safe operation of the tracks and other facilities of Railroad at said location. No materials, tools or equipment shall be stored within ten (10) feet of the centerline of any track. The regulations of Railroad and the instructions of its representatives shall be complied with relating to the proper manner of protecting the tracks, pipelines, wire lines, signals and all other property at said location, the traffic moving on such tracks and the removal of tools, equipment and materials. Provided, no bailment shall be created by the storage of any materials, tools or equipment on Railroad property.

Job No.: JSL0005
Route: Various
County: Various

6. Before said Work, Company shall, at its sole cost and expense, obtain all necessary authority from any public authorities having jurisdiction in the premises, and shall thereafter observe and comply with the requirements of such public authority or authorities and all applicable laws and regulations. Company shall secure written approval by Railroad of plans and/or specifications submitted to Railroad prior to the commencement of any Work.
7. The Structure shall be installed at the sole risk, cost and expense of Company, in accordance with American Railway Engineering Association Specifications or other Industry Standard Specifications as may apply or be appropriate for the use intended. Said specifications are incorporated herein and made a part hereof by reference. Approval of plans or completed work by Railroad's designated representative shall not, in itself, be considered acknowledgment that said project is in conformity with said standards.
8. COMPANY AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS RAILROAD, ITS OFFICERS, AGENTS, AND EMPLOYEES FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITIES OF EVERY KIND (INCLUDING REASONABLE ATTORNEYS' FEES, COURT COSTS, AND OTHER EXPENSES RELATED THERETO) FOR INJURY TO OR DEATH OF A PERSON OR FOR LOSS OF OR DAMAGE TO ANY PROPERTY, ARISING OUT OF OR IN CONNECTION WITH ANY WORK DONE, ACTION TAKEN OR PERMITTED BY COMPANY, ITS SUBCONTRACTORS, AGENTS OR EMPLOYEES UNDER THIS CONTRACT.

LICENSEE HEREBY ASSUMES, AND SHALL AT ALL TIMES HEREAFTER RELEASE, INDEMNIFY, DEFEND AND SAVE RAILROAD HARMLESS FROM AND AGAINST ANY AND ALL LIABILITY, LOSS, CLAIM, SUIT, DAMAGE, CHARGE OR EXPENSE WHICH RAILROAD MAY SUFFER, SUSTAIN, INCUR OR IN ANY WAY BE SUBJECTED TO, ON ACCOUNT OF DEATH OF OR INJURY TO ANY PERSON (INCLUDING OFFICERS, AGENTS, EMPLOYEES OR INVITEES OF RAILROAD), AND FOR DAMAGE TO OR LOSS OF OR DESTRUCTION OF ANY PROPERTY WHATSOEVER, ARISING OUT OF, RESULTING FROM, OR IN ANY WAY CONNECTED WITH THE PRESENCE, EXISTENCE, OPERATIONS, OR USE, OF WIRELINE, EXCEPT TO THE EXTENT PROVEN TO HAVE BEEN CAUSED BY THE FAULT, OR NEGLIGENCE OF RAILROAD. HOWEVER, DURING ANY PERIOD OF ACTUAL CONSTRUCTION, REPAIR, MAINTENANCE, REPLACEMENT OR REMOVAL OF WIRELINE, WHEREIN AGENTS OR PERSONNEL OF LICENSEE ARE ON THE RAILROAD RIGHT-OF-WAY, LICENSEE'S LIABILITY HEREUNDER SHALL BE ABSOLUTE, IRRESPECTIVE OF ANY FAULT OR NEGLIGENCE OF RAILROAD.

9. Should Railroad bring suit to compel performance of or to recover for breach of any covenant or condition contained herein, Company shall pay to Railroad reasonable attorneys' fees in addition to the amount of judgment and costs.
10. Prior to the performance of any work upon or adjacent to Railroad's property under this Agreement:
 - (a) Company shall furnish Railroad, at Company expense, a certified copy of a public liability and property damage liability insurance policy issued in the name of Company covering the contractual liability assumed by Company under Section 8 hereof. The form, substance and limits of said insurance policy shall be subject to the approval of Railroad and shall be in compliance with the provisions contained in the insert marked

Exhibit "A", hereto attached and made a part hereof.

- (b) Company shall furnish Railroad, at Company expense, a certificate of Workers Compensation coverage, including Federal Employee Liability Act coverage if applicable, for its workers and subcontractors in accordance with the requirements of the State or States in which said work is to be performed.
- (c) Company shall furnish a policy of Railroad Protective coverage in the amount of Two million and no/100 dollars (\$2,000,000.00) per occurrence, Six million and no/100 dollars (\$6,000,000.00) aggregate with named insured as outlined in COMPANY OCCUPANCY/ACCESS AGREEMENT, Exhibit "A". WARNING: ONLY A POLICY OF RAILROAD PROTECTIVE INSURANCE WHICH SPECIFICALLY NAMES **Missouri Eastern Railroad, LLC** AS THE INSURED PARTIES IS ACCEPTABLE AND A COPY OF SAID POLICY MUST BE RECEIVED PRIOR TO THIS PERMIT BEING APPROVED ON BEHALF OF RAILROAD.

Company shall keep said insurance in full force and effect until all work to be performed upon or adjacent to Railroad property under said contract is completed to the satisfaction of and accepted by Third Party and thereafter until Company has fulfilled the provisions of this agreement with respect to the removal of tools, equipment and materials from Railroad property. Said policy shall name Railroad as additional insured.

- 11. The permission herein given shall not be assigned by Company without the prior written consent of Railroad, except in the case of subcontractors who shall be deemed agents of Company, subject to the terms of this Agreement. Railroad Requirements for Company working on Railroad Right-of-Way are attached as Company OCCUPANCY/ACCESS AGREEMENT, Exhibit "B" and made a part hereof. Failure to comply with all of said requirements shall be grounds for cancellation of this Agreement at the sole option of Railroad.

12. CONSTRUCTION PROVISIONS: In relation to Railroad's track and Railroad operations:

- a. Company warrants it will place no bore pit closer than 25 feet from the end of the ties of the nearest track, as measured at right angles from said track; that all of the lines to be installed under Railroad's track shall be a minimum of five feet six inches below the base of the rail; that carrier pipe(s) and/or wire lines shall be encased in Steel Casing Pipe in accordance with the attached Company OCCUPANCY/ACCESS AGREEMENT, Exhibit "D" casing criteria attached hereto; and that casing shall extend a minimum of 25 feet from the center line of the outside track on each side of said crossing, measured at a right angle to said track.
- b. Company shall be solely liable for location and protection of any subgrade railroad signal wires or other railroad facilities, which may be impacted by Company Work. If same shall be damaged by said Work, Contractor shall, at its own expense, immediately cause said damage to be corrected. Contractor shall be solely liable to Railroad for any and all costs resulting for any interruption of train service resulting from Company Work.
- c. Said provisions shall prevail over any lesser provision or standard set out for occupancy of adjoining or underlying lands.

THIS AGREEMENT IS hereby declared to be binding upon the parties hereto.

Job No.: JSL0005
Route: Various
County: Various

IN WITNESS WHEREOF, the undersigned have hereunto set their hand and seals this
_____ day of _____ **20**_____.

Railroad

Missouri Eastern Railroad, LLC

By: **Bruce Carswell**
Senior Vp

Signed: _____

Company

<Contractor>

By: _____

Its: _____

Signed: _____

EXHIBIT A

The coverage afforded hereunder shall include the liability assumed by the named insured under the following indemnification provisions contained in an agreement in writing between the named insured and **Missouri Eastern Railroad, LLC**, covering work to be performed upon or adjacent to its property.

Company AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS Railroad, ITS OFFICERS, AGENTS, AND EMPLOYEES FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITIES OF EVERY KIND (INCLUDING REASONABLE ATTORNEYS' FEES, COURT COSTS, AND

Job No.: JSL0005
Route: Various
County: Various

OTHER EXPENSES RELATED THERETO) FOR INJURY TO OR DEATH OF A PERSON OR FOR LOSS OF OR DAMAGE TO ANY PROPERTY, ARISING OUT OF OR IN CONNECTION WITH ANY Work DONE, ACTION TAKEN OR PERMITTED BY Company, ITS SUBCONTRACTORS, AGENTS OR EMPLOYEES UNDER THIS CONTRACT.

IT IS THE EXPRESS INTENTION OF THE PARTIES HERETO, BOTH Company AND Railroad, THAT THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH INDEMNIFIES Railroad FOR ITS OWN NEGLIGENCE, WHETHER THAT NEGLIGENCE IS ACTIVE OR PASSIVE, OR IS THE SOLE OR A CONCURRING CAUSE OF THE INJURY, DEATH OR DAMAGE; PROVIDED THAT SAID INDEMNITY SHALL NOT PROTECT Railroad FROM LIABILITY FOR DEATH, INJURY OR DAMAGE ARISING SOLELY OUT OF THE CRIMINAL ACTIONS OF Railroad, ITS OFFICERS, AGENTS AND EMPLOYEES. IT IS STIPULATED BY THE PARTIES THAT Railroad OWES NO DUTY TO Company, ITS CLIENT, OR THEIR DIRECTORS, OFFICERS, EMPLOYEES AGENTS OR INVITEES TO PROVIDE A REASONABLY SAFE WORK PLACE AND THAT ALL PARTIES ENTERING ONTO Railroad PROPERTY DO SO AT THEIR SOLE RISK. ”

The policy or policies shall provide coverage in amount of not less than Two Million Dollars (\$2,000,000) combined single limit for all damages arising out of bodily injury to or death of persons and for loss of or damage to property.

The policy or policies, where applicable and available, shall contain Insurance Services Office Standard Endorsement CG 2417.

No cancellation of this policy or modification of the coverage afforded under this endorsement shall be effective until ten (10) days’ notice thereof has been given to: Missouri Eastern Railroad, LLC, C/O IMGRail, 1629 Race Track Rd. Suite 206, St. John’s, FL 32259, E-mail contact@imgonline.net

The policy as required in section 10(a) of the Agreement shall name Railroad as an additional insured.

The policy as required in section 10(b) shall name Railroad and affiliates as listed below as additional insured with respect to F.E.L.A. coverage, and/or if applicable under the laws of the State in which the work is performed.

The policy as required in section 10(c) shall name **Missouri Eastern Railroad, LLC** as insured. **Railroad requires each Insurance Carrier providing coverage must be an Admitted Company in the State for which this Agreement is written and has an A.M. Best rating of “A” or better and a financial class rating of 10 or better.**

EXHIBIT B

Requirements for Contractors working on Railroad Right-of-Way:

A. In order to protect Railroad’s investment in its right-of-way and for the safety of persons coming onto Railroad property, Railroad has established certain requirements. The following constitute minimum requirements for all persons coming on or near Railroad right-of-way. Company is encouraged to develop their own safety rules that meet or exceed the following requirements. Company will not be allowed to occupy or work on Railroad right-of-way prior to signing and dating this Agreement and returning it to the Railroad contact person noted herein.

B. All permits and agreements must be in effect, required payments made and insurance

certificates received and approved prior to Company entering Railroad right-of-way. Insurance must remain in effect during the entire project.

C. Any dewatering utilizing drains or ditches on Railroad property must be approved by Railroad.

D. Company must have approved "Construction Plans" prior to commencing work on a project. No changes will be made to "Construction Plans" without approval by all parties involved. Approved revised plans will be furnished to all parties prior to implementation of changes.

E. Company will incur all costs for track work, including flagging, etc., made necessary due to the Work.

F. Pursuant to Federal Regulation, flagging protection is always required when equipment crosses or is working within 25 feet of center of any live track. When deemed necessary by Railroad, a flagman may be required at all times while working on Railroad right-of-way.

G. Crossing of any Railroad tracks must be done at approved locations and must be over full depth timbers, rubber, etc. Any equipment with steel wheels, lugs or tracks must not cross steel rails without aid of rubber tires or other approved protection.

H. If temporary construction crossings are necessary, they must be covered by a Private Roadway and Crossing Agreement and must be barricaded when not in use. A Private Roadway and Crossing Agreement is prepared by Railroad under the same general terms as this Agreement.

I. Company must furnish details on how Company will perform work that may affect existing drainage and/or possible fouling of track ballast as well as removal of overhead bridges/structures. (Structures and bridge spans over tracks must be removed intact).

J. Absolutely no piling of construction materials or any other material, including dirt, sand, etc., within 15 feet of center on any secondary track (25 feet of Main Line and siding tracks) or on property of Railroad not covered by an existing Construction Easement, permit, lease or agreement. A 10' clear area on both sides of a main track must remain unobstructed at all times to allow for stopped train inspection.

K. (a) All bore pits must be a minimum of 25 feet from the nearest outside rail of any track, measured at a 90 degree angle to said track and all under track bores shall be no less than six feet below the bottom of the ties.

(b) No construction will be allowed within 15 feet of center of any track unless authorized by Railroad and as shown on plans approved by Railroad. This includes any excavation, slope encroachment and driving of sheet piles.

L. No vehicles or machines shall remain unattended within 15 feet of a secondary track or within 25 feet of a Main Line track.

M. Should Company in any way interfere with Railroad operations or damage property during construction operations over Railroad's tracks and right-of-way, Company, upon demand by Railroad to Company and/or Client, shall immediately stop work on Railroad's right-of-way for a period of not less than 48 hours to allow Railroad to investigate. Any necessary repairs shall be

Job No.: JSL0005
Route: Various
County: Various

made by Railroad at Company's sole cost and expense. No work will proceed until authorized by Railroad.

N. Company's safety rules, including rules regarding personal Safety Equipment, must not conflict with Railroad safety policies or rules.

O. Articles included in any agreement with Railroad, which complement this document or exceed its contents, include Company OCCUPANCY/ACCESS AGREEMENT, Exhibit "C".

Company's Acknowledgement: Work Site Location

Company _____ Address: _____

By: _____ Town: _____

Title: _____ State: _____

Date: _____ Project No. _____

Railroad Contact Person:

Missouri Eastern Railroad

Todd Nottmeier **Trainmaster**
Name _____ Title _____

1027 South Main Street Suite 403 **Joplin, MO 64801**
Address City, State, Zip

(612) 772-1736 **(801) 393-7733**
Telephone Number Fax Number

tnottmeier@jag-transport.com
Email

EXHIBIT "C"

Statement of Conditions when Flagmen, Protective Services and Devices or other appropriate personnel will be furnished by Railroad at sole expense of Company:

A. Railroad flagmen will be required for, but not limited to, the following conditions:

1. When, in the sole opinion of Railroad, protection is necessary to safeguard Railroad's trains, engines, facilities and property.

Job No.: JSL0005
Route: Various
County: Various

2. When work is performed, in any way, over, under, or in close proximity to tracks or any Railroad facilities.
3. When work in any way interferes with the operation of trains at usual speeds or threatens, damages, or endangers track or Railroad facilities.
4. When any hazard is presented Railroad communications, signal, electrical, or other facilities due to persons, material, equipment, or blasting in the vicinity.
5. When and where material is being hauled across tracks. Provided, however, special clearance must be obtained from Railroad before moving heavy or cumbersome objects and equipment which might result in making the track impassable for any period of time.

B. Protective Services and Devices, Other Specialized Personnel shall be provided when, in the sole opinion of Railroad, such are necessary in addition to flagging.

COST OF FLAGGING AND OTHER PROTECTIVE SERVICES AND DEVICES

A. Flagging

1. Shall be billed a minimum of **actual cost (please verify rates with the Railroad office)** per day plus any expenses incurred for each flagman required, for each day, or for any portion thereof, for up to eight hours in one shift Monday through Friday, excepting holidays recognized by Railroad in its personnel policy manual.
2. Time worked in excess of eight hours in one shift Monday through Friday, or worked in any amount on Saturday, Sunday and on holidays recognized by Railroad in its personnel policy manual, shall be billed at the rate of **actual cost (please verify rates with the Railroad office)** per eight-hour day, per flagman required, for each day or portion thereof worked.

B. Communications Linemen, Signalmen, Protective Services and Devices

All services required shall be billed at Railroad's contracted rate with service provider plus a 20 percent Railroad administrative fee.

EXHIBIT "D"

MINIMUM WALL THICKNESS FOR CASING PIPES UNDER Railroad TRACKS

1. STEEL CASING PIPE (A.R.E.A. SPEC. 1964)

<u>NOMINAL DIAMETER</u> (Inches)	<u>NOMINAL WALL THICKNESS</u> (Inches)	
	<u>PROTECTED</u>	<u>NOT PROTECTED*</u>
Under 14	0.188	0.188
14 and 16	0.219	0.281 (9/32)
18	0.250	0.312
20	0.281	0.344
22	0.312	0.375
24	0.344	0.406
26	0.375	0.438
28 and 30	0.406	0.469
32	0.438	0.500
34 and 36	0.469	0.531
38, 40 and 42	0.500	0.562

Steel Pipe to have minimum yield strength of 35,000 psi.

* When casing is installed without benefit of a protective coating and said casing is not cathode protected, the wall thickness shall be increased to the nearest standard size which is a minimum of 0.063 inches greater than the thickness shown for protected pipe except for diameters under 12.75 inch.

2. CONCRETE PIPE

All diameters of concrete pipe under main tracks shall be specified, as A.S.T.M. C-76 (Latest Revision) Table V. Concrete pipe under siding and yard tracks may be Table IV. (Either Wall "B" or "C" is acceptable.

3. CORRUGATED METAL PIPE

Table shows permissible minimum and maximum height of cover for both riveted and helical pipe.

<u>NOMINAL DIAMETER</u> (Inches)	<u>16 GAGE</u>	<u>14 GAGE</u>	<u>12 GAGE</u>
12	4-53 (ft)	4-80 (ft)	
15	4-42	4-64	
18	4-34	4-53	
21	4-28	4-45	4-79 (ft)
24	5-23	4-40	4-70
30		4-31	4-56

Q. Special Provisions for Protection of Terminal Railroad Association of St. Louis Railway Interests

To Report an Emergency on property of the Terminal Railroad Association of St. Louis (hereinafter "Railroad"), call: (618) 451-8478. This project includes crack sealing the bridge deck of the St. Louis County Route 180 bridge (A4696) over the TRRA Merchant Subdivision, Mile Post 5.8 DOT# 803059J; MoDOT Project JSL0005.

1.0 Authority of Railroad Engineer and Commission's Representative.

1.1 Railroad's authorized representative, herein called "Railroad Engineer", shall have final authority in all matters affecting the safe maintenance and operation of railroad traffic including the adequacy of the foundations and structures supporting Railroad tracks. The Railroad Engineer for this Project is identified below, with current contact information:

Mr. Travis Eichelberger
Sr. Director of Engineering
Terminal Railroad Association of St. Louis
1201 McKinley Ave.
Venice, IL 62090
Office: (618) 451-8451

1.2 The Commission's authorized representative, herein called "Engineer", shall have authority over all other matters as prescribed herein and in the Project specifications.

2.0 Contractor's Right of Entry with TRRA Railroad.

TRRA's Right of Entry is available upon request to Kelly Gibbons at kgibbons@terminalrailroad.com. Insurance and Safety Rules applicable to work over Railroad can be found at:

<https://www.terminalrailroad.com/Customers/Contractor%20Right%20of%20Entry.aspx>

Contractors shall become thoroughly familiar with TRRA's Right of Entry requirements prior to bid.

A copy of the License for Right of Entry Procedures can be found in the Electronic Deliverables for this project.

3.0 Prior to entry on Railroad's Property, the original Railroad Protective Liability Insurance Policy shall be submitted by the prime Contractor to the Railroad at the address below for review and approval by the Railroad. In addition, certificates of insurance evidencing the Contractor's and any subcontractor's Commercial General Liability Insurance shall be issued to the Railroad and the Commission at the addresses below. The certificates of insurance shall state that the insurance coverage will not be suspended, voided, canceled, or reduced in coverage or limits without 30 days advanced written notice to Railroad and the Commission. No work will be permitted on the Railroad's Property until the Railroad has reviewed and approved the evidence of insurance required herein.

Job No.: JSL0005
Route: Various
County: Various

Railroad

Ms. Kelly Gibbons
Manager of Corporate Contracts
and Real Estate
Terminal Railroad Assoc. of St. Louis
1017 Olive Street, 5th Floor
St. Louis, MO 63101

Commission

Ms. Brandi Baldwin
State Construction and Materials Engineer
MoDOT
P.O. Box 270
Jefferson City, MO 65102

4.0 Payment for Cost of Compliance. Commission shall not separately pay for any extra cost the Contractor or Railroad incurs on account of compliance with these Railroad Job Special Provisions. The Contractor and Railroad shall include all such cost in the contract unit price for other items included in the contract. Railroad will not pay the Contractor for any work it performs to comply with these Railroad Job Special Provisions.

R. Special Provisions for Protection of Bi-State Development (Metro) Interests

This project includes crack sealing the bridge deck of the St. Louis County Route 180 bridge (A4967) over Bi-State Development (Metro); MoDOT Project JSL0005.

The Below Terms & Conditions Will Be Part of the Resulting Contract

Section J

INSURANCE

Indemnification

Indemnification

To the fullest extent permitted by applicable law, the **Contractor** shall agree to indemnify, defend and hold harmless **Bi-State**, its commissioners, officers, officials, agents, and employees from and against any and all claims, suits, actions, judgments, fines, penalties, loss, damage, costs, or expense (including but not limited to attorneys' fees), whether direct or indirect, due to bodily or personal injury, death, sickness or property damage (including loss of use thereof) arising out of Contractor's activities or resulting from the performance of services, the delivery of goods, or the failure to perform under this contract.

The successful **Contractor** shall also agree to indemnify, defend and hold harmless **Bi-State**, its commissioners, officers, officials, agents, and employees from and against any and all claims, suits, actions, judgments, fines, penalties, loss, damage, costs, or expense (including but not limited to attorneys' fees), whether direct or indirect, arising out of **Contractor's** failure to comply with any applicable federal, state or local laws, statutes, ordinances, rules or regulations currently in force, or to be enacted in the future.

Such obligations shall not be construed to waive, negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to either the **Contractor** or **Bi-State**.

Insurance

IT IS HIGHLY RECOMMENDED THAT YOU CONFER WITH YOUR INSURANCE BROKER/AGENT OR OTHER INSURANCE COMPANY REPRESENTATIVE, BEFORE SUBMITTING YOUR PROPOSAL, TO DETERMINE THE AVAILABILITY AND APPLICABLE COST, IF ANY, OF CERTIFICATES, ENDORSEMENTS, COVERAGES, AND LIMITS REQUIRED.

2.1 Minimum Scope And Extent Of Coverage

A. General Liability

Commercial General Liability, ISO coverage form number **CG 00 01** ("occurrence" basis) or, ISO coverage form CG 00 02 ("claims-made basis"), or ISO equivalent.

If ISO equivalent or manuscript general liability coverage forms are used, minimum coverage will be as follows: Premises/Operations; Independent Contractors; Products/Completed Operations; Personal Injury; Broad Form Property Damage including Completed Operations; Broad Form Contractual Liability Coverage to include **Contractor's** obligations under 1. INDEMNIFICATION above.

B. Automobile Liability

Business Automobile Liability Insurance, ISO Coverage form number CA 0001 0187 covering automobile liability, code 1 "ANY AUTO", and Endorsement CA 0029 1288 – Changes in Business Auto and Truckers' Coverage forms (Insured Contract).

C. Workers' Compensation And Employer Liability

Statutory Workers' Compensation Insurance for all states and jurisdictions where **Contractor** has work locations, a Broad Form All States Endorsement for incidental contact, and standard Employer's Liability Insurance.

D. RAILROAD PROTECTIVE LIABILITY

Railroad Protective Liability Insurance covering the work to be performed under this contract if such work is to be performed on or adjacent to the Metro Link right-of-way. The policy form should be ISO CG 00 35 (06/90) or other equivalent RIMA/AASFITO approved form including coverage for "Physical Damage to Property" and coverage for pollution arising out of fuels or lubricants brought to the job site (i.e., ISO Form CG 28 31). If a Lloyd's or other similar "Claims Made" policy form is used, the Extended Claims Made Date shall be a minimum of two years past the expiration date of the policy.

Alternative: In many instances, it is possible for an organization to address this exposure by an endorsement to its commercial general liability policy *if it is not in the construction business per se or if it does not customarily work in proximity of a railroad right-of-way*. The applicable endorsement is CG 24 17 – Contractual Liability – Railroads. A copy of the endorsement must be attached to the required Certificate of Insurance.

2.2 Minimum Limits of Insurance

A. General Liability – Prime Contractor

\$1,000,000 combined single limit per occurrence for bodily injury, personal injury, and property damage.

\$2,000,000 annual aggregate.

B. Automobile Liability – Prime Contractor

\$1,000,000 combined single limit per accident for bodily injury and property damage.

Automobile Liability – Subcontractors/Vendors/Suppliers

\$1,000,000 combined single limit per accident for bodily injury and property damage.

[General Liability and Automobile Liability insurance may be arranged under individual policies for the full limits required or by a combination of underlying policies with the balance provided by a for following Excess or Umbrella Liability policy.]

C. Workers' Compensation/Employer's Liability
(All Parties)

Workers' Compensation limits as required by applicable State Statutes (generally unlimited) and minimum of **\$500,000** limit per accident for Employer's Liability.

D. RAILROAD PROTECTIVE LIABILITY

\$2,000,000 combined single limit per occurrence for bodily injury, personal injury, and property damage.

\$6,000,000 annual aggregate *(or \$2,000,000 if the aggregate applies only to claims and legal expenses which arise out of the activities under this contract)*

2.3 Deductibles And Self-Insured Retentions

All deductibles, co-payment clauses, and self-insured retentions must be declared to and approved by **Bi-State Development**. **Bi-State Development** reserves the right to request the reduction or elimination of unacceptable deductibles or self-insured retentions as they would apply to **Bi-State Development**, its commissioners, officers, officials, agents, and employees; or alternatively to request claims administration, and defense expenses. In the case of Professional Liability, an actuarially supervised and adequately funded self-insurance program is acceptable subject to approval by Bi-State Development's Director of Risk Management.

2.4 Other Insurance Provisions & Requirements

The respective insurance policies and coverage as outlined below must contain, or be endorsed to contain, the following conditions or provisions:

A. General Liability

Bi-State Development, its commissioners, officers, officials, agents, and employees shall be endorsed as **additional insureds** by ISO Form **CG 20 26 -- ADDITIONAL INSURED – DESIGNATED PERSON OR ORGANIZATION** or equivalent. As additional insureds, they are to be covered as for legal liability

arising out of to work performed by or on behalf of the **Contractor** or arising out of **Contractor's** activities or resulting from the performance of services or the delivery of goods called for by this contract.

GENERAL LIABILITY AND AUTOMOBILE LIABILITY

Contractor's insurance coverage shall be primary with respect to **Bi-State Development**, its commissioners, officers, officials, agents, and employees. All insurance or self-insurance programs maintained by **Bi-State Development**, its commissioners, officers, officials, agents, and employees shall be excess of the **Contractor's** insurance and shall not contribute with it.

C. All Coverages

Contractor's insurance coverage shall be primary with respect to Bi-State Development, its commissioners, officers, officials, agents, and employees. All insurance or self-insurance programs maintained by Bi-State Development, its commissioners, officers, officials, agents, and employees shall be excess of the **Consultant's** insurance and shall not contribute with it.

Contractor's failure to comply with the terms and conditions of these insurance policies shall not affect or abridge coverage for Bi-State Development, its commissioners, officers, officials, agents, or employees.

Each insurance policy required by this section of this Contract shall contain a stipulation, endorsed if necessary, that **Bi-State Development's** Director of Risk Management will receive a 30-day advance notice of any policy cancellation other than cancellation for non-payment of premium; ten- (10) days advance notice is required for policy cancellation for non-payment of premium; ten (10) days advance notice is required for policy cancellation due to non-payment of premium

2.5 Insurer Qualifications/Acceptability

Insurance required hereunder shall be issued by an A.M. Best "A" rated, Class VII insurance company approved to conduct insurance business in the state(s) of Missouri and/or Illinois.

2.6 Verification of Insurance Coverage

Before commencing work, the **Contractor** shall furnish **Bi-State Development** with CERTIFICATE (S) OF INSURANCE and with *copies* of any applicable original endorsements evidencing the required insurance coverage. The insurance certificates and endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates and endorsements received by **Bi-State Development** are subject to review and approval by **Bi-State Development's** Director of Risk Management. **Bi-State Development** reserves the rights to require complete, certified copies of all required policies at any time. If the scope of this contract will exceed one (1) year - or, if any of **Contractor's** applicable insurance coverage expire prior to completion of the work or services required under this contract - the **Contractor** will provide a renewal or replacement certificate before continuing work or services hereunder. The contractor should send the certificate(s) to the following address:

Railroad:

Timothy F. Nittler, P.E. Senior Director of Capital Projects
Metro – A Bi-State Development Enterprise
One Metropolitan Square
211 North Broadway, Suite 700

Job No.: JSL0005
Route: Various
County: Various

St. Louis, MO 63102-2759
Telephone: 314.982.1400 x 1306 | C 618.409.3684 | F 314.335.3428
Email: tfnittler@MetroStLouis.org

Commission:
Ms. Brandi Baldwin
State Construction and Materials Engineer
MoDOT
P.O. Box 270
Jefferson City, MO 65102

S. Lane Reduction Arrow

1.0 Description. This work shall consist of installing special pavement markings as shown in the plans.

2.0 Lane reduction arrows shown in the plans shall be in accordance with MUTCD Figure 3B-24F and shall be preformed thermoplastic pavement marking in accordance with Section 620 of the Standard Specifications. The lane reduction arrows installed on concrete pavement shall have a minimum of 1.5 inch black outside contrast border surrounding the lane reduction arrow. This black contrast border shall be either preformed thermoplastic paint or acrylic waterborne paint.

3.0 Basis of Payment. Payment for furnishing and installing the pavement markings noted above, including all materials, equipment, tools, labor, and work incidental thereto **(including the 1.5 inch black outside border)**, and shall be considered to be completely covered by the contract unit prices for the following:

Item No.	Type	Description
620-99.02	Each	Lane Reduction Arrow, Preformed Thermoplastic Pavement Marking