20240207 - February Specifications Committee Meeting

February Specifications Committee Meeting Agenda

Meeting Date

Wednesday, February 7, 2024 @ 9:00am

Meeting Location: 1334 Smith Street, Charleston, WV in Lower Level Conference

Also meeting virtually via Google Meet video conference. E-mail distribution message includes instruction.

2023 Standard Specification Roads and Bridges

Print Version:

WVDOH Employees-contact us or stop by Technical Support

Industry-We have an order form on our webpage here:

https://transportation.wv.gov/highways/TechnicalSupport/specifications/Documents/SpecBookOrderForm 20230925.pdf

2024 Supplemental Specifications

• The 2024 Supplemental is posted on our webpage.

https://transportation.wv.gov/highways/TechnicalSupport/specifications/Pages/default.aspx

Approved Permanent Specification changes from last Committee meeting (12/06/23)

- Seven Specification Changes Involving Terminology Changes:
 - 101.1-Abbreviations,
 - 401.9.7-Trucks for Transporting Mixture,
 - 707.1.1-Acceptance Requirements for Air Entraining Admixtures,
 - 708.3-Joint and Crack Sealant, Hot-Poured for Concrete and Asphalt Pavements, 708.4.1.2-Test Requirements,
 - 709.1-Steel Bars for Concrete Reinforcement,
 - 711.5.3-Approval, 711.23-Material/System Approval,
 - 715.4-Concrete Repair Materials, 715.9-Warning Devices, 715.11-Engineering Fabric, 715.14-Elastomeric Bearing Pads, and 715.40-Pavement Marking Material
- **101.2-Definitions:** Adds Chief Engineer to align with Division personnel announcement.
- **106.3-Samples:** Revision adds testing and material acceptance requirements.
- 109.20-Weigh Tickets: Revision adds weigh ticket requirements.
- **402.2-Materials:** Revision updates section to align with changes in 401.2.
- 601.3.2.4.1-Optimized Aggregate Gradation: Updates error to 200 sieve and Note 1.
- Section 625-Rock Socketed Drilled Shaft: Revision moves testing responsibility to contractor.
- **703.1.5.2-Dolomite Limestone:** Revision clarifies that either ASTM test can be performed.
- **707.2.2-Performance Requirements for Concrete Retarders:** Revision removes duplicated paragraph.
- **715.9.6.1-Product Submission and Approval:** Revision adds MP reference.
- **106.1-Source of Supply and Quality Requirements:** Updates to correlate with new Federal requirements.

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Approved Project Specific Special Provisions (SP) from last Committee meeting (12/06/23)

• SP900-Railroad

Items removed from Committee Agenda

None

Old Business-Provisions discussed at last Committee meeting

SECTION	TITLE	DESCRIPTION
<u>636</u>	SP636-Digital Speed Limit Sign	4 th time to Committee; discussed in August, October, and December. Project Specific Special Provision for Digital Speed Limit Sign on high speed, multi-lane highways, work areas.
	J. Adkins	The Special Provision has been updated per comments from the last meeting. SP is not redline, however changes have been made including the addition of a placement section.
<u>601</u>	601.11.4.4.1- Transverse Grooving 679.5.2.1-Transverse Grooving	2 nd time to Committee; discussed in December. Two Specification changes to Section 601-Structural Concrete and Section 679- Overlaying of Portland Cement Concrete Bridge Decks. The revision updates the transverse grooving (width, depth, and spacing tolerance) specification to align with the International Grooving & Grinding (IGGA) recommendation similar to surrounding states.
	A. Gillispie	 601.11.4.4.1-Transverse Grooving 679.5.2.1-Transverse Grooving No update to the specification; it is redline copy showing the revisions. Approval is expected in February.
<u>688</u>	688.6.2.1-"Spent Material"	2 nd time to Committee; discussed in December. Specification change to Section 688-Field Painting of Metal Structures. The revision updates the laboratory certification requirement for testing "spent materials"; only requiring a certified WVDEP Laboratory.
	E. Gardner	No update to the specification; it is redline copy showing the revisions. Approval is expected in February.

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712	712.4- Galvanized Steel Deep Beam Guardrail, Fasteners And Anchor Bolts	2 nd time to Committee; discussed in December. Specification change to Section 712-Guardrail and Fence. The revision adds the MP Reference and AASHTO Product Evaluation and Audit Solutions.
	G. Hanna	No update to the specification; it is redline copy showing the revisions.
		Approval is expected in February.
<u>715</u>	715.5-Packaged Dry, Hydraulic Cement Grout (Non-Shrink)	2nd time to Committee; discussed in December. Specification change to Section 715-Miscellaneous Materials. The revision adds a statement about test data from an independent AASHTO accredited lab.
	A. Gillispie	No update to the specification; it is redline copy showing the revisions.
		Approval is expected in February.
<u>720</u>	720.3.2-Quality Assurance (QA) Testing	2 nd time to Committee; discussed in December. Specification change to Section 720-Smoothness Testing. The revision updates the turnaround time for testing.
	V. Allison	No update to the specification; it is redline copy showing the revisions.
		Approval is expected in February.

New Business – New Provisions for Spec Committee

SECTION	TITLE	DESCRIPTION
<u>108</u>	SP108-Procescution and Progress	1st time to Committee Update to previously approved Project Specific Special Provision for Failure to Complete on Time and Liquidated Damages.
	S. Smith	Provision removes sentence to help the Division meet required deadlines.

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<u>204</u>	204.5-Basis of Payment S. Boggs	1st Time to Committee Specification change to 204-Mobilization. The revision is to clarify when the mobilization payment is made. The specification is the redline copy showing the	
		revision.	
<u>601</u>	601.3.2.2-Air Content	1st time to Committee Specification change to 601-Structural Concrete. The revision ensures air content testing is completed before the concrete pump for concrete placement using the pumping method.	
	A. Gillispie	The specification is the redline copy showing the revision.	
<u>636</u>	636.6.2-Shadow Vehicle 715.41.4-Truck	1st time to Committee Two Specification changes to 636-Maintaining Traffic and 715 Miscellaneous Materials. The revision updates Truck Mounted Attenuator (TMA) and Trailer Truck Mounted Attenuator (TTMA) to meet MASH Test Level 3 requirements.	
	Mounted Attenuator (TMA) and Trailer Truck Mounted Attenuator		
	(TTMA)	 636.6.2-Shadow Vehicle 715.41.4-Truck Mounted Attenuator (TMA) and Trailer Truck Mounted Attenuator (TTMA) 	
	T. Whitmore	The specification is the redline copy showing the revision.	

2024 Specifications Committee

The Specification Committee typically meet every other month; on the first Wednesday at 9:00am. 2024 meetings will be held in February (2/7), April (4/3), June (6/12), August (8/8), October (10/2), and December (12/4).

Calendar subject to change, updates will be given, as needed.

Deadline for new items & updates to these provisions is March 1, 2024.

If you are the 'champion' of any specification changes and/or project specific special provisions currently in the Specification Committee, it is your responsibility to edit/update/modify them in a timely manner per comments and discussion in Spec Committee. Failure to submit updates may result in removal of item and/or delays.

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Comments

Comments are requested for Specifications Changes and Project Specific Special Provisions as they help in the decision-making process.

Please Send Comments to either: <u>Steve.D.Boggs@wv.gov</u>
Janie.M.Adkins@wv.gov

File Format Structure and Progression of items thru Specifications Committee

The purpose of the below protocol is to provide guidance on the file structure of Proposed Specifications & Project Specific Provisions as they progress thru Specifications Committee.

This procedure would facilitate a means of tracking changes from meeting to meeting; as the agenda & provisions are posted publicly online on the Spec Committee website.

TYPES OF PROVISIONS:

There are three standard types of provisions typically discussed in committee:

- 1. Specification Changes These are permanent changes to the WVDOH Standard Specifications.
 - Unless inserted into a project proposal, these changes typically go into effect in January (of subsequent year) with the Supplemental Specifications
- 2. Project Specific Special Provisions (SP) Are applied to specifically designated projects.
- 3. Updates to previously approved SP Changes/edits/updated to SP that have been approved by spec committee.

NEW BUSINESS ITEMS:

New items should be setup & submitted in the following format along with a brief overview of the item or reason for the change:

- 1. Specification Changes Show as red-line copy (see note)
- 2. Project Specific Special Provisions (SP) Will be shown in all black.
- 3. Updates to approved SP Shown as red-line copy.

NOTE: Red-line copy is a form of editing which indicates removal or addition of text. You can redline a Microsoft Word document by using the built-in "Track Changes" feature or you can manually redline document with font color changes & strike-through.

OLD BUSINESS ITEMS:

Updated provisions that were discussed at the last committee meeting should be setup in the following format:

- Redline copy from prior meeting would not be shown
- Redline copy of new changes/updates (from previous meeting)

PROGRESSION OF ITEMS THRU COMMITTEE AND APPROVAL:

Depending on how important the project and/or comments/discussion of item at previous meeting, then several things can happen in no particular order.

- Few comments/discussion/minor changes...will recommend approval of item at next meeting
- A lot of comments/discussion...will not recommend approval at next meeting; item will be updated and reviewed again at the next meeting.
- SP's in committee may be used in advertised project. Hope to work to address comments & finish approving at subsequent meeting.

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

SPECIAL PROVISION

FOR

STATE PROJECT NUMBER:	
FEDERAL PROJECT NUMBER:	

SECTION 636 MAINTAINING TRAFFIC

636.19-PORTABLE MESSAGE SIGNS:

ADD THE FOLLOWING SUBSECTION:

636.19.3.3-Digital Speed Limit Trailer: A Digital Speed Limit Trailer (DSLT) shall conform to the general requirements of 636.19. The DSLT shall incorporate a standard speed limit sign per MUTCD sign designation R2-1. The size of the R2-1 shall be a minimum of 48-inches by 60-inches. The background sheeting used to fabricate the R2-1 shall meet the requirements of ASTM D4956 IV, VIII, IX, or XI. The static message numerical portion of the R2-1 shall be replaced with the digital display panel. The DSLT support structure shall provide for a minimum R2-1 mounting height of 7-feet above the roadway.

The DSLT shall also incorporate beacons. One beacon shall be located immediately above and below the R2-1 sign and "Work Zone" plaque. Each beacon shall consist of a circular yellow signal indication having a minimum nominal diameter of 8-inches. The beacons shall be vertically aligned and centered horizontally with the R2-1 sign. The edge of each beacon housing shall be located no closer than 12-inches outside of the nearest edge of the R2-1 sign or "Work Zone" plaque. The DSLT shall be programmed such that each beacon will be flashed at a rate of not less than 50 or more than 60 times per minute. The illuminated period of each flash shall be a minimum of 1/2 and a maximum of 2/3 of the total cycle for each beacon. The DSLT shall incorporate automatic adjustment of the luminance of the beacons under varying light conditions. The DSLT shall provide the user the option of turning the beacons off or alternately flashing the beacons while the display is in operation.

Each DSLT shall have remote communication capabilities using a cellular modem allowing the user to change the displayed speed remotely using manufacturer provided software. In addition, each separate DSLT shall have the ability for the user to change the

displayed speed manually at the device. Each DSLT shall provide the user with the ability to monitor the battery level both remotely using the manufacturers provided software, provided there is cellular coverage where the device is placed, and manually at the device. Each device shall provide the user the ability to manually charge the battery if necessary. The DSLT shall have a twenty (20) day minimum autonomy with flashers functioning.

The DSLT shall be charged at all times and maintained in proper working conditions. If one or more of the devices stops functioning due to neglect by the Contractor to properly maintain the device and not replaced or repaired within 36 hours a penalty of \$500 per calendar day shall be applied. If the DSLT is non-functional due factors outside the control of the Contractor the penalty shall not apply (an example such as vehicle impact and vandalism), however repair or replacement shall be within 48 hours.

Unless otherwise requested by the Engineer, the Contractor shall submit a weekly report documenting the changes to the display to the Engineer.

636.19.4-Placement

DELETE THE FIRST PARAGRAPH AND REPLACE WITH THE FOLLOWING:

Portable message signs shall be turned off with no active displays or operating beacons when being transported. Portable message signs that are not adequately shielded from impacts by utilizing barriers or terrain as described herein to the satisfaction of the Engineer shall be operational at all times to provide clear visibility. This shall include time periods allowed herein when such devices are temporarily no longer needed to serve their intended function of contributing to the efficient or safe operation of the work zone. During such time periods the Contractor shall modify the speed displayed on the Speed Monitoring Trailer static speed limit signs and the DSLT displays accordingly if the speed limit in effect through the work area is changed to a higher work zone speed limit or the normal posted speed limit. In addition, Changeable Message Signs shall be set to flashing warning mode or shall display an alternative generic message approved by the Engineer if a specific informational message is not currently required. If the Speed Monitoring Trailers and/or Changeable Message Signs are not expected to be needed for an entire daylight period or for more than four (4) hours at night, these devices shall be temporarily relocated to a shielded location or other location off the shoulder, either of which shall be approved by the Engineer. If the speed limit in effect through the work area is reverted to the normal posted speed limit and the reduced work zone speed limit is not reinstated within 72-hours, all DSLT's not adequately shielded shall be relocated as specified above and coverings on existing post mounted static speed limit signs displaying the normal posted speed limit shall be uncovered at the direction of the Engineer.

ADD THE FOLLOWING AFTER THE FIRST PARAGRAPH:

The exact placement and any relocations of a DSLT will be as directed by the Engineer. Unless otherwise directed by the Engineer and approved by the Traffic Engineering Division, the work zone speed limit referenced in the plans, shall be displayed on the DSLT when workers are present. However, when workers are not present in the work zone, the design speed shall be based on the original posted speed limit or the warranted speed limit

reduction for when workers are not present. The digital display legends and Speed Limit Sign Beacons on the DSLT Sign Assemblies shall not be automatically changed/activated/deactivated using a pre-programmed schedule.

If the normal posted speed limit remains in effect for more than fourteen (14) days, the DSTL's shall be removed from the project and the Division will no longer pay for the item. In addition, the normal static speed limit signs shall be uncovered.

636.23-METHOD OF MEASUREMENT:

636.23.22-Portable Message Signs:

DELETE THE CONTENTS OF THE SUBSECTION AND REPLACE WITH THE FOLLOWING:

636.23.22-Portable Message Signs:

636.23.22.1- Changeable Message Sign: The quantity of "Changeable Message Sign" shall be the actual number of days that the sign is used on the project.

636.23.22.2- Speed Motoring Trailer: The quantity of "Speed Motoring Trailer" shall be the actual number of days that the sign is used on the project.

636.23.22.3- Digital Speed Limit Sign: The quantity of "Digital Speed Limit Sign" shall be the actual number of days that the sign is used on the project.

636.25-PAY ITEMS:

ADD THE ITEM TO THE TABLE:

ITEM	DESCRIPTION	UNIT
636031-*	Digital Speed Limit Sign	Day

Appendix 636A. This sheet is not required with PS&E submission.:

Designer Note: This specification requires use of Digital Speed Limit Trailers (DSLT) in lieu of Work Zone Speed Limit When Flashing static signing on projects. It is intended for only specified projects which meet criteria below.

- The ADT of the Interstate or expressway is 25,000 or greater.
- The normal posted speed limit of the Interstate or expressway is 50 MPH or greater.
- Work zone speed limits are expected to be in effect at any locations along the mainline of the Interstate or expressway for a total of thirty (30) complete days or more during the duration of the project.
- The work zone length is a minimum of three (3) miles.

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

SUPPLEMENTAL SPECIFICATION

FOR

SECTION 601 STRUCTURAL CONRETE

601.11-FINISHING CONCRETE SURFACES:

601.11.4-Finishing Concrete Bridge Decks: 601.11.4.4-Class H Concrete Finished Deck Grooving: 601.11.4.4.1-Transverse Grooving:

DELETE THE CONTENTS OF THE PARAGRAPH AND REPLACE WITH THE FOLLOWING:

After corrective grinding and before opening to traffic, grooves shall be cut into the concrete using a mechanical saw. These grooves shall be 0.10 0.125 to 0.188 inch wide and extend 0.125 to 0.25 inch deep. Groove spacing shall be 1.5-0.75 inches center to center. No later than one week prior to grooving operations, the Contractor shall provide the Engineer with two accurate, easily readable gauges with which to verify groove dimensions. Groove depth and spacing tolerances are limited to $\pm 1/16$ inch. Groove width tolerances are +0.02 inch and -0.0 inch. The grooves shall be cut in a direction that is transverse to the centerline of the roadway or parallel to the skew. On any one bridge the direction of the grooves shall be consistent. Grooves shall be cut continuously across the deck to within one foot of gutter lines or drainage structures. Grooves shall also be continuous across the full width of the deck surface including construction joints. Grooves shall terminate within one (1) inch of any exposed metal component or elastomeric concrete of an expansion joint. When the deck is skewed and the contractor is using gang blades to saw the grooves, the maximum distance (measured perpendicular to the centerline of the expansion joint) from the last groove termination in the pass to the expansion joint shall be one (1) foot – eight (8) inches. Radial grooving shall be performed in increments limited to twelve (12) feet of bridge length.

SUPPLEMENTAL SPECIFICATION

FOR

SECTION 679 OVERLAYING OF PORTLAND CEMENT CONCRETE BRIDGE DECKS

679.5-FINAL BRIDGE DECK FINISH: 679.5.2-Finished Deck Grooving: 679.5.2.1-Transverse Grooving:

DELETE THE CONTENTS OF THE PARAGRAPH AND REPLACE WITH THE FOLLOWING:

After corrective grinding and before opening to traffic, grooves shall be cut into the concrete using a mechanical saw. These grooves shall be 0.10-0.125 to 0.188 inch wide and extend 0.125 to 0.25 inch deep. Groove spacing shall be 0.10-0.125 inches center to center. No later than one week prior to grooving operations, the Contractor shall provide the Engineer with two accurate, easily readable gauges with which to verify groove dimensions. Groove depth and spacing tolerances are limited to $\pm 1/16$ inch. Groove width tolerances are ± 0.02 inch and ± 0.0 inch. Grooves shall be cut continuously across the deck to within one (1) foot of gutter lines or drainage structures. Grooves shall also be continuous across the full width of the deck surface including construction joints. Grooves shall terminate within one (1) inch of any exposed metal component or elastomeric concrete of an expansion joint. When the deck is skewed and the contractor is using gang blades to saw the grooves, the maximum distance (measured perpendicular to the centerline of the expansion joint) from the last groove termination in the pass to the expansion joint shall be one (1) foot, eight (8) inches. Radial grooving shall be performed in increments limited to twelve (12) feet of bridge length.

SUPPLEMENTAL SPECIFICATION

FOR

SECTION 688 FIELD PAINTING OF METAL STRUCTURES

688.6-ENVIRONMENTAL, WORKER PROTECTION, AND WASTE HANDLING: 688.6.2-Permits for Disposal of "Spent Material": 688.6.2.1-"Spent Material":

DELETE THE CONTENTS OF THE SUBSECTION AND REPLACE WITH THE FOLLOWING:

This shall include material generated by surface preparation operations and shall be sampled and tested in accordance with the current revision of SSPC Guide 7 The Contractor shall, at the Contractor's expense, select a laboratory certified by the WVDEP that will sample and analyze the "spent materials". The laboratory must be certified by the WVDEP, EPA or by another state's DEP equivalent. Certification will be provided to the Engineer prior to the beginning of work. The waste transporter for both hazardous and non-hazardous waste will be listed on the Contractor's Containment/Disposal Control Plan.

SUPPLEMENTAL SPECIFICATION

FOR

SECTION 712 GUARDRAIL AND FENCE

712.4- GALVANIZED STEEL DEEP BEAM GUARDRAIL, FASTENERS AND ANCHOR BOLTS:

ADD THE FOLLOWING TO THE END OF THE SECTION:

Galvanized steel deep beam guardrail, fasteners and anchor bolts shall conform to AASHTO M 180, Type II, Class A. <u>Fabricators of guardrail who supply to WVDOH projects shall meet MP 712.04.50 and shall be audited by AASHTO Product Evaluation and Audit Solutions.</u>

SUPPLEMENTAL SPECIFICATION

FOR

SECTION 715 MISCELLANEOUS MATERIALS

715.5- PACKAGED DRY, HYDRAULIC-CEMENT GROUT (NON-SHRINK):

ADD THE FOLLOWING SENTENCE TO THE SUBSECTION

The material shall conform to the requirements of ASTM C1107. <u>Testing data shall be from an independent AASHTO accredited testing laboratory.</u>

SUPPLEMENTAL SPECIFICATION

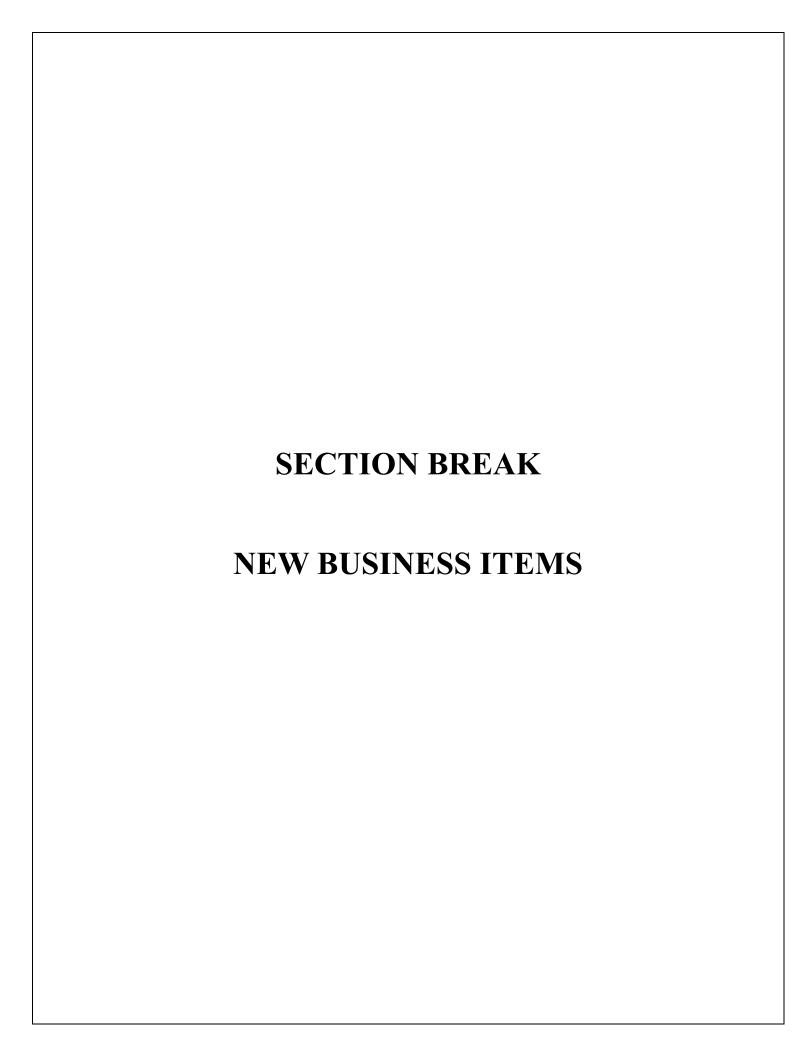
FOR

SECTION 720 SMOOTHNESS TESTING

720.3-RIDE QUALITY TESTING

REMOVE THE FOLLOWING FROM THE SUBSECTION:

720.3.2-Quality Assurance (QA) Testing: QA testing is the responsibility of the Division. The Engineer shall submit a "Bridge and Pavement Testing Request Form" form to MCS&T via email, within five (5) calendar days after all lanes are continuously open to traffic. Within fourteen (14) calendar days from receiving the request, the Division will conduct QA testing. The Division will use a certified inertial profiler and certified operator for QA testing.



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

SPECIAL PROVISION

FOR

STATE PROJECT NUMBER:	
FEDERAL PROJECT NUMBER:	

SECTION 108 PROSECUTION AND PROGRESS

108.7-COMPLETION DATES:

108.7.1-Failure to Complete on Time and Liquidated Damages:

DELETE THE SECOND PARAGRAPH AND REPLACE WITH THE FOLLOWING:

Therefore, for each calendar day the project is deemed not to be Substantially Complete after the Contract Time specified for completion of the work, subject to such extensions of contract time required or permitted in 108.6, the Division will assess liquidated damages against the Contractor. Daily charges will be deducted for each calendar day, as defined in 101.2 on all contracts. The total amount of daily charges will be deducted from any monies due the Contractor, not as a penalty but as liquidated damages. Unless specified elsewhere in the Contract, the amount of the daily charge will be calculated using Table 108.7.1 on the date of the project letting.

An adjustment of Contact time will be considered for loss of time due to adverse weather.

SUPPLEMENTAL SPECIFICATION

FOR

SECTION 204 MOBILIZATION

204.5-BASIS OF PAYMENT:

DELETE THE CONTENTS OF BULLET ii. AND REPLACE WITH THE FOLLOWING:

ii. 2.5% of the original contract amount or the remaining 50% of the amount bid for mobilization, whichever is less, shall be released with the estimate payable 30_28 days after the first estimate.

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

SUPPLEMENTAL SPECIFICATION

FOR

SECTION 601 STRUCTURAL CONRETE

601.3-PROPORTIONING:

601.3.2-Field Tolerances and Adjustments: 601.3.2.2-Air Content:

DELETE THE SUBSECTION AND REPLACE WITH THE FOLLOWING:

The target value of the entrained air at the point of placement shall be as shown in Table 601.3.1A. However, when pumping concrete, the air content shall be measured before the concrete pump, and the target value of the entrained air shall be as shown in Table 601.3.1A at that point. If the entrained air does not conform with the target value within plus or minus 2.5 percentage points, the Contractor shall take immediate steps to adjust the air content of succeeding loads by making necessary adjustments in the mixture. The air content shall be measured on loads already batched and enroute, as well as the first load to which any adjustments were made in batching procedures. If the air content exceeds the target value plus 3.0 percentage points the concrete shall be rejected. When the concrete is delivered in a truck mixer and the air content is less than the target value minus 2.5 percentage points the concrete shall be rejected, or the Contractor may use additional air entraining agent in an amount that is intended to achieve the target value specified. The addition is permitted under the conditions listed below.

The target of the entrained air content of Class H concrete at the time of placement shall be as shown in Table 601.3.1A. If the entrained air does not conform with the target value within plus or minus 1.5 percentage points, the Contractor shall take immediate steps to adjust the air content of succeeding loads by making necessary adjustments in the mixture. If the entrained air content of Class H concrete does not conform to the target value plus 2.0 percentage points, the concrete shall be rejected. When Class H concrete is delivered in a truck mixer and the air content is less than the target value minus 2.0 percentage points, the concrete shall be rejected, or the Contractor may use additional air-entraining agent in an amount that is intended to achieve the target value specified. The addition is permitted under the conditions listed below.

- i. The air entraining agent is the same as used in the approved mix design and is thoroughly mixed with a minimum of 2 gallons of water. The solution will be directed to the front of the mixer.
- ii. The mixer is turned a minimum of 30 revolutions, at mixing speed, or the

number of revolutions established in tests to comply with uniformity requirements, whichever is more.

Immediately after mixing, the air content and slump shall be measured by a certified inspector or technician.

An air adjustment may be attempted twice per truck. If after the second addition the specified air content is not achieved, the concrete shall be rejected. These procedures do not alter the limits placed on time to discharge, the total revolutions of the mixing drum, or the specified slump.

SUPPLEMENTAL SPECIFICATION

FOR

SECTION 636 MAINTAINING TRAFFIC

636.6-PILOT TRUCK AND DRIVER OR SHADOW VEHICLE: 636.6.2-Shadow Vehicle:

DELETE THE CONTENTS OF THE FOURTH PARAGRAPH AND REPLACE WITH THE FOLLOWING:

Test Level 2 devices listed on the MASH APL may only be utilized on roadways with a normal posted speed limit of forty (40) MPH or less. All TMA's and TTMA's shall meet MASH Test Level 3 requirements regardless of the work zone speed limit or the normal posted speed limit of the roadway.

SUPPLEMENTAL SPECIFICATION

FOR

SECTION 715 MISCELLANEOUS MATERIALS

715.41-IMPACT ATTENUATORS:

715.41.4-Truck Mounted Attenuator (TMA) and Trailer Truck Mounted Attenuator (TTMA):

ADD THE FOLLOWING PARAPGRAH TO THE END OF THE SECTION.

Only TMA and TTMA devices designed and tested to meet MASH Test Level 3 requirements will be evaluated and considered for approval. Such devices meeting only Test Level 2 requirements will not be approved.