

JOB SPECIAL PROVISIONS TABLE OF CONTENTS (ROADWAY)

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

A.	General – Federal	1
B.	Contract Liquidated Damages	1
C.	Work Zone Traffic Management	2
D.	Emergency Provisions and Incident Management	5
E.	Project Contact for Contractor/Bidder Questions	6
F.	Supplemental Revisions	6
G.	Optional Pavements	8
H.	Utilities	8
I.	Contractor Quality Control	10
J.	Contractor Surveying and Staking	12
K.	Damage to Existing Pavement, Side Roads and Entrances	12
L.	Guardrail Grading Requirements	13
M.	Additional Mobilization for Seeding	14
N.	Class 3 Excavation	14
O.	Fertilizing, Seeding, and Mulch	14
P.	Relocating and Mounting Existing Signs to New Posts	15
Q.	Removal of Pavement Marking on Existing Pavement	15
R.	Restrictions for Migratory Birds	16
S.	Temporary Stream Crossing or Temporary Work Pad	17
T.	Daylighted Type 5 Base	18
U.	Optional Rumble Strips	18

 <p>9-30-19</p>	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65102 Phone 1-888-275-6636
	OLSSON INC. 7301 W. 133 rd Street, Suite 200 Overland Park, KS 66213 Certificate of Authority: 001592 Consultant Phone: 913-381-1170
	If a seal is present on this sheet, JSP's have been electronically sealed and dated.
	JOB NUMBER: J113109 ANDREW COUNTY, MO DATE PREPARED: 8/23/2019
	ADDENDUM DATE:
Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: ALL	

JOB
SPECIAL PROVISION

A. General - Federal JSP-09-02E

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 2019 Missouri Standard Plans
For Highway Construction

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

B. Contract Liquidated Damages JSP-13-01B

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

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

Job No. J113109
Rte I-29 over Mace Creek
Andrew County

Notice to Proceed: March 9th, 2020

Complete bridge, wall, pavement,
shoulder, guardrail construction
and restore four lanes of traffic: December 15th, 2020

Job Completion Date: April 15, 2021

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

Job Number	Calendar Days	Daily Road User Cost
J113109	N/A	\$5,400

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

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

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

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 10 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.

3.0 Work Hour Restrictions.

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

Memorial Day
Labor Day
Thanksgiving
Christmas
New Year's Day

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

12:00 noon July 2, 2020 – 10:00 p.m. July 5, 2020
12:00 noon July 2, 2021 – 6:00 a.m. July 6, 2021
12:00 noon July 1, 2022 – 6:00 a.m. July 5, 2022

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

3.3 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.

3.3.1 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. The CMS shall be capable of communication with the Transportation Management Center (TMC), if applicable, 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-90-11

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

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

Missouri Highway Patrol:	816-387-2345
Andrew County Sheriff Department:	816-324-4114
Savannah Rural Fire Protection District:	816-324-7533
Andrew County Ambulance District:	816-897-0549
Savannah Police Department:	816-324-7541

EMERGENCY ONLY NUMBER

911

Missouri Highway Patrol - *55 CELL PHONE

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

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

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

E. Project Contact For Contract/Bidder Questions JSP-96-05

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

Joyce Reynolds, Project Contact
Northwest District
3602 N. Belt Highway
St. Joseph, MO 64506

Telephone Number: 816-387-2411
E-mail: Joyce.Reynolds@modot.mo.gov

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

F. Supplemental Revisions JSP-18-01H

Stormwater Compliance Requirements

1.0 Description. This provision requires the contractor to provide a Water Pollution Control Manager (WPCM) for any project that includes areas of land disturbance that will total one (1) acre or greater on the project site at any point in time. 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.

1.1 Applicability. The project site consists of all areas designated on the plans, including temporary and permanent easements. This provision does not apply to Contractor staging, plant, or borrow areas that are not located on MoDOT right of way (Off-site). The Contractor is responsible for obtaining its own separate land disturbance permit for Off-site areas. This provision is in addition to any other stormwater, environmental, and land disturbance requirements specified elsewhere in the contract.

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 within 7 days of the stormwater inspection or any extended period of time granted by the Engineer.

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.

G. Optional Pavements JSP 06-06G

1.0 Description. This work shall consist of a pavement composed of either portland cement concrete or asphaltic concrete constructed on a prepared subgrade. This work shall be performed in accordance with the standard specifications and as shown on the plans or established by the engineer.

2.0 The quantities shown reflect the total square yards of pavement surface designated for each pavement type as computed and shown on the plans.

2.1 No additional payment will be made for asphaltic concrete mix quantities to construct the required 1:1 slope along the edge of the pavement, or for tack applied between lifts of asphalt.

2.2 No additional payment will be made for aggregate base quantities outside the limits of the final surface area as computed and shown on the plans. When A2 shoulders are specified, payment for aggregate base will be as shown on the plans.

2.3 The grading shown on the plans was designed for the thinner pavement option. For projects with grading in the contract, there will be no adjustment of the earthwork quantities due to adjusting the roadway subgrade for optional pavements.

2.4 The contractor shall comply with Sections 401 through 403 for the asphalt option and Sections 501 and 502 for the concrete option.

2.5 Pavement options composed of Portland cement concrete shall have contrast pavement marking for intermittent markings (skips), dotted lines, and solid intersection lane lines. The pavement markings shall be in accordance with Section 620. No additional payment will be made for the contrast pavement markings.

3.0 Method of Measurement. The quantities of concrete pavement will be measured in accordance with Section 502.14. The quantities of asphaltic concrete pavement will be measured in accordance with Section 403.22.

4.0 Basis of Payment. The accepted quantity of the chosen option will be paid for by the contract unit bid price for Item 403-99.05, per square yard.

H. Utilities

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

J113109 & J113241

<u>Utility Name</u>	<u>Known Required Adjustment</u>	<u>Type</u>
Andrew County PWSD #1 Dustin Holmes 201 South 71 Highway Savannah, MO 64485 (816) 324-6266	See Section 2	Water
CenturyLink 625 Cherry Street Columbia, MO 65201 (573) 634-1615	None	Communications
City of Savannah 402 Court Street Savannah, MO 64485 (816) 646-6638	None	Sewer & Water
Kansas City Power & Light 613 Atchison Street St. Joseph, MO 64501 (816) 471-5275	None	Electric
Level 3 Now CenturyLink Fiber Jason Johns 625 Cherry Street Columbia, MO 65201 (636) 887-4947	See Section 3	Communications
United Electric Cooperative 401 North 71 Highway Savannah, MO 64485 (800) 748-1488	None	Electric

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

2.0 Andrew County PWSD #1 has an existing water line just on the west side of Hopkins Creek and is located under both Interstate 29 northbound and southbound bridges over Hopkins Creek. The project plans show a temporary access road that will be built on a portion of this existing water line. Andrew County PWSD #1 stated that this section of their water line is four to five feet deep. Prior to doing any work around this existing water line, the bridge contractor shall contact Andrew County PWSD #1. Dustin Holmes is the contact for Andrew County PWSD #1, and can be reached at (816) 324-6266.

3.0 Level 3 Now CenturyLink Fiber has an existing buried fiber line running down the median of Interstate 29. The contractor shall contact and have Missouri One Call System mark Level 3 Now CenturyLink's interstate median fiber optic cable. The contractor shall inform Jason Johns, of Level 3 Now CenturyLink Fiber, to be on site for all work within two feet of this fiber optic cable. All work within two feet of this fiber optic cable shall be done with approval of the Engineer, after consultation with Jason Johns, the on-site Level 3 Now CenturyLink Fiber representative. The contractor shall exercise caution around all fiber optic cable of Level 3 Now CenturyLink Fiber throughout the life of the project. Jason Johns can be reached at (636) 887-4947.

3.1 The engineer may adjust the placement of guardrail, guard cable, anchor assemblies, pipe extensions, etc. in the field, after utility facilities have been located, to eliminate as many fiber optic cable conflicts as possible.

I. 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.

J. Contractor Surveying And Staking

In addition to the requirements of Section 627 of the Missouri Standard Specifications for Highway Construction, the following shall apply:

1.0 Description. The Contractor will be responsible for all layout required on the project. This responsibility will include, but not be limited to the following: Construction signing, transition milling, pavement marking, loop detectors, signing and signal bases, pull boxes, field verify existing pipe flow lines, etc.

1.1 The above list is not all inclusive. The contractor will have the primary responsibility for these operations. The contractor shall provide the Resident Engineer (RE) with a staking plan layout for approval prior to the installation of signs. The RE will also provide assistance during this layout provided a request is submitted to the RE or Construction Project Manager 48 hours in advance. This will ensure that all permanently mounted traffic control devices remain consistent with District policy and avoid re-staking. If the contractor installs any signs without the engineer's approval, all costs associated with re-staking and/or relocation will be at the contractor's expense.

1.2 The intent of this provision is to increase the quality of our work zones and minimize negative impacts to the contractor's schedule that can result from delays in staking.

1.3 Any adjustments to the plans quantities or line numbers established in the contract shall be approved by the Engineer.

2.0 Basis of Payment. No direct payment will be made to cover the costs associated with these additional requirements. All costs will be considered as included in and completely covered by the unit bid price submitted for item 627-40.00, Contractor Furnished Surveying and Staking, per lump sum.

K. Damage To Existing Pavement, Side Roads And Entrances

1.0 Damage Description. This work shall consist of repairing any damage to existing pavement, curb ramps, side roads, and entrances caused by contractor operations. This shall include but is not limited to, damage caused by the traffic during contractor operations within the project limits including the work zone signing.

2.0 Damage Construction Requirements. Any cracking, gouging, or other damage to the existing pavement, shoulders, side roads, or entrances from general construction shall be repaired within twenty-four (24) hours of the time of damage at the contractor's expense.

3.0 Method of Measurement. No measurement of damaged pavement, or damaged side roads or entrances as described above shall be made.

4.0 Basis of Payment. No payment will be made for repairs to existing pavement, side roads, or entrances damaged by the contractor operations.

L. Guardrail Grading Requirements JSP-17-02B

1.0 Description. Guardrail installation and grading shall be in accordance with Missouri Standard Specifications for Highway Construction, Missouri Standard Plans for Highway Construction, and as described herein.

2.0 Construction Requirements. When guardrail and/or end treatment removal and replacement requires grading of the shoulder and/or slopes, Section 606.3.1(b), (c), and 606.3.1.1 of the Missouri Standard Specifications shall be waived and the following shall apply:

a) Along roadways and shoulders, remove no more guardrail than can be reconstructed within seven (7) calendar days, including weekends and holidays. The seven day counting period shall start when the first piece of safety hardware is removed.

b) The active work zone area that encompasses the guardrail and/or end treatment reconstruction, shall not exceed one (1) mile in length. The contractor shall be required to provide and maintain approved channelizing devices adjacent to the reconstruction area.

c) Only one-side of the roadway shall be worked on at the same time. Divided facilities shall be limited to work on one-side of each direction at the same time.

d) When the removal of any existing safety hardware device exposes non-breakaway obstacles, the reconstruction of the safety hardware device protecting the obstacle shall be replaced within 48 hours of removal or an approved temporary crashworthy device shall be provided, installed and maintained at the contractor's expense until the non-breakaway obstacle is permanently protected. The 48 hour counting period shall start when the first piece of safety hardware is removed.

e) Areas where guardrail and/or end treatments have been removed, but not yet replaced, shall be delineated in accordance with plans or as directed by the Engineer.

3.0 Non-Compliance. Non-compliance with this provision shall result in the immediate suspension of work in accordance with Sec 105.1.2. No work, including but not limited to additional guardrail removal and grading, shall be allowed to proceed except for work necessary to restore guardrail installation.

4.0 Basis of Payment. No direct payment will be made for compliance with this provision. Guardrail items, grading, and temporary traffic control devices will be paid for as provided in the contract.

M. Additional Mobilization for Seeding NJSP-16-03A

1.0 Description. This provision provides compensation for additional mobilization for seeding, as specified herein.

2.0 Additional Mobilization for Seeding. Additional mobilization to perform temporary or permanent seeding, beyond the initial occurrence, may be necessary as specified in Sec 806.50.2 and as required per terms of the SWPPP. Mobilization of all equipment, workers and materials necessary to perform seeding and mulching shall be considered included in this work.

2.1 Measurement of the number of occurrences authorized by the engineer to mobilize equipment onto the project to perform temporary or permanent seeding will be made per each occurrence, except for the initial occurrence and as specified herein. No measurement will be made for mobilization necessary to perform repair work to previously seeded areas or for mobilization necessary due to removal of equipment prior to completion of seeding all areas available for seeding, as determined by the engineer.

3.0 Basis of Payment. The accepted occurrences of Additional Mobilization for Seeding will be paid for under 618-10.20, Additional Mobilization for Seeding, at a fixed unit price of \$600 per each occurrence. Payment for the initial occurrence to mobilize for seeding, and any additional mobilization costs in excess of the fixed price, shall be considered completely covered under other items.

N. Class 3 Excavation

1.0 Description. No determination or geotechnical data is available to precisely determine if the Class 3 Excavation work on this project will include significant quantities of rock excavation. Field observations would suggest that rock excavation is likely along this project in various locations.

2.0 Basis of Payment. All excavation quantities regardless of encountering rock shall be paid for as Class 3 Excavation as noted on the plans.

O. Fertilizing, Seeding, And Mulch

1.0 Construction Requirements. In accordance with Sections 801 and 805, the following shall be applied at the rate specified in the locations specified. Dry seeding application methods will be required for slopes flatter than 3:1. Bulk Seed may be used provided live seed rates are met. Vegetative mulch will be stabilized with recycled paper overspray in accordance with Section 802.

Seed Mixture	
<i>Within the first 30 feet (mow area – Cool Season)</i>	
<u>Seeding Mixture</u>	<u>Pounds Pure Live Seed (PLS)/Acre</u>
Tall Fescue	80
Teff Grass	3
Annual Ryegrass	5
Perennial Ryegrass	6
White Clover	6
Oats	5
Total Seed	105 PLS/acre
<u>Fertilizer</u>	<u>Pounds/Acre</u>
Nitrogen (N)	40
Phosphoric Acid (P ₂ O ₅)	80
Soluble Potash (K ₂ O)	40
Effective Neutralizing Material	0
Total Fertilizer	160 lbs/acre

2.0 Basis of Payment. All expenses incurred by the contractor of furnishing and applying seed fertilizer and mulch shall be considered as included in and completely covered by the contract unit price for 805-10.00A Seeding - Cool Season Mixtures or 805-20.00A Seeding – Warm Season Mixtures per 0.1 acre. Fertilizing and Mulching will be considered incidental to seeding and therefore the contractor will not receive any direct pay for these two items.

P. Relocating And Mounting Existing Signs To New Posts

1.0 Description. This item provides for relocation and mounting existing signs on various sizes to new posts at locations shown on the signing sheets.

2.0 Construction Requirements. The contractor shall install new posts at the locations shown and the mount existing signs to the appropriate post type and summarized on the signing sheets. All work shall be in accordance with the construction requirements of Section 903.

2.1 Contractor shall exercise reasonable care during removal and handling of signs and posts. All signs designated to be reused and relocated that are damaged due to contractor negligence shall be replaced at the contractor’s expense.

3.0 Basis of Payment. All cost incurred for relocating and mounting existing signs to new posts at the locations shown, complete in place, will be paid for at the contract unit price for the following:

- Pay Item 903-10.10, Concrete Footings, Embedded, per Cubic Yard
- Pay Item 903-12.70A, 2.0 in. PSST Post- 12 GA., per Linear Foot
- Pay Item 903-12.71, Post Anchor for 2.0 in. PSST-12 GA., per Linear Foot

Anchor, mounting plate, fall arrest cable, and mounting hardware associated with posts relocated and mounted to barriers shall be subsidiary to the following:

- Pay Item 903-12.70A, 2.0 in. PSST Post- 12 GA., per Linear Foot

Q. Removal Of Pavement Marking On Existing Pavement

1.0 Description. This work shall consist of removing existing pavement marking from existing pavement that will be the final driving surface as specified during construction and as approved by the engineer.

2.0 Construction Requirements. The contractor shall use water blasting or other method approved by the engineer to remove all existing pavement marking material on existing pavement as to minimize damage and scarring. Pavement marking shall be completely removed to the satisfaction of the engineer with minimal damage to the pavement. Any excess damage or scarring of the pavement shall be repaired at the contractor's expense.

3.0 Method of Measurement. Measurement will be made in accordance with Section 620.

4.0 Basis of Payment. All costs incurred for complying with this provision shall be considered completely covered by the contract unit price for Pay Item No. 620-70.01, Pavement Marking Removal, per Linear Foot.

R. Restrictions For Migratory Birds NJSP-16-06A

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

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

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

3.1 Inactive or Partially Constructed Nests. If nests are present and MoDOT determines that the nests are inactive or partially constructed, the contractor may remove the nests provided that the colony's inactive or partially constructed nests are completely removed by March 15 and the contractor maintains a nest free condition until the bridge work is complete. Dry removal methods shall be used when practicable. If dry removal is not practicable, hydro cleaning may be used if approved by the Engineer and only if water is free of blasting grit, chemicals, or detergents, and applied using pressure less than 5,000 PSI. Clean water such as that from municipal water treatment plants or wells shall be used. Use of source water from Waters of the State (i.e., streams or lakes), is allowable, if the appropriate methods to prevent the possible spread of invasive aquatic species are implemented.

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

the introduction and spread of aquatic invasive species through MoDOT projects in Missouri streams and lakes, the following precautions shall be followed.

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

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

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

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

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

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

3.2.2 Prior to use of equipment, contractors shall provide the MoDOT inspector written documentation of the equipment's geographic origin (including the water body it was last used in), as well as defining the specified treatment method used to adequately ensure protection against invasive species. The written documentation will include a statement indicating the contractor is aware of these provisions and will also treat the equipment appropriately after completion of the project.

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

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

S. Temporary Stream Crossing Or Temporary Work Pad

1.0 Description. This specification covers a temporary stream crossing or temporary work pad built to facilitate the movement of the contractor's equipment across a stream.

2.0 Construction Requirements. The contractor shall be responsible for the design, installation, maintenance, and removal of the temporary stream crossing or temporary work pad and any structures installed for the construction of the temporary stream crossing or temporary work pad. Appropriate measures shall be taken to maintain near normal downstream flows and minimize flooding upstream.

2.1 Rock furnished for the temporary stream crossing or temporary work pad shall be in accordance with Sec 303.2.

2.2 The temporary stream crossing or temporary work pad shall be constructed to permit the free movement of the stream's aquatic life.

2.3 The temporary stream crossing shall be installed on the downstream side of the bridge only.

2.4 All approaches to the temporary stream crossing or temporary work pad shall be maintained such that all stormwater runoff is diverted to retention devices.

2.5 When the temporary stream crossing or temporary work pad is no longer needed, the crossing or pad shall be removed as soon as possible and the area shall be restored to pre-project conditions or as approved by the engineer.

3.0 Basis of Payment. No direct pay will be made for any material or labor involved with the design, installation, maintenance, or removal of the temporary stream crossing or temporary work pad. The contractor shall be responsible for all costs, including damage and penalties.

T. Daylighted Type 5 Base

1.0 Description. This work shall consist of installing daylighted type 5 base as shown on the plans and shall meet all requirements of Section 304.

2.0 Method of Measurement. The quantities will be measured in accordance with Section 304.5, except that where measurement is required it will be made to the nearest tenth of a station measured along the edge of shoulder.

3.0 Basis of Payment. Section 304.6 is supplemented by the following:

3.1 All expenses incurred by the contractor by reason of their compliance with this provision shall be considered as completely covered by the contract unit price per 100 feet for the following:

Bid Item No.	Description	Units
304-99.09	Daylighted Type 5 Base	100 FT.

U. Optional Rumble Strips

1.0 Description. This work shall consist of milling shoulder and centerline rumble strips into bituminous or concrete pavements in accordance with section 626 and as shown on the plans or directed by the engineer.

2.0 Method of Measurement. Final measurement will not be made except as allowed by section 626.3.

3.0 Basis of Payment.

3.1 The accepted quantity of shoulder rumble strips will be paid for by the contract unit price for Item 626-99.09, Misc. Optional Shoulder Rumble Strips, per station.

3.2 Payment will be considered full compensation for all labor, equipment, and material necessary to complete the described work, including loading, hauling, stockpiling and disposal of milled material; and any other incidental items.

JOB SPECIAL PROVISIONS TABLE OF CONTENTS (ROADWAY)

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

A.	General – Federal	1
B.	Contract Liquidated Damages	1
C.	Work Zone Traffic Management	2
D.	Emergency Provisions and Incident Management	5
E.	Project Contact for Contractor/Bidder Questions	6
F.	Supplemental Revisions	6
G.	Optional Pavements	8
H.	Utilities	8
I.	Contractor Quality Control	10
J.	Contractor Surveying and Staking	12
K.	Damage to Existing Pavement, Side Roads and Entrances	12
L.	Guardrail Grading Requirements	13
M.	Additional Mobilization for Seeding	14
N.	Class 3 Excavation	14
O.	Fertilizing, Seeding, and Mulch	14
P.	Relocating and Mounting Existing Signs to New Posts	15

 <p>9-30-19</p>	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65102 Phone 1-888-275-6636
	OLSSON ASSOCIATES 7301 W. 133 rd Street, Suite 200 Overland Park, KS 66213 Certificate of Authority: 001592 Consultant Phone: 913-381-1170
	If a seal is present on this sheet, JSP's have been electronically sealed and dated.
	JOB NUMBER: J113241 ANDREW COUNTY, MO DATE PREPARED: 8/23/2019
	ADDENDUM DATE:
Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: ALL	

JOB
SPECIAL PROVISION

A. General - Federal JSP-09-02E

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 2019 Missouri Standard Plans
For Highway Construction

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

B. Contract Liquidated Damages JSP-13-01B

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

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

Notice to Proceed: March 9th, 2020

Complete bridge, wall, pavement,
shoulder, guardrail construction
and restore four lanes of traffic: December 15th, 2020

Job Completion Date: April 15, 2021

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

Job Number	Calendar Days	Daily Road User Cost
J113241	N/A	\$5,400

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

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

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

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 10 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.

3.0 Work Hour Restrictions.

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

Memorial Day
Labor Day
Thanksgiving
Christmas
New Year's Day

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

12:00 noon July 2, 2020 – 10:00 p.m. July 5, 2020
12:00 noon July 2, 2021 – 6:00 a.m. July 6, 2021
12:00 noon July 1, 2022 – 6:00 a.m. July 5, 2022

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

3.3 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.

3.3.1 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. The CMS shall be capable of communication with the Transportation Management Center (TMC), if applicable, 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-90-11

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

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

Missouri Highway Patrol:	816-387-2345
Andrew County Sheriff Department:	816-324-4114
Savannah Rural Fire Protection District:	816-324-7533
Andrew County Ambulance District:	816-897-0549
Savannah Police Department:	816-324-7541

EMERGENCY ONLY NUMBER

911

Missouri Highway Patrol - *55 CELL PHONE

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

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

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

E. Project Contact For Contract/Bidder Questions JSP-96-05

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

Joyce Reynolds, Project Contact
Northwest District
3602 N. Belt Highway
St. Joseph, MO 64506

Telephone Number: 816-387-2411
E-mail: Joyce.Reynolds@modot.mo.gov

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

F. Supplemental Revisions JSP-18-01H

Stormwater Compliance Requirements

1.0 Description. This provision requires the contractor to provide a Water Pollution Control Manager (WPCM) for any project that includes areas of land disturbance that will total one (1) acre or greater on the project site at any point in time. 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.

1.1 Applicability. The project site consists of all areas designated on the plans, including temporary and permanent easements. This provision does not apply to Contractor staging, plant, or borrow areas that are not located on MoDOT right of way (Off-site). The Contractor is responsible for obtaining its own separate land disturbance permit for Off-site areas. This provision is in addition to any other stormwater, environmental, and land disturbance requirements specified elsewhere in the contract.

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 within 7 days of the stormwater inspection or any extended period of time granted by the Engineer.

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.

G. Optional Pavements JSP 06-06G

1.0 Description. This work shall consist of a pavement composed of either portland cement concrete or asphaltic concrete constructed on a prepared subgrade. This work shall be performed in accordance with the standard specifications and as shown on the plans or established by the engineer.

2.0 The quantities shown reflect the total square yards of pavement surface designated for each pavement type as computed and shown on the plans.

2.1 No additional payment will be made for asphaltic concrete mix quantities to construct the required 1:1 slope along the edge of the pavement, or for tack applied between lifts of asphalt.

2.2 No additional payment will be made for aggregate base quantities outside the limits of the final surface area as computed and shown on the plans. When A2 shoulders are specified, payment for aggregate base will be as shown on the plans.

2.3 The grading shown on the plans was designed for the thinner pavement option. For projects with grading in the contract, there will be no adjustment of the earthwork quantities due to adjusting the roadway subgrade for optional pavements.

2.4 The contractor shall comply with Sections 401 through 403 for the asphalt option and Sections 501 and 502 for the concrete option.

2.5 Pavement options composed of Portland cement concrete shall have contrast pavement marking for intermittent markings (skips), dotted lines, and solid intersection lane lines. The pavement markings shall be in accordance with Section 620. No additional payment will be made for the contrast pavement markings.

3.0 Method of Measurement. The quantities of concrete pavement will be measured in accordance with Section 502.14. The quantities of asphaltic concrete pavement will be measured in accordance with Section 403.22.

4.0 Basis of Payment. The accepted quantity of the chosen option will be paid for by the contract unit bid price for Item 403-99.05, per square yard.

H. Utilities

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

J113109 & J113241

<u>Utility Name</u>	<u>Known Required Adjustment</u>	<u>Type</u>
Andrew County PWSD #1 Dustin Holmes 201 South 71 Highway Savannah, MO 64485 (816) 324-6266	See Section 2	Water
CenturyLink 625 Cherry Street Columbia, MO 65201 (573) 634-1615	None	Communications
City of Savannah 402 Court Street Savannah, MO 64485 (816) 646-6638	None	Sewer & Water
Kansas City Power & Light 613 Atchison Street St. Joseph, MO 64501 (816) 471-5275	None	Electric
Level 3 Now CenturyLink Fiber Jason Johns 625 Cherry Street Columbia, MO 65201 (636) 887-4947	See Section 3	Communications
United Electric Cooperative 401 North 71 Highway Savannah, MO 64485 (800) 748-1488	None	Electric

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

2.0 Andrew County PWSD #1 has an existing water line just on the west side of Hopkins Creek and is located under both Interstate 29 northbound and southbound bridges over Hopkins Creek. The project plans show a temporary access road that will be built on a portion of this existing water line. Andrew County PWSD #1 stated that this section of their water line is four to five feet deep. Prior to doing any work around this existing water line, the bridge contractor shall contact Andrew County PWSD #1. Dustin Holmes is the contact for Andrew County PWSD #1, and can be reached at (816) 324-6266.

3.0 Level 3 Now CenturyLink Fiber has an existing buried fiber line running down the median of Interstate 29. The contractor shall contact and have Missouri One Call System mark Level 3 Now CenturyLink's interstate median fiber optic cable. The contractor shall inform Jason Johns, of Level 3 Now CenturyLink Fiber, to be on site for all work within two feet of this fiber optic cable. All work within two feet of this fiber optic cable shall be done with approval of the Engineer, after consultation with Jason Johns, the on-site Level 3 Now CenturyLink Fiber representative. The contractor shall exercise caution around all fiber optic cable of Level 3 Now CenturyLink Fiber throughout the life of the project. Jason Johns can be reached at (636) 887-4947.

3.1 The engineer may adjust the placement of guardrail, guard cable, anchor assemblies, pipe extensions, etc. in the field, after utility facilities have been located, to eliminate as many fiber optic cable conflicts as possible.

I. 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.

J. Contractor Surveying And Staking

In addition to the requirements of Section 627 of the Missouri Standard Specifications for Highway Construction, the following shall apply:

1.0 Description. The Contractor will be responsible for all layout required on the project. This responsibility will include, but not be limited to the following: Construction signing, transition milling, pavement marking, loop detectors, signing and signal bases, pull boxes, field verify existing pipe flow lines, etc.

1.1 The above list is not all inclusive. The contractor will have the primary responsibility for these operations. The contractor shall provide the Resident Engineer (RE) with a staking plan layout for approval prior to the installation of signs. The RE will also provide assistance during this layout provided a request is submitted to the RE or Construction Project Manager 48 hours in advance. This will ensure that all permanently mounted traffic control devices remain consistent with District policy and avoid re-staking. If the contractor installs any signs without the engineer's approval, all costs associated with re-staking and/or relocation will be at the contractor's expense.

1.2 The intent of this provision is to increase the quality of our work zones and minimize negative impacts to the contractor's schedule that can result from delays in staking.

1.3 Any adjustments to the plans quantities or line numbers established in the contract shall be approved by the Engineer.

2.0 Basis of Payment. No direct payment will be made to cover the costs associated with these additional requirements. All costs will be considered as included in and completely covered by the unit bid price submitted for item 627-40.00, Contractor Furnished Surveying and Staking, per lump sum.

K. Damage To Existing Pavement, Side Roads And Entrances

1.0 Damage Description. This work shall consist of repairing any damage to existing pavement, curb ramps, side roads, and entrances caused by contractor operations. This shall include but is not limited to, damage caused by the traffic during contractor operations within the project limits including the work zone signing.

2.0 Damage Construction Requirements. Any cracking, gouging, or other damage to the existing pavement, shoulders, side roads, or entrances from general construction shall be repaired within twenty-four (24) hours of the time of damage at the contractor's expense.

3.0 Method of Measurement. No measurement of damaged pavement, or damaged side roads or entrances as described above shall be made.

4.0 Basis of Payment. No payment will be made for repairs to existing pavement, side roads, or entrances damaged by the contractor operations.

L. Guardrail Grading Requirements JSP-17-02B

1.0 Description. Guardrail installation and grading shall be in accordance with Missouri Standard Specifications for Highway Construction, Missouri Standard Plans for Highway Construction, and as described herein.

2.0 Construction Requirements. When guardrail and/or end treatment removal and replacement requires grading of the shoulder and/or slopes, Section 606.3.1(b), (c), and 606.3.1.1 of the Missouri Standard Specifications shall be waived and the following shall apply:

a) Along roadways and shoulders, remove no more guardrail than can be reconstructed within seven (7) calendar days, including weekends and holidays. The seven day counting period shall start when the first piece of safety hardware is removed.

b) The active work zone area that encompasses the guardrail and/or end treatment reconstruction, shall not exceed one (1) mile in length. The contractor shall be required to provide and maintain approved channelizing devices adjacent to the reconstruction area.

c) Only one-side of the roadway shall be worked on at the same time. Divided facilities shall be limited to work on one-side of each direction at the same time.

d) When the removal of any existing safety hardware device exposes non-breakaway obstacles, the reconstruction of the safety hardware device protecting the obstacle shall be replaced within 48 hours of removal or an approved temporary crashworthy device shall be provided, installed and maintained at the contractor's expense until the non-breakaway obstacle is permanently protected. The 48 hour counting period shall start when the first piece of safety hardware is removed.

e) Areas where guardrail and/or end treatments have been removed, but not yet replaced, shall be delineated in accordance with plans or as directed by the Engineer.

3.0 Non-Compliance. Non-compliance with this provision shall result in the immediate suspension of work in accordance with Sec 105.1.2. No work, including but not limited to additional guardrail removal and grading, shall be allowed to proceed except for work necessary to restore guardrail installation.

4.0 Basis of Payment. No direct payment will be made for compliance with this provision. Guardrail items, grading, and temporary traffic control devices will be paid for as provided in the contract.

M. Additional Mobilization for Seeding NJSP-16-03A

1.0 Description. This provision provides compensation for additional mobilization for seeding, as specified herein.

2.0 Additional Mobilization for Seeding. Additional mobilization to perform temporary or permanent seeding, beyond the initial occurrence, may be necessary as specified in Sec 806.50.2 and as required per terms of the SWPPP. Mobilization of all equipment, workers and materials necessary to perform seeding and mulching shall be considered included in this work.

2.1 Measurement of the number of occurrences authorized by the engineer to mobilize equipment onto the project to perform temporary or permanent seeding will be made per each occurrence, except for the initial occurrence and as specified herein. No measurement will be made for mobilization necessary to perform repair work to previously seeded areas or for mobilization necessary due to removal of equipment prior to completion of seeding all areas available for seeding, as determined by the engineer.

3.0 Basis of Payment. The accepted occurrences of Additional Mobilization for Seeding will be paid for under 618-10.20, Additional Mobilization for Seeding, at a fixed unit price of \$600 per each occurrence. Payment for the initial occurrence to mobilize for seeding, and any additional mobilization costs in excess of the fixed price, shall be considered completely covered under other items.

N. Class 3 Excavation

1.0 Description. No determination or geotechnical data is available to precisely determine if the Class 3 Excavation work on this project will include significant quantities of rock excavation. Field observations would suggest that rock excavation is likely along this project in various locations.

2.0 Basis of Payment. All excavation quantities regardless of encountering rock shall be paid for as Class 3 Excavation as noted on the plans.

O. Fertilizing, Seeding, And Mulch

1.0 Construction Requirements. In accordance with Sections 801 and 805, the following shall be applied at the rate specified in the locations specified. Dry seeding application methods will be required for slopes flatter than 3:1. Bulk Seed may be used provided live seed rates are met. Vegetative mulch will be stabilized with recycled paper overspray in accordance with Section 802.

Seed Mixture	
<i>Within the first 30 feet (mow area – Cool Season)</i>	
<u>Seeding Mixture</u>	<u>Pounds Pure Live Seed (PLS)/Acre</u>
Tall Fescue	80
Teff Grass	3
Annual Ryegrass	5
Perennial Ryegrass	6
White Clover	6
Oats	5
Total Seed	105 PLS/acre
<u>Fertilizer</u>	<u>Pounds/Acre</u>
Nitrogen (N)	40
Phosphoric Acid (P ₂ O ₅)	80
Soluble Potash (K ₂ O)	40
Effective Neutralizing Material	0
Total Fertilizer	160 lbs/acre

2.0 Basis of Payment. All expenses incurred by the contractor of furnishing and applying seed fertilizer and mulch shall be considered as included in and completely covered by the contract unit price for 805-10.00A Seeding - Cool Season Mixtures per 0.1 acre. Fertilizing and Mulching will be considered incidental to seeding and therefore the contractor will not receive any direct pay for these two items.

P. Relocating And Mounting Existing Signs To New Posts

1.0 Description. This item provides for relocation and mounting existing signs on various sizes to new posts at locations shown on the signing sheets.

2.0 Construction Requirements. The contractor shall install new posts at the locations shown and the mount existing signs to the appropriate post type and summarized on sheet D-29 and D-30 of the signing sheets. All work shall be in accordance with the construction requirements of Section 903.


2.1 Contractor shall exercise reasonable care during removal and handling of signs and posts. All signs designated to be reused and relocated that are damaged due to contractor negligence shall be replaced at the contractor's expense.

3.0 Basis of Payment. All cost incurred for relocating and mounting existing signs to new posts at the locations shown, complete in place, will be paid for at the contract unit price for the following:

- Pay Item 903-10.10, Concrete Footings, Embedded, per Cubic Yard
- Pay Item 903-12.70A, 2.0 in. PSST Post- 12 GA., per Linear Foot
- Pay Item 903-12.71, Post Anchor for 2.0 in. PSST-12 GA., per Linear Foot

TABLE OF CONTENTS

- A. CONSTRUCTION REQUIREMENTS
- B. GALVANIZED STRUCTURAL STEEL PILE
- C. FORM LINERS

 <p>8/23/19</p>	<p>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65101 Phone (888) 275-6636</p>
	<p>OLSSON INC. 7301 West 133rd Street Overland Park, KS 66213 Certificate of Authority # 001592 Consultant Phone #913-381-1170</p>
	<p>JOB NO. J113109 ANDREW COUNTY, MO DATE PREPARED: 8/23/2019</p>
<p>Date: 8/23/2019</p>	
<p>Only the following items of the Job Special Provisions (Bridge) are authenticated by this seal: A-C</p>	

JOB SPECIAL PROVISIONS (BRIDGE)

A. CONSTRUCTION REQUIREMENTS

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

2.0 Construction Requirements. Plans for the existing structure(s) and geotechnical report for the new bridges are included in the contract in the bridge electronic deliverables zip file for informational purposes only.

2.1 In order to assure the least traffic interference, the work shall be scheduled so that the roadway closure is for the absolute minimum amount of time required to complete the work.

2.2 Provisions shall be made to prevent any debris and materials from falling into the stream. Any debris and materials that falls below the bridge outside the limits mentioned previously and if determined necessary by the engineer, the debris shall be removed as approved by the engineer at the contractor's expense.

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

3.0 Method of Measurement. No measurement will be made.

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

B. GALVANIZED STRUCTURAL STEEL PILE

1.0 Description. This job special provision contains general requirements for furnishing, coating and placing galvanized steel piles as shown on the plans and shall be in addition to the requirements of Sec 702.

2.0 Material. Structural steel piles shall be galvanized in accordance with ASTM A123 and Sec 1080. Repairs to the galvanized coating and field galvanizing shall be in accordance with ASTM A780. Zinc rich paints will not be allowed. Repairs and field galvanizing will not be required where the pile will be encased in concrete or below the limits specified in section 3.0 of this job special provision. Protective Coatings specified in Sec 702 will not be required for galvanized piles.

3.0 Construction Requirements.

3.1 Galvanizing material shall be omitted or removed 1 inch clear of weld locations. The method used to omit or remove the galvanizing material shall be masking, grinding or other methods as approved by the engineer. If a weld location falls within an area where galvanizing is required, clean the weld area making sure to remove all welding slag. Then field galvanize the weld area in accordance with ASTM A780. Zinc rich paints will not be allowed.

3.2 All pile below the pile concrete encasement shall be galvanized down to an elevation as shown on the plans.

3.3 At the contractor's option, the entire pile length may be galvanized.

JOB SPECIAL PROVISIONS (BRIDGE)

4.0 Method of Measurement. Galvanized Structural Steel Pile in place will be the actual length to the nearest linear foot for that portion of the pile that remains permanently in the structure. See Sec 702 Basis of Payment for any additional length authorized by the engineer resulting from pile splices. No separate measurement will be made for pile that is not galvanized.

5.0 Basis of Payment. The accepted quantity of galvanized and non galvanized pile in place will be paid for at the contract unit price for Galvanized Structural Steel Pile. No direct payment will be made for incidental items necessary to complete the work unless specifically provided as a pay item in the contract.

C. FORM LINERS

1.0 Description. This work item shall consist of constructing the form liner aesthetic treatment on mechanically stabilized earth (MSE) wall systems as shown on the plans and described in this special provision.

2.0 Materials.

2.1 Shop Drawings. Contractor shall provide complete shop drawings of all aesthetic treatments.

2.2 Formwork. Formwork for concrete facing panels for the MSE wall systems shall be a type that produces uniform results consistent in both, pattern and depth of relief with the project design aesthetics. The contractor shall be responsible to coordinate the aesthetic treatments of all components to meet the design aesthetic criteria described herein and as shown on plans. No mixing of pattern numbers or manufacturers will be permitted. The form liner pattern shall be one of the patterns listed on the plans or approved equal.

2.3 Form Ties. Wall form ties shall be placed in a uniform pattern. In surface areas receiving the aesthetic treatment form liner, all form ties shall be placed in the simulated stone surface. Form ties shall be fiberglass ties that shall hold the forms in the correct alignment. The color of the ties shall closely match the concrete wall color. Ties shall be ground flush with the surface of concrete prior to pressure washing.

2.4 Form Release Agent. Form release agents shall be the manufacturer's standard non-staining, non-petroleum based and compatible with surface sealer finish coating. Form release agents shall be applied to all surfaces of the form liner at the manufacturer's recommended rate.

2.5 Gaskets. Closed cell compressible neoprene of such thickness as is appropriate to assure leakage prevention shall be used to prevent joint leakage. One face shall be coated with an adhesive tape to assure proper positioning at the time of form closure. The neoprene shall be sufficiently compressible as to assure virtual "zero" separation of the forms as a result of the use of this product.

2.6 Aggregates.

2.6.1 Aggregate Source. The aggregate incorporated into the concrete mix of all aesthetic concrete MSE Wall components shall be from the same source. The aggregate incorporated into the concrete mix of all aesthetic concrete bridge components shall be from the same source

JOB SPECIAL PROVISIONS (BRIDGE)

as the balance of the bridge concrete work. The purpose for this provision is to ensure uniformity of materials and color once areas are pressure washed and aggregates become exposed. Single-source shall be interpreted as one contiguous rock quarry, gravel pit or dredging location. This provision in no way alters the specification requirements for aggregate quality specified in other sections of the project specifications.

2.6.2 Aggregate Gradation. Concrete mixes supplied for the construction of the aesthetic treatments shall be in accordance with the following requirements. The concrete aggregate for the aesthetic treatment mix shall be Gradation E in accordance with [Sec 1005](#) for any areas where aesthetic treatment is formed monolithically with the structure. This requirement for aggregate size is necessary to permit concrete mixture to flow freely and fill completely into reveals and form liner proposed in the aesthetic treatment. Gradation E aggregate shall meet the aggregate source requirements.

2.7 Joint Materials. Bond breaker material shall be polyethylene tape, coated paper, metal foil or similar type materials. The backup material shall be compressible, non-shrink, non-reactive with the sealant and non-absorptive material type such as extruded butyl or polychloroprene foam rubber. The joint sealant shall be an elastomeric, multi-component sealant, in accordance with Federal Specification TT-S-227, Type II. The sealant color shall match the pressure washed concrete surface color.

3.0 Construction Requirements.

3.1 Reveals and Texture. All reveals and texture shall be continuous from element to element through construction joints and around corners. Techniques shall be utilized to ensure true continuous texture between separate elements. Sand blasting will not be permitted for cleaning concrete surface, as sand blasting will reduce the special surface texture specified. Pressure washing with water is the preferred method of removing laitance. Pressure washing cleaning shall provide a minimum pressure of 3000 psi at a rate of 3 to 4 gallons per minute (11.4 to 15.1 L/min) using a fan nozzle held perpendicular to the surface at a distance of 2 to 3 feet. The completed surface shall be free of blemishes, discolorations, surface voids and conspicuous form marks to the satisfaction of the engineer.

3.2 Sample Test Panels. Sample test panels shall be constructed to demonstrate the contractor's workmanship for all form liner textures and patterns as shown on the plans. The sample test panels may also be used for demonstration special surface finish if approved by the engineer. The architectural surface treatment of the finished work shall achieve the same final effect as demonstrated on the approved sample test panels. The materials used in construction of the sample test panels shall be in accordance with all standards as listed in this specification and the plans. The concrete mix shall be consistent with the project specifications and criteria. The minimum size of the sample test panels shall be 6 x 6 feet x 8 inches. The form liner finish shall be demonstrated in a vertical strip covering one-half to three-quarters of the sample test panel(s).

3.3 Patches. Holes and defects in concrete surface shall be filled within 48 hours of when the forms are removed. The same patching materials and techniques shall be used that were approved on sample test panels. The patches shall be made with a stiff mortar made with the same material sources as the concrete. The mortar mix proportions shall be adjusted so the dry patch matches the dry adjacent concrete. White cement shall be added to the mortar mix if necessary to lighten the mortar mix.

JOB SPECIAL PROVISIONS (BRIDGE)

3.4 Joints. Joints shall be sealed when the sealant, air and concrete temperatures are above 40°F. Joints shall be primed and filled flush with joint sealant in accordance with the manufacturer's recommendation. All construction control and expansion joints shall occur within the vertical joints as shown in the elevation views on the plans. All vertical expansion joints shall be filled with preformed fiber expansion joint filler covered with bond break tape and sealed with elastomeric, multi-component sealant.

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

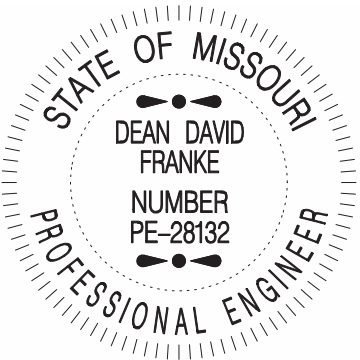
4.1 Form Liners on MSE Wall Systems. No measurement of form liners on MSE wall systems shall be made.

5.0 Basis of Payment.

5.1 Form Liners on MSE Wall Systems. Payment for the above described work, including all material, additional concrete, equipment, labor and any other incidental work necessary to complete this item, will be considered completely covered by the contract unit price for "MSE Wall Systems".

TABLE OF CONTENTS

- A. Construction Requirements
- B. Slurry and Residue Produced During Surface Treatment of PCCP and Bridge Decks
- C. Total Surface Hydro Demolition and Monolithic Deck Repair

 <p>THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.</p>	<p>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65101 Phone (888) 275-6636</p>
	<p>If a seal is present on this sheet, JSP's has been electronically sealed and dated.</p>
	<p>JOB NO. J113241 Andrew County, MO Date Prepared: 7/26/2019</p>
	<p>Only the following items of the Job Special Provisions (Bridge) are authenticated by this seal: A - C</p>

JOB SPECIAL PROVISIONS (BRIDGE)

A. CONSTRUCTION REQUIREMENTS

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

2.0 Construction Requirements. Plans for the existing structure(s) are included in the contract in the bridge electronic deliverables zip file for informational purposes only.

2.1 In order to assure the least traffic interference, the work shall be scheduled so that a bridge closure is for the absolute minimum amount of time required to complete the work. A bridge shall not be closed until material is available for continuous construction and the contractor is prepared to diligently pursue the work until the closed bridge is opened to traffic.

2.2 Bridge work by contractor forces, including erection, rehabilitation, or demolition, shall not be allowed over traffic unless a bridge platform protection system is installed below the work area except for work performed above a deck that is intact. The protection system shall be capable of catching all falling objects such as tools, overhang brackets or materials. Lifting of objects that are heavier than the capacity of the bridge protection system shall not be allowed.

2.3 Qualified special mortar shall be a qualified rapid set concrete patching material in accordance with [Sec 704](#). A qualified rapid set concrete patching material will not be permitted for repairing concrete deck (half-soling), deck repair with void tube replacement, full depth repair, modified deck repair and substructure repair (formed) unless a note on the bridge plans specifies that a qualified special mortar may be used.

2.4 Provisions shall be made to prevent any debris and materials from falling onto the roadway. Any debris and materials that falls below the bridge outside the limits mentioned previously and if determined necessary by the engineer, the debris shall be removed as approved by the engineer at the contractor's expense. Traffic under the bridge shall be maintained in accordance with the contract documents.

2.5 Any damage sustained to the remaining structure as a result of the contractor's operations shall be repaired or the material replaced as approved by the engineer at the contractor's expense.

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

2.7 Removal of epoxy polymer overlay shall be in accordance with [Sec 216.30](#).

3.0 Method of Measurement. No measurement will be made.

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

JOB SPECIAL PROVISIONS (BRIDGE)

B. SLURRY AND RESIDUE PRODUCED DURING SURFACE TREATMENT OF PCCP AND BRIDGE DECKS

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

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

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

2.2 Prior to starting work, slurry or residue "no discharge zones" will be identified by the Engineer with respect to the contractor's approved BMP and residue disposal plan.

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

2.4 When slurry is dispersed on the right of way, BMP's shall be installed to keep slurry residue from entering drainage structures, from entering any waterways and from leaving the right of way.

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

C. TOTAL SURFACE HYDRO DEMOLITION AND MONOLITHIC DECK REPAIR

1.0 Description. This provision describes requirements for the hydro demolition process and all other preparatory and repair work associated with the placement of a concrete wearing surface on a bridge deck. Included in this provision are the requirements for scarification of the bridge deck during existing wearing surface removal, removal of all existing deck repairs, conventional deck repair of special repair zones before hydro demolition, total surface hydro demolition of the deck, conventional deck repair after hydro demolition, preparation of the deck for a concrete wearing surface, and monolithic deck repair.

2.0 Mechanical Scarification of the Bridge Deck.

2.1 On decks with existing wearing surfaces, the wearing surface shall be removed in accordance with Sec 216 and as shown on the plans. On decks without existing wearing surfaces, the surface shall be scarified in accordance with Sec 216.

2.2 Prior to wearing surface removal or scarification of the existing deck, the contractor shall verify the depth of the top mat of reinforcing steel within the deck. If the depth of the reinforcing steel is less than the removal depth, the additional slab removal depth shall be reduced to avoid damage to the reinforcing steel. Any reinforcing steel damaged by the removal/scarification operation shall be repaired or replaced at the contractor's expense.

3.0 Identifying Existing Deck Repairs. Following scarification of the deck and prior to hydro demolition, the entire deck surface shall be thoroughly cleaned by high pressure water blasting with sufficient pressure to remove all debris. After cleaning, all existing deck repairs will be measured by the engineer and marked for removal over the full deck. Existing deck repairs are defined as any sound or unsound repairs made to the original deck previous to this project.

4.0 Zoned Conventional Deck Repair Before Hydro Demolition on Existing Cast-In-Place Concrete Box Girder, Solid Slab and Voided Slab Bridges Only (Not applicable for prestressed concrete or steel beam and girder bridges.)

4.1 Following scarification of the deck and prior to hydro demolition, repairs shall be done inside special repair zones as called for in the contract plans in accordance with Sec 704 except as follows:

(a) All sound and unsound existing partial depth deck repairs shall be removed and replaced as half-sole repair in accordance with Sec 704.

(b) Monolithic deck repair as specified in Section 5.12 shall be used to replace shallow deteriorated concrete when only half the diameter or less of the top mat of reinforcing steel is exposed.

(c) The area to come in contact with new concrete shall be thoroughly sand blasted to remove all foreign matter, dirt, free standing water, loose material and micro-cracking. Containment and disposal of material shall be in accordance with Sec 202.

4.2 Hydro demolition shall not move forward until the repairs in all special repair zones are complete and properly cured.

5.0 Total Surface Hydro Demolition and Deck Repair.

5.1 Description. This work shall consist of the selective removal of all unsound original concrete over the entire top surface of the bridge deck, and establishment of a highly rough and bondable surface, with a single pass of hydro demolition equipment. Unsound original concrete is defined as existing bridge deck concrete that is deteriorated, spalled or as determined by the engineer to be unacceptable.

5.2 Material. Water used in the hydro demolition shall be in accordance with Sec 1070.

5.3 Environmental Compliance.

5.3.1 Prior to the start of any bridge repair work, the contractor shall submit to the engineer for review an Environmental Compliance Plan (ECP) that ensures compliance with all federal, state, and local environmental laws and regulations. The ECP shall include specific details of the contractor's plan for containment, filtering, and disposal of water, slurry, and other debris, including all best management practices (BMPs) that the contractor plans to utilize to prevent environmental pollution and protect the waters of the state.

5.3.2 All drains, joints, and other locations where discharge water could exit the deck shall be blocked in order to direct runoff to a central collection and filtering location, as designed by the contractor. When runoff is allowed to be dispersed adjacent to the bridge, BMPs shall be utilized to contain and filter the slurry to prevent the discharge of slurry or other contaminants.

5.3.3 No direct payment will be made for compliance with this ECP, including, but not limited to, containment of the water and slurry, installing, maintaining, and removing the BMPs, filtering, and disposal of all waste materials.

5.4 Equipment.

5.4.1 The hydro demolition process shall consist of a water supply system, a high pressure water pumping system, and a demolition type unit. The demolition unit shall be robotic, computerized, and self-propelled, utilizing a high pressure water jet stream that is capable of removing concrete to the desired depths specified with a single pass of the unit, including the selective removal of all unsound original concrete. It shall also be capable of cleaning rust and concrete particles from all exposed reinforcing steel. The resulting concrete surface profile shall be one that is highly rough and bondable.

5.4.2 The hydro demolition equipment shall provide shielding to ensure containment of all dislodged concrete within the removal area in order to protect the traveling public and work crew from flying debris on, adjacent to, and below the work site.

5.4.3 Vacuum equipment shall be utilized for clean-up of hydro demolition debris. This equipment shall be equipped with fugitive dust control devices and shall be capable of removing wet debris and standing water in the same pass.

5.4.4 Calibration. The hydro demolition equipment shall be calibrated on a representative sample of sound deck concrete, as directed by the engineer. The calibration will demonstrate the ability to cut to the desired depth or depths, as indicated on the plans, in a single pass. The minimum allowable water pressure shall be 13,000 psi and the maximum water pressure shall not exceed 20,000 psi. The calibration shall accomplish the desired surface roughness, profile, and cutting depth as indicated on the contract plans. The equipment shall then be moved to an area of deteriorated deck, as directed by the engineer, in order to demonstrate the ability to remove all unsound original material. The equipment shall selectively remove all unsound original concrete, avoid the removal of unnecessary sound concrete, and provide a highly rough and bondable surface.

5.4.4.1 If the equipment does not demonstrate the ability to produce the desired result, as determined by the engineer, the equipment shall be removed from the project and the contractor shall provide other equipment for calibration. No additional contract time or compensation will be allowed for the mobilization of replacement equipment to the work site.

5.4.4.2 After the contractor has calibrated the equipment settings to the satisfaction of the engineer so that the equipment does selectively remove all unsound original concrete and provide a highly rough and bondable surface, without removing additional sound concrete, the calibration will be approved by the engineer and the contractor shall record the equipment settings as follows:

Water Pressure Gauge	
Machine Staging Control (Step)	
Machine Staging Control (Step) Inside Special Repair Zones ^a	
Nozzle Size	
Nozzle Type	
Nozzle Travel Speed	
Water Usage Rate	

^a Only applicable inside special repair zones on existing cast-in-place concrete box girder, solid slab and voided slab bridges. Not applicable for prestressed concrete or steel beam and girder bridges.

5.5 Removal of Existing Deck Repairs Prior to Hydro Demolition.

5.5.1 For bridges without special repair zones, the contractor shall remove all sound and unsound existing deck repairs using conventional hand/mechanical equipment in accordance with Sec 704 prior to hydro demolition.

5.5.2 For bridges with special repair zones, the contractor shall remove all sound and unsound existing deck repairs outside special repair zones using conventional hand/mechanical equipment in accordance with Sec 704 prior to hydro demolition.

5.5.3 Removal shall not include any unsound original bridge deck concrete.

5.5.4 Payment for removal of both sound and unsound existing deck repairs will be made per Section 7.2.

5.5.5 Following removal of existing deck repairs, all debris shall be removed from the deck prior to hydro demolition, at no additional cost.

5.6 Hydro Demolition Operation Requirements.

5.6.1 After calibration of the equipment, the contractor shall perform total surface hydro demolition over the entire surface of the bridge deck.

5.6.1.1 For bridges without special repair zones, the settings shall be maintained throughout the operation, unless the desired results are not being attained, in which case re-calibration shall be performed.

5.6.1.2 For bridges with special repair zones, two separate settings shall be maintained throughout the operation. One set of settings shall be maintained throughout the operation outside special repair zones unless the desired results are not being attained, in which case re-calibration shall be performed. Another set of settings shall be maintained throughout the operation inside special repair zones unless the desired results are not being attained, in which case re-calibration shall be performed.

5.6.1.3 Calibration shall be required on each bridge and when different equipment is brought to the site for use. The engineer will periodically verify the calibration settings to ensure the desired results are being attained.

5.6.2 The operator shall minimize the overlap of the individual hydro demolition passes to limit the amount of sound concrete removal.

5.6.3 When the hydro demolition process is taking place above an area of concern, the contractor shall take measures to protect that area from hydro blasting through the deck, falling debris, water runoff, or any other action that the engineer considers a risk to public safety or a risk of property damage. An area of concern shall include vehicular traffic, boat traffic, pedestrian traffic, parking areas, private property, railroad property or any other area of concern as determined by the engineer.

5.6.4 Only those vehicles directly required to perform the hydro demolition work and clean-up, or corresponding wearing surface construction equipment, shall be allowed on the bridge deck. Contamination of the deck by construction equipment or any other source shall be prevented.

5.6.5 The contractor shall clean up the slurry and rubble from the hydro demolition operation as soon as possible following the hydro demolition process. This clean-up shall be completed prior to the drying of the slurry on the deck and reinforcing steel. The contractor shall utilize a vacuum collection type system capable of removing wet debris and water in a single operation. Following the cleaning, the surface shall be free of all debris, loose material, slurry, or cement paste.

5.7 Incidental Conventional Concrete Removals After Hydro Demolition.

5.7.1 After the deck has been cleaned and dried, and is free of frost, the engineer will perform a second sounding test of the entire deck and identify any unsound original deck material that remains.

5.7.2 The contractor shall remove all identified unsound original deck material, as well as any areas on the deck that were inaccessible to the hydro demolition equipment. This removal work shall be included in the cost of the hydro demolition.

5.7.3 All removals after hydro demolition shall be done with pneumatic hammers no heavier than the nominal 35-pound class and operated no more than a 45 degree angle from the horizontal. Use of mechanical equipment for the purpose of chipping shall be kept to the absolute minimum to avoid creating micro-fractures on the surface of the deck.

5.7.4 Reinforcing Steel Repair. The contractor shall take steps necessary to prevent damage to existing reinforcing steel. All equipment shall be operated in a manner that does not damage the deck, reinforcing steel or superstructure components. Any damage caused by the contractors equipment or negligence shall be repaired at the contractors expense.

5.7.4.1 Reinforcing steel that is exposed by the process shall be thoroughly cleaned by sand or hydro blasting to the satisfaction of the engineer.

5.7.4.2 Reinforcement repair shall be in accordance with Sec 704. Replacement of damaged reinforcing steel may include the removal of additional concrete to adequately anchor reinforcing steel to the appropriate lap splice length in accordance with Sec 706.

5.7.4.3 No direct payment will be made for additional cleaning of reinforcing steel or for removal of loose concrete from the bars. Replacement of reinforcing steel will be made at the fixed unit

price in Sec 109.15, except that no payment will be made for replacement of reinforcing steel cut or broken by the contractor.

5.8 Conventional Repairing Concrete Deck (Half-Soling) After Hydro Demolition.

5.8.1 For polyester polymer concrete or low slump concrete wearing surfaces, following removal of unsound original concrete by hydro demolition and hand chipping, any areas requiring repairing concrete deck (half-soling) will be identified by the engineer.

5.8.2 All repairing concrete deck (half-soling) identified by the engineer shall be made prior to the deck wearing surface.

5.8.3 Repairing concrete deck (half-soling) shall be in accordance with Sec 704 except that the removal is accomplished by hydro demolition and limited only to locations where the removal of concrete around the perimeter of the top transverse reinforcing steel is required.

5.8.4 Concrete or qualified repair mortars used for repairing concrete deck (half-soling) shall be fully cured prior to the wearing surface.

5.9 Conventional Full Depth Repair After Hydro Demolition.

5.9.1 Following removal of unsound original concrete by hydro demolition and hand chipping, any areas requiring a full depth repair will be identified by the engineer.

5.9.2 For polyester polymer concrete or low slump concrete wearing surfaces on all bridge decks and all concrete wearing surfaces on voided slab bridges, all full depth repair shall be made prior to the deck wearing surface in accordance with Sec 704 except that the removal is accomplished by hydro demolition.

5.9.3 For concrete wearing surfaces not covered by 5.9.2, full depth repair for areas greater than 5 square feet (3 square feet in areas of prestressed panels) shall be made prior to the deck wearing surface in accordance with Sec 704 except that the removal is accomplished by hydro demolition and concrete may be placed in the repair area up to one inch below the top mat of reinforcement.

5.9.4 If the engineer determines that for concrete wearing surfaces not covered by 5.9.2, full depth repair for areas less than or equal to 5 square feet (3 square feet in areas of prestressed panels) can be made monolithic with the new deck wearing surface, the contractor shall form the bottom of the repair prior to the wearing surface. No payment will be made for forming the bottom of full depth monolithic repairs, including form removal.

5.9.5 Concrete or qualified repair mortars used for full depth repair shall be fully cured prior to the wearing surface.

5.10 Conventional Deck Repair with Void Tube Replacement After Hydro Demolition.

5.10.1 Following removal of unsound original concrete by hydro demolition and hand chipping, any areas requiring deck repair with void tube replacement will be identified by the engineer.

5.10.2 Deck repair with void tube replacement shall be in accordance with Sec 704 except that the removal is accomplished by hydro demolition and limited only to locations where the removal of concrete around the perimeter of the top transverse reinforcing steel is required.

5.10.3 Concrete or qualified repair mortars used for deck repair with void tube replacement shall be fully cured prior to the wearing surface.

5.11 Preparation of Deck for Concrete Wearing Surface.

5.11.1 All areas of the deck, where further removal of concrete was performed with pneumatic hammering after the hydro demolition, shall be thoroughly sand blasted to remove any loose material and micro-cracking. Containment and disposal of material shall be in accordance with Sec 202.

5.11.2 After completion of sand blasting and associated clean-up of debris, the entire deck surface shall be thoroughly cleaned by a minimum 7000 psi pressure water blasting to remove all debris and slurry residue within 24 hours before wearing surface placement begins. Water blasting shall continue until the run-off water from cleaning flows clear.

5.11.3 After cleaning, the deck surface shall be thoroughly saturated to the point that the surface does not dry out, and any excess water removed with compressed air. Clean polyethylene sheeting shall then be used to cover the deck completely until such time as the wearing surface is poured. Just prior to placement of the wearing surface, the deck shall be brought to a saturated surface dry (SSD) condition and maintained in a SSD condition throughout the pour, with no ponding of water.

5.12 Monolithic Deck Repair.

5.12.1 Monolithic deck repair is defined as providing and placing the deck wearing surface material necessary to fill all depressions in the deck below the bottom of the planned deck wearing surface thickness. This material is placed monolithic during the deck wearing surface process.

5.12.2 Any standing water on the deck or in the depressed areas shall be removed prior to placement of concrete wearing surface material. Hand vibrators shall be used in areas where concrete is being placed around reinforcement, deeper areas within the pour, and along curb lines and construction joints.

5.12.3 For polyester polymer concrete or low slump concrete wearing surfaces on all bridge decks and all concrete wearing surfaces on voided slab bridges, shallow areas shall be filled monolithically with the deck wearing surface.

5.12.4 For concrete wearing surfaces not covered by 5.12.3, shallow and deep areas, including approved full depth repair areas, shall be filled monolithically with the deck wearing surface. Deep areas shall be filled in advance during the wearing surface pour so that material stiffens enough that it will not roll back under the paving screed.

5.12.5 The volume of material necessary to fill areas removed by the contractor's negligence, including milling too deep during scarification and excessive overlap of hydro demolition passes, will be deducted from the total quantity of monolithic deck repair.

6.0 Method of Measurement.

6.1 Measurement for Removal of Existing Deck Repairs will be made to the nearest square foot. For bridges without special repair zones, measurement will include all sound and unsound

existing deck repairs. For bridges with special repair zones, measurement will only include all sound and unsound existing deck repairs outside special repair zones.

6.2 Measurement for conventional deck repair will be done in accordance with the pay items called for in the contract plans.

6.3 Measurement for Total Surface Hydro Demolition will be per square yard of the bridge deck as specified on the plans or shown in the contract. No final measurement will be made for hydro demolition except for authorized changes during construction or where appreciable errors are found in the contract quantity.

6.4 Measurement for Monolithic Deck Repair will be made to the nearest cubic yard. The quantity of monolithic deck repair will be determined by deducting the theoretical volume of material necessary to construct the deck wearing surface at plan thickness from the total volume of deck wearing surface material placed on the deck surface. Any volume of material wasted or used to fill depressed areas caused by the contractor's negligence in scarification or concrete removal will not be included in this quantity.

7.0 Basis of Payment

7.1 Payment for removal of an existing wearing surface, when required, and scarification will be as specified in Section 2.0.

7.2 Payment for Removal of Existing Deck Repairs will be made at the contract unit price.

7.3 Payment for conventional deck repair will be done in accordance with the pay items called for in the contract plans.

7.4 Payment for Total Surface Hydro Demolition of the bridge deck will be paid for at the contract unit price. Payment includes all work associated with the hydro demolition process including, but not limited to, ECP, equipment calibration, hand chipping curb areas, removal of remaining unsound original concrete, clean-up of debris and slurry, forming for full depth monolithic repairs, and preparation of the deck for concrete wearing surface.

7.5 Payment for Monolithic Deck Repair will be made at the fixed unit price for the type of wearing surface material specified in the plans. Payment includes all material, labor and equipment, and any other incidental items necessary to complete the work. Labor and equipment costs for placing the wearing surface concrete monolithically with the deck repair will be considered completely covered by the contract unit price for the concrete wearing surface. Fixed unit prices shall be \$700 per cubic yard for latex modified concrete.