

Programmatic Work Plan for Utilizing Fixed Price Variable Scope Contracting for Design-Bid-Build Construction Projects (SEP-14)

Purpose and Scope

The Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA) are entering into this programmatic work plan agreement to approve the use of Fixed Price Variable Scope Contracting (FPVS) on preventive maintenance and traffic control device installation types of work when deemed appropriate and beneficial. Currently, each individual project requires a written work plan and formal approval prior to utilizing the FPVS process. With this agreement, MoDOT and FHWA agree to programmatically approve the use of FPVS, a form of “alternative contracting” identified under the FHWA’s SEP-14 program, without requiring a specific work plan and approval for each individual project.

MoDOT will select projects with work that is repetitive in multiple locations. This project delivery method will be used when project budget is a priority on preventive maintenance and traffic control installation types of work. MoDOT intends to use this contracting method on 10 to 20 projects a year on NHS routes.

Proposal

FPVS is a competitive bidding and contracting process that allows an agency to maximize the amount of work completed for a fixed budget amount. This contract method allows MoDOT to vary the amount of work to be completed to match the budget set for the project. MoDOT has successfully used FPVS contracting on two recent projects. The benefit of this procurement method is MoDOT’s ability to maximize the amount of work completed in a single contract while keeping total project costs from exceeding the project budget. An advantage to the contractor will be their ability to calculate their bid knowing the locations of work, based on priorities established in the bid proposal.

MoDOT proposes to use FPVS procurement to accomplish these projects. This contract method will allow MoDOT to vary the amount of work to be completed to match the budget set for the projects. The work included in the bid proposal is established in priority order to be completed and will exceed the amount of work that is expected to be completed by the budget in order to capitalize on getting better than expected bids. This procurement method will have the contractor bid a unit price for the estimated quantities for each item of work in the contract. The estimated quantities included in the contract represent the amount of work than can be completed for the budgeted amount. Once the project has been awarded, the MoDOT

construction office would then manage the contract by adjusting the contract quantities to hit the budgeted amount.

Procurement Overview:

Under the FPVS procurement method:

1. The budgeted amount is shown in the contract.
2. The contract indicates the project locations that are included in the initial bid quantities. The itemized bid quantities are based only on work at these locations.
3. The contract indicates the project locations that are included as the variable scope portion of the contract.
4. Contract work is listed in priority order: first, the locations included in the initial bid quantities; next, the locations included in the variable scope portion of the contract. The contractor shall begin work on the first route and continue down the list until all funds have been used.
5. The unit prices bid will apply for the work at the locations included in the initial bid quantities, as well as for those locations listed as variable scope.
6. The award of the contract will be based on the lowest responsible bidder based on their total bid for the itemized quantities in the proposal and unit price bid.
7. Once the project has been awarded, the MoDOT construction office would then manage the contract by using a change order to adjust the contract quantities upward or downward to reach, but not exceed the budgeted amount.

MoDOT will initially utilize pre-bid meetings and/or industry meetings with contractors to familiarize them with the FPVS bidding and contract process.

Schedule

MoDOT proposes to implement the programmatic agreement for a period no longer than 3 years. Project advertisement, letting, and award will follow MoDOT standard procedures. Evaluations and reports will be completed on an annual basis.

Roles and Responsibilities of MoDOT

MoDOT will designate various Project Managers on a project-by-project basis who will be responsible for delivering a FPVS project. The Project Manager is responsible for implementing the FPVS project in accordance with state and federal laws and regulations while meeting the project's scope and budget. The Project Manager is responsible for coordinating with various project team members from design, bridge, construction, environmental, financial, etc. during project delivery. The Project Manager will hand-off project responsibility to a MoDOT Resident Engineer during construction of the project. MoDOT's Design Division Bidding and Contract Services Engineer and the Design Liaison Engineer will serve as the main point of contact with

FHWA for FPVS projects. Project specific submittals, approval requests, and coordination may be delegated to the Project Manager, with the approval and under the direction and supervision of the Central Office Design Division.

MoDOT will proactively coordinate and collaborate with FHWA to determine an agreed upon level of FHWA involvement in all facets of FPVS projects. The Project Manager will coordinate project actions, approval requests, project coordination meetings, submittals, and written or verbal coordination with FHWA. Written responses to FHWA submitted comments or inquiries will be provided in a timely manner.

Roles and Responsibilities of FHWA

The FHWA designated Transportation Engineer (TE) will have primary responsibility for ensuring a FPVS project is executed in accordance with federal laws while implementing FHWA's Performance Plan and required stewardship and project involvement. The designated TE will serve as MoDOT's main point of contact for FPVS projects in their respective MoDOT District. Project specific submittal reviews, approvals, meeting attendance and coordination may be delegated to other FHWA staff members, with the approval and under the direction of the designated FHWA TE. FHWA will proactively coordinate and collaborate with MoDOT to determine an agreed upon level of FHWA involvement in all facets of the FPVS project. FHWA will provide timely reviews of project submittals and written review comments. If the FHWA TE becomes unavailable during a review period, the FHWA Project Implementation Team Leader or FHWA Deputy Division Administrator may be contacted regarding all project-related issues.

MoDOT Policy and Guidelines

MoDOT developed basic guidance for FPVS contracting in MoDOT's Engineering Policy Guide, Article 147.4. This article contains guidelines, procedures, benefits, and potential drawbacks for using FPVS contracts. EPG 147.4 will be updated with revised guidance and procedures as MoDOT gains additional experience with FPVS contracting.

Evaluation/Performance Measures

MoDOT will evaluate the effectiveness of FPVS contracting as projects are completed. Periodic meetings will be conducted with MoDOT project staff and FHWA to modify and improve the guidelines for FPVS contracting. If significant changes are identified those changes will be communicated and coordinated with both Industry and the FHWA Missouri Division Office.

MoDOT reports use of innovative contracting methods under MoDOT Tracker Measure – Innovative Contracting Methods. This measure tracks use of non-traditional contracting methods by MoDOT such as Design-Build, A+B Contracting, Alternate Technical Concepts, and

will also include FPVS Contracting. MoDOT's target for innovative contracting is 10% of MoDOT's total construction program (in dollars). MoDOT's Tracker can be found at <https://www.modot.org/tracker-measures-departmental-performance>. The Tracker Measure is in the Deliver Transportation Solutions of Great Value section.

In addition to the performance measure above MoDOT will provide the following information:

- 1) FPVS Contracts Proposed: MoDOT will assess the types of FPVS contracts proposed and the types of FPVS projects approved for addition to MoDOT's construction program.
- 2) FPVS Contracts Let: MoDOT will list all contracts awarded during the year using the FPVS contracting method and the bid analysis used to determine award.
- 3) Lessons Learned: MoDOT will provide a summary of any lessons learned from individual FPVS projects and include items that may be improved for future FPVS projects.
- 4) Industry Reaction: MoDOT will record and track responses from the contracting industry, including an assessment of FPVS process improvements proposed by industry.

Reporting

MoDOT will provide the FHWA Division Office with initial, interim, and final reports on this SEP-14 Programmatic work plan.

- 1) Initial Report: At the end of Year 1, provide an initial report with the following information:
 - a. List all projects let during Year 1 using this contracting method
 - b. Report on Performance Measures above for Year 1 projects
- 2) Interim Report: At the end of Year 2 and each succeeding year before the final year, provide an interim report with the following information:
 - a. List all projects let during succeeding years using this contracting method
 - b. Report on Performance Measures above for projects awarded during that succeeding year
- 3) Final Report: At the end of the programmatic approval period, provide a final report with the following information:
 - a. List all projects let during the programmatic approval period using this contracting method
 - b. Report on Performance Measures above for projects awarded during the programmatic approval period

Periodic meetings will be conducted with MoDOT Design, MoDOT Construction and Materials, and FHWA to modify and improve the guidelines for using FPVS, as necessary. In the event

significant changes are identified as necessary, those changes will be communicated and coordinated with both Industry and the FHWA Missouri Division Office.

Summary of Previous FPVS Projects

MoDOT has successfully used FPVS Contracting on the following projects over the past few years.

- 1) J7P3108B, Routes I-49, 249 & Loop 49, Wrong Way and Chevron signing, Federally Funded
- 2) J2I3225/J5I3303, Routes I-70, 61 and 63, Wrong Way and Do Not Enter ramp signing, Federally Funded
- 3) J6M02786, Routes UU, V, M, AB, AD, and AT, Chip Seal, State Funded

147.4 Fixed Price Variable Scope (FPVS) Contracting

MoDOT uses a procurement process called Fixed Price Variable Scope contracting as a tool for projects where it would manage the amount of work completed within a set budget. In general, this type of contracting works best for repetitive preventive maintenance and traffic control device installation work which MoDOT would benefit from being completed in multiple locations. This type of procurement is currently an experimental contracting method and requires a Special Experimental Projects (SEP-14) approval from FHWA. Please work with your Design Liaison to assist in getting this approval.

147.4.1. FPVS Overview

A FPVS project will be set up with estimated quantities of work at specified locations which the contractor will complete in an established priority order until the budget has been exhausted. This procurement method will have the contractor bid a unit price for the estimated quantities for each item of work in the contract. The initial estimated quantities included in the contract represent the amount of work that can be completed for the budgeted amount. Once the project has been awarded, the MoDOT construction office would then manage the contract based on the priorities set forth in the JSP by adjusting the contract quantities to hit the budgeted amount.

FPVS projects will be sent through the normal bidding process as other projects and will be awarded to the lowest responsible bidder based on the established quantities in the project. Construction will manage the contract by using the standard change order process.

MoDOT will utilize pre-bid meetings or industry meetings with contractors to familiarize them with the FPVS process for new types of projects or projects that are new to a region of the State.

147.4.2. Project Set-up

A project using FPVS will need to be programmed in the STIP to cover all possible work locations that may be completed by the project. This would typically be done by using Various Routes and Various Counties within SIMS. Please note all locations included in the contract must have all clearances, such as environmental.

The project team will establish the estimated amount of work that can be completed within the project budget. The project team will then determine the locations that can be completed within those quantities. The project team will also determine additional locations to be completed if there is remaining budget in the contract. It is recommended the project team sets up the initial quantities based on 80-90% of the budget so that it is likely the quantities are increased for the contractor instead of work being removed from the contractor if bids are higher than expected.

The project team will need to modify the Contract Liquidated Damages JSP and add the additional JSPs as shown in the FPVS Special Provisions (attached). One aspect of the FPVS contracting is we want to give the contractor a window of time to complete the work as we do with many other projects. However, we do not want to extend the contract completion date due to an increase in quantities so we want to state that an extension of time will not be granted.

147.4.3 FPVS Plan Development

This is flexible and up to the discretion of the project team. FPVS contracting opens the door for the project team to be creative in plan development. With FPVS contracting, less location specific work will be required in the design phase, but this may result in more administration in the construction phase. It is important to have the full support of the core team during plan development.

Plans may only include the design of the work included in the initial quantities or they may include design for both the initial quantities and the potential additional quantities that may be added. If the plans do not include designs for the potential additional quantities, it is important that the contractor can figure a good bid based on the information provided.

Things to keep in mind:

1. The better information provided with the plans and specifications will result in better bids, but also keep in mind there is a balance between level of effort in the design and how much it will actually affect the bid.
2. All locations in the project must be in the STIP and have all clearances prior to advertisement for bids.
3. Lump Sum items, including Mobilization, can be used but the plans and JSPs should clearly state that they will not be adjusted based on a change in quantity. It is acceptable to include a JSP noting that Mobilization will not be adjusted on the project.

147.4.4 FPVS Contract Administration

The bidding documents will include set quantities for each pay item that the contractor will be required to bid. The award of the contract will be given to the lowest responsible bidder based on the set quantities and unit bid price. After the project is awarded to the lowest responsible bidder, the contract will be managed based on the priorities set forth in the JSP by changing the quantities of each pay item to deliver the project budget. Budgets for the project cannot be increased to accommodate more work with the project.

There are two scenarios that could occur. The first scenario is the awarded bidder's total bid is lower than the project budget. Since the contractor's total bid is less than the budget identified in the project special provisions, MoDOT would look at the priority list of routes identified in the special provisions to add additional quantities of work from the next highest priority. This will be accomplished using the standard contract change order process using the contract bid prices. The unit prices should not be adjusted due to the change in contract quantity.

The second scenario is the awarded bidder's bid is higher than the project budget. Since the contractor's total bid is more than the budget identified in the project special provisions, MoDOT would look at the priority list of routes identified in the special provisions to remove quantities of work from the lowest priority included in the bid quantities. This will be accomplished using the standard contract change order process using the contract bid prices. The unit prices should not be adjusted due to the change in contact quantity.

147.4.5 FPVS Examples

Here are some projects that used FPVS:

- Sign installation
- Chip Seal
- High Friction Surface Treatment
- Crack Sealing
- Thin lift asphalt overlay
- Pavement marking

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<p>“THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.”</p>	<p>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65102 Phone 1-888-275-6636</p>
	<p>If a seal is present on this sheet, JSP's have been electronically sealed and dated.</p>
	<p>JOB NUMBER: J2I3225 & J5I3303 VARIOUS COUNTIES, MO DATE PREPARED: 02/11/2019</p>
	<p>ADDENDUM DATE: R001 April 5, 2019</p>
<p>Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: All</p>	

JOB
SPECIAL PROVISION

A. General - Federal JSP-09-02D

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 "Bidding". 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 "Business"; "Standards and Specifications". The effective version shall be determined by the letting date of the project.

General Provisions & Supplemental Specifications

Supplemental Plans to July 2018 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

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. No extension of the completion time will be granted due to an increase of quantities per the Scope of Work special provision.

Notice to Proceed: July 8, 2019
Completion Date: April 30, 2020

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
J213225	N/A	\$7,600
J513303	N/A	\$7,600

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 **\$500** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the above specified 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. Scope of Work – J213225

1.0 The scope of work for this project is to provide Do Not Enter and Wrong-Way sign assemblies installation on Ramps along the following Routes:

The following locations are included in the initial bid quantities:

- a. Route I-70 in Montgomery and Warren Counties. Starting at Exit 200 (Routes F/J) and progressing to the Eastbound Truck Parking (near mile marker 167), including rest areas and truck parking areas.
Exception: Route 161 Interchange in Montgomery County
Exception: Route F Interchange in Montgomery County

The following locations are included as the variable scope portion of the contract:

- b. Route 61 in Lincoln County. Starting at Route 47 and progressing to Route U.
- c. Route 63 in Randolph County. Starting at Morley Street and progressing to Route M.

2.0 The above routes are listed in priority order. The Commission has budgeted \$135,000 for installation of these signs. The contractor shall begin installation on the first route and continue down the list until all funds have been used. If the contractor will not be able to complete the entire route, the contractor shall begin at the starting point listed and progress along the route with sign installation on the interchange ramps, without skipping

interchanges, until the funds are expended. It is the responsibility of the contractor to not exceed the budget listed above. Any contract costs incurred above this amount will be the responsibility of the contractor, unless approved by change order.

3.0 The award of the contract will be based on the lowest responsible bidder based on their total bid for the itemized quantities in the proposal and unit price bid.

4.0 Contract quantities will be adjusted after the award of the contract as necessary to match the budgeted amount stated in section 2.0. In the event there is an increase in quantities to the contract, an extension of contract time will NOT be granted.

D. Scope of Work – J513303

1.0 The scope of work for this project is to provide Do Not Enter and Wrong-Way sign assemblies installation on Ramps along the following Routes:

The following locations are included in the initial bid quantities:

- a. Route I-70 in Cooper, Boone and Callaway Counties. Starting at Exit 161 (Routes D/YY) and progressing to Exit 89 (Route K) , including rest areas and truck parking areas.

Exception: Route 87 Interchange in Cooper County

The following locations are included as the variable scope portion of the contract:

- b. Route 63 in Boone County. Starting at Routes M/Y and progressing to Route WW.
- c. Route 63 in Boone County. Starting at Vandiver Dr. and progressing to Routes F/22.

2.0 The above routes are listed in priority order. The Commission has budgeted \$424,000 for installation of these signs. The contractor shall begin installation on the first route and continue down the list until all funds have been used. If the contractor will not be able to complete the entire route, the contractor shall begin at the starting point listed and progress along the route with sign installation on the interchange ramps, without skipping interchanges, until the funds are expended. It is the responsibility of the contractor to not exceed the budget listed above. Any contract costs incurred above this amount will be the responsibility of the contractor, unless approved by change order.

3.0 The award of the contract will be based on the lowest responsible bidder based on their total bid for the itemized quantities in the proposal and unit price bid.

4.0 Contract quantities will be adjusted after the award of the contract as necessary to match the budgeted amount stated in section 2.0. In the event there is an increase in quantities to the contract, an extension of contract time will NOT be granted.

E. Work Zone Traffic Management

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 There are six major holiday periods shown below. No work shall take place during these holiday periods, 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 approved by the Engineer.

Memorial Day
Independence Day
Labor Day
Thanksgiving
Christmas
New Year's Day

3.1.1 No work shall take place within the city limits of Columbia during University of Missouri – Columbia (MU) home football game weekends and MU graduation weekends during the period from 12:00 noon on the last working day preceding the event until 7:00 p.m. on the day subsequent to the event.

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

3.3 Any work within the city limits of Columbia, Missouri shall be completed during nighttime hours. Any work at the interchange of Route 54 and I-70 in Callaway County shall be completed during nighttime hours. Nighttime hours shall be considered to be 7:00 p.m. to 6:00 a.m. for this project.

3.5 The contractor shall not alter the start time, ending time, or a reduction in the number of through lanes of traffic or ramp closures without advance notification and approval by the engineer. The only work zone operation approved to begin 30 minutes prior to a reduction in through traffic lanes or ramp closures is the installation of traffic control signs. Should lane closures be placed or remain in place, prior to the approved starting time or after the approved ending time, the Commission, the traveling public, and state and local police and governmental authorities will be damaged in various ways, including but not limited to, increased construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delays, with a resulting cost to the traveling public. These damages are not easily computed or quantified. Therefore, the contractor will be charged with liquidated damages

specified in the amount of **\$1000 per 15 minute increment** for each 15 minutes that the temporary lane closures are in place and not open to traffic in excess of the limitation as specified elsewhere in this special provision. It shall be the responsibility of the engineer to determine the quantity of unapproved closure time.

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

4.0 Detours and Lane Closures.

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

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

F. Utilities

1.0 The contractor shall be aware there are numerous utilities present along the routes in this contract. Utility locates were not performed during the design phase of the project; therefore, the extent of conflicts with utilities are unknown. However, the intent of the contract is to vary the location of the sign installations to avoid utility conflicts.

There may be underground utilities that run parallel or cross the routes that are in close proximity to the sign work locations. The contractor shall take necessary precautions and measures to verify locations and depths of utilities by any necessary means to determine exact impacts to their work.

If utility facilities are found and discovered, the engineer will determine whether relocation of the utility is necessary to accommodate construction or if the work can be installed in accordance with Missouri Standard Plans for Highway Construction for the item of work specified. If utility relocation is deemed necessary by the engineer and a delay is encountered, the contract time will be adjusted accordingly.

2.0 Basis of Payment. There is no direct pay for complying with this provision.

G. Project Contact for Contractor/Bidder Questions

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

Missy Wilbers, Project Contact
MoDOT – Central District
1511 Missouri Blvd., PO Box 718
Jefferson City, MO 65102

Location	Address	Contact
New Florence	540 Tree Farm Road New Florence, MO 63363	Dion Thurman (636) 359-6450
Warrenton	800 West Booneslick Warrenton, MO 63383	Clint Ford (636) 359-4491
Troy	121 Francis Drive Troy, MO 63379	Danny Duke (636) 358-2683
Moberly	1501 East Highway 24 Moberly, MO 65270	T.K. Brenner (660) 651-6482
Boonville	16803 Highway 5 Boonville, MO 65233	Raymond Bledsoe (660) 888-0039
Columbia	4201 Paris Road Columbia, MO 65202	Richard Skelton (573) 619-1937
Williamsburg	3949 County Road 1005 Williamsburg, MO 63388	Curt Houchins (573) 629-7349

1.1 The contractor shall notify the contact at least 24 hours in advance of delivering any signing materials to the facility.

1.2 The contractor shall exercise reasonable care in the handling of the signs. Should any sign be damaged due to the contractor's negligence during removal, transportation and/or reinstallation, it shall be replaced in kind at the contractor's expense. The engineer shall have the final determination on whether the said signs should be replaced or repaired.

1.3 Any hardware (brackets, u-bolts, aluminum l-beams, etc.) associated with removals involving overhead sign supports shall become the property of the contractor and disposed of off the right of way.

1.4 All sign supports, footings and other signing equipment to be removed shall become the property of the contractor and disposed of off the right of way.

1.5 The existing signs shall not be removed until the new signs are installed. Existing signs to be removed shall be removed the same day as the new signs are installed.

2.0 Work Requirements.

2.1 Posts supporting one (1) sign only will require the removal of the existing post(s), footing(s) and any other hardware associated with sign removal at that location. The contractor shall restore the existing ground, including the backfilling of any holes.

2.2 Posts supporting more than one (1) sign, which includes any sign(s) to be left in place and any sign(s) to be removed, will require the removal of the appropriate sign and associated hardware. The existing post(s) and remaining sign(s) are to be left in place.

3.0 Basis of Payment. All costs incurred for complying with this provision shall be considered completely covered by the contract unit price for:

Item Number	Type	Description
903-99.02	Each	Removal of Existing Signs, Post and Footings
903-99.02	Each	Removal of Existing Signs from Existing Post

J. Sign Assemblies and Installation

1.0 Description. The work shall include furnishing all the necessary materials and installing the sign assemblies as shown in Typical Signing Layouts, or as designated by the engineer.

1.1 Sign Assemblies:

Wrong Way (R5-1a) – 42"x30" on 1 – 2" PSST Post with sleeve and concrete footing
Do Not Enter (R5-1) – 48"x48" on 2 – 2" PSST Post with sleeves and concrete footings
Wrong Way (R5-1a) – 42"x30" on back of existing posts
Do Not Enter (R5-1) – 48"x48" on back of existing posts

1.2 Wrong way sign post lengths shall not exceed 11 feet when measured from the ground to the bottom of the sign. For any location where the post could potentially exceed 11 feet, the contractor shall contact the engineer.

1.3 Do Not Enter post lengths shall be less than 12 feet when measured from the ground to the bottom of the sign. For any location where the post length could potentially be 12 feet or more, the contractor shall contact the engineer.

2.0 Material. Posts, sign sheeting and concrete footings shall be in accordance with Sec 903.

3.0 Construction. The contractor shall stake the proposed location of each sign along the ramp and provide the engineer the opportunity to review the location prior to installation. Installation of the sign assemblies shall be in accordance with Sec 903 and Standard Plan 903.

3.1 The contractor shall pour the concrete footings on the same day as the hole is excavated.

3.2 The contractor will be allowed to attach signs to the back of green shoulder mounted signs on the ramp, which are typically destination signs. Signs shall not be attached to the back of green signs with specific tourist oriented destinations displayed or to the back of blue or brown signs located on ramps as these are maintained by the department's supplemental guide sign contractor. Signs may also be attached to the upright columns of overhead sign structures with approval from the engineer, using banding materials per MoDOT standards and specifications.

4.0 Method of Measurement. Measurement of each sign installation, including all materials, excavation, equipment and labor will be per each complete sign assembly installed.

5.0 Basis of Payment. The accepted quantity of sign installations will be paid for at the contract unit price for:

903-99.02, Wrong Way (R5-1a) – 42"x30" on 1 - 2" PSST Post, per each
903-99.02, Do Not Enter (R5-1) – 48"x48" on 2 - 2" PSST Posts, per each
903-99.02, Wrong Way (R5-1a) – 42"x30" on back of existing posts, per each
903-99.02, Do Not Enter (R5-1) – 48"x48" on back of existing posts, per each

The unit bid price shall include the cost of all labor, equipment and materials to install the sign assemblies.

K. Temporary Traffic Control

1.0 Description. All work necessary to maintain safe and efficient traffic flow through the work areas shall be provided by the contractor as indicated on the traffic control sheets. This will include furnishing, relocating, and removing temporary traffic control devices and equipment, and the removal and relocation or covering and uncovering of existing signs and other traffic control devices in accordance with the contract documents or as directed by the engineer.

2.0 Work requirements. The contractor shall stake the proposed location of the Ramp Work Ahead, Ramp Narrows, and Shoulder Work signs and provide the engineer the opportunity to review the location prior to installation. Work shall be in accordance with Sec 616, Sec 612, and the contract plans.

2.1 The contractor shall provide a Truck or Trailer Mounted Attenuator (TMA) for worker protection at each ramp while workers are present. The TMA shall be used with the Partial Ramp Closure and Shoulder Work Ahead.

3.0 Method of Measurement.

3.1 The method of measurement for Truck or Trailer Mounted Attenuator (TMA) will be by each ramp. The contractor will only be paid once for each ramp regardless of the number of times the contractor is required to use the TMA. The payment by each ramp will include use for both the Partial Ramp Closure and Shoulder Work Ahead when required for the same ramp.

3.2 The method of measurement for Partial Ramp Closure will be by each ramp that the contractor uses the Partial Ramp Closure traffic control. The contractor will only be paid once for each ramp regardless of the number of times the contractor is required to install the Partial Ramp Closure traffic control devices.

3.3 The method of measurement for Shoulder Work Ahead will be by each ramp that the contractor uses the Shoulder Work Ahead traffic control. The contractor will only be paid once for each ramp regardless of the number of times the contractor is required to install the Shoulder Work Ahead traffic control devices.

4.0 Basis of Payment.

Temporary traffic control will be paid for at the contract price for:

Item Number	Type	Description
612-99.02	Each	Truck or Trailer Mounted Attenuator (TMA)
616-99.02	Each	Partial Ramp Closure
616-99.02	Each	Shoulder Work Ahead

- (a) No direct payment will be made for the following:
- (b) Incidental items necessary to complete the work, unless specifically provided as a pay item in the contract.
- (c) Installing, operating, maintaining, cleaning, repairing, removing or replacing traffic control devices.

- (d) Covering and uncovering existing signs and other traffic control devices.
- (e) Relocating temporary traffic control devices, including permanent traffic control devices temporarily relocated, unless specifically included as a pay item in the contract.
- (f) Providing channelizers.
- (g) Worker apparel and PPE.
- (h) Flaggers and appurtenances at flagging stations.
- (i) Furnishing, installing, operating, maintaining, and removing construction-related vehicle and equipment lighting.

4.3 Any additional work deemed necessary by the engineer that requires temporary traffic control and is not covered by the contract plans will be included in the cost change order for the additional work. However, if the added work is required in a stage where temporary traffic control is already in place, no additional traffic control pay will be made in this case.

L. Mobilization

Delete Sec 618.2 and substitute the following:

618.2 No direct payment will be made for mobilization. All costs for mobilization shall be considered included in the cost of the individual contract pay items included in the contract.

M. Bonds

- 1.0** The amount of the Bid Bond shall be 5% of the anticipated budget for this project.
- 2.0** The amount of the Performance Bond shall be 100% of the anticipated budget for this project.

N. Airport Requirements

1.0 Description. The project is located near a public use airport or heliport or is more than 200 feet above existing ground level, which requires adherence to Federal Aviation Regulation Part 77 (FAA Reg Part 77). "Near" to a public use airport or heliport is defined as follows:

- 20,000 feet (4 miles) from an airport with a runway length of at least 3,200 feet
- 10,000 feet (2 miles) from an airport with runway length less than 3,200 feet
- 5,000 feet (1 mile) from a public use heliport

2.0 The maximum height of the improvement and the equipment operating while performing the improvements was assumed to be 15 feet above the current travelway during the process of evaluating the project for compliance with FAA Reg Part 77.

2.1 If the contractor's height of equipment or if the improvement itself is beyond the assumed height as indicated in Sec 2.0, the contractor will work with the resident engineer to fill out the

Form 7460-1, or revise the original Form 7460-1 based upon the proposed height and resubmit, if necessary, for a determination by FAA on compliance with FAA Reg Part 77. Further information can be found in MoDOT's Engineering Policy Guide 235.8 Airports. If the Form 7460-1 must be filed, the associated work shall not be performed prior to the FAA determination, which could take up to 45 days.

2.2 If the contractor's height of equipment and the improvement itself is below the assumed height as indicated in Sec 2.0, no further action is necessary to fulfill the requirements set forth in FAA Reg Part 77.

3.0 Basis of Payment. There will be no direct payment for any work associated with this provision. Contract time extension will be given for the time necessary to obtain or revise the FAA permit. Any delays or costs incurred in obtaining the revised permit will be noncompensable.

O. Contractor Quality Control

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

2.0 Quality Control Plan.

- (a) The name and contact information of the person in responsible charge of the QC testing.
- (b) A list of the QC technicians who will perform testing on the project, including the fields in which they are certified to perform testing.
- (c) A proposed independent third party testing firm for dispute resolution, including all contact information.
- (d) A list of Hold Points, when specified by the engineer.
- (e) The MoDOT Standard Inspection and Testing Plan (ITP). This shall be the version that is posted at the time of bid on the MoDOT website (www.modot.org/quality).

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

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

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

3.2 Non-Conformance Reporting. A Non-Conformance Report (NCR) shall be submitted by the contractor when the contractor proposes to incorporate material into the work that does not

meet the testing requirements or for any work that does not comply with the contract terms or specifications.

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

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

4.0 Work Planning and Scheduling.

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

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

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

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

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

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

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

checklists provided in the ITP as a guide to minimize findings by MoDOT inspection staff. Submittal of completed checklists is not required, except as specified in 5.1.

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

5.2 The contractor shall submit weekly reports stating the progress of the sign installation and provide high-resolution date/time stamped photographs of the each sign installed. Additional photographs shall be taken of the work area to ensure proper site clean-up has occurred.

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

P. Supplemental Revisions JSP-18-01G

Delete Sec 106.9 and substitute the following:

106.9 Buy America Requirement. On all federal-aid projects, the contractor's attention is directed to Title 23 CFR 635.410 Buy America Requirements. Where steel or iron products are to be permanently incorporated into the contract work, steel and iron material shall be manufactured in the USA except for "minor usage" as described herein. Furthermore, any coating process of the steel or iron shall be performed in the USA. The use of pig iron and processed, pelletized and reduced iron ore manufactured outside of the USA will be permitted in the domestic manufacturing process for steel or iron material.

Delete Sec 106.9.3 and substitute the following:

106.9.3 Buy America requirements include a step certification for all fabrication processes of all steel or iron materials that are accepted per Sec 1000.

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

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

request by the Engineer and retained for a period of 3 years after the last reimbursement of the material.

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

Delete Sec 106.9.4 and Renumber subsequent sections accordingly:

Delete Sec 616.5.1 and substitute the following:

616.5.1 Amber or Amber and White Warning Lights. All on-road construction-related vehicles and equipment shall operate with amber or amber and white warning lights having 360 degrees of total coverage and as follows:

- (1) For daytime operations, SAE Class 1 or 2 lights shall be used.
- (2) For dusk to dawn operations, SAE Class 2 lights shall be used, or SAE Class 1 lights with dimming capabilities to minimize glare experienced by travelers.

616.5.1.1 Red or Red and Blue Warning Lights. The contractor may elect to use red or red and blue warning lights in accordance with Missouri law and the following requirements:

- (1) Use of red or red and blue lights shall be limited to use on a total of two vehicles per work zone and/or project.
- (2) Use of red or red and blue warning lights shall be limited to areas in advance of tapers or lane shifts and at the active work location.
- (3) Lights shall be SAE Class 2 or SAE Class 1 with dimming capabilities to minimize glare experienced by travelers.

The awarded contract will serve as a permit by the Commission, granting the prime contractor and approved sub-contractors to utilize red or red and blue lights as required by Missouri law.

Stormwater Compliance Requirements

1.0 Description. This provision requires the contractor to provide a Water Pollution Control Manager (WPCM) for any project that includes areas of land disturbance that will total one (1) acre or greater on the project site at any point in time. When a WPCM is required, all sections within this provision shall be applicable, including assessment of specified Liquidated Damages for failure to correct Stormwater Deficiencies, as specified herein.

1.1 Applicability. The project site consists of all areas designated on the plans, including temporary and permanent easements. This provision does not apply to Contractor staging, plant,

or borrow areas that are not located on MoDOT right of way (Off-site). The Contractor is responsible for obtaining its own separate land disturbance permit for Off-site areas. This provision is in addition to any other stormwater, environmental, and land disturbance requirements specified elsewhere in the contract.

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

2.1 Duties of the WPCM:

- (a) Be familiar with the stormwater requirements including the current MoDOT State Operating Permit for construction stormwater discharges/land disturbance activities; MoDOT's statewide Stormwater Pollution Prevention Plan (SWPPP); the Corps of Engineers Section 404 Permit, when applicable; the project specific SWPPP, the Project's Erosion & Sediment Control Plan; all applicable special provisions, specifications, and standard drawings; and this provision;
- (b) Successfully complete the MoDOT Stormwater Training Course within the last 4 years. The MoDOT Stormwater Training is a free online course available at MoDOT.org;
- (c) Attend the Pre-Activity Meeting for Grading and Land Disturbance and all subsequent Weekly Meetings in which grading activities are discussed;
- (d) Oversee and ensure all work is performed in accordance with the Project-specific SWPPP and all updates thereto, or as designated by the Engineer;
- (e) Review the project site for compliance with the Project SWPPP, as needed, from the start of any grading operations until final stabilization is achieved, and take necessary actions to correct any known deficiencies to prevent pollution of the waters of the state or adjacent property owners prior to the engineer's weekly inspections;
- (f) Review and acknowledge receipt of each MoDOT Inspection Report (Land Disturbance Inspection Record) for the Project within forty eight (48) hours of receiving the report and ensure that all Stormwater Deficiencies noted on the report are corrected within 7 days of the stormwater inspection or any extended period of time granted by the Engineer.

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

3.1 Hold Point. Following the pre-activity meeting for Grading/land disturbance and subsequent installation of the initial BMPs identified at the pre-activity meeting, a Hold Point shall occur prior to the start of any land disturbance operations to allow the engineer and WPCM the time needed

to perform an on-site review of the installation of the BMPs to ensure compliance with the SWPPP is met. Land disturbance operations shall not begin until authorization is given by the engineer.

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

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

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

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