



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. Box 778
DOVER, DELAWARE 19903

JENNIFER COHAN
SECRETARY

VIA OVERNIGHT DELIVERY

November 28, 2017

Contract No. T201112201.01
Federal Aid Project No. NHS-K008(13)
SR 1, NE Front Street Grade Separated Intersection
Kent County

Ladies and Gentlemen:

Enclosed is Addendum No. 4 for the referenced contract consisting of the following:

1. The Bid Proposal Cover, revised, to be substituted for the same page in the Proposal.
2. One (1) page, Prospective Bidders Notes, page ii, revised, to be substituted for the same page in the Proposal. Bidders Note number 10 has been revised.
3. One (1) page, Table of Contents, page v, revised, to be substituted for the same page in the Proposal.
4. One (1) page, Special Provision 746538-Bridge Electrical System, has been added to the Proposal.
5. One (1) page, Special Provision 614506-Installing Water Main, revised, to be substituted for the same page in the Proposal. The last sentence in paragraph 4 has been deleted on pages 100 and 109.
6. One (1) page, Special Provision 753516-Sanitary Sewer System, revised, to be substituted for the same page in the Proposal. The last sentence in paragraph 4 has been deleted on pages 185 and 192.
7. Seventeen (17) pages, Bid Proposal Forms, 1, 3 and 4 through 18, revised, to be substituted for the same pages in the Proposal.
 - The following Item Numbers have quantity revisions: 202000, 602014, 602646 and 743015.
 - The following Item Numbers have been added: 743013 and 746538.
8. Two (2) pages, Breakout Sheet Instructions, pages 259 and 263 of the PDF Document, revised, to be substituted for the same pages in the Proposal.
9. The following Plan Sheets have been revised and replaced: 4, 9, 11, 59, 60, 67 and 236a.
10. Expedite File Disc, Amendments No. 2

Please note the revisions listed above and submit your bid based upon this information.

Sincerely,

~signature on file~

Robert A. Kovacs
Competitively Bid Contracts Coordinator
Delaware Department of Transportation

STATE OF DELAWARE



DEPARTMENT OF TRANSPORTATION

BID PROPOSAL

for

CONTRACT T201112201.01

FEDERAL AID PROJECT NO. NHS-K008(13)

CFDA NO. 20.205

SR 1, NE Front Street Grade Separated Intersection

Kent County

ADVERTISEMENT DATE: October 16, 2017

COMPLETION TIME: 670 Calendar Days

SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
DELAWARE DEPARTMENT OF TRANSPORTATION
AUGUST 2001

Bids will be received in the Bidder's Room at the Delaware Department of Transportation's Administration Building, 800 Bay Road, Dover, Delaware until 2:00 P.M. local time ~~November 21~~ ~~November 28~~ **December 5, 2017**

6. SUPPLEMENTAL SPECIFICATIONS to the August 2001 Standard Specifications were issued November 24, 2014 and apply to this project. They can be [viewed here](#). The *Specifications Note* document is for the use by the bidders to reference the new numbers to the past numbers used for bidding purposes on previous Department contracts.
7. DBE PROGRAM REQUIREMENTS under 49CFR §26.53(b)(3)(i)(B) change effective January 1, 2017. **Submission of DBE participation information is now required from the lowest apparent bidder no later than five (5) calendar days after bid opening (formerly 7 days).**
8. No RETAINAGE will be withheld on this contract.
9. EXTERNAL COMPLAINT PROCEDURE can be viewed on DelDOT's Website at: <http://www.deldot.gov/information/business/>, or you may request a copy by calling (302) 760-2555.
10. **BREAKOUT SHEETS MUST be submitted either with your bid documents;** ~~or within seven (7) calendar days following the bid due date by the lowest apparent bidder. Refer to instructions adjacent to the Breakout Sheets in this document.~~
11. PROPOSED TRAINEE PLANS - The number of trainees to be trained will be **2**, as listed in the Training Special Provisions within Contract General Notices. The program(s) must be submitted within 10 Calendar Days of notification of apparent low bidder status. Contract Award will not take place until acceptable On-the-Job (OJT) program plans are received by the Civil Rights Group of the Department. Failure of the apparent low bidder to present copies of an acceptable OJT Trainee Programs within ten (10) calendar days of notification of apparent low bidder status, shall create a rebuttable presumption that the bid is not responsive.
12. The Completion Date for all of the work in this Contract is identified elsewhere in the Contract documents. In addition, work is to be performed on facilities owned by the Kent County Department of Public Works under Item 753550-Installing Sanitary Sewer (Force Main), DIP, 18". Interruption of service for the existing force main is limited to the number of calendar days identified in the plans. This service interruption duration shall be identified as an Interim Completion Date Milestone in the Contractor's CPM. If the work is not completed such that the service is interrupted for longer than the identified number of calendar days, then for each and every Calendar Day charged beyond the identified Calendar Days, Liquidated Damages shall be assessed and deducted from monies due the Contractor per Section 108.08 in the amount of twenty-five percent (25%) of the value shown in Section 108.09 until such time as the described work is complete and accepted by the Engineer and the Kent County Department of Public Works and service is restored to the 18 inch sewer force main. These liquidated damages are in addition to and do not void or alter any liquidated damages that may be assessed if work for other Interim Completion Dates is not completed and accepted by the Engineer within the identified Interim Completion Date or if all of the work in the Contract is not completed and accepted by the Engineer within the identified Completion Date for the entire Contract.
13. **Appendix - B**
This project incorporates Appendix-B TECHNICAL SPECIFICATIONS, which is a part of this contract. Appendix-B contains additional specifications required for this project.

Contract No. T201112201.01

401810 - BITUMINOUS CONCRETE, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22 . . .	<u>61</u>
401819 - BITUMINOUS CONCRETE, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22	<u>61</u>
401830 - BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 70-22, (NON-CARBONATE STONE)	<u>61</u>
602520 - EPOXY PROTECTIVE COATING FOR CONCRETE	<u>72</u>
602549 - FORM LINERS	<u>75</u>
602553 - MECHANICALLY STABILIZED EARTH WALLS, TYPE 1	<u>76</u>
602646 - SILICONE ACRYLIC CONCRETE SEALER	<u>82</u>
605501 - GROUND MOUNT BREAKAWAY TYPE SIGN SUPPORTS AND FOUNDATION	<u>84</u>
605512 - PREFABRICATED EXPANSION JOINT SYSTEM 4"	<u>86</u>
605664 - STEEL SIGN STRUCTURES	<u>88</u>
605761 - STEEL SIGN STRUCTURES, TUBULAR ARCH, CANTILEVER	<u>95</u>
614506 - INSTALLING WATER MAIN	<u>100</u>
618537 - DRILLED SHAFT, 54"	<u>110</u>
619519 - DYNAMIC PILE TESTING BY CONTRACTOR	<u>129</u>
705530 - TRIANGULAR CHANNELIZING ISLANDS	<u>132</u>
710506 - ADJUST AND REPAIR EXISTING SANITARY MANHOLE	<u>134</u>
712506 - GABIONS	<u>135</u>
715500 - UNDERDRAIN OUTLET PIPE, 6"	<u>137</u>
720556 - BOLLARD	<u>138</u>
720585 - GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1 - 31	<u>139</u>
720586 - GUARDRAIL END TREATMENT ATTENUATOR, TYPE 2 - 31	<u>139</u>
720588 - GUARDRAIL END TREATMENT ATTENUATOR, TYPE 3 - 31	<u>139</u>
727507 - BRIDGE SAFETY FENCE	<u>141</u>
727555 - RIGHT-OF-WAY MARKER, CAPPED REBAR	<u>142</u>
744506 - CONDUIT JUNCTION WELL, TYPE 7, PRECAST POLYMER CONCRETE	<u>143</u>
744530 - CONDUIT JUNCTION WELL, TYPE 11, PRECAST CONCRETE/POLYMER LID- FRAME	<u>143</u>
744531 - CONDUIT JUNCTION WELL, TYPE 14, PRECAST CONCRETE/POLYMER LID- FRAME	<u>143</u>
745602 - FURNISH & INSTALL UP TO 4" SCHEDULE 80 HDPE CONDUIT (BORE)	<u>145</u>
745604 - FURNISH & INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (TRENCH)	<u>145</u>
745605 - FURNISH & INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (ON STRUCTURE)	<u>145</u>
745609 - FURNISH & INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (ON STRUCTURE)	<u>145</u>
746511 - CABLES, 1/#4 AWG	<u>149</u>
746512 - CABLES, 1/#6 AWG	<u>149</u>
746527 - CABLES, 1/#2 AWG	<u>149</u>
746565 - CABLES, 1/#3/0 AWG	<u>149</u>
746566 - CABLES, 1/#1 AWG	<u>149</u>
746567 - CABLES, 1/#1/0 AWG	<u>149</u>
746605 - INSULATED GROUND CABLE, 1/#10	<u>149</u>
746516 - SERVICE INSTALLATION	<u>150</u>
746517 - ALUMINUM LIGHTING STANDARD WITH SINGLE DAVIT ARM, 30' POLE	<u>151</u>
746538 - BRIDGE ELECTRICAL SYSTEM.	154A
746519 - ALUMINUM LIGHTING STANDARD WITH SINGLE DAVIT ARM, 40' POLE	<u>151</u>
746653 - ELECTRICAL TESTING	<u>155</u>
746847 - POLE BASE, TYPE 3	<u>157</u>
746852 - POLE BASE, TYPE 6	<u>157</u>
747508 - LIGHTING CONTROL CENTER - 100 A	<u>159</u>
747514 - CABINET BASE TYPE F	<u>161</u>
748502 - RAISED/RECESSED PAVEMENT MARKER	<u>162</u>
748537 - PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 8"	<u>163</u>
748548 - PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	<u>163</u>
748549 - PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 10"	<u>163</u>
748530 - REMOVAL OF PAVEMENT STRIPING	<u>173</u>
748553 - PREFORMED RETROREFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS, BIKE SYMBOL	<u>174</u>

746538 - BRIDGE ELECTRICAL SYSTEM**Description:**

This work consists of furnishing and installing rigid galvanized steel conduit, PVC conduit, fittings, junction boxes, PVC sleeves and caps as shown on the Plans, as specified herein, and/or as directed by the Engineer.

Materials:

Galvanized Steel Conduit – 2 ½” diameter, rigid galvanized steel conduit meeting National Electric Code 2002, Article 344.

PVC Conduit - 4" schedule 80 rigid polyvinyl chloride (PVC) conduit, meeting Commercial Standard CS-272-65 (PVC), ASTM D-1785 and U.C. Standard 651 specifications.

RWIS (Road Weather Information System) Conduit – 1” diameter PVC Conduit, Schedule 80

Junction Boxes - shall meet ANSI Specifications, U.L. requirements and listed as raintight and shall accommodate the size and number of conduits shown on the Plans. Junction boxes/wells shall be galvanized steel alloy and constructed to the size indicated.

PVC Sleeves – 6” Schedule 80 with cap

Shop drawings and/or catalog cuts for the above listed materials shall be submitted to the Engineer for approval.

Construction Methods:

Prior to placing the concrete bridge deck, the Contractor shall install 2 ea 6 inch PVC sleeves in the deck at the location of the weather sensors. Drill a hole in each sleeve to accept a 1 inch PVC conduit tied to the bottom of the top rebar mat. Each 1 inch PVC conduit shall extend from the sleeve to a 9” x 9” x 6” junction box in the parapet face (2 runs, 1 from each sleeve to the Junction Box). A pull wire shall also be installed to facilitate wire installation through the conduits by others. The top of each PVC sleeve shall be capped to avoid concrete intrusion and shall be clearly marked following deck concrete placement so that it can be avoided during deck grooving operations and easily located by the weather sensor installer. DelDOT’s Traffic Signal Construction manager (or representative) shall be contacted to review the RWIS conduit system set up prior to placing any deck concrete.

Prior to placing the Parapet Wall concrete, the Contractor shall extend the 1” inch PVC conduits to the 9” x 9” x 6” Junction Box. 2 ea 2 ½” Galvanized Steel conduits shall be installed from that Junction Box through the parapet, sweeping under the approach slab and exiting to a junction well located outside the Bridge. In addition, a 4” PVC conduit shall be installed in the parapet wall for the entire length of the structure. 12” x 18” x 6” Junction Boxes to access the 4” conduit shall be spaced at intervals not to exceed 300 feet, or at the center of the structure on shorter spans. The 4” PVC Conduit shall also sweep out of the

parapet, under the approach slab, and exit to junction wells located outside the Bridge at both ends of the structure. All conduits shall include a pull wire for future cable installation. Junction boxes in the bridge shall be positioned to avoid any fence posts and/or Guardrail to Bridge attachments and shall be flush with the front face of the parapet wall. Conduits exiting the structure shall be positioned to avoid all guardrail posts.

Prior to placing approach slab and/or sleeper slab concrete, all conduits exiting the bridge must be installed beneath the concrete including any necessary sweeps to properly enter the Junction Well outside of the structure.

Method of Measurement:

The quantity of bridge electrical system will not be measured.

Basis of Payment:

The quantity of bridge electrical system will be paid for at the lump sum bid price. Price and payment will constitute full compensation for furnishing and installing the required 2 1/2" rigid galvanized steel conduits and 4" PVC conduit within the parapet walls, extending to the Junction Well(s) located outside the structure; 1" PVC conduit, 6" PVC sleeves with caps, fittings, conduit sweeps, junction boxes in the parapet wall, pull wires within all conduits, and for all labor, equipment, tools, and incidentals required to complete the work. All wiring inside the conduits will be performed by others. Junction Wells located outside the structure will be paid for separately under their respective bid item.

4/29/13

614506 - INSTALLING WATER MAIN

Description:

This work consists of furnishing and related work to install a relocated portion of the City of Milford’s water r system as shown on the City of Milford Sewer and Water Relocation Plans (sheets MS-1 through MS-15) in accordance with the locations, details, and notes on the Plans, and as directed by the Engineer as extra or additional work. The existing water service shall be abandoned or salvaged as specified on the Plans.

The City of Milford from hereafter shall be addressed as the Owner. The contractor is advised to obtain and be fully acquainted with the specifications of the Owner. The City of Milford’s standards for water installations are available to view at <http://www.cityofmilford.com/176/City-Standard-Construction-Specification>. Cost to comply are considered incidental to Item 614506.

The work shall be performed in accordance with these Special Provisions, Delaware Standard Specifications, and the requirements of the Standards and Specifications of the City of Milford. In case of conflict between these Special Provisions, Delaware Standard Specifications, and the Standards and Specifications of the City of Milford, the Standards and Specifications of the City of Milford shall prevail.

A “Breakout Sheet” is included in the contract to establish unit prices for the items listed below. The total of the unit prices multiplied by the estimated quantities will establish the total Lump Sum price to be submitted with the bid. Each listed item will be measured as a unit price item in the field. The final Lump Sum payment for Item 614506 will be adjusted by change order, either plus or minus, to match the final totals of all unit price items established in the Breakout Sheet. ~~Failure to complete and submit the Breakout Sheet with the bid will cause the bid to be considered unresponsive.~~

Breakout

<u>Item</u>	<u>Unit</u>	<u>Description</u>
W-1	(LF)	Furnish & Install DR 18, C-900, PVC Water Main, Including Fittings, and Appurtenances
W-2	(LF)	Furnish & Install Class 50 Ductile Iron Water Main, Including Fittings, and Appurtenances
W-3	(LF)	Remove and Properly Dispose of Existing Water Main
W-4	(LF)	Furnish & Install Schedule 40 Steel Casing Pipe by Open Cut, Including Carrier Pipe, Casing Spacers, and End Seals
W-5	(LF)	Furnish & Install Schedule 40 Steel Casing Pipe by Jack & Bore, Including Carrier Pipe, Casing Spacers, and End Seals
W-6	(EA)	Furnish & Install Resilient Wedge Gate Valve, Including Valve Box
W-7	(EA)	Furnish & Install Hydrant Assembly, Including Hydrant Tee, Valve & Valve Box, and Ductile Iron Lead
W-8	(EA)	Furnish Hydrant Assembly, Including Hydrant Tee, Valve & Valve Box, Ductile Iron Lead, and Fittings as Necessary and Install by Cutting-In on Existing Water Main
W-9a	(EA)	Furnish & Install Tapping Saddle, Corporation Stop, and Tap Water Main
W-9b	(EA)	Furnish & Install Tapping Saddle, Corporation Stop, and Tap Water Main
W-10a	(LF)	Furnish & Install SDR 9 Water Service Pipe, Including Fittings
W-10b	(LF)	Furnish & Install SDR 9 Water Service Pipe, Including Fittings
W-11a	(EA)	Furnish & Install Water Meter Pit, Including Frame & Cover
W-11b	(EA)	Furnish & Install Water Meter Pit, Including Frame & Cover
W-12	(EA)	Remove Existing Fire Hydrant, Hydrant Lead, Valve, and Valve Box and Turn Hydrant, Valve, and Valve Box Over to City
W-13	(EA)	Remove Existing Valve and Valve Box, Install MJ Cap(s) on Main, and Turn Valve and Valve Box Over to City
W-14	(EA)	Open or Close (as indicated) Existing Valve, Remove Valve Box and Turn Over to City
W-15a	(EA)	Remove Existing Meter Pit and Frame & Cover and Turn Over to City

Contract No. T201112201.01

ABANDON EXISTING WATER MAIN BY FILLING WITH FLOWABLE FILL, INCLUDING INSTALLING MJ CAPS OR PLUGS AND TEMPORARY FILL AND BLEED PIPES WHERE NECESSARY (Breakout Item W-17)

- A. Measurement for this item shall be made based on the volume of pipe filled with flowable fill. The volume shall be calculated by measuring horizontally along the ground surface above the pipe filled and multiplying the resulting length by the cross-sectional area of the pipe filled.
- B. Payment shall be made based on the unit price bid for the volume of pipe actually filled.

Payment Clarification

A percentage of the total Lump Sum will be paid based on the work performed in each pay period. The percentage will be calculated by multiplying the total unit of each completed Breakout Item times the appropriate unit price; then adding the total dollars of completed work, divided by the total Lump Sum bid price for item 614506 – Installing Water Main. Final payment may result in less than 100% of the total Lump Sum based on the actual work performed. Should the Lump Sum total be exceeded, additional funds will be added by Change Order based on the best available estimate at the time. ~~Failure to fully complete the Breakout Sheet for this Item will result in the bid being declared non responsive.~~

9/01/2017

753516 - SANITARY SEWER SYSTEM

Description:

This work consists of furnishing and related work to install a relocated portion of the City of Milford’s sanitary sewer system as shown on the City of Milford Sewer and Water Relocation Plans (sheets MS-1 through MS-15) in accordance with the locations, details, and notes on the Plans, and as directed by the Engineer as extra or additional work. The existing sewer service shall be abandoned or salvaged as specified on the Plans.

The City of Milford from hereafter shall be addressed as the Owner. The contractor is advised to obtain and be fully acquainted with the specifications of the Owner. . The City of Milford’s standards for sewer installations are available to view at <http://www.cityofmilford.com/176/City-Standard-Construction-Specification>. Cost to comply are considered incidental to Item 753516.

The work shall be performed in accordance with these Special Provisions, Delaware Standard Specifications, and the requirements of the Standards and Specifications of the City of Milford. In case of conflict between these Special Provisions, Delaware Standard Specifications, and the Standards and Specifications of the City of Milford, the Standards and Specifications of the City of Milford shall prevail.

A “Breakout Sheet” is included in the contract to establish unit prices for the items listed below. The total of the unit prices multiplied by the estimated quantities will establish the total Lump Sum price to be submitted with the bid. Each listed item will be measured as a unit price item in the field. The final Lump Sum payment for Item 753516 will be adjusted by change order, either plus or minus, to match the final totals of all unit price items established in the Breakout Sheet. ~~Failure to complete and submit the Breakout Sheet with the bid will cause the bid to be considered unresponsive.~~

Breakout Item	Unit	Description
S-1	(LF)	Furnish & Install DR 18, C-900, PVC Forcemain, Including Fittings and Appurtenances
S-2	(EA)	Furnish & Install Resilient Wedge Gate Valve, Including Valve Box
S-3	(LF)	Furnish & Install SDR 9 HDPE Forcemain, Including Fittings and Appurtenances
S-4	(LF)	Furnish & Install Schedule 40 Steel Casing Pipe by Open Cut, Including CarrierPipe, Casing Spacers, and End Seals
S-5	(EA)	Furnish & Install Combination Air Valve and Structure, Including Frame & Cover
S-6	(LF)	Furnish & Install SDR 9 HDPE Sewer Lateral, Including Fittings
S-7a	(EA)	Furnish & Install Curb Stop, Including Curb Box
S-7b	(EA)	Furnish & Install Curb Stop, Including Curb Box
S-8	(EA)	Furnish & Install Direct Bury Check Valve
S-9	(EA)	Remove Air Release Valve, Frame & Cover, and Concrete Top on Structure and Dispose of Properly, Cap Forcemain and Fill Structure with Flowable Fill
S-10	(EA)	Shut Off Curb Stop or Valve and Remove Curb or Valve Box and Turn Over to City
S-11	(LS)	Cap Existing Forcemain Where Directed and Abandon in Place
S-12	(SY)	Remove and Properly Dispose of All Existing Asphalt Paving at Pump Station
S-13	(SY)	Undercut to Proper Depth and Compact Sub-Grade Within Footprint of New Area to Be Paved at Pump Station
S-14	(CY)	Furnish, Install, and Compact CR-6 (Crusher Run) Stone Base
S-15	(TON)	Install Type C Superpave Hot Mix Asphalt Paving

Materials:

All the materials including pipe, fittings, and all other accessories as listed under this Special Provisions, shall conform to the material and quality requirements of the Standards and Specifications of the City of Milford. The Owner shall have right to inspect and reject the materials, if his/her specifications requirements are not met.

REMOVE AND PROPERLY DISPOSE OF All EXISTING ASPHALT PAVING AT PUMP STATION (Breakout Item S-12)

- A. Measurement for this bid item shall be made based on the total area of existing asphalt completely removed and properly disposed of off-site.
- B. Payment for work associated with this bid item shall be made at the unit price bid for the area of asphalt completely removed and properly disposed of off-site.

UNDERCUT TO PROPER DEPTH AND COMPACT SUBGRADE WITHIN FOOTPRINT OF NEW AREA TO BE PAVED AT PUMP STATION (Breakout Item S-13)

- A. Measurement for this bid item shall be made based on the total area excavated and properly compacted, including disposed of excavated material off-site.
- B. Payment for work associated with this bid item shall be made at the unit price bid for the area excavated to the proper depth and compacted in accordance with compaction requirements.

FURNISH, INSTALL, AND COMPACT CR-6 (CRUSHER RUN) STONE BASE (Breakout Item S-14)

- A. Measurement for this bid item shall be made based on the total volume of CR-6 crusher run installed and compacted to the specified depth in the area to be paved.
- B. Payment for work associated with this bid item shall be made at the unit price bid for the actual volume of stone base actually installed and compacted to the specified depth.

INSTALL TYPE C SUPERPAVE HOT MIX ASPHALT PAVING (Breakout Item S-15)

- A. Measurement for these items shall be made based on the weight in tons of asphalt placed and properly compacted.
- B. Payment for work associated with this bid item shall be made at the unit price bid for the tonnage of asphalt properly placed and compacted.

Payment Clarification

A percentage of the total Lump Sum will be paid based on the work performed in each pay period. The percentage will be calculated by multiplying the total unit of each completed Breakout Item times the appropriate unit price; then adding the total dollars of completed work, divided by the total Lump Sum bid price for item 753516 – Sanitary Sewer System. **2753516 - SANITARY SEWER SYSTEM** Final payment may result in less than 100% of the total Lump Sum based on the actual work performed. Should the Lump Sum total be exceeded, additional funds will be added by Change Order based on the best available estimate at the time. ~~Failure to fully complete the Breakout Sheet for this Item will result in the bid being declared non-responsive.~~

9/01/17

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 1
DATE:

CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

All figures must be typewritten.

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
SECTION 0001 ITEMS						
0010	201000 CLEARING AND GRUBBING	LUMP	LUMP			
0020	202000 EXCAVATION AND EMBANKMENT	CY	109324.000			
0030	207000 EXCAVATION AND BACKFILL FOR STRUCTURES	CY	275.000			
0040	208000 EXCAVATION AND BACKFILLING FOR PIPE TRENCHES	CY	482.000			
0050	208001 FLOWABLE FILL	CY	100.000			
0060	209001 BORROW, TYPE A	CY	1000.000			
0070	209003 BORROW, TYPE C	CY	1000.000			
0080	209006 BORROW, TYPE F	CY	1000.000			
0090	210000 FURNISHING BORROW TYPE "C" FOR PIPE, UTILITY TRENCH, AND STRUCTURE BACKFILL	CY	668.000			

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 3
DATE:

CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

All figures must be typewritten.

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0190	602001 PORTLAND CEMENT CONCRETE MASONRY, CLASS A	127.000 CY				
0200	602006 PORTLAND CEMENT CONCRETE MASONRY, PIER FOOTING, CLASS B	105.000 CY				
0210	602007 PORTLAND CEMENT CONCRETE MASONRY, PIER ABOVE FOOTING, CLASS A	62.000 CY				
0220	602013 PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	410.000 CY				
0230	602014 PORTLAND CEMENT CONCRETE MASONRY, APPROACH SLAB, CLASS D	132.000 CY				
0240	602015 PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT ABOVE FOOTING, CLASS A	66.000 CY				
0250	602017 PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	100.000 CY				
0260	602018 PORTLAND CEMENT CONCRETE MASONRY, CLASS D	21.000 CY				
0270	602520 EPOXY PROTECTIVE COATING FOR CONCRETE	124.000 SY				
0280	602549 FORM LINERS	1739.000 SF				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 4
DATE:

CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

All figures must be typewritten.

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0290	602553 MECHANICALLY STABILIZED EARTH WALLS, WALL 1	7685.000 SF				
0300	602646 SILICONE ACRYLIC CONCRETE SEALER	15607.000 SF				
0310	604000 BAR REINFORCEMENT, EPOXY COATED	201900.000 LB				
0320	605002 STEEL STRUCTURES	LUMP	LUMP			
0330	605501 GROUND MOUNT BREAKAWAY TYPE SIGN SUPPORTS AND FOUNDATION	LUMP	LUMP			
0340	605512 PREFABRICATED EXPANSION JOINT SYSTEM, 4"	108.000 LF				
0350	605761 STEEL SIGN STRUCTURES, TUBULAR ARCH CANTILEVER	LUMP	LUMP			
0360	608000 COARSE AGGREGATE FOR FOUNDATION STABILIZATION AND SUBFOUNDATION BACKFILL	150.000 TON				
0370	612021 REINFORCED CONCRETE PIPE, 15", CLASS IV	1094.000 LF				
0380	612022 REINFORCED CONCRETE PIPE, 18", CLASS IV	660.000 LF				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 5
DATE:

CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

All figures must be typewritten.

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0390	612023 REINFORCED CONCRETE PIPE, 24", CLASS IV	144.000 LF				
0400	612034 REINFORCED CONCRETE PIPE, 36", CLASS IV	144.000 LF				
0410	612213 REINFORCED CONCRETE ELLIPTICAL PIPE, 27"X42", CLASS IV	136.000 LF				
0420	612216 REINFORCED CONCRETE ELLIPTICAL PIPE, 14"X23", CLASS IV	56.000 LF				
0430	612220 REINFORCED CONCRETE ELLIPTICAL PIPE, 29"X45", CLASS IV	144.000 LF				
0440	614506 INSTALLING WATER MAIN	LUMP	LUMP			
0450	617003 REINFORCED CONCRETE FLARED END SECTION, 18"	4.000 EACH				
0460	617005 REINFORCED CONCRETE FLARED END SECTION, 24"	6.000 EACH				
0470	617009 REINFORCED CONCRETE FLARED END SECTION, 36"	2.000 EACH				
0480	617168 REINFORCED CONCRETE FLARED END SECTION, 27" X 42"	2.000 EACH				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 6
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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0490	617171 REINFORCED CONCRETE FLARED END SECTION, 29" X 45"	2.000 EACH				
0500	618081 FURNISH PRECAST PRESTRESSED CONCRETE PILE, 14" X 14"	2145.000 LF				
0510	618082 FURNISH PRECAST PRESTRESSED CONCRETE PILE, 16" X 16"	1240.000 LF				
0520	618091 FURNISH PRECAST PRESTRESSED CONCRETE TEST PILE, 14" X 14"	210.000 LF				
0530	618092 FURNISH PRECAST PRESTRESSED CONCRETE TEST PILE, 16" X 16"	248.000 LF				
0540	618537 DRILLED SHAFT, 54"	82.000 LF				
0550	619061 INSTALL PRECAST PRESTRESSED CONCRETE PILE, 14" X 14"	2145.000 LF				
0560	619062 INSTALL PRECAST PRESTRESSED CONCRETE PILE, 16" X 16"	1240.000 LF				
0570	619067 INSTALL PRECAST PRESTRESSED CONCRETE TEST PILE, 14" X 14"	210.000 LF				
0580	619068 INSTALL PRECAST PRESTRESSED CONCRETE TEST PILE, 16" X 16"	248.000 LF				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 7
DATE:

CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0590	619519 DYNAMIC PILE TESTING BY CONTRACTOR	7.000 EACH				
0600	701011 PORTLAND CEMENT CONCRETE CURB, TYPE 2	2208.000 LF				
0610	701012 PORTLAND CEMENT CONCRETE CURB, TYPE 1-4	367.000 LF				
0620	701019 INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 3-4	2888.000 LF				
0630	701022 INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 3-8	2151.000 LF				
0640	705002 P.C.C. SIDEWALK, 6"	247.000 SF				
0650	705005 P. C. C. SIDEWALK, 8"	4681.000 SF				
0660	705007 SIDEWALK SURFACE DETECTABLE WARNING SYSTEM	210.000 SF				
0670	705008 CURB RAMP, TYPE 1	1545.000 SF				
0680	705530 TRIANGULAR CHANNELIZING ISLANDS	1502.000 SF				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 8
DATE:

CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0690	707005 UNDERDRAIN OUTLET	22.000 EACH				
0700	708051 DRAINAGE INLET, 34" X 24"	18.000 EACH				
0710	708057 DRAINAGE INLET, 72" X 24"	2.000 EACH				
0720	708060 REPLACE DRAINAGE INLET GRATE(S)	10.000 EACH				
0730	708061 REPLACE DRAINAGE INLET FRAME(S)	10.000 EACH				
0740	708111 MANHOLE, 48" X 30"	1.000 EACH				
0750	710506 ADJUST AND REPAIR EXISTING SANITARY MANHOLE	5.000 EACH				
0760	712020 RIPRAP, R-4	1354.000 TON				
0770	712506 GABIONS	80.000 CY				
0780	713001 GEOTEXTILES, STABILIZATION	150.000 SY				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 9
DATE:

CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0790	713002 GEOTEXTILES, SEPARATION	250.000 SY				
0800	713003 GEOTEXTILES, RIPRAP	3045.000 SY				
0810	715001 PERFORATED PIPE UNDERDRAINS, 6"	13175.000 LF				
0820	715500 UNDERDRAIN OUTLET PIPE, 6"	376.000 LF				
0830	720050 GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	1994.000 LF				
0840	720556 BOLLARD	1.000 EACH				
0850	720586 GUARDRAIL END TREATMENT ATTENUATOR, TYPE 2-31	6.000 EACH				
0860	720588 GUARDRAIL END TREATMENT ATTENUATOR, TYPE 3-31	2.000 EACH				
0870	725002 GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 1-31	2.000 EACH				
0880	725003 GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 2-31	2.000 EACH				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 10
DATE:

CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0890	726001 END ANCHORAGE 31	EACH 2.000				
0900	727014 CONSTRUCTION SAFETY FENCE	LF 7940.000				
0910	727015 MONUMENTS	EACH 19.000				
0920	727507 BRIDGE SAFETY FENCE	LF 470.000				
0930	727555 RIGHT-OF-WAY MARKER, CAPPED REBAR	EACH 8.000				
0940	743000 MAINTENANCE OF TRAFFIC	LUMP	LUMP			
0950	743003 ARROWPANELS, TYPE C	EADY 60.000				
0960	743004 FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	EADY 270.000				
0970	743005 FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY	EADY 250.000				
0980	743006 PLASTIC DRUMS	EADY 4697.000				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 11
DATE:

CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0990	743007 TRAFFIC OFFICERS	800.000 HOUR	75.00000		60000.00	
1000	743008 REFLECTOR PANELS	100.000 EACH				
1010	743010 FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	200.000 EADY				
1020	743013 FURNISH PORTABLE PCC STRUCTURE MOUNTED SAFETY BARRIER	6990.000 LF				
1030	743015 FURNISH AND MAINTAIN PORTABLE PCC SAFETY BARRIER	1163.000 LF				
1040	743023 TEMPORARY BARRICADES, TYPE III	16720.000 LFDY				
1050	743024 TEMPORARY WARNING SIGNS AND PLAQUES	57990.000 EADY				
1060	743025 INSTALL TEMPORARY IMPACT ATTENUATOR	5.000 EACH				
1070	743029 FURNISH TEMPORARY IMPACT ATTENUATOR - NON-GATING, REDIRECTIVE, TEST LEVEL 3	5.000 EACH				
1080	743057 FLAGGER, KENT COUNTY, FEDERAL	2000.000 HOUR				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 12
DATE:

CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1090	743066 FLAGGER, KENT COUNTY, FEDERAL, OVERTIME	400.000 HOUR				
1100	744506 CONDUIT JUNCTION WELL, TYPE 7, PRECAST POLYMER CONCRETE	15.000 EACH				
1110	744530 CONDUIT JUNCTION WELL, TYPE 11, PRECAST CONCRETE/ POLYMER LID-FRAME	28.000 EACH				
1120	744531 CONDUIT JUNCTION WELL, TYPE 14, PRECAST CONCRETE/ POLYMER LID-FRAME	40.000 EACH				
1130	745602 FURNISH & INSTALL UP TO 4" SCHEDULE 80 HDPE CONDUIT (BORE)	1331.000 LF				
1140	745604 FURNISH & INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (TRENCH)	31097.000 LF				
1150	745605 FURNISH & INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (ON STRUCTURE)	321.000 LF				
1160	745609 FURNISH & INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (ON STRUCTURE)	321.000 LF				
1170	746511 CABLES, 1/#4 AWG	1265.000 LF				
1180	746512 CABLES, 1/#6 AWG	44801.000 LF				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 13
DATE:

CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1190	746516 SERVICE INSTALLATION	3.000 EACH				
1200	746517 ALUMINUM LIGHTING STANDARD WITH SINGLE DAVIT ARM, 30' POLE	33.000 EACH				
1210	746519 ALUMINUM LIGHTING STANDARD WITH SINGLE DAVIT ARM, 40' POLE	44.000 EACH				
1220	746527 CABLES, 1/#2 AWG	1212.000 LF				
1230	746538 BRIDGE ELECTRICAL SYSTEM	LUMP	LUMP			
1240	746565 CABLES, 1/#3/0 AWG	505.000 LF				
1250	746566 CABLES, 1/#1 AWG	6235.000 LF				
1260	746567 CABLES, 1/#1/0 AWG	3348.000 LF				
1270	746653 ELECTRICAL TESTING	LUMP	LUMP			
1280	746847 POLE BASE, TYPE 3	3.000 EACH				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 14
DATE:

CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1290	746848 POLE BASE, TYPE 3A	1.000 EACH				
1300	746852 POLE BASE, TYPE 6	77.000 EACH				
1310	747508 LIGHTING CONTROL CENTER - 100 A	3.000 EACH				
1320	747516 CABINET BASE, TYPE P	3.000 EACH				
1330	748015 PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	1827.000 SF				
1340	748019 TEMPORARY MARKINGS, PAINT, 4"	25000.000 LF				
1350	748502 RAISED/RECESSED PAVEMENT MARKER	524.000 EACH				
1360	748530 REMOVAL OF PAVEMENT STRIPING	42570.000 SF				
1370	748537 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 8"	1120.000 LF				
1380	748548 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	89310.000 LF				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 15
DATE:

CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1390	748549 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 10"	2040.000 LF				
1400	748553 PREFORMED RETROREFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS, BIKE SYMBOL	6.000 EACH				
1410	749500 SIGN PANEL	1199.000 SF				
1420	749687 INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST	342.000 EACH				
1430	749690 INSTALLATION OR REMOVAL OF TRAFFIC SIGNS ON MULTIPLE SIGN POSTS	212.000 SF				
1440	750000 ADJUST WATER VALVE BOXES	7.000 EACH				
1450	753516 SANITARY SEWER SYSTEM	LUMP	LUMP			
1460	753550 INSTALLING SANITARY SEWER (FORCE MAIN), DIP, 18"	1228.000 LF				
1470	758000 REMOVAL OF EXISTING PORTLAND CEMENTCONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	2509.000 SY				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 16
DATE:

CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1480	759502 FIELD OFFICE, SPECIAL I	24.000 EAMO				
1490	760006 PAVEMENT - MILLING, HOT-MIX, 2" DEPTH	65882.000 SY				
1500	760012 RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX	5565.000 LF				
1510	760016 RUMBLE STRIPS, HOT-MIX	8559.000 LF				
1520	760018 RUMBLE STRIPS, CENTER LINE, HOT-MIX	2555.000 LF				
1530	762001 SAW CUTTING, BITUMINOUS CONCRETE	7264.000 LF				
1540	762002 SAW CUTTING, CONCRETE, FULL DEPTH	12.000 LF				
1550	763000 INITIAL EXPENSE	LUMP	LUMP			
1560	763501 CONSTRUCTION ENGINEERING	LUMP	LUMP			
1570	763503 TRAINEE	1080.000 HOUR	0.80000		864.00	

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 17
DATE:

CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1580	763508 PROJECT CONTROL SYSTEM DEVELOPMENT PLAN	LUMP	LUMP			
1590	763509 CPM SCHEDULE UPDATES AND/OR REVISED UPDATES	24.000 EAMO				
1600	905001 SILT FENCE	6132.000 LF				
1610	905002 REINFORCED SILT FENCE	1595.000 LF				
1620	905004 INLET SEDIMENT CONTROL, DRAINAGE INLET	40.000 EACH				
1630	905006 INLET SEDIMENT CONTROL, CULVERT INLET	5.000 EACH				
1640	906002 DEWATERING BAG	1.000 EACH				
1650	906003 SUMP PIT	2.000 EACH				
1660	907510 COMPOST FILTER LOG	200.000 LF				
1670	908004 TOPSOIL, 6" DEPTH	22877.000 SY				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 18
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CONTRACT ID: T201112201.01 PROJECT(S): NHS-K008(13)

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1680	908010 TOPSOILING, 6" DEPTH	122415.000 SY				
1690	908014 PERMANENT GRASS SEEDING, DRY GROUND	132236.000 SY				
1700	908015 PERMANENT GRASS SEEDING, WET GROUND	11944.000 SY				
1710	908017 TEMPORARY GRASS SEEDING	264472.000 SY				
1720	908020 EROSION CONTROL BLANKET MULCH	34315.000 SY				
1730	908023 STABILIZED CONSTRUCTION ENTRANCE	380.000 TON				
	SECTION 0001 TOTAL					
	TOTAL BID					

BREAKOUT SHEET INSTRUCTIONS

~~BREAKOUT SHEET(S) MUST BE SUBMITTED WITH YOUR BID DOCUMENTS; OR WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING THE BID DUE DATE BY THE LOWEST APPARENT BIDDER.~~

~~BREAKOUT SHEETS ARE TO BE SUBMITTED TO DELDOT'S CONTRACT ADMINISTRATION AS SHOWN BELOW. BREAKOUT SHEETS CANNOT BE CHANGED AFTER AWARD. THE DEPARTMENT WILL REVIEW THE FIGURES SUBMITTED ON THE BREAKOUT SHEET(S) TO ENSURE THEY MATCH THE RESPECTIVE LUMP SUM BID AMOUNT(S). MATHEMATICALLY INCORRECT BREAKOUT SHEETS WILL BE RETURNED FOR IMMEDIATE CORRECTION.~~

~~BREAKOUT SHEETS MAY BE SUBMITTED:~~

~~VIA E-MAIL TO: DOT.ASK@STATE.DE.US
SUBJECT: **T201112201.01** Breakout Sheet~~

~~OR MAILED TO: DELDOT
CONTRACT ADMINISTRATION
PO BOX 778, DOVER, DE 19903~~

~~'BREAKOUT SHEET' AND THE PROJECT NUMBER
MUST APPEAR ON THE ENVELOPE.~~

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GENERAL NOTES

1. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2001 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2001, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.

EROSION POTENTIAL FOR THIS PROJECT	CONTRACTOR ESC SUPERVISOR REQUIREMENT
() INSIGNIFICANT	NONE
() MINOR	CONTRACTOR TRAINING PROGRAM, AS DEFINED IN SECTION 6.2 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
(x) MAJOR	CERTIFIED CONSTRUCTION REVIEWER (CCR), AS DEFINED IN SECTION 6.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.

3. ELECTRONIC PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR, INCLUDE:

()	NONE
(x)	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
(x)	ALL PLAN SHEETS, IN PDF FORMAT.
(x)	EXISTING DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
(x)	PROPOSED DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
()	DESIGN FILE, IN .DGN FILE FORMAT, CONTAINING ONLY THE PROPOSED 3D TRIANGLES OF THE PROPOSED DIGITAL TERRAIN MODEL (DTM).

NOTE: THE DOCUMENT ENTITLED "RELEASE FOR DELIVERY OF DOCUMENTS IN ELECTRONIC FORM TO A CONTRACTOR" MUST BE SIGNED BY ALL PARTIES PRIOR TO THE DELIVERY OF ANY ELECTRONIC PROJECT FILES.

4. PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE CONTRACTOR, INCLUDE:

(x)	CROSS SECTIONS
(x)	RIGHT-OF-WAY PLANS (WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR)

5. AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR REQUIREMENT FOR THIS PROJECT.

()	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
(x)	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR IS INCIDENTAL TO ITEM 743000.
()	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE ATSSA SUPERVISOR'S SOLE JOB SHALL BE SUPERVISION OF THE INSTALLATION, OPERATION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES FOR THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT SHALL NOT BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR SHALL BE PAID FOR UNDER ITEM 743031.

6. THE DISTURBED AREA FOR THIS PROJECT IS 83.46 ACRES.

7. THE SEDIMENT AND STORMWATER MANAGEMENT PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE SEDIMENT AND STORMWATER MANAGEMENT PLANS ARE VALID FOR A FIVE YEAR PERIOD, BEGINNING ON THE DATE THE STORMWATER ENGINEER SIGNED THE CONSTRUCTION TITLE SHEET. IF THE FINAL ACCEPTANCE OF THE PROJECT IS ANTICIPATED TO EXTEND BEYOND THE FIVE YEARS, THE CONTRACTOR WILL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS. THE STORMWATER ENGINEER WILL REVIEW THE CURRENT SEDIMENT AND STORMWATER MANAGEMENT PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFICATIONS.

PROJECT NOTES

SECTION 100

1. ANY DAMAGE TO ITEMS NOTED TO BE RELOCATED OR RESET BY THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER, SHALL BE REPAIRED AND/OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

SECTION 200

2. THE CONTRACTOR SHALL REMOVE AND RESET ALL MAILBOXES TO MAINTAIN MAIL SERVICE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL RELOCATE MAILBOXES AS REQUIRED BY THE PROPOSED GEOMETRICS AND AS DIRECTED BY THE ENGINEER. WHEN RELOCATING MAILBOXES IN CURBED SECTIONS, THE FACE OF THE MAILBOX SHALL BE FLUSH WITH THE BACK EDGE OF CURB. WHEN RELOCATING MAILBOXES IN OPEN SECTIONS, THE FACE OF THE MAILBOX SHALL SET BACK 8 INCHES FROM THE EDGE OF THE PAVED SHOULDER. THE BOTTOM OF THE MAILBOX SHALL BE SET 46 INCHES ABOVE THE ROADWAY SURFACE. MAILBOXES LOCATED AT DRIVEWAY ENTRANCES SHALL BE PLACED ON THE FAR SIDE OF THE DRIVEWAY IN THE DIRECTION OF TRAVEL. POSTS BEING RESET IN CONCRETE SIDEWALK SHALL BE PLACED IN AN APPROPRIATE SIZE PVC SLEEVE. COST FOR ALL WORK AND MATERIALS SHALL BE PAID UNDER ITEM 201000 - CLEARING AND GRUBBING.

3. THE ENGINEER MAY REQUIRE THE CONTRACTOR TO EXCAVATE TEST PITS ALONG PROPOSED DRAINAGE RUNS, AT POINTS OF POSSIBLE UTILITY CONFLICTS, TO DETERMINE IF A CONFLICT EXISTS. ANY CONFLICTS SHALL BE COORDINATED BY THE CONTRACTOR, WITH THE ENGINEER AND THE UTILITY COMPANY INVOLVED. THE ENGINEER SHALL ULTIMATELY DETERMINE THE SOLUTION TO THE UTILITY CONFLICT. TEST HOLES SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM 208000 - EXCAVATION AND BACKFILL FOR PIPE TRENCHES, BUT ONLY TO THE ACTUAL DEPTH EXCAVATED.

4. ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
 - REMOVAL OF R/W FENCE FROM STA 1196+50(RT) THRU 1206+79(RT) ON SR1(1029 LF)
 - REMOVAL OF 105' OF WHITE VINYL FENCING FROM RW FOR GRADING WORK NEAR STATION 1525+00 NE FRONT STREET
 - REMOVAL OF DRAINAGE INLET IN MEDIAN OF SR1(STATION 1209+10)
 - REMOVAL OF EXISTING RIPRAP IN DITCH AT STATIONS 54+75 RT, 55+50 RT, 57+75 RT
 - REMOVAL OF CLEARED ORGANIC DEBRIS PILES LOCATED ADJACENT TO PROPOSED RAMP C

5. ALL TREES LOCATED WITHIN THE LOC TO BE REMOVED UNLESS EXPLICITLY NOTED ON THE PLANS. REMOVAL SHALL BE INCIDENTAL TO ITEM 201000 - CLEARING AND GRUBBING.

6. ALL EXISTING DRAINAGE PIPE MARKED FOR REMOVAL OR ABANDONMENT SHALL BE INCIDENTAL TO SECTION 202000 - EXCAVATION AND EMBANKMENT. ALL PAYMENT FOR FLOWABLE FILL FOR ABANDONED PIPES SHALL BE INCIDENTAL TO SECTION 202000 - EXCAVATION AND EMBANKMENT.

SECTION 300

7. A. THE CONTRACTOR MAY ELECT TO USE ANY OF THE FOLLOWING MATERIALS TO MEET THE REQUIREMENTS OF ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B':
 a. CRUSHED STONE (PER STANDARD SPECIFICATION 821)
 b. CRUSHED CONCRETE (PER STANDARD SPECIFICATION 821)
 c. HOT-MIX MILLINGS (PER SPECIAL PROVISION 302514 MILLED HOT-MIX BASE COURSE)

THE CONTRACTOR WILL NOT BE ALLOWED TO MIX DIFFERENT MATERIALS (OR SIMILAR MATERIALS FROM DIFFERENT SOURCES) TO MEET THE REQUIREMENTS OF ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

ALL OF THE ABOVE LISTED MATERIALS ARE PERMITTED FOR USE ON THE JOB, PROVIDED THEY ARE SEPARATED INTO APPROVED AREAS. EACH AREA OF BASE COURSE MUST BE CONSTRUCTED USING MATERIALS FROM A SINGULAR SOURCE, FULL DEPTH, IN ORDER THAT PROPER TESTING MAY BE ACCOMPLISHED. THE CONTRACTOR AND ENGINEER SHALL AGREE ON THE LIMITS OF EACH SOURCE OF MATERIAL PRIOR TO PLACEMENT.

B. THE QUANTITY USED FOR BASE OF EACH OF THE ABOVE LISTED MATERIALS WILL BE THE CONTRACTOR'S CHOICE, WITH THE TOTAL BEING EQUAL TO THE ACTUAL QUANTITY USED UNDER ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

C. THE CONTRACTOR MAY ALSO ELECT TO RECYCLE MILLINGS FOR USE IN HOT-MIX AS PERMITTED BY THE STANDARD SPECIFICATIONS. THE CHOICE OF THE QUANTITY OF MILLINGS USED FOR THIS PURPOSE, OR FOR BASE COURSE, LIES WITH THE CONTRACTOR. ALL EXCESS MILLING MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR.

D. HOT-MIX MILLINGS MAY BE GENERATED FROM THE FOLLOWING SOURCES:
 a. MATERIAL MADE AVAILABLE WHEN MILLED ON THIS CONTRACT UNDER ITEM 760006.
 b. MATERIAL MILLED ON THIS CONTRACT AT THE CONTRACTOR'S CHOICE UNDER ITEM 202000.
 c. MILLED MATERIAL FURNISHED ON THE JOB FROM THE CONTRACTOR'S YARD OR OTHER OUTSIDE SOURCE.
 ALL MILLED MATERIALS SHALL MEET THE MATERIAL REQUIREMENTS OF ITEM 302514 - MILLED HOT-MIX BASE COURSE.

E. PAYMENT CLARIFICATION:

a. SHOULD THE CONTRACTOR ELECT TO MILL PORTIONS OF HOT-MIX SHOWN ON THE PLANS TO BE REMOVED UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT THE COST OF MILLING THIS HOT-MIX WILL BE PAID AS ITEM 202000 - EXCAVATION AND EMBANKMENT. THE MILLINGS GENERATED MAY BE RECYCLED INTO HOT-MIX, UTILIZED FOR BASE COURSE, OR DISPOSED OF TO AN APPROVED SITE. HAULING COSTS FOR DISPOSAL AND/OR RECYCLING ARE INCIDENTAL TO ITEM 202000 - EXCAVATION AND EMBANKMENT.

b. MILLINGS GENERATED UNDER ITEM 760502 - PAVEMENT MILLINGS, TAPER CUT MAY BE RECYCLED INTO HOT-MIX, UTILIZED FOR BASE COURSE OR DISPOSED OF BY THE CONTRACTOR TO AN APPROVED SITE. NO SEPARATE PAYMENT WILL BE MADE FOR TRANSPORTING MILLINGS ON SITE OR TO AN APPROVED DISPOSAL SITE.

c. SHOULD THE CONTRACTOR ELECT TO TEMPORARILY STOCKPILE MILLINGS ON THE JOB SITE FOR LATER USE, ALL COSTS FOR STOCKPILING AND SUBSEQUENT REHANDLING SHALL BE INCIDENTAL TO ITEM 202000 - EXCAVATION AND EMBANKMENT.

d. MILLINGS USED FOR BASE COURSE SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIAL PROVISION 302514 - MILLED HOT-MIX BASE COURSE. NO SEPARATE PAYMENT WILL BE MADE TO FURNISH MILLINGS FROM AN OUTSIDE SOURCE OR TRANSPORT MILLINGS WITHIN THE PROJECT LIMITS. MILLINGS USED FOR BASE COURSE WILL BE PAID FOR AT THE UNIT BID PRICE FOR ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

e. ALL COSTS TO UTILIZE MILLINGS IN RECYCLED HOT-MIX WILL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE HOT-MIX ITEM USING THE RECYCLED MATERIAL.

f. SPECIAL PROVISION 302514 - MILLED HOT-MIX BASE COURSE IS PROVIDED TO SPECIFY THE MEANS OF LAY DOWN AND COMPACTION AS WELL AS THE MATERIAL REQUIREMENTS FOR MILLINGS USED AS BASE COURSE. ALL COSTS TO BRING THE MILLINGS INTO COMPLIANCE WITH THE REQUIREMENTS OF ITEM - 302514 MILLED HOT-MIX BASE COURSE ARE INCIDENTAL TO ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'. NO PAYMENT WILL BE MADE FOR ITEM 302514 - MILLED HOT-MIX BASE COURSE. THE QUANTITY OF MILLINGS USED FOR BASE COURSE WILL BE PAID FOR UNDER ITEM 302007 - GRADED AGGREGATE BASE COURSE.

SECTION 400

8. THE PAVEMENT SECTION FOR WARM-MIX RESIDENTIAL DRIVEWAYS SHALL BE 2" HOT-MIX, TYPE 'C' OVER 8" GRADED AGGREGATE BASE COURSE, TYPE 'B', UNLESS OTHERWISE NOTED ON THE PLANS.

SECTION 600

9. THE DEPARTMENT AND THE CONTRACTOR SHALL INSPECT ALL EXISTING PIPES AND DRAINAGE STRUCTURES TO BE USED IN THE FINAL DRAINAGE SYSTEM AND AGREE ON THE CONDITION PRIOR TO THE START OF CONSTRUCTION. EXISTING PIPES AND DRAINAGE STRUCTURES DAMAGED DUE TO CONTRACTOR OPERATIONS SHALL BE REPAIRED OR REPLACED IN-KIND AT THE CONTRACTOR'S EXPENSE. THE DEPARTMENT WILL VIDEO INSPECT NEW PIPE RUNS TO CONFIRM CONDITION PRIOR TO ACCEPTANCE. PIPE CLEANING PRIOR TO VIDEO INSPECTION AND MAINTENANCE OF TRAFFIC DURING THE VIDEO INSPECTION ARE THE RESPONSIBILITY OF THE CONTRACTOR AND INCIDENTAL TO THE PIPE ITEM THAT IS BEING VIDEO INSPECTED.

SECTION 700

10. IN AREAS WHERE PROPOSED CURB MEETS EXISTING CURB AND THE TWO CURB TYPES ARE NOT SIMILAR, THE PROPOSED CURB SHALL BE TRANSITIONED IN 10 LINEAR FEET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK, INCLUDING SAW CUTTING EXISTING CURB SHALL BE INCIDENTAL TO THE PROPOSED CURB ITEM.

11. WHERE PROPOSED CONCRETE SIDEWALK IS CONSTRUCTED TO MEET EXISTING SIDEWALK, THE EXISTING SIDEWALK SHALL BE SAWCUT AT THE TIE-IN POINT OR MEET THE NEAREST EXISTING SIDEWALK JOINT. ALL SAW CUTTING SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER AND SHALL BE PAID FOR UNDER ITEM 762002 - SAWCUTTING, CONCRETE, FULL DEPTH.

11. PORTLAND CEMENT CONCRETE CHANNELIZING ISLANDS THAT ARE LESS THAN 75 SQ FT MAY BE POURED MONOLITHICALLY, OR AS DIRECTED BY THE ENGINEER.

12. STATION AND ELEVATION DATA GIVEN FOR DRAINAGE STRUCTURES ARE TO BE APPLIED TO THE CENTER OF THE GRATE FOR INLETS, AND TO THE CENTER OF THE STRUCTURE FOR JUNCTION BOXES AND MANHOLES.

13. DRAINAGE INLET GRATES ADJACENT TO THE ROAD, WITHIN THE PROJECT LIMITS, WHICH ARE NOT TYPE 1 SHALL BE REPLACED. THE ACTUAL LOCATIONS, THE NEED FOR ANY GRATE MODIFICATIONS OR FOR NEW FRAMES SHALL BE DETERMINED BY THE ENGINEER. ALL REPLACED GRATES/FRAMES SHALL BE DELIVERED TO THE NEAREST DISTRICT MAINTENANCE YARD WITH THE COST OF DELIVERY INCIDENTAL TO ITEM 708060 - REPLACING CATCH BASIN GRATES. FINAL PAYMENT FOR REPLACED GRATES/FRAMES SHALL NOT BE MADE UNTIL RECEIPT OF DELIVERED MATERIALS IS PRODUCED, SIGNED BY A DELDOT MAINTENANCE YARD SUPERVISOR.

14. ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT.

SECTION 900

15. THIS PROJECT IS COVERED UNDER AN NPDES GENERAL PERMIT FOR CONSTRUCTION. UNDER THE GENERAL PERMIT, COMPLIANCE WITH DELDOT'S APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS WILL CONSTITUTE COMPLIANCE WITH THE NPDES INDUSTRIAL PERMITTING REQUIREMENTS FOR THIS CONSTRUCTION PROJECT. A COPY OF THE NPDES GENERAL PERMIT AND NOI IS KEPT ON FILE IN EACH OF THE CONSTRUCTION OFFICES AND THE DEPARTMENT'S TEAM SUPPORT SECTION. A COPY OF THE GENERAL PERMIT OR THE NOI CAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.

MISCELLANEOUS

16. THE CONTRACTOR SHALL CONTACT MICHAEL ELLER, THE CHIEF OF SCHEDULING FOR DART FIRST STATE, 14 DAYS PRIOR TO THE START OF CONSTRUCTION AT 302-576-6061.

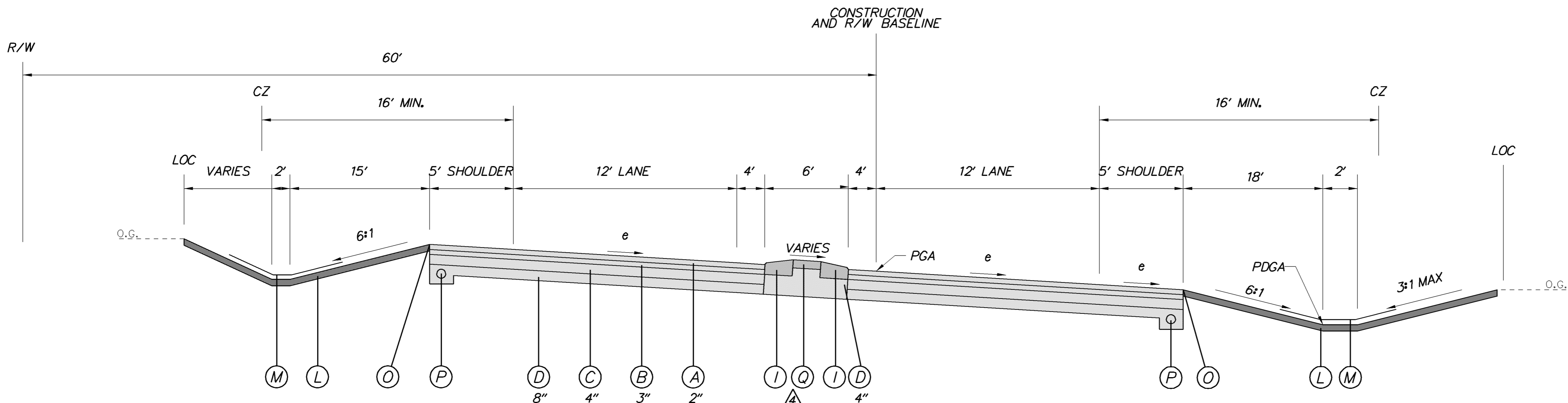
17. CROSS SECTIONS USED IN THE PREPARATION OF THIS CONTRACT ARE AVAILABLE FROM THE DEPARTMENT TO LOW BIDDER AFTER CONTRACT HAS BEEN AWARDED.

18. RIGHT-OF-WAY PLANS FOR RIGHT-OF-WAY OR EASEMENT STAKEOUT PURPOSES ARE AVAILABLE FROM THE DEPARTMENT.

LEGEND

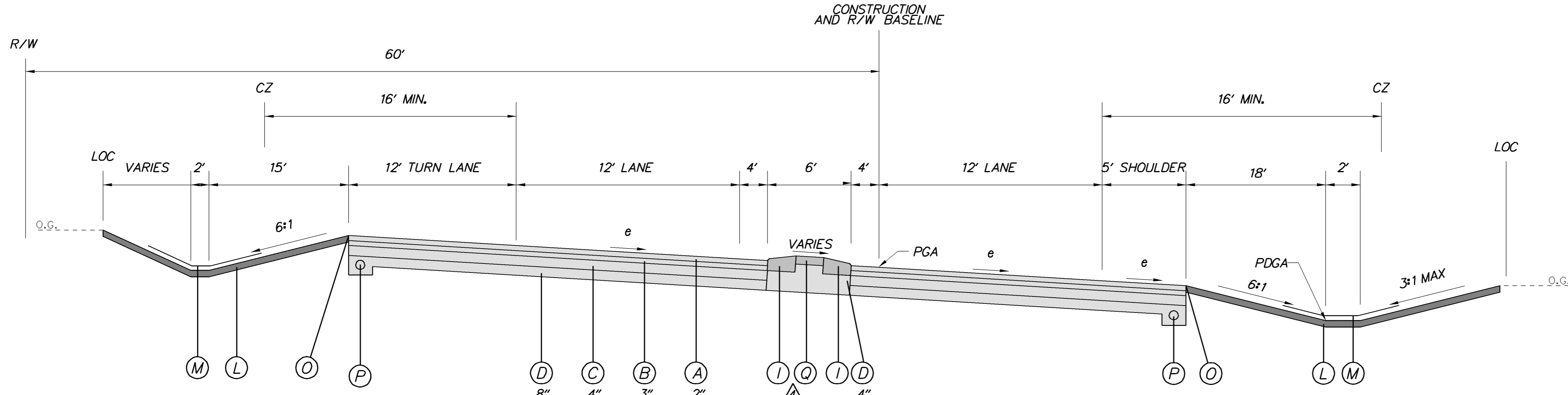
- (A) ITEM 401801 - BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)
- (B) ITEM 401810 - BITUMINOUS CONCRETE, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (C) ITEM 401819 - BITUMINOUS CONCRETE, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (D) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (E) ITEM 401830 - BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 70-22 (NON-CARBONATE STONE)
- (G) ITEM 760006 - PAVEMENT - MILLING, HOT-MIX, 2" DEPTH
- (H) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
- (I) ITEM 701011 - PORTLAND CEMENT CONCRETE CURB, TYPE 2
- (J) ITEM 701019 - INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 3-4
- (K) ITEM 701022 - INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 3-8
- (L) ITEM 908004 - TOPSOIL 6" DEPTH
- (M) ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
- (N) ITEM 908020 - EROSION CONTROL BLANKET
- (O) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31
- (P) ITEM 401752 - SAFETY EDGE FOR ROADWAY PAVEMENT
- (Q) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6"
- (R) ITEM 705005 - P.C.C. SIDEWALK, 8"

WHEN VERTICAL CURB IS PRESENT, A 1.5' HORIZONTAL OFFSET MUST BE MAINTAINED FROM THE FACE OF CURB



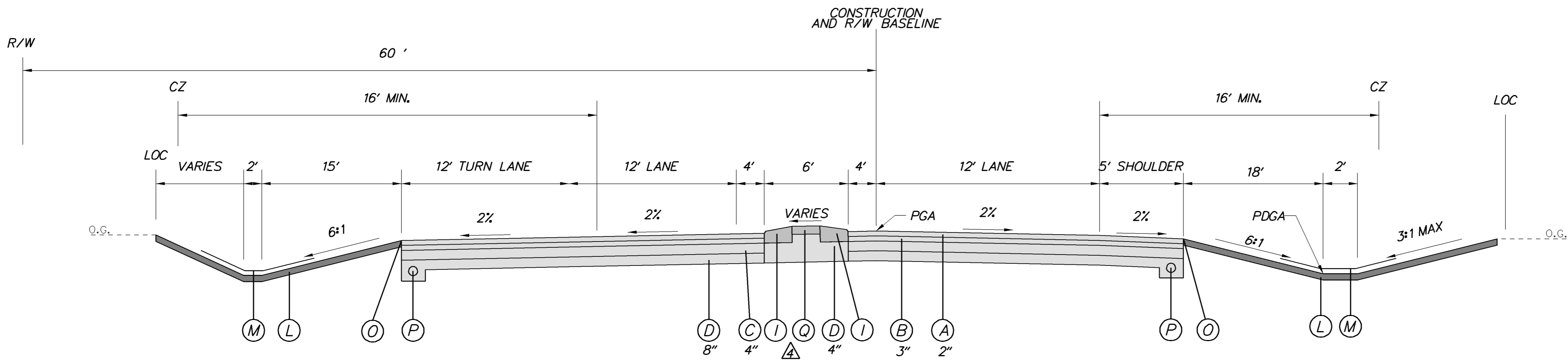
RAMP A / B SUPERELEVATION SECTION

STATION 293+18 TO 298+08
e_{max} = 6.0%



RAMP A / B SUPERELEVATION SECTION WITH RIGHT TURN LANE

STATION 291+62 TO STATION 293+18
e_{max} = 6.0%



RAMP A / B NORMAL SECTION WITH RIGHT TURN LANE

STATION 290+34 TO STATION 291+62

MATERIAL	LIFT THICKNESS	
	MINIMUM	MAXIMUM
HOT-MIX, TYPE 'C'	1.25"	2"
HOT-MIX, TYPE 'B'	2.25"	3"
BITUMINOUS CONCRETE BASE COURSE	3"	6"
GRADED AGGREGATE BASE COURSE	3"	8"

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	
(R) ADDED 8" SIDEWALK ITEM (Q)	

NOT TO SCALE

SR1, NE FRONT STREET GRADE SEPARATED INTERSECTION

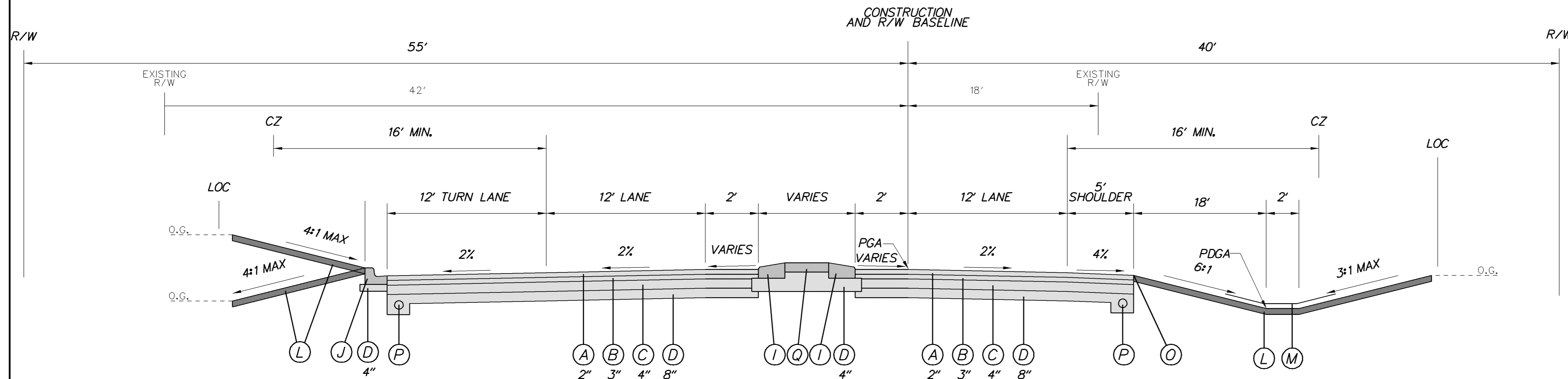
CONTRACT T20112201	BRIDGE NO.
COUNTY KENT	DESIGNED BY: GAP
	CHECKED BY: TMB

TYPICAL SECTIONS	SHEET NO. 9
	TOTAL SHTS. 236

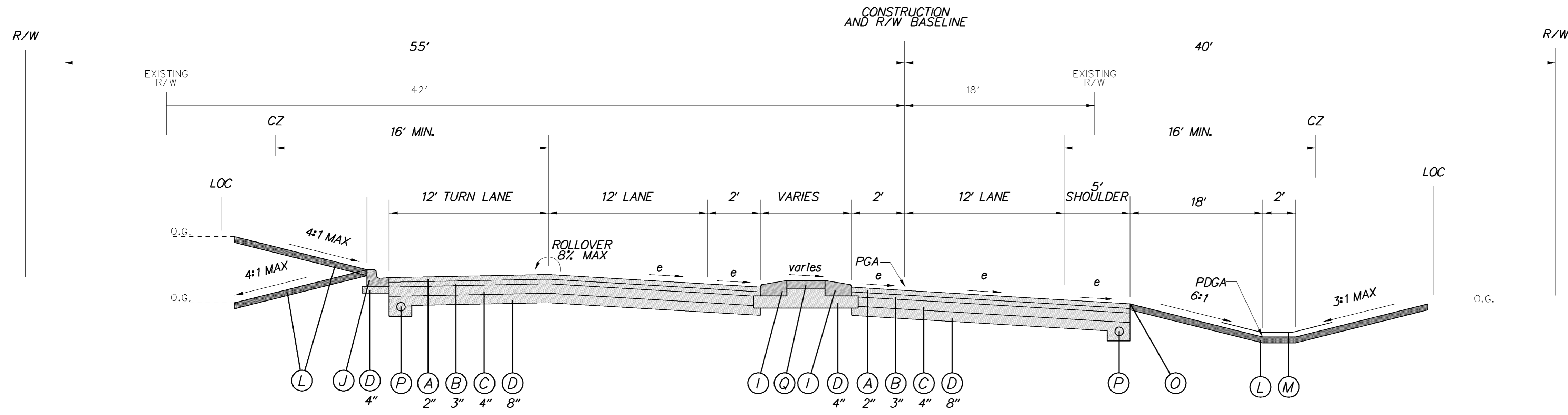
LEGEND

- (A) ITEM 401801 - BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)
- (B) ITEM 401810 - BITUMINOUS CONCRETE, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
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- (R) ITEM 705005 - P.C.C. SIDEWALK, 8"

WHEN VERTICAL CURB IS PRESENT, A 1.5' HORIZONTAL OFFSET MUST BE MAINTAINED FROM THE FACE OF CURB



RAMP C NORMAL SECTION WITH CURB MEDIAN
STATION 46+02 TO STATION 48+47



RAMP C SUPERELEVATION SECTION WITH CURB MEDIAN
STATION 45+07 TO STATION 46+02
e_{max} = 6.0%

MATERIAL	LIFT THICKNESS	
	MINIMUM	MAXIMUM
HOT-MIX, TYPE 'C'	1.25"	2"
HOT-MIX, TYPE 'B'	2.25"	3"
BITUMINOUS CONCRETE BASE COURSE	3"	6"
GRADED AGGREGATE BASE COURSE	3"	8"

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ADDENDUMS / REVISIONS	
(R) ADDED 8" SIDEWALK ITEM (Q)	

NOT TO SCALE

**SR1, NE FRONT STREET
GRADE SEPARATED
INTERSECTION**

CONTRACT T20112201	BRIDGE NO.
COUNTY KENT	DESIGNED BY: GAP
	CHECKED BY: TMB

TYPICAL SECTIONS

SHEET NO. 11
TOTAL SHTS. 236

BRIDGE PROJECT NOTES

1. LOCATION
PROPOSED NE FRONT STREET BRIDGE 2-409B OVER SRI, KENT COUNTY, DELAWARE.
2. DESIGN CRITERIA
2014 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7th EDITION, U.S. CUSTOMARY UNITS, WITH 2016 AND 2017 INTERIMS. 2016 DELDOT BRIDGE DESIGN MANUAL.
3. LOADING
- UNIT WEIGHTS OF MATERIALS SHALL BE IN ACCORDANCE WITH THE 2016 DELDOT BRIDGE DESIGN MANUAL.
- DEAD LOADS INCLUDES 25 PSF FOR FUTURE WEARING SURFACE AND 15 PSF FOR S.I.P. FORMS (INCLUDES CONCRETE IN FORM CORRUGATIONS).
- LIVE LOADS INCLUDES HL-93 LOADING. SEISMIC PERFORMANCE ZONE 1.
- FATIGUE DESIGN IS BASED ON THE FOLLOWING ONE DIRECTIONAL TRAFFIC VOLUMES: ADTT = 6079 YEAR = 2035
- SOUTH BARRIER HAS BEEN DESIGNED FOR TEST LEVEL FOUR (TL-4) AND NORTH BARRIER HAS BEEN DESIGNED FOR TEST LEVEL THREE (TL-3).

LRFR LOAD RATINGS IN ACCORDANCE WITH AASHTO MANUAL FOR BRIDGE EVALUATION, 2nd EDITION. NOTE THAT THE DECK ACTS COMPOSITELY WITH THE BEAMS.
4. PORTLAND CEMENT CONCRETE
USE PORTLAND CEMENT CONCRETE FOR CAST-IN-PLACE ELEMENTS AS FOLLOWS:
(f'c = 28-DAY COMPRESSIVE STRENGTH)
CLASS A - PARAPETS, ABUTMENTS, PIER ABOVE FOOTING, MOMENT SLABS, AND WINGWALLS (f'c = 4.5 KSI)
CLASS B - PIER FOOTING (f'c = 3.0 KSI)
CLASS D - CONCRETE DECK, APPROACH SLAB, AND SLEEPER SLAB (f'c = 4.5 KSI)
MIX REQUIREMENTS SHALL CONFORM TO SECTION 812 OF THE STANDARD SPECIFICATIONS. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE ANY APPROVED CONCRETE ADDITIVES OR HEATING TECHNIQUES TO MAINTAIN THE PROPER TEMPERATURE FOR ANY CONCRETE POURED DURING COLD WEATHER. PAYMENT SHALL BE INCIDENTAL TO THE RESPECTIVE CONCRETE BID ITEMS. DO NOT SLIP-FORM BARRIERS WITHOUT DEPARTMENT'S APPROVAL.
5. MISCELLANEOUS PAYMENT NOTES
A. ALL DIAPHRAGM CONCRETE IS INCLUDED IN THE QUANTITY FOR ITEM 602013 - PCC MASONRY, SUPERSTRUCTURE, CLASS D. STYROFOAM FILLER USED IN THE PIER AND END DIAPHRAGMS IS INCIDENTAL TO ITEM 602013.
B. ANY WATERSTOPS SHALL BE INCIDENTAL TO THE APPROPRIATE CONCRETE ITEM.
C. STRUCTURAL EXCAVATION AND BACKFILL AROUND THE PIER FOOTING SHALL BE PAID UNDER ITEMS 207000 AND 210000 RESPECTIVELY.
D. ALL BACKFILL AROUND THE ABUTMENTS (EACH CONSTRUCTED ABOVE EXISTING GRADE) SHALL BE PAID UNDER ITEM 209003 - BORROW, TYPE C. THE QUANTITY INCLUDED WITH THE BRIDGE QUANTITIES IS THE FILL AROUND EACH ABUTMENT FROM THE END OF THE APPROACH SLAB TO THE TOE OF SLOPE IN FRONT OF THE ABUTMENT. THIS QUANTITY DOES NOT INCLUDE FILL WITHIN THE MSE WALL BACKFILL LIMITS.
E. WINGWALLS AND MOMENT SLABS ARE PAID UNDER ITEM 602001 - P.C.C. MASONRY, CLASS A.
F. SLEEPER SLABS ARE PAID UNDER ITEM 602018 - P.C.C. MASONRY, CLASS D.
6. BEARINGS
ALL ELASTOMERIC BEARINGS SHALL BE STEEL LAMINATED ELASTOMERIC DESIGNED AS PER AASHTO 14.7.5, METHOD B, AND SHALL CONFORM TO SPECIAL PROVISION 605581 - ELASTOMERIC BEARING PADS. PAYMENT SHALL BE INCIDENTAL TO ITEM 605002 - STEEL STRUCTURES.
7. BAR REINFORCEMENT
REINFORCING STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60. REINFORCING STEEL SHALL HAVE A 3" CLEAR COVER IF CAST AGAINST EARTH AND A 2" CLEAR COVER ELSEWHERE, UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL REINFORCING STEEL SHALL BE PROTECTED WITH FUSION BONDED EPOXY. EPOXY COATED REINFORCING STEEL SHALL CONFORM TO AASHTO M284 (ASTM D3963). ANY FIELD CUTTING OR FIELD BENDING MUST BE APPROVED BY THE ENGINEER. PAYMENT SHALL BE INCIDENTAL TO ITEM 604000-BAR REINFORCEMENT, EPOXY COATED. WELDING OF REINFORCEMENT DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED UNLESS SPECIFIED.
8. CONSTRUCTION JOINTS
KEYED CONSTRUCTION JOINTS SHALL BE 2" X 4" OR AS NOTED. ALL EXPOSED CONSTRUCTION JOINTS SHALL HAVE A 3/4" V-NOTCH.
9. DECK SLAB
THE DECK SLAB THICKNESS INCLUDES 1/2" INTEGRAL WEARING SURFACE.
10. SUBSTRUCTURE PROTECTIVE COATING LIMITS
A. ITEM 602520 - EPOXY PROTECTIVE COATING FOR CONCRETE SHALL BE APPLIED TO THE TOP OF ABUTMENT AND PIER, BEARING PEDESTALS, AND THE VERTICAL SURFACE OF THE BACKWALL.
B. ITEM 602646 - SILICONE ACRYLIC CONCRETE SEALER SHALL BE APPLIED TO ALL EXPOSED CONCRETE ABUTMENT, PIER, AND WINGWALL SURFACES THAT DO NOT REQUIRE AN EPOXY SEALER. THE COLOR SHALL BE INSGNIA WHITE (NO. 37925) OF FEDERAL STANDARD 595C.
11. CONCRETE PLACEMENT
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING NO FALLING MATERIAL OR EQUIPMENT INTERFERES WITH THE TRAVELLING PUBLIC. SIP DECK FORMS SHALL BE MORTAR TIGHT PER SECTION 602 OF THE STANDARD SPECIFICATIONS. IF ADDITIONAL PROTECTION IS DEEMED NECESSARY BY THE ENGINEER, IT MAY BE PLACED BELOW THE SIP FORMS. NO PAYMENT WILL BE MADE FOR ADDITIONAL PROTECTION. A PLAN SHOWING THE CONTRACTOR'S PROTECTION METHOD SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
12. BRIDGE EMBANKMENTS SHALL SIT UNDISTURBED FOR A MINIMUM 30 DAY PERIOD AFTER CONSTRUCTED TO FULL HEIGHT, OR AS DIRECTED BY THE ENGINEER. FULL HEIGHT SHALL BE TO THE BOTTOM OF ABUTMENT FOOTER ELEVATION. ALSO, SETTLEMENT SHALL NOT EXCEED 0.3" PER WEEK BEFORE RESUMING WORK ON THE EMBANKMENT, OR AS DIRECTED BY THE ENGINEER.
13. ROADWAY CLEARANCES
A MINIMUM OF 16'-6" VERTICAL CLEARANCE SHALL BE MAINTAINED ABOVE ALL ROADWAYS.

14. STRUCTURAL STEEL
PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M270, GRADE 50W AND 70W (ASTM A709, GRADE 50W AND 70W) DESIGNATION, EXCEPT WHEN NOTED OTHERWISE. THE ADDITIONAL REQUIREMENTS FOR CHARPY V-NOTCH TESTING (DENOTED AS 'CVN ON PLANS) OF AASHTO M270 FOR PRIMARY LOAD CARRYING MEMBERS SHALL BE INCLUDED. SUPPLEMENTAL NOTCH TOUGHNESS REQUIREMENTS ARE MANDATORY FOR:
-TOP AND BOTTOM GIRDER FLANGES AS SHOWN ON PLANS
-GIRDER WEB PLATES AS SHOWN ON PLANS
-GIRDER FIELD SPLICE PLATES
-ALL DIAPHRAGM MEMBERS AND DIAPHRAGM CONNECTION PLATES

ALL FASTENERS ARE 3/8" DIAMETER ASTM A325 HIGH STRENGTH BOLTS, TYPE 1, UNLESS OTHERWISE NOTED. REAM SUBDRILLED or SUBPUNCHED HOLES FOR FIELD SPLICES IN THE FABRICATION SHOP.

IF GIRDERS CAN BE FABRICATED IN LENGTHS LONGER THAN THE SECTIONS SHOWN ON THE PLANS BY ELIMINATING FIELD SPLICES, FIELD SPLICES MAY BE OMITTED AT THE REQUEST OF THIS CONTRACTOR. THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR SECURING A HAULING PERMIT. APPROVAL FOR ELIMINATION OF A FIELD SPLICE AT THE SHOP DRAWING STAGE DOES NOT OBLIGATE THE DEPARTMENT TO ISSUE A HAULING PERMIT.

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH AASHTO/AWS D1.5M/D1.5:2015 BRIDGE WELDING CODE, AND CONTRACT DOCUMENTS. MAKE TACK WELDS WITH THE SAME TYPE OF ELECTRODE AND INCORPORATE IN THE FINAL WELD. NO OTHER TACK WELDING WILL BE PERMITTED.

DO NOT MAKE WELDS BY MANUAL SHIELDED METAL ARC PROCESS FOR PRIMARY GIRDER WELDS SUCH AS FLANGE TO WEB WELDS OR FOR SHOP SPLICES OF WEB AND FLANGES.

DO NOT USE FORM SUPPORT SYSTEMS THAT WILL CAUSE UNACCEPTABLE OVERSTRESS OR DEFORMATION TO PERMANENT BRIDGE MEMBERS.

SHOP ASSEMBLE THE ENTIRE STEEL SUPERSTRUCTURE FOLLOWING THE SAME ERECTION PROCEDURES AND SUPPORT CONDITIONS TO ENSURE THE PROPER FIT FOR ALL STRUCTURAL STEEL COMPONENTS PRIOR TO REAMING OF BOLT HOLES FOR SPLICES AND DIAPHRAGM CONNECTION PLATES.

DO NOT WELD PERMANENT METAL DECK FORMS OR OTHER ATTACHMENTS TO GIRDER TOP FLANGES IN TENSION ZONES. TENSION ZONES OF TOP FLANGE ARE DESIGNATED ON THE PLANS. THREADED STUDS FOR THE SUPPORT OF THE DECK OVERHANG FORMING BRACKET ARE PERMITTED PROVIDED THAT THE THREADED STUD IS ATTACHED WITH THE SAME WELDING PROCESSING AS THE SHEAR STUDS.

VERTICALLY ADJUST STAY-IN-PLACE FORMS TO ATTAIN FINISHED LINES AND GRADES REQUIRED ON THE PLANS.

USE OVERSIZED HOLES ON DIAPHRAGM CONNECTORS. ALL BOLTS ON DIAPHRAGMS MUST BE FINGER TIGHT AT ERECTION. BOLTS ARE TO BE TORQUED BEFORE CONCRETE DECK IS POURED.

SET ANCHOR BOLTS TO TEMPLATE OR IN PRE-FORMED HOLES. DO NOT DRILL UNLESS SPECIFICALLY INDICATED ON PLANS. FILL THE PRE-FORMED HOLES WITH NON-SHRINK GROUT.

STABILITY OF PARTIAL GIRDERS AND COMPLETED GIRDERS IS TO BE MAINTAINED BY THE CONTRACTOR DURING ERECTION UNTIL ALL GIRDERS AND DIAPHRAGMS ARE IN-PLACE AND ALL BOLTS ARE PROPERLY INSTALLED. ERECTION LOADS INCLUDING SELF-WEIGHT OF THE STEEL MEMBERS, WIND LOADING AND CONSTRUCTION LIVE LOAD EFFECTS ARE TO BE EVALUATED BY THE CONTRACTOR FOR STABILITY, STRESSES AND DEFLECTIONS ON THE STEEL MEMBERS DURING ANY STAGE OF ERECTION.

AN ALTERNATE SLAB PLACEMENT SEQUENCE MAY BE PERMITTED AT THE REQUEST OF THE CONTRACTOR. SUBMIT FOR REVIEW AND APPROVAL TO THE DEPARTMENT A REVISED SLAB PLACEMENT SEQUENCE WITH SUPPORT CALCULATIONS AND COMPUTER STRESS ANALYSIS. SATISFY THE REQUIREMENTS OF THE ORIGINAL SLAB PLACEMENT SEQUENCE. OBTAIN WRITTEN APPROVAL PRIOR TO THE USE OF THE REVISED SLAB PLACEMENT SEQUENCE AND/OR CAMBER VALUES. NO COMPENSATION WILL BE ALLOWED FOR THE DEVELOPMENT AND APPROVAL OF THE REVISED SLAB PLACEMENT SEQUENCE AND CAMBER VALUES. THE DEPARTMENT WILL BE THE SOLE JUDGE OF THE ACCEPTABILITY OF THE REVISED SLAB PLACEMENT SEQUENCE AND CAMBER VALUES.

BLAST CLEAN THE FLAYING SURFACES OF SPLICES AND CONNECTIONS THAT REMAIN UNASSEMBLED FOR A PERIOD OF 12 MONTHS OR MORE FOLLOWING THE INITIAL CLEANING.

15. BRIDGE SAFETY FENCE
ALL POSTS, BRACES, FITTINGS, CHAIN LINK FENCING, AND HARDWARE SHALL BE PVC COATED. NUTS, BOLTS, AND WASHERS SHALL ALSO BE PVC COATED AND TOUCHED UP AFTER INSTALLATION. PRECOATED LONGITUDINAL RAILS, IF CUT, SHALL HAVE THE CUT END COATED WITH PVC TOUCH UP MATERIAL SUPPLIED BY THE MANUFACTURER PRIOR TO ERECTION. PVC COLOR FOR ALL ELEMENTS OF FENCE SHALL BE BLACK UNLESS OTHERWISE NOTED. PAYMENT FOR PVC COATING SHALL BE INCIDENTAL TO ITEM 727507 - BRIDGE SAFETY FENCE.
16. FORM LINER
THE TYPE OF FORM LINED PATTERN ON THE PARAPET SHALL BE VALLEY FORGE FIELDSTONE. ALL EXPOSED FORM LINED SURFACES SHALL BE PAINTED USING MULTI-COLORED PAINTS. THE PROPOSED MULTI-COLORED PAINTS MUST BE APPROVED BY THE ENGINEER AND INCLUDED IN SAMPLES DESCRIBED UNDER MATERIALS SECTION OF SPECIAL PROVISION 602549. PAYMENT INCIDENTAL TO ITEM #602549 - FORM LINERS.
17. S.I.P. FORMS
IN ADDITION TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, CALCULATIONS AND DRAWINGS FOR THE S.I.P. FORMS MUST BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF DELAWARE AND SUBMITTED FOR APPROVAL. PAYMENT SHALL BE INCIDENTAL TO ITEM #602013 - PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D.

INDEX OF SHEETS

SHEET NO.	DRAWING NO.	TITLE
59	PN-01	BRIDGE PROJECT NOTES
60	PN-02	BRIDGE QUANTITIES AND LOAD RATINGS
61	PE-01	BRIDGE PLAN AND ELEVATION
62	TS-01	TYPICAL BRIDGE SECTION AND PROFILE
63	PL-01	PILE LAYOUT PLAN - ABUTMENTS A AND B
64	PL-02	PILE LAYOUT PLAN - PIER
65	PL-03	PILE DETAILS
66	WA-01	MSE WALL LAYOUT PLAN
67	WA-02	MSE WALL ELEVATIONS AT ABUTMENTS A AND B
68	AB-01	ABUTMENT A - PLAN AND ELEVATION
69	AB-02	ABUTMENT B - PLAN AND ELEVATION
70	AB-03	ABUTMENT A AND B REINFORCEMENT DETAILS
71	AB-04	ABUTMENT AND MSE WALL SECTIONS
72	AB-05	ABUTMENT AND END DIAPHRAGM DETAILS
73, 74	WW-01, WW-02	WINGWALL REINFORCEMENT DETAILS
75	PR-01	PIER PLAN, SECTION AND ELEVATION
76	PR-02	PIER REINFORCEMENT DETAILS
77	FR-01	FRAMING PLAN AND BEARING DETAILS
78	BM-01	GIRDER ELEVATION
79	BM-02	CROSS FRAME, STIFFENER AND CONNECTION PLATE DETAILS
80	BM-03	SPLICE AND SUPERSTRUCTURE DETAILS
81	CT-01	CAMBER DETAILS
82	DK-01	DECK SLAB DETAILS
83	FD-01	FINISHED DECK ELEVATIONS
84	EX-01	EXPANSION JOINT DETAILS
85 - 87	AS-01 - AS-03	APPROACH SLAB AND SLEEPER SLAB DETAILS
88	MS-01	MOMENT SLAB DETAILS
89, 90	PA-01, PA-02	PARAPET DETAILS
91	BR-01	REINFORCING BAR SUMMARY
92 - 95	BO-01-BO-04	SOIL BORING LOGS

LAST REVISED: 03/27/2016
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ADDENDUMS / REVISIONS	
4	CONCRETE SEALER CHANGE

**SRI, NE FRONT STREET
GRADE SEPARATED
INTERSECTION**

CONTRACT	BRIDGE NO.	2-409B
T20112201	DESIGNED BY:	KRL, CBB
COUNTY	CHECKED BY:	JAT
KENT		

BRIDGE PROJECT NOTES

PN-01
SHEET NO.
59
TOTAL SHTS.
236

BRIDGE QUANTITIES			
ITEM NUMBER	ITEM TITLE	UNIT	QUANTITY
207000	EXCAVATION AND BACKFILL FOR STRUCTURES	CY	275
209003	BORROW, TYPE C	CY	14,060
210000	FURNISHING BORROW TYPE C FOR PIPE, UTILITY TRENCH, AND STRUCTURE BACKFILL	CY	160
302007	GRADED AGGREGATE BASE COURSE, TYPE B	CY	185
602001	PCC MASONRY, CLASS A	CY	127
602006	PCC MASONRY, PIER FOOTING, CLASS B	CY	105
602007	PCC MASONRY, PIER ABOVE FOOTING, CLASS A	CY	62
602013	PCC MASONRY, SUPERSTRUCTURE, CLASS D	CY	410
602014	PCC MASONRY, APPROACH SLAB, CLASS D	CY	120
602015	PCC MASONRY, ABUTMENT ABOVE FOOTING, CLASS A	CY	66
602017	PCC MASONRY, PARAPET, CLASS A	CY	100
602018	PCC MASONRY, CLASS D	CY	21
602520	EPOXY PROTECTIVE COATING FOR CONCRETE	SY	124
602549	FORM LINERS	SF	1,739
602553	MECHANICALLY STABILIZED EARTH WALLS	SF	7,685
602646	SILICONE ACRYLIC CONCRETE SEALER	SF	9,770
604000	BAR REINFORCEMENT, EPOXY COATED	LB	200,750
605002	STEEL STRUCTURES	LS	1
605512	PREFABRICATED EXPANSION JOINT SYSTEM, 4"	LF	108
608000	COARSE AGGREGATE FOR FOUNDATION STABILIZATION	TON	150
618081	FURNISH PRECAST PRESTRESSED CONCRETE PILES, 14" X 14"	LF	2,145
618082	FURNISH PRECAST PRESTRESSED CONCRETE PILES, 16" X 16"	LF	1,240
618091	FURNISH PRECAST PRESTRESSED CONCRETE TEST PILES, 14" X 14"	LF	210
618092	FURNISH PRECAST PRESTRESSED CONCRETE TEST PILES, 16" X 16"	LF	248
619061	INSTALL PRECAST PRESTRESSED CONCRETE PILES, 14" X 14"	LF	2,145
619062	INSTALL PRECAST PRESTRESSED CONCRETE PILES, 16" X 16"	LF	1,240
619067	INSTALL PRECAST PRESTRESSED CONCRETE TEST PILES, 14" X 14"	LF	210
619068	INSTALL PRECAST PRESTRESSED CONCRETE TEST PILES, 16" X 16"	LF	248
619519	DYNAMIC PILE TESTING BY CONTRACTOR	EACH	7
712020	RIPRAP, R-4	TON	720
713003	GEOTEXTILES, RIPRAP	SY	1,460
725002	GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 1	EACH	2
725003	GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 2	EACH	2
727507	BRIDGE SAFETY FENCE	LF	470
745605	FURNISH AND INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (ON STRUCTURE)	LF	321
745609	FURNISH AND INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (ON STRUCTURE)	LF	321

132

15,607

LOAD RATING SUMMARY					
DESIGN VEHICLE	RATING FACTOR	RATING WEIGHT (TON)	CONTROLLING MEMBER	CONTROLLING POINT	LOAD EFFECT
HL-93 TRUCK (INVENTORY)	1.22	43.81	EXTERIOR BEAM 6	110	FLEXURE
HL-93 TANDEM (INVENTORY)	1.01	25.14	EXTERIOR BEAM 6	110	FLEXURE
HL-93 TRUCK TRAIN (INVENTORY)	1.29	46.59	EXTERIOR BEAM 6	110	FLEXURE
HS-20 (INVENTORY)	1.85	66.25	EXTERIOR BEAM 6	110	FLEXURE
HL-93 TRUCK (OPERATING)	1.58	56.80	EXTERIOR BEAM 6	110	FLEXURE
HL-93 TANDEM (OPERATING)	1.30	32.59	EXTERIOR BEAM 6	110	FLEXURE
HL-93 TRUCK TRAIN (OPERATING)	1.68	60.39	EXTERIOR BEAM 6	110	FLEXURE
HS-20 (OPERATING)	2.40	86.23	EXTERIOR BEAM 6	110	FLEXURE
DE S220 & LEGAL-LANE (LEGAL)	2.86	57.14	EXTERIOR BEAM 6	110	FLEXURE
DE S335 & LEGAL-LANE (LEGAL)	1.86	65.24	EXTERIOR BEAM 6	200	FLEXURE
DE S437 & LEGAL-LANE (LEGAL)	1.78	65.35	EXTERIOR BEAM 6	200	FLEXURE
DE T330 & LEGAL-LANE (LEGAL)	2.58	77.29	EXTERIOR BEAM 6	200	FLEXURE
DE T435 & LEGAL-LANE (LEGAL)	2.36	82.64	EXTERIOR BEAM 6	200	FLEXURE
DE T540 & LEGAL-LANE (LEGAL)	2.22	88.73	EXTERIOR BEAM 6	200	FLEXURE

NOTE: LOAD RATING INCLUDES FUTURE WEARING SURFACE AS NOTED IN THE PLANS.

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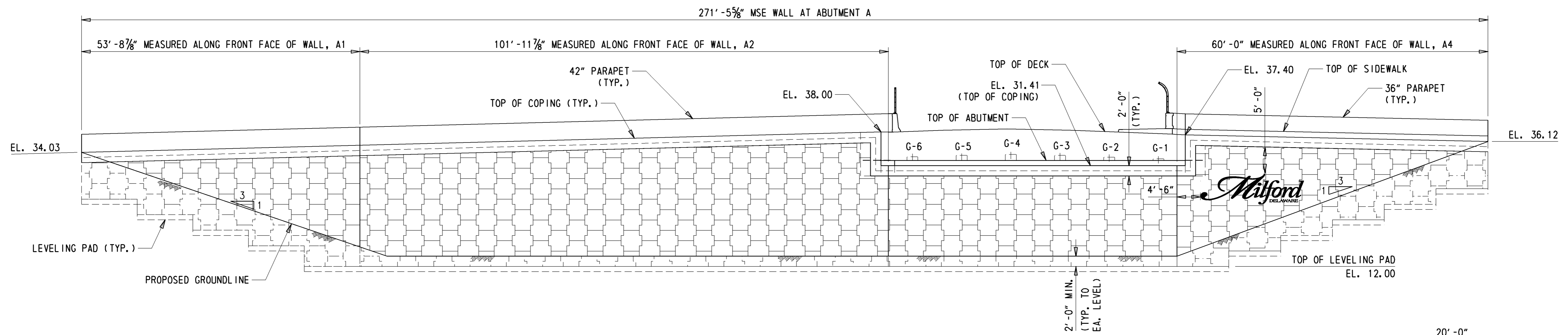
ADDENDUMS / REVISIONS	
	QUANTITY CHANGES

**SR1, NE FRONT STREET
GRADE SEPARATED
INTERSECTION**

CONTRACT	BRIDGE NO.	2-409B
T201112201	DESIGNED BY: KRL, CBB	
COUNTY	CHECKED BY: JAT	
KENT		

**BRIDGE QUANTITIES
AND LOAD RATINGS**

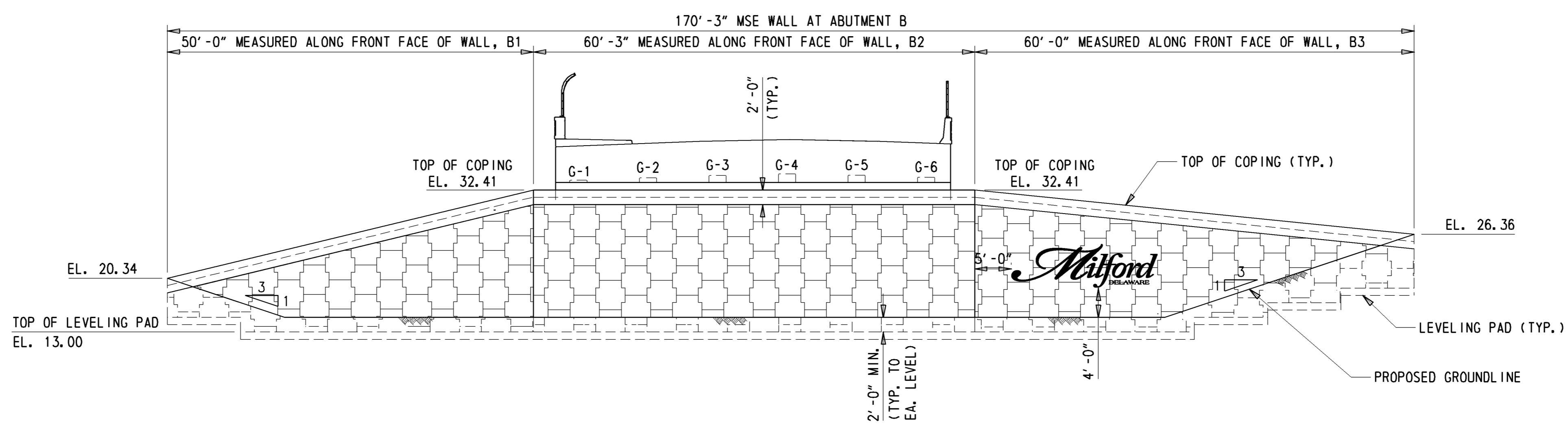
PN-02
SHEET NO.
60
TOTAL SHTS.
236



DEVELOPED ELEVATION AT ABUTMENT A
1/8" = 1'-0"



FORM LINER DETAIL
1/4" = 1'-0"

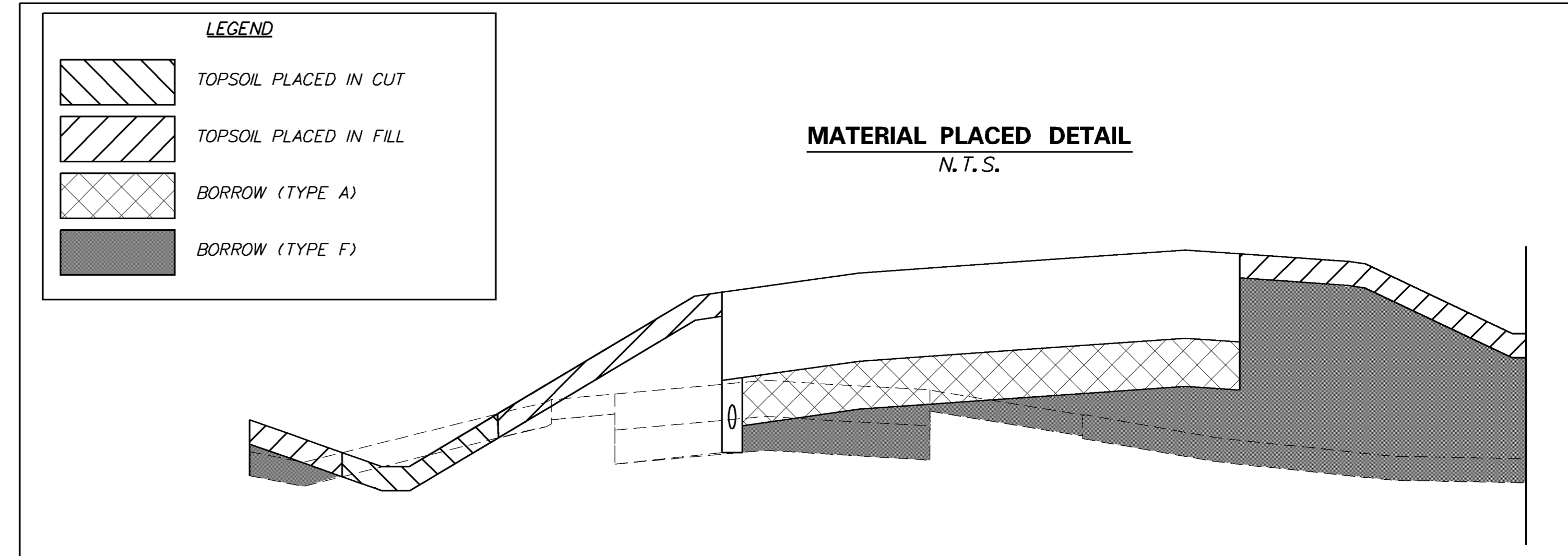
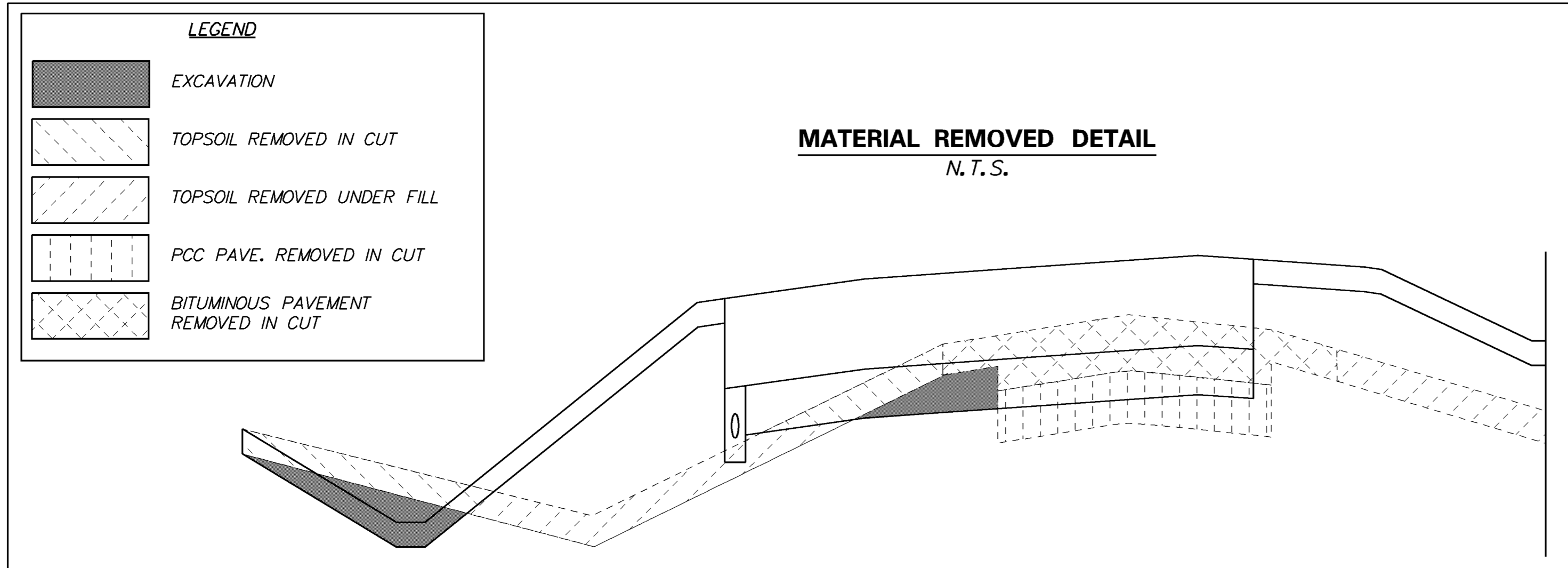


DEVELOPED ELEVATION AT ABUTMENT B
1/8" = 1'-0"

- NOTES:
- FORM LINER MILFORD LOGO SHALL BE COATED AS PER ITEM 602646 - SILICONE ACRYLLIC CONCRETE SEALER. THE CONCRETE SEALER APPLIED TO THE LETTERING OF THE FORM LINER WILL BE DYED TO MATCH STANDARD COLOR 37038 (BLACK) OF FED-595C. PAYMENT INCIDENTAL TO ITEM 602553 - MECHANICALLY STABILIZED EARTH WALLS.
 - MSE PANEL EDGES SHALL BE BEVELED A MAXIMUM OF 1/2" IN LOCATIONS WHERE THE PANEL EDGES CROSS THE LETTERING WITHIN THE FORMLINER LIMITS.
 - ALL LETTERS SHALL BE RAISED 3" OVER PANEL FACE AND LETTER EDGES SHALL BE BEVELED 1/2" WITHIN THE FORMLINER LIMITS.
 - THE CONTRACTOR SHALL SUBMIT THE FORM LINER/PANEL WORKING PLAN FOR APPROVAL PRIOR TO INSTALLATION.
 - FOR TYPICAL MSE WALL SECTION, SEE DWG. NO. AB-04.
 - FOR ADDITIONAL INFORMATION ON MSE WALLS, SEE DWG. NO. WA-01.
 - PARAPET FORM LINER NOT SHOWN FOR CLARITY.
 - ALL EXPOSED MSE WALL SURFACES OUTSIDE OF THE FORM LINER MILFORD LOGO SHALL BE COATED AND PAID FOR UNDER ITEM - 602646 - SILICONE ACRYLLIC CONCRETE SEALER AND DYED TO MATCH STANDARD COLOR 37925 (INSIGNIA WHITE) OF FED-595C.

4

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*ALL VALUES SHOWN ARE IN CUBIC YARDS.

	CUT	FILL	TOTAL
EXCAVATION / EMBANKMENT 202000			
RAMP A	16,305	694	15,611
RAMP B	18,295	745	17,550
RAMP C	3,779	7,893	-4114
RAMP D	80	11	69
NE FRONT STREET / NEW WHARF ROAD	33,115	72,000	-38,885
SILICATO WAY	103	22	-99
EXISTING NE FRONT STREET	967	564	403
EXISTING NEW WHARF RD	17,680	55	17,625
GORE POND	9,000	0	9,000
SILICATO POND	10,000	4,000	6,000
TOTALS	109,324	86,164	

*SOIL BORINGS SHOW FILL PASSES FOR DELDOT TYPE C.

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