ECMS Highway Construction

Contract: 62996

Leeward Construction, Inc. XX-XXXXXXX

Honesdale

570-253-4090 (phone)

570-253-4581 (fax)

tquinnan@leewardconstruction.com

Prime Business Partner

SusquehannaCounty

SR 92, Section 502

SR 92 & 171 INTERSECTION

Location

X045-259-L25E

Federal Project

P-30009207502-0450-373-1

WBS Element

April 12, 2012

Bid Opening

TABLE OF CONTENTS

Contract

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.

There are no Addenda.

THIS AGREEMENT, Made this *26* day of *April* A.D. *2012*, between the Commonwealth of Pennsylvania by the Secretary of Transportation, hereinafter called the Commonwealth and *Leeward Construction, Inc.* 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 *$744,912.75* 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:
For the rehabilitation and improvement of a certain section of STATE HIGHWAY in SUSQUEHANNA COUNTY, SUSQUEHANNA DEPOT BOROUGH, Commonwealth of Pennsylvania, STATE ROUTE 0092 SECTION 502. The project being situated as follows: From a point approximately 7.8 miles (41,184 linear feet) west of Jackson at Segment 0520 offset 0495 (Station 899+00) to the intersection with SR 0171 at Segment 0520 Offset 1087 (Station 904+92.00) This project consists of realignment of the intersection of SR 00092 and SR 00171 consisting of overlay of the existing road with SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARINGCOURSE, 1 ½ inch depth, SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDERCOURSE, PG 64-22 2 ½ inch depth, reconstruction of Euclid Avenue, a cast in place concrete wall and a soldier pile wall, sidewalks and curbing, ADA ramps, drainage, guiderail and pavement markings all contained within an overall project length of 592.00 linear feet (0.112mile) as indicated on the approved drawings included in the bid package.

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 *06/06/2013*. 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.

Fiscal Information:

Recorded Number:	62996
Certified Fund Available Under Activity Program:	373

Symbol: 010-008-10581-11/12-1

Amount: $744,912.75

Contract Workflow Status

Status	Name	Disposition	Date/Time
Draft	Delores A Ritzman/PennDOT	Award	04/20/2012 02:03:55 PM
Contractor Review	Eric R Linde/PennDOT BP-000557	Sign	04/23/2012 09:26:32 AM
BOD CMD Review	Becki G Mescher-Vuxta/ PennDOT	Accept	04/23/2012 10:46:40 AM
BOD Director Review	R. Wayne Willey/PennDOT	Sign	04/24/2012 08:12:26 AM
Chief Counsel Preliminary Review	Jody King/PennDOT	Accept	04/25/2012 09:04:11 AM
Chief Counsel Final Review	Jody King/PennDOT	Accept	04/25/2012 09:04:14 AM
Comptroller Review	Andrew K Peters/PennDOT	Accept	04/26/2012 08:26:26 AM
CMD Execute	Lynn A Phillips/PennDOT	Submit	04/26/2012 08:29:12 AM

Addenda

None

Bid Items

Item	Description	Quantity	Unit Price	Item Total	Addendum
0203-0001	CLASS 1 EXCAVATION	942.000	$25.00	$23,550.00	
4204-0001	CLASS 2 EXCAVATION (MODIFIED)	54.000	$50.00	$2,700.00	
0205-0100	FOREIGN BORROW EXCAVATION	265.000	$30.00	$7,950.00	
0309-0426	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BASE COURSE, PG 64-22, 0.3 TO < 3 MILLION ESALs, 25.0 MM MIX, 6" DEPTH	998.000	$30.00	$29,940.00	
0350-0108	SUBBASE 8" DEPTH (NO. 2A)	727.000	$15.00	$10,905.00	
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	1,974.000	$12.00	$23,688.00	
0409-6450	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER COURSE, PG 64-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH	625.000	$20.00	$12,500.00	
0409-7470	SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER COURSE (LEVELING), PG 64-22, 0.3 TO < 3 MILLION ESALS, 19.0 MM MIX	11.000	$125.00	$1,375.00	
0460-0001	BITUMINOUS TACK COAT	2,599.000	$0.25	$649.75	
0491-0012	MILLING OF BITUMINOUS PAVEMENT SURFACE, 1 1/2" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	279.000	$9.00	$2,511.00	
0491-0019	MILLING OF BITUMINOUS PAVEMENT SURFACE, VARIABLE DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR	1,020.000	$9.00	$9,180.00	
4601-0352	15" THERMOPLASTIC PIPE, GROUP III, 8'-2' FILL (MODIFIED)	258.000	$90.00	$23,220.00	
4601-0400	18" THERMOPLASTIC PIPE, GROUP VI, 15'-2' FILL (MODIFIED)	25.000	$120.00	$3,000.00	
4601-0763	18" DUCTILE IRON PIPE (MODIFIED)	20.000	$300.00	$6,000.00	
4601-7313	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL (MODIFIED)	90.000	$130.00	$11,700.00	
0605-2711	TYPE C CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	5.000	$1,000.00	$5,000.00	
0605-2731	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	8.000	$1,000.00	$8,000.00	
0605-2850	STANDARD INLET BOX, HEIGHT < /= 10'	10.000	$2,000.00	$20,000.00	
0605-2854	TYPE 4 INLET BOX, HEIGHT < /= 10'	1.000	$3,000.00	$3,000.00	
0606-0150	GRADE ADJUSTMENT OF EXISTING MANHOLES	1.000	$500.00	$500.00	
0607-0013	REBUILT INLET BOX	10.000	$250.00	$2,500.00	
0608-0001	MOBILIZATION	1.000	$30,000.00	$30,000.00	
0609-0003	INSPECTOR'S FIELD OFFICE AND INSPECTION FACILITIES, TYPE B	1.000	$10,000.00	$10,000.00	
0609-0009	EQUIPMENT PACKAGE	1.000	$3,500.00	$3,500.00	
0615-0023	8" SUBSURFACE DRAIN OUTLETS	2.000	$100.00	$200.00	
0620-0400	TERMINAL SECTION, SINGLE	2.000	$110.00	$220.00	
0620-0503	REMOVE EXISTING GUIDE RAIL (CONTRACTOR'S PROPERTY)	50.000	$10.00	$500.00	
0620-0585	RUBBING RAIL	150.000	$18.00	$2,700.00	
0620-1075	TYPE 2-S GUIDE RAIL	450.000	$27.50	$12,375.00	
0627-0001	TEMPORARY CONCRETE BARRIER	63.000	$100.00	$6,300.00	
0627-0011	TEMPORARY END TRANSITION	2.000	$490.00	$980.00	
0630-0001	PLAIN CEMENT CONCRETE CURB	571.000	$25.00	$14,275.00	
0640-0005	PLAIN CEMENT CONCRETE GUTTER	44.000	$125.00	$5,500.00	
0676-0001	CEMENT CONCRETE SIDEWALK	228.000	$85.00	$19,380.00	
0686-0020	CONSTRUCTION SURVEYING, TYPE B	1.000	$10,000.00	$10,000.00	
0689-0002	NETWORK SCHEDULE	1.000	$2,500.00	$2,500.00	
0695-0004	DETECTABLE WARNING SURFACE, POLYMER COMPOSITE	48.000	$50.00	$2,400.00	
4804-0012	SEEDING AND SOIL SUPPLEMENTS - FORMULA C (MODIFIED)	4.000	$415.00	$1,660.00	

4804-0013	SEEDING AND SOIL SUPPLEMENTS - FORMULA D (MODIFIED)	1.000	$184.00	$184.00
0805-0037	MULCHING - SHREDDED BARK WITH WEED BARRIER MAT	650.000	$9.15	$5,947.50
0806-0050	EROSION CONTROL MAT	255.000	$4.20	$1,071.00
0808-3626	SNOWDRIFT CRAB - (1" CAL. B&B)	10.000	$184.00	$1,840.00
0808-4173	DWARF WINGED EUONYMUS - (3' HT. B&B - HEAVY)	61.000	$60.00	$3,660.00
0808-4290	BAYBERRY - (18" HT. B&B)	6.000	$35.00	$210.00
0808-4692	PFITZER JUNIPER - (2' SPD. B&B)	9.000	$58.00	$522.00
0808-4880	HATFIELD YEW - (18" HT. B&B)	2.000	$46.00	$92.00
0865-0003	SILT BARRIER FENCE, 30" HEIGHT	45.000	$5.00	$225.00
0866-0005	HEAVY DUTY SILT BARRIER FENCE	100.000	$10.00	$1,000.00
0901-0001	MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION	1.000	$10,000.00	$10,000.00
0901-0451	3-LINE CHANGEABLE MESSAGE SIGN WITHOUT TELECOMMUNICATIONS	3.000	$10,000.00	$30,000.00
0931-0001	POST MOUNTED SIGNS, TYPE B	76.000	$40.25	$3,059.00
0932-0001	POST MOUNTED SIGNS, TYPE C	8.000	$90.00	$720.00
0937-0107	GUIDE RAIL MOUNTED DELINEATOR TYPE B, (W/W)	19.000	$18.00	$342.00
0960-0002	4" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS	438.000	$4.00	$1,752.00
0960-0021	24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	228.000	$23.00	$5,244.00
0962-1001	6" WHITE WATERBORNE PAVEMENT MARKINGS	213.000	$5.25	$1,118.25
0962-1005	4" YELLOW WATERBORNE PAVEMENT MARKINGS	90.000	$3.00	$270.00
0962-1030	WHITE WATERBORNE PAVEMENT LEGEND, "HANDICAP SYMBOL", 3'-3" X 2'-11"	1.000	$460.00	$460.00
4962-1060	WHITE WATERBORNE PAVEMENT LEGEND, "STRAIGHT ARROW", 12'-0" X 1'-8" (MODIFIED)	2.000	$460.00	$920.00
4962-1061	WHITE WATERBORNE PAVEMENT LEGEND, "RIGHT ARROW", 12'-0" X 3'-0" (MODIFIED)	2.000	$460.00	$920.00
4962-1062	WHITE WATERBORNE PAVEMENT LEGEND, "LEFT ARROW", 12'-0" X 3'-0" (MODIFIED)	1.000	$460.00	$460.00
0963-0001	PAVEMENT MARKING REMOVAL	72.000	$11.50	$828.00
1002-0053	REINFORCEMENT BARS, EPOXY COATED	4,848.000	$2.50	$12,120.00
8610-0001	CONCRETE RETAINING WALL AS DESIGNED, S-31576	1.000	$76,175.00	$76,175.00
8700-0001	SOLDIER PILE RETAINING WALL AS DESIGNED, S-31575	1.000	$158,675.25	$158,675.25
9000-0004	SAWCUTTING	1,979.000	$3.00	$5,937.00
9000-0007	UTILITY TEST PITS	10.000	$750.00	$7,500.00
9000-5000	DATE STONE AND CONCRETE LINTEL PLACEMENT	1.000	$1,000.00	$1,000.00
9000-5001	PEDESTRIAN RAILING	10.000	$510.00	$5,100.00
9000-5002	FENCE	95.000	$140.00	$13,300.00
9203-0101	TEMPORARY EXCAVATION AND SUPPORT SYSTEM	1.000	$25,000.00	$25,000.00
9203-0102	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM	1.000	$35,000.00	$35,000.00
9409-0001	TEMPORARY BITUMINOUS TYPE 3 CURB RAMP	2.000	$1,000.00	$2,000.00
9931-0001	POST MOUNTED DELINEATOR (RED) SIGN, TYPE B, MODIFIED	2.000	$55.00	$110.00
9931-0002	REMOVAL OF EXISTING SIGNS AND POSTS	11.000	$72.00	$792.00
9931-0003	REMOVE AND RELOCATE EXISTING SIGNS	2.000	$200.00	$400.00
9931-0004	REMOVE AND RESET EXISTING SIGN	3.000	$200.00	$600.00

Contract Total: $744,912.75

Bid Total: $744,912.75

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 no 2,effective April 2, 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:

(X) DSP1. Offset Provision for Commonwealth Contracts.

(X) DSP2. Contractor Responsibility Provisions.

(X) 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 6 % 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.

G401A - a00401 ADVANCE NOTICE OF TRAFFIC RESTRICTIONS

Addendum:

Associated Item(s):

Header:
ADVANCE NOTICE OF TRAFFIC RESTRICTIONS

Provision Body:

Notify the Engineer at least 4 calendar 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. After notification, the District Office will advise the public of these traffic restrictions and possible delays.

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).

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 Susquehanna County

which is within the Economic Area of Binghamton-Elmira

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.

G3003B - a03003 CLARIFICATION OF FEDERAL REGULATION IMPACTS TO F.A.R.

Addendum:

Associated Item(s):

Header:
CLARIFICATION OF FEDERAL REGULATION IMPACTS TO F.A.R. REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

Provision Body:

Recent federal regulations have modified reporting requirements for federally funded highway construction projects. Those modifications and their impact on the F.A.R. are identified below.

V.Statements and Payrolls

(b) Payrolls and Payroll Records

3.In accordance with federal regulation 29 CFR 5.5(a)(3)(ii)(A), only certified payroll records submitted to the Department shall no longer include the employee's full social security number and address, but shall only include the last four digits of the employee's social security number.All other required documentation shall remain the same.

4. First bullet: In accordance with federal regulation 29 CFR 5.5 (a) (3) (ii) (A), only certified payroll records submitted to the Department shall no longer include the employee's full social security number and address, but shall only include the last four digits of the employee's social security number.All other required documentation shall remain the same.

VI.Record of Materials, Supplies, and Labor

In accordance with final rule regarding federal regulation 23 CFR Part 635.126, which eliminated the FHWA-47, this paragraph no longer applies.

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.

TRI-BORO MUNICIPAL AUTHORITY

Contact: Joseph Schell, telephone 570-853-4206 tribroma@epix.net

NOT AFFECTED: (U/G) SR 0171 Station 402+00 to 405+00 Right and Left

SR 0092 Station 902+00 to 904+92 Right and Left

PENNSYLVANIA ELECTRIC COMPANY

Contact: Kurt Durland, telephone 570-265-1283 kdurland@firstenergycorp.com

COORDINATED: (Aerial) SR 0092 Station 900+97 Right

Complete coordinated work for Frontier. Utility will transfer to new Frontier pole.

One(1) calendar days required

COORDINATED: (Aerial) SR 0092 Station 901+82 Right

Complete coordinated work for Frontier. Utility will transfer to new Frontier pole.

One(1) calendar days required

COORDINATED: (Aerial) SR 0092 Station 902+65 Right

Complete coordinated work for Frontier. Utility will transfer to new Frontier pole.

One(1) calendar days required

COORDINATED: (Aerial) SR 0092 Station 903+65 Right

Complete coordinated work for Frontier. Utility will transfer to new Frontier pole.

One(1) calendar days required

COORDINATED: (Aerial) SR 0092 Station 903+65 to 903+95 Right

Complete coordinated work for Frontier pole. Utility will transfer service cable from Pole K-1 to pole S-1 at Station 403+20 left.

One(1) calendar days required

CONDITIONAL RESTRICTION: (Aerial) Frontier must install poles before Penelec can attach.

FRONTIER COMMUNICATIONS SOLUTIONS

Contact: Steve Lathrope, telephone 570-278-0036 steven.lathrop@ftr.com

COORDINATED: (Aerial) SR 0092 Station 900+97 Right

Stake road edge and guiderail. Utility will relocate pole back and 6’ ahead station to maintain 3’ minimum behind guiderail post.

Five (5) calendar days required.

COORDINATED: (Aerial) SR 0092 Station 901+82 Right

Stake road edge and guiderail. Utility will relocate pole back to maintain 3’ minimum behind guiderail post. Install Guy.

Five (5) calendar days required.

COORDINATED: (Aerial) SR 0092 Station 902+65 Right

Stake road edge and guiderail. Utility will relocate pole back to maintain 3’ minimum behind guiderail post.

Five (5) calendar days required.

COORDINATED: (Aerial) SR 0092 Station 903+65 Right

Stake road edge and guiderail. Utility will relocate pole back and 35’ back station to maintain 3’ minimum behind guiderail post. Pole will be a 50’ pole to add an additional 5’ clearance under aerial cables.

Five (5) calendar days required.

COORDINATED: (Aerial) SR 0092 Station 903+65 to 903+95 Right

Perform coordinated work for pole. Utility will relocate service as required.

Five (5) calendar days required.

CONDITIONAL RESTRICTION: (Aerial) Penelec and Adams must transfer to new Frontier poles before Frontier can transfer.

PENNSYLVANIA AMERICAN WATER COMPANY

Contact: Dan Millard, telephone 570-853-4629 dan.millard@amwater.com

COORDINATED: (U/G) SR 0171 Station 402+64 Right

Layout curb location and back of sidewalk. Utility will relocate Fire Hydrant back maintaining 1.5’ from face of curb and maintaining 5’ clear sidewalk behind.

One (1) calendar day required.

COORDINATED: (U/G) SR 0171 Station 402+35 to 403+60 Right and Left

Determine final grade of roadway. Utility will adjust valves and curb boxes to grade.

One (1) calendar day required.

COORDINATED: (U/G) SR 0092 Station 902+32 to 904+92 Right and Left

Determine final grade of roadway. Utility will adjust valves and curb boxes to grade.

One (1) calendar day required.

ADAMS CABLE SERVICE

Contact: Gary Rixner, Technical Supervisor, telephone 570-282-6121 gary@echoes.net

COORDINATED: (Aerial) SR 0092 Station 900+97 Right

SR 0092 Station 901+82 Right

SR 0092 Station 902+65 Right

SR 0092 Station 903+65 Right

Complete coordinated work for Frontier. Utility will transfer to new Frontier Poles.

Seven (7) calendar days required.

CONDITIONAL RESTRICTION: (Aerial) Frontier must install poles and Penelec must transfer before Adams can transfer.

SUSQUEHANNA DEPOT BOROUGH

Contact: Steve Glover, telephone 570-853-3227

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 $3.39 per gallon. Use this index price in accordance with Section 110.12 PRICE ADJUSTMENT FOR DIESEL FUEL COST FLUCTUATIONS.

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 $628.00 per ton. Use this price index in accordance with Section 110.04 PRICE ADJUSTMENT OF BITUMINOUS MATERIALS.

G4902B - 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@state.pa.us no later than 3:00 pm prevailing local time on the seventh calendar day 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 no later than 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 no later than 3:00 pm prevailing local time on the seventh calendar day 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).

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.

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.

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.

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:

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.

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, HP12x74", the unit weight of the steel is 74 pounds per foot).

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

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.

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:

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:

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:

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.

G7028C - a07028 CHANGES TO SPECIFICATIONS: SECTION 1105

Addendum:

Associated Item(s):

Header:
Changes to Specifications: Section 1105

Provision Body:

- Revise Section 1105 - Fabricated Structural Steel to read as follows:

SECTION 1105 - STRUCTURAL STEEL AND ALUMINUM

1105.01 GENERAL REQUIREMENTS—

(a) Prequalification. Structural steel and aluminum fabricators performing work for the Department are required to prequalify according to the American Institute of Steel Construction's (AISC) Quality Certification Program and obtain approval from the Chief Structural Materials Engineer. Plants and shops must be registered and certified under the AISC program with Simple Steel Bridge Structures (SBr), Major Steel Bridge (CBr) or Standard for Bridge and highway Metal Component Manufacturers (B- CMP) certification and must submit a valid certificate to the Chief Structural Materials Engineer, at 81 Lab Lane, Harrisburg, PA. 17110. Annual submission of an endorsed copy of the certificate is required for continued prequalification. New fabricators or certified fabricators wishing to upgrade certification are required to furnish acceptable references for which the fabricator has successfully completed fabrication of similar members. If unable to furnish references, the fabricator must satisfactorily produce a sample member to obtain Department approval and listing in Bulletin 15.

Only fabricators having CBr certification including the Fracture Critical endorsement may fabricate the following:

Fracture critical members and attachments.

Only fabricators having CBr certification may fabricate the following:

Main bridge members, except for certain rolled beams

Welded floorbeams

Cross frames and diaphragms for curved bridges

Bracing, portals, and stiffening members for arches, trusses, cable stayed and suspension bridges

Rolled beams with butt welds that are heat-curved, or heat-cambered, or cold cambered.

Fabricators having either the CBr or SBr certification may fabricate the following:

Rolled beams with bearing stiffeners and diaphragm connection or cover plates[2]

Cross frames and diaphragms for straight bridges

Shop-fabricated material for reinforcing existing bridges[1]

Lateral bracing except for arches, trusses, cable-stayed, and suspension bridges[1]

Note 1: Fabricate in a CBr certified plant if welding is required.

Note 2: SBr certified plants must qualify for initial approval from the Chief Structural Materials Engineer to perform heat cambering or cold cambering on rolled beams.

Fabricators having CBr, SBr, or B-CMP certification may fabricate the following:

Expansion dams

Bridge drainage material

Welded bearings

Inspection walks

Steel grid flooring

Overhead sign structures

Welded sound barrier supports

Bridge railing

Pedestrian railing

Structure mounted guide rail

Welded protective barrier

Traffic, lighting or camera poles

AISC certification is not required for the following:

Castings, forgings, and machined parts not welded

Non metallic bearings

Protective fence

Material not requiring shop fabrication or shop welding, such as plates and shapes for strengthening existing bridges and manufactured items accepted by certification

Prequalification of 'machine shops' (who provide services and materials to approved fabricators) for listing in Bulletin 15 is required. Approved fabricators are not required to prequalify as machine shops. Approved machine shops may perform one or more of the following operations[3]:

- Cutting or shearing materials to finish size
- Grinding
- Drilling or punching
- Cold bending
- Machining
- Flattening

Note 3: Individual shop operations may be limited. Refer to Bulletin 15 for limitations.

(b) Standard Reference. Section 105.04

(c) Shop Drawings. Section 105.02 and as follows:

Bridge members and other structures are generally designed in lengths, depths, and widths that can be transported from the fabrication source to the project. Field splices, if required, must be indicated and detailed on the shop drawings. If required by the District Executive, submit design computations prepared by a Professional Engineer registered in the State according to the Design Manual, Part 4, Structures. The District Executive will not review requests for elimination of field splices unless a notice is included from the Bureau of Maintenance and Operations that a hauling permit can be obtained to ship beams exceeding the dimensions shown on the structure drawings.

(d) Erection Drawings. Section 1050.3(c)2.d

(e) Inspection.

1. General. The MTD will oversee and manage in-plant Quality Assurance inspection. The fabricator is responsible for notifying their assigned consultant inspection firm a minimum of 48 hours (excluding weekends and holidays) before the beginning of work so that arrangements can be made for inspection.

The Representative may waive shop inspection and make a complete inspection at a later stage in the construction sequence. Furnish certified mill reports, in duplicate, covering the structural steel used.

2. Facilities for Inspection. Furnish necessary facilities for the inspection of material and workmanship. Furnish an Inspector's Field Office, Type C, as specified in Section 714.5(a), except provide a four drawer, fire resistant (D label) metal file cabinet in place of a two drawer, fire resistant (D label) metal file cabinet. Allow inspectors employed by the Department unrestricted access to work in process and stored material during plant working hours.

3. Plant Inspector's Authority. Plant Inspectors have the authority to reject any material or work not conforming to the requirements of these Specifications. In case of dispute, the Contractor may appeal to the Representative, whose decision will be final.

4. Rejections. Material, workmanship, or finished members accepted by the inspector at the shop may be rejected later if they do not conform to the specifications. Repair or replace rejected material or members.

5. Testing. If directed, furnish test specimens of material, as well as equipment, tools, and labor necessary to prepare the specimens and to make the tests.

6. Mill Orders and Shipping Statements. Furnish copies of mill orders and shipping statements as directed. Show the weights of the individual members on the statement. Ensure that the fabricator submits a copy of the shipping invoice to the Department's Shop Inspector to be stamped for verification of inspection and acceptance of steel items before shipment. Forward the stamped copy of the shipping invoice with the shipment for the project file. The Shop Inspector will review and accept mill certifications and return them to the fabricator.

(f) Storage of Materials. Section 106.05 and as follows:

> Place materials stored aboveground on platforms, skids, or other supports. Place and support materials to avoid overstress, deformation, or damage. Exercise special care for curved members. Keep materials free from dirt, grease, and other foreign materials. Ensure proper drainage and protect materials from corrosion.

(g) QC.

1. General. Establish and maintain a level of QC based on uniform fabrication practices. Do not initiate fabrication without an approved QC plan.

2. QC Plan. Shops seeking prequalification must submit a QC Plan to the Chief Structural Materials Engineer, MTD, for review and approval. Develop the plan in accordance with the criteria established in AASHTO-NSBA Steel Bridge Collaboration document S4. 1-2002 “Steel Bridge Fabrication QC/ QA Guide Specification” (refer to Publication 135 for an outline of the QC plan criteria). Facilities performing welding that require non-destructive testing must submit their written practice according to the current version of ASNT- SNT-TC-1A. Pre-qualified shops must submit an updated QC Plan to the Chief Structural Materials Engineer, MTD, if there are any changes in materials, processes, or personnel.

3. QC Personnel. Assign sufficient qualified personnel with structural steel and/ or aluminum fabrication experience to be responsible for QC during the fabrication process, storage, and shipment. Do not proceed with fabrication until qualified QC personnel are present and approved by the Department. Provide an AWS Certified Welding Inspector (CWI) on site as the Fabricator's designated QC Representative to oversee all processes of fabrication that involve welding, application of heat, or straightening of material.

1105.02 MATERIAL—

(a) Structural Steel and Aluminum.

1. General. AASHTO M 160/M 160M (ASTM A 6/A 6M)

2. Carbon Steel. AASHTO M 270/M 270M (ASTM A 709/A 709M), Grade 250 (Grade 36), ASTM A 36, ASTM A992 (Structural Steel Shapes).

2.a Cold Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes. ASTM A 500/A500M, Grade A, B, or C.

2.b Hot Formed Welded and Seamless Carbon Steel Structural Tubing. ASTM A 501

3. High-Strength Low Alloy Structural Steel for Welding.

3.a High Strength Low Alloy, Quenched and Tempered Structural Steel Plate. AASHTO M 270/ M 270M (ASTM A 709/ A 709M), Grade HPS 485W (Grade HPS 70W).

3.b High-Strength Low-Alloy TMCP Structural Steel Plate. AASHTO M 270/M 270M (ASTM A 709/A 709M), Grade HPS 485W (Grade HPS 70W), up to 2 inches thick.

3.c High Strength Low Alloy Structural Steel. AASHTO M 270/M 270M (ASTM A 709/A 709M), Grades 345 or 345W (Grades 50 or 50W), ASTM A 572, Grade 345 (Grade 50), of a quality suitable for welding.

3.d High Strength Low Alloy Columbium Vanadium Steel of Structural Quality. AASHTO M 270/ M 270M (ASTM 709/ A 709M), Grade 345 (Grade 50), ASTM A 572, Grade 345 (Grade 50).

3.e High Strength Low Alloy Structural Steel with 50,000 pounds per square inch Minimum Yield Point to 4 inches Thick. AASHTO M 270/M 270M (ASTM A 709/A 709M), Grade 345W (Grade 50W), ASTM A 588 (Grades A, B, and C only[4]).

Note 4: Plate thicknesses greater than 4 inches are required to conform to the physical properties listed in the specification for plate thicknesses 4 inches and under.

3.f High Yield Strength, Quenched and Tempered Alloy Steel Plate.

3.f.1 High Yield Strength, Quenched and Tempered Alloy Steel Plate, Suitable for Welding. AASHTO M 270/M 270M (ASTM A 709/A 709M), Grades 690 or 690W (Grades 100 or 100W).

3.f.2 High Strength Alloy Steel Plates, Quenched and Tempered, for Pressure Vessels. ASTM A 517/A 517M. Conforming to the supplementary notch toughness requirements of AASHTO M 244/M 244M-1996.

3.f.3 Quenched and Tempered Alloy Steel Structural Shapes and Seamless Mechanical Tubing. Products conforming to all of the mechanical and chemical requirements of ASTM A 709/A 709M, Grades 690 or 690W (Grades 100 or 100W) steel, except with a maximum tensile strength of 140,000 pounds per square inch for structural shapes and 145,000 pounds per square inch for seamless mechanical tubing, are to be considered as ASTM A 709/A 709M.

3.g Stainless Steel. As indicated on the plans. Use only prequalified base metals listed in AWS D1.6/D1.6M – 2007.

4. Aluminum. As indicated on the plans. Use only prequalified based metals listed in AWS D1.2/D1.2M – 2008.

5. Supplemental Requirements for Notch Toughness. Provide structural steel conforming to the supplementary notch toughness requirements for the longitudinal Charpy V notch tests specified for Zone 2 of the applicable AASHTO Materials Specifications. Unless otherwise indicated, the supplemental requirements are mandatory for the following load-carrying member components subject to tensile stress:

- Rolled shapes
- Webs
- Tension flanges of built up beams
- Beam splice material
- Truss members and gusset plates attached to such truss members.
- Diaphragms, X frames, bracing, and connecting plates for curved girder bridges or straight girder bridges if the skew is less than 70 degrees.

The requirements are not mandatory for:

- Stiffeners
- Drainage material
- Expansion dams
- Bearings
- Other secondary material
- Diaphragms, X frames, bracing, and connecting plates for straight girder bridges if the skew is 70 degrees or greater, or unless otherwise indicated as requiring notch toughness.

If directed, provide samples for Charpy V Notch testing from steel used in fabricating fracture-critical plates and shapes. Submit the samples to the Chief Structural Materials Engineer, 81 Lab Lane, Harrisburg, PA. 17110. Obtain the samples from plates delivered to the fabricator.

(b) Bedding Material for Bridge Shoes. Section 1113.03(h)

(c) Bolts, Nuts, and Washers. From a manufacturer listed in Bulletin 15 and as follows, unless otherwise indicated or specified:

1. Bolts for General Application.

- ASTM F 568, Class 4.6
- ASTM A 307, Grade A

1.a Nuts.

- ASTM A 563, Hex Nut, Style 1
  - M16 to M36, Class 5
- ASTM A 563, Heavy Hex
  - M42 to M100, Class 5
- ASTM A 536, Heavy Hex
  - All Diameters, Class A

1.b Washers. ASTM F 436 or ANSI B18.22M

2. Anchor Bolts. AASHTO M 270/M 270M (ASTM A 709/A 709M), Grade 250 (Grade 36), anchor bolts (headed or non-headed, either straight or bent) and cap screws, hot-dip or mechanically galvanize as specified in Section 1105.02(s).

2.a Nuts. ASTM A 563

2.b Washers. ASTM F 436

3. Anchor Bolts. ASTM F 1554, Grades 36, 55, 105, anchor bolts (headed or non-headed, either straight or bent) and cap screws (fully threaded shank), hot-dip or mechanically galvanize as specified in Section 1105.02(s).

3.a Nuts. ASTM A 563

3.b Washers. ASTM F 436

(d) High Strength Bolts. Use bolts, nuts, and washers mechanically galvanized as specified in Section 1105.02 (s), unless otherwise indicated or specified. For AASHTO M 270/M 270M (ASTM A 709/A 709M), Grade 345W (Grade 50W) steel, unpainted, use bolts, nuts, and washers conforming to atmospheric corrosion resistance requirements of AASHTO M 270/M 270M (ASTM A 709/A 709M), Grade 345W (Grade 50W). Use mechanically galvanized bolts, nuts, and washers on painted portions of weathering steel structures.

Provide high strength, carbon steel bolts; suitable nuts; and plain hardened washers for structural joints from a manufacturer listed in Bulletin 15, and, unless otherwise indicated or specified, conforming to the following requirements:

1. Identifying Marks. Identify bolts manufactured to AASHTO M 164 (ASTM A 325) and nuts manufactured to specifications referenced in AASHTO M 164 (ASTM A 325) by specific markings on the top of the bolt head and on the face of the nut. Identify the bolt strength grade by the symbol “A325,” the bolt manufacturer, and the bolt type using head markings. Identify the nut strength grade, the nut manufacturer, and, if Type 3, the nut type using nut markings.

Identify bolts manufactured to AASHTO M 253 (ASTM A 490) and nuts manufactured to specifications referenced in AASHTO M 253 (ASTM A 490) by specific markings on the top of the bolt head and on the face of the nut. Identify the bolt strength grade by the symbol “A490”, the bolt manufacturer, and the bolt type. Identify the nut strength grade, the nut manufacturer, and, if Type 3, the nut type using nut markings.

Identify washer manufacturer and, if Type 3, the washer type using washer markings.

2. Dimensions. Ensure bolt and nut dimensions conform to the requirements for Heavy Hex Structural Bolts and for Hex Nuts, Heavy given in ANSI Standards B18.2.1 and B18.2.2, respectively.

3. Bolts. AASHTO M 164 (ASTM A 325), except as amended and revised below:

Provide a lot number on the supplier's certification corresponding to that appearing on the shipping package and certification Form CS-4171. Note on the supplier's certification when and where all testing was done, including the rotational capacity tests specified. If galvanized bolts are used, include zinc thickness on the supplier’s certification.

Furnish bolts with diameters of 1/2 inch to 1 inch inclusive, and a hardness of 24 to 33 HRC. Provide black bolts “oily” to the touch when installed.

4. Nuts. AASHTO M 292/M 292M (ASTM A 194/A 194M) or AASHTO M 291 (ASTM A 563), as applicable.

Provide galvanized, heat-treated nuts, Grade 2H, DH, or DH3, and mechanically galvanized nuts as specified in Section 1105.02 (s) (AASHTO M 232 or AASHTO M 298).

Provide plain (ungalvanized) nuts, which are Grade 2, C, D, or C3, having a Rockwell Hardness of 89 HRB; or heat-treated, Grade 2H, DH, or DH3.

Lubricate all galvanized nuts. Use a lubricant containing a dye of any color that contrasts with the color of the galvanizing so that a visual check can be made for the lubricant at the time of field installation.

Furnish nuts to be galvanized that are tapped oversize the minimum amount required to allow assembly on the bolt thread in the coated condition. Ensure nuts conform to the requirements of AASHTO M 291 (ASTM A 563) and the rotational capacity test specified.

5. Washers. AASHTO M 293 (ASTM F 436), unless otherwise indicated. When indicated, galvanize as specified in Section 1105.02(s) (AASHTO M 232 or AASHTO M 298).

6. Direct Tension Indicator (DTI) Devices. ASTM F 959 and as follows:

Provide Direct Tension Indicator (DTI) devices having a hardness not greater than 35 HRC and within ±2 HRC and 0.75 standard deviation of the lot's target HRC (as indicated on the CS-4171 certification provided by the manufacturer). Furnish plain DTI devices for use with plain bolts, and, if galvanized bolts are indicated or specified, provide galvanized DTI devices. Galvanize as specified in Section 1105.02(s) (ASTM B 695).

In addition to the bolt tension tests specified in ASTM F 959, test plain finish DTI devices a second time by applying the compression load until the average gap measures 0.005 inch. Ensure that the loading remains within the acceptable range according to Table 3 of ASTM F 959 for the applicable type.

Ship each lot in protective containers marked with the type, lot number, quantity, and total lot size. Include a copy of the certification with each shipment.

Handle and store DTI devices according to the manufacturer's recommendations.

Obtain a minimum of eight samples from each lot according to PTM No. 1 for testing at the MTD.

7. Testing. Test bolts, nuts, washers, and assemblies as follows:

7.a Bolts. Perform proof load tests according to ASTM F 606, Method 1, at the minimum frequency specified in AASHTO M 164 (ASTM A 325), Section 9.2.4.

Perform wedge tests on full size bolts according to ASTM F 606, Section 3.5. If bolts are to be galvanized, perform testing after galvanizing. Use the minimum testing frequency specified in AASHTO M 164 (ASTM A 325), Section 9.2.4.

If galvanized bolts are supplied, determine the thickness of zinc coating by taking measurements on the wrench flats or top of bolt head.

7.b Nuts. Perform proof load tests according to ASTM F 606, Section 4.2, at the minimum frequency specified in AASHTO M 291 (ASTM A 563), Section 9.3, or AASHTO M 292/M 292M (ASTM A 194/A 194M), Section 7.1.2.1. If nuts are to be galvanized, perform testing after galvanizing, overtapping, and lubricating.

If galvanized nuts are supplied, determine the thickness of zinc coating by taking measurements on the wrench flats.

7.c Washers. If galvanized washers are supplied, perform hardness testing after galvanizing. Remove the galvanized coating before taking hardness measurements.

If galvanized washers are supplied, measure the thickness of zinc coating.

7.d Assemblies. Perform rotational-capacity tests on all black or galvanized bolt, nut, and washer assemblies before shipping. Test galvanized assemblies after galvanizing. Washers are required as part of the test, even if not required as part of the installation procedure. Perform the rotational-capacity test according to AASHTO M 164 (ASTM A 325), except as modified below:

- For long bolts or bolts too short to fit the tension calibrator, test according to PTM No. 427.
- Test each bolt production lot, nut lot, and washer lot in combination as an assembly. If washers are not required as part of the installation procedure, do not include in the lot identification
- Assign a rotational-capacity lot number to each combination of lots tested.
- Test a minimum of two assemblies per rotational-capacity lot
- Test the bolt, nut, and washer assembly in a Skidmore Wilhelm Calibrator or an equivalent approved device.

8. Documentation. Report the results of all tests (including zinc coating thickness) on the appropriate test report as required in the applicable AASHTO or ASTM standards and as specified below. Report the location where tests were performed and date of testing. Ensure that the manufacturer or distributor performing tests certifies that the results recorded are accurate.

8.a Mill Test Report (MTR). Furnish a MTR for all mill steel used in manufacturing bolts, nuts, and washers. Indicate where the material was melted and manufactured.

8.b Manufacturer Certified Test Report (MCTR). Provide a MCTR for each item furnished. Ensure that the manufacturer performing the rotational-capacity test include the following on the MCTR:

- The Lot Number of each of the items tested.
- The Rotational-Capacity Lot Number.
- The results of required tests.
- The location where tests were performed and date of testing.
- Certification that the MCTR's for the items conform to this specification and the applicable AASHTO or ASTM standards.
- The location where the bolt, nut, and washer assembly components were manufactured.

8.c Distributor Certified Test Report (DCTR). Ensure that the distributor performing tests furnish a certified test report including the following:

- The MCTR for the various bolt, nut, and washer assembly components.
- The results of all required tests, including the rotational-capacity test if performed by the distributor instead of the manufacturer.
- The location where tests were performed and date of testing.
- The Rotational-Capacity Lot Number.
- Certification that the MCTR's conform to this specification and the applicable AASHTO or ASTM standards.

(e) Welded Stud Shear Connectors.

1. Materials. Provide shear connector studs conforming to AASHTO M 169 (ASTM A 108), cold drawn bars, Grade 1015, 1018, or 1020, either semi-or fully-killed. If flux retaining caps are used, furnish caps of low carbon grade steel suitable for welding and conforming to ASTM A 109/A 109M.

2. Testing. Determine tensile properties of either bar stock after drawing or of finished studs according to the applicable sections of ASTM A 370. Perform tensile tests of finished studs on studs welded to test fixture similar to that shown in Figure 7.2 of AASHTO/AWS Bridge Welding Code D1.5-/D1.5M - 2008. If fracture occurs outside of the middle half of the gage length, repeat the test.

The required tensile properties are:

Tensile Strength 60,000 psi (min.)

Yield Strength* 50,000 psi (min.)

Elongation 20% in 2 inches (min.)

Reduction of area 50% (min.)

*As determined by a 0.2% offset method.

3. Finish. Provide finished studs of uniform quality and condition, free from injurious laps, fins, seams, cracks, twists, bends, or other injurious defects. Produce finish by cold drawing, cold rolling, or machining.

4. Certification. Provide the manufacturer's certification that the studs, as delivered, conform to the material requirements of this section. Furnish certified copies of in-plant QC test reports to the Representative upon request.

5. Check Samples. If required, provide check samples of studs of each type and size used under the contract. The Representative will select the samples.

(f) Steel Forgings and Steel Shafting.

1. Steel Forgings. Furnish steel forgings conforming to AASHTO M 102 (ASTM A 668/A 668M), Classes C, D, F, or G.

2. Cold Finished Carbon Steel Shafting. Furnish cold-finished carbon steel shafting conforming to AASHTO M 169 (ASTM A 108), UNS Designations G10160-G10300, inclusive, unless otherwise indicated or specified.

(g) Steel Castings.

1. Mild Steel Castings. Furnish steel castings for use in highway bridge components conforming to AASHTO M 103/M 103M (ASTM A 27/A 27M). Provide steel of Class 485 (Class 70) or Grades 485-250 (Grades 70-36), respectively, unless otherwise indicated or specified.

2. Chromium Alloy Steel Castings. Furnish chromium, alloy-steel castings conforming to AASHTO M 163/M 163M (ASTM A 743/A 743M), Grade CA-15, unless otherwise indicated or specified.

3. Workmanship and Finish. Furnish castings true to pattern in form and dimensions, free from pouring faults, sponginess, cracks, blow holes, and other defects in positions affecting the castings' strength and value for the service intended. Provide boldly filleted angles and sharp and perfect arrises.

The Contractor may correct defects not affecting the strength and value of the casting for the service intended if allowed in writing by the Chief Bridge Engineer. The Representative may reject castings containing:

- A blow hole having a length greater than 1 inch, a cross sectional area greater than 1/2 square inch, or a depth greater than 1/2 inch.
- A group of holes in a straight line with a total length greater than or equal to 1 foot, measured on the surface of the casting, and with an aggregate length greater than 1 inch.

4. Testing.

4.a Major Castings. Major castings are those subject to high loading whose failure in service would cause major damage (e.g., bridge bearings or machinery parts in movable bridges). All castings over 1,000 pounds are major castings. Test major castings by radiographing with x ray or gamma ray apparatus according to ASTM E 186, E 280 or E 446, as applicable, and according to Table A below.

4.b Minor Castings. Minor castings are those whose failure would not lead to failure of main bridge members (e.g., scuppers or gratings). Test minor castings by suspending them and hammering them all over.

4.c Rejection. The Representative may reject castings that contain cracks, flaws, or other defects that appear during or after testing.

(h) Iron Castings.

1. Gray Iron Castings. Furnish gray iron castings conforming to AASHTO M 105 (ASTM A 48/A 48M), Class 225B (35B), unless otherwise indicated or specified.

For castings subject to traffic loads furnish gray iron castings conforming to AASHTO M 105 (ASTM A 48/A 48M), Class 225B (35B) and AASHTO M306, unless otherwise indicated or specified.

2. Malleable Iron Castings. Furnish malleable iron castings conforming to ASTM A 47/A 47M, Grade 22010 (32510), unless otherwise indicated or specified.

3. Ductile Iron Castings. Furnish ductile iron castings conforming to ASTM A 536, Grade 60-40-18, unless otherwise indicated or specified. In addition to the specified test coupons, test specimens from parts integral with the castings, such as risers, for castings having a weight more than 1,000 pounds. Ensure that the required quality is obtained in the castings in the finished condition.

TABLE A

Severity Levels - Radiographically Inspected Castings*

Specification ASTM Designation	Discontinuity Type Designation	Acceptable** Severity Level	Remarks
E 466 up to 2 inches	A	3	
	B	3	
	C-1	3	
	C-2	3	
	C-3	3	
	C-4	3	
	D	-	None Allowed
	E	-	None Allowed
	F	-	None Allowed
	G	-	None Allowed
E 186 2 inches to 4 1/2 inches	A	3	
	B	3	
	C-1	2	
	C-2	3	
	C-3	3	
	D	-	None Allowed

	E	-	None Allowed
	F	-	None Allowed
E 280 4 1/2 inches to 12 inches	A	3	
	B	3	
	C-1	2	
	C-2	3	
	C-3	3	
	D	-	None Allowed
	E	-	None Allowed
	F	-	None Allowed

* Radiograph all critical areas, but not less than 25% of each casting, or 25% of all castings, as indicated or as directed.

** If unacceptable defects are found in more than 10% of the radiographs, radiograph 100% of castings until the accumulated rejection level falls to 10% or less. The Contractor may then resume testing 25% of castings.

4. Workmanship and Finish. Furnish iron castings true to pattern in form and dimensions, free from pouring faults, sponginess, cracks, blow holes, and other defects in positions affecting the castings' strength and value for the service intended. Provide boldly filleted angles and sharp and perfect arises.

5. Cleaning. Remove scale and sand from all castings to provide a smooth, clean, and uniform surface.

(i) Bronze Bearing and Expansion Plates. AASHTO M 107 (ASTM B 22), Alloy No. C91100 or C91300, except with a maximum of 2 1/2% lead, unless otherwise indicated or specified.

If indicated, make surfaces permanently self lubricated. Provide a coefficient of friction of less than 0.10 or as indicated.

(j) Steel Pipe.

1. Pipe and Couplings. ASTM A 53

2. Flanges and Pipe Fittings. ASTM A 338

3. Welded Fittings. ASTM A 234/A 234M

4. Threaded Parts. Apply one coat of primer to all threads immediately before assembly. Wipe clean after assembly.

(k) Low Alloy Steel Pipe.

1. Pipe and Couplings. Manufactured from low alloy steel AASHTO M 270/M 270M (ASTM A 709/A 709M), Grade 345 or 345W (Grade 50 or 50W), Type 2 or AASHTO M 270/M 270M (ASTM A 709/A 709M) Grade 345W (Grade 50W), and conforming to either ASTM A 53, or to ASTM A 714, Class 4, Grade V.

2. Flanges and Pipe Fittings. ASTM A 338

3. Welding Fittings. ASTM A 234/A 234M

4. Threaded Parts. Apply one coat of primer to all threads immediately before assembly. Wipe clean after assembly.

(l) Not Used.

(m) Steel Tubing. ASTM A 500 or ASTM A 501

(n) Cast Iron Pipe. ASTM A 74 or ASTM A 377

(o) Not Used.

(p) Sheet Copper. AASHTO M 138/M 183M (ASTM B 152/B 152M), and conforming to the requirements of the Embrittlement Test, Section 12 of AASHTO M 138/M 138M (ASTM B 152/B 152M) and ASTM B 577.

Make lapped joints by soldering or by riveting and soldering.

(q) Sheet Zinc. ASTM B 69, Type II.

Make lapped joints by soldering.

(r) Sheet Lead. Common desilverized lead A, as specified for pig lead, ASTM B 29.

(s) Galvanizing. From a galvanizer listed in Bulletin 15 and as follows:

1. General. If indicated or specified, galvanize materials as specified in the applicable material specifications. If the applicable material specifications do not include galvanizing, galvanize according to ASTM A 53; ASTM B 633; ASTM A 392, Class 2 coating; ASTM B 695 and B 696 (AASHTO M 298 and M 299); ASTM A 123 (AASHTO M 111); or ASTM A 153 (AASHTO M 232), as applicable.

Test for the specified weight of galvanizing according to ASTM A 90/A 90M (AASHTO T 65).

Comply with ASTM A 143 and ASTM A 385.

2. Repair of Damaged Galvanizing. After erecting galvanized material in place, repair in accordance with ASTM A 780/A 780M.

3. Quenching after Galvanizing. Quenching after galvanizing is allowed for the following items:

Non-welded secondary bridge members

Railings

Drainage Scuppers

Downspouts

Inlet grates

Utility brackets

Angle Supports

Embedded plates

Quenching after galvanizing is not allowed for the following items without approval of the Engineer:

Primary bridge members

Welded secondary members

Sign Structures

Traffic and lighting poles

Any member to be painted after galvanizing

Items not listed may not be quenched without approval of the Engineer.

(t) Welding Material. AASHTO/AWS D1.5 2008 Bridge Welding Code, modified as specified in Section 1105.03(m)1.

(u) Paint. Section 1060.2

(v) Certification. Section 106.03(b)3

(w) Eyebars. Furnish a weldable grade of steel for eyebars. Acceptable grades include:

- Structural steel for bridges, AASHTO M 270/M 270M (ASTM A 709/A 709M), Grade 250 (Grade 36), ASTM A 36.
- Structural steel for bridges, AASHTO M 270/M 270M (ASTM A 709/A 709M), Grades 345 and 345W (Grades 50 and 50W), ASTM A 572, Grade 345 (Grade 50), ASTM A 588, Grades A, B, and C only.

1105.03 FABRICATION—

(a) Straightening Material and Curving Rolled Beams and Welded Girders. Section 1050.03(c)5 and as follows:

1. Materials. Do not heat straighten or heat curve steels that are manufactured to a specified minimum yield point greater than 50,000 pounds per square inch without approval.

2. Type of Heating. Curve beams and girders by either continuous or V-type heating, unless otherwise approved.

2.a Minimum Radius of Curvature. For heat-curved beams and girders, the horizontal radius of curvature measured to the centerline of the girder web cannot be less than 150 feet and cannot be less than the larger of the values calculated from the following two equations:

$$R = 14bD/(\sqrt{(F_{yw}}\ )\ \Psi t_w\ )$$

$$R = 7{,}500b/(F_{yw}\ \Psi)$$

where:

t_w = thickness of the web (inches)

Ψ = ratio of the total cross-sectional area to the cross-sectional area of both flanges

b = widest flange width (inches)

D = clear distance between flanges (inches)

F_{yw} = specified minimum yield strength of a web (kips per square inch)

R = radius of curvature (inches)

In addition to the above requirements, the radius cannot be less than 1,000 feet when the flange thickness exceeds 3.0 inches or the flange width exceeds 30.0 inches.

2.b Continuous Heating. For the continuous method, heat a strip or intermittent strips along the edge of the top and bottom flange approximately simultaneously depending on flange widths and thicknesses. Use a strip of sufficient width and temperature to obtain the required curvature.

2.c V-type Heating. For the V-type heating, heat the top and bottom flanges in truncated triangular or wedge-shaped areas having their base along the flange edge and spaced at regular intervals along each flange. Use the spacing and temperature necessary to obtain the required curvature and to allow heating to progress along the top and bottom at approximately the same rate. Terminate

the apex of the truncated triangular area applied to the inside flange surface just before the junction of the web and the flange is reached. When heating the inside flange surface (the surfaces that intersect the web), do not apply heat directly to the web. If the radius of curvature is 1,000 feet or more, extend the apex of the truncated triangular heating pattern applied to the outside flange surface to the juncture of the flange and web. If the radius of curvature is less than 1,000 feet, extend the apex of the truncated triangular heating pattern applied to the outside flange surface past the web for a distance equal to one-eighth of the flange or 3 inches, whichever is less. For the truncated triangular pattern, provide an included angle of approximately 15 to 30 degrees, but do not exceed 10 inches for the base of the triangle. Do not make variations in the patterns prescribed above unless permitted.

For both types of heating, heat the flange edges that will be on the inside of the horizontal curve after cooling. Heat both the inside and outside flange surfaces only if the flange thickness is 1 1/4 inches or greater. Heat the two surfaces concurrently.

3. Temperature. Conduct the heat-curving operation in such a manner that the steel temperature does not exceed 1,150F as measured by temperature indicating crayons or other suitable means. Do not artificially cool the girder until after it naturally cools to 600F. Obtain approval for the method of artificial cooling.

4. Position for Heating. Heat-curve the girder with the web in either a vertical or a horizontal position.

If curved in the vertical position, brace or support the girder in such a manner that the tendency of the girder to deflect laterally during the heat-curving process will not cause the girder to overturn.

If curved in the horizontal position, support the girder near its ends and at intermediate points, as necessary, to obtain a uniform curvature. Do not allow the bending stress in the flanges due to the dead weight of the girder to exceed the usual allowable design stress. Maintain intermediate safety catch blocks at the mid-length of the girder within 2 inches of the flanges at all times during the heating process to guard against a sudden sag due to plastic flange buckling.

5. Sequence of Operations. Heat-curve the girder in the fabrication shop before it is painted. Conduct the heat curving operation either before or after all the required welding of transverse intermediate stiffeners is completed. However, unless provisions are made for girder shrinkage, locate and attach connection plates and bearing stiffeners after heat curving. If longitudinal stiffeners are required, heat-curve or oxygen-cut them separately and then weld them to the curved girder. When cover plates are to be attached to rolled beams, attach them before heat curving if the total thickness of one flange and cover plate is less than 2 1/2 inches and the radius of curvature is greater than 1,000 feet. For other rolled beams with cover plates, heat-curve the beams before the cover plates are attached; either heat-curve or oxygen-cut cover plates separately, then weld them to the curved beam.

6. Camber. Camber girders before heat curving. Obtain camber for rolled beams using approved heat-cambering or cold cambering methods. For plate girders, cut the web to the prescribed camber with suitable allowance for shrinkage due to cutting, welding, and heat-curving. However, if permitted, correct moderate deviations from specified camber by a carefully supervised application of heat. Correct deviations from the specified camber according to Publication 135.

7. Measurement of Curvature and Camber. Measure horizontal curvature and vertical camber after all welding and heating operations are completed and the flanges have cooled to a uniform temperature. Check horizontal curvature with the girder in the vertical position.

(b) Finish. Finish exposed work. Shear, flame cut, and chip carefully and accurately. Make sharp corners and round edges by grinding or other acceptable means.

When AASHTO M 270/M 270M (ASTM A 709/A 709M), Grade 345W (Grade 50W), Grade 485W (Grade HPS 70W), ASTM A 588, Grades A, B, and C only steel is specified for beams or girders, blast clean only the fascia side of exterior beams or girders in the field according to SSPC-SP6-85, Commercial Blast Cleaning. Blast clean from the top outside (fascia) edge of the top flange to the inside edge of the bottom flange including the bottom of the bottom flange. Blast clean the faying surfaces of splices and connections of all structural elements according to SSPC-SP-1085. Reblast unpainted elements that remain unassembled for a period of 12 months following the initial cleaning.

(c) Bolt Holes.

1. General. Unless otherwise specified, only punch or drill holes for bolts as indicated below.

Unless subpunching and reaming are specified in Section 1105.03(d), punch material forming parts of a member composed of not more than five thicknesses of metal 1/16 inch larger than the nominal diameter of the bolts whenever the thickness of the material is not greater than 3/4 inch for structural steel, 5/8 inch for high-strength steel or 1/2 inch for quenched and tempered alloy steel. If there are more than five thicknesses or if any of the main material is thicker than 3/4 inch for structural steel, 5/8 inch for high-strength steel, or 1/2 inch for quenched and tempered alloy steel, either subdrill and ream or drill all holes full size.

When specified, either subpunch (or subdrill if thickness limitation governs) all holes 3/16 inch smaller than the nominal diameter of the bolts and, after assembling, ream to 1/16 inch larger than the nominal diameter of the bolts, or drill all holes full size to 1/16 inch larger than the nominal diameter of the bolts.

When indicated, provide enlarged or slotted holes with high-strength bolts.

2. Punched Holes. Furnish dies with diameters that do not exceed the diameter of the corresponding punch by more than 1/16 inch. Ream any holes that must be enlarged to admit the bolts. Cut holes clean without torn or ragged edges.

3. Reamed or Drilled Holes. Furnish reamed or drilled holes perpendicular to the member, cylindrical, and conforming to the size requirements specified in Section 1105.03 (c) 1. Where practical, direct reamers by mechanical means. Remove burrs on the outside surfaces. Use twist drills, twist reamers, or rotobroach cutters for reaming and drilling. Assemble and securely hold connecting parts while they are being reamed or drilled. Match mark the connecting parts before disassembling.

4. Accuracy of Holes. Furnish holes not more than 1/32 inch larger in diameter than the true decimal equivalent of the nominal diameter. The slightly conical hole that results from punching operations is acceptable. Ensure that the width of slotted holes produced by flame cutting or a combination of drilling and flame cutting or punching and flame cutting are not more than 1/32 inch greater than the nominal width. Grind the flame cut surface smooth.

5. Numerically-Controlled Drilled Field Connections. Instead of reaming sub-sized holes or drilling full-sized holes while assembled, the Contractor may use numerically controlled (N/C) drilling or punching equipment to drill or punch full-sized bolt holes in unassembled pieces, connections, and templates for use with matching sub-sized and reamed holes. The Contractor may use N/C equipment to either drill or punch holes through individual pieces or drill through any combination of pieces held tightly together. Full-size punched holes shall meet the requirements of Section 1105.03(c)2.

If N/C drilling or punching equipment is used, demonstrate the accuracy of the drilling or punching procedure by means of check assemblies as specified in Section 1105.03(g).

6. Holes for Turned Bolts or Other Approved Bearing Type Bolts. Subpunch or subdrill all holes 3/16 inch smaller than the nominal diameter of the bolt for turned bolts or other approved bearing-type bolts. After assembling, either ream, drill to a steel template, or drill from the solid. Provide a driving fit for the finished holes as indicated or as specified in the special provisions.

(d) Preparation of Field Connections. Unless otherwise approved, prepare bolt holes for field connections and field splices as follows:

- Field connections and field splices of main members of trusses, arches, continuous beam spans, bents, towers (each face), plate girders, and rigid frames – subpunch or subdrill and subsequently ream while assembled or drill full size through a steel template while assembled.
- Field splices of rolled beam stringers continuous over floor beams or cross frames – the fabricator may drill full size unassembled to a steel template.
- Floor beams or cross frames – the fabricator may drill full size unassembled to a steel template.
- Floor beam and stringer field end connections – subpunch and ream while assembled or drill full size to a steel template while assembled.
- For any connection, instead of subpunching and reaming, or subdrilling and reaming, the fabricator may drill holes full size with all thicknesses of material assembled in proper position.

When using a steel template, ream and drill full size all field connection holes through the template after the template has been placed in the proper position and angle and firmly bolted into place. Use templates that are exact duplicates for reaming matching members or the opposite faces of a single member. Accurately locate templates used for connections on like parts or members so that the parts or members are duplicates and require no match-marking.

(e) Accuracy of Hole Group.

1. Accuracy Before Reaming. Punch full size, subpunch, or subdrill holes such that after assembling, and before any reaming is done, a cylindrical pin 1/8 inch smaller in diameter than the nominal size of the hole may be entered perpendicularly to the face of the member without drifting in at least 75% of the contiguous holes in the same plane. The Representative will reject pieces that do not conform to this requirement. Also, the Representative may reject any piece that contains at least one hole that will not pass a pin 3/16 inch smaller in diameter than the nominal size of the hole.

2. Accuracy After Reaming. After holes are reamed or drilled, ensure that the offset between adjacent thicknesses of metal is no greater than 1/32 inch for at least 85% of the holes in any contiguous group.

For all steel templates, provide hardened steel bushings in holes accurately dimensioned from the centerlines of the connection as inscribed on the template. Use the centerlines to accurately locate the template from the milled or scribed ends of the members.

(f) Bolting. Clean surfaces of metal in contact before assembling. Assemble, pin, and firmly draw together the parts of a member before drilling, reaming, or bolting. If necessary, dismantle assembled pieces to remove burrs and shavings produced by the operation. Furnish members free from twists, bends, and other deformation.

When assembling, allow enough drifting to bring the parts into position, however, do not allow the drifting to enlarge the holes or distort the metal.

(g) Preassembly of Field Connections.

1. General. As necessary, preassemble field connections of main members of trusses, arches, continuous beams, plate girders, bents, towers and rigid frames before erection to verify the geometry of the completed structure or unit and to verify or prepare field splices.

Submit an appropriate method of preassembly for approval. Provide a method and details of assembly consistent with the erection procedure indicated on the approved erection plans and camber diagrams. At a minimum, provide a preassembly procedure consisting of assembling three contiguous panels accurately adjusted for line and camber. Provide a procedure for progressive assemblies consisting of at least one section or panel of the previous assembly (repositioned if necessary and adequately pinned to ensure accurate alignment) plus two or more sections or panels added at the advancing end. For structures longer than 150 feet, furnish a procedure for assemblies not less than 150 feet long regardless of the length of individual continuous panels or sections. The Contractor may start the sequence of assembly from any location in the structure and proceed in one or both directions provided that the preceding requirements are satisfied.

Use the Progressive Truss and Girder Assembly unless otherwise specified in the proposal.

2. Bolted Connections. For bolted connections, prepare holes as specified in Section 1105.03(c). Where applicable, assemble major components of compression members with milled ends in full bearing, and then ream the sub-sized holes to the specified size.

3. Check Assembly-Numerically Controlled Drilling. When using numerically controlled drilling, furnish a check assembly for each major structural type of each project unless otherwise indicated or specified in the special provisions. Provide check assemblies consisting of at least three contiguous shop sections or, for a truss, all members in at least three contiguous panels but not less than the number of panels associated with three contiguous chord lengths (i.e., length between field splices). Base check assemblies on the proposed order of erection, joints in bearings, special complex points, and similar considerations. Special complex points include the portals of skewed trusses.

Use the first sections of each major structural type to be fabricated as the check assemblies.

Obtain approval for each N/C drilled check assembly before reaming or dismantling the assembly. If a check assembly fails to demonstrate that the required accuracy is being obtained for camber, alignment, accuracy of holes, and fit of milled joints, the Representative may require additional check assemblies. Additional check assemblies will be at no additional cost to the Department.

4. Field Welded Connections. Preassemble field welded connections as specified in Section 1105.03(g)1 and verify the fit of members, including the proper space between abutting flanges.

(h) Match Marking. Match-mark connecting parts preassembled in the shop to ensure proper fit in the field. Furnish a diagram showing match-marks to the Representative.

(i) Connections Using Unfinished or Turned Bolts.

1. General. When unfinished bolts are specified, furnish unfinished or turned bolts conforming to ASTM A 307, Grade A Bolts. Provide bolts with single self-locking nuts or double nuts unless otherwise indicated or specified in the special provisions. Use beveled washers where bearing faces have a slope of more than 20:1 with respect to a plane normal to the bolt axis.

For bolted connections fabricated with high-strength bolts, assemble connections as specified in Section 1105.03(j).

2. Turned Bolts. Provide turned bolts with an ANSI roughness rating value of 125 for the surface of the body of the bolts. Furnish hexagonal heads and nuts with standard dimensions for bolts of the nominal size specified or the next larger nominal size. Provide thread diameters equal to the body of the bolt or the nominal diameter of the bolt specified. Carefully ream holes for turned bolts

with bolts furnished to provide for a light driving fit. Furnish bolts with threads that are entirely outside of the holes. Provide a washer under the nut.

(j) Connections Using High Strength Bolts. Section 1050.3(c)7 and as follows:

1. General. Provide AASHTO M 164 (ASTM A 325) or equivalent high strength bolts. Furnish bolt holes as specified in Section 1105.03(c). When Turn-of-Nut Tightening Method is used, provide hardened washers as specified in Section 1105.02(d)5, under the element turned in tightening.

2. Bolted Parts. Use steel for all material within the grip of the bolt; do not use compressible material such as gaskets or insulation within the grip. Ensure that bolted steel parts solidly fit together after the bolts are tightened. Bolted steel parts may be coated or uncoated. Do not exceed a slope of 20:1 for the surfaces of parts in contact with the bolt head or nut with respect to a plane normal to the bolt axis.

3. Surface Conditions. At the time of assembly, ensure that all joint surfaces, including surfaces adjacent to the bolt head and nut, are free of scale (except tight mill scale), dirt, or other foreign material. Remove burrs that would prevent solid seating of the connected parts.

Paint is allowed on the faying surface in connections except for slip-critical connections as defined in Article 6.13.2.1.1 of the LRFD Specification. Prepare faying surfaces for slip-critical connections according to the following requirements, as applicable:

3.a Non-coated Joints. Exclude paint, including any inadvertent over spray, from the area within the bolt pattern and areas closer than one bolt diameter, but not less than 1 inch, from the edge of any hole.

3.b Joints with Painted Faying Surfaces. Blast clean joints specified to have painted faying surfaces. Except as specified in Section 1105.03(j)3.c, coat the joints with a Class A or B paint according to Section 6.13.2.8 of the LRFD Specification.

3.c Coatings with Low Slip Coefficient. If permitted, and provided that the mean slip coefficient is established (tested according to Section 6.13.2.8 of the LRFD Specification) and the allowable slip load per unit area is achieved, the Contractor may use a coating providing a slip coefficient less than 0.33.

3.d Minimum Coating Curing Time. Do not assemble coated joints before the coating has cured for the minimum time used in the qualifying test.

3.e Galvanized Faying Surfaces. Hot-dip galvanize faying surfaces specified to be galvanized according to AASHTO M 111 (ASTM A 123). Subsequently roughen galvanized surfaces by hand wire brushing. Do not roughen using power wire brushes.

3.f Existing Field Surfaces. For connections to existing structures, provide surface conditions according to the contract documents.

(k) Plate Cut Edges.

1. Edge Planing. Plane, mill, grind, or thermal cut to a depth of 3/16 inch the sheared edges of plates more than 5/8 inch thick that carry calculated stress.

2. Thermal Cutting. Section 1105.03(p)

3. Visual Inspection and Repair of Plate Cut Edges. Perform visual inspection and repair of plate cut edges according to the AASHTO/AWS Bridge Welding Code D1.5/D 1.5M – 2008.

(l) Not used.

(m) Welding. All Weld Procedure Specifications must be based upon Weld Procedure Specification (WPS) qualification tests, pre-tests and verification tests which have been performed not more than 60 months in advance of production welding. WPS qualification welding must be witnessed by a Department representative unless otherwise approved by the Chief Structural Materials Engineer.

For welding aluminum structures, conduct welding, welder qualification, prequalification of weld details and inspection of welds in accordance with AWS D1.2/D1.2M-2008. For the purpose of establishing weld acceptance criteria, define all welded aluminum structures as ‘Class II’ structures.

For welding sheet steel, conduct welding, welder qualification, prequalification of weld details and inspection of welds in accordance with AWS D1.3/D1.3M-2008.

For welding stainless steel or stainless steel to carbon steel, conduct welding, welder qualification, prequalification of weld details and inspection of welds in accordance with AWS D1.6/D1.6M-2007.

Unless otherwise indicated or specified, for tubular steel structures, conduct welding, welder qualifications, prequalification of weld details, and inspection of welds according to AASHTO/AWS D1.1/D1.1M-2008 subject to the following limitations:

- Use on low-hydrogen electrodes
- Provide a minimum preheat and interpass temperature of at least 50 F.

Conduct welding, welder qualifications, prequalification of weld details, and inspection of welds according to the AASHTO/AWS Bridge Welding Code D1.5/D1.5M-2008.

Do not weld or tack brackets, clips, shipping devices or other material not indicated or specified in the special provisions to any member unless shown on the shop drawings and approved.

1. Weld structural steel for highway bridges according to the AASHTO/AWS Bridge Welding Code D1.5/D1.5M-2008 with the following modifications:

- Section 1.1.3. Revise completely as follows:

  All references to acceptance or approval will denote acceptance or approval by the Engineer. The term Engineer refers to the Chief Bridge Engineer or the Chief Bridge Engineer's representative; namely, the Chief Structural Materials Engineer.

- Section 1.3.2. Delete this section.
- Section 1.3.6. Welding of Ancillary Products. Delete this section.
- Section 2.3.3. Plug and Slot Welds. Delete this section.
- Section 2.9. Details of Plug and Slot Welds. Delete this section.
- Section 2.17.6.1 Revise section sentence as follows:

  Design connections or splices made with fillet welds for the average of the calculated stress and the strength of the member, but no less than 75% of the strength of the member.

- Section 3.5.1.6(2). Revise completely as follows:

  Panels are designated as unstiffened (no intermediate stiffeners) in any location along the girder where the spacing of stiffeners, including diaphragm connection plates, exceeds 1.5 times the web depth for straight girders and 1.0 times the web depth for curved girders. Web flatness must be checked for conformance in all girder panels by the fabricator, and witnessed by the Department’s agency inspector. Flatness variations exceeding the tolerance must be documented. Submit a repair procedure to the Chief Structural Materials Engineer for review and approval prior to repair.

- Section 3.5.1.9. Revise completely as follows:

  Fit bearing stiffeners as specified in Section 1105.03(u). Flatness tolerance of sole plates after welding as specified in Section 1111.03(c), Class B.

- Section 4.1.6. Delete this section.
- Table 4.2 Matching Filler Metal Requirements for WPSs Qualified in Accordance with 5.13. Delete all references to electroslag or electrogas welding.
- Clause 4 Part E, Electroslag Welding (ESW) and Electrogas Welding (EGW). Delete this part.
- Clause 4 Part F, Plug and Slot Welds. Delete this part.
- Section 5.3 Duration. Add the following:

  Unless directed.

- Section 5.14 Electroslag and Electrogas Welding. Delete this section.

- Table 5.4 Additional PQR Essential Variable Changes Requiring WPS Requalification for Electroslag or Electrogas Welding. Delete this table.
- Section 5.16.4. Delete Item (2).
- Section 5.19.5.2 ESW and EGW Specimens. Delete this section.
- Section 6.7.1. Revise completely as follows:

  Non-destructively test complete penetration groove welds as specified in Section 1105.03(m)8.

- Section 6.7.1.1. Delete this section.
- Section 6.7.1.2(2). Revise completely as follows:

  Twenty-five percent of each joint subject to compression or shear.

- Section 6.7.1.2(2)(d). Delete this section.
- Section 6.7.2.1 Revise the first sentence as follows

  At least 12 inches will be tested in every 10-foot length and 12 inches of such welds less than 10 feet in length of each size of weld and type joint in main members including the end connections of such members.

- Section 12.6. Consumable Requirements – Delete all references to optional supplemental diffusible hydrogen designator H16.

2. Do not weld to flanges in tension areas unless indicated.

3. Show specification, grade, type, and any supplementary requirements for each steel indicated on the shop drawings.

4. Do not weld temporary fabrication and construction details, such as rails for deck finishing equipment, bar supports, or deck forming devices, to beams, girders, or other main members, unless permitted. Identify locations of such welds on the shop drawings.

5. Do not use electroslag or electrogas welding.

6. Gas Metal Arc Welding (GMAW) and Flux Cored Arc Welding (FCAW) – Shop Application only.

6.a Main Load Carrying Bridge Members. Do not use the GMAW or FCAW processes (including tack welding except as otherwise approved herein) for any of the following conditions:

- web-to-web welds[5],
- web-to-flange welds[5],
- flange-to-flange welds[5], and
- welds on truss members and gusset plates[5].

Note 5: Including rolled shapes.

For stiffener and connection plate welds to flanges and webs and for X-frames and diaphragms considered main members, the fabricator may use the FCAW-G (gas shielded) process and the GMAW process, subject to the following restrictions:

- Use only GMAW spray and constant voltage pulsed spray transfer modes.
- Use only metal cored electrodes for GMAW on fracture critical members.
- Use only GMAW equipment with the following features:

  - A ‘lock out’ feature to prevent the operator from adjusting the equipment outside the approved WPS parameters.
  - An adaptive mode capable of automatically correcting amperage, etc. due to operator variations (stick-out, etc.) to maintain the desired transfer mode.

For fracture critical members, only metal cored electrodes are allowed.

- Single-pass GMAW tack welds and root passes are allowed for all joints on all main load carrying members provided the Contractor can demonstrate that such welds are completely re-melted by subsequent Submerged Arc Welding (SAW) passes.
- Other applications may be allowed by the Engineer if prior approval is received.

6.b Secondary Members and Other Welded Structures. Either the GMAW or FCAW-G process may be used for welding bridge drainage material, expansion dams, bearings, bracing, those X-frames and diaphragms not considered main members, soldier piles, sound barrier posts, and other welded structures. Both Globular and Short Circuit GMAW transfer modes are prohibited unless otherwise specifically approved or specified.

7. Do not use plug welds to repair misplaced holes.

8. Non destructively test all groove welds in main members according to the AASHTO/ AWS Bridge Welding Code D1.5/ D1.5M-2008. Unless otherwise indicated or specified, use radiographic testing on butt joints. Use radiographic or ultrasonic testing for corner or “T” joints. Use magnetic particle testing according to AASHTO/AWS D1.5/D1.5M-2008, Section 6.7.2.

9. All welding consumables (electrodes and electrode/flux combinations) used for welding of fracture critical members will conform to the diffusible hydrogen requirements of the AWS filler metal specifications optional supplemental designator H4 or H8 only.

10. Perform weld repairs according to specified welding code and Department approved procedure(s). Do not repair individual locations more than three times without written permission of the Engineer. Following the third unsuccessful attempt, submit a proposed repair procedure for review.

11. Do not repair any individual area on welded pole to base or splice plate to chord or gusset plate connections for luminaire supports, traffic signal supports, and sign structure supports more than one time without written permission of the Engineer.

(n) Weld Repairs and Geometric Corrections using Applied Heat. For non-fracture critical members only, refer to Publication 135 for pre-approved base metal repair procedures and heat correction procedures. The fabricator may use the pre-approved procedures after the Department’s inspector has verified that the discontinuity to be repaired is covered by the specific procedure. Any repairs performed are subject to inspection by the Department’s inspector.

(o) Not used.

(p) Thermal Cutting. Unless otherwise approved, cut steel and weld metal using oxy-fuel gas, air plasma arc, or oxygen plasma arc processes. Conduct cutting for all processes according to the AASHTO/AWS Bridge Welding Code D1.5/D1.5M-2008. Do not submerge base metal in water during any process unless otherwise indicated.

(q) Facing of Bearing Surfaces. Ensure that the surface finishes of bearing and base plates and other bearing surfaces in contact with each other or concrete conform to the ANSI surface roughness requirements defined in ANSI/ASME B46.1 and listed below:

- Steel slabs — ANSI 2 mils
- Heavy plates in contact with shoes to be welded — ANSI 1 mil
- Milled ends of compression members, milled or ground ends of stiffeners and fillers — ANSI 0.5 mil
- Bridge rollers and rockers — ANSI 0.25 mil
- Pins and pin holes — ANSI 0.13 mil
- Sliding bearing — ANSI 0.13 mil

- Sliding bearings—Stainless Steel to Polytetrafluoroethylene (PTFE) ANSI 0.008 mil

Fabricate bearing surfaces according to the following additional requirements:

- Machine sliding bearings having a surface roughness of 0.063 mil or rougher so the lay of the cut is parallel to the direction of movement.
- Provide machined surfaces plane and true, conforming to the indicated dimensions.
- For surfaces designed to be flat, machine surfaces to within 0.01 inch of flatness. Determine flatness as specified in Section 1111.03(c).
- Maintain uniform and even contact when assembling adjacent bearing surfaces. Unless a closer tolerance is indicated or specified, do not exceed a gap of 0.040 inch between bearing surfaces. Machine all sliding surfaces of base plates.
- Do not machine any surfaces of fabricated members until all fabrication and welding of the assembly or subassembly is complete. Machine heat treated components after completion of heat treating.

(r) Abutting Joints. Mill or saw-cut abutting joints in compression members of trusses and columns to obtain a square joint and uniform bearing. Do not allow the opening at other joints not required to be faced to exceed 3/8 inch.

(s) Plates: Direction of Rolling. Fabrication of Members. Unless otherwise indicated, cut and fabricate steel plates for main members and splice plates for flanges and main tension members (not secondary members) so that the primary direction of rolling is parallel to the direction of the main tensile and compressive stresses. Unless otherwise indicated or specified, fabricate I shaped beams and girders so that when erected and under their own weight, the webs are within the allowable tolerance of vertical. Provide flanges normal to the web, unless otherwise indicated.

(t) Bent Plates.

1. General. Fabricate bent, unwelded, load-carrying, rolled-steel plates from the stock plates so that the bend lines will be at right angles to the direction of rolling. If allowed, cold-bent ribs for orthotropic-deck bridges may be bent with bend lines in the direction of rolling.

Before bending, round the corners of the plate where bending is to occur to a radius of 1/8 inch.

2. Cold Bending. Cold bend such that no cracking of the plate occurs. Provide minimum bend radii, measured to the concave face of the metal, according to the following table:

Thickness (t) in inches	Up to 1/2	Over 1/2 to 1	Over 1 to 1 1/2	Over 1 1/2 to 2 1/2	Over 2 1/2 to 4
Bend radii for all grades of structural steel in this specification	2t	2 1/2t	3t	3 1/2t	4t

Provide allowance for springback of Grades 690 and 690W (Grades 100 and 100W) steels of about three times that for Grade 250 (Grade 36) steel. For break press forming, provide a lower die span of at least 16 times the plate thickness. Multiple hits are advisable. Cold Bending of fracture critical members is prohibited.

3. Hot Bending. If a radius shorter than the minimum specified for cold bending is necessary, hot bend the plates at a temperature not less than 800F and not greater than 1,200F. If Grades 690 and 690W (Grades 100 and 100W) steel plates are heated to a temperature greater than 1,100F, requench and temper them according to the producing mill's practice.

(u) Fit of Stiffeners. Ensure that at least 75% of the bearing area of end bearing stiffeners for girders and stiffeners intended as supports for concentrated loads have full bearing on the flanges that they transmit load to or receive load from. Full bearing is defined as a gap not exceeding 0.005 inch. The maximum gap between the bearing stiffener and the flange on the remaining 25%

may not exceed 1/32 inch. Mill or grind the ends of bearing stiffeners to achieve the required bearing on the flanges. For weldable steel in compression areas of flanges, weld stiffeners as indicated or specified.

Provide a tight fit against the compression flange for intermediate stiffeners not intended to support concentrated loads unless otherwise indicated or specified. Tight fit is defined as a gap not exceeding 1/16 inch.

(v) Eyebars. Flame cut pin holes at least 2 inches smaller in diameter than the finished pin diameter. Securely fasten together all eyebars that are to be placed side by side in the structure in the order that they will be placed on the pin and bore both ends while clamped. Pack and match-mark eyebars for shipment and erection. Stamp all identifying marks on the edge of one head of each member with steel stencils after fabrication is completed so that the marks are visible when the bars are nested in place on the structure. Provide low stress type steel die stamps.

Furnish eyebars straight and free from twists. Accurately locate pin holes on the centerline of the bar. Limit inclination of any bar to the plane of the truss to 1/16 inch to a foot.

Simultaneously cut the edge of eyebars that lie between the transverse centerline of their pin holes with two mechanically operated torches abreast of each other and guided by a substantial template. Prevent distortion of the plates.

(w) Annealing and Stress Relieving. Anneal (full annealing) and normalize structural members indicated according to ASTM A 941. Finish machining, boring, and straightening structural members subsequent to heat treatment. Maintain the temperature uniformly throughout the furnace during heating and cooling so that the temperatures of any two points on the member differ by no more than 100F at any one time.

Do not anneal or normalize members consisting of Grades 690 and 690W (Grades 100 and 100W) or Grade 485W (Grade 70W) steel. Stress relieve these members only if permitted. Do not allow the holding temperatures for stress relieving Grades 690 and 690W (Grades 100 and 100W) and Grade 485W (Grade 70W) steels to exceed 1,100F and 1,050F, respectively.

Furnish a record of each furnace charge identifying the pieces in the charge and showing the temperature and schedule actually used. Provide proper instruments, including recording pyrometers, to determine the temperatures of members in the furnace at any time. Submit the records of the treatment operation for approval.

When indicated or specified, stress relieve members such as bridge shoes, pedestals, or other parts that are built up by welding sections of plate together according to Section 4.4 of the AASHTO/AWS Bridge Welding Code D1.5/D1.5M-2008.

(x) Pins and Rollers. Turn pins and rollers to the dimensions indicated and ensure that they are straight, smooth, and free from flaws. Forge and anneal pins and rollers more than 9 inches in diameter. Either forge and anneal or use cold-finished, carbon-steel shafting for pins and rollers 9 inches or less in diameter.

In pins larger than 9 inches in diameter, bore a hole not less than 2 inches in diameter full length along the axis of the pin after the forging has cooled to a temperature below the critical range and before annealing. Bore the hole under suitable conditions to prevent damage by cooling too rapidly.

(y) Boring Pin Holes. Bore pin holes true to the specified diameter, smooth and straight, at right angles with the axis of the member and parallel with each other unless otherwise indicated or specified. Produce the final surface by a finishing cut.

Do not allow the diameter of the pin hole to exceed that of the pin by more than 1/50 inch for pins 5 inches or less in diameter, or by more than 1/32 inch for pins larger than 5 inches in diameter. Do not allow the distance outside to outside of end holes in tension members and inside to inside of end holes in compression members to vary more than 1/32 inch from that indicated or specified. Bore pin holes in built-up members after the member has been assembled.

(z) Threads for Bolts and Pins. Provide threads for all bolts and pins for structural steel construction conforming to Unified Standard Series UNC ANSI B1.1, Class 2A for external threads and Class 2B for internal threads, except furnish pin ends having a diameter of 1 3/8 inches or threaded more than six threads to 1 inch.

(aa) Full Size Tests. When full size tests of fabricated structural members or eyebars are indicated or specified, provide suitable facilities, material, supervision, and labor necessary for making and recording the required tests.

(bb) Marking and Shipping. Paint or mark each member with an erection mark for identification. Furnish an erection diagram to the Representative indicating the location of the erection marks on each member, so that the marks can be located in the field.

Furnish copies of material orders, shipping statements, and erection diagrams to the Representative. Show the weights of the individual members on the statements. Mark the weights of members with a weight greater than 3 tons on the members. Load

structural members on trucks or cars in such a manner that they may be transported and unloaded at their destination without being excessively stressed, deformed, or otherwise damaged.

Pack bolts of one length and diameter and loose nuts or washers of each size separately. Ship pins, small parts and packages of bolts, washers, and nuts in boxes, crates, kegs, or barrels, but do not allow the gross weight of any package to exceed 300 pounds. Plainly display a list and description of contents on the outside of each shipping container.

(cc) Painting. Section 1060.3 and as follows:

Include the manufacturer of the complete self curing inorganic zinc system consisting of the primer, intermediate tie, and finish coats on the shipping papers.

(dd) Identification of Steel During Fabrication. Use a system of assembly- marking individual pieces and issuing cutting instructions to the shop (generally by cross- referencing the assembly- marks indicated on the shop drawings with the corresponding item covered on the mill purchase order) that maintains the identity of the original piece.

Only furnish steel from stock material that can be identified by heat number and mill test report.

During fabrication, up to the point of assembling members, clearly and legibly show the grade designation on each piece of steel other than Grade 250 (Grade 36) steel. Either write the grade designation on the piece or use the identification color code shown in Table B.

TABLE B

Identification Color Codes

Grade **Metric (English)**	**Color Code**
345 (50)	Green & Yellow
345W (50W)	Blue & Yellow
485W (70W)	Blue & Orange
690 (100)	Red
690W (100W)	Red & Orange

Except for Grade 250 (Grade 36) steel, establish an individual color code for steels not covered in Table B or included in AASHTO M 160/M 160M (ASTM A 6/A 6M). Provide the color code to the Representative.

Die stamp or firmly attach a substantial tag to identify the grade designation of those pieces of steel, other than Grade 250 (Grade 36) steel, that before being assembled into members will be subjected to fabricating operations such as blast cleaning, galvanizing, heating for forming, or painting that might obliterate paint color code markings. Furnish low stress- type steel die stamps.

If requested by the Representative, furnish an affidavit certifying that the identification of the steel was maintained according to this specification throughout the fabrication operation.

(ee) Welded Connections. Ensure that surfaces and edges to be welded are smooth, uniform, clean, and free of defects that would adversely affect the quality of the weld. Prepare edges according to the AASHTO/ AWS Bridge Welding Code D1.5/ D1.5M-2008.

(ff) Numerically-Controlled Drilled Field Connections. Section 1105.03(c)5

(gg) Facing of Bolted Surfaces. ASTM A 6/A 6M, and as follows:

- Provide surfaces plane and true, within the specified tolerances.
- Variations for surfaces designed to be flat: Conforming to ASTM A 6/A 6M, Tables A1.13, A1.14, and A1.15, unless otherwise indicated or specified.
- Complete all welded attachments to bolted surfaces before machining surfaces to required tolerances.
- Grind only on surfaces less than 2 inches wide, unless otherwise allowed.
- Use milling or other acceptable procedures to correct plate flatness to within the specified tolerances
- Provide plate thickness as indicated.
- Identify each plate and the methods used to correct plate flatness to the specified tolerances.
- Replace rejected plates at no additional cost to the Department.

(hh) Determination of Surface Flatness.

Furnish surfaces having flatness as determined by the following method:

- Place a precision straightedge that is a minimum of 6 inches longer than the surface to be measured in contact with and as parallel as possible to the surface. The straightedge may be located in any position on the surface being evaluated and not necessarily at 90 degrees to the edge.
- Attempt to insert a feeler gage having the required tolerance under the straightedge.
- Flatness is acceptable if the feeler gage does not pass between the straightedge and the surface.

G7035B - a07035 CHANGES TO SPECIFICATIONS: SECTIONS 108, 711, and 948

Addendum:

Associated Item(s):

Header:
Changes to Specifications: Sections 108, 711, and 948.

Provision Body:

SECTION 108 – PERFORMANCE AND PROGRESS

- **SECTION 108.06(a), TIME EXTENSIONS. Revise the fifth bullet within the second paragraph to read:**

  - The District Executive, in writing, authorizes additional and/or extra work, which affects progress on one or more controlling operations. Submit a time extension request within 30 calendar days after the date the prices to be paid for all authorized additional work and/or extra work at a negotiated price are agreed upon and, when applicable, accepted by the Department, or, if authorized extra work is to be paid on a force account basis, within 30 calendar days after the date the force account work is completed.

SECTION 711 - CONCRETE CURING MATERIAL AND ADMIXTURES

- **SECTION 711.3(c) SHIPMENT. Revise to read a follows:**

(c) Shipment. Ship and deliver in drums, in bulk or in bags. Mark or tag each drum or bag with the batch or lot number and date of manufacture. Forward a bill of lading with each bulk shipment, bearing the same information as necessary for drums. Each shipment will be subject to sampling and testing at any time.

- **SECTION 711.3 CONCRETE ADMIXTURES - Revise to add the following:**

(g) Fibers for Plastic Shrinkage Cracking. Monofilament or collated fibrillated synthetic fiber, complying with ASTM C 1116, 4.1.3-Type III. Provide test report complying with ICC Evaluation services (ICC-ES) AC32 Acceptance Criteria for Concrete with synthetic fibers, Section 3.2.1 from an Independent Certified Laboratory.

Provide a method of adding the fibers to the mix such that the fibers are dispersed during mixing and no clumps of fibers are present at the end of a mix cycle.

SECTION 948—STEEL SIGN STRUCTURE

- **SECTION 948.2(a) CANTILEVER, CENTERMOUNT, OR SPAN WITH SINGLE PLANE TRUSS. Revise to read as follows:**

(a) Cantilever, Centermount, Monopipe, or Span with Single Plane Truss.

1. Columns, Struts, and Truss Chords—

1.a ASTM A 53/A 53M, Grade B, Type E or S

- Provide supplemental CVN testing (Zone 2) for pipe with wall thicknesses greater than or equal to 1/2 inch.

1.b API 5L, Grades B, X42 or X52; PSL2, with the following characteristics:

- No jointers permitted.
- Do not use thermomechanical rolled or thermomechanical formed (grade suffix M) pipe on monopipe structures.
- Process of manufacture: seamless, electric resistance welded, or longitudinal seam, submerged arc welded.
- f_y = 65,000 pounds per square inch, maximum
- Provide supplemental CVN testing (Zone 2) for pipe with wall thicknesses greater than or equal to 1/2 inch.

1.c ASTM A 500, Grade B

- Provide supplemental CVN testing (Zone 2) for pipe with wall thicknesses greater than or equal to 1/2 inch.

1.d ASTM A 106, Grade B

- Provide supplemental CVN testing (Zone 2) for pipe with wall thicknesses greater than or equal to 1/2 inch.

- **SECTION 948.2(d) FABRICATED STRUCTURAL STEEL. Revise to read as follows:**

(d) Fabricated Structural Steel. Section 1105, except identify on the shop drawings weld locations, type, size, process, and nondestructive testing. Shielded Metal Arc Welding (SMAW), Submerged Arc Welding (SAW), Gas Metal Arc Welding (GMAW), and gas-shielded Flux Cored Arc Welding (FCAW) are approved. Galvanize as specified in Section 1105.02(s). If necessary, repair base connection welds one time. If more than one repair is necessary, obtain approval. Column base plates must meet a Class C flatness tolerance, as specified in Section 1111, for structures erected directly on a pre-finished concrete foundation using bridge shoe bedding material.

1. Perform the following minimum ultrasonic testing of Complete Joint Penetration (CJP) groove welds.

1.a 25% of the length of CJP groove welds connecting each flange splice plate to the truss chords, each base plate to the tower columns, each connection plate to the chords or columns, each CJP weld on truss seat plates, and each CJP longitudinal seam weld on cantilever and center-mount sleeves. 100% of the length of CJP groove (butt) welds on monopipe structures.

- If a rejectable defect is found, then test 100% of the weld on that plate or sleeve.

1.b 100% of the groove weld length on at least 25% of the number of similar type connections of web members to the truss chords.

- If any rejectable defect is found, double the testing frequency until no rejectable defects are discovered.

2. Perform the following minimum magnetic particle inspection (MT) of fillet welds and Partial Joint Penetration (PJP) groove welds.

2.a Intermediate member connections: MT 100% of the weldment length on at least 25% of the total number of connections on trusses and towers, respectively.

- If any rejectable defect is found, double the testing frequency until no rejectable defects are discovered.

2.b Welds on truss seat plates, cantilever and center- mount sleeves, and alternate press- break members and fillet welds connecting backing rings base plates and flange splice plates: MT a minimum of 25% of the total length of each weld.

- If a rejectable defect is found, then test 100% of the weld on the element.

2.c Welds attaching handhole frames to columns: MT of the length of each weld.

2.d All other connections: MT 100% of the weldments on at least 10% of the total number of connections.

- If any rejectable defect is found, double the testing frequency until no rejectable defects are discovered.

3. Perform 100% radiographic inspection of complete penetration longitudinal seam welds on tapered tube structures.

4. The Department's plant inspector will select weld locations and weldments to be tested.

5. Backing rings for full penetration welds must be continuous or butt welded with a full penetration weld. Perform 100% ultrasonic inspection (UT) of butt welds in rings 5/16-inch and thicker. Perform 100% MT on rings less than 5/16-inch thick. Test to AWS D1.5/D1.5-2008 tension criteria.

- **SECTION 948.2(i) STAINLESS STEEL U-BOLTS AND WASHERS. Revise to read as follows:**

(i) Stainless Steel U-Bolts and Washers. ASTM A 276, Type 304. Maximum allowable diameter for stainless steel U-bolts is 3/4 inch Condition B.

- **SECTION 948.2(j) STAINLESS STEEL NUTS. Revise to read as follows:**

(j) Stainless Steel Nuts. ASTM F594, Alloy Group 1

- **SECTION 948.2(k) HIGH STRENGTH BOLTS. Revise to read as follows:**

(k) High Strength Bolt. Section 1105.02(d)

- Furnish bolts, nuts, and washers for testing purposes and test as specified in Section 1050.3(c)7.b.
- U-bolts, other than stainless steel, shall conform to ASTM A 449.
- Stainless Steel U-bolts as specified in Section 948.2(j) may be substituted for ASTM A 449.
- U-bolts for bolt diameters of 3/4 inch and smaller.

G7036B - a07036 CHANGES TO SPECIFICATIONS: SECTIONS 609 AND 688

Addendum:

Associated Item(s):

Header:
Changes to Specifications: Sections 609 and 688

Provision Body:

SECTION 609—INSPECTOR'S FIELD OFFICE AND INSPECTION FACILITIES

- **SECTION 609- Inspector's Field office and Inspection Facilities. Revise to read as follows:**

SECTION 609—INSPECTOR'S FIELD OFFICE AND INSPECTION FACILITIES

609.1 DESCRIPTION—This work is furnishing, setting up, maintaining, and removing a field office of the type indicated and, if indicated, a field laboratory, proportioning plant office, and/or equipment package for the exclusive use of Department personnel.

609.2 MATERIAL—

(a) General. Provide offices and laboratories having the minimum floor space specified, along with all required furnishings, equipment, and materials. Furnish office and laboratory facilities that conform to applicable occupational safety and health regulations, including, but not limited to, those governing sanitation, illumination, ventilation, means of egress, medical services and first aid, and fire protection. Ensure that offices and laboratories have at least 7-foot ceilings, locking windows, adequate electric lighting, an adequate number of storage cupboards and closets, a mail slot or drop box, and a private entrance secured with lock and key. Ensure that stairway systems installed for access to offices and laboratories include a handrail and non-skid treads. Provide systems to heat and cool interior spaces, as necessary, to maintain an ambient temperature between 65F and 75F. Maintain acceptable sanitary toilet facilities, for exclusive use by Department personnel, near or within offices and laboratories. Ensure that the number of sanitary toilet facilities furnished is sufficient based on the size of the Department inspection staff that will likely be stationed in the indicated office or laboratory. Maintain acceptable lavatory (wash-up) facilities near or within sanitary toilet facilities. If the field office is located in an existing building ensure that lavatory facilities are equipped with hot and cold (or tepid) running water: hand soap or similar cleansing agents; and clean, sanitary, cloth or paper hand towels or warm air blowers. If a construction trailer is used as a field office, ensure that a sanitary toilet facility is located near the field office and ensure that it is equipped with waterless hand soap. Ensure that the electric supply service is of sufficient capacity to allow unrestricted operation of all indicated electronic systems, appliances, and equipment. Furnish documentation certifying that indicated equipment requiring calibration has been calibrated within the last 12 months, and continue to have such equipment recalibrated annually for the duration of the project. If required furnishings and/or equipment being provided have been previously used, ensure that such items are in satisfactory condition and fully functional as of the scheduled start of work. Whenever practical, obtain maintenance agreements for communications, electronic, and/or specialized equipment that provide for on site repair service. If malfunctioning equipment cannot be repaired on site, provide a replacement within a 24 hour time frame based on the relative importance of the piece to the timely performance of required project management functions as determined by the Representative.

1. Inspector's Field Office. Set up the indicated field office in an acceptable weatherproof building or trailer. Situate the field office in an acceptable location on or in the immediate vicinity of the project, separate from other construction offices. For field offices where multiple individual partitioned rooms are indicated, submit a floor plan showing the layout of the interior space for approval. Equip the field office as specified in Table A.

2. Proportioning Plant Office. If indicated, provide an office at the proportioning plant. Set up the indicated plant office in an acceptable weatherproof building or trailer. Equip the office as specified in Table A.

3. Field Laboratory. If indicated, provide a laboratory for materials and soils testing. Set up the indicated field laboratory in an acceptable weatherproof building or trailer situated in an acceptable location. Supply a gravity or pressure potable water system having at least a 100-gallon capacity and connected to a service sink with a faucet and acceptable outside drain. Do not drain or discharge wastewater into the surrounding environment; use a container of sufficient size to collect all drained or discharged wastewater and transport and dispose of wastewater at an approved site for handling such wastewater. Equip the field laboratory as specified in Table A.

4. Nuclear Gauge Temporary Storage. If indicated, provide a temporary storage location within the Inspector's Field Office or Field Laboratory for temporary storage of moisture density nuclear gauges by a Department Representative. Provide a temporary storage location consisting of an enclosed closet with a minimum area of 9 square feet and secured with two independent locks and keys. Provide all keys to only the licensed Department nuclear gauge operator. Do not provide keys to any other persons. Where possible, locate the closet at least 20 feet from a permanent work station (i.e., desk area). Where a 20 feet minimum distance from a permanent work station is not reasonably possible, the Department licensed nuclear gauge operator will temporarily store the nuclear gauge within the storage location following current Department policy and procedures to prevent radiation exposure to the public.

(b) Testing Equipment. On projects where a Field Laboratory is indicated, furnish and maintain the following equipment for required testing of soil or aggregates:

Number of Each	Equipment
1	C.A. Mechanical Sieve Shaker with Timer

1	F.A. Mechanical Sieve Shaker with Timer
1	Set Standard Sieves for C.A.
1	Set Standard Sieves for F.A. and Soils
1	Unit Mass (Weight) Metal Container 1 cubic foot
1	Unit Mass (Weight) Metal Container 1/2 cubic foot
1	Platform Scale, 200-pound capacity, sensitive to 0.01 pound
1	Balance, 70.5-ounce capacity, sensitive to 3.5x103 ounce, with one complete set of Masses (Weights).
1	Exhaust Fan (for venting Mechanical Shakers)
1	Density Sample Extruder
1	Proctor Mold and Rammer
1	12-inch Steel Straightedge
2	Mixing/Drying Pans
1	Mixing Spoon
1	Broom & Dust Pan

In addition, on projects where a Field Laboratory is indicated and cement concrete, bituminous concrete, and/ or construction aggregates are to be used; furnish and maintain the equipment specified in Section 704.2(a), in the plant requirements of Bulletin 27, and/or in Sections 703.1(b) and 703.2(b), respectively.

(c) Communications Equipment. When indicated, provide the communications equipment specified in the proposal. Furnish communications equipment in the quantity indicated and meeting the following requirements:

1. Copier. A digital laser copier, with automatic document feeder, having reduction/ enlargement functions and capable of accepting maximum 11–inch by 17-inch size originals and producing 8 1/2–inch by 11-inch and 8 1/2-inch by 14 – inch size copies at a minimum rate of 10 letter size copies per minute. Include sufficient imaging cartridges (toner/ drum/ developer) to yield a minimum of 5,000 copied pages.

2. Fax Machine. A high speed desktop facsimile machine capable of transmitting and receiving copies of standard, 8 1/2–inch by 11–inch printed material, pictures, etc. over a standard telephone line. Provide compatible toner cartridges, as required.

3. Cellular Phone. A portable, handheld unit capable of providing wireless communications within a 50-mile radius of the project. Include a carrying case with belt loop/clip, cigarette lighter adapter, spare battery, and desk charger. Arrange for a cellular service plan that includes a voice mail option, call waiting, and 400 peak minutes of unrestricted use per month, for each device supplied, for the duration of the project.

(d) Electronic Equipment. When indicated, provide the electronic equipment specified in the proposal. Furnish electronic equipment in the quantity indicated and meeting the following requirements:

1. Digital Camera. A minimum 5-megapixel image resolution digital camera having 12X combined zoom (3X optical, 4X digital) and capable of producing pictures in JPG/JPEG file format. Imaging quality best up to 5 inches by 7 inches. Include two sets of NiMH rechargeable batteries and a compatible battery charger capable of recharging one set of batteries in 2 hours or less. Furnish a 2GB (minimum) internal memory card having the appropriate format for use with the camera; an external, USB-connected adapter capable of reading the memory card regardless of format (i.e. SmartMedia, Compact Flash, xD, SD, etc.); and any other operating essentials. Must be compatible with the Microcomputer System specified in Section 688.2.

2 Document Scanner. A flatbed, color scanner with a 50 sheet minimum automatic document feeder (ADF) capable of scanning a minimum of 8 pages per minute in black and white mode and having, at a minimum, an optical resolution of 2400 dpi, a 48-bit color rate, and capable of delivering 8 1/2-inch by 11-inch and 8 1/2-inch by 14-inch prints, a USB interface, and text scanning and image editing software. Software provided must support TIFF Group 4-2D and JPEG file formats and create PDF files. Must be compatible with the Microcomputer System specified in Section 688.2.

3 Laser Printer. A laser printer having USB connectivity, at a minimum, a black and white print resolution of 1200 X 1200 dpi, capable of delivering 8 1/2-inch by 11-inch and 8 1/2-inch by 14-inch prints at a minimum speed of 15 pages per minute. Include all necessary cords and cables. Provide compatible toner cartridges, as required; they must be compatible with the Microcomputer System specified in Section 688.2.

4. Color Printer. A color inkjet printer having, at a minimum, a black and white print resolution of 600 x 600 dpi, a color print resolution of 4800 x 1200 dpi, parallel port or USB connectivity, and 64KB of standard memory; capable of delivering 8 1/2-inch by 11-inch and 8 1/2-inch by 14-inch black and white prints at a minimum speed of 20 pages per minute and color prints at 15 pages per minute. Include all necessary cords and cables. Provide compatible inkjet cartridges, as required; they must be compatible with the Microcomputer System specified in Section 688.2.

(e) Specialized Equipment. When indicated, provide the specialized equipment specified in the proposal. Furnish specialized equipment in the quantity indicated and meeting the following requirements:

1. Surveyor's Level and Measuring Rod. A standard, waterproof, surveyor's leveling instrument having, as a minimum, 20x magnification and a sighting range of up to 200 feet; with a job accuracy range within 1/4 inch at 75 feet. Include a 25-foot minimum, fiberglass measuring rod, folding leg tripod, rain cover, and carrying case.

2. Electronic Digitizer. A stationary or portable, high performance digitizer system capable of electronically measuring the exact, net area and perimeter of linear shapes on plan drawings at any scale, and converting those measurements to areas and volumes. Furnish electronic digitizer having a tablet with a minimum 22-inch by 36-inch active area. Include necessary cabling, carrying case, and all other operating essentials.

3. Digital Display Level. A durable level with automatic calibration function, that reads angles with precision and digitally displays readings in degrees, percent slope, and pitch to within 1/10 degree accuracy. Include battery(ies).

When inspecting ADA curb ramps or sidewalk slopes use a 4 feet maximum length digital display level with the readout set to % slope and entered using one decimal place.

4. Infrared Thermometer. A hand-held, portable, non-contact thermometer capable of measuring temperatures between – 4F and 482F and with a field of view (i.e., spot ratio) of at least 6:1. Include protective case, battery(ies) and all other operating essentials.

5. Laser Range Finder. A self-contained, light-weight, hand-held instrument that measures and records distances in feet, yards, or meters; having a maximum range of 750 feet to an uncooperative, non-reflective target; LCD display; and shock/water resistant housing. Include battery(ies), cabling, carrying case, and all other operating essentials.

6. Paper Shredder. Lightweight, crosscut shredder capable of shredding 4 sheets at one time.

(f) Internet Service. For each type Field Office indicated, purchase a subscription to an Internet service, for exclusive use by Department personnel, for the duration of the project. Purchase a separate Internet service subscription for the Proportioning Plant

Office, if indicated. Choose a proprietary or mid-market service that provides for high-speed access to the account by means of a Digital Subscriber Line (DSL), Cable, or other Broadband connection (Dial-up service will not be accepted). Based on the specific type of high-speed connection provided, furnish a compatible modem with built-in hardware firewall protection. If such high-speed access is not available within the area where the project is located, choose a wireless air card for the Internet service. Ensure that the subscription package allows for the exchange of electronic mail and includes some means of securing access to the account (e.g. password protection) by at least four different users.

If a high-speed Internet service is provided for the Field Office, and the proposal indicates that more than one microcomputer system will be used on the project, to provide a compatible, powered wired router with built-in hardware firewall protection and Ethernet switch, and the cabling needed to interconnect the router with the modem and all microcomputers. A wireless router will not be acceptable.

Demonstrate connectivity with the Internet Service Provider at the time of or immediately following microcomputer system installation.

(g) Miscellaneous Materials. For each microcomputer system that will be used on the project, as indicated in the proposal, at a minimum provide the following:

All compact disks and flash drives become Department property.

- Ten, recordable CD-R 700 MB (minimum) compact disks (CD's) with individual protective cases,
- Ten, rewritable CD-RW 700 MB (minimum) compact disks (CD's) with individual protective cases,
- One, CD-ROM drive cleaning kit,
- Two, Memory Flash Drives 8 GB (minimum).

All binders and paper become Department property.

In addition, at a minimum provide the following miscellaneous materials:

- Five, 8 1/2-inch by 11-inch; ten, 11-inch by 8 1/2-inch; and five, 8 1/2-inch by 14-inch pressboard or plastic computer paper binders with plastic locking strips as required.
- Four, 3-inch, three D-ring binders, with vinyl covers, having dimensions of 8 1/2 inches by 11 inches.
- 8 1/2 -inch by 11-inch and 8 1/2-inch by 14-inch, and 11-inch by 17-inch 20# white bond paper for copiers and printers, as specified, sufficient for the life of the project. Providing only one ream of paper at a time is unacceptable.

609.3 CONSTRUCTION—Install the indicated facilities no later than 5 working days after the Notice to Proceed Date or 5 days before the scheduled start of work. Anchor the facilities to withstand high winds. Maintain the facilities from installation until 30 days after physical work (including punch list items from final inspection) has been satisfactorily completed, unless released earlier by the Representative. Satisfactorily clean or arrange for the indicated facilities to be cleaned at least once per week. Provide an adequate number of accessible parking spaces immediately adjacent or in close proximity to the offices or laboratory for exclusive use by Department personnel. Provide proper maintenance of parking areas. Ensure that there is sufficient lighting to illuminate the exterior of offices or laboratory and all parking areas. Designate a specific individual to serve as the contact person for service-related problems. After physical work has been completed, but before release by the Representative, arrange to meet with the Inspector-in-Charge to examine and determine the condition of all specialized equipment that is contractor-owned. Report any unresolved disputes over the condition of such equipment to the Representative. Failure to meet with the Inspector-in-Charge or to report problems with the condition of specialized equipment will create a presumption that, except for expected wear resulting from normal usage, the equipment is in good condition and remains fully functional. Specialized equipment that is lost or determined to be damaged beyond repair will be replaced or reimbursement will be made as specified in Section 110.03, provided such loss or damage is not the result of carelessness or negligence on the part of the Contractor or any other responsible third party. The Representative may direct that the facilities be maintained for more than 30 days after physical work has been satisfactorily completed, as necessary, to allow time for Department personnel to process outstanding project records. Remove and dispose of furnishings, equipment, and materials upon release by the Representative.

609.4 MEASUREMENT AND PAYMENT—Lump Sum

The proposal will include separate pay items for the Inspector's Field Office and Inspection Facilities, Field Laboratory, Proportioning Plant Office, and Equipment Package, as applicable.

Each contract item will be paid, as specified in Section 110.05, in two equal payments, according to the following schedule:

- When work is completed in an amount equivalent to at least 10% of the original contract amount, excluding the bid price for the applicable item, the first payment will be made.
- When work is completed in an amount equivalent to at least 60% of the original contract amount, excluding the bid price for the applicable item, the second payment will be made.

(a) Price Adjustments. Adjustments to the lump sum prices bid for the indicated office or laboratory facilities and equipment package, as applicable, will be made as follows:

1. Time Extensions and Reductions. In the event the time for completion of all work on the project is extended or reduced, as specified in Section 108.06, an appropriate adjustment (payment to the Contractor or rebate to the Department) will be made to the lump sum prices bid for the indicated office or laboratory facilities and equipment package, as applicable, for the days in excess of (payment) or less than (rebate) the original contract time, at the following daily rate:

$$\text{Daily Price Adjustment Rate} = \frac{75\% \times \text{Contract Lump Sum Price}}{\text{Original Contract Time in Days}}$$

2. Facilities Maintained for More than 30 Days After Physical Work Completion. In the event the Representative directs that the office or laboratory facilities and equipment package be maintained for more than 30 days after the date of physical work completion, as specified in Section 609.3, an appropriate adjustment (payment to the Contractor) will be made to the lump sum prices bid for the indicated office or laboratory facilities and equipment package, as applicable, for the days in excess of 30 until released by the Representative, at the Daily Price Adjustment Rate specified in Section 609.4(a)1.

No adjustment will be made if the Representative directs that the office or laboratory facilities and equipment package be maintained for more than 30 days after the date of physical work completion due to the Contractor's failure to submit, complete, and/or correct required certificates or documents, as established during the final inspection.

TABLE A

Office/Laboratory and Standard Equipment

	Type A Field Office	Type B Field Office	Type C Field Office	Proportioning Plant Office	Field Laboratory
Floor Space square foot, out to out	1,300	650	240	150	150
Individual Partitioned Rooms	6	3	2	1	1
Conference Table & Chairs	1				
Desk(s) & Chair(s)	6	3	2	1	1
Office Chairs	15	9	6		
Plan Rack(s)	2	2	2		1

Work Table(s) (1)	5	3	2	1	1
Printer Stand(s) (2)	5	3	1		
4-Drawer File Cabinet (3)	4	3	2	1	1
2-Drawer File Cabinet (3)	2	1	1		
Sample Splitter (4)					1
Range (5)					1
Sanitary Electric Water Cooler	1	1	1	1	1
Individual Access Phone Line(s) (6)	4	4	4	3	
Telephone(s) w/ Answering Machine(s) or Voice Mail	2	2	2	1	

(1) Work Table. Minimum size: 2 1/2 feet by 7 feet by 2 1/2 feet high.

(2) Printer Stand. Specifically designed to accommodate laser and color printers, with paper storage/feeder tray. Minimum size: 18 inches by 18 inches by 2 1/2 feet high.

(3) File Cabinets. Fire resistant (D-Label), lockable, metal file cabinet.

(4) Sample Splitter. For coarse and fine aggregate, with adjustable chute opening.

(5) Range. Standard, 36-inch range, gas or electric, new or used, with oven capable of operating at 230F ± 9F.

(6) Individual Access Phone Line(s). The number indicated includes the phone line(s) needed for microcomputer system operation and Internet service.

Appendix

Table A

Equipment Package

EQUIPMENT PACKAGE

Equipment	**Quantity***
Communications Equipment	
Copier (1)	
Fax Machine (1)	

Cellular Phone(s)	
Electronic Equipment	
Digital Camera	
Document Scanner (2)	
Laser Printer (2)	
Color Printer (2)	
Specialized Equipment	
Surveyor's Level & Measuring Rod	
Electronic Digitizer	
Digital Display Level	
Infrared Thermometer	
Laser Range Finder	
Paper Shredder	
Miscellaneous Items	
Internet Service Provider	
Computer Media	Yes/No
Toners/Cartridges	Yes/No
(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.	
* The special provision will be included in the proposal indicating the quantity of each type of communications, electronic, and/or specialized equipment to be furnished.	

Microcomputer Systems. 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, the special provision in the proposal will indicate the total number of microcomputer systems that will be used on the project.

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.

SECTION 688—MICROCOMPUTER SYSTEM

- **SECTION 688 - Microcomputer System. Revise to read as follows:**

SECTION 688—MICROCOMPUTER SYSTEM

688.1 DESCRIPTION—This work is furnishing, setting up, and maintaining a microcomputer of the type specified, and a battery backup system if indicated, for the exclusive use of Department personnel.

688.2 MATERIAL—

(a) General. Provide all material necessary for setup and operation of a microcomputer system, including all cords and cabling. Upon delivery to the field office, ensure that all hardware and software are compatible and operational.

(b) Microcomputer. The Type A microcomputer is a desktop or tower model. The Type C microcomputer is a laptop computer. The minimum hardware specifications for each type microcomputer systems are as indicated in Table A and as follows:

1. Monitor. For the Type A microcomputer system, provide a 19- inch minimum, widescreen LCD monitor with WXGA video support having at a minimum a resolution of 1440 x 900 dpi, with 800: 1 Contrast Ratio with VGA and DVI connectors.

For the Type C microcomputer system, provide a 14.1-inch widescreen WXGA+LCD Panel screen having a minimum resolution of 1024 x 768 dpi.

2. Surge Protector. Provide a surge protector for each computer (Type A and/or Type C), with a minimum of six AC outlets and one telephone outlet, having a line voltage regulator/conditioner that protects against chronic low or high voltage, voltage spikes, and radio frequency interference.

3. Input Devices. Provide a Windows compatible, 104 key, full size Multimedia function keyboard, USB with a 6 foot minimum length cord. Provide a Microsoft compatible 3 button optical scrolling mouse, USB with a 6 foot minimum length cord. Provide both devices for Type A and/or Type C computers (one each).

4. Miscellaneous.

- Provide two Lithium-Ion batteries, with 3 hours minimum per battery, AC adapter, automobile adapter, with a Type C microcomputer.
- Provide a carrying case large enough to carry the Type C microcomputer, spare battery pack, external pointing device (mouse), AC adapter, automobile adapter.

(c) Software. All system software must be installed on the C: drive partition.

- Provide MS Windows 7 Professional 64 bit operating system, with Service Pack 1, to include all Windows and Microsoft updates.. Internet Explorer version 8 should be installed for guaranteed compatibility with all current PENNDOT based websites. Set up this operating system as a new installation, not as an upgrade from a previously installed, older version of Windows.
- Provide MS Office - Professional 2007 Service Pack 2 Edition, with all Microsoft Office updates.
- Provide Acrobat Reader 10 (X) or newer with the most current version.
- Provide Symantec PC Anywhere version 12.5 – (Host and remote Mode) and/or most current version.
- Provide WinZip version 14 (or newer).
- Provide sun Microsystems Java with most current version with all updates.
- Provide Adobe Flash Player with most current version with all updates.
- Provide antivirus software that meets the Department’s current standard, with updates for the duration of the project.
- Provide the Inspector-In-Charge with all OEM software CD’s/licenses, manuals, and documentation, to be maintained in the Department’s Project Field Office for the duration of the project.
- Provide a compatible Internet browser that meets the Department’s current standard for ECMS as specified in Section 609.2(f).

(d) Battery Backup System. For the Type A microcomputer, provide a UPS (uninterrupted power supply) battery backup system meeting the following minimum requirements:

- Load Wattage (minimum) 500
- Full Load maximum time 9 minutes
- Number AC Outlets Regulated 4
- Number AC Outlets w/battery backup 2
- Number AC Outlets with noise isolation and spike protection 4
- Indicator Lights Line and Battery Power
- Circuit Protection
  - Line Breaker
  - Battery (internal) Fuse
- Alarm (audible tone during battery operation with defeat switch)

TABLE A
Minimum Specifications

System Type	Type A	Type C
Central Processing Unit (Min)	Intel Core 2 Duo E 6000 series	Inter Core 2 Duo T7000 series
CPU Speed (Min)	2.33 GHz, 4MB L2 Cache, Intel VT	2.00 GHz L2 Cache
Random Accessible Memory (RAM) (Min)	4GB DDR2	4 GB DDR2
Internal SATA Hard Drive (Min)	500GB, SATA 3.0Gb/s and 8 MB Cache	250 GB, SATA
Internal DVD Burner (Min)	24X DVDRW, SATA	8X CD/DVD Burner
USB 3 Button Optical Mouse	Yes	Yes
Internal Pointing Device (Touchpad)	—	Yes
USB 2.0 Ports (Min)	6 (2 front, 4 rear)	4
External USB 2.0 4-Port Hub (Min)	—	Yes
Network Port	Yes	Yes
Type II PCMCIA Slots	—	1

(e) Maintenance Agreement. Furnish a maintenance agreement, which provides for on site repair service within 24 hours of notification. If the system can not be repaired, provide a replacement within 48 hours of notification.

(f) Compatibility. All references to compatibility require that compatibility be demonstrated in the Inspector's Field Office.

688.3 CONSTRUCTION—Furnish microcomputer(s) for Department use no later than 5 working days after the Notice to Proceed date or 5 days before the scheduled start of work. Provide the type of microcomputer specified and install in the Inspector's Field Office. Maintain the system from installation until 30 days after physical work including work on punch list items identified during the final inspection, has been satisfactorily completed unless released earlier by the Representative. The Representative may direct that the system be maintained for more than 30 days after physical work has been satisfactorily completed, as necessary, to allow time for Department personnel to process outstanding project records. Remove and properly dispose of all dispensable items for the life of the project and upon release by the Representative.

688.4 MEASUREMENT AND PAYMENT—Lump Sum

For the type indicated.

Paid in three payments, in accordance with the following schedule:

- Whenever all the requirements specified of Section 688.2(a) have been met and compatibility satisfactorily demonstrated to the Representative, 80% of the amount bid for this item will be paid.

- Whenever work is performed equal to 40% of the original contract amount, excluding the bid price for this item, 10% of the amount bid for this item will be paid.
- Whenever work is performed equal to 80% of the original contract amount, excluding the bid price for this item, the remaining 10% of the amount bid for this item will be paid.

(a) Price Adjustments. Adjustments to the lump sum prices for the indicated type microcomputer system, as applicable, will be made as follows:

1. Time Extensions and Reductions. In the event the time for completion of all work on the project is extended or reduced, as specified in Section 108.06, to be more than A percent or less than B percent of the original contract time, where A and B are as specified in Table B, an appropriate adjustment (payment to the Contractor or rebate to the Department) will be made to the lump sum prices bid for the indicated microcomputer systems, as applicable, for that portion of adjusted contract time in excess of A percent of (payment) or less than B percent of (rebate) the original contract time, at the following daily rate:

$$\text{Daily Price Adjustment Rate} = \frac{75\% \times \text{Contract Lump Sum Price}}{\text{Original Contract Time in Days}}$$

TABLE B

Contract Time

Original Contract Time in Days		**Percent**	
From More Than	**To and Including**	**A**	**B**
0	100	130	70
100	300	120	80
300	500	115	85
500	1000	112	88
1000		110	90

2. Systems Maintained More than 30 Days After Physical Work Completion. In the event the Representative directs that the microcomputer systems be maintained for more than 30 days after the date of physical work completion, as specified in Section 688.3, an appropriate adjustment (payment to the Contractor) will be made to the lump sum prices bid for the indicated microcomputer systems, as applicable, for the days in excess of 30 until released by the Representative, at the Daily Price Adjustment Rate specified in Section 688.4(a)1.

No adjustment will be made if the Representative directs that the microcomputer systems be maintained for more than 30 days after the date of physical work completion due to the Contractor’s failure to submit, complete, and/or correct required certificates or documents, as established during the final inspection.

N10501A - a10501 SHOP DRAWINGS

Addendum:

Associated Item(s):

Header:
BRIDGE SHOP DRAWINGS

Provision Body:

The District Engineer has designated Mctish Kunkel and Associates Inc. to act as agent for the review and acceptance of bridge shop drawings. Submit print sets for review and acceptance, as specified in Section 105.02(d), to the following address:

3500 Winchester Road

Suite 300

Allentown Pa 18104

610-841-2700

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.one
b.N/A

S6201B - b06201 SECTION 620 - GUIDE RAIL

Addendum:

Associated Item(s):

Header:
SECTION 620 - GUIDE RAIL

Provision Body:

Provide guide rail posts 300 mm (1 foot) longer than indicated on the Standard Drawings at those locations indicated on the plans. Additional 300 mm (1foot) length is incidental to the items of guide rail and no separate or additional compensation will be allowed therefore.

00 - B092 CONSTRUCTION HOLIDAY RESTRICTIONS

Addendum:

Associated Item(s):

Header:

Provision Body:

Do not perform work on this project during the following holiday periods, unless directed by the engineer. Also, do not have any short-term lane closures during these holidays. Such work and/or activities include, but are not limited to the following:

• Slow moving construction vehicles entering or leaving the roadways.

• Crane swings over or near the highway.

• Any lane closures.

Easter - The restriction is from Friday, 12:01 AM preceding the holiday to Monday, 12:59 PM following the holiday.

Memorial Day and Labor Day - The restriction is from Friday, 12:01 AM preceding the holiday to Tuesday, 12:59 PM following the holiday.

Thanksgiving - The restriction is from Wednesday, 12:01 AM preceding the holiday to Sunday, 12:59 PM following the holiday.

Independence Day (July 4th), Christmas (December 25th), and New Year’s (January 1st) –

If the holiday is Monday, then the restriction is from Friday, 12:01 AM preceding the holiday to Tuesday, 12:59 PM following the holiday.

If the holiday is Wednesday, then the restriction is from Tuesday, 12:01 AM preceding the Holiday to Thursday, 12:59 PM following the holiday.

If the holiday is Thursday, then the restriction is from Wednesday, 12:01 AM preceding the holiday to Sunday, 12:59 PM following the holiday.

If the holiday is Friday, then the restriction is from Thursday, 12:01 AM preceding the holiday to Monday, 12:59 PM following the holiday.

If the holiday is Saturday or Sunday, then the restriction is from Friday, 12:01 AM preceding the holiday to Monday, 12:59 PM following the holiday.

Independence Day (July 4th) -

If the holiday is Tuesday, then the restriction is from Monday, 12:01 AM preceding the holiday to Wednesday, 12:59 PM following the holiday.

Christmas (December 25th) and New Year's (January 1st) -

If the holiday is Tuesday, then the restriction is from Friday, 12:01 AM preceding the holiday to Wednesday, 12:59 PM following the holiday.

00 - c 24" DIA. DRILLED CAISSON, SHAFT SECTION

Addendum:

Associated Item(s):

Header:
24" DIA. DRILLED CAISSON, SHAFT SECTION

Provision Body:
DESCRIPTION: This item is the installation of the drilled caisson

MATERIALS:

Casing – Section 1006.2(a)

Class A cement concrete – Section 704

CONSTRUCTION: In accordance with Section 1006.3 and contract documents.

MEASUREMENT AND PAYMENT- Incidental to Lump Sum Wall.

00 - c 4" STONE FACING

Addendum:

Associated Item(s):

Header:
4” STONE FACING

Provision Body:
DESCRIPTION: This work is the installation of four inch stone facing to the front face of the cast in place retaining wall. Use the stone from the existing stone walls that are to be removed. The installed stone is to resemble the color and pattern of the existing stone wall to which it attaches.

MATERIAL:

Mortar – Section 705.7(b)

Stone – On site from existing wall.

Dovetail Slot – In accordance with ASCE/ACI 530-05 and provided by Penndot Pub 35 approved supplier.

Dovetail Anchors – In accordance with ASCE/ACI 530-05 and provided by Penndot Pub 35 approved supplier.

Galvanizing – In accordance with section 1105.02(s) and ASTM A153/A 153M.

CONSTRUCTION:

(a) Sample Panel. Construct an on-site, sample, masonry panel approximately 4 feet square, indicating the color range, texture, bonding pattern, mortar color, tooling, and workmanship of the proposed stone masonry structure. Obtain approval of the sample panel before erecting the stone masonry.

(b) Placing Stone. Lay stone with exposed surfaces true to line, in courses, in a full bed and head of mortar, and with joints not exceeding 3/8” in width. Do not furrow beds. Stagger joints on adjoining courses, as nearly as practical. Saturate stone with water and ensure that stones are surface dry before placement.

(c) Pointing. Finish mortar joints with a flat pointing tool to a an approved appearance.

(d) Curing and protection. Do not place mortar and stone or point, in freezing weather, unless otherwise authorized in writing. Protect masonry from freezing until cured. Provide adequate protection from frost, and remove and replace work damaged by frost. Protect completed stonework from the elements. Cure stonework with water moisture for at least 3 days.

(e) Anchors. Install anchors in accordance with manufacturers recommendations or the following.

a. Use dovetail slots every 18” horizontally to be cast into face of wall.

b. Use dovetail anchors every 18” vertically.

c. Slots and anchors to be galvanized in accordance with ASTM A153/A153M.

MEASUREMENT AND PAYMENT – Square Foot.

This work is incidental to the Lump Sum cast in place wall.

00 - c NOTIFICATIONS

Addendum:

Associated Item(s):

Header:

Provision Body:

Provide the following notification to the Inspector-in-Charge of the following:

• Start of physical work – four calendar days

• Width, height, or weight restrictions to any roadway – ten working days (excluding State holidays). This information should be on the form M-937.

• Removal of width, height, or weight restrictions to any roadway – immediately upon removal. This information should be on the form M-937RO.

• Start of any operation affecting traffic (lane closures, total closures, etc.) -- four calendar days with a confirmation the morning of the operation.

The contractor will not be permitted to close or restrict any roadway until ten working days (excluding State holidays) after such notification is received by the District Permits Unit.

No time extensions will be granted for failure to submit the required notices.

Also, directly notify local residents, school districts, local and county emergency management agencies (EMAs) of work that impacts those entities at the start of the project and again no less than four calendar days in advance of such work. Provide documentation of such notifications to the Inspector-in-Charge.

Regardless of these provisions, the contractor is expected to provide notification to any entities that are affected by his operations sufficiently ahead of the operations to allow those entities to adjust their operations accordingly.

00 - C SECTION 208 SPECIAL ROLLING

Addendum:

Associated Item(s):

Header:

Provision Body:

208.1 DESCRIPTION - This work is the special rolling of embankments.

208.2 MATERIAL - Use acceptable pneumatic-tired equipment for special rolling, capable of varying the load from 267 kN (30 tons) to 445 kN (50 tons). Use a roller constructed to transmit the load through four wheels, equally spaced over the roller width, mounted on two (2) or four (4) axles in line, permitting oscillation of the individual wheels or pairs of wheels. Use a roller with tires capable of operating at inflation pressures ranging from 0.62 MPa (90 pounds per square inch) to 1.03 Mpa (150 pounds per square inch). Provide charts or tabulations showing the contact areas and contact pressures for the full range of tire inflation pressures and loadings for the particular tires furnished.

208.3 CONSTRUCTION - Adjust the roller load and tire pressures for contact pressures to approximately the maximum supporting value of the layer being rolled. When the special rolling of any layer shows an area to be unstable or nonuniform, satisfactorily stabilize the area by providing additional compaction on these areas or by removing the unsuitable material, replacing it with suitable material, and recompacting.

Operate the roller in a systematic manner so the number of passes can be readily determined and recorded. Normally, operate the roller at a speed of not less than 4.0 km/h (2-1/2 miles per hour).

Perform special rolling only in the presence of the Inspector- in- Charge who will approve or disapprove the stability of the embankment and recommend corrective measures.

208.4 MEASUREMENT AND PAYMENT - Incidental to lumps sum Wall.

No measurement and payment will be made for idle equipment time because of repairs, servicing, loading or unloading ballast, increasing or decreasing tire pressure, bad weather, or for any other similar reason.

I2032C - c02032 ITEM 9203-0101- TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM

Addendum:

Associated Item(s): 9203-0101

Header:

ITEM 9203-0101 - TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM

Provision Body:

I. DESCRIPTION - This work is the design and construction of a temporary excavation support and protection system or appropriately designed open cut excavation, as indicated, with a service life of less than or equal to 36 months.

II. MATERIAL - Provide certification or laboratory test results verifying material properties. For used steel, the salvage design values from AASHTO Guide Design Specification for Bridge Temporary Works (AASHTO Guide Spec) may be used as an alternate to testing to determine grade of steel. Materials need not be new but must be in serviceable condition as determined by the Engineer. Temporary material used does not have to be from a Bulletin 15 source, but must meet the following:

- Structural Steel.....….....AASHTO M 270M/270 (ASTM A709M/A709) Grade 250(Grade 36), Grade 345(Grade 50) or Grade 345W(Grade 50W)
- Steel Sheet Piling.....….. .....ASTM A328M/A328, ASTM A572M/A572
- Steel H-Piles.....….. .....AASHTO M 270M/270 (ASTM A709M/A709), Grade 250(Grade 36)
- Wood Lagging.....…..... ...Rough Cut Species in AASHTO Guide Spec Appendix A and AASHTO Construction Handbook for Bridge Temporary Works Appendix C
- Cement.....…….....AASHTO M85 and AASHTO M240
- Pre-Stressing Steel.....….. .ASTM A416 Grade 270
- Welded Wire Fabric..... ..AASHTO A55 (ASTM A185)
- Reinforcement Bars..... ....AASHTO M 31M/31 (ASTM A615M/A615), AASHTO M42M/M42 (ASTMA616M/A616),Grade420(Grade 60)
- Other Material.....….....In accordance with applicable Sections of Publication 408

III. DESIGN - Design the temporary excavation support and protection system in accordance with current AASHTO LRFD Bridge Design Specifications and Design Manual, Part 4 (Metric) Specifications, current FHWA guidelines and AASHTO Guide Spec. Design temporary excavation support and protection system for final condition and all construction conditions, including surcharge loads due to vehicle traffic and construction equipment. Submit 4 sets of design calculations and 4 sets of completed detailed drawings, signed and sealed by a Professional Engineer, registered in the Commonwealth of Pennsylvania to the District Executive for review. Include in the design calculations all material properties, design loads, and design assumptions. Include on the completed detailed drawings all design dimensions, limits of work, elevations, material, member sizes and construction sequence. Provide cutoff elevation of steel and wooden components for work in streambed. Include specific installation procedures and testing requirements as part of the submittal. Allow 14 days for the review by the Department.

Ensure that temporary excavation support and protection system design and construction conforms to the following:

a) Open cut excavations are allowed, provided they meet OSHA requirements, the safety of the traveling public, the approved traffic control plan and existing structure is assured, and they stay within the legal right-of-way lines. Cuts can extend beyond legal right- of- way lines only with the written approval of the Department and written permission of the property owners. Ensure environmental compliance if cut extends beyond area cleared by the Department. Submit slope stability analysis in accordance with Publication 293.

b) The temporary excavation support and protection system will be selected by the Contractor. Examples include anchored walls, mechanically stabilized earth walls, prefabricated modular walls, cantilever walls, cofferdams, and soil nailing walls. These systems may be comprised of one or more of the following: Soldier Piles, Timber Lagging, Steel Sheet Piling, Caissons, Slurry Walls, Tiebacks, Soil Nails, Shotcrete, Deadman Anchors, Wales, Cross lot Bracing, Raker Braces, Precast Concrete, Precast Lagging, Soil Cement Lagging, Cement Bentonite, Gabions, Minipiles, Concrete Reaction Blocks, Mechanically Stabilized Earth Walls or other methods.

c) Design temporary excavation support and protection system based on the following parameters:

1. Soil parameters (***see Project Specific Details for following parameters***):

1.a Effective angle of friction _____

1.b Moist unit weight of soil _____

1.c Saturated unit weight of soil _____

1.d Effective cohesion _____

1.e Static groundwater level at elevation _____

1.f Undrained shear strength of cohesive soil_____

1.g Shear strength for rock mass_____

Provide other soil/rock properties with test data, needed in the design of the temporary excavation support and protection system.

2. Ensure that all components stay within the legal right-of-way unless an easement is obtained by the Contractor.

IV. CONSTRUCTION - Install temporary excavation support and protection system in accordance with applicable sections of Publication 408. Be responsible for adequacy, safety and compliance with Traffic Control Plan. If the design is not compliant with the approved Traffic Control Plan, furnish any additional traffic control devices at no additional cost to the Department. All steel and wooden components may remain in place to pavement subgrade or 0.6 meters(2 feet) below finish grade,whichever is higher elevation. Treated wood is not required unless it is within 2 meters(6 feet) of finish grade and is to remain in place. Pressure treat with chromate copper arsenate (CCA) to refusal. Finish grade is defined as top of pavement when a roadway is behind the temporary excavation support and protection system. Have a Professional Engineer, registered in the Commonwealth of Pennsylvania, certify that the temporary excavation support system or open cut excavation has been installed as shown on the Professional Engineer's signed and sealed drawings. Submit the certification to the Representative within 3 working days of completion of the system.

V. QUALIFICATIONS - The work must be supervised by a superintendent or foreman who is experienced, in the construction of temporary excavation support and protection system proposed. If the design height of the temporary excavation support and protection system exceeds 6 meters(20 feet), provide the following with the design submission:

- For the superintendent or foreman who will supervise the work, submit a list containing at least 5 projects which demonstrate a minimum of 3 years experience in the construction of the temporary excavation support and protection system proposed. Include a brief description of each project and the name and phone number of the owner's representative knowledgeable in each project listed.
- The name of the Professional Engineer, registered in the Commonwealth of Pennsylvania and having at least 3 years experience in the design and construction of temporary excavation support and protection systems, who will design and specify the sequence of construction of the temporary excavation support and protection of system.

VI. MEASUREMENT AND PAYMENT - Lump Sum.

This item will be measured and paid for in a proportionate manner, designated by the Department.

If an acceptable open cut excavation is provided in lieu of the temporary excavation support indicated, payment will be made for the as-bid lump sum temporary excavation support item, but no additional payment will be made for any class of excavation, structure backfill or additional shoring as a result of the open cut excavation or to restore the facilities to their original condition.

Project Specific Details:

The Soil Parameters as indicated in III. (c) 1. are:
1.a Effective angle of friction: 32 degrees
1.b Moist unit weight of soil: 120 pcf
1.c Saturated unit weight of soil: 124 pcf
1.d Effective cohesion: 0
1.e Static groundwater level at elevation: 920.0
1.f Undrained shear strength of cohesive soil: N/A
1.g shear strength of rock mass: N/A

I2032C - c02032 ITEM 9203-0102 - TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM

Addendum:

Associated Item(s): 9203-0102

Header:

ITEM 9203-0102 - TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM

Provision Body:

I. DESCRIPTION - This work is the design and construction of a temporary excavation support and protection system or appropriately designed open cut excavation, as indicated, with a service life of less than or equal to 36 months.

II. MATERIAL - Provide certification or laboratory test results verifying material properties. For used steel, the salvage design values from AASHTO Guide Design Specification for Bridge Temporary Works (AASHTO Guide Spec) may be used as an alternate to testing to determine grade of steel. Materials need not be new but must be in serviceable condition as determined by the Engineer. Temporary material used does not have to be from a Bulletin 15 source, but must meet the following:

- Structural Steel.....….....AASHTO M 270M/270 (ASTM A709M/A709) Grade 250(Grade 36), Grade 345(Grade 50) or Grade 345W(Grade 50W)
- Steel Sheet Piling.....….. .....ASTM A328M/A328, ASTM A572M/A572
- Steel H-Piles.....….. .....AASHTO M 270M/270 (ASTM A709M/A709), Grade 250(Grade 36)
- Wood Lagging.....…..... ...Rough Cut Species in AASHTO Guide Spec Appendix A and AASHTO Construction Handbook for Bridge Temporary Works Appendix C
- Cement.....…….....AASHTO M85 and AASHTO M240
- Pre-Stressing Steel.....….. .ASTM A416 Grade 270
- Welded Wire Fabric..... ..AASHTO A55 (ASTM A185)
- Reinforcement Bars..... ....AASHTO M 31M/31 (ASTM A615M/A615), AASHTO M42M/M42 (ASTMA616M/A616),Grade420(Grade 60)
- Other Material.....….....In accordance with applicable Sections of Publication 408

III. DESIGN - Design the temporary excavation support and protection system in accordance with current AASHTO LRFD Bridge Design Specifications and Design Manual, Part 4 (Metric) Specifications, current FHWA guidelines and AASHTO Guide Spec. Design temporary excavation support and protection system for final condition and all construction conditions, including surcharge loads due to vehicle traffic and construction equipment. Submit 4 sets of design calculations and 4 sets of completed detailed drawings, signed and sealed by a Professional Engineer, registered in the Commonwealth of Pennsylvania to the District Executive for review. Include in the design calculations all material properties, design loads, and design assumptions. Include on the completed detailed drawings all design dimensions, limits of work, elevations, material, member sizes and construction sequence. Provide cutoff elevation of steel and wooden components for work in streambed. Include specific installation procedures and testing requirements as part of the submittal. Allow 14 days for the review by the Department.

Ensure that temporary excavation support and protection system design and construction conforms to the following:

a) Open cut excavations are allowed, provided they meet OSHA requirements, the safety of the traveling public, the approved traffic control plan and existing structure is assured, and they stay within the legal right-of-way lines. Cuts can extend beyond legal right- of- way lines only with the written approval of the Department and written permission of the property owners. Ensure environmental compliance if cut extends beyond area cleared by the Department. Submit slope stability analysis in accordance with Publication 293.

b) The temporary excavation support and protection system will be selected by the Contractor. Examples include anchored walls, mechanically stabilized earth walls, prefabricated modular walls, cantilever walls, cofferdams, and soil nailing walls. These systems may be comprised of one or more of the following: Soldier Piles, Timber Lagging, Steel Sheet Piling, Caissons, Slurry Walls, Tiebacks, Soil Nails, Shotcrete, Deadman Anchors, Wales, Cross lot Bracing, Raker Braces, Precast Concrete, Precast Lagging, Soil Cement Lagging, Cement Bentonite, Gabions, Minipiles, Concrete Reaction Blocks, Mechanically Stabilized Earth Walls or other methods.

c) Design temporary excavation support and protection system based on the following parameters:

1. Soil parameters (***see Project Specific Details for following parameters***):

1.a Effective angle of friction _____

1.b Moist unit weight of soil _____

1.c Saturated unit weight of soil _____

1.d Effective cohesion _____

1.e Static groundwater level at elevation _____

1.f Undrained shear strength of cohesive soil_____

1.g Shear strength for rock mass_____

Provide other soil/rock properties with test data, needed in the design of the temporary excavation support and protection system.

2. Ensure that all components stay within the legal right-of-way unless an easement is obtained by the Contractor.

IV. CONSTRUCTION - Install temporary excavation support and protection system in accordance with applicable sections of Publication 408. Be responsible for adequacy, safety and compliance with Traffic Control Plan. If the design is not compliant with the approved Traffic Control Plan, furnish any additional traffic control devices at no additional cost to the Department. All steel and wooden components may remain in place to pavement subgrade or 0.6 meters(2 feet) below finish grade,whichever is higher elevation. Treated wood is not required unless it is within 2 meters(6 feet) of finish grade and is to remain in place. Pressure treat with chromate copper arsenate (CCA) to refusal. Finish grade is defined as top of pavement when a roadway is behind the temporary excavation support and protection system. Have a Professional Engineer, registered in the Commonwealth of Pennsylvania, certify that the temporary excavation support system or open cut excavation has been installed as shown on the Professional Engineer's signed and sealed drawings. Submit the certification to the Representative within 3 working days of completion of the system.

V. QUALIFICATIONS - The work must be supervised by a superintendent or foreman who is experienced, in the construction of temporary excavation support and protection system proposed. If the design height of the temporary excavation support and protection system exceeds 6 meters(20 feet), provide the following with the design submission:

- For the superintendent or foreman who will supervise the work, submit a list containing at least 5 projects which demonstrate a minimum of 3 years experience in the construction of the temporary excavation support and protection system proposed. Include a brief description of each project and the name and phone number of the owner's representative knowledgeable in each project listed.
- The name of the Professional Engineer, registered in the Commonwealth of Pennsylvania and having at least 3 years experience in the design and construction of temporary excavation support and protection systems, who will design and specify the sequence of construction of the temporary excavation support and protection of system.

VI. MEASUREMENT AND PAYMENT - Lump Sum.

This item will be measured and paid for in a proportionate manner, designated by the Department.

If an acceptable open cut excavation is provided in lieu of the temporary excavation support indicated, payment will be made for the as-bid lump sum temporary excavation support item, but no additional payment will be made for any class of excavation, structure backfill or additional shoring as a result of the open cut excavation or to restore the facilities to their original condition.

Project Specific Details:

The Soil Parameters as indicated in III. (c) 1. are:
1.a Effective angle of friction: 30 degrees
1.b Moist unit weight of soil: 120 pcf
1.c Saturated unit weight of soil: 124 pcf
1.d Effective cohesion: 0
1.e Static groundwater level at elevation: 911.5
1.f Undrained shear strength of cohesive soil: N/A
1.g shear strength of rock mass: N/A

I6091F - c06091 ITEM 0609-0009 EQUIPMENT PACKAGE

Addendum:

Associated Item(s): 0609-0009

Header:

ITEM 0609-0009 EQUIPMENT PACKAGE

Provision Body:

Appendix

Table A

EQUIPMENT PACKAGE
Equipment
Communications Equipment
Copier (1)

Fax Machine (1)
Cellular Phone(s)
Electronic Equipment
Digital Camera
Document Scanner (2)
Laser Printer (2)
Color Printer (2)
Specialized Equipment
Surveyor's Level & Measuring Rod
Electronic Digitizer
Digital Display Level
Infrared Thermometer
Laser Range Finder
Paper Shredder
Miscellaneous Items
Internet Service Provider
Computer Media
Toners/Cartridges

(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 print

Microcomputer Systems. A total of one(1) 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

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

I8041A - c08041 ITEM 4804-0012,0013- SEEDING AND SOIL SUPPLEMENTS, MODIFIED

Addendum:

Associated Item(s): 4804-0012, 4804-0013

Header:

ITEM 4804-0012 SEEDING AND SOIL SUPPLEMENTS - FORMULA C
ITEM 4804-0013 SEEDING AND SOIL SUPPLEMENTS - FORMULA D

Provision Body:

I. In accordance with Section 804, modified as follows:

Section 804.1 DESCRIPTION - Revise to read:

This work is the furnishing and placing of seed and soil supplements and mulch of the type indicated.

II. Section 804.2(d) Herbicides. Delete this section and replace with the following:

(d) Mulch. Section 805.2(a)1., for the type indicated

III. Section 804.2(e) Mow-Line Delineator Stakes. Delete this section and replace with the following:

(e) Mulch Binder. Section 805.2(b)

IV. Section 804.3(g) Mow-Line Delineation. Delete this section and replace with the following:

(g) Mulching. Section 805.3

V. Section 804.3(h) Herbicides. Delete this section.

Section 804.3(j) Maintenance. Revise the last paragraph as follows:

After the seeding, soil supplement, and mulch work on a slope has been satisfactorily completed, if a slope failure occurs, one which requires redressing, excavation, or establishment of a new slope, reapply soil supplements, reseed, and mulch as specified for the original treatment.

Section 804.4 MEASUREMENT AND PAYMENT - Revise as follows:

(a) Seeding and Soil Supplements. Kilogram(Pound)

Includes mulch and mulch binder.

Measured by the number of kilograms(pounds) of seed actually incorporated into the work, for the formula specified.

Reapplying soil supplements and reseeding and mulching on failed slope areas, as specified in Section 804.3(j), will be paid for at the contract unit price, in addition to the original accepted application of seeding, soil supplements, and mulch.

00 - 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:

Do not allow employees to park their personal vehicles on any traveled roadway or shoulder. It will be the resident engineer’s responsibility to determine/designate the appropriate parking areas, dependant upon construction.

Notify property owners ten days in advance of driveway restrictions affecting their properties.

Keep all driveways accessible at all times.

Limit personnel assigned to night work on this project to working 12 hours in any given 24 hour period, including this project and any other projects on which they perform work.

For night work provide a work light on all equipment and provide flashing yellow lights on all trucks hauling material on the project. Work lights and approved revolving yellow lights are to be operating at all times while the equipment is within the project limits.

For night work provide the necessary number of illumination devices to satisfactorily illuminate the work area. Use a portable lighting system with multi-directional light output encompassing 360 degrees. Diffuse the light to create a minimum glare shadow free output. Provide a 400 watt pulse start Metal Halide lamp or greater. Provide light intensity such as to provide adequate illumination to a 15,000 sq. ft. area when mounted at least 14 ft. above the ground. Mount the light on a self-contained trailer, to a construction vehicle such as a roller, paver or similar self-powered piece of construction equipment. The intent of the light is to provide a work area light source, which moves in conjunction with construction operations. Do not exceed a spacing of 250 feet between illumination devices. These illumination devices will be considered incidental to the item of work being performed and will not be paid separately.

Provide 24 hour contact information on each Changeable Message Sign. Include the name of the Contractor, or the Contractors' designated representative, who will respond to calls from PennDOT or the Pennsylvania State Police and make message changes as directed. Provide the information using a permanently attached label, sign, sticker, plaque or a magnetic sign affixed to the exterior frame or cabinet of the device. Provide a minimum text size that is readable from the ground and no less than ½ inch. Include the contact name, address, phone number and company.

00 - ITEM 4204-0001 CLASS 2 EXCAVATION

Addendum:

Associated Item(s): 4204-0001

Header:
ITEM 4204-0001 CLASS 2 EXCAVATION

Provision Body:
Section 204.3 CONSTRUCTION. Add the following:

(k) Saw Cutting. Initial saw cutting, as indicated, is incidental to Class 2 excavation.

00 - ITEM 4601-0352,0400,0763,7313

Addendum:

Associated Item(s): 4601-0352, 4601-0400, 4601-0763, 4601-7313

Header:
ITEM 4601 0352 15" THERMOPLASTIC PIPE, GROUP III, 8'-2' FILL MODIFIED
ITEM 4601 0400 18" THERMOPLASTIC PIPE, GROUP VI, 15'-2' FILL MODIFIED
ITEM 4601 0763 18" DUCTILE IRON PIPE MODIFIED
ITEM 4601 7313 24" REINFORCED CONCRETE PIPE, TYPE B, 15'-1.5' FILL MODIFIED

Provision Body:
In accordance with Section 601 except as follows:

Section 601.3 CONSTRUCTION. Add the following:

(q) Saw Cutting. Initial saw cutting, as indicated, is incidental to Section 601 – Pipe Culverts.

Section 601.4(a) Pipe Culverts and Relaid Pipe Culverts. Revise the second sentence to read:

The unit price includes the initial saw cutting, all excavation, bedding material, pipe, coarse aggregate and suitable material backfill as indicated.

Delete Sections 601.4(b) thru (i).

00 - ITEM 4962-1060,1061,1062 WHITE WATERBORNE PAVEMENT LEGEND

Addendum:

Associated Item(s): 4962-1060, 4962-1061, 4962-1062

Header:

ITEM 4962-1060 – WHITE WATERBORNE PAVEMENT LEGEND, “STRAIGHT ARROW”,
12’-0” X 1’-8” MODIFIED
ITEM 4962-1061 – WHITE WATERBORNE PAVEMENT LEGEND, “RIGHT ARROW”,
12’-0” X 3’-0” MODIFIED
ITEM 4962-1062 – WHITE WATERBORNE PAVEMENT LEGEND, “LEFT ARROW”,
12’-0” X 3’-0” MODIFIED

Provision Body:

Section 962.1 DESCRIPTION. Revise this section to read:

This work is the furnishing and application of waterborne pavement markings, of the type and color indicated, along with the removal of the waterborne pavement markings using waterblasting methods only.

Section 962.3 CONSTRUCTION. Revise this section by adding:

(l) Pavement Marking Removal. Remove waterborne pavement markings by waterblasting.

Vacuum or collect residue concurrently with the removal operation unless an alternate

procedure is submitted and accepted. Perform this work only in the area where the

markings were applied. Do not allow residual material to interfere with drainage or

accumulate to constitute a traffic hazard. Dispose of all residue in an acceptable manner.

Repair any pavement or surface damage caused during the removal process.

Section 962.4 MEASUREMENT AND PAYMENT. Revise this section by deleting 962.4(c). Revise section 962.4(b) to read:

962.4 (b) Legend (Includes Pavement Marking Removal). Each

00 - ITEM 8610-0001 CONCRETE RETAINING WALL, AS DESIGNED

Addendum:

Associated Item(s): 8610-0001

Header:
ITEM 8610-0001 CONCRETE RETAINING WALL, AS DESIGNED

Provision Body:
DESCRIPTION: This work consists of performing all work necessary for the installation of the as designed concrete retaining wall.

MATERIALS: In accordance with Section 1001.2

CONSTRUCTION: In accordance with Section 1001.3 and contract documents.

(a). Temporary excavation support and protection system shall be used during the construction of the retaining wall. After the construction is completed, the excavation support system shall be cut- off 2'-0" below the finished grade and will permanently remain behind the retaining wall. The Temporary Excavation Support and Protection System special provision shall be followed for the design and installation of the system.

(b). Provide a 3'-0" minimum of No. 2A coarse aggregate below the bottom of footing as shown on the plans and as recommended in the structure foundation report.

(c). Provide a 4" stone facing to the exposed face of the retaining wall as shown on the plans and as specified in the Stone Facing special provision.

MEASUREMENT AND PAYMENT – Lump sum

00 - ITEM 8700-0001 SOLDIER PILE RETAINING WALL, AS DESIGNED

Addendum:

Associated Item(s): 8700-0001

Header:
ITEM 8700-0001 SOLDIER PILE RETAINING WALL, AS DESIGNED

Provision Body:
DESCRIPTION: This work consists of performing all work necessary for the installation of the as designed soldier pile retaining wall.

MATERIALS:

• Class 3 Excavation Section 204

• Selected Borrow Excavation Structure Backfill Section 1001

• Steel Beam Bearing Piles Section 1005

• Class AA Cement Concrete Section 1001

• Reinforcement Bars, Epoxy Coated Section 1002

• Neoprene Bearing Pads Section 1113.02 and 11 13.03(d)

• Fabricated Structural Steel Section 1056.2

CONSTRUCTION: In accordance with Section 1006.3 and contract documents.

(a) General. Do not order material, or start work on any anchored wall system, until written approval of personnel qualifications and design plans are received. Expect work suspension if unqualified personnel are substituted for approved personnel during construction.

Be fully liable for additional costs resulting from the suspension of work. No adjustment in contract time is permitted as a result of the suspension of work.

(b) Drilling equipment. Use drilling rigs of the proper type and capacity for the proposed work and maintain in good operating condition to the satisfaction of the engineer.

(c) Drilling. Provide 24” Diameter Drilled Caisson, Shaft Section through soil as indicated. Use core drilling, rotary drilling, percussion drilling, auger drilling or driven casing. Drill holes plumb, and within specified tolerances.

1. Functional requirements for Prebored Holes. Drill all prebored holes of the diameter indicated on approved plans into soil to the minimum depths indicated, or to a greater diameter and/or depth as required by field conditions, so that a competent, non-yielding foundation socket for piles is assured. Socket is defined as the embedment length of the pile. Minimum required socket lengths will be indicated.

2. Casing. Bored holes may require casings through fill or soil to prevent collapse of overburden, or, when necessary, to shut off seepage water. Keep the casing in place through the cleaning and inspection of the prebored holes, and withdraw either during or after concrete placement.

3. Cleaning of Predrilled Holes. After the holes have been drilled to the proper depth, remove all loose rock, earth, and debris and water from the bottom of the hole by approved methods acceptable to the Engineer. Make a complete check, and verify that all holes have been drilled to a sufficient depth to assure a competent, non-yielding socket foundation.

(d) Placing Piles. Set soldier piles and fill holes with Class A concrete, after drilling of each hole is complete.

If water accumulates in the prebored holes after cleaning and inspection, prior to concrete encasement, remove the water by approved method, or, alternatively, place the concrete at the bottom of the hole below the accumulated water by tremie methods.

(e) Precast Concrete Panels. Section 714.4 thru 714.13 and as follows:

1. General. Submit shop drawings for the precast panels/ lagging, and the design for any lifting lugs or erection bolts, for acceptance. Do not start fabrication until approval is obtained from the engineer.

Submit the method of placement for acceptance.

Provide concrete with a 28 day minimum compressive strength of 28MPa (4000 psi) as determined in accordance with PTM No. 604 and with an entrained air content of 6% in the plastic state within a tolerance of plus or minus 1.5% as determined in accordance with PTM No. 615.

Provide epoxy coated reinforcement bars in precast concrete panels.

2. Testing and Inspection. Acceptability of the precast panels will be determined on the basis of entrained air in the concrete mixture, compression testing, and visual inspection. Furnish facilities and perform all necessary sampling and testing in an expeditious and satisfactory manner. Acceptance will be as herein specified.

The concrete panels will be accepted, with respect to compressive strength, on the basis of production lot sample test results.

Acceptance with respect to visual inspection will be based on compliance with the requirements of Section 713.2(d). In addition, units may be rejected for color variations on the front face due to excess form oil or other reasons.

3. Concrete Finish. Provide a conventional surface finish for the front face, unless otherwise indicated or specified, and a floated surface finish for the rear face. Screed the rear face of the panel to eliminate open pockets of aggregate and surface distortions in excess of ¼ inch.

4. Tolerances. Manufacture all units within the following tolerances:

Do not exceed an angular distortion with regard to height of 0.2 inch in 5 feet.

Panel Dimension. All dimensions to be within 3/16 inch.

Panel squareness. Do not exceed ½ inch as determined by taking the difference between diagonal measurements.

Panel Surface Finish. Measured over a length of 5 feet, defects on smooth formed surfaces not to exceed 1/8 inch and on texture finished surfaces not to exceed 5/16 inch.

5. Panel Installation. Repair or replace any element damaged during handling, transportation, erecting, or backfilling of any element that cannot be satisfactorily placed in the wall.

Submit the method of placement for acceptance.

Place panels/lagging horizontally on top of the support plates. Use a maximum of 1-inch galvanized steel shims to set bottom panels level.

Fill all voids behind precast panels with No. 57 aggregate to provide a continuous drainage layer.

Provide a geocomposite drain board attached to the rear face of the precast lagging panels with a weephole. Ensure the drainboard remains intact and functional during the installation of the wall.

Apply a protective coating for reinforced concrete surfaces to the front face of all concrete panels and end blocks after wall construction is complete.

(f) Fabricated Structural Steel

Provide shop drawings for all steel posts.

Fabricate Structural Steel in accordance with Section 1105.03 and contract documents.

Galvanize all steel posts after shop fabrication is complete in accordance with Section 1105.02 (s).

Paint All Fabricated Structural Steel with two (2) base coats before installation. Paint with one (1) finish coat all exposed steel surfaces. Paint surfaces in accordance with section 1060. Finish coat color to match Sherwin Williams No. SW4001 (Bolt Brown).

MEASUREMENT AND PAYMENT – Lump sum

00 - ITEM 9000 5000 – DATE STONE AND CONCRETE LINTEL PLACEMENT

Addendum:

Associated Item(s): 9000-5000

Header:
ITEM 9000 5000 – DATE STONE AND CONCRETE LINTEL PLACEMENT

Provision Body:
DESCRIPTION This work is the placement of a date stone and concrete lintels, salvaged from the razed “Persons” building, into the “concrete retaining wall, as designed” (item no. 8610-0001).

MATERIAL Date Stone (1 piece)

Concrete Lintels (8 lintels – 5 pieces each lintel)

CONSTRUCTION – Contact Mr. Steve Glover (Susquehanna Depot Roadmaster/Street Superintendent) at (570) 396-0842 for the stored location of the salvaged date stone and lintel pieces. Remove the date stone and lintel pieces from the storage location and transport to project site. Incorporate the date stone and lintel pieces into the 4” stone facing of the “concrete retaining wall, as designed (item no. 8610-0001), as shown on the plan drawings (sheet 39 of 59).

MEASUREMENT AND PAYMENT – Lump Sum

00 - ITEM 9000-0004 SAWCUTTING

Addendum:

Associated Item(s): 9000-0004

Header:
ITEM 9000-0004 SAWCUTTING

Provision Body:
DESCRIPTION This work is sawcutting the pavement to a depth as indicated or directed.

CONSTRUCTION

Saw cut to the depth indicated or directed.

MEASUREMENT AND PAYMENT Linear Foot.

00 - ITEM 9000-0007 UTILITY TEST PITS

Addendum:

Associated Item(s): 9000-0007

Header:
ITEM 9000-0007 UTILITY TEST PITS

Provision Body:
DESCRIPTION This work is sawcutting and hand digging of utility test pits as indicated or as directed, including restoration of the existing pavement.

MATERIAL Subbase Section 350.2

Bituminous Concrete Base Course Section 309.2

CONSTRUCTION Notify all involved utility company representatives five days in advance of initiating any portion of this work, and coordinate construction during test pit excavations.

Sawcut the existing pavement structure, 3’ x 5’, at the designated test pit area. Hand excavate material from the test pit as directed. Exercise care during excavation to avoid damage and or rupture to lines and facilities within the pit area. Obtain approval of the work, backfill with subbase material in layers of not more than a loose 8" depth and compact to 100% dry weight density. Construct bituminous concrete base course in accordance with Section 305.3.

MEASUREMENT AND PAYMENT Each.

00 - ITEM 9000-5001 PEDESTRIAN RAILING

Addendum:

Associated Item(s): 9000-5001

Header:
ITEM 9000-5001 PEDESTRIAN RAILING

Provision Body:
DESCRIPTION This work is the extension of the existing pedestrian handrail(s) at the “Pennstar” bank building.

MATERIAL Handrail materials should be capable of withstanding bending moments of at least 250 lb

horizontal concentrated load. Fasteners and support mounts should withstand a 250 lb

shear load and a 250 lb tensile load.

CONSTRUCTION – Coordinate with Lori Canfield (Manager of Pennstar Bank) at (570) 853-3125 for the existing style and/or manufacturer of the existing pedestrian railing. Top of gripping surface for handrail must be mounted between 34” and 38” above the ramp surface and be parallel with the ramp or landing surface. Ends of handrail must be either rounded or returned smoothly to floor, wall or post and should not project into any walkway. Clear space between handrail and wall surface must be a minimum of 1.5”. If handrails are not continuous, they must extend at least 12” beyond the top and bottom of the ramp segment. Handrails must not rotate within their fittings. Avoid recessed handrail locations in vertical surfaces.

MEASUREMENT AND PAYMENT – Linear Foot

00 - ITEM 9000-5002 FENCE

Addendum:

Associated Item(s): 9000-5002

Header:
ITEM 9000-5002 FENCE

Provision Body:
DESCRIPTION – This work is the furnishing and installation of a 60” high black powder coated aluminum fence, in and around the location of the stone faced cast-in-place retaining wall as indicated on the plan.

MATERIAL – Use fence materials as manufactured by: Jerith Manufacturing Co. Inc, 14400 McNulty Road, Philadelphia, Pa. 19154, 1-800-344-2242; Fence Deck and Rail, 2453 King Street Extension, North Charleston, South Carolina, 29405, 1-888-614-5738; Aluminum Fence and Manufacturing Co., 18 Jackson St., Struthers, Ohio, 44471, 1-330-755-3323; or equivalent. The fence is to meet the following requirements:

- Smooth top not exposing any pickets

- Picket spacing approximately 3.8”

- Racking design to accommodate inclines

- Powder coated aluminum (black)

CONSTRUCTION – In accordance with the manufacturer’s specifications and requirements.

MEASUREMENT AND PAYMENT – Linear Foot (Includes post hole excavation, posts, concrete, fence, and all hardware for complete installation.)

00 - ITEM 9409-0001 – TEMPORARY BITUMINOUS TYPE 3 CURB RAMP

Addendum:

Associated Item(s): 9409-0001

Header:
ITEM 9409-0001 – TEMPORARY BITUMINOUS TYPE 3 CURB RAMP

Provision Body:
DESCRIPTION - This work is the construction and removal of a built-up “type 3” curb ramp on a completed/existing bituminous surface in accordance with standard drawings.

MATERIAL –

• Superpave Asphalt Mixture Design, HMA Wearing Course – Section 409.2

CONSTRUCTION - Before placing built-up curb ramp, clean the existing pavement on which it is to be placed, then apply a bond breaker to prevent damage to the existing pavement when removing the built-up curb ramp. After the built-up curb ramp is no longer needed, remove the built-up curb ramp, the bond breaker, and dispose of the materials in a suitable manner. Then clean the existing surface.

MEASUREMENT AND PAYMENT -

(a) Each.

(b) Incidental Work. The following work is incidental to the built-up curb ramp modified item:

• initial cleaning of existing surface

• application of bond breaker

• removal and disposal of built-up curb ramp and bond breaker

• final cleaning of existing surface

00 - ITEM 9931 0001 – POST MOUNTED DELINEATOR (RED) SIGN, TYPE B, MODIFIED

Addendum:

Associated Item(s): 9931-0001

Header:
ITEM 9931 0001 – POST MOUNTED DELINEATOR (RED) SIGN, TYPE B, MODIFIED

Provision Body:
In accordance with Section 931 as indicated and as follows:

Section 931.2 MATERIAL. Add the following:

• High Intensity Flat Stock Sheet Aluminum – Section 937.2

Section 931.3 CONSTRUCTION. Revise to read:

As shown on the Standard Drawings, the detail drawings (construction plan sheet 39 of 59), as specified in Sections 930.3(a), (b), (d), and (e) and as follows:

Section 931.4 MEASUREMENT AND PAYMENT. Revise to read:

Each.

00 - ITEM 9931 0002 REMOVAL OF EXISTING SIGNS AND POSTS

Addendum:

Associated Item(s): 9931-0002

Header:
ITEM 9931 0002 REMOVAL OF EXISTING SIGNS AND POSTS

Provision Body:
DESCRIPTION This work is the removal of existing signs and posts as indicated or directed.

CONSTRUCTION Remove signs and posts including the concrete bases to 1 foot below the existing ground line.

MEASUREMENT AND PAYMENT Each.

00 - ITEM 9931 0003 REMOVE AND RELOCATE EXISTING SIGNS

Addendum:

Associated Item(s): 9931-0003

Header:
ITEM 9931 0003 REMOVE AND RELOCATE EXISTING SIGNS

Provision Body:
In accordance with Section 931, as indicated, and as follows:

Add the following to Section 931.3:

(c) Remove existing signs and posts. Stockpile as directed. Provide new anchor posts and reset at the new location as indicated or directed. Replace sign or post damaged by this operation at no cost to the department.

Revise Section 931.4 to read:

MEASUREMENT AND PAYMENT EACH

00 - ITEM 9931 0004 REMOVE AND RESET EXISTING SIGN

Addendum:

Associated Item(s): 9931-0004

Header:
ITEM 9931 0004 REMOVE AND RESET EXISTING SIGN

Provision Body:
In accordance with Section 931, as indicated, and as follows:

Add the following to Section 931.3:

(c) Remove existing sign and post. Stockpile as directed. Provide new anchor posts and reset at the same location. Replace sign or post damaged by this operation at no cost to the Department.

Revise Section 931.4 to read:

MEASUREMENT AND PAYMENT EACH

Performance Bonds

Surety Company:	The Fidelity and Deposit Company of Maryland	**Status:**	Accepted
Bonding Agency:	Saul-Metcho	**Bond Number:**	09064420
Producer:	Bob Robert, A, Saul/PennDOT BP-002273	**Bond Amount:**	$744,912.75
Co-Insurer:	No	**NAIC:**	39306

KNOW ALL MEN BY THESE PRESENTS, That we, *Leeward Construction, Inc.* of *9 Collan Park , Honesdale, PA 18431* as PRINCIPAL,and The Fidelity and Deposit Company of Maryland a corporation,as SURETY, are held and firmly bound unto the *Commonwealth of Pennsylvania* in the full and just sum of *$744,912.75*, lawful moneyof the United States of America, to be paid to the said Commonwealth of Pennsylvania, or it assigns, to which payment well and truly tobe 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 19 day of April 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 workidentified below for approximately the sum of the bond amount defined above.

For the rehabilitation and improvement of a certain section of STATE HIGHWAY in SUSQUEHANNA COUNTY, SUSQUEHANNA DEPOT BOROUGH, Commonwealth of Pennsylvania, STATE ROUTE 0092 SECTION 502. The project being situated as follows: From a point approximately 7.8 miles (41,184 linear feet) west of Jackson at Segment 0520 offset 0495 (Station 899+00) to the intersection with SR 0171 at Segment 0520 Offset 1087 (Station 904 +92.00) This project consists of realignment of the intersection of SR 00092 and SR 00171 consisting of overlay of the existing road with SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARINGCOURSE, 1 ½ inch depth, SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDERCOURSE, PG 64-22 2 ½ inch depth, reconstruction of Euclid Avenue, a cast in place concrete wall and a soldier pile wall, sidewalks and curbing, ADA ramps, drainage, guiderail and pavement markings all contained within an overall project length of 592.00 linear feet (0.112mile) as indicated on the approved drawings included in the bid package.

and

WHEREAS, it was one of the conditions of the award of the Secretary of Transportation, acting for and on behalf ofthe Commonwealth of Pennsylvania, pursuant to which said contract was undertaken by the PRINCIPAL that these presentsshould 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 allrespects comply with and faithfully perform the terms and conditions of said contract, and his, their, or its obligationsthereunder, including the plans, specifications, and conditions therein referred to and made a partthereof, 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 fromany expense incurred through the failure of said contractor to complete the work as specified, or for any damages growing outof 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 causewhatsoever, 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 itor the giving by the Commonwealth of any extension of time for the performance of the contract or any other forbearance on thepart of either the Commonwealth or the PRINCIPAL to the other shall not in any way release the PRINCIPAL and the SURETY orSURETIES 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 firstabove written.

Attorney-in-Fact Certification

*The undersigned attorney-in-fact by executing this Performance Bond certifies that he/she is licensed with the company namedas surety for this bond and that to the best of his/ her knowledge the said surety islicensed with the Pennsylvania Insurance Department.

Bond Workflow Status

Status	Name	Disposition	Date/Time
Draft	Thomas R Quinnan/ PennDOT BP-000557	Submit	04/19/2012 12:51:00 PM
Producer Review	Bob Robert, A, Saul/ PennDOT BP-002273	Sign	04/19/2012 02:25:28 PM
Contractor Review	Eric R Linde/PennDOT BP-000557	Sign	04/19/2012 03:18:46 PM
BOD CMD Review	John C Grigalonis/ PennDOT	Accept	04/19/2012 04:05:05 PM

Payment Bonds

Surety Company:	The Fidelity and Deposit Company of Maryland	**Status:**	Accepted
Bonding Agency:	Saul-Metcho	**Bond Number:**	09064420
Producer:	Bob Robert, A, Saul/PennDOT BP-002273	**Bond Amount:**	$744,912.75
Co-Insurer:	No	**NAIC:**	39306

KNOW ALL MEN BY THESE PRESENTS, That we, *Leeward Construction, Inc.* of *9 Collan Park , Honesdale, PA 18431* as PRINCIPAL,and The Fidelity and Deposit Company of Maryland a corporation,as SURETY, are held and firmly bound unto the *Commonwealth of Pennsylvania* in the full and just sum of *$744,912.75*, lawful moneyof the United States of America, to be paid to the said Commonwealth of Pennsylvania, or it assigns, to which payment well and truly tobe 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 19 day of April 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 workidentified below for approximately the sum of the bond amount defined above.

For the rehabilitation and improvement of a certain section of STATE HIGHWAY in SUSQUEHANNA COUNTY, SUSQUEHANNA DEPOT BOROUGH, Commonwealth of Pennsylvania, STATE ROUTE 0092 SECTION 502. The project being situated as follows: From a point approximately 7.8 miles (41,184 linear feet) west of Jackson at Segment 0520 offset 0495 (Station 899+00) to the intersection with SR 0171 at Segment 0520 Offset 1087 (Station 904 +92.00) This project consists of realignment of the intersection of SR 00092 and SR 00171 consisting of overlay of the existing road with SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARINGCOURSE, 1 ½ inch depth, SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDERCOURSE, PG 64-22 2 ½ inch depth, reconstruction of Euclid Avenue, a cast in place concrete wall and a soldier pile wall, sidewalks and curbing, ADA ramps, drainage, guiderail and pavement markings all contained within an overall project length of 592.00 linear feet (0.112mile) as indicated on the approved drawings included in the bid package.

and

WHEREAS, it was one of the conditions of the award of the Secretary of Transportation, acting for and on behalf ofthe Commonwealth of Pennsylvania, pursuant to which said contract was undertaken by the PRINCIPAL that these presentsshould 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 willpromptly or cause to be paid in full all sums of money which may be due by contractor or corporation, for all materials furnishedor labor supplied or performed in the prosecution of the work, whether or not the said material or labor entered into and becamecomponent parts of the work or improvement contemplated, and for rental of the equipment used and services rendered by public utilitiesin, or in connection with, the prosecution of such work, then this obligation to be void, otherwise to remain in full force andeffect.

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 paidin full therefor, may sue assumpsit on this Payment Bond in his, their, or its own name and may prosecute the same to final judgementfor such sum or sums as may be justly due to him, them, or it, and have execution thereon. Provided, however, that theCommonwealth 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 theprovisions of the "Public Works Contractors' Bond Law of 1967", Act No. 385, approved December 20, 1967, P.L. 869, which Act shallbe 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 materialsto be furnished or labor to be supplied or performed under it or the giving by the Commonwealth of any extension of time for theperformance of the contract or any other forbearance on the part of either the Commonwealth or the Principal to the other shallnot 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, orforbearance being hereby waived.

IN WITNESS WHEREOF, the said PRINCIPAL and SURETY have duly executed this Bond under seal the day and year firstabove written.

Attorney-in-Fact Certification

*The undersigned attorney-in-fact by executing this Payment Bond certifies that he/she is licensed with the company namedas surety for this bond and that to the best of his/her knowledge the said surety islicensed with the Pennsylvania Insurance Department.

Bond Workflow Status

Status	Name	Disposition	Date/Time
Draft	Thomas R Quinnan/ PennDOT BP-000557	Submit	04/19/2012 12:50:10 PM
Producer Review	Bob Robert, A, Saul/ PennDOT BP-002273	Sign	04/19/2012 02:23:10 PM
Contractor Review	Eric R Linde/PennDOT BP-000557	Sign	04/19/2012 03:18:31 PM
BOD CMD Review	John C Grigalonis/ PennDOT	Accept	04/19/2012 04:04:47 PM

Insurance

the securus group

454 new holland ave
suite 300
lancaster, PA 17602

Company: great american ins co
Policy: tpp101025002
Expiration: 04/01/2013

DBE Commitments

DBE: 6%
Approved: 6.04%

Perform Less Than 50% of Work Items: No
Good Faith Effort Evaluation: No

Status	Business Partner	Business	% of Bid	Submitted	Acknowledged
Approved	Beth's Barricades	Subcontractor	0.48%	04/18/2012	04/18/2012
Approved	Callahan Paving Products, Inc.	Regular Dealer	3.61%	04/18/2012	04/18/2012
Approved	Guidemark, Inc.	Subcontractor	1.95%	04/18/2012	04/18/2012

Beth's Barricades

Prime

Contact: Thomas R. Quinnan
Phone: 570-253-4090
DBE: 6%
Status: Approved
Revision Number:

DBE

Business Partner: Beth's Barricades
Type: DBE
Contact: David Nury
Phone: 412-767-8830
DBE JVT%:
Certification: 12455
Cert. Expiration: 09/30/2012

Agreement Amount: $3,600.00
% of Bid: 0.48
Mobilization: $0.00
Starting: 05/24/2012
Completion: 06/06/2013
Business Type: Subcontractor

Items

None

Partial Items

Item	Description	Unit of Measure	Quantity
0901-0001	MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION	LS	1.000

Comment

None

Workflow

Status	Name	Disposition	Date/Time
Draft	Thomas R Quinnan/PennDOT BP-000557	Submit	04/18/2012 01:39:11 PM
Awaiting Acknowledgement	David J Nury/PennDOT BP-003313	Acknowledge	04/18/2012 01:54:34 PM
Acknowledged	Thomas R Quinnan/PennDOT BP-000557	Submit	04/18/2012 01:55:28 PM
PennDOT Review	Delores A Ritzman/PennDOT	Approve	04/18/2012 01:57:01 PM

Callahan Paving Products, Inc.

Prime

Contact: Thomas R. Quinnan
Phone: 570-253-4090
DBE: 6%
Status: Approved
Revision Number:

DBE

Business Partner: Callahan Paving Products, Inc.
Type: DBE
Contact: Brian Eberhart
Phone: 570-966-9637
DBE JVT%:
Certification: 10452
Cert. Expiration: 09/14/2012

Agreement Amount: $26,885.57
% of Bid: 3.61
Mobilization: $0.00
Starting: 05/24/2012
Completion: 06/06/2013
Business Type: Regular Dealer

Items

None

Partial Items

Item	Description	Unit of Measure	Quantity
8700-0001	SOLDIER PILE RETAINING WALL AS DESIGNED, S-31575	LS	1.000
4601-7313	18" REINFORCED CONCRETE PIPE, TYPE B, 15' - 1.5' FILL	LF	90.000
4601-0763	18" DUCTILE IRON PIPE	LF	20.000
4601-0400	18" THERMOPLASTIC PIPE, GROUP VI, 15'-2' FILL	LF	25.000
4601-0352	15" THERMOPLASTIC PIPE, GROUP III, 8'-2' FILL	LF	258.000
0605-2854	TYPE 4 INLET BOX, HEIGHT < /= 10'	EACH	1.000
0605-2850	STANDARD INLET BOX, HEIGHT < /= 10'	EACH	10.000
0605-2731	TYPE M CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	SET	8.000
0605-2711	TYPE C CONCRETE TOP UNIT AND BICYCLE SAFE GRATE	SET	5.000

Comment

None

Workflow

Status	Name	Disposition	Date/Time
Draft	Thomas R Quinnan/PennDOT BP-000557	Submit	04/18/2012 01:39:42 PM
Awaiting Acknowledgement	Brian Eberhart/PennDOT BP-000822	Acknowledge	04/18/2012 01:45:25 PM
Acknowledged	Thomas R Quinnan/PennDOT BP-000557	Submit	04/18/2012 01:46:35 PM
PennDOT Review	Delores A Ritzman/PennDOT	Approve	04/18/2012 01:50:27 PM

Guidemark, Inc.

Prime

Contact: Thomas R. Quinnan
Phone: 570-253-4090
DBE: 6%
Status: Approved
Revision Number:

DBE

Business Partner: Guidemark, Inc.
Type: DBE
Contact: Douglas Dolinar
Phone: 215-721-7100
DBE JVT%:
Certification: 11706
Cert. Expiration: 03/31/2014

Agreement Amount: $14,526.00
% of Bid: 1.95
Mobilization: $3,600.00
Starting: 05/24/2012
Completion: 06/06/2013
Business Type: Subcontractor

Items

Item	Description	Unit of Measure	Quantity
4962-1062	WHITE WATERBORNE PAVEMENT LEGEND, "LEFT ARROW", 12'-0" X 3'-0"	EACH	1.000
4962-1061	WHITE WATERBORNE PAVEMENT LEGEND, "RIGHT ARROW", 12'-0" X 3'-0"	EACH	2.000
4962-1060	WHITE WATERBORNE PAVEMENT LEGEND, "STRAIGHT ARROW", 12'-0" X 1'-8"	EACH	2.000
0963-0001	PAVEMENT MARKING REMOVAL	SF	72.000
0963-0001	PAVEMENT MARKING REMOVAL	SF	72.000
0963-0001	PAVEMENT MARKING REMOVAL	SF	72.000
0962-1030	WHITE WATERBORNE PAVEMENT LEGEND, "HANDICAP SYMBOL", 3'-3" X 2'-11"	EACH	1.000
0962-1005	4" YELLOW WATERBORNE PAVEMENT MARKINGS	LF	90.000
0962-1001	6" WHITE WATERBORNE PAVEMENT MARKINGS	LF	213.000
0960-0021	24" WHITE HOT THERMOPLASTIC PAVEMENT MARKINGS	LF	228.000
0960-0002	4" YELLOW HOT THERMOPLASTIC PAVEMENT MARKINGS	LF	438.000

Partial Items

Item	Description	Unit of Measure	Quantity
0608-0001	MOBILIZATION	LS	1.000

Comment

None

Workflow

Status	Name	Disposition	Date/Time
Draft	Thomas R Quinnan/PennDOT BP-000557	Submit	04/18/2012 12:07:17 PM

Awaiting Acknowledgement	Nancy E Dolinar/PennDOT BP-000759	Acknowledge	04/18/2012 01:03:34 PM
Acknowledged	Thomas R Quinnan/PennDOT BP-000557	Submit	04/18/2012 01:39:52 PM
PennDOT Review	Delores A Ritzman/PennDOT	Approve	04/18/2012 01:51:03 PM

Plans

Plans	Addendum
Roadway Plan	
Supplemental Plans	
Cross Section	
Erosion and Sediment Pollution Control Plan	
Structure Plan - S -31575 Soldier Pile and Retaining Wall	
Structure Plan - S-31576 Cast in place Retaining Wall	
Traffic Control Plan	

Attachments

Project-Specific Checklist Items **Addendum**

Project Specific - M-937RO bridge Restriction Opening from

Project Specific - M-93R Bridge Restrictions Form

Project Specific - Steel Cost Escalation Form

Project Specific - Bridge/Structures Related Effective Policy Letters

Reviews

None

Contract Award Items

Disclosure of Lobbying Activities - F.A.R. - REQUIRED CONTRACT PROVISIONS FEDERAL- AID CONSTRUCTION CONTRACTS

Disclosure of Lobbying Activities

F.A.R. REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

Federal Wage Rate

Local Agreements and Coordination

None

Environmental Clearances

None

Permits

Environmental Due Diligence (EDD) - Contractor

Environmental Due Diligence (EDD) - PennDOT

Erosion and Sediment Control Approval Letter

Right of Way

None

Survey

None

Utilities Clearance

None

Utility Engineering

None

Construction Items

Pre-Bid Construction Schedule

Structures and Geotechnical

None

Railroad Coordination

None

Traffic

None

Construction Coordination

None

Maintenance Items

None

Estimates

None

Comments: