

Job No.: J5P3490

Route: Various

County: Various

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

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	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65102 Phone 1-888-275-6636
	<i>Civil Design, Inc.</i> 5220 Oakland Avenue St. Louis, MO 63110 Certificate of Authority: 2002006804 Consultant Phone: 314-916-1178
	If a seal is present on this sheet, JSP's have been electronically sealed and dated.
	JOB NUMBER: J5P3490 COUNTY - VARIOIS, MO DATE PREPARED: 4/4/23
	ADDENDUM DATE:
Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: All	

JOB
SPECIAL PROVISION

A. General - Federal JSP-09-02H

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

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

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

General Provisions & Supplemental Specifications

Supplemental Plans to July 2022 Missouri Standard Plans
For Highway Construction

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

B. Contract Liquidated Damages JSP-13-01B

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

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

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Notice to Proceed: July 11, 2023
Completion Date: December 1, 2024

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

Job Number	Calendar Days	Daily Road User Cost
J5P3490	217	\$5400

3.0 Liquidated Damages for Contract Administrative Costs. Should the contractor fail to complete the work on or before the completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged contract administrative liquidated damages in accordance with Sec 108.8 in the amount of **\$750** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the above specified completion date or calendar days.

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

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

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

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

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

2.0 Traffic Management Schedule.

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

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

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

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

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

2.5.1 Traffic Safety.

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

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

3.0 Work Hour Restrictions.

3.1 Except for emergency work, as determined by the engineer, and long term lane closures required by project phasing, all lanes shall be scheduled to be open to traffic during the five

major holiday periods shown below, from 12:00 noon on the last working day preceding the holiday until 6:00 a.m. on the first working day subsequent to the holiday unless otherwise approved by the engineer.

Memorial Day
Labor Day
Thanksgiving
Christmas
New Year's Day

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

12:00 noon June 30, 2023 – 6:00 a.m. July 5, 2023

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

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

4.0 Detours and Lane Closures.

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

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

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

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

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

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

Missouri Highway Patrol 573-751-1000 – Jefferson City 573-368-2345 - Rolla		
City of Fulton	City of Holts Summit	City of Jamestown
Fire: 573-592-3153	Fire: 573-896-4589	Fire: 660-849-2800
Police: 573-592-3100	Police: 573-896-4115	Police: 573-796-2525
City of Latham	City of Jefferson City	City of Rich Fountain
Fire: 660-458-6233	Fire: 573-634-6401	Fire: 573-635-4225
Moniteau County Sheriff	Police: 573-634-6400	Police: 573-897-3927
City of Steelville	City of Rolla	City of St. James
Fire: 573-775-2708	Fire: 573-364-3989	Fire: 573-265-7212
Police: 573-775-2200	Police: 573-364-0111	Police: 573-265-3777
City of Latham		
Fire: 660-458-6233		
Moniteau County Sheriff: 573-796-2525		

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

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

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

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

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

Mia Peters, PE Project Contact
Central District
1511 Missouri Blvd.
Jefferson City, MO 65102

Telephone Number: 573-751-7690
Email: Maria.Peters@modot.mo.gov

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

F. Supplemental Revisions JSP-18-01X

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

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

Stormwater Compliance Requirements

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

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

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

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

2.1 Duties of the WPCM:

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

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

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

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

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

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

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

Anti-Discrimination Against Israel Certification

By signing this contract, the Company certifies it is not currently engaged in and shall not, for the duration of the contract, engage in a boycott of goods or services from the State of Israel, companies doing business in or with Israel or authorized by, licensed by, or organized under the laws of the State of Israel, or persons or entities doing business in the State of Israel as defined by Section 34.600 RSMo. This certification shall not apply to contracts with a total potential value of less than One Hundred Thousand Dollars (\$100,000) or to contractors with fewer than ten (10) employees.

Ground Tire Rubber (GTR) Dry Process Modification of Bituminous Pavement Material

1.0 Description. This work shall consist of the dry process of adding ground tire rubber (GTR) to modify bituminous material to be used in highway construction. Existing GTR requirements in Section 1015 pertain to the wet process method of GTR modification that blends GTR with the asphalt binder (terminal blending or blending at HMA plant). The following requirements shall govern for dry process GTR modification. The dry process method adds GTR as a fine aggregate or mineral filler during mix production. All GTR modified asphalt mixtures shall be in accordance with Secs 401, 402, or 403 as specified in the contract; except as revised by this specification.

2.0 Materials. The contractor shall furnish a manufacturer's certification to the engineer for each shipment of GTR furnished stating the name of the manufacturer, the chemical composition, workability additives, and certifying that the GTR supplied is in accordance with this specification.

2.1 Product Approval. The GTR product shall contain a Trans-Polyoctenamer (TOR) added at 4.5 % of the weight of the crumb rubber or an engineered crumb rubber (ECR) workability additive that has proven performance in Missouri. Other GTR additives shall be demonstrated and proven prior to use such as a five-year field performance history in other states or performance on a federal or state-sanctioned accelerated loading facility.

2.2 General. GTR shall be produced from processing automobile or truck tires by ambient or cryogenic grinding methods. Heavy equipment tires, uncured or de-vulcanized rubber will not be permitted. GTR shall also meet the following material requirements:

Table 1 – GTR Material Properties		
Property	Test Method	Criteria
Specific Gravity	ASTM D1817	1.02 to 1.20
Metal Contaminates	ASTM D5603	$\leq 0.01\%$
Fiber Content	ASTM D5603	$\leq 0.5\%$
Moisture Content	ASTM D1509	$\leq 1.0\%^*$
Mineral Filler	AASHTO M17	$\leq 4.0\%$

*Moisture content of the GTR shall not cause foaming when combined with asphalt binder and aggregate during mix production

2.3 Gradation. The GTR material prior to TOR or ECR workability additives shall meet the following gradation and shall be tested in accordance with ASTM D5603 and ASTM D5644.

Table 2 – GTR Gradation	
Sieve	Percent Passing by Weight
No. 20	100
No. 30	98-100
No. 40	50-70
No. 100	5-15

3.0 Delivery, Storage, and Handling. The GTR shall be supplied in moisture-proof packaging or other appropriate bulk containers. GTR shall be stored in a dry location protected from rain before use. Each bag or container shall be properly labeled with the manufacturer's designation for the GTR and specific type, mesh size, weight and manufacturer's batch or Lot designation.

4.0 Feeder System. Dry Process GTR shall be controlled with a feeder system using a proportioning device that is accurate to within ± 3 percent of the amount required. The system shall automatically adjust the feed rate to always maintain the material within this tolerance and shall have a convenient and accurate means of calibration. The system shall provide in-process monitoring, consisting of either a digital display of output or a printout of feed rate, in pounds per minute, to verify feed rate. The supply system shall report the feed in 1-pound increments using

load cells that will enable the user to monitor the depletion of the GTR. Monitoring the system volumetrically will not be allowed. The feeder shall interlock with the aggregate weight system and asphalt binder pump to maintain correct mixture proportions at all production rates.

Flow indicators or sensing devices for the system shall be interlocked with the plant controls to interrupt mixture production if GTR introduction rate is not within ± 3 percent. This interlock will immediately notify the operator if GTR introduction rate exceeds introduction tolerances. All plant production will cease if the introduction rate is not brought back within tolerance after 30 seconds. When the interlock system interrupts production and the plant has to be restarted, upon restarting operations; the modifier system shall run until a uniform feed can be observed on the output display. All mix produced prior to obtaining a uniform feed shall be rejected.

4.1 Batch Plants. GTR shall be added to aggregate in the weigh hopper. Mixing times shall be increased per GTR manufacturer recommendations

4.2 Drum Plants. The feeder system shall add GTR to aggregate and liquid binder during mixing and provide sufficient mixing time to produce a uniform mixture. The feeder system shall ensure GTR does not become entrained in the exhaust system of the drier or plant and is not exposed to the drier flame at any point after introduction.

5.0 Testing During Mixture Production. Testing of asphalt mixes containing GTR shall not begin until at least 30 minutes after production or per additive supplier's recommendation.

6.0 Construction Requirements. Mixes containing GTR shall have a target mixing temperature of 325 F or as directed by the GTR additive supplier. The additive supplier's recommendations shall be followed to allow for GTR binder absorption/reaction. This may include holding mix in the silo to allow time for binder to absorb into the GTR. Rolling operations may need to be modified.

7.0 Mix Design Test Method Modification. A formal mixing procedure from the additive supplier shall be provided to the contractor and engineer that details the proper sample preparation, including blending GTR with the binder or other additives. Samples shall be prepared and fabricated in accordance with this procedure by the engineer and contractor throughout the duration of the project.

8.0 Mix design Volumetrics. Mix design volumetric equations shall be modified as follows:

8.1 Additional virgin binder added to offset GTR absorption of binder shall be counted as part of the mix virgin binder

8.2 GTR shall be included as part of the aggregate when calculating VMA of the mix.

8.2.1 GTR SPG shall be 1.15

8.3 VMA shall be calculated as follows:

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

where:

P_s = percent aggregate by total mixture weight

P_{GTR} = percent GTR by total mixture weight

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

G_{GTR} = GTR specific gravity

8.4 G_{se} shall be calculated as follows:

$$G_{se} = \frac{(100 - P_b - P_{GTR})}{\left(\frac{100}{G_{mm}} - \frac{P_b}{G_b} - \frac{P_{GTR}}{G_{GTR}} \right)}$$

8.5 P_{be} shall be calculated as follows:

$$P_{be} = P_b - \frac{P_{ba}}{100} * (P_s + P_{GTR})$$

9.0 Minimum GTR Amount. The minimum dosage rate for GTR shall be 5 % by weight of total binder for an acceptable one bump grade or 10 % by weight of total binder for an acceptable two bump grade as detailed in the following table. Varying percentage blends of GTR and approved additives may be used as approved by the engineer with proven performance and meeting the specified requirements of the contract grade.

Contract Binder Grade	Percent Effective Virgin Binder Replacement Limits	Required Virgin Binder Grade	Minimum GTR Dosage Rate
PG 76-22	0 - 20	PG 70-22	5 %
		PG 64-22	10 %
PG 70-22	0 - 30	PG 64-22	5 %
		PG 58-28	10 %
PG 64-22	0 - 40*	PG 58-28	5 %
		PG 52-34	10 %
PG 58-28	0 - 40*	PG 52-34	5 %
		PG 46-34	10 %

* Reclaimed Asphalt Shingles (RAS) may be used when the contract grade is PG 64-22 or PG 58-28. RAS replacement shall follow the 2 x RAS criteria when calculating percent effective binder replacement in accordance Sec 401.

Delete Sec 107 in its entirety and substitute the following:

107.1 Laws to be Observed The contractor shall know, observe and comply with all federal and state laws, local laws, codes, ordinances, orders, decrees and regulations existing at the time of or enacted subsequent to the execution of the contract that in any manner affect the prosecution of the work, except as specified in the contract or as directed by the engineer. The Contractor shall also ensure that any subcontractor know, observe and comply with all federal

and state laws, local laws, codes, ordinances, orders, decrees and regulations as outlined above. The contractor and surety shall indemnify and save harmless the State, the Commission, the Commission's agents, employees and assigns from any claim or liability arising from or based on the violation of any such law, code, ordinance, regulation, order or decree, except any local regulations, decrees, orders, codes or ordinances directed by the contract.

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

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

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

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

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

107.4 Safety and Sanitary Provisions The contractor shall at all times take necessary precautions to protect the life and health of all persons employed on the project or, who at the direction of the contractor are present on the right of way. The contractor shall be familiar with the latest accepted accident prevention methods and shall provide necessary safety devices

and safeguards accordingly. The Commission will refuse to provide inspection services at plants or work sites where adequate safety measures are not provided and maintained.

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

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

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

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

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

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

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

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

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

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

107.5.3 Material and Equipment. During construction hours, equipment, material and vehicles utilized in construction of the project will only be permitted on shoulders, medians or pavements where the locations are closed to traffic, properly signed and occupied by ongoing construction operations, unless otherwise approved by the engineer. Except in cases of emergency, construction equipment, material and vehicles will not be permitted on pavements or shoulders being utilized by traffic. If the contract specifies time periods the contractor will not

be permitted to perform work, construction equipment or vehicles shall not enter or leave the construction area via the pavements handling traffic nor be operated on the pavements handling traffic within the construction area during the restricted time periods. During non-construction hours, construction equipment, material and vehicles will not be permitted within 30 feet of the edge of the pavement or shoulders carrying traffic unless the equipment, material and vehicles are located in a properly protected area, an off-site storage area or as otherwise directed by the engineer.

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

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

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

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

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

107.7.3 Removal of any item or material of any nature by blasting shall be done in such a manner and at such time as to avoid damage affecting the integrity of the design and to avoid damage to any new or existing structure, whether on Commission right of way or private property, included in or adjacent to the work. Unless the contract documents or the engineer restricts such operation, the contractor shall be responsible for determining a method of operation to ensure the desired results and the integrity of the completed work.

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

107.8 Preservation of Monuments and Artifacts.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

107.13.4 Contractor's Pollution Liability (CPL) Insurance. The Contractor performing excavation, remediation, hazardous materials removal, or any other work involving potential pollution arising from construction operations shall procure and maintain contractor's pollution liability insurance for liability arising out of sudden, accidental, and gradual pollution and remediation. The policy shall have minimum limits of \$1,000,000 and the Commission, MoDOT and its employees shall be endorsed as additional insureds under such policy. The policy shall provide coverage for the hauling of waste from the project site to the final disposal location, including non-owned disposal sites. Products/completed operations coverage for pollution liability insurance shall extend a minimum of three (3) years after final acceptance of the project. Coverage shall be included on behalf of the insured for covered claims arising out of the actions of independent contractors. If the insured is using subcontractors, the Policy must include work performed "by or on behalf" of the insured. Policy shall specifically provide for a duty to defend on the part of the insurer.

107.13.5 Aircraft Liability Insurance. If aircraft, including unmanned aircraft, will be used on the project, Contractor shall provide, or cause to be provided, aircraft liability insurance

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

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

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

107.13.8 Railroad Protective Liability Insurance. In addition to other forms of required insurance, the Contractor shall provide railroad protective liability insurance when any of the Contractor's work is to be performed within any railroad right of way and in some cases may be required when the project improvements are near a railroad right of way. The name or names of the railroad companies known to be in the vicinity of the contract improvements will be specified in each contract, but the contractor shall confirm the railroad companies impacted and the final insurance needed with each railroad. The minimum limits of the insurance indicated by each railroad to the Commission will be included in the contract bid documents for informational purposes, but the contractor shall be bound by each individual railroad company requirements. Each railroad agency has final determination in the content and coverage limits of the policies required. No work will be permitted within any railroad's right of way until the railroad involved has reviewed and approved the insurance policy. Any day upon which the Contractor cannot perform work due to such a policy not being approved by the railroad will not be counted as a contract day under [Sec 108.7](#).

107.13.9 Evidence of Insurance. Required evidence of insurance providing confirmation of compliance with these requirements shall consist of a certificate of insurance, an endorsement to any workers compensation policy waiving the subrogation by the insurer, and any endorsements adding the Commission, MoDOT and its employees as additional insureds where specified. "Blanket" or "automatic" additional insured endorsements providing additional insured

coverage “where required by contract,” may be used, provided that such forms provide coverage at least as broad as provided by the specified endorsement forms required. The contractor and any subcontract work shall not commence under the contract until the contractor obtains the applicable insurance coverage required and receives approval for such insurance from the engineer. All evidence of insurance for the prime contractor, including certificates of insurance and required endorsements, and notices shall be submitted electronically by the insurance agent to ContractorSupport@MoDOT.mo.gov. The Contractor shall promptly furnish the engineer with a complete copy of its policy upon request. Failure to furnish evidence of proper insurance, or complete insurance policies when requested, may result in the suspension of work as provided in [Sec 108](#), and may result in other claims or actions for breach of contract or otherwise, as may be recognized at law or in equity.

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

107.13.10 Other Conditions and Requirements

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

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

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

107.13.10.4 Primary and Non-contributory. For any claims related to this contract, the Contractor’s insurance coverage shall be primary insurance with respects to the Commission, MoDOT and its employees as the additional insureds. Any other insurance or self-insurance maintained by any of these parties shall be excess of the Contractor’s insurance and shall not contribute with the Contractor’s insurance.

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

is not intended by any party or insured to be all inclusive, or to the exclusion of other coverage, or a waiver of any type.

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

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

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

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

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

107.15 Third Party Liability. Neither the State of Missouri, including the Commission, nor the contractor, by execution of the contract including these specifications, intend to create a right of action in a third-party beneficiary, except as specifically set out in these specifications and the contract. It is not intended by any required contractual liability in the contract or in these specifications that any third-party beneficiary has a cause of action arising out of the condition of the project when completed in accordance with the plans and accepted by the Commission.

107.16 Personal Liability of Public Officials. There shall be no personal liability upon the Chief Engineer, or any member, employee, or agent of the Commission in carrying out any of the provisions of the contract or in exercising any power or authority granted to the individual, it being understood that in such matters the individual acts as an agent and representative of the State, with official and public duty doctrine immunity. If any provision of the contract appears to

impose a duty on such an individual, the duty will remain exclusively that of the Commission and will not be a personal duty or obligation of the individual.

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

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

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

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

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

Buy America

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

1.0 Description. The Bipartisan Infrastructure Law (BIL) was enacted on November 15, 2021. The BIL includes Build America, Buy America Act Publication L. No. 117-58. This provision expands the Buy America requirements beyond what is currently only required for steel and iron products. The steel and iron provisions have not changed with the new bill. Cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives are excluded from this requirement. All other materials and manufactured products permanently incorporated into the project will be subject to Buy America requirements. There are three categories requiring Buy America Certification:

- a) Iron and steel – no changes to the current specification requirements.
- b) Manufactured products – these are currently exempted under the 1983 waiver from FHWA.
- c) Construction materials consisting primarily of:

- Non-ferrous metals;
- Plastic and polymer-based products (including polyvinylchloride, composite build materials, and polymers used in fiber optic cables);
- Glass (including optic glass);
- Lumber; or
- Drywall

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

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

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

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

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

Delete Sec 617.20.3 and substitute the following:

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

Delete Sec 1063.2 and substitute the following:

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

Alternate Weather Limitations for Plant Mix Bituminous Surface Leveling

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

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

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

2.0 Remedial Actions.

- a) Reclaimed Asphalt Pavement (RAP) content in the mix does not exceed 20% asphalt binder replacement.
- b) No Reclaimed Asphalt Shingles (RAS) are added to the mix.
- c) A material transverse vehicle is utilized to transfer the mix from the haul trucks to the paver.
- d) Warm mix technology shall be incorporated into the mix (either by chemical additive or foaming), as approved by the engineer.

G. Utilities JSP-93-26F

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

<u>Utility Name</u>	<u>Known Required Adjustment</u>	<u>Type</u>
Alliance Water Resources Nathan Browne Phone: (573) 699-8030 Email: nbrowne@stjamesmo.org	Section 2.1	Water Sewer Gas
Ameren Missouri Electric – Central MO Jason Haynam Phone: (573) 681-7513 Email: jhaynam@ameren.com	Section 2.2	Electric
Ameren Missouri Gas Trent Snodgrass Phone: (660) 353-1530 Email: tsnodgrass@ameren.com	Section 2.3	Gas
AT&T Distribution – Central MO Chris Halley Phone: (314) 402-5829 Email: ch7954@att.com	Section 2.4	Communications
Callabyte Technology Chris Meloy Phone: (573) 690-6164 Email: cmeloy@callawayelectric.com Callabyte Office Phone: (573) 826-2371 Email: info@callabyte.com	Section 2.5	Communications
Callaway County PWSD #1 Office Phone: (573) 896-4788 Email: callawaywater1@yahoo.com	Section 2.6	Water
Callaway Electric Cooperative Mark Voss Office Phone: (573) 642-3326 Email: mvooss@callawayelectric.com	Section 2.7	Electric
Charter Communications Ron Williams Phone: (314) 280-1662 Email: ron.williams@charter.com	Section 2.8	Communications

City of Eldon David McKenney Phone: (573) 392-2291 Email: utilitybilling@eldonmo.org	Section 2.9	Water
City of Fulton Richard Elsenrath Email: asstcityengineer@fultonmo.org	Section 2.10	Fiber
City of Holts Summit Keith Edwards Phone: (573) 220-8726 Office Phone: (573) 896-5600 sewer@holtssummit.org	Section 2.11	Sewer
City of Jamestown Jamie Russell Phone: (660) 849-2339 cityofjamestown@gmail.com	Section 2.12	Water
City of Jefferson – Street Department David Bange Phone: (573) 634-6464 Email: dbange@jeffcitymo.org	Section 2.13	Storm Sewer
City of Jefferson – Wastewater Eric Seaman Phone: (573) 634-6464 Email: dbange@jeffcitymo.org	Section 2.14	Sanitary Sewer
City of Rolla – Public Works David Forshee Phone: (573) 426-6957 Email: dforshee@rollacity.org	Section 2.15	Sanitary Sewer Storm Sewer
City of Rolla – Municipal Utilities Chad Davis Phone: (573) 364-1572 Email: cdavis@rmurolla.org	Section 2.16	Electric
City of St. James – Municipal Utilities Nathan Browne Phone: (573) 699-8030 Email: nbrowne@stjamesmo.org	Section 2.17	Water Sewer Gas
City of Steelville Jason Evans Email: jhevens.consult@gmail.com	Section 2.18	Water Sewer

Cole County PWSD #2 Randy Kay Phone: (573) 635-7011 Email: PWSD2@socket.net	Section 2.19	Water
CO-MO Connect Matt Schubert Phone: (573) 569-2489 Email: mschubert@co-mo.coop	Section 2.20	Communications
CTLCL – Centurylink David Roberts Phone: (573) 886-3503 Email: david.a.robers@lumen.com Lumen Relocation Department Email: relocations@lumen.com	Section 2.21	Communications
Fidelity Communications Richard Barred Phone: (573) 694-1693 Office Phone: (417) 667-2857 Email: richard.barred@fidelitycommunications.com	Section 2.22	Communications
Intercounty Electric Coop Garth McCracken Phone: (573) 368-4523 Office Phone: (866) 624-3679 Email: garth.mccracken@ieca.coop	Section 2.23	Electric
Level 3 Now Centurylink – Central MO Chris Boessen Phone: (573) 634-1722 Email: Cristopher.r.boessen@centurylink.com Chris Mueller Email: chris.mueller@lumen.com Kelly Weigle Email: kelly.weigle@lumen.com	Section 2.24	Communications
MCI ASG Investigations Email: asg.investigationsteam@asginc.us	Section 2.25	Communications
Mediacom Bob Boner Phone: (573) 443-1536 Email: Bboner@mediacomecc.com	Section 2.26	Communications

Missouri American Water Co. - Central MO Douglas Patrick Phone: (573) 606-6380 Email: douglas.patrick@amwater.com	Section 2.27	Water Sewer
MNA - Bluebird James Scott Phone: (314) 220-8996 Email: james.scott@bluebirdnetwork.com	Section 2.28	Communications
MoDOT – Central District Jason Morff Phone: (573) 526-3207 Email: jason.morff@modot.mo.gov Tim Oligschlaeger Phone: (573) 526-6880 Email: tim.oligschlaeger@modot.mo.gov	Section 2.29	Fiber
Sho-Me Technologies Brad McGoon Email: dmcgoon@shomepower.com	Section 2.30	Communications
Socket - Telecom Matt Kohly Phone: (573) 289-8633 Email: mkohly@sockettelecom.com Todd Pulis Phone: (573) 818-4778 Email: tpulis@socket.net	Section 2.31	Communications
Steelville Telephone Company Danny Wallis Email: danny.wallis@goste.net	Section 2.32	Communications

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

information indicating existence, location and status of any facility. Such verification includes direct contact with the listed utilities.

2.0 Project Specific Provisions:

2.1 Alliance Water Resources has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites. Upon contacting Alliance water, they stated that utility coordination of their facilities is done through the City of St. James. An all-clear letter has been received from the City of St. James regarding water lines.

None of Alliance Water Resources' facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Nathan Browne, City of St. James, for coordination of work that may arise and affect their facilities.

2.2 Ameren Missouri Electric – Central MO has overhead electric facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites.

None of Ameren Electric facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Jason Haynam, for coordination of work that may arise and affect their facilities.

2.3 Ameren Missouri Gas has facilities located throughout the project limits. Adjustments for valves will be required once final elevations are known.

Adjustments will occur at the following location(s):

Gas valve near STA 1171+78.00, 22.81' LT (p. 14)

Contractors shall contact Trent Snodgrass for coordination once final elevations are known.

2.4 AT&T Distribution – Central MO has facilities located throughout the project limits. However, their facilities are at least 24 inches below the current elevation. Without extensive excavation occurring, there should not be a need for adjustments or relocations.

Contractors shall contact, as needed, Chris Halley, for coordination of work that may arise and affect their facilities.

2.5 Callabyte Technology has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites.

None of Callabyte Technology's facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Chris Meloy, for coordination of work that may arise and affect their facilities.

2.6 Callaway County PWSD #1 has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites. An all-clear letter has been received from Callaway County PWSD #1.

None of Callaway County PWSD #1's facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, the Callaway County PWSD #1 office (573) 896-4788, for coordination of work that may arise and affect their facilities.

2.7 Callaway Electric Cooperative has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites. An all-clear letter has been received from Callaway Electric Cooperative.

None of Callaway Electric Cooperative's facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Mark Voss, for coordination of work that may arise and affect their facilities.

2.8 Charter Communications has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites.

None of Charter Communications' facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Ron Williams, for coordination of work that may arise and affect their facilities.

2.9 City of Eldon has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites. An all-clear letter has been received.

None of the City of Eldon's facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, David McKenney, for coordination of work that may arise and affect their facilities.

2.10 City of Fulton has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites. An all-clear letter has been received from the City of Fulton.

None of the City of Fulton's facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Richard Elsenrath, for coordination of work that may arise and affect their facilities.

2.11 City of Holts Summit has facilities located throughout the project limits. Adjustments for manholes will be required once final elevations are known.

Adjustments will occur at the following location(s):

Sanitary sewer manhole near STA 3028+01.20, 26.30' LT (p. 8)

Contractors shall contact Keith Edwards for coordination once final elevations are known.

2.12 City of Jamestown has facilities located throughout the project limits. Adjustments for manholes will be required once final elevations are known.

Adjustments will occur at the following location(s):

Water valve near STA 1186+05.00, 16.00' LT (p. 13)

Water valve near STA 1171+78.00, 25.45' RT (p. 14)

Water valve near STA 1171+74.00, 36.60' RT (p. 14)

Contractors shall contact Jamie Russell for coordination once final elevations are known.

2.13 City of Jefferson – Street Department has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites.

None of the City of Jefferson – Street Department's facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, David Bange, for coordination of work that may arise and affect their facilities.

2.14 City of Jefferson – Wastewater has facilities located throughout the project limits. Adjustments for valves and manholes will be required once final elevations are known.

Adjustments will occur at the following location(s):

Water valve near STA 6067+43.40, 45.25' LT (p. 27)

Sanitary manhole near STA 6074+14.00, 44.50' LT (p. 28)

Contractors shall contact Eric Seaman for coordination once final elevations are known.

2.15 City of Rolla – Public Works has facilities located throughout the project limits. Adjustments for storm sewer manholes will be required once final elevations are known.

Adjustments will occur at the following location(s):

Manhole near STA 10017+89.45, 15.00' RT (p. 50)

Manhole near STA 10026+14.46, 15.25' RT (p. 51)

Manhole near STA 10027+57.50, 15.25' RT (p. 51)

Manhole near STA 10029+42.91, 15.25' RT (p. 51)

Manhole near STA 10024+68.58, 15.40' RT (p. 52)

Manhole near STA 10029+08.15, 15.75' RT (p. 53)

Contractors shall contact David Forshee for coordination once final elevations are known.

2.16 City of Rolla – Municipal Utilities has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites.

None of the City of Rolla – Municipal Utilities’ facilities are known to require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Chad Davis, for coordination of work that may arise and affect their facilities.

2.17 City of St. James – Municipal Utilities has facilities located throughout the project limits. Adjustments for storm sewer manholes will be required once final elevations are known.

Adjustments will occur at the following location(s):

Water valve near STA 11027+64.32, 25.75’ RT (p. 58)
Grated inlet near STA 11027+70.00, 25.50’ RT (p. 58)
Cub Inlet Top near STA 11040+30.36, 37.70’ LT (p. 61)

Contractors shall contact Nathan Browne for coordination once final elevations are known.

2.18 City of Steelville has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites.

None of the City of Steelville’s facilities require adjustments or relocations to complete the project. The City would like to be contacted prior to construction.

Contractors shall contact, as needed, Jason Evans, for coordination of work that may arise and affect their facilities.

2.19 Cole County PWSD #2 has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites.

None of Cole County PWSD #2’s facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Randy Kay, for coordination of work that may arise and affect their facilities.

2.20 CO-MO Connect has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites. An all-clear letter has been received from CO-MO Connect.

None of CO-MO Connect’s facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Matt Schubert, for coordination of work that may arise and affect their facilities.

2.21 CTLCL – Centurylink has facilities located throughout the project limits. Adjustments for pull boxes will be required once final elevations are known.

Adjustments will occur at the following location(s):

Pull box near STA 3027+74.00, 30.50' LT (p. 8)
Pull box near STA 3027+85.00, 30.50' LT (p. 8)

Contractors shall contact the Lumen Relocations Department once final elevations are known.

2.22 Fidelity Communications has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites.

None of the Fidelity Communications' facilities are known to require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Richard Barred, for coordination of work that may arise and affect their facilities.

2.23 Intercounty Electric Coop has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites.

None of the Intercounty Electric Coop's facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Garth McCracken, for coordination of work that may arise and affect their facilities.

2.24 Level 3 Now Centurylink – Central MO has facilities located throughout the project limits. However, their facilities are at least 30 inches below the current elevation. Without extensive excavation occurring, there should not be a need for adjustments or relocations.

Contractors shall contact, as needed, Kelly Weigle, for coordination of work that may arise and affect their facilities.

2.25 MCI (Verizon) has facilities located within the project limits. However, their facilities are not in conflict with any of the reconstruction sites. An all-clear letter has been received from ASG Investigations on behalf of Verizon.

None of MCI's facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, ASG Investigations, for coordination of work that may arise and affect their facilities.

2.26 Mediacom has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites.

None of Mediacom's facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Bob Boner, for coordination of work that may arise and affect their facilities.

2.27 Missouri American Water Co. – Central MO has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites.

None of Missouri American Water Co. – Central MO's facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Doug Patrick, for coordination of work that may arise and affect their facilities.

2.28 MNA – Bluebird has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites. An all-clear letter has been received from MNA – Bluebird.

None of MNA – Bluebird's facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Jamie Scott, for coordination of work that may arise and affect their facilities.

2.29 MoDOT – Central District has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites.

None of MoDOT – Central District's facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Jason Morff, for coordination of work that may arise and affect their facilities.

2.30 Sho-Me Technologies has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites.

None of Sho-Me Technologies' facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Brad McGoon, for coordination of work that may arise and affect their facilities.

2.31 Socket – Telecom has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites.

None of Socket – Telecom's facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Matt Kohly, for coordination of work that may arise and affect their facilities.

2.32 Steelville Telephone Company has facilities located throughout the project limits. However, their facilities are not in conflict with any of the reconstruction sites.

None of Steelville Telephone Company's facilities require adjustments or relocations to complete the project.

Contractors shall contact, as needed, Danny Wallis, for coordination of work that may arise and affect their facilities.

3.0 It shall be noted by the contractor that MoDOT is a member of Missouri One Call (800 Dig Rite). Some work on this project may be in the vicinity of MoDOT utility facilities, which includes but is not limited to traffic signal cables, highway lighting circuits, ITS cables, cathodic protection cables, etc. Prior to beginning work, the contractor shall request locates from Missouri One Call.

4.0 The contractor must maintain an 80" vertical clearance in any areas where the sidewalk goes underneath a guy wire.

5.0 Any representation of the presence of utilities on any bidding document provided under this contract is disclaimed by the Commission. The contractor fully understands this disclaimer when determining the basis of their bid for this contract. The contractor agrees to hold the Commission harmless in the presence or absence of any utility within the limits of this contract.

5.1 There will be no direct payment for compliance with this provision.

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

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

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

www.modot.org/business/contractor_resources/forms.htm

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.

I. Removal and Delivery of Existing Signs JSP-12-01B

1.0 Description. All Commission-owned signs removed from the project shall remain the property of the Commission and shall be disassembled and delivered as specified herein.

2.0 Disassembly and Delivery. All Commission-owned signs, not to include abandoned billboard signs, designated for removal in the plans, and any other signs designated by the

engineer, shall be removed by the contractor and delivered to the address below. The contractor shall call the phone number listed below 48 hours prior to delivery and make arrangements for delivery during normal business hours.

MoDOT Linn Maintenance Lot
1739 US 50
Linn, MO, 65051
Attn: Eric Kaiser
573-526-4449

2.1 Signs shall be removed from sign supports and structures prior to delivery. Sign supports and structures shall become the property of the Contractor and removed from the project. Any oversized sign panels shall be disassembled or cut into widths of 8-feet or less with no restriction on length. Signs shall be stacked neatly in bins provided by MoDOT at the delivery site.

3.0 Basis of Payment. All costs associated with removing, disassembling, storing, and transporting 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.

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

1.0 Delete Sec 616.11 and insert the following:

616.11 Method of Measurement. Measurement for relocation of post-mounted signs will be made to the nearest square foot of sign area only for the signs designated for payment on the plans. All other sign relocations shall be incidental. Measurement for construction signs will be made to the nearest square foot of sign area. Measurement will be made per each for each of the temporary traffic control items provided in the contract.

616.11.1 Lump Sum Temporary Traffic Control. No measurement will be made for temporary traffic control items grouped and designated to be paid per lump sum. The list of lump sum items provided in the plans or contract is considered an approximation and may be subject to change based on field conditions. This is not a complete list and may exclude quantities for duplicate work zone packages used in simultaneous operations. The contractor shall provide all traffic control devices required to execute the provided traffic control plans for each applicable operation, stage, or phase. No measurement will be made for any additional signs or devices needed except for changes in the traffic control plan directed by the engineer.

2.0 Delete Sec 616.12 and insert the following:

616.12 Basis of Payment. All temporary traffic control devices authorized for installation by the engineer will be paid for at the contract unit price for each of the pay items included in the contract. Whether the devices are paid individually, or per lump sum, no direct payment will be made for the following:

- (a) Incidental items necessary to complete the work, unless specifically provided as a pay item in the contract.

- (b) Installing, operating, maintaining, cleaning, repairing, removing, or replacing traffic control devices.
- (c) Covering and uncovering existing signs and other traffic control devices.
- (d) Relocating temporary traffic control devices, including permanent traffic control devices temporarily relocated, unless specifically included as a pay item in the contract.
- (e) Worker apparel.
- (f) Flaggers, AFADs, PFDs, pilot vehicles, and appurtenances at flagging stations.
- (g) Furnishing, installing, operating, maintaining, and removing construction-related vehicle and equipment lighting.
- (h) Construction and removal of temporary equipment crossovers, including restoring pre-existing crossovers.
- (i) Provide and maintaining work zone lighting and work area lighting.

616.12.1 Lump Sum Temporary Traffic Control. Traffic control items grouped together in the contract or plans for lump sum payment shall be paid incrementally per Sec 616.12.1.1. Alternately, upon request from the contractor, the engineer will consider a modified payment schedule that more accurately reflects completion of traffic control work. No payment will be made for any additional signs or devices needed except for changes in the traffic control plan directed by the engineer. Additional items directed by the engineer will be paid for in accordance with Sec 109.4. No adjustment to the price will be made for overruns or underruns of other work or for added work that is completed within existing work zones.

616.12.1.1 Partial payments. For purposes of determining partial payments, the original contract amount will be the total dollar value of all original contract line items less the price for Lump Sum Temporary Traffic Control (LSTTC). If the contract includes multiple projects, this determination will be made for each project. Partial payments will be made as follows:

- (a) The first payment will be made when five percent of the original contract amount is earned. The payment will be 50 percent of the price for LSTTC, or five percent of the original contract amount, whichever is less.
- (b) The second payment will be made when 50 percent of the original contract amount is earned. The payment will be 25 percent of the price for LSTTC, or 2.5 percent of the original contract amount, whichever is less.
- (c) The third payment will be made when 75 percent of the original contract amount is earned. The payment will be 20 percent of the price for LSTTC, or two percent of the original contract amount, whichever is less.
- (d) Payment for the remaining balance due for LSTTC will be made when the contract has been accepted for maintenance or earlier as approved by the engineer.

616.12.1.2 Temporary traffic control will be paid for at the contract lump sum price for Item:

Item No.	Unit	Description
616-99.01	Lump Sum	Misc. Lump Sum Temporary Traffic Control

K. Changeable Message Sign (Commission Furnished) JSP-93-27

1.0 Description. The commission will furnish changeable message sign(s), hereinafter referred to as a CMS, in a serviceable and working condition to the job site. Each CMS will not be delivered until requested by the contractor through the engineer and the immediate use of the CMS will be for the contractor to place it into service. When the CMS is no longer needed, the engineer shall be notified to remove the CMS from the job site.

1.1 The contractor shall be responsible for relocating, maintaining, operating and protecting the CMS from theft and traffic hazards from the time the CMS is delivered until it is returned to the commission. The contractor shall maintain the CMS as required by the manufacturer and the engineer during the time the contractor is responsible for the CMS. The manufacturer recommended procedures for maintenance and operation will be on file at the project office.

2.0 Material. The contractor shall furnish and employ any fuel, oil, fuel filters, oil filters, batteries, hydraulic fluid or brake fluid needed to operate and maintain the CMS.

2.1 The contractor shall program the CMS as directed by the engineer.

3.0 Liability.

3.1 Should any CMS be damaged beyond reuse by the contractor's negligence, the contractor will replace the CMS with an equivalent make and model at the contractor's expense. If minor damage(s) caused by the contractor's operation, the contractor shall make all the necessary repairs to restore the CMS to its usable and functional condition.

3.2 Upon the completion of work, the contractor shall make all necessary repairs to the CMS if needed or replace the CMS with an equivalent type, if the equipment is beyond repairs, to the satisfaction of the engineer before returning it to an assigned location determined by the engineer.

4.0 Construction Requirements. The contractor shall place the CMS 6 feet (2 meters) off of the right edge of shoulder at the location shown on the plans or as directed by the engineer. The CMS shall be placed so that the right side of the unit is advanced approximately 3 degrees ahead with the direction of traffic. CMS shall not be located in medians. CMS shall be delineated with a minimum of five non-metallic drum-like channelizers. Installation, including location and placement, shall be approved by the engineer. If needed, the contractor shall relocate the CMS as directed by the engineer.

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

4.2 If the CMS is equipped with a cellular phone and modem for changing the message from a remote location, the operating cost shall include cellular phone hookup and monthly usage fee for the duration of the project.

5.0 Basis of Payment. All expenses incurred by the contractor in maintaining, relocating, operating and protecting the changeable message signs as outlined above shall be paid for at the contract unit price for:

Item 616-10.96	Changeable Message Sign, Commission Furnished	Each
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5.1 Cost for channelizers shall be included in the contract unit price for CMS.

L. Audible Pedestrian Push Buttons and Signing

1.0 Description. Audible pedestrian push buttons and signing will be required for all pedestrian indications at all the intersections.

2.0 Installation. Audible signals should be installed as part of a pushbutton assembly.

3.0 Equipment.

3.1 Walk Indications. Accessible pedestrian signals shall have both audible and vibrotactile walk indications.

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

3.3 Audible. Accessible pedestrian signals shall have an audible walk indication during the walk interval only. The audible walk indication shall be audible from the beginning of the associated crosswalk.

3.4 Push Button signage. In addition to standard pedestrian sign requirements, all pushbuttons for the locations mentioned in 1.0 shall have additional signage to indicate crosswalk direction by use of a tactile arrow and the name of the street containing the crosswalk served by the audible pedestrian signal. The sign shall be located immediately above the push button mechanism and parallel to the crosswalk controlled by the button. The street name shall be the name of the street or reasonable abbreviation whose crosswalk is controlled by the push button. Signage shall comply with ADA Accessibility Guidelines (ADAAG) 703.2 specifications for Braille and raised print.

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

3.4.2 Street Name. Accessible pedestrian signals (APS) shall include street name information aligned parallel to the crosswalk direction and shall comply with Revised Draft Guidelines for Accessible Public Rights-of-Way R409.3 or shall provide street name information in audible format.

4.0 Performance.

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

4.2 Verbal Wait Message. Acknowledge tone that tells the pedestrian that they have placed a call and informational message that tells the pedestrian to "Wait to cross" street name at intersecting street name.

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

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

5.0 Documentation and Support. Two copies of the operation and maintenance manuals for each station shall be included.

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

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

8.0 Payment. Payment for the audible signals will be for each unit per **bid item "902-99.02 – Detector Pushbutton APS"**. This will include all wiring, power adaptors, programming devices, communication devices, and installation hardware needed. Payment for signing will be included in the pay item for audible pedestrian pushbutton.

M. Pedestrian Push Button Extension

1.0 This work includes adding 1-1/2-inch aluminum pipe extensions to pedestrian pushbuttons so they meet offset and height requirements per ADA specifications.

1.1 The contractor is advised that various push buttons will require extensions from the pedestrian signal pole or vehicular signal post so the button is located meeting the requirement of ADA specifications. Extensions shall not exceed 18-inches.

2.0 Method of Measurement: Measurement of the pedestrian pushbutton extensions shall be made per each.

3.0 Basis of Payment: All costs associated with this work shall be considered completely covered by Item No. 902-99.02 "Pedestrian Push Button Extension", per each.

N. Property Access

1.0 Description. Access shall be maintained at all times to the local businesses and property owners within the project limits through the duration of the sidewalk, paved approach, and road closures. The contractor shall take all necessary steps to provide reasonable access accommodations to the property owners within the project limits. Under no circumstances shall any property owner be left without access to their property.

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

O. Site Restoration

1.0 Description. 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, damages to buildings, foundations, retaining walls, fencing, pavements, landscaping, trees, shrubs, plants, and damages to landscaping, or irrigation systems inside the easement areas 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 If the contractor elects and receives approval from the engineer for alternate trench and/or pull box locations, any areas of, sidewalk, pavement, shoulders, islands and medians – as well as any similar improvements consisting of asphaltic concrete materials – removed in conjunction with their construction shall be replaced with improvements of similar composition and thickness. Removals shall be achieved by means of full depth saw cuts, the resulting subgrade compacted to minimum density requirements and topped with 4 inches of compacted aggregate base course prior to replacement of surface materials. Concrete materials used in their replacement shall be approved by the engineer. A commercial asphalt mix may be used for replacement of asphaltic surfacing upon approval of the engineer.

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

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

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.

P. Adjusting Manholes Items

1.0 Description. This work shall consist of adjusting water valves, water meters, basins/inlets, manholes, lighting pull boxes, and signal pull boxes that are within areas where either new sidewalks, curb ramps, approaches or pavements are to be constructed as shown on the plans. The contractor shall verify the type of frame and cover in the field before performing the work. The adjustments shall be made to match the final proposed grade. Various pull boxes are called out to be relocated and adjusted to grade. The relocation of these pull boxes is included in the adjust to grade pay item.

2.0 Construction requirements. Height Adjustment. Regardless of type or size, the manholes, inlets, valves and pull boxes shown in the plans require adjustment to match the new grade of pavement. The existing manholes shall be adjusted and installed according to standard plan 731.00U. Adjusting rings shall not exceed 12 inches in height.

2.1 Adjusting manholes and adjusting basins or inlets shall be done in accordance with Section 604 except and modified herein.

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

2.3 The Contractor shall contact the respective utility regarding any questions regarding the adjustment of these facilities.

2.4 The contractor shall notify the engineer if manholes, valves or pull boxes belonging to utilities other than those listed above are encountered that will require adjustment. The contractor shall coordinate work with the affected utility to ensure that the completed facilities meet ADA requirements.

2.5 The Contractor shall contact the respective utility owners regarding any questions about the adjustment of these facilities. The Contractor shall contact the respective utility owner, at least 3 weeks prior to adjustment of these facilities to allow the utility owner to make necessary adjustments. The Contractor shall coordinate with the respective utility owners for scheduling and providing the necessary grade requirements for each adjustment.

2.6 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.

2.7 The Commission cannot warrant the information above which was provided by the utility owners.

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:

<u>Item Number</u>	<u>Type</u>	<u>Description</u>
604-99.02	Each	Adjusting Manholes
604-99.02	Each	Adjusting Inlet Top
603-99.02	Each	Adjusting Inlet Grate
603-99.02	Each	Adjusting Water Valve
603-99.32	Each	Adjusting Gas Valves
902-99.02	Each	Adjusting Pull Boxes

No direct payment will be made for any required hauling, cutting, joining, backfilling, adjusting rings, or any other requirements necessary to fulfill this provision. Not direct pay will be made to recover the cost of equipment, labor, materials, or time required to fulfill the above provision.

Q. Culvert Clean Out

1.0 Description. This work shall consist of removal of debris and silt from existing inlets, and manholes and the connecting inlet and outlet pipe at locations designated on the plans as “**culvert cleanout**”, or by the Engineer.

2.0 Construction Requirements. The designated inlet/manhole and inlet/outlet pipe shall be cleaned by a method and process approved by the Engineer. All debris and silt shall be removed from drainage structures to clean out of the outlet pipe. Removed material shall be properly disposed of by the contractor off the right of way. The entire outlet pipe from the inlet or manhole, to the next drainage structure downstream shall be cleaned out. Upon completion of the clean out, the drainage structure and pipes shall be thoroughly flushed with water.

3.0 Method of Measurement. Measurement for Culvert Cleanout will be made per each.

4.0 Basis of Payment. The accepted quantity of culvert cleanout will be paid for at the contract unit price for:

<u>Item Number</u>	<u>Type</u>	<u>Description</u>
206-35.00	Each	Culvert Cleanout

Payment will be considered full compensation for all labor, equipment, and material necessary to clean out the designated culverts and drop inlets and manholes.

R. ADA Compliant Grate or Manhole Cover

1.0 Description. This work shall consist of providing an ADA Compliant Storm Grate or Manhole Cover in the locations shown on the plans.

2.0 Construction Requirements. The designated ADA compliant grate or cover shall meet the Americans with Disabilities Act. The grate should not have slot openings greater than ½” in the direction of travel. Grates with elongated openings will be placed with long dimension perpendicular to the dominant direction of travel.

3.0 Method of Measurement. Measurement for ADA Compliant Grate will be made per each drainage structure specified in the plans.

4.0 Basis of Payment. The accepted ADA Compliant Grate or Manhole Cover will be paid for at the contract unit price for:

Payment will be considered full compensation for all labor, equipment, and material necessary to provide and place ADA Compliant Grate in the location specified on the plans.

<u>Item Number</u>	<u>Type</u>	<u>Description</u>
614-99.02	Each	ADA Compliant Grate
614-99.02	Each	ADA Compliant Manhole Cover

S. Relocate Pedestrian Push Button Post

1.0 Description. This work shall consist of relocating an existing Pedestrian Push Button Post as noted in the plans. All post adjustments completed in the location shall be as indicated on the drawings and directed by the Engineer. Push Button Post on the pedestrian access route shall be placed in compliance with ADA guidelines.

2.0 Materials. All materials and construction requirements shall conform to Sections 902 and Division 1000.

2.0 Construction Requirements. This work shall consist of relocating, furnishing and installing, "Relocate Pedestrian Push Button Post", complete, in place. All of the following is considered part of this work; ITS, connections, maintain ITS network, grounding, electrical connections, wiring, footings, covers, conduit, connectors, testing, etc. required to complete the relocation.

3.1 Contractor shall investigate existing conditions for the new push button post location, to be approved by the Engineer, prior to construction activities beginning related to this provision.

3.2 All construction shall be completed according to the Missouri Department of Transportation Standards.

3.3 The contractor shall exercise reasonable care in the handling of the equipment during removal, temporary storage, and installation. Should any of the equipment be damaged by the contractor's negligence, it shall be replaced at the contractor's expense.

3.0 Acceptance Testing

3.1 After relocating the pedestrian push button post and its assembly, the contractor shall test it using manufacturer recommended procedures to demonstrate that it is fully functional. If the pushbutton fails to operate properly and the problem cannot be resolved in the field, the cost of replacement shall be borne entirely by the contractor.

4.0 Method of Measurement. Measurement for Relocate Pedestrian Push Button Post will be made per each as specified in the plans.

5.0 Basis of Payment. Payment for furnishing all labor, materials, equipment, and incidentals necessary to for this relocation shall be completely covered by the contract unit price for the following pay item:

<u>Item Number</u>	<u>Type</u>	<u>Description</u>
902.99.02	Each	RELOCATE PED. PUSH BUTTON POST

There shall be No Direct Pay for adjusting ITS connections, electrical connections, wiring, conduit, footing, other connections, or other adjustments to except as identified by other pay items within this contract.

T. Remove and Relocate Bench

1.0 Description. This work shall consist of the removal of an existing bench.

2.0 Method of Measurement. Measurement for Remove and Replace Bench will be made per each.

3.0 Basis of Payment. Payment will be considered full compensation for all labor, equipment, and material necessary to remove bench, storage, and replacement of bench.

<u>Item Number</u>	<u>Type</u>	<u>Description</u>
608.99.02	Each	Remove and Replace Bench

U. Handrail Repair

1.0 **Description.** This work shall consist of repairing existing Handrail without balusters as specified in the plans.

2.0 **Materials.** All materials and construction requirements shall conform to Sections 606 and Division 1000. Contractor is to Match existing handrail material.

3.0 **Construction Requirements.** This work shall consist of repairing Handrail by adding the rail extensions required per MoDOT Standard Plans Section 608.40.

4.0 **Method of Measurement.** Measurements for Handrail Repair will be made per each.

5.0 Basis of Payment. Payment will be considered full compensation for all labor, equipment, and material necessary to repair handrail.

<u>Item Number</u>	<u>Type</u>	<u>Description</u>
608.99.02	Each	Handrail Repair

V. Access to Commercial and Private Entrances

1.0 Description. While working on entrances or adjacent properties, the contractor shall make every reasonable effort to minimize any interference to the properties and to complete the work diligently. 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 engineer.

2.0 Construction Requirements. On all commercial and residential entrances the contractor shall keep one-half of the entrance open at all times. On commercial entrances less than 20' 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 the temporary aggregate following completion of the entrance. For properties with more than one entrance the contractor may construct one entrance at a time with the approval of the property owner and engineer.

2.1 The contractor shall complete the entrances as quickly as possible and shall take no longer than 4 weeks to complete any one entrance.

3.0 Property Owner Agreements. Agreements made with property owners during the negotiation of easements and rights of way listed in the Property Owner Notification special provision, shall be adhered to and shall supersede the requirements in the Access to Commercial and Private Entrances special provision.

4.0 Basis of Payment. No direct payment will be made to the contractor for any expenses incurred for compliance with this provision.

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, or here. 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.

1.1 The following Property Owners shall be given the number of days-notice specified below.

Parcel 6: Contact owner by phone 1 week in advance of construction. Entrance shall be fully open on Saturdays and Sundays. Contact: Tracy Bauman 573-634-2240

Parcel 7: Contact tenant by phone 1 week in advance of construction. Contact: Felix Zamikovsky 713-907-2840 felixz@csmgroup.org

Parcel 8: Contact owner by phone 2 weeks in advance of construction. Contact: Anthony (manager) 573-378-5367 or David Miller (owner) 660-647-0218

Parcel 10: Contact owner by phone 1 week in advance of construction. Contact: Linda Bierbower 573-280-0001

Parcel 11: Contact owner by phone 1 week in advance of construction. Contact: Barbara Wilson (resident) 573-364-1706 (h) or 573-465-1706 (c), or Amy Jo Wilson (daughter on title) 573-465-4147

Parcel 12: Contact owner by phone 1 week in advance of construction. Contact: Chad Lewis 573-465-3654

Parcel 13: Contact owner by phone 1 week in advance of construction. Contact: Pastor Bryan Gallant 828-708-8394

Parcel 19: Contact owner by phone 1 week in advance of construction. Contact: Jason Cusick 314-609-1882

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. Relocate Ground Signs

1.0 Description. The contractor shall relocate ground signs as noted in the plans as "TBR&REL". The contractor shall relocate signs near their existing locations unless noted otherwise in the plans.

2.0 Method of Measurement. Measurement for the relocation of signs will be made per each. Each sign relocated shall be considered as a quantity of one each.

3.0 Basis of Payment. All labor, equipment and material to remove and relocate the signs with the exception of sign posts and post footings, to complete the described work will be paid for at the contract unit price for:

<u>Item Number</u>	<u>Type</u>	<u>Description</u>
903-99.02	Each	Relocate Ground Signs

Y. Detector, Pushbutton (New Installation) APS

1.0 Description. Audible pedestrian push buttons and signing will be required for all pedestrian indications at all the intersections.

2.0 Installation. Audible signals should be installed as part of a pushbutton assembly.

3.0 Equipment.

3.1 Walk Indications. Accessible pedestrian signals shall have both audible and vibrotactile walk indications.

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

3.3 Audible. Accessible pedestrian signals shall have an audible walk indication during the walk interval only. The audible walk indication shall be audible from the beginning of the associated crosswalk.

3.4 Push Button signage. In addition to standard pedestrian sign requirements, all pushbuttons for the locations mentioned in 1.0 shall have additional signage to indicate crosswalk direction by use of a tactile arrow and the name of the street containing the crosswalk served by the audible pedestrian signal. The sign shall be located immediately above the push button mechanism and parallel to the crosswalk controlled by the button. The street name shall be the name of the street or reasonable abbreviation whose crosswalk is controlled by the push button. Signage shall comply with ADA Accessibility Guidelines (ADAAG) 703.2 specifications for Braille and raised print.

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

3.4.2 Street Name. Accessible pedestrian signals (APS) shall include street name information aligned parallel to the crosswalk direction and shall comply with Revised Draft Guidelines for Accessible Public Rights-of-Way R409.3 or shall provide street name information in audible format.

4.0 Performance.

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

4.2 Verbal Wait Message. Acknowledge tone that tells the pedestrian that they have placed a call and informational message that tells the pedestrian to "Wait to cross" street name at intersecting street name.

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

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

5.0 Documentation and Support. Two copies of the operation and maintenance manuals for each station shall be included.

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

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

8.0 Payment. Payment for the audible signals will be for each unit per **bid item “902-99.02 Detector, Pushbutton (New Installation) APS”**. This will include all wiring, power adaptors, programming devices, communication devices, and installation hardware needed. Payment for signing will be included in the pay item for this audible pedestrian pushbutton.

Z. Pedestrian Push Button Extension

1.0 This work includes adding 1-1/2-inch aluminum pipe extensions to pedestrian pushbuttons so they meet offset and height requirements per ADA specifications.

1.1 The contractor is advised that various push buttons will require extensions from the pedestrian signal pole or vehicular signal post so the button is located meeting the requirement of ADA specifications. Extensions shall not exceed 18-inches.

2.0 Method of Measurement: Measurement of the pedestrian pushbutton extensions shall be made per each.

3.0 Basis of Payment: All costs associated with this work shall be considered completely covered by Item No. 902-99.02 “Pedestrian Push Button Extension”, per each.

AA. Remove Existing Push Button and Install APS Push Button

1.0 Description. This work consists of removing the existing push button and installing new APS push button. Audible pedestrian push buttons and signing will be required for all pedestrian indications at all the intersections.

2.0 Method of Measurement: Measurement of the removing existing push button will fall under the overall Removal of Improvements. Measurement for the install of APS Push Button will be per each and fall under the Detector, Pushbutton (New Installation) APS Specification.

3.0 Basis of Payment: All costs associated with the removal of the existing push button will be covered by bid item “202-20.10” Removal of Improvements. The installation portion of this work shall be considered covered by bid item “902-99.02 Detector, Pushbutton (New Installation) APS”.

BB. Concrete Trough with Steel Plate

1.0 This work includes furnishing and installing a diamond tread steel plate over a cast-in-place concrete trough in accordance with the plans to ensure positive drainage.

1.1 The dimensions of the steel plate and concrete trough shall be in accordance with the plans and in coordination with the engineer.

1.2 The steel shall be in accordance with Division 700 of Missouri Standards for Highway Construction, latest edition.

2.0 Method of Measurement: Measurement of the concrete trough shall be made per linear foot of trough based upon the pay limits denoted in the plans.

3.0 Basis of Payment: All costs associated with this work shall be considered completely covered by Item No. 609-99.03 "Concrete Trough with Steel Plate", per linear foot.

CC. Sidewalk Joint Grinding

1.0 Description. This work consists of providing a smooth transition for the joint between two existing surfaces used for a pedestrian thoroughfare. The joint may be between but not limited to surfaces connecting pavement, sidewalks, transition areas, ramps, and/or landings and any other location as directed by the engineer.

2.0 Construction Requirements.

2.1 Any joint between two existing sidewalk surfaces have a differential height of less than ¼ inch shall be considered ADA compliant. If the differential height falls between ¼ inch and ½ inch, then the contractor shall grind the high side down on a bevel not to exceed a 2:1 (H:V) slope so that the bevel begins at the lower panel elevation. For joints having a differential height greater than ½ inch, then the contractor shall grind the high side down on a bevel not to exceed a 12:1 (H:V) slope so that the bevel begins at the lower panel elevations.

2.2 All ground surfaces shall be smooth and planar meeting the minimum ADA requirements.

2.3 Any surface areas damaged by the contractor during the grinding operations shall be repaired and/or replaced solely at the contractor's expense.

3.0 Method of Measurement. Measurement for Sidewalk Joint Grinding will be made along the centerline of the joint to the nearest linear foot.

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 Pay Item No. 622-99.03, Sidewalk Joint Grinding, per linear foot (LF).

DD. Tapered Sleeve

1.0 This work includes furnishing and installing a tapered sleeve to connect an existing pipe to a new pipe extension in the locations noted on the plans.

1.2 The tapered sleeve shall be in accordance with Division 700 of Missouri Standards for Highway Construction, latest edition.

2.0 Method of Measurement: Measurement of the tapered sleeve shall be incidental to 725-03.12A or 725-03.15A Group B Pipe.

3.0 Basis of Payment: All costs associated with this work shall be considered completely covered by Items No. 725-03.12A 12" Pipe, Group B and 725-03.15A 15" Pipe, Group B.

EE. Pavement and Median Replacement

1.0 This work includes pavement and median replacement associated with placement of signal improvements at the Stoneridge Parkway and 179 intersections as shown on the plans.

1.2 The pavement and median replacement shall be in accordance with Division 500 and 600 of the Missouri Standards for Highway Construction, latest edition.

2.0 Method of Measurement: Measurement of this repair shall be Square Yards (SY), Pavement and Median Replacement..

3.0 Basis of Payment: All costs associated with this work shall be considered completely covered by Item no. 608-99.05, Pavement and Median Replacement.

FF. 7" Concrete Curb Ramp

1.0 This work includes 7" thick Concrete Curb ramps as indicated on the plans.

1.2 The 7" Concrete Curb Ramps shall be in accordance with Division 600 of the Missouri Standards for Highway Construction, latest edition.

2.0 Method of Measurement: Measurement of 7" Concrete Curb Ramp shall be in square yards (SY).

3.0 Basis of Payment: All costs associated with this work shall be considered completely covered by Item no. 608-99.05, 7" Concrete Curb Ramp.

GG. Cooperation Between Contractors

1.0 Description. The contractor shall be aware there are pavement resurfacing projects on Various Routes in Central District that could interfere with this project.

2.0 Construction Requirements. The contractor shall establish contact with the Central District Office Construction personnel to determine if there are any scheduling conflicts with paving and/or striping operations on that project in the area.

J5S3520 Callaway Route OO in Holts Summit and Callaway Route C in Fulton
J5S3454 Cole Route BU Route 50 (Missouri Blvd.) and Route 179 in Jefferson City

Project Contact:

Chris Brownell, Resident Engineer
Jefferson City Construction Office
Phone: 573-526-4567

J5S3456 Moniteau Route E in Latham
JCD0131 Morgan Route 52 in Stover

Job No.: J5P3490

Route: Various

County: Various

Project Contact:

Chris Graham, Resident Engineer

Osage Beach Construction Office

Phone: 573-526-0362

J5S3468 Phelps Route O in Rolla

J5P3568 Phelps Route 8 in St. James and Steelville

Project Contact:

Eric Abbott, Resident Engineer

St. James Construction Office

Phone: 573-526-4180

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