


Job No.: J9M0283
Route: 77
County: CAPE
GIRARDEAU / SCOTT

JOB SPECIAL PROVISIONS TABLE OF CONTENTS (ROADWAY)

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

A.	General – State JSP-09-03L	1
B.	Contract Liquidated Damages JSP- 13-01D	1
C.	Work Zone Traffic Management JSP-02-06N	2
D.	Emergency Provisions and Incident Management JSP-90-11A	4
E.	Project Contact for Contractor/Bidder Questions JSP-96-05A	5
F.	Supplemental Revisions JSP-18-01KK	6
G.	Utilities JSP-93-26F	13
H.	Truck Mounted Attenuator (TMA) for Stationary Activities JSP-23-04	14
I.	Contractor Quality Control NJSP-15-42	14
J.	48” Flap Gate	16
K.	48” Steel Culvert – Horizontal Bore	19
L.	Seeding and Mulching Requirements JSP-25-03	26

 <p>THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY.</p>	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65102 Phone 1-888-275-6636
	HDR Engineering, Inc. 2139 E. Primrose, Suite E Springfield MO, 65807 Certificate of Authority: 000856 Consultant Phone: 417-351-6500
	If a seal is present on this sheet, JSP's have been electronically sealed and dated.
	JOB NUMBER: J9M0283 CAPE GIRARDEAU / SCOTTCOUNTY, MO DATE PREPARED: 9/26/2025
	ADDENDUM DATE:
Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: All	

JOB
SPECIAL PROVISION

A. General – State JSP-09-03L

1.0 Description. The Federal Government is not participating in the cost of construction of this project.

1.1 This contract requires payment of the prevailing hourly rate of wages for each craft or type of worker required to execute the contract as determined by the Missouri Department of Labor and Industrial Relations. The current State Wage Rates can be found on the Missouri Department of Transportation web page at www.modot.org under "Doing Business with MoDOT", "Contractor Resources" for the applicable bid opening. This supplemental bidding document has 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.

State Wage Rates

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 2025 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- 13-01D

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

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

Notice to Proceed: February 9, 2026
Contract Completion Date: July 1, 2026

Job No.: J9M0283
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2.1 Calendar Days and Completion Dates. Completion of the project is required as specified herein. The count of calendar days will begin on the date the contractor starts any construction operations on the project.

Project	Calendar Days	Daily Road User Cost
J9M0283	65	\$2,300

3.0 Liquidated Damages for Contract Administrative Costs. Should the contractor fail to complete the work on or before the contract completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged contract administrative liquidated damages in accordance with Sec 108.8 in the amount of **\$250** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the specified contract completion date or calendar days.

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

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

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

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

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

2.0 Traffic Management Schedule.

2.1 Traffic management schedules shall be submitted to the engineer for review prior to the start of work and prior to any revisions to the traffic management schedule. The traffic management

schedule shall include the proposed traffic control measures, the hours traffic control will be in place, and work hours.

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

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

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

2.5 Traffic Congestion. The contractor shall, upon approval of the engineer, take proactive measures to reduce traffic congestion in the work zone. The contractor shall immediately implement appropriate mitigation strategies whenever traffic congestion reaches an excess of 10 minutes to prevent congestion from escalating to 15 minute or above threshold. If disruption of the traffic flow occurs and traffic is backed up in queues of 15 minute delays or longer, then the contractor shall immediately review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from reoccurring. Traffic delays may be monitored by physical presence on site or by utilizing real-time travel data through the work zone that generate text and/or email notifications where available. The engineer monitoring the work zone may also notify the contractor of delays that require prompt mitigation. The contractor may work with the engineer to determine what other alternative solutions or time periods would be acceptable.

2.5.1 Traffic Safety.

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

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

3.0 Work Hour Restrictions.

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

6:00 a.m. on the first working day subsequent to the holiday unless otherwise approved by the engineer.

Memorial Day
Labor Day
Thanksgiving
Christmas
New Year's Day

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

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

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

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

4.0 Detours and Lane Closures.

4.1 At least one lane of traffic in each direction shall be maintained at all times except for brief intervals of time required when the movement of the contractor's equipment will seriously hinder the safe movement of traffic. Periods during which the contractor will be allowed to interrupt traffic will be designated by the engineer.

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

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

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

enforcement or other emergency agencies immediately as needed. The area engineer's office shall also be notified when the contractor requests emergency assistance.

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

Missouri Highway Patrol 573-840-9500		
City of Chaffee	City of Scott City	City of Cape Girardeau
Fire: 573-887-3558	Fire: 573-264-2126	Fire: 573-339-6330
Police: 573-887-6911	Police: 573-264-2121	Police: 573-335-6621

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

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

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

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

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

Seiji Shimbo, Project Manager

Southeast District
2675 N Main St.
Sikeston, MO 63801

Telephone Number: 573-380-9765
Email: Seiji.Shimbo@modot.mo.gov

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

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

F. Supplemental Revisions JSP-18-01KK

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

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

2. Stormwater Compliance Requirements

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

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

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

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

2.1 Duties of the WPCM:

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

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

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

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

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

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

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

3. *Delete Sec 106.9 in its entirety and substitute the following:*

106.9 Buy America Requirements.

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

106.9.1 Buy America Requirements for Iron or Steel Products.

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

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

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

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

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

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

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

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

106.9.2 Buy America Requirements for Construction Materials other than iron or steel products.

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

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

106.9.3 Buy America Requirements for Manufactured Products.

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

106.9.3.1 Produced in the United States, in the case of manufactured products, means:

(A) For projects obligated on or after October 1, 2025, the product was manufactured in the United States; and

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

106.9.3.2 (i) With respect to precast concrete products that are classified as manufactured products, components of precast concrete products that consist wholly or predominantly of iron or steel or a combination of both shall meet the requirements of paragraph (b) of this section. The cost of such components shall be included in the applicable calculation for purposes of determining whether the precast concrete product is produced in the United States.

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

106.9.4 Waiver for De Minimis Costs for Manufactured and Construction Materials other than iron or steel products.

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

4. Third-Party Test Waiver for Concrete Aggregate

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

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

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

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

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

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

3.1 The testing facility shall be AASHTO accredited.

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

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

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

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

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

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

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

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

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

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

6. *Add Sec 102.7.9 to include the following:*

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

bidding documents and submitted in accordance with Sec 102.10. Failure to disclose this information may result in a bid being declared irregular.

G. Utilities JSP-93-26F

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

<u>Utility Name</u>	<u>Known Required Adjustment</u>	<u>Type</u>
AT&T Jeff Speth 500 East Independence Drive Union, MO 63084 Phone: (573) 747-3516 Phone: (636) 630-3652 - cell Email: JS3295@ATT.com	None See 2.0	Communications
Ameren Missouri Electric Ray Perez 45 S Minnesota Avenue Phone: (573)-651-5723 Email: JPerez2@ameren.com	None See 2.1	Electric
Show-Me Technologies Jim Salaki 417-701-3793 FiberInfrastructure@shomepower.com	None See 2.2	Communications

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 AT&T Fiber Optic Line. AT&T has two existing fiber optic cables that parallel Route 77 along the west side of the road. The facilities are outside of the right-of-way in a utility easement. There are no anticipated impacts to the fiber optic cables.

2.1 Ameren Missouri Electric Grading Requirement. Ameren has an existing power pole at Route 77 Station 78+77, 160' Lt. that shall remain undisturbed. Excavation will not be allowed within 15' of the existing power pole. Temporary shoring shall be used, if necessary, to avoid grading within 15' of the power pole. No direct payment will be made for complying with this provision.

2.2 Show-Me Technologies Fiber Optic Line. Show-Me Technologies has a fiber optic cable that parallels Route 77 along the east side of the road. The fiber optic cable is in the vicinity of the launch pit. Locates determined the depth of the facility to be 7' beneath existing grade near the location of the culvert. Care should be taken to not disturb the existing utility when constructing the launch pit. No direct payment will be made for complying with this provision.

H. Truck Mounted Attenuator (TMA) for Stationary Activities JSP-23-04

1.0 Description. Provide and maintain Truck Mounted Attenuators (TMA) in accordance with Sec 612 and as specified herein.

2.0 Construction Requirements. Truck Mounted Attenuators (TMA) shall be used for the work activities indicated in the plans or specified herein.

2.1 Access to the west side of Route 77 from the shoulder – Access to the west side of Route 77 will be necessary for the excavation of the receiving pit. Stationary shoulder operations for mobilization or hauling material shall be protected by a TMA.

3.0 Method of Measurement. No measurement will be made for Truck Mounted Attenuators (TMA).

4.0 Basis of Payment. Delete Sec 612.5.1 and substitute with the following:

612.5.1 No payment will be made for truck mounted attenuators (TMAs) used in mobile operations or for any TMAs designated as optional.

612.5.1.1 Payment for TMAs required for stationary work activities will be paid for at the contract unit bid price for Item 612-30.01, Truck Mounted Attenuator (TMA), per lump sum. The lump sum payment includes all work activities that require a TMA, regardless of the number of deployments, relocations, or length of time utilized. No payment will be made for repair or replacement of damaged TMAs.

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. 48" Flap Gate

1.0 Description. This work shall consist of furnishing and installing flap gates of standard design and fitting the opening shown on the plans.

2.0 Materials. Flap gates shall be constructed as follows.

Job No.: J9M0283
Route: 77
County: CAPE
GIRARDEAU / SCOTT

BILL OF MATERIAL		
PC. #	DESCRIPTION	# REQUIRED
1	CONNECTING BAND - VAR LENGTH (A)	1
2	1/4" x 2" BAR x 2-1/2" LONG	2
3	1/4" PLATE COVER VAR DIA. (B) - UP TO 24" DIA. PIPE 3/8" PLATE COVER VAR DIA. (B) - ALL PIPES GREATER THAN 24" DIA.	1
4	1/4" x 2" BAR x VAR LENGTH (C)	2
5	1/4" x 2" BAR x 2" LONG W/BRASS BUSHINGS	2
6	7/16" Ø ROD x 8 1/2" LONG	1
7	FLAT BAND LUGS	2
8	1/2" Ø x 6" BAND BOLT & NUT	1
	ATTACHMENT BOLTS (3/8" Ø x 1 1/2" HEX. HEAD)	4

2.1 As a standard finish all gates shall be painted with a shop coat of red oxide.

3.0 Construction Requirements. Flap gates shall react to any difference in water level, and shall be hinged to seat accurately. Flap gates shall be constructed according to Figure 1 – Dimension Details, Figure 2 – Connecting Band and Figure 3 – Cover Plate.

4.0 Method of Measurement. For the basis of this contract, all materials used in constructing the flag gate shall be considered as a single unit. Measurement will be made per each unit installed by the contractor and accepted by the engineer.

5.0 Basis of Payment. The accepted quantity for flap gates, complete in place including connection to the pipe, will be paid for at the contract unit price of each for Item No. 732-99.02. No additional payment will be made for any labor, equipment or time necessary to fulfill the requirements of this special provision.

DIMENSION DETAILS			
PIPE DIA.	(A) CONNECTING BAND LENGTH	(B) PLATE COVER DIA.	(C) BAR LENGTH
15"	54"	18.5"	16"
18"	64"	21.5"	19"
21"	74"	24.5"	22"
24"	83"	27.5"	25"
30"	102"	33.5"	31"
36"	120"	39.5"	36"
42"	140"	45.5"	42"
48"	159"	51.5"	49"

Figure 1 – Dimension Details

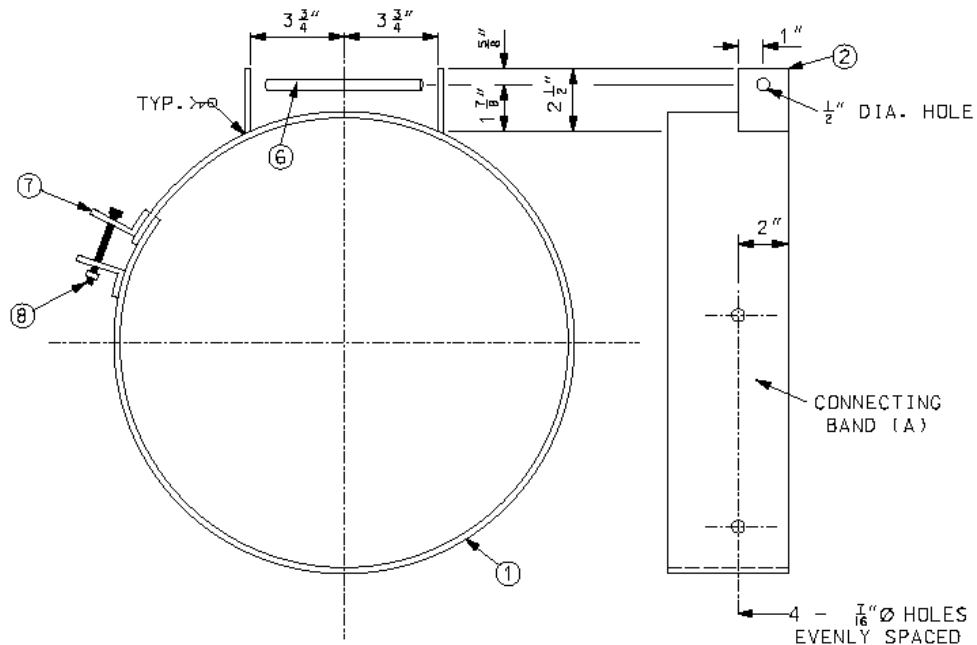


Figure 2 - Connecting Band

K. 48" Steel Culvert – Horizontal Bore

2.0 Materials.

The Carrier pipe shall be coated with 12 – 16 mils of approved fusion bonded epoxy (FBE) overlaid with 40 – 60 mils of abrasion resistant overcoat (ARO) coatings.
All girth welds shall be coated with approved 2-part epoxy-based coatings in accordance with the field applied coatings specifications.

3.0 Construction Requirements.

3.1 General requirements. The contractor chosen to perform this work shall present evidence to prove to the satisfaction of the commission and engineer that his company and the superintendent he will employ for this project have experience in conventional bore installations in subsurface conditions similar to that found on the project. The contractor shall keep such a superintendent continuously employed until the conventional bore installations are completed.

3.1.1 The pipe installer shall be a specialist in the construction of carrier pipes by conventional boring construction methods and shall have at least 5 years experience in this specialty. Installer shall have satisfactorily completely constructed in his own name, during the past five (5) years not less than ten (10) similar installations which are comparable in diameter and length to that shown and specified herein.

3.1.2 The contractor shall only use personnel thoroughly trained and experienced in the skills required for conventional boring. The field supervisor of boring operations and the boring machine operator shall not have less than 12 months experience in the operations of the equipment being used.

3.1.3 Welds shall be made only by experienced welders who shall have at least 5 years' experience in the specialty. Welders previously qualified by tests as prescribed in the American Welding Society, AWS D.1.1 to perform the type of work required are adequate.

3.1.4 The contractor shall perform topographical surveys prior to the beginning of any excavation in the workspace areas and upon completion of the carrier pipe installation and backfilling. The contractor shall initially verify the site conditions are consistent with those identified in the designs prior to excavation and then restore all existing surface and sub-surface facilities damaged due to measurable settlement.

3.1.5 The carrier pipe shall be placed approximately five (5') feet (Rte. 77 Sta 78+99) from the northern fill face of Bridge K0522. The contractor shall locate the fill-face of Bridge K0522 and confirm that the pipe alignment will provide at least five (5') of horizontal clearance.

3.1.6 The contractor shall be completely responsible and liable for protecting the work, adjacent Bridge K0522, and adjacent property from vibration, movement, settlement, heave, cracking, and other damage. The contractor shall submit a plan to monitor vibration, movement, and cracks at nearby structures during the conventional bore operations. A pre-construction plan to examine existing cracks and install vibration monitors on nearby structures prior to the start of the work shall also be submitted. Vibration monitors shall record movement continuously and be checked frequently by the contractor during the construction operations. If vibration, movement, or cracking is noticed to a degree that could or is suspected to cause damage, the construction operations shall be immediately ceased and the contractor's operations adjusted to prevent damage to nearby structures.

3.1.7 The contractor shall be responsible for losses and repairs resulting from damage to any above ground or underground infrastructure resulting from boring operations.

3.1.7 Dewatering will be necessary for construction. All boring pits shall be kept dewatered and pumps of adequate capacity shall be attended on a 24-hour basis, if conditions require. The contractor shall install watertight shoring and/or dewatering systems to combat groundwater

infiltration if high groundwater exists. Dewatering shall be performed prior to excavation, and during construction as necessary, to keep the work free from water.

3.1.8 The contractor shall install secondary spill containment beneath the boring machine, fuel tanks, and stationary equipment so any oil or hydrocarbon leaks can be contained and cleaned.

3.1.9 Water or boring fluid under pressure shall not be utilized for any phases of the construction operation. Any fluid used shall be for lubrication purposes only.

3.1.10 The contractor shall dispose of excess excavated material or boring fluids/cuttings in an approved off-site disposal site.

3.1.11 Equipment shall be of sufficient size/capacity to complete the conventional bore installations and should be in good working condition, supported by inspection/compliance certifications as appropriate for the relevant boring machine(s) and ancillary equipment. Sufficient spare parts for boring equipment and materials necessary for implementing mitigation measures shall be readily available such that an equipment failure does not extend construction delays.

3.1.12 Do not bring explosives onto site or use in the work. Use of explosive materials or blasting is specifically prohibited.

3.2 Subsurface Information

3.2.1 The contractor shall refer to the contract documents and supplementary geotechnical report for subsurface information.

3.2.2 Data on subsurface conditions is not intended as a representation or warranty of continuity of such conditions between soil borings. The engineer will not be responsible for interpretation or conclusions drawn therefrom by the contractor.

3.2.3 Additional test borings and other exploratory operations may be made by contractor at no cost to the commission.

3.3 Preparation

3.3.1 Bore pits at each end of the crossings shall be sufficiently large to permit satisfactory installation of the bore pipe and carrier pipe. All excavation, backfill, sheeting, shoring, bracing, and dewatering shall comply with the applicable requirements. Bracing, shoring, sheeting or other supports shall be installed as needed. The contractor shall install suitable reaction blocks for the jacks as required. Boring operations shall be continuous, and precautions shall be taken to avoid interruptions that might cause the carrier pipe to "freeze" in place. Upon completion of jacking operations, the reaction blocks, braces and all other associated construction materials shall be completely removed from the site. Appropriate barricades will be provided if pits are open overnight. Excavation shall be completely enclosed with barricades.

3.3.2 All pits and their locations necessary in the performance of this work shall be acceptable to the engineer prior to starting work. All pits shall be adequately sheeted to protect the work, all persons, and adjacent property. The contractor shall provide all additional shields, headers, or stabilization of the pit faces, as required by the engineer, to prevent settlement or damage to

the areas above the carrier pipe. The contractor shall be completely responsible and liable for protecting the work and adjacent property and for any damage that may result due to insufficient stabilization.

3.3.3 The contractor shall install launch seals at the crossings to reduce probability for water infiltration into the excavations at the face of the pits where excavations are, or could be, below the groundwater table.

3.3.4 The contractor shall verify all existing utility locations prior to constructing launching and receiving pits. The contractor shall carefully coordinate work at the crossing to avoid existing utilities.

3.3.5 The contractor shall maintain safe excavations with proper ingress and egress, in a condition suitable for the health of the workers at all times.

3.4 Delivery: The contractor shall exercise special care during the delivery not to damage the carrier pipe.

3.4.1 Damaged materials will be rejected by the engineer and replaced by the contractor, at no expense to the commission.

3.4.2 The contractor shall store the carrier pipe on approved clogging for protection from corrosion in accordance with the manufacturer's recommendation.

3.5 Installation of Steel Carrier Pipe by Conventional Boring

3.5.1 Design bracing, backstops, jacking frames, track systems, etc. such that the advancement of the initial bore pipe can be accomplished based on the anticipated thrust loads including a factor of safety without overstressing the pipe.

3.5.2 The boring method shall consist of advancing the initial sacrificial bore pipe into the ground while removing the material within the bore pipe as it is being advanced (continuously or intermittently) or once it has been advanced along the entire bore path. Material from within the bore pipe may be removed and conveyed back to the launch pit by auger flights or alternative methods, if approved by the commission. The subsurface material within the bore pipe shall be removed prior to installation of the carrier pipe. If desired by the contractor, and approved by the engineer, the carrier pipe designed for the crossing may be used for the initial pass to achieve a single pass installation.

3.5.3 The sections of steel carrier pipe shall be field welded in accordance with the applicable portions of American Water Works Association (AWWA) C206 and AWS D.1.1 for field welded pipe joints. The contractor shall wire brush the welded joints and paint with an approved material. After completion of jacking, the contractor shall clean the interior of the carrier pipe of all excess material. The contractor may propose an alternative to welding by providing a joint design that is appropriate for the application. Connections that do not require welding must be submitted to the engineer for approval.

3.5.4 The engineer will visually inspect 100 percent of all butt welds. The contractor shall notify the engineer at least 48 hours in advance of when welding will begin.

3.5.5 The contractor shall contract with a third-party testing agency to visually inspect the welds and the welder's procedures and processes. The third-party testing agency shall inspect 100 percent of all butt welds with full circumference radiographic inspection performed by approved non-destructive testing quality control personnel.

3.5.6 Defective welds shall be removed in a manner that permits proper and complete repair by welding. Any cut-outs and or repairs will be at the contractor's sole expense if the welds do not pass the inspection. Any repairs will be retested as stated above.

3.5.7 Unless otherwise approved, the overcut from the cutting head shall not be more than 1 inch around the circumference of the bore pipe outer diameter (i.e. the diameter of the excavated hole shall be no greater than the pipe outside diameter plus 2 inches).

3.5.8 If voids greater than the approved overcut develop around the carrier pipe as it is advanced, the contractor shall pump cement grout to fill all such voids or fill by other means acceptable to the engineer.

3.5.9 Provide the front of the bore pipe with suitable mechanical arrangements or devices that will positively prevent the auger and cutting head from leading the pipe so that there will be no unsupported excavation ahead of the pipe.

3.5.10 The face of the cutting edge shall be arranged to provide reasonable obstruction to the free flow of soft or poor soil.

3.5.11 The equipment and mechanical arrangements or devices used to bore and remove the earth shall be removable from within the bore pipe to evaluate line and grade and address scenarios where obstructions may be encountered.

3.5.12 If an obstruction is encountered during installation to stop the forward action of the bore pipe, and it becomes evident that it is impossible to advance the pipe, the contractor shall cease operations, notify the commission and await direction. The commission may require that the bore pipe is abandoned in place and filled with approved grout. Any abandonment, mitigation measures, redesign, and subsequent boring attempts will be completed by the contractor at no cost to the commission.

3.5.13 Upon advancing the bore pipe along the prescribed bore path and cleaning the interior of the pipe of subsurface material, the contractor shall take a final inventory and report the volume of material excavated from the hole created from boring operations to verify no excessive voids have been created. The contractor shall also submit the final X, Y, Z positions of the leading end of the bore pipe tabulated at approved intervals (20 feet or less) throughout the boring process for the engineer's review and approval prior to installation of the carrier and subsequent carrier pipes.

3.5.14 If the carrier pipe was not utilized for the initial pass, the leading end of the carrier pipe shall be welded onto the bore pipe and advanced along the bore path while the bore pipe is removed on the opposite side. The contractor shall minimize the number of welds on the carrier pipe and drives required based on the space available, jacking/thrusting mechanism used, and carrier pipe joint lengths. All girth welds will be welded, coated and inspected in accordance with the Contract Documents.

3.5.15 The carrier pipe shall be installed along the lines and grades shown on the plans and within the tolerances specified below.

The maximum allowable tolerances are as follows:

Horizontal – within six inches (6") per 100 feet of pipe.

Vertical – within three inches (3") per 100 feet of pipe.

Positive drainage shall be maintained between the inlet and the outlet of the new culvert.

The engineer will review any out-of-tolerance deviations on a case-by-case basis to determine if acceptable and notify the contractor.

3.6 Submittals and Reports

3.6.1 Execution Plan: Before starting work, the contractor shall submit execution plans, inclusive of drawings and descriptions showing means and methods for the excavation of the bore pits and sequential order of operations for installation of the carrier pipe for approval by the engineer. The contractor shall prepare a report that includes, but is not limited to:

- Resumes of key personnel and list of any subcontractors
- Site preparation accounting for access, ground disturbance, site grading, noise abatement, excavations, shoring, dewatering systems, endpoints seals, and equipment layout, at a minimum.
- Equipment list of all equipment that will be used to execute the work including size/capacity and relevant certifications
- Spare parts inventory
- Construction schedule including order of operations from mobilization to demobilization
- Shoring system and design, signed and sealed by MO PE if required
- Dewatering plan
- Mechanism/method by which to advance the sacrificial bore pipe and install the carrier pipe with estimated maximum jacking/thrust loads
- Mechanism/method by which to remove the material within the sacrificial bore pipe while/after it is installed
- Any pilot tube techniques planned with a detailed description for how they will be advanced
- Cutterhead design (if applicable)
- Launch seal design
- Boring fluid/lubrication Plan (no fluid under pressure is allowed)
- Estimated volume of excavated material for excavations and for the carrier pipe installation
- Fluids and solids disposal plan
- Contingency plans for, at a minimum:
 - Management/mitigation of excessive water infiltration
 - Deviations from line and grade tolerances
 - Identification of excavating excessive volumes of material
 - Spills of hydrocarbon or hazardous liquids
 - Encountering obstructions preventing the installation according to the Plans

- Subsidence or heave from operations

3.6.2 Reporting: The contractor shall submit the Boring Status according to Contract Documents. The contractor shall submit reports to engineer at end of each work shift. The contractor shall submit these reports in engineer approved format and shall include the following information, at a minimum:

- Supervisor on site, crew members on site, shifts/time worked;
- Description of work, phase of operation, boring equipment in use and footage completed;
- Maximum torque values on each drive;
- Maximum jacking/thrust force for each drive;
- Penetration rates for each drive;
- Water or boring fluid discharge rates, pressures, and pump times for each drive;
- Provide X, Y, Z location data of the leading end of the bore pipe for each check as compared to the design bore path and report any deviations and corrections made;
- Computer printout of directional survey report;
- Volume of excavated material (removed from inside the pipe) and total progress of pipe advancement (footage);
- Water acquisition volumes and daily consumption from each permitted source;
- Daily total of Bentonite and boring fluid used and total to date;
- Disposal quantities of liquids and solids;
- Disposal bill of lading/trip ticket and lab sample results;
- Schedule updates;
- Execution Plan updates;
- List of any submitted and/or approved changes to the Execution Plan during that shift.

3.6.3 The contractor shall provide technical data, test reports, and work schedule as required by the engineer.

3.6.4 The contractor shall provide material test reports and certificates of conformance in accordance with the designated material standard.

4.0 Method of Measurement. Final payment will be made based on the final length of Item No. 734-99.03 "48" Steel Culvert – Horizontal Bore", measured in linear feet along the centerline of the culvert.

5.0 Basis of Payment. No direct payment will be made for preparation of the topographic survey, boring pits, excavation, dewatering, shoring and bracing, settlement monitoring, welding, submittals, and reporting as described in this provision. All labor, equipment, time, and materials and other costs needed to comply with this provision and associated with the bored culvert will be completely covered by the contract unit price for Item No. 734-99.03 "48" Steel Culvert – Horizontal Bore".

L. Seeding and Mulching Requirements JSP-25-03

1.0 Seeding. Seeding shall be in accordance with Sec. 805 except as otherwise stated herein. Cool season grasses shall be utilized in accordance with Standard Plan 805.00.

1.1 Temporary Seeding. Temporary seeding shall be in accordance with Sec. 806.50 except as otherwise stated herein.

2.0 Mulching. Mulching shall be in accordance with Sec. 802 except as otherwise stated herein.

3.0 Method of Measurement. No measurement will be made for seeding, temporary seeding or mulching. Seeding and mulching of all disturbed areas, including any additional areas disturbed beyond what is shown on the plans, shall be considered included in the single lump sum item provided.

4.0 Basis of Payment. All labor, equipment, and materials necessary to complete all seeding, temporary seeding and mulching shall be completely covered under the lump sum price for item 805-99.01, Seeding and Mulching - Cool Season Grasses.