



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

JENNIFER COHAN  
SECRETARY

**VIA WEBSITE POSTING AND OVERNIGHT DELIVERY**

October 18, 2019

Contract No. T201507402.01  
Federal Aid Project No. BHN-N347(03)  
BR 1-714 on N347 Chapman Road over I-95  
New Castle County

Ladies and Gentlemen:

Enclosed is Addendum No. 2 for the referenced contract consisting of the following:

1. The date for the receipt of bids has been moved to Tuesday, November 5, 2019, prior to 2:00 p.m.
2. The Bid Proposal Cover, revised, to be substituted for the same page of the Proposal.
3. Four (4) pages, Bid Proposal Forms, pages 13 through 16, revised, to be substituted for same pages in the Proposal.  
  
- The following Item Numbers have been added: 818002, 822002, 822004 and 822005
4. Four (4) sheets, Construction Plans, sheets 3, 25, 41 and 65, revised, to be substituted for the same sheets in the Plans.
5. Amendment File No. 2.

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

Sincerely,  
*~signature on file~*  
Connie Ivins  
Competitively Bid Contracts Coordinator  
Delaware Department of Transportation

STATE OF DELAWARE



DEPARTMENT OF TRANSPORTATION

BID PROPOSAL

for

CONTRACT T201507402.01

FEDERAL AID PROJECT NO. BHN-N347(03)

CFDA NO. 20.205

BR 1-714 ON N347 CHAPMAN ROAD OVER I-95

NEW CASTLE COUNTY

ADVERTISEMENT DATE: September 23, 2019

COMPLETION TIME: 565 Calendar Days

SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION  
DELAWARE DEPARTMENT OF TRANSPORTATION  
AUGUST 2016

Bids will be received in the Bidder's Room at the Delaware Department of Transportation's Administration Building, 800 Bay Road, Dover, Delaware prior to 2:00 P.M. local time ~~October 22~~ **November 5, 2019**

DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

PAGE: 13  
DATE:

CONTRACT ID: T201507402.01 PROJECT(S): BHN-N347(03)

All figures must be typewritten.

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1160	817027 RAISED/RECESSED PAVEMENT MARKER	53.000 EACH				
1170	817031 REMOVAL OF PAVEMENT STRIPING	11380.000 SF				
1180	818002 SUPPLY OF FLAT SHEET ALUMINUM SIGN PANEL, TYPE IX, RETROREFLECTIVE SHEETING	190.000 SF				
1190	819016 INSTALLATION OF 4" DIAMETER HOLE, LESS THAN OR EQUAL TO 6" DEPTH	2.000 EACH				
1200	819018 INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST	56.000 EACH				
1210	819019 INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON MULTIPLE SIGN POSTS	18.000 SF				
1220	822002 INSTALLATION OF SIGN ON/OVER HIGHWAY STRUCTURE	190.000 SF				
1230	822004 SUPPLY OF OVERHEAD I-BEAM, W-6	48.000 LF				
1240	822005 INSTALLATION OF OVERHEAD I-BEAM	5.000 EACH				

DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

PAGE: 14  
DATE:

CONTRACT ID: T201507402.01 PROJECT(S): BHN-N347(03)

All figures must be typewritten.

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1250	830001 CONDUIT JUNCTION WELL, TYPE 1, 20" X 20" PRECAST CONCRETE	EACH 2.000				
1260	830002 CONDUIT JUNCTION WELL, TYPE 4, 20" X 42-1/2" PRECAST CONCRETE	EACH 5.000				
1270	830004 CONDUIT JUNCTION WELL, TYPE 7, 36" X 60" PRECAST POLYMER CONCRETE	EACH 2.000				
1280	831513 FURNISH AND INSTALL 2" SCHEDULE 80 PVC CONDUIT (TRENCH)	LF 205.000				
1290	831516 FURNISH AND INSTALL 4" SCHEDULE 80 PVC CONDUIT (TRENCH)	LF 825.000				
1300	831521 FURNISH AND INSTALL 4" SCHEDULE 80 PVC CONDUIT (ON STRUCTURE )	LF 615.000				
1310	831542 FURNISH AND INSTALL 2" HDPE SDR-13.5 CONDUIT (BORE)	LF 200.000				
1320	831545 FURNISH AND INSTALL 4" HDPE SDR-13.5 CONDUIT (BORE)	LF 220.000				
1330	832003 FURISH AND INSTALL 1-CONDUCTOR #2/0 AWG STRANDED COPPER, TYPE USE-2	LF 840.000				

DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

PAGE: 15  
DATE:

CONTRACT ID: T201507402.01 PROJECT(S): BHN-N347(03)

All figures must be typewritten.

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1340	832006 FURNISH AND INSTALL 1-CONDUCTOR #2 AWG STRANDED COPPER, TYPE USE-2	LF 420.000				
1350	832029 FURNISH AND INSTALL #8/2 WIRE UF W/GROUND	LF 205.000				
1360	835003 CABINET BASE TYPE P	EACH 1.000				
1370	842501 FURNISH AND INSTALL ELECTRIC UTILITY SERVICE EQUIPMENT 120/240 (100 AMP)	EACH 2.000				
1380	905001 SILT FENCE	LF 2870.000				
1390	905004 INLET SEDIMENT CONTROL, DRAINAGE INLET	EACH 14.000				
1400	905005 INLET SEDIMENT CONTROL, CURB INLET	EACH 6.000				
1410	906002 DEWATERING BAG	EACH 10.000				
1420	907013 TEMPORARY SLOPE DRAIN, 18"	LF 50.000				
1430	907017 COMPOST FILTER LOGS	LF 415.000				

DELAWARE DEPARTMENT OF TRANSPORTATION  
SCHEDULE OF ITEMS

PAGE:  
DATE:

16

CONTRACT ID: T201507402.01

PROJECT(S): BHN-N347(03)

All figures must be typewritten.

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1440	908004 TOPSOIL, 6" DEPTH	18215.000 SY				
1450	908014 PERMANENT GRASS SEEDING, DRY GROUND	51450.000 SY				
1460	908015 PERMANENT GRASS SEEDING, STORMWATER	5780.000 SY				
1470	908017 TEMPORARY GRASS SEEDING	179260.000 SY				
1480	908020 EROSION CONTROL BLANKET MULCH	28620.000 SY				
1490	908021 TURF REINFORCEMENT MATTING, TYPE 1	60.000 SY				
1500	908023 STABILIZED CONSTRUCTION ENTRANCE	560.000 SY				
1510	910006 OUTLET STRUCTURE	2.000 EACH				
1520	910010 BIORETENTION AREA	155.000 CY				
	SECTION 0001 TOTAL					
	TOTAL BID					

10/9/2019 3:49:40 PM PK\60323054 DeIDOT AGR 1672 BDS\T06 - Rehab Br. 1-714\900 WORK\910 CAD\20-SHEETS\100\_Construction Plans\A001.dgn

**ADDENDUM PREPARED BY**  
AECOM TECHNICAL SERVICES, INC.

*Angela D. Melvin* 10/09/19

THIS SEAL APPLIES TO THE FOLLOWING SHEETS CHANGED UNDER ADDENDUM \*1: 26, 66, 103

DATE SEAL



**ADDENDUM PREPARED BY**  
AECOM TECHNICAL SERVICES, INC.

*Angela D. Melvin* 10/16/19

THIS SEAL APPLIES TO THE FOLLOWING SHEETS CHANGE UNDER ADDENDUM \*2: SHEETS 25, 41, 65.

DATE SEAL



ADDENDA / REVISIONS		<b>NOT TO SCALE</b>	<b>BR 1-714 ON CHAPMAN ROAD OVER I-95</b>	CONTRACT	BRIDGE NO.	<b>ADDENDA AND REVISIONS</b>	SECTION
				T201507402	<b>1-714 /1-714A</b>		AEC
				COUNTY	DESIGNED BY: T. SINGLE		SHEET NO.
				NEW CASTLE	CHECKED BY: D. SEMPLE		3

**SECTION 200**

- REMOVAL OF STRUCTURES AND OBSTRUCTIONS:  
ITEMS TO BE REMOVED UNDER ITEM 211550 - REMOVAL OF EXISTING BRIDGE ASSOCIATED WITH BRIDGE (BR1-714) SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:  
SUPERSTRUCTURE AND SUBSTRUCTURE TO LIMITS SHOWN ON DRAWINGS.
- HAZARDOUS MATERIAL:  
THE CONTRACTOR IS ADVISED THAT THE EXISTING STRUCTURE OVER (I-95 NB & SB) DOES CONTAIN LEAD BASED PAINT. AS A RESULT, THE CONTRACTOR'S PROPOSED DEMOLITION PLAN MUST ADDRESS, AS A MINIMUM, METHODS OF CUTTING THE BEAMS AND/OR DIAPHRAGMS, IF REQUIRED, AND HOW THOSE PERSONS PERFORMING SUCH WORK WILL BE PROTECTED IN ACCORDANCE WITH APPLICABLE OSHA REGULATIONS. ADDITIONALLY, THE CONTRACTOR MUST ADDRESS WHEN AND HOW THE LEAD BASED PAINT WILL BE REMOVED FROM THE STRUCTURAL STEEL AND ALL RELATED BRIDGE COMPONENTS. IF THE WORK IS PERFORMED ON SITE, THEN PROPER PROTECTION, CONTAINMENT, AND FINAL LEAD PAINT DISPOSAL MUST BE ADDRESSED IN THE PROPOSED PLAN. IF THE BEAMS WILL BE TRANSPORTED WITH THE PAINT STILL INTACT, THEN THE PLAN SHALL DETAIL HOW THE STRUCTURAL COMPONENTS WILL BE PROTECTED DURING TRANSPORT, WHERE AND HOW THE PAINT WILL BE REMOVED, AND THE LOCATION OF FINAL PAINT DISPOSAL, AGAIN IN ACCORDANCE WITH OSHA REGULATIONS. WRITTEN DOCUMENTATION MUST BE PROVIDED TO THE ENGINEER, PRIOR TO FINAL CONTRACT ACCEPTANCE, NOTING WHEN AND WHERE THE LEAD BASED PAINT WAS REMOVED, AND THE LOCATION OF FINAL PAINT DISPOSAL. ALL COSTS INVOLVED WITH THE ABOVE LISTED WORK SHALL BE INCIDENTAL TO ITEM 211550 - REMOVAL OF EXISTING BRIDGE. IF EXISTING UTILITY CONDUIT IS FOUND TO CONTAIN ASBESTOS, REMEDIATION SHALL BE PAID UNDER 202560 - CONTAMINATED MATERIAL.

**SECTION 600**

- PORTLAND CEMENT CONCRETE:  
USE PORTLAND CEMENT CONCRETE FOR CAST-IN-PLACE ELEMENTS AS FOLLOWS: (f'c = 28-DAY COMPRESSIVE STRENGTH)  
CLASS A - (PILE CAP, SIDEWALK AND BARRIERS), (f'c = 4.5 KSI)  
CLASS D - (DECK, DIAPHRAGMS, APPROACH SLAB AND SLEEPER SLAB), (f'c = 4.5 KSI)  
A HIGHER CLASS CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS CONCRETE AT NO ADDITIONAL COST TO DELDOT WITH APPROVAL OF THE BRIDGE DESIGN ENGINEER.
- DECK SLAB:  
THE DECK SLAB THICKNESS INCLUDES 1/2" INTEGRAL WEARING SURFACE.
- 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 OR 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 (D3963).  
- ANY FIELD CUTTING OR FIELD BENDING MUST BE APPROVED BY THE ENGINEER. PAYMENT SHALL BE INCIDENTAL TO THE BAR REINFORCEMENT ITEM.  
- GALVANIZED REINFORCING STEEL MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL AT NO ADDITIONAL COST TO DELDOT WITH APPROVAL OF THE BRIDGE DESIGN ENGINEER.  
- WELDING OF REINFORCEMENT DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED UNLESS SPECIFIED.

- CONCRETE SEALER:  
REFER TO DIAGRAMS CONTAINING CONCRETE SEALER LIMITS ON SHEET BR 1-714 BD-02, PAYMENT SHALL BE INCIDENTAL TO (613001 AND 613003).

- STRUCTURAL STEEL:  
PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M270, GRADE 50W (ASTM A709, GRADE 50W) 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 7/8" DIAMETER ASTM A325 HIGH STRENGTH BOLTS, TYPE 3, UNLESS OTHERWISE NOTED. REAM SUBDRILLED OR SUBPUNCHED HOLES FOR FIELD SPLICES IN THE FABRICATION SHOP. ALL BOLTED CONNECTIONS SHALL BE DESIGNED AS SLIP-CRITICAL CONNECTIONS WITH CLASS B FAYING SURFACE.

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 THE 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/D.15 \*\*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 THE THREADED STUD IS ATTACHED WITH THE SAME WELDING PROCESS AS THE SHEAR STUDS.

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

**SECTION 600 (CONTINUED)**

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. IN MASONRY PLATES, FILL THE CLEARANCE BETWEEN ANCHOR BOLTS AND HOLES WITH APPROVED NON-HARDENING CAULKING COMPOUND.

STABILITY OF PARTIAL GIRDERS AND COMPLETED GIRDERS IS TO BE MAINTAINED BY THE CONTRACTOR DURING ERECTION UNTIL ALL GIRDERS AND DIAPHRAGMS (INCLUDING CONCRETE END DIAPHRAGM) 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.

THE DESIGN WIND SPEED FOR CONSTRUCTION PRIOR TO COMPLETED CONSTRUCTION OF THE COMPOSITE DECK WAS TAKEN AS 60 MPH. DESIGN OF ALTERNATE SUPPORT FOR WIND SPEEDS ABOVE 60 MPH SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

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.

- BEARINGS:  
ALL ELASTOMERIC BEARINGS SHALL BE STEEL LAMINATED ELASTOMERIC DESIGNED AS PER AASHTO 14.7.5, METHOD B, AND SHALL CONFORM TO SECTION 623 OF THE STANDARD SPECIFICATIONS. PAYMENT SHALL BE INCIDENTAL TO 623000.

- PERFORATED PIPE UNDERDRAINS:  
MINIMUM INSTALLATION SLOPE SHALL BE 0.02 FT./FT. CAP FREE ENDS.

**SECTION 800**

- MAINTENANCE OF TRAFFIC:  
MAINTENANCE OF TRAFFIC SHALL BE AS PER THE TRAFFIC CONTROL PLANS AND DETOUR PLANS. THE DETOUR SHALL REMAIN IN EFFECT AS REQUIRED FOR GIRDER ERECTION AND DEMOLITION AS REQUIRED.  
ITEM 801000 - MAINTENANCE OF TRAFFIC, ALL INCLUSIVE.

**MISCELLANEOUS**

- DESIGN SPECIFICATIONS:  
(A) DELDOT BRIDGE DESIGN MANUAL, 2017 EDITION  
(B) AASHTO LRFD BRIDGE SPECIFICATIONS, 2014, 7TH EDITION, CUSTOMARY U.S. UNITS INCLUDING 2015 AND 2016 INTERIMS.  
(C) PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH THE DELDOT STANDARD SPECIFICATIONS, AUGUST 2016.  
(D) SPLICE PLATES DESIGNED IN ACCORDANCE WITH AASHTO LRFD BRIDGE SPECIFICATIONS, 2017, 8TH EDITION, CUSTOMARY U.S. UNITS.

- LOADING:  
-DEAD LOADS INCLUDE 25 PSF FOR FUTURE WEARING SURFACE ON DECK SLAB AND 15 PSF FOR STAY-IN-PLACE FORMS (INCLUDES CONCRETE IN FORM CORRUGATIONS). BARRIER AND FENCE LOADS ARE DISTRIBUTED 75% TO EXTERIOR GIRDER AND 25% TO FIRST INTERIOR. SIDEWALK LOAD IS DISTRIBUTED 100% TO EXTERIOR GIRDER.  
-DESIGN LIVE LOADS INCLUDE HL-93 LOADING.  
-FATIGUE DESIGN IS BASED ON THE FOLLOWING ONE DIRECTIONAL TRAFFIC VOLUMES: A<sub>DTT</sub> = (989, MEASURED IN 2017).  
-LIVE LOAD DISTRIBUTION TO THE GIRDERS IS BASED ON THE GRILLAGE METHOD.  
- THERMAL LOADS AND MOVEMENTS ARE BASED ON THE MODERATE TEMPERATURE RANGE AS STIPULATED IN THE AASHTO LRFD DESIGN SPECIFICATIONS AS 0-80°F GIRDERS TO BE ERECTED BETWEEN 40°-80°F FOR STEEL. THE NORMAL TEMPERATURE SHALL BE CONSIDERED TO BE 68°F.  
-LIVE LOAD DEFLECTION SHALL BE LIMITED TO L/1000.  
-FOR SEISMIC LOADS, CONSIDER SEISMIC PERFORMANCE ZONE 1, WITH A SITE CLASS = (A) AND OPERATIONAL CATEGORY = ESSENTIAL.  
-FOR REINFORCEMENT DISTRIBUTION REQUIREMENTS, CONSIDER CLASS 2 EXPOSURE CRITERIA FOR DECKS.  
-BARRIERS HAVE BEEN DESIGNED FOR (MASH OR NCHRP 350) TEST LEVEL 3 (TL-3).

- EXISTING CONDITIONS:  
-ALL EXISTING DIMENSIONS AND ELEVATIONS SHOWN ARE BASED ON THE BEST AVAILABLE INFORMATION AND ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS, GEOMETRY, AND ELEVATIONS AS NECESSARY PRIOR TO ORDERING ANY MATERIALS AND COMMENCING CONSTRUCTION TO ENSURE PROPER FIT OF THE PROPOSED CONSTRUCTION.  
-THE CONTRACTOR SHALL NOT CONSIDER ANY OF THE DATA ON THE EXISTING STRUCTURE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE BY THE DEPARTMENT OR ITS AUTHORIZED AGENTS AS POSITIVE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT WILL BE ENCOUNTERED IN THE FIELD.

- ROADWAY CLEARANCES:  
A MINIMUM OF 16'-6" SHALL BE MAINTAINED ABOVE ALL ROADWAYS.

- UTILITIES:  
SEE UTILITY STATEMENT AND CONSTRUCTION PLAN SHEETS FOR FURTHER INFORMATION ON UTILITY COORDINATION.

**INDEX OF STRUCTURES DRAWINGS**

BR 1-714 BD-01	BRIDGE NOTES
BR 1-714 BD-02	QUANTITIES AND LOAD RATINGS
BR 1-714 BD-03	GENERAL PLAN AND ELEVATION
BR 1-714 BD-04	CONSTRUCTION SEQUENCE AND DEMOLITION PLAN
BR 1-714 BD-05	GEOMETRIC LAYOUT
BR 1-714 BD-06	GEOTECHNICAL INSTRUMENTATION PLAN
BR 1-714 BD-07	GEOTECHNICAL INSTRUMENTATION TYPICAL DETAILS
BR 1-714 BD-08	PILE PLAN
BR 1-714 BD-09	PILE DETAILS
BR 1-714 BD-10	ABUTMENT 1 PLAN AND ELEVATION
BR 1-714 BD-11	ABUTMENT 2 PLAN AND ELEVATION
BR 1-714 BD-12	ABUTMENT SECTIONS
BR 1-714 BD-13	PILE CAP SECTIONS AND DETAILS
BR 1-714 BD-14	ABUTMENT REINFORCEMENT SCHEDULE
BR 1-714 BD-15	NSE WINGWALLS ELEVATIONS
BR 1-714 BD-16	NSE MEDIAN ELEVATION
BR 1-714 BD-17	MEDIAN MOMENT SLAB - PLAN AND SECTION
BR 1-714 BD-18	FRAMING PLAN
BR 1-714 BD-19	EXTERIOR GIRDER ELEVATION AND DETAILS
BR 1-714 BD-20	INTERIOR GIRDER ELEVATION AND DETAILS
BR 1-714 BD-21	INTERMEDIATE DIAPHRAGM DETAILS
BR 1-714 BD-22	CAMBER DIAGRAM
BR 1-714 BD-23	BEARINGS DETAILS - 1
BR 1-714 BD-24	BEARINGS DETAILS - 2
BR 1-714 BD-25	BEARINGS DETAILS - 3
BR 1-714 BD-26	ABUTMENT 1 CONCRETE DIAPHRAGM
BR 1-714 BD-27	ABUTMENT 2 CONCRETE DIAPHRAGM
BR 1-714 BD-28	BRIDGE DECK REINFORCEMENT PLAN - 1
BR 1-714 BD-29	BRIDGE DECK REINFORCEMENT PLAN - 2
BR 1-714 BD-30	BRIDGE DECK SECTION AND DETAILS
BR 1-714 BD-31	BRIDGE BARRIER & SIDEWALK REINFORCEMENT - SECTION AND ELEVATION
BR 1-714 BD-32	FINISHED BRIDGE DECK ELEVATIONS
BR 1-714 BD-33	ABUTMENT 1 APPROACH SLAB REINFORCEMENT - PLAN
BR 1-714 BD-34	ABUTMENT 2 APPROACH SLAB REINFORCEMENT - PLAN
BR 1-714 BD-35	BRIDGE APPROACH SLAB REINFORCEMENT - SECTION AND DETAILS
BR 1-714 BD-36	DECK AND CONCRETE DIAPHRAGM REINFORCEMENT SCHEDULE
BR 1-714 BD-37	APPROACH SLAB REINFORCEMENT SCHEDULE
BR 1-714 BD-38	RAILING DETAILS
BR 1-714 BD-39	EXPANSION JOINT DETAILS
BR 1-714 BD-40	ITS CONDUIT DETAILS

**MISCELLANEOUS (CONTINUED)**

- WORKING OVER ROADWAYS:

DO NOT PICK OR LIFT OVER LANES AND OR SHOULDERS OPEN TO TRAFFIC.

DO NOT PERFORM ANY WORK DIRECTLY OVER OPEN LANES OF TRAFFIC WITHOUT ADEQUATE SHIELDING OR WORK PLATFORMS, LANE CLOSURES OR DETOURS IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS.

INSTALL SIP FORMS, ADDITIONAL PROTECTIVE SHIELD SYSTEM, WORK PLATFORMS AND/OR OVERHANG FALSEWORK BEFORE BEGINNING ANY CONSTRUCTION OPERATIONS OVER TRAFFIC.

IF THE CONTRACTOR DETERMINES THAT ADDITIONAL PROTECTIVE SHIELDING OR WORK PLATFORMS ARE NEEDED TO PROTECT TRAFFIC, SUBMIT PLANS AND CALCULATIONS FOR REVIEW AND APPROVAL FOR PROTECTING TRAFFIC WHILE WORKING OVER TRAVELWAYS. HAVE THE DRAWINGS AND DESIGN CALCULATIONS PREPARED, SIGNED, AND SEALED BY A DELAWARE REGISTERED PROFESSIONAL ENGINEER. THE APPROVAL OF THE ENGINEER WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR THE SAFETY OF THE METHOD OR EQUIPMENT. BASED ON CONTRACTOR MEANS AND METHODS DETERMINE AND CLEARLY DEFINE ALL DEAD AND LIVE LOADS FOR THIS SYSTEM, WHICH, AT A MINIMUM, SHALL BE INSTALLED BETWEEN BEAMS OR GIRDERS OVER ANY TRAVEL WAY OR SHOULDER AREA WHERE TRAFFIC IS MAINTAINED. NO SEPARATE PAYMENT WILL BE MADE FOR ADDITIONAL PROTECTIVE SHIELDING OR WORK PLATFORMS.

ALL FORMWORK INCLUDING STAY-IN-PLACE FORMS SHALL BE MORTAR TIGHT.

WHILE PLACING DECK, DECK OVERHANG AND PARAPET CONCRETE OVER LANES OPEN TO TRAFFIC, NO CLOSURE OR DETOURS WILL BE ALLOWED DURING THESE OPERATIONS.

THE MAINTENANCE OF TRAFFIC REQUIRED FOR THE INSTALLATION OF THESE ITEMS WILL BE PAID UNDER THE MAINTENANCE OF TRAFFIC UNIT BID ITEMS. CONTRACTOR SHALL ADHERE TO THE TRAFFIC CONTROL PLAN, DELAWARE MUTCD, AND TRAFFIC LANE CLOSURE AND WORK RESTRICTIONS PROVIDED IN THE CONTRACT DOCUMENTS.

30/15/2019 10:02:30 AM PA 8023054 DeIDOT AGR 1672 BDS\T06 - Rehab Br. 1-714-900 WORK\910 CAD\20-SHEETS\Structures\Final Design\SB\BR1-714-SB-QN01.dgn

**ADDENDA / REVISIONS**

NOTE REVISED	J. EBERLE 10/11/2019

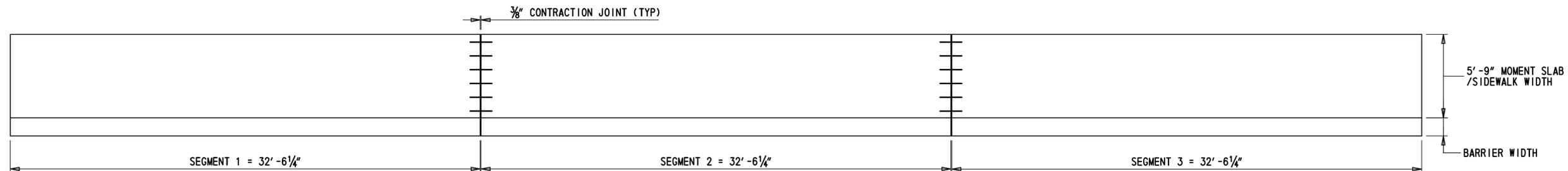
**NOT TO SCALE**

**BR 1-714 ON  
CHAPMAN ROAD OVER I-95 SB**

CONTRACT	BRIDGE NO.	<b>1-714</b>
T201507402	DESIGNED BY:	R.GANOVSKA
COUNTY	CHECKED BY:	R. DOMINICK
NEW CASTLE		

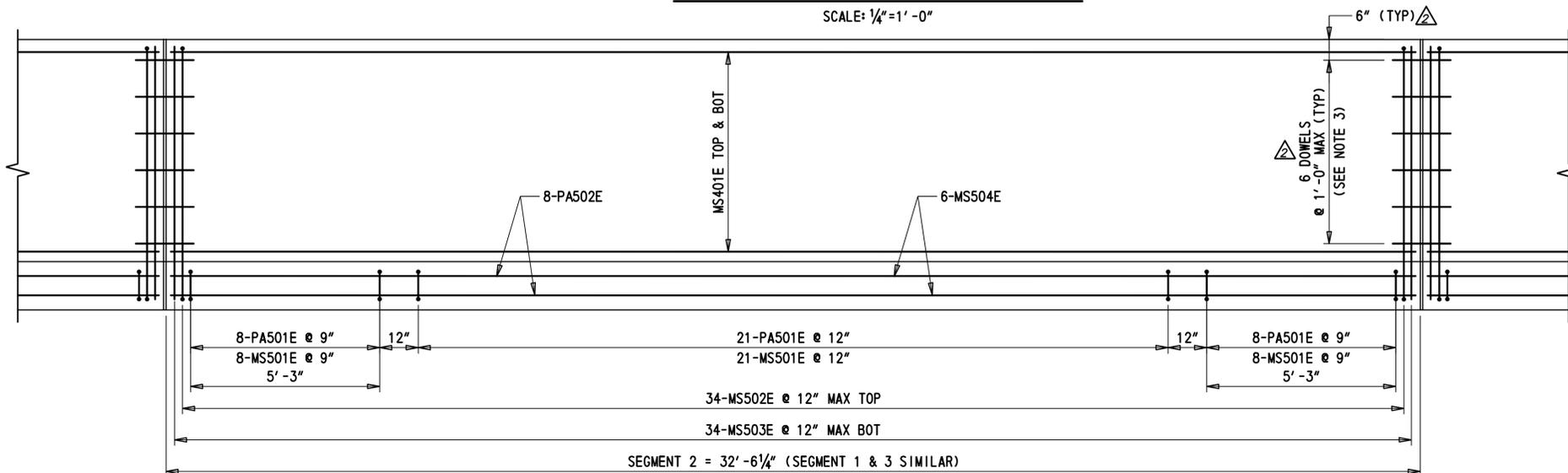
**BRIDGE NOTES**

BR 1-714 BD-01	SECTION
	AEC
	SHEET NO.
	25



**MOMENT SLAB SEGMENTS LAYOUT**

SCALE: 1/4" = 1'-0"



**NOTES:**

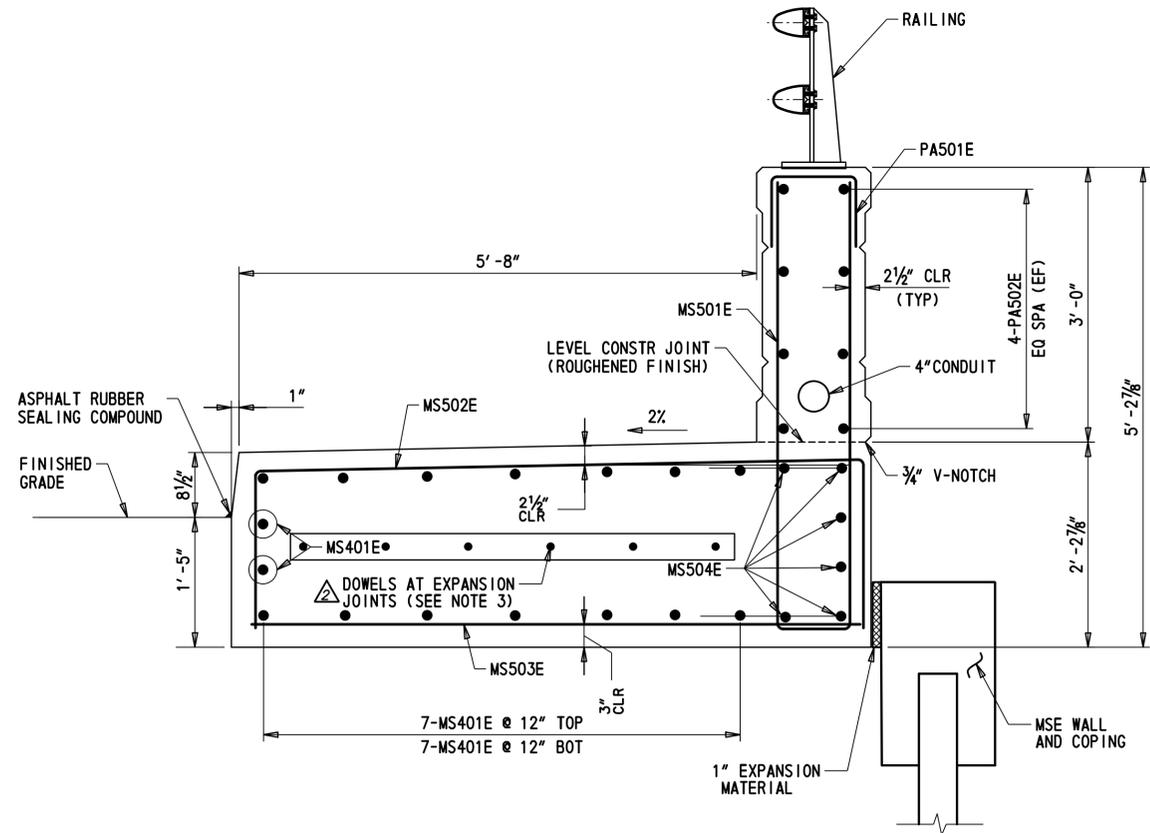
1. DRAIN PERFORATED POLYVINYL CHLORIDE PIPE (P.P.V.C) TO DAYLIGHT.
2. COST OF IMPERVIOUS MEMBRANE, 4" P.P.V.C. AND 8" P.P.V.C. INCIDENTAL TO ITEM 607001.
3. PROVIDE EPOXY COATED SMOOTH DOWEL BARS 1 1/2" X 18" (MINIMUM). COST OF DOWEL BARS INCIDENTAL TO ITEM 610018.
4. MOMENT SLAB CONCRETE TO BE PAID FOR UNDER ITEM 610018. PARAPET CONCRETE TO BE PAID FOR UNDER ITEM 610008. REINFORCING IN MOMENT SLAB AND PARAPET TO BE PAID UNDER ITEM 611001.

**CROSS REFERENCE NOTES:**

1. FOR MSE WALL LAYOUT AND DETAILS, SEE SHEETS BR 1-714 BD-10 AND BR 1-714 BD-11.
2. FOR MSE WALL ELEVATIONS, SEE SHEETS BR 1-714 BD-16 AND BR 1-714 BD-17.
3. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET BR 1-714 BD-37.

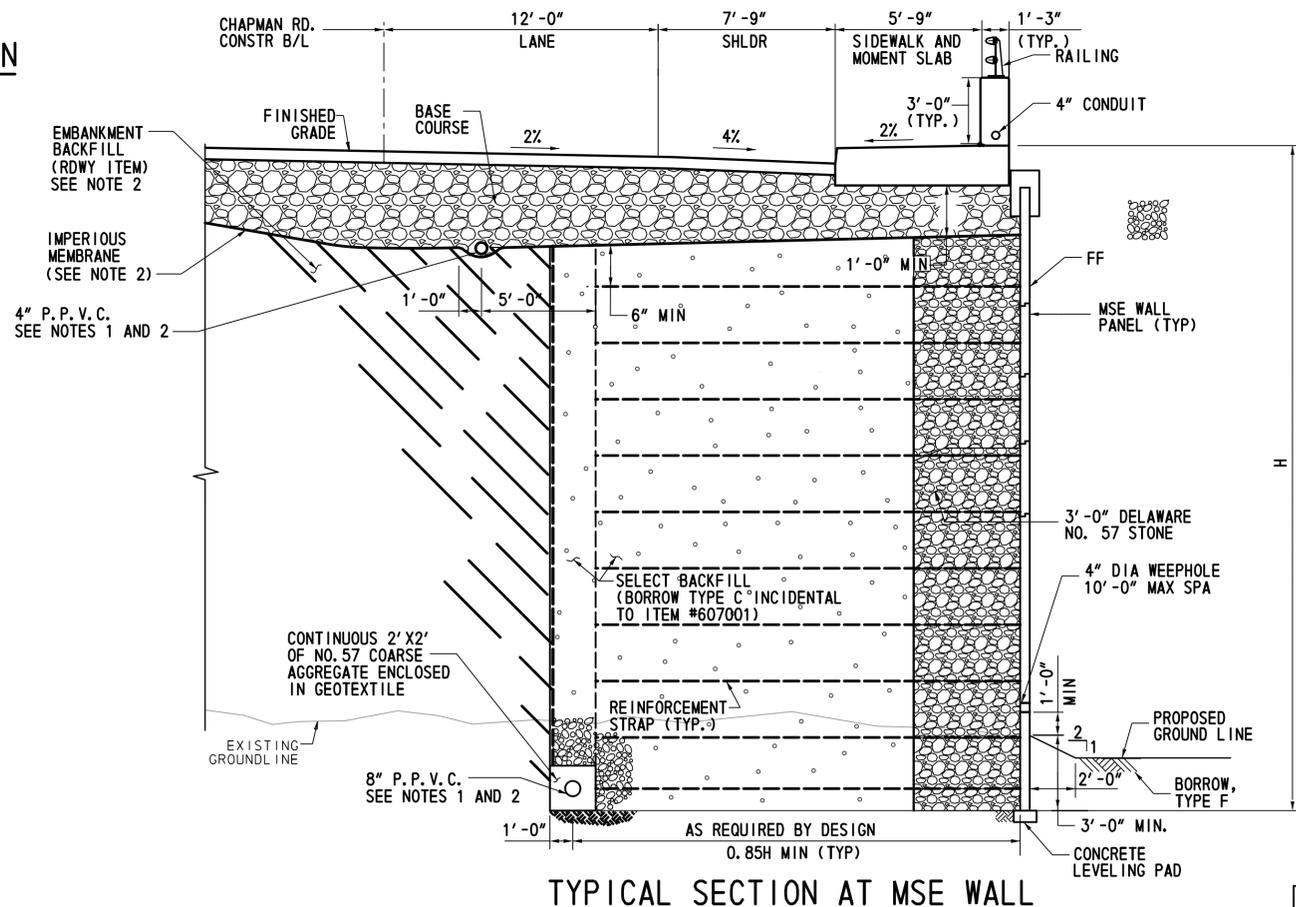
**MOMENT SLAB PLAN**

SCALE: 1/2" = 1'-0"



**MOMENT SLAB SECTION-1**

SCALE: 1" = 1'-0"



**TYPICAL SECTION AT MSE WALL**

SCALE: 1/4" = 1'-0"

10/16/2019  
PA 60323054  
DeIDOT AGR 1672 BDS\T06 - Rehab Br. 1-714-900 WORK\910 CAD\20-SHEETS\Structures\Final Design\SB\BR1-714-SB-MSS01.dgn

ITEM NUMBER AND DOWEL CLARIFICATION	ADDENDA / REVISIONS
	J. EBERLE 10/16/2019

SCALE AS NOTED

**BR 1-714 ON  
CHAPMAN ROAD OVER I-95 SB**

CONTRACT	BRIDGE NO.	<b>1-714</b>
T201507402	DESIGNED BY:	H.BORDNER
COUNTY	CHECKED BY:	E.LUCZKA
NEW CASTLE		

**MEDIAN MOMENT SLAB -  
PLAN AND SECTION**

SECTION	AEC
SHEET NO.	41

**SECTION 200**

- REMOVAL OF STRUCTURES AND OBSTRUCTIONS:  
ITEMS TO BE REMOVED UNDER ITEM 211550 - REMOVAL OF EXISTING BRIDGE ASSOCIATED WITH BRIDGE (BRI-714) SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:  
SUPERSTRUCTURE AND SUBSTRUCTURE TO LIMITS SHOWN ON BRI-714 DRAWINGS.
- HAZARDOUS MATERIAL:  
THE CONTRACTOR IS ADVISED THAT THE EXISTING STRUCTURE OVER (I-95 NB & SB) DOES CONTAIN LEAD BASED PAINT. AS A RESULT, THE CONTRACTOR'S PROPOSED DEMOLITION PLAN MUST ADDRESS, AS A MINIMUM, METHODS OF CUTTING THE BEAMS AND/OR DIAPHRAGMS, IF REQUIRED, AND HOW THOSE PERSONS PERFORMING SUCH WORK WILL BE PROTECTED IN ACCORDANCE WITH APPLICABLE OSHA REGULATIONS. ADDITIONALLY, THE CONTRACTOR MUST ADDRESS WHEN AND HOW THE LEAD BASED PAINT WILL BE REMOVED FROM THE STRUCTURAL STEEL AND ALL RELATED BRIDGE COMPONENTS. IF THE WORK IS PERFORMED ON SITE, THEN PROPER PROTECTION, CONTAINMENT, AND FINAL LEAD PAINT DISPOSAL MUST BE ADDRESSED IN THE PROPOSED PLAN. IF THE BEAMS WILL BE TRANSPORTED WITH THE PAINT STILL INTACT, THEN THE PLAN SHALL DETAIL HOW THE STRUCTURAL COMPONENTS WILL BE PROTECTED DURING TRANSPORT, WHERE AND HOW THE PAINT WILL BE REMOVED, AND THE LOCATION OF FINAL PAINT DISPOSAL, AGAIN IN ACCORDANCE WITH OSHA REGULATIONS. WRITTEN DOCUMENTATION MUST BE PROVIDED TO THE ENGINEER, PRIOR TO FINAL CONTRACT. ACCEPTANCE, NOTING WHEN AND WHERE THE LEAD BASED PAINT WAS REMOVED, AND THE LOCATION OF FINAL PAINT DISPOSAL. ALL COSTS INVOLVED WITH THE ABOVE LISTED WORK SHALL BE INCIDENTAL TO ITEM #211550 - REMOVAL OF EXISTING BRIDGE. IF EXISTING UTILITY CONDUIT IS FOUND TO CONTAIN ASBESTOS, REMEDIATION SHALL BE PAID UNDER 202560 - CONTAMINATED MATERIAL.

**SECTION 600**

- PORTLAND CEMENT CONCRETE:  
USE PORTLAND CEMENT CONCRETE FOR CAST-IN-PLACE ELEMENTS AS FOLLOWS: (f'c = 28-DAY COMPRESSIVE STRENGTH)  
CLASS A - (PILE CAP, SIDEWALK AND BARRIERS), (f'c = 4.5 Ks1)  
CLASS D - (DECK, DIAPHRAGMS, APPROACH SLAB AND SLEEPER SLAB), (f'c = 4.5Ks1)  
A HIGHER CLASS CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS CONCRETE AT NO ADDITIONAL COST TO DELDOT WITH APPROVAL OF THE BRIDGE DESIGN ENGINEER.
- DECK SLAB:  
THE DECK SLAB THICKNESS INCLUDES 1/2" INTEGRAL WEARING SURFACE.
- 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 OR 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 (D3963).  
- ANY FIELD CUTTING OR FIELD BENDING MUST BE APPROVED BY THE ENGINEER. PAYMENT SHALL BE INCIDENTAL TO THE BAR REINFORCEMENT ITEM.  
- GALVANIZED REINFORCING STEEL MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL AT NO ADDITIONAL COST TO DELDOT WITH APPROVAL OF THE BRIDGE DESIGN ENGINEER.  
- WELDING OF REINFORCEMENT DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED UNLESS SPECIFIED.
- CONCRETE SEALER:  
REFER TO DIAGRAMS CONTAINING CONCRETE SEALER LIMITS ON SHEET BR 1-714A BD-02, PAYMENT SHALL BE INCIDENTAL TO (613001 AND 613003).
- STRUCTURAL STEEL:  
PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M270, GRADE 50W (ASTM A709, GRADE 50W) 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 7/8" DIAMETER ASTM A325 HIGH STRENGTH BOLTS, TYPE 3, UNLESS OTHERWISE NOTED. REAM SUBDRILLED OR SUBPUNCHED HOLES FOR FIELD SPLICES IN THE FABRICATION SHOP. ALL BOLTED CONNECTIONS SHALL BE DESIGNED AS SLIP-CRITICAL CONNECTIONS WITH CLASS B FAYING SURFACE.  
  
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 THE 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/D.15 \*\*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 THE THREADED STUD IS ATTACHED WITH THE SAME WELDING PROCESS AS THE SHEAR STUDS.

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

**SECTION 600  
(CONTINUED)**

- STANDARD 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. IN MASONRY PLATES, FILL THE CLEARANCE BETWEEN ANCHOR BOLTS AND HOLES WITH APPROVED NON-HARDENING CAULKING COMPOUND.  
  
STABILITY OF PARTIAL GIRDERS AND COMPLETED GIRDERS IS TO BE MAINTAINED BY THE CONTRACTOR DURING ERECTION UNTIL ALL GIRDERS AND DIAPHRAGMS (INCLUDING CONCRETE END DIAPHRAGM) 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.  
  
THE DESIGN WIND SPEED FOR CONSTRUCTION PRIOR TO COMPLETED CONSTRUCTION OF THE COMPOSITE DECK WAS TAKEN AS 60 MPH. DESIGN OF ALTERNATE SUPPORT FOR WIND SPEEDS ABOVE 60 MPH SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.  
  
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.

- BEARINGS:  
ALL ELASTOMERIC BEARINGS SHALL BE STEEL LAMINATED ELASTOMERIC DESIGNED AS PER AASHTO 14.7.5, METHOD B, AND SHALL CONFORM TO SECTION 623 OF THE STANDARD SPECIFICATIONS. PAYMENT SHALL BE INCIDENTAL TO (623000)
- PERFORATED PIPE UNDERDRAINS:  
MINIMUM INSTALLATION SLOPE SHALL BE 0.02 FT./F T. CAP FREE ENDS.

**SECTION 800**

- MAINTENANCE OF TRAFFIC:  
MAINTENANCE OF TRAFFIC SHALL BE AS PER THE TRAFFIC CONTROL PLANS AND DETOUR PLANS. THE DETOUR SHALL REMAIN IN EFFECT AS REQUIRED FOR GIRDER ERECTION AND DEMOLITION AS REQUIRED. ITEM 801000 - MAINTENANCE OF TRAFFIC, ALL INCLUSIVE.

**MISCELLANEOUS**

- DESIGN SPECIFICATIONS:  
(A) DELDOT BRIDGE DESIGN MANUAL, 2017 EDITION  
(B) AASHTO LRFD BRIDGE SPECIFICATIONS, 2014, 7TH EDITION, CUSTOMARY U.S. UNITS INCLUDING 2015 AND 2016 INTERIMS.  
(C) PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH THE DELDOT STANDARD SPECIFICATIONS, AUGUST 2016.  
(D) SPLICE PLATES DESIGNED IN ACCORDANCE WITH AASHTO LRFD BRIDGE SPECIFICATIONS, 2017, 8TH EDITION, CUSTOMARY U.S. UNITS.
- LOADING:  
-DEAD LOADS INCLUDE 25 PSF FOR FUTURE WEARING SURFACE ON DECK SLAB AND 15 PSF FOR STAY-IN-PLACE FORMS (INCLUDES CONCRETE IN FORM CORRUGATIONS). BARRIER AND FENCE LOADS ARE DISTRIBUTED 75% TO EXTERIOR GIRDER AND 25% TO FIRST INTERIOR. SIDEWALK LOAD IS DISTRIBUTED 100% TO EXTERIOR GIRDER.  
-DESIGN LIVE LOADS INCLUDE HL-93 LOADING.  
-FATIGUE DESIGN IS BASED ON THE FOLLOWING ONE DIRECTIONAL TRAFFIC VOLUMES: ADTT = (989, MEASURED IN 2017).  
-LIVE LOAD DISTRIBUTION TO THE GIRDERS IS BASED ON THE GRILLAGE METHOD.  
-THERMAL LOADS AND MOVEMENTS ARE BASED ON THE MODERATE TEMPERATURE RANGE AS STIPULATED IN THE AASHTO LRFD DESIGN SPECIFICATIONS AS 0-80° GIRDERS TO BE ERECTED BETWEEN 40°-80° FOR STEEL. THE NORMAL TEMPERATURE SHALL BE CONSIDERED TO BE 68F.  
-LIVE LOAD DEFLECTION SHALL BE LIMITED TO (L/1000).  
-FOR SEISMIC LOADS, CONSIDER SEISMIC PERFORMANCE ZONE 1, WITH A SITE CLASS = (A) AND OPERATIONAL CATEGORY = ESSENTIAL.  
-FOR REINFORCEMENT DISTRIBUTION REQUIREMENTS, CONSIDER CLASS 2 EXPOSURE CRITERIA FOR DECKS.  
-BARRIERS HAVE BEEN DESIGNED FOR (MASH OR NCHRP 350) TEST LEVEL 3 (TL-3).
- EXISTING CONDITIONS:  
-ALL EXISTING DIMENSIONS AND ELEVATIONS SHOWN ARE BASED ON THE BEST AVAILABLE INFORMATION AND ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS, GEOMETRY, AND ELEVATIONS AS NECESSARY PRIOR TO ORDERING ANY MATERIALS AND COMMENCING CONSTRUCTION TO ENSURE PROPER FIT OF THE PROPOSED CONSTRUCTION.  
-THE CONTRACTOR SHALL NOT CONSIDER ANY OF THE DATA ON THE EXISTING STRUCTURE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE BY THE DEPARTMENT OR ITS AUTHORIZED AGENTS AS POSITIVE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT WILL BE ENCOUNTERED IN THE FIELD.
- ROADWAY CLEARANCES:  
A MINIMUM OF 16'-6" SHALL BE MAINTAINED ABOVE ALL ROADWAYS.
- UTILITIES:  
SEE UTILITY STATEMENT AND CONSTRUCTION PLAN SHEETS FOR FURTHER INFORMATION ON UTILITY COORDINATION.

**INDEX OF STRUCTURES DRAWINGS**

- BR 1-714A BD-01. BRIDGE NOTES
- BR 1-714A BD-02. QUANTITIES AND LOAD RATINGS
- BR 1-714A BD-03. GENERAL PLAN AND ELEVATION
- BR 1-714A BD-04. CONSTRUCTION SEQUENCE AND DEMOLITION PLAN
- BR 1-714A BD-05. GEOMETRIC LAYOUT
- BR 1-714A BD-06. PILE PLAN
- BR 1-714A BD-07. PILE DETAILS
- BR 1-714A BD-08. ABUTMENT 1 PLAN AND ELEVATION
- BR 1-714A BD-09. ABUTMENT 2 PLAN AND ELEVATION
- BR 1-714A BD-10. ABUTMENT SECTIONS
- BR 1-714A BD-11. PILE CAP SECTIONS AND DETAILS
- BR 1-714A BD-12. ABUTMENT REINFORCEMENT SHCHEDULE
- BR 1-714A BD-13. MSE WINGWALL ELEVATIONS
- BR 1-714A BD-14. FRAMING PLAN
- BR 1-714A BD-15. EXTERIOR GIRDER ELEVATION AND DETAILS
- BR 1-714A BD-16. INTERIOR GIRDER ELEVATION AND DETAILS
- BR 1-714A BD-17. INTERMEDIATE DIAPHRAGM DETAILS
- BR 1-714A BD-18. CAMBER DIAGRAM
- BR 1-714A BD-19. BEARINGS DETAILS - 1
- BR 1-714A BD-20. BEARINGS DETAILS - 2
- BR 1-714A BD-21. BEARINGS DETAILS - 3
- BR 1-714A BD-22. ABUTMENT 1 CONCRETE DIAPHRAGM
- BR 1-714A BD-23. ABUTMENT 2 CONCRETE DIAPHRAGM
- BR 1-714A BD-24. BRIDGE DECK REINFORCEMENT PLAN - 1
- BR 1-714A BD-25. BRIDGE DECK REINFORCEMENT PLAN - 2
- BR 1-714A BD-26. BRIDGE DECK SECTION AND DETAILS
- BR 1-714A BD-27. BRIDGE BARRIER AND SIDEWALK REINFORCEMENT - SECTION AND ELEVATION
- BR 1-714A BD-28. FINISHED BRIDGE DECK ELEVATIONS
- BR 1-714A BD-29. ABUTMENT 1 APPROACH SLAB REINFORCEMENT - PLAN
- BR 1-714A BD-30. ABUTMENT 2 APPROACH SLAB REINFORCEMENT - PLAN
- BR 1-714A BD-31. BRIDGE APPROACH SLAB REINFORCEMENT - SECTION AND DETAILS
- BR 1-714A BD-32. DECK AND CONCRETE DIAPHRAGM REINFORCEMENT SCHEDULE
- BR 1-714A BD-33. APPROACH SLAB REINFORCEMENT SCHEDULE
- BR 1-714A BD-34. RAILING DETAILS
- BR 1-714A BD-35. EXPANSION JOINT DETAILS
- BR 1-714A BD-36. ITS CONDUIT DETAILS

**MISCELLANEOUS  
(CONTINUED)**

- WORKING OVER ROADWAYS:

DO NOT PICK OR LIFT OVER LANES AND OR SHOULDERS OPEN TO TRAFFIC.

DO NOT PERFORM ANY WORK DIRECTLY OVER OPEN LANES OF TRAFFIC WITHOUT ADEQUATE SHIELDING OR WORK PLATFORMS, LANE CLOSURES OR DETOURS IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS.

INSTALL SIP FORMS, ADDITIONAL PROTECTIVE SHIELD SYSTEM, WORK PLATFORMS AND/OR OVERHANG FALSEWORK BEFORE BEGINNING ANY CONSTRUCTION OPERATIONS OVER TRAFFIC.

IF THE CONTRACTOR DETERMINES THAT ADDITIONAL PROTECTIVE SHIELDING OR WORK PLATFORMS ARE NEEDED TO PROTECT TRAFFIC, SUBMIT PLANS AND CALCULATIONS FOR REVIEW AND APPROVAL FOR PROTECTING TRAFFIC WHILE WORKING OVER TRAVELWAYS. HAVE THE DRAWINGS AND DESIGN CALCULATIONS PREPARED, SIGNED, AND SEALED BY A DELAWARE REGISTERED PROFESSIONAL ENGINEER. THE APPROVAL OF THE ENGINEER WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR THE SAFETY OF THE METHOD OR EQUIPMENT. BASED ON CONTRACTOR MEANS AND METHODS DETERMINE AND CLEARLY DEFINE ALL DEAD AND LIVE LOADS FOR THIS SYSTEM, WHICH, AT A MINIMUM, SHALL BE INSTALLED BETWEEN BEAMS OR GIRDERS OVER ANY TRAVEL WAY OR SHOULDER AREA WHERE TRAFFIC IS MAINTAINED. NO SEPARATE PAYMENT WILL BE MADE FOR ADDITIONAL PROTECTIVE SHIELDING OR WORK PLATFORMS.

ALL FORMWORK INCLUDING STAY-IN-PLACE FORMS SHALL BE MORTAR TIGHT.

WHILE PLACING DECK, DECK OVERHANG AND PARAPET CONCRETE OVER LANES OPEN TO TRAFFIC, NO CLOSURE OR DETOURS WILL BE ALLOWED DURING THESE OPERATIONS.

THE MAINTENANCE OF TRAFFIC REQUIRED FOR THE INSTALLATION OF THESE ITEMS WILL BE PAID UNDER THE MAINTENANCE OF TRAFFIC UNIT BID ITEMS. CONTRACTOR SHALL ADHERE TO THE TRAFFIC CONTROL PLAN, DELAWARE MUTCD, AND TRAFFIC LANE CLOSURE AND WORK RESTRICTIONS PROVIDED IN THE CONTRACT DOCUMENTS.

30/15/2019 10:14:00 AM 1-714-NB-001.dgn

**ADDENDA / REVISIONS**

NOTE REVISION	J. EBERLE 10/11/2019

**NOT TO SCALE**

**BR 1-714A ON  
CHAPMAN ROAD OVER I-95 NB**

CONTRACT	BRIDGE NO.	<b>1-714A</b>
T201507402	DESIGNED BY:	R. GANOVSKA
COUNTY	CHECKED BY:	R. DOMINICK
NEW CASTLE		

**BRIDGE NOTES**

**BR 1-714A  
BD-01**

SECTION
AEC
SHEET NO.
65