

**Special Experimental Project No. 14 (SEP-14)  
Programmatic Use of Type 1, Type 2 & Type 3 Fixed Price Variable Scope Contracting on  
Capital Preventative Maintenance Projects  
Calendar Year 2021 Annual Evaluation Report  
March 22, 2024**

**Introduction**

The Michigan Department of Transportation (MDOT) received programmatic approval to utilize Fixed Price Variable Scope (FPVS) contracting on Capital Preventative Maintenance (CPM) Projects. The purpose of FPVS contracting is to construct the greatest amount of work with the available project budget and gain more value for the dollar by using this innovative contracting method.

This annual report covers Type 1, Type 2, and Type 3 FPVS CPM projects let in calendar year 2023.

**Type 1, 2 & 3 FPVS Contracting Overview**

MDOT has developed three types of FPVS procurements requiring approval through this SEP-14 Work Plan. This Work Plan only applies to CPM projects using Type 1, 2, and 3 procurements. Non-CPM projects using a Type 1, 2 or 3 procurements require a separate approval unless otherwise directed by the Federal Highway Administration (FHWA).

**Type 1:** Type 1 FPVS projects receive bids by a unit of work that can be completed for a stated fixed price. The selected contractor is the bidder that proposes the most units of work for the given fixed price. For example, an HMA crack sealing project would be bid by the lane miles a contractor can complete based on the fixed price provided in the contract. In the event of a tie, the Department will use the unit prices and bid total submitted in the electronic bid from each of the tied Bidders. The bid total submitted in the electronic bid will be considered as the adjusted bid price. The adjusted bid price cannot be greater than the original fixed price bid. The pay items with bid quantities entered by the Department and price for Mobilization must remain at the original values, and the quantities for the pay items bid by the Bidder cannot change. The Bidder with the lowest adjusted bid price will determine the low Bidder. Type 1 has been used for HMA crack seal, chip seal, and fog seal projects, bid by the lane mile.

**Type 2:** Type 2 FPVS projects receive bids by the units of work that can be completed for a maximum fixed price. Contractors will bid units of work and may also bid a price for the work that is below the maximum price. The work that will be completed is identified at the time of the bid. The selected contractor is first determined by the bidder that proposes the most units of work for their stated maximum price. If two or more contractors propose the same amount of work, then the successful bidder is determined by which contractor proposed the lowest maximum price. Type 2 is used on a per site or priority basis, when partial completion of a site or priority is not acceptable such as bridges or ITS.

**Type 3:** Type 3 FPVS projects receive bids through traditional bidding process. The Contractor provides unit prices for the pay items provided in the schedule of items. The selected contractor is determined by the lowest submitted bid. The project is awarded at the low bid price.

The schedule of items is made up of the normal pay items and quantities estimated by the Engineer that are required to complete a base amount of work, called "Priority 1". On federally funded projects the Priority 1 work cannot be reduced, this is typically setup to be approximately 90% of the budgeted amount. MDOT provides the Contractors with the available budget for the project. The portion of the project that is not included in the Schedule of Items is considered "Priority 2" (additional priority areas may also be identified in the plans). Priorities beyond Priority 1 are included in the design and the environmental clearance document, and the contract contains informational pay items and quantities for these priorities. The work in Priority 1 will be completed by the project. If bids are favorable, or if additional funding becomes available to the project during construction, the project work is extended into Priority 2 until the final construction costs are approximately equal to the available funding. Type 3 has been used on concrete pavement repairs, HMA cold milling and overlay, and HMA crush and shape work.

### **Project Development Considerations**

MDOT's CPM FPVS projects were all environmentally classified as categorical exclusions. Each project needs to be cleared through the environmental process and all permits obtained for the entire project limits and not just what is estimated to be constructed. Work cannot exceed what is environmentally cleared.

The projects were approved in the State Transportation Improvement Plan (STIP) as part of the General Program Account (GPA) for capital preventative maintenance projects. The portions of the project that were not constructed will be included in future projects.

Per MDOT's commitment to FHWA, the Project Manager (PM) must track the status of completing any of the remaining work not bid. The remaining non-constructed portion of the project will need to be completed within 3 years of the original construction to avoid the penalty of reimbursement of federal funding for the entire project. As of November 2021, projects that are programmed for CPM work are exempt from the 3-year completion requirement. Other individual projects may be exempt from the 3-year completion requirement and will be evaluated on a case-by-case basis.

FPVS contracting can modify how projects are bid, inspected, constructed, and paid. Contract documents are included, when necessary, to provide clear bidding instruction, and to modify MDOT's typical process on design-bid-build (DBB) projects. This is done to conform to the intent of the FPVS contracting method while meeting state and federal requirements. FHWA Michigan staff reviewed and approved new contract language when the original FPVS program began.

The PM on each FPVS project determines when a bid would be considered for rejection. On traditional DBB projects, this occurs when the low bid is greater than 10% of engineer's price estimate. On Type 1 and Type 2 FPVS projects, rejection of a bid would be considered if the bid would perform 10% less work than the engineer estimated. Type 3 FPVS projects would use the standard process to determine bid rejection.

### **Bid Process and Results**

MDOT receives bids electronically on all DBB projects. Appendix A contains the bidding results for each type of FPVS programmed in 2023, and includes the scope of work, lane mile cost, number of bidders, the bids from all bidders, the engineer's estimate of work and the additional work gained beyond the engineer's estimate.

In 2023, MDOT let eight (8) Type 1 CPM FPVS projects and one (1) Type 1 Local Agency (LAP) Safety funded Edgeline Pavement Marking FPVS project that pertain to this programmatic report. The Type 1 CPM projects included HMA crack treatments and overband crack fills which resulted in completing a total of 226.12 miles more than the engineer's estimate, which is an average increase of 13.96%. The low bid for LAP's project allowed for 5.34% more pavement markings than the anticipated engineers estimate.

The 2023 projects programmed with approximately 20-30% more work than the engineer's estimate of work allowed for maximum lane miles to be bid on three crack seal projects resulting in entire project limits to be completed for the fixed price. One of the three projects resulted in a bid tie between two of the bidders. Per the "Preparation Delivery, and Consideration of Bid on FPVS Projects" Special Provision (SP), the winning contractor was determined by the initial bid total as follows:

In the event that two or more Bidders are tied after subsection 102.13.A is evaluated, the Department will use the unit prices and bid total submitted in the electronic bid from each of the tied Bidders. The bid total submitted in the electronic bid will be considered as the adjusted bid price. The adjusted bid price cannot be greater than the original fixed price bid. The pay items with bid quantities entered by the Department and price for Mobilization and Railroad Protection must remain at the original values, and the quantities for the pay items bid by the Bidder cannot change. The Bidder with the lowest adjusted bid price will determine the low Bidder.

This allowed MDOT to use the as-submitted bid total as the first tie breaker as per revised SP which confirm improvement to the process. The bid results were posted on the scheduled letting and the project was awarded without delay:

- **University Region (Jackson TSC) JN 213399** – Two bidders bid the max lane miles of 93.10 resulting in a tie for the fixed price of \$231,000.00 (not including Mobilization and Railroad Protection). Per revised "Preparation Delivery, and Consideration of Bid on FPVS Projects" SP, the apparent bids were used with results of \$198,304.00 and \$278,408.70 for the max lane miles. Lowest apparent bid was awarded the project.

Two of the three Superior Region FPVS projects let in the May 2023 letting resulted in All Bids Rejected due to contractors' bid totals exceeding the allowable fixed price amount stated in the contract documents. These bids were not considered, and both projects (Ishpeming TSC's JN 213399 and Crystal Falls TSC's JN 218063) were re-advertised for the July 2023 letting with added clarification on how to bid FPVS Type 1 jobs. The "Preparation, Delivery, and Consideration of Bids on FPVS Projects" SP was revised to state "*the total bid price submitted cannot be greater than the original fixed price bid. Any bid over the fixed price amount will be rejected.*" Also, a "Guidance for Contractors – How to Bid FPVS Type 1 Projects" was created for the RID and utilized beginning in the July 2023 letting. The added clarification in the contract documents resulted in acceptable bids by two contractors on both JN 213399 and JN 218063 with an average increase of approximately 16% more lane miles than anticipated. Both the SP and the RID document are included as attachments.

MDOT has also completed construction on the three FPVS Type 1 pilot projects utilizing the railroad protection pay item which allows for continuous HMA crack treatment work through an at-grade railroad

crossing. On past Type 1 crack treatment jobs, the sections through an at-grade crossing were gapped out since there was not a way to pay for railroad protection on a specific Priority location. Therefore, the “Preparation, Delivery and Considerations of Bid on FPVS Projects” SP was revised to incorporate railroad protection on fixed priority locations that must be bid, all other additional priority locations that may or may not be bid can only gap out sections through an at grade crossing and cannot utilize the railroad protection pay item.

As reported in the 2022 SEP-14 annual report, the 2022 bid results were not affected on Grand Region’s railroad protection Pilot FPVS Type 1 project (JN 207873). Per feedback from the PM and the awarded contractor, adding the railroad protection component did not affect the bid since the pay item was already included as a fixed amount covered in the contract documents. No other issues or concerns were provided by the contractor. Construction was completed in 2023.

Similar findings were reported after completion of the other two railroad protection pilot projects. The PMs provided the following post construction contractor input on how inclusion of the railroad protection pay item affected the bids, railroad insurance, and other valuable feedback regarding the FPVS project:

- **University Region (Jackson TSC) JN 213399** – The contractor bid the railroad protection pay item as required but did not bill for that work (i.e. \$4000.00 bid, \$0.00 paid). According to the Inspector’s Daily Report there was no mention of railroad coordination or protection for the priority section with railroad. Based on the Tabulation of Bids and authorized project amount, the final amount paid to the contractor did not include the fixed amount for railroad protection.
- **Superior Region (Newberry TSC) JN 217865** – The contractor bid the railroad protection pay item as required, but where able to perform the work quickly in the area when a train was not scheduled. The railroad protection item did not affect the bid, and the final amount paid to the contractor did not include the amount for railroad protection.

According to the 2023 bidding results for the pilot projects, the railroad protection component did not affect the bid price per lane mile bid but provided additional safety to the project (if needed); and more lane miles were completed than the anticipated engineer’s estimate. Therefore, MDOT requests approval for the inclusion of the railroad protection specification to be applied universally on all FPVS Type 1 CPM projects.

The engineer’s estimate of work on FPVS projects is based on historical average unit prices from a geographic area. The 2023 letting results from all eight (8) CPM crack seal FPVS projects and LAP’s Safety funded pavement markings indicate that the FPVS contracting method on roadway crack sealing and chip sealing are cost effective, and that more work is being performed to preserve MDOT’s roads and safety than through the use of conventional Design-Bid-Build contracts.

### **Industry Coordination and Reaction**

When MDOT began using FPVS in 2012, MDOT met with representatives from Industry to discuss the innovative contracting methods being used on a project and required mandatory pre-bid meetings. Since then, MDOT has used FPVS on many different projects, most prevalently on HMA crack treatments. These

projects have become more of a standard practice and no longer have pre-bid meetings. Other projects are evaluated independently to determine if a pre-bid meeting is required or not.

The Michigan Road Preservation Association (MRPA) represents contractors that perform preservation work including HMA crack sealing and chip seals. MRPA has indicated that its members are supportive of the use of FPVS, and feels this method keeps funding in their niche industry that is typically moved from their industry's work if there are bid savings on projects. The Innovative Contracting area participates in the quarterly meetings when requested.

### **Administrative Consideration**

One of the goals of using FPVS is to reduce the amount of work required by staff to manage MDOT's program. A project with a constrained budget reduces the burden on staff to reallocate funds from projects if the cost estimate is exceeded or reduced. By using a fixed amount of funds, MDOT did not have to search for additional projects to allocate any bid savings to, or conversely find additional funds from un-let projects. This also results in not having to prepare additional proposals and bid letting packages. The FPVS process saves the Department staff time and effort.

### **Additional Comments and Recommendations**

Based on MDOT's experience in 2023 and in past years, MDOT has the following recommendations:

1. For Type 1 FPVS projects, the maximum limits of the work should exceed the estimated amount of work by at least 25% of the required amount. Based on the latest bid results, it is recommended that additional work beyond 25% be programmed to avoid reaching the maximum bid and/or bid ties. If any adjustments are made after plan turn-in prior to advertisement, the PMs should confirm that the revised maximum amount still meets the required criteria. Bidding history should be reviewed for the type of work being contracted to estimate the normal variations in bids on DBB projects. This is done to estimate the minimum amount of work that should be included in the project beyond the estimated amount of work. The bid history should be examined for projects of similar geographic areas (i.e.: urban or rural settings, similar traffic control setups, etc.). MDOT has also compiled historical lane mile costs per Region to assist the PMs.
2. As recommended in previous years on HMA crack treatment and overband projects, the Engineer should continue to evaluate the pavement condition and the severity of cracking. If cracking is more prevalent on some routes, the Engineer should take this into account when preparing the estimate of work. This should be noted by the PMs and evaluated at the start of each job prior to programming the priorities.
3. The "Guidance for Contractors – How to Bid FPVS Type 1 Projects" created for the RID added further clarification to the contract documents and eliminated the need to reject all bids or not consider a bid due to bidding over the fixed price amount. The guidance added clarity which resulted in acceptable bids since it was first incorporated in the July letting.

### **Contract Information**

Specific FPVS contracts can be found by looking up each project on MDOT's e-Proposal website through MILogin (<https://milogintp.michigan.gov/eai/tplogin/authenticate?URL=/>). Once registered for MILogin, enter the MILogin website by typing in the user's email address and password and then select MDOT e-proposal. Select the letting date from the "Lettings" area on the left side of the page, and then select the item number

from the pull-down menu. The project proposal and any addenda will be available for downloading from this location.

MDOT has also developed a guide for the development of FPVS projects. This guide was incorporated as an appendix to MDOT's Innovative Construction Contracting Guide in early 2015 (updated in 2021) and is publicly posted on MDOT's website.

Unique contract items or traditional contract items modified by MDOT on the 2023 Type 1 FPVS projects are listed below.

- SP for Pavement Markings on FPVS Projects \*
  - SP for HMA Crack Treatment and Overband Crackfill on FPVS Projects\*
  - SP for Warranty Work Requirements for HMA Crack Treatment on FPVS Projects \*
  - SP for the Preparation, Delivery and Considerations of Bid on FPVS Projects \*\*
  - Guidance for Contractors – How to Bid FPVS Type 1 Projects\*\*\*
- \* SP are modified to reflect changes needed for electronic bidding on FPVS Type 1 contracting.
- \*\* SP for the Preparation of Bid and Delivery of Bid is revised to reflect electronic bidding, provides instruction on how to submit an electronic bid on a project and how bid ties are handled.
- \*\*\* RID document added for clarification on how to bid FPVS Type 1 jobs.

## Appendix A: 2023 Bid Letting Results

Type	Job No.	Region	Project Scope	Project Limits	Letting Data	No. of Bidders	Max Bid (Lane Miles)	Winning Bid (Lane Miles)	Engineer's Estimate of Work	Bid Price Per Lane Mile	Gain/Loss (Lane Mile)	Gain/Loss (%)	Other Bids (Lane Miles)
<b>Federally Funded Type 1 CPM FPVS Projects</b>													
1	217463	Bay	HMA Crack Treatment	Various Routes in Davison TSC & Huron TSC Area	230208 #601	4	194.53	185.09	144.00	\$2,814.85	41.09	28.53%	152.53, 147.53, 139.42
1	213399*	University	HMA Crack Treatment & Overband Crack Fill	Various Routes in Jackson TSC Area	230412 #602	4	93.10	93.10	79.05	\$2,130.01	14.05	17.77%	93.10, 87.06, 79.86
1	217865*	Superior	HMA Crack Treatment & Overband Crack Fill	Various Routes in Newberry TSC Area	230510 #603	5	335.84	255.87	251.57	\$2,227.67	4.30	1.71%	241.67, 335.85 n/c, 335.85 n/c, 249.87
1	218063	Superior	HMA Crack Treatment & Overband Crack Fill	Various Routes in Crystal Falls TSC Area	230712 #601	2	330.78	226.88	171.68	\$2,533.20	55.20	32.15%	212.68
1	217466	Superior	HMA Crack Treatment & Overband Crack Fill	Various Routes in Ishpeming TSC Area	230712 #602	2	307.57	225.06	225.00	\$2,508.38	0.06	0.03%	210.00
1	218985	Bay	HMA Crack Treatment	Various Routes in Bay City TSC Area	230809 #601	2	199.59	148.43	167.00	\$3,604.38	-18.57	-11.12%	130.48
1	213889	Grand	HMA Crack Treatment	Various Routes in Cadillac TSC Area	230906 #601	4	126.67	126.67	111.09	\$3,091.83	15.58	14.02%	111.78, 99.40, 99.40
1	215636	North	HMA Crack Treatment & Overband Crack Fill	Various Routes in Traverse City TSC Area	231011 #601	4	514.41	514.41	400.00	\$2,770.04	114.41	28.60%	483.42, 458.19, 435.34
* Pilot FPVS Type 1 project with Railroad Protection					Total	27	2102.49	1775.51	1549.39	\$21,680.36	226.12	111.70%	
					Average	3.38	262.81	221.94	193.67	\$2,710.05	28.26	13.96%	
Type	Job No.	Region	Project Scope	Project Limits	Letting Data	No. of Bidders	Max Bid (Lane Miles)	Winning Bid (Lane Miles)	Engineer's Estimate of Work	Bid Price Per Lane Mile	Gain/Loss (Lane Miles)	Gain/Loss (%)	Other Bids
<b>Federally Funded Type 1 Safety FPVS Project</b>													
1	214551**	Southwest	Edgeline Pavement Markings	Various Routes in St. Joseph County Area - LAP	230412 #601	1	330.56	209.14	198.54	\$406.43	10.60	5.34%	N/A
** Local Agency Safety Project					Total	1	330.56	209.14	198.54	\$406.43	10.60	5.34%	
					Average	1	330.56	209.14	198.54	\$406.43	10.60	5.34%	

This SP is to be used on "Type 1" fixed price variable scope (FPVS) projects where Mobilization is a fixed price, and the remaining items of work are bid by increasing priority for the fixed price. If the Railroad Protection pay item is needed on sections through an at grade crossing, then Contact the Innovative Contracting Unit (ICU) for further guidance on how to utilize the Railroad Protection component in the required priorities.

The designer must fill in the yellow highlighted area of this SP. If there is no railroad involvement and/or the sections through the at grade crossing is gapped out, then the designer must delete the highlighted area referencing Railroad Projection. Once this is completed this note should be deleted, the highlighting removed, and the SP can be used without further approval. If other changes are necessary, then the SP will need to be submitted for review and approval before being used.

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
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VARIABLE SCOPE PROJECTS**

ICS:DMT

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APPR:LFS:MAS:06-27-23

The Department will receive and compare bids in accordance with the process described in this special provision to determine the low Bidder for this contract.

**Delete subsection 102.03, of the Standard Specifications for Construction, in its entirety and replace it with the following:**

The Department will use the process described in the Special Provision for Preparation, Delivery, and Consideration of Bids on Fixed Price Variable Scope Projects and the modifications to the standard specifications contained therein to determine the low Bidder for this contract.

**Delete the first paragraph of subsection 102.05, of the Standard Specifications for Construction, in its entirety and replace it with the following:**

Enter the number of (Units, i.e., lane miles) of work in the blank QUANTITY field of the electronic bidding file that can be completed for the fixed price of \$XXX,XXX (not including Mobilization and Railroad Protection).

Enter the unit price in the UNIT PRICE field of the electronic bidding file. Some priority quantities are fixed and must be bid. The remaining priority quantities are optional to bid. For the optional priority quantity line items, the Bidder has the option to bid the total quantity identified in the schedule of items or bid a portion of a pay item. Once a partial quantity has been entered for an optional priority, the remaining optional priority quantities must be entered as 0.00. If the bid is anything other than 0.00 on additional optional priority quantities, the bid will not be considered. If the bid is over the fixed price, the bid will not be considered. Bids will not be adjusted; they will be awarded at the price submitted. The contract will be awarded to the Bidder that meets the required lane miles and does not exceed the fixed price. To arrive at the unit price for all line



items bid, divide the fixed price by the total number of units of work bid. The Item Total and Bid Total of the electronic bidding file equal the contract price (fixed price plus Mobilization **plus Railroad Protection**).

The formula is as follows for calculating the unit price:

$$P = \frac{S}{B}$$

Where:

P = Unit price of pay items,

S = The fixed price of \$XXX,XXX (not including Mobilization and Railroad Protection)

B = Total (Units, i.e., lane miles) bid

**Delete subsection 102.06.A.1, of the Standard Specifications for Construction, in its entirety.**

**Delete the first paragraph of subsection 102.13, of the Standard Specifications for Construction, in its entirety and replace it with the following:**

The low Bidder will be determined based on the following criteria.

- A. The price submitted cannot be greater than the fixed price. The bid will be considered irregular and will be rejected if the price submitted is greater than the fixed price.
- B. The greatest number of (Units, i.e., lanes miles) bid.
- C. In the event that two or more Bidders are tied after subsection 102.13.B is evaluated, the Department will use the unit prices and bid total submitted in the electronic bid from each of the tied Bidders. The bid total submitted in the electronic bid will be considered as the adjusted bid price. The pay items with bid quantities entered by the Department and price for Mobilization **and Railroad Protection** must remain at the original values, and the quantities for the pay items bid by the Bidder cannot change. The Bidder with the lowest adjusted bid price will determine the low Bidder.
- D. In the event that two or more Bidders are tied after subsection 102.13.C is evaluated, the low Bidder will be determined by drawing names from a container. The following rules apply:
  1. Each of the tied Bidders will provide an authorized representative to witness the drawing.
  2. The names of the tied Bidders will be written on separate and identical pieces of paper and be placed in a container provided by the Department.
  3. A representative of the Department will draw a single piece of paper from the container. The Bidder that is drawn from the container will be the low Bidder. The drawing constitutes the final decision of the Department and is not subject to further contest or appeal.

If the low Bidder is determined by subsection 102.13.C or subsection 102.13.D, the Department will calculate the contract unit price of the pay items, excluding Mobilization and Railroad Protection, based on the following formula:

$$P = \frac{S}{B}$$

Where:

P = Unit price of pay items,

S = Adjusted price from subsection 102.13.C minus Mobilization and Railroad Protection

B = Total (Units, i.e., lane miles) bid

**Guidance for Contractors**  
**How to Bid Fixed Price Variable Scope (FPVS) Type 1 Projects**

- 1) Preparation, Delivery, and Consideration of Bids on FPVS Projects SP
  - a. Contains the maximum Fixed Price (not including Mobilization and Railroad Protection) programmed for the project along with the formula to calculate the price/lane mile.
  - b. The Bidder cannot exceed the Fixed Price amount.
- 2) AASHTOWare Project Bids
  - a. The Fixed Price amount for Mobilization (and Railroad Protection) plus the Fixed Price amount listed on the Preparation, Delivery, and Consideration of Bids on FPVS Projects SP equals the Maximum Bid amount that will be accepted.
  - b. The Lane Miles x Unit Price/Lane Mile Bid must not exceed the Maximum Bid Total.
    - i. If the Contractor's initial Maximum Bid Total is over the allowed Maximum Bid Amount, then the Contractor is responsible for adjusting their Unit Price/Lane Mile Bid, so it does not exceed Maximum Bid Total before submitting their final bid.

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ICS:DMT

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APPR:LFS:MAS:05-24-23

The Department will receive and compare bids in accordance with the process described in this special provision to determine the low Bidder for this contract.

**Delete subsection 102.03, of the Standard Specifications for Construction, in its entirety and replace it with the following:**

The Department will use the process described in the Special Provision for Preparation, Delivery, and Consideration of Bids on Fixed Price Variable Scope Projects and the modifications to the standard specifications contained therein to determine the low Bidder for this contract.

**Delete the first paragraph of subsection 102.05, of the Standard Specifications for Construction, in its entirety and replace it with the following:**

Enter the number of (Units, i.e., lane miles) of work in the blank QUANTITY field of the electronic bidding file that can be completed for the **fixed price of \$XXX,XXX.** 

Enter the unit price in the UNIT PRICE field of the electronic bidding file. Some priority quantities are fixed and must be bid. The remaining priority quantities are optional to bid. For the optional priority quantity line items, the Bidder has the option to bid the total quantity identified in the schedule of items or bid a portion of a pay item. Once a partial quantity has been entered for an optional priority, the remaining optional priority quantities must be entered as 0.00. If the bid is anything other than 0.00 on additional optional priority quantities, the bid will not be considered. If the bid is over the fixed dollar amount, the bid will not be considered. Bids will not be adjusted; they will be awarded at the price submitted. The contract will be awarded to the Bidder that meets the required lane miles and does not exceed the fixed price amount. To arrive at the unit price for all line items bid, divide the fixed price by the total number of units of work bid. The Item Total and Bid Total of the electronic bidding file equal the contract price (fixed price plus mobilization plus railroad protection).

**The formula is as follows for calculating the unit price:** 

$$P = \frac{S}{B}$$

**Where:**

**P = Unit price of pay items,**

**S = The fixed price of \$XXX,XXX (not including Mobilization and Railroad Protection)**

**B = Total (Units, i.e., lane miles) bid**

**Delete subsection 102.06.A.1, of the Standard Specifications for Construction, in its entirety.**

**Delete the first paragraph of subsection 102.13, of the Standard Specifications for Construction, in its entirety and replace it with the following:**

The low Bidder will be determined based on the following criteria.

- A. The price submitted cannot be greater than the original fixed bid price. The bid will be considered irregular and will be rejected if the price submitted is greater than the original fixed bid price.
- B. The greatest number of (Units, i.e., lanes miles) bid.
- C. In the event that two or more Bidders are tied after subsection 102.13.B is evaluated, the Department will use the unit prices and bid total submitted in the electronic bid from each of the tied Bidders. The bid total submitted in the electronic bid will be considered as the adjusted bid price. The pay items with bid quantities entered by the Department and price for Mobilization and Railroad Protection must remain at the original values, and the quantities for the pay items bid by the Bidder cannot change. The Bidder with the lowest adjusted bid price will determine the low Bidder.
- D. In the event that two or more Bidders are tied after subsection 102.13.C is evaluated, the low Bidder will be determined by drawing names from a container. The following rules apply:
  1. Each of the tied Bidders will provide an authorized representative to witness the drawing.
  2. The names of the tied Bidders will be written on separate and identical pieces of paper and be placed in a container provided by the Department.
  3. A representative of the Department will draw a single piece of paper from the container. The Bidder that is drawn from the container will be the low Bidder. The drawing constitutes the final decision of the Department and is not subject to further contest or appeal.

If the low Bidder is determined by subsection 102.13.C or subsection 102.13.D, the Department will calculate the contract unit price of the pay items, excluding Mobilization and Railroad Protection, based on the following formula:

$$P = \frac{S}{B}$$

Where:

- P = Unit price of pay items,  
S = Adjusted price from subsection 102.13.C minus Mobilization and Railroad Protection  
B = Total (Units, i.e., lane miles) bid

# AASHTOWare Project Bids for Fixed Price Variable Scope (FPVS) Type 1

AASHTOWare Project Bids™ Bid – 25000-217463.ebsx 90 Amendments) 25000-217463

FILE EDIT TOOLS VIEW HELP

4% Complete

Section 1 Items are Fixed and Must be Bid.

LINE NUMBER	ITEM NUMBER	QUANTITY	UNITS	UNIT PRICE	EXTENDED PRICE
<b>SECTION 1</b>					<b>\$47,400.00</b>
Road Work - Mobilization					
0005	1100001		1.000 LS	47,400.00	\$47,400.00
Mobilization, Max \$47,400.00					
<b>SECTION 2</b>					<b>\$0.00</b>
Road Work					
0010	5027004	10.320	Lnmi	<input type="text"/>	
_ Priority 01, HMA Crack Treatment, Lane, Warranty					
0015	5027004	32.570	Lnmi	<input type="text"/>	
_ Priority 02, HMA Crack Treatment, Lane, Warranty					
0020	5027004	24.890	Lnmi	<input type="text"/>	
_ Priority 03, HMA Crack Treatment, Lane, Warranty					
0025	5027004	23.320	Lnmi	<input type="text"/>	
_ Priority 04, HMA Crack Treatment, Lane, Warranty					
0030	5027004		<input type="text"/> Lnmi	<input type="text"/>	
_ Priority 05, HMA Crack Treatment, Lane, Warranty, 19.12 Inmi					
0035	5027004		<input type="text"/> Lnmi	<input type="text"/>	
_ Priority 06, HMA Crack Treatment, Lane, Warranty, 10.95 Inmi					
0040	5027004		<input type="text"/> Lnmi	<input type="text"/>	
_ Priority 07, HMA Crack Treatment, Lane, Warranty, 7.88 Inmi					
0045	5027004		<input type="text"/> Lnmi	<input type="text"/>	
_ Priority 08, HMA Crack Treatment, Lane, Warranty, 10.37 Inmi					
0050	5027004		<input type="text"/> Lnmi	<input type="text"/>	
_ Priority 09, HMA Crack Treatment, Ramp, Warranty, 1.24 Inmi					
0055	5027004		<input type="text"/> Lnmi	<input type="text"/>	
_ Priority 10, HMA Crack Treatment, Ramp, Warranty, 0.87 Inmi					
0060	5027004		<input type="text"/> Lnmi	<input type="text"/>	
_ Priority 11, HMA Crack Treatment, Lane, Warranty, 19.99 Inmi					
0065	5027004		<input type="text"/> Lnmi	<input type="text"/>	
_ Priority 12, HMA Crack Treatment, Lane, Warranty, 23.57 Inmi					
0070	5027004		<input type="text"/> Lnmi	<input type="text"/>	
_ Priority 13, HMA Crack Treatment, Lane, Warranty, 9.44 Inmi					

Item Total: \$47,400.00    Bid Total: \$47,400.00

**Bid Total**  
= Section 1 (Fixed Dollar Items) + Extended Price of Each Priority Bid.

**\*Bid Total Amount must NOT exceed the Section 1 (Fixed Dollar Items) + Fixed Price Amount listed in the Prep Delivery SP.**