

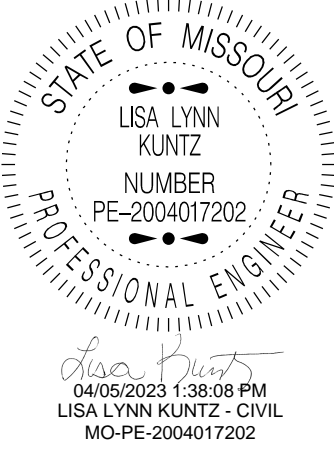
Job No.: J6I3573  
Route: Various  
County: St. Louis

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

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	<b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b> 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: J6I3573 ST. LOUIS COUNTY, MO DATE PREPARED: 03/06/23
	ADDENDUM DATE:
Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: All	

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JOB  
SPECIAL PROVISION

A. General – Federal JSP-09-02H

**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](http://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](http://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 2022 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-13-01B

**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 shall be completed on or before the date specified below. Completion by this date shall be in accordance with the requirements of Sec 108.7.1.

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Notice to Proceed: July 10, 2023  
Completion Date: December 6, 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
J6I3573	N/A	\$5,400

**3.0 Liquidated Damages for Contract Administrative Costs.** Should the contractor fail to complete the work on or before the 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 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 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-02-06M

**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.

#### **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 Transportation Management Plan.** The contractor Work Zone Specialist (WZS) shall review the Transportation Management Plan (TMP), found as an electronic deliverable on MoDOT's Online Plans Room and discuss the TMP with the engineer during the preconstruction conference. Throughout the construction project, the WZS is responsible for updating any changes or modifications to the TMP and getting those changes approved by the engineer a

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minimum of two weeks in advance of implementation. The WZS shall participate in the post construction conference and provide recommendations on how future TMPs can be improved.

**2.7 Traffic Management Center (TMC) Coordination.** The Work Zone Specialist (WZS) or their designee shall contact by phone the MoDOT Traffic Management Center (KC Scout TMC at #816-347-2250 or Gateway 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:

12:00 noon July 3, 2024 – 6:00 a.m. July 5, 2024  
12:00 noon July 3, 2025 – 6:00 a.m. July 7, 2025

**3.2** The contractor shall not perform any construction operation on the *roadway, (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 during the following working hours: It shall be the responsibility of the engineer to determine weekend hours and if the work hours noted below may be modified.

Route 67 Northbound (Min. 1 Lane Open at all times):  
6:00 p.m. – Midnight (12:00 a.m.), Monday through Friday  
Midnight (12:00 a.m.) – Noon (12:00 p.m.), Monday through Friday

Route 67 Southbound (Min. 1 Lane Open at all times):  
6:00 p.m. – Midnight (12:00 a.m.), Monday through Friday  
Midnight (12:00 a.m.) – Noon (12:00 p.m.), Monday through Friday

Note: The only hours the contractor is not allowed to close lanes on Route 67 is from Noon (12:00) p.m. to 6:00 p.m. each day.

Route N Northbound (Min. 1 Lane Open at all times):  
All Day, Monday through Friday

Route N Southbound (Min. 1 Lane Open at all times):  
All Day, Monday through Friday

Route AC Northbound (Min. 1 Lane Open at all times):  
All Day, Monday through Friday

Route AC Southbound (Min. 1 Lane Open at all times):  
All Day, Monday through Friday

#### **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** At least one lane of traffic in each direction of each route shall be maintained at all times except for brief intervals of time required when the movement of the contractor's equipment will seriously hinder the safe movement of traffic. 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-90-11**

**1.0** The contractor shall have communication equipment on the construction site or immediate access to other communication systems to request assistance from the police or other emergency agencies for incident management. In case of traffic accidents or the need for police to direct or restore traffic flow through the job site, the contractor shall notify police or other emergency agencies immediately as needed. The area engineer's office shall also be notified when the contractor requests emergency assistance.

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

Missouri Highway Patrol: 636-300-2800
St. Louis County Police: 636-529-8210
Metro North Fire Protection District: 314-867-5360
Florissant Valley Fire Protection District: 314-837-4894
Northeast Ambulance and Fire: 314-382-1501
City of Florissant Police: 314-831-7000

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

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

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

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.

Lisa Kuntz, Project Manager  
St. Louis District  
1590 Woodlake Drive  
Chesterfield , MO 63017-5712

Telephone Number: 314-453-1879  
Email: [Lisa.Kuntz@modot.mo.gov](mailto:Lisa.Kuntz@modot.mo.gov)

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

F. Utilities JSP-93-26F



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County: St. Louis

**1.0** For informational purposes only, the following is a list of names, addresses, and telephone numbers of the known utility companies in the area of the construction work for this improvement:

<u>Utility Name</u>	<u>Known Required Adjustment</u>	<u>Type</u>
<b>Ameren Missouri</b> Brandon Butcher Phone: (618) 797-5617 Email: <a href="mailto:bbutcher@ameren.com">bbutcher@ameren.com</a>	None	Power
<b>AT&amp;T – Distribution</b> <b>Cheryl Gisser</b> Phone: (636) 479-0055 Email: <a href="mailto:cb1969@att.com">cb1969@att.com</a>	None	Communications
<b>AT&amp;T – Transmission</b> Lenny Vohs Phone: (816) 275-4014 Email: <a href="mailto:lv2121@att.com">lv2121@att.com</a>	None	Communications
<b>Spire</b> Nick Eggert Phone: 314-330-5720 Email: <a href="mailto:Nicholas.Eggert@spireenergy.com">Nicholas.Eggert@spireenergy.com</a>	None	Gas
<b>Missouri American Water Compnay (MAWC)</b> Dave Pruitt Phone: (314) 996-2396 Email: <a href="mailto:dave.pruitt@amwater.com">dave.pruitt@amwater.com</a>	None	Water
<b>Metropolitan Sewer District (MSD)</b> James Derby Phone: (314) 768-2789 Email: <a href="mailto:jcderb@stlmsd.com">jcderb@stlmsd.com</a>	None	Sewer

**1.1** The existence and approximate location of utility facilities known to exist, as shown on the plans, are based upon the best information available to the Commission at this time. This information is provided by the Commission "as-is" and the Commission expressly disclaims any representation or warranty as to the completeness, accuracy, or suitability of the information for any use. Reliance upon this information is done at the risk and peril of the user, and the Commission shall not be liable for any damages that may arise from any error in the information. It is, therefore, the responsibility of the contractor to verify the above listing information indicating existence, location and status of any facility. Such verification includes direct contact with the listed utilities.

**2.0 Ameren Overhead Power lines:** All three locations on this project will require working in the vicinity Ameren's 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.

**2.1** 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 Rte. N over Ball Creek – Structure L0269:**

3.1: There are no anticipated relocations at this location.

3.2: AT&T has a multiple way duct package running parallel to the roadway under the proposed northbound shoulder. While no conflict is anticipated with the construction of the concrete shoulder and type C barrier the Contractor shall use caution while working over the top of the AT&T multiple way duct package system.

3.3: Spire has a high-pressure gas main running parallel to the roadway under the proposed northbound shoulder. While no conflict is anticipated with the construction of the concrete shoulder and type C barrier the Contractor shall use caution while working over the top of the Spire high pressure gas main.

3.4: MAWC, Ameren, MSD, and Spire have facilities within the project limits at this location as shown on the plans. While no conflict is anticipated, the contractor shall take necessary precautions and measures to verify locations of utility companies' facilities and to protect in place their existing facilities during construction.

**4.0 Rte. AC over Delwood Creek – Structure A1108:**

4.1: AT&T has a manhole frame and cover that may need to be adjusted at approximate station 384+62.2 to meet ADA requirements, the Contractor will need to field verify.

4.2: There are no further anticipated relocations at this location

4.3: Ameren, AT&T, Spire, MSD, and MAWC have facilities within the project limits at this location as shown on the plans. While no conflict is anticipated, the contractor shall take necessary precautions and measures to verify locations of utility companies' facilities and to protect in place their existing facilities during construction.

**5.0 Rte. 67 over Paddock Creek – Structure A1073:**

5.1: There are no anticipated relocations at this location

5.2: MAWC, MoDOT ITS, MoDOT Drainage, Ameren, and Spire have facilities within the project limits at this location as shown on the plans. While no conflict is anticipated, the contractor shall take necessary precautions and measures to verify locations of utility companies' facilities and to protect in place their existing facilities during construction.

**6.0 If utility facilities are discovered the contractor shall contact the MoDOT Area Utility Coordinator,** Dave Brunjes at (314) 439-6297. 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.

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

G. Adjusting Manholes, Valves and Pullboxes

**1.0 Height Adjustment.** Regardless of type or size, the manholes, valves and pull boxes shown in the plans require adjustment to match the new grade of the roadway, ramp, landing, or sidewalk. The existing manholes shall be adjusted and installed according to standard plan 731.00T. Adjusting rings shall not exceed 12 inches in height.

**2.0 Concrete Collars.** Damaged concrete collars on manholes shall be replaced as directed by the engineer. The replacement concrete collars shall be 4 inches deep and 18 inches wide around the manhole.

**3.0** The contractor is advised that Metropolitan St. Louis Sewer District, MoDOT, MAWC, Spire Gas have manholes and valves, located within the islands/roadway/sidewalk that will require adjustments. The Contractor shall adjust these facilities to grade as necessary. The Contractor shall contact the respective utility regarding any questions regarding the adjustment of these facilities.

**3.1** The contractor shall notify the engineer if manholes or pull boxes belonging to utilities other than Metropolitan St. Louis Sewer District, MoDOT, are encountered that will require adjustment. The contractor shall coordinate work with the affected utility to ensure that the completed facilities meet ADA requirements.

**3.2 Basis of Payment.** All costs associated with compliance with this special provision for all material, equipment, and labor shall be completely covered by the contract unit price for:

Item Number	Type	Description
604-99.02	Each	Adjusting Manholes, Valves, and Pull Boxes

**4.0** Pull boxes, valves or manholes not owned by MoDOT or specified as required work by the Contractor may require adjustment due to work in the contract. The Contractor shall contact the respective utility owners regarding any questions about the adjustment of these facilities. The Contractor shall contact the respective utility owner, at least 3 weeks prior to adjustment of these facilities to allow the utility owner to make necessary adjustments. The Contractor shall coordinate with the respective utility owners for scheduling and providing the necessary grade requirements for each adjustment. Payment for all necessary work required for the coordination

for the scheduling, grade requirements and adjustments of these utility facilities shall be at no direct pay.

Contractor shall directly contact Utility companies to verify location of facilities and status of relocation/adjustment work. The contractor shall coordinate construction activities with Utility Companies and take measures to ensure the integrity of the existing facilities are not disturbed until such time as the Utility Companies have completed the adjustment work.

#### H. 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](http://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 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.

I. Lump Sum Temporary Traffic Control JSP-22-01

**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

J. ADA Compliance and Final Acceptance of Constructed Facilities JSP-10-01C

**1.0 Description.** The contractor shall comply with all laws pertaining to the Americans with Disabilities Act (ADA) during construction of pedestrian facilities on public rights of way for this project. An ADA Checklist is provided herein to be utilized by the contractor for verifying compliance with the ADA law. The contractor is expected to familiarize himself with the plans involving pedestrian facilities and the ADA Post Construction Checklist prior to performing the work.

**2.0 ADA Checklist.** The contractor can locate the ADA Checklist form on the Missouri Department of Transportation website:

[www.modot.org/business/contractor\\_resources/forms.htm](http://www.modot.org/business/contractor_resources/forms.htm)

**2.1** The ADA Checklist is not to be considered all-inclusive, nor does it supersede any other contract requirements. The ADA checklist is a required guide for the contractor to use during the

construction of the pedestrian facilities and a basis for the commission's acceptance of work. Prior to work being performed, the contractor shall bring to the engineer's attention any planned work that is in conflict with the design or with the requirement shown in the checklist. This notification shall be made in writing. Situations may arise where the checklist may not fully address all requirements needed to construct a facility to the full requirements of current ADA law. In those situations, the contractor shall propose a solution to the engineer that is compliant with current ADA law using the following hierarchy of resources: 2010 ADA Standards for Accessible Design, Draft Public Rights of Way Accessibility Guidelines (PROWAG) dated November 23, 2005, MoDOT's Engineering Policy Guidelines (EPG), or a solution approved by the U.S. Access Board.

**2.2** It is encouraged that the contractor monitor the completed sections of the newly constructed pedestrian facilities in attempts to minimize negative impacts that his equipment, subcontractors or general public may have on the work. Completed facilities must comply with the requirements of ADA and the ADA Checklist or have documented reasons for the non-compliant items to remain.

### **3.0 Coordination of Construction.**

**3.1** Prior to construction and/or closure on an existing pedestrian path of travel, the contractor shall submit a schedule of work to be constructed, which includes location of work performed, the duration of time the contractor expects to impact the facility and an accessible signed pedestrian detour compliant with MUTCD Section 6D that will be used during each stage of construction. This plan shall be submitted to the engineer for review and approval at or prior to the pre-construction conference. Accessible signed detours shall be in place prior to any work being performed that has the effect of closing an existing pedestrian travel way.

**3.2** When consultant survey is included in the contract, the contractor shall use their survey crews to verify that the intended design can be constructed to the full requirements as established in the 2010 ADA Standards. When 2010 ADA Standards do not give sufficient information to construct the contract work, the contractor shall refer to the PROWAG.

**3.3** When consultant survey is not included in the contract, the contractor shall coordinate with the engineer, prior to construction, to determine if additional survey will be required to confirm the designs constructability.

**4.0 Final Acceptance of Work.** The contractor shall provide the completed ADA Checklist to the engineer at the semi-final inspection. ADA improvements require final inspection and compliance with the ADA requirements and the ADA Checklist. Each item listed in the checklist must receive either a "YES" or an "N/A" score. Any item receiving a "NO" will be deemed non-compliant and shall be corrected at the contractor's expense unless deemed otherwise by the engineer. Documentation must be provided about the location of any non-compliant items that are allowed to remain at the end of the construction project. Specific details of the non-compliant items, the ADA requirement that the work was not able to comply with, and the specific reasons that justify the exception are to be included with the completed ADA Checklist provided to the engineer.

**4.1** Slope and grade measurements shall be made using a properly calibrated, 2 foot long, electronic digital level approved by the engineer.



**5.0 Basis of Payment.** The contractor will receive full pay of the contract unit cost for all sidewalk, ramp, curb ramp, median, island, approach work, cross walk striping, APS buttons, pedestrian heads, detectible warning systems and temporary traffic control measures that are completed during the current estimate period as approved by the engineer. Based upon completion of the ADA Checklist, the contractor shall complete any necessary adjustments to items deemed non-compliant as directed by the engineer.

**5.1** 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 documents.

K. ADA Curb Ramp

**1.0 Description.** This work shall consist of constructing new concrete curb ramps and island cut-throughs that are compliant with current Americans with Disabilities Act (ADA) and MoDOT guidelines at locations shown on the plans and as directed by the engineer. Providing work zone protections for pedestrians will be a primary component of this project. Specifically, this work shall consist of providing pedestrian detours, including all necessary designing of specific detour routes, placing of signing, barricades, and channelizing. Nothing in this provision shall be construed to limit contractor innovation in mitigating pedestrian traffic impacts. All revisions shall be submitted to the engineer in writing 3 days prior to approval.

**1.1** The contractor shall ensure that the persons establishing the grades of the ADA facilities have a copy of ADA related provisions at hand for reference. If it is found that written provisions for ADA facilities are not at hand, the engineer may cause ADA work to be ceased until a copy arrives.

**2.0 Construction Requirements.** Except as noted herein, all applicable provisions in Sec 608 for construction of curb ramps shall apply. Items and materials used for pedestrian traffic control shall be in accordance with Section 616 of the Missouri Standard Specifications for Highway Construction of the version current at the time of the bid opening, as applicable. Materials used to provide access over or around obstacles shall be in accordance with the Section applicable.

**2.1** The area to be removed and/or constructed under this provision includes the entire curb ramp, flares, landing pads, sidewalk, and any curbs, including variable height curbs as tabulated in the quantity sheets and shown on the plan sheets. **In addition, any concrete median used to separate ramps, as shown for a dual perpendicular ramp within Std. Plan 608.50, shall be included in the cost of the ramp. Truncated domes shall be paid for separately.**

**2.1.1 Gutter Correction.** The contractor shall establish the grade of the flow line of the gutter before establishing the grades of ADA facilities. The gutter line shall be free flowing with no ponding and next to the curb. Under performing gutters shall be replaced with a concrete curb and gutter or a minimum 1.75-inch thick asphalt mill and fill. Running or standing storm water shall not be pushed out into the roadway where it may be splashed on pedestrians by passing vehicles or cause a hydroplaning hazard. An asphalt mill and fill shall be a minimum of 1.75 inches thick and the edges shall be at a smooth milled butt joint. The contractor shall use an approved BP-1 mix for all corner asphalt mill and fill work unless another surface asphalt mix is

specified elsewhere in the contract. Asphalt mill and fill is included in the work of ADA Curb Ramps. If asphalt mill and fill is needed at a corner without any other ADA work, it will be found as a separate line item in this contract.

**2.2** Recommendations for the design type of each curb ramp to be built on this project are shown on the plans. These curb ramps may vary from the original design in size, shape, and location as necessary to comply with ADA laws. It is the contractor's responsibility to inspect locations in the field before bidding to verify quantities needed to satisfy this provision.

**2.2.1** ADA provides some exceptions to ramp slope where space limitations exist. The apparent construction limits shown on the plans are not considered a space limitation. The use of these exceptions will not be considered by the engineer unless the length needed for compliance goes beyond 10 additional feet as shown as the plans are interpreted by the engineer. The contractor shall not place any ADA exceptions without consulting the engineer on a case by case basis.

**2.3 Work Area Safety.** The contractor shall maintain a work area that is safe for pedestrians. The areas adjacent to the contractor's physical work site shall also be maintained as needed to provide access to adjoining properties, regardless of whether a detour route is in place. All holes shall be covered with secured plywood or steel plates, and the work area walkways shall be free of trip hazards, loose debris, vehicles, materials, and equipment when the contractor is not in the work area. A 3 foot minimum path shall be maintained on any used-in-place walkway needed for access. The contractor shall not be permitted to park on any walkway solely to avoid the need for a lane closure. Items for lane closures are provided in the plans and quantities. The contractor shall fence in his work area to provide no access to the general public during the construction of the project.

**2.4 Prosecution of Work.** The contractor shall have all necessary personnel, equipment, and materials at hand for all work at each location before the work begins so that work may proceed without delay.

**2.4.1 Pedestrian Detours.** The contractor may provide and maintain a signed pedestrian detour at their own cost on a route with equal or better ADA accessibility than the closed pathway, if such routes exist. Since MoDOT may not own the right-of-way of the detour path, the contractor shall ascertain that the detour route will remain open during its planned use as a detour. The contractor shall inform the engineer of plans to use a detour not less than three weeks before it is set up.

**2.4.2 Detour Locations.** Pedestrian detours are to cross the street or go around the block where facilities exist. It may be possible to provide one detour for more than one corner/work location; the quantity for pedestrian detours will be based on the number of work locations needing detours and not on the number of detours actually used. The detour routes shall have equal or better accessibility than existing in the construction location and shall be approved by the engineer. Detours may also use roadway shoulders with sufficient width to provide for pedestrians, and the traffic control to protect them, and where parking is not allowed, provided drainage structures are not a hazard.

At locations where a pedestrian detour is not feasible, the contractor has the option of staging work to maintain a 3' minimum pathway, providing a temporary pathway (3' minimum width) that does not reduce the number of through lanes of the roadway, or providing a full closure with

signs. Locations for full closure shall be submitted to the engineer in writing 2 weeks prior to beginning work, and signs shall be placed announcing the closure 1 week before work begins.

**2.5** The curb ramps to be modified per this provision vary in size. It is the contractor's responsibility to verify actual quantities needed to satisfy this provision.

**2.6** The truncated domes shall come from Pre-Qualified List FS-1067 Table 1.

**3.0 Method of Measurement.** Final measurement will not be made except for authorized changes during construction or where appreciable errors are found in the contract quantity. The revision or correction will be computed and added to or deducted from the contract quantity.

**4.0 Basis of Payment.** The accepted quantity of ADA compliant curb ramps will be paid at the contract unit price for:

Pay Item Number	Type / Description	Unit
608-99.02	ADA Curb Ramp	Each

No direct payment will be made for any excavating or preparing of the subgrade, **furnishing and installing the 4" Type 5 Aggregate Base**, furnishing or installing reinforcement, any incidental work required for furnishing and installing tie bars, tinting of concrete surface as required in the plans, asphalt mill and fill required to transition the new ramp to existing pavement or to drain the sidewalk, warping sidewalk to meet existing sidewalk sections, relocating or resetting granite curb or relocating existing pedestrian push buttons on signal poles.

L. Coordination with MoDOT SLITS Group and Utility Locates

**1.0 Description.** Any work that will impact the existing communications network must be coordinated with the Commission's St. Louis District ITS staff. This includes but not limited to removal and replacement of any existing communications equipment, adding new devices and changes to power sources or disconnects. Minor modifications to the existing communications network can have significant impacts on the system and operation of other ITS and traffic signal systems.

**1.1** MoDOT is a member of MO-One-Call System. Prior to any excavation or work within MoDOT Right-Of-way, the contractor must contact MO-One Call at 1-800-DIG-RITE and request for Utility Locates within noted project limits. If the scope of work contains modification, addition and/or expansion of existing underground MoDOT ITS, lighting, or signal facilities, the contractor must notify the MoDOT Utilities Locate staff prior to any work, in order for MoDOT to update MoDOT utility location records with Missouri One Call.

**2.0 Contact.** Initial contact must be made at least seven calendar days before work that may impact the existing communications network commences. Contact the ITS staff via an email at SLITS@modot.mo.gov. The engineer shall be notified prior to making contact with ITS staff. For MoDOT Utility location updates, the contractor must contact MoDOT TMC at 314-275-1500 and ask for Utility Locate Section at least seven calendar days before performing any work.

**3.0** The ITS and network devices located within the project limits are a crucial part of the traffic operation system for this area. It is imperative that the downtime be kept to a minimum when

adding, removing, or modifying any existing ITS and network devices. This may require the contractor to perform work that will affect existing network devices during nighttime and/or weekend hours, at the discretion of the Engineer. Allowable timeframes for this work will be subject to the need for ITS devices in the area to be used to manage other traffic impacting work zones.

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

M. MoDOT ITS Equipment within Project Limits

**1.0 Description.** MoDOT owned fiber optic cable and conduit, critical MoDOT power supplies and power cables, and pull boxes for fiber and power cabling and other above and underground ITS (Intelligent Transportation System) facilities are present within the limits of this project. Damage or interruption of these items can cause extensive outages to the MoDOT network.

**2.0 Construction Requirements.** The contractor shall exercise reasonable care while completing work near these facilities and shall take steps necessary to protect these facilities from damage for all items that are not specifically identified as being removed and/or relocated in the plans. Should any of the existing wiring or conduit be damaged by the contractor, it shall be replaced at the contractor's expense and the system in full operation within **4** hours of when the damage occurred. If it is mutually agreed upon between the Commission and the Contractor that the repairs will require more than **4** hours to complete, a mutually agreed upon time for repairs to be complete will be determined.

**2.1** The contractor shall not modify any existing network or electrical connections within equipment cabinets, unless coordinated with MoDOT ITS staff. Existing connections include, but are not limited to, fiber jumpers, CAT5(e) cables, power supplies, and power strips. The connection to specific fiber and copper ports on network equipment shall also not be modified, unless coordinated with MoDOT ITS staff, as the network equipment has been configured specifically for each equipment cabinet. Significant network outages and unnecessary troubleshooting to investigate outages can occur, even with minor changes to existing connections within the cabinet.

**3.0 Liquidated Damages.** In the event of damage, if the system is not repaired and in full operation within **4** hours of the damage occurring, or within the timeframe agreed upon, the contractor will be charged with a liquidated damage specified in the amount of \$100.00\_per hour for each full hour that the system is not fully operational. This damage will be assessed independently of the liquidated damages specified elsewhere in the contract.

**3.1** The MoDOT Engineer will also have the option of issuing a work order for MoDOT's on-call ITS Maintenance contractor to make repairs, if it is the Engineer's opinion that the contractor creating the damage will not be able to make repairs in a timely manner. Contractor's reimbursement for MoDOT expense for this option shall be in addition to the liquidated damages.

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

N. Remove and Relocate Signs

**1.0 Description.** The contractor shall remove and relocate all ground mount signs as noted in the plans. The contractor shall relocate signs near their existing locations unless noted in the plans.

**2.0 Method of Measurement.** Measurement for the removal and relocation of ground mount signs will be made per each. Regardless of the number of signs on a given ground-mount post, each sign relocated shall be considered as a quantity of 1 each.

**3.0 Basis of Payment.** All labor, equipment and material to complete the described work will be paid for at the contract unit price for:

Item No.	Unit	Description
903-99.02	Each	Remove & Relocate Ground Mount Signs

O. NTCIP Compliant Changeable Message Sign Requirements

**1.0 Description.** All solar powered changeable message signs, hereinafter referred to as a CMS, shall be in accordance with these specifications.

**2.0 Material.** Each CMS shall consist of an all LED (light emitting diode) matrix message board, solar/battery power supply and a user-operated interface, as specified, all mounted on a heavy duty, towable trailer.

**2.1** Each CMS shall be either Full Matrix or Character Matrix, and have the following minimum characteristics:

- (a) Full Matrix - Each CMS shall be the Full Matrix type with the capability of providing one, two, and three lines of individual changeable characters with minimum heights of 52 (1300), 28 (700), and 18 (450) inches (mm), respectively. Full Matrix signs shall be capable of both static and dynamic graphics, and full display sized messages.
- (b) Character Matrix (Three Line) – Each CMS shall consist of a minimum of three lines containing eight individual changeable characters per line. Each character shall be a minimum of 12 inches wide and 18 inches (450 mm) high.
- (c) Sign firmware shall comply with the current FHWA and DOT (Department of Transportation) NTCIP standards and support all NTCIP mandatory objects.
- (d) Physical access to the onboard computer shall be protected by a padlock or other locking handle mechanism. Electronic access to the onboard computer shall be protected by a username and password.

**2.2** Full matrix CMS and character matrix CMS shall meet the following:

- (a) The overall sign dimensions shall not be less than 72 inches (1800 mm) high x 126 inches (3150 mm) wide.

- (b) The CMS shall be legible up to a distance of 650 feet (200 m) for both day and night operations and shall be visible for ½-mile (800 m) with 18 inch (450 mm) characters.
- (c) When fully raised in the display position, the bottom of the CMS board shall be at least a height of 7 feet (2100 mm) from the ground and shall be able to rotate a complete 360 degrees atop the lift mechanism. A sight tube, used to aim the CMS board to oncoming traffic, shall be installed on the CMS board or mast. The CMS shall have an electrical hydraulic lifting mechanism that includes a manual lifting and lowering relief mechanism as a backup. It also must be able to be locked into various viewing angles as determined best for the motorists by the CMS operator.
- (d) All LED displays and control circuitry shall be operational from -20 F (-29 C) to 120 F (50 C). The LED's shall have a rated life of 100,000 hours. The LED's shall be ITE amber in color on a flat black background.
- (e) The CMS face shall be constructed that if an individual panel or pixel fails the rest of the face shall continue to display the message.
- (f) The unit shall be able to withstand a 65-mph (105-kmph) maximum road wind speed. The trailer shall be able to support the fully extended CMS board in an 80-mph (130-kmph) wind load.
- (g) Solar charging system shall allow for total autonomy of 24/7/365 continuous operation.
- (h) All exterior surfaces except the sign face shall be cleaned, primed, and finished with two coats of Highway Safety Orange and the sign interior itself shall be cleaned and finished with one coat of corrosion inhibiting primer and two coats of flat black. The sign face shall be covered with a rigid translucent material to prevent damage to the sign face caused by the environment.

**3.0 Construction Requirements.** Prior to placing a CMS on a project, the engineer shall verify proposed CMS location is void of conflict with another DMS or CMS locations presently established. If a conflict is present, the engineer shall contact the Traffic Management Center (TMC) at 314-275-1526 to mitigate. If no conflict is present, engineer shall provide Traffic Management Center (TMC) with the Job Number, Route, County, specific CMS location, and a CMS identification number that is permanently affixed to the CMS. The engineer and contractor shall verify the message displayed on board is compliant with CMS messaging policies. The contractor shall place the CMS 6 feet [2 meters] off of the right edge of shoulder at the location shown on the plans or as directed by the engineer. The CMS shall be placed so that the right side of the unit is advanced approximately 3 degrees ahead with the direction of traffic. CMS shall not be located in medians. CMS shall be delineated with a minimum of five non-metallic channelizing devices. Installation, including location and placement, shall be approved by the engineer. If needed, the contractor shall relocate the CMS as directed by the engineer.

**3.1** When not in use, the CMS shall be stored no closer than 30 feet [10 meters] to the edge of pavement carrying traffic, unless it is in a properly protected area or an off-site storage area or as otherwise directed by the engineer.

**4.0 Basis of Payment.** All expenses incurred by the contractor in integrating, maintaining, relocating, operating, and protecting the changeable message signs as outlined above shall be

paid for at the contract unit price for Item 616-99.02 Changeable Message Sign, Contractor Furnished and Retained, per Each.

**4.1** Cost for channelizers shall be included in the contract unit price for CMS.

Item Number	Unit	Description
616-99.02	EACH	NTCIP Compliant Changeable Message Sign (Contractor Furnished and Retained)

**P. Site Restoration**

**1.0 Description.** Restore to its original condition any disturbed area at sites including, but not limited to staging areas, access roads, concrete barrier, sidewalk, and curb installations. Restoration shall be accomplished by placing material equivalent to that of the adjacent undisturbed area. Disturbed unpaved areas on shall be fertilized and either seeded and mulched or sodded as directed by the engineer. The engineer will have the final authority in determining the acceptability of the restoration work.

**2.0** If the contractor elects and receives approval from the engineer for alternate trench and/or pull box locations, any areas of concrete slope protection, sidewalk, pavement, shoulders, islands and medians – as well as any similar improvements consisting of asphaltic concrete materials – removed in conjunction with their construction shall be replaced with improvements of similar composition and thickness. Removals shall be achieved by means of full depth saw cuts, the resulting subgrade compacted to minimum density requirements and topped with 4 inches of compacted aggregate base course prior to replacement of surface materials. Concrete materials used in replacement, shall be approved by the engineer. A commercial asphalt mix may be used for replacement of asphaltic surfacing upon approval of the engineer.

**2.1** Unless quantities and pay items for removal and subsequent replacement of improvements are contained in the plans for a specific location of removal work, no direct payment will be made for full depth saw cutting and the removal and subsequent replacement of asphalt or concrete slope protection, sidewalk, pavement, shoulders, islands, medians, sod and the required dowel and tie bars removed and replaced by the contractor as a result of his election to vary the location of conduit runs and pull boxes. This work will be considered as included in the various unit bid prices for conduit and pull boxes established in the contract, and no additional payment will be made.

**2.2** Sidewalks and sidewalk ramps that are disturbed as described in this provision shall be replaced to meet current ADA standards.

**2.2** Areas that are used by the contractor for jobsite trailers, equipment and materials storage, or used for project staging areas that are disturbed shall be cleaned up and restored to a condition that is both acceptable to the engineer and, at a minimum, equivalent to the existing site condition.

**3.0 Basis of Payment.** The cost of restoration of disturbed areas will be incidental to the unit price of guardrail, pole base, conduit, and/or pull box. No direct payment will be made for any materials or labor, which is performed under this provision.

Q. Special Fence Post Installation

**1.0 Description.** This work shall consist of furnishing and erecting special chain-link fence attached to existing sidewalk using resin anchors as shown in the plan sheets.

**2.0 Material.** All material shall be in accordance with Sections 607 and 1043 of the Standard Specifications.

**3.0 Construction Requirements.** Installation of the special chain-link fence shall be in accordance with Section 607 of the Standard Specification and as shown on the special plan sheet showing the connection detail to the existing sidewalk.

**4.0 Method of Measurement.** Measurement of the special chain-link fence will be made to the nearest linear foot, measured along the slope of the fabric.

**5.0 Basis of Payment.** The accepted quantity of special chain-link fence, complete in place and including all material, labor and equipment for installation, will be paid for at the contract unit price for the following pay item included in the contract:

Item 607-99.03	Special Chain-link Fence (60")	LF
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R. Pedestrian Fence (Structures)

**1.0 Description.** This work shall consist of constructing Pedestrian Fence (Structures) on new 42" tall concrete traffic barriers at the locations shown in the plans.

**2.0 Material.** Material shall be as specified in Sec. 607.10.2.

**3.0 Construction Requirements.** The Pedestrian Fence (Structures) shall be constructed as detailed in the plans and in accordance with Sec 607.10.3. The fence should be attached to the new barrier using an anchor bolt detailed in the plan sheets.

**4.0 Method of Measurement.** Pedestrian Fence (Structures) will be measured to the nearest linear foot, measured along the slope of the fabric.

**5.0 Basis of Payment.** The accepted quantity of pedestrian fence, complete in place, will be paid for at the contractor unit price for item number 607-99.03, 30" Pedestrian Fence (Structures), per linear foot. No direct payment will be made for connector plates, grout, anchor bolts or other ancillary items necessary to complete the work.

S. Culvert Cleanout and Debris Removal from Channels

**1.0 Description.** This work shall consist of excavating, removing, and disposing of the trash, rocks, silt, tree limbs and other debris within and immediately upstream/downstream of each culvert as shown on plans. The contractor shall also cleanout the channel of structure L0269 (Route N) directly upstream of the culvert outside the limits described above concerning the actual culvert cleanout.



**2.0 Construction Requirements.** All work shall be in accordance with Sec 200. The removal of debris from culvert shall be completed prior to any rehab work to the structure.

**2.1** All debris and material removed from the **channel and culvert** shall be disposed of off-site and off right-of-way at a location approved by the engineer. The disposal of debris shall also be done in accordance with the Commission's Nationwide Permit under the Clean Water Act.

**2.2 Culvert Floor.** The contractor shall be aware the existing floor of each culvert is a structural component of the culvert. The contractor shall take care not to further damage the floor during the removal of debris, especially in the areas where steel rebars are exposed.

### **3.0 Method of Measurement.**

**3.1 Culvert Cleanout.** The depth of the debris in culvert varies; it shall be the responsibility of the bidder to field verify the depth of debris within each cell of the culvert prior to the bid. No final measurement of the Culvert Cleanout will be made.

**3.2 Unclassified Excavation (Debris Removal).** The silt and debris removal within the channel of L0269 (Route N) shall be measured to the nearest cubic yard of Unclassified Excavation. This is in addition to the culvert cleanouts on each of the box culverts.

**4.0 Basis of Payment.** Payment will be made at the contract unit price for the following pay item:

<b>Item No.</b>	<b>Type/Description</b>	<b>Unit</b>
206-35.00	Culvert Cleanout	EA
203-50.00	Unclassified Excavation	CY

### **T. Construction Requirements for Box Culverts**

**1.0 Work in Culvert.** Rehabilitation of box culverts L0269 and A1108 will require the construction equipment to enter the natural streams next to each culvert. The contractor shall be required to build a temporary stream crossing to keep the construction equipment off the creek bed and out of the water. All work shall be done in accordance with Sec 806.100 Temporary Stream Crossing and all conditions of the Commission's Nationwide Permit under the Clean Water Act.

**1.1** Rehabilitation of box culvert A1073 under Route 67 will require the contractor to crane equipment and material over the **north side** of the box culvert as access is limited to the u-shaped concrete channel due to its shape and significant utility impacts on the south side of Route 67. Access from the south side will not be allowed.

**1.2** Rehabilitation of box culvert A1108 under Route AC will require the contractor to crane equipment and material over the south side of the box culvert since there are significant utility impacts on the north side of Route AC and since an temporary access road is not likely to be fitted into existing right of way.

**1.3** The Contractor is required to maintain drainage during construction as to ensure that the existing box culverts continue to convey storm water through the structures until the rehabilitation is complete.

**2.0 Basis of Payment.** No direct payment will be made to the contractor for compliance with this provision.

U. Concrete Barrier Transition Sections

**1.0 Description.** This work shall consist of constructing Concrete Traffic Barrier, and a barrier transition section for barrier as shown in the plans.

**2.0 Material.** All material shall be in accordance with Division 1000, Material Details, and as specifically detailed within Section 617 of the Standard Specifications.

**3.0 Construction Requirements.** Construction of concrete barrier and/or transition sections shall be in accordance with Section 617 of the Standard Specifications and as shown on the special plan sheets or as directed by the Engineer.

**4.0 Method of Measurement.** Measurement of the concrete barrier will be made to the nearest linear foot as noted below.

**5.0 Basis of Payment.** The accepted quantity of barrier, including all steel reinforcement complete in place and including all material, labor, and equipment for installation, will be paid for at the contract unit price for the following pay items below included in the contract. 8 inches or 10 inches of non-reinforced concrete pavement and aggregate base shall be paid separately from any barrier or its transition section.

Item 617-20.00	Concrete Traffic Barrier, Type 'B'	LF
Item 617-30.00	Concrete Traffic Barrier, Type 'C'	LF
Item 617-31.00	Concrete Traffic Barrier, Type 'D'	LF
Item 617-99.03	Concrete Traffic Barrier, Type 'B' Transition Section	LF
Item 617-99.03	Concrete Traffic Barrier, Type 'C' Transition Section	LF
Item 617-99.03	Concrete Traffic Barrier, Type 'D' Transition Section	LF

V. Restrictions for Migratory Birds NJSP-16-06A

**1.0 Description.** Swallows or other bird species protected by the Migratory Bird Treaty Act may be nesting under the bridge or bridges that will be repaired under this contract.

**2.0 Restrictions.** To comply with the Migratory Bird Treaty Act, nests of protected species cannot be disturbed when active (eggs or young are present). Generally, nests are active between April 1 and July 31, but active nests can be present outside of these dates.

**3.0 Avoidance Measures.** The contractor shall not disturb active nests or destroy adults, eggs or young birds. In an effort to comply with the Migratory Bird Treaty Act, the contractor operations will be limited to the options established in the following sections.

**3.1 Inactive or Partially Constructed Nests.** If nests are present and MoDOT determines that the nests are inactive or partially constructed, the contractor may remove the nests provided that the colony's inactive or partially constructed nests are completely removed by March 15 and the contractor maintains a nest free condition until the bridge work is complete. Dry removal

methods shall be used when practicable. If dry removal is not practicable, hydro cleaning may be used if approved by the Engineer and only if water is free of blasting grit, chemicals, or detergents, and applied using pressure less than 5,000 PSI. Clean water such as that from municipal water treatment plants or wells shall be used. Use of source water from Waters of the State (i.e., streams or lakes), is allowable, if the appropriate methods to prevent the possible spread of invasive aquatic species are implemented.

**3.2 Water and Equipment Used for Hydro cleaning.** Aquatic invasives such as zebra mussels and some algae species have infested several bodies of water in the United States and can be transported by vessels (barges, boats, tugs, tankers, etc.) and equipment (tanks, tubing, pumps, etc.) that have been used in areas that contain these invasive species. If equipment is not properly inspected and treated to prevent the spread of invasives, these species can be introduced into areas not currently known to have a population. These invasive species are detrimental to existing ecosystems and can outcompete native species. To assist in preventing the introduction and spread of aquatic invasive species through MoDOT projects in Missouri streams and lakes, the following precautions shall be followed.

**3.2.1 Use of Water from Streams, Lakes or Ponds.** Contractors shall not use water for nest removal from streams, lakes or ponds, unless they have implemented appropriate methods to prevent the possible spread of invasive aquatic species. Water sources from municipal water treatment plants or wells may be used without following these measures provided the equipment to be used has not previously contained waters from streams, lakes or ponds. If the equipment has previously contained waters from other streams or lakes, the following measures must be implemented prior to use.

**3.2.1.1 Equipment Washing.** Prior to the use or re-use of equipment following any use with water from streams, lakes or ponds, all equipment shall be washed and rinsed thoroughly with hard spray (power wash) and hot (minimum 120° F) water, for at least one minute.

**3.2.1.2 Equipment Treating or Drying.** Equipment shall be treated or dried in one of the following manners.

**3.2.1.2.1** Equipment interior and/or other surfaces shall be treated with a 10% bleach solution to kill any aquatic nuisance species. This solution must also be run through all intake lines and hoses, to sterilize interior components. When chlorine treatment is used, all chlorine runoff from equipment washing must be collected and properly treated and/or disposed of in accordance with Sec 806.

**3.2.1.2.2** Equipment interior and/or other surfaces shall be treated with 140° F water for a minimum of 10 seconds contact on all surfaces. 140 ° F water must also be run through all intake lines and hoses, to purge any standing water.

**3.2.1.2.3** Equipment shall be flushed of all non-municipal water, and dried thoroughly, in the sun before using in or transporting between streams and lakes. Dry times will depend on the season the equipment is being used. Equipment must dry a minimum of 7 days for June-September, 18 days for March-May; 18 days for October-November, and 30 days for December-February. The drying method should be reserved as a last resort option.

**3.2.2** Prior to use of equipment, contractors shall provide the MoDOT inspector written documentation of the equipment's geographic origin (including the water body it was last used in), as well as defining the specified treatment method used to adequately ensure protection

against invasive species. The written documentation will include a statement indicating the contractor is aware of these provisions and will also treat the equipment appropriately after completion of the project.

**3.3 Active Nests.** The contractor may work on the bridge if active nests are present, as long as the work does not impact or disturb the birds and/or nests. At a minimum, work shall not be performed within 10 feet of an active nest; however, the contractor is responsible for ensuring their activities do not impact the nests, eggs, or young.

**4.0 Additional Responsibilities.** If active bird nests remain after all reasonable avoidance measures have been taken, or if bird nests are observed during project construction, the contractor shall notify the Resident Engineer and contact the MoDOT Environmental Section (573-526-4778) to determine if there are other allowable options.

W. Slurry and Residue Produced During Treatment of PCCP and Bridge Decks

**1.0 Description.** This work covers the requirements for controlling residue or slurry produced by milling, grinding, planning, grooving or other methods of surface treatments on new or existing PCCP and bridge decks in addition to Section 622.

**2.0 Construction Requirements.** The following shall be considered the minimum requirements for performing this work within the project limits.

**2.1** The contractor shall submit to the Engineer for approval in writing prior to the pre-construction meeting, the best management practices (BMP's) to be used to protect the environment, including the method of disposal of the residue whether on right of way or off-site.

**2.2** When slurry is dispersed on the right of way, BMP's shall be installed to keep slurry or residue from entering paved ditches or structures discharging within the areas restricted by Section 622.303.8.6, from entering any waterways or from leaving the right of way.

**2.3** Upon approval of the contractor's BMP and residue disposal plan and prior to the contractor beginning surface treatment operations, the Engineer will identify slurry or residue "no discharge zones".

**2.4** Operations may be suspended by the Engineer during periods of rainfall or during freezing temperatures.

**3.0 Basis of Payment.** No direct payment for slurry or residue control requirements for BMP's will be made. Compliance with this specification along with the cost of all materials, labor and equipment necessary for the surface treatment work shall be included in and completely covered by the unit price bid for each of the items of work for surface treatment included in contract.

X. Clean Water Act Requirements

**1.0 Description.** The Contractor shall be aware that any work within streams, wetlands, or special aquatic sites requires a Section 404 permit from the Corps of Engineers.

**2.0** The project meets the conditions of the following listed permits with no pre-construction notification to the Corps of Engineers:

Section 404 Nationwide Permit 3 (Maintenance)

**3.0** The Contractor shall abide by all general conditions of Section 404 and 401 Permits, and specific conditions of the following listed Nationwide Permit found in the General Provisions and Supplemental Specifications to the current Missouri Standard Specifications for Highway Construction referenced in this contract.

Section 404 Nationwide Permit 3 (Maintenance)

**3.1** If there are any changes to the scope or limits to the project, the Contractor must notify the Engineer who will then notify the MoDOT Environmental Section to verify that the project still meets permit conditions.

**3.2** No additional time will be added to the contract for the contractor to obtain any permits.

**4.0 Basis of Payment.** There will be no direct payment for compliance with this provision.

Y. Ball Creek Requirements

**1.0 Description.** Ball Creek, which runs through Box Culvert L0269 under Route N, shall follow JSP - Clean Water Act Requirements as noted above. In addition, the maximum distance of sediment clean-out upstream of the box (west side of Route N) shall be 200', which equates to approximately Station 6+50 on the plans. This listed stationing may vary slightly as it will be based upon the actual upstream station of the box culvert.

Z. MSD As-built Submittals

**1.0 Description.** Metropolitan St. Louis Sewer District (MSD) requires as-built drawings of the constructed drainage facilities to be submitted for their records. The contractor shall perform all work necessary to produce and submit the final as-built drainage plans to MSD, per MSD's as-built submittal requirements. The contractor shall submit the MSD as-built drawings for the following permits associated with Job J613573 and shall include subsequent revisions after all drainage structures related to the project have been constructed or adjusted:

<b>22MSD-00513</b>	<b>Route 67 – A1073</b>
<b>22MSD-00514</b>	<b>Route AC – A1108</b>
<b>23MSD-00029</b>	<b>Route N – L0269</b>

**1.1 MSD Electronic Plans Submittal Process.** MSD requires that permits be submitted electronically using their new online paperless system Accela. The contractor will be required to login on to this system and upload as-builts and/or shop drawings as necessary. Additional information can be found here:

<https://www.stlmsd.com/msd-work/plan-review/plan-review-documents>

A direct link to the new online system can be found here:

<https://aca3.accela.com/STLMSD/Login.aspx>

In order to access the permit, the contractor will first need to call MSD in order to obtain access for the particular job mentioned above.

**1.2** The contractor shall provide a copy of the as-built drainage plans to the MoDOT engineer at the time of the MSD submittal.

**1.3** The Contractor shall comply with all General Construction Permitting Requirements indicated in the approved permit, which includes payment of all permit fees.

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

AA. Liquidated Damages for Winter Months JSP-04-17A

Delete Sec 108.8.1.3 (a)

Liquidated damages for failure to complete the work on time shall not be waived from December 15 to March 15, both dates inclusive.

BB. Temporary Access Road

**1.0 Description.** The contractor may construct a temporary road to provide access to Ball Creek (Box L0269) from the west side of Route N for the purpose of rehabbing the structures indicated within the plans.

**2.0 Construction Requirements.** Only trees and grubbing that are in the path of the proposed access road are to be cleared for construction. Installation of a clean rock fill temporary access road along with all of the excavation and embankment required shall be included within construction of the access road. Positive drainage must be provided if the access road intercepts with a current storm water drainage route. The site must be returned to its original pre-construction condition after the access road is no longer needed with all rock fill being hauled away and the ground re-seeded and mulched.

**2.1** Vertical and Horizontal alignment and estimated quantities for the temporary access road for Box L0269 are provided for the contractor's information only. The contractor will be allowed to modify the horizontal and vertical alignment of the temporary access road from that shown on the plans. Any variation in alignment shall remain entirely on MoDOT Right-of-Way or Permanent or Easements. The temporary access road will not be allowed to negatively impact the stability of any existing roadway fill, as determined by the engineer. If the contractor chooses an alternative method to reach the creek bed, such as using a crane for Box A1073, then the contractor will still be paid for the temporary access road as the method and means of accessing the work site.

**3.0 Method of Measurement.** Measurement of the temporary access road, complete in place and removed after construction, including all incidentals specified in the quantities will not be

made on this project. The contractor shall be responsible for providing the access road while the quantities included in the plans may vary based upon the alignment and method chosen by the contractor to rehab these box culverts.

**4.0 Basis of Payment.** Payment for the construction and deconstruction of the temporary access road will be paid in the form of a lump sum. This includes all excavation, materials, clearing, equipment, tools, labor, and any incidental work required to comply with this provision. No adjustment of the contract price for the item listed below will be made for any variations resulting from the contractor's chosen alignment of the temporary access road.

Item Number	Item Name	Units
618-99.01	Temporary Access Road – Ball Creek	Lump Sum

CC. Supplemental Revisions JSP-18-01X

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 RManager (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](http://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	≤ 0.01%
Fiber Content	ASTM D5603	≤ 0.5%
Moisture Content	ASTM D1509	≤ 1.0%*
Mineral Filler	AASHTO M17	≤ 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  $\pm 3$  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  $\pm 3$  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** VMA shall be calculated as follows:

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

where:

$P_s$  = percent aggregate by total mixture weight

$P_{GTR}$  = percent GTR by total mixture weight

$G_{sb}$  = bulk specific gravity of the combined aggregate

$G_{GTR}$  = 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 107 in its entirety and substitute the following:**

**107.1 Laws to be Observed** The contractor shall know, observe and comply with all federal and state laws, local laws, codes, ordinances, orders, decrees and regulations existing at the time of or enacted subsequent to the execution of the contract that in any manner affect the prosecution of the work, except as specified in the contract or as directed by the engineer. The Contractor shall also ensure that any subcontractor know, observe and comply with all federal and state laws, local laws, codes, ordinances, orders, decrees and regulations as outlined above. The contractor and surety shall indemnify and save harmless the State, the Commission, the Commission's agents, employees and assigns from any claim or liability arising from or based on the violation of any such law, code, ordinance, regulation, order or decree, except any local regulations, decrees, orders, codes or ordinances directed by the contract.

**107.1.1 Contract and Legal Inconsistency** The engineer shall be notified immediately in writing if any discrepancy or inconsistency is discovered between the contract and any law, ordinance, regulation, order or decree.

**107.1.2 Local Building and Zoning Codes or Ordinances** The projects of the Commission are not typically subject to local building or zoning codes or ordinances. Therefore, the contractor usually need not obtain a local building or zoning permit or variance for work done exclusively as the Commission's contractor on the Commission's project and the Commission's right of way. Other local codes or ordinances may not apply to the Commission, and thus to the contractor as well. If any questions arise concerning whether the contractor shall comply with a local code, ordinance, decree or order of any type, the contractor shall advise the engineer of the problem immediately, for resolution by the engineer. This provision will not exempt the contractor from the requirement of thoroughly researching and determining, before submitting a bid on the contract and from complying with, all federal, state or local laws, regulations, codes, ordinances, decrees or orders that may apply to the contract work. The Commission will not be responsible for the contractor's failure to be informed before bidding as to the federal, state and local laws, regulations, codes, ordinances, decrees or orders that may govern the contract work, or for the contractor's failure to determine before bidding which of these do not govern the contract work.

**107.1.3 Authentication of Certain Documents** If plans, plats, detailed drawings or specifications for falsework, cofferdams or any other work are required to be submitted to the engineer, the documents shall be signed, sealed and stamped in accordance with the laws relating to the practice of architecture and professional engineering in the State of Missouri (Chapter 327, RSMo).

**107.2 Permits, Licenses and Taxes** Except as otherwise provided in the contract, the contractor shall procure all permits and licenses, shall pay all charges, fees and taxes, and shall give all notices necessary and incidental to the due and lawful prosecution of the work. No direct payment will be made for the cost of complying with this requirement.

**107.3 Patented or Copyrighted Devices, Material and Processes.** If the contractor is required or desires to use any design, device, material or process covered by letters, patent, copyright, service or trademark, the contractor shall arrange and provide for such use by suitable agreement with the patentee or owner, and a copy of the agreement may be required by the Commission. The contractor and surety shall indemnify and save harmless the State, the Commission, the Commission's agents, employees and assigns from any suits, claims or damages arising from the infringement upon or use of any patented, copyrighted or registered design, device, material, process or mark.

**107.4 Safety and Sanitary Provisions** The contractor shall at all times take necessary precautions to protect the life and health of all persons employed on the project or, who at the direction of the contractor are present on the right of way. The contractor shall be familiar with the latest accepted accident prevention methods and shall provide necessary safety devices and safeguards accordingly. The Commission will refuse to provide inspection services at plants or work sites where adequate safety measures are not provided and maintained.

**107.4.1 Apparel.** All workers within highway right of way shall wear approved ANSI/ISEA 107 Performance Class 2 or 3 safety apparel and more specifically as follows:

**107.4.1.1** During daytime activities, flaggers shall wear a high visibility hard hat, safety glasses, a Performance Class 3 top OR a Performance Class 2 top, and safety footwear. Hard hats other than high visibility orange or green shall be covered with a high visibility covering.

**107.4.1.2** During daytime activities, workers shall wear a hard hat, safety glasses, a Performance Class 3 top OR a Performance Class 2 top, and safety footwear.

**107.4.1.3** During nighttime activities, flaggers shall wear a high visibility/reflective hard hat, safety glasses, a Performance Class 3 top AND Class E bottoms, OR Performance Class 2 top AND Class E bottoms, and safety footwear. Hard hats shall be reflective or covered with a high visibility covering.

**107.4.1.4** During nighttime activities, workers shall wear a hard hat, safety glasses, a Performance Class 3 top OR Performance Class 2 top AND Class E bottoms, and safety footwear.

**107.4.2** The contractor shall provide and maintain in a neat and sanitary condition, such accommodations for the use of employees as may be necessary to comply with the requirements and regulations of any agency having jurisdiction over public health and sanitation. The contractor shall permit no public or private nuisance.

**107.4.3** All sanitary facilities and safety devices shall be furnished free to employees and no direct payment will be made for such facilities or devices.

**107.5 Public Convenience and Safety** The contractor shall conduct the work in a manner that will ensure, as far as practical, the least obstruction to traffic and shall provide for the convenience and safety of the general public and residents along and adjacent to the highway in an adequate and satisfactory manner.

**107.5.1 Obstructions Prohibited** Fire hydrants on and adjacent to the highway shall be kept accessible to firefighting apparatus at all times, and no obstruction shall be placed within 15 feet of any such hydrant. Footways, gutters, sewers, outlets, inlets and portions of highways adjoining the work under construction shall not be obstructed. Pavements over which hauling is performed shall be kept clean of spilled or tracked-on material at all times when in use by traffic.

**107.5.2 Objects Potentially Affecting Navigable Airspace.** The contractor shall comply with all federal regulations pertaining to constructing, erecting or installing any object, temporary or permanent, which could potentially affect navigable airspace.

**107.5.3 Material and Equipment.** During construction hours, equipment, material and vehicles utilized in construction of the project will only be permitted on shoulders, medians or pavements where the locations are closed to traffic, properly signed and occupied by ongoing construction operations, unless otherwise approved by the engineer. Except in cases of emergency, construction equipment, material and vehicles will not be permitted on pavements or shoulders being utilized by traffic. If the contract specifies time periods the contractor will not be permitted to perform work, construction equipment or vehicles shall not enter or leave the construction area via the pavements handling traffic nor be operated on the pavements handling traffic within the construction area during the restricted time periods. During non-construction hours, construction equipment, material and vehicles will not be permitted within 30 feet of the edge of the pavement or shoulders carrying traffic unless the equipment, material and vehicles are located in a properly protected area, an off-site storage area or as otherwise directed by the engineer.

**107.5.4 Distractions to the Traveling Public in Work Zones.** In order to avoid distracting operators of vehicles traveling on the roadway, the Contractor and its sub-contractors shall not bring or display any signs, flags, logos, emblems, advertising, or any other communicative device on construction equipment that is large enough to be legible from the main traveled way of the highway in the work zone or on highway right of way. This prohibition does not apply to any sign, logo or emblem placed on Contractor equipment identifying the owner or manufacturer of the equipment or to any official highway signs approved by the Commission pursuant to 227.220 RSMo.

**107.6 Bridges over Navigable Waters.** All work on navigable waters shall be conducted such that free navigation of the waterways will not be interfered with and that existing navigable depths will not be impaired except as allowed by permit issued by the USCG or the USACE.

**107.7 Use of Explosives.** All blasting operations shall be conducted under the direct supervision of a licensed blaster as required by the Missouri Blasting Safety Act. When explosives are used in the prosecution of the work, the contractor shall use the utmost care to prevent bodily injury and property damage. The contractor shall be responsible for damage resulting from the use of explosives. The engineer will have the authority to suspend any unsafe blasting operation. The contractor shall be familiar and comply with the rules and regulations of any city, county, state or federal agency or any other agency that may have jurisdiction in the handling, loading, transporting, storage and use of explosives. All places used for explosives storage shall be marked clearly "DANGEROUS EXPLOSIVES".

**107.7.1** Before beginning work, the contractor shall furnish the engineer letters of approval for the proposed operation from the appropriate regulating agencies. The contractor shall notify in writing the appropriate fire protection jurisdiction of the intent to store, transport or use explosives and shall provide proof of notice to the engineer. The contractor shall provide the engineer with copies of all permits, blasting logs and seismic monitoring data.

**107.7.2** The contractor shall notify in advance each property owner, tenant and public utility company having structures or facilities close to the work of any intention to use explosives.

**107.7.3** Removal of any item or material of any nature by blasting shall be done in such a manner and at such time as to avoid damage affecting the integrity of the design and to avoid damage to any new or existing structure, whether on Commission right of way or private property, included in or adjacent to the work. Unless the contract documents or the engineer

restricts such operation, the contractor shall be responsible for determining a method of operation to ensure the desired results and the integrity of the completed work.

**107.7.4** The contractor and surety shall indemnify and save harmless the State, the Commission, the Commission's agents, employees and assigns from any claim related to the possession, transportation, storage or use of explosives.

#### **107.8 Preservation of Monuments and Artifacts.**

**107.8.1 Monuments.** The contractor shall not disturb or damage any land monument or property landmark unless authorized by the engineer.

**107.8.2 Human and Archaeological Remains.** The contractor shall report to the engineer the discovery of human remains, artifacts, fossils and other items of historical, archaeological or geological significance discovered within the right of way during construction. Such items will remain in the Commission's custody and shall not be removed from the site unless directed by the engineer. The preservation and handling of such items shall be in accordance with [Sec 203.4.8](#).

**107.9 Forest and Park Protection.** Environmental and sanitary laws and regulations regarding the performance of work within or adjacent to state or national forests or parks shall be obeyed. The contractor shall keep the project site in an orderly condition, dispose of all refuse, obtain permits for the construction and maintenance of all construction camps, stores, warehouses, residences, latrines, cesspools, septic tanks and other structures in accordance with the regulations and instructions issued by the forest or park supervisor. The contractor shall require employees and subcontractors, independently, and at the request of forest officials, to prevent and suppress forest fires, and to notify a forest official of the location and extent of any fire.

**107.10 Environmental Protection.** The contractor shall comply with all federal, state and local laws and regulations controlling pollution of the environment. Pollution of streams, lakes, ponds and reservoirs with fuels, oils, bitumens, chemicals or other harmful material and pollution of the atmosphere from particulate and gaseous matter shall be avoided.

**107.10.1** Fording of streams and fill for temporary work not specified on design plans will not be permitted unless the plan for such operation is authorized by the Corps of Engineers, meets the approval of the engineer, complies with the current MoDOT Pollution Plan and results in minimum siltation to the stream. Temporary stream crossings shall not be constructed unless specifically designated as a condition of the Corps of Engineers Section 404 permit or a permit is obtained, and the temporary stream crossing is in accordance with [Sec 806](#).

**107.10.2** When work areas or pits are located in or adjacent to streams, the areas shall be separated from the main stream by a dike or barrier to keep sediment from entering the stream. Care shall be taken during the construction and removal of such barriers to minimize siltation of the stream.

**107.10.3** Disposal of Portland cement concrete residue and wash water, water from aggregate washing, or other operations producing sediment laden runoff shall be treated in accordance with Sec 806.



**107.10.4** Oil distributors or tanker trucks used for the transport or application of any petroleum-based products, and that have a capacity greater than 1,320 gallons, shall not be left unattended on MoDOT right of way within the project limits during non-construction hours unless secondary containment is deployed as per the Spill Prevention Control and Countermeasure rule. Parking of these vehicles on MoDOT right of way outside of the project limits, or on any MoDOT owned property, shall not be allowed without the aforementioned secondary containment and prior authorization from the engineer.

**107.11 Responsibility for Claims for Damage or Injury.** The contractor and insurance company shall indemnify and save harmless the State, the Commission, the Commission's agents, employees and assigns from all claims or suits made or brought for bodily injury, death or property damage, arising from performance of the work to the extent of:

(a) The negligent acts or omissions of the contractor, subcontractors, suppliers or their respective officers, agents or employees.

(b) The creation or maintenance of a dangerous condition of or on the Commission's property or right of way, which condition occurred due to the acts or omissions of the contractor, subcontractors, suppliers or their respective officers, agents or employees or for which the contractor had knowledge of or could have had knowledge of the condition in time to warn of or repair said condition.

(c) The failure of the contractor, subcontractors, suppliers or their respective officers, agents or employees, to perform the work in accordance with the plans and specifications.

**107.11.1** The contractor will not be required to defend, indemnify or hold harmless any other person, including the State, the Commission, or the Commission's agents, employees or assigns for any acts, omissions or negligence of other persons.

**107.11.2** Neither the Commission nor the contractor, by execution of a contract, shall intend to or create a new or enlarge an existing cause of action in any third party. This provision shall not be interpreted to create any new liability that does not exist under the law, or to waive or extinguish any defense that either party to this contract or their respective agents and employees may have to an action or suit by a third party.

**107.12 Contractor's Responsibility for Work** From the earlier of the date of commencement of the work or the effective date of the notice to proceed, and until any work is accepted by the engineer, the work shall be in the custody and under the charge and care of the contractor. Issuance of a payment estimate on any part of the work done will not be considered as final acceptance of any work completed up to that time.

**107.12.1** Damages to any portion of the work before the work is completed and accepted, caused by the action of the elements or from any other reason, shall be repaired or replaced at the contractor's expense. The contractor, at the contractor's option, may insure against any such damages. The Commission may, in its discretion, make such a payment, determined in accordance with [Sec 109.4](#), for damage to the work due to unforeseeable causes beyond the control of, and without fault or negligence on the part of the contractor, unless the contractor has been reimbursed for such damages by the contractor's insurer. Prior to reimbursement, the contractor shall furnish documentary evidence of all efforts to recover such repair costs.

**107.12.2** The contractor shall immediately give written notice to the engineer of any pedestrian, worker and/or vehicular accident. The contractor may be directed by the engineer to repair permanent Commission facilities that have been damaged by events that are beyond the control of the contractor. Reimbursement will be provided by the Commission, determined in accordance with [Sec 109.4](#), for the actual direct cost of labor, equipment and material, exclusive of overhead, indirect or consequential costs of profit. The Commission may elect to make such repairs in lieu of the contractor.

**107.13 General Insurance Requirements.** The Contractor shall procure and maintain at the Contractor's expense until Final Acceptance of the project by the engineer, insurance for all damages and losses imposed by law and assumed under the contract, of the kinds and in the amounts specified in [Secs 107.13.1](#) through [107.13.8](#).

**107.13.1 Sovereign Immunity Limits for Missouri Public Entities.** The Contractor shall procure and maintain at least minimum insurance coverages to meet the sovereign immunity limits for Missouri public entities as calculated by the Missouri Department of Insurance and published annually in the Missouri Register pursuant to Section 537.610 RSMo., for Secs 107.13.2 through 107.13.5, unless specified otherwise for each type of insurance coverage. Each policy shall provide additional insured status for the Missouri Highways and Transportation Commission (Commission), the Missouri Department of Transportation (MoDOT) and its employees up to Missouri's sovereign immunity limits.

**107.13.2 Commercial General Liability Insurance.** The Contractor shall procure, and maintain during the term of the project, commercial general liability insurance with coverage at least as broad as Insurance Services Office (ISO) policy form CG 00 01. The general aggregate limit shall, by endorsement or otherwise, provide a designated aggregate limit solely for this project using ISO form CG 25 03 05 09 or an equivalent form. General liability policies shall be endorsed to add the Commission, MoDOT, and its employees as additional insureds (the "Additional Insureds") using Insurance Services Office forms CG 20 10 or the equivalent under such policy. For construction contracts, an endorsement providing completed operations coverage to the Additional Insureds, ISO form CG 20 37 or the equivalent, is also required. This form, CG 20 37, shall be endorsed on each subsequent commercial general liability policy issued to the Contractor for three (3) years after final acceptance of the project. The contractor could provide extended completed operations for specific project needs. Discontinued operations coverage shall be provided for three (3) years when applicable. Coverage shall not be reduced by insured versus insured exclusions or by explosion, collapse and underground (XCU) exclusions.

**107.13.3 Commercial Automobile Liability Insurance.** The Contractor shall procure and maintain automobile liability coverage at least as broad as ISO policy form CA 00 01 covering owned, hired, and non-owned autos. The policy shall include as insureds anyone liable for the conduct of an insured as described by policy provision or by endorsement added to the policy.

**107.13.4 Contractor's Pollution Liability (CPL) Insurance.** The Contractor performing excavation, remediation, hazardous materials removal, or any other work involving potential pollution arising from construction operations shall procure and maintain contractor's pollution liability insurance for liability arising out of sudden, accidental, and gradual pollution and remediation. The policy shall have minimum limits of \$1,000,000 and the Commission, MoDOT and its employees shall be endorsed as additional insureds under such policy. The policy shall provide coverage for the hauling of waste from the project site to the final disposal location, including non-owned disposal sites. Products/completed operations coverage for pollution

liability insurance shall extend a minimum of three (3) years after final acceptance of the project. Coverage shall be included on behalf of the insured for covered claims arising out of the actions of independent contractors. If the insured is using subcontractors, the Policy must include work performed "by or on behalf" of the insured. Policy shall specifically provide for a duty to defend on the part of the insurer.

**107.13.5 Aircraft Liability Insurance.** If aircraft, including unmanned aircraft, will be used on the project, Contractor shall provide, or cause to be provided, aircraft liability insurance protecting against claims for damages resulting from such use in all cases where any aircraft that is owned, leased or chartered by any Contractor-Related Entity used on the Project. The policy shall have minimum limits of \$1,000,000 and the Commission, MoDOT and its employees shall be additional insureds on the policy by endorsement or policy provision. The use of any aircraft in performance of the Work, the aircraft crew, flight path and altitude, including landing of any aircraft on the Site or on any property owned by the Commission, MoDOT or other parties at interest, shall be subject to review and written acceptance by the Commission prior to any such usage. If any aircraft are leased or chartered with crew and/or pilot, evidence of non-owned aircraft liability insurance will be acceptable to meet these requirements but must be provided prior to use of the aircraft. For use of unmanned aircraft vehicles, the contractor may provide insurance either through an aircraft liability insurance policy, or by endorsement to the Contractor's commercial general liability insurance policy and excess liability policies. Use of unmanned aircraft must comply with all state and federal rules and regulations, including FAA requirements.

**107.13.6 Excess or Umbrella Liability Insurance.** The Contractor may satisfy the required limits for Secs 107.13.2 through 107.13.5 by use of excess or umbrella liability insurance policies in any combination that meets the contract limits requirements. Such policies shall include as insureds, the Missouri Highways and Transportation Commission (Commission), the Missouri Department of Transportation (MoDOT) and its employees.

**107.13.7 Workers' Compensation Insurance.** The Contractor shall provide evidence to the engineer that the Contractor has obtained workers' compensation insurance and employers liability insurance as required by the state or is exempt and provides proper documentation to the engineer. Coverage shall include all statutory workers' compensation benefits to Contractor employees who may sustain work-related injury, death or disease. If applicable, commensurate with the requirements of the U.S. Longshore and Harbor Workers' Compensation Act (USL&H) and the Jones Act, with a minimum limit of \$2,000,000 per occurrence and in the aggregate, or as may be specified by law, for each. The required insurance must be endorsed to include a waiver of subrogation in favor of the Commission, MoDOT and its employees.

**107.13.8 Railroad Protective Liability Insurance.** In addition to other forms of required insurance, the Contractor shall provide railroad protective liability insurance when any of the Contractor's work is to be performed within any railroad right of way and in some cases may be required when the project improvements are near a railroad right of way. The name or names of the railroad companies known to be in the vicinity of the contract improvements will be specified in each contract, but the contractor shall confirm the railroad companies impacted and the final insurance needed with each railroad. The minimum limits of the insurance indicated by each railroad to the Commission will be included in the contract bid documents for informational purposes, but the contractor shall be bound by each individual railroad company requirements. Each railroad agency has final determination in the content and coverage limits of the policies required. No work will be permitted within any railroad's right of way until the railroad involved has reviewed and approved the insurance policy. Any day upon which the Contractor cannot

perform work due to such a policy not being approved by the railroad will not be counted as a contract day under [Sec 108.7](#).

**107.13.9 Evidence of Insurance.** Required evidence of insurance providing confirmation of compliance with these requirements shall consist of a certificate of insurance, an endorsement to any workers compensation policy waiving the subrogation by the insurer, and any endorsements adding the Commission, MoDOT and its employees as additional insureds where specified. "Blanket" or "automatic" additional insured endorsements providing additional insured coverage "where required by contract," may be used, provided that such forms provide coverage at least as broad as provided by the specified endorsement forms required. The contractor and any subcontract work shall not commence under the contract until the contractor obtains the applicable insurance coverage required and receives approval for such insurance from the engineer. All evidence of insurance for the prime contractor, including certificates of insurance and required endorsements, and notices shall be submitted electronically by the insurance agent to [ContractorSupport@MoDOT.mo.gov](mailto:ContractorSupport@MoDOT.mo.gov). The Contractor shall promptly furnish the engineer with a complete copy of its policy upon request. Failure to furnish evidence of proper insurance, or complete insurance policies when requested, may result in the suspension of work as provided in [Sec 108](#), and may result in other claims or actions for breach of contract or otherwise, as may be recognized at law or in equity.

**107.13.9.1 Work Performed by Subcontract.** Prior to its commencement of the applicable work, the contractor shall cause each of its subcontractors to provide insurance that complies with the requirements for contractor-provided insurance. Contractor's determination of such insurance shall not be interpreted as relieving Contractor or its insurer of any liability otherwise imposed on Contractor or its insurers under these Contract Documents. The Contractor shall promptly furnish the engineer with a complete copy of its subcontractor policies upon request. Failure to furnish evidence of proper insurance, or complete insurance policies when requested, may result in the suspension of work as provided in [Sec 108](#), and may result in other claims or actions for breach of contract or otherwise, as may be recognized at law or in equity.

#### **107.13.10 Other Conditions and Requirements**

**107.13.10.1 Acceptability of Insurance Companies.** All insurers must be authorized to transact business under the laws of the State of Missouri and hold an AM Best rating of no less than A-: VI.

**107.13.10.2 Waiver of Right of Recovery.** All insurance coverage maintained or procured pursuant to this agreement shall be endorsed to waive subrogation against the Commission, MoDOT and its employees or shall specifically allow the Contractor, or others providing insurance evidence in compliance with these specifications, to waive their right of recovery prior to a loss. Contractor hereby waives its own right of recovery against the Commission, MoDOT and its employees.

**107.13.10.3 Enforcement of Contract Provisions (non estoppel).** Contractor acknowledges and agrees that any actual or alleged failure on the part of the Commission, MoDOT or its employees to inform Contractor of non-compliance with any requirement imposes no additional obligations on the Commission, MoDOT or its employees, nor does it waive any rights hereunder.

**107.13.10.4 Primary and Non-contributory.** For any claims related to this contract, the Contractor's insurance coverage shall be primary insurance with respects to the Commission,

MoDOT and its employees as the additional insureds. Any other insurance or self-insurance maintained by any of these parties shall be excess of the Contractor's insurance and shall not contribute with the Contractor's insurance.

**107.13.10.5 Specifications not Limiting.** Requirements of specific coverage features, or limits contained in this Section are not intended as a limitation on coverage, limits or other requirements, or a waiver of any coverage normally provided by any insurance. Specific reference to a given coverage feature is for purposes of clarification only as it pertains to a given issue and is not intended by any party or insured to be all inclusive, or to the exclusion of other coverage, or a waiver of any type.

**107.13.10.6 Notice of Cancellation and Change in Insurance Carrier.** Contractor agrees to oblige its insurance agent or broker, and insurers by endorsement to the policy, to provide to the engineer with thirty (30) days advance notice of cancellation, except for nonpayment for which ten (10) days' notice is required, or nonrenewal of coverage for each required coverage. If any policy is canceled or the insurance carrier is planned to change before the contract work is complete, a satisfactory replacement policy shall be obtained and in force, with notice and evidence of insurance submitted to the engineer, prior to the effective date of cancellation of the former policy.

**107.13.10.7 Self-insured Contractors and Self-insured Retentions.** A self-insured contractor will not be considered to comply with these specifications unless approved by the engineer prior to beginning work. A contractor with insurance policies arranged with self-insured retentions must be declared to and approved by the engineer prior to beginning work. The Commission reserves the right to require that self-insured retentions be eliminated, lowered, or replaced by a deductible or other policy type.

**107.13.10.8 Timely Notice of Claims.** Contractor shall give the engineer prompt and timely notice of claims made or suits instituted that arise out of or result from Contractor's performance under this Agreement, and that involve or may involve coverage under any of the required liability policies. The Commission and MoDOT will provide timely notice to the contractor of any claims or lawsuits that it receives. If the Commission demands that the contractor defend the suit and/or indemnify the Commission, the contractor or its insurance company shall acknowledge that demand within 20 days of receiving it and the contractor shall respond within a total of 45 days of the claim receipt the intent of the contractor to defend.

**107.13.10.9 Exhaustion of Policy Limits.** It shall be the contractor's responsibility to notify the engineer promptly when any provided insurance limits are not able to be maintained during the contract period or provide verification that additional coverage or excess coverage is also available.

**107.14 Cooperation in Defense.** The indemnified party shall cooperate with the indemnifying party in the defense of a third-party claim subject to the foregoing, (1) the indemnified party shall not have any obligation to participate in the defense of or to defend any third-party claim, and (2) the indemnified party's defense of or its participation in the defense of any third-party claim shall not in any way diminish or lessen its right to indemnification as provided in this section.

**107.15 Third Party Liability.** Neither the State of Missouri, including the Commission, nor the contractor, by execution of the contract including these specifications, intend to create a right of action in a third-party beneficiary, except as specifically set out in these specifications and the contract. It is not intended by any required contractual liability in the contract or in these



specifications that any third-party beneficiary has a cause of action arising out of the condition of the project when completed in accordance with the plans and accepted by the Commission.

**107.16 Personal Liability of Public Officials.** There shall be no personal liability upon the Chief Engineer, or any member, employee, or agent of the Commission in carrying out any of the provisions of the contract or in exercising any power or authority granted to the individual, it being understood that in such matters the individual acts as an agent and representative of the State, with official and public duty doctrine immunity. If any provision of the contract appears to impose a duty on such an individual, the duty will remain exclusively that of the Commission and will not be a personal duty or obligation of the individual.

**107.17 Contractors That Are Not Resident In Missouri.** Any contractor that is not a permanent resident of or domiciled in Missouri shall provide to the Commission proof of compliance with the Missouri "nonresident employers" financial assurance laws at Sections 285.230 to 285.234, RSMo, before the contractor performs any work on a project.

**107.17.1** A nonresident contractor that is a "transient employer" as that term is defined in Section 285.230.1, RSMo, and 12 CSR 10-2.017(1)(A), shall file with the Commission a photocopy of the contractor's current transient employer's certificate of registration issued by the Missouri Department of Revenue before performing any work on a project. A nonresident contractor that is not classified by the Missouri Department of Revenue as a "transient employer" because the nonresident contractor has properly registered with the Missouri Department of Revenue and the Missouri Division of Employment Security, and has filed and paid Missouri state income taxes for more than 24 consecutive months, shall file with the Commission a photocopy of the contractor's certificate of registration, issued by the Missouri Department of Revenue, that it is not a "transient employer" before performing any work on a project.

**107.17.2** The contractor shall require a nonresident subcontractor to file with the Commission a photocopy of the subcontractor's current transient employer's or alternate certificate of registration, as issued by the Missouri Department of Revenue, before that subcontractor performs any work on a project.

**107.17.3** Any nonresident contractor or subcontractor that fails to file the financial assurance forms with the Missouri Department of Revenue as required by Missouri law will be prohibited from contracting for or performing labor on any project for a period of one year.

**107.18 Basis of Payment.** No direct payment will be made for compliance with [Sec 107](#), except as provided by [Sec 618](#).

Buy America

In addition to Section 106.9 of the Missouri Standard Specifications for Highway Construction, the following requirements will also be in effect for this project.

**1.0 Description.** The Bipartisan Infrastructure Law (BIL) was enacted on November 15, 2021. The BIL includes Build America, Buy America Act Publication L. No. 117-58. This provision expands the Buy America requirements beyond what is currently only required for steel and iron products. The steel and iron provisions have not changed with the new bill. Cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents

or additives are excluded from this requirement. All other materials and manufactured products permanently incorporated into the project will be subject to Buy America requirements. There are three categories requiring Buy America Certification:

- a) Iron and steel – no changes to the current specification requirements.
- b) Manufactured products – these are currently exempted under the 1983 waiver from FHWA.
- c) Construction materials consisting primarily of:
  - Non-ferrous metals;
  - Plastic and polymer-based products (including polyvinylchloride, composite build materials, and polymers used in fiber optic cables);
  - Glass (including optic glass);
  - Lumber; or
  - Drywall

**1.1** All products and or materials will only be classified under one of these categories and not under multiple categories. It is the prime contractor's responsibility to assure all submittals required for Buy America are submitted to the Engineer prior to the products and or materials being incorporated in the job. The implementation of this policy will be in effect for all projects awarded after November 10, 2022.

**1.2** New items designated as construction materials under this requirement will require the prime contractor to submit a material of origin form certification prior to incorporation into the project. The Certificate of Material origin form ([link to certificate form](#)) from the supplier and/or fabricator must show all steps of the manufacturing being completed in the United States. The Certificate of Material form shall be filed with the contract documents.

**1.3** Any minor miscellaneous construction material items that are not included in the materials specifications shall be certified by the prime contractor as being procured domestically. The certification shall read "I certify all materials permanently incorporated in this project covered under this provision have been to the best of my knowledge procured and all manufactured domestically." The certification shall be signed by an authorized representative of the prime contractor.

**1.4** The National Transportation Product Evaluation Program (NTPEP) compliance program verifies that some non-iron and steel products fabrication processes conform to 23 CFR 635.410 Buy America Requirements and an acceptable standard per 23 CFR 635.410(d). NTPEP compliant suppliers will not be required to submit step certification documentation with the shipment for some selected non-iron and steel materials. The NTPEP compliant supplier shall maintain the step certification documentation on file and shall provide this documentation to the engineer upon request.

**2.0 Basis of Payment.** Any costs incurred by the contractor by reason of compliance with the above requirements shall be considered as included in and completely covered by the unit price bid for the various items of work included in the contract.

**Delete Sec 617.20.3 and substitute the following:**

**617.20.3 Certification.** Prior to use the contractor shall submit to the engineer a manufacture's certification of crashworthiness per NCHRP 350 or MASH 2016 for portable concrete barrier or other approved temporary barrier. Type F three-loop temporary concrete barrier is required to meet NCHRP 350 requirements regardless of manufacturing date and may be used until January 1, 2030. All other temporary barriers manufactured prior to January 1, 2023 may be used until January 1, 2030. All other temporary barriers manufactured after January 1, 2023 shall meet MASH 2016 crash test requirements.

**Delete Sec 1063.2 and substitute the following:**

**1063.2 General Requirements.** All temporary traffic control devices shall be manufactured as shown on the plans and as specified, in accordance with MUTCD requirements and shall be NCHRP 350 or MASH 2016 compliant. FHWA Category 1 temporary traffic control devices are not required to be crash tested unless modified. Non MASH 2016 FHWA Category 2 temporary traffic control devices and appurtenances manufactured prior to January 1, 2023 may be used until January 1, 2026. Non MASH 2016 FHWA Category 3 temporary traffic control devices and appurtenances manufactured prior to January 1, 2023 may be used until January 1, 2030. All other FHWA Category 2 and Category 3 temporary traffic control devices and appurtenances manufactured after January 1, 2023 shall meet MASH 2016 Test Level 3 crash test requirements. Type F three-loop temporary concrete barrier is required to meet NCHRP 350 requirements regardless of manufacturing date and may be used until January 1, 2030. MASH 2016 FHWA Category 4 temporary traffic control devices should be used when available. Nominal dimensions will be permitted for dimensional lumber where applicable. All temporary traffic control devices shall exhibit good workmanship and shall be free of objectionable marks or defects that affect appearance or serviceability. The brand name or model number shall be permanently identified on each traffic control device.

**Alternate Weather Limitations for Plant Mix Bituminous Surface Leveling**

**1.0 Description.** Weather limitations for Plant Mix Bituminous Surface Leveling mixtures shall be as specified in Sec 402.10.1 except as otherwise allowed herein.

**1.1** When all remedial actions listed in Section 2.0 have been implemented by the contractor, at no additional cost to the Commission, the alternate weather limitations in Section 1.2 shall apply in lieu of Sec 402.10.1

**1.2 Alternate Weather Limitations.** Bituminous mixtures shall not be placed (1) when either the air temperature or the temperature of the surface on which the mixture is to be placed is below 40 F, or (2) on any wet surface or frozen pavement. Temperatures shall be obtained in accordance with MoDOT Test Method TM 20.

**2.0 Remedial Actions.**

- a) Reclaimed Asphalt Pavement (RAP) content in the mix does not exceed 20% asphalt binder replacement.
- b) No Reclaimed Asphalt Shingles (RAS) are added to the mix.
- c) A material transverse vehicle is utilized to transfer the mix from the haul trucks to the paver.



- d) Warm mix technology shall be incorporated into the mix (either by chemical additive or foaming), as approved by the engineer.

DD. Coordination with Other Projects

**1.0 Description.** The contractor shall coordinate traffic management between the following projects within the same project limits:

MoDOT Job Number J6S3599 (Route N ADA/Resurfacing from Brotherton to Route 115)

**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, private, MoDOT maintenance, permit, or other projects that may impact project construction or traffic control in the vicinity of this project. It shall be the responsibility of the contractor to determine what, if any projects other than the ones listed above may impact this project and work to coordinate construction and traffic management efforts between this project and any other project involved.

**2.0 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.

EE. Disturbed Areas during Construction

**1.0 Description.** As shown on the Title Plan Sheet, many separate locations of construction are included on this project, but the contractor shall not disturb more than 1 acre of ground at any one time. No direct payment shall be made to comply with this provision.

FF. Testing Modifications

**1.0 Description.** The predominant use of base rock on this project is for entrances, sidewalks, and ADA curb ramps. Concrete base and pavement are patchwork. Paved approaches, sidewalks, and curb will frequently be poured from the same truckload of concrete at a frequency of one or two trucks per day. This JSP revises the Inspection and testing Plan (ITP). Specifically, it revises some of the QC testing frequencies to better match the nature of work and not cause an undue burden on the contractor.

**2.0 Compaction Test on Base Rock Under Sidewalk ADA Ramps and Paved Approaches in the Field.** (Revises Sec 304.3.4) The required frequency of one per day will be modified to one per 600 tons.

**3.0 Gradation Test on Base Rock Under Sidewalk ADA Ramps and Paved Approaches.** (Revises Sec 304.4.1) The standard ITP requires one test per 250 tons with a minimum of one per week. The required frequency will be modified to one per 500 tons.

**4.0 Concrete Plan Checklists.** (Revises Sec 501) Submittal of the 501 Concrete Plant Checklist will be modified from once per day to once per week when the contractor is only pouring curb sidewalk, paved approaches, and ADA ramps.

**5.0 Concrete Median, Median Strip, Sidewalk, Curb Ramps, and Curb.** (Revises Sec 608)

The required testing of one from the first truckload per day will be modified to the first truckload for the project and each 100 CUYDs for air and slump thereafter. Strength will be verified by use of cylinders or maturity meters at a minimum rate of one per 100 CUYD.

**6.0 Paved Approaches.** (Revises Sec 608) The required testing of one from the first truckload per day and each 100 CUYDs for air and slump will remain per specification. Strength will be verified by use of cylinders or maturity meters at a minimum rate of one per 100 CUYD.

**7.0 Curb Concrete.** (Revises Sec 609) The required frequency will be the same as Sec 5.0 above.

**8.0 Basis of Payment.** No direct payment will be made to the contractor to fulfill the above provision.

GG. Liquidated Damages Specified JSP-93-28

**1.0 Description.** If at any location, as defined as being along 1 side of a given route shown in the plans, where sidewalk is being removed and replaced or shoulder is being removed and replaced, is not complete and open to traffic or pedestrians including the construction of the concrete barrier, within 1-month from the start of work at a given location, 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 delay, with its resulting cost to the traveling public. 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 **\$1000** per day for each full day that the sidewalk or shoulder is closed 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 excess closure time.

**1.1** For clarification purposes, the locations on this job are the following:

Route N near Box L0269 – West side  
Route N near Box L0269 – East Side  
Route AC near Box A1108 – West side  
Route AC near Box A1108 – East side  
Route 67 near Box A1073 – North side  
Route 67 near Box A1073 – South side

If the contractor does not close the shoulder or sidewalk, but instead works on the culvert rehabilitation outside of the shoulder or sidewalk, then this provision does not apply. If the contractor needs to remove a section of sidewalk for constructing a temporary access road down to the creek, then this provision does not apply to that section of sidewalk. Only when the contractor first closes the shoulder or sidewalk at a given location does the 1-month time frame begin. Multiple liquidated damages may apply if multiple locations are not completed within that 1-month time frame.

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

Job No.: J613573  
Route: Various  
County: St. Louis