

Job No.: J4S3412

Route: 1

County: Clay

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

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 <p>THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.</p>	<b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b> 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65102 Phone 1-888-275-6636
	<b><i>Wilson &amp; Company</i></b> 800 East 101 <sup>st</sup> Terrace, Suite 200 Kansas City, MO 64131 Certificate of Authority: 2003007599 Consultant Phone: (816) 701-3100
	If a seal is present on this sheet, JSP's have been electronically sealed and dated.
	JOB NUMBER: J4S3412 CLAYCOUNTY, MO DATE PREPARED: 03/03/2025
	ADDENDUM DATE: <b><u>R002 May 12, 2025</u></b>
Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: All	

JOB  
SPECIAL PROVISION

A. General - Federal JSP-09-02K

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

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

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

General Provisions & Supplemental Specifications

Supplemental Plans to April 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.

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Notice to Proceed: July 7, 2025  
Contract Completion Date: November 1, 2026

**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
 <b>REVISED</b>	<b>J4S3412 – Reconstruction</b>	<b>N/A</b>	<b>\$5,400</b>
 <b>REVISED</b>	<b>J4S3412 – Resurfacing</b>	<b>N/A</b>	<b>\$5,400</b>

**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 **\$2,000** 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 **15 minutes** to prevent congestion from escalating beyond this delay threshold. If disruption of the traffic flow occurs and traffic is backed up in queues equal to or greater than the delay time threshold listed above, then the contractor shall immediately review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from reoccurring. Traffic delays may be monitored by physical presence on site or by utilizing real-time travel data through the work zone that generate text and/or email notifications where available. The engineer monitoring the work zone may also notify the contractor of delays that require prompt mitigation. The contractor may work with the engineer to determine what other alternative solutions or time periods would be acceptable. When a Work Zone Analysis Spreadsheet is provided, the contractor will find it in the electronic deliverables on MoDOT's Online Plans Room. The contractor may refer to the Work Zone Analysis Spreadsheet for detailed information on traffic delays.

#### **2.5.1 Traffic Safety.**

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

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

**2.6 Traffic Management Center (TMC) Coordination.** The Work Zone Specialist (WZS) or their designee shall contact by phone the MoDOT Traffic Management Center (KC Scout TMC at #816-347-2250 or Gateway Guide TMC at #314-275-1513) within five minutes of a lane or ramp closure

beginning and within five minutes of a lane or ramp closure being removed. The WZS shall make this phone call 24 hours a day, 365 days of the year since the MoDOT Traffic Management Centers are always staffed.

### 3.0 Work Hour Restrictions.

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

Memorial Day  
Labor Day  
Thanksgiving  
Christmas  
New Year's Day

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

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

**3.1.2** The contractor's working hours will be restricted for the Special Events as shown below. All lanes shall be scheduled to be open to traffic during these Special Events.

2026 World Cup  
Tuesday, June 16, 2026  
Saturday, June 20, 2026  
Thursday, June 25, 2026  
Saturday, June 27, 2026  
Friday, July 3, 2026  
Saturday, July 11, 2026

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

**3.3** The contractor shall be aware that traffic volume data indicates construction operations on the roadbed between the following hours will likely result in traffic queues greater than 15 minutes.



**Route 1 Northbound (64<sup>th</sup> Street to NE 44<sup>th</sup> Street):  
12:00 Noon - 6:00 p.m. Monday through Friday**

Based on this, the contractor's operations will be restricted accordingly unless it can be successfully demonstrated the operations can be performed without a 15 minute queue in traffic. It shall be the responsibility of the engineer to determine if the above work hours may be modified. Working hours for evenings, weekends and holidays will be determined by the engineer. ~~The contractor may not work during the following listed hours:~~

~~**Route 1 Northbound (64<sup>th</sup> Street to NE 44<sup>th</sup> Street):  
12:00 Noon - 6:00 p.m. Monday through Friday**~~



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

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

#### **4.0 Detours and Lane Closures.**

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

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

**5.0 Basis of Payment.** No direct payment will be made to the contractor to recover the cost of equipment, labor, materials, or time required to fulfill the above provisions, unless specified

elsewhere in the contract document. All authorized changes in the traffic control plan shall be provided for as specified in Sec 616.

D. **Liquidated Damages Specified**

**1.0 Description.** If construction of the staged construction from 72<sup>nd</sup> to 64<sup>th</sup> street necessary to open Route 1 to traffic (to include all grading, paving, drainage structures, pavement marking, and permanent signing) is not completed by December 31, 2025, the Commission, the traveling public, and state and local police and governmental authorities will be damaged in various ways, including but not limited to potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delay, with its resulting cost to the traveling public.

**2.0 Liquidated Damages Specified for Failure to Complete Work on Time.** These costs are not reasonably capable of being computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of \$5,400 per day for each full day that all construction of the staged construction from 72<sup>nd</sup> to 64<sup>th</sup> street necessary to open Route 1 to traffic (to include all grading, paving, drainage structures, pavement marking, temporary erosion control, and permanent signing) is not completed and open to traffic, in excess of the limitation as specified elsewhere in the special provision. It will be the responsibility of the engineer to determine the quantity of excess closure time.

**2.1** The said liquidated damages specified will be assessed in addition to any other liquidated damages charged under the Missouri Standard Specifications for Highway Construction, as indicated elsewhere in this contract.

**2.2** This deduction will continue until such time as the necessary work is completed and traffic is restored.

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

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

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

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

**2.1** The ADA Checklist is not to be considered all-inclusive, nor does it supersede any other contract requirements. The ADA checklist is a required guide for the contractor to use during the construction of the pedestrian facilities and a basis for the commission's acceptance of work. Prior to work being performed, the contractor shall bring to the engineer's attention any planned work that is in conflict with the design or with the requirement shown in the checklist. This notification shall be made in writing. Situations may arise where the checklist may not fully address all requirements needed to construct a facility to the full requirements of current ADA law. In those situations, the contractor shall propose a solution to the engineer that is compliant with

current ADA law using the following hierarchy of resources: 2010 ADA Standards for Accessible Design, Draft Public Rights of Way Accessibility Guidelines (PROWAG) dated November 23, 2005, MoDOT's Engineering Policy Guidelines (EPG), or a solution approved by the U.S. Access Board.

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

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

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

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

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

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

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

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

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

F. **Liquidated Damages Specified for Entrance Closures**

**1.0 Construction and Closure of Entrances.** The Contractor shall provide ingress and egress at all times for each property owner along the project either by constructing the new approach half at a time or by providing temporary access as approved by the Engineer. Businesses with two or more entrances shall have only one entrance closed at a time. However, in the case of a property having one approach used exclusively as an entrance and another approach exclusively as an exit, the approaches shall be built one half at a time to provide safe traffic movement into and out of the properties. See **job** special provision “**Access to Commercial and Private Properties**” for further details.

2 REVISED

**1.1** If each entrance, once construction has started, is not completely constructed to plan design and opened to traffic within the **time limits stated in JSP ACCESS TO COMMERCIAL AND PRIVATE PROPERTIES**, the City, the traveling public, and state and local police and governmental authorities will be damaged in various way, including but not limited to, increased construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delay, with its resulting cost to the traveling public. These damages are not reasonably capable of being computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of **\$500 per day per entrance for each full day** that the entrance is not fully complete and 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 excess closure time.

2 REVISED

**2.0** That said liquidated damages specified will be assessed regardless if whether it would otherwise be charged as liquidated damages under the Missouri Standard Specification for Highway Construction.

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

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

**2.0 Disassembly and Delivery.**

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

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

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

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

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

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

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

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

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

Missouri Highway Patrol Troop A 816-622-0800	
City of Kansas City	City of Gladstone
Fire: 816-513-4600	Fire: 816-436-3550
Police: 816-234-5111	Police: 816-436-3550

**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.

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

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

Ben McCabe, P.E, Project Manager  
Kansas City District  
600 NE Colbern Rd.  
Lee's Summit, MO 64086  
Telephone Number: 816-607-2097  
Email: [Benjamin.McCabe@modot.mo.gov](mailto:Benjamin.McCabe@modot.mo.gov)

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

J. Supplemental Revisions JSP-18-01FF

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

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

- Stormwater Compliance Requirements

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

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

**1.2 Reporting of Off-Site Land Disturbance.** If the project includes any planned land disturbance on the project site, prior to the start of work, the contractor shall submit a written report to the engineer that discloses all Off-site support areas where land disturbance is planned,

the total acreage of anticipated land disturbance on those sites, and the land disturbance permit number(s). Upon request by the engineer, the contractor shall submit a copy of its land disturbance permit(s) for Off-site locations. Based on the total acreage of land disturbance, both on and Off-site, the engineer shall determine if these Stormwater Compliance Requirements shall apply. The Contractor shall immediately report any changes to the planned area of Off-site land disturbance. The Contractor is responsible for obtaining its own separate land disturbance permit for Off-site areas.

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

**2.1 Duties of the WPCM:**

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

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

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

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

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

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

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

- **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 and Steel.**

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

**106.9.1.1 Buy America Requirements for Iron and Steel for Manufactured items.**

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

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

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

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

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

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

**106.9.4.3** Any minor miscellaneous steel or iron items that are not included in the materials specifications shall be certified by the prime contractor as being procured domestically. Examples of these items would be bolts for sign posts, anchorage inserts, etc. The certification shall read

"I certify that all steel and iron materials permanently incorporated in this project during all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements procured and processed domestically in accordance with CFR Title 23 Section 635.410 Buy America Requirements. Any foreign steel used was submitted and accepted under minor usage". The certification shall be signed by an authorized representative of the prime contractor.

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

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

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

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

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

**106.9.7 Buy America Requirements for Manufactured Products.**

Manufactured products means:

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

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

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

- Pavement Marking Paint Requirements for Standard Waterborne and Temporary

**1.0 Description.** High Build acrylic waterborne pavement marking paint shall be used in lieu of standard acrylic waterborne pavement marking paint for all Standard Waterborne Pavement Marking Paint items and all Temporary Pavement Marking Paint items. Paint thickness, bead type, bead application rate, retroreflectivity requirements, and all other specifications shall remain as stated in the Missouri Standard Specifications for Highway Construction, except as otherwise amended in the contract documents.

**2.0 Material Requirements.** Material requirements for Sec 620.20.2.5 Standard Waterborne Paint, and Sec 620.10.2 Temporary Pavement Marking Paint shall be per Sec 1048.20.1.2 High Build Acrylic Waterborne Pavement Marking Paint.

- 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  $\pm 2.0$  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 modulus of elasticity and percent length change for each individual concrete specimen. Raw data shall include initial measurements made at zero cycles and every subsequent measurement of concrete specimens. Raw data shall include the cycle count and date each measurement was taken. Test results shall also include properties of the concrete mixture as required by AASHTO T 161. This shall include the gradation of the coarse aggregate sample. If AASHTO T 152 is used to measure fresh air content, then the aggregate correction factor for the mix determined in accordance with AASHTO T 152 shall also be included.

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

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

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

**15.0 Bidder's List Quote Summary.** MoDOT is a recipient of federal funds and is required by 49 CFR 26.11 to provide data about its DBE program. All bidders who seek to work on federally assisted contracts must submit data about all DBE and non-DBEs in accordance with Sec 102.7.9. MoDOT will not compare the submitted Bidder's List Quote Summary to any other

documents or submittals, pre or post award. All information will be used by MoDOT in accordance with 49 CFR 26.11 for reporting to USDOT and to aid in overall DBE goal setting.

- **Add Sec 102.7.9 to include the following:**

**102.7.9 Bidder's List Quote Summary.** Each bidder shall submit with each bid a summary of all subcontractors, suppliers, manufacturers, and truckers 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.

K. Winter Months Requirements JSP-15-07A

**1.0 Description.** This project contains work which spans the winter months.

**2.0 Work to be Completed.** When the contractor ceases operations for the winter months, any paving operation performed by the contractor shall not result in a lane height differential between adjacent lanes.

**3.0 Maintenance of Pavement Marking.** Prior to ceasing operations for winter months, a permanent or temporary stripe shall be provided on any completed length to the point that the original stripe was obliterated or obscured by the contractors' operation. Temporary striped areas shall be re-striped with the remaining route upon performance of the final striping.

**4.0 Winter Related Maintenance Activities.** The contractor shall have the project in a condition as not to interfere with the plowing of snow. The contractor shall also provide a taper at the end of his paving that will not be damaged by the plowing of snow.

**5.0 Basis of Payment.** There will be no direct pay for compliance with this provision.

L. Contractor Quality Control NJSP-15-42

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

**2.0 Quality Control Plan.**

- (a) The name and contact information of the person in responsible charge of the QC testing.
- (b) A list of the QC technicians who will perform testing on the project, including the fields in which they are certified to perform testing.
- (c) A proposed independent third party testing firm for dispute resolution, including all contact information.

- (d) A list of Hold Points, when specified by the engineer.
- (e) The MoDOT Standard Inspection and Testing Plan (ITP). This shall be the version that is posted at the time of bid on the MoDOT website ([www.modot.org/quality](http://www.modot.org/quality)).

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

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

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

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

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

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

#### **4.0 Work Planning and Scheduling.**

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

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

**4.3 Pre-Activity Meeting.** A pre-activity meeting is required in advance of the start of each new activity, except when waived by the engineer. The purpose of this meeting is to review construction details of the new activity. At a minimum, the discussion topics shall include: safety precautions, QC testing, traffic impacts, and any required Hold Points. Attendees shall include

the engineer, the contractor superintendent and the foreman who will be leading the new activity. Pre-activity meetings may be held in conjunction with the weekly project meeting.

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

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

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

**5.0 Quality Assurance Testing and Inspection.** MoDOT will perform quality assurance testing and inspection of the work, except as specified herein. The contractor shall utilize the inspection checklists provided in the ITP as a guide to minimize findings by MoDOT inspection staff. Submittal of completed checklists is not required, except as specified in 5.1.

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

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

M. Disposition of Existing Signal/Lighting and Network Equipment JSP-15-05A

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

Stadium Maintenance Lot  
9101 E 40<sup>th</sup> Terrace  
Building B  
Kansas City, MO 64133

**2.0 Signal Equipment.** All equipment other than network communication devices noted in 3.0 are to be transported to the address listed above. The contractor shall notify the Commission's representative 24 hours prior to each delivery by calling the phone number listed above and ask for the field traffic supervisor.

**3.0 Network Communication Devices.** Devices such as CCTV cameras and domes, video encoders, device servers, Ethernet switches, media converters, and radio assemblies are to be transported to the address listed below. The contractor shall notify the Commission's representative 24 hours prior to each delivery by calling phone number listed below and providing details for the delivery.

Stadium Maintenance Lot  
9101 E 40<sup>th</sup> Terrace  
Building B  
Kansas City, MO 64133

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

**5.0 Basis of Payment.** Payment for removal, handling and transportation of all equipment specified shall be considered completely covered by the contract unit price for 202-20.10, Removal of Improvements, per lump sum.

N. ADA Material Testing Frequency Modifications JSP-23-01

**1.0 Description.** This provision revises the Inspection and Testing Plan (ITP) for the construction of ADA compliant features to better match the nature of the work. The Quality Control (QC) testing frequency for the Sections identified below are to be revised as specified.

**2.0 Compaction Test on Base Rock Under Sidewalk, Curb Ramps and Paved Approaches.** (Revises ITP Sec 304.3.4) The required test frequency will be one per 600 tons.

**3.0 Gradation Test on Base Rock Under Sidewalk, Curb Ramps and Paved Approaches.** (Revises ITP Sec 304.4.1) The required frequency will be one per 500 tons.

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

**5.0 Concrete Median, Median Strip, Sidewalk, Curb Ramps, and Curb.** (Revises ITP Sec 608) The required frequency will be the first truckload for the project and each 100 CUYDs for air and slump thereafter. Strength will be verified by use of cylinders or maturity meters at a minimum rate of one per 100 CUYD.

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

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

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

O. **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 Mark Manion 2121 E 63 <sup>rd</sup> Kansas City, MO 64160 Phone: (314) 275-0020 Phone: (816) 772-0267 - cell Email: <a href="mailto:mm256t@att.com">mm256t@att.com</a>	Yes	Communications
Kansas City Water Jeff Martin 4800 East 63 <sup>rd</sup> Street Kansas City, MO 64130 Phone: (816) 513-0296 Email: <a href="mailto:Jeff.Martin@kcmo.org">Jeff.Martin@kcmo.org</a>	Yes	Water
Kansas City Sewer Khoa Nguyen 4800 East 63 <sup>rd</sup> Street Kansas City, MO 64130 Phone: (816) 513-0264 Email: <a href="mailto:Khoa.Nguyen@kcmo.org">Khoa.Nguyen@kcmo.org</a>	Yes	Sewer
Kansas City Traffic Sam Akula 5310 Municipal Ave Kansas City, MO 64120 Phone: (816) 513-9861 Email: <a href="mailto:Sam.Akula@kcmo.org">Sam.Akula@kcmo.org</a>	Yes	Traffic
Kansas City Streetlight Victor Pecina 5310 Municipal Ave Kansas City, MO 64120 Phone: (816) 513-9868 Email: <a href="mailto:Victor.Pecina@kcmo.org">Victor.Pecina@kcmo.org</a>	No	Streetlight

2 ADDED

City of Gladstone (Water, Sewer, Traffic Signal, Sanitary, Storm) Tim Nebergall 4000 NE 76 <sup>th</sup> Street Gladstone, MO 64119 Phone: (816) 436-5442 Email: <a href="mailto:timn@gladstone.mo.us">timn@gladstone.mo.us</a>	No	Water, Traffic Signal, Sanitary Sewer, Storm
Evergy Brent Gerling 8325 N Platte Purchase Dr Kansas City, MO 64118 Phone: (816) 420-4814 Email: <a href="mailto:brent.gerling@evergy.com">brent.gerling@evergy.com</a>	Yes	Electric
Google Lauren Marcucci Phone: (877) 454-6959 Email: <a href="mailto:lmarcucci@google.com">lmarcucci@google.com</a>	Yes	Fiber
Lumen Rick Redel 711 E 19 <sup>th</sup> Street Kansas City, MO 64108 Phone: (816) 518-2804 Email: <a href="mailto:richard.redel@lumen.com">richard.redel@lumen.com</a>	Yes	Fiber
MCI/Verizon Joe Bullimore 10740 Nell Ave Suite 400 Overland Park, Kansas 66211 Phone: (913) 609-1024 <a href="mailto:Jospeh.Bullimore@verizon.com">Jospeh.Bullimore@verizon.com</a>	Yes	Fiber
North Kansas City District #74 Joel Brooks 6469 North Prospect Gladstone, MO 64119 Phone: (816) 507-0050 Email: <a href="mailto:Joel.Brooks@nkcschools.org">Joel.Brooks@nkcschools.org</a>	No	General
Spectrum Delbert Kimbrough 8221 West 119 <sup>th</sup> Overland Park, Kansas 66213 Phone: (816) 365-5679 Email: <a href="mailto:delbert.kimbrough@charter.com">delbert.kimbrough@charter.com</a>	Yes	Fiber

Spire Chloe Luckeroth 7500 E 35 <sup>th</sup> Terrace Kansas City, Missouri 64129 Phone: (816) 634-4584 Email: <a href="mailto:chloe.luckeroth@spireenergy.com">chloe.luckeroth@spireenergy.com</a>	Yes	Gas
United Private Network Brandon Myer 120 West 12 <sup>th</sup> Street 11 <sup>th</sup> Floor Kansas City, MO 64105 Phone: (816) 206-4257 Email: <a href="mailto:brandon.myer@upnfiber.com">brandon.myer@upnfiber.com</a>	Yes	Fiber

**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.

**P. Non-Tracking Tack JSP-24-02A**

**1.0 Description.** This work requires application of tack in accordance with Sec 407 and prevention of tack loss from the surface as specified herein. Tack loss prevention shall be accomplished with successful usage of a MoDOT-approved non-tracking tack, or other acceptable non-tracking means, as approved by the engineer.

**2.0 MoDOT-Approved Non-Tracking Tack.** A list of MoDOT-approved non-tracking tack products is available at MoDOT.org under the Materials Qualified List. Upon request from the contractor, the MoDOT Division of Construction & Materials will consider allowance of other non-tracking products. To be approved, the contractor must successfully demonstrate that the proposed product meets the non-tracking requirements specified in section 3.0. The location of a contractor demonstration will only be allowed in areas approved by the engineer. The engineer will make final determination of product acceptance based on observation of the results of the contractor's demonstration.

**2.1** Products on the Qualified List have demonstrated successful non-tracking performance on previous projects; however, the Commission does not endorse nor guarantee success of any of the listed products. Success is dependent on the contractor choosing a product that can achieve the desired results while also taking into consideration all factors, including, but not limited to, cure time, weather conditions, surface prep, surface type, material properties, and adherence to manufacturer's instructions. The contractor is responsible for monitoring adherence of the tack to the pavement surface and shall cease operations when tack first begins to show signs of not meeting the requirements of Section 3.0. Corrective action shall be made prior to resuming tacking operations.

**3.0 Non-Tracking Requirements.** Non-tracking tack shall remain adhered to the pavement surface when exposed to any wheeled or tracked vehicles. The tack shall not track off the surface within 30 minutes of being applied, and shall not stick to the tires, tracks or other parts of paving equipment or vehicles such that the underlying surface becomes visible or void of tack prior to the placement of the hot mix asphalt. The tack shall not track onto any adjacent lanes, pavement markings, driveways, sideroads, etc.

**3.1** The contractor shall be responsible for cleaning all tracked tack from adjacent lanes, driveways, sideroads, etc., and shall replace all pavement markings that become coated with tracked tack. This cleaning and replacement requirement applies to both approved and proposed non-tracking products.

**4.0 Basis of Payment.** Measurement and payment shall be in accordance with Sec 407. The accepted quantity of non-tracking tack coat will be paid for per gallon at the contract unit price for 407-10.07 Tack Coat – Non-Tracking, per gallon. No additional payment will be made for the cost to demonstrate proposed products, for cleaning surfaces due to tracking of tack, or for replacement of pavement marking damaged by tracked tack.

Q. DBE Prompt Payment Reporting JSP-24-05B

**1.0 Description.**

**1.1** This provision will only apply to contracts that have a Disadvantaged Business Enterprise (DBE) goal greater than 0% and have at least one DBE subcontractor.

**1.2** MoDOT monitors the payments made by prime contractors and subcontractors to DBEs for compliance with DBE payment monitoring rules as outlined in 49 CFR 26.37. To facilitate this monitoring, MoDOT requires prime contractors to report their remitted payments to DBEs and subcontractors to report their remitted payments to lower-tier DBEs.

**1.3** Tracking of DBE payments are made through the Signet™ application (Signet). Signet is a third-party service, supported by the vendor, for usage by the prime contractor and all subcontractors. Signet is only a reporting tool; it does not process financial transactions. MoDOT does not provide direct technical support for Signet. Information about Signet may be found at <https://signet-help.zendesk.com/hc/en-us>.

**1.4** Upon completion of the first pay estimate on the contract, Signet will automatically send an email to the prime contractor prompting registration. The prime will be required to pay a one-time, fixed fee of \$1,000 for this contract directly to the Signet vendor. Use of Signet to track DBE payments will be available for the life of the contract, regardless of the contract value, contract duration, number of subcontractors, or payments reported. No additional fee will be charged to subcontractors that are required to report payments or DBEs that are required to verify payments through Signet. The contractor may also, at no additional cost, report payments through Signet to subcontractors that are not DBEs.

**1.5** After each estimate, when contractor reporting of payments is complete, the subcontractor will receive an email notifying them of the payment and requesting verification of the reported payment. A subcontractor that has not completed registration with Signet will be prompted to do so at this time.

**1.6** Users will be set up automatically based on information in MoDOT's vendor list. Additional users under each contractor may be added once registration has been completed within Signet. The current vendor list can be found at <https://www.modot.org/bid-opening-info>.

**1.7** For purposes of this requirement, payer is defined as the prime contractor or subcontractor that reports a payment in Signet to a vendor that is either a subcontractor, trucker, manufacturer, regular dealer, or broker. Payee is defined as the vendor that receives notification of payment through Signet from the prime contractor or a higher-tier subcontractor. Payment is defined as issuing an Electronic Funds Transfer (EFT) or mailing a check to a payee.

**2.0 Requirements.** Payers must report remitted payment to DBEs within Signet, for work performed by the DBE subcontractor, DBE trucking, materials supplied from a DBE manufacturer, dealer, or broker, as well as a return of retainage (and/or other amounts withheld), within 15 calendar days.

**2.1** Prime contractors must report remitted payments to DBEs within 15 calendar days of each payment it receives from MoDOT. Prime contractors must also report payments to non-DBE subcontractors if that subcontractor is making payment to a lower tier DBE subcontractor, trucker, manufacturer, regular dealer, or broker.

**2.2** The payer must report the following information within Signet:

- a. The name of the payee.
- b. The dollar amount of the payment to the payee.
- c. The date the payment was made.
- d. Any retainage or other amount withheld (if any) and the reason for the withholding (if other than retainage).
- e. The DBE function performed for this payment (e.g., contracting, trucking, or supplying as a manufacturer, dealer, or broker).
- f. Other information required by Signet.

The payer must report its return of retainage (and/or other amounts withheld) in separate, standalone payment entries (i.e., without being comingled with a payment for work performed or materials supplied).

**2.3** In the event that no work has been completed by a DBE during the estimate period, such that no payment is due to a DBE subcontractor, trucker, manufacturer, regular dealer, or broker, then the prime contractor will mark payment complete within Signet, and no other payments are required to be reported.

**2.4** Each subcontractor making a payment to a lower-tier DBE must report remitted payments within Signet, as detailed in Section 2.2, within 15 days of receipt of each payment from the prime contractor.

**2.5** DBE payees must verify in Signet each payment reported by a payer within 15 calendar days of the payment being reported by the payer. This verification includes whether the payment was received, and if so, whether it was as expected.

**3.0 Basis of Payment.** A fixed cost of \$1,000 will be paid on this contract for the required software to report payments to DBEs through Signet. Regardless of the number of projects in a

contract, a single payment will be made under item 108-10.00, SIGNET DBE REPORTING, per lump sum. The engineer reserves the right to underrun this item for any reason. Any additional costs for registration, software, usage, time, labor, or other costs will be considered incidental and no direct payment will be made.

R. **Alternates for Pavements** JSP-96-04G

**1.0 Description.** This work shall consist of a pavement composed of either portland cement concrete or asphaltic concrete, constructed on a prepared subgrade in accordance with the standard specifications and in conformity with the lines, grades, thickness and typical cross sections shown on the plans or established by the engineer.

**1.1** Separate pay items, descriptions and quantities are included in the itemized proposal for each of the alternates. The bidder shall only bid one of the alternates and leave the contract unit price column blank for any pay item listed for any other alternate. If the bidder leaves any value in the unit price column for another alternate other than the one they are bidding, the bid will be rejected.


**2.0 Mainline Pavements**

**2.0.1** A sum of **\$476,600** will be added by the Commission to the total bid using an asphalt alternate for the pavement for bid comparison purposes to factor in life cycle cost analysis of the roadway. The additional amount added will not represent any additional payment to be made to the successful bidder and is used only for determining the low bid.

**2.1** The quantities shown for each alternate reflect the total square yards of pavement surface designated for alternate pavement types as computed and shown on the plans. 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** The grading shown on the plans was designed for the concrete pavement alternate.

**2.3** Pavement alternates composed of Portland cement concrete shall have contrast pavements for intermittent markings (skips), dotted lines, and solid intersection lane lines. The pavement markings shall comply with Sec 620. No additional payment will be for the contrast pavement markings.

 **ADDED**

**Delete Sec 502.5.4 and substitute the following:**

**502.5.4 Sealing Joints.** All sawed joints shall be **sealed**, unless otherwise specified. Sawed or formed joints shall be sealed with joint sealing material before the pavement is opened to any traffic, including construction traffic. Immediately prior to sealing, the joints shall be thoroughly cleaned and dried. The sealing material shall be heated to the pouring temperature recommended by the manufacturer. Any material which has been heated above the maximum safe heating temperature will be rejected. Any excess material shall be removed from the pavement surface.

 **ADDED**

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

**4.0 Basis of Payment.** The accepted quantity of the chosen alternate and other associated items will be paid for at the unit price for each of the appropriate pay items included in the contract.

**4.1** For projects with previously graded roadbeds, any additional quantities required to bring the roadway subgrade to the proper elevation will be considered completely covered by the pay item for Subgrading and Shouldering.

**4.2** For projects with grading in the contract, there will be no adjustment of the earthwork quantities due to adjusting the roadway subgrade for alternate pavements.

S. Rapid Set Concrete Patching Material – Horizontal Repairs JSP-02-10

**1.0 Description.** This specification covers cementitious concrete, polymer-modified concrete and polymer concrete that are suitable for repairing concrete surfaces on bridges or roadways, particularly under fast setting or special conditions. The repairs would involve horizontal applications. The work shall consist of removing, furnishing, preparing, and placing materials at locations as shown on the plans or as directed by the engineer.

**2.0 Material.** All materials shall be in accordance with MoDOT specifications and as noted herein.

**2.1 Aggregate For Extending Commercial Mixture.** Coarse and fine aggregates shall be in accordance with [Sec 1005](#), except the requirements for gradation and percent passing the No. 200 sieve shall not apply. Coarse aggregate meeting Gradation E requirements shall be used for repairs greater than one inch (25 mm) in depth. Fine aggregate will be allowed for repairs less than one inch (25 mm). Aggregate specified, bagged, labeled and furnished by the rapid set concrete patching material manufacturer may also be used for mortar extension.

**2.2 Material Applications.** The contractor shall select and use the product most suitable for the work and field conditions in accordance with these specifications.

**2.3 Curing.** Rapid set concrete patching material shall be cured until the minimum compressive strength 3200 psi is attained using standard curing specifications, unless otherwise specified by the manufacturer.

**2.4 Qualification and Project Acceptance.**

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

**2.4.2 Qualification.** Prior to use, rapid set concrete patching material shall be qualified. In order to become qualified, a material shall have completed testing through AASHTO's National Transportation Product Evaluation Program (NTPEP). The manufacturer shall contact the AASHTO/NTPEP coordinator to obtain the testing location for the rapid setting concrete patching material.

**2.4.2.1 Requested Information.** The manufacturer shall submit with samples of the materials, a written request to Construction and Materials with the following information:

- (a) Brand name of the product.
- (b) Certification that the material meets this specification.
- (c) NTPEP test results showing compliance with this special provision.
- (d) Specific mixing, handling and curing instructions.
- (e) Application type (i.e., bridge or roadway).

**2.4.2.2 Qualified List.** Upon approval by the engineer, the brand name and manufacturer will be placed on a qualified list of rapid set concrete patching materials. The listing of qualified materials is available from Construction and Materials or on MoDOT's web site. New certified test results and samples shall be submitted any time the manufacturing process or the material formulation is changed. The material will be subject to removal from the qualified list if there is evidence of unsatisfactory performance or a change in manufacturing process or formulation, or when random sampling and testing of material offered for use indicates nonconformity with any of the requirements herein specified.

**2.4.3 Provisional Approval.** Provisional approval may be granted provided the following requirements have been met:

- (a) New Products Evaluation Form
- (b) Certified test results from an independent laboratory showing compliance with this special provision.
- (c) Documentation prepared by MoDOT covering two years of field performance on MoDOT's system. MoDOT will need to approve the location of the test site. Documentation will contain the placement date, field observations (semi annual), description of field performance and photographs of in-place material.
- (d) During placement the manufacturer's representative shall be present on the project to provide technical expertise.

**2.4.3.1 Disqualification.** If during the two year observation period the repair area(s) fails provisional approval will not be granted. Repair area(s) experiencing any cracking, debonding or spalling will be considered a failure.

**2.4.3.2 Length of Provisional Approval.** Provisional approval will be granted for three years or until NTPEP testing is completed.

**2.5 Certification.** The contractor shall supply a manufacturer's certification to the engineer for each lot of material furnished. The certification shall include the name of the manufacturer, a manufacturer certification statement that the material supplied is the same as that qualified and listing the date of qualification.

**2.6 Acceptance.** Acceptance of the material will be based on the use of a qualified or provisionally approved material, the manufacturer's certification that the material supplied is the same as that approved and upon the results of such tests as may be performed by the engineer.

**3.0 Mixture.** Unless otherwise specified, rapid set concrete patching material shall be approved commercial mixtures meeting [Sections 3.1 – 3.1.3](#) or deck repair cementitious mortar meeting [Section 3.2](#). Rapid set concrete patching materials shall be specifically designed for the application needed.

**3.1 Commercial Mixtures.** Rapid set concrete patching material in its sacked form and mixtures when properly prepared in accordance with the manufacturer's specifications, shall meet the minimum test requirements given in Table 1. Mixtures may be supplied, as required, as a patching mortar or as a patching mortar with aggregate extension. If the material is to be supplied with extender aggregate, this shall also pass the required tests in Table 1 using the maximum allowed amount of extender aggregate.

**3.1.1 Mixture Requirements.** Rapid set concrete patching material shall be single packaged dry mix requiring the addition of water or other liquid component just prior to mixing. The material shall be capable of ½ inch (13 mm) to full depth repair and require no bonding agent. The material shall not contain soluble chlorides as an ingredient of manufacture. The material shall be placed in accordance to the manufacturer's recommendations.

<b>Table 1 (English Unit)</b>				
<b>Physical Test Property</b>	<b>Specification</b>	<b>Requirement for cementitious concrete</b>	<b>Requirement for polymer-modified concrete</b>	<b>Requirement for polymer concrete</b>
Bond Strength by Slant Shear <sup>1</sup>	ASTM C882/C928 <sup>3</sup>	min. 1000 psi @ 24hrs.& min. 1500 psi @ 7 days	n/a	min. 1000 psi @ 24hrs.& min. 1500 psi @ 7 days
Linear Coefficient of Thermal Expansion <sup>1, 2</sup> (for bagged mortar only, without extension aggregate)	ASTM C531	n/a	n/a	4 – 8 X 10-6 in/in/deg F
Resistance to Rapid Freezing & Thawing <sup>1</sup>	AASHTO T161 or ASTM C666	80% min. using Procedure B <sup>5</sup> (300 Cycles)	80% min. using Procedure B <sup>5</sup> (300 Cycles)	n/a
Compressive Strength <sup>1</sup>	AASHTO T22 or ASTM C39	3200 psi @ 3 hr & 4000 psi @ 7 days	3200 psi @ 3 hr & 4000 psi @ 7 days	n/a
Rapid Chloride Permeability <sup>1</sup>	AASHTO T277 or ASTM C1202	<u>Bridge Decks</u> 1000 coulombs @ 28 days <u>Roadway</u> 2000 coulombs @ 28 days	<u>Bridge Deck</u> 1000 coulombs @ 28 days <u>Roadway</u> 2000 coulombs @ 28 days	<u>Bridge Deck</u> 1000 coulombs @ 28 days <u>Roadway</u> 2000 coulombs @ 28 days
Length Change <sup>1,4</sup>	AASHTO T 160 or ASTM C157	In water Storage (+0.15) In air storage (-0.15)	In water storage (+0.15) In air storage (-0.15)	n/a
Color		gray	gray	gray

<sup>1</sup>The commercial mix test values can be located in the AASHTO's National Transportation Product Evaluation Program (NTPEP) reports for Laboratory Evaluations of Rapid Set Concrete Patching Materials. Data for provisionally approved materials is located at the Construction and Materials Division.

<sup>2</sup>Not required for extended mixtures if the mortar passes this requirement.

<sup>3</sup> ASTM C882 shall be performed on non-water based materials. ASTM C928 shall be performed on water-based materials.

<sup>4</sup> As modified by ASTM C928.

<sup>5</sup> Procedure A may be used in lieu of Procedure B

**3.1.2 Construction Requirements.** The manufacturer shall provide with the bagged mixture, specifications for the mixing procedure, amount and kind of liquid to be added, and the amount of aggregate extension allowed, if any. All mixing, handling and curing practices recommended by the manufacturer shall be followed and will be considered a part of these specifications.

**3.1.3 Removal from Qualified List.** All mixtures shall be approved before use. Reoccurring failures of any mixture for any reason will be cause for removal from the qualified list.

**3.2 Deck Repair Concrete.** A qualified rapid set concrete patching material indicated for horizontal use and intended for patching concrete bridge decks may be used when specified on the plans and as approved by the engineer. If this option is selected, the contractor shall provide a trial mix to determine the total cure time needed to achieve a compressive strength of 3200 psi (22 MPa). Compressive specimens shall be prepared in accordance with current MoDOT test methods and cured to simulate actual field conditions. Testing of compressive specimens shall be performed by methods and at facilities acceptable to the engineer. The repaired deck shall not be opened to traffic until at least 4 hours after the last placement of deck repair concrete, the established cure time has elapsed and until such concrete has achieved a compressive strength of 3200 psi (22 MPa). A new trial mix may be required if the engineer determines the field conditions vary substantially from trial mix conditions. The engineer will make field cylinders to verify the 3200 psi (22 MPa) minimum strength.

#### **4.0 Construction Requirements.**

**4.1 Mixing.** Rapid set concrete patching material shall be mixed and finished according to the manufacturer's recommendation.

**4.2 Preparation of Repair Area.** Deteriorated, damaged or defective concrete as shown on the plans, required by the specifications or as directed by the engineer, shall be removed. All exposed reinforcement shall be thoroughly cleaned as shown on the plans, required by the specifications or as directed by the engineer. Unless otherwise specified by the commercial mixture manufacturer, the existing surface shall be damp and all free water shall be removed prior to placement of the required material.

**4.3 Bonding Agent.** A bonding agent may be used if recommended by the rapid set concrete patching material manufacturer.

**5.0 Method of Measurement.** No measurement will be made for rapid set concrete patching material.

**6.0 Basis of Payment.** Rapid set concrete patching material will be paid for at the contract unit price for other items and will be considered full compensation for all labor, equipment and material to complete the described work.

T. Rapid Set Concrete Patching Material – Vertical and Overhead Repairs JSP-02-01

**1.0 Description.** This specification covers cementitious concrete, polymer-modified concrete and polymer concrete that are suitable for repairing concrete surfaces on bridges or concrete structures, particularly under fast setting or special conditions. The repairs would involve vertical or overhead applications. The work shall consist of removing, furnishing, preparing, and placing materials at locations as shown on the plans or as directed by the engineer.

**2.0 Material.** All materials shall be in accordance with MoDOT specifications and as noted herein.

**2.1 Aggregate. For Extending Commercial Mixture.** Coarse and fine aggregates shall be in accordance with [Sec 1005](#), except the requirements for gradation and percent passing the No. 200 sieve shall not apply. Coarse aggregate meeting Gradation E requirements shall be used for repairs greater than one inch (25 mm) in depth. Fine aggregate will be allowed for repairs less than one inch (25 mm). Aggregate specified, bagged, labeled and furnished by the rapid set concrete patching material manufacturer may also be used for mortar extension.

**2.2 Material Applications.** The contractor shall select and use the product most suitable for the work and field conditions in accordance with these specifications.

**2.3 Curing.** Rapid set concrete patching material shall be cured until the minimum compressive strength 1500 psi is attained using standard curing specifications, unless otherwise specified by the manufacturer.

**2.4 Qualification and Project Acceptance.**

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

**2.4.2 Qualification.** Prior to use, rapid set concrete patching materials need to be qualified.

**2.4.2.1 Requested Information.** The manufacturer shall submit with samples of the materials, a written request to Construction and Materials with the following information:

- (a) New Products Evaluation Form
- (b) Brand name of the product.
- (c) Certification that the material meets this specification.
- (d) Certified test results from an independent laboratory showing compliance with this specification.
- (e) Specific preparation instructions of repair area.

(f) Specific mixing, handling and curing instructions.

(g) Application type (i.e., vertical or overhead).

**2.4.2.2 Field Evaluation.** Final approval will be granted when the following requirements are met:

(e) MoDOT report documenting two years of field performance on MoDOT system. The report will contain the placement date, field observations (semi annual), description of field performance and photographs of in-place material.

(f) A manufacturer's representative shall be present during placement of the material to provide technical expertise.

**2.4.2.2.3 Disqualification.** If during the two year observation period the repair area(s) fails the product will not be added to the qualified list.

**2.5 Qualified List.** The listing of qualified products are available from Construction and Materials or on MoDOT's web site. New certified test results and samples shall be submitted any time the manufacturing process or the material formulation is changed. The material will be subject to removal from the qualified list if there is evidence of unsatisfactory performance or a change in manufacturing process or formulation, or when random sampling and testing of material offered for use indicates nonconformity with any of the requirements herein specified.

**2.6 Certification.** The contractor shall supply a manufacturer's certification to the engineer for each lot of material furnished. The certification shall include the name of the manufacturer, a manufacturer certification statement that the material supplied is the same as that qualified and listing the date of qualification.

**2.7 Acceptance.** Acceptance of the material will be based on the use of a qualified product, the manufacturer's certification that the material supplied is the same as that approved and upon the results of such tests as may be performed by the engineer.

**3.0 Mixture.** Unless otherwise specified, rapid set concrete patching material shall be approved commercial mixtures meeting [Sections 3.1 – 3.1.3.](#) Rapid set concrete patching materials shall be specifically designed for the application needed.

**3.1 Commercial Mixtures.** Rapid set concrete patching material in its sacked form and mixtures when properly prepared in accordance with the manufacturer's specifications, shall meet the minimum test requirements given in Table 1. Mixtures may be supplied, as required, as a patching mortar or as a patching mortar with aggregate extension. If the material is to be supplied with extender aggregate, this shall also pass the required tests in Table 1 using the maximum allowed amount of extender aggregate.

**3.1.2 Mixture Requirements.** Rapid set concrete patching material shall be single packaged dry mix requiring the addition of water or other liquid component just prior to mixing. The material shall not contain soluble chlorides as an ingredient of manufacture. The material shall be placed in accordance to the manufacturer's recommendations.

<b>Table 1 (English Unit)</b>				
<b>Physical Test Property</b>	<b>Specification</b>	<b>Requirement for cementitious concrete</b>	<b>Requirement for polymer-modified concrete</b>	<b>Requirement for polymer concrete</b>
Bond Strength by Slant Shear	ASTM C882/C928 <sup>2</sup>	min. 1000 psi @ 24hrs.& min. 1500 psi @ 7 days	n/a	min. 1000 psi @ 24hrs.& min. 1500 psi @ 7 days
Linear Coefficient of Thermal Expansion <sup>1</sup> (for bagged mortar only, without extension aggregate)	ASTM C531	n/a	n/a	4 – 8 X 10-6 in/in/deg F
Resistance to Rapid Freezing & Thawing	AASHTO T161 or ASTM C666	80% min. using Procedure B <sup>3</sup> (300 Cycles)	80% min. using Procedure B <sup>3</sup> (300 Cycles)	n/a
Compressive Strength	AASHTO T22 or ASTM C39	1500 psi @ 3 hr & 3000 psi @ 24 hr	1500 psi @ 3 hr & 3000 psi @ 24 hr	n/a
Rapid Chloride Permeability	AASHTO T277 or ASTM C1202	1000 coulombs @ 28 days	1000 coulombs @ 28 days	1000 coulombs @ 28 days
Length Change	AASHTO T 160 or ASTM C157	In water Storage (+0.15) In air storage (-0.15)	In water storage (+0.15) In air storage (-0.15)	n/a
Color		gray	gray	gray

<sup>1</sup> Not required for extended mixtures if the mortar passes this requirement.

<sup>2</sup> ASTM C882 shall be performed on non-water based materials. ASTM C928 shall be performed on water-based materials.

<sup>3</sup> Procedure A may be used in lieu of Procedure B

**3.1.2 Construction Requirements.** The manufacturer shall provide with the bagged mixture, specifications for the mixing procedure, amount and kind of liquid to be added, and the amount of aggregate extension allowed, if any. All mixing, handling and curing practices recommended by the manufacturer shall be followed and will be considered a part of these specifications.

**3.1.3 Removal from Qualified List.** All mixtures shall be approved before use. Reoccurring failures of any mixture for any reason will be cause for removal from the qualified list.

**3.2 Vertical Repair.** A qualified rapid set concrete patching material approved for vertical use may be used when specified on the plans and as approved by the engineer. The engineer will make field cylinders to verify the 1500 psi (10 MPa) minimum strength. The material shall adhere to the concrete surface without sagging.

**3.3 Overhead Repair.** A qualified rapid set concrete patching material approved for overhead use may be used when specified on the plans and as approved by the engineer. The material

shall be placeable in layers of at least 1 inch on overhead applications without the use of formwork or anchoring devices. The material shall adhere to the concrete surface without sagging. The engineer will make field cylinders to verify the 1500 psi (10 MPa) minimum strength.

#### **4.0 Construction Requirements.**

**4.1 Mixing.** Rapid set concrete patching material shall be mixed and finished according to the manufacturer's recommendation.

**4.2 Preparation of Repair Area.** Deteriorated, damaged or defective concrete as shown on the plans, required by the specifications or as directed by the engineer, shall be removed. All exposed reinforcement shall be thoroughly cleaned as shown on the plans, required by the specifications or as directed by the engineer. Unless otherwise specified by the commercial mixture manufacturer, the existing surface shall be damp and all free water shall be removed prior to placement of the required material.

**4.3 Bonding Agent.** A bonding agent may be used if recommended by the rapid set concrete patching material manufacturer.

**5.0 Method of Measurement.** No measurement will be made for rapid set concrete patching material.

**6.0 Basis of Payment.** Rapid set concrete patching material will be paid for at the contract unit price for other items and will be considered full compensation for all labor, equipment and material to complete the described work.

#### **U. Access to Commercial and Private Properties**

**1.0 Description.** This improvement is in a commercial and residential area. While working on entrances or adjacent properties, the contractor shall make every reasonable effort to minimize any interference to the properties and to pursue the work diligently. The contractor shall maintain access to all properties within the project limits that do not have access from another roadway for the duration of the construction. This may be accomplished by constructing entrances half-at-a time if the parcel has only one entrance. If the parcel has multiple entrances, the contractor will be allowed to close one entrance as long as the remaining entrance(s) are open unless otherwise specified in this provision. The Contractor may also use temporary surfacing and concrete accelerating admixtures as approved by the Engineer to maintain access.

**1.1** Under no circumstances shall the Contractor block ingress/egress to and from businesses during the normal business hours of each business unless as approved by the property owner and the Engineer.

#### **2.0 Construction Requirements.**

**2.1 Commercial Entrances.** On all commercial entrances greater than 20 feet wide, the Contractor shall keep one-half of the entrance open at all times. On commercial entrances less than 20 feet wide it may be necessary for the Contractor to provide temporary aggregate to provide access to the property. The Contractor shall remove and dispose of temporary aggregate following completion of the entrance. For properties with more than one entrance the Contractor

may construct one entire entrance at a time with the approval of the property owner and the Engineer.

**2.1.1** The Contractor shall complete the entrances as quickly as possible and shall **take no longer than four (4) weeks** to complete any one entrance over 20 feet wide. The Contractor shall **take no longer than five (5) days** to complete any one commercial entrance with a width less than 20 feet.

**2.2 Private Entrances.** The Contractor shall complete entrances as quickly as possible and shall **take no longer than seventy-two (72) hours** to complete any one private entrances, unless otherwise approved by the Engineer and property owner.

**2.2.1** Private entrances 20 feet or wider may be constructed one half at a time. One half of the entrance shall be open at all times and the Contractor shall **take no longer than ten (10) days** to complete the entrance.

**2.3** If shown with the temporary traffic control plans provided within this project, the Contractor may shift traffic to allow for 1 lane in each direction on Route 1 enabling the Contractor to close lanes directly next to private or commercial properties between two side roads in order to complete all entrance, sidewalk, ADA ramps, etc. for that given section of the roadway. Temporary connections either through the entrance or via the sidewalk leading to private or commercial property shall be provided at all times.

**2.4** The Contractor has the option of using high early strength Portland Cement concrete pavement (PCCP) for use in paved approaches and other areas of improvements as shown on the plans or approved by the Engineer. All materials, mixture, and placement requirements shall be in accordance with all applicable portions of Section 501, 502, and 613, except as specified herein. An accelerator will be allowed as approved by the Engineer.

**3.0 Communication.** The Contractor shall contact each property owner at least 48 hours prior to any sidewalk or entrance construction within their property limits to advise them of the work that will take place and the timeframe of the work. The Contractor will be allowed to vary from Section 1.0 of this provision if other access arrangements are made with the property owner or tenant. These variations must be approved by the Engineer prior to beginning work.

**4.0 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 documents.

## V. Contractor Cooperation

**1.0 Description.** It shall be the Contractor's responsibility to cooperate and coordinate construction at the intersection of Vivion Road and Route 1 with the Kansas City intersection improvements project.

**2.0 Construction Requirements.** The work occurring at the intersection of Vivion Road and Route 1, as shown in the contract plans, shall be the last work sequence completed by the Contractor.

**2.1** The Contractor shall coordinate with the City of Kansas City and their contractor working on the Vivion Road project to set expectations and outline limits to the mill and overlay. The Contractor shall meet with Kansas City and their contractor prior to start of any construction activities to allow for adequate notification.

**2.2** The Contractor shall notify the City of Kansas City at least 1 (one) week before beginning any work associated with the Vivion Road and Route 1 intersection.

**3.0 Basis of Payment.** No direct payment will be made to the Contractor to recover the cost of equipment, labor, materials, or time required to fulfill the above provisions, unless specified elsewhere in the contract documents.

#### **4.0 Construction**

##### W. Property Owner Notification

**1.0 Description.** It shall be the Contractor's responsibility to inform and notify the adjacent property owner 48-hours prior to starting any construction activities that may impact driveway and parking lot access or occur along the frontage of the property owner's parcel, unless specified more specifically in a property owner agreement. The notification shall be in written form and include the contractor's contact information, the Engineer's contact information, and an estimated schedule of work and the associated impacts.

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

##### X. Site Restoration

**1.0 Description.** The contractor shall protect and avoid damage to all private property. Contractor shall restore to its original condition any disturbed areas at sites including but not limited to pull box, conduit, sidewalk, pole base installations, damage to buildings, foundations, retaining walls, fencing, pavements, landscaping, trees, shrubs, plants, and damages to landscaping, or irrigation systems inside the right of way shall be restored. Restoration shall be accomplished by placing material equivalent to that of the adjacent undisturbed area. Disturbed unpaved areas shall be fertilized and either seeded and mulched or sodded as directed by the Engineer. The Engineer will have the final authority in determining the acceptability of the restoration work.

**2.0** Unless quantities and pay items for removal and subsequent replacement of improvements are contained in the plans for a specific location of removal work, no direct payment will be made for the removal and subsequent replacement of sidewalk, pavement, shoulders, islands, or medians. This work will be considered as included in various unit bid prices in the contract and no additional payment will be made.

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

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

Y. Adjust Items

**1.0 Description.** This work shall consist of adjusting basins/inlets, manholes, lighting pull boxes, signal pull boxes, and water valves that are within areas where either new sidewalks, curb ramps, approaches or pavements, as needed, to complete construction as shown on the plans. The Contractor shall verify the type of frame and cover in the field before performing the work. The adjustments shall be made to match the final proposed grade. Various pull boxes are called out to be adjusted to grade. Adjusting rings shall not exceed 12 inches in height.

**2.0 Construction Requirements.** Adjusting manholes and adjusting basins or inlets shall be done in accordance with Sec 604 except as modified herein.

**2.1** Adjustments, extensions, and/or lowering of utility and any related excavation and backfill shall be constructed as approved by the Engineer. For MoDOT owned facilities, adjustments shall conform to the current Missouri Standard Specifications for Highway Construction. For any other municipal owned facility, the Contractor shall coordinate with the municipality to coordinate adjustments during construction. Adjustments for inlets require the top lid to be repaired to be flushed with finished grade, leaving no excessive cracks in the lid. These are called out in the plans as "Adjust Storm MH", "Adjust Storm Lid", and "Adjust Sanitary MH".

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

Item Number	Unit	Description
604-99.02	Each	Adjust Storm MH
604-99.02	Each	Adjust Storm Lid
604-99.02	Each	Adjust Sanitary MH
604-99.02	Each	Adjust Water Valve
604-99.02	Each	Adjust Signal Pull Box

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

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

Z. Modified Curb and Gutter Type A

**1.0 Description.** This work shall consist of furnishing and installing a concrete curb and gutter with a modified thickened gutter pan in the mill and overlay section shown on the contract plans.

**2.0 Material Requirements.** All materials shall be in accordance with Section 609 and Section 706.

**3.0 Construction Requirements.** All work performed shall be done in accordance with Section 604 except as noted in the plans.

**3.1** The existing gutter along Route 1 has been overlaid with a 3/4" UBAWS. When replacing the Type A Curb and Gutter, the Contractor shall match existing grade of the overlaid gutter pan. The Contractor shall match the edge of gutter pan with the existing edge of pavement elevation as well as the back of top curb shall match the existing back of top curb.

**3.2** The Contractor shall full depth saw cut 1 foot off the edge of pavement toward the centerline of the road to provide enough working room to cast the Modified Curb and Gutter Type A. After the curb and gutter has been formed and placed, the Contractor shall restore the pavement base and sub base as shown on the plans. The cost of this pavement replacement shall be considered incidental to the Modified Curb and Gutter Type A.

**4.0 Method of Measurement.** This curb will be measured to the nearest whole linear foot.

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

Item Number	Unit	Description
609-99.03	LF	Modified Curb and Gutter (Type A)

AA. Concrete Sidewalk and Curb Jointing at Utility Poles

**1.0 Description.** Contractor shall provide longitudinal and transverse jointing for concrete sidewalk and concrete curbing to direct pedestrians around utility poles. The longitudinal and transverse jointing shall be completed to provide separation from the pedestrian access route on the sidewalk from utility poles.

**2.0 Construction Requirements.** At each utility pole located within the sidewalk or curbing adjacent to the sidewalk, concrete jointing/edging shall be provided to a depth of 3/4"-inch. The jointing shall be as per direction of Engineer.

**2.1** Jointing to be completed to guide sidewalk users around utility poles. The length of longitudinal joints shall be a length of 10-feet (maximum length of 15-feet) at each utility pole. Transverse short jointing shall be completed within the longitudinal joint at 12-inch intervals.

**2.2** The jointing pattern shall be approved by Engineer as part of the pre-concrete placement conference.

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

**BB. Replace Storm Lid**

**1.0 Description.** This work shall consist of replacing storm lids as shown on the plans. The Contractor shall verify the type of frame and cover in the field before performing the work. The replaced storm lids shall match the final proposed grade.

**2.0 Construction Requirements.** Replacement of storm lids shall be done in accordance with Section 604 except as modified herein.

**2.1** Replacement of storm lids shall conform to current Missouri Standard Specifications for Highway Construction. If the Contractor encounters a storm structure not owned by MoDOT, the Contractor shall notify the Engineer.

**2.2** No direct payment will be made for any required hauling, cutting, joining, backfilling, or adjusting rings, or any other requirements necessary to fulfill this provision. No direct payment will be made to recover the cost of equipment, labor, materials, or time required to fulfill the above provision.

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

Item Number	Unit	Description
604-99.02	Each	Replace Storm Lid

**CC. Sidewalk Manicuring**

**1.0 Description.** This work shall consist of removing and vegetation, soil buildup, and/or debris from all existing sidewalks and adjacent areas next to the sidewalks to eliminate any obstacles or obstructions within the project limits. A landscaping vertical blade is required to get a clean deep cut through existing sod and soil buildup at the edge of existing sidewalk.

**2.0 Construction Requirements.** Any vegetation, soil buildup, and/or debris covering and/or encroaching on the existing sidewalks shall be completely removed within the width of the existing sidewalk with use of a vertical blade, as directed by the Engineer. All tree limbs or other vegetation encroaching onto or over the sidewalk shall be removed to provide a minimum overhead clearance of at least 80 inches from the elevation of the existing sidewalk and shall provide a horizontal clearance to at least the edge of sidewalk.

**2.1** All soil material removed from the sidewalks may be evenly spread out on the right of way as approved by the Engineer. Any tree limbs or vegetative clippings removed by the contractor shall be disposed of off the right of way at the Contractor's expense.

**3.0 Basis of Payment.** Payment for sidewalk manicuring will be paid for at the contract unit price for bid item "202-99.03, Sidewalk Manicuring", per lump sum.

**DD. Concrete Washout**

**1.0 Description.** Concrete washout BMPs shall be established in designated areas for this project if concrete production or delivery occurs. Washout BMPs can be non-leaking plastic or clay/bentonite lined pits, a straw bale enclosure lined with plastic, a storage tank or prefabricated BMP or other structured approved by the Engineer or inspector. Designated washout areas should be located at least 50 feet away from storm drains, ditches, streams or other water bodies. Washouts should be monitored like other BMPs to ensure there are no leaks and they are operating effectively. They should be cleaned out when they reach 75% of their design capacity. Care should be taken to ensure these structures do not overflow during storm events. Upon completion of concrete washout on the project, the engineer or inspector should ensure proper disposal of washout materials. Washout liquids can be allowed to evaporate or be pumped out and properly disposed of. They cannot be discharged into storm drains, ditches, streams or other bodies of water. Dried concrete can be broken up and used as clean fill on the project, recycled or properly disposed of by other means.

**2.0 Basis of Payment.** No Direct payment will be made to the contractor for installing, maintaining, and removing concrete washout facilities or for properly disposing of materials. The cost of complying with this requirement shall be completely covered in the contract unit price of the concrete pay items included in the contract.

**EE. Damage to Existing Pavement, Side Roads, and Entrances**

**1.0 Description.** This work shall consist of repairing any damage to existing pavement, curb, ramps and/or shoulders caused by Contractor operation. This shall include damage caused either directly or indirectly by Contractor operations, including but not limited to, damage caused by the traffic during contractor operations.

**2.0 Construction Requirements.** Any cracking, gouging, or other damage to the existing pavement, curb, ramps and/or shoulders, side roads, or entrances from general construction shall be repaired within twenty-four (24) hours of the time of the damage at the Contractor's expense. Repair of the damaged pavement, shoulders, side roads, or entrances shall be as determined by the Engineer.

**3.0 Method of Measurement.** No measurement of damage pavement, curb, ramps, or shoulder areas as described above shall be made.

**4.0 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 documents.

**FF. Coordination with The Kansas City Area Transportation Authority**

**1.0 Description.** The Contractor shall be required to coordinate with the Kansas City Area Transportation Authority (KCATA) where construction operations will involve work on or around existing transit stops. It is requested that the coordination begin prior to the project Preconstruction Conference to ensure minimal disruption in service to KCATA system.

**2.0 Construction Requirements.** All KCATA stops within the project limits shall remain open and operational throughout the duration of the project. In locations where the Contractor's operations will involve work in proximity to a transit stop location, the Contractor shall notify KCATA through the contacts listed below, not later than 72 hours prior to beginning work at that location. The Contractor shall also take care to minimize exposure of transit users to construction hazards in proximity to all transit stops that are in service during work operations.

**2.1 Project Contacts.** The Contractor shall notify the following contacts at KCATA to coordinate scheduling throughout the project with them or their designated representative(s):

AJ Farris  
Office: (816)346-0332  
Cell: (913)219-8650  
Email: [ajfarris@kcata.org](mailto:ajfarris@kcata.org)

**3.0 Temporary Facilities.** In locations where the Contractor's operations may affect a transit stop location, a temporary stop may be required. Signage of the temporary stop shall be in accordance with Specification Section 104.10.2, and placement shall be coordinated with KCATA. All temporary transit stops shall be located in proximity to the existing stop it is representing, accessible, clear and conspicuous to both the transit rider and facility operator and be located where it is safe from hazards within the work area.

**4.0 Permanent Facilities.** Locations for proposed bus stop are identified in the contract plans. The Contractor shall remove the existing bus stop pads and benches. This work shall not be paid for separately but be included in the Lump Sum cost of Removal of Improvements. The Contractor shall coordinate with KCATA for delivery of existing benches.

**4.1 Benches.** At existing transit stops with benches, the Contractor shall coordinate with the KCATA for KCATA to remove the existing bench prior to the Contractor's activities at the location. KCATA shall store and reinstall the bench at the completion of the Contractor's work at the transit stop location.

**5.0 Basis of Payment.** No direct payment will be made for any labor, equipment, materials, and time required to comply with this provision.

## GG. Video Detection System

**1.0 Description.** The Contractor shall furnish and install all equipment, materials, software, and other miscellaneous items that are required to provide a fully functional Video Detection System for the control of bicycle and vehicular traffic signals.

**2.0 Material.** The video detection system shall consist of power supply, hard-wired video cameras, all necessary video and power cabling with end connectors, mounting brackets, surge protection as recommended by the manufacturer, video detection processors/extension modules capable of processing the number of camera and phase combination video sources shown on the project plans. The video detection system will be defined as the complete assembly of all required equipment and components for detection of vehicles. Each video detection system shall consist of the video camera(s), lightning arrester for video cabling, processor unit(s), control device (mouse or keypad;), software and license for system control via a computer or USB (if applicable), communication components, and a color monitor. All camera views shall be obtainable without

requiring the disconnection and reconnection of cables within the system. The video detection systems in the list below are the only systems that are tested, fully functional, and approved for use in the Kansas City District:

1. **Autoscope Vision**
2. **Autoscope Rackvision Terra**
3. **Iteris Vantage Vector**

**3.0 Installation Requirements.** The video detection system shall be installed per the manufacturer's recommendations. The installer shall be certified by the video detection system's manufacturer to install the system. All coaxial and ethernet cable runs (if used) shall be continuous without a splice from the cabinet to the camera. If requested by the engineer, a factory certified representative from the supplier shall be available for on-site assistance for a minimum of one day during installation.

A separate grounded 120 VAC service outlet shall be provided in the controller cabinet for supplying power to the parts of the video detection system requiring AC power. Use of the grounded service outlet located on the cabinet door will not be permitted.

**3.1 Detection Zones.** The detection zones shall be created by drawing the detection zones on the video image (minimum 2 zones). A graphical user interface shall be built into the video detection system and displayed on a video monitor or computer. It shall be possible to edit previously defined detector configurations to fine-tune detection zone placement. When a vehicle is detected by crossing a detection zone, there shall be a visual change on the video display, such as a flashing symbol or a change in color or intensity to verify proper operation of the video detection system.

The video detection system shall have a method to send and receive communications from the system to a central location. It should be able to obtain a live video image and configured detection zones. The user should have the ability to change detection zones and detection settings in real time from the central location. The system shall be able to have re-addressable IP address or addresses.

**3.2 Performance.** Overall performance of the video detection system shall be comparable to inductive loops. Using camera optics and in the absence of occlusion, the video detection system shall be able to detect vehicle presence with 98% accuracy under normal day and night conditions with only slight deterioration in performance under adverse weather conditions, including fog, snow and rain. When visibility exceeds the capabilities of the camera, the video detection system shall default to placing a call on all detectors. Supportive documentation is required to meet this specification and shall be provided to the Engineer before installation.

**3.3 Vehicle Data.** In addition to presence detection, the video detection system shall be capable of performing at a minimum the following calculations in real time and store all values for each camera view for any visible lane without the addition of another device:

- a) Speed
- b) Volume
- c) Lane Occupancy
- d) Vehicle Classification
- e) Other available performance measures

For speed calculations thru movements are required. Turning movement measurements are desired but not required. For volume measurements/calculations both mainline thru and all turning movements are required. All values are to be assigned to detector channels within the controller. If this requirement cannot be met all values must be able to be exported thru an excel spreadsheet. Other performance measures must be clearly defined. In all cases all performances measures must be ultimately available in an easily usable, exportable format (USB, Ethernet, or built Wi-fi Computer). The contractor shall provide documentation to the Engineer to confirm the volumes are configured and operational through the video detection system.

**3.4 Monitor.** The monitor shall be an LCD active matrix with a minimum 7" diagonal screen color monitor, an NTSC-M system, HDMI, VGA, and BNC video in-out connections built into the housing. The unit shall be compact and lightweight, with a stand on the cabinet shelving, have low power consumption, constructed to operate under extreme temperature conditions, and run on AC power. AC adaptor shall be included. The monitor shall be installed to automatically power on when the cabinet door is opened and automatically power off when the cabinet door is closed. A manual on/off switch shall be provided.

**3.5 Video Camera and Housing.** The camera shall produce a high definition (HD) color video image of vehicles during daylight hours, with an optional production of black and white images during nighttime hours. The camera shall be able to detect a minimum of 500 ft in advance of the signal. Detection shall work properly during night hours without the need of additional luminaire lighting at the signal. The video shall produce a clear image for scenes. The camera shall include an electronic shutter or auto iris control based on average scene luminance and shall be equipped with an auto iris lens, as well as sun shield that prevents sunlight from directly entering the lens. The sun shield shall include a provision for water diversion to prevent water from flowing in the camera field of view and shall be able to slide forward and back. The total weight of the enclosure, camera, lens, housing, sun shield and mounting bracket shall be less than 10 pounds.

**3.6 Video Detection System Connections.** The system must be able to connect through computer or mouse/video for configuring the detection zones. The equipment shall be provided with a NEMA TS2 interface as shown on the plans.

At a minimum, each lane of traffic shall be able to have its own output. A minimum of 32 detector outputs is required for the system but should be capable of expanding to 64 outputs if required based on the geometry of the intersection.

The contractor shall be responsible for any changes or additions to either an existing or new cabinet in order to provide a properly functional video detection system and monitor display. This may include, but is not limited to, additional SDLC connectors, shelf relocation and component reorganization. No direct pay for any changes or additions. All required connections will be considered part of the video detection system installation.

**3.7 Warranty of Video Detection System.** The video detection system including cameras shall be warranted to be free of defects in material and workmanship for a minimum of 3 years. During the warranty period, technical support from factory certified personnel or factory certified installers shall be available from the supplier. Ongoing software support by the supplier shall include updates for the processor unit and computer software and shall be provided at no cost during the warranty period. The update of the processor unit software to be NTCIP compliant shall be included.

**4.0 Construction Requirements.** Construction requirements shall conform to Sec 902.

**5.0 Documentation and Testing.** The contractor shall provide one bound copy for the signal cabinet and one pdf version of the user's manual.

**6.0 Method of Measurement.** Method of measurement shall conform to Sec 902.

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

**7.1 Basis of Payment.** Measurement and payment for work covered by this specification shall include all equipment, tools, labor, programming, and materials necessary and shall be paid at the contract unit price as follows:

Item No.	Type	Description
903-99.02	Each	KC District Video Detection System

#### HH. Saw Cutting for Removal of Improvements

**1.0 Description.** Saw cutting will be necessary for removal of improvements in certain locations as depicted in the contract plans. A number of locations and estimated saw cut lengths have been identified and quantified in the table for Removal of Improvements that has been included in the Schedule of Quantities. The list included within the Schedule of Quantities may not be all inclusive and the Contractor's means and methods may require an alternate removal method be employed.

**2.0 Construction Requirements.** All materials and work performed for this item shall be in accordance with Section 202.

**2.1 Exception for Full Depth Pavement Repair Saw Cutting.** This provision does not apply to the perimeter and internal saw cutting required for full depth pavement repairs, which shall be governed by the requirements of Section 613.

**3.0 Method of Measurement.** With the exception of full depth pavement repair, no measurement shall be made for saw cutting.

**4.0 Basis of Payment.** With the exception of full depth pavement repairs, all saw cutting shall be considered incidental to and completely covered by the contract lump sum price Removal of Improvements. No direct payment will be made for any labor, equipment, materials, and time required to comply with this provision.

#### II. Pavement Marking Layout

**1.0 Description.** The striping lane lines on sections of roadway with multiple traffic lanes in one direction shall be placed in a manner in which the start and stop points for all intermittent lane lines match and line up even transversely across all traffic lanes. For all installations of intermittent pavement markings care should be taken to align the skips longitudinally to consistently match

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the spacing of the existing UIP intermittent lane line at both start and end points of the improvement section.

**2.0 Construction Requirements.** The Contractor shall submit to the Engineer for review and approval a pavement marking installation plan. This plan will include the Contractor's proposal for installing the intermittent pavement markings to meet the requirements outlined above.

**2.1** Final striping will not begin until the contractor has received approval of pavement marking installation plan.

**3.0 Basis of Payment.** All costs and expense incurred by the Contractor in fulfilling the requirements of this provision shall be considered incidental to pavement marking bid items.

JJ. Drainage Maintenance During Construction

**1.0 Description.** The Contractor's attention is called to the drainage construction. The Contractor is required to maintain drainage during construction and to ensure that the existing drainage system continues to convey all storm water until the storm lids have been replaced or adjusted.

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

KK. ADA Compliant Movable Barricade

**1.0 Description.** This work shall consist of providing movable barricades to close the existing pedestrian facilities during construction and/or to safely reroute pedestrians around construction activities. The Contractor will be responsible for moving the pedestrian barricades to coincide with their planned order of work.

**2.0 Construction Requirements.** The Contractor shall use a movable barricade that meets the requirements as established by the ADA. The pedestrian barricades shall be of self-supporting type, having a minimum length of 6 feet per unit. The face of the barricade shall not extend into an adjacent sidewalk considered open for pedestrian use. The Contractor will be responsible for setting and maintaining the pedestrian barricades until all of the proposed improvements have been constructed.

**3.0 Method of Measurement.** Measurement for ADA Compliant Movable Barricade will be made per each for each 6 foot (minimum) unit provided.

**4.0 Basis of Payment.** Payment for all work necessary to fulfill the requirements noted above shall be considered completely covered in the contract unit price for the following. No direct payment will be made for any necessary relocation of the ADA Complaint Barricade.

Item Number	Unit	Description
616-99.02	Each	Misc. ADA Compliant Movable Barricade

LL. Shotcrete Concrete Repair

**1.0 Description.** Substructure repair (formed and unformed), superstructure repair (unformed) and slab edge repair shall be in accordance with Sec 704 and as shown on the contract plans. Shotcrete, in accordance with this Special Provision, shall be used for slab edge repair and may be used at the Contractor's option for formed and unformed substructure and superstructure repairs.

**1.1** Shotcrete shall be in accordance with the current requirements of American Concrete Institute (ACI) 506.2-13, "Specification for Shotcrete", except as otherwise specified. Shotcrete shall consist of an application of one or more layers of mortar or concrete conveyed through a hose and pneumatically projected at a high velocity against a prepared surface.

**1.2** Shotcrete shall be produced by a dry-mix process. The dry-mix process shall consist of thoroughly mixing all the ingredients except accelerating admixtures and mixing water and conveying the mixture through the hose pneumatically and the mixing water is introduced at the nozzle. For additional descriptive information, the Contractor's attention shall be directed to the ACI 506R-16, "Guide to Shotcrete".

**2.0 Contractor Experience Requirements.**

**2.1** Workers, including foremen, nozzle men and delivery equipment operators, shall be fully experienced to perform the work.

**2.2** Initial qualification of nozzle men will be based ACI or EFNARC certification for the application process being used. The nozzle men shall submit documented proof they have been certified in accordance with the ACI 506.3R-91 "Certification of Shotcrete Nozzle men" or EFNARC "Nozzle man Certification Scheme". The certification shall have been done by an ACI or EFNARC recognized shotcrete testing lab and/or recognized shotcreting consultant and have covered the type of shotcrete to be used (plain dry-mix).

**2.3** The Contractor may supply 1 reference project for the project nozzle man in lieu of completing test panels in accordance with Section 5.1 of this Job Special Provision to demonstrate the experience of the nozzle man in similar shotcrete application work. Owner contact information for the reference project shall be provided to allow for the Engineer to confirm satisfactory results.

**3.0 Shotcrete Materials.**

**3.1** Shotcrete materials shall consist of one of the following premixed and packaged materials:

- a) BASF MasterEmaco S 211SP
- b) Euclid Chemical Eucoshot F
- c) King Shotcrete MS-D1
- d) CTS Cement Low-P

**3.2** No material testing is anticipated. Acceptance will be based on the prequalified materials listed in this Special Provision, approval of the nozzle man prior to material placement, and visual inspection. If questions arise based from visual examination, placement methods, curing methods or other potentially undesirable influences the Engineer reserves the right to test any material properties listed on the published product data sheet for the material selected. Testing will be done at the Contractor's expense.

**3.3** Material shall be delivered, stored, and handled to prevent contamination, segregation, corrosion or damage.

**3.4 Proportioning and Use of Admixtures.** Admixtures will not be permitted unless approved by the Engineer.

**3.5 Bonding Agents.** Bonding agents will not be permitted.

**3.6 Air Entrainment.** Additional air entrainment admixtures will not be required.

**4.0 Construction Submittals.**

**4.1** At least 15 days before the planned start of formed and unformed substructure repair, a copy of the following information shall be submitted in writing to the Engineer for review:

- (a) Written documentation of the nozzlemen's qualifications including proof of ACI or EFNARC certification;
- (b) Proposed methods of shotcrete placement and of controlling and maintaining facing alignment including equipment models;
- (c) Shotcrete mix; and
- (d) One reference project including: Nozzleman's name, material used, process used, and whether a blow pipe was utilized. Owner contact information shall be provided to ensure satisfactory results were accomplished on the reference project; or
- (e) A satisfactory test panel shall be provided with the material to be used.

**4.2** The Engineer will approve or reject the Contractor's submittals within 10 days after the receipt of a complete submission. The Contractor will not be permitted to begin formed or unformed substructure repair with Shotcrete until the submittal requirements are satisfied and found acceptable to the Engineer. Changes or deviations from the approved submittals shall be re-submitted for approval. No adjustment in contract time will be allowed due to incomplete submittals.

**4.3** A pre-construction meeting scheduled by the Engineer will be held prior to the start of work. Attendance shall be mandatory. The shotcrete Contractor shall attend.

**5.0 Field Quality Control.**

**5.1** Production test panels will not initially be required if a reference project for the nozzleman is provided as outlined in Section 2.3 of this Job Special Provision. The Engineer may halt repair work if satisfactory results are not produced by the Contractor and require production test panels.

**5.2** If a comparable project demonstrating satisfactory results cannot be provided, the skills of the nozzleman shall be demonstrated and tested with at least one production test panel being furnished prior to performing repairs.

**5.3 Production Test Panels (If Required).**

**5.3.1** Qualified personnel shall perform shotcreting and coring of the test panels with the Engineer present. The Contractor shall provide equipment, materials, and personnel as necessary to obtain shotcrete cores for testing including construction of test panel boxes, field curing requirements and coring.

**5.3.2** Production test panels shall be made with the minimum full thickness and dimension of 18 x 18 inch and at least 3½ inch thick with 2-#4 bars placed in each direction. The #4 bars shall be centered in the 3½ inch dimension and evenly spaced in each direction with the bars touching at the 4 intersecting locations.

#### **5.4 Test Panel Curing, Test Specimen Extraction and Testing.**

**5.4.1** Immediately after shooting, the test panels shall be field moist cured by covering and tightly wrapping with a sheet of material meeting the requirements of ASTM C 171 until delivered to the testing lab or test specimens are extracted. The test panels shall not be immersed in water. The test panels for the first 24 hours after shooting shall not be disturbed.

**5.4.2** At the direction of the Engineer at least two 3 inch diameter core samples shall be cut at two of the intersections to ensure consolidation around the bars. If voids are present the material and nozzleman are not approved for use. The Contractor may continue with changes to the materials or nozzleman. The same process will be followed until no voids are present.

#### **6.0 Shotcrete Facing Requirements.**

**6.1 Shotcrete Alignment Control.** The final surface of the shotcrete shall maintain the existing concrete plane surface.

**6.2 Surface Preparation.** In addition to the manufacturer's recommendations, the surfaces to be shotcreted shall be cleaned of loose materials, mud, rebound, overspray, or other foreign matter that could prevent or reduce shotcrete bond. Shotcrete shall not be placed on frozen surfaces.

**6.3 Delivery and Application.** In addition to the manufacturer's recommendations, a clean, dry, oil free supply of compressed air sufficient for maintaining adequate nozzle velocity shall be maintained at all times. The equipment shall be capable of delivering the premixed material accurately, uniformly and continuously through the delivery hose. Shotcrete application thickness, nozzle technique, air pressure and rate of shotcrete placement shall be controlled to prevent sagging or sloughing of freshly applied shotcrete.

**6.3.1** The shotcrete shall be applied from the lower part of the area upwards to prevent accumulation of rebound. The nozzle shall be oriented at a distance and approximately perpendicular to the working face so that rebound will be minimal and compaction shall be maximized. Special attention shall be paid to encapsulating reinforcement. Care shall be taken while encasing reinforcing steel and mesh to keep the front face of the reinforcement clean during shooting operations, so that the shotcrete builds up from behind, to encase the reinforcement and prevent voids and sand pockets from forming. If a blow pipe was used to qualify, a blow pipe shall be required. The blow pipe is used to remove rebound and overspray immediately ahead of the nozzle. Rebound shall not be worked back into the construction. Rebound that does not fall clear of the working area shall be removed. Hardened rebound and hardened overspray shall be removed prior to the application of additional shotcrete using abrasive blast cleaning, chipping hammers, high pressure water blasting or other suitable techniques.

**6.3.2** When using multiple layer shotcrete construction, the surface of the receiving layer shall be prepared before application of a subsequent layer, by either:

- (a) Brooming the stiffened layer with a stiff bristle broom to remove all loose material, rebound, overspray or glaze, prior to the shotcrete attaining initial set.
- (b) If the shotcrete has set, surface preparation shall be delayed 24 hours, at which time the surface shall be prepared by sandblasting or high pressure water blasting to remove all loose material, rebound, hardened overspray, glaze or other material that may prevent adequate bond.

**6.4 Defective Shotcrete.** The Engineer will have authority to accept or reject the shotcrete work. Shotcrete that is not in accordance with the project specifications may be rejected either during the shotcrete application process, or on the basis of tests. Shotcrete surface defects shall be repaired as soon as possible after placement. Shotcrete that exhibits segregation, honeycombing, laminations, voids or sand pockets shall be removed and replaced. In-place shotcrete determined not meeting the published Technical Information for the product used will be subject to remediation as approved by the Engineer. Possible remediation options range from required latex over coating for excessive cracking up to removal and replacement at the Contractor's expense

**6.5 Construction Joints.** Construction joints shall be tapered uniformly toward the excavation face over a minimum distance equal to the thickness of the shotcrete layer. Square joints will not be permitted except at the expansion joint. The surface of the joints shall be rough, clean and sound. A minimum reinforcement overlap at reinforcement splice joints shall be provided. The surface of a joint shall be clean and wet before adjacent shotcrete is applied.

**6.6 Final Face Finish.** Shotcrete finish shall be a wood float, rubber float, steel trowel or smooth screeded finish.

**6.7 Additional Construction Requirements.**

**6.7.1** If the work to be performed is in the vicinity of a jurisdictional water of the US, care shall be taken to avoid any rebound from entering the regulated waterway.

**6.7.2** If the work to be performed is in the vicinity of an enclosed drainage system, care shall be taken to avoid any rebound from entering the drainage system.

**6.8 Weather Limitations.**

**6.8.1** The shotcrete shall be protected if placed when the ambient temperature is below 40°F and falling or when likely to be subject to freezing temperatures before gaining sufficient strength. Cold weather protection shall be maintained until the compressive strength of the shotcrete is greater than 725 psi. Cold weather protection includes blankets, heating under tents or other means acceptable to the Engineer. The temperature of the shotcrete mix, when deposited, shall be not less than 50°F or more than 85°F. The air in contact with the shotcrete surfaces shall be maintained at temperatures above 32°F for a minimum of 7 days.

**6.8.2** If the prevailing ambient temperature conditions (relative humidity, wind speed, air temperature and direct exposure to sunlight) are such that the shotcrete develops plastic shrinkage and/or early drying shrinkage cracking, shotcrete application shall be suspended. The

Contractor shall reschedule the work to a time when more favorable ambient conditions prevail or adopt corrective measures, such as installation of sun screens, wind breaks or fogging devices to protect the work. Newly placed shotcrete exposed to rain that washes out cement or otherwise makes the shotcrete unacceptable shall be removed and replaced at the Contractor's expense.

**6.9 Curing.** Permanent shotcrete shall be protected from loss of moisture for at least 1 day after placement. Shotcrete shall be cured by methods that keep the shotcrete surfaces adequately wet and protected during the specified curing period. Curing shall commence within one hour of shotcrete application. When the ambient temperature exceeds 80°F, the work shall be planned such that curing can commence immediately after finishing. Curing shall be in accordance with the following requirements.

**(a) Membrane Curing.** Membrane curing is required on overhead surfaces that cannot be adequately wet cured. Curing compounds will not be permitted on any surface against which additional shotcrete or other cementitious finishing materials are to be bonded unless the surface is thoroughly sandblasted in a manner acceptable to the Engineer. Membrane curing compounds shall be spray applied as quickly as practical after the initial shotcrete set at rate of coverage of not less than 7.1 square feet per gallon.

**7.0 Safety Requirements.** Nozzlemen and helpers shall be equipped with gloves, eye protection and adequate protective clothing during the application of shotcrete. Whip checks are required on air lines. The Contractor shall be responsible for meeting all federal, state and local safety requirements.

**8.0 Method of Measurement.** Measurement of Substructure Repair (Formed), Substructure Repair (Unformed), Superstructure Repair (Unformed) and Slab Edge Repair shall be in accordance with Sec 704.

**9.0 Basis of Payment.** Payment for Substructure Repair (Formed), Substructure Repair (Unformed), Superstructure Repair (Unformed) and Slab Edge Repair shall be in accordance with Sec 704.

MM. Median Island Cut-Throughs

**1.0 Description.** This work shall consist of providing a median or median island cut-through that is compliant with current Americans with Disabilities Act (ADA) and MoDOT guidelines at locations shown on the plans and as directed by the Engineer.

**2.0 Construction Requirements.** The Contractor shall be responsible for removing the existing median and if necessary, the existing pavement and base prior to installing the new cut-through as shown in the plans and as per Section 608 in both the Standard Plans and Standard Specifications. If new pavement/sidewalk is to be installed, it shall be minimum 7" Concrete Sidewalk on a 4" Type 5 Aggregate Base with new median island dowelled into the new sidewalk. Truncated domes installed within the island or median cut-throughs shall be placed flushed with the face of the curb/island.

**2.1 ADA Ramps.** If there is a ramp that provides access to the raised portion of the island or median instead of cutting through a portion of the island or median, then that area of concrete will be paid for separately as an ADA Curb Ramp, per each, and not per quantities noted below.

**2.2 Cross Slope through Cut-Throughs.** The Contractor shall meet ADA requirements regarding cross slope through the cut-through.

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

**4.0 Basis of Payment.** Payment for furnishing and installing a new median or median island cut-through shall include all excavation, base compaction, saw cuts, removal of existing pavement and median island, new sidewalk and base, new median island, new truncated domes, and all materials, equipment, tools, labor, and work incidental thereto, and shall be considered to be completely covered by the contract unit price for items listed below as indicated in the plans.

Pay Item Number	Type/Description	Unit
202-20.10	Removal of Improvements	Lump Sum
304-05.04	Type 5 Aggregate for Base (4 In. Thick)	S.Y.
608-30.06	6 in. Concrete Median Strip	S.Y.
502-11.12	Concrete Pavement (12 in. Non-Reinforced)	S.Y.
608-10.12	Truncated Domes	S.F

#### NN. Dewatering

**1.0 Description.** This provision covers dewatering the site as necessary to provide suitable conditions for construction of the box culvert as approved by the engineer. This work will only be performed at the discretion of the engineer and will be underrun if not required by the engineer. If the engineer determines it necessary to provide dewatering, the work shall be performed in accordance with Sec 206 and this job special provision.

**2.0 Construction Requirements.** Dewatering shall provide a dry work area suitable to construct the box culvert within specifications, as approved by the engineer. Typical dewatering methods consist of, but are not limited to, construction of cofferdams, seal courses, over excavation, well point systems, dewatering and drainage diversion. Any dewatering method utilized shall conform to all environmental laws and regulations.

**3.0 Method of Measurement.** No measurement will be made.

**4.0 Basis of Payment.** Payment for dewatering will be made regardless of which dewatering means is utilized. No payment will be made if the work area is not maintained in a dewatered state as approved by the engineer. The lump sum payment for dewatering will be considered full compensation, and no time extensions will be made regardless of which means and methods are utilized by the contractor.

#### OO. Drop Inlet Cleanout

**1.0 Description.** This work shall consist of cleaning out drop inlets. Drop inlets may be cleaned out by hand, mechanical, water or other approved method. The chosen method of drop inlet cleanout shall be approved by the engineer.

**2.0 Requirements.** The Contractor shall be required to contain any sedimentation and/or potential pollutants and prevent them from flowing into receiving streams, rivers, or downstream storm drainage. Sediment materials collected shall be disposed of, by the Contractor, in a manner so as not to damage or pollute any adjacent or downstream property.

**3.0 Method of Measurement.** Drop inlet cleanout shall be measured per each.

**4.0 Basis of Payment.** Drop inlet cleanout shall be paid under the contract Item Number 604-99.02, "Drop inlet Cleanout", per each. The Drop Inlet Cleanout pay item shall include all material, equipment, dispose of flushed sediment, trash, other pollutants, labor and any other incidental work associated with the drop inlet cleanout.

PP. Clean Water Act Requirements

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

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

Section 404 Nationwide Permit 3 (Maintenance Projects)

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

Section 404 Nationwide Permit 3 (Maintenance Projects)

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

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

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

QQ. MoDOT's Construction Workforce Program NJSP-15-17A

**1.0 Description.**

**1.1** Projects utilizing federal funds include contract provisions for minority and female workforce utilization in the various trade crafts used to complete construction contracts. These federal contract workforce goals are described in the section labeled "Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity". These goals are included in all MoDOT federal aid contracts and are under the authorization and enforcement of the U.S. Department of Labor (US DOL).

**1.2** The Federal workforce requirement (Goals – TABLE 1) is authorized in 41 CFR Part 60-4

and Executive Order 11246 which set Equal Employment Opportunity goals with Affirmative Action requirements.

**1.3** The required federal aid workforce provisions noted above, coupled with the following additional contract provisions, constitute MoDOT's Construction Workforce Program herein called Program.

**1.4** This provision does not require pre-qualification nor is it a condition of award.

**1.5** The Program does not eliminate or limit any actions the US DOL may take in relation to this contract's federal provisions.

**1.6** The Program goals included in the contract are separate from any Disadvantaged Business Enterprise (DBE) or On-The-Job (OJT) training provision that may be included as contract provisions. DBE and OJT goals may or may not be included in a contract based on the individual size of contracts, type of contract work, anticipated length of contract, available and willing resources or other reasons.

**1.7** Contractor, for the purpose of this provision, means the prime contractor and any and all subcontractors.

**1.8** It is expected that the contractor recognizes the construction workforce goals for both minority and female workers in the project's county and make efforts to attain those goals, if possible, through the existing workforce makeup of the prime (including subcontractors) that will be on the project and/or through hiring opportunities that may arise for the project. However, it is not the intent of this provision to compel any contractor to displace existing workforce or move workers around to just meet the workforce goals.

**1.9** If the contractor's existing Missouri construction workforce meets or exceeds the federal workforce goals established in Table 1, then the OJT goal (Training Provision) if included in the contract, does not be apply.

**1.10 Contractor's Workforce Plan.** The Contractor shall submit its Workforce Plan a minimum of 1 week before construction starts. One plan shall be submitted for the project that shall include the cumulative planned workforce of the prime and subcontractor(s). The contractor shall prepare the plan, for total minority and female utilization, regardless of the craft. The Engineer will provide the Contractor with comments regarding their Workforce Plan prior to the start of construction. Once work starts, all monthly reporting shall include the craft of each worker reported. If the contractor's plan includes project manager, direct project support roles, project testers or other project professionals, these designations should also be included in addition to the workers designated by craft such as laborer, operator, carpenter, ironworker and others.

**1.11** The plan accepted by the engineer before the start of construction will be the effort expected of the prime contractor to maintain during the life of the project.

**1.12** If the contractors planned project workforce plan (including OJT hours if included in the contract) is short of the goals included in Table 1, there is opportunity for the contractor to receive a reimbursement of \$10.00 / hour for any new project minority and female hires needed through the remainder of the project. The reimbursement is applicable to work that qualifies for prevailing wage under the federal Davis-Bacon Act, 40 U.S.C. §§ 3141–3148, in accordance with an approved workforce plan. Any reimbursement must be pre-approved by the Engineer. The

reimbursement is provided as a remedy to the contractor and as an aid in the long-term growth of experienced persons in the building of roads and bridges in Missouri. The contractor shall manage the plan through the life of the project as described in the plan or as modified, in coordination with the Engineer. The total amount available per project is not capped.

**1.13** The Contractor's workforce plan may include existing construction support and professional services staff.

**2.0 Forms and Documentation.** The bidder must submit the following documents if awarded the contract:

**Cumulative Workforce Utilization Reports.** This report is contract specific. One report shall be submitted to the Engineer by the 15<sup>th</sup> of each month. The report will be used to report the total workforce compliance data for the prime contractor and all subcontractors retained by the contractor on the Commission's construction contract. The reporting shall include the workforce hours per each craft broken down by gender and ethnicity. Construction Support, testing and other professional services hours shall be included as these hours are part of the overall plan. The report will include the previous month's hours worked for the project. For projects less than 60 days in length, only one report with total hours worked by classification is required at substantial completion of construction.

### **3.0 Methods for Securing Workforce Participation and Good Faith Efforts.**

**3.1** By submitting a bid, the Bidder agrees, as a material term of the contract, to carry out MoDOT's Construction Workforce Program by making good-faith efforts to utilize minority and female workers on the contractor's job sites to the fullest extent consistent with submitting the lowest bid to MoDOT. The Bidder shall agree that the Program is incorporated into this document and agree to follow the Program. If a bidder is unable to meet the workforce goals at the time of bid, it shall be required to objectively demonstrate to MoDOT that the goals have been met or demonstrate a good faith effort has been made with the level of effort submitted prior to the start of construction.

**3.2** The Engineer, through consultation with MoDOT's External Civil Rights (ECR's) Division, may determine that the contractor has demonstrated that good-faith efforts to secure minority and female participation have been made.

**3.3** In evaluating good-faith efforts, the ECR's Division will take into consideration the affirmative actions listed in the Federal Provisions (including provisions of Executive Order 11246).

**3.4** MoDOT's Program allows the contractor flexibility to implement a project specific workforce and improve the diversity of their existing workforce that can be utilized across various areas of the state to meet future MoDOT Program goals and Federal Provisions.

**3.5** If the contractor's approved plan changes during the project and/or the available workforce changes from what is approved at any time, it is the contractor's responsibility to remedy, in coordination with MoDOT's ECR Division, the conditions as outlined and made available through this provision.

**4.0 Compliance Determination. (Required with project closeout)** All documentation and on-site information will be reviewed by MoDOT's ECR Division in making a determination of whether the contractor made sufficient good faith efforts to meet the compliance with MoDOT's

Construction Workforce Program.

**5.0 Liquidated Damages.** If the contractor elects to not submit a workforce plan prior to work starting or fails to fulfill their workforce plan committed to prior to the start of construction, the contractor will be required to establish a good-faith effort determination, as to why either of these events occurred. MoDOT may sustain damages, the exact extent of which would be difficult or impossible to ascertain, as this impacts the cost of future road and bridge construction. Therefore, in order to liquidate those damages, MoDOT shall be entitled, at its sole discretion, to deduct and withhold the following amounts: **The sum of one thousand five hundred (\$1,500)**

**6.0 Administrative Reconsideration.** The contractor shall be offered the opportunity for administrative reconsideration upon written request related to findings and/or actions determined by MoDOT's ECR's Division. The Administrative Reconsideration Committee shall be composed of individuals not involved in the original MoDOT determination(s).

**7.0 Available Pre-Apprentice Training Programs.** The Commission has established a labor force recruiting program intended to assist contractors in identifying, interviewing and hiring qualified job applicants. MoDOT strongly encourages the hiring of individuals from the MoDOT funded pre-apprentice training programs.

**8.0 Independent Third-Party Compliance Monitor (Monitor).** MoDOT may utilize a monitor that will be responsible for tracking the project's workforce utilization for the information the contractor submits. The contractor and its subcontractors shall allow the monitor access to their reports, be available to answer the monitor's questions and allow the monitor to access to the site and to contractor and subcontractor employees. The monitor shall abide by the contractor's project site protocols.

**9.0 Regional Diversity Council (Council).** (Applicable to the Kansas City and St. Louis District regions only) The Council shall consist of local community leaders, leadership of local construction trades, MoDOT staff, Industry representation, and a representative(s) from the Federal Highway Administration. The Council will meet quarterly and evaluate the workforce activity per each project according to the following criteria:

- a. Review monthly workforce reports.
- b. Review progress toward the stated project workforce program.
- c. Review findings of Administrative Reconsideration hearings.
- d. Recommend *other* workforce actions to MoDOT.

**10.0 Federal Workforce Goals.**

Female Participation for Each Trade is 6.9% Statewide for Missouri.

Minority Participation for Each Trade is shown below in Table 1.

**TABLE 1:**

County	Goal (Percent)	County	Goal (Percent)
Adair	4	Linn	4
Andrew	3.2	Livingston	10
Atchison	10	McDonald	2.3
Audrain	4	Macon	4
Barry	2.3	Madison	11.4

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Barton	2.3	Maries	11.4
Bates	10	Marion	3.1
Benton	10	Mercer	10
Bollinger	11.4	Miller	4
Boone	6.3	Mississippi	11.4
Buchanan	3.2	Moniteau	4
Butler	11.4	Monroe	4
Caldwell	10	Montgomery	11.4
Callaway	4	Morgan	4
Camden	4	New Madrid	26.5
Cape Girardeau	11.4	Newton	2.3
Carroll	10	Nodaway	10
Carter	11.4	Oregon	2.3
Cass	12.7	Osage	4
Cedar	2.3	Ozark	2.3
Chariton	4	Pemiscot	26.5
Christian	2	Perry	11.4
Clark	3.4	Pettis	10
Clay	12.7	Phelps	11.4
Clinton	10	Pike	3.1
Cole	4	Platte	12.7
Cooper	4	Polk	2.3
Crawford	11.4	Pulaski	2.3
Dade	2.3	Putnam	4
Dallas	2.3	Ralls	3.1
Daviess	10	Randolph	4
DeKalb	10	Ray	12.7
Dent	11.4	Reynolds	11.4
Douglas	2.3	Ripley	11.4
Dunklin	26.5	St. Charles	14.7
Franklin	14.7	St. Clair	2.3
Gasconade	11.4	St. Francois	11.4
Gentry	10	Ste. Genevieve	11.4
Greene	2	St. Louis City	14.7
Grundy	10	St. Louis County	14.7
Harrison	10	Saline	10
Henry	10	Schuyler	4
Hickory	2.3	Scotland	4
Holt	10	Scott	11.4
Howard	4	Shannon	2.3
Howell	2.3	Shelby	4
Iron	11.4	Stoddard	11.4
Jackson	12.7	Stone	2.3
Jasper	2.3	Sullivan	4
Jefferson	14.7	Taney	2.3
Johnson	10	Texas	2.3
Knox	4	Vernon	2.3
Laclede	2.3	Warren	11.4
Lafayette	10	Washington	11.4
Lawrence	2.3	Wayne	11.4
Lewis	3.1	Webster	2.3
Lincoln	11.4	Worth	10
		Wright	2.3

**STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION**  
**CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)**

This contractor and subcontractor shall abide by the requirements of 41 CFR 60-1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability or veteran status.

As used in these specifications:

"Minority" includes;

- (i) Black (all person having origins in any of the Black African racial groups not of Hispanic origin);
- (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
- (iii) Asian and pacific islander (all persons having origins in any of the original peoples of the Far East, southeast Asia, the Indian Subcontinent, or the Pacific Islands; and
- (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North American and maintaining identifiable tribal affiliations through membership and participation or community identification).