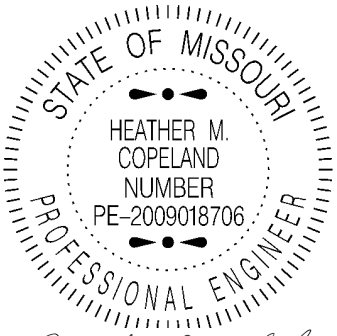
Job No.: JSL0065
Route: H
County: St. Louis City

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Job No.: JSL0065
Route: H
County: St. Louis City

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11/04/2026 8:01:16 AM
HEATHER M. COPELAND - CIVIL
MO-PE-2009018706</td>
<td>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 W. CAPITOL AVE.
JEFFERSON CITY, MO 65102
Phone 1-888-275-6636

If a seal is present on this sheet, JSP's have been electronically sealed and dated.

JOB NUMBER: JSL0065
ST. LOUIS CITY, MO
DATE PREPARED: 10/26/2026

ADDENDUM DATE:</td>
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<td colspan="2">Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: All</td>
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Job No.: JSL0065
Route: H
County: St. Louis City

JOB
SPECIAL PROVISION

A. General - Federal JSP-09-02M

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

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

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

General Provisions & Supplemental Specifications

Supplemental Plans to July 2026 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-13-01E

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

2.0 Period of Performance. Prosecution of work is expected to begin on the date specified below in accordance with Sec 108.2. Regardless of when the work is begun on this contract, all work on all projects 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.

Notice to Proceed: March 1, 2027
Completion Date: October 15, 2027

2.1 Calendar Days and Completion Dates. Completion of the project is required as specified herein. 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
JSL0065	N/A	$2,300

3.0 Liquidated Damages for Contract Administrative Costs. Should the contractor fail to complete the work on or before the contract completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged contract administrative liquidated damages in accordance with Sec 108.8 in the amount of **$1,500** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the above specified contract completion date or calendar days.

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

5.0 Liquidated Damages for Winter Months. 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.

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

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

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

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

2.0 Traffic Management Schedule.

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

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

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

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

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

2.5.1 Traffic Safety.

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

2.5.1.2 Non-Recurring Congestion. When traffic queues extend to within 1000 feet of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet of the ROAD WORK AHEAD, or similar, sign on an undivided highway infrequently, the contractor shall deploy a means of providing advance warning of the traffic congestion, as approved by the engineer. The warning location shall be no less than 1000 feet and no more than 0.5 mile in advance of the end of the traffic queue on divided highways and no less than 500 feet and no more than 0.5 mile in advance of the end of the traffic queue on undivided highways.

2.6 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 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:

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

3.1.2 Except for emergency work, as determined by the engineer, and long term lane closures required by project phasing, the contractor's working hours will be restricted for the Special Events as shown below. All lanes shall be scheduled to be open to traffic during these Special Events.

There may be events of regional significance during the duration of this project, such as events at Saint Louis Zoo WildCare Park, and community celebrations and seasonal athletic events held at Chain of Rocks Park. The Engineer will advise the contractor of any such events and how they are to be handled. All lanes shall be scheduled to be open to traffic 3 hours before the event until 2 hours following the end of the event, or at the direction of the Engineer.

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

3.3 It shall be the responsibility of the engineer to determine if the work hours may be modified. Working hours for evenings, weekends and holidays will be determined by the engineer.

3.4 Any work requiring closure of the vehicular entrances to North Riverfront Park and Chain of Rocks Park for greater than 1 hour shall be completed during nighttime hours. Nighttime hours shall be considered to be 8:00 p.m. to 5:00 a.m. for this project.

Single Lane Closures Allowed on Route H:
9am – 3pm, Monday through Sunday

Short-Term Full Road Closures Allowed:
As determined by the engineer

3.5 The contractor shall not alter the start time, ending time, or a reduction in the number of through lanes of traffic or ramp closures without advance notification and approval by the engineer. The only work zone operation approved to begin 30 minutes prior to a reduction in through traffic lanes or ramp closures is the installation of traffic control signs. Should lane closures be placed or remain in place, prior to the approved starting time or after the approved ending time, the Commission, the traveling public, and state and local police and governmental authorities will be damaged in various ways, including but not limited to, increased construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delays, with a resulting cost to the traveling public. These damages are not easily computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of **$250 per 15 minute increment** for each 15 minutes that the temporary lane closures are in place and not open to traffic in excess of the limitation as specified elsewhere in this special provision. It shall be the responsibility of the engineer to determine the quantity of unapproved closure time.

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

4.0 Detours and Lane Closures.

4.1 When a changeable message sign (CMS) is provided, the contractor shall use the CMS to notify motorists of future traffic disruption and possible traffic delays one week before traffic is shifted to a detour or prior to lane closures. The CMS shall be installed at a location as approved or directed by the engineer. If a CMS with Communication Interface is required, then the CMS shall be capable of communication prior to installation on right of way. All messages planned for use in the work zone shall be approved and authorized by the engineer or its designee prior to deployment. When permanent dynamic message signs (DMS) owned and

operated by MoDOT are located near the project, they may also be used to provide warning and information for the work zone. Permanent DMS shall be operated by the TMC, and any messages planned for use on DMS shall be approved and authorized by the TMC at least 72 hours in advance of the work.

4.2 At least one lane of traffic in each direction 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-90-11A

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

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

Missouri Highway Patrol, Troop C (636) 300-2800 Cellular: *55
St. Louis Metropolitan Police Department (314) 444-0100
St. Louis City Fire Department (314) 533-3406
St. Louis City Tow Lot/Towing Services (341) 383-7546
MoDOT Traffic Management Center (TMC) ***Gateway Guide***: (314) 275-1513; Jim Connell 314-565-6717 ***Risk Management:*** Daytime (314) 453-1721; After Hours (314) 594-SAFE (7233)

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

2.2 The contractor shall notify law enforcement and emergency agencies before the start of construction to request their cooperation and to provide coordination of services when emergencies arise during the construction at the project site. When the contractor completes

this notification with law enforcement and emergency agencies, a report shall be furnished to the engineer on the status of incident management.

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

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

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

Heather Copeland, Project Manager
MoDOT, St. Louis District
1590 Woodlake Drive
Chesterfield, MO 63017

Telephone Number: 314-453-5026
Email: Heather.Copeland@modot.mo.gov

1.1 All questions concerning the bid document preparation can be directed to the Central Office – Design as listed below.

Telephone Number: (573) 751-2876
Email: BCS@modot.mo.gov

2.0 Upon award and execution of the contract, the successful bidder/contractor shall forward all questions and coordinate the work with the engineer listed below:

Scott Washausen, Resident Engineer
St. Louis District
6138 Wilson Ave
St. Louis, MO 63139

Telephone Number: 314-453-1849
Email: Scott.Washausen@modot.mo.gov

F. Contractor Quality Control NJSP-15-42

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

2.0 Quality Control Plan.

(a) The name and contact information of the person in responsible charge of the QC testing.

(b) A list of the QC technicians who will perform testing on the project, including the fields in which they are certified to perform testing.

(c) A proposed independent third party testing firm for dispute resolution, including all contact information.

(d) A list of Hold Points, when specified by the engineer.

(e) The MoDOT Standard Inspection and Testing Plan (ITP). This shall be the version that is posted at the time of bid on the MoDOT website (www.modot.org/quality).

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

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

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

3.2 Non-Conformance Reporting. A Non-Conformance Report (NCR) shall be submitted by the contractor when the contractor proposes to incorporate material into the work that does not meet the testing requirements or for any work that does not comply with the contract terms or specifications.

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

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

4.0 Work Planning and Scheduling.

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

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

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

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

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

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

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

G. Utilities

1.0 The existence and approximate location of utility facilities shown on the plans, are based upon the best information available to the Commission currently. 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 contractor. The Commission shall not be liable for any damage that may arise from any error in the utility information shown on the plans. It is, therefore, the responsibility of the contractor to comply with Missouri CSR 319 to get utilities marked and verify the existence, location, and status of any marked utility prior to any excavations. Such verification may require direct contact with the listed utilities. The contractor shall use necessary precautions to protect the integrity of any existing utility facility located near construction activities.

There shall be no direct pay for compliance with this provision.

1.1 For informational purposes only, the following is a list of names and contact information of the known utility companies in the area of the construction work for this improvement:

Utility Company	Known Required Adjustment	Type
Ameren Missouri Zak Kaller Telephone: (636) 793-1487 Email: zkaller@ameren.com	No See 3.0	Power (overhead & underground)
AT&T Distribution Mark Sanderson Telephone: (314) 651-2620 Email: ms146h@att.com	Yes See 4.0	Communications
Charter/Spectrum Jason Reed Telephone: (314) 386-1647 Email: jason.reed@charter.com	Yes See 5.0	Communication
St. Louis City Water Division Kevin Hampe Telephone: (314) 633-9023 Email: khampe@stlwater.com	Yes See 6.0	Water
MCI/Verizon Domenic Nicastro Telephone: (636) 459-1600 Email: domenic.nicastro@verizon.com	No See 7.0	Communications (fiber)
Metropolitan Sewer District Jim Derby Telephone: (314) 768-2789 Email: jderby@stlmsd.com Jeremy McCoy – Force Main Sewer Telephone: (636) 861-6722 Email: jmccoy@stlmsd.com	No See 8.0	Sewer, Storm, & Force Main Sewer
Spire Energy Brian Langenbacher Telephone: (314) 713-6572 Email:brian.langenbacher@spireenergy.com	No See 9.0	Gas
City of St. Louis Lighting Division Justin Decarlo Telephone: (314) 803-0248 Email: decarloj@stlouis-mo.gov	No See 10.0	Street Lighting
MoDOT Traffic Signals & Lighting Brian Ducote Telephole: (314) 681-8395 Email: brian.ducote@modot.mo.gov	No See 11.0	Signals & Lighting

2.0 Project Specific Provisions: The utilities listed above are known to be within the limits of this project. Besides the utility adjustments noted in this JSP, no other utility adjustments are anticipated for this project.

3.0 Ameren Missouri. Ameren Missouri has overhead electric facilities in the project limits. Ameren has several overhead electric facilities crossing route H not shown on the plans. The overhead electric crossings are at the following locations; stations 5+75, 6+40 (transmission), 12+50, 19+50, 37+10, 37+80, 65+30, 68+80, 75+50, 94+75, 99+00, 103+30, 105+00, 164+50, and 205+00. There are no adjustments expected to these facilities for this project. Contractors shall be aware of overhead crossings throughout the limits of the project as they pertain to construction operations.

The contractor shall discuss their planned work as it relates to the energized power lines with Ameren Missouri and coordinate with Ameren Missouri for the installation of any insulated covers over the lines and/or any other designated requirements necessary to fulfill the safety needs of the contractor. Please note, Ameren Missouri has revised their policy regarding the charges for placement, length of use, and relocation of covers. The contractor is advised to contact Ameren Missouri regarding the current policy and for an estimated cost to place the covers. The Contractor shall contact Ameren Missouri at least six weeks in advance of when construction work is scheduled to begin to request covers to be placed at a given location.

3.1 The contractor shall directly contact Ameren Missouri to verify the location of marked facilities. The contractor shall coordinate construction activities with Ameren Missouri and take precautions to ensure the integrity of existing facilities is not disturbed. The contractor shall protect the integrity of any existing Ameren Missouri facility near their work while performing construction activities for this project.

The Commission cannot warrant the information provided above by Ameren Missouri.

No direct payment will be made for this provision. The contractor is responsible for any charges from Ameren Missouri for this provision and payment shall be made directly to Ameren Missouri.

4.0 AT&T (Distribution). AT&T has existing underground and overhead facilities within the limits of this project. AT&T has an existing underground duct and manholes in the paving limits of route H. AT&T plans to relocate the underground duct to the right of way and abandon their manholes in the pavement. There are no other adjustments expected to AT&T's overhead and underground facilities for this project. Contractors should be aware of AT&T's overhead and underground facilities throughout the limits of the project as they pertain to construction operations.

4.1 AT&T has an existing underground duct package with 26 underground vaults located in the north bound lane of route H from 37+04 right of centerline to 173+09 right of centerline. AT&T will have ADB relocate the cables from the ducts in the pavement to a new duct package installed in the right of way from 30+47 right of centerline to 134+15 right of centerline. After AT&T completes splicing the relocated cables into service, ADB will plug and grout fill the abandoned AT&T vaults and manholes in the pavement. ADB shall place the grout fill to the bottom of the manhole frame & cover at each vault location.

4.2 MoDOT's contractor shall remove the abandoned AT&T manhole frame & covers. MoDOT's contractor is responsible for disposal of the AT&T frame & covers.

MoDOT's contractor shall coordinate with ADB to use the contractor's traffic control, and lane drops as needed for ADB to complete the grout fill abandonment of AT&T's vaults.

4.3 MoDOT's contractor shall restore the pavement to grade with a 6' x 12' concrete pavement repair at each AT&T vault location. The costs for this work are included in the contract and shall include all costs necessary to construct the pavement repair to MoDOT's current standards and specifications, including costs for subgrade preparation. Quantities for this work are included on the list of bid items for the contract:

Item No. 613-10.12 Subgrade Compaction (6 In. Depth) (Pavement Repair)

Item No. 613-10.13 Type 1 or 5 Aggregate for Base (4 In. Thick) (Pavement Repair)

Item No. 613-10.14 Full Depth Pavement Repair Saw Cut (For Perimeter and Internal Saw Cuts)

Item No. 613-10.15 Dowel Bar (Drilling, Furnishing and Installation) for Full Depth Pavement Repair

Item No. 613-99.05 Furnishing & Placing Rapid Strength Concrete Material for Full Depth Pavement Repair

4.4 AT&T has underground fiber optic cable near the new signal equipment being constructed at station 167+45 left of centerline route H. The contractor should verify the location of any marked AT&T facility to ensure the integrity of the utility isn't disturbed during construction. Any conflict determined with the utility and construction of the new signal equipment shall be brought immediately to the attention of the utility coordinator and the MoDOT engineer for the project. The engineer will determine whether relocation of the utility is necessary to accommodate construction of the new signal equipment or if the new signal equipment can be adjusted to avoid relocation of the utility. The contractor shall adjust their planned schedule of operations to allow time for relocation of the utility if that is the resolution determined by MoDOT.

4.5 The contractor shall take precautions to ensure the integrity of all other existing overhead and underground facilities isn't disturbed. The contractor shall protect the integrity of any existing AT&T facility near their work while performing construction activities for this project.

The Commission cannot warrant the information provided above by AT&T.

There shall be no direct pay to the contractor for compliance with this provision except for the work specified in provision 4.3.

5.0 Charter/Spectrum. Charter/Spectrum has existing underground and overhead facilities not shown on the plans that are in the project limits. Charter has an underground cable in conflict with construction of new signal base 4 at station 166+89.6, 32.2' left of centerline route H. There are no adjustments expected to Charter/Spectrums facilities for this project.

5.1 Charter/Spectrum has an underground cable in conflict with construction of new signal base 4 at 166+89.6, 32.2' left of centerline route H. Charter/Spectrum is expected to relocate the cable clear of conflict with the signal base construction. The contractor shall verify the status of the underground cable prior to starting work on the signal base.

5.2 The contractor shall verify the location of marked utilities. The contractor shall take precautions to ensure the integrity of existing utilities is not disturbed. The contractor shall protect the integrity of any existing Charter/Spectrum facility near their work while performing construction activities for this project.

The Commission cannot warrant the information provided above by Charter/Spectrum.

There shall be no direct pay for compliance with this provision.

6.0 St. Louis Water Division. STLWD has a 12IN water main, hydrants, and water valves not shown on the plans that are in the construction limits of this project. Relocation of the water main and hydrants isn't expected for this project. Adjustment of water valve covers in the new pavement is expected for this project.

6.1 There are STLWD valve covers located in the paving limits of south bound route H from 5+00 to 213+40 that are low and need to be adjusted to the grade for the new pavement. The list of valve adjustments is not final, and the number of adjustments could change prior to and after the new pavement is placed.

- Water valve cover – station 140+14 left of centerline, Route H
- Water valve cover – station 141+39 left of centerline, Route H
- Water valve cover – station 154+91 left of centerline, Route H
- Water valve cover – station 163+64 left of centerline, Route H
- Water valve cover – station 164+40 left of centerline, Route H
- Water valve cover – station 180+26 left of centerline, Route H
- Water valve cover – station 193+31 left of centerline, Route H
- Water valve cover – station 193+76 left of centerline, Route H
- Water valve cover – station 202+31 left of centerline, Route H

6.2 MoDOT's contractor shall be responsible for adjusting any STLWD water valve frame & covers to grade. This work shall be done in compliance with current STLWD standards and specifications & the work inspected by STLWD staff. The contractor shall take precautions to ensure the integrity of the water main isn't disturbed during construction. Any pavement disturbed by the contractor for adjustment of a water valve frame & cover shall be restored to MoDOT's current standards.

The costs for this work are included in the contract and shall include all costs necessary for compliance with this provision. Quantities for this work are included on the list of bid items for the contract.

Item No. 604-99.02 Adjusting Water Valves

6.3 The contractor shall verify the location of marked facilities. The contractor shall coordinate construction activities with STLWD regarding the adjustment of the water valve covers. The contractor shall take precautions to ensure the integrity of existing facilities is not disturbed. The contractor shall protect the integrity of any existing STLWD facility near their work while performing construction activities for this project.

The Commission cannot warrant the information provided for this project by MAWC.

There shall be no direct pay for compliance with this provision.

7.0 MCI/Verizon. MCI/Verizon has existing underground fiber facilities within the limits of this project. MCI/Verizon has underground fiber and hand holes in the right of way from 76+00 right

of centerline to 162+50 right of centerline. There are no adjustments expected to these facilities for work on this project.

7.1 The contractor shall verify the location of marked facilities before digging. The contractor shall take precautions to ensure the integrity of existing facilities is not disturbed. The contractor shall protect the integrity of any existing MCI/Verizon facility near their work while performing construction activities for this project.

The Commission cannot warrant the information provided above by MCI/Verizon.

There shall be no direct pay for compliance with this provision.

8.0 Metropolitan Sewer District (MSD). MSD has sanitary sewers, a force main sanitary sewer, and storm sewer facilities within the limits of this project. Some of these facilities aren't shown on the plan sheets. The contractor shall be aware of sanitary or storm sewer facilities in the limits of the work as they pertain to their construction operations.

8.1 MSD has a low manhole cover in the paving limits of this project. The location is listed below. MSD will adjust the manhole frame & cover to grade. The contractor shall coordinate with MSD for adjustment of the manhole frame & cover to the grade of the new pavement.

- Manhole frame & cover – station 58+74 right of centerline, route H

8.2 MSD has a force main sewer near the new signal equipment to be constructed at station 167+45 right of centerline route H. The contractor shall verify the location of the force main sewer to ensure the integrity of the sewer isn't disturbed during construction. Any conflict with the force main sewer determined to conflict with construction of the signal equipment shall be brought immediately to the attention of the utility coordinator and the MoDOT engineer for the project. The engineer will determine whether relocation of the force main sewer is necessary to accommodate construction of the new signal equipment or if the new signal equipment can be adjusted to avoid relocation of the force main sewer. The contractor shall adjust their planned schedule of operations to allow time for relocation of the force main sewer if that is the resolution determined by MoDOT.

8.3 The contractor shall verify the location of marked utilities before digging. The contractor shall take precautions to ensure the integrity of existing utilities is not disturbed. The contractor shall protect the integrity of any existing MSD facility near their work while performing construction activities for this project.

The Commission cannot warrant the information provided for the project by MSD.

There shall be no direct pay for compliance with this provision.

9.0 Spire Energy. Spire has gas facilities parallel to and crossing the construction limits of this project that are not shown on the plans. Adjustment or relocation of Spire's gas facilities is not expected for this project. The contractor should be aware of Spire's facilities near their work as they pertain to construction operations.

9.2 Spire has a 4IN PL gas main near the new signal equipment be constructed at station 167+45 left of centerline route H. Spire verified the location of the 4IN gas main is near the

location of new pull box 3 at station 167+24.4, 22.7' left of centerline route H. The contractor should verify the location of the gas main pipe to ensure the integrity of the main pipe isn't disturbed during construction. Any conflict with the gas main pipe determined to conflict with construction of the pull box or any other signal equipment shall be brought immediately to the attention of the utility coordinator and the MoDOT engineer for the project. The engineer will determine whether relocation of the gas main pipe is necessary to accommodate construction of the new signal equipment or if the new signal equipment can be adjusted to avoid relocation of the gas main pipe. The contractor shall adjust their planned schedule of operations to allow time for relocation of the gas main pipe if that is the resolution determined by MoDOT.

9.3 The contractor shall verify the location of marked facilities. The contractor shall coordinate construction activities with Spire regarding the adjustment of the gas valve covers for the sidewalk construction. The contractor shall take precautions to ensure the integrity of existing facilities is not disturbed. The contractor shall protect the integrity of any existing Spire facility near their work while performing construction activities for this project.

The Commission cannot warrant the information provided for this project by Spire Energy.

There shall be no direct pay for compliance with this provision.

10.0 St. Louis City Lighting. St. Louis City Lighting has existing street lighting facilities within the limits of this project. There are no adjustments expected to these facilities. Contractors should be aware of St. Louis City Lighting's overhead and underground facilities as they pertain to construction operations.

10.1 The contractor shall verify the location of marked facilities. The contractor shall take precautions to ensure the integrity of existing facilities is not disturbed. The contractor shall protect the integrity of any existing overhead or underground St. Louis City Lighting facility near their work while performing construction activities for this project.

The Commission cannot warrant the information provided above by St. Louis County Transportation.

There shall be no direct pay for compliance with this provision.

11.0 MoDOT Signals & Lighting. MoDOT has existing street lighting facilities within the limits of this project. There are no adjustments expected to these facilities. Contractors should be aware of St. Louis City Lighting's overhead and underground facilities as they pertain to construction operations.

11.1 The contractor shall verify the location of marked signal facilities. The contractor shall take precautions to ensure the integrity of existing signal facilities is not disturbed. The contractor shall protect the integrity of any existing MoDOT signal or lighting facility near their work while performing construction activities for this project.

The Commission cannot warrant the information provided above by St. Louis County Transportation.

There shall be no direct pay for compliance with this provision.

H. Backfilling of Utility Locates

1.0 Description. This work shall consist of backfilling all areas excavated for the purpose of locating underground utilities.

2.0 Construction Requirements. The contractor shall be responsible for backfilling all cavities and voids in areas excavated for the purpose of locating underground utilities in paved areas with flowable backfill as per Section 621.

2.1 If the excavated area is less 2 square foot, any existing asphalt or concrete removed from the existing roadway, islands, shoulders, sidewalks, or medians, including underlying pavement, for the purpose of locating underground utilities shall be completely replaced in like kind by the contractor as directed by the engineer.

2.2 If the excavated area is larger than 2 square foot, the contractor shall repair it as directed by the engineer.

3.0 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.

I. Adjust to Grade Water Valves

1.0 Description. This work shall consist of adjusting water valves that are within areas where resurfaced pavements are to be constructed as shown on the plans. The contractor shall verify the type of frame and cover in the field before performing the work. The adjustment shall be made to match the final proposed grade.

2.0 Construction Requirements.

2.1 MoDOT's contractor shall be responsible for adjusting any STLWD water valve frame & covers to grade. This work shall be done in compliance with current STLWD standards and specifications & the work inspected by STLWD staff. The contractor shall take precautions to ensure the integrity of the water main isn't disturbed during construction. Any pavement disturbed by the contractor for adjustment of a water valve frame & cover shall be restored to MoDOT's current standards.

3.0 Basis of Payment. All costs for materials, equipment, labor, and installation shall be included in the cost for adjusting water valves under Item No. 604-99.02 Adjusting Water Valves, paid per each.

J. 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

K. 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 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. (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.

5.0 Concrete Base and Pavement. (Revises Sec 502) No cores will be taken. Formwork will be checked to verify pavement thickness. Pavement strength will be tested using cylinders or maturity meters under the masonry concrete specification. The concrete base and pavement will be required to reach 4,000 PSI within 20 days. No bonuses will be given for strength or thickness.

6.0 Concrete Median, Median Strip, Sidewalk, Curb Ramps and Paved Approaches. (Revises Sec 608) The required testing of one from the first truckload 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.

L. Site Restoration

1.0 Description. This work shall consist of restoring to its original condition any disturbed area at sites including, but not limited to, items such as: pavement markings, guardrail, sidewalk, curb ramp, bus stop pad, sprinklers, pull box, conduit, and pole base installations. Restoration shall be accomplished by placing material equivalent to that of the adjacent undisturbed area. Disturbed unpaved areas 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 Materials. Any areas of concrete slope protection, paved ditch, pavement and shoulders as well as any similar improvements shall be replaced with improvements of similar composition and thickness. Removals shall be achieved by means of full depth saw cut, 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, pavement, shoulders etc. This work will be considered as included in the various unit bid prices established in the contract, and no additional payment will be made.

2.2 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.

2.3 Any sidewalks and curb ramps that are disturbed as described in this provision shall be replaced to meet current ADA standards.

2.4 All guardrail post holes remaining from the removal of existing guardrail posts in existing concrete or asphalt pavement or ditch shall be backfilled with a granular material and sealed with a ½ inch hot-poured elastic type material in accordance with Section 1057 or as approved by the Engineer. Any concrete or asphalt pavement or ditch damaged in the process of fulfilling

this provision shall be replaced in kind and considered incidental to the installation of the new guardrail at the disturbed location.

2.5 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 the items associated with the disturbance. No direct payment will be made for any materials, equipment, time, or labor, which is performed under this provision.

M. Special Provisions for Protection of BNSF Railway Company Interests

To Report an Emergency on the railroad call: (800) 832-5452
St Louis County, Riverview Drive, USDOT # 072833W, mile post 10.024 on BNSF Hannibal Subdivision near St Louis, MO. **Current FRA data shows 3 daytime trains, 3 nighttime trains and 0 passenger trains daily.**

1.0 Authority of Railroad Engineer and Commission's Representative.

1.1 The authorized representative of BNSF Railway Company, herein called "Railroad Engineer", shall have final authority in all matters affecting the safe maintenance and operation of railroad traffic including the adequacy of the foundations and structures supporting the railroad tracks.

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

2.0 Contractor's indemnity Obligations to the Railroad.

2.1 The term "contractor" as used in this special provision includes any and all subcontractors. The contractor shall indemnify, defend and hold harmless the Railroad from and against any and all loss, damage, claims, demands, causes of action, costs and expenses of whatsoever nature arising out of injury to or death of persons whomsoever, or out of damage to or destruction of property whatsoever, including, without limitation, damage to fiber optic, communication and other cable lines and systems, where such injury, death, damage or destruction results from any cause arising out of work performed by the contractor pursuant to the agreement between Railroad and the Commission for the project, and shall also release the Railroad from and shall waive any claims for injury or damage to equipment or other property, which may result from the construction, maintenance and operation of railroad tracks, wire lines, fiber optic cable, pipe lines and other facilities on said right of way of the Railroad by the contractor. **THE LIABILITY ASSUMED BY THE CONTRACTOR WILL NOT BE AFFECTED BY THE FACT, IF IT IS A FACT, THAT THE DAMAGE, DESTRUCTION, INJURY, DEATH, CAUSE OF ACTION OR CLAIM WAS OCCASIONED BY OR CONTRIBUTED TO BY THE NEGLIGENCE OF THE RAILROAD, THE RAILROAD'S AGENTS, SERVANTS, EMPLOYEES OR OTHERWISE, EXCEPT TO THE EXTENT THAT SUCH CLAIMS ARE PROVEN BY ANY CLAIMANT TO HAVE BEEN PROXIMATELY CAUSED BY THE INTENTIONAL MISCONDUCT OR SOLE OR GROSS NEGLIGENCE OF THE RAILROAD.** The contractor's

indemnity shall include loss of profits or revenue arising from damage or destruction to fiber optic, communication and other cable lines and systems.

2.2 In addition to the indemnity obligations contained in the preceding paragraph, the contractor shall indemnify, defend and hold harmless the Railroad from any claims, expenses, costs, actions, demands, losses, fines, penalties, and fees, of whatsoever nature arising from, related to or connected, in whole or in part, with the following:

(a) The removal of the contractor's agents, servants, employees or invitees from the Railroad's property for safety reasons.

(b) Contractor's compliance or failure to comply with the provision of applicable law in connection with the performance of contractor's work.

3.0 Notice of Starting Work.

3.1 The contractor shall not commence any work on Railroad's right of way until the contractor has complied with the following conditions:

(a) The contractor shall be required to apply for, execute and comply with all provisions of a permit obtained by accessing the following link: http://bnsf.railpermitting.com

3.2 The Railroad's written authorization to proceed with the work, with a copy to the Engineer, will include the names, addresses and telephone numbers of the Railroad's representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

4.0 Interference with Railroad Operations.

4.1 The contractor shall arrange and conduct all work so that there shall be no interference with the Railroad's operations, including train, signal, telephone and telegraphic services; or damage to the Railroad's property; poles, wires and other facilities of tenants, licensees, easement grantees and invitees on the Railroad's right of way. Whenever work may affect the operations or safety of trains, the method of doing such work shall first be submitted to the Railroad Engineer for approval, but such approval shall not relieve the contractor from liability. Any work to be performed by the contractor that requires flagging service or inspection service shall be deferred by the contractor until the flagging service required by the Railroad is available at the job site.

4.2 Whenever work within the Railroad's right of way is of such a nature that impediment to the Railroad's operations is unavoidable, such as use of runaround tracks or necessity for reduced speed, the contractor shall schedule and conduct these operations so that such impediment is reduced to the absolute minimum.

4.3 Should conditions arising from, or in connection with the work require that immediate and unusual provisions be made to protect the Railroad's operations and property, the contractor shall make such provisions. If in the judgment of the Railroad Engineer, or the Engineer if the Railroad Engineer is absent, such provision is insufficient, the Railroad Engineer or Engineer may require or provide such provisions as deem necessary. In any event, such provisions shall be at the contractor's expense and without cost to the Railroad or the Commission.

4.4 The contractor shall be responsible for any damage to the Railroad as a result of work on the project, which shall include but not be limited to interference with the normal movement of trains caused exclusively by the work performed by the contractor. The contractor shall be responsible for damages for the Railroad's train delays that are caused exclusively by the contractor. The Railroad agrees not to perform any act to unnecessarily cause any train delay. The damages for train delays per freight hour will be billed at an average rate per hour as determined from the Railroad's records. These records shall be provided by the Railroad, upon request, to the Commission or the Commission's contractor.

5.0 Track Clearances.

5.1 The minimum track clearances to be maintained by the contractor during construction are shown on the project plans. However, before undertaking any work within Railroad's right of way, or before placing any obstruction over any track, the contractor shall:

(a) Notify the Railroad Engineer at least 72 hours in advance of the work.

(b) Receive assurance from the Railroad Engineer that arrangements have been made for flagging service as may be necessary.

(c) Receive permission from the Railroad Engineer to proceed with the work.

(d) Ascertain that the Engineer has received copies of notice to the Railroad and of the Railroad's response.

5.2 The contractor shall fully comply with any horizontal and vertical clearance requirements imposed by Missouri state statutes and regulations and Federal statutes and regulations regarding the placement of structures or equipment near or over railroad tracks.

6.0 Construction Procedures.

6.1 General. Construction work on the Railroad's property shall be:

(a) Subject to the inspection and review of the Railroad.

(b) In accordance with the Railroad's written outline of specific conditions.

(c) In accordance with this special provision.

(d) Care shall be taken to avoid damage to concrete crossing panels. Milling within two (2) feet of concrete crossing planks shall be done manually or using specific machinery for fine mill work such as a milling attachment on a skid-steer or other means and methods approved by the engineer.

6.2 Excavation. The subgrade of an operated track shall be maintained with the berm edge at least 12 feet from centerline of track and not more than 26 inches below top of the rail. The contractor will not be required to make existing section meet this specification if substandard, in which case the existing section will be maintained. The contractor shall cease all work and notify the Railroad immediately before continuing excavation in the work area if obstructions are encountered which do not appear on the drawings. If the obstruction is a utility and the owner of the utility can be identified, then the contractor shall also notify the owner immediately. If there

is any doubt about the location of underground cables or lines of any kind, no work shall be performed until the exact location has been determined. There will be no exceptions to these instructions. Additionally, all excavations shall be conducted in compliance with applicable Occupational Safety and Health Act regulations and, regardless of depth, shall be shored where there is any danger to tracks, structures or personnel. Any excavations, holes or trenches on the Railroad's property shall be covered, guarded and/or protected when not being worked on. When leaving work site areas at night and over weekends, the areas shall be secured and left in a condition that will ensure that Railroad's employees and other personnel who may be working or passing through the area are protected from all hazards. All excavations shall be back filled as soon as possible.

6.3 Excavation for Structure. The contractor shall be required to take special precaution and care in connection with excavating, shoring pits and in driving piles for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which the tracks carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material. The procedure for doing such work, including need of and plans for shoring, shall be approved by the Railroad Engineer before work is performed, but such approval shall not relieve the contractor from liability. Before submission of plans to the Railroad Engineer for approval, the Engineer will first review such plans in accordance with the Missouri Standard Specifications for Highway Construction, hereinafter called "Standard Specifications". The responsibility for the design and construction of the sheeting rests solely with the contractor. The temporary shoring along the railroad tracks shall be designed for the Cooper E80 loading. The design shall insure that the shoring is braced or substantially securely to prevent movement. The contractor shall submit plans for the temporary shoring that shall be signed, sealed, and stamped in accordance with the laws relating to Architects and Professional Engineers, Chapter 327, RSMo. and then submitted for review by the Engineer.

6.4 Demolition of Existing Structures. The contractor shall be required to take special precaution and care in connection with demolition of existing structures. The procedure for doing such work, including need of and plans for temporary falsework, shall first be approved by Railroad Engineer before work is performed, but such approval shall not relieve the contractor from liability. Before submission of plans to the Railroad Engineer for approval, the Engineer will first review such plans.

6.5 Falsework. The contractor shall be required to take special precaution and care to prevent any material from falling on the Railroad's right of way. The procedure for preventing material from falling, including need of and plans for temporary falsework, shall first be approved by the Railroad Engineer, but such approval shall not relieve the contractor from liability. Before submission of plans to the Railroad Engineer for approval, the Engineer will first review such plans.

6.6 Blasting.

6.6.1 The contractor shall obtain advance approval of the Railroad Engineer and the Engineer for use of explosives on or adjacent to the Railroad's property. If permission for use of explosives is granted, the contractor shall be required to comply with the following:

(a) Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the contractor.

(b) Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.

(c) No blasting shall be done without the presence of the Railroad Engineer. At least 72 hours advance notice to the person designated in the Railroad's notice of authorization to proceed as mentioned in Section 2.2 of this job special provision, the contactor shall be required to arrange for the presence of the Railroad Engineer and such flagging as the Railroad may require.

(d) The contractor shall have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains, as well as correcting, at contractor's expense, any track misalignment or other damage to the Railroad's property resulting from the blasting as directed by the Railroad Engineer. If contractor's actions result in delay of trains, the contractor shall bear the entire cost thereof.

6.6.2 The Railroad Engineer will:

(a) Determine the approximate location of trains and advise the contractor the approximate amount of time available for the blasting operation and clean-up.

(b) Have the authority to order discontinuance of blasting if blasting is too hazardous or is not in accordance with this special provision.

6.7 Maintenance of Railroad Facilities. The contractor shall be required to maintain all ditches and drainage structures free of silt or other obstructions which may result from contractor's operations. The contractor shall promptly repair eroded areas within Railroad's right of way and repair any other damage to the Railroad's property, tenants, licensees, easement grantees and invitees. All such maintenance and repair of damages due to the contractor's operations shall be done at the contractor's expense.

6.8 Storage of Materials and Equipment.

6.8.1 The contractor shall not store or stockpile construction materials or equipment closer than 25 feet to the centerline of the nearest railroad track or on the Railroad's property not covered by construction easement, contractor's permit, lease or agreement. Additionally, the contractor shall not store or leave materials or equipment within 250 feet of the edge of any highway/rail at-grade crossings. Further, both sides of a main track shall remain unobstructed for a distance of 10 feet from the exterior edge of the track at all times to allow for stopped train inspection.

6.8.2 Machines or vehicles shall not be left unattended with the engine running. Parked machines or equipment shall be in gear with brakes set and with blade, pan or bucket lowered to the ground if so equipped. All grading or construction machinery that is left parked near the track unattended shall be effectively immobilized so that unauthorized persons cannot move such equipment.

6.9 Cleanup. Upon completion of the work, the contractor shall remove from within the limits of the Railroad's right of way, all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the contractor, and leave said right of way in a neat condition satisfactory to the Railroad Engineer.

6.10 Buried Cable and Other Buried Facilities.

6.10.1 The contractor is placed on notice that fiber optic, communication and other cable lines and systems, collectively the "Lines", owned by various telecommunications companies may be buried on Railroad's property or right of way. The locations of the buried Lines, pipelines or utility facilities have been included on the plans based on information from the telecommunications companies, pipeline operators, or utilities, as the case may be. The contractor shall be responsible for contacting the Railroad Engineer, the Railroad's 24-hour information number (1-800-533-2891), the telecommunications companies, pipeline operators and utilities and notifying them of any work that may damage the buried Lines, pipelines, utility facilities and/or interfere with their service. The contractor shall verify the location of all buried Lines, pipelines and utility facilities shown on the plans or marked in the field in order to establish their exact locations prior to or while doing work on the Railroad's property or right of way. The contractor shall also use all reasonable methods when working on the Railroad's property or right of way to determine if any other buried Lines, pipelines or utility facilities exist on the Railroad's property or right of way.

6.10.2 Failure to mark or identify the buried Lines, pipelines or utility facilities will be sufficient cause for the Railroad Engineer to stop construction at no cost to the Commission or Railroad until these items are completed. The contractor shall be responsible for the rearrangement of any buried facilities, Lines, pipelines or utility facilities determined to interfere with the construction. The contractor shall cooperate fully with any telecommunications companies, pipeline operators and utility facility owners in performing such rearrangements.

7.0 Damages. The Railroad will not assume liability for any damages to the contractor, contractor's work, employees, servants, equipment and materials caused by railroad traffic. Any cost incurred by the Railroad for repairing damages to Railroad's property or to property of the Railroad's tenants, licensees, easement grantees and invitees caused by or resulting from the contractor's operations shall be paid directly to the Railroad by contractor.

8.0 Flagging Services.

8.1 When Required. Under the terms of the agreement between the Commission and the Railroad, the Railroad has sole authority to determine the need for flagging required to protect the Railroad's operations. In general, the requirements of such services will be whenever the contractor's personnel or equipment are, or are likely to be, working on the Railroad's right of way within 25 feet of the centerline of any track, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging, or reasonable probability of accidental hazard to Railroad's operations or personnel. Normally, the Railroad will require one flagger per project; but in some cases, more than one may be necessary, such as yard limits where 3 flaggers may be required. However, if the contractor works within distances that violate instructions given by the Railroad Engineer or performs work that has not been scheduled with the Railroad Engineer, flaggers may be required full time until the project has been completed.

8.2 Scheduling and Notification.

8.2.1 Not later than the time that approval is initially requested to begin work on the Railroad's right of way (30 days), contractor shall furnish to the Railroad and the Commission a schedule for all work required to complete the portion of the project within Railroad's right of way and

arrange for a job site meeting between the contractor, the Engineer, and the Railroad Engineer. Flaggers may not be scheduled until the job site meeting has been conducted and the contractor's work scheduled.

8.2.2 The contractor shall be required to give the Railroad Engineer at least 30 days of advance written notice of intent to begin work within Railroad's right of way in accordance with this special provision. Once begun, if such work is then suspended at any time, or for any reason, the contractor shall be required to give the Railroad Engineer at least 5 working days of advance notice before resuming work on Railroad's right of way. Such notices shall include sufficient details of the proposed work to enable the Railroad Engineer to determine if flagging will be required. If such notice is in writing, the contractor shall furnish the Engineer a copy; if notice is given verbally, the notice shall be confirmed in writing with copy to the Engineer. If flagging is required, no work shall be undertaken until the flagger or flaggers are present at the job site. Obtaining a flagger or flaggers may take up to 30 days to obtain initially from the Railroad or an approved third Party Flagging Company. When flagging begins, the flagger is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If flagging becomes unnecessary and is suspended, obtaining a flagger or flaggers may take up to 30 days to again obtain from the Railroad. Due to Railroad labor agreements, 10 working days notice may be necessary before flagging services may be discontinued and responsibility for payment stopped. Notification for flagging should be addressed to:

Mr. Joseph Wontor
BNSF Railroad
1-708-518-6284
Joseph.Wontor@BNSF.com

And

BNSFScheduling@wilsonco.com

8.2.3 If, after the flagger is assigned to the project site, emergencies arise which require the flagger's presence elsewhere, then the contractor shall delay work on the Railroad's right of way until such time as the flagger is again available. Any additional costs resulting from such delay shall be borne by the contractor and not the Railroad.

8.3 Payment.

8.3.1 The Contractor will pay the Railroad or appropriate flagging contractor directly for the cost of flagging services associated with the project and notify the MoDOT Resident Engineer of such payments.

8.3.2 The Contractor shall be responsible for arranging needed flagging services as required by the Railroad to accomplish the highway improvement.

8.3.3 The cost of flagging service is estimated at approximately $1,600 per day based on an 8-hour work day and a 40-hour work week. This cost includes the base pay for the flagger, overhead, and per diem charge for travel expenses, meals and lodging.

If flagging is provided by an approved Third-Party Flagging Company, rates and billing will be governed by the agreement set up between the Contractor and the Third-Party Flagging

Company at the time the services are provided. It is the responsibility of the Contractor to ensure that billing complies with applicable provisions of Volume 1, Chapter 4, §3 and Volume 6, Chapter 6 §2, Subsection 1 of the Federal-Aid Highway Program Manual issued by the Federal Highway Administration, including all current amendments.

If flagging is provided by the Railroad, the charge to the contractor by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for flagging service at the time the service is required. Work by a flagger in excess of 8 hours per day or 40 hours per week but not more than 12 hours a day will result in overtime pay at 1 1/2 times the appropriate rate. Work by a flagger in excess of 12 hours per day will result in overtime pay at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 1/2 times the normal rate. Railroad expenses incurred preparing and handling invoices will also be charged to the contractor and/or the Commission. Charges to the contractor and/or the Commission by the Railroad shall be in accordance with applicable provisions of Volume 1, Chapter 4, §3 and Volume 6, Chapter 6, §2, Subsection 1 of the Federal-Aid Highway Program Manual issued by the Federal Highway Administration, including all current amendments. Flagging costs are subject to change. The above estimates of flagging cost are provided for information only and are not binding in any way. Each time a flagger is called, the minimum period for billing will be the 8 hour basic day unless the flagger can be assigned to other Railroad work during the work day.

8.3.4 In addition to the hours of providing flagging at the construction site, the flagger hours will include, but is not limited to, travel time to and from the project, time to complete paperwork for the flagging operations and time for setting warning signs/flags for the train traffic.

8.4 Verification.

8.4.1 Any complaints concerning a flagger shall be resolved in a timely manner. If need for a flagger is questioned, please contact the Railroad Engineer and Mr. Jacob D Rzewnicki, Manager of Public Projects at 913-551-4275. All verbal complaints shall be confirmed in writing by the contractor within 5 working days with copy to the Railroad Engineer and Engineer. All written correspondence shall be addressed to the BNSF Manager of Public Projects as shown in Section 2.1 of this job special provision.

8.4.2 The Railroad flagger assigned to the project will be responsible for notifying the Engineer upon arrival at the job site on the first day, or as soon thereafter as possible, that flagging services begin and on the last day that flagger performs such services for each separate period that services are provided. The Engineer will document such notification in the project records.

9.0 Haul Across Railroads.

9.1 Where the plans show or imply that materials of any nature must be hauled across the Railroad’s tracks, unless the plans clearly show that the Commission has included arrangements for such haul in the agreement with the Railroad, the contractor shall be required to make all necessary arrangements with the Railroad regarding means of transporting such materials across the Railroad’s tracks. The contractor shall be required to bear all costs incidental to such crossings, including flagging, whether services are performed by contractor's own forces or by Railroad’s personnel.

9.2 No crossing may be established for use of the contractor for transporting materials or equipment across the tracks of the Railroad unless specific authority for the installation,

maintenance, necessary watching and flagging thereof and removal, all at the expense of the contractor, is first obtained from the Railroad Engineer.

10.0 Work for the Benefit of the Contractor. All temporary or permanent changes in wire lines or other facilities which are considered necessary to the project are shown on the plans, and are included in the agreement between the Commission and the Railroad or will be covered by appropriate revisions to same which will be initiated and approved by the Commission and/or the Railroad. Should the contractor desire any changes in addition to the above, then contractor shall make separate arrangements with the Railroad for same to be accomplished at the contractor's expense.

11.0 Cooperation and Delays. The contractor shall arrange a schedule with the Railroad for accomplishing staged construction involving work by the Railroad or tenants, licensees, easement grantees and invitees of the Railroad. In arranging a schedule, the contractor shall ascertain, from the Railroad, the lead time required for assembling crews, materials and make due allowance. No charge of claims of the contractor against the Railroad will be allowed for hindrance or delay on account of railway traffic for any work done by the Railroad, other delay incident to or necessary for safe maintenance of railway traffic, or for any delays due to compliance with this special provision.

12.0 Trainman's Walkways. Along the outer side of each exterior track of multiple operated track and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains shall be maintained extending to a line not less than 12 feet from centerline of track. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while Railway's protective service is provided shall be removed before the close of each workday. Any excavation near the walkway, the contractor shall install a handrail with a 12 feet minimum clearance from centerline of track.

13.0 Insurance. The amount of work to be performed upon, over or under Railroad's right of way is estimated to be 1 percent of the contractor's total bid for the project.

13.1 In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, Contractor must, at its sole cost and expense, procure and maintain during the life of this Agreement the following insurance coverage:

(a) Commercial General Liability insurance. This insurance shall contain broad form contractual liability with a combined single limit of a minimum of $2,000,000 each occurrence and an aggregate limit of at least $6,000,000 but in no event less than the amount otherwise carried by the contractor. Coverage must be purchased on a post 2004 ISO occurrence form or equivalent and include coverage for, but not limit to the following:

- Bodily Injury and Property Damage
- Personal Injury and Advertising Injury
- Fire legal liability
- Products and completed operations

This policy must also contain the following endorsements, which must be indicated on the certificate of insurance:

- The definition of insured contract must be amended to remove any exclusion or other limitation for any work being done within 50 feet of railroad property.
- Waiver of subrogation in favor of and acceptable to Railway.
- Additional insured endorsement in favor of and acceptable to Railway.
- Separation of insureds.
- The policy shall be primary and non-contributing with respect to any insurance carried by Railway.

It is agreed that the workers' compensation and employers' liability related exclusions in the Commercial General Liability insurance policy(s) required herein are intended to apply to employees of the policy holder and shall not apply to Railway employees.

No other endorsements limiting coverage as respects obligations under this Agreement may be included on the policy with regard to the work being performed under this agreement.

(b) Business Automobile Insurance. This insurance must contain a combined single limit of at least $1,000,000 per occurrence, and include coverage for, but not limited to the following:

- Bodily injury and property damage
- Any and all vehicles owned, used or hired

The policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:

- Waiver of subrogation in favor of and acceptable to Railway.
- Additional insured endorsement in favor of and acceptable to Railway.
- Separation of insureds.
- The policy shall be primary and non-contributing with respect to any insurance carried by Railway.

(c) Workers Compensation and Employers Liability insurance including coverage for, but not limited to:

- Contractor's statutory liability under the worker's compensation laws of the state(s) in which the work is to be performed. If optional under State law, the insurance must cover all employees anyway.
- Employers' Liability (Part B) with limits of at least $500,000 each accident, $500,000 by disease policy limit, $500,000 by disease each employee.

This policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:

- Waiver of subrogation in favor of and acceptable to Railway.

(d) Railroad Protective Liability insurance naming only the Railway as the Insured with coverage of at least $2,000,000 per occurrence and $6,000,000 in the aggregate.

The policy Must be issued on a standard ISO form CG 00 35 10 93 and include the following:

- Endorsed to include the Pollution Exclusion Amendment (ISO form CG 28 31 10 93)
- Endorsed to include the Limited Seepage and Pollution Endorsement.
- Endorsed to remove any exclusion for punitive damages.
- No other endorsements restricting coverage may be added.
- The original policy must be provided to the Railway prior to performing any work or services under this Agreement

In lieu of providing a Railroad Protective Liability Policy, Licensee may participate in Licensor's Blanket Railroad Protective Liability Insurance Policy available to contractor.

13.2 Other Requirements:

13.2.1 All policies (applying to coverage listed above) must not contain an exclusion for punitive damages and certificates of insurance must reflect that no exclusion exists.

13.2.2 Contractor agrees to waive its right of recovery against Railway for all claims and suits against Railway. In addition, its insurers, through the terms of the policy or policy endorsement, waive their right of subrogation against Railway for all claims and suits. The certificate of insurance must reflect the waiver of subrogation endorsement. Contractor further waives its right of recovery, and its insurers also waive their right of subrogation against Railway for loss of its owned or leased property or property under contractor's care, custody or control.

13.2.3 Contractor is not allowed to self-insure without the prior written consent of Railway. If granted by Railway, any deductible, self-insured retention or other financial responsibility for claims must be covered directly by contractor in lieu of insurance. Any and all Railway liabilities that would otherwise, in accordance with the provisions of this Agreement, be covered by contractor's insurance will be covered as if contractor elected not to include a deductible, self-insured retention or other financial responsibility for claims.

13.2.4 Prior to commencing the Work, contractor must furnish to Railway an acceptable certificate(s) of insurance including an original signature of the authorized representative evidencing the required coverage, endorsements, and amendments and referencing the contract audit/folder number if available. Contractor shall notify Railway in writing at least 30 days prior to any cancellation, non-renewal, substitution or material alteration. Upon request from Railway, a certified duplicate original of any required policy must be furnished. Contractor should send the certificate(s) to the following address:

Railroad:
BNSF Railway Company
P.O. Box 140528
Kansas City, MO 64114
Toll Free: 877-576-2378
Fax number: 817-840-7487
Email: BNSF@certfocus.com
www.certfocus.com

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

13.2.5 Any insurance policy must be written by a reputable insurance company acceptable to Railway or with a current Best's Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the service is to be provide.

13.2.6 Contractor represents that this Agreement has been thoroughly reviewed by contractor's insurance agent(s)/broker(s), who have been instructed by contractor to procure the insurance coverage required by this Agreement. Allocated Loss Expense must be in addition to all policy limits for coverages referenced above. Not more frequently than once every five years, Railway may reasonably modify the required insurance coverage to reflect then-current risk management practices in the railroad industry and underwriting practices in the insurance industry.

13.2.7 If any portion of the operation is to be subcontracted by contractor, contractor must require that the subcontractor provide and maintain the insurance coverages set forth herein, naming Railway as an additional insured, and requiring that the subcontractor release, defend and indemnify Railway to the same extent and under the same terms and conditions as contractor is required to release, defend and indemnify Railway herein.

13.2.8 Failure to provide evidence as required by this section will entitle, but not require, Railway to terminate this Agreement immediately. Acceptance of a certificate that does not comply with this section will not operate as a waiver of contractor's obligations hereunder.

13.2.9 The fact that insurance (including, without limitation, self-insurance) is obtained by contractor will not be deemed to release or diminish the liability of contractor including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by Railway will not be limited by the amount of the required insurance coverage.

13.2.10 For purposes of this section, Railway means "Burlington Northern Santa Fe LLC", "BNSF RAILWAY COMPANY" and the subsidiaries, successors, assigns and affiliates of each.

13.2.11 Railroad will not accept binders as evidence of insurance, the original policy shall be provided. The named insured, description of the work and designation of the job site to be shown on the Policy are as follows:

(a) Named Insured: BNSF Railway Company
(b) Description and Designation:
Resurfacing (Resurfacing mill/fill) below the crossing.
St Louis County, Riverview Drive
Job No. JST0065
USDOT# 072833W MP 10.024 Hannibal Sub near St Louis MO.

13.2.12 The contractor must notify BNSF Manager of Public Projects at jacob.rzewnicki@bnsf.com when applying for railroad insurance coverage.

13.3 If any part of the work is sublet, similar insurance and evidence thereof in the same amounts as required of the prime contractor, shall be provided by or in behalf of the subcontractor to cover the subcontractor's operations. Endorsements to the prime contractor's policies specifically naming subcontractors and describing their operations will be acceptable for this purpose.

13.4 All Insurance hereinbefore specified shall be carried until all work required to be performed under the terms of the contract has been satisfactorily completed within the limits of the Railroad's right of way as evidenced by the formal acceptance by the Commission. Insuring Companies may cancel insurance by permission of the Commission and Railroad or on 30 days written notice to the Railroad and Commission.

14.0 Hazardous Materials Compliance and Reporting. Contractor shall be responsible for complying with all applicable federal, state and local governmental laws and regulations, including, but not limited to environmental laws and regulations (including but not limited to the Resource Conservation and Recovery Act, as amended; the Clean Water Act, as amended; the Oil Pollution Act, as amended; the Hazardous Materials Transportation Act, as amended; and the Comprehensive Environmental Response, Compensation and Liability Act, as amended), and health and safety laws and regulations. In addition to the liability provisions contained elsewhere in this job special provision, the contractor hereby indemnifies, defends and holds harmless the Railroad for, from and against all fines or penalties imposed or assessed by federal, state and local governmental agencies against the Railroad which arise out of contractor's work under this special provision. Notwithstanding the preceding sentence, the contractor will not be liable for pre-existing hazardous materials or hazardous substances discovered on Railroad's property or right of way so long as such hazardous materials or hazardous substances were not caused by (in whole or in part) contractor's work, acts or omissions. If contractor discovers any hazardous waste, hazardous substance, petroleum or other deleterious material, including but not limited to any non-containerized commodity or material, on or adjacent to Railroad's property, in or near any surface water, swamp, wetlands or waterways, while performing any work under this special provision, the contractor shall immediately:

(a) Notify the Railroad's Resource Operations Center at (800) 832-5452, of such discovery.
(b) Take safeguards necessary to protect employees, subcontractors, agents and/or third parties.
(c) Exercise due care with respect to the release, including the taking of any appropriate measure to minimize the impact of such release

15.0 Personal Injury Reporting. The Railroad is required to report certain injuries as a part of compliance with Federal Railroad Administration ("FRA") reporting requirements. Any personal injury sustained by any employee of the contractor, subcontractor or contractor's invitees while on the Railroad's property shall be reported immediately, by phone or mail if unable to contact in person, to the Railroad's representative in charge of the project. The Non-Employee Personal Injury Data Collection Form is to be completed and sent by Fax to the Railroad at (817) 352-7595 and to the Railroad's Project Representative no later than the close of shift on the date of the injury.

16.0 Failure to Comply. In the event the contractor violates or fails to comply with any of the requirements of this special provision, the below orders will be applied. Any such orders shall remain in effect until the contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

(a) The Railroad Engineer may require that the contractor to vacate the Railroad's property.

(b) The Engineer may withhold all monies due to the contractor until contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

17.0 Payment for Cost of Compliance. No separate payment will be made for any extra cost incurred on account of compliance with this special provision. All such cost shall be included in the contract unit price for other items included in the contract. Railroad will not be responsible for paying the contractor for any work performed under this special provision.

N. Access to St. Louis Riverfront Trail

1.0 Description.
This provision covers reconstruction of the existing pedestrian signal and replacement of existing ADA concrete pads at multiple locations along the St. Louis Riverfront Trail crossing on Route H, as shown in the plans. Work shall include removal of existing components, installation of new pedestrian signal equipment, removal and replacement of concrete pads, and maintaining continuous pedestrian and bicycle access to the trail. Under no circumstances shall the contractor block ingress/egress to and from the trail.

2.0 Trail Access Requirements. The St. Louis Riverfront Trail shall always remain open to all users. The contractor shall maintain continuous access through the work zone and shall not fully close the trail under any circumstance.

2.1 ADA Pad Phasing Requirements. Construction of each ADA pad shall be staged so that only half of each pad is removed and reconstructed at a time. The contractor shall ensure that an accessible route at least 5 feet wide remains open during each phase of construction.

2.2 ADA Pad Construction Time Limitation. Once demolition begins on any portion of an ADA pad, that portion shall be fully reconstructed and reopened within seventy-two (72) hours. This requirement includes forming, pouring, finishing, curing, and reopening the pad section to trail users.

3.0 Signal Work. The contractor shall remove the existing pedestrian signal equipment at the Route H trail crossing, including poles, foundations, signal heads, pedestrian push buttons, wiring, conduits, and all associated components as shown in the plans. The contractor shall then install new pedestrian signal equipment in accordance with the plans and standards. This includes new poles, foundations, pedestrian heads, push buttons, wiring, and all related supporting components. This work shall be performed in a manner that maintains a safe and functional crossing of Route H for trail users at all St. Louis Riverfront Trail crossing locations.

3.1 Temporary Signal Operation. If temporary operation of the pedestrian signal is required to maintain functionality during construction, the contractor shall coordinate all work with the engineer.

4.0 Coordination. The contractor shall coordinate construction activities with the engineer. Notice of work affecting trail users shall be provided at least fourteen (14) days in advance unless otherwise approved by the engineer.

5.0 Basis of Payment. No direct payment shall be made to the contractor for the labor, equipment, material, or time required to comply with this provision.

O. Furnishing and Placing Rapid Strength Concrete for Full Depth Pavement Repair

1.0 Description. This specification covers the requirements of rapid strength concrete that is suitable for full depth pavement repairs. The work shall be in accordance with Sec 613.10, unless otherwise specified with this special provision.

2.0 Materials. All material, proportioning, air-entraining, mixing and transporting of concrete shall be in accordance with Sec 501 as applicable to pavement concrete, except as noted herein.

2.1 Cement. The cement shall meet the requirements of ASTM C1600 for Type VRH or Type URH. Type III cement and soluble chloride accelerators are not allowed.

2.2 Admixtures. The use of chemical admixtures is allowed and shall be in accordance with AASHTO M 194.

2.3 Mix Requirements. The concrete mix design shall meet a minimum compressive strength of 3000 psi within 4 hours; while maintaining initial workability to effectively place the concrete and meet the requirements of this specification.

The concrete mix design shall not exceed 700 lb/cy of cement.

The concrete mix design shall not exceed 0.04% shrinkage at 28 days in accordance with ASTM C 157 with the following modifications:

1. The demold time shall be determined by ASTM C 403 Final Set plus 25% of that time.
2. Initial measurement shall be taken immediately after demolding.
3. The shrinkage specimens shall be air cured until 28 days.

2.4 Certification. In addition to the mix design information required in Sec 501.3; the contractor shall submit ASTM C 666 – Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing test results from an independent laboratory with a concrete mixture containing similar cement type and amount in comparison to the approved mix design. For acceptance, the concrete mixture tested shall meet a minimum durability factor of 80 percent.

3.0 Construction. All construction requirements shall be in accordance with Sec 502 except as follows:

3.1 General Inspection. All materials shall be subject to inspection and sampling by MoDOT at the source of manufacture, intermediate shipping terminal or destination. MoDOT will be allowed free access to all facilities and records as required for instpection and sampling.

3.2 Trial Mix Requirement. The contractor shall construct a test pad (used during maturity testing) or a small pavement repair location using the approved mix design prior to production. The test pad or repair area will be evaluated and will be subject for approval from the engineer before any further production.

3.3 Compressive Strength Requirements. The concrete opening strength to all traffic shall be a minimum compressive strength of 3000 psi. Light construction traffic is allowed when the concrete achieves a minimum compressive strength of 2000 psi. The opening strength shall be verified by the maturity method in accordance with Sec 507, except the strength-maturity relationship shall be developed using 2-hour, 4-hour, 6-hour, 1-day, 7-day, and 28-day time intervals.

3.4 Curing. After concrete placement and after surface irregularities have been removed, the concrete surface shall be given a uniform roughened finished by a broom, wet burlap drag, or other methods approved by the engineer for a temporary surface texture. Immediately after texturing, the concrete shall have a wet burlap cure until the concrete has achieved a minimum compressive strength of 2000 psi. When the wet burlap is removed, the concrete shall have a white pigmented membrane applied in accordance with Sec 502.

3.5 Testing. The concrete mixture shall be within the specified limits for compressive strength, pavement thickness, and air content. The QC and QA test frequencies shall follow Sec 613.10.

4.0 Method of Mesurement and Basis of Payment. The method of measurement and basis of payment shall be in accordance with Sec 613.10. The accepted quantity of pavement repair shall be paid for at the contract unit price for Item No. 613-99.05 Furnishing and Placing Rapid Strength Concrete Material for Full Depth Pavement Repair, per square yard.

P. Preformed Thermoplastic U-Turn Arrow

1.0 Description. This provision is for furnishing and installing preformed thermoplastic U-turn pavement marking arrows on Route H as shown in the plans. All work shall comply with Sec 620.

2.0 MUTCD. The dimensions and specifications for the U-turn arrow shall be in accordance to Figure 3B-21 of the MUTCD, 11th Edition.

3.0 Method of Measurement. Measurement of preformed thermoplastic U-Turn Arrows will be per each.

4.0 Basis of Payment. Payment for installing preformed thermoplastic U-Turn Arrows shall be considered full compensation for all contractor-provided equipment items, labor, and material to complete the described work under Item No. 620-99.02 Preformed Thermoplastic U-Turn Arrows, paid per each.

Q. Low-Tracking or Non-Tracking Tack Coat NJSP-15-15H

1.0 Description. This work shall consist of preparing and treating an existing bituminous or concrete surface with a low-tracking or non-tracking tack coat material prior to an asphalt overlay in accordance with Section 407, except as revised by this specification.

2.0 Low-Tracking or Non-Tracking Requirements. Products accepted for use as low-tracking or non-tracking tack shall not stick to the tires, tracks or other parts of paving equipment or vehicles such that the surface to be overlaid becomes visible or void of tack prior to the placement of the asphaltic concrete pavement mixture. The tack material shall exhibit a low-tracking or non-tracking characteristic within 30 minutes of being applied to the roadway. Products accepted for use shall exhibit a laboratory “no-pick-up" time of 60 minutes or less per

TM-87. The product shall bond the two pavements. Products accepted for use shall exhibit a laboratory bond strength greater than or equivalent to a standard SS-1h tack material. The test method used may be any AASHTO TM method or other approved research test methods.

2.1 Optional Application. In lieu of applying a Low-Tracking or Non-Tracking Tack, a Polymer Modified Emulsion Tack may be placed immediately ahead of the asphalt pavement as defined below in section 4.0 Optional Polymer Modified Emulsion Tack.

3.0 Equipment and Construction Requirements. All equipment and construction requirements shall be in accordance with Section 407; except as revised as follows:

3.1 Storage and Handling. All guidelines and instructions about storage and handling of the non-tracking tack product shall be followed in accordance with the product manufacturer. A copy of this in formation shall be provided to the engineer. The information shall include the application and maximum allowable temperatures for the product and the particle charge.

3.2 Distributor. The distributor shall have the full circulating and heating capabilities in the tank. If the particle charge of the low-tracking or non-tracking tack is different from the particle charge of the emulsion that was previously used then the tank shall be thoroughly cleaned prior to use, since some products are not compatible.

3.3 Curing. The low-tracking or non-tracking tack shall be allowed to cure prior to any construction traffic driving on the surface. A minimum of 15 minutes of cure time shall be allowed prior to driving on the tacked surface, unless less cure time is successfully demonstrated and approved by the engineer.

3.4 Supplier Information. The low-tracking or non-tracking tack materials are a different type of product compared to the conventional tack used in Missouri. *There may be multiple products that can meet the low-tracking or non-tracking tack requirements. All products that achieve equivalent field performance will be allowed.*

3.5 Material Requirements. All material shall be in accordance with Section 1015 of the Standard Specifications and specifically as follows:

Emulsion Properties for Low-Tracking or Non-Tracking Tack Coat			
Tests	Method	Min	Max
Viscosity, Saybolt Furol @ 25°C (77°F), s	AASHTO T 59	10	100
Storage Stability Test, 24 hr, percent	AASHTO T 59	--	1.0
Sieve Test, percent	AASHTO T 59	--	0.30
Residue by Distillation, percent	AASHTO T 59	50	
Oil Distillate by Distillation, percent	AASHTO T 59	--	1
Test on Residue from Distillation			
Penetration 25°C, 100 g, 5 s	AASHTO T 49	--	90
Solubility in Trichloroethylene, %	AASHTO T 44	97.5	--

OR

The following requirements are not intended to govern emulsified products.

PG Graded Products for Low-Tracking or Non-Tracking Tack Coat

Tests	Method	Min	Max
Rotational Viscosity (Pa-sec) @ 302° F	AASHTO T 316 302°F	100	300
Penetration 25°C, 100 g, 5 s	AASHTO T 49	--	90
In addition to the table above, when using PG Graded Binders as tack, a certification shall be supplied to the engineer which includes test results demonstrating that the PG binder component meets the minimum requirements of a PG 58 or greater on the high end and a -22 or lower on the low end in accordance with AASHTO M320. The PG binder component shall account for at least 97% of the total product composition by volume. If using 100% PG binders, then the products shall be in accordance with Section 1015.10.			

All products that meet a laboratory "no-pick-up" time of 60 min or less and a field "no-pick-up" time of 30 min or less shall be accepted per TM-87.

4.0 Optional Polymer Modified Emulsion Tack.

4.1 Description. In lieu of using a low-tracking or non-tracking tack coat material, a Polymer Modified Emulsion Tack may be placed prior to a bituminous overlay of hot asphaltic concrete pavement. The Polymer Modified Emulsion Tack shall be spray applied immediately prior to the application of the hot asphaltic concrete pavement so as to produce a homogeneous surface in accordance with Secs 401, 402, or 403. This option will not be required solely if low tracking tack products fail to perform in the field.

4.2 Materials. The Polymer Modified Emulsion Tack shall be in accordance with Sec 1015.20.5.1.1 or Sec 1015.20.6.2.

4.3 Construction Requirements. The asphaltic concrete pavement shall be placed in accordance with Secs 401, 402, or 403, except as modified herein.

4.4 Equipment. No wheel, track or other part of the paving machine or any hauling equipment shall come in contact with the Polymer Modified Emulsion Tack before the asphaltic concrete pavement mixture is applied.

4.5 Application of Polymer Modified Emulsion Tack.

4.5.1 The Polymer Modified Emulsion tack shall be sprayed at a temperature of 120 - 180° F. The sprayer shall accurately and continuously monitor the application rate and provide a uniform coverage across the entire width to be overlaid. The application rate of the asphalt emulsion tack shall be applied at the same rate as the low-tracking or non- tracking tack coat material in accordance with Sec 407. The Engineer may make adjustments to the application rate based upon the existing pavement surface conditions and the recommendations of the Polymer Modified Emulsion Tack supplier.

4.5.2 Water may be added to SS-1hp and CSS-1hp by the emulsion manufacturer and shipped to the jobsite. No dilution shall be allowed in the field. When water is added to SS-1HP or CSS-1HP, the resulting mixture shall contain no more than 20 percent of added water. The contractor shall notify the engineer of the use of a diluted emulsion. The exact quantity of added water shall be indicated on the manufacturer's bill of lading, manifest or truck ticket. The application rate of the resulting mixture shall be adjusted such that the original emulsion will be spread at the specified rate. No water shall be added to the CPEM-1 or PEM-1.

5.0 Method of Measurement. Measurement of asphalt emulsion to the nearest gallon shall be made as specified in Sec 1015. The measurement of asphalt emulsion shall be based upon undiluted material.

6.0 Basis of Payment. The accepted quantity of low-tracking or non-tracking tack coat or polymer modified emulsion tack will be paid for at the contract unit price as follows:

Item No.	Type	Description
407-10.07	GAL	Tack Coat - Non-tracking

R. Additional Coldmilling at Curb Opening Inlets

1.0 Description. This work shall consist of milling the existing pavement to an additional depth in the vicinity adjacent to curb opening inlets prior to placing new pavement. The clear opening at the curb line shall provide a minimum of 6 inches depth to allow proper stormwater flow into the inlets.

2.0 Construction Requirements. The contractor shall be responsible for removing an additional depth of pavement to provide the required six-inch minimum clear opening at all inlets within the project limits. The milling shall include a depression leading to and through the curb opening as directed by the Engineer. The milling shall take place prior to the placement of any new asphalt material for paving operations.

2.1 Examples of inlets that do not currently provide an acceptable clear opening are shown below.





3.0 Basis of Payment. The cost of restoring clear opening depth at curb opening inlets will be incidental to the unit price of the items associated with the disturbance. No direct payment will be made for materials, equipment, time, or labor, which is performed under this provision.

S. Removal and Delivery of Existing Signs JSP-12-01C

1.0 Description. All Commission-owned signs removed from the project shall be disassembled, stored, transported, and disposed of as specified herein. Sign supports, structures and hardware removed from the project shall become the property of the contractor.

2.0 Disassembly and Delivery.

2.1 All Commission-owned signs, (excluding abandoned billboard signs), designated for removal in the plans, or any other signs designated by the Engineer, shall be removed from the sign supports and structures, disassembled, stored, transported, and delivered by the contractor to the recycling center for destruction.

2.2 The contractor shall coordinate and make arrangements with the recycling center for delivery of the signs. Sign panels shall be disassembled and/or cut into sizes as required by the recycling center.

2.3 The contractor shall provide the Engineer with a "Sign Delivery Certification" attesting to completion of delivery of all existing sign material from the project to the recycler. In addition, the contractor shall provide to the Engineer a final "Sign Certification of Destruction" from the recycler that documents the total pounds of scrap sign material received from the project and attests that all such material will not be re-purposed and will be destroyed in a recycling process. The contractor can locate the required certification statements from the Missouri Department of Transportation website:

https://www.modot.org/forms-contractor-use

2.4 Funds received from the disposal of the signs from the recycling center shall be retained by the Contractor.

3.0 Basis of Payment. All costs associated with removing, disassembling and/or cutting, storing, transporting, and disposing of signs shall be considered as completely covered by the contract unit price for Item No. 202-20.10, "Removal of Improvements", per lump sum.

T. MoDOT TS2 Type 1 Cabinet Assembly

1.0 Description. The cabinet assembly shall meet, as a minimum, all applicable sections of the latest revisions as found in the NEMA TS2 Standard Publication and sections 902 and 1092 of the Missouri Standard Specifications for Highway Construction Manual. Where differences occur, this specification shall govern.

2.0 Materials.

2.1 Cabinet. The cabinet shall be constructed from aluminum with a minimum thickness of 0.125 inches. The cabinet shall be designed and manufactured with materials that will allow rigid mounting, whether intended for pole, base, or pedestal mounting. All mounting points where the cabinet is bolted to the foundation shall be reinforced at the factory by welding in an additional layer of material equal to the thickness of the material that the cabinet is constructed from. Triangular gussets are also required when the base plate and cabinet walls are welded together vs. continuous rolled material. A rain channel shall be incorporated into the design of the main door opening to prevent liquids from entering the enclosure. All external hardware shall be stainless steel. Unless otherwise specified, the cabinet exterior shall be supplied with a natural aluminum finish. Sufficient care shall be taken in handling to ensure that scratches are minimized. All surfaces shall be free from weld flash. Welds shall be smooth, neatly formed, free from cracks, blowholes and other irregularities. All sharp edges shall be ground smooth. The cabinet shall be equipped with (2) lifting brackets for installation and removal purposes.

2.2 Cabinet Doors. The cabinet shall include front and rear doors of NEMA type 3R construction with rain tight gaskets. A stiffener plate shall be welded across the inside of the main door to prevent flexing. Doors shall include a mechanism capable of holding the door open at approximately 90 and 165 degrees under windy conditions. Manual placement of the mechanism shall not be required by field personnel. Only the main door shall have ventilation louvers. A plaque designation “Traffic Control” shall be affix to each main cabinet door.

2.3 Door Alarm. The front and rear doors shall be equipped with switches wired to the traffic signal controller alarm **with** 1 input for logging and reporting of a door open condition. This should indicate a Special Status 1 alarm in the signal controller alarm screen.

2.4 Shelves. No less than (2) shelves shall be provided and each shall have the ability to be independently removed, relocated, and adjusted. The front edge of each shelf shall have holes predrilled at a spacing of no greater than 8 inches to accommodate tie-wrapping to secure cables/harnesses.

2.5 Mounting Rails. A minimum of one set of vertical "C" channels shall be mounted on each interior wall of the cabinet for the purpose of mounting the cabinet components. The channels shall accommodate spring mounted nuts or studs. All mounting rails shall extend to within 7 inches of the top and bottom of the cabinet.

2.6 Pull-out Drawer. The cabinet shall be equipped with a pull-out drawer/shelf assembly. A 1½ inch deep drawer shall be provided in the cabinet, mounted directly beneath the controller support shelf. The drawer shall have a hinged top cover and shall be capable of accommodating one complete set of cabinet prints and manuals. This drawer shall support 50 pounds in weight when fully extended. The drawer shall open and close smoothly. The drawer dimensions shall make maximum use of available depth offered by the controller shelf and be a minimum of 18 inches wide.

2.7 Police Door. The police door shall contain only (1) switch used for flash/auto operations. The ability to turn field indications off from the police panel will not be permitted.

2.8 Lighting. The cabinet shall include no less than (3) field replaceable LED light assemblies along the top and sides of the cabinet. The LED panels shall be controlled by a manually activated toggle switch on the tech panel.

2.9 Fans/Ventilation. The components of the system as well as the CFM requirements shall be in compliance with the MoDOT 902 & 1092 specifications.

2.10 Heater. The cabinet shall be supplied with a 200 Watt fan heater with thermostat control that is designed to protect electronics from the effects of low temperatures such as corrosion, freezing or condensation, which can damage critical components within a control enclosure. Housing shall be constructed of aluminum. Overall dimensions including mounting areas shall be approximately: 4inch depth, 4inch width, 5.50inch height.

2.11 Switch Guards. All switches shall include switch guards. All switches shall be clearly labeled.

2.12 Receptacles and power strip(s). An 8-outlet IP addressable power strip will be furnished by the Commission and installed by the contractor. The installation of the power strip shall be included in the cost of the cabinet assembly. The main door tech panel shall contain a 15 amp

duplex GFI receptacle. A separate grounded service outlet shall be provided in the controller cabinet for supplying power to the video detection monitor. The monitor shall be installed to automatically power on when the cabinet door is opened and automatically power off when the cabinet door is closed. The use of the grounded service outlet located on the cabinet door will not be permitted for this function. A manual on/off switch shall also be provided and mounted to the main door tech panel.

2.13 16-Position Back Panel Wiring. All new signal cabinets shall have a 16-position load switch back panel and conform to the following specifications. Regardless of the number of phases specified on the plans, all load switch positions shall be completely wired for use. The load switch back panel shall be configured for NEMA Configuration "A" or "G" as designated on the signal plans. Vehicle phases, overlaps (including FYA configurations), and pedestrian phases shall be wired such that it must work with a Type 16 MMU. The cabinet shall include both a DT panel and a CTB (SDLC) panel with 6 harnesses.

2.14 Detection Configuration.

2.14.1 For all Detector Types. Detection configuration shall be in accordance with the configuration prescribed in the SL District Traffic Signal Detection System JSP.

2.14.*2* Intersections with Video Detection. For intersections with video detection, the cabinet shall be wired to automatically power on the video monitor when the cabinet door is open.

2.15 Load Switch. The front of the load switch shall be provided with (3) indicators to show the input signal from the controller to the load switch and (3) indicators to show the output to the field devices. The full complement of load switches shall be supplied with each cabinet to allow for maximum phase utilization for which the cabinet is designed.

2.16 SDLC. All connection points shall be protected by a BIU 15 pin surge suppressor used for the protection of any devices on Port 1 Synchronous Data Link Control (SDLC). Each cabinet shall be provided with a SDLC hub assembly and (6) SDLC cables unless otherwise noted on the order form. All mechanical connections shall be soldered.

2.17 Surge Protection. Surge protection shall be a modular plug in type product as listed in the MoDOT Traffic Approved Product List.

2.18 AC line filter. The AC line filter shall protect equipment from malfunctions due to conducted interference coming into the equipment from line, especially line to ground (common mode) noise and transients. Overall dimensions including mounting areas shall be approximately: 4.17inch width and 3.53inch height.

2.19 Signal Buss Relay. The relay shall be a direct "drop-in" replacement for existing mercury displacement relays. The relay shall be a single pole solid state or hybrid relay. Overall dimensions including mounting areas shall be approximately: 2.5inch depth, 2inch width, 5 inch height.

2.20 Field Wiring termination. All field wires shall be attached to the back panel terminal strips via a mechanical copper lug, which can accommodate wire sizes from 14AWG - 6AWG. Lugs shall be provided for all field outputs to maximize the cabinet design.

2.21 Flash Transfer Relays. The full complement of relays shall be supplied with each cabinet to allow for maximum phase utilization for which the cabinet is designed.

2.22 Cabinet Wiring Prints. Paper cabinet prints as well as electronic media shall be provided with each cabinet. (4) paper copies shall be provided (22" X 34") and (1) electronic copy in pdf and dgn format. All flash program wiring configurations shall be represented on the cabinet print (Red, Amber, No Flash, FYA, Ped, FYA & Ped).

2.23 Generator Attachment. A generator plug shall be installed on each cabinet unless otherwise noted. The access door shall be hinged, lockable and watertight. The plug shall conform to the (NEMA L5-30 configuration). An automatic transfer switch shall be provided which will switch power to/from "line", "UPS" or "generator" when power from one of the sources has been lost or gained. The unit shall be rated for 30 amps and shall contain either a LCD display or indicator lights that validate the following: Line in, Line out, UPS in, UPS out and "from" generator. The unit shall contain a main breaker (on/off switch), a UPS bypass breaker (switch) and a Generator breaker (switch). To minimize the impact of the presence of the auto transfer switch, the dimensions shall be no greater than 12" wide X 6" deep X 4" high. The unit shall be constructed of either aluminum or stainless steel.

3.0 Testing.

3.1 Each controller and cabinet assembly shall be tested as a complete entity under signal load in accordance with Missouri Standard Specifications Section 902 for a minimum of 30 days after installation.

3.2 Each assembly shall be delivered with a signed document detailing the cabinet final tests performed. The cabinet shall be assembled and tested by the controller manufacturer or authorized local distributor to ensure proper component integration and operation.

4.0 Warranty and Training.

4.1 If a Controller and/or Malfunction Management Unit are ordered with a cabinet assembly, the Controller and Malfunction Management Unit shall be warranted by the manufacturer against mechanical and electrical defects for a period of 2 years from date of shipment. The manufacturer's warranty shall be supplied in writing with each cabinet and controller. Second party extended warranties are not acceptable.

4.2 The cabinet assembly and all other components shall be warranted for a period of one year from date of shipment. Any defects shall be corrected by the manufacturer or supplier at no cost to the owner.

4.3 MoDOT may require training on the maintenance and operation of NEMA TS2 cabinet assemblies. Maintenance and operation personnel shall be trained on troubleshooting, maintenance and repair of cabinets and all serviceable equipment. Training shall include field level troubleshooting and bench repair. This training shall be for a minimum of sixteen hours over two days. Training shall be conducted at a time and location mutually agreeable by the contractor and the signal shop traffic supervisor or as directed by MoDOT.

5.0 Method of Measurement. Method of measurement shall conform to Sections 902 and 1092 of the Standard Specifications.

6.0 Basis of Payment. Payment included with cost of pay item 902-42.83 (Controller Assembly Housing, NEMA TS2 Controller) paid per each. Payment will be considered full compensation for all labor, equipment, and material to complete the described work as shown on the plans. No additional payment will be made for installation of the power strip mentioned in 2.12. No additional payment will be made to provide conformance.

U. Disposition of Existing Signal/Lighting and Network Equipment

1.0 Description. All controllers, cabinets, cabinet equipment, network equipment, DMS equipment, antennas, radios, modems, and other equipment noted in the plans shall be removed by the contractor.

2.0 Signal Equipment. All equipment other than network communication devices noted in 3.0 are to be transported to the Commission's maintenance lot located at 2309a Barrett Station Road, Ballwin, Missouri 63021. The contractor shall notify the Commission's representative 24 hours prior to each delivery by calling:

Mr. Brian Ducote, Signals Preventative Maintenance Supervisor
Cell: (314) 681-8395

Mr. Tony Rogers, Lighting and Locates Supervisor
Cell: (314) 348-9481

3.0 Network Communication Devices. Devices such as CCTV cameras and domes, video encoders, device servers, Ethernet switches, media converters, and radio assemblies are to be transported to the Commission's TMC in Chesterfield. The contractor shall notify the Commission's representative 24 hours prior to each delivery by calling 314-275-1526 and providing details for the delivery.

1.0 The contractor shall exercise reasonable care in the handling of the equipment during removal and transportation. Should any of the equipment be damaged by the contractor's negligence, it shall be replaced at the contractor's expense. The contractor shall dispose of any other equipment. Delivery shall be within 2 working days of removal. All items returned shall be tagged with the date removed, project number and location/intersection.

2.0 Basis of Payment. Payment for removal, handling and transportation of all equipment specified shall be considered completely covered by the contract unit price for **"Removal of Improvements"** per lump sum.

V. Coordination with MoDOT Signal Shop for Cabinet Entry

1.0 **Description.** Commission-furnished color-coded pad locks have been placed on all of MoDOT's signal cabinets in addition to the key used to unlock the door handle. To gain access to the appropriate cabinets during the project all contractors shall coordinate with MoDOT's signal shop to obtain the proper keys and locks..

1.0.1 Keys & Locks. Red locks & keys are provided when a contractor has modified the signal cabinet and MoDOT staff shall not have access to the cabinet until it is accepted for maintenance. The blue keys are provided for entry into the cabinet where MoDOT's Signal Shop

group deems the access to be minor in nature (entry to the cabinet to make a simple network switch connection, for example).

1.0.2 Completion of Project. At the completion of the project all keys and pad locks distributed to contractor during the project shall be returned to the Signal Shop supervisor or their representative and keys shall not be reproduced.

2.0 Contact. Initial contact must be made at least seven calendar days before work begins, preferably when the project has the notice to proceed or during the pre-construction meeting, if applicable. MoDOT's Signal Shop supervisors shall be notified prior to work beginning. Contact the signal shop via email at **sltrs@modot.mo.gov** to coordinate which padlocks are to be used.

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

W. Install New or Relocate Existing Communication Equipment

1.0 Description. The contractor shall install MoDOT furnished ethernet network switch(s) or relocate all existing network equipment from existing ITS or signal cabinet into new cabinet, make necessary connections and test for proper network connection. This work shall be coordinated with MoDOT SLITS Group via an email to SLITS@modot.mo.gov.

2.0 Materials.

2.1 The Contractor shall install MoDOT furnished Ethernet network switch(es) or relocate the existing Ethernet network switch(es), video encoders, cellular modem and other existing or new network devices inside the new ITS or signal cabinet as shown on the detail communication plans. These will include power cables and network device surge arresters. Relocating the existing CCTV camera(s) and network radios(s) shall be paid under separate pay items.

2.2 The Contractor shall furnish and install any other cables such as Category 5E patch cords, coax patch cords, and short serial cables, etc. as required for the new location connections.

3.0 Construction Requirements.

3.1 Provide to the engineer a detailed schedule of installation of Contractor furnished communications equipment, at least thirty (30) days before commencing this type of work. Additionally, coordinate such work with the engineer.

3.2 The Contractor shall NOT move any cables from port to port on the network switches without prior MoDOT approval. For equipment installed in cabinets, mount the equipment in the rack as shown in the approved cabinet layout diagram or, for existing cabinets, as directed by the engineer, and connect the power cables and ground wires. If there are insufficient outlets in existing cabinets, provide Commission approved power strips as required. Connect the communication cables as shown on the connection diagrams in the plans. The equipment will be configured by the Commission, and therefore do not change any configuration settings.

3.3 Assist Commission staff in making the installed equipment operational. This may entail having a person with a cellular telephone at the cabinet reporting on results and making changes as directed by Commission staff. It may also entail installing replacement equipment when a unit cannot be made to work properly.

3.4 Cisco Ethernet Switch. Prior to the beginning of the project, the Contractor shall verify the correct switch type and model including any additional necessary Cisco supported equipment with MoDOT St. Louis ITS department. Additional equipment may include but is not limited to the power supply, DIN rails, and any applicable Cisco supported SFPs (Small Form-factor Pluggable transceivers), or expansion modules. For signal cabinets, the switch shall be mounted on the left side panel above the 120V IP Power Strip. Attach unit to 2 rails of the side panel, with the power cable facing away from the cabinet door. The Cisco switch shall be powered from the 120V IP Power Strip. The Cisco Ethernet Switch including the additional Cisco supported equipment shall be delivered to Commission's ITS Engineer for programming at least 2 weeks prior to the field installation.

3.5. Cellular Modem. If present, **t**he contractor shall provide before and after documents on cellular modem signal strength. The new cellular modem signal strength shall be equivalent or better than existing. Contractor shall be responsible for installation or relocation of cellular antenna to achieve acceptable signal strength.

3.6 Other Agency's Devices on MoDOT Right-Of-Way and Facilities. If other agency's devices such as emergency pre-emption system, CCTV Camera, etc. exist within MoDOT Right-Of-Way and must be relocated onto the new MoDOT facilities, the contractor must notify MoDOT SLITS Group via an email to SLITS@modot.mo.gov and MoDOT area traffic engineer in the early stage of the construction. MoDOT SLITS Group and MoDOT area traffic engineer will coordinate the removal and re-installation of those devices with responsible agency.

4.0 Basis of Payment. Measurement and payment for communication equipment installation will be on a per cabinet basis. The unit price shall include patch cords, cabling, assistance to Commission staff in getting the equipment operational, documentation, and all miscellaneous hardware required for a safe, fully operational system. Payment will be made as follows:

Item No.	Type	Description
910-99.02	Each	Install or Relocate Existing Communication Equipment

X. ATC Traffic Signal Controller

1.0 Description. The Commission's St. Louis District is utilizing TransCore's TransSuite software as their Advanced Traffic Management System (ATMS), therefore all signal controllers must be able to interface with their TCS program.

2.0 Material. All traffic signal controllers purchased and installed on this project shall be selected from the list below and match the cabinet type and connections indicated on the D-37C sheet for each intersection(s). The controllers on the list below are the only controllers that are tested, fully functional, and approved with the version of TransSuite that the St. Louis District is currently operating (TransSuite version 20.4):

Controller/Firmware Type	Firmware Supported	Cabinet Type (Match in field)
Econolite Cobalt	EOS 3.2.24	NEMA TS2 Type 1 or 2
McCain Omni eX, eX2	3.4	NEMA TS2 Type 1 or 2
Intelight X3	MaxTime 2.1.1	NEMA TS2 Type 1 or 2

3.0 Construction Requirements. Contractor shall ensure that the signal controller as noted above is programmed to be compatible with the previously mentioned version of TransSuite TCS system.

4.0 Acceptance Testing. All controllers shall be tested per the Commission's specifications. Programming and testing should be done prior to any installation and approved by the Commission's engineer or representative. The contractor shall provide a copy of the signal programming to the engineer via an USB Flash drive.

5.0 Documentation. Contractor shall provide the engineer with an electronic copy of the manufacturer's signal controller manual or link to the website where the manual can be downloaded in .pdf format.

6.0 Basis of Payment. Measurement and payment for work covered by this specification shall include all equipment, tools and materials necessary and shall be paid at the contract unit price for Item No. 902-99.02 ATC Traffic Signal Controller, paid per each.

Y. Coordination with ITS Staff 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. The contractor shall notify the ITS group via an email to SLITS@modot.mo.gov at least 2 days before any work that may impact the existing network communications. The contractor shall include the Job#, location and brief scope of work in the email's subject line. 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.

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

Z. Traffic Signal Maintenance and Programming

1.0 Description. Traffic signal maintenance and programming for this project shall be in accordance with Section 902 of the Standard Specifications, and specifically as follows.

2.0 Contractor Maintenance Responsibilitities

2.1 Traffic Signal Maintenance. Once any part of an existing traffic signal within the limits of this project has otherwise been modified and/or adjusted by the contractor or the contractor begins work at an intersection with traffic signals already in operation, then the contractor shall be solely responsible for that traffic signal's maintenance. All traffic signal maintenance shall be the responsibility of the contractor as specified in 902.2.and 902.3, until the Commission accepts the traffic signal for maintenance or as directed by the Engineer.

2.2 Traffic Signal Controller Programming. If the contractor modifies and/or adjusts an existing traffic signal controller's programming or makes any roadway changes to reduce the traffic capacity through a signalized intersection within the limits of a project or utilizes a project defined detour that utilizes the traffic signals within the below schedule, the contractor shall be solely responsible for those traffic signal controller programs. All controller programming shall be the responsibility of the contractor as specified in 902.2 or until final acceptance of the project or until released from the responsibility by the Engineer.

2.3 Contractor's Traffic Engineer. If traffic signals are listed in the schedule outlined in section 2.2, the contractor shall have an experienced traffic Engineer with a Professional Engineer's (PE) license in Missouri as well as a Professional Traffic Operations Engineer (PTOE) certification (hereafter referred to as "contractor's traffic Engineer") with the noted experience outlined to section 3.0. MoDOT shall approve the traffic Engineer prior to them being hired.

2.4 Traffic Signal Complaints The contractor shall respond to malfunction complaints or traffic signal timing complaints for those locations detailed in section 2.1 and/or section 2.2 of this provision and as specified in Section 902.21.1. Response time shall be 1 hour for complaints received by the contractor between 6 AM and 6 PM on non-holiday weekdays, and 2 hours for all other times. For cases due to travel times or other extenuating circumstances additional time may be acceptable within reason but must be approved by a Commission Traffic Operations Engineers. These timeframes will replace the '24 hour' response time in Section 105.14 for any traffic signal-related incidents, where the entire cost of the work, if performed by MoDOT personnel or a third party, will be computed as described in Section 108.9 and deducted from the payments due the contractor.

2.5 Traffic Signal Contacts. The contractor must supply to the Engineer and to the Commission's Transportation Management Center (TMC) a contact name and phone number who will be responsible for receiving traffic signal timing complaints for the Engineer. These complaints may be forwarded directly to the contractor by someone other than the Engineer's representative and will not relieve the contractor from properly responding based on the response times of this provision. The contractor shall respond to the Engineer and its representative within 12 hours of the complaint and its remedy. The contractor shall submit to the Engineer's representative a weekly report of complaints received and remedies performed throughout the duration of the project.

2.6 Existing Traffic Signal Controller Programming. The contractor shall request an electronic report from the Engineer on the existing phasing and timing of each traffic signal, which may be the contractor's responsibility to program. The contractor shall give the Engineer 2 weeks' notice to supply the electronic report. The Engineer's representative shall be available to the contractor before any changes are made to a traffic signal or controller to answer any questions about the report. In lieu of the report, the contractor's traffic Engineer may obtain this information from the appropriate agency's central traffic signal control system.

2.7 Traffic Mitigation Plan. The contractor shall notify the Engineer 2 weeks prior to the date of any work impacting the Commission's traffic signals as described in Section 2.1 and/or 2.2. The contractor shall meet with the Engineer's representatives to discuss their traffic mitigation plan at least 1 week before the date of the first impacts and as needed between construction stages. The traffic mitigation plan should at a minimum include:

a) Proposed Timing Plan changes and any models
b) Anticipated locations of concern
c) A map in electronic format displaying the locations and names of the traffic signals and owning agency as detailed in sections 2.1 and/or section 2.2.
d) Other traffic mitigation efforts

2.8 Notification of Changes to Traffic Signal System. The contractor shall notify the Engineer or representative of the changes no later than 1 working day after changes are programmed if unable to provide advance notice as specified in 902.2.

3.0 Contractor's Traffic Engineer Qualifications.

3.1 Credentials. The contractor shall have an experienced traffic Engineer with a Professional Engineer's (PE) license in Missouri as well as a Professional Traffic Operations Engineer (PTOE) certification.

3.2 Experience. Any proposed contractor traffic Engineer shall be able to demonstrate personal successful previous experience in the following tasks:

3.2.1 Response. The contractor's traffic Engineer shall have the ability to be on site within 1 hour of being requested.

3.2.2 Corridor Management. Time/space diagram manipulation to successfully adjust offsets and splits for rapidly changing traffic demands.

3.2.3 Controller Programming. Ability to program by hand and by software NTCIP-compatible controllers.

3.2.4 Intersection Programming. Implementation of adjusted and/or new timing plans because of changing traffic demand.

3.2.5 Traffic Signal Software. Use and understanding of all traffic signal controllers and central traffic signal control systems utilized by the Commission.

3.3 Proposed Traffic Engineers. The contractor shall submit the names(s) of proposed traffic engineer(s) and the name(s) of all other personnel on their proposed staff along with detailed experience in all tasks outlined in Paragraph 3.2 above. The Engineer reserves the right to reject any contractor traffic engineer, before the start of work, who does not have sufficient

experience or, at any point during the project, which does not satisfy the requirements set forth within this Job Special Provision. A list of potential traffic engineers shall be submitted for review to the Project Manager and the Commission's Traffic Engineers prior to bid.

4.0 Contractor's Traffic Engineer Responsibilities.

4.1 VPN Access. The approved contractor's traffic Engineer and any staff assigned to manage the traffic signals during the project are encouraged to apply for VPN (Virtual Private Network) access with the Engineer once the project is awarded. If approved, the Engineer will assign a unique IP address to the contractor's traffic Engineer, which will allow for remote access to the Commission's central traffic signal control systems as appropriate and the ability to interface with the noted traffic signals on this project.

4.2 Traffic Signal Timing Complaints. The contractor's traffic Engineer shall respond to any traffic signal timing complaints regarding signals outlined in section 2.2 of this provision.

4.3 Traffic Signal Coordination. The contractor's traffic Engineer shall be solely responsible for maintaining the coordination at any affected traffic signal to the satisfaction of the Commission's Traffic Operations Engineers or representative until completion of work as set forth in section 2.2 of this provision. Maintenance of coordination may include the synchronization of the affected controller's internal time clocks to the second using an atomic clock, or other means approved by the Commissions Traffic Operations Engineers. If time clock synchronization is used, the contractor shall verify all affected controllers are synchronized at least 1 time per week with a report to the Engineer or representative. This report will be in the form of a documentation record as spelled out in the Work Zone Traffic Management Plan.

4.4 Traffic Signal Controller Programming. The contractor's traffic Engineer shall be responsible for implementing traffic signal controller programming at each intersection listed in section 2.2 for any of the following scenarios:

a) Intersection Impact
b) Construction Stage Traffic Switch
c) Response to Customer Concern
d) New Intersection Turn-On (along with any subsequent revisions)
e) Final completion of improvements
f) As otherwise directed by the Engineer or the Commission's Traffic Operations Engineers

Proposed timing plans should be submitted to the Commission's Traffic Operations Engineers for review prior to field implementation.

4.5 Central Traffic Signal Control System Setup. If a traffic signal cabinet is reconfigured, the contractor's traffic Engineer shall archive the existing controller programming in the Commission's central traffic signal control system. If the signal controller type is changed, the contractor's traffic Engineer shall archive the existing controller programming and convert any new controllers to the proper controller interface type in the Commission's central traffic signal control system. If only signal timing adjustments are made, all database versions shall be clearly labeled and saved separately from the default version, and the final timing program shall be uploaded into the Commission's central traffic signal control system and set as the default database. In addition, the contractor's traffic Engineer shall update any intersection diagrams (i.e., XPL) whose intersection controls were modified during construction.

4.6 Controller Program Test Period. The intersection program shall operate properly with no faults or malfunctions for a period of 15 consecutive days as a condition of being accepted for maintenance by the Commission. Any programming faults shall be corrected by the contractor's traffic Engineer per the response protocols of this provision and the 15 days will start over.

4.7 Cabinet Photos. The contractor's traffic Engineer shall obtain cabinet photos of any new or modified traffic signal cabinet affected by the project. The photos shall be captured of the following perspectives and delivered in the .jpg format electronically and via thumb drive to the Commission's Traffic Operations Engineers.

a) Power Meter 1 – Away from power meter with meter centered
b) Power Meter 2 – Close up with power meter number
c) Cabinet 1 – Away with cabinet centered and door closed
d) Cabinet 2 – Close up of entire cabinet with door opened
e) Cabinet 3 – Close up of center cabinet interior
f) Cabinet 4 – Close up of left cabinet interior
g) Cabinet 5 – Close up of right cabinet interior
h) Cabinet 6 – Close up of back panel
i) Cabinet 7 – Close up of switch
j) Cabinet 8-Close up of wall interconnect center

4.8 Detection. The contractor's traffic Engineer shall assist the contractor in setting up detection as per plan and/or SL District Traffic Signal Detection System JSP. The contractor's traffic Engineer shall verify that all detectors work properly and that each detector input into the traffic signal controller is programmed regarding its intended use. The contractor's traffic Engineer is responsible for optimizing the detector operation by utilizing various detector settings in the traffic signal controller.

4.9 Signal Performance Measures. The contractor's traffic Engineer shall setup traffic signal controllers on the Commission's advanced traffic signal performance measures module unless directed otherwise by the Commission's Traffic Operations Engineers. This includes any work on the Commission's advanced traffic signal performance measures module, traffic signal controller(s), and video detection processor(s). The contractor's traffic Engineer shall provide proof of each traffic signal setup in the module to the Commission's Traffic Operations Engineers. The contractor's traffic Engineer shall setup any traffic signal detectors as system detectors in the Commission's central traffic signal control system.

4.10 Preemption Controller Programming. If preemption is to be provided at a traffic signal, the contractor's traffic Engineer shall program the preemption settings in the traffic signal controller per MoDOT EPG guidelines and at the direction of the Commission's Traffic Operations Engineers. The contractor's traffic Engineer shall test the preempt settings at the traffic signal cabinet to verify proper operation.

5.0 Post Project Report. The contractor shall submit to the Engineer a post project report, four to six weeks after the final traffic signal adjustments have been completed. The report shall include at a minimum an observation report, summary of timing changes and locations, summary of complaints, and any other pertinent information regarding the contractor's efforts for managing these traffic signal corridors in one electronic document.

6.0 Deliverables. All deliverables mentioned in this provision shall be submitted to the Engineer in a timely manner to the satisfaction of the Engineer prior to receiving full compensation for this work. All deliverables must be submitted to the Engineer via USB.

a) Experience submittal
b) Preliminary Traffic Mitigation Plan
c) Notification of Detour Implementation
d) Time Base Reports, As Needed
e) Complaint Resolutions
f) Audible pedestrian signal voice message files
g) Traffic Signal Database versions (in PDF format)
h) Traffic signal photos
i) Notification of Restoration to Normal Operations
j) Post Project Report

7.0 Construction Requirements. Construction requirements shall conform to Sections 902, 1061 and 1092.

8.0 Method of Measurement. Method of measurement shall conform to Section 902.

9.0 Basis of Payment. Payment will be considered full compensation for all contractor services, installation, and labor to complete the described work:

Item No.	Type	Description
902-99.01	Lump Sum	Traffic Signal Maintenance & Programming

AA. Audible Pedestrian Pushbuttons and Signing

1.0 Description. This work shall consist of furnishing, installing and placing intooperation an Accessible Pedestrian Signal (APS) that assist the pedestrian who has visual or physical disabilities in activating the pedestrian phase. The APS shall be installed per the manufacturer's recommendations and specifications. Cable runs shall be continuous and unspliced. Audible pedestrian pushbuttons and signing will be required for all pedestrian indications at all intersections.

2.0 Installation. The APS shall be installed as part of a pushbutton assembly and shall have both audible and vibrotactile walk indications.

2.1 Material. The following systems in the list below are the only systems that are tested, fully functional, and approved for use in the St. Louis District. All necessary equipment for use of the systems below, shall be provided to the Commission for adequate maintenance of the system.

- PedSafety Guardian Mini
- Guardian with Bluetooth and Wayfinding Sign

3.0 Equipment.

3.1 Vibrotactile. Vibrotactile walk indications shall be provided by a tactile arrow on the pushbutton that vibrates during the walk interval have high visual contrast (light on dark or dark on light), and shall be aligned parallel to the direction of travel on the associated crosswalk.

3.2 Audible. The APS shall have an audible walk indication during the walk interval only. The audible walk indication shall be audible from the beginning of the associated crosswalk.

3.3 Pushbutton Signage. In addition to standard pedestrian sign requirements, all pushbuttons shall have additional signage to indicate crosswalk direction by use of a tactile arrow and the name of the street containing the crosswalk served by the audible pedestrian signal. The sign shall be located immediately above the push button mechanism and parallel to the crosswalk controlled by the button. The street name shall be the name of the street or reasonable abbreviation whose crosswalk is controlled by the push button. Signage shall comply with ADA Accessibility Guidelines (ADAAG) 703.2 specifications for Braille and raised print.

3.4.1 Arrow. Signs shall include a tactile arrow aligned parallel to the crosswalk direction. The arrow shall be raised 0.8 mm (.03 inch) minimum and shall be 4 mm (1.5 in) minimum in length. The arrowhead shall be open at 45 degrees to the shaft and shall be 33 percent of the length of the shaft. Stroke width shall be 10 percent minimum and 15 percent maximum of arrow length. The arrow shall contrast with the background.

3.4.2 Street Name. The APS shall include street name information aligned parallel to the crosswalk direction and shall comply with Guidelines for Accessible Public Rights-of-Way R308.3.2 or shall provide street name information in audible format.

4.0 Performance.

4.1 Audible Locator Tone. Locator tone tells the pedestrian that the intersection is equipped with APS and where it is. Pushbutton locator tones shall have duration of 0.15 seconds or less, and shall repeat at 1-second intervals. Pushbutton locator tones shall be intensity responsive to ambient sound, and be audible 6 to 12 feet from the pushbutton, or to the building line, whichever is less. The locator tone shall operate during the DON'T WALK and flashing DON'T WALK intervals only and shall be deactivated when the pedestrian signal is not operative.

4.2 Verbal Wait Message. If available, the acknowledge tone featureshall not be used. A verbal wait message shall provide a clear message to the pedestrian they have placed a call. The verbal information informational message “Wait to cross” street name at intersecting street name shall be used.

4.3 Verbal Walk Message. If available, the audio tone feature shall not be used. The verbal messages shall provide a clear message that the walk interval is in effect, as well as to which crossing it applies. The verbal message shall be provided at regular intervals throughout the timing of the walk interval and shall be the term “walk sign,” which will be followed by the name of the street to be crossed.

4.4 Volume. Automatic volume adjustment in response to ambient traffic sound level shall be provided up to a maximum volume of 100 dB. The units shall be responsive to ambient noise level changes up to no more than 5 dB louder than ambient sound. Tone or voice volume measured at 36 inches from the unit shall be 2dB minimum and 5dB maximum above ambient noise level. At installation, signal system is to be adjusted to be audible at no more than 5 to 12 feet from the system.

5.0 Documentation and Support.

5.1 Operation and Maintenance Manuals. Two copies of the operation and maintenance manuals for each location shall be provided to the Commission.

5.2 USB with Audible Messages. The Contractor shall provide two copies of USB data cards, to the Engineer, that contains files for the manufacturer's audible messages for complete operation of all APS at all locations.

6.0 Construction Requirements. Construction requirements shall conform to Sec 902, 1061, and 1092.

7.0 Method of Measurement. Method of measurement shall conform to Sec 902.

8.0 Basis of Payment. Accepted "Accessible Pedestrian Pushbuttons and Signing" will be paid for at the contract unit price. Payment will be considered full compensation for all labor, equipment and material to complete the described work. Payment for signing will be included in the contract unit price for Accessible Pedestrian Signals.

Item Number	Type	Description
902-99.02	EA	Accessible Pedestrian Pushbutton and Signing

BB. Countdown Pedestrian Signal Heads

1.0 Description. This work shall consist of furnishing, installing, and placing into operation any countdown, pedestrian signal heads.

2.0 System Requirements. Delete Sec. 1092.1.9 in its entirety and substitute the following:

2.1 1092.1.9 Pedestrian Signal Heads. Pedestrian signal heads shall be in accordance with ITE specifications and standards for pedestrian traffic control signal indications and the following:

b) Pedestrian signal head housing shall be constructed of a one-piece, 0.250-inch (6 mm) thick, polycarbonate material as shown on the plans. The housing shall include an integral mounting bracket designed for side-of-pole mounting on all makes of signal poles with a terminal compartment and minimum 5-position, double-row terminal block.

c) The door, lens and any openings in the housing shall have gaskets or seals to exclude dust and moisture from the inside of the compartment.

d) Lenses shall be constructed of polycarbonate material.

e) Pedestrian signal head units shall be provided with a manufactured preformed rectangular visor or screen-type louver.

f) All plastic material shall be ultraviolet stabilized.

g) Indications shall be ITE Class 3 symbol messages. The "UPRAISED HAND" symbole shall be illuminated with a filed, Portland orange LED module. The "WALKING

PERSON" symbol shall be illuminated with a filled white LED module. The "countdown" display numbers shall be in accordance with applicable portions of Sec 1092.1.

h) Pedestrian traffic control signal faces shall be constructed such that all messages are displayed from the same message-bearing surface having a black opaque background. The "countdown" display shall be located to the right of the "UPRAISED HAND" and the "WALKING PERSON" symbols, which will be overlaid.

i) Pedestrian signal heads require "Countdown" displays and shall have the following features:

1. Display numbers must be two digits at least 9 inches in height.

2. Shall only display the "Countdown" time during the pedestrian change interval. Time displayed shall be in seconds, and begin only at the beginning of the pedestrian change interval. The flashing "UPRAISED HAND" symbol shall be concurrently displayed during the pedestrian change interval. The total time displayed at the start of the pedestrian change interval shall be automatically adjusted by the pedestrian signal head and not require any manual settings or additional wiring to the signal cabinet.

3. Once the "countdown" display reaches "0", the "countdown" display shall blank-out until the next pedestrian change interval begins.

4. If the pedestrian change interval is interrupted or shortened as part of a transition into a preemption sequence, the "countdown" display shall go dark immediately upon activation of the preemption transition.

5. A test switch shall be provided in order to test the "countdown" display.

2.0 Construction Requirements. Construction requirements shall conform to Sec 902.

3.0 Method of Measurement. Method of measurement shall conform to Sec 902.

4.0 Basis of Payment. Payment for pedestrian signal heads, including all materials, equipment, labor and tools shall be made and considered completely covered by the contract unit price bid for:

Item No.	Description	Unit
902-99.02	Countdown Pedestrian Signal Head, Type 1S	Each

CC. Intersection Warning Flasher

1.0 Description. An IWF installation is the addition of a sign with a continuous flashing yellow beacon to alert drivers to approach an intersection where extra caution is needed. Its purpose is to increase driver awareness especially in locations with limited sight distance, high speeds, The purpose of this IWF system is to: 1) Increase driver attentiveness on high-speed roadways or rural corridors where intersections can appear suddenly. 2) Enhance visibility of the intersection during nighttime, adverse weather, or limited-sight-distance conditions.

1.1 The Intersection Warning Flasher shall operate based upon the 2023 (11th Edition) MUTCD, Chapter 4S – Flashing Beacons.

2.0 Beacon Requirements.

2.1 General Conditions. IWF assemblies shall meet requirements set forth by this JSP:

An IWF assembly shall consist of two continuous flashing yellow beacon indications installed above and below the sign, and shall be designed, located, and operated in accordance with the detailed requirements specified below.

(a) Power for the IWFs shall be supplied from solar panel and battery capable of supplying the appropriate power sufficient for 1 IWF per post with continuous operation. The solar panel and battery shall be installed on the same post.
(b)The one yellow warning sign shall be a fluorescent yellow sign.

2.3 Beacon Flashing Requirements.

(a) Per 2023 MUTCD Section 4S.01 requirements for the flash rate of beacons, IWFs shall use flasher rate between 50 and 60 times per minute.

2.4 Beacon Operation.

(a) The IWF shall flash at all times of the day (24 hr.).

2.5 Other.

(a) The signs shall meet the requirements of Sec 903. The minimum height of the lowest sign shall be seven feet as shown in the plans.
(b) The post shall be meet MoDOT standards.

3.0 Method of Measurement. Measurement for installation of Intersection Warning Flasher Assemblies will be made per each assembly. No measurement will be made for individual items that make up the IWF assembly.

4.0 Basis of Payment. All labor, equipment, and materials necessary to install the beacons, signs, post, foundation, solar panels, batteries, and other equipment to have a fully operational IWF system will be included in Bid Item No. 902-99.02 Intersection Warning Flasher Assembly, paid per each.

DD. Relocate and Install City Lighting

1.0 Description. This project will affect lighting structures and circuits not owned and maintained by MoDOT. The work under this item consists of labor, material, supplies, and tools involved in furnishing and installing new and relocated city light poles as shown on the design plans and described herein.

1.1 All work shall meet NEC, NESC, and NEMA standards unless noted otherwise in this specification or within the plans. This work shall be completed in accordance with Section 901 of the Missouri Department of Transportation Standard Specifications for Highway Construction unless otherwise noted.

2.0 Construction Requirements.

2.1 Contact. The City's Traffic Division shall assist in locating and marking existing underground conduits before the actual construction begins. Contact Rich Hulsey of the Traffic Division at 314-647-3111 ext. 1104.

2.2 Removal and Relocation. The contractor shall determine the source of power for all lights affected and ensure the circuits are properly de-energized prior to removal of the lighting. The contractor shall remove, store during construction, and reinstall all lighting poles and luminaires as shown on the plans. The contractor shall utilize care in the removal, storage, transportation, and reinstallation of the lighting. Any damage to the pole or luminaire shall be repaired or replaced at the contractor's expense to the satisfaction of MoDOT and the lighting owner.

2.2.1 The Contractor shall avoid damaging existing street lighting underground conduits. Existing circuitry to the relocated lights shall be field verified to ensure that all existing lights to remain in place are operational.
2.2.2 Light fixtures and existing light poles shall be removed from their present locations and set in the new location. Relocated light poles shall be placed to be plumb when relocation is complete. The lower wiring aperture shall be placed 18" below existing grade as per City standard.

2.2.3 Existing wires to the removed lights shall be removed back to the nearest junction box to remain, and the existing conduit can be used in place if condition allows. Existing pole/bracket cable may be reused if insulation is tested and found to be in good condition. Any reused wiring shall also be resistance and continuity checked.

2.2.4 The existing circuitry will need to be field verified, and junction box(es) shall be installed to intercept circuit(s) and connect new lights to existing lights as required. Provide new conduit and wire to new light fixtures. Conduit and wire shall at minimum match the size of the existing circuitry.

2.2.5 All existing light fixtures will be tested to ensure proper operation once reinstalled.

2.3 Circuiting. If circuit information is not shown in the plans, the contractor shall investigate the lighting circuits. The contractor shall note the size and type of all conduits and cables connecting the lights. The contractor shall also note the path of all wiring. The contractor shall use the same conduit and cables in the same path when reinstalling the lighting.

2.4 Signing. The contractor shall note that some of the poles to be removed and reinstalled have signs strapped to them. The contractor shall utilize care not to damage the signs. All signs shall be reinstalled when the pole is reinstalled. Any signs damaged during handling shall be replaced at the contractor's expense.

2.5 New City Light Pole Installation. The contractor shall install new direct-bury concrete city light poles at locations shown on plans. New installations will include the luminaire, post, brackets/arms, wiring, and conduit.

2.5.1 Refer to JSP attachment below for specific details for the City of St Louis Standard Concrete Street Lighting Pole. Materials for the luminaires, poles and arms shall be as indicated on the JSP attachment or approved equal.

2.5.2 The contractor will connect new installations to existing City lighting circuits. Existing circuitry shall be field verified to ensure that all existing lights to remain in place are operational.

Splicing new installations will be incidental to the construction of the new lighting structure. The lower wiring aperture shall be placed 18” below existing grade as per City standard.

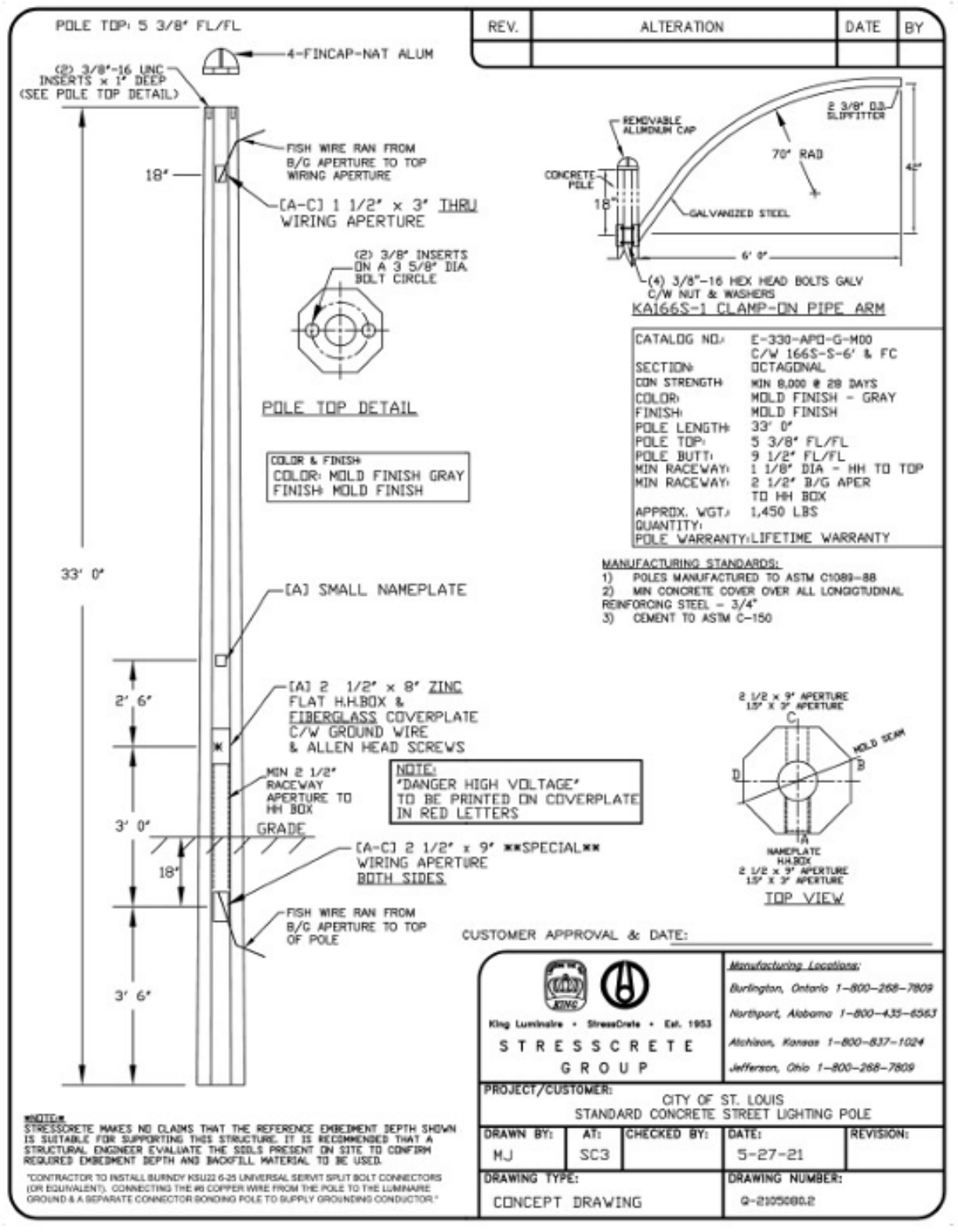
2.5.3 New installations shall be plumb and tested for operability when installation is complete.

3.0 Method of Measurement. Measurement of non-MoDOT owned lighting poles to be removed, reinstalled, and installed will be per each.

4.0 Basis of Payment. Payment for removing, reinstalling, and installing non-MoDOT owned lighting shall be considered full compensation for all contractor-provided equipment items, labor, and material to complete the described work, including making electrical connections if not otherwise shown. Payment will be made as follows:

Item Number	Type	Description
901-99.02	Each	Relocation of City Lighting Pole
901-99.02	Each	Installation of New City Lighting Pole

Job No.: JSL0065
Route: H
County: St. Louis City



REV.	ALTERATION	DATE	BY

NOTE:
STRESSCRETE MAKES NO CLAIMS THAT THE REFERENCE EMBEDMENT DEPTH SHOWN IS SUITABLE FOR SUPPORTING THIS STRUCTURE. IT IS RECOMMENDED THAT A STRUCTURAL ENGINEER EVALUATE THE SOILS PRESENT ON SITE TO CONFIRM REQUIRED EMBEDMENT DEPTH AND BACKFILL MATERIAL TO BE USED.

"CONTRACTOR TO INSTALL BURNDY KSU22 6-25 UNIVERSAL SERVIT SPLIT BOLT CONNECTORS (OR EQUIVALENT). CONNECTING THE #6 COPPER WIRE FROM THE POLE TO THE LUMINAIRE GROUND & A SEPARATE CONNECTOR BONDING POLE TO SUPPLY GROUNDING CONDUCTOR."

EE. Supplemental Revisions JSP-18-01NN

- Compliance with 2 CFR 200.216 – Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment.

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

- Stormwater Compliance Requirements

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

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

  1.2 Reporting of Off-Site Land Disturbance. If the project includes any planned land disturbance on the project site, prior to the start of work, the contractor shall submit a written report to the engineer that discloses all Off-site support areas where land disturbance is planned, the total acreage of anticipated land disturbance on those sites, and the land disturbance permit number(s). Upon request by the engineer, the contractor shall submit a copy of its land disturbance permit(s) for Off-site locations. Based on the total acreage of land disturbance, both on and Off-site, the engineer shall determine if these Stormwater Compliance Requirements shall apply. The contractor shall immediately report any changes to the planned area of Off-site land disturbance. The contractor is responsible for obtaining its own separate land disturbance permit for Off-site areas.

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

  2.1 Duties of the WPCM:

(a) Be familiar with the stormwater requirements including the current MoDOT State Operating Permit for construction stormwater discharges/land disturbance activities; MoDOT's statewide Stormwater Pollution Prevention Plan (SWPPP); the Corps of Engineers Section 404 Permit, when applicable; the project specific SWPPP, the Project's Erosion & Sediment Control Plan; all applicable special provisions, specifications, and standard drawings; and this provision;

(b) Successfully complete the MoDOT Stormwater Training Course within the last 4 years. The MoDOT Stormwater Training is a free online course available at MoDOT.org;

(c) Attend the Pre-Activity Meeting for Grading and Land Disturbance and all subsequent Weekly Meetings in which grading activities are discussed;

(d) Oversee and ensure all work is performed in accordance with the Project-specific SWPPP and all updates thereto, or as designated by the engineer;

(e) Review the project site for compliance with the Project SWPPP, as needed, from the start of any grading operations until final stabilization is achieved, and take necessary actions to correct any known deficiencies to prevent pollution of the waters of the state or adjacent property owners prior to the engineer's weekly inspections;

(f) Review and acknowledge receipt of each MoDOT Inspection Report (Land Disturbance Inspection Record) for the Project within forty-eight (48) hours of receiving the report and ensure that all Stormwater Deficiencies noted on the report are corrected as soon as possible, but no later than stated in Section 5.0.

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

3.1 Hold Point. Following the pre-activity meeting for grading/land disturbance and subsequent installation of the initial BMPs identified at the pre-activity meeting, a Hold Point shall occur prior to the start of any land disturbance operations to allow the engineer and WPCM the time needed to perform an on-site review of the installation of the BMPs to ensure compliance with the SWPPP is met. Land disturbance operations shall not begin until authorization is given by the engineer.

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

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

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

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

- *Delete Sec 106.9, including all subsections and substitute the following:*

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

106.9.1 Buy America Requirements for Iron or Steel Products.
The contractor's attention is directed to Title 23 CFR 635.410 *Buy America Requirements*. Where articles, materials or supplies that consist wholly or predominantly of iron or steel or a combination of both are to be permanently incorporated into the contract work, steel and iron material shall be manufactured, from the initial melting stage through the application of coatings, in the USA except for "minimal use" as described herein. Predominantly of iron or steel or a combination of both means that the cost of the iron and steel content exceeds 50 percent of the total cost of all its components. Under a general waiver from FHWA the use of pig iron and processed, pelletized, and reduced iron ore manufactured outside of the USA will be permitted in the domestic manufacturing process for steel or iron material.

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

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

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

106.9.1.3.1 Items designated as Category 1 will consist of steel girders, piling, and reinforcing steel installed on site. Category 1 items require supporting documentation prior to incorporation into the project showing all steps of manufacturing, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements. This includes the Mill Test Report from the original producing steel mill and certifications documenting the manufacturing process for all subsequent fabrication, including coatings. The certification shall include language that certifies all steel and iron materials permanently incorporated in this project was procured and processed domestically and all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410.

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

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

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

products may be used; however, payment will be at the contract unit price for foreign steel or iron products.

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

(a) Non-ferrous metals
(b) Plastic and Polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables)
(c) Glass (including optic glass)
(d) Fiber optic cable (including drop cable)
(e) Optical fiber
(f) Lumber
(g) Engineered wood
(h) Drywall

106.9.3 Buy America Requirements for Manufactured Products.
Manufactured products mean articles, materials or supplies that have been processed into a specific form and shape, or combined with other articles, materials or supplies to create a product with different properties than the individual articles, materials or supplies. If an item is classified as an iron or steel product, an excluded material, or other product category as specified by law or in 2 CFR part 184, then it is not a manufactured product. However, an article, material or supply classified as a manufactured product may include components that are iron or steel products, excluded materials, or other product categories as specified by law or in 2 CFR part 184. Mixtures of excluded materials delivered to a work site without final form for incorporation into a project are not a manufactured product.

106.9.3.1 Produced in the United States, in the case of manufactured products, means:
(A) For projects obligated on or after October 1, 2025, the product was manufactured in the United States; and
(B) For projects obligated on or after October 1, 2026, the product was manufactured in the United States and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product.

106.9.3.2 (i) With respect to precast concrete products that are classified as manufactured products, components of precast concrete products that consist wholly or predominantly of iron or steel or a combination of both shall meet the requirements of paragraph (b) of this section. The cost of such components shall be included in the applicable calculation for purposes of determining whether the precast concrete product is produced in the United States.
(ii) With respect to intelligent transportation systems and other electronic hardware systems that are installed in the highway right of way or other real property and classified as manufactured products, the cabinets or other enclosures of such systems that consist wholly or predominantly of iron or steel or a combination of both shall meet the requirements of paragraph (b) of this section. The cost of cabinets or other enclosures shall be included in

the applicable calculation for purposes of determining whether systems referred to in the preceding sentence are produced in the United States.

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

- Third-Party Test Waiver for Concrete Aggregate

1.0 Description. Third party tests may be allowed for determining the durability factor for concrete pavement and concrete masonry aggregate.

2.0 Material. All aggregate for concrete shall be in accordance with Sec 1005.

2.1 MoDOT personnel shall be present at the time of sampling at the quarry. The aggregate sample shall be placed in an approved tamper-evident container (provided by the quarry) for shipment to the third-party testing facility.

2.2 AASHTO T 161 Method B Resistance of Concrete to Rapid Freezing and Thawing, shall be used to determine the aggregate durability factor. All concrete beams for testing shall be 3-inch wide by 4-inch deep by 16-inch long or 3.5-inch wide by 4.5-inch deep by 16-inch long. All beams for testing shall receive a 35-day wet cure fully immersed in saturated lime water prior to initiating the testing process.

2.3 Concrete test beams shall be made using a MoDOT approved concrete pavement mix design.

3.0 Testing Facility Requirements. All third-party test facilities shall meet the requirements outlined in this provision.

3.1 The testing facility shall be AASHTO accredited.

3.1.1 For tests ran after January 1, 2025, accreditation documentation shall be on file with the Construction and Materials Division prior to any tests being performed.

3.1.2 Construction and Materials Division may consider tests completed prior to January 1, 2025, to be acceptable if all sections of this provision are met, with the exception of 3.1.1. Accreditation documentation shall be provided with the test results for tests completed prior to January 1, 2025. No tests completed prior to September 1, 2024, will be accepted.

3.2 The testing facility shall provide their testing process, list of equipment, equipment calibration documentation, and testing certifications or qualifications of technicians performing the AASHTO T 161 Procedure B tests. The testing facility shall provide details on their freezing and thawing apparatus including the time and temperature profile of their freeze-thaw chamber. The profile shall include the temperature set points throughout the entirety of the freeze-thaw cycle. The profile shall show the cycle time at which the

apparatus drains/fills with water and the cycle time at which the apparatus begins cooling the specimens.

3.3 Results, no more than five years old, from the third-party test facility shall compare within ±2.0 percent of an independent test from another AASHTO accredited test facility or with MoDOT test records, in order to be approved for use (e.g. test facility results in a durability factor of 79, MoDOT's recent durability test factor is 81; this compared within +2 percent). The independent testing facility shall be in accordance with this provision. The comparison test can be from a different sample of the same ledge combination.

3.4 When there is a dispute between the third party durability test results and MoDOT durability test results, the MoDOT durability test result shall govern.

3.5 Test results shall be submitted to MoDOT's Construction and Materials division electronically for final approval. Test results shall include raw data for all measurements of relative dynamic modulus of elasticity and percent length change for each individual concrete specimen. Raw data shall include initial measurements made at zero cycles and every subsequent measurement of concrete specimens. Raw data shall include the cycle count and date each measurement was taken. Test results shall also include properties of the concrete mixture as required by AASHTO T 161. This shall include the gradation of the coarse aggregate sample. If AASHTO T 152 is used to measure fresh air content, then the aggregate correction factor for the mix determined in accordance with AASHTO T 152 shall also be included.

4.0 Method of Measurement. There is no method of measurement for this provision. The testing requirements and number of specimens shall be in accordance with AASHTO T 161 Procedure B.

5.0 Basis of Payment. No direct payment will be made to the contractor or quarry to recover the cost of aggregate samples, sample shipments, testing equipment, labor to prepare samples or test samples, or developing the durability report.

- *Delete paragraph 15.0 of the General Provision Disadvantaged Business Enterprise (DBE) Program Requirements and substitute the following*:

15.0 Bidder's List Quote Summary. MoDOT is a recipient of federal funds and is required by 49 CFR 26.11 to provide data about its DBE program. All bidders who seek to work on federally assisted contracts must submit data about all DBE and non-DBEs in accordance with Sec 102.7.9. MoDOT will not compare the submitted Bidder's List Quote Summary to any other documents or submittals, pre or post award. All information will be used by MoDOT in accordance with 49 CFR 26.11 for reporting to USDOT and to aid in overall DBE goal setting**.**

Add Sec 102.7.9 to include the following:

102.7.9 Bidder's List Quote Summary. Each bidder shall submit with each bid a summary of all subcontractors, material suppliers, and service providers (e.g. hauling) considered on federally funded projects pursuant to 49 CFR 26.11. The bidder will provide the firm's name, the corresponding North American Industry Classification System (NAICS) code(s) the firm(s) were considered for, and whether or not they were used in the bid. The

information submitted should be the most complete information available at the time of bid. The information shall be disclosed on the Bidder's List Quote Summary form provided in the bidding documents and submitted in accordance with Sec 102.10. Failure to disclose this information may result in a bid being declared irregular.

- Revisions to General Conditions of the Contract for Missouri Standard Specifications for Highway Construction

Insert the following definitions into Sec 101.2:

Agent of Contractor. Subcontractors, its employees, assigns, and agents.

Agent of MoDOT. Any private contractors, subcontractors, engineers, or the employees thereof performing work in accordance with the plans and specifications approved by MoDOT.

Commencement of Work. Also defined as the start of construction operations/activities, this is the date the contractor, its employees, agents, and/or assigns first begins performing work pursuant to the terms of the contract, including the furnishing of labor, material, equipment, and other incidentals necessary or convenient to the successful completion of the project and the carrying out of duties and obligations imposed by the contract. For purposes of clarity, this date shall be deemed to occur on the date certified payroll activities on the project commence.

Exceptions. Work items identified by the engineer, as documented on the semi-final inspection, that are allowed to be completed after the contract completion date but prior to the item-specific completion date established by the engineer. Failure to complete any excepted work item by the item-specific completion date will result in assessment of contract liquidated damages. Designation of exceptions not mandated by the contract is at the sole discretion of the engineer.

Typical exceptions include:
Seasonal items (e.g., sodding, overseeding, establishment of grass for soil stabilization, or tree/shrub plantings)
Tasks that have contractually required or allowed delays (e.g., removal of sediment control devices, waiting periods for signal/lighting systems, pause for retroreflectivity evaluation of pavement markings)
Other tasks in which the engineer determines it is in the best interest of the Commission to allow completion of such task to extend beyond the contract completion date, but within a designated period of time.

Delete Sec 105.10.7, including all subsections and substitute the following:

105.10.7 Final Inspection. Upon apparent completion of the entire project, the engineer will make a Final Inspection of the work to determine acceptance for maintenance in accordance with Sec 105.15.

Delete Sec 105.15, including all subsections and substitute the following:

105.15 Acceptance.

105.15.1 Partial Acceptance. At the discretion of the engineer, portions of the work within a project may be accepted for maintenance prior to the Final Inspection of all work for that project. When a portion of the work or a specific item is partially accepted, the contractor is relieved from maintenance on the identified portion of the work, but this is not the Final Inspection, as defined in Sec 105.15.2, and will not excuse the contractor from liability or responsibility to the Commission for work performed.

105.15.1.1 Acceptance of a Specific Item or Section of Work. Upon completion of any of the items or sections of work listed herein, the contractor may request the engineer's inspection of the work and partial acceptance. If the engineer finds the work to be complete and acceptable, including submittal by the contractor of all required documentation, partial acceptance will be made for that item or section. The following items, complete in place, as determined by the engineer, are eligible for consideration of partial acceptance:

(a) Any section 0.5 mile or more in length.
(b) Any section 0.5 mile or more in length in one direction of a divided highway.
(c) A complete bridge.
(d) An intersection traffic signal system. Partial acceptance may be made for signal equipment prior to the 30-day testing period though any required performance tests and/or guarantees shall remain applicable.
(e) Devices intended to be used for traffic safety and control. Acceptance of traffic safety devices is limited to guardrail, impact attenuation barriers, traffic signal items, signs, delineators, lighting, concrete barrier walls, concrete bridge parapet, bridge railing, guard cable, crash cushions and fence, which are permanently installed in their final position in accordance with the contract documents.

105.15.1.2 Semi-Final Inspection, Corrections and Exceptions. The contractor shall submit a written request for a semi-final inspection at least seven days prior to the anticipated completion of work, excluding exceptions. If the engineer postpones the inspection beyond the date the contractor completes all work, the period of postponement will be considered an excusable but non-compensable delay.

105.15.1.2.1 Immediately following the semi-final inspection, the engineer will provide the contractor with a list of any remaining items of work, corrections, and exceptions. The count of contract time will continue until all work and corrections are complete. If the engineer determines all work is complete, with no exceptions, the semi-final inspection will be considered the Final Inspection in accordance with Sec 105.15.2.

105.15.1.2.2 Work Complete Date. Upon verification by the engineer that all work, exclusive of exceptions, is complete, the engineer will declare partial acceptance and cease the count of contract time. The count of contract time will resume should the contractor fail to complete one or more exceptions by the required date.

105.15.2 Final Inspection and Acceptance for Maintenance. The contractor shall promptly notify the engineer when all work on a project, including exceptions, is complete. Upon Final Inspection by the engineer and verification that all work on a project is complete, a notice of acceptance for maintenance will be submitted to the contractor. Acceptance for maintenance excludes any items covered by item-specific performance bonds. Final Inspection shall occur not later than ten (10) business days after contractor's notification to the engineer that all corrections and exceptions have been completed. If the Final

Inspection has not occurred within the ten (10) business-day time frame, all corrections and exceptions shall be deemed completed and MoDOT will be deemed to have accepted maintenance. If written acceptance for maintenance is not received within twenty (20) business days after the date of the Final Inspection, nor any objections sent to the Agent of MoDOT during this twenty (20) business-day period, the project and the work shall automatically be deemed accepted for maintenance.

105.15.2.1 Following the Final Inspection, the Agent of MoDOT will be relieved of any new or additional liability to third parties for personal injury, death or property damages which may be alleged to result from the design or construction of the work, unless additional work is performed by the Agent of MoDOT on the right of way after Final Inspection.

105.15.2.2 Nothing in these specifications shall be deemed to excuse the contractor of liability or responsibility for any personal injury, death or property damages which may have occurred during the time period from the Commencement of Work through the Final Inspection.

105.15.2.3 Acceptance of a project shall not be construed to relieve the contractor of full responsibility for making good any non-latent defect in work or material found on any section of work prior to final acceptance of the entire project, to alter in any manner the method of payment prescribed in the contract or to constitute a waiver of any claim the Commission might have against the contractor on the entire project.

105.15.2.4 Contracts with Multiple Projects. For contracts that include two or more projects, the contractor may request a separate final inspection and acceptance for maintenance as the work is completed on each project.

105.15.3 Final Acceptance and Payment. Following Final Inspection and acceptance for maintenance, the engineer will prepare the final tabulation of quantities in accordance with Sec 109.8. A final change order, if necessary, and the final tabulation of quantities will be submitted to the contractor for review. Upon receipt of the final tabulation of quantities, the contractor shall promptly submit to the engineer any remaining project documentation including, but not limited to, those listed in Sec 105.15.3.2.

105.15.3.1 A Final Acceptance report will be submitted to the contractor, and final payment will be made, no later than thirty days following concurrence on tabulation of quantities, receipt by the engineer of all project documentation, and verification by the engineer that all material incorporated into the work has been properly inspected. If the final tabulation of quantities determines the contractor was overpaid, the contractor, or in case of default, the surety, shall return the amount of overpayment to the Commission within thirty days of receiving notice of the overpayment from the engineer.

105.15.3.2 When required by the contract, project documentation shall consist of the following:

(a) Contractor's Affidavit Regarding Settlement of Claims (Form C-242)
(b) Final Change Order
(c) DBE Participation List and Final Verification
(d) Affidavit – Compliance with the Prevailing Wage Law

105.15.3.3 Final acceptance will not excuse the contractor's liability or responsibility to the Commission for any latent defects in the work or material incorporated into the work, or for claims relating to any work or material incorporated into the work, except as barred by Sections 537.600 and 537.610, RSMo.

Delete Sec 107.11, including all subsections, and substitute the following:

107.11 Responsibility for Claims for Damage or Injury. The contractor shall be responsible, to the extent imposed by applicable law, for injury, property damage, damage to the Work, or other loss caused by the negligent, wrongful, intentional, reckless, or contractually noncompliant acts or omissions of the contractor or an Agent of Contractor from Commencement of construction activities through Final Inspection and acceptance for maintenance.

107.11.1 The contractor shall not be responsible for damage relating to personal injury or death, arising from the design, condition, or maintenance of the project area prior to commencement of work and after Final Inspection and acceptance of the work, in accordance with Sec 101.2 and 105.15.2, unless any of the following conditions exist:

(a) The work is so defective that it creates an imminent danger to third parties;
(b) A defect in the work was concealed and not discoverable by a reasonable inspection by the Commission;
(c) The agent of MoDOT knew of the dangerous condition and did not disclose it to the Commission; or
(d) The plans or specifications followed were so imperfect or improper that the agent of MoDOT should have known the work to be done thereunder would result in an unsafe condition.

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.

Delete Sec 107.12, including all subsections, and substitute the following:

107.12 Contractor's Responsibility for Work Damages to any portion of the work occurring after the date of Commencement of Work and before the work is deemed approved 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.

107.12.1 The contractor shall immediately give written notice to the engineer of any pedestrian, worker and/or vehicular accident that occurs in or near the work zone. 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.

Delete Sections 107.13, 107.13.1, 107.13.2, 107.13.3, 107.13.3.4, 107.13.5, 107.13.6, 107.13.9, 107.13.10.4, 107.13.10.8, and substitute the following:

107.13 General Insurance Requirements. From the commencement of construction activities through the Final Inspection and acceptance for maintenance of the project by the engineer, the contractor shall procure and maintain at the contractor's expense, 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 Sec 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, its members, the Missouri Department of Transportation, and its employees up to Missouri's sovereign immunity limits. Provided, however, additional insured coverage applies only to liability caused in whole or in part by the acts or omissions of the named insured or those acting on its behalf and does not provide defense or indemnity for liability that Section 537.600, RSMo. places solely on MoDOT or another public entity. Each policy shall be endorsed to not waive sovereign immunity limits. The naming of the Commission, its members, MoDOT, and its employees as additional insureds under any insurance policy shall not be construed as a waiver of any sovereign, official, or other governmental immunity. The Commission, its members, MoDOT, and its employees reserve the right to assert any sovereign, official, or any other governmental immunities. Nothing in the Section shall be construed to enlarge the liability of the contractor beyond that imposed by applicable law, create a contractual duty to defend or indemnify prohibited by Section 537.600, RSMo, or require insurance coverage for liability that Section 537.600, RSMo places solely upon MoDOT. Insurance coverage and priority shall otherwise be determined in accordance with the applicable policies and endorsements.

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, its members, MoDOT, its employees, agents, and assigns 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. Should work on the project be discontinued, the commercial general liability insurance coverage shall remain in effect for three (3) years after the date of discontinuation, 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 be endorsed to Commission, its members, MoDOT, and its employees, agents, and assigns as additional insureds (the "Additional Insureds").

107.13.4 Contractor's Pollution Liability (CPL) Insurance. The contractor 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. The Commission, its members, MoDOT, and its employees, agents, and assigns shall be endorsed as additional insureds under such policy. The policy shall provide coverage for hauling of waste from the project site to the final disposal location including non-owned disposal sites. Completed operations coverage for pollution liability shall extend a minimum of three (3) years after final acceptance of the project. Contractor shall require any subcontractor that performs environmental remediation, hazardous material removal or related work including the transportation, disposal, or environmental engineering work, to provide contractor's pollution liability insurance with limits and scope of coverage appropriate to the exposure. The Commission, its members, MoDOT, and its employees, agents, and assigns shall be endorsed as additional insured under such policy. The policy shall not contain a cross suits exclusion or other provisions that would eliminate additional insured claims against the contractor or subcontractor.

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, its members, MoDOT, and its employees, agents, and assigns 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 additional insureds, the Commission, its members, MoDOT, and its employees, agents, and assigns.

107.13.9 Evidence of Insurance. Required evidence of insurance providing confirmation of compliance with these requirements shall consist of a certificate of insurance 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. No later than five (5) business days prior to the Commencement of Work, 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. The aforementioned evidence of insurance shall also be submitted in the same manner no fewer than five (5) business days prior to the effective date of any change or renewal of insurance during the term of the project. 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. 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.

107.13.10.4 Primary and Non-contributory. For any claims related to this contract or insurance requirements herein identified, the contractor's insurance coverage shall be primary insurance with respect to the Commission, its members, 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, unless liability caused in whole or in part by the acts or omissions of the named insured or those acting on its behalf and does not provide defense or indemnity for liability that Section 537.600, RSMo places solely upon MoDOT or another public entity. Priority and allocation shall be governed by the applicable policies and endorsements. MoDOT may not unilaterally alter priority among the contractor's, any subcontractor's, or any additional insured's policies.

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 or agent of 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.

Delete Sec 107.14 and substitute the following:

107.14 Cooperation in Defense. The Agent of MoDOT and MoDOT shall reasonably cooperate in the defense of the other against potential third party claims. This cooperation includes providing reasonable access to relevant records, documents, and personnel. Nothing in this section creates a contractual duty to defend prohibited by RSMo 537.600(5).

Delete Sec 107.18 and substitute the following:

107.18 Basis of Payment. No direct payment will be made for compliance with Sec 107.

- Payment for Excess Piling

  Delete Sec 702.6.3 and insert the following:

  702.6.3 Pile Cut-Offs. No direct payment will be made for routine pile cut-offs, except as otherwise provided herein.

  702.6.3.1 Excess Piling. If the total measured length of installed piling on a given structure, per item, is 85 percent or less of the plan quantity, the difference between plan quantity and installed quantity shall be deemed as excess piling. Reimbursement will be made for excess piling, as determined by the engineer. No reimbursement will be made for piling purchased in excess of plan quantity. The contractor shall provide the engineer with all paid invoices, which may be used to determine an equitable reimbursement. Shipping costs on the invoice will be included in the reimbursement payment, but no handling, overhead or profit will be included. All excess piling shall be removed from the project and retained by the contractor.

- *Delete Sec 102.18.1 and renumber existing Sec 102.18.2 through 102.18.5.4 including all subsections:*

  102.18.1 Certification Regarding Disbarment, Eligibility, Indictments, Convictions or Civil Judgments. The president or authorized official of the bidder, under penalty of perjury under the laws of the USA, shall certify that, except as noted in the exceptions, the company or any person associated therewith in the capacity of owner, partner, director, officer, principal investor, project director, manager, auditor or any position involving the administration of federal funds:

  (a) Is not currently under suspension, debarment, voluntary exclusion or determination of ineligibility by any federal agency.

  (b) Has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past three years.

  (c) Does not have a proposed debarment or suspension pending.

  (d) Has not been indicted, convicted or had a civil judgment rendered against any of the listed parties by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

  102.18.1.1 If there are any exceptions, the bidder shall submit the exceptions on company letterhead, signed by the bidder and inserted inside the bid submitted.

  102.18.1.2 Exceptions will not necessarily result in denial of award but will be considered in determining bidder responsibility.

  102.18.1.3 For any exception noted, the bidder shall indicate to whom it applies, the initiating agency, and dates of action.

  102.18.1.4 Providing false information may result in criminal prosecution or administrative sanctions.

102.18.2 Certification Regarding Anti-Collusion. In accordance with 23 USC 112, the bidder shall certify, under penalty of perjury, that the bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this contract.

102.18.3 Certification Regarding Lobbying Activities. In accordance with 31 USC 1352, the bidder shall certify that:

(a) No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any federal agency, a member of Congress, an officer or employee of Congress or an employee of a member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement and the extension, continuation, renewal, amendment or modification of any federal contract, grant, loan or cooperative agreement.

(b) If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any federal agency, a member of Congress, an officer or employee of Congress or an employee of a member of Congress in connection with this federal contract, grant, loan or cooperative agreement, the bidder shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with the instructions.

102.18.3.1 This certification shall be a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification shall be a prerequisite for making or entering into this transaction imposed by 31 USC 1352. Any person who fails to file the required certification will be subject to a civil penalty of no less than $10,000 and no more than $100,000 for each such failure.

102.18.3.2 The bidder also agrees by submitting a bid that the bidder shall require that the language of this certification be included in all subcontracts that exceed $100,000, and that all such subrecipients shall certify and disclose any lobbying activities accordingly.

102.18.4 Certification Regarding Missouri Domestic Products Procurement Act. This certification will only apply to state-funded projects as noted on the cover of the Request for Bid. The bidder's attention is directed to Sections 34.350 through 34.359 RSMo 2000, which requires all manufactured goods or commodities used or supplied in the performance of the contract or any subcontract to be manufactured, assembled or produced in the USA. Sections 34.350 through 34.359 RSMo will not apply if the total bid is less than $1,000.00.

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

102.18.4.2 The bidder shall certify that all the specified goods or products for which this bid was solicited are manufactured, assembled or produced in the USA. If there are any exceptions, the bidder shall submit a list of the exceptions on company letterhead, signed by the bidder and attached to the inside of the bid submitted. The list shall include the pay item

number and the location where the item is manufactured. The bidder shall identify any of the exceptions in the list that are specified goods or products that are treated as manufactured, assembled or produced in the USA under an existing treaty, law, agreement or regulation of the USA regarding export/import restrictions and international trade.

102.18.4.3 The bidder shall notify the contact listed in the Request for Bid of any specified goods or products that cannot be manufactured, assembled or produced in the USA in sufficient quantities or in time to meet the contract specifications.

102.18.4.4 The bidder shall certify that the bid complies with all provisions of Section 34.350 *et seq* RSMo.

- *Delete Sec 106.10 and substitute the following:*

106.10 Missouri Domestic Products Requirement. For state funded projects, as noted on the cover of the contract, material shall be in accordance with Sec 102.18.4.

- *Delete the Training Provision of the General Provisions and substitute the following*:

Training Provision

1.0 Description. This provision implements 23 CFR Part 230.111 and 23 CFR Part 230, Subpart A, Appendix B.

2.0 Purpose. The contractor shall provide on-the-job training aimed at developing full journeymen in the type of trade or job classification involved. Training and upgrading of minorities and women toward journeymen status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

2.1 In the event that a contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also ensure that this training special provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

2.2 The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to MoDOT for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for

each trainee employed by him on the contract work, who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

3.0 Program Administration. All training goals, including the number of training hours, on federally funded projects are to be established by the Business Development and Compliance (BDC) Division with Federal Highway Administration (FHWA) oversight. The following guidelines will be utilized in selecting projects and determining the goal to be set:

a. Availability of minorities and women for training.
b. The potential for effective training.
c. Duration of the contract (number of working days).
d. Dollar value of the contract.
e. Total normal work force that the average bidder could be expected to use.
f. Geographical location.
g. Type of work.
h. The need for additional journeymen in the area.
i. The need to correct underutilization of minorities and females in specific trades.
j. A satisfactory ratio of trainees to journeymen expected to be on the contractor's workforce during normal operations (considered to fall between 1:10 and 1:4).
k. Recognition of the suggested minimum goal for the State.

3.1 Trainee goals will be set in 1,000 increments or 1 slot (person) per 1,000 hours per project. For example, if the trainee goal on the project is 2,000 hours a maximum of 2 trainees will be approved for the project. In the event a trainee leaves the project for valid reasons the trainee shall be replaced as soon as possible. **No apprentice/trainee can be assigned less than 500 hours on a contract.** MoDOT will not assign training on contracts that will not support the 500 hours. **Providing less than 500 hours is not considered to be beneficial training nor helping to achieve journey-level status. Therefore, a trainee/apprentice, regardless of craft, must have been trained on the contract for at least 500 hours to be eligible for reimbursement.** Upon reaching the 500 hours, the contractor will be compensated as noted herein. FHWA and MoDOT will only approve training programs meeting the requirements of the Training Special Provisions (TSP). A program will be approved if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training will also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts.

3.2 No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case.

3.3 The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by MoDOT and the Federal

Highway Administration. MoDOT and the Federal Highway Administration shall approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from MoDOT prior to commencing work on the classification covered by the program.

4.0 Approval Process. Any trainee submitted to fulfill the OJT requirement must be in a registered training program. Acceptable training programs include:

a. BAT Programs – Apprenticeship programs approved by the U.S. Department of Labor, Bureau of Apprenticeship and Training.
b. Any other program, such as the Missouri Manpower Programs, which have been approved by FHWA and MoDOT.

4.1 Submittal of the TRAINEE NOTIFICATION – After the training plan has been approved, the Trainee Notification Form should be submitted within 30 days of the trainee commencing work on the project. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower-level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification will be permitted only with the approval of the BDC Division. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training. Reimbursement to the contractor for off-site training as indicated above may only be made when the contractor does one or more of the following and the trainees are concurrently employed on federal-aid projects:

Contributes to the cost of the training.
Provides the instruction to the trainee.
Pays the trainee’s wages during the off-site training period.

5.0 Good Faith Efforts (GFE). In the event that the OJT goal is not met at the end of the project, the BDC Division will request a written narrative GFE and supporting documents and data to explain the goal shortfall. After submittal, the BDC Division will make a determination to approve or deny the GFE.

5.1 In the event the BDC Division denies the GFE submitted by the contractor, the contractor shall have the right to an Administrative Reconsideration Hearing. The request for an administrative reconsideration hearing must be made within seven (7) days of the receipt of the denial letter. The Administrative Reconsideration Committee may be constituted, as MoDOT deems appropriate and fair, provided that no committee member on the Reconsideration Committee shall have taken part in the original MoDOT determination that the contractor failed to meet the OJT contract goal and/or failed to make adequate GFE to do so.

5.2 If the Administrative Reconsideration Committee does not find the contractor met the OJT contract goal, and/or does not find that the contractor made adequate and sufficient GFE to do so, then The Administrative Reconsideration Committee will recommend that liquidated damages as outlined in the non-compliance sanctions section below be carried out. If the Administrative Reconsideration Committee does find that the contractor has met a GFE, then no liquidated damages will be assessed.

6.0 Economically Disadvantaged Verification. When a contractor submits a trainee who is economically disadvantaged the following information should be submitted with the trainee notification to verify this status:

The previous year's tax return verifying the individual's income is less than the federal poverty guidelines, or Verification of enrollment in any government issued entitlement programs.

7.0 Beneficial Training. MoDOT will ensure its contractors provide on-the-job training aimed at developing or contributing to full journey level status in the type of trade(s) involved. Training shall be consistent with the trainee/apprentice program. Training tasks will be consistent with the approved trade classification for the specific contract. The contractor shall furnish the trainee a copy of the program the contractor will follow in providing the training. The contractor shall provide each trainee and resident engineer documentation showing the type and length of training that will be completed including classroom and on-the-job hours. This includes providing information on the monthly trainee report and trainee notification as to the total working and classroom hours the trainee/apprentice has completed to date.

8.0 Training Reimbursement Process. Except as otherwise noted herein, the contractor will be reimbursed $10.00 per hour of training given an employee on this contract in accordance with an approved training program.

8.1 Reimbursement will be made at the end of the project, once all trainee hours have been submitted, as well as the trainee summary. The contractor will be reimbursed for hours each trainee has attained on the project, with the minimum hours for reimbursement eligibility being 500. Contractors will be reimbursed in instances where the OJT goal is met as well as if a GFE is made to meet the goal. Reimbursement will not be made if the OJT goal was not met, and the contractor did not make a GFE to meet the goal.

8.2 Training will not be reimbursed if the contractor fails to provide beneficial training. This includes only partially meeting the training goal on the project.

8.3 A request may be submitted to the BDC Division to increase the Training Hours assigned to a contract. Approval of such requests by the BDC Division will be granted on a case-by-case basis.

8.4 The contractor is eligible to be reimbursed the total OJT hours assigned to the project once those hours have been fulfilled. For any hours achieved beyond the goal, the contractor must request this additional reimbursement from the BDC Division, and, with concurrence from the resident engineer, the contractor is then eligible to receive reimbursement of hours achieved beyond the goal, either 25 percent of hours over the goal or 500, whichever is less. Outlined below are the maximum overrun reimbursements:

OJT Goal	Hours Achieved	Payable Hours
1,000	1,250	1,250
2,000	1,500	1,500
3,000+	1,501+	1,500

9.0 Monitoring. MoDOT will monitor contractors to ensure trainees and apprentices are receiving beneficial training in the type of trades submitted. Training shall be consistent with the training program or those OJT Programs the FHWA and MoDOT have approved.

9.1 It is normally expected that the trainee/apprentice will begin training on the project as soon as possible, utilizing the skills involved and remaining on the project as long as training opportunities exist in the work classifications or until the completion of the training program.

9.2 Project Office staff will periodically interview trainees to determine:

a. Whether apprentice/trainee is receiving training in designated craft
b. Workplace environment
c. If trainee/apprentice is experiencing problems on the job site
d. If the apprentice/trainee is being treated fairly

9.3 MoDOT monitors contracts with training through onsite visits, monthly training reports and construction reports. These reports are generated by the contractor and are to be disseminated to the Project Office. If there are problems, the BDC Division will contact the contractor to address the deficiencies.

9.4 Trainees will be paid at the rate set by the training program. The appropriate minimum journeyman's rate paid cannot be less than the amounts set out in the 23 CFR Subpart A, Appendix B. For example, at least 60 percent of the appropriate minimum journey person's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period and 90 percent for the last quarter of the training period. The appropriate rates approved by the Department of Labor or Transportation in connection with the existing programs shall apply to all apprentice or trainees being trained for the same classification who are covered by the Training Special Provision.

10.0 Reports. The contractor shall provide for the maintenance of records and furnish monthly reports documenting the contractor's performance under this provision. All trainee notifications must be submitted within 30 days of the trainee's start date. If a trainee has been previously approved by MoDOT, the contractor must still notify MoDOT of the name of the individual(s) and proposed craft the trainees will be trained in, as well as indicate which project the trainees will be working on. The trainee notifications or listing of the proposed trainees must be submitted via fax, mail or electronically to the BDC Division. If the contractor fails to submit the trainee notification or list of proposed trainees prior to the onset of the project, the contractor will be subject to the sanctions as outlined in this OJT TSP.

10.1 Monthly Trainee reports must be submitted following the last pay period of the month, no later than the 15th of the following month. Failure to submit the reports, hours completed during that month could result in hours not being credited. In the cases of voluntary trainee termination or when the trainee completes the hours specified in the program, the contractor must complete the trainee completion form within 30 days. The contractor's failure to submit

the proper reports in a timely manner may result in the loss of reimbursement for the training hours for that month.

11.0 Non-Compliance Sanctions. Progress payments shall be withheld for failing to comply with all OJT Program requirements unless MoDOT accepts GFE.

11.1 If the training hours have not been obtained and a GFE has not been displayed upon project completion, the contractor will be assessed liquidated damages in the amount of $20.00 per hour for those hours not realized. For instance, if the project goal was 1,000 hours and only 450 hours were met, then liquidated damages would be assessed at 550 x $20.00 = $11,000.00.

11.2 If BDC Division approves a GFE, then liquidated damages will not be assessed. An approved GFE along with the minimum 500 training hours will result in reimbursement for the applicable hours.

11.3 If the contractor does not achieve the full OJT goal, they will not receive partial credit for hours completed under 500 per trainee. For instance, if the goal on the project was 1,000 hours and only 450 were convened, then no reimbursement will be given for any hours fulfilled. If the goal on the project is 2,000 hours and only 1,500 hours are completed and no GFE is demonstrated, the contractor will receive credit for the 1,500 hours and also be assessed liquidated damages in the amount of the 500 hours that were not met.

11.4 In the event the Contract exceeds the trainee goal on the project, the contractor must submit a request to BDC to obtain an extension of hours. The maximum number of hours beyond those enumerated in the contract cannot exceed 25 percent per 1,000 hours, with a maximum of 500 hours eligible for reimbursement beyond the goal. This extension is subject to the **advance** approval of the BDC Division, and concurrence from the resident engineer.

11.5 Failure to satisfactorily comply with the OJT requirements will also be reflected in the contractor’s performance evaluation.