

**ECMS Highway Construction**

**Contract: 22406**

**Joseph B. Fay Co. XX-XXXXXXX**

**Russellton**

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Prime Business Partner

**CambriaCounty**

**SR 271, Section 013**

**Menoher Blvd Slide**

Location

**T093-057-L24E**

**X093-079-L20E**

Federal Project

**P-500271T716S-0930-373-1**

**P-50027107013-0930-373-1**

WBS Element

**September 13, 2012**

Bid Opening

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## Contract

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Addendum issued subsequent to the printed proposal have been incorporated into the text of this contract and the modified portions are annotated in the contract - e.g., A1, A2 etc.

Incorporated Addendum is As follows:

**Addendum No. 1,**            **A1,**    dated 09/05/2012

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THIS AGREEMENT, Made this *16* day of *October* A.D. *2012*, between the Commonwealth of Pennsylvania by the Secretary of Transportation, hereinafter called the Commonwealth and *Joseph B. Fay Co.* his, hers, its or their executors, administrators, successors, or assigns, hereinafter called the Contractor.

### W I T N E S S E T H:

1. That the Contractor, for and in consideration of the payment or payments herein specified and agreed to by the Commonwealth, hereby covenants and agrees to furnish and deliver all the materials and to do and perform all the work and labor in the improvement of a certain section of highway at the unit prices bid by said Contractor for the respective estimated quantities aggregating approximately the sum of *\$5,439,210.65* and such other items as are mentioned in the Contractor's original proposal, which proposal and prices named, together with Publication 408/2011-2 - Specifications (as specified in the proposal), are made a part of this contract and accepted as such, also the drawings of the project, prepared and/or approved by the Department of Transportation, which drawings are also agreed by each party as being a part hereof.

2. The location and description being situated as follows:

The description and location of the project is as follows: The proposed Menoher Boulevard (SR 271) Slope Stabilization project is located in Southmont Borough, Cambria County just west of Johnstown. The primary work associated with this project entails approximately 1,850 feet of rock slope stabilization work along the southbound side of SR 0271 from Barnett Street to the historic Chapin Arch. Other work associated with this portion of the project is replacement of the rock barrier fence, milling and overlay, and reconfiguration of the intersection of SR 0271 and Barnett Street. The proposed Parkhill Slope Stabilization project is located in East Taylor and East Conemaugh Townships, Cambria County just east of Johnstown. The primary work associated with this project entails approximately 250 feet of rock slope stabilization and shotcrete facing along the southbound side of SR 0271. Additional work included in this project will be traffic signal upgrades and other miscellaneous construction, as indicated on the approved drawings included in the bid package for STATE ROUTE 0271, SECTION 013, in CAMBRIA COUNTY, CITY OF JOHNSTOWN, EAST TAYLOR TOWNSHIP, SOUTHMONT AND EAST CONEMAUGH BOROUGH at the following locations: SR 0271, SECTION 013 STATION 95+00.00 TO STATION 158+00.00 SEGMENT 0150, OFFSET 3128 TO SEGMENT 0180, OFFSET 0965 SR 0271, SECTION 16S SEGMENT 0300, OFFSET 0400 TO SEGMENT 0300, OFFSET 1100

3. The Contractor further covenants and agrees that all work shall be performed in the best and most workmanlike manner. He also agrees that all materials furnished and labor performed shall be in strict and complete conformity, in every respect, with all parts of this contract and shall be subject to the inspection and acceptance of authorized representatives of the Department of Transportation. In the event that any portion of

work (including materials supplied pursuant thereto) performed by the Contractor is rejected by the Department's authorized representatives as defective, unsuitable, or unacceptable, the Contractor agrees to remove and replace all such rejected portions of work in conformance with this contract and to the satisfaction of and at no expense to the Department. The Contractor further covenants that prompt payment will be made in full for all labor and materials used in the performance of work on this project.

4. The Contractor covenants and agrees that all work (including, but not limited to, all labor performed and all materials supplied) on this project shall be performed and completed to the satisfaction of the Chief Highway Engineer of the Department of Transportation on or before the expiration date of *10/18/2013*. If, for any reason, except as provided in the contract, the Contractor fails to complete all work on this project to the satisfaction of the Chief Highway Engineer within the aforementioned time allowed, the Department shall deduct from any sums due or which may become due the Contractor the amount indicated in the Specifications for each calendar day used in excess of the aforementioned number of days allowed, or, in case a completion date is fixed, for each calendar day elapsing between that completion date and the actual date of completion. If no sums are due the Contractor, the Contractor agrees to remit to the Department the aforementioned sum for each day used in excess of the time allowed for completion of the contract. The amounts deducted or remitted under this paragraph are liquidated damages and not penalties.

5. The Contractor further covenants and warrants that the Contractor has had sufficient time to examine and has examined the site of the contract work to ascertain for itself those conditions such as may be determined by inspection, investigation, and inquiry, including the location, accessibility, and general character of the site.

6. The Contractor further covenants that he has not relied upon any information provided by the Department, including information contained in the Special Provisions, concerning the time within which publicly or privately-owned facilities below, at or above the ground are expected to be installed, removed, repaired, replaced, and/ or relocated; that he has not relied upon any information provided by the Department concerning the location or existence of all such facilities that might be below, at or above the ground; that he has contacted or will contact all owner of such facilities to verify the location and position of all such facilities and the time within which work on such facilities will be performed; and that he is aware delays might be incurred in the performance of work on this project as a result of work being performed or that will be performed on such facilities by their owners. It is understood further that, notwithstanding assistance of any kind and extent that might be provided by the Department, the Contractor, in every instance, bears the ultimate responsibility of resolving all disputes of every kind with the owners of such facilities. The Contractor agrees to save and hold the Department harmless from liability for all delays, interference and interruptions that might arise during the performance of work on this project as a result of work being or that will be performed on such publicly or privately-owned facilities.

7. The Contractor further covenants and warrants that he has read, is completely familiar with and understands thoroughly the General Conditions; the Specifications of the Commonwealth of Pennsylvania, Department of Transportation, currently in effect; the Supplements, Special Provisions and/or Conditions; and any other addenda or requirements, contained in the governing the performance of work under this contract, whether attached hereto and made a part hereof, or incorporated herein by reference.

8. It is distinctly understood and agreed that the Contractor shall not do any work (including, but not limited to, the supply of labor and/or materials) not covered by the specifications and the contract, unless such work has been authorized in writing as provided in the Specifications. In no event shall the Contractor incur any liability by reason of refusing to obey any verbal directions or instructions that he might be given to perform additional or extra work. Likewise, the Department will not be liable for any work performed as additional or extra work, unless such work is required of the Contractor in writing as provided in the Specifications. All such work which might have been performed by the Contractor without such written order first being given shall be at the Contractor's risk, cost, and expense, and the Contractor hereby covenants and agrees that, without such written order, he shall make no claim for compensation for such unauthorized work.

9. It is further distinctly agreed that the Contractor shall not assign this contract, nor any part thereof, nor any right to any sums to be paid him hereunder, nor shall any part of the work to be done or material furnished under this contract be sublet, without the consent in writing of the Secretary of Transportation.

10. It is also agreed and understood that the acceptance of the final payment by the Contractor shall be considered as a release in full of all claims against the Commonwealth of Pennsylvania arising out of, or by reason of, the work done and materials furnished under this contract.

11. The Contractor shall accept, insofar as the work covered by the contract is concerned, the provisions of the Workmens Compensation Act of 1915, and any supplements or amendments thereto, and shall insure his liability thereunder or file with the Department of Transportation a certificate of exemption from insurance from the Bureau of Workers' Compensation of the Department of Labor and Industry.

12. In order to secure proper and complete compliance with the terms and provisions of this contract, the Contractor shall provide a bond in a sum equal to one hundred percent (100%) of the total contract price of the work to be done. The Contractor shall also secure an additional bond in the same amount for the prompt payment in full for all labor and materials supplied in performing work on this project. Both bonds are attached to and made a part of this contract.

13. Conditioned upon compliance by the Contractor with all pertinent conditions and procedures contained in the contract, claims for damages or extra costs in excess of three hundred dollars (\$300.00) arising out of disputes pertaining to this contract shall be referred to the Board of Claims pursuant to Section 1724(a) of the Commonwealth Procurement Code, 62 Pa. C.S. § 1724(a).

14. If for any reason the Commonwealth Procurement Code is inoperative or the Board of Claims cannot function, such claims shall be referred and decided by a panel consisting of the Secretary of Transportation and the General Counsel or their respective deputy or deputies.

15. The Contractor hereby further agrees to receive and the Commonwealth agrees to pay the prices set forth in the linked bid items as full compensation for furnishing all the materials and labor which may be required in the prosecution and completion of all work to be done under this contract, and in all respects to complete the contract to the satisfaction of the Secretary of Transportation.

16. The Contractor certified in his, her, its or their bid submission (covering federal aid projects only) to the disclosure of lobbying activities and, if applicable, completed the disclosure form and by said certification understands that Public Law 101-121, Section 319, prohibits federal funds from being expended by recipient or any lower tier sub-recipients of a federal contract, grant, loan or cooperative agreement to pay any person for influencing or attempting to influence a federal agency or Congress in connection with the awarding of any federal contract, the making of any federal grant or loan, or the entering into of any cooperative agreement.

17. If federal funds are involved, the Contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. Contractor shall carry out applicable requirements of 49 C.F.R. Part 26 - DATED OCTOBER 16, 2001 in the award and administration of United States Department of Transportation assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the Pennsylvania Department of Transportation deems appropriate. Contractor must include this assurance in each subcontract that it signs with a subcontractor.

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**Fiscal Information:**

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**Recorded Number:** 22406  
**Certified Fund Available Under Activity Program:** 373  
**Symbol:** 010-008-10581-12/13-1  
**Amount:** \$5,439,210.65

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**Contract Workflow Status**

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<b>Status</b>	<b>Name</b>	<b>Disposition</b>	<b>Date/Time</b>
Draft	Delores A Ritzman/PennDOT	Award	10/05/2012 02:26:33 PM
Contractor Review	Dennis Watkins/PennDOT BP-001279	Sign	10/08/2012 08:39:30 AM
BOD CMD Review	Roland L Rode/PennDOT	Accept	10/10/2012 08:40:13 AM
BOD Director Review	R. Wayne Willey/PennDOT	Sign	10/11/2012 06:52:55 AM
Chief Counsel Preliminary Review	Steven I Roth/PennDOT	Accept	10/12/2012 05:51:26 PM
Chief Counsel Final Review	Michael H Kline/PennDOT	Accept	10/15/2012 05:57:27 PM
Comptroller Review	Matthew P Eng/PennDOT	Accept	10/16/2012 08:52:15 AM
CMD Execute	Douglas A Nace/PennDOT	Submit	10/16/2012 09:31:02 AM



## Addenda

### Addendum: 1

#### Description:

The description and location of the project is as follows: The proposed Menoher Boulevard (SR 271) Slope Stabilization project is located in Southmont Borough, Cambria County just west of Johnstown. The primary work associated with this project entails approximately 1,850 feet of rock slope stabilization work along the southbound side of SR 0271 from Barnett Street to the historic Chapin Arch. Other work associated with this portion of the project is replacement of the rock barrier fence, milling and overlay, and reconfiguration of the intersection of SR 0271 and Barnett Street.

The proposed Parkhill Slope Stabilization project is located in East Taylor and East Conemaugh Townships, Cambria County just east of Johnstown. The primary work associated with this project entails approximately 250 feet of rock slope stabilization and shotcrete facing along the southbound side of SR 0271.

Additional work included in this project will be traffic signal upgrades and other miscellaneous construction, as indicated on the approved drawings included in the bid package for STATE ROUTE 0271, SECTION 013, in CAMBRIA COUNTY, CITY OF JOHNSTOWN, EAST TAYLOR TOWNSHIP, SOUTHMONT AND EAST CONEMAUGH BOROUGH at the following locations:

SR 0271, SECTION 013  
 STATION 95+00.00 TO STATION 158+00.00  
 SEGMENT 0150, OFFSET 3128 TO SEGMENT 0180, OFFSET 0965

SR 0271, SECTION 16S  
 SEGMENT 0300, OFFSET 0400 TO SEGMENT 0300, OFFSET 1100

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**Estimated Project:** \$6,790,538.30  
**Federal Project Status:** PENNDOT Oversight Non-NHS  
**DBE:** 5.00%  
**Structure Work:** 0.00%  
**Wage Rates:** Yes  
**Project Type:** Standard  
**State Type of Work:** SLIDES CORRECTION  
**Prequalification Required:** Yes  
**Pre-Bid Meeting:** None  
**Scheduled Let:** 09/13/2012 11:00:00 AM  
**New Let:**  
**Let Date Move:**  
**Anticipated NTP:** 10/29/2012  
**Required Completion:** 10/18/2013

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#### Additional Information

This is an ECMS project. All Addenda will be electronically posted. Place for delivery of diskette bid before 11:00 a.m. prevailing local time on the scheduled let date: PENNDOT CONTRACT AWARDS ROOM, 7TH FLOOR; COMMONWEALTH KEYSTONE BUILDING; 400 NORTH STREET; HARRISBURG PA 17120

#### Item and Quantity

Modified Work Classes for the following Design Items:

9000-0204  
 9000-0205  
 9000-0207  
 9000-0208

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**Special Provision**

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**Other**

## Bid Items

Item	Description	Quantity	Unit Price	Item Total	Addendum
4201-0001	CLEARING AND GRUBBING (MODIFIED)	1.000	\$273,000.00	\$273,000.00	
4203-0001	CLASS 1 EXCAVATION (MODIFIED)	3,000.000	\$37.00	\$111,000.00	
0203-0001	CLASS 1 EXCAVATION	77.000	\$24.00	\$1,848.00	
0203-0003	CLASS 1A EXCAVATION	66.000	\$48.00	\$3,168.00	
4203-0003	CLASS 1A EXCAVATION (MODIFIED)	1,750.000	\$23.00	\$40,250.00	
0203-0004	CLASS 1B EXCAVATION	63.000	\$71.00	\$4,473.00	
4204-0001	CLASS 2 EXCAVATION (MODIFIED)	5.000	\$400.00	\$2,000.00	
0204-0010	CLEANING EXISTING DITCHES	1,250.000	\$12.00	\$15,000.00	
0212-0014	GEOTEXTILE, CLASS 4, TYPE A	340.000	\$3.00	\$1,020.00	
0213-0002	TEMPORARY PROJECT AIR POLLUTION CONTROL	1,000.000	\$1.00	\$1,000.00	
0309-0437	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BASE COURSE, PG 64-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX	18.000	\$145.00	\$2,610.00	
0350-0103	SUBBASE 3" DEPTH (NO. 2A)	263.000	\$5.00	\$1,315.00	
0409-0482	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H	9,672.000	\$7.60	\$73,507.20	
0409-1492	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE (LEVELING), PG 64-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-H	581.000	\$92.00	\$53,452.00	
0460-0001	BITUMINOUS TACK COAT	19,393.000	\$0.25	\$4,848.25	
0469-0022	ASPHALT JOINT AND CRACK SEALING FOR BITUMINOUS SURFACES	4,901.000	\$0.95	\$4,655.95	
0491-0014	MILLING OF BITUMINOUS PAVEMENT SURFACE, 2 1/2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	9,645.000	\$1.82	\$17,553.90	
0501-0300	H.E.S. REINFORCED CEMENT CONCRETE PAVEMENT, 8" DEPTH	73.000	\$100.00	\$7,300.00	
0601-5901	CLEANING EXISTING PIPE CULVERTS, DIAMETERS UP TO AND INCLUDING 36"	1,650.000	\$7.00	\$11,550.00	
0608-0001	MOBILIZATION	1.000	\$350,000.00	\$350,000.00	
0609-0006	INSPECTOR'S FIELD OFFICE AND INSPECTION FACILITIES, TYPE A	1.000	\$25,000.00	\$25,000.00	
0609-0009	EQUIPMENT PACKAGE	1.000	\$5,000.00	\$5,000.00	
0619-0051	ANCHORED BACKSLOPE TERMINAL, TYPE 1	2.000	\$1,000.00	\$2,000.00	
0619-0460	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3 (ENERGY ABSORBING TERMINALS FLARED)	4.000	\$1,600.00	\$6,400.00	
0619-0470	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3 (ENERGY ABSORBING TERMINALS, TANGENT)	2.000	\$1,800.00	\$3,600.00	
0620-0010	TYPICAL AND ALTERNATE CONCRETE BRIDGE BARRIER TRANSITION WITHOUT INLET PLACEMENT	1.000	\$1,800.00	\$1,800.00	
0620-0402	TERMINAL SECTION, BRIDGE CONNECTION	1.000	\$200.00	\$200.00	
0620-0500	RESET GUIDE RAIL	3,358.000	\$5.00	\$16,790.00	
0620-0502	REMOVE EXISTING GUIDE RAIL (DEPARTMENT PROPERTY)	590.000	\$3.00	\$1,770.00	
0620-1075	TYPE 2-S GUIDE RAIL	338.000	\$20.00	\$6,760.00	
0620-1100	TYPE 2-SC GUIDE RAIL	13.000	\$39.50	\$513.50	
4624-0001	RIGHT-OF-WAY FENCE, TYPE 1 (MODIFIED)	39.000	\$75.00	\$2,925.00	
4624-0300	END POSTS FOR TYPE 1 RIGHT-OF-WAY FENCE (MODIFIED)	4.000	\$310.00	\$1,240.00	
4624-0725	VEHICULAR GATE FOR TYPE 1 RIGHT-OF-WAY FENCE, 15-FOOT OPENING (MODIFIED)	1.000	\$2,450.00	\$2,450.00	
0633-0225	PLAIN CONCRETE MOUNTABLE CURB, TYPE B	130.000	\$30.00	\$3,900.00	
0660-0030	BITUMINOUS SHOULDER RUMBLE STRIPS	4,572.000	\$0.40	\$1,828.80	
0686-0020	CONSTRUCTION SURVEYING, TYPE B	1.000	\$40,000.00	\$40,000.00	
0689-0002	NETWORK SCHEDULE	1.000	\$5,000.00	\$5,000.00	

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0703-0020	NO. 1 COARSE AGGREGATE	77.000	\$45.00	\$3,465.00
0804-0012	SEEDING AND SOIL SUPPLEMENTS - FORMULA C	320.000	\$26.00	\$8,320.00
0804-0013	SEEDING AND SOIL SUPPLEMENTS - FORMULA D	33.000	\$12.00	\$396.00
0804-0014	SEEDING - FORMULA E	350.000	\$10.00	\$3,500.00
0805-0021	MULCHING - HAY	25.000	\$400.00	\$10,000.00
0811-0003	TEMPORARY PROTECTIVE FENCE	479.000	\$7.00	\$3,353.00
4851-0001	ROCK ENERGY DISSIPATOR (MODIFIED)	1.000	\$1,700.00	\$1,700.00
0860-0000	INLET FILTER BAG FOR TYPE M INLET	6.000	\$400.00	\$2,400.00
0901-0001	MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION	1.000	\$20,000.00	\$20,000.00
0901-0202	FLOODLIGHTS	2.000	\$5,000.00	\$10,000.00
0901-0203	ARROW PANEL	1.000	\$1,800.00	\$1,800.00
0901-0240	ADDITIONAL TRAFFIC CONTROL SIGNS	100.000	\$7.50	\$750.00
0901-0320	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, YELLOW	606.000	\$1.50	\$909.00
0901-0330	4" STANDARD PAVEMENT MARKINGS, PAINT & BEADS, WHITE	133.000	\$1.50	\$199.50
0901-0461	FULL-MATRIX CHANGEABLE MESSAGE SIGN WITHOUT TELECOMMUNICATIONS	2.000	\$5,500.00	\$11,000.00
0931-0001	POST MOUNTED SIGNS, TYPE B	134.000	\$22.00	\$2,948.00
0936-0200	STRUCTURE MOUNTED FLAT SHEET ALUMINUM SIGNS	61.000	\$38.50	\$2,348.50
0937-0102	GUIDE RAIL MOUNTED DELINEATOR TYPE A, (W/B)	54.000	\$8.00	\$432.00
0937-0113	GUIDE RAIL MOUNTED DELINEATOR TYPE D, (W/B)	54.000	\$8.00	\$432.00
0937-0203	BARRIER MOUNTED DELINEATOR, SIDE-MOUNT TYPE O, (W/B)	15.000	\$5.00	\$75.00
0941-0001	RESET POST MOUNTED SIGNS, TYPE B	1.000	\$116.00	\$116.00
0951-4014	TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL	2.000	\$3,000.00	\$6,000.00
4952-1021	NEMA TS-1 CONTROLLER ASSEMBLY, TYPE 2 MOUNTING (MODIFIED)	2.000	\$10,500.00	\$21,000.00
0954-0011	1 INCH CONDUIT	40.000	\$3.00	\$120.00
0954-0012	2 INCH CONDUIT	225.000	\$3.25	\$731.25
0954-0151	TRENCH AND BACKFILL, TYPE I	40.000	\$7.00	\$280.00
0954-0152	TRENCH AND BACKFILL, TYPE II	25.000	\$22.00	\$550.00
0954-0153	TRENCH AND BACKFILL, TYPE III	145.000	\$42.00	\$6,090.00
0954-0201	SIGNAL CABLE, 14 AWG, 3 CONDUCTOR	1,700.000	\$1.50	\$2,550.00
0954-0202	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	2,400.000	\$1.75	\$4,200.00
4954-0302	JUNCTION BOX, JB-27 (MODIFIED)	4.000	\$1,100.00	\$4,400.00
0954-0402	ELECTRICAL SERVICE, TYPE B	2.000	\$1,600.00	\$3,200.00
4955-3208	VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS (MODIFIED)	16.000	\$755.00	\$12,080.00
0955-3723	LED PEDESTRIAN SIGNAL HEAD, TYPE B	16.000	\$560.00	\$8,960.00
0956-0001	DETECTOR LEAD IN CABLE	1,000.000	\$1.30	\$1,300.00
0956-0101	LOOP SENSOR	970.000	\$8.00	\$7,760.00
4956-0121	LOOP AMPLIFIER, 1 CHANNEL SHELF MOUNTED WITH TIMER (MODIFIED)	8.000	\$300.00	\$2,400.00
4956-0500	PEDESTRIAN PUSH BUTTON (MODIFIED)	8.000	\$150.00	\$1,200.00
0960-0001	4" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	5,087.000	\$0.50	\$2,543.50
0960-0002	4" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS	9,292.000	\$0.50	\$4,646.00
0960-0005	6" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	710.000	\$0.60	\$426.00
0960-0008	8" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	234.000	\$2.25	\$526.50
0960-0021	24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	140.000	\$10.00	\$1,400.00
0960-0022	24" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS	141.000	\$10.00	\$1,410.00
0963-0001	PAVEMENT MARKING REMOVAL	138.000	\$5.00	\$690.00
0965-0220	WHITE PREFORMED THERMOPLASTIC LEGEND, "STRAIGHT ARROW", 12' - 0" X 1' - 8"	2.000	\$200.00	\$400.00

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0965-0224	WHITE PREFORMED THERMOPLASTIC LEGEND, "LEFT ARROW", 12' - 0" X 3' - 0"	2.000	\$225.00	\$450.00	
0971-0001	REMOVE POST MOUNTED SIGNS, TYPE B	6.000	\$25.00	\$150.00	
9000-0002	CONCRETE WASHOUT	1.000	\$1,000.00	\$1,000.00	
9000-0005	UTILITY TEST HOLES	2.000	\$200.00	\$400.00	
9000-0101	VIDEOTAPE PRIVATE ROAD	1.000	\$1,000.00	\$1,000.00	
9000-0201	SLOPE PREPARATION FOR WIRE MESH SLOPE TREATMENT	23,500.000	\$20.00	\$470,000.00	
9000-0202	ROCK ANCHOR BOLTS (10' LONG)	730.000	\$900.00	\$657,000.00	
9000-0203	ROCK ANCHOR BOLTS (30' LONG)	135.000	\$2,750.00	\$371,250.00	
9000-0204	GEOBRUGG TECCO WIRE MESH	24,800.000	\$56.00	\$1,388,800.00	1
9000-0205	GEOBRUGG SPIDER WIRE MESH	3,600.000	\$47.00	\$169,200.00	1
9000-0206	SHOTCRETE FACING	8,800.000	\$45.00	\$396,000.00	
9000-0207	ROCKFALL BARRIER DEMOLITION AND REPLACEMENT	1,074.000	\$350.00	\$375,900.00	1
9000-0208	TEMPORARY ROCKFALL PROTECTION	1.000	\$30,000.00	\$30,000.00	1
9000-0209	HORIZONTAL DRAINS	2,600.000	\$47.00	\$122,200.00	
9202-0001	ASBESTOS TESTING AND ABATEMENT	5,000.000	\$1.00	\$5,000.00	
9203-0001	ROCK SLOPE SCALING	150.000	\$650.00	\$97,500.00	
9600-1125	REPAIR OF PRIVATE ROAD	15,000.000	\$1.00	\$15,000.00	
9624-0001	VEHICULAR GATE, 16'-0" OPENING, DOUBLE-SWING	1.000	\$3,000.00	\$3,000.00	
9660-0030	BITUMINOUS CENTERLINE RUMBLE STRIPS	3,464.000	\$0.70	\$2,424.80	
9951-0130	TRAFFIC SIGNAL SUPPORT, TWIN MAST ARMS, 30' AND 35'	1.000	\$13,000.00	\$13,000.00	
9951-0135	TRAFFIC SIGNAL SUPPORT, TWIN MAST ARMS, 35' AND 20'	1.000	\$12,200.00	\$12,200.00	
9952-3000	CONTROLLER UNIT AND CABINET MODIFICATION	1.000	\$8,000.00	\$8,000.00	
9957-5001	SPREAD SPECTRUM RADIO TRANSCEIVERS AND ANTENNAS	2.000	\$7,000.00	\$14,000.00	

**Contract Total:** \$5,439,210.65

**Bid Total:** \$5,439,210.65

## Special Provisions

### G2A - a00002 PUBLIC BID OPENING LOCATION

**Addendum:**

**Associated Item(s):**

**Header:**

PUBLIC BID OPENING LOCATION

**Provision Body:**

The location of the public bid opening is the Commonwealth Keystone Building, 7th Floor, Contract Awards Room, 400 North Street, Harrisburg. Allow sufficient time before the bid opening to obtain a visitor pass on the 5th Floor and to be escorted to the 7th Floor Contract Awards Room.

### G101B - a00101 GOVERNING SPECIFICATIONS AND APPLICABLE DESIGNATED SPECIAL PROVISIONS

**Addendum:**

**Associated Item(s):**

**Header:**

GOVERNING SPECIFICATIONS AND APPLICABLE DESIGNATED SPECIAL PROVISIONS

**Provision Body:**

I. GOVERNING SPECIFICATIONS. This bid proposal is made under, subject to, and governed by:

Specifications 408/2011, Change 2, effective date April 6, 2012 of the Pennsylvania Department of Transportation. Within these Specifications where dual measurement and tabular options are presented English standards apply.

II. APPLICABLE DESIGNATED SPECIAL PROVISIONS. The following Designated Special Provisions are found in Appendix C to the above Governing Specifications. Those that apply to this bid proposal are preceded with a check (i.e., "X"). Goals, minimum levels of participation, or other project specific requirements associated with these documents are also established where applicable:

DSP1. Offset Provision for Commonwealth Contracts.

DSP2. Contractor Responsibility Provisions.

DSP3. Provisions for Commonwealth Contracts Concerning the Americans with Disabilities Act.

DSP4. Minority Business and Women Business Enterprise Participation Requirements. This is used on 100% State projects requiring Prequalification. The minimum levels of participation for this project are:

MBE ; WBE

(fill in)% (fill in)%

DSP5. Minority Business and Women Business Enterprise Program. This is used only on 100% State projects over \$100,000 requiring Prequalification and where DSP4 does not apply.

( ) DSP6. Minority Business and Women Business Enterprise Utilization Requirements. This is used on State projects without Prequalification requirements. Minimum participation levels of 5% for MBE and 3% for WBE of the dollar amount of the bid have been established for this project.

(x) DSP7. Disadvantaged Business Enterprise Requirements. This is used on Federal - aid projects only. In conjunction with this contract a goal of 5 % of the original contract amount has been established.

(x) DSP9. Special Supplement - Anti-Pollution Measures - August 26, 1999.

(x) DSP10. Nondiscrimination/Sexual Harassment Clause.

(x) DSP11. Contractor Integrity Provisions.

(x) DSP12. Executive Order 11246, with Appendix A and B.

## **G113B - a00113 CONTRACT PROVISIONS - RIGHT-TO-KNOW LAW**

### **Addendum:**

### **Associated Item(s):**

### **Header:**

CONTRACT PROVISIONS - RIGHT TO KNOW LAW

### **Provision Body:**

#### **I. Contract Provisions – Right to Know Law 8-K-1532**

a. The Pennsylvania Right-to-Know Law (RTKL), 65 P.S. §§ 67.101-3104, applies to this Contract.

b. If the Department needs assistance in any matter arising out of the RTKL related to this Contract, the Department will notify the Contractor using the legal contact information provided in this Contract. The Contractor, at any time, may designate a different contact for such purpose upon reasonable prior written notice to the Department.

c. Upon written notification from the Department that it requires assistance in responding to a request under the RTKL for information related to this Contract that may be in the Contractor's possession, constituting, or alleged to constitute, a public record in accordance with the RTKL ("Requested Information"), the Contractor will:

1. Provide the Department, within 10 calendar days after receipt of written notification, access to, and copies of, any document or information in the Contractor's possession arising out of this Contract that the Department reasonably believes is Requested Information and may be a public record under the RTKL; and

2. Provide such other assistance as the Department may reasonably request, in order to comply with the RTKL with respect to this Contract.

d. If the Contractor considers the Requested Information to include a request for a Trade Secret or Confidential Proprietary Information, as those terms are defined by the RTKL, or other information that the Contractor considers exempt from production under the RTKL, notify the Department and provide, within 7 calendar days of receiving the written notification, a written statement signed by a representative of the Contractor explaining why the requested material is exempt from public disclosure under the RTKL.

e. The Department will rely upon the written statement from the Contractor in denying a RTKL request for the Requested Information unless the Department determines that the Requested Information is clearly not protected from disclosure under the RTKL. Should the Department determine that the Requested Information is clearly not exempt from disclosure, provide the Requested Information within 7 calendar days of receipt of written notification of the Department's determination.

f. Failing to provide the Requested Information within the time period required by these provisions, indemnify and hold the Department harmless for any damages, penalties, costs, detriment or harm that the Department may incur as a result of this failure, including any statutory damages assessed against the Department.

g. The Department will reimburse the Contractor for any costs associated with complying with these provisions only to the extent allowed under the fee schedule established by the Office of Open Records or as otherwise provided by the RTKL if the fee schedule is inapplicable.

h. The Contractor may file a legal challenge to any Department decision to release a record to the public with the Office of Open Records, or in the Pennsylvania Courts, however, indemnify the Department for any legal expenses incurred by the Department as a result of such a challenge and hold the Department harmless for any damages, penalties, costs, detriment or harm that the Department may incur as a result of the failure, including any statutory damages assessed against the Department, regardless of the outcome of such legal challenge. As between the parties, agree to waive all rights or remedies that may be available as a result of the Department's disclosure of Requested information pursuant to the RTKL.

i. The Contractor's duties relating to the RTKL are continuing duties that survive the expiration of this Contract and continue as long as the Requested Information remains in the Contractor's possession.

### **G311A - a00311 ROAD USER LIQUIDATED DAMAGES (RULD)**

**Addendum:**

**Associated Item(s):**

**Header:**

ROAD USER LIQUIDATED DAMAGES (RULD)

**Provision Body:**

Road User Liquidated Damages (RULDs) will be assessed as specified in Section 108.07(b) and as follows:

Unrestricted traffic is defined as opening the roadway/structure full width including shoulders and ramps as approved by the Representative with no further need for traffic restrictive devices.

24 hours in advance of the completion of portions of the work which control the assessment of liquidated damages, notify the Representative so that a mutual inspection can be performed. If the Representative determines that the work is completed satisfactorily, the travel lanes will be opened to unrestricted traffic and no further liquidated damages will be assessed for that portion of work.

Damage charges as outlined below will be assessed independent of and concurrent with, as appropriate, Construction Engineering Liquidated Damages (CELD) as specified in Section 108.07(a).

RULDs as specified will be deducted from money due or to become due.

**Detour**

RULDs in the amount of \$ 25,000.00 will be assessed for each day/or portion of day that the detour for SR 0271-013 is not removed and traffic is open to unrestricted traffic in all lanes on or after October 17, 2013.

RULDs in the amount of \$10,000.00 will be assessed for each day/or portion of day that the detour for SR 0271-16S is not removed and traffic is open to unrestricted traffic in all lanes on or after June 18, 2013



**G801A - a00801 PARTNERING**

**Addendum:**

**Associated Item(s):**

**Header:**

PARTNERING

**Provision Body:**

I. In accordance with Section 104.01, INTENT OF PLANS AND SPECIFICATIONS, and as follows:

(a) Covenant Of Good Faith and Fair Dealing. This contract, in its performance and enforcement, imposes an obligation of good faith and fair dealing on the Contractor and the Department.

The Contractor and the Department, with a positive commitment to honesty and integrity, agree to the following mutual duties:

- To function within the laws and statutes applicable to their duties and responsibilities,
- To assist in the other's performance,
- To avoid hindering the other's performance,
- To proceed to fulfill obligations diligently, and
- To cooperate in the common endeavor of the contract.

(b) Voluntary Partnering. The Department intends to encourage the formation of a cohesive partnership with the Contractor and its principal subcontractors and suppliers. This partnership will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. The objectives are effective and efficient contract performance and completion of all work within budget, on schedule, and in accordance with the plans and specifications.

This partnership will be bilateral in makeup, and participation will be totally voluntary. Any cost associated with bringing about this partnering will be agreed to by both parties and shared equally. Participation is not a requirement of the contract and, therefore, the costs associated with partnering are not to be included in the bid, and the provisions specified in Section 110.03(d)4. do not apply to these costs.

To implement this partnering initiative prior to the Preconstruction Conference, the Notice to Proceed, and the start of work, as specified in Sections 108.02 and 108.03, the Contractor's management personnel and the District Engineer are to organize a Partnering Seminar/Team Building Workshop as follows:

1. Facilitator. Select and obtain Department concurrence for a third party facilitator to conduct the workshop for the project stakeholders. The Contractor and the Department are to share the cost of the facilitator equally.
2. Attendees. Persons required to be in attendance are the Department's Assistant Construction Engineer, Inspector-in-Charge, and key project personnel; the Contractor's on-site project manager (Superintendent); and key project supervision personnel for both the Contractor and its principal subcontractors and suppliers. The project design engineers, key specialty or technical personnel, utility management personnel, FHWA, and key local government personnel should also be invited to attend, as necessary. The Contractor may wish to have Regional and Corporate level managers in attendance. The Department may wish to have District and State level managers in attendance.

3. Agenda. Workshop agenda is to consist of at least the following:

- Discussion of partnering principles.
- Development of a project charter with defined goals and objectives.
- Defined problem solving procedure and evaluation process.

Approximately 1/3 of the workshop should be devoted to team building and problem solving techniques; with the remainder of the time being devoted to defining project goals and objectives and issue resolution.

4. Duration. Workshop duration should normally be 2 days, but may be modified due to project related variables such as cost, complexity, number of stakeholders, project personnel partnering experience, number of potential issues, and other project-related factors.

5. Location. The workshop is to be located at a "neutral" site, in Pennsylvania, in close proximity to the project site if possible. The Contractor and the Department are to share the cost of the facilities equally.

Follow-up workshops may be held periodically throughout the duration of the contract as agreed to by the Contractor and the Department.

II. The establishment of a partnership charter on this project will not change the legal relationship of the parties to the contract nor relieve either party of responsibility for any of the terms of the contract.

## **G901B - a00901 ALTERNATE EROSION AND SEDIMENT POLLUTION CONTROL PLAN**

**Addendum:**

**Associated Item(s):**

**Header:**

ALTERNATE EROSION AND SEDIMENT POLLUTION CONTROL PLAN

**Provision Body:**

Comply with these requirements when submitting an alternate plan for accomplishing equal or better temporary and permanent erosion and sediment pollution control. Do not start work until the alternate erosion and sediment pollution control plan, schedules, and operation methods have been approved by the Department and the Department of Environmental Protection, or by the Department and the County Conservation District, as applicable.

Apply for any earth disturbance permits or permit amendments not included in the proposal documents that are required because of the nature of the contemplated construction procedures.

Prepare and furnish, with the applications, plans and documents that are required by the Department of Environmental Protection or the County Conservation District.

Provide simultaneously to the District Executive a copy of all plans and documents that affect the construction requirements.

Provide immediately to the District Executive any modifications that are made to the plans and documents that are required by the Department of Environmental Protection or the County Conservation District.

Obtain the approval of the Department and the permit from the Department of Environmental Protection prior to beginning any work when a permit is required, and the approval of the Department and the County Conservation District when a permit is not required.

Acquire areas outside of the right-of-way that are necessary for erosion and sediment pollution control. Proceed with the agreement procedure described in Section 105.14 (Borrow Areas and Waste Areas).

**G1101B - a01101 CONSTRUCTION PROCEDURES - EROSION AND SEDIMENT POLLUTION CONTROL**

**Addendum:**

**Associated Item(s):**

**Header:**

CONSTRUCTION PROCEDURES - EROSION AND SEDIMENT POLLUTION CONTROL

**Provision Body:**

I. Observe the applicable following procedures during the entire period of construction as directed:

(a) Conduct all operations as specified in the erosion and sediment pollution control plan and in such a manner to minimize turbidity in streams. Do not discharge water containing sediments or pollutants into the streams.

(b) Direct flowing water away from project construction areas.

(c) Limit movement of equipment through the streambed in accordance with the approved plan so as to prevent unnecessary siltation or disturbance. Permit equipment to cross flowing channels only on rock roadways and/or bridges to prevent constant turbulency and siltation.

Construct rock crossings, causeways or cofferdams with rock having a minimum size of 75 mm (3 inches) or larger as directed; also, the surface may be choked with stone aggregate having a minimum size of 9.5 mm (3/8-inch). Do not use earth or other materials which may cause sedimentation, for any crossings, causeways or cofferdams.

(d) Seed and/or stabilize all stream banks immediately upon completion of grading.

(e) Seed all cut and fill slopes when they have reached a vertical height of 4.5 m (15 feet). On areas where permanent seeding will not be performed within a period of 20 days after the excavation or embankment operations have been completed place temporary seeding (annual Ryegrass) and mulching on all soil areas.

(f) Control the entire grading area at all times during construction by placing the erosion and sediment pollution control devices that can be installed prior to disturbing the earth and the stabilization devices as soon as the required earthwork has been performed.

(g) For any excavation material stockpiled more than 20 days, take interim stabilization measures to minimize erosion of the stockpile slopes.

(h) Clean the sedimentation structures during construction as specified in Section 861. Dispose of silt fencing and sediment removed from the project, as directed.

(i) Separate all water originating outside of the project from that originating within.

(j) During the life of the contract, be responsible for the maintenance of all erosion and sediment pollution control devices.

(k) Seed all borrow and waste areas in accordance with the approved plans and with item (e) above.

**G1601A - a01601 E.E.O. COVERED AREA**

**Addendum:**

**Associated Item(s):**

**Header:**

E.E.O. COVERED AREA

**Provision Body:**

For the purpose set forth in the Executive Order 11246

the covered area for this contract is Somerset County,

which is within the Economic Area of Pittsburg, Pa.

as listed in Appendix B of Designated Special Provision 12 (DSP12) entitled "Executive Order 11246 (with Appendix A and B)" in Appendix C of Pub 408.

**G4301D - a04301 UTILITIES--THE REQUIREMENT TO LIST INFORMATION**

**Addendum:**

**Associated Item(s):**

**Header:**

UTILITIES--THE REQUIREMENT TO LIST INFORMATION

**Provision Body:**

I. Cooperate with the public utility companies and local authorities in the placement, replacement, relocation, adjustment, or reconstruction of their structures and facilities during construction. Contact all utility representatives at least 15 calendar days before starting operations.

PRIOR	Anticipated completion before the Notice to Proceed is issued. Use actual or anticipated completion date shown.
RESTRICTIVE	To be completed by the utility or string of utilities before operating without restriction. Number of calendar days will start from the actual notice to proceed that is issued to the contractor.
CONCURRENT	Simultaneous with, but not restricting, operations. Number of calendar days required.
COORDINATED	Phasing with specific construction operations. Number of calendar days required after completion of specific construction operations.
NOT AFFECTED	Identifies utility with facilities in the construction area not anticipated to be affected. Specific information may be provided by the utility.
INCORPORATED	Utility relocation work to be incorporated into the prime highway construction contract.

CONDITIONAL RESTRICTIONS AND TIME REQUIREMENTS Identify conditions affecting the utility's ability to perform a certain type of utility relocation work, i. e., certain times of the day, week, or year that a facility cannot be shut down, acquisition of Right-of-Way by the state, or demolition of buildings.

PENNSYLVANIA ELECTRIC COMPANY

Contact: Joseph Ritter, telephone 814-269-6709

Construction Contact: Ted Custer, telephone 814-269-6714

COORDINATED: (Aerial) SR 271, Sta. 120+07 RT

Contractor to trim trees prior to Utility relocation. Utility to relocate pole #J-1053711 to Sta. 120+07 RT, 9 ft behind guiderail. Notify Utility two (2) weeks prior to work in this area. Thirty (30) calendar days required.

NOT AFFECTED: (Aerial) SR 271, Segment 300 Offset 400 RT/LT to Segment 300 Offset 1100 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (Aerial) SR 271, Sta. 1+00 RT/LT to Sta. 3+00 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (Aerial) SR 403, Sta. 208+50 RT/LT to Sta. 211+00 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

CONDITIONAL RESTRICTIONS AND TIME REQUIREMENTS:

Schedule may be impacted by severe weather conditions.

De-energization is not included in these relocations. Contractor will be billed to de-energize lines prior to each request. Four (4) weeks minimum notification is required.

VERIZON NORTH LLC

Contact: Dan Wheatcroft, telephone 724-986-6125

NOT AFFECTED: (Aerial) SR 271, Sta. 122+50 RT/LT to Sta. 151+50 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (Aerial) SR 271, Segment 300 Offset 400 RT/LT to Segment 300 Offset 1100 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (Aerial) SR 271, Sta. 1+00 RT/LT to Sta. 3+00 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (Aerial) SR 403, Sta. 208+50 RT/LT to Sta. 211+00 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

PEOPLES NATURAL GAS COMPANY LLC

Contact: Mark Malik, telephone 814-269-6317

NOT AFFECTED: (U/G) SR 271, Sta. 122+50 RT/LT to Sta. 151+50 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (U/G) SR 271, Segment 300 Offset 400 RT/LT to Segment 300 Offset 1100 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (U/G) SR 271, Sta. 1+00 RT/LT to Sta. 3+00 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (U/G) SR 403, Sta. 208+50 RT/LT to Sta. 211+00 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

ATLANTIC BROADBAND, LLC

Contact: Len Hillegas , telephone 814-534-8410

Construction Contact: Joe Horten, telephone 814-534-8148

NOT AFFECTED: (Aerial) SR 271, Sta. 122+50 RT/LT to Sta. 151+50 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (Aerial) SR 271, Segment 300 Offset 400 RT/LT to Segment 300 Offset 1100 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (Aerial) SR 271, Sta. 1+00 RT/LT to Sta. 3+00 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (Aerial) SR 403, Sta. 208+50 RT/LT to Sta. 211+00 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

GREATER JOHNSTOWN WATER AUTHORITY

Contact: Jeffery Smith, telephone 814-533-4300 ext. 123

NOT AFFECTED: (Aerial) SR 271, Sta. 122+50 RT/LT to Sta. 151+50 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (Aerial) SR 271, Segment 300 Offset 400 RT/LT to Segment 300 Offset 1100 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (Aerial) SR 271, Sta. 1+00 RT/LT to Sta. 3+00 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (Aerial) SR 403, Sta. 208+50 RT/LT to Sta. 211+00 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

JOHNSTOWN CITY

Contact: Darby Sprincz, Public Works Director, telephone 814-533-2061

NOT AFFECTED: (Aerial) SR 271, Sta. 122+50 RT/LT to Sta. 151+50 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (Aerial) SR 271, Segment 300 Offset 400 RT/LT to Segment 300 Offset 1100 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (Aerial) SR 271, Sta. 1+00 RT/LT to Sta. 3+00 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

NOT AFFECTED: (Aerial) SR 403, Sta. 208+50 RT/LT to Sta. 211+00 RT/LT

Utility to remain in place throughout construction. Notify Utility two (2) weeks prior to work in this area.

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**G4802A - a04802 INDEX PRICE FOR DIESEL FUEL**

**Addendum:**

**Associated Item(s):**

**Header:**

Index Price for Diesel Fuel

**Provision Body:**

The index price for diesel fuel (FB), as determined by the Department, is \$3.05/ Gallon. Use this index price in accordance with Section 110.12 PRICE ADJUSTMENT FOR DIESEL FUEL COST FLUCTUATIONS.

**G4811D - a04811 PRICE ADJUSTMENT FOR DIESEL FUEL COST FLUCTUATIONS FOR WARM MIX ASPHALT**

**Addendum:**

**Associated Item(s):**

**Header:**

Price Adjustment for Diesel Fuel Cost Fluctuations for Warm Mix Asphalt

**Provision Body:**

**Revise Section 110.12(a)1.c to read as follows:**

**1.c Category C - Flexible Bases and Pavements.** Contract items constructed under Sections 309, 311, 316, 409, 411, 419, 422, 430, 431, 439\*, 440\*, 450, 470\*, 471\*, 480\*, 481\*, 651, 653, 654\*\*, 656\*\*, and 657, including any modified standard or nonstandard item where the character of the work to be performed is considered construction of a flexible base, pavement, pavement patch, or shoulder. The sum of the plan quantity for each applicable item in the category must exceed 4,535 tonnes (5, 000 tons).

\*When measured and paid for on a Material Used Basis, price adjustments, when applicable, will be computed based on the coarse aggregate item quantity (m<sup>2</sup> or SY) only, as paid on current estimates. For seal coats / surface treatments paid on an Area Basis, a depth equal to the maximum allowable size of the type of aggregate used, as specified in Section 703.2, Table C, will be assumed.

\*\*Excluding shoulder backfill.

**G4891C - a04891 PRICE INDEX FOR WARM MIX ASPHALT**

**Addendum:**

**Associated Item(s):**

**Header:**

Price Index for Warm Mix Asphalt

**Provision Body:**



Section 110.04 PRICE ADJUSTMENT OF BITUMINOUS MATERIALS. Revise the list of Sections to which specified price adjustment provisions will be applied to read:

309 360 430 461 481 657

311 409 431 467 482

316 410 439 469 651

320 411 440 470 653

341 419 450 471 654

342 422 460 480 656

### **G4901A - a04901 PRICE INDEX FOR ASPHALT CEMENT**

**Addendum:**

**Associated Item(s):**

**Header:**

PRICE INDEX FOR ASPHALT CEMENT

**Provision Body:**

The price index for asphalt cement (PG 64-22), as determined by the Department is \$585.50/Ton. Use this price index in accordance with Section 110.04 PRICE ADJUSTMENT OF BITUMINOUS MATERIALS.

### **G4902C - a04902 PRICE ADJUSTMENT FOR STEEL COST FLUCTUATIONS**

**Addendum:**

**Associated Item(s):**

**Header:**

PRICE ADJUSTMENT FOR STEEL COST FLUCTUATIONS

**Provision Body:**

These requirements provide for a price adjustment, in the form of a payment to the Contractor or a rebate to the Department, for fluctuations in the cost of the steel used in the applicable materials placed as part of the construction work specified in Sections 620, 621, 948, 1002, 1005, 1050, 1056, 1080, and 1085.

**(a) General.** These price adjustment provisions apply to items in the contract Schedule of Prices, as specified above, including any modified standard or non-standard item where the work to be performed includes incorporation of one or more of the applicable steel materials specified in the above Sections and addressed herein. Additionally, items in the Component Item Schedule (CIS) for an "as-designed" or alternate design structure, as well as work performed under a design-build contract, will be included when applying the specified price adjustment requirements, provided the work to be performed includes incorporation of one or more of the applicable steel materials specified in the above Sections and addressed herein. Terminal sections, end treatments, transitions, and transition treatments associated with guide rail and metal median barrier work; as well as mechanical splice

systems, pile tip reinforcement, high load multi-rotational bearings, shear connectors, and scuppers; will not be subject to the price adjustment criteria and conditions specified herein.

To elect to have these price adjustment provisions apply to one or more of the steel product categories identified herein, when planned for incorporation into a specific project, advance notification must be submitted to the Department. The apparent low bidder is required to submit the Steel Escalation Option form attached to the proposal, via fax, to (717) 705-1504, or email to [steeloptions@pa.gov](mailto:steeloptions@pa.gov) by 3:00 pm prevailing local time within 7 calendar days after the bid opening. When the seventh calendar day after the bid opening falls on a day PENNDOT offices are closed, submit the Steel Escalation Option form by 3:00 pm prevailing local time on the next business day. If a properly completed Steel Escalation Option form is not provided by the apparent low bidder within the time specified, the Department will consider the option to apply these price adjustment provisions to the project to be declined. Furthermore, if a Steel Escalation Option form, when provided within the specified time, has been completed such that the Department is unable to ascertain the bidder's intention with regard to the inclusion of any one of the applicable steel product categories, the Department will consider the option to apply these price adjustment provisions to that product category to be declined. No further opportunity to elect steel escalation for the project or an individual steel product category will be made available. In the event the apparent low bid is rejected, the next lowest bidder will be notified to submit the Steel Escalation Option form by 3:00 pm prevailing local time within 7 calendar days after notification.

The Department posts a monthly index price for steel (\$ per ton) based on data obtained from the U.S. Department of Labor (USDOL), Bureau of Labor Statistics, which publishes monthly Producer Price Index (PPI) values for various commodities. The statewide index price for steel will be based on the PPI value posted by USDOL for "Semi-finished Steel Mill Products" (Series ID: WPU101702). The Department will post its monthly index price for steel after the USDOL lists the PPI value on which it is based as final.

The "base / benchmark" index price, SB, will be the steel index price posted by the Department, determined as specified above, for the month in which project letting occurred.

The "invoice" index price, SI, will be the steel index price posted by the Department, determined as specified above, for the month in which applicable steel material is invoiced.

Steel material will be considered invoiced as of the date when an invoice from the steel mill providing the necessary raw material is sent to the Contractor or to a subcontractor, fabricator, manufacturer, or supplier. The steel price adjustment provisions specified herein are not applicable to raw steel material having a mill invoice date that precedes the project letting date. On a quarterly basis, provide documentation of the invoice date for applicable steel material incorporated into the work during the prior 3-month period. Documentation is to be in the form of a tabulation that lists all material invoiced during the period, in chronological order by invoice date; the quantity invoiced; and the applicable contract item(s) and corresponding project location(s) where the invoiced quantity or portion thereof was incorporated, along with copies of supporting invoices. Have a representative of the Contractor, authorized to make such statements, certify that the information provided in the tabulation is complete and accurate and may be relied upon by the Department.

Failure to provide the required tabulation within 10 calendar days of the end of each, applicable 3-month period will result in the Department computing a price adjustment (rebate or increase) using a value for SI that results in the greatest possible price rebate or least possible price increase based on the monthly index prices posted by the Department, to date, since work on the project began.

**(b) Price Adjustment Criteria and Conditions.** The following criteria and conditions will be considered in determining a price adjustment for steel cost fluctuations.

**1. No Price Adjustment.** When the ratio SI/SB falls within the range of 0.95 to 1.05, no price adjustment will be made for applicable steel material having an invoice date that falls within the month for which the SI index price was posted.

**2. Price Rebate.** When the ratio SI/SB is calculated to be less than 0.95, the Department will receive an automatic price rebate, for applicable steel material having an invoice date that falls within the month for which the SI index price was posted, to be determined in accordance with the following formula:

$$P.R. = (0.95 - SI / SB) (SB) (ST)$$

where:

P.R. = Price Rebate

SI = Index price for the month in which applicable steel material is invoiced.

SB = Index price for the month in which project letting occurred.

ST = Quantity (tons) of applicable steel material incorporated into the work during the applicable 3-month period.\*

\*Computed based on the quantity paid, under applicable contract items, on current estimates processed during the 3-month period addressed in the tabulation provided by the Contractor. Not to exceed the total tonnage of applicable steel material invoiced during the month for which the SI index price was posted, as shown on the Contractor's tabulation.

**3. Price Increase.** When the ratio SI/SB is calculated to be greater than 1.05, the Contractor will receive a price increase, for applicable steel material having an invoice date that falls within the month for which the SI index price was posted, to be determined in accordance with the following formula:

$$P.I. = (SI / SB - 1.05) (SB) (ST)$$

where:

P.I. = Price Increase

SI = Index price for the month in which applicable steel material is invoiced.

SB = Index price for the month in which project letting occurred.

ST = Quantity (tons) of applicable steel material incorporated into the work during the applicable 3-month period.\*

\* Computed based on the quantity paid, under applicable contract items, on current estimates processed during the 3-month period addressed in the tabulation provided by the Contractor. Not to exceed the total tonnage of applicable steel material invoiced during the month for which the SI index price was posted, as shown on the Contractor's tabulation.

**4. Equivalent Tonnage.** For applicable steel material furnished under a separate contract item, under a design-bid-build contract, or under a design-build contract the equivalent steel tonnage will be computed as indicate in the following sections.

For design-build contracts, provide an itemized breakdown of the applicable steel materials addressed herein incorporated into the work and indicate the quantity of each actually installed. Indicated quantities should be based on field measurements or take-offs from the approved plans or shop drawings and be equivalent to those used to compute payments made against the Lump Sum construction item on current estimates.

**4.a Guide Rail and Metal Median Barrier.** For applicable guide rail and metal median barrier components (i.e. rail elements, posts, and rubbing rail) furnished under separate contract items or as part of a single contract item for guide rail / metal median barrier complete in place, the equivalent steel tonnage is computed as follows:

**4.a.1 Guide Rail or Median Barrier Rail Element (Weak Post or Strong Post).**

$$\text{Steel Tonnage (ST)} = 7.84 (Q) / 2000$$

where:

Q = Quantity (linear feet) of weak post or strong post guide rail element paid on current estimates processed during the applicable 3-month period

**4.a.2. Type 2W Posts.**

$$\text{Steel Tonnage (ST)} = 8.67 (L) (Q) / 2000$$

where:

L = Length of each post (feet) as required by the Standard Drawings or as specified

Q = Quantity (each) of Type 2W posts paid on current estimates processed during the applicable 3-month period.

**4.a.3 Type 2S Posts.**

$$\text{Steel Tonnage (ST)} = 9.17 (L) (Q) / 2000$$

where:

L = Length of each post (feet) as required by the Standard Drawings or as specified

Q = Quantity (each) of Type 2S posts paid on current estimates processed during the applicable 3-month period

**4.a.4 Rubbing Rail.**

$$\text{Steel Tonnage (ST)} = 8.56 (Q) / 2000$$

where:

Q = Quantity (linear feet) of rubbing rail paid on current estimates processed during the applicable 3-month period

**4.b Reinforcement Bars.** For applicable reinforcement bars furnished under a separate contract item, as a component item associated with an alternate design structure, or as a component item associated with a design-build contract, the equivalent steel tonnage is computed as follows:

$$\text{Steel Tonnage (ST)} = (Q) / 2000$$

where:

Q = Quantity (pounds) of reinforcement bars paid on current estimates processed during the applicable 3-month period.

**4.c Piles.** For applicable steel beam bearing piles, cast-in-place concrete bearing piles, cast-in-place concrete piles, and steel pipe piles, furnished under a separate contract item, as a component item associated with an alternate design structure, or as a component item associated with a design-build contract, the equivalent tonnage is computed as follows:

**4.c.1 Steel H-Piles.**

$$\text{Steel Tonnage (ST)} = (UW) (Q) / 2000$$

where:

UW= Unit Weight of the Steel Beam\* (pounds per foot)

Q = Quantity (linear feet) of steel piles paid on current estimates processed during the applicable 3-month period.

\* The unit weight of steel will be the second of the two numbers associated with the size designation for the beam as cited in the item description (i.e. If the item description is "Steel Beam Bearing Piles, HP12xZ4", the unit weight of the steel is 74 pounds per foot).

**4.c.2 Cast-in-Place Concrete Piles.**

$$\text{Steel Tonnage (ST)} = 2.80 (D) (Q) / 2000$$

where:

D = Diameter of the steel shell (inches)\*

Q = Quantity (linear feet) of cast-in-place concrete piles paid on current estimates processed during the applicable 3-month period.

\* From the approved structure Plans or field measurements. For cylindrical shells of varying diameter, a weighted average diameter will be used, computed based on the number of shells of each diameter actually installed. For tapered shells, an average diameter will be used, computed as the average of the shell diameters at the butt end and at the tip.

**4.c.3 Pipe Piles.**

$$\text{Steel Tonnage (ST)} = 6.70 (D) (Q) / 2000$$

where:

D = Diameter of the steel pipe (inches)\*

Q = Quantity (linear feet) of pipe piles paid on current estimates processed during the applicable 3-month period.

\* From the approved structure Plans or field measurements.

**4.d Steel Sign Structure.** For applicable steel sign structures constructed under a separate contract item, the equivalent tonnage is computed as follows:

$$\text{Steel Tonnage (ST)} = (Q) / 2000$$

where:

Q = Quantity (pounds) of steel in each sign structure, or portion thereof, paid on current estimates processed during the applicable 3-month period.\*

\*Not to exceed the estimated weight of each sign structure as indicated on the structure Plans.

**4.e Fabricated Structural Steel.** For applicable fabricated structural steel; furnished under a separate contract item, as a component item associated with an "as-designed" or alternate design structure, or as a component item associated with a design-build contract; the equivalent tonnage is computed as follows:

$$\text{Steel Tonnage (ST)} = (Q) / 2000$$

where:

Q = Quantity (pounds) of fabricated structural steel girders, rolled beams, angle, and plate paid on current estimates processed during the applicable 3-month period.

**4.f Precast Reinforced Concrete Box Culverts and Prestressed Concrete Bridge Beams.** For applicable precast reinforced concrete box culvert segments and prestressed concrete bridge beams; furnished under a separate contract item, as a component item associated with an "as-designed" or alternate design structure, or as a component item associated with a design-build contract; the equivalent tonnage is computed as follows:

$$\text{Steel Tonnage (ST)} = (UW)(Q)/2000$$

where:

UW= Unit Weight (pounds per foot) of reinforcing steel in a box culvert segment or of reinforcing steel and prestressing strands in a prestressed bridge beam.\*

Q = Quantity (linear feet) of precast reinforced concrete box culvert segments and prestressed concrete bridge beams paid on current estimates processed during the applicable 3-month period.

\* Submit documentation indicating the weight (pounds) of reinforcing steel included in and the length (feet) of each box culvert segment, and the weight (pounds) of mild reinforcing steel and prestressing strands included in and the length (feet) of each prestressed bridge beam. UW will be computed as the average of the unit weight of steel (i.e. weight of steel divided by length) in each box culvert segment, or as the average of the unit weight of steel (i.e. weight of steel divided by length) in each prestressed bridge beam. Documentation must be submitted at the time required shop drawings are submitted for approval.

**5. Payment/Rebate.** The price adjustment will be paid, or rebated, upon approval of a contract adjustment to be prepared on a quarterly basis as applicable work is completed. Cumulative quarterly price adjustments amounting to less than \$1,000 will be disregarded.

**6. Expiration of Contract Time.** When eligible materials are purchased after expiration of contract time and liquidated damages are chargeable, the value for SI used to compute the price adjustment will be either the index price for the month in which applicable steel material is invoiced or the index price at the time contract time expired, whichever is less.

**7. Final Quantities.** Upon completion of the work and determination of final pay quantities, a final contract adjustment may be prepared to reconcile any difference between estimated quantities previously paid and the final quantities. In this situation, the value for SI used in the price adjustment formula will be the average of all SI values previously used for computing price adjustments.

**8. Inspection of Records.** The Department, through the Office of Inspector General, reserves the right to inspect the records of the prime contractor and its subcontractors and material fabricators and suppliers to ascertain actual invoicing dates and quantity information for the steel material used in the performance of applicable items of work.

**9. Extra Work.** When applicable items of work, as specified herein, are added to the contract as Extra Work, in accordance with the provisions of Section 110.03, no price adjustment will be made for fluctuations in the cost of the steel used in manufacturing the materials placed during performance of the extra work. The current price for steel is to be used when preparing required backup data for extra work to be performed at a negotiated price. For extra work performed on a force account basis, reimbursement of actual material costs, along with the specified overhead and profit markup, will be considered to include full compensation for the current cost of steel.

## G7022A - a07022 CHANGES TO SPECIFICATION: SECTION 107

**Addendum:**

**Associated Item(s):**

**Header:**

CHANGES TO SPECIFICATIONS: SECTION 107

**Provision Body:**

### **SECTION 107 - Legal Relations and Responsibility to the Public**

- Section 107.30(a)1. Revise to read as follows:

1. Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity, as required by Executive Order 11246 and Executive Order 11375, are set forth in Required Contract Provisions (Form FHWA-1273, except V.2.b. revise first sentence to read as follows: the payroll records shall contain the name; an individually identifying number [e.g., the last four digits of the employee's social security number]; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions

made; and actual wages paid) and these requirements; imposed pursuant to 23 U.S.C. 140, as established by Section 22 of the Federal-Aid Highway Act of 1968. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-43 and the provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. The requirements set forth herein constitute the specific affirmative action requirements for project activities under this contract and supplement the equal employment opportunity requirements set forth in the Required Contract Provisions.

**G7037D - a07037 CHANGES TO SPECIFICATIONS: SECTIONS 106, 108, 514, 515, 516, 676, AND 1107**

**Addendum:**

**Associated Item(s):**

**Header:**

Changes to Specifications: Sections 106, 108, 514, 515, 516, 676, and 1107

**Provision Body:**

**SECTION 106—CONTROL OF MATERIAL**

- **Section 106.01 General.** Revise to read as follows:

**106.01 GENERAL**—Use material complying with the requirements of these specifications. At the pre-construction conference, submit a list of material to be sampled and tested by the Contractor and a list of material to be sampled and tested by the Department.

Comply with the provisions of the Pennsylvania Trade Practices Act, 71 P.S. Section 773.101, et seq., concerning the purchase of aluminum and steel products produced in a foreign country. On Federal - Aid projects, also comply with the provisions specified in Section 106.10.

Comply with the provisions of the Steel Products Procurement Act, 73 P.S. Section 1881, et seq. in the performance of the contract or any subcontract.

Following contract execution, furnish to the Department a complete statement of the project construction material's origin, composition, and manufacture.

For Fabricated Structural Steel materials, as identified in Section 1105.01(a) and inspected in accordance with Section 1105.01(e), and any other fabricated aluminum, precast or prestressed concrete products inspected during manufacturing, stamped and approved for shipment by the Department's Representative, furnish Form CS-4171 to the Inspector-in-Charge. Certified mill test reports for any steel included will be reviewed by the Department's Inspector and retained by the fabricator.

For all other steel products or products containing steel that will serve a permanent functional use in the project, provide the Inspector-in-Charge the following when the product is delivered to the project site:

- For any "identifiable" steel products, certification that Section 4 of the Steel Products Procurement Act, 73 P.S. Section 1884, has been complied with. Identifiable steel products are steel products which contain permanent markings which indicate the material was both melted and manufactured in the United States.
- For all other "unidentifiable" steel products, documentation such as invoices, bills of lading, and mill certification that positively identify that the steel was melted and manufactured in the United States.

The provisions of the Steel Products Procurement Act will not be waived unless the Secretary has determined, under authority granted in Section 4(b) of the act, that a certain steel product or products is not produced in the United States in sufficient quantities to meet contract requirements. Such a determination will be set forth in a proposal for the Department's review and

response. Include with the proposal a comprehensive list of sources, including names and contact information, for verification. The Secretary does not have the authority to waive the provisions specified in Section 106.10.

Steel products are defined as products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated, otherwise similarly processed, or processed by a combination of two or more of these operations from steel made in the United States by the open hearth, basic oxygen, electric furnace, Bessemer, or any other steel-producing process. Included are cast iron products and machinery and equipment as listed in United States Department of Commerce Standard Industrial Classification 25, 35, and 37 and made of, fabricated from, or containing steel components. If a product, as delivered to the project, contains both foreign and United States steel, such product is considered to be a United States steel product only if at least 75% of the cost of the articles, materials, and supplies have been mined, produced, or manufactured, as the case may be, in the United States. On Federal - Aid projects, comply with the provisions specified in Section 106.10.

No payment will be made on the contract if unidentified steel products are supplied, until the hereinbefore requirements are met.

Any payments made that should not have been made may be recoverable from a manufacturer or supplier as well as from a contractor or subcontractor.

Any person who willfully violates the Steel Products Procurement Act will be prohibited from submitting bids for any contract for a period of 5 years from the date of determination that a violation has occurred. If a subcontractor, manufacturer or supplier, violates the Steel Products Procurement Act, such person will be prohibited from performing any work or supplying any materials to the Department for a period of 5 years from the date of determination that a violation has occurred.

If steel products are used as a construction tool or appurtenance and will not serve a permanent functional use in the project, compliance with the Steel Products Procurement Act is not required.

When standard manufactured items are specified and these items are identified by unit mass (unit weight), section dimensions, or similar characteristics, their identification will be considered to be nominal masses (weights) or dimensions. Unless more stringently controlled by specified tolerances, industry established manufacturing tolerances will be accepted.

**SECTION 108—PERFORMANCE AND PROGRESS**

- **Section 108.07(a) Construction Engineering Liquidated Damages. Revise to read as follows:**

**(a) Construction Engineering Liquidated Damages** . For each day that any physical work remains uncompleted after the Required Completion Date, the sum per day specified in the following schedule, unless otherwise stated in the proposal, will be deducted from money due or to become due. This deduction will not be as a penalty, but as Construction Engineering Liquidated Damages.

<b>Original Contract Amount</b>		<b>Schedule of Daily Charges For Construction            Engineering Liquidated Damages</b>
From More Than	To and Including	Per Calendar Day
\$ 0	\$ 400,000	\$ 825
400,000	1,000,000	1,535
1,000,000	5,000,000	2,085
5,000,000	10,000,000	3,280
10,000,000	15,000,000	4,285
15,000,000		5,660



In the event the Contractor is declared in default, as specified in Section 108.08, Construction Engineering Liquidated Damages will be charged as provided by this section. If the total amount chargeable as Construction Engineering Liquidated Damages exceeds the amount payable to the Contractor or the surety, the excess is to be paid to the State by the Contractor or the surety.

**SECTION 514—DIAMOND GRINDING OF CONCRETE PAVEMENT**

- **SECTION 514.3(e) Concrete Pavement Rehabilitation. Revise to read as follows:**

**(e) Concrete Pavement Rehabilitation.** Concrete pavement repairs including concrete pavement patching, concrete spall repair, dowel retrofit, slab stabilization, and slab jacking must be completed before the start of any diamond grinding operations.

After completing the concrete rehabilitation operation, determine the ride quality of the existing pavement in accordance with Section 507.3(a) and Section 507.3(b), before performing any diamond grinding. After completing the diamond grinding operations, reevaluate the ride quality of the pavement surface according to Section 507.3(a) and Section 507.3(b). Use the same pavement surface profile measuring equipment to perform all ride quality evaluations on the project.

After diamond grinding the pavement surface, provide a maximum IRI of 70 in/mile for facilities where posted speed limits are greater than 45 miles per hour, and a maximum IRI of 90 in/mile for facilities where posted speed limits are less than or equal to 45 miles per hour. Meet these requirements in all IRI lots where diamond grinding of the pavement was performed to receive payment.

**1. Lots.** A full lot is 528 feet of a single lane. The Representative will designate lots starting at the beginning ride quality limit and continuing to the ending ride quality limit for each pavement lane and ramp that is 12 feet or wider. Do not include the length of excluded areas in the 528 feet. Excluded areas will consist of; bridge decks, ramps less than 1,500 feet, in length, tapered pavements less than 12 feet wide, partial lots less than 100 feet in length, shoulders, medians, and other pavement surfaces as indicated.

**SECTION 515—SAWING AND SEALING OF BITUMINOUS OVERLAYS**

- **SECTION 515.3(b) Sawing. Revise to read as follows:**

**(b) Sawing.** Make all saw-cuts directly above the existing transverse joints within ± 1 inch. Saw-cuts which do not meet this tolerance will be declared defective as outlined in Section 105.12. Do not saw cut until the bituminous course has cooled below 140F. Perform saw cutting within 7 days after placing the wearing course. Perform this work on all finished overlay areas before discontinuing work due to seasonal paving limitations.

Make saw-cuts only in the lane in which the existing joint is located. Extend the saw-cuts through any existing widening. Provide separate saw-cuts in each lane if existing transverse joints are offset more than 1 inch.

Use the following table to determine saw-cut reservoir size:

Overlay Thickness	Reservoir
inches	inches
≤1 1/2	1/2 deep by 1/2 wide

>1 1/2	1 deep by 1/2 wide
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Additionally, if the total depth of overlay is 3 1/2 inches or greater, make an initial saw-cut 1/8 inch wide to a depth of 1 1/2 inches or one-third of the total overlay thickness, whichever is greater. Indicated overlay depths do not include scratch or leveling courses less than 1 inch.

If wet sawing, immediately flush the reservoir with water.

If not placing the wearing course within the same construction season, provide a 1/8-inch wide saw-cut in the last placed bituminous course to a minimum depth of 1 inch or one-third the thickness of the bituminous material placed, whichever is greater.

## SECTION 516—CONCRETE PAVEMENT PATCHING

- **SECTION 516—Description. Revise to read as follows:**

**516.1 DESCRIPTION**—This work is the construction of single course, full depth, normal strength or accelerated strength, cement concrete pavement patches. Do not patch less than one lane width. If diamond grinding is to be performed, test the pavement surface in the longitudinal direction as specified in Section 514.3(d)2.

**(a) Patching Joint.** Provide full depth saw-cuts at the existing pavement/patch interface, install load transfer dowels in the transverse faces of the existing pavement, construct a sealant reservoir, and seal the joint.

**(b) New Pavement Joint.** Provide load transfer unit, construct sealant reservoir, and seal the joint.

**(c) Normal and Accelerated Concrete Pavement Patching, Type A.** Construct patches between 6 feet and 20 feet long.

**(d) Normal and Accelerated Concrete Pavement Patching, Type B.** Construct patches between 20.1 feet and 65 feet long.

**(e) Normal and Accelerated Concrete Pavement Patching, Type C.** Construct patches between 65.1 feet and 500 feet long.

- **Section 516.2(a) – Cement Concrete—Class AA. Revise to read as follows:**

**(a) Cement Concrete—Class AA.** Section 704

- **Section 516.2(g) Concrete Curing Materials. Revise to read as follows:**

**(g) Concrete Curing Materials.** For normal strength concrete, use Section 711.1(a), (b), (c), (d), and (e); or Section 711.2(a), Type 2.

For accelerated strength concrete, use Section 711.1(b) and Section 711.2(a), Type 2, or 711.2(b).

- **Section 516.2(j) Tape Bond Breaker. Revise to read as follows:**

**(j) Tape Bond Breaker.** An approved self adhesive tape.

- **Section 516.2(k) Anchor Material. Revise to read as follows:**

**(k) Anchor Material.** An approved adhesive anchoring material listed in Bulletin 15.

- **Section 516.3(a) General. Revise to read as follows:**

**(a) General.** Prepare a QC Plan as specified in Section 106.03(a)2.a and submit it for review. The QC Plan must describe appropriate action points for all phases of construction, including concrete mixing and curing, joint sawing and sealing, and sampling and testing for opening to traffic. If patching adjacent lanes, construct concrete pavement patches one lane at a time where two lane width construction would interfere with traffic. The Representative will surface mark patch areas in advance of the sawing operations.

Protect traffic from drop off conditions as specified in Section 901.3(j). Do not allow excavated patch areas to remain un-patched for more than 2 calendar days or over weekends or holidays.

If it rains while the patch area is open, excavate an outlet through the shoulder at the lowest point of the patch as directed. Repair any damage to the existing shoulders as a result of this work, at no expense to the Department. After saw cutting the existing pavement, allow traffic on patch areas of existing pavement for a maximum of 72 hours. Do not allow saw cuts in excess of 1/2 inch in width to be opened to traffic.

For normal strength patches, do not place concrete if the air temperature falls below 40F. For accelerated strength patches, do not place concrete if the air temperature falls below 45F. Before placing concrete, ensure adequate equipment and trained personnel are available, and sufficient hauling units scheduled, to maintain continuity in placement.

- **Section 516.3(b) Saw Cutting. Revise to read as follows:**

**(b) Saw Cutting.** Use a saw equipped with a diamond-tipped blade, a blade guard, alignment guides, water cooling system, and cut-depth controls for saw cutting the perimeter of the patch. Do not allow cooling water, slurry, and dust from the sawing operation to enter any lane opened to traffic. Make all required full depth longitudinal saw cuts along the perimeter of the patch prior to making any full depth transverse saw cuts.

Where only one lane is being patched, make a full depth saw-cut in the existing longitudinal joint for the full length of the patch. Where multiple lanes are being patched one lane at a time, perform one of the following:

- Make a full depth saw-cut within the adjacent lane to be patched. Make the saw-cut parallel and not more than 1 foot from the existing longitudinal joint. Form the patch joint in the same location as the existing longitudinal joint and backfill behind the forms with aggregate at no additional cost to the Department.
- Make a full depth saw-cut in the existing longitudinal joint for the length of the patch and insert a temporary rigid separator between the adjacent lane and the patch area. Do not use a temporary rigid separator greater than 1/8 inch thick.

Make full depth transverse saw-cuts at the locations marked on the pavement surface. Do not break back the underside of the existing pavement. If break back or spalling occurs, make a new full depth transverse saw-cut beyond the area of break back or spalling. Place the additional length of patch at no expense to the Department. If break back or spalling occurs in the adjacent lane, repair the damaged area at a minimum with a full depth Type A concrete patch at no additional expense to the Department. Full depth saw cuts at the patch limits will be allowed to extend transversely into the adjacent pavement up to full depth + 2 inches provided dowel bars in the adjacent lane are not damaged. Additional full depth transverse saw cuts will be allowed to facilitate slab removal but may not extend transversely into the adjacent pavement to remain in place.

- **Section 516.3(c) Removal of Existing Pavement. Revise to read as follows:**

**(c) Removal of Existing Pavement.** Remove concrete between narrowly spaced saw-cuts at the end of a proposed patch area in a manner that does not damage any adjacent pavement that is to remain in place.

As an alternate, a wheel saw having carbide steel tips may be used before making the full depth transverse saw-cuts necessary for the patching joint. Limit penetration of the wheel to minimize disturbance to the subbase. Do not allow wheel saws with carbide steel tips to cut into pavement that is to remain in place. Discontinue using a wheel saw if unsatisfactory results are obtained as determined by the Representative.

Remove the concrete in the patch area in one or more pieces minimizing disturbance to the subbase, subgrade, and the adjacent pavement to remain in place. Do not use drop hammers or hydro hammers. If damage occurs to pavement to remain in place, repair as specified in Section 516.3(b) at no additional cost to the Department.

If the surface of the subbase is disturbed by the removal technique, recompact the surface using small vibratory compactors. If the disturbed material is deeper than 1 inch, remove the disturbed material with hand tools and replace with concrete during paving at no expense to the Department.

Correct all subbase surface irregularities exceeding 1 inch in depth by loosening the surface and removing or adding material as required. Compact the corrected area and surrounding surface by rolling to proper grade and slope.

- **Section 516.3(j) Curing of Concrete. Revise to read as follows:**

**(j) Curing of Concrete.** For normal strength patches, immediately after finishing operations have been completed, cover and cure the patch surface as specified in Section 501.3(l).

For accelerated patches, cure concrete as specified in Section 501.3(l)1.b or using approved curing insulation materials. Apply white membrane-forming curing compound as specified in Section 501.3(l)1.c. The Contractor may use black membrane-forming curing compound provided the patch area will not be accessible to traffic before placement of a surface course. Discontinue use of black membrane-forming curing compound if it performs unsatisfactorily as a curing agent, and resume curing by other methods as specified. Cure test cylinders under the same conditions as the concrete pavement patch. Provide insulation or heating of patches if the ambient temperature drops below 80F during the curing operation. Control the curing temperature and monitor at least hourly to ensure that the concrete pavement patch does not experience a curing temperature change in excess 40F within any 1-hour period during the curing operation. If a change in curing temperature in excess of 40F occurs in the concrete pavement patch within any 1-hour period, the work will be considered defective.

- **Section 516.3(m) Longitudinal Joints. Revise to read as follows:**

**(m) Longitudinal Joints.** In two lane width patching being performed at the same time, construct a Type L joint as shown on the Standard Drawings.

In two lane patching being performed one lane at a time, or one lane patching, provide a 1/4-inch, full depth, polystyrene board bond breaker in the longitudinal joint of Type A and B patches. Do not provide a bond breaker in the longitudinal joint of Type C patches. Provide tiebars in all Type C patches. For all patch types, saw cut the longitudinal joint 1/4 inch wide and 1 inch deep. Center the saw-cut over the joint.

- **Section 516.3(n) Sealing. Revise to read as follows:**

**(n) Sealing.** Seal all longitudinal and transverse joints constructed as part of this work, as specified in Section 501.3(n).

Seal all saw-cuts extending beyond the patch limits.

- **Section 516.3(q) Opening to Traffic. Revise to read as follows:**

**(q) Opening to Traffic.** For normal strength patches, do not open the repaired area to traffic until the concrete has obtained a minimum compressive strength of 3,000 pounds per square inch, when tested according to PTM No. 604.

For accelerated strength patches, obtain samples of plastic concrete, for compressive strength testing for opening to traffic, from each 100 cubic yards or fraction thereof of the day's placement, and, unless otherwise required, from the last mixer load of the day, according to the approved QC Plan. Sample locations will be selected according to PTM No. 1. Test concrete for compressive strength according to PTM No. 604, at the time of opening to traffic but no later than 7 hours after the test specimens were molded. Concrete lots that have not attained a minimum compressive strength of 1,200 pounds per square inch at the time of opening to traffic will be considered defective work.

## **SECTION 676—CEMENT CONCRETE SIDEWALKS**

- **Section 676.3(h) Curb Ramps.** Revise to read as follows.

**(h)Curb Ramps.** As required and where indicated, construct cement concrete sidewalk for curb ramp configurations as indicated on Standard Drawing RC 67M except for the detectable warning surface located at the bottom of each ramp. Construct the detectable warning surface as specified in Section 695.

Create a slip-resistant textured surface for the full width and length of the curb ramp and any side-flares excluding the detectable warning surface. Use a coarse, stiff-toothed broom to create a textured pattern that is worked perpendicular to the slopes of the curb ramp.

Shape rounded edges instead of sharp angled edges while the concrete is still plastic for all slope changes of the curb ramp especially where the top of the curb ramp meets adjacent sidewalk surfaces.

Embed detectable warning surface in fresh, wet concrete at the proper location for the curb ramp before the wet concrete has set.

## **SECTION 1107—PRESTRESSED CONCRETE BRIDGE BEAMS**

- **Section 1107.03(d)5.b. Air Content.** Revise to read as follows:

**5.b Air Content.** Provide an air content of  $6\% \pm 1.5\%$  for traditional mixes and  $7\% \pm 2\%$  for self consolidating (SCC) mixes. The air content requirement may be waived if the mix meets the following additional qualification tests before production:

- Rapid Chloride Permeability, AASHTO T277: 1500 coulombs at 56-days
- Freeze Thaw Resistance, ASTM C666, Procedure A or B: Minimum durability factor of 90 at 300 cycles.

**G7038B - a07038 Changes to Specifications: Sections 101, 103, 110, 419, 695, 930, 931, 932, 934, 935, 938,**

**Addendum:**

**Associated Item(s):**

**Header:**

a07038 Changes to Specifications: Sections 101, 103, 110, 419, 695, 930, 931, 932, 934, 935, 938, 1012, 1015, and 1103

**Provision Body:**

## **SECTION 101—ABBREVIATIONS AND DEFINITIONS OF TERMS**

- **Section 101.03 DEFINITIONS.** Revise to include the following:

**MAJOR ITEM OF WORK**—Any item having a unit of measure of other than Lump Sum, Call, Dollar, or Predetermined Amount (PDA).

**SECTION 103—AWARD AND EXECUTION OF CONTRACT**

- **Section 103.03 Cancellation of Award.**Revise to read as follows:

**103.03 CANCELLATION OF AWARD**—The Secretary reserves the right to cancel the award of any contract at any time before its approval by the Chief Counsel, the General Counsel, and/or the Attorney General, or their designees, when such cancellation is in the best interests of the State. In the event of such cancellation, payment will be made for the documented costs of insurance and surety bonds required under Sections 103.04 and 103.05, and the documented cost of actual expenses reasonably incurred in accordance with a Letter of Intent, when specified and issued by the Deputy Secretary for Highway Administration. No payment will be made for damages of any other kind including, but not limited to, lost profits.

- **Section 103.07 Cancellation of Contract.**Revise to read as follows:

**103.07 CANCELLATION OF CONTRACT**—The contract may be canceled by either party if the Notice to Proceed is not issued on or before the Anticipated Notice to Proceed Date specified in the bid package or within 30 days of the Award of the contract, whichever is later. Extension(s) of the cancellation period will be made only by mutual written consent of the parties to the contract provided such written consent is given before the expiration of the cancellation period. Prices will not be renegotiated. The Secretary also reserves the right to cancel the contract any time before the actual Notice to Proceed Date. If the contract is canceled, payment will be made for the documented costs of insurance and surety bonds required under Sections 103.04 and 103.05, and the documented cost of actual expenses reasonably incurred in accordance with a Letter of Intent, when specified and issued by the Deputy Secretary for Highway Administration. No payment will be made for damages of any other kind including, but not limited to, lost profits.

**SECTION 110—PAYMENT**

- **Section 110.02(d) Required Changes in the Scope of Work.**Revise to read as follows:

**(d)Required Changes in the Scope of Work.**The Department reserves the right to make, in writing, at any time, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations in the work will neither invalidate the contract or release the surety, and the Contractor agrees to perform the work as changed or altered.

If alterations in the work or changes in quantities do not significantly change the character of the work to be performed under the contract, the work will be paid for at the original contract unit price.

If alterations in the work or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work or by affecting other work cause such other work to become significantly different in character, an adjustment, excluding loss of anticipated profits, will be made as specified in Section 110.03. The basis for the adjustment will be agreed upon before the performance of the work. If a basis cannot be agreed upon, the work will be paid for as extra work as specified in Section 110.03.

The term “significant change in character” applies only to the following circumstances:

- If the work as altered differs materially in kind or nature from that involved or included in the original proposed construction, or
- If any major item of work as defined in Section 101 is increased to in excess of 125% or decreased to below 75% of the original contract quantity. Any allowance for an increase in quantity applies only to that portion in excess of 125% of the original contract item quantity or, in case of a decrease below 75%, to the actual quantity of work performed.

When a contract item experiences a significant change in character as a result of a decrease to below 75% of the original contract quantity, the actual quantity of work performed may be paid at an adjusted price, as agreed upon with the Contractor and as approved; however, total compensation will not exceed the contract item’s original value. Item value is defined as the original contract quantity multiplied by the contract unit price.

**SECTION 419—STONE MATRIX ASPHALT MIXTURE DESIGN, RPS CONSTRUCTION OF PLANT-MIXED HMA WEARING COURSES**

• **Section 419.2(d) Stabilizer. Revise to read as follows:**

**(d) Stabilizer.** Provide mineral fiber, cellulose fiber, or crumb rubber (CR) stabilizers conforming to the requirements below and added at a rate specified in Table B. Use the dosage rate prescribed in the JMF.

**1. Requirements for All Fiber Types.** Fibers must prevent draindown in the mixture according to the tolerances in Table B. Use a fiber of the type and properties appropriate to the plant's metering and delivery system.

**2. Cellulose Fibers.** Fibers must be of sufficient quality to prevent mixture draindown.

**3. Cellulose Pellets.** Use cellulose fiber stabilizing additive in pellet form that disperses sufficiently at mixing temperature to blend uniformly into the asphalt mixture. Use pellets that do not exceed 6 mm (0.25 inch) average diameter. Pellets may contain binder ingredients such as asphalt cement, wax, or polymer. Do not use pellets if the binder ingredient exceeds 20.0% of the total mass (weight) of the pellets. Use binder that produces no measurable effect on the properties of the asphalt cement. Do not use fiber pellets which soften or clump together when stored at temperatures up to 50 °C (122F).

Note: If the binder material constitutes more than 3% of the pellet mass (weight), base the dosage rate on the net fiber content.

**4. Mineral Fibers.** Use mineral fibers made from virgin basalt, diabase, slag, or other silicate rock. Use an approved mineral fiber meeting the following requirements for shot content, as tested according to ASTM C 612.

Sieve	Percent Passing
250 µm (No. 60)	85 - 95
63 µm (No. 230)	60 - 80

**5. Crumb Rubber (CR).** Use CR derived from the processing of recycled tires. Rubber tire buffings produced by the retreading process qualify as a source of CR. Furnish processed, free flowing CR from a manufacturer listed in Bulletin 15, certified as specified in Section 106.03(b)3.

**5.a Gradation.** Meet the following gradation as determined according to ASTM D 5461 using 200 mm diameter sized sieves and maintaining a maximum allowable loss after sieve analysis of 7.65%. As an alternative dry sieve analysis test method, perform the sieve analysis of the CR according to Florida Test Method, FM 5-559.

CR Gradation	
Sieve Size	Percent Passing
4.75 mm (No. 200)	100
2.36 mm	98 - 100
75 µm (No. 200)	0 - 3

**5.b Contaminants.** Provide CR relatively free from fabric, wire, cord, and other contaminating materials to a maximum total contaminant content of 2.5% (maximum of 1.0% iron, 1.0% fiber, and 0.5% other contaminants by mass (weight) of total CR sample components).

Remove rubber particles from the fiber balls before weighing. Determine the metal content by thoroughly passing a magnet through a  $50 \pm g$  ( $1.76 \pm 0.004$  ounces) sample. Determine fiber content by weighing fiber balls, which are formed during the gradation test procedure.

- Section 419.2(d) Table B. Revise to read as follows:

**TABLE B**

**Mix Design Requirements for SMA Mixtures**

<b>AGGREGATE GRADATION REQUIREMENTS, PERCENT PASSING</b>		
<b>Sieve Size</b>	<b>9.5-mm Mixture</b>	<b>12.5-mm Mixture</b>
19.0 mm (3/4 inch)	-	100
12.5 mm (1/2 inch)	100	90 – 99
9.5 mm (3/8 inch)	75 – 95	70 – 85
4.75 (No. 4)	30 – 50	28 – 40
2.36 mm (No. 8)	20 – 30	20 – 30
1.18 mm (No. 16)	-	-
600 mm (No. 30)	-	-
300 mm (No. 50)	-	-
150 mm (No. 100)	-	-
75 mm (No. 200)	8 – 13	8 – 11
<b>VOLUMETRIC DESIGN REQUIREMENTS</b>		
<b>Design Gyration (<math>N_{design}</math>)</b>	100	
<b>Void in Mineral Aggregate</b>	18.0 % Minimum	
<b>Void in Course Aggregate (VCA)</b>	$VCA_{mix} < VCA_{dry\ rodde}$	
<b>Design air voids</b>	3.5 - 4.0 %	



<b>Minimum asphalt binder content</b>	Table C
<b>Binder grade</b>	PG 76-22
<b>Stabilizer content</b>	Cellulose:0.2 to 0.4 % by total mix mass (weight) Mineral:0.3 to 0.4 % by total mix mass (weight) CR:0.3 to 1 % by total mix mass (weight)
<b>Draindown</b>	0.3 % maximum

- **Section 419.3(l) Joints.Revise to read as follows:**

(l)Joints.Section 409.3(k).

**SECTION 695—DETECTABLE WARNING SURFACE**

- **Section 695.2(a) Detectable Warning Surface (DWS).Revise to read as follows:**

**(a) Detectable Warning Surface (DWS).** Provide a DWS product from a manufacturer listed in Bulletin 15 and meeting the requirements of the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG). Provide certification as specified in Section 106.03(b)3 that the DWS meets the following PROWAG criteria:

- **General.**Detectable warning surface with the surface comprised of truncated domes.Dome size and spacing as specified and as indicated on Standard Drawing, RC-67M.
- **Surface.**Slip resistant.
- **Contrast.**Provide a DWS color, as approved by the Representative, that contrasts visually with adjacent walking surfaces either light-on-dark or dark-on-light.

**SECTION 930—POST MOUNTED SIGNS, TYPE A**

- **SECTION 930.2(a) Extruded Aluminum Channel Signs, Posts, and Miscellaneous Material.Revise to read as follows:**

**(a) Extruded Aluminum Channel Signs, Posts, and Miscellaneous Material.**

- Extruded Aluminum Channel Signs—Section 1103.02
- Steel S or W Beam Posts and Breakaway System—Section 1103.07
- Galvanized Steel Hex Head Bolts, Nuts, Lock - Washers; Aluminum Post-Clips, Auxiliary Supports for Exit Panels, 1/8-inch Rivets—Section 1103.11

- **SECTION 930.3(h) Erection.Revise to read as follows:**

**(h) Erection.** Install nuts on post clips with a torque wrench for extruded aluminum channels. Apply 225 inch-pounds of torque to each galvanized nut with the threads dry, clean, and unlubricated.

Attach the sign to posts with twist - in toggle and buckle straps or stainless steel post - clips for flat sheet aluminum. Apply 225 inch-pounds of torque to each stainless steel nut with the threads dry, clean, and unlubricated.

Clean signs after erection, removing any accumulation of oil, grease, dirt, or foreign material.

Brace the panel with one or more auxiliary supports if exit panels cannot be supported by two sign posts.

**SECTION 931—POST MOUNTED SIGNS, TYPE B**

- **SECTION 931.2 MATERIAL. Revise to read as follows:**

**931.2MATERIAL—**As shown on the Standard Drawings and as follows:

- Flat Sheet Signs—Section 1103.04
- Breakaway Steel Posts—From a manufacturer listed in Bulletin 15, and as specified in Section 1103.08.
- Anti - Theft Hardware—Section 1103.11, System A
- Packaged Dry Concrete—Section 624.2(b)

**SECTION 932—POST MOUNTED SIGNS, TYPE C**

- **SECTION 932.2(a) Signs, Posts, Supports, and Miscellaneous Material.** Revise to read as follows:

**(a) Signs, Posts, Supports, and Miscellaneous Material.**

- Flat Sheet Signs—Section 1103.04
- Treated Wood Posts—Section 1103.09
- Anti-Theft Hardware—Section 1103.11, System A
- Lag Screws—Section 1103.11(d)
- Shims and Bars—Section 1105.02(a)2
- Brackets—Section 1105.02(f)2

**SECTION 934—POST MOUNTED SIGNS, TYPE E**

- **SECTION 934.2(a) Extruded Aluminum Channel Signs, Posts, Supports, and Miscellaneous Material.** Revise to read as follows:

**(a) Extruded Aluminum Channel Signs, Posts, Supports, and Miscellaneous Material.**

- Extruded Aluminum Channel Signs—Section 1103.02
- Treated Wood Posts—Section 1103.09(a)
- Composite Posts—Section 1103.09(b)
- Galvanized Steel Hex Head Bolts, Nuts, Lock-Washers; Aluminum Post-Clips, Auxiliary Supports for Exit Panels, Rivets—Section 1103.11
- Angles (Supports)—Section 1103.12(g)
- Shim Bars and Plates (Supports)—Section 1105.02(a)2

- **SECTION 934.2(b) Flat Sheet Aluminum Signs with Stiffeners, Posts, and Miscellaneous Material.** Revise to read as follows:

**(b) Flat Sheet Aluminum Signs with Stiffeners, Posts, and Miscellaneous Material.**

- Flat Sheet Aluminum Signs with Stiffeners—Section 1103.03
- Treated Wood Posts—Section 1103.09(a)
- Composite Posts—Section 1103.09(b)
- Rivets—Section 1103.11(e)
- Stainless Steel Bolts, Nuts, Washers, Post-Clips; Twist-In Toggles and Buckle Straps; Butting Plates; Auxiliary Supports for Exit Panels—Section 1103.11
- Angles (Support)—Section 1103.12(g)
- Shim Bars and Plates (Supports)—Section 1105.02(a)2

**SECTION 935—POST MOUNTED SIGNS, TYPE F**

- **SECTION 935.2 MATERIAL.** Revise to read as follows:

**935.2 MATERIAL**—As shown on the Standard Drawing for the corresponding type post and as follows:

- Flat Sheet Signs—Section 1103.04
- Brackets and Bars (Supports)—Section 1103.12
- Extruded Aluminum Channel Signs—Section 1103.02
- Flat Sheet Aluminum Signs with Stiffeners—Section 1103.03
- Galvanized Steel Hex Head Bolts, Nuts, Lock-Washers; Aluminum Post-Clips; Lag Screws; Rivets; Anti-Theft Sign Hardware (System A)—Section 1103.11

**SECTION 938—DISTANCE MARKERS**

- **SECTION 938.2 MATERIAL.**Revise to read as follows:

**938.2 MATERIAL**—As shown on the Standard Drawings and as follows:

- Aluminum Blanks—Section 1103.04(a)
- Breakaway Steel Posts—Section 1103.08
- Anti - Theft Hardware—Section 1103.11(j)
- Brackets, Bars, Clamps, Straps and Gussett Plates (Supports)—Section 1103.12(i)

**SECTION 1012—PEDESTRIAN RAILING**

- **SECTION 1012.2(a) Railing.**Revise to read as follows:

**(a) Railing.**

- Aluminum-Alloy Casting—ASTM B 26/B 26M, Alloy SG70A-T6 or ASTM B 108, Alloy SG70A-T6.
- Aluminum-Alloy Bolts—ASTM B 211/B 211M, Alloy 2024-T4.
- Aluminum-Alloy Nuts—ASTM B 211/B 211M, Alloy 6061-T6.
- Nylon Washers—Section 1103.11(j)2
- Bolt Heads—Regular hexagon, ANSI B18.2.3.5M (ANSI B18.2).
- Nuts. Finished hexagon, ANSI B18.2.4.6M (ANSI B18.2)—Threads, Class 6, 6g, or 6H (Threads, Class 2, 2A, or 2B).
- Aluminum Alloy Balusters – ASTM B 221/B 221M, Alloy 6061-T4.
- Post assembly and panel to post aluminum washers – ASTM B209, Alloy 2024-T3.
- Cast Aluminum Post Base – ASTM B 26/B 26M, Alloy SG70A-T6 or ASTM B 108/ B 108M, Alloy SG70A-T6.
- Other Aluminum Alloys—Section 1013.2(a)

Certify as specified in Section 106.03(b)3.

**SECTION 1015—PROTECTIVE BARRIER**

- **SECTION 1015.2(a) Barrier.**Revise to read as follows:

**(a) Barrier.**

- Aluminum-Alloy Extruded Section—ASTM B 221/B 221M, Alloy 6061-T6 or 6351-T5.
- Aluminum-Alloy Sheet and Plate—Alloy 6061-T6
- Aluminum-Alloy Bolts— ASTM B 211, Alloy 2024-T6 or 6061-T6
- Aluminum-Alloy Nuts—ASTM B 211/B 211M, Alloy 6061-T6.
- Nylon Washers—Section 1103.11(j)2
- Bolt Heads—Regular hexagon. ANSI B18.2.3.5M (B18.2)
- Nuts—Finished hexagon, ANSI B18.2.4.6M (B18.2) Thread, Class 6, 6g, or 6H (2, 2A, or 2B)
- Other Aluminum Alloys—Section 1013.02(a)

Certify as specified in Section 106.03(b)3.

**SECTION 1103—TRAFFIC SIGNING AND MARKING**

- **SECTION 1103.11 MISCELLANEOUS MATERIALS.**Revise to read as follows:

**1103.11 MISCELLANEOUS MATERIALS—**

**(a) Hex Head Bolts, Nuts, and Washers for Extruded Panel Sign Post-Clips.**Galvanized steel as specified in Section 1105.02 (s):

- 1. Hex Head Bolts.**ASTM A307, Grade A or B.
- 2. Nut.**ASTM A563 DH or ASTM A194 Grade 1 or 2.

**3.Washer.**Carbon steel helical coil or ASTM F436 or ASTM F844 (Note 1)

**Note 1:**If either ASTM F436 or ASTM F844 flat washers are used, bolt must be fastened either using two nuts or a single nut with the threads galled adjacent to the nut to prevent loosening.

**(b)Post - Clips.**For extruded panel signs, aluminum, conforming to ASTM B 108, Alloy 356-T6. For flat sheet aluminum signs with stiffeners, stainless steel, Type 304, 14 gage.

**(c)Auxiliary Supports for Exit Panels.**Aluminum conforming to ASTM B 211/B 211M, Alloy 6061-T6. 3 inches by 3 inches by 3/16-inch angle, 6 1/2 feet long or long enough to attach to three stiffeners on the main sign.

**(d)Lag Screws.** 5/16-inch round head, galvanized steel as specified in Section 1105.02(s); ASTM A 307.

**(e) Rivets.**Aluminum, self - plugging or hollow - core, as follows:

- 3/16-inch for mounting reflective units and distance plaques—Alloy 5056 with 7178 mandrels.
- 3/16-inch for mounting flat aluminum sheets to stiffeners sections— Alloy 5056 with carbon steel mandrels.

Rivet size specified is the minimum shank diameter. Use rivets with sufficient grip range to attach to background sign material, stiffeners, or posts. Use a No. 10 drill for 3/16-inch rivets for attachment of stiffeners and splice bars.

**(f)Bolts, Nuts, and Washers for Flat Sheet Aluminum Signs with Stiffeners.**Stainless steel, Type 304 bolts. Use 5/16-inch by 1 inch long for butting plates and 5/16-inch by 2 inches long for post - clips. Use standard connection bolts or twist - in bolts.

**(g)Twist - in Toggle and Buckle Straps.**Stainless steel, Type 201, and 0.75 inch wide and 0.03 inch thick, with rounded edges. Spot welded, twist - in type toggle on end of strap. Spot welded, antirotational buckle on other end of strap. Toggles and buckles shall be stainless steel, Type 304, and 1/16 inch thick.

**(h)Butting Plates.**Fabricate from stainless steel, Type 304.

**(i)Anchors.**Section 1105.02(c)2.From a manufacturer listed in Bulletin 15.

**(j) Anti - Theft Sign Hardware.**

#### **1.System A.**

- **Bolts.** Section 1105.02(c)1 and as follows:

Provide 5/16 inch by 2 1/2-inch steel carriage bolts with minimum 1711/16-inch diameter round head, square neck, and threads to within 1 inch of head.

Furnish bolts having a mechanically deposited cadmium coating, ASTM B 696, or zinc, Type I coating as specified in Section 1105.02(s).

- **Nuts.** Square, pyramidal-shaped nuts with all four sides sloping at an angle of 41 degrees; 5/16-18 UNC threads; C-1010 cold-rolled steel, case hardened to Rockwell hardness of 55 to 60.

Furnish nuts having a 0.002 inch to 0.005 inch thick, mechanically deposited, zinc, Type II yellow chromate coating as specified in Section 1105.02 (s) (ASTM B 695), tested according to ASTM B 201.

#### **2.System B.**

- **Bolts.** Section 1103.11(m) and as follows:

Provide 5/16-inch by 2 1/2-inch and 5/16-inch by 3-inch bolts with minimum 9/16-inch diameter one-way heads and threads to within 1 inch of head.

- **Nuts.** Section 1103.11(n) and as follows:

Provide nuts, Alloy 2011-T3, double-chamfered hexagon with self-locking conical shape 9/16-inch - 3/8-inch by 3/16-inch unit under the nut with 5/16-18 UNC threads. Hexagon portion should break away from self-locking unit with 5/16-18 UNC to 40 inch-pounds to 80 inch-pounds of torque.

- **Washers.** Nylon 1/8 inch thick by 1-inch minimum outside diameter with 480 inch-pounds maximum allowable applied torque.

**(k) Banding.** Stainless steel, Type 201, 0.750 inch wide by 0.030 inch thick, with rounded edges for handling ease and safety. Buckles and other necessary hardware shall be of stainless steel, Type 304.

**(m) Aluminum Bolts.** ASTM B 211/B 211M. Alloy 2024-T4, thread fit, ANSI Class 6g, and threads shall be within two threads of the head or a minimum of 1 3/4 inches.

**(n) Aluminum Nuts.** ASTM B 211/B 211M. Alloy 2024-T6, thread fit, ANSI Class 6H (ANSI Class 2B, 18 UNC threads).

## 00 - b0350 SECTION 350 - SUBBASE

**Addendum:**

**Associated Item(s):**

**Header:**

SECTION 350 - SUBBASE

**Provision Body:**

350.2 MATERIAL - Revise to read:

(a) Aggregate - Provide material with a maximum absorption of 3.5% as determined by AASHTO T-85 and as specified in Section 703.2 and 703.5.

## 00 - b0409 SUPERPAVE ASPHALT (HMA/WMA/SMA), STANDARD AND RPS CONSTRUCTION OF ALL PLANT-MIXED HMA/WMA/SMA

**Addendum:**

**Associated Item(s):**

**Header:**

SECTION 309/409 - SUPERPAVE ASPHALT (HMA/WMA/SMA), STANDARD AND RPS CONSTRUCTION OF ALL PLANT-MIXED HMA/WMA/SMA

**Provision Body:**

In accordance with Section 309/409 revised as follows:

Mixture Composition for Standard and RPS Construction - Revise by adding the following:

**Heat-Stable, Anti-Stripping Additive.** Use a heat stable anti-stripping additive in any plant mixed HMA/WMA/SMA containing fine OR coarse aggregate composed primarily of Sandstone, Calcareous Sandstone, Siltstone, or Gravel . Blend or inject the additive with the asphalt cement before adding the additive and asphalt cement to the mixture. Use the manufacturer's recommended dosage of the additive, or as required by moisture sensitivity testing and ASTM D 3625, but not less than 0.25% by mass (weight) of the asphalt.

All mixes containing BOTH fine and coarse aggregate composed primarily of Sandstone, Calcareous Sandstone, Siltstone, or Gravel, must contain 0.50% minimum by mass (weight) of the asphalt, heat-stable anti-strip agent added to the asphalt in the mix, as described above, unless otherwise approved by the Department.

Select an additive that does not harm the completed bituminous concrete mixture and that is compatible with the aggregate and asphalt supplied for the project. Provide written verification from the anti-strip supplier for compatibility of anti-strip with the aggregate and asphalt binder being used in the specific mix.

### **S6081C - b06081 SECTION 608 - MOBILIZATION**

**Addendum:**

**Associated Item(s):**

**Header:**

SECTION 608 - MOBILIZATION

**Provision Body:**

- Section 608.1 Description. Revise by adding the following:

When developing agreements with DBE subcontractors include an opportunity for the DBE to identify an item for their mobilization. Include any agreed upon amounts in the contract lump sum price bid for mobilization. Also, list agreed to amounts for each DBE subcontractor on the DBE Participation for Federal Projects form specified in the "Disadvantage Business Enterprise Requirements" Designated Special Provision in Appendix C of Pub. 408.

- Section 608.4 Measurement and Payment. Revise by adding the following:

(c) DBE Payment Schedule. Within the Schedule submitted as specified in Section 108.03, indicate the starting date of work subcontracted to DBE's. One month before the scheduled start of subcontracted DBE work, but not earlier than the Notice to Proceed, pay 25% of the amount shown for mobilization on the applicable DBE Participation for Federal Projects form. Pay the remaining 75% of the amount shown for mobilization on the applicable DBE Participation for Federal Projects form, in three equal payments, when subcontracted DBE work is 25%, 50%, and 75% complete. Pay the affected DBE within 7 days of its reaching the specified milestones for percentage of work completed.

### **S6092A - b06092-SECTION 609.2(g) MISCELLANEOUS MATERIALS**

**Addendum:**

**Associated Item(s):**

**Header:**

SECTION 609.2(g) MISCELLANEOUS MATERIALS

**Provision Body:**

**Section 609.2(g) Miscellaneous Materials. Add the following new set of bullets:**

The laser printer(s) and/or color printer(s) needed for this project will be obtained for Department use through a statewide lease agreement and not as part of the Equipment Package contract item.

A total of (See "a" in Project Specific Details) Laser Printer(s) and (See "b" in Project Specific Details) Color Printer(s) will be leased for the project.

Provide compatible toner cartridges for each laser printer and compatible ink jet cartridges for each color printer indicated above, as required. The exact make and model of laser printer and/or color printer being used on the project will not be known until the start of work. For cost estimating purposes, toner cartridges and/or ink jet cartridges furnished must be usable with the type of printer specified in Section 609.2(d)3. and Section 609.2(d)4., as applicable.

**Project Specific Details:**

a. \_\_\_\_ 1 \_\_\_\_

b. \_\_\_\_ 1 \_\_\_\_

**00 - c0201 ITEM 4201-0001 CLEARING AND GRUBBING MODIFIED**

**Addendum:**

**Associated Item(s):** 4201-0001

**Header:**

ITEM 4201-0001 CLEARING AND GRUBBING MODIFIED

**Provision Body:**

In accordance with Section 201 and as follows:

DESCRIPTION: Revise to read:

Remove trees and brush as indicated on the plans, DO NOT GRUB.

CONSTRUCTION: Add the following:

Remove all trees and brush within the station limits indicated on the plans from an elevation adjacent the southbound roadway to a height of 20 feet above the wire mesh limits or the Legal Slope Easement Line, whichever controls. DO NOT GRUB.

For tree clearing outside the station limits of the wire mesh, remove all trees and brush from an elevation adjacent the southbound roadway to the Legal Right-of-Way Line. DO NOT GRUB.

Remove all trees and brush within the station limits indicated on the plans from an elevation adjacent the northbound roadway to the Legal Right-of-Way Line unless specifically noted otherwise on the plans. DO NOT GRUB.

For any other areas, as directed by the Engineer, trim tree branches that extend over the pavement and shoulders to an UNLIMITED HEIGHT. Treat wounds as specified in Section 810.3(c).

Tree stumps can remain. Remove to 4" height above ground as per Section 810.3(a).

DO NOT spray paint and/or mark trees to be removed.

**00 - c0203 ITEM 4203-0001 CLASS 1 EXCAVATION MODIFIED**

**Addendum:**

**Associated Item(s):** 4203-0001

**Header:**

ITEM 4203-0001 CLASS 1 EXCAVATION MODIFIED

**Provision Body:**

In accordance with Section 203 and as follows:

DESCRIPTION - Revise to read:

This work includes rockfall remediation on S.R. 0271 S.B. consisting of the scaling of loose rock from the existing cut slope and trimming of larger blocks of rock protruding out of the slope, between Seg/Off 0300/500 and Seg/Off 300/1000 (approximately 500 ft.). Access the cut slope from the travel lanes and shoulder, or by other means approved by the Representative.

CONSTRUCTION - Add the following:

Use a hoe ram or similar equipment to trim the harder rock in the cut face. Break the rock to provide a uniform face. The upper portion of the slope may be trimmed using a large excavator and manually, using man lifts or similar equipment. Minimize dislodging large pieces of rock that may result in undercutting of overlying material. Repair areas of excessive undercutting as directed. Scaling/trimming will be performed at the direction of the Representative. Prior to any work, submit to the Representative for approval a plan showing details of the proposed operations and equipment to be used. Blasting is not permitted. Do not begin any work until the plan is approved. Protect the roadway from damage. Any damage caused by the Contractor's operations must be repaired at no additional cost to the Department. All excavated material must be contained within the Right of Way. Properly dispose of rock in accordance with Section 105.14.

Trim all vegetation on the slope face to TR 381 (Jackson Street). Treat all stumps with approved herbicide to eliminate re-growth.

Provide adequate protection to motorists and surrounding property during rock scaling. Submit methods of protecting motorists to the Representative for approval two weeks prior to excavation. The Contractor is solely responsible for injury to persons or damage to property that may result from his operations. The exercise of or failure to exercise control on the part of the Representative shall in no way relieve the Contractor of responsibility for any injury or damage.

MEASUREMENT AND PAYMENT - Add the following:

Includes all work related to rockfall remediation such as Work Zone Traffic Control, means and methods chosen to protect motorists and property from falling rock, excavation, loading and hauling of excavated material to waste site, removal of vegetation and stump treatment, and revegetation of disturbed areas as directed.

**00 - c0203 ITEM 4203-0003 CLASS 1A EXCAVATION MODIFIED**

**Addendum:**

**Associated Item(s):** 4203-0003

**Header:**

ITEM 4203-0003 CLASS 1A EXCAVATION MODIFIED

**Provision Body:**

In accordance with Section 203 and as follows:

DESCRIPTION: Revise the following:

201.3(b) Class 1A Excavation: Revise to read:

Removal of all existing rockfall debris as well as that generated during the rock slope scaling activities from the toe of the slope at the locations indicated in the Contract drawings. Excavation material is to be removed so as to not disturb the intact rock comprising the toe of slope. Grade the ditch as required to provide positive drainage towards existing inlets. Work is to be neatly performed behind the existing rock fall fence and this fence is not to be disturbed or damage during this excavation.



**00 - c0204 ITEM 4204-0001 CLASS 2 EXCAVATION MODIFIED**

**Addendum:**

**Associated Item(s):** 4204-0001

**Header:**

ITEM 4204-0001 CLASS 2 EXCAVATION MODIFIED

**Provision Body:**

DESCRIPTION - Revise to read:

This work is the removal of an existing inlet and plugging the remaining pipe ends closed.

MATERIALS - Add the following:

Flow able backfill- Section 220.

CONSTRUCTION - Add the following:

Neatly sawcut the pavement full depth around the perimeter of the inlet box to minimize damage to the surrounding pavement during removal. Remove the inlet box by standard excavation methods. At the inlet end, remove the pipe to the next joint if it within 3 feet of the face of the box, otherwise, sawcut the pipe to a neat line. If the outlet end of the pipe is undamaged, no additional pipe removal is necessary. If the end is damaged, expose the pipe to the limit of the damage and sawcut the pipe to a neat line or remove the pipe to the next joint if it is 3 feet or less. If there is an end section installed on the outlet end, remove it prior to plugging. Plug both pipe ends with flowable backfill material. Pour, place, or pump sufficient material to completely close off the pipe ends extending into the remaining pipe at least 1 foot. Repair any damage to the embankment with backfill acceptable to the Engineer and stabilize the slope.

MEASUREMENT AND PAYMENT - Add the following:

Include sawcutting and backfill material

Pavement patching will be paid separately.

**I4111B - c04111 ITEM 9411- \_\_\_\_\_ WARM MIX ASPHALT (WMA), PLANT-MIXED BITUMINOUS CONCRETE, \_\_\_\_\_ COURSE, PG \_\_\_\_ - \_\_\_\_**

**Addendum:**

**Associated Item(s):** 9411-0482, 9411-1492

**Header:**

ITEM 9411-0482 WARM MIX ASPHALT (WMA) WEARING COURSE, PG 64-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H

ITEM 9411-1492 WARM MIX ASPHALT (WMA) WEARING COURSE (LEVELING), PG 64-22, 0.3 TO < 3 MILLION ESALS, 9.5 MM MIX, SRL-H

**Provision Body:**

**I. DESCRIPTION** - This work is the Standard and RPS construction of plant-mixed, dense-graded Warm Mix Asphalt (WMA) pavement course on a prepared surface using a volumetric asphalt mixture design developed with the Superpave Gyrotory Compactor (SGC) using prescribed manufactured additives modifiers and/or plant process modifications according to these specifications and standard drawings. Use of reclaimed asphalt pavement (RAP) materials, is permitted using current requirements and policy as specified for Hot-Mix Asphalt (MA) pavement courses in Section 409 and Bulletin 27.

**II. MATERIAL** - Section 409.2 with additions and modifications as follows:

**(a) Bituminous Material.** Section 409.2(a) with additional subsections as follows:

**3. WMA Technology Additives or Modifiers Blended at the Bituminous Material Supplier Refinery or Terminal.** Provide refinery or terminally blended bituminous material modified with a WMA Technology additive or modifier from an approved manufacturer and source listed in Bulletin 15. Include in the bituminous material producer QC plan, the WMA Technology additive or modifier manufacturer name and source, dosage rates, blending method, QC testing, corrective action points, disposition of failed material, storage, handling shipping, and bill of lading information following the applicable requirements in Section 702. Include the WMA Technology Additive or Modifier and dosage rate on the bill of lading. Provide certification that the refinery or terminally blended bituminous material modified with the WMA Technology additive or modifier meets the requirements of Section 409.2(a)1 or Section 409.2(a)2 for the specified grade.

**4. WMA Technology Additives or Modifiers Blended at the Bituminous Mixture Producer Plant.** For WMA Technology additives or modifiers blended with the bituminous material at the bituminous mixture production plant, prepare a Producer QC Plan as specified in Section 106 and conforming to the additional Producer QC Plan requirements in Section 409.2(e)1.a and the additional Producer QC Plan requirements within this specification. Provide certification that the bituminous material blended with the WMA Technology additive or modifier at the bituminous mixture production plant meets the requirements of Section 409.2(a)1 or Section 409.2(a)2 for the specified grade.

**(e) Composition of Mixtures.** Section 409.2(e) with additions and modifications as follows:

**1. Virgin Material Mixtures.** Replace the first paragraph in Section 409.2(e)1 with the following:

Size, uniformly grade, and combine aggregate fractions, bituminous material, and either WMA technology additive(s), modifiers or no special additive (s) or modifier (s), if mixture temperature, workability, and compactability is achieved solely through plant mechanical modification to produce foamed asphalt, in proportions to produce a JMF that conforms to the material, gradation, and volumetric Superpave Asphalt Mixture Design requirements as specified in Bulletin 27, Chapter 2A, for the specified nominal maximum aggregate size and design ESALs except as procedurally modified by the WMA Technology Technical Representative or manufacturer to address laboratory procedures when preparing, compacting and testing WMA mixtures and to achieve a uniform blend. Develop a hot mix asphalt (HMA) JMF according to Section 409.2 and incorporate the WMA technology additive, modifier, or process into that JMF during production. Do not develop a volumetric WMA JMF based on incorporating the WMA technology additive, modifier or process during the volumetric asphalt mixture design process. For all WMA mixture JMFs, perform moisture sensitivity analysis on laboratory mixed and laboratory compacted specimens that include the WMA Technology additive, modifier, or process as required in Bulletin 27, Chapter 2A for HMA using the same mixing, compaction and conditioning criteria used during the development of the volumetric asphalt mixture design for the HMA JMF and ensure the WMA Technology additive modifier, or process is not detrimental to the moisture resistance of the mixture.

**1.a.2. Testing Plan with Action Points.** Section 409.2(e)1.a.2 and add the following additional bullets:

- Blended bituminous material lot size/quantity and lot designation method.
- List of all tests to be performed on the blended bituminous material.
- Testing and certification of the blended bituminous material and WMA Technology additive or modifier for conformance to Section 409.4(a)1 or Section 409.2(a)2.
- Frequency of testing of the blended bituminous material.
- List action points to initiate corrective procedures for the blended bituminous material.
- Recording method to document corrective procedures for the blended bituminous material.
- Handling and disposition of blended bituminous material failing to meet the bituminous material specification requirements.

**1.a.3. Materials Storage and Handling.** Section 409.2(e)1.a.3 and add the following additional bullets:

- WMA Technology additive or modifier manufacturer name and source as listed in Bulletin 15.
- WMA Technology additive or modifier storage and handling prior to blending.
- All measuring, conveying and blending devices for the WMA Technology and anti-strip additive (if required), including calibration procedures.

- WMA Technology additive or modifier and anti-strip additive (if required) method of introduction, dosage rates, blending with the bituminous material and method of automation, recordation and print outs.
- Storage and handling of the blended bituminous material with the WMA Technology additive or modifier.
- WMA Production and Laboratory Mixture Temperature Range and Target
- WMA Laboratory Compaction Temperature Range and Target

**1.c. Annual JMF Verification.**Section 409.2(e)1.c and add the following to the end of the subsection:

Perform the annual JMF Verification for the WMA mixture JMF even if the equivalent HMA mixture JMF was previously annually verified.

**1.d. Production.** Section 409.2(e)1.d and add the following:

Prepare and test WMA mixtures, including SGC specimens for quality control using the same test methods, procedures and frequencies as specified for HMA, except as modified by the WMA Technology Technical Representative and the Producer QC Plan. Maintain records of the testing of WMA and make available for review by the Representative when directed.

**1.d.6 Degree of Particle Coating.**Add new subsection to Section 409.2(e)1.d as follows:

For all WMA mixtures, sample the mixture according to PTM No. 1 and at the frequency in the producer QC Plan.Determine the degree of particle coating of the completed WMA mixture according to AASHTO T 195.Produce a WMA mixture with percent coated particles ≥ 95.0%, except ≥ 85.0% for WMA mixtures containing slag aggregate.Increase the plant mixing time or make other plant adjustments if the required percent of coated particles is not met.Produce a WMA mixture capable of being handled, placed and compacted without stripping the bituminous material from the aggregate.

**Table A**

**Job-Mix Formula**

**Composition Tolerance Requirements of the Completed Mix**

Section 409, Table A, Except revise the Temperature of Mixture (F) as follows:

<b>Class of Material</b>	<b>Type of Material</b>	<b>Minimum*</b>	<b>Maximum*</b>
PG 58-28	Asphalt Cement	215	285
PG 64-22	Asphalt Cement	220	295
PG 76-22	Asphalt Cement	240	305
All other PG Binders	Asphalt Cement	514	(Max Temperature as specified in Bulletin 25 minus 25 F)

\* The minimum and maximum temperatures shown in Table A for each Class of Material are a master temperature range for a completed WMA mixture.The Producer must include a smaller completed mixture temperature range and compaction temperature range that does not exceed 50F and that does not fall outside the master temperature range in the Producer QC Plan.The Producer is required to produce the completed mixture within the smaller temperature range in the Producer QC Plan.The Producer is required to compact the completed mixture in the SGC for QC volumetric analysis at the midpoint of the compaction temperature range in the Producer QC Plan.The Producer QC Plan mixture temperature range and compaction temperature range are to follow the guidelines provided by the WMA Technology Technical Representative or Manufacturer.

**(g) WMA Technologies (Additive(s), Modifier(s), or Processes) and WMA Manufacturers.** Add new subsection to Section 409.2 as follows:

Produce the WMA mixture using approved or provisionally approved WMA technologies including additives, modifiers or processes from manufacturers listed in Bulletin 15. If blending WMA additives or modifiers with bituminous material, provide bituminous material modified with the WMA additive or modifier according to Section II. (a) 3 or Section II. (a) 4 within this specification. For WMA technology additives or modifiers blended with the bituminous mixture at the bituminous mixture production plant, prepare a QC Plan as specified in Section 106 and also conforming to the additional Producer QC Plan requirements within this specification. Submit the QC plan to the District Materials Engineer/District Materials Manager (DME/DMM) annually at least 3 weeks before the planned start of blending WMA Technologies with bituminous material and do not start blending until the DME/DMM reviews the QC plan.

For more information on the approved WMA technologies listed in Bulletin 15, refer to the Internet website <http://www.warmmixasphalt.com/WmaTechnologies.aspx>

**(h) Anti-Strip Additives.** Add new subsection to Section 409.2 as follows:

Add a compatible liquid anti-strip additive at a minimum dosage rate of 0.25% by mass (weight) of the total bituminous material or, higher as needed, to WMA mixtures using WMA Technology that is categorized as a mechanical foaming process.

**(i) WMA Technology Technical Representative.** Add new subsection to Section 409.2 as follows:

If directed by the Department at the preconstruction conference, ensure that a Technical Representative, from the manufacturer of the approved WMA Technology used to produce the WMA mixture, is present during initial production and placement of the specified WMA pavement course. If the Department directs that a Technical Representative is not required to be present during initial production, provide the name and telephone number of a Technical Representative who can be on-call and in direct verbal contact with the Producer, Contractor and a Department Representative within a maximum 2 hour period after initial contact. Ensure that the Technical Representative is knowledgeable in the storage, handling, blending, mixture production, mixture QC testing, placement and compaction using the WMA Technology. The Department will expect a WMA Technology Technical Representative to be present during initial production, placement and compaction when the Producer is using a WMA Technology for the very first time. Submit any proposed deviations to this requirement in writing to the Representative for approval either before or at the preconstruction conference. After initial production of the specified WMA pavement course in a sufficient quantity to place 1 mile without any technical issues affecting the production, placement and compaction of the WMA pavement course, as determined by the Department Representative upon review of the plant and field QC testing, the Department Representative will release the Technical Representative from being present. Upon release of the Technical Representative from being present, provide the name and telephone number of a Technical Representative who can be on-call and in direct verbal contact with the Producer, Contractor and a Department Representative within a maximum 2 hour period after initial contact.

**III. CONSTRUCTION** - Section 409.3 with additions and modifications as follows:

**(a) Paving Operation QC Plan:** Section 409.3(a) and add the following:

Prepare and submit additional information specifically related to all aspects of the field control of WMA concrete paving operations to the Representative as part of the paving operation QC Plan that addresses all recommendations and direction from the WMA Technology Technical Representative. Describe the construction equipment and methods necessary to control the WMA paving operations including the testing, delivery, placement, compaction, and protection of the WMA concrete courses for all placement applications including handwork as specified in Section 409.3.

**(c) Bituminous Mixing Plant.** Section 409.3(c) and add the following:

Make any plant modifications needed to introduce WMA Technology additives, modifiers, or processes according to specific recommendations and direction from the WMA Technology Technical Representative or process manufacturer to achieve a uniform blend of the WMA Technology additive, modifier or foaming process and produce a WMA mixture meeting these specifications.

**1. Batch Plant.** Section 409.3(c)1 and add the following:

Dry the aggregate (s) according to the specific recommendations and direction from the WMA Technology Technical Representative and heat to a suitable temperature so that the resulting completed mixture temperature is within the mixture temperature range established in the Producer QC Plan and recommended or directed by the WMA Technology Technical

Representative or manufacturer and that is within the master minimum and maximum temperature range in Table A within this specification. Ensure that the aggregate is free of unburned fuel oil when delivered to the pug mill.

**2. Drum mixer Plant.** Section 409.3(c)2 and add the following:

Produce a completed mixture that is within the mixture temperature range established in the Producer QC Plan and recommended or directed by the WMA Technology Technical Representative or manufacturer and that is within the master minimum and maximum temperature range in Table A within this specification. Ensure that the aggregate and completed mixture is free unburned fuel oil.

**(h) Spreading and Finishing.**Section 409.3(h) with additions as follows:

**1.a Placing.**Section 409.3(h)1.a and add the following to the end of the subsection.

At the beginning of each day’s paving, up to 3 hauling equipment loads of WMA mixture are permitted to exceed the maximum temperature of mixture in Table A within this specification. This is to assist with warming the paver screed and other equipment in order to prevent dragging and sticking of WMA mixture to the equipment. For these loads, do not exceed the maximum temperature of mixture specified for HMA in Section 409, Table A.

**IV. MEASUREMENT AND PAYMENT** - Section 409.4 except replace HMA with WMA as follows:

**(a) Standard WMA Construction**

**1. WMA Courses.**

**1.a Warm Mix Asphalt (WMA), Wearing Course.** Square Yard or Ton

**1.b Warm Mix Asphalt (WMA), Wearing Course (Scratch).** Ton

**1.c Warm Mix Asphalt (WMA), Wearing Course (Leveling).** Ton

**1.d Warm Mix Asphalt (WMA), Binder Course.** Square Yard or Ton

**1.e Warm Mix Asphalt (WMA), Binder Course (Leveling).** Ton

**(b) RPS WMA Construction.** Section 409.4(b), except replace HMA with WMA. Square Yard or Ton

**16091F - c06091 ITEM 2609-0009 (ITEM 0609-0009) EQUIPMENT PACKAGE; ITEM 2609-0016 (ITEM 0609-0016) EQUIPMENT**

Addendum:

Associated Item(s): 0609-0009

Header:

ITEM 0609-0009 EQUIPMENT PACKAGE

Provision Body:

Appendix

Table A

EQUIPMENT PACKAGE
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Equipment	Quantity
<b>Communications Equipment</b>	
Copier <sup>(1)</sup>	1
Fax Machine <sup>(1)</sup>	1
Cellular Phone(s)	3
<b>Electronic Equipment</b>	
Digital Camera	1
Document Scanner <sup>(2)</sup>	
Laser Printer <sup>(2)</sup>	
Color Printer <sup>(2)</sup>	
<b>Specialized Equipment</b>	
Surveyor's Level & Measuring Rod	
Electronic Digitizer	
Digital Display Level	
Infrared Thermometer	
Laser Range Finder	
Paper Shredder	
<b>Miscellaneous Items</b>	
Internet Service Provider	Yes
Computer Media	Yes
Toners/Cartridges	Yes

(1) Unless otherwise approved, a multifunction machine may not be furnished in lieu of a separate copier and fax.

(2) Unless otherwise approved, a multifunction machine may not be furnished in lieu of a separate scanner, laser printer and color printer.

**Microcomputer Systems.** A total of   2   microcomputer systems will be used on the project.

This information is being provided to assist Bidders in meeting the requirements of Section 609.2(f), Internet Service, and Section 609.2(g), Miscellaneous Materials.

Microcomputer systems may be furnished by the Department. If microcomputer systems are to be furnished by the Contractor, as part of the construction Contract, the bid will include applicable, 0688-XXXX bid items. When indicated, furnish microcomputer systems meeting the requirements of Section 688.

**00 - c06201 ITEM 0620-0502 REMOVE EXISTING GUIDE RAIL (DEPARTMENT PROPERTY)**

**Addendum:**

**Associated Item(s):** 0620-0502

**Header:**

ITEM 0620-0502 REMOVE EXISTING GUIDE RAIL (DEPARTMENT PROPERTY)

**Provision Body:**

In accordance with Section 620 and as follows:

620.3 CONSTRUCTION

620.3 (d) Remove Existing Guide Rail - Add the following:

Disposition of Guide Rail:

Completely remove and disassemble the existing guide rail (including end treatments) at locations indicated and as directed. Do not disassemble by burning or cutting. Neatly bundle the galvanized steel posts and galvanized rail elements. Bundle all damaged or unusable posts and rail elements separately. Place all associated hardware in suitable containers. Deliver all materials to the Ebensburg 01 stockpile at the Cambria County Maintenance Office located at 4595 Admiral Peary Highway, Ebensburg, PA 15931.

Use banding to secure bundles of like items. Where banding is impracticable, use pallets, and suitable containers for transporting like items. Label the containers to indicate contents.

Contact, Tedman Smay, Assistant Cambria County Maintenance Manager, at (814) 419-1151 to coordinate the delivery of these materials one (1) week prior to the anticipated delivery date.

**00 - c0624 ITEM 4624-0001 RIGHT-OF-WAY FENCE, TYPE 1 MODIFIED**

**Addendum:**

**Associated Item(s):** 4624-0001

**Header:**

ITEM 4624-0001 RIGHT-OF-WAY FENCE, TYPE 1 MODIFIED

**Provision Body:**

In accordance with Section 624 and as follows:

CONSTRUCTION - Revise as follows:

Follow the Standard Drawings for Type 1 fence except; make the height of the fence (8') eight feet, from ground elevation to top of fence.

**00 - c0624 ITEM 4624-0300 END POSTS FOR TYPE 1 RIGHT-OF-WAY FENCE MODIFIED**

**Addendum:**

**Associated Item(s):** 4624-0300

**Header:**

ITEM 4624-0300 END POSTS FOR TYPE 1 RIGHT-OF-WAY FENCE MODIFIED

**Provision Body:**

In accordance with Section 624 and as follows:

CONSTRUCTION -Add the following:

As shown on the Standard Drawings except provide end posts to construct a type 1 fence modified to an (8) eight foot height.

**00 - c0624 ITEM 4624-0725 VEHICULAR GATE FOR TYPE 1 RIGHT-OF-WAY FENCE, 15-FOOT OPENING MODIFIED**

**Addendum:**

**Associated Item(s):** 4624-0725

**Header:**

ITEM 4624-0725 VEHICULAR GATE FOR TYPE 1 RIGHT-OF-WAY FENCE, 15-FOOT OPENING MODIFIED

**Provision Body:**

In accordance with Section 624 and as follows:

CONSTRUCTION - Add the following:

As indicated in Standard Drawing RC 61M except provide for an (8') eight foot fence height.

Maintain the (15') fifteen foot gate opening.

**I6891A - c06891 ITEM 2689-0002 (ITEM 0689-0002) NETWORK SCHEDULE**

**Addendum:**

**Associated Item(s):** 0689-0002

**Header:**

ITEM 0689-0002 NETWORK SCHEDULE

**Provision Body:**

In accordance with Section 689 except as follows:

Replace "30 Calendar Day Work Plan" with "14 Calendar Day Work Plan", as specified in Section 689.3(b)1, first and second paragraphs; and Section 689.4(b), first bullet.

**00 - c0851 ITEM 4851-0001 ROCK ENERGY DISSIPATOR MODIFIED**

**Addendum:**

**Associated Item(s):** 4851-0001

**Header:**

ITEM 4851-0001 ROCK ENERGY DISSIPATOR MODIFIED

**Provision Body:**



In accordance with Section 851 and as follows:

CONSTRUCTION - Revise the first sentence to read:

Construct as indicated in the plans , as specified in Section 850.3 and as follows:

## **00 - c0901 ITEM 0901-0001 MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION**

### **Addendum:**

**Associated Item(s):** 0901-0001

### **Header:**

ITEM 0901-0001 MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION

### **Provision Body:**

In accordance with Section 901 and as follows:

Any changes to the Traffic Control Plan or this special provision must be approved by the Department's District Traffic Engineer at least 3 weeks prior to implementation. Allow ample time for review and comment prior to any change request.

Any change request or revision request must be submitted at least 3 weeks prior to implementation and be shown on 1 inch = 25 feet scale plans in detail including lane shift tapers and stations, work area limits, barrier tapers and transitions, and any other traffic control related items.

### **Operational Requirements:**

Do not park personal vehicles or equipment on or along the shoulder of the roadway and in accordance with Publication 213.

Designate a person as the project traffic control coordinator. At least 25 percent of this individual's duties will be traffic control related. Duties include, but are not limited to, the following:

- 1) Coordinate all traffic control installations, pattern changes, and removals.
- 2) Inspect long-term traffic control devices and patterns each working day.
- 3) Inspect each short-term traffic control pattern that is set up.
- 4) Document the details of these inspections (items inspected, deficiencies discovered, and action taken to correct the deficiencies) and give to inspector in-charge on daily basis.
- 5) Program changeable message signs if signs are required or deemed necessary by the project representative.

Coordinate working schedule and short term traffic control patterns with any adjacent Department projects.

Provide minimum 14 calendar day advance notice to affected municipalities, respective Emergency Services, local school districts, the Pennsylvania State Police, and PENNDOT Cambria County Maintenance Manager, and PennDOT District 9-0 Permit Office prior to beginning any work or imposing any traffic restrictions.

Provide notification to all affected businesses and property owners at least 14 calendar days prior to the erection of the Advance Construction Advisory signs.

During construction notify adjacent property owners a minimum 10 calendar days in advance of driveway restrictions affecting their properties.

Maintain ingress and egress to private driveways and residents within the project area at all times and as noted in the construction restrictions.

Do not store any material, equipment, or vehicles within 30 feet of any open travel lane during construction of the project unless it is protected by an approved longitudinal barrier or is located more than 2 feet behind vertical face roadway curb.

Changeable Message Signs (If Required or Directed):

Place and program the changeable message signs as directed. Relocate and/or reprogram as directed. Usages include, but are not limited to, the following:

- 1) notifying motorists of the start date of work
- 2) providing specific messages related to the traffic control patterns
- 3) providing messages for use during incident management

Traffic Control Signals and Modifications (As Required or Directed):

Perform timing and signal head adjustments subject to approval from the District Traffic Unit.

Provide a qualified and experienced technician throughout the duration of the project to maintain the existing and temporary traffic signals. The technician is responsible for assuring continuous operation of all signals on the project; modifying signal phasing, timing, pre-emption, and interconnect system as required and/or directed; and providing manual operation of the signals as necessary to permit construction activities and minimize traffic delays. Provide the technician on an on-call basis 24 hours a day, seven days a week throughout the duration of the project.

Adjustment(s) to the signal timing may improve traffic flow through the detour intersections during construction. Provide programming adjustments to the signal timings, phasing and detection as directed by the District Traffic Engineer.

Traffic Control Devices Requirements:

The signs and traffic control devices listed or indicated on the Traffic Control Plan or Publication 213 represent the minimum requirements for this item and as such, are for information only. The number and types of traffic control signs and devices for this project will be predicated on the number and location of work sites, the extent of repairs and the planned sequence of operations.

Place all short-term signing in accordance with respective Publication 213 Figures.

Replace reflective sheeting should it become damaged where reflectivity becomes impaired. Immediately repair or replace damaged, defaced or dirty signs, devices or barrier.

If it is not possible to mount construction warning or other signing as indicated or specified in the traffic control plan the District Traffic Engineer will determine the method of mounting the signs.

When the work area encroaches on a crosswalk, sidewalk or other pedestrian walkway, submit a detailed plan for satisfactorily closing the walkway to pedestrian traffic to the Engineer. Include the number and type of devices to be used in accordance with the appropriate figure from Publication 213. Do not close any walkway without prior approval of the plan.

If construction operations require flagging, provide sufficient number of properly attired flaggers (vest; hard hat) to adequately control traffic flow through the work zone, which includes any intersecting streets in the work zone, and as directed.

## **P9311A - c09311 ITEM 9931-0001 POST MOUNTED SIGNS, TYPE B, EXPANDED FOAM BACKFILL**

**Addendum:**

**Associated Item(s):** 9931-0001

**Header:**

ITEM 9931-0001 POST MOUNTED SIGNS, TYPE B, EXPANDED FOAM BACKFILL

**Provision Body:**

**I. DESCRIPTION**-This work is furnishing and installation of flat sheet signs on breakaway steel posts, including removal of existing signs.

**II. MATERIAL**-As shown on the Standard Drawings and as follows:

- Flat Sheet Signs-Section 1103.04
- Breakaway Steel Posts-From a manufacturer listed in Bulletin 15, and as specified in Section 1103.08.
- Aluminum Bolts, Nuts, Lock Washers; Nylon Washers; Anti Theft Hardware-Section 1103.11
- Expanded Foam Backfill.

**Properties.**

Compressive Strength (ASTM D 1621-04a)	1.14 MPa (165 pounds per square inch), minimum
Shear Strength (ASTM D 732-02)	0.48 MPa (70 pounds per square inch), minimum
Tensile Strength (ASTM D 1623-03 Type A)	1.03 MPa (150 pounds per square inch), minimum
Density (ASTM D 1622-03)	142.7 kg/M <sup>3</sup> (8.9 pounds per cubic foot)

**Quality Control (QC)**

Certify material as specified in Section 106.03(b)3.

**III. CONSTRUCTION**-As shown on the Standard Drawings except substitute expanded foam backfill for concrete foundation, as specified in Sections 930.3(a), (b), (d), and (e) and as follows:

**(a) General.** Drive anchors into undisturbed earth with anchor top a maximum of 100 mm (4 inches) above lower slope side.

Drill concrete if posts are to be located in concrete areas.

Drive square anchor into undisturbed earth. If square steel posts are used in expanded foam backfill, install as specified in Section III(c).

Fasten STOP and YIELD signs, and other signs if indicated, to posts with anti-theft hardware.

Permanently scribe 25 mm (1-inch) numerals on back of sign indicating the month/day/year of installation.

**(b) Removal of Existing Signs.** Remove existing signs or sign installations, only when indicated or directed.

Return aluminum and steel removed from existing sign installations to the Department unless indicated otherwise. Sort and band removed items by type of material onto separate wooden pallets. Prevent additional damage or deterioration of the sign materials, particularly aluminum sign blanks, during storage, bundling, and delivery. Give 3 working days notice to arrange delivery to the Department as indicated.

**(c) Expanded Foam Backfill Used For Foundation Material.** Excavate a hole in undisturbed earth 300 mm (1 foot) minimum in diameter by 900 mm (3 feet) minimum deep, measured from adjacent ground. Use 150 mm (6 inches) of excavated material as the final layer of the foundation with the top of the layer flush and in the same plane as the adjacent ground. Shape the top surface of the excavated material to prevent water standing against the post. If channel bar is used as the post use an anchor plate.

Mix the components of the expanded foam backfill in accordance with the manufacturer's specifications. Secure the post in its final position before placement and for at least 20 minutes after placement of the expanded foam backfill. Remove the material used to temporarily secure the post.

Check the alignment of the post. If the signpost is out of plumb, remove the expanded foam backfill and post and repeat the procedure at no additional cost to the Department.

To correct an existing sign installation, remove and replace it as specified above.

**IV. MEASUREMENT AND PAYMENT**-Square Meter (Square Foot) of sign

The unit price includes removal of existing signs.

**00 - c0952 ITEM 4952-1021 NEMA TS-1 CONTROLLER ASSEMBLY, TYPE 2 MOUNTING MODIFIED**

**Addendum:**

**Associated Item(s):** 4952-1021

**Header:**

ITEM 4952-1021 NEMA TS-1 CONTROLLER ASSEMBLY, TYPE 2 MOUNTING MODIFIED

**Provision Body:**

In accordance with Section 952 and as follows:

Section 952.2 MATERIAL - Add the following:

Provide the solid-state controller assembly with integral time base coordination module and closed loop system module meeting the requirements of Section 1104.04(a) and compatible with the existing Johnstown Central Business District Closed Loop System.

Controller to be a Econolite, NEMA Traffic Controller, TS-1 manufactured by:

Econolite Control, Inc.

3360 East LaPalma Avenue

Anaheim, CA 92806

Provide the controller assemblies and NEMA Traffic Controller, (TS-1 with Closed Loop System Equipment) at each location to operate in a network system or isolated, capable of communication with a radio modem to provide full duplex 900 MHz Spread Spectrum wireless interconnect communication between a master controller and local controller, utilizing FSK and RS-232 connections, include any communications modules and necessary interfaces needed for phone lines or other medium. Locations as listed below:

A. Menoher Boulevard and South Street (Local Controller)

B. Napoleon Street and South Street (Local Controller)

Furnish and install each controller unit and assembly with all necessary modifications to support fiber optic, Closed Loop Traffic Signal System, Spread Spectrum Radio Equipment communications and hardwire interfaces within the controller assembly. (Include any wiring, fiber optic equipment, panels, relays, etc. needed for a complete and operational system)

Provide an internal time based coordination module (board) that is an integral part of the controller unit. Provide a module in accordance with Section 1104.04(a). Implement all coordination data into the time base units as a backup to the Closed Loop System.

Provide a NEMA Plus Logging Conflict Monitor with liquid crystal display with adjustable contrast, RS-232 port and transfer cable.

Provide a surge protection package in the controller cabinet. Surge protection to be solid state design, continuous service current 10A at 120V RMS, rated at 20,000 A (8 X 20 microsecond) 20 times, peak clamping voltage – 350V at 20KA. Provide terminals for AC line, AS neutral, AC equipment in, AC equipment out, neutral equipment out, and ground.

Provide a generator back-up switch/connection in a separate keyed box mounted on the outside of the controller assembly.

Ensure that each controller assembly displays a permanent 8 1/2" x 11" face drawing showing the intersection, north arrow, and identifying all loops, detection areas, signal heads, and phase assignments. Mount with plastic cover on the inside door. Use permanent and non-fading drawing material.

Provide an "open door" switch on the controller cabinet to notify the central monitor when the door is open.

Provide the police panel with a control device (hand cord) to control the signal phasing manually. Provide a cord of appropriate length to facilitate controller operation at an adequate distance from the controller cabinet in order to see the entire intersection.

Section 952.3 CONSTRUCTION - Add the following:

Provide a service technician from the supplier of the signal control equipment to be present during the turn on.

As directed, make changes to inputs, outputs, timing or programming controls during the construction project and during the 30-day system test within 24 hours of notification.

Ground loop detector lead-ins in cabinet only.

Terminate all spare signal conductors on an isolated terminal strip. Do not ground.

Develop graphics for each location and program all data into the Closed Loop System central computer to accommodate the additional controller locations.

Section 952.4 MEASUREMENT AND PAYMENT - Revise to read:

Each

Complete and operational. Including all controller assembly equipment; controller, cabinet, back panel, load switches, related hardware, conduit, wiring and any material needed for a functional controller assembly integrating the Spread Spectrum Radio technology within the closed loop traffic signal system.

**00 - c0954 ITEM 4954-0302 JUNCTION BOX, JB-27 MODIFIED**

**Addendum:**

**Associated Item(s):** 4954-0302

**Header:**

ITEM 4954-0302 JUNCTION BOX, JB-27 MODIFIED

**Provision Body:**

In accordance with Section 954 and as follows:

MATERIAL - Add the following:

Furnish only cast iron or galvanized steel junction boxes.

**00 - c0955 ITEM 4955-3208 VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS MODIFIED**

**Addendum:**

**Associated Item(s):** 4955-3208

**Header:**

ITEM 4955-3208 VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS MODIFIED

**Provision Body:**

In accordance with Section 955 and as follows:

Section 955.2 MATERIAL - Delete Section 1104.06(a) 2 and replace with the following:

Mounting hardware at the bottom of the signal for tether wire installation to include lock nipple, (i.e. chase nipple), serrated locking ring, and notched coupling with set screws that will accommodate the 1.5 inches aluminum pipe as shown on the standard drawings. All items shall be manufactured from aluminum.

Provide each vehicular signal head with a 12" red, yellow, and green LED module. (Maximum number of LED's per Module – 18)

LED Modules will operate in either rigid mount or span wire applications with no perceptible cutoff or flicker, by utilizing a lensing system that provides uniform illumination similar to an incandescent lamp.

LED Modules to be compatible with signal control equipment and conflict monitors for NEMA TS-1 and NEMA TS-2 Standards.

LEDs to be interconnected to minimize the effect of a single LED failure.

Modules to operate from 80 to 135 VAC with less than 10% variations in intensity.

LED Modules not to protrude though the face of the signal head when mounted.

For facilitate cleaning, there will be no external facets on this lens face.

LED Modules to incorporate an inner lens that is sealed to the lamp housing.

Provide an outer lens to focus the light to meet ITE intensity and distribution standards. This lens defuses the light in order to disguise the LEDs as the light source.

The external lens on the signal module to be replaceable by a field technician. A fracture or crack of the lens will not require the entire module to be replaced.

Provide control circuitry to prevent the current flow through the LEDs in the off state to avoid false indications during operation.

LEDs to meet or exceed ITE Specifications VTCSH Part 2: Light Emitting Diodes (LED) Vehicular Traffic Signal Modules.

Provide catalog cuts, and a Certificate of Compliance from an independent lab certifying that the LEDs have been tested and are in compliance with the ITE Specifications.

Contractor to provide the Department and municipality with warranty documentation indicating the initial activation of the LED modules.

MEASUREMENT AND PAYMENT – Each. Includes all necessary materials for the complete installation of traffic signals to existing supports and adjusting or providing strain pole/span wire clamps to accommodate the proper roadway clearance.

**00 - c0956 ITEM 4956-0121 LOOP AMPLIFIER, 1 CHANNEL SHELF MOUNTED WITH TIMER MODIFIED**

**Addendum:**

**Associated Item(s):** 4956-0121

**Header:**

ITEM 4956-0121 LOOP AMPLIFIER, 1 CHANNEL SHELF MOUNTED WITH TIMER MODIFIED

**Provision Body:**

In accordance with Section 956, except provide the solid state amplifier with two (2) outputs:

- Primary output - Normal detector output with delay and extension timers.
- Count output - Provides an individual pulse output for each vehicle on the same loop at the same time.

Add the following to Section 956.4(d):

This work includes furnishing and installation of materials required to make the two (2) outputs operational.

**00 - c0956 ITEM 4956-0500 PEDESTRIAN PUSH BUTTON MODIFIED**

**Addendum:**

**Associated Item(s):** 4956-0500

**Header:**

ITEM 4956-0500 PEDESTRIAN PUSH BUTTON MODIFIED

**Provision Body:**

In accordance with Section 956 and as follows:

Section 956.2 MATERIAL - Add the following:

Provide each pedestrian push button with an ADA (mushroom) type button.

**00 - c9000 ITEM 9000-0002 CONCRETE WASHOUT**

**Addendum:**

**Associated Item(s):** 9000-0002

**Header:**

ITEM 9000-0002 CONCRETE WASHOUT

**Provision Body:**

DESCRIPTION - This work is the construction of a concrete washout station for the purpose of containing waste cement concrete material and wastewater.

MATERIALS -

Compost filter sock- Section 867

Impervious liner (geomembrane) -Section 736

CONSTRUCTION

For any project on which concrete will be poured or otherwise formed on site, a suitable washout facility must be provided for the cleaning of chutes, mixers, and hoppers of the delivery vehicles unless such a facility will be used at the source of the concrete. Under no circumstances may wash water from these vehicles be allowed to enter any surface waters. Make sure that proper signage is provided to drivers so that they are aware of the presence of washout facilities.

Wherever compost sock washouts are used, a suitable impervious geomembrane should be placed at the location of the washout. Compost socks should be staked in the manner recommended by the manufacturer around perimeter of the geomembrane so as to form a ring with the ends of the sock located at the upslope corner. Care should be taken to ensure continuous contact of the sock with the geomembrane at all locations. Where necessary, socks may be stacked and staked so as to form a triangular cross-section.

Washout facilities should not be placed within 50 feet of storm drains, open ditches or surface waters. They should be in a convenient location for the trucks, preferably near the place where the concrete is being poured, but far enough from other vehicular traffic to minimize the potential for accidental damage or spills. Wherever possible, they should be located on slopes not exceeding a 2% grade. Additional information on washouts may be obtained from EPA's stormwater website at:

<http://cfpub.epa.gov/npdes/stormwater/menuofbmps>

**MEASUREMENT AND PAYMENT**

Each. Includes all labor, materials and equipment necessary to construct washout station, empty and properly dispose of waste material, and remove washout station and dispose of properly when no longer needed.

**00 - c9000 ITEM 9000-0005 UTILITY TEST HOLES**

**Addendum:**

**Associated Item(s):** 9000-0005

**Header:**

ITEM 9000-0005 UTILITY TEST HOLES

**Provision Body:**

DESCRIPTION - This work is identifying existing underground facilities both electronically and physically.

MATERIAL - Section 206.2

CONSTRUCTION - As directed by the representative, excavate a test hole at the approximate point of conflict with the proposed improvement. Provide all measures necessary to perform the work safely and to cause no damage to the utility structure. The test hole will be of the minimum size required to expose the utility of interest and record the following information:

- a. Depth below grade. (Maximum 5 feet depth)
- b. Utility material, shape and overall condition.
- c. Approximate diameter of pipes or conduits
- d. The general direction trend of the utility.

Record the location of the utility with a minimum of 3 (three) swing tie measurements to convenient existing permanent structures on the site.



Survey test hole locations with a total station survey instrument and data collector relevant to the Department provided project control. Process survey locations to provide northing, easting and grade/ utility elevations. Generate stations and offset for the test holes if baseline geometry is provided.

Backfill and compact test hole with embankment in accordance with Section 206.3. Restore test hole area to original condition. Install ribbon of appropriate APWA/ULCC color in the backfill from utility to grade.

MEASUREMENT AND PAYMENT - Each

**00 - c9000 ITEM 9000-0101 VIDEOTAPE PRIVATE ROAD**

**Addendum:**

**Associated Item(s):** 9000-0101

**Header:**

ITEM 9000-0101 VIDEOTAPE PRIVATE ROAD

**Provision Body:**

DESCRIPTION – This work is the videotaping of the existing private road bounded by the Maintenance Access Easement within the Grandview Cemetery property. Document the existing condition of the private cemetery road prior to placing heavy construction equipment. Much of the existing pavement is covered with organic material (leaves, moss and woody material). Clean off the organic material prior to videotaping so the existing roadway surface condition can be properly documented.

Include a video log of the location of all pavement distress with the videotape or disc. Deliver two (2) copies of the videotape or disc to the Representative before the start of construction.

MEASUREMENT AND PAYMENT – Lump Sum

**00 - c9000 ITEM 9000-0201 SLOPE PREPARATION FOR WIRE MESH SLOPE TREATMENT**

**Addendum:**

**Associated Item(s):** 9000-0201

**Header:**

ITEM 9000-0201 SLOPE PREPARATION FOR WIRE MESH SLOPE TREATMENT

**Provision Body:**

DESCRIPTION - This work involves the removal of the existing wire mesh, loose rock blocks, trees and vegetation within the limits of work proposed for the placement of high-tensile steel wire mesh.

CONSTRUCTION -

(a) Remove the existing wire mesh from the rock slope to the limits required for placement of the wire mesh as indicated on the contract drawings.

(b) Remove the loose rock blocks that are freely resting on slope or can be removed by light prying. This work is to be performed by using non-pneumatic and non-hydraulic hand tools.

(c) Remove trees, brush and vegetation by cutting flush to existing ground surface. This work is to be performed with minimal disturbance to the existing slope face and adjacent structures. Treat the remaining stumps with a Herbicide meeting the requirements of Section 810.2.

(d) Removal of any fencing, safety barrier, traffic signs, or other obstructions must be approved by the Engineer.

(e) All debris material created by the slope preparation operations, as well as any existing rubbish or debris, within the limits of this work must be removed and disposed of off site. Disposal of these materials must comply with all local, state, and federal government laws and regulations concerning such disposal of waste and excess material.

MEASUREMENT AND PAYMENT - Square Yard

**00 - c9000 ITEM 9000-0202 AND 9000-0203 ROCK ANCHOR BOLTS**

**Addendum:**

**Associated Item(s):** 9000-0202, 9000-0203

**Header:**

ITEM 9000-0202 ROCK ANCHOR BOLTS (10' LONG)  
ITEM 9000-0203 ROCK ANCHOR BOLTS (30' LONG)

**Provision Body:**

DESCRIPTION - This work consists of the construction of permanent rock anchor bolts in the slope adjacent to S.R. 271 to the limits shown on the plans and details.

**MATERIALS -**

Furnish materials for construction of rock anchor bolt structures that are new and without defects. Remove defective materials from the job site at no additional cost to the Department.

(a) Production Bolts (30 Feet Long and 10 Feet Long). Pub 408 Section 709.1, 1-1/4" nominal diameter, grade 75, continuous, without splices or welds, deformed continuous threadbar, new, straight, undamaged, epoxy coated and encapsulated. If threads are cut into a reinforcing bar, use the next larger bar number designation from that shown on the plans at no additional expense to the Department.

(b) Test Bolts. Pub 408 Section 709.1, 1-1/4" nominal diameter, grade 75, continuous, without splices or welds, deformed continuous threadbar, new, straight and undamaged, epoxy coated and encapsulated. If threads are cut into a reinforcing bar, use the next larger bar number designation from that shown on the plans at no additional expense to the Department.

(c) Bar Couplers. Bar couplers must develop the full ultimate tensile strength of the bar as certified by the manufacturer.

(d) Corrosion Protection.

1. Production and Test Bolts. Epoxy Coating meeting requirements of AASHTO M284/ ASTM A775. Minimum 12 Mils electrostatically applied. Bend test requirements are waived.

(e) Nuts. AASHTO M291, Grade B, hexagonal, fitted with spherical seat to provide uniform bearing.

(f) Centralizers. Schedule 40 PVC, steel or other material not detrimental to the bolt steel (do not use wood); securely attached to the bolt bar; sized to position the bolt bar within 1 inch of the center of the drillhole; sized to allow grout tube insertion to the bottom of the drillhole; and sized to allow grout to freely flow up the drillhole.

(g) Bolt Grout. Provide a neat or sand/cement mixture grout with a minimum 3 day compressive strength of 1700 psi and a minimum 28 day compressive strength of 3000 psi per AASHTO T106/ASTM C109.

1. Cement. AASHTO M85/ASTM C150, Type II.

2. Fine Aggregate. Clean, natural sand, Type C in Section 703.1(c).

3. Admixtures. AASHTO M194/ASTM C494. Provide admixtures which control bleed, improve flowability, reduce water content and retard set in the grout only will be accepted by the Engineer. Do not use accelerators. Use expansive admixtures only in grout used for filling sealed encapsulations. Provide admixtures compatible with the grout and mixed in accordance with the manufacturer's recommendations.

(h) High-tensile steel wire mesh (Item 9000-0204 and Item 9000-0205)

## MATERIALS HANDLING AND STORAGE

(a) Store all rock anchor bolts on supports to keep the steel from contact with the ground. Carefully handle rock anchor bolts during unloading and storing. Carry, do not drag, bolts to the hole prior to installation. Do not ground welding leads to the bolt steel. Bolt steel shall be protected from and sufficiently free of dirt, rust and other deleterious substances prior to installation.

(b) Damage to the anchor bolt steel as a result of abrasion, cuts, nicks, welds and weld spatter shall be repaired in accordance with the coater's recommendations using an epoxy field repair kit approved by the epoxy manufacturer.

## SUBMITTALS

Submit the following documentation to the Engineer at least 14 days prior to the planned start of the rock anchor bolted slope system construction:

### Pre-Construction Submittals

(a) Work Plan. The Contractor shall submit a detailed work plan describing the tools, methods of drilling and excavation to be performed, construction sequencing including proposed verification test locations, and schedule. Work may not proceed until the work plan has been approved by the Engineer.

(b) Bolt Grout Mix Design including:

1. Brand and type of Portland cement.

2. Source, gradation, and quality of all aggregates, if used.

3. Proportions of mix by weight and water-cement ratio.

4. Manufacturer and brand name of all admixtures (where allowed).

5. Compressive strength results (per AASHTO T106/ASTM C109) verifying the required minimum 3 and 28 day grout compressive strengths. Previous test results for the same grout mix completed within one year of the start of work may be submitted for verification of the required compressive strengths.

(c) Bolt Grout Placement Procedures and Equipment.

(d) Rock anchor bolting Testing Methods and Equipment including:

1. Details of the jacking frame and appurtenant bracing.

2. Details showing methods of grouting the unbonded length of test bolts after completion of testing.

3. Equipment list.

(e) Identification number and certified calibration records for each test jack and pressure gauge and load cell to be used to calibrate. Calibrate, jack and pressure gauges as a unit. Calibration records must include the date tested, device identification number and calibration test results and must be certified for accuracy of at least 2 percent of the applied certification loads by a qualified independent testing laboratory within 90 days prior to submittal.

(f) Manufacturer Certificates of Compliance for the rock anchor bolt centralizers, epoxy coating or encapsulation, film protection, bearing plates, nuts, geocomposites, geotextiles and PVC drain piping.

Upon delivery of bolt bars to the project site, provide certified mill test results for bolt bars and couplers from each heat specifying the ultimate strength, yield strength, elongation and composition.

## Testing Submittals

Provide graphs of verification and test bolts plotting deflection against load to the Engineer within 3 working days. Plots for each bolt shall include as a minimum for each load where deflection is to be measured:

1. 80% of the theoretical elastic elongation of the unbonded length of the bolt.

2. Bolt deflection as measured in the field.

3. Creep test plots versus time for each load increment where creep testing is performed.

## CONTRACTOR'S EXPERIENCE REQUIREMENTS

The Contractor must be experienced in the construction of permanent rock anchor bolt retaining structures and have successfully constructed at least 3 projects in the last 3 years involving construction of permanent rock anchor bolt retaining structures totaling at least 10000 square feet of wall face area and at least 500 permanent rock anchor bolts.

A Professional Engineer employed by the rock anchor bolting Contractor, and having experience in the construction of at least 3 completed permanent rock anchor bolt retaining wall projects over the past 3 years, must supervise the work. The Contractor will not be allowed to use consultants or manufacturer's representatives to satisfy the supervising Engineer requirements of this section.

Should the rock anchor bolt materials, arrangement or proposed lengths be changed by the Contractor, a revised slope stabilization system shall be designed by a Registered Professional Engineer with experience in the design of at least 2 successfully completed permanent rock anchor bolt retaining wall projects over the past 10 years. The slope designer may be either an employee of the Contractor or a separate Consultant designer meeting the stated experience requirements.

Drilling operators and foreman are to have a minimum of 2 years experience installing rock anchor bolts or permanent ground anchors with the Contractor's organization. Submit documentation that project personnel have appropriate qualifications. Inadequate proof of personnel qualifications will be cause for withholding slope design approval. Changes to previously approved personnel must be approved in writing.

At least 14 calendar days before the planned start of rock anchor bolted slope system construction, the Contractor must submit the experience qualifications and details for the referenced design and construction projects, including a brief project description with the owner's name and current phone number. Upon receipt of the experience qualifications submittal, the Engineer will have 5 calendar days to approve or reject the proposed rock anchor bolting Contractor and Designer.

## CONSTRUCTION

(a) Verification Testing. Perform a minimum of five verification tests (See Rock anchor bolt Testing) on sacrificial test bolts prior to initiating the installation of the production bolts to ensure the adequacy of the construction procedures and design. Submit testing results to the Engineer for review and approval prior to proceeding with production bolts.

(b) Drainage Control. Complete all slope clearing, grubbing, preparation, and stump removal, minimizing grading as practical prior to the start of rock anchor bolt installation in accordance with Item 9000-0201 – Slope Preparation Wire Mesh Slope Treatment. Repair damage caused to slope construction by the failure to control surface water to the Engineer's satisfaction at no additional cost to the Department.

(c) Excavation. In conformance with Section 203, and to the limits and construction stages indicated and the following:

### Slope Scaling:

1. Scale loose rock blocks to the limits indicated prior to installing rock bolts in any particular area.

(d) Bolt Installation. Drill holes for rock anchor bolts at the angle and locations shown. Provide the rock anchor bolt length necessary to develop adequate load capacity to satisfy testing acceptance criteria for the design load required, but not less than the length indicated on the approved plans. Casing may be necessary to maintain a clean open hole drilled to the size and inclination shown. Drilling methods and grouting pressure are at the option of the Contractor.

The rock anchor bolts shall be installed within 6 inches of the point of entry locations shown on the plans. If a stump or other obstruction will prevent the successful installation of a bolt at any of the locations shown, obtain approval from the Engineer prior to relocating the bolt point of entry. At the point of entry, place the bolt angle within plus or minus 3 degrees of that shown on the approved plans. Subsidence or physical damage by such operations must be cause for immediate cessation of operations and repair at the Contractor's expense.

Inject grout at the lowest point of the drill hole. Pump grout through grout tubes, casing, hollow-stem augers, and drill rods until the hole is filled to prevent air voids. Fill with grout progressively from the bottom to top. Provide grouting equipment capable of continuous mixing and producing a grout free of lumps. Place a bolt in each drilled hole within 15 minutes of the grout injection.

Place centralizers at 10 feet in total length, and ensure that no less than 1 3/4 inch of grout cover is achieved at all locations along the bolt.

(e) Seed and place turf reinforcement mat. Seed any disturbed portion of the soil slope in accordance with Pub 408/2011 Section 804.3, using Seed Formula C.

(f) Place steel wire mesh facing system in accordance with the contract drawings and the approved shop drawings.

(g) Lightly stress installed bolts to take up any slack after the grout has reached a compressive strength of at least 3000 psi.

Test production bolts as required in accordance with procedures discussed herein.

#### ROCK ANCHOR BOLT TESTING

Perform proof testing of rock anchor bolts. The specified design load for all production bolts is 15 kips. Perform proof tests on 5 percent of production bolts as selected by the Contractor and approved by the Engineer. Do not perform bolt testing until the bolt grout has cured for at least 72 hours and attained at least the specified 3 day compressive strength. Testing in less than 72 hours will only be allowed if the Contractor submits compressive strength test results for test performed by a qualified independent testing laboratory, verifying that the bolt grout mix being used will provide the specified 3 day compressive strength in the lesser time.

The alignment load (AL) necessary to maintain position of the stressing and testing equipment must not exceed 0.10 times the design load (P). Set dial gauges to "zero" after the alignment load has been applied.

The maximum test load must not exceed 75 percent of the guaranteed ultimate tensile strength of the bolt. Monitor the jack load with a load cell. Provide the Engineer with the calibration curve before start of testing.

1. Equipment - Provide a dial gauge capable of measuring to 1/1000 inch movement. Use a hydraulic jack and gauge calibrated as a unit to apply the test load. Provide pressure gauge graduated in 10 ksf increments or less and use to measure the applied load. Apply test load incrementally. Use the load cell only in load hold situations to monitor that the load is being held at a constant value.

2. Proof Testing - Upon completion of verification testing, perform proof testing at locations shown on drawings or as approved by Engineer. The Engineer reserves the right to modify the location and number of proof tests.

Incrementally load the proof test bolt to a maximum test load of 1.5 times the Design Test Load (P) in accordance with the following schedule. Record the rock anchor bolt movement at each load increment.

#### Load Hold Time

AL (0.10 P max.) Minimum of 1 minute

0.25 P Minimum of 1 minute

0.50 P Minimum of 1 minute

0.75 P Minimum of 1 minute

1.00 P Minimum of 1 minute

1.25 P Minimum of 1 minute

1.33 P (Max. Test Load) See Below

Hold each load increment, except for the 1.5 (P) load, until the deflection stabilizes.

All load increments must be maintained within 5 percent of the intended load. Depending on the performance, either 10 minute or 60 minute creep tests must be performed at the maximum test load (1.33 P). The creep period must start as soon as the maximum test load is applied and the bolt movement must be measured and recorded at 1 minute, 2, 3, 5, 6 and 10 minutes. Where the bolt movement between 1 minute and 10 minutes exceeds 0.04 inches, the maximum test load shall be maintained an additional 50 minutes and movements must be recorded at 20 minutes, 30, 50 and 60 minutes.

The Engineer will review all proof tests to determine if the bolt is acceptable. A bolt will be accepted if the following 3 criteria are met:

- a. The total creep movement of less than 0.04 inches measured between the 1 and 10 minute readings or a total creep movement of less than 0.08 inches is measured between the 6 and 60 minute readings and the creep rate is linear or decreasing throughout the creep test load hold period.
- b. The total measured movement at the maximum test load exceeds 80 percent of the theoretical elastic elongation of the test bolt unbonded length.
- c. A pullout failure does not occur at the maximum test load. Pullout failure is defined as the load at which attempts to further increase the test load result in continued pullout movement of the test bolt. The pullout failure load must not be recorded as part of the test data.

Successful proof tested bolts meeting the above test acceptance criteria may be incorporated as production bolts.

4. Acceptance Criteria - Unacceptable test results must result in modification to design and/or construction procedures. Any modifications of design or construction procedures must be at no change in the contract prices. Provide graphs of verification and test bolts plotting deflection against load to the Engineer within 3 working days. Modification plans must be submitted to the Engineer for review and approval prior to implementation.

MEASUREMENT AND PAYMENT - Each

**00 - c9000 ITEM 9000-0204 AND 9000-0205 WIRE MESH**

**Addendum:**

**Associated Item(s):** 9000-0204, 9000-0205

**Header:**

ITEM 9000-0204 GEOBRUGG TECCO WIRE MESH  
ITEM 9000-0205 GEOBRUGG SPIDER WIRE MESH

**Provision Body:**

DESCRIPTION - This work is furnishing and installing either anchored or draped wire mesh slope netting along the rock slope adjacent to S.R. 271 to the limits indicated on the Contract drawings and in accordance with the construction details and vendor specifications.

MATERIALS - Furnish materials for installation of wire mesh that is new and without defects. Remove defective materials from the job site at no additional cost to the Department.

(a) Corrosion Protection.

1. Mesh, Ropes, and Hardware. Facing hardware to include high-tensile steel wire mesh facing, hex nuts, spike plates, boundary ropes, wire rope anchors, and compression claws. Galvanize in accordance with Pub 408, Section 1105.02(s).

2. Anchors. Epoxy Coating meeting requirements of AASHTO M284/ASTM A775. Minimum 12 Mil electrostatically applied. Bend test requirements are waived.

(b) Geobrug Tecco Mesh (4mm) and Geobrug Spider Mesh or equivalent. High tensile steel wire mesh reinforcement system to be designed by Contractor utilizing steel wire mesh facing, spike plates, boundary ropes, wire rope anchors, compression claws and other facing hardware meeting the following minimum requirements;

Spike Plates. Diamond-shaped;

Length (minimum): 350 mm (13.77")

Width (minimum): 170 mm (6.69")

Thickness (minimum): 10 mm (0.39")

Boundary Ropes.

Light Type: Rope, steel wire: Diameter = 10 mm (0.39")

Minimum Breaking Force: ZR = 64 kN (7.19 tons)

Heavy Type: Rope, steel wire: Diameter = 12 mm (0.47")

Minimum Breaking Force: ZR = 84 kN (9.44 tons)

a. Rope Anchors. Spiral rope, 19 wires, 2-rope exec., with double steel tube in loop section.

Light Type: Diameter = 10.5 mm (0.41")

Load Capacity = 100 kN (11.24 tons)

Heavy Type Diameter = 14.5 mm (0.57")

Load Capacity = 195 kN (21.91 tons)

b. Compression Claw. Fe360, material thickness 6mm (0.23").

(c) Erosion Control and Revegetation Mat (ECRM). Permanent mat meeting the requirements of Pub 408/2011, Section 806.2(b) and suitable for placement on a prepared 1H:1V slope surface.

(d) Seeding and Soil Supplement. Section 804.2(b) Formula C.

CONSTRUCTION -



Seed all slopes up to 1H:1V beneath the wire mesh in accordance with Section 804.3, using Seed Formula C. Install Erosion Control and Revegetation Mat (ECRM) on all surfaces up to 1H:1V beneath the wire mesh in accordance with Section 806. Install wire mesh over the ECRM in vertical strips to the limits directed by the Engineer. Install in accordance with the Wire Mesh Slope Treatment (WMST) Details and as directed by the Engineer. Install all fasteners, connectors, ropes and associated hardware in accordance with the manufacturers recommendations.

MEASUREMENT AND PAYMENT - Square Yard

Includes Erosion Control and Revegetation Mat and Seeding Formula C Mixture

## 00 - c9000 ITEM 9000-0206 SHOTCRETE FACING

**Addendum:**

**Associated Item(s):** 9000-0206

**Header:**

ITEM 9000-0206 SHOTCRETE FACING

**Provision Body:**

DESCRIPTION

The furnishing of necessary materials as well as the construction of a shotcrete facing over the rock slope and Upper Freeport Coal as indicated on the plan and "Shotcrete Facing" detail and plan.

The facing will be attached to the rock slope with steel reinforcement bars (rock dowels) either grouted in place or placed in epoxy resin.

MATERIALS

(a) Rock Dowels - Section 709.1, Pub. 408 - Thread as necessary. Provide 1-inch diameter epoxy-coated bars with a minimum thickness of 0.3 mm {12 mils} where required and shown on the plans. Epoxy in accordance with AASHTO M 284/M 284M.

(b) Steel welded wire fabric - Section 709.3, Pub. 408.

(c) Permanent structural shotcrete facing:

(1) Materials:

- Cement - Section 701, Pub. 408
- Water - Section 720.1, Pub. 408
- Fine aggregate - Type A, Section 703.1, Pub. 408
- Air entraining admixtures for wet mix - Section 711.3(d), Pub. 408

- Accelerating additives and plasticizers - AASHTO M 194

- Additives are to be non-corrosive to steel. They are to contain calcium chloride and/or prevent other detrimental effects such as cracking and excessive shrinkage.

(2) Shotcrete quality - Produced by either dry mix or wet mix process achieving a minimum compressive strength of 21 MPa {3 ksi} in seven days and 32 MPa {4.6 ksi} in 28 days.

(3) Pre-constructing testing - Test specimens to be made by each application crew using the equipment, materials, mixture proportions, and procedures proposed for the job.

A test panel at least 750 mm by 750 mm {30 in by 30 in.} shall be made for each mixture being considered and for each shooting position to be encountered in the job. The test panels are to be fabricated to the same thickness as the structure, but not less than 100 mm {4 in.}. Take at least five 100 mm {4 in.} diameter cores from each panel for testing in accordance with AASHTO T 24.

(4) Mixture proportions - Provide samples for testing. Submit for acceptance the recommended mixture proportion, source of materials, and all test results. Select mixture proportion on the basis of compressive strength tests of specimens continuously moist cured until tested at 28 days. For mixture acceptance purposes, average core compressive strength shall be equal to at least 1.2 times the required compressive strength specified in (2) above.

(5) Batching and mixing - Aggregate and cement may be batched by weight or volume. Provide mixing equipment capable of thoroughly mixing the materials in sufficient quantity to maintain placing continuity. For dry mix process, provide capability to discharge all mixed materials without any carry-over from one batch to the next. Provide ready mix shotcrete complying with AASHTO M 157 for wet mix process.

(6) Delivery equipment - For dry mix process, provide equipment capable of discharging the aggregate-cement mixture into the delivery hose and delivering a continuous, smooth stream of uniformly mixed material to the discharge nozzle. Equip the discharge nozzle with a manually operated water injection system (water ring) for directing an even distribution of water through the aggregate-cement mixture. The water valve shall be capable of ready adjustment to vary the quantity of water and shall be convenient to the nozzleman. Provide water pressure at the discharge nozzle sufficiently greater than the operating air pressure to ensure that the water is intimately mixed with the other materials. If the line water pressure is inadequate, introduce a water pump into the line. Ensure that the water pressure is steady (nonpulsating). Clean delivery equipment thoroughly at the end of each shift. Inspect equipment parts, especially the nozzle lines and water ring, at regular intervals and replace as required.

For wet mix process, provide equipment capable of delivering the premixed materials accurately, uniformly, and continuously through the delivery hose. Follow recommendations of the equipment manufacturer on the type and size of nozzle to be used, and on cleaning, inspection, and maintenance of the equipment. Ready mixed shotcrete is to be delivered in transit mixers complying with AASHTO M 157.

Provide a supply of clean, dry air adequate for maintaining sufficient nozzle velocity for all parts of the work and, if required, for simultaneous operation of a suitable blow pipe for clearing away rebound.

(7) Safety requirements - Maintain safety in all areas where shotcrete is to be applied, including dust protection. Causticity of cement and accelerating hardening admixtures may cause skin and respiratory irritation unless safety measures are taken in addition to providing required ventilation. During the application of shotcrete, provide nozzlemen and helpers with gloves and adequate protective clothing.

(8) Finish - Provide undisturbed final layer of shotcrete as applied from nozzle without hand finishing, unless otherwise specified.

(9) Curing - Immediately after finishing, keep shotcrete continuously moist for at least 24 hours. Use one of the following materials or methods:

- Ponding or continuous sprinkling
- Absorptive mat or fabric, sand, or other covering kept continuously wet
- Curing compounds - (Refer to AASHTO M 148). On natural gun or flash finishes, use the application rate of 2.5 m<sup>2</sup>/L {100 ft<sup>2</sup>/gal}. Do not use curing compounds on any surfaces against which additional shotcrete or other cementitious finishing materials are to be bonded unless positive measures, such as sandblasting, are taken to completely remove curing compounds prior to the application of such additional materials.

Provide additional final curing immediately following the initial curing and before the shotcrete has dried. Use one of the following materials or methods:

- Continue the method used in initial curing
- Application of impervious sheet material conforming to AASHTO M 171

Continue curing for the first seven days after shotcreting or until the required strength is obtained. During the curing period, maintain shotcrete above 4° C {40° F} and in a moist condition as specified.

(10) Construction testing - Cut cores from the structure and test in accordance with AASHTO T 24. Three cores from 90 m<sup>2</sup> {1,000 ft<sup>2</sup>} of facing or per shift are required.

Alternately, make one test panel with minimum dimensions of 450 mm by 450 mm by 100 mm {18 in. by 18 in. by 4 in.} gunned in the same position as the work represented for each 90 m<sup>2</sup> {1,000 ft<sup>2</sup>} of completed facing. Gunn panels during the course of the work by the contractor's regular nozzleman. Field cure panels in the same manner as the work; however, the test specimens shall be soaked in water for a minimum of 40 hours prior to testing. Cut a minimum of three cores from each panel for testing in accordance with AASHTO T 24. The average compressive strength of each core of a set of three cores shall equal or exceed 85 percent of the compressive strength specified.

(d) Grout - Provide a neat cement grout to be used in rock bolt anchorage consisting of a pumpable mixture capable of reaching a cube strength of 21 MPa {3 ksi} in accordance with AASHTO T 106. Chemical additives that can control, bleed, or retard set in the grout are to be used only when approved in writing.

(e) Epoxy Resin – Provide fast setting, high strength, epoxy resin with a cured cube strength exceeding 21 MPa {3 ksi}.

(f) Fasteners and attachment devices - Provide high strength nuts conforming to AASHTO M 291.

Provide plates and shims conforming to AASHTO M 183M/M 183. Provide plastic centralizers of a minimum diameter 13 mm {1/2 in.} smaller than the nominal diameter of the drill hole.

(g) Wall drains - Provide as required and shown on the plans, prefabricated, fully wrapped, preformed drains. The core, not less than 6 mm {1/4 in.} thick or more than 13 mm {1/2 in.} thick, shall be either a preformed grid of embossed plastic or a system of plastic pillars and interconnections forming a semirigid mat. When covered with filter fabric, the core material shall be capable of maintaining a drainage void for the entire height of permeable liner. Provide a polypropylene geotextile having a minimum weight of 200 g/m<sup>2</sup> {6 oz/yd<sup>2</sup>} as the filter fabric.

## CONSTRUCTION

(a) Submittals - Provide two sets of material certificates, construction procedures, and detailed construction sequencing plans, including excavation sequence for approval.

Assume all risks for work performed without approved plans.

Work may not proceed until the construction sequencing plans have been approved by the Department's Representative.

(b) Qualifications - Submit proof of two projects on which contractor has designed and/or installed rock bolts or ground anchors in the past two years. The contractor's staff on this project is to include a supervising engineer with at least three years of experience in the design and construction of anchored walls.

Drilling operators and foreman are to have a minimum of two years experience installing rock bolts or permanent ground anchors with the contractor's organization. Submit documentation that project personnel have appropriate qualifications. Inadequate proof of personnel qualifications shall be cause for withholding wall design approval. Changes to previously approved personnel must be approved in writing.

Provide shotcreting nozzle operators with one year of experience in the application of shotcrete on projects of comparable nature. Shotcreting nozzle operators who have worked under the immediate supervision of a foreman or instructor for at least two years are also qualified.

(c) Excavation - In conformance with Section 203, Pub. 408, and to the limits and construction stages indicated.

(d) Bolt installation - Drill holes for rock dowels as indicated on the "Shotcrete Facing" detail. Provide the rock dowel length not less than the length shown on "Shotcrete Facing" detail. Drilling methods and grouting pressure/epoxy placement are at the option of the contractor. At the point of entry, the bolt angle shall be within plus or minus 3 degrees of that shown on the approved plans. Subsidence or physical damage by such operations shall be cause for immediate cessation of operations and repair at the contractor's expense.

Inject grout/epoxy at the lowest point of the drill hole. Pump grout/epoxy through tubes until the hole is filled to prevent air voids. Fill with grout/epoxy progressively from the bottom to top. Provide grouting equipment capable of continuous mixing and producing a grout free of lumps. Place a bolt in each drilled hole within 5 minutes of the grout/epoxy injection.

Place centralizers at intervals to ensure that no less than 38 mm {1.5 in.} of grout cover is achieved at all locations along the bar.

(e) Shotcreting - After each stage cut, and in anticipation of shotcreting, clean surfaces of all loose material, mud, rebound from previously placed shotcrete, and other foreign matter that will prevent bond of shotcrete. Use weep holes, drain pipes, or other methods to control seepage. Where used, provide a weep hole, a 600 mm {2 ft.} long, 50 mm {2 in.} diameter, slotted drain pipe (Schedule 40 PVC) placed in pre-drilled holes sloped 5 percent to drain. Protect against contamination during shotcreting to ensure proper functioning. Dampen surface before shotcreting. Install permanent drainage as specified.

Apply shotcrete with the same equipment and the same technique as those used in the approved test panels. Nozzle operators performing the test panels are to be the same operators used to place shotcrete in the work. Measuring pins shall be installed on 1500 mm {5 ft.} centers in each direction. The pins shall be non-corrosive and designed to prevent infiltration of water through the shotcrete. Other methods may be approved to establish whether the required minimum thickness of shotcrete is being applied if the contractor can satisfactorily demonstrate the reliability of these other methods. When a layer of shotcrete is to be covered by a succeeding layer at a later time, it shall first be allowed to develop its initial set. Then remove all laitance and loose material, and rebound by brooming or scraping. Remove laitance that has been allowed to take final set by sandblasting, and thoroughly clean surface.

Do not shotcrete if ambient temperature is less than 4° C {40° F}. Maintain curing temperature as specified under Section 1.12.3(e) (9) of these specifications.

Firmly position the wire fabric to prevent vibration while the shotcrete is being applied. Lap mesh 1 ½ squares in both directions. Bend tie wires flat in the plane of the mesh and do not form large knots. Provide a minimum cover of 50 mm {2 in.} of shotcrete.

Control thickness, method of support, air pressure, and water content of shotcrete to preclude sagging or sloughing off.

Fill first horizontal and vertical corners and any area where rebound cannot escape or be blown free.

Hold nozzle at a distance and angle that will place the material behind the reinforcement before any material is allowed to accumulate on its face. In the dry mix process, additional water may be added to the mix when encasing reinforcement, to facilitate a smooth flow of material behind the bars. Do not place shotcrete through more than one layer of reinforcing steel rods or mesh in one application unless preconstruction tests have demonstrated that steel is properly encased.

Taper construction joints over a minimum distance of 300 mm {12 in.} to a thin edge, and thoroughly wet before placing any adjacent section. Repair surface defects as soon as possible after initial placement of the shotcrete. All shotcrete that lacks uniformity, that exhibits segregation, honeycombing, or lamination, or that contains any dry patches, slugs, voids, or sand pockets shall be removed and replaced with fresh shotcrete.

Do not repair core holes with shotcrete. Instead, fill solid with patching mortar after cleaning and thoroughly dampening.

Use the following precautions during shotcreting:

- (1) Do not place shotcrete if drying or stiffening of the mix takes place at any time prior to delivery to the nozzle.
- (2) Do not use rebound or previously expended material in the shotcrete mix.
- (3) The area to which shotcrete is to be applied shall be clean and free of rebound or overspray.
- (4) Discontinue shotcreting when temperature drops below 4\_ C {40\_ F} or when shotcrete cannot be protected.

MEASUREMENT AND PAYMENT -Square Foot

**00 - c9000 ITEM 9000-0207 ROCKFALL BARRIER DEMOLITION AND REPLACEMENT**

**Addendum:**

**Associated Item(s):** 9000-0207

**Header:**

ITEM 9000-0207 ROCKFALL BARRIER DEMOLITION AND REPLACEMENT

**Provision Body:**

DESCRIPTION

This work includes, but is not limited to, demolition, removal, disposal, and replacement of the existing rockfall barrier from Station 127+50 to 138+23, as indicated on the Contract Drawings. Work completed herein shall include protection and if required repair of adjacent surfaces, fencing, and barrier at no additional cost to the Department, if damaged during the course of the Work.

The existing steel support posts are to remain in place and modified as required to install a minimum 250 kJ rockfall barrier of equal height to the existing.

The Contractor shall remove and dispose of materials in accordance with applicable regulatory and legal requirements.

## MATERIALS

Furnish materials for the replacement of the rockfall barrier that are new and without defects. The Contractor is to remove defective or damaged materials from the job site at no additional cost to the Department.

(a) Rockfall Barrier – Low Deflection (less than 3') 250 kJ Rockfall Protection Barrier. The finished height of the barrier must be of equivalent height to the existing barrier.

## SUBMITTALS

Submit the following documentation to the Engineer at least 14 days prior to the planned start of the rockfall barrier replacement.

(a) Workplan. Provide a detailed workplan describing how the rockfall fence will be disassembled, disposed of, and reconstructed. Submit for approval the Manufacturer's design details, specifications, and certifications for a minimum 250 kJ rockfall barrier. The barrier must have a total deflection of less than 3' under the full impact load. Provide a description and detailed drawings of how the new barrier will be attached to the existing steel posts, including any proposed modifications of the existing steel posts. Work may not proceed until the work plan has been approved by the Engineer.

(b) Contractor's Experience Requirements. The Contractor must be experienced in the construction of rockfall protection barriers and have successfully constructed at least 3 projects in the last 3 years involving construction of permanent rockfall barriers totaling at least 1,000 linear feet. The Contractor must submit the experience qualifications and details for the referenced construction projects, including a brief project description with the owner's name and current phone number. Upon receipt of the experience qualifications submittal, the Engineer will have 5 calendar days to approve or reject the proposed rockfall barrier installation Contractor.

## CONSTRUCTION

(a) Upon completion of all slope scaling and wire mesh installation activities, remove the existing wire mesh, cable nets, steel cables, and associated hardware from the steel support posts.

(b) Modify the steel posts as required per the manufacturers' plans for the selected rockfall barrier system.

(c) Install the new rockfall barrier on the existing posts.

(d) Removal of any steel posts, concrete barrier, traffic signs, or other obstructions must be approved by the Engineer.

(e) All debris material created by the barrier demolition activities, as well as any existing rubbish or debris, within the limits of this work must be removed and disposed of off site. Disposal of these materials must comply with all local, state, and federal government laws and regulations concerning such disposal of waste and excess material.

## MEASUREMENT AND PAYMENT - Linear Foot

**00 - c9000 ITEM 9000-0208 TEMPORARY ROCKFALL FENCE PROTECTION**

**Addendum:**

**Associated Item(s):** 9000-0208

**Header:**

ITEM 9000-0208 TEMPORARY ROCKFALL FENCE PROTECTION

**Provision Body:**

DESCRIPTION - This work includes but is not limited to the procurement, installation, maintenance, and removal of a temporary rockfall protection system. The rockfall protection system must ensure that materials (rock, soil, vegetation, and construction debris) are not permitted to pass the northbound shoulder of the S.R. 271 roadway.

MATERIALS - Furnish materials for the temporary rockfall protection per the approved design and that are free of defect. Remove and replace defective or damaged materials from the job site at no additional cost to the Department throughout the duration of the project.

SUBMITTALS

Submit the following documentation to the Engineer at least 14 days prior to the planned start of work on the slope.

(a) Workplan. Provide a detailed workplan describing how the work will be conducted on the slope adjacent to S.R. 271. The workplan must describe the methods of vegetation clearing, wire mesh removal, scaling, rock anchor installation, and wire mesh installation. The workplan must include a design for the temporary rockfall protection. The designed capacity and dimensions of the temporary rockfall protection system must account for all means and methods utilized in the construction activities. Work may not proceed until the work plan has been approved by the Engineer.

(b) Contractor's Experience Requirements. The Contractor must be experienced in the construction of rockfall protection barriers and have successfully constructed at least 3 projects in the last 3 years involving construction of permanent rockfall barriers totaling at least 1,000 linear feet. The Contractor must submit the experience qualifications and details for the referenced construction projects, including a brief project description with the owner's name and current phone number. Upon receipt of the experience qualifications submittal, the Engineer will have 5 calendar days to approve or reject the proposed rockfall barrier installation Contractor.

CONSTRUCTION -

(a) Install the temporary rockfall protection system prior to beginning any slope clearing or scaling activities.

(b) Maintain the temporary rockfall protection system during all upslope work activities.

(c) Remove all debris material created by the slope preparation operations, as well as any existing rubbish or debris prior to removing the temporary rockfall protection system.

MEASUREMENT AND PAYMENT - Lump Sum

**00 - c9000 ITEM 9000-0209 HORIZONTAL DRAINS**

**Addendum:**

**Associated Item(s):** 9000-0209

**Header:**

ITEM 9000-0209 HORIZONTAL DRAINS

**Provision Body:**

DESCRIPTION - This work consists of the construction of horizontal drains as indicated on the Contract Drawings.

MATERIALS -

PVC Pipe - Furnish new, 2.5-inch diameter, Schedule 80 PVC pipe. Provide pre-manufactured slotted pipe having a minimum slot width of 0.040 inches and equipped with flush joint threaded end connections and centralizers suitable to keep the pipe centered in the drill hole.

Steel Pipe – Furnish new, 3.5-inch diameter, Galvanized Schedule 40 Grade 36 Steel Pipe.

Grout – Section 701. Provide lean cement grout with a minimum 28 day compressive strength exceeding 3,500 psi.

CONSTRUCTION - Drill horizontal boreholes to maintain an upward slope (for positive drainage) of ten percent (5.7) from horizontal by means of 4-inch destructive drilling. Utilize means such as stabilizers, centralizers, reaming shells or equivalent to ensure proper alignment of the borehole.

All drains are to be installed at the locations indicated in the Construction Details. The alignment of the drains is to be verified by the Contractor. Submit equipment and method specifications to the Department for approval.

Grout 5-foot-long galvanized steel pipe into bore hole as indicated on the Construction Detail. Install the slotted PVC pipe to the complete length of the horizontal boring, equipping the back end of the slotted pipe with a threaded plug. Seal annulus between the slotted PVC pipe and the galvanized steel pipe with caulking compound conforming to Section 705.8.

After the horizontal drain construction is complete, sound the full depth of the drain to ensure the PVC is open and was not damaged during installation.

MEASUREMENT AND PAYMENT – Linear Foot

Payment will be made at the proposed bid price per linear foot for the various items required to install horizontal drains completed and accepted by the Engineer. Horizontal drains will be measured to the nearest foot, as determined by the Engineer. The payment per lineal foot will be considered full payment for all costs associated with furnishing and installing horizontal drains, including all labor, equipment and materials. No separate measurement or payment will be made for crane usage, platform construction, hole alignment verification, PVC plugs, tees, elbows or other fitting or for creating an annular seal at the drain outlet. Re-drilling or other methods to stay within the specified alignment and to install the slotted PVC pipe to the complete length of the borehole will be performed by the Contractor at no extra cost to the Department.

**00 - c9202 ITEM 9202-0001 ASBESTOS TESTING AND ABATEMENT**

**Addendum:**

**Associated Item(s):** 9202-0001

**Header:**

ITEM 9202-0001 ASBESTOS TESTING AND ABATEMENT

**Provision Body:**

DESCRIPTION – This work is the removal, loading and transportation of existing asbestos-containing bituminous pavement from the existing roadway to a properly permitted municipal waste landfill. Refer to the Record of Roadway Pavement Types (the subject material is denoted as FJ-4) for approximate locations and depths.



**MATERIAL – Surfacant –** A chemical wetting agent added to water to decrease the water's surface tension and increase penetration.

Approved Manufacturers and/or Suppliers:

- Bullseye Environmental Corporation (800-692-8557)
- Aramsco (800-767-6933)
- Foster Products (215-870-6530)

**CONSTRUCTION –** To remove the existing bituminous pavement use “amended” water (water to which a surfacant has been added) according to the manufacturer's specifications during any operations involving saw-cutting, drilling, milling, mechanical disturbance, or excavation/loading of the existing asbestos-containing pavement. Dry operations involving disturbance to the asbestos-containing asphalt are prohibited. Ensure that the air quality during the removal of the existing asbestos-containing bituminous pavement is evaluated. Use amended water as directed by the Engineer.

Notify the PennDOT A.C.E. at least ten working days prior to the initiation of asbestos abatement work. Complete the Commonwealth of Pennsylvania Form 2700-FM-AQ0021, “Asbestos Abatement And Demolition/ Renovation Form” which is attached to the proposal, (the Contractor must complete Sections 8, 14A, 14C, 17, 18, 25, and 26; all other sections have been filled out for the Contractor), sign, and submit to both the Pennsylvania Department of Environmental Protection (PA DEP) and the United States Environmental Protection Agency (U.S. EPA) at least ten (10) working days prior to the initiation of asbestos abatement work.

Submit a draft copy of the same form to the PennDOT A.C.E. at least twenty (20) working days prior to the initiation of asbestos abatement/renovation work.

Complete the “Property Owner Notification” which is attached to the proposal and deliver to all adjacent properties within the project limits one week prior to the initiation of asbestos abatement/renovation work. Update and deliver any schedule changes.

Do not reuse any excavated or milled asbestos-containing bituminous material. Secure an approved and permitted disposal facility for asbestos-containing bituminous pavement prior to the initiation of work. Transport the material while adequately wet in tarped trucks to the disposal facility in accordance with all federal, state, and local laws, regulations, and ordinances. Use appropriate placards. Provide documentation to verify the proper transportation and disposal of the removed pavement to the Engineer for payment. Locate a pre-approved facility to accept this material with approval of the Engineer. Additionally, contact the PA DEP South Central Regional Office for a complete list of landfills permitted to receive this waste. The asbestos-containing asphalt is considered residual waste.

- All workers who will be working on or near any activity that will potentially render the asbestos-containing bituminous pavement friable (i.e., saw cutting, jackhammering, milling, drilling, and excavating) must have, at a minimum, eight hours of asbestos awareness training. Training topics should include the health effects associated with asbestos exposure, the relationship between smoking and asbestos exposure, appropriate work practices and engineering controls for minimizing asbestos fiber releases, “hands-on” training, and the proper selection and use of personal protective equipment.

- The generation of visible dust emissions during activities disturbing asphalt-containing bituminous pavement is prohibited.

- Potential bidders are hereby made aware that at any time the airborne concentration of asbestos fibers exceeds the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) of 0.1 fibers per cubic centimeter of air (f/ cc), work will stop until work practices and/ or engineering controls are amended to reduce the airborne asbestos fiber concentration to below the OSHA PEL. Perform personal air sampling and analysis, and the use of respiratory protection if necessary, in order to ensure that workers are not being exposed to an asbestos airborne fiber concentration in excess of the OSHA PEL. If respiratory protective devices are utilized, comply with the OSHA Respiratory Protection Standard (29 CFR 1926.103).

The Contractor is hereby made aware of the following requirements to follow during actual construction activities. Additional requirements not listed here also apply.

- A person trained in the provisions of 40 CFR Part 61, Subpart M, shall be on-site during all asbestos-related work activities, and evidence that the required training has been accomplished by this person shall be available for inspection during all working hours.
- Asbestos warning signs shall be posted during the disturbance of asbestos-containing bituminous pavement in and around the construction and field office trailers. It will not be necessary to post signs near the actual work areas.
- Prompt cleanup and disposal of all asbestos-containing asphalt waste generated shall occur.

Transport the material from the project site to the permitted disposal facility utilizing licensed, inspected, insured, tarped vehicles and/ or waste containers in accordance with all local, state, and federal regulations. Check with local agencies prior to transportation and off-site disposal activities to determine if additional requirements apply. The Department must approve the proposed disposal facility prior to transportation. Secure and forward a copy of the disposal facility-operating permit to the Department. Provide the Department all documentation of shipping and disposal within ten days of delivery to the disposal facility.

## MEASUREMENT AND PAYMENT - DOLLAR

The proposal will include an item and a predetermined amount of money for ASBESTOS TESTING AND ABATEMENT. The contract item will have a unit of measure of DOLLAR, a unit price of \$1.00, and a quantity equal to the predetermined amount.

Due to the contingent or unpredictable nature of the work being performed and/or the incentive or bonus status of the payment being made, the provisions of Section 110.02(d) are not applicable to this item.

Measured and paid for, under the ASBESTOS TESTING AND ABATEMENT item as follows:

- Contract Items. For performance of work identified as having similar items listed in the contract, the contract unit price will be paid
- Non-Contract Items. Items of work not identified in the contract will be paid as follow:

1. Negotiated Price. At an agreed upon price. This price will be agreed upon with the Department prior to performing the work. When applicable, agreement is also required with the FHWA.

2. Force Account Work. Section 110.03(d)

## 00 - c9203 ITEM 9203-0001 ROCK SLOPE SCALING

### Addendum:

**Associated Item(s):** 9203-0001

### Header:

ITEM 9203-0001 ROCK SLOPE SCALING

### Provision Body:

DESCRIPTION – This work is excavation of rock cut slopes to the required tolerances by means of scaling.

CONSTRUCTION - Section 203.3(b). and as follows:

2. Scaling Methods. Perform rock excavation scaling with explosives or by using pneumatic and hydraulic tools or other approved methods that will satisfactorily remove rock overhangs to produce a finished rock slope which suitable for placement of high tensile wire mesh.

Blasting on this project is permissible provided that measures are taken to adequately control blasted rock such that no rock passes the downslope edge of the S.R. 271 roadway. In addition, pre-blast surveys and monitoring of monuments within Grandview Cemetery is required. The Contractor is required to contact the cemetery to review their blasting plans for review and approval prior to the start of operations.

Grandview Cemetery Contact Information:

George J. Kondor Jr.

President, Chief Operating Officer

Grandview Cemetery & Mausoleums

(814) 535-2652

Slope Scaling Qualifications. Before beginning work, submit a list of proposed personnel and documentation verifying that they meet the qualification requirements listed below. Include a list of employer's names and telephone numbers, location and dates of previous slope drape projects, and the extent of work performed. This information must be verifiable.

Provide a scaling crew with one Scaling Foreman present at all times when scaling is performed. A Scaling Crew consists of three qualified scalers, one of which may also be the Scaling Foreman. Employ a Scaling Foreman and Scaling Crew who have at least two years of demonstrated experience in rock scaling in similar capacities.

Scaling Work Plan. Submit a written work plan for the rock slope scaling to the Engineer

for acceptance at least ten days before beginning work. Work may not proceed until the work plan is approved by the Engineer. Submit five copies. Include the following information:

1. Proposed construction sequence and schedule.
2. Type and quantity of equipment.
3. Number of scaling crews required for the project.
4. Removal and disposal plan for materials generated from the scaling and slope crest preparation.
5. Contractor's protection plan to protect personnel, facilities, and other structures from injury or damage caused by scaling activities.

MEASUREMENT AND PAYMENT - Hour

Payment for Hauling and Disposal of scaled earth materials to be paid for under Item 4203-0003

## **00 - c9600 ITEM 9600-1125 REPAIR OF PRIVATE ROAD**

**Addendum:**

**Associated Item(s):** 9600-1125

**Header:**

ITEM 9600-1125 REPAIR OF PRIVATE ROAD

**Provision Body:**

DESCRIPTION - This work is the repair of damage to the Private Road that will be used as a construction access road within the Maintenance Access Easement. . Perform repair work in accordance with the applicable sections of Publication 408 and as directed.

MATERIAL - Furnish material for repair work that is compatible with the existing roadway, as determined by the Engineer.

CONSTRUCTION - Repair or reconstruct damaged roadway to restore the profile and/or cross slope to original or like condition, to the satisfaction of the Engineer.

MEASUREMENT AND PAYMENT - Dollar.

The proposal will include an item and a predetermined amount of money for REPAIR OF DETOUR ROUTE. The contract item will have a unit of measure of DOLLAR, a unit price of \$1.00, and a quantity equal to the predetermined amount.

Due to the contingent or unpredictable nature of the work being performed and/or the incentive or bonus status of the payment being made, the provisions of Section 110.02(d) are not applicable to this item.

Measured and paid for, under the REPAIR OF DETOUR ROUTE item as follows:

- Contract Items. For performance of work identified as having similar items listed in the contract, the contract unit price will be paid
  
- Non-Contract Items. Items of work not identified in the contract will be paid as follow:

1. Negotiated Price. At an agreed upon price. This price will be agreed upon with the Department prior to performing the work. When applicable, agreement is also required with the FHWA.

2. Force Account Work. Section 110.03(d)

**00 - c9624 ITEM 9624-0001 VEHICULAR GATE, 16'-0" OPENING, DOUBLE-SWING**

**Addendum:**

**Associated Item(s):** 9624-0001

**Header:**

ITEM 9624-0001 VEHICULAR GATE, 16'-0" OPENING, DOUBLE-SWING

**Provision Body:**

DESCRIPTION: This work is the installation of a vehicular gate on the Private Drive near the Meade Street access point and placement of boulders to close off access around the gate.

MATERIALS - Section 1110 and as follows:

Constructed out of tubular steel or aluminum stock; provide two gate sections, each at length of 8'-0" to span a 16'-0" opening in accordance with the plan.

CONSTRUCTION: Section 624.3 and as follows:

Install gate prior to any slope work and/or as soon as the Rock Construction Entrance is constructed. The gate must be closed and locked each day after construction.

Placement of boulders is required to deter vehicular access around the gate. Boulders shall be placed in a generally straight line between the gate posts and the existing cable guard fence or steep slope greater than 1H:1V. Place boulders with no more than 2 feet between adjacent members. Boulders size may vary, but the minimum dimension shall be 3 feet across in any direction. Boulders shall be embedded in the ground approximately six inches to preclude sliding or rolling. Boulders must be a type of weather-resistant rock.

Be responsible for obtaining a signed Right of Entry form from the Grandview Cemetery for access outside the Temporary Construction Easement and Maintenance Access Easement for the purpose of placing boulders. Contact Mr. George J. Kondor, Jr., President and Chief Operating Officer of Grandview Cemetery & Mausoleums, at (814) 535-2652.

Any damage to any roadway or existing features outside the easement areas will be the responsibility of the contractor to repair at his expense.

Provide gate with a chain and lock; a key for the lock shall be retained by contractor. Supply Cambria County Maintenance with two (2) keys upon installation of the gate. Supply the Grandview Cemetery (Mr. George J. Kondor, Jr.) two (2) keys to the lock upon completion of construction.

MEASUREMENT AND PAYMENT: Lump Sum

Included Boulders

**00 - c9660 ITEM 9660-0030 BITUMINOUS CENTERLINE RUMBLE STRIPS**

**Addendum:**

**Associated Item(s):** 9660-0030

**Header:**

ITEM 9660-0030 BITUMINOUS CENTERLINE RUMBLE STRIPS

**Provision Body:**

DESCRIPTION - This work is the milling of bituminous rumble strips of the type indicated.

MATERIAL - None

CONSTRUCTION - As indicated and as follows:

(a) Equipment – Use a machine capable of providing a smooth cut without tearing or snagging and producing rumble strips as indicated.

(b) Milling Operation. Mill bituminous rumble strips to have finished dimensions and tolerances as indicated. Check and verify the alignment of pattern edge during the milling operation. Discontinue milling operations if satisfactory results are not being obtained, and submit an alternate construction plan to the Engineer for approval. At the end of each work day, move all equipment to a location as directed where it presents no hazard to roadway traffic.

(c) Disposition of Removed Material – Remove and dispose of removed material in compliance with the D.E.P. Residual Waste Regulations. Remove debris from areas disturbed by the milling operation before opening roadway to traffic.

MEASUREMENT AND PAYMENT - Linear Foot

Measured longitudinally along centerline of milled bituminous rumble strips. Payment includes removal and disposal of milled material.

**00 - c9951 ITEM 9951 TRAFFIC SIGNAL SUPPORT, TWIN MAST ARMS**

**Addendum:**

**Associated Item(s):** 9951-0130, 9951-0135

**Header:**

ITEM 9951-0130 TRAFFIC SIGNAL SUPPORT, TWIN MAST ARMS, 30' AND 35'  
ITEM 9951-0135 TRAFFIC SIGNAL SUPPORT, TWIN MAST ARMS, 35' AND 20'

**Provision Body:**

In accordance with Sections 951 and as follows:

DESCRIPTION – This work is the furnishing and installation of a twin mast arm, traffic signal support as indicated.

MATERIAL - Section 951.2 and as follows:

Furnish double nuts on all anchor bolts.

CONSTRUCTION - Section 951.3(c) and as follows:

Verify with the structure manufacturer to determine whether or not a dampener is recommended for the structure.

Cost of dampener if recommended shall be included in the cost of the structure.

For information, refer to the traffic signal plan sheets.

MEASUREMENT AND PAYMENT - Each

**00 - c9952 ITEM 9952-3000 CONTROLLER UNIT AND CABINET MODIFICATION**

**Addendum:**

**Associated Item(s):** 9952-3000

**Header:**

ITEM 9952-3000 CONTROLLER UNIT AND CABINET MODIFICATION

**Provision Body:**

DESCRIPTION - This work includes the furnishing of a controller unit and modification to the existing controller assembly located at Napoleon Street and Haynes Street. Install the necessary wiring and cabinet modifications needed to integrate a Spread Spectrum Radio with the fiber optic equipment currently operating within the existing fiber optic Closed Loop Traffic Signal System within the Johnstown Central Business District corridor. This controller is to communicate with the traffic signal installations at Menoher Boulevard and South Street and Napoleon Street and South Street via spread spectrum radio and the existing traffic signal master controller at Washington Street and Franklin Street with 6 fiber optic (Multimode).

MATERIAL - Section 952.2 and as follows:

Furnish a Econolite, TS-1, NEMA Traffic Controller unit, TS-1, with Closed Loop System Equipment and Fiber Optic Modem to operate within the existing controller assembly at this location is, manufactured by:

Econolite Control, Inc.

3360 East LaPalma Avenue

Anaheim, CA 92806

The modification to the existing NEMA Traffic Controller assembly, (TS-1 with Closed Loop System Equipment) to provide operation in a network system or isolated, capable of integrating fiber-optic communication with a radio modem to provide full duplex 900 MHz Spread Spectrum wireless interconnect communication between (2) two local controllers, utilizing FSK and R232 connections, include any communications modules and necessary interfaces as needed. Location to be modified is as follows:

#### A. Washington Street and Franklin Street (EXISTING LOCAL and MASTER CONTROLLER)

Provide within the existing controller assembly all necessary modifications to the Closed Loop System and install Spread Spectrum Radio Equipment/modifications within the controller assembly as indicated on the plan sheets. (Include any wiring, fiber optic equipment, panels, relays, etc and cabinet modifications that would be required).

Include any communication modules and connectors needed for the fiber optic and wireless operation.

The existing controller assembly includes equipment that is operational within the fiber optic closed loop traffic signal system currently in operation.

Controller location to utilize fusion splices. Terminate all fibers within the controller assembly with connectors and connect to patch pannel

Provide any necessary equipment needed for the termination of all fiber optic cables, splicing and organization of the fiber optic cable within the controller cabinets. This device to be capable of accommodating up to 24 fibers.

#### CONSTRUCTION - Section 952.3 and as follows:

Provide a service technician from the supplier of the signal control equipment to be present during the turn on.

As directed, make changes to inputs, outputs, timing or programming controls during the construction project and during the 30-day system test within 24 hours of notification.

Program any data changes into the Closed Loop System central computers to accommodate the additional controller locations.

Provide any changes or updates to the controller database, closed loop central database or graphic screen for this location.

#### MEASUREMENT AND PAYMENT - Each

Complete and operational. Including modification of the controller/assembly to be capable of wireless radio communication within the fiber optic system, include any communication modules/equipment needed, fiber optic equipment, patch panel, fiber optic splicing and connectors, hardware, wiring and material needed for functional controller assembly integrating both fiber-optic and Spread Spectrum Radio technologies.

**00 - c9957 ITEM 9957-5001 SPREAD SPECTRUM RADIO TRANSCEIVERS AND ANTENNAS**

**Addendum:**

**Associated Item(s):** 9957-5001

**Header:**

ITEM 9957-5001 SPREAD SPECTRUM RADIO TRANSCEIVERS AND ANTENNAS

**Provision Body:**

DESCRIPTION—This work is the furnishing and installation of Pole Mounted Spread-Spectrum Wireless Transceivers and Antennas for communication within an existing closed loop system local controller unit and adding 2 local controller units to the system. The existing closed loop traffic signal system is manufactured by Econolite Control, Inc. and the spread spectrum radio equipment will be compatible with this system to provide the necessary transfer of communication data between the master and the secondary controller units. This work will also include enclosures, mounting brackets, and conduit at the following field locations:

- A. Menoher Boulevard and South Street (Local Controller)
- B. Napoleon Street and South Street (Local Controller)
- C. Washington Street and Franklin Street (Master & Local Controller)

MATERIAL—Furnish Spread Spectrum Radio (SSR) transceivers at the field locations indicated, meeting Section 950.2, 1104.1, 1104.8 and the following requirements:

**CERTIFICATION**

Licensed by the Federal Communications Commission (FCC) to meet the FCC regulations on spread spectrum operation as described in parts 15.247 and 15.249 of the Code of Federal Regulations and has been approved for indoor and outdoor applications.

**GENERAL**

- Input power 110 VAC (25 W Max)
- Operating Environment -40 degrees C to +80 degrees C
- Maximum Size 5"x 9"x 2"

**CONNECTORS**

- FSK RJ22
- RS232 DB9 Female
- Antenna BNC Female

**INTERFACE**

- DATA RATE (RS232) 1200 Bps to 115.2 Kbps
- DATA RATE (FSK) 1200 Bps to Bell 202
- DATA Format 8/9 Bits
- Operating Mode Point-to-Point, Point-to-Multi-Point

**INDICATORS**

- Radio Status LED's for TXD, RXD, and PWR Display



FSK Interface Superbrite LED's for TXD, RXD, and PWR

## **RADIO**

Frequency Range 902-928 MHz

Output Power Up to 1 Watt (user selectable)

Receiver Sensitivity -110 dBm

Technology Frequency Hopping Spread Spectrum(FHSS),

half Duplex or full Duplex as required

Number of Usable

Interface Channels 139

Available Hopping Sequences 62

**ERROR DETECTION/CORRECTION** 16 BIT CRC error checking with auto packet retransmission

**RANGE** 20+ miles

**FUNCTIONAL** Compatible with the closed loop operation and software as specified elsewhere in these specifications

This Wireless system must be 100% compatible with Traffic Management hardware and software, and must interface directly with 1200 baud FSK communication lines through a built-in FSK interface. Each radio must be a completely integrated package and must be field proven with references. Provide a list of customer references for similar systems with address, contact person, and telephone number for each reference when requesting approval.

The radio is to be of the frequency hopping spread spectrum technology type, operating in the frequency range of 902-928 MHz. Each radio must be software programmable for Master, Slave, and Repeater operation. For repeater operation, one transceiver must provide local communication along with repeating the signal to additional intersections. It is not acceptable to integrate 2 separate radios to create a repeater.

Each radio system must be complete with Windows™ Based configuration and diagnostics software. This software must provide system-wide diagnostics capabilities directly from the master radio location. As a minimum, the following features must be available:

- Local Configuration
- Remote Configuration
- Site Diagnostics (Signal Strength)
- System Diagnostics (Data Testing, Link Integrity)
- Spectrum Analyzer \*\*

If a Yagi antenna is to be provided it will be manufactured from 6061/T6 Aluminum rod and seamless drawn tube, all gold anodized. Provide stainless steel hardware and fastenings; capable of vertical or horizontal mounting; internal BALUN, Coax Feed and connectors sealed in a foam potting system to prevent moisture penetration.

Frequency Range: 902-928 MHz (Spread Spectrum)

Gain (over Dipole) 10 dB

VSWR <1.5

IMPEDENCE 50 OHMS

Front-to-Back Ratio 20 dB Minimum

Input Power Rating: 100 WATTS

Polarization: H or V (Rear Mount)

Termination: N Female (Mates with UG-21u)

Dimensions: 8" x 24" Maximum

Mounting: Attaches to pipe or mast with Max. O.D. of 2.375

Antenna types and mounting locations will be as recommended by the spread spectrum radio system supplier. Provide any modifications necessary at the intersection of Washington Street and Franklin Street to connect radio equipment to existing closed loop system fiber interconnect. controller assembly with necessary hardware and materials to accommodate the wireless spread spectrum radio equipment. This location will also be connected to fiber optic interconnect cable. The antenna location will be as recommended by the manufacturer of the spread spectrum radio system.

Provide, if necessary, luminaire arms at locations that may need to have the antennas extended over the roadway or as recommended by the manufacturer/supplier.

**CONSTRUCTION**—Section 950.3, 1104.01, and 1104.08 and the following requirements:

Shelf or rack mount the SSR transceiver in the controller cabinets or mount on the traffic signal support pole in a weather proof NEMA 4X enclosure. Install moisture-resistant sealers to protect the attachment of antenna and coaxial cable. Provide a rigid attachment of the unit to the structure mount to withstand a windload of 80 mph. Provide sufficient slack using drip loops for the coaxial cable and cable strain relief hardware. Ground the antennas properly.

Submit complete shop drawings of the antenna attachment to the Engineer for approval.

Install the Master radio, and take signal strength readings and spectrum scans at the slave site prior to installing the slave unit. With the approval of the engineer, make any necessary adjustments to the height, location, type of antenna, operating parameters, or whatever may be required to insure proper operation of the system.

Install name plates and wiring diagrams, sealed in a waterproof enclosure consisting of a metal frame with a plastic core permanently attached to the inside of the door on the enclosure or spread spectrum radio cabinet.

Furnish and install any other materials necessary to provide a fully functional spread spectrum wireless communication system.

Provide all required equipment and material for complete operational repeater stations (if needed). (Inc. all cabinets, transmission devices, Type "A" service, antennas, and wiring)

Pull, terminate and connect all power and communications wiring in the enclosure and spread spectrum radio cabinet(s).

## MEASUREMENT AND PAYMENT – EACH

Complete and operational. Include all equipment, hardware, testing, wiring, modification of the existing controller assembly at the master location and material needed for a functional Spread Spectrum Radio interconnect system within an existing hardwire closed loop traffic signal system.

## **00 - CONSTRUCTION RESTRICTIONS**

**Addendum:**

**Associated Item(s):**

**Header:**

CONSTRUCTION RESTRICTIONS

**Provision Body:**

**SR 0271 Section 16S**

No long term lane restrictions are permitted for this project, with the exception of the project detour.

The project detour will be implemented on a Monday through Thursday timeframe only. Do not implement the project detour on a Friday or weekend timeframe.

Do not implement the detour prior to May 28, 2013. Physical work shall begin within 24 hours of implementing the detour.

Remove project detour prior to June 18, 2013. Physical work after the said date will be completed using Publication 213 Short-term operations.

Road User Liquidated Damages will be assessed at \$10,000/day if the roadway is not open to unrestricted traffic flow before or after the said timeframe.

**SR 0271 Section 013**

No long term lane restrictions are permitted for this project, with the exception of the project detour.

Short-term Publication 213 lane restrictions are not permitted during the following timeframes:

July 3, 2013 to July 7, 2013 – Fourth of July

August 30, 2013 to September 3, 2013 – Labor Day Weekend

The project detour will be implemented on a Monday through Thursday timeframe only. Do not implement the project detour on a Friday or weekend timeframe.

Do not implement the detour prior to June 25, 2013. Physical work shall begin within 24 hours of implementing the detour.

Remove project detour prior to October 17, 2013. Physical work after the said date will be completed using Publication 213 Short-term operations.

Road User Liquidated Damages will be assessed at \$25,000/day if the roadway is not open to unrestricted traffic flow prior to or after the said timeframe.

**00 - d01 ADVANCE NOTICE TO CHANGE IN TRAFFIC CONTROL**

**Addendum:**

**Associated Item(s):**

**Header:**

ADVANCE NOTICE TO CHANGE IN TRAFFIC CONTROL

**Provision Body:**

Notify the Engineer at least 5 working days in advance of the start of any operation which will affect the flow of traffic and provide the Engineer with details of the work to be done.

**00 - INCENTIVE/DISINCENTIVE CLAUSE**

**Addendum:**

**Associated Item(s):**

**Header:**

INCENTIVE/DISINCENTIVE CLAUSE

**Provision Body:**

As specified below, the Contractor will be paid an incentive for each calendar day that S.R. 271-013 is open to unrestricted traffic. The milestone completion Date for incentive payment is established as October 17, 2013 with a maximum incentive of 10 calendar days. Furthermore, disincentive charges will be deducted as specified in the Special Provision titled "Road Users Liquidated Damages".

Incentive/disincentive payments will be made as follows:

1. Early Completion of Milestone Completion Date. The contractor will be paid an incentive, in the amount of \$25,000.00 each calendar day that traffic is open to unrestricted flow prior to the Milestone Completion Date. Any incentive payment will be made as an extra work item in accordance with Section 110.03.
2. Late Completion of Milestone Completion. Disincentive charges, equal to the daily road user costs, will be deducted from money due or become due the Contractor or the Surety for each calendar day the contractor fails to meet the Milestone Completion Date. If the amount chargeable exceeds the amount payable to the Contractor or Surety, the excess will be paid to the State by the Contractor or the Surety.

The milestone will not be considered complete until the detour is lifted and SR 271-013 is open to unrestricted traffic.

**00 - PROJECT FIELD OFFICE**

**Addendum:**

**Associated Item(s):**

**Header:**

PROJECT FIELD OFFICE

**Provision Body:**

Furnish, erect and maintain sufficient PROJECT FIELD OFFICE signs (C3-1) with directional arrow 90 degree turn marker (M6-1) signs leading from the nearest state highway to the field office, as directed.

## Performance Bonds

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**Surety Company:** Liberty Mutual Insurance Company

**Bonding Agency:** Marsh USA, Inc.

**Producer:** Marjorie A Altemus/PennDOT BP-002573

**Co-Insurer:** No

**Status:** Accepted

**Bond Number:** 387005217

**Bond Amount:** \$5,439,210.65

**NAIC:** 23043

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KNOW ALL MEN BY THESE PRESENTS, That we, *Joseph B. Fay Co. of P.O. Box 66, Russellton, PA 15076-0066* as PRINCIPAL, and Liberty Mutual Insurance Company a corporation, as SURETY, are held and firmly bound unto the *Commonwealth of Pennsylvania* in the full and just sum of \$5,439,210.65, lawful money of the United States of America, to be paid to the said Commonwealth of Pennsylvania, or it assigns, to which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

Sealed with our respective seals and dated this 26 day of September A.D. 2012.

Whereas, the above bounden PRINCIPAL has undertaken to contract with the said Commonwealth of Pennsylvania, by and through the Secretary of Transportation covering the work identified below for approximately the sum of the bond amount defined above.

The description and location of the project is as follows: The proposed Menoher Boulevard (SR 271) Slope Stabilization project is located in Southmont Borough, Cambria County just west of Johnstown. The primary work associated with this project entails approximately 1,850 feet of rock slope stabilization work along the southbound side of SR 0271 from Barnett Street to the historic Chapin Arch. Other work associated with this portion of the project is replacement of the rock barrier fence, milling and overlay, and reconfiguration of the intersection of SR 0271 and Barnett Street. The proposed Parkhill Slope Stabilization project is located in East Taylor and East Conemaugh Townships, Cambria County just east of Johnstown. The primary work associated with this project entails approximately 250 feet of rock slope stabilization and shotcrete facing along the southbound side of SR 0271. Additional work included in this project will be traffic signal upgrades and other miscellaneous construction, as indicated on the approved drawings included in the bid package for STATE ROUTE 0271, SECTION 013, in CAMBRIA COUNTY, CITY OF JOHNSTOWN, EAST TAYLOR TOWNSHIP, SOUTHMONT AND EAST CONEMAUGH BOROUGH at the following locations: SR 0271, SECTION 013 STATION 95+00.00 TO STATION 158+00.00 SEGMENT 0150, OFFSET 3128 TO SEGMENT 0180, OFFSET 0965 SR 0271, SECTION 16S SEGMENT 0300, OFFSET 0400 TO SEGMENT 0300, OFFSET 1100

and

WHEREAS, it was one of the conditions of the award of the Secretary of Transportation, acting for and on behalf of the Commonwealth of Pennsylvania, pursuant to which said contract was undertaken by the PRINCIPAL that these presents should be executed, to become binding upon the date the said contract is approved for the office of Budget, by the Comptroller.

NOW, THEREFORE, The conditions of this obligation is such that if the above bounden PRINCIPAL, as Contractor, shall in all respects comply with and faithfully perform the terms and conditions of said contract, and his, their, or its obligations thereunder, including the plans, specifications, and conditions therein referred to and made a part thereof, and such alterations as may be made in said specifications as therein provided for, and shall well and truly, and in a manner satisfactory to the Commonwealth of Pennsylvania, complete the work contracted for, and shall save harmless the Commonwealth of Pennsylvania from any expense incurred through the failure of said contractor to complete the work as specified, or for any damages growing out of the carelessness and/or negligence of said contractor or his, their, or its servants.

And shall save and keep harmless the said Commonwealth of Pennsylvania against and from all losses to it from any cause whatsoever, including patent, trademark, and copyright infringements, in the manner of constructing said section of roadway; then this obligation to be void or otherwise to be and remain in full force and virtue.

It is further provided that any alteration which may be made in the terms of the contract or in the work to be done under it or the giving by the Commonwealth of any extension of time for the performance of the contract or any other forbearance on the part of either the Commonwealth or the PRINCIPAL to the other shall not in any way release the PRINCIPAL and the SURETY or SURETIES or either or any of them, their heirs, executors, administrators, successors or assigns, from their liability hereunder, notice to the SURETY or SURETIES of any such alteration, extension, or forbearance being hereby waived.

IN WITNESS WHEREOF, the said PRINCIPAL and SURETY have duly executed this Bond under seal the day and year first above written.

**Attorney-in-Fact Certification**

\*The undersigned attorney-in-fact by executing this Performance Bond certifies that he/she is licensed with the company named as surety for this bond and that to the best of his/her knowledge the said surety is licensed with the Pennsylvania Insurance Department.

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**Bond Workflow Status**

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<b>Status</b>	<b>Name</b>	<b>Disposition</b>	<b>Date/Time</b>
Draft	Dennis Watkins/PennDOT BP-001279	Submit	09/25/2012 02:07:11 PM
Producer Review	Marjorie A Altemus/ PennDOT BP-002573	Sign	09/26/2012 02:14:39 PM
Contractor Review	Dennis Watkins/PennDOT BP-001279	Sign	09/26/2012 03:33:12 PM
BOD CMD Review	Roland L Rode/PennDOT	Accept	09/26/2012 03:57:04 PM

## Payment Bonds

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**Surety Company:** Liberty Mutual Insurance Company

**Bonding Agency:** Marsh USA, Inc.

**Producer:** Marjorie A Altemus/PennDOT BP-002573

**Co-Insurer:** No

**Status:** Accepted

**Bond Number:** 387005217

**Bond Amount:** \$5,439,210.65

**NAIC:** 23043

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KNOW ALL MEN BY THESE PRESENTS, That we, *Joseph B. Fay Co. of P.O. Box 66, Russellton, PA 15076-0066* as PRINCIPAL, and Liberty Mutual Insurance Company a corporation, as SURETY, are held and firmly bound unto the *Commonwealth of Pennsylvania* in the full and just sum of \$5,439,210.65, lawful money of the United States of America, to be paid to the said Commonwealth of Pennsylvania, or it assigns, to which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

Sealed with our respective seals and dated this 26 day of September A.D. 2012.

Whereas, the above bounden PRINCIPAL has undertaken to contract with the said Commonwealth of Pennsylvania, by and through the Secretary of Transportation covering the work identified below for approximately the sum of the bond amount defined above.

The description and location of the project is as follows: The proposed Menoher Boulevard (SR 271) Slope Stabilization project is located in Southmont Borough, Cambria County just west of Johnstown. The primary work associated with this project entails approximately 1,850 feet of rock slope stabilization work along the southbound side of SR 0271 from Barnett Street to the historic Chapin Arch. Other work associated with this portion of the project is replacement of the rock barrier fence, milling and overlay, and reconfiguration of the intersection of SR 0271 and Barnett Street. The proposed Parkhill Slope Stabilization project is located in East Taylor and East Conemaugh Townships, Cambria County just east of Johnstown. The primary work associated with this project entails approximately 250 feet of rock slope stabilization and shotcrete facing along the southbound side of SR 0271. Additional work included in this project will be traffic signal upgrades and other miscellaneous construction, as indicated on the approved drawings included in the bid package for STATE ROUTE 0271, SECTION 013, in CAMBRIA COUNTY, CITY OF JOHNSTOWN, EAST TAYLOR TOWNSHIP, SOUTHMONT AND EAST CONEMAUGH BOROUGH at the following locations: SR 0271, SECTION 013 STATION 95+00.00 TO STATION 158+00.00 SEGMENT 0150, OFFSET 3128 TO SEGMENT 0180, OFFSET 0965 SR 0271, SECTION 16S SEGMENT 0300, OFFSET 0400 TO SEGMENT 0300, OFFSET 1100

and

WHEREAS, it was one of the conditions of the award of the Secretary of Transportation, acting for and on behalf of the Commonwealth of Pennsylvania, pursuant to which said contract was undertaken by the PRINCIPAL that these presents should be executed, to become binding upon the date the said contract is approved for the office of Budget, by the Comptroller.

NOW, THEREFORE, The conditions of this obligation is such that if the above bounden PRINCIPAL shall and will promptly or cause to be paid in full all sums of money which may be due by contractor or corporation, for all materials furnished or labor supplied or performed in the prosecution of the work, whether or not the said material or labor entered into and became component parts of the work or improvement contemplated, and for rental of the equipment used and services rendered by public utilities in, or in connection with, the prosecution of such work, then this obligation to be void, otherwise to remain in full force and effect.

The PRINCIPAL and SURETY hereby, jointly and severally, agree with the obligee herein that any individual, firm, partnership, association or corporation, which has performed labor or furnished material in the prosecution of the work as provided, and any public utility which has rendered services in, or in connection with, the prosecution of such work, and which has not been paid in full therefor, may sue *assumpsit* on this Payment Bond in his, their, or its own name and may prosecute the same to final judgement for such sum or sums as may be justly due to him, them, or it, and have execution thereon. Provided, however, that the Commonwealth shall not be liable for the payment of any costs or expenses of such suit.

Recovery by any individual, firm, partnership, association or corporation hereunder shall be subject to the provisions of the "Public Works Contractors' Bond Law of 1967", Act No. 385, approved December 20, 1967, P.L. 869, which Act shall be incorporated herein and made a part hereof, as fully and completely as though its provisions were fully and at length herein recited.

It is further provided that any alteration which may be made in the terms of the contract or in the work to be done or materials to be furnished or labor to be supplied or performed under it or the giving by the Commonwealth of any extension of time for the performance of the contract or any other forbearance on the part of either the Commonwealth or the Principal to the other

shall not in any way release the PRINCIPAL and the SURETY or SURETIES or either or any of them, their heirs, executors, administrators, successors or assigns, from their liability hereunder, notice to the SURETY or SURETIES of any such alteration, extension, or forbearance being hereby waived.

IN WITNESS WHEREOF, the said PRINCIPAL and SURETY have duly executed this Bond under seal the day and year first above written.

**Attorney-in-Fact Certification**

\*The undersigned attorney-in-fact by executing this Payment Bond certifies that he/she is licensed with the company named as surety for this bond and that to the best of his/her knowledge the said surety is licensed with the Pennsylvania Insurance Department.

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**Bond Workflow Status**

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<b>Status</b>	<b>Name</b>	<b>Disposition</b>	<b>Date/Time</b>
Draft	Dennis Watkins/PennDOT BP-001279	Submit	09/25/2012 02:06:13 PM
Producer Review	Marjorie A Altemus/ PennDOT BP-002573	Sign	09/26/2012 02:12:59 PM
Contractor Review	Dennis Watkins/PennDOT BP-001279	Sign	09/26/2012 03:32:18 PM
BOD CMD Review	Roland L Rode/PennDOT	Accept	09/26/2012 03:56:51 PM



## Insurance

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**Willis of Pennsylvania, Inc.**

444 Liberty Ave  
Four Gateway Center  
Ste 505, PA 15222

**Company:** Travelers Property Casualty Company of Am

**Policy:** VTC2JC0948K1996TIL11

**Expiration:** 12/31/2012

## DBE Commitments

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**DBE:** 5%  
**Approved:** 5.52%

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**Perform Less Than 50% of Work Items:** No  
**Good Faith Effort Evaluation:** No

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<b>Status</b>	<b>Business Partner</b>	<b>Business</b>	<b>% of Bid</b>	<b>Submitted</b>	<b>Acknowledged</b>
Approved	Madura Steel Sales, Inc.	Regular Dealer	5.52%	09/18/2012	09/18/2012

**Madura Steel Sales, Inc.**

**Prime**

**Contact:** Dennis Watkins  
**Phone:** 724-265-4600  
**DBE:** 5%

**Status:** Approved  
**Revision Number:**

**DBE**

**Business Partner:** Madura Steel Sales, Inc.  
**Type:** DBE  
**Contact:** Debbie Madura  
**Phone:** 724-962-8114  
**DBE JVT%:**  
**Certification:** 2177  
**Cert. Expiration:** 04/30/2014

**Agreement Amount:** \$300,000.00  
**% of Bid:** 5.52  
**Mobilization:** \$0.00  
**Starting:** 11/26/2012  
**Completion:** 07/31/2013  
**Business Type:** Regular Dealer

**Items**

None

**Partial Items**

Item	Description	Unit of Measure	Quantity
9000-0207	ROCKFALL BARRIER DEMOLITION AND REPLACEMENT	LF	1,074.000
9000-0207	ROCKFALL BARRIER DEMOLITION AND REPLACEMENT	LF	1,074.000
9000-0205	GEOBRUGG SPIDER WIRE MESH	SY	3,600.000
9000-0204	GEOBRUGG TECCO WIRE MESH	SY	24,800.000

**Comment**

None

**Workflow**

Status	Name	Disposition	Date/Time
Draft	Dennis Watkins/PennDOT BP-001279	Submit	09/18/2012 08:44:45 AM
Awaiting Acknowledgement	Debora X Madura/PennDOT BP-001632	Acknowledge	09/18/2012 09:26:40 AM
Acknowledged	Dennis Watkins/PennDOT BP-001279	Submit	09/18/2012 12:00:07 PM
PennDOT Review	Delores A Ritzman/PennDOT	Approve	09/18/2012 12:52:21 PM

# Plans

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**Plans**

**Addendum**

Roadway Plan

**Supplemental Plans**

Cross Section

Erosion and Sediment Pollution Control Plan

Signing and Pavement Marking Plan

Traffic Control Plan

Traffic Signal Plan

## Attachments

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### Project-Specific Checklist Items

Addendum

- Project Specific - Exhibit 1 Certificate of Non - Compliance
- Project Specific - Steel Escalation Option
- Project Specific - Form FP-001 (Certification of Origin of Clean Fill Act)
- Project Specific - Environmental Commitments and Mitigation Tracking System Report

### Reviews

None

### Contract Award Items

- Disclosure of Lobbying Activities
- F.A.R. REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
- Federal Wage Rate - Dated: 08-03-2012

### Local Agreements and Coordination

None

### Environmental Clearances

None

### Permits

- Environmental Due Diligence (EDD) - Contractor
- Environmental Due Diligence (EDD) - PennDOT - SR 0271, Section 013
- Environmental Due Diligence (EDD) - PennDOT - SR 0271, Section 16S

### Right of Way

None

### Survey

None

### Utilities Clearance

None

### Utility Engineering

None

### Construction Items

- Pre-Bid Construction Schedule - Calendar
- Pre-Bid Construction Schedule - Flow Chart
- Pre-Bid Construction Schedule - Bar Chart

### Structures and Geotechnical

None

### Railroad Coordination

None

### Traffic

None

**Construction Coordination**

None

**Maintenance Items**

None

**Estimates**

None

**Comments:**