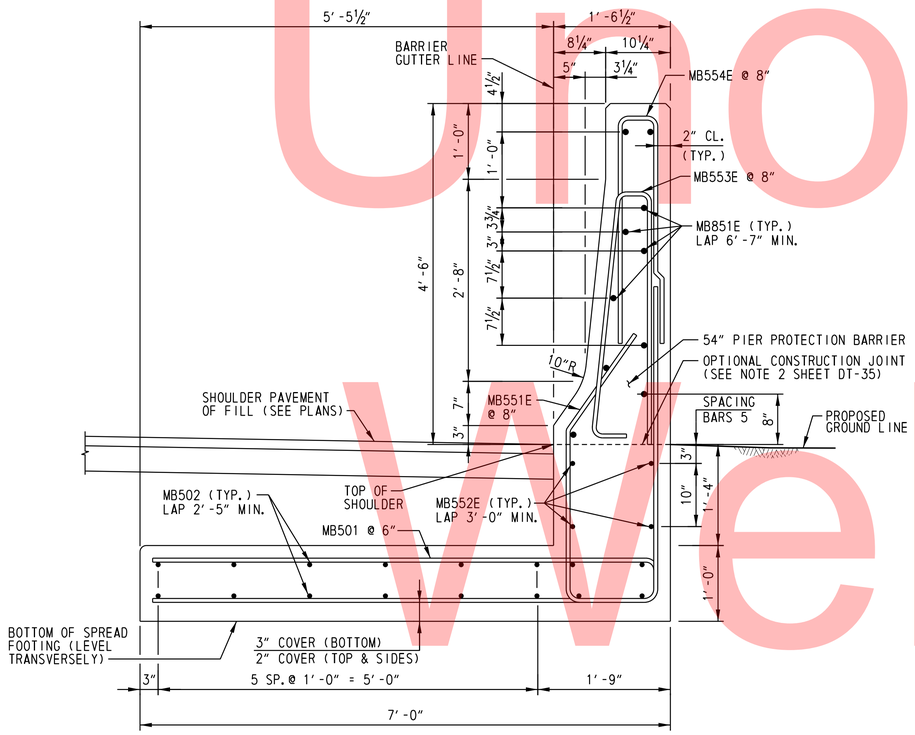
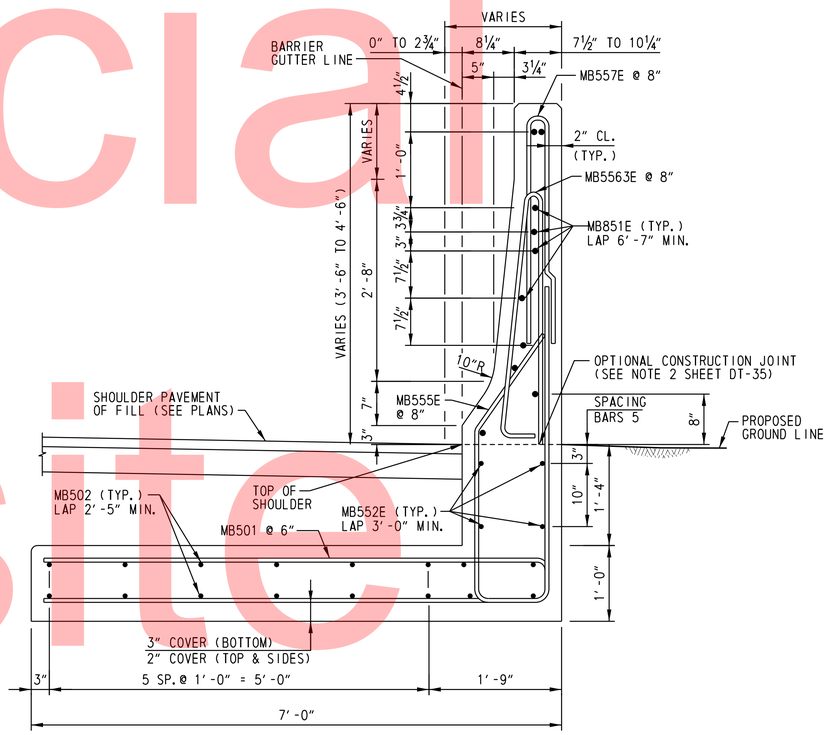


SECTION A-A

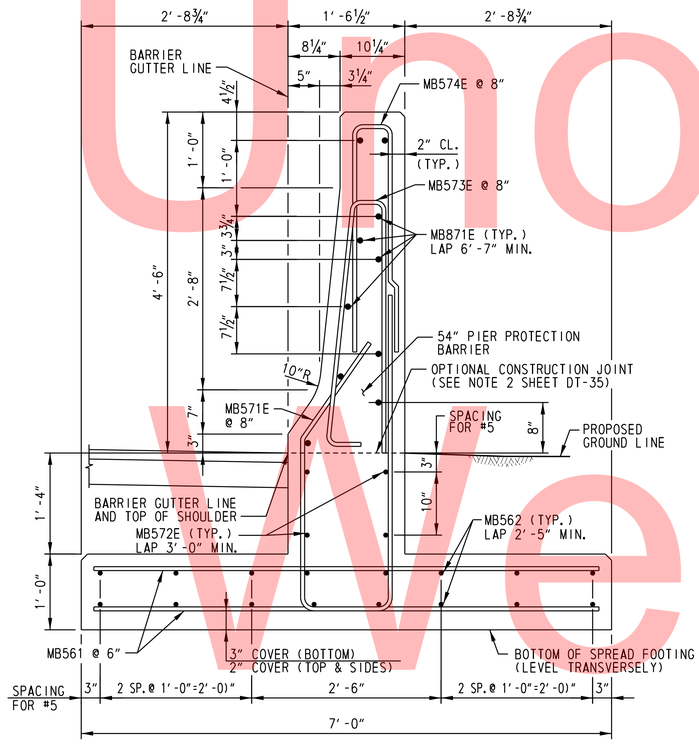


SECTION B-B

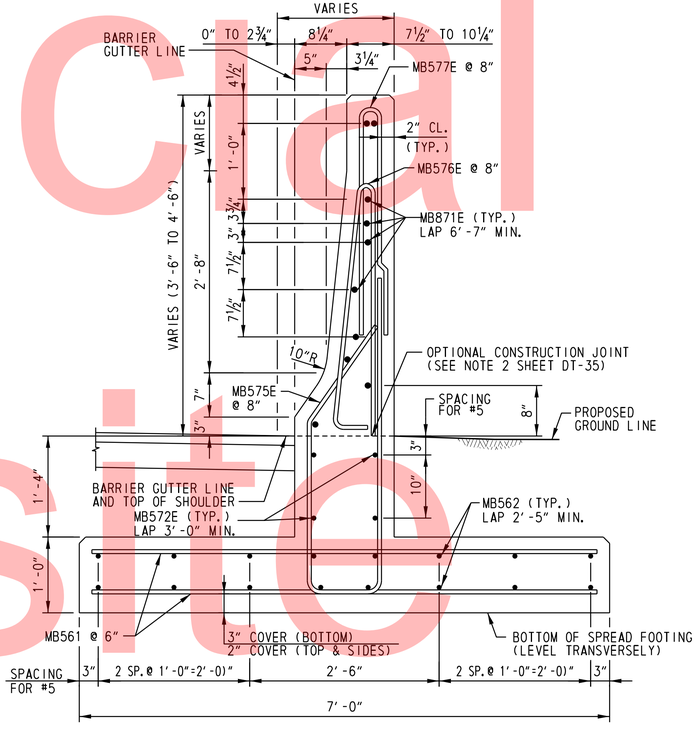
MEDIAN BARRIER SECTIONS

DT-37

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 675 / 678	CONSTRUCTION DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: CGG	SHEET NO. 101
					CHECKED BY: BPH	TOTAL SHTS. 481



SECTION C-C

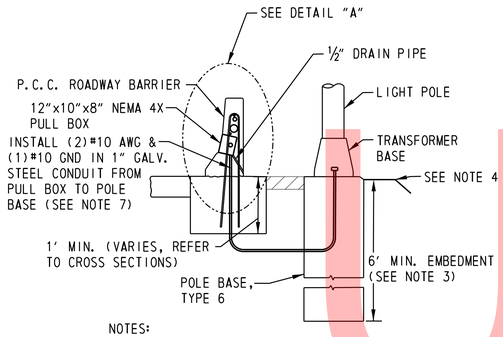


SECTION D-D

PLOTTED BY: MONTES DATE: 2/27/2015
FILE LOCATION: Q:\NDE\060272_020_I-95_AND_SR_141_INTE\CADD\DT.DGN [SHEET: DT38]

MEDIAN BARRIER SECTIONS — DT-38

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 675 / 678	CONSTRUCTION DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: CGG	SHEET NO. 102
					CHECKED BY: BPH	TOTAL SHTS. 481

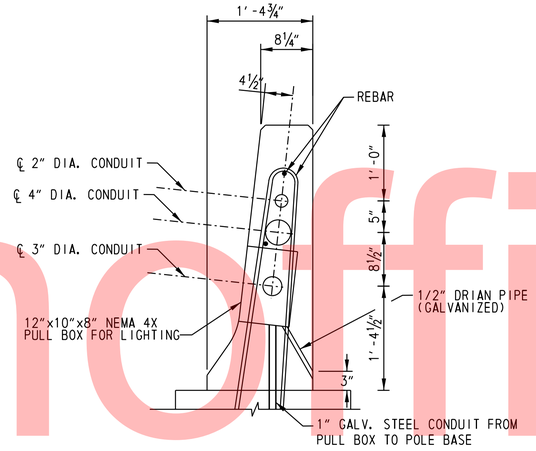


NOTES:

1. ADDITIONAL CONCRETE AND REINFORCING STEEL TO ACHIEVE 6' EMBEDMENT SHALL BE INCIDENTAL TO THE ITEM 'POLE BASE, TYPE 6'.
2. INSTALL (2) INLINE CONNECTORS (PHASE WIRE FUSED AT 5 AMPS) IN POLE BASE: CONNECT GROUND CABLE TO GROUND LUG.
3. LIGHT POLES LST-24 AND LST-29 WILL REQUIRE STANDARD TYPE 6 FOUNDATIONS. LIGHT POLES LST-8 AND LST-25 WILL REQUIRE SPECIAL TYPE 6 FOUNDATIONS 9' IN DEPTH, WITH THE TOP OF THE FOUNDATION LEVEL WITH THE PROPOSED FINISHED GRADE. AT THESE TWO LOCATIONS, THE FOUNDATION SHALL BE INSTALLED AS PER THE DELDOT STANDARD POLE BASE 6 DETAIL, BUT SHALL INCLUDE 6-#4 HORIZONTAL REINFORCING BARS, AND 8-#8 VERTICAL REINFORCING BARS EQUALLY SPACED.
4. A 6:1 SLOPE SHALL BE PROVIDED FOR 3' BEYOND THE TYPE 6 FOUNDATION AT LIGHT POLE BASES LOCATED BEHIND THE BARRIER.
5. ALL ADDITIONAL REINFORCING SHALL BE CONTINUOUS AT NEMA 4X BOX, ADJUST PARAPET REINFORCING AS REQUIRED TO CLEAR NEMA 4X BOX.
6. FOR PARAPET REINFORCING DETAILS SEE SHEET DT-01 SECTION A-A.
7. THE 3-#10 AWG CABLES SHALL BE INCIDENTAL TO THE INSTALLATION OF THE LIGHT POLE. THE 1" GALVANIZED STEEL CONDUIT RUNNING FROM THE NEMA 4X BOX TO THE POLE BASE SHALL BE INCIDENTAL TO THE COST OF THE BARRIER WALL/RETAINING WALL PAY ITEMS.

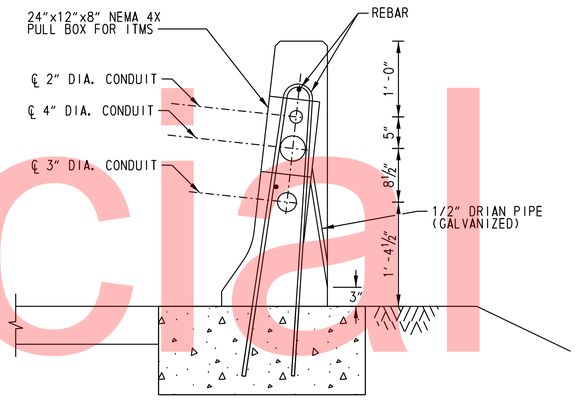
LP-8,24,25,29 INSTALLATION DETAIL

N.T.S.



DETAIL "A" CONDUIT PLACEMENT

N.T.S.



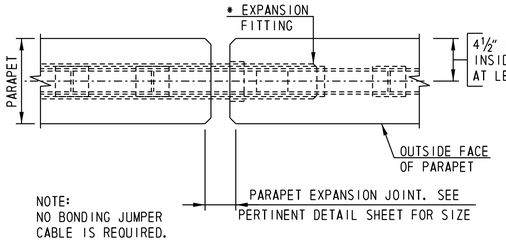
NOTES:

1. ALL REINFORCING SHALL BE CONTINUOUS AT NEMA 4X BOX, ADJUST PARAPET REINFORCING AS REQUIRED TO CLEAR NEMA 4X BOX.
2. FOR PARAPET REINFORCING DETAILS SEE SHEET DT-01 SECTION A-A.

SECTION THRU ITMS PULL BOX

N.T.S.

* EXPANSION FITTINGS FOR USE WITH RIGID GALVANIZED STEEL CONDUIT SHALL CONSIST OF A MALLEABLE IRON HEAD AND STEEL SLEEVE WHICH SHALL BE HOT -DIPPED GALVANIZED AND ASSEMBLED WITH A WATERTIGHT PACKING GLAND, AND INSULATED BUSHING, PRESSURE RING AND GASKET AND TINNED-COPPER BOND TO ASSURE CONTINUITY OF GROUND. THE FITTING SHALL PROVIDE FOR MOVEMENT OF ROADWAY JOINTS.



CONDUIT EXPANSION JOINT DETAIL

N.T.S.

NOTES:

1. PLACE EXPANSION JOINT IN PIPE CONDUIT AND PARAPET AT EVERY EXPANSION JOINT.
2. #10 GALVANIZED PULL WIRE TO BE PROVIDED FOR FULL LENGTH OF CONDUIT AND LEFT IN PLACE.
3. ALL PIPE AND EXPANSION JOINT MUST BE U.L. APPROVED FOR ENCASEMENT IN CONCRETE.
4. FITTINGS TO BE GALVANIZED STEEL.
5. CONDUIT, FITTINGS, EXPANSION FITTING AND APPURTENANCES SHALL BE INCIDENTAL TO THE COST OF THE BARRIER WALL/RETAINING WALL PAY ITEMS.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

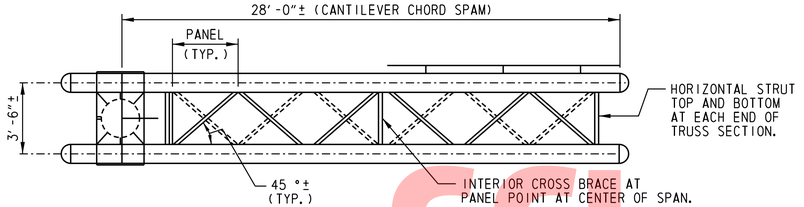
NOT TO SCALE

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

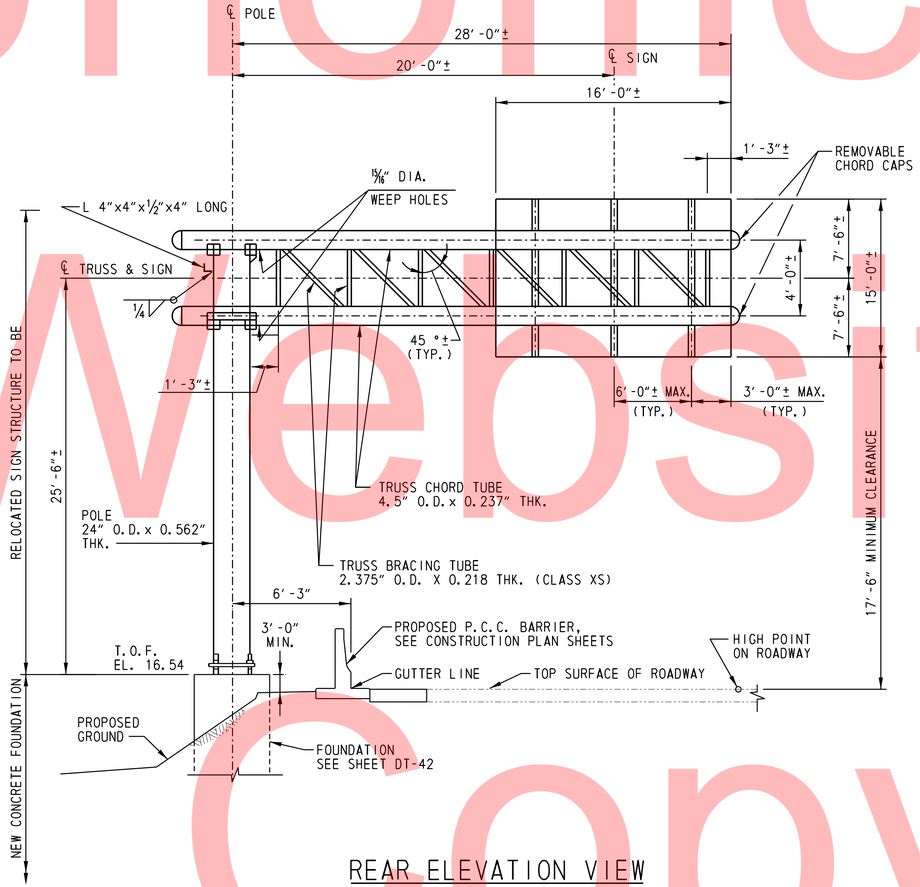
CONTRACT T201109002
COUNTY NEW CASTLE
BRIDGE NO. 675 / 678
DESIGNED BY: CGG
CHECKED BY: BPH

CONSTRUCTION DETAILS

DT-39
SHEET NO. 103
TOTAL SHTS. 481



PLAN VIEW
N.T.S.



REAR ELEVATION VIEW
N.T.S.

(GUSSET PLATE NOT SHOWN FOR CLARITY)

ELEVATION OF RELOCATED BOX TRUSS CANTILEVER SIGN STRUCTURE

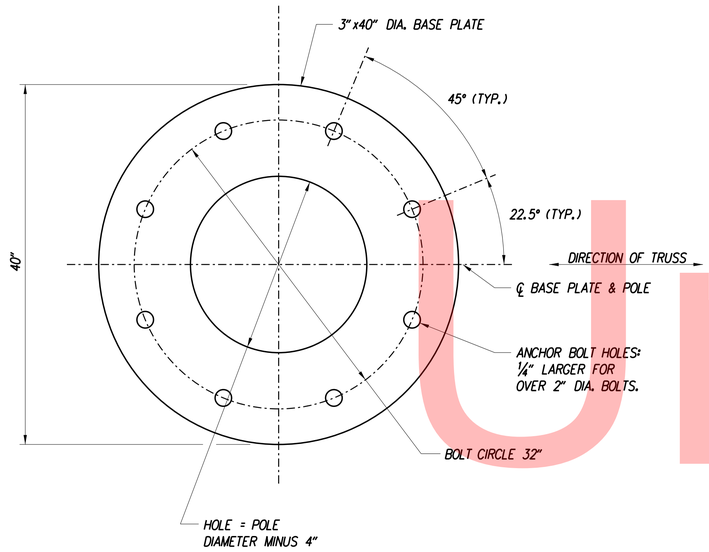
NOTES:

1. SIGN STRUCTURE IS ANALYZED IN ACCORDANCE WITH 2009 AASHTO "STANDARD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY, SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" 5TH EDITION, WITH 2010 AND 2011 INTERIMS. SIGN STRUCTURE MEETS FATIGUE CATEGORY II.
2. EXISTING SIGN STRUCTURE SHALL BE RELOCATED AND THE LOCATION SHALL BE AS SHOWN IN THE SIGNING, STRIPING AND CONDUIT PLANS. SEE SPECIAL PROVISION FOR ADDITIONAL REQUIREMENTS AND THE COST IS INCIDENTAL TO ITEM 605525.
3. ALL DIMENSIONS AFFECTED BY THE GEOMETRICS AND PROPOSED FOUNDATION SHALL BE CHECKED IN THE FIELD BY THE CONTRACTOR BEFORE ANY CONSTRUCTION IS DONE AND BEFORE ANY-MATERIAL IS ORDERED OR FABRICATED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY THE ENGINEER WITH ALL FIELD DIMENSIONS REQUIRED TO CHECK DETAIL DRAWINGS. THE ± MARKS SHOWN WITH DIMENSIONS AND STATIONS DO NOT INDICATE ANY DEGREE OF PRECISION. THESE MARKS (±) INDICATE EXISTING DIMENSIONS AND STATIONS THAT MAY VARY AND DO REQUIRE FIELD VERIFICATION BY THE CONTRACTOR.
4. SEE DT-41 AND DT-42 FOR FOUNDATION, ANCHOR BOLT AND ANCHOR PLATE DETAILS.
5. REMOVE THE SIGN PANEL FROM THE STRUCTURE PRIOR TO RELOCATION. AFTER RELOCATION, INSTALL SIGN PANEL WITH NEW GALVANIZED HARDWARE. CONFIRMING TO ASTM A153. COST FOR REMOVAL AND REINSTALLATION OF SIGN PANEL INCLUDING MATERIAL, LABOR AND HARDWARE INCIDENTAL TO ITEM 605525.
6. SEE DT-16 FOR GENERAL NOTES.

PLOTTED BY: MONTES DATE: 2/27/2015
[FILE LOCATION: Q:\NDE\060272_020_I-95_AND_SR_141_INTE\CADD\DT.DGN [SHEET: DT40]

BOX TRUSS CANTILEVER SIGN STRUCTURE — DT-40

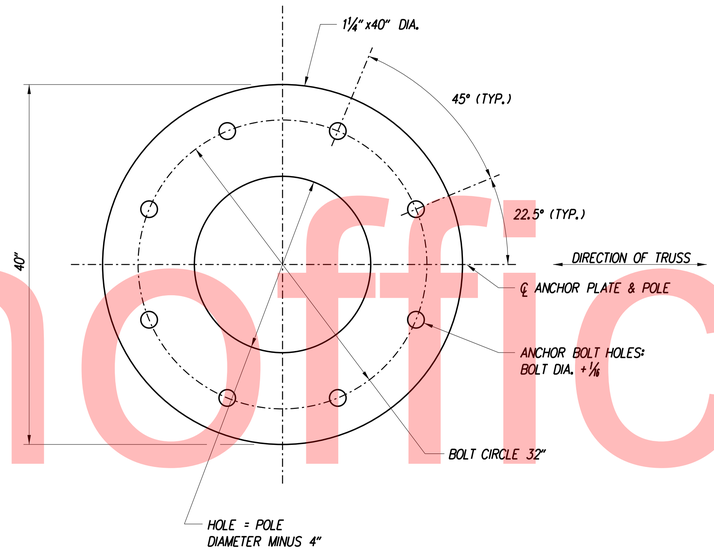
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 675 / 678	CONSTRUCTION DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: P.D.R.	SHEET NO. 104
					CHECKED BY: F.F.B.	TOTAL SHTS. 481



PLAN - EXISTING BASE PLATE *

N.T.S.

* PROVIDE FOR INFORMATION PURPOSE ONLY.
SEE DT-40 NOTE 3 FOR ADDITIONAL REQUIREMENTS.

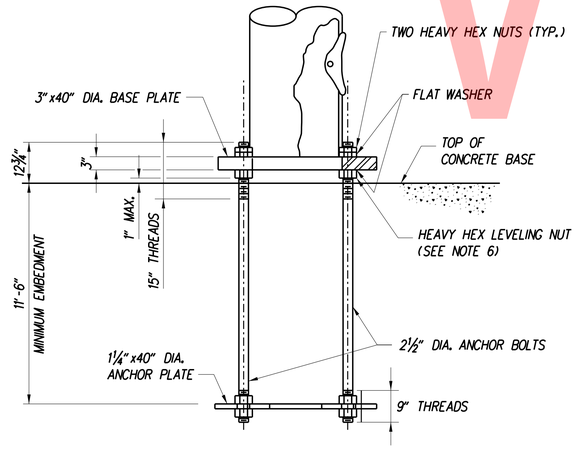


PLAN - ANCHOR PLATE AND TEMPLATE

N.T.S.

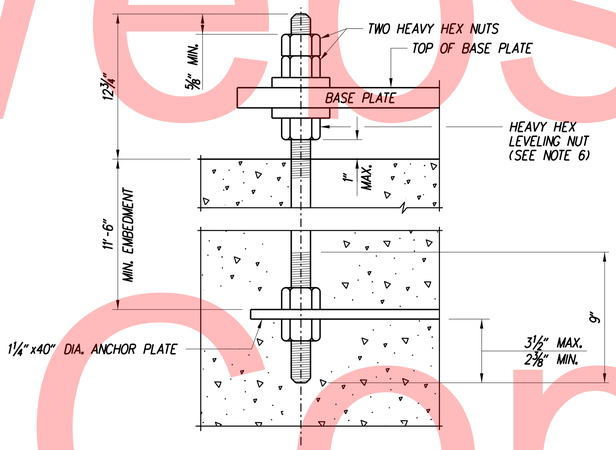
NOTES:

1. GALVANIZE ENTIRE LENGTH OF ANCHOR BOLTS.
2. ALL ANCHOR BOLTS SHALL BE PLUMB AFTER FOUNDATION INSTALLATION. STEEL TEMPLATE SHALL BE USED TO SET ANCHOR BOLTS.
3. BASE PLATE SHALL BE IN FULL CONTACT WITH ALL FLAT WASHERS.
4. ALL ANCHOR BOLT NUTS SHALL BE TIGHTENED USING TURN OF THE NUT METHOD. (30° MIN. TO 45° MAX. TURN AFTER SNUG TIGHT.
5. GROUT SHALL NOT BE PLACED BETWEEN THE BASE PLATE AND CONCRETE BASE.
6. PROVIDE RODENT SCREEN AROUND LEVELING NUTS.
7. SEE SHEET DT-16 FOR GENERAL NUTS.
8. SEE SHEET DT-42 FOR FOUNDATION DETAIL.



ELEVATION - ANCHOR PLATE AND TEMPLATE

N.T.S.



ANCHOR BOLT DETAIL

N.T.S.

SIGN STRUCTURE BASE PLATE AND ANCHORAGE

DT-41

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

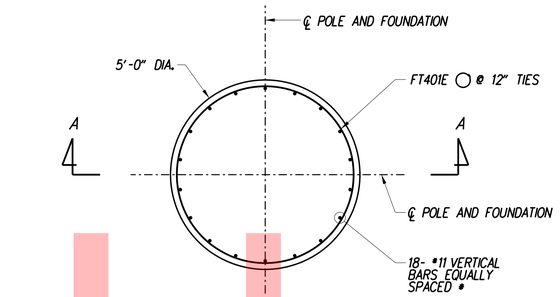
I-95 AND SR 141 INTERCHANGE,
RAMPS G & F IMPROVEMENTS

CONTRACT T201109002
COUNTY NEW CASTLE
BRIDGE NO. 675 / 678
DESIGNED BY: P.D.R.
CHECKED BY: F.F.B.

CONSTRUCTION DETAILS

SHEET NO. 105
TOTAL SHTS. 481

PLOTTED BY: MONTES DATE: 2/27/2015
FILE LOCATION: Q:\NDE\060272_020_I-95_AND_SR_141_INTE\CADD\DT.DGN [SHEET: DT41]

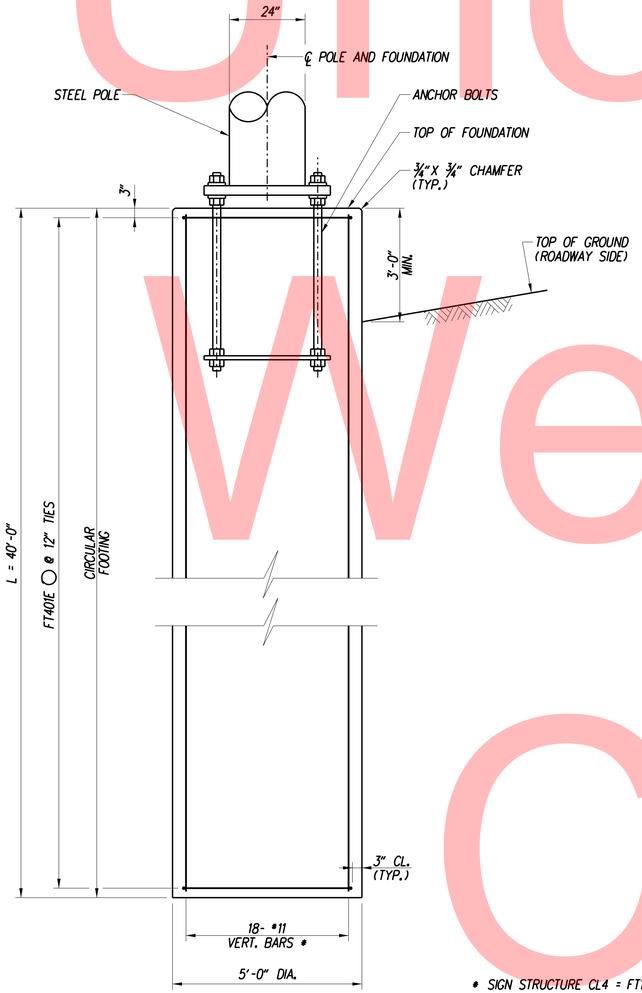


FOUNDATION PLAN

SCALE: ½" = 1'-0"

NOTE:

ANCHOR BOLTS NOT SHOWN FOR CLARITY.



SECTION A-A

SCALE: ½" = 1'-0"

SIGN STRUCTURE CL4 = FT1101E

NOTES:

1. COST FOR SIGN STRUCTURE FOUNDATION SHALL BE INCIDENTAL TO ITEM 605525 (RELOCATING SIGN SUPPORT STRUCTURE). SEE SPECIAL PROVISIONS.
2. APPROVED METAL SPACERS SHALL BE ATTACHED TO THE TOP AND BOTTOM REINFORCING CAGE TO ENSURE THAT THE REQUIRED CLEAR DISTANCE TO THE REINFORCING CAGE IS MAINTAINED.
3. IF DRILLED SHAFT EXCAVATION IS UNSHORED (TEMPORARY CASING) CONCRETE SHALL BE PLACED IN THE SAME WORKING DAY AS EXCAVATION TAKES PLACE.
4. IT IS THE RESPONSIBILITY OF THE PROSPECTIVE CONTRACTOR AND SUBCONTRACTORS TO INSPECT THE SITE IN THE FIELD WHERE DRILLED SHAFT WILL BE BUILT PRIOR TO SUBMITTING THEIR PROPOSALS, TO DETERMINE THE ACCESSIBILITY TO THE VARIOUS LOCATIONS, ASCERTAIN THE CONDITIONS UNDER WHICH THE WORK WILL BE CONDUCTED, AND ESTABLISH THE EQUIPMENT THAT WILL BE REQUIRED TO EXPEDITIOUSLY PERFORM THE WORK.
5. SEE SHEET DT-16 FOR GENERAL NOTES.
6. SEE SHEET DT-40 FOR CANTILEVER STRUCTURE NOTES.
7. SEE SHEET DT-41 FOR BASE PLATE AND ANCHORAGE DETAILS.

PLOTTED BY: MONTES DATE: 2/27/2015
FILE LOCATION: Q:\NDE\060272_020_I-95_AND_SR_141_INTE\CADD\DT.DGN [SHEET: DT42]

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

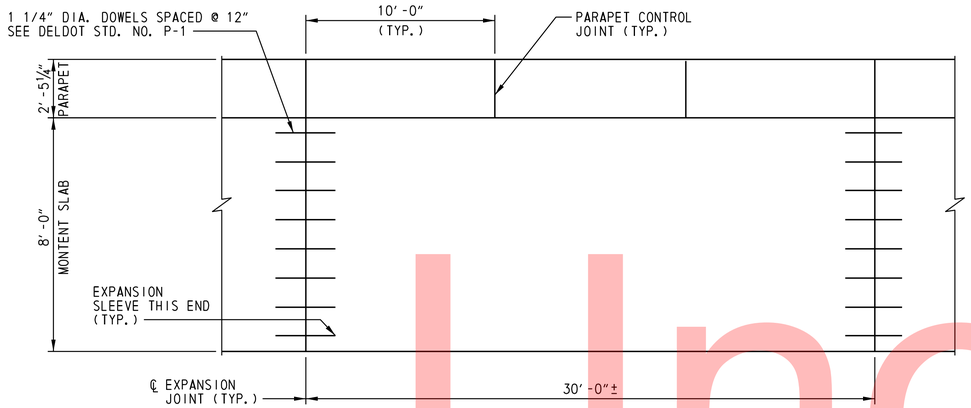
I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	T201109002
COUNTY	NEW CASTLE
BRIDGE NO.	675 / 678
DESIGNED BY:	P.D.R.
CHECKED BY:	F.F.B.

CONSTRUCTION DETAILS

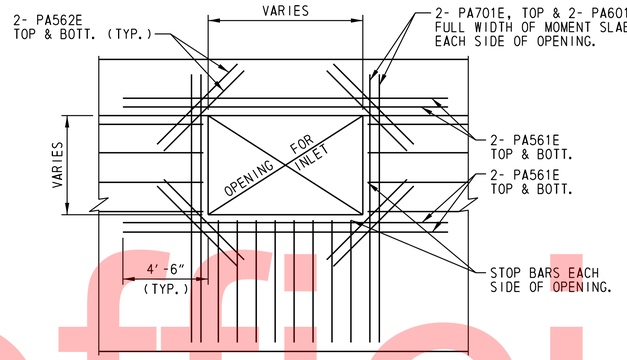
SIGN STRUCTURE FOUNDATIONS

DT-42	
SHEET NO.	106
TOTAL SHTS.	481



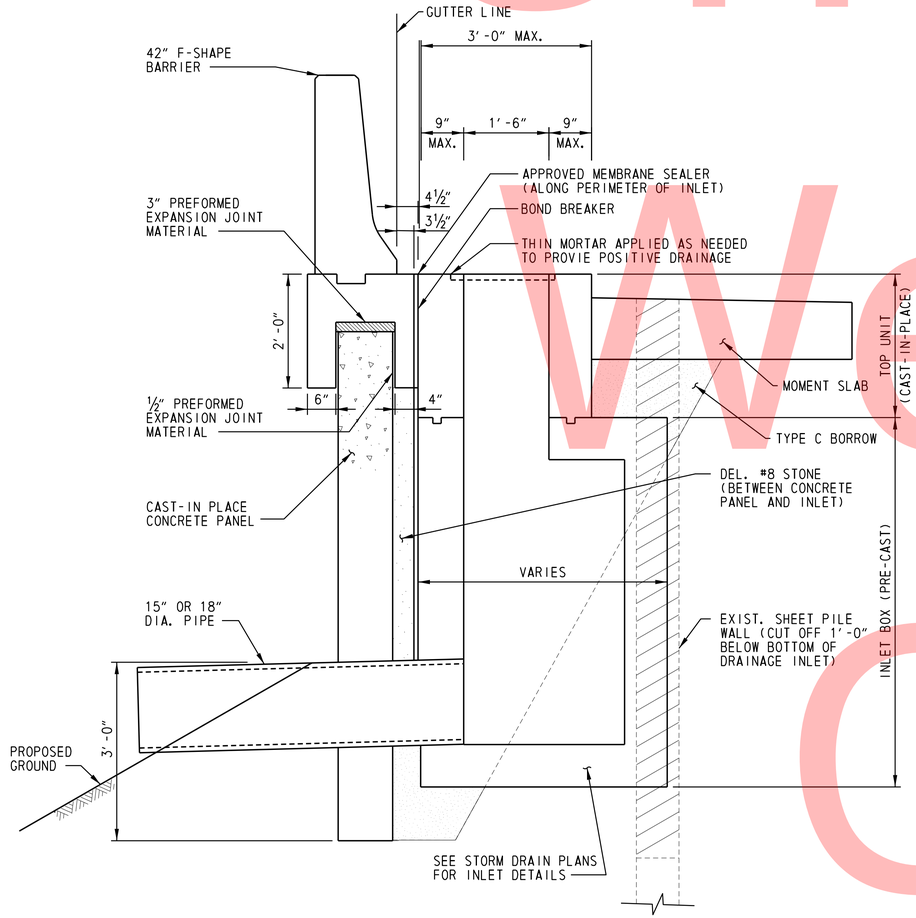
MOMENT SLAB

N.T.S.



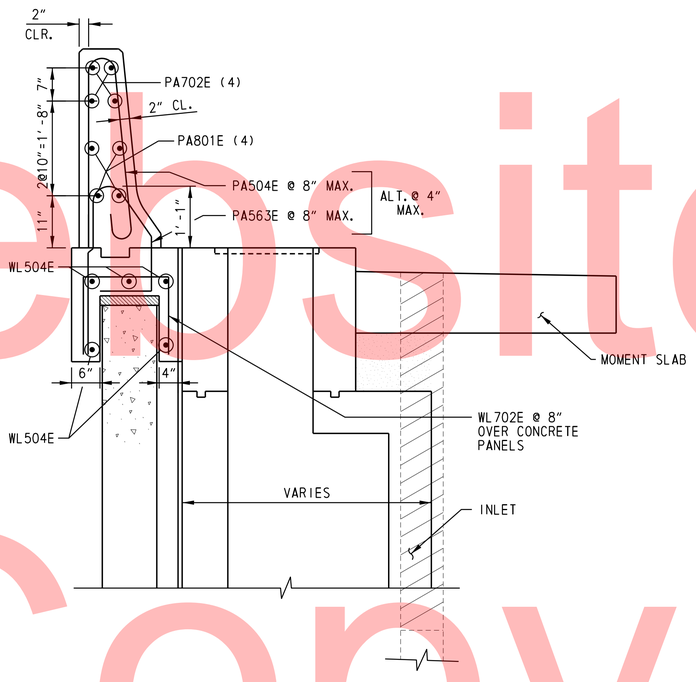
MOMENT SLAB PLAN AT INLET

N.T.S.



WALL SECTION AT DRAINAGE INLET

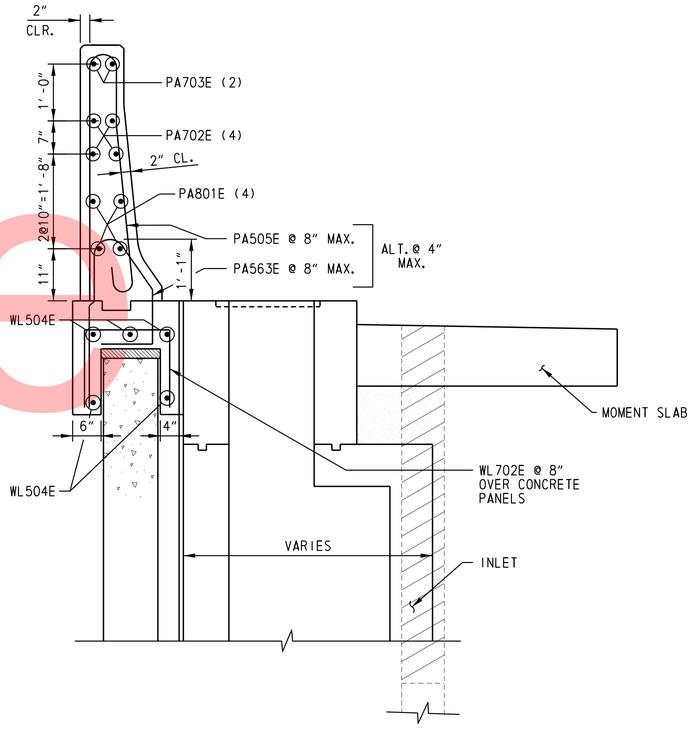
N.T.S.



42" F-SHAPE BARRIER

WALL SECTION AT DRAINAGE INLET - REINFORCING

N.T.S.



54" F-SHAPE BARRIER

WALL SECTION AT DRAINAGE INLET - REINFORCING

N.T.S.

WALL SECTION AT DRAINAGE INLET

DT-43

PLOTTED BY: MONTES DATE: 2/27/2015
FILE LOCATION: Q:\NDE\060272_020_I-95_AND_SR_141_INTE\CADD\DT.DGN [SHEET: DT43]

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

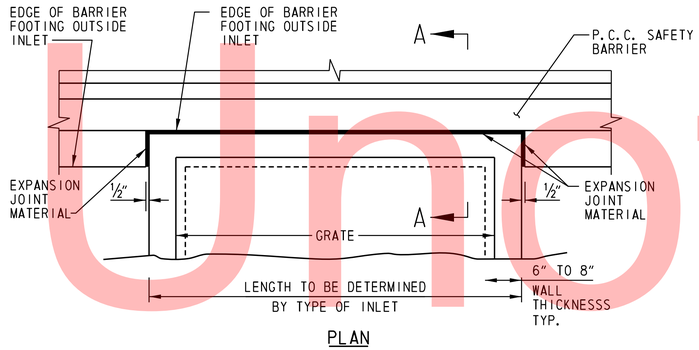
NOT TO SCALE

I-95 AND SR 141 INTERCHANGE,
RAMPS G & F IMPROVEMENTS

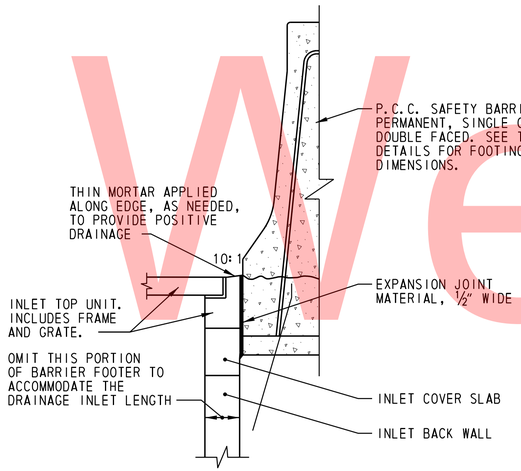
CONTRACT T201109002
COUNTY NEW CASTLE
BRIDGE NO. 675 / 678
DESIGNED BY: P.D.R.
CHECKED BY: F.F.B.

CONSTRUCTION DETAILS

SHEET NO. 107
TOTAL SHTS. 481



PLAN



SECTION A-A

NOTES:
1. THE COST FOR THE THIN MORTAR AND EXPANSION JOINT MATERIAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE DRAINAGE INLET ITEM.
2. TO BE PAID UNDER ITEM 708512, DRAINAGE INLET, SPECIAL I.

DRAINAGE INLET DETAIL AT BARRIER

N. T. S.

PLOTTED BY: MONTES DATE: 2/27/2015
FILE LOCATION: Q:\NDE\060272_020_I-95_AND_SR_141_INTE\CADD\DT.DGN [SHEET: DT44]

DRAINAGE INLET DETAIL AT BARRIER — DT-44

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT T201109002	BRIDGE NO. 675 / 678	SHEET NO. 108
COUNTY NEW CASTLE	DESIGNED BY: P.D.R.	TOTAL SHTS. 481
	CHECKED BY: F.F.B.	

CONSTRUCTION DETAILS

① ANY MARK NUMBER WITH SUFFIX 'E' DENOTES EPOXY COATED REINFORCING STEEL.

② ALL MARK 'LOCATION PREFIXES' SHALL CONSIST OF TWO LETTERS AND ARE AS FOLLOWS: AB = ABUTMENT, AS = APPROACH SLAB, BC = BOX CULVERT, BW = BACKWALL, CL = COLUMN, DK = DECK, DL = DOWEL, FT = FOOTING, HW = HEADWALL, MS = MISC. BARS, PA = PARAPET, PR = PIER, SC = SHEETPILE CAP, SL = SLAB, TW = TOEWALL, WL = WALL (UNIQUE LOCATION), WW = WINGWALL

SPECIFICATIONS					BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)										
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O
MEDIAN BARRIER AT I-295 N.B AND BRIDGE NO. 675															
240	5	13-11 0	MB501	17		6-8 0	0-7 0	6-8 0							
48	5	30-0 0	MB502	STR											
16	5	37-6 0		STR											
150	5	9-1 0	MB551E	16	4-2 0	1-2 2	2-3 2	1-5 0				0-10 0		1-1 3	
12	5	30-0 0	MB552E	STR											
4	5	39-0 0		STR											
150	5	7-6 2	MB553E	H6	0-6 0	3-3 1	0-6 1	3-3 0				3-3 0		0-3 3	
150	5	6-6 1	MB554E	17		3-0 0	0-6 1	3-0 0							
10	5	9-0 0	MB555E	16	4-2 0	1-1 2	2-3 2	1-5 0				0-10 0		1-1 3	
10	5	8-11 0		16	4-2 0	1-0 2	2-3 2	1-5 0				0-10 0		1-1 3	
10	5	8-10 0		16	4-2 0	0-11 2	2-3 2	1-5 0				0-10 0		1-1 3	
10	5	7-8 3	MB556E	H7	0-6 0	3-3 1	0-8 2	3-3 0		0-2 3		3-3 0		0-3 3	
10	5	7-7 1		H7	0-6 0	3-3 1	0-7 0	3-3 0		0-2 1		3-3 0		0-3 3	
10	5	7-5 3		H7	0-6 0	3-3 1	0-5 2	3-3 0		0-1 3		3-3 0		0-3 3	
10	5	6-3 0	MB557E	S11		6-3 0						3-0 0		0-2 3	
10	5	6-2 2		S11		6-2 2						3-0 0		0-2 1	
10	5	6-2 0		S11		6-2 0						3-0 0		0-1 3	
40	8	30-0 0	MB851E	STR											
10	8	26-4 0		STR											
MEDIAN BARRIER AT I-95 N.B AND BRIDGE NO. 675															
516	5	6-8 0	MB561	STR											
64	5	30-0 0	MB562	STR											
16	5	18-6 0		STR											
164	5	9-1 0	MB571E	16	4-2 0	1-2 2	2-3 2	1-5 0				0-10 0		1-1 3	
16	5	30-0 0	MB572E	STR											
4	5	20-9 0		STR											
164	5	7-6 2	MB573E	H6	0-6 0	3-3 1	0-6 1	3-3 0				3-3 0		0-3 3	
164	5	6-6 1	MB574E	17		3-0 0	0-6 1	3-0 0							
10	5	9-0 0	MB575E	16	4-2 0	1-1 2	2-3 2	1-5 0				0-10 0		1-1 3	
10	5	8-11 0		16	4-2 0	1-0 2	2-3 2	1-5 0				0-10 0		1-1 3	
10	5	8-10 0		16	4-2 0	0-11 2	2-3 2	1-5 0				0-10 0		1-1 3	
10	5	7-8 3	MB576E	H7	0-6 0	3-3 1	0-8 2	3-3 0		0-2 3		3-3 0		0-3 3	
10	5	7-7 1		H7	0-6 0	3-3 1	0-7 0	3-3 0		0-2 1		3-3 0		0-3 3	
10	5	7-5 3		H7	0-6 0	3-3 1	0-5 2	3-3 0		0-1 3		3-3 0		0-3 3	

SPECIFICATIONS					BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)										
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O
10	5	6-3 0	MB577E	S11		6-3 0						3-0 0		0-2 3	
10	5	6-2 2		S11		6-2 2						3-0 0		0-2 1	
10	5	6-2 0		S11		6-2 0						3-0 0		0-1 3	
40	8	30-0 0	MB871E	STR											
10	8	35-3 0		STR											
MEDIAN BARRIER AT I-295 N.B. AND BRIDGE NO. 678															
231	5	13-11 0	MB501	17		6-8 0	0-7 0	6-8 0							
48	5	30-0 0	MB502	STR											
16	5	32-6 0		STR											
144	5	9-1 0	MB551E	16	4-2 0	1-2 2	2-3 2	1-5 0				0-10 0		1-1 3	
12	5	30-0 0	MB552E	STR											
4	5	34-6 0		STR											
144	5	7-6 2	MB553E	H6	0-6 0	3-3 1	0-6 1	3-3 0				3-3 0		0-3 3	
144	5	6-6 1	MB554E	17		3-0 0	0-6 1	3-0 0							
10	5	9-0 0	MB555E	16	4-2 0	1-1 2	2-3 2	1-5 0				0-10 0		1-1 3	
10	5	8-11 0		16	4-2 0	1-0 2	2-3 2	1-5 0				0-10 0		1-1 3	
10	5	8-10 0		16	4-2 0	0-11 2	2-3 2	1-5 0				0-10 0		1-1 3	
10	5	7-8 3	MB556E	H7	0-6 0	3-3 1	0-8 2	3-3 0		0-2 3		3-3 0		0-3 3	
10	5	7-7 1		H7	0-6 0	3-3 1	0-7 0	3-3 0		0-2 1		3-3 0		0-3 3	
10	5	7-5 3		H7	0-6 0	3-3 1	0-5 2	3-3 0		0-1 3		3-3 0		0-3 3	
10	5	6-3 0	MB557E	S11		6-3 0						3-0 0		0-2 3	
10	5	6-2 2		S11		6-2 2						3-0 0		0-2 1	
10	5	6-2 0		S11		6-2 0						3-0 0		0-1 3	
40	8	30-0 0	MB851E	STR											
10	8	21-9 0		STR											

SPECIFICATIONS					BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)										
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O
MEDIAN BARRIER AT I-95 N.B. AND BRIDGE NO. 678															
231	5	13-11 0	MB501	17		6-8 0	0-7 0	6-8 0							
48	5	30-0 0	MB502	STR											
16	5	32-6 0		STR											
144	5	9-1 0	MB551E	16	4-2 0	1-2 2	2-3 2	1-5 0				0-10 0		1-1 3	
12	5	30-0 0	MB552E	STR											
4	5	34-6 0		STR											
144	5	7-6 2	MB553E	H6	0-6 0	3-3 1	0-6 1	3-3 0				3-3 0		0-3 3	
144	5	6-6 1	MB554E	17		3-0 0	0-6 1	3-0 0							
10	5	9-0 0	MB555E	16	4-2 0	1-1 2	2-3 2	1-5 0				0-10 0		1-1 3	
10	5	8-11 0		16	4-2 0	1-0 2	2-3 2	1-5 0				0-10 0		1-1 3	
10	5	8-10 0		16	4-2 0	0-11 2	2-3 2	1-5 0				0-10 0		1-1 3	
10	5	7-8 3	MB556E	H7	0-6 0	3-3 1	0-8 2	3-3 0		0-2 3		3-3 0		0-3 3	
10	5	7-7 1		H7	0-6 0	3-3 1	0-7 0	3-3 0		0-2 1		3-3 0		0-3 3	
10	5	7-5 3		H7	0-6 0	3-3 1	0-5 2	3-3 0		0-1 3		3-3 0		0-3 3	
10	5	6-3 0	MB557E	S11		6-3 0						3-0 0		0-2 3	
10	5	6-2 2		S11		6-2 2						3-0 0		0-2 1	
10	5	6-2 0		S11		6-2 0						3-0 0		0-1 3	
40	8	30-0 0	MB851E	STR											
10	8	21-9 0		STR											

ASTM STANDARD ENGLISH REINFORCING BARS

BAR SIZE	NOMINAL DIMENSIONS: DIAMETER (INCHES)	NOMINAL DIMENSIONS: AREA (INCHES²)	NOMINAL DIMENSIONS: WEIGHT (LBS./FT.)
3	0.375	0.110	0.376
4	0.500	0.200	0.668
5	0.625	0.310	1.043
6	0.750	0.440	1.502
7	0.875	0.600	2.044
8	1.000	0.790	2.670
9	1.128	1.000	3.400
10	1.270	1.270	4.303
11	1.410	1.560	5.313
14	1.693	2.250	7.650
18	2.257	4.000	13.600

RECOMMENDED END HOOKS, APPLICABLE TO ALL GRADES

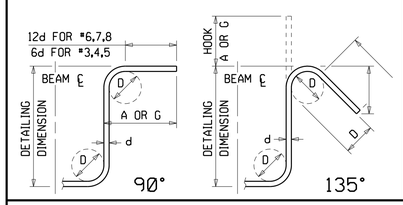
BAR SIZE	180° HOOKS: D	180° HOOKS: A OR G	180° HOOKS: J	90° HOOKS: A OR G
3	2¼"	5"	3"	6"
4	3"	6"	4"	8"
5	3¾"	7"	5"	10"
6	4½"	8"	6"	1-0"
7	5¼"	10"	7"	1-2"
8	6"	11"	8"	1-4"
9	9½"	1-3"	11¾"	1-7"
10	10¾"	1-5"	1-1¼"	1-10"
11	1-0"	1-7"	1-2¾"	2-0"
14	1-6¼"	2-3"	1-9¾"	2-7"
18	2-0"	3-0"	2-4½"	3-5"

STIRRUP AND TIE HOOKS, APPLICABLE TO ALL GRADES

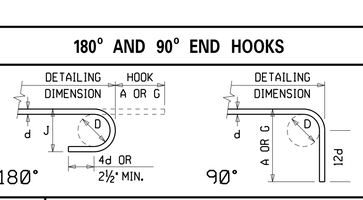
BAR SIZE	90° HOOK: D	90° HOOK: A OR G	135° HOOK: A OR G	135° HOOK: A OR G
3	1½"	4"	4"	2½"
4	2"	4½"	4½"	3"
5	2½"	6"	5½"	3¾"
6	4½"	1-0"	8"	4½"
7	5¼"	1-2"	9"	5¼"
8	6"	1-4"	10½"	6"

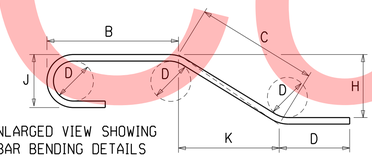
NOTES:
1. FIGURES SHOWN IN CIRCLES REPRESENT BAR BEND TYPES.
2. STANDARD BAR BENDS INCLUDE ONLY THOSE TYPES BELOW, INDICATED AS SUCH.
3. ALL DIMENSIONS OUT-TO-OUT, EXCEPT "A" AND "G" ON STD. 180° AND 135° HOOKS.
4. "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD 'ACI' HOOKS ARE TO BE USED.
5. WHERE "J" IS NOT SHOWN, "J" WILL BE KEPT EQUAL TO OR LESS THAN "H" ON TYPES 3, 5 AND 22. WHERE "J" CAN EXCEED "H", IT SHALL BE SHOWN.
6. "H" DIMENSIONS OF STIRRUPS TO BE SHOWN AS NEEDED TO FIT WITHIN THE CONCRETE.
7. UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR (EXCEPT FOR BEND TYPES 11 AND 13).
8. WHERE SLOPE DIFFERS FROM 45° OFFSET, "H" AND "K" MUST BE SHOWN.
9. WHERE BARS ARE TO BE BENT MORE ACCURATELY THAN STANDARD BENDING TOLERANCES, BENDING DIMENSIONS REQUIRING CLOSER FABRICATION SHOULD HAVE LIMITS INDICATED.
10. FOR RECOMMENDED DIAMETER "D", OF BENDS, HOOKS, ETC., REFER TO TABLE ABOVE, 'CRSI' OR 'ACI' TABLES WHERE APPLICABLE AND REQUIRED.
11. TYPE S1-S6, S11, T1-T3 AND T6-T9 APPLICABLE TO BAR SIZES #3 THROUGH #8.

STIRRUP AND TIE HOOKS

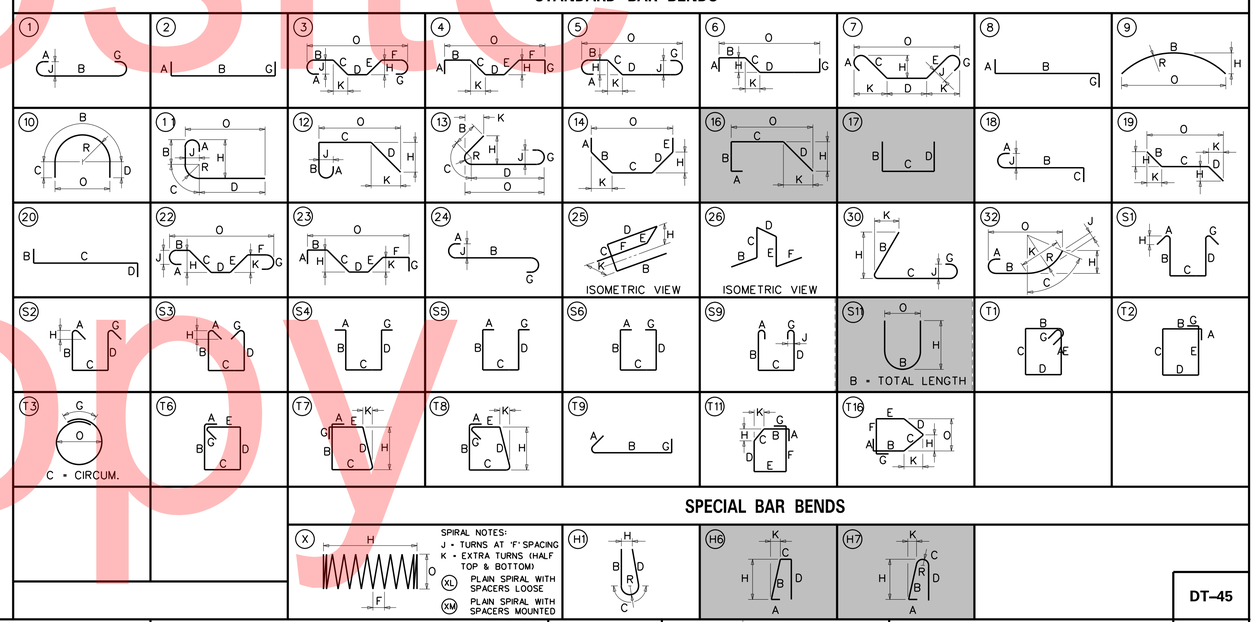


180° AND 90° END HOOKS

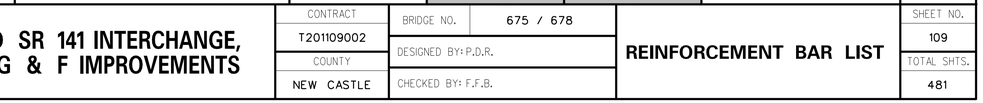




STANDARD BAR BENDS



SPECIAL BAR BENDS



DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

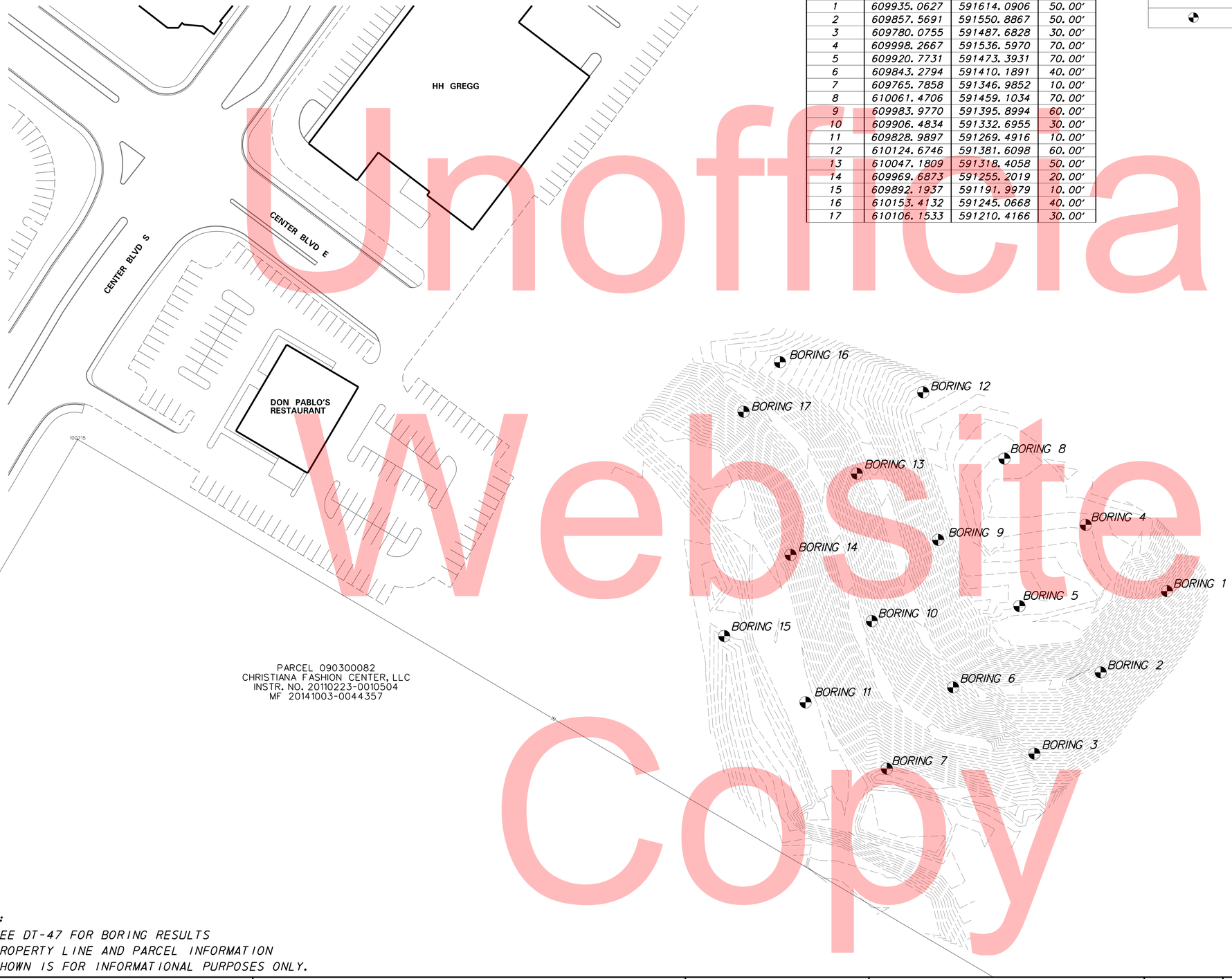
CONTRACT	BRIDGE NO.	675 / 678
T201109002	DESIGNED BY: P.D.R.	
COUNTY	CHECKED BY: F.F.B.	
NEW CASTLE		

REINFORCEMENT BAR LIST

DT-45

SHEET NO.	TOTAL SHTS.
109	481

PLOTTED BY: MONTES DATE: 2/27/2015
FILE LOCATION: Q:\NDE\0602?2_020_I-95_AND_SR_141_INTE\CADD\DT.DGN [SHEET: DT45]



BORING LOCATION SCHEDULE

NO.	NORTHING	EASTING	DEPTH
1	609935.0627	591614.0906	50.00'
2	609857.5691	591550.8867	50.00'
3	609780.0755	591487.6828	30.00'
4	609998.2667	591536.5970	70.00'
5	609920.7731	591473.3931	70.00'
6	609843.2794	591410.1891	40.00'
7	609765.7858	591346.9852	10.00'
8	610061.4706	591459.1034	70.00'
9	609983.9770	591395.8994	60.00'
10	609906.4834	591332.6955	30.00'
11	609828.9897	591269.4916	10.00'
12	610124.6746	591381.6098	60.00'
13	610047.1809	591318.4058	50.00'
14	609969.6873	591255.2019	20.00'
15	609892.1937	591191.9979	10.00'
16	610153.4132	591245.0668	40.00'
17	610106.1533	591210.4166	30.00'

LEGEND

- - - - - - -	EXISTING CONTOURS
⊕	SOIL BORING LOCATION

N

NOTES:
1. SEE DT-47 FOR BORING RESULTS
2. PROPERTY LINE AND PARCEL INFORMATION SHOWN IS FOR INFORMATIONAL PURPOSES ONLY.

STOCKPILE BORING PLAN — DT-46

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	T201109002
COUNTY	NEW CASTLE
BRIDGE NO.	675 / 678
DESIGNED BY: CGG	
CHECKED BY: BPH	

CONSTRUCTION DETAILS

SHEET NO. 110 — TOTAL SHTS. 481

PLOTTED BY: MONTES DATE: 2/27/2015
FILE LOCATION: Q:\NDE\060272_020_I-95_AND_SR_141_INTE\CADD\SP.DGN.DGN [SHEET: DT46]

STOCKPILE BORING LOG DATA

BORING NO.	DATE	NORTHING	EASTING	DEPTH 0'–10' AASHTO CLASS. / REMARKS	10'–20' AASHTO CLASS. / REMARKS	20'–30' AASHTO CLASS. / REMARKS	30'–40' AASHTO CLASS. / REMARKS	40'–50' AASHTO CLASS. / REMARKS	50'–60' AASHTO CLASS. / REMARKS	60'–70' AASHTO CLASS. / REMARKS
BORING 4	9/23/14	609998.2667	591536.5970	A-4 / F BORROW	A-4, A-6 / F BORROW	A-4, A-6, A-2-4 / A & F BORROW	A-4, A-6, A-2-4 / A,C, & F BORROW	A-4 / F BORROW	A-4, A-2-4 / A & F BORROW	A-4, A-1-b / A,C, & F BORROW
BORING 5	9/24/14	609920.7731	591473.3931	A-4 / F BORROW	A-4 / F BORROW	A-4 / F BORROW	A-4, A-2-4, A-6 / A & F BORROW	A-4, A-6, A-2-6 / A & F BORROW	A-6, A-2-6, A-4, A-4, A-1-b / A,C & F BORROW	A-4, A-1-a, A-1-b / A,C, & F BORROW
BORING 8	9/29/14	610061.4706	591459.1034	A-4 / F BORROW	A-4, A-6 / F BORROW	A-1-b, A-2-4, A-6, A-2-6 / A,C, & F BORROW	A-4, A-1-b / A,C, & F BORROW	A-4, A-6 / F BORROW	A-4, A-2-4 / A,C & F BORROW	A-4, A-2-4 / A,C, & F BORROW
BORING 12	10/06/14	610124.6746	591381.6098	A-4 / F BORROW	A-4 / F BORROW	A-4 / F BORROW	A-4 / F BORROW	A-4 / F BORROW	A-2-4, A-2-7, A-6, A-7-6 / A & F BORROW	- / -
BORING 9	10/07/14	609983.9770	591395.8994	A-4, A-6 / F BORROW	A-4, A-6 / F BORROW	A-4, A-2-4, A-6 / A & F BORROW	A-4, A-1-b, A-2-4 / A, C, F BORROW	A-4, A-2-4 / A & F BORROW	A-4, A-1-b, A-2-4 / A,C & F BORROW	- / -
BORING 6	10/08/14	609843.2794	591410.1891	A-4, A-2-4 / A & F BORROW	A-4, A-2-4, A-6 / A & F BORROW	A-4, A-2-4 / A & F BORROW	A-4, A-1-b, A-2-4 / A, C, F BORROW	- / -	- / -	- / -
BORING 15	10/08/14	609892.1937	591191.9979	A-4, A-2-4 / A & F BORROW	- / -	- / -	- / -	- / -	- / -	- / -
BORING 11	10/08/14	609828.9897	591269.4916	A-4, A-1-a, A-1-b / A, C, F BORROW	- / -	- / -	- / -	- / -	- / -	- / -
BORING 1	10/13/14	609935.0627	591614.0906	A-4 / F BORROW	A-4 / F BORROW	A-4 / F BORROW	A-4, A-6, A-2-4 / A & F BORROW	A-2-4, A-4, A-1-b / F BORROW	- / -	- / -
BORING 2	10/15/14	609857.5691	591550.8867	A-4 / F BORROW	A-4, A-6 / F BORROW	A-4, A-2-4, / F BORROW	A-4, A-2-4 / A & F BORROW	A-2-4 / A & F BORROW	- / -	- / -
BORING 3	10/15/14	609780.0755	591487.6828	A-4 / F BORROW	A-4, A-6 / F BORROW	A-4, A-1-b, A-2-4 / A, C, F BORROW	- / -	- / -	- / -	- / -
BORING 10	10/15/14	609906.4834	591332.6955	A-4, A-2-4 / F BORROW	A-4, A-2-4 / A & F BORROW	A-4, A-1-b, A-2-6, A-2-4 / A, C, F BORROW	- / -	- / -	- / -	- / -
BORING 16	10/16/14	610093.0396	591287.0465	A-4, A-2-4, A-6 / A, C, F BORROW	A-4, A-2-6 / A & F BORROW	A-4, A-6 / F BORROW	A-1-a, A-1-b, A-2-6 / A, C, F, BORROW	- / -	- / -	- / -
BORING 17	10/16/14	610042.4377	591246.0570	A-4, A-6 / F BORROW	A-4, A-6 / F BORROW	A-4, A-6 / F BORROW	- / -	- / -	- / -	- / -
BORING 13	10/20/14	610047.1809	591318.4058	A-4, A-2-4, A-2-6, A-6 / A & F BORROW	A-4, A-2-6, A-6 / A & F BORROW	A-4, A-6 / F BORROW	A-4, A-2-6 / A & F BORROW	A-1-b, A-2-6 / A, C, F BORROW	- / -	- / -
BORING 7	10/21/14	609765.7858	591346.9852	A-4 / F BORROW	- / -	- / -	- / -	- / -	- / -	- / -
BORING 14	10/21/14	609969.6873	591255.2019	A-4 / F BORROW	A-4 / F BORROW	- / -	- / -	- / -	- / -	- / -

NOTE:
1. THE DATA PROVIDED IS FOR THE STOCKPILE THAT IS AVAILABLE FOR USE ON THIS PROJECT BEHIND THE DON PABLO'S RESTAURANT IN NEWARK,DE. PLEASE REFER TO SECTION 200, NOTE 5 OF THE PROJECT NOTES FOR ADDITIONAL INFORMATION.
2. COMPLETE BORING LOGS AVAILABLE UPON REQUEST.

STOCKPILE BORING PLAN — DT-47

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT T201109002 | COUNTY NEW CASTLE | BRIDGE NO. 675 / 678 | DESIGNED BY: CGG | CHECKED BY: BPH

CONSTRUCTION DETAILS

SHEET NO. 111 | TOTAL SHTS. 481

BRIDGE PROJECT NOTES

1. LOCATION
PROPOSED SR-141 BRIDGE 1-675 OVER I-95, NEW CASTLE COUNTY, DELAWARE.

2. DESIGN CRITERIA
2012 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6th EDITION, U.S. CUSTOMARY UNITS.

3. GENERAL
PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ANSI/AASHTO/AWS D1.5-08 BRIDGE WELDING CODE AND PROJECT SPECIAL PROVISIONS. ALL DIMENSIONS ARE HORIZONTAL, EXCEPT AS NOTED. SUPERSTRUCTURE DIMENSIONS SHOWN ARE FOR A NORMAL TEMPERATURE OF 68 DEGREES FAHRENHEIT.

4. LOADING
- UNIT WEIGHTS OF MATERIALS SHALL BE IN ACCORDANCE WITH THE DELDOT BRIDGE MANUAL.
- DEAD LOAD INCLUDES 25 PSF FOR FUTURE WEARING SURFACE AND 15 PSF FOR S.I.P. FORMS (INCLUDES CONCRETE IN FORM CORRUGATIONS).
- VEHICLE LIVE LOAD SHALL BE HL-93, WHICH CONSISTS OF A DESIGN TRUCK OR TANDEM WITH DYNAMIC LOAD ALLOWANCE AND A LANE LOAD.
- BARRIERS HAVE BEEN DESIGNED FOR TEST LEVEL FOUR (TL-4).

FATIGUE DESIGN SHALL BE BASED ON THE FOLLOWING ONE DIRECTIONAL TRAFFIC VOLUMES:

FOR THERMAL LOADS, CONSIDER THE MODERATE TEMPERATURE RANGE AS STIPULATED IN THE AASHTO LRFD DESIGN SPECIFICATIONS. THE NORMAL TEMPERATURE SHALL BE CONSIDERED TO BE 68°F.

5. PORTLAND CEMENT CONCRETE
STRUCTURAL ELEMENTS OF PORTLAND CEMENT CONCRETE SHALL BE AS NOTED:
(f'c = 28 DAY COMPRESSIVE STRENGTH)
CLASS A - PARAPETS, ABUTMENT FOOTINGS, ABUTMENTS, PIER ABOVE FOOTING AND WING WALLS (f'c = 4.5 KSI)
CLASS B - PIER FOOTING (f'c = 3.0 KSI)
CLASS D - CONCRETE DECK AND APPROACH SLAB (f'c = 4.5 KSI)
MIX REQUIREMENTS SHALL CONFORM TO SECTION 812 OF THE STANDARD SPECIFICATIONS. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾" 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.

NO SLIP-FORMING OF BARRIERS IS PERMITTED, UNLESS OTHERWISE APPROVED BY THE DEPARTMENT.

6. STRUCTURAL STEEL
STEEL PLATE GIRDER TOP AND BOTTOM FLANGES (POSITIVE MOMENT REGION), STEEL PLATE WEB, STIFFENERS, SOLE PLATES, CONNECTION PLATES AND CROSS FRAMES SHALL BE ASTM A709 GRADE 50W. STEEL PLATE GIRDER TOP AND BOTTOM FLANGES (NEGATIVE MOMENT REGION ONLY) SHALL BE ASTM A709 GRADE 70W. THE ADDITIONAL REQUIREMENTS FOR CHARPY V-NOTCH TESTING OF AASHTO M270 FOR PRIMARY LOAD CARRYING MEMBERS SHALL BE INCLUDED.

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.

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)

PROVIDE WELDED STUD SHEAR CONNECTORS MANUFACTURED FROM STEEL CONFORMING TO AASHTO M 169, GRADES 1015, 1018, OR 1020, EITHER SEMI OR FULLY KILLED.

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

7. BEARING
ALL STEEL BEARINGS SHALL CONFORM TO SUBSECTION 605 OF THE STANDARD SPECIFICATIONS.

8. BAR REINFORCEMENT
REINFORCING STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60. REINFORCING STEEL SHALL HAVE A 3" 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). THE CONTRACTOR IS PERMITTED TO USE MECHANICAL COUPLERS AND THREADED INSERTS IN LIEU OF LAP SPLICES FOR THE BAR REINFORCEMENT. IF USED, THE MECHANICAL COUPLERS AND THEARDED INSERTS SHALL BE EPOXY COATED. PAYMENT FOR MECHANICAL COUPLERS AND THREADED INSERTS SHALL BE INCIDENTAL TO ITEM 604000-BAR REINFORCEMENT, EPOXY COATED. ALL BARS THAT ARE FIELD CUT SHALL HAVE THE CUTTED END EPOXY COATED. THE PAYMENT FOR ALL NECESSARY FIELD CUTTING, BENDING, AND CUTTED END EPOXY COATED SHALL BE INCIDENTAL TO ITEM 604000-BAR REINFORCEMENT, EPOXY COATED.

9. PLAN DIMENSIONS
ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND PARAPETS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EXPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

10. CONSTRUCTION JOINTS
KEYED CONSTRUCTION JOINTS SHALL BE 2 INCHES X 4 INCHES OR AS NOTED. ALL EXPOSED CONSTRUCTION JOINTS SHALL HAVE A ¾" V-NOTCH. ANY WATERSTOPS SHALL BE INCIDENTAL TO THE APPROPRIATE CONCRETE ITEM.

11. CONCRETE SEALER
SILICONE ACRYLIC CONCRETE SEALER SHALL BE APPLIED TO THE EXPOSED FACES OF BACKWALLS, ABUTMENTS, ABUTMENT SEATS, WING WALLS, PIER CAP, PIER COLUMNS, BARRIERS AND OUTSIDE FACE AND UNDERSIDE OF DECK TO FASCIA BEAM. PAYMENT UNDER ITEM *602646 - SILICONE ACRYLIC CONCRETE SEALER.

12. DECK SLAB
THE DECK SLAB THICKNESS INCLUDES ½" INTEGRAL WEARING SURFACE.

13. DEMOLITION OF EXISTING STRUCTURE
EXISTING BRIDGE SUPERSTRUCTURE SHALL BE REMOVED IN PHASES AS SHOWN ON PLAN IN ITS ENTIRETY TO ENABLE CONSTRUCTION OF THE PROPOSED BRIDGE. WINGWALLS, PIER SUPPORTS, PIER WALL, INCLUDING FOOTINGS AND ABUTMENTS SHALL BE REMOVED ENTIRELY WHEN OBSTRUCTING THE PROPOSED CONSTRUCTION OR TO A DEPTH OF THREE (3) FEET BELOW THE EXISTING GROUND LEVEL PROVIDED THAT THEY DO NOT INTERFERE WITH PROPOSED STRUCTURE. THE CONTRACTOR SHALL INSTALL PERMANENT SHEETINGS TO RETAIN THE BACKFILL OF THE PROPOSED STRUCTURE AND TO MAINTAIN THE INTEGRITY OF THE REMAINING EXISTING ABUTMENTS. THE CONTRACTOR SHALL SUBMIT A PROPOSED PLAN FOR THE PERMANENT SHEETINGS FOR APPROVAL BY THE ENGINEER. THE SUBMITTAL SHALL INCLUDE ANY DRAWINGS AND CALCULATIONS ASSOCIATED WITH THE WORK AND SHALL BE STAMPED BY A DELAWARE REGISTERED PROFESSIONAL ENGINEER. PAYMENT FOR INSTALLATION OF PERMANENT SHEETING, AS WELL AS THE MATERIALS AND WORK ASSOCIATED WITH THE SUBMITTAL, SHALL BE MADE UNDER ITEM *207501-SHEETING AND SHORING. PAYMENT FOR SUPERSTRUCTURE AND SUBSTRUCTURE REMOVAL SHALL BE UNDER ITEM *211550 - DEMOLITION OF EXISTING BRIDGE. AS-BUILT PLANS (CONTRACT * 1-1(21)-1) OF THE EXISTING STRUCTURE ARE AVAILABLE AND MAY BE OBTAINED THROUGH THE DEPARTMENT.

14. HAZARDOUS MATERIAL
THE CONTRACTOR IS ADVISED THAT THE EXISTING STRUCTURE OVER I-95 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 - DEMOLITION OF EXISTING BRIDGE.

15. PILE FOUNDATIONS
ABUTMENTS A & B WILL UTILIZE CANTILEVER ABUTMENTS ON STEEL H-PILES. THE PIER WILL UTILIZE PIER FOOTER ON STEEL H-PILES. THE ENGINEER WILL VERIFY, FROM THE TEST PILE DRIVING RESULTS, THE CAPABILITY OF THE PILE DRIVING HAMMER SELECTED BY THE CONTRACTOR. PILES SHALL BE DRIVEN TO THE MINIMUM BEARING RESISTANCE SHOWN ON PLANS.

CONTRACTOR SHALL PERFORM DYNAMIC PILE MONITORING ON THE TEST PILES AT LOCATIONS SHOWN ON PLANS AND IF DIRECTED ON SELECT BEARING PILES AT LOCATIONS AS DETERMINED BY THE ENGINEER.

ALL PILES SHALL BE HP12x53 AND SHALL CONFORM TO ASTM A709, GRADE 50.

16. TEMPORARY MOUNTED BARRIERS
THE CONTRACTOR SHALL PREPARE A WORKING DRAWING SUBMITTAL OF THE PROPOSED MEANS AND METHODS TO ANCHOR THE PORTABLE PCC STRUCTURE MOUNTED BARRIER DESIGNED FOR TL-3 IMPACT AND THE REPAIRS OF THE BOLT HOLES IN THE DECK TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL ADJUST THE LOCATION OF ANCHORS TO AVOID THE BAR REINFORCEMENT IN THE SLAB. PAYMENT INCIDENTAL TO ITEM *743013 - PORTABLE PCC STRUCTURE MOUNTED BARRIER.

17. SHEETING AND SHORING
THE CONTRACTOR SHALL SUBMIT A PROPOSED PLAN FOR SHEETING OR SHORING OF THE EXCAVATION. THE SUBMITTAL SHALL INCLUDE ANY DRAWINGS AND CALCULATIONS ASSOCIATED WITH THE WORK AND SHALL BE STAMPED BY A DELAWARE REGISTERED PROFESSIONAL ENGINEER. PAYMENT FOR SHEETING AND SHORING, AS WELL AS THE MATERIALS AND WORK ASSOCIATED WITH THE SUBMITTAL, SHALL BE MADE UNDER ITEM *207501 - SHEETING AND SHORING.

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

19. UTILITIES
DELMARVA POWER HAS AN 8" GAS MAIN IN SERVICE ATTACHED TO THE EXISTING BRIDGE. THE SERVICE WILL BE RE-ATTACHED TO THE NEW STRUCTURE. DELMARVA SHALL PROVIDE ALL LABOR AND MATERIALS FOR THE INSTALLATION OF THE NEW 8" GAS MAIN AND TRANSFER OF SERVICE AS SHOWN ON PLANS. THE CONTRACTOR SHALL PROVIDE AND INSTALL A 12" STEEL CASING IN BOTH APPROACHES, AS SHOWN ON PLANS FOR THE ENCASEMENT OF THE 8" GAS LINE. PAYMENT FOR THE PROVISION AND INSTALLATION OF 12" STEEL CASING SHALL BE UNDER ITEM *614605-STEEL CASING PIPE 12". THE CONTRACTOR SHALL COORDINATE WITH MR. TED WAUGH, TELEPHONE 302-429-3706, OF DELMARVA REGARDING THE GAS MAIN INSTALLATION. PAYMENT FOR COORDINATION SHALL BE INCIDENTAL TO ITEM *614605-STEEL CASING PIPE, 12".

20. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATIONS OF THE EXISTING PILES THAT MAY CONFLICT WITH PROPOSED PILES MARKED P-44, P-43, P-38, P-37, AND P-7 RESPECTIVELY, PRIOR THE INSTALLATION OF THE PILES. IN THE EVENT OF A CONFLICT, THE PROPOSED PILES MAY BE SHIFTED A MAXIMUM OF 1'-3" TO THE RIGHT OR LEFT TO AVOID THE EXISTING PILES. PAYMENT FOR THE DETERMINATION OF THE LOCATIONS OF THE EXISTING PILES SHALL BE INCIDENTAL TO ITEM 619040-INSTALLATION OF H PILES, HP 12X53.

21. SWEDGED ANCHOR BOLTS. BOLTS MAY BE CAST-IN-PLACE OR GROUTED IN PREFORMED (SLEEVED OR DRILLED) HOLES. SLEEVED HOLES SHALL BE CORRUGATED TO PREVENT SLIPPAGE. THE PREFORMED HOLES SHALL HAVE A DIAMETER OF AT LEAST 2" LARGER THAN THE DIAMETER OF THE BOLTS. WHEN DRILLING HOLES, DO NOT UNDER ANY CIRCUMSTANCES COME INTO CONTACT WITH THE REINFORCING BARS.

INDEX OF SHEETS

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT T201109002
COUNTY NEW CASTLE
BRIDGE NO. 1-675
DESIGNED BY: KRL
CHECKED BY: MJG & PAM

PROJECT NOTES

PN-01
SHEET NO. 112
TOTAL SHTS. 481

QUANTITIES

ITEM NUMBER	ITEM TITLE	UNIT	QUANTITY
207000	EXCAVATION AND BACKFILL FOR STRUCTURES	CY	3416
207501	SHEETING AND SHORING	LS	1
209003	BORROW TYPE 'C'	CY	2608
210000	FURNISHING BORROW TYPE 'C' FOR PIPE, UTILITY TRENCH, AND STRUCTURE BACKFILL	CY	3636
211550	DEMOLITION OF EXISTING BRIDGE	LS	1
601502	TEMPORARY PROTECTIVE SHIELD	LS	1
602003	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT FOOTING, CLASS A	CY	369
602006	PORTLAND CEMENT CONCRETE MASONRY, PIER FOOTING, CLASS B	CY	235
602007	PORTLAND CEMENT CONCRETE MASONRY, PIER ABOVE FOOTING, CLASS A	CY	93
602013	PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	CY	640
602014	PORTLAND CEMENT CONCRETE MASONRY, APPROACH SLAB, CLASS D	CY	313
602015	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT ABOVE FOOTING, CLASS A	CY	640
602017	PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	CY	83
602549	FORMLINERS	SF	3725
602646	SILICONE ACRYLIC CONCRETE SEALER	SF	6701
604000	BAR REINFORCEMENT, EPOXY COATED	LB	371000
605002	STEEL STRUCTURES	LS	1
605511	PREFABRICATED EXPANSION JOINT SYSTEM, 3"	LF	183
608000	COARSE AGGREGATE FOR FOUNDATION STABILIZATION AND SUBFOUNDATION BACKFILL	TON	110
612501	PVC PIPE, 4"	LF	24
614605	STEEL CASING PIPE, 12"	LF	90
618060	STEEL H PILES, HP 12 X 53	LF	19,620
618063	STEEL H TEST PILES, HP 12 X 53	LF	500
619040	INSTALL STEEL H PILES, HP 12 X 53	LF	19,620
619043	INSTALL STEEL H TEST PILES, HP 12 X 53	LF	500
619519	DYNAMIC PILE TESTING BY CONTRACTOR	EA	10
712005	RIPRAP, R-4	SY	340
713002	GEOTEXTILES, RIPRAP	SY	340
715000	PERFORATED PIPE UNDERDRAINS, 4"	LF	312
727507	BRIDGE SAFETY FENCE	LF	639
743013	PORTABLE PCC STRUCTURE MOUNTED SAFETY BARRIER	LF	375
743014	RELOCATE PORTABLE PCC STRUCTURE MOUNTED SAFETY BARRIER	LF	375
746538	BRIDGE ELECTRICAL SYSTEM	LS	1
760017	RUMBLE STRIPS, CONCRETE	LF	640

LOAD RATING SUMMARY

DESIGN VEHICLE	RATING FACTOR	RATING WEIGHT (TON)	CONTROLLING MEMBER	CONTROLLING POINT	LOAD EFFECT
HL-93 TRUCK TRAIN (INVENTORY)	1.06	N/A	SPAN 1: INTERIOR GIRDER	110	FLEXURE
HL-93 TANDEM TRAIN (INVENTORY)	1.20	N/A	SPAN 1: INTERIOS GIRDER	110	FLEXURE
HL-93 TRUCK (INVENTORY)	N/A	N/A	N/A	N/A	N/A
HS-20 (INVENTORY)	1.95	70.16	SPAN 1: EXTERIOR GIRDER	200	SHEAR
HL-93 TRUCK TRAIN (OPERATING)	1.37	N/A	SPAN 1: INTERIOR GIRDER	110	FLEXURE
HL-93 TANDEM TRAIN (OPERATING)	1.55	N/A	SPAN 1: INTERIOR GIRDER	110	FLEXURE
HL-93 TRUCK (OPERATING)	N/A	N/A	N/A	N/A	N/A
HS-20 (OPERATING)	2.53	90.95	SPAN 1: INTERIOR GIRDER	200	SHEAR
DE S220 & LEGAL-LANE (LEGAL)	3.01	60.13	SPAN 1: INTERIOR GIRDER	110	FLEXURE
DE S335 & LEGAL-LANE (LEGAL)	1.98	69.13	SPAN 1: INTERIOR GIRDER	110	FLEXURE
DE S437 & LEGAL-LANE (LEGAL)	1.90	69.57	SPAN 1: INTERIOR GIRDER	110	FLEXURE
DE S330 & LEGAL-LANE (LEGAL)	2.29	68.76	SPAN 1: INTERIOR GIRDER	110	FLEXURE
DE S435 & LEGAL-LANE (LEGAL)	2.03	71.17	SPAN 1: INTERIOR GIRDER	110	FLEXURE
DE S540 & LEGAL-LANE (LEGAL)	1.83	73.36	SPAN 1: INTERIOR GIRDER	110	FLEXURE

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

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

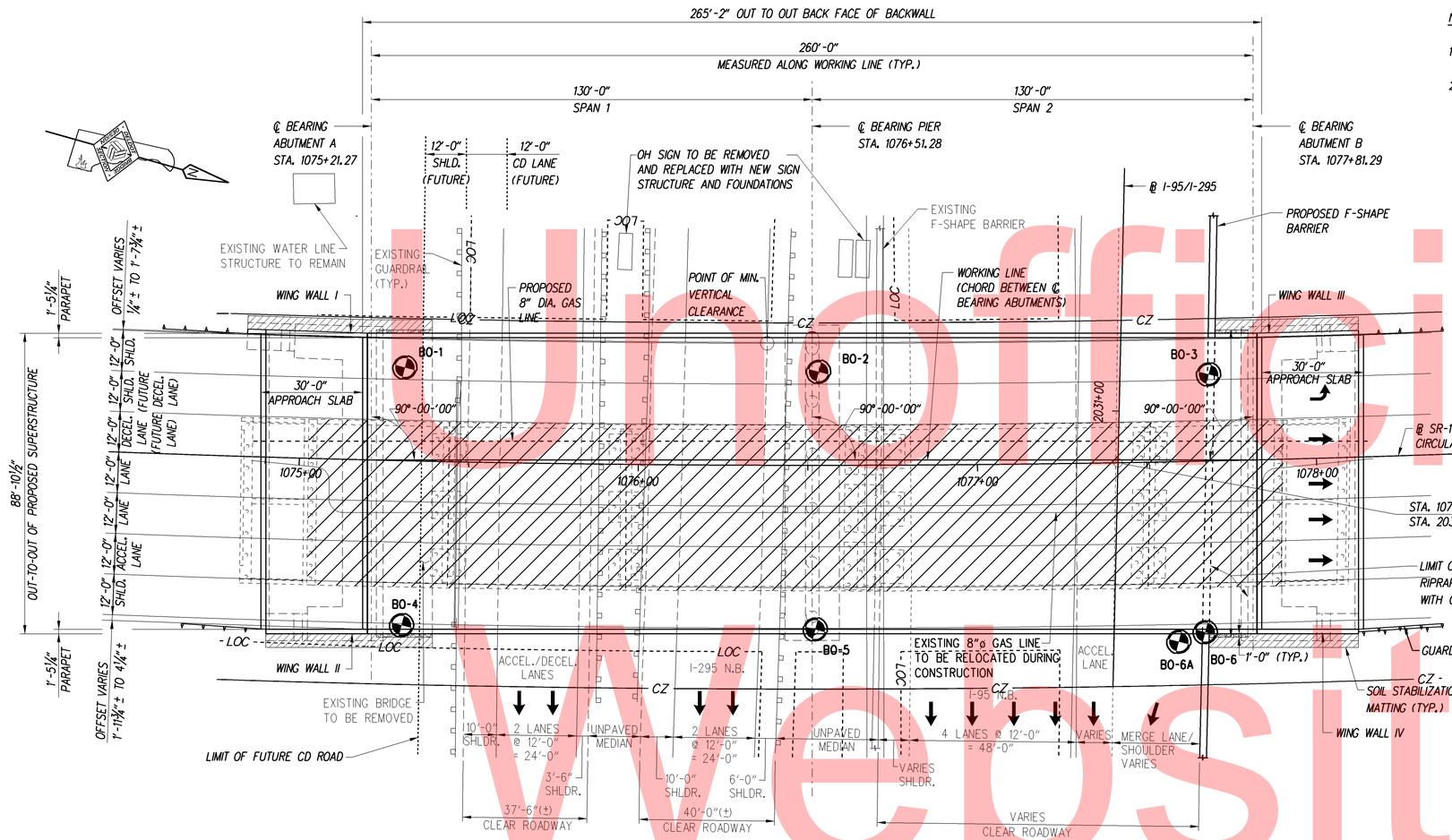
NOT TO SCALE

I-95 AND SR 141 INTERCHANGE,
RAMPS G & F IMPROVEMENTS

CONTRACT T201109002
COUNTY NEW CASTLE
BRIDGE NO. 1-675
DESIGNED BY: KRL
CHECKED BY: PAM

BRIDGE QUANTITIES

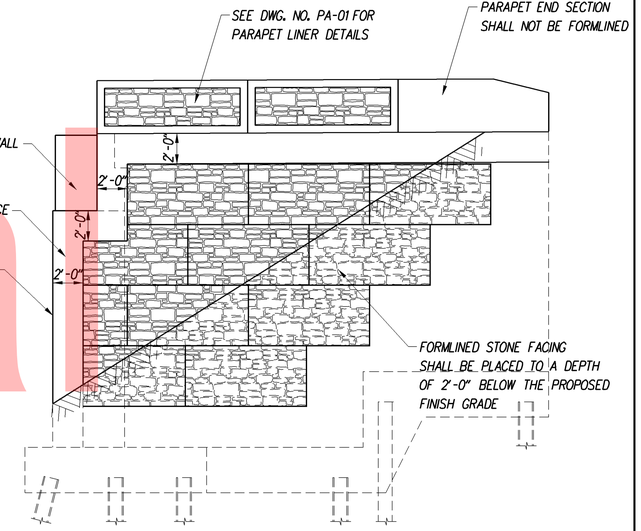
PN-02
SHEET NO. 113
TOTAL SHTS. 481



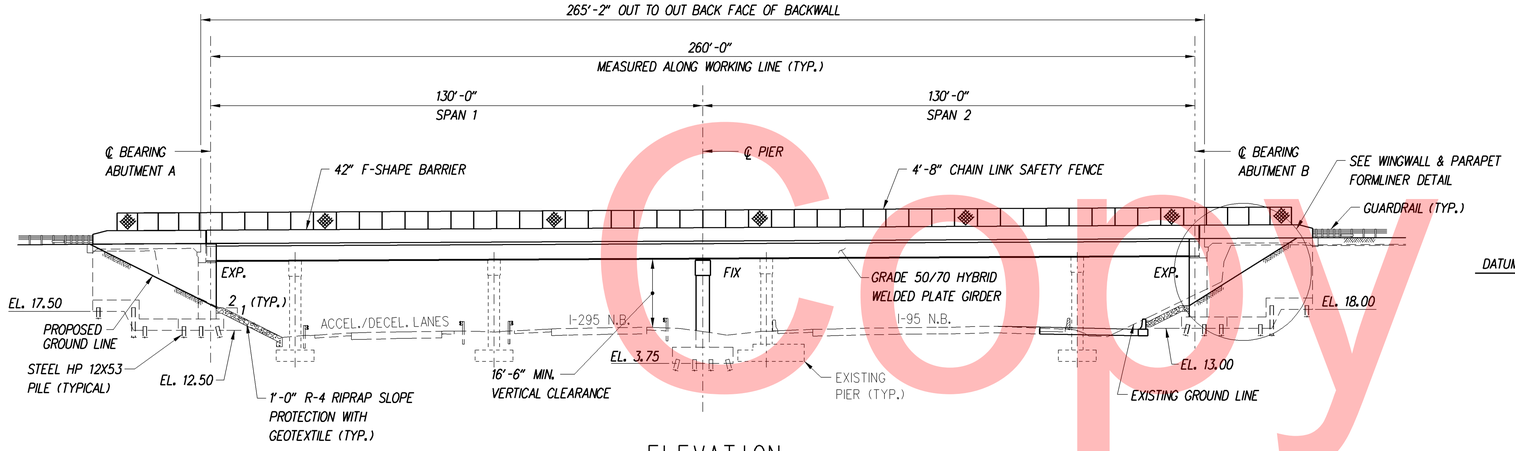
PLAN

NOTES:

1. ⊕ INDICATES BORINGS TAKEN FOR THIS PROJECT.
2. FOR @ SR 141 N.B. CIRCULAR CURVE NO. 20 INFORMATION, SEE HORIZONTAL AND VERTICAL CONTROL SHEET HV-05.

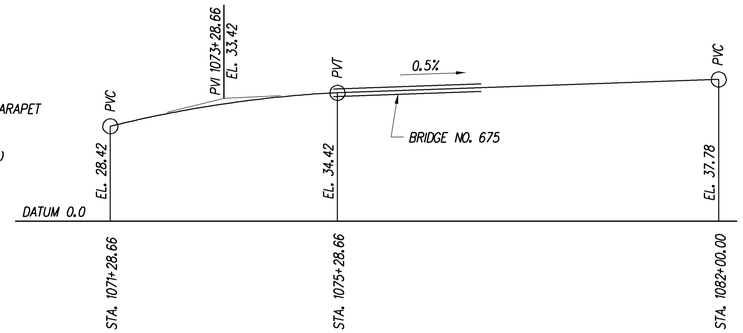


WINGWALL AND BARRIER FORMLINER DETAIL



ELEVATION

TYPE OF CURVE = SYMMETRIC PARABOLIC
DIRECTION = CREST
LENGTH = 400.00'
L1 = 200.00'
L2 = 200.00'
G1 = 2.50%
G2 = 0.50%
SSD = 739.83'
K = 200.09



SR-141 N.B. PROFILE

N.T.S.

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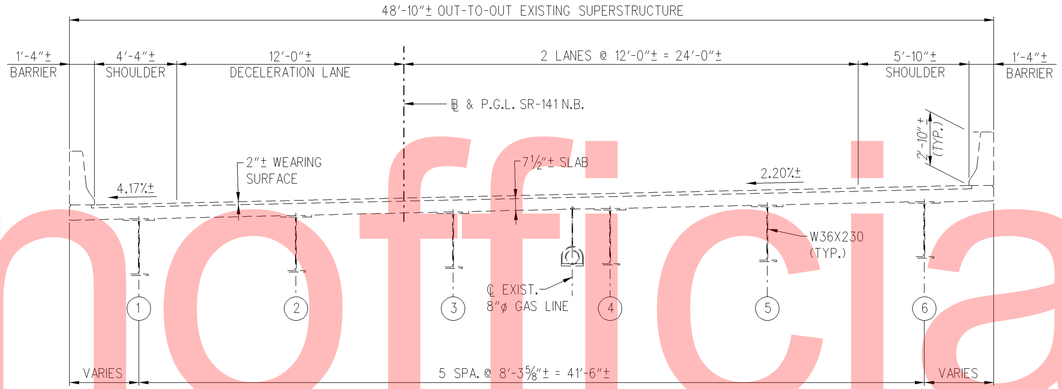
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 20 40 60 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	BRIDGE PLAN AND ELEVATION
				COUNTY NEW CASTLE	DESIGNED BY: KRL	
					CHECKED BY: PAM	

PE-01

SHEET NO. 114

TOTAL SHTS. 481

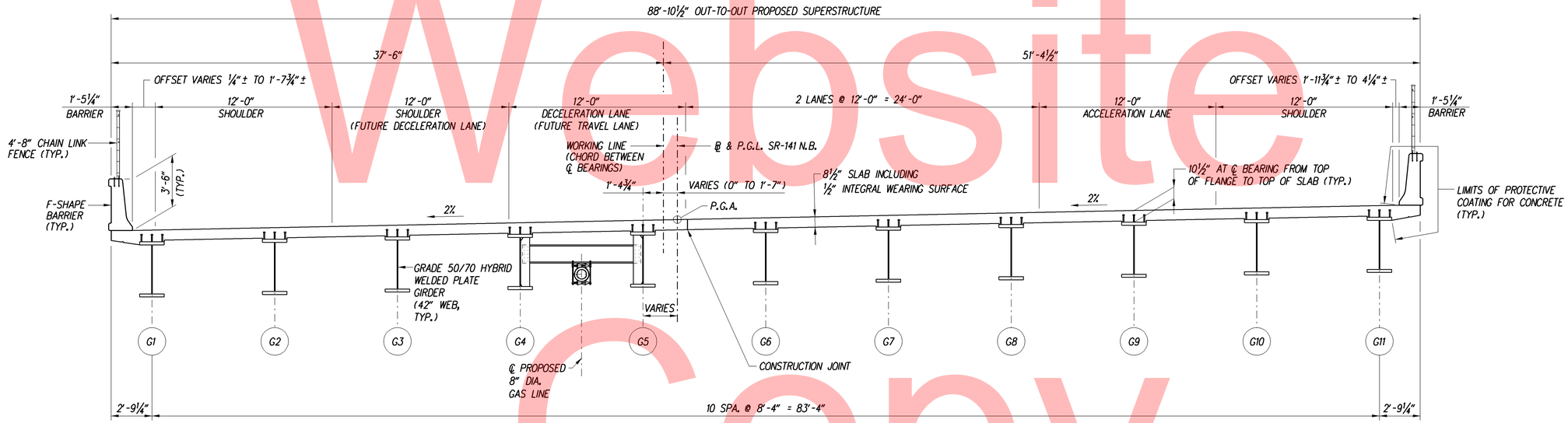


EXISTING TYPICAL SECTION

NOTES:

1. EXISTING CONCRETE DECK IS NON-COMPOSITE.
2. BAY BETWEEN GIRDERS 5 AND 6 SHALL BE FORMED. NO S.I.P. FORMS SHALL BE USED AT THIS LOCATION.

NOTE:
ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.



PROPOSED TYPICAL SECTION

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 4 8 12 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENT	CONTRACT T201109002 / COUNTY NEW CASTLE	BRIDGE NO. 1-675 / DESIGNED BY: KRL / CHECKED BY: PAM	BRIDGE TYPICAL SECTIONS	TS-01 / SHEET NO. 115 / TOTAL SHTS. 481

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BRIDGE 675 CONSTRUCTION PHASING

SEQUENCE OF CONSTRUCTION - PHASE 1 - REMOVAL:

1. SHIFT TRAFFIC TO EAST SIDE OF THE EXISTING BRIDGE ON SR 141 AS SHOWN ON THE PHASE 1 CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS.
2. INSTALL TEMPORARY BARRIER ALONG NORTHBOUND SR 141 AS SHOWN ON THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS.
3. INSTALL PORTION OF PERMANENT SHEETING TO BACK OF EXISTING FOUNDATION. REMAINDER OF SHEET PILE TO BE INSTALLED AS STATED IN NOTE 9 BELOW. CONTRACTOR SHALL DETERMINE THE LOCATION OF EXISTING PILES PRIOR TO DRIVING SHEET PILE AND MAKE NECESSARY ADJUSTMENTS TO AVOID PILES OR REMOVE THE PILES.

THE FOLLOWING MOT SHALL BE ON I-95 & I-295:

4. INSTALL TEMPORARY PROTECTIVE SHIELD UTILIZING TYPICAL APPLICATIONS PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS AND THE DELAWARE MUTCD.
5. REMOVE PORTIONS OF THE EXISTING SUPERSTRUCTURE AS SHOWN ON THE PHASE 1 CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS.
6. SHIFT TRAFFIC PER THE PHASE 1 GIRDER REMOVAL - STAGE I, II AND III PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS TO REMOVE THE GIRDERS AS NOTED ON THE BRIDGE 1-675 CONSTRUCTION PHASING - PHASE 1 SHEETS.
7. SHIFT TRAFFIC PER THE PIER DEMO PHASE 1 - STAGE I AND II PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS.
8. CONSTRUCT VERTICAL SHIELDS TO PROTECT VEHICLES ADJACENT TO WORKING AREA. PAYMENT FOR VERTICAL SHEETING SHALL BE INCIDENTAL TO ITEM 211550 - DEMOLITION OF EXISTING BRIDGE.
9. REMOVE PORTION OF ABUTMENTS AND PIERS AS SHOWN ON PLAN FOR EACH RESPECTIVE PIER DEMO STAGE. INSTALL REMAINDER OF PERMANENT SHEETING TO BACK OF PROPOSED ABUTMENT PILE CAPS. CONTRACTOR SHALL PROPOSE A MEANS AND METHODS TO RETAIN PROPOSED BACKFILL OVER THE HEEL OF THE PROPOSED FOUNDATION. PAYMENT INCIDENTAL TO PERMANENT SHEETING.

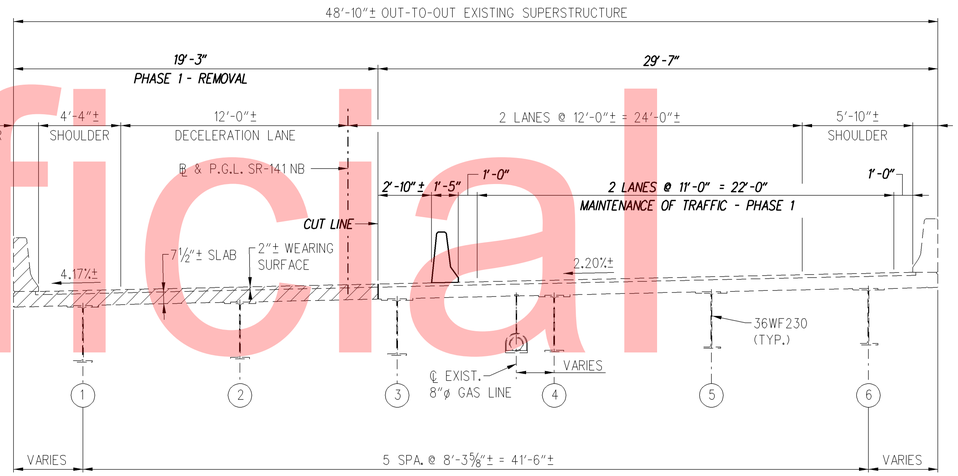
SEQUENCE OF CONSTRUCTION - PHASE 1 - CONSTRUCTION:

THE FOLLOWING MOT SHALL BE ON NB I-95 & I-295:

1. SHIFT TRAFFIC PER THE PHASE 1 GIRDER REPLACEMENT- STAGE I, II AND III PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS TO PLACE THE GIRDERS 1 THROUGH 5 AND DIAPHRAMS AS NOTED ON THE BRIDGE 1-675 CONSTRUCTION PHASING - PHASE 1 SHEETS.
2. CONSTRUCT PORTION OF ABUTMENTS AND PIER AS SHOWN ON PLANS. INSTALL PROPOSED 12- STEEL PIPE SLEEVES AS SHOWN ON PLANS.
3. POUR PORTION OF THE DECK SLAB AS SHOWN, PROVIDE ADEQUATE REINFORCING LAPSPLICE LENGTH FOR PHASE 2 WORK.
4. INSTALL 8- DIA. GAS LINE AND SHIFT SERVICE TO NEW LINE.
5. CONSTRUCT F-SHAPE PARAPET AS SHOWN ON PLANS.
6. CONSTRUCT PORTION OF APPROACH SLAB AS SHOWN ON PLANS.
7. INSTALL TEMPORARY TRAFFIC BARRIER AS SHOWN IN PREPARATION FOR PHASE 2 WORK.

NOTE:

1. FOR MORE INFORMATION ON THE M.O.T. ON I-95 AND I-295 FOR PHASE 1 WORK, SEE THE CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS.

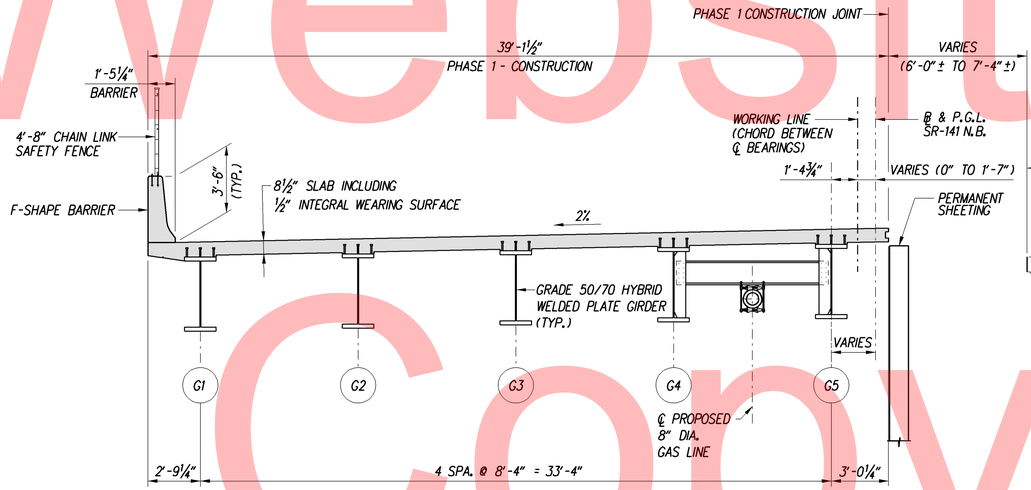


LEGEND

PORTION OF EXISTING STRUCTURE TO BE REMOVED

PHASE 1 - CONSTRUCTION

PHASE 1 - REMOVAL



NOTE:
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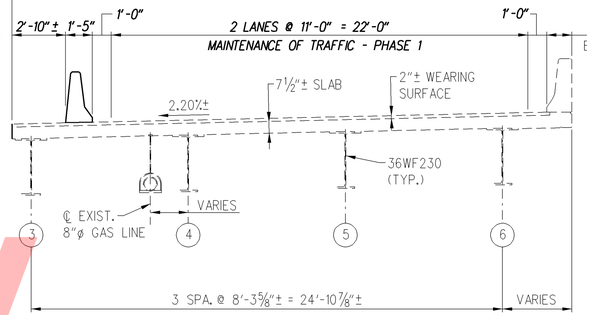

PHASE 1 CONSTRUCTION

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 4 8 12 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	CONSTRUCTION PHASING PHASE 1
				COUNTY NEW CASTLE	DESIGNED BY: KRL	
					CHECKED BY: PAM	

SR-01

SHEET NO. 116

TOTAL SHTS. 481

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SEQUENCE OF CONSTRUCTION - PHASE 2 - REMOVAL:

1. SWITCH TRAFFIC TO NEWLY CONSTRUCTED WEST SIDE OF THE BRIDGE ON NORTHBOUND SR 141 AS SHOWN ON THE PHASE 2 CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS.

THE FOLLOWING MOT SHALL BE ON I-95 & I-295:

2. INSTALL TEMPORARY PROTECTIVE SHIELD UTILIZING TYPICAL APPLICATIONS PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS AND THE DELAWARE MUTCD.
3. REMOVE PORTIONS OF THE EXISTING SUPERSTRUCTURE AS SHOWN ON THE PHASE 2 CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS.
4. SHIFT TRAFFIC PER THE PHASE 2 GIRDER REMOVAL - STAGE I, II AND III PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS TO REMOVE THE GIRDERS AS NOTED ON THE BRIDGE 1-675 CONSTRUCTION PHASING - PHASE 2 SHEETS.
5. SHIFT TRAFFIC PER THE PIER DEMO PHASE 2 - STAGE I AND II PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS.
6. CONSTRUCT VERTICAL SHIELDS TO PROTECT VEHICLES ADJACENT TO WORKING AREA. PAYMENT FOR VERTICAL SHEETING SHALL BE INCIDENTAL TO ITEM 211550 - DEMOLITION OF EXISTING BRIDGE.
7. REMOVE REMAINING PORTION OF ABUTMENTS AND PIERS AS SHOWN ON PLAN FOR EACH RESPECTIVE LANE SHIFT.
8. CONSTRUCT REMAINING PORTION OF ABUTMENTS AND PIER AS SHOWN ON PLANS FOR EACH RESPECTIVE LANE SHIFT.

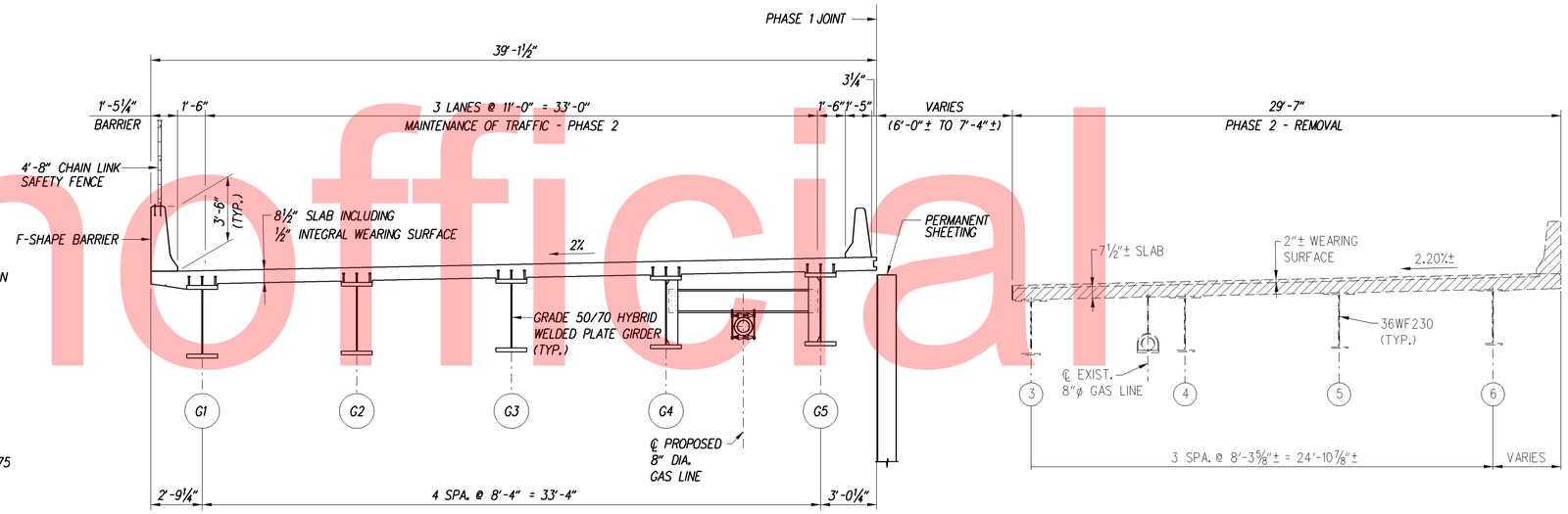
SEQUENCE OF CONSTRUCTION - PHASE 2 - CONSTRUCTION:

THE FOLLOWING MOT SHALL BE ON NB I-95 & I-295:

1. SHIFT TRAFFIC PER THE PHASE 2 GIRDER REPLACEMENT- STAGE I, II AND III PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS TO PLACE THE GIRDERS 6 THROUGH 11 AND DIAPHRAMS AS NOTED ON THE BRIDGE 1-675 CONSTRUCTION PHASING - PHASE 2 SHEETS.
2. POUR REMAINING PORTION OF THE DECK SLAB AS SHOWN.
3. CONSTRUCT F-SHAPEBARRIER AS SHOWN ON PLANS.
4. CONSTRUCT REMAINING PORTION OF APPROACH SLAB AS SHOWN ON THE PLANS.
5. REMOVE TEMPORARY TRAFFIC BARRIER AND OPEN THE ENTIRE BRIDGE TO TRAFFIC.

NOTE:

1. FOR MORE INFORMATION ON THE M.O.T. ON I-95 AND I-295 FOR PHASE 2 WORK, SEE THE CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS.



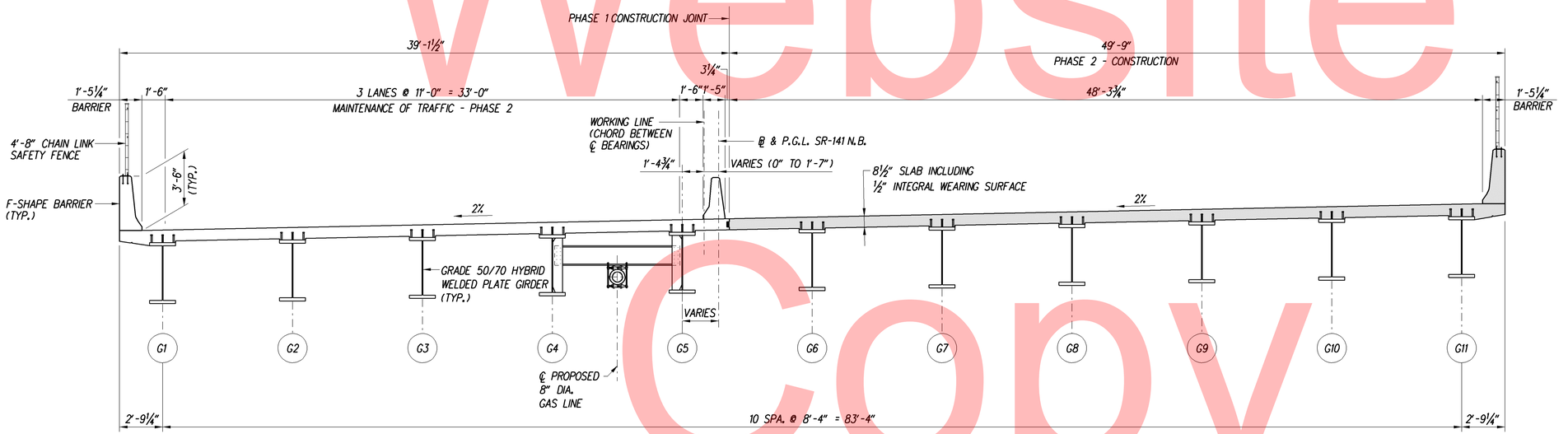
PHASE 2 - REMOVAL

SEQUENCE OF CONSTRUCTION - PHASE 2 - REMOVAL

-SEE DWG. NO. SR-04

SEQUENCE OF CONSTRUCTION - PHASE 2 - CONSTRUCTION

-SEE DWG. NO. SR-04



PHASE 2 - CONSTRUCTION

LEGEND

PORTION OF EXISTING STRUCTURE TO BE REMOVED

PHASE 2 - CONSTRUCTION

NOTE:
ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

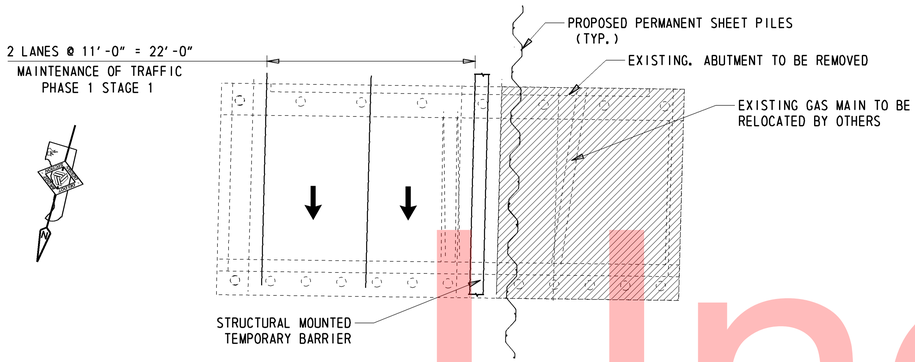
SCALE 0 4 8 12 FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

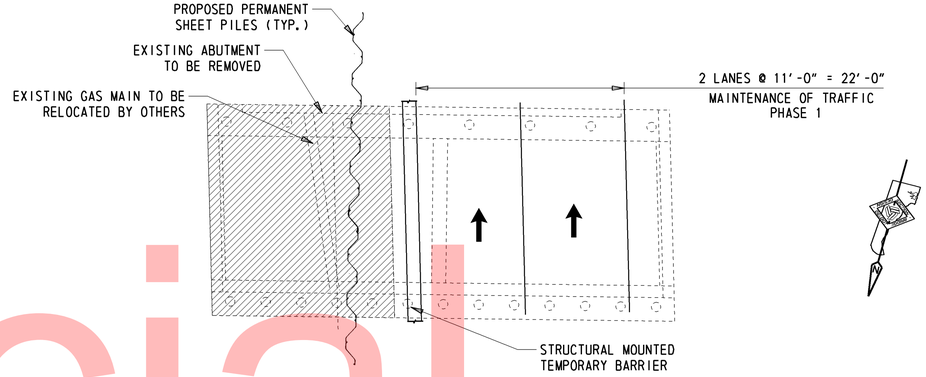
CONTRACT T201109002
COUNTY NEW CASTLE
BRIDGE NO. 1-675
DESIGNED BY: KRL
CHECKED BY: PAM

CONSTRUCTION PHASING PHASE 2

SR-02
SHEET NO. 117
TOTAL SHTS. 481

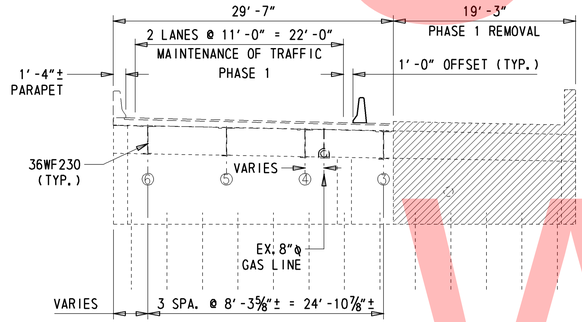


ABUTMENT A PLAN
PHASE I - REMOVAL

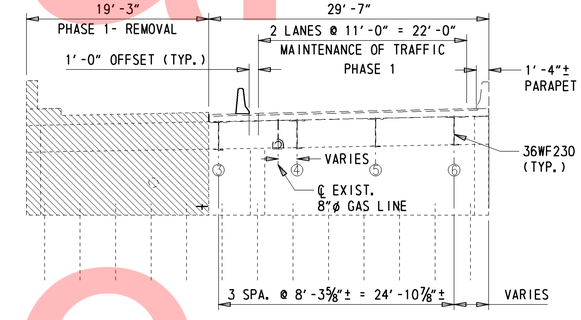


ABUTMENT B PLAN
PHASE I - REMOVAL

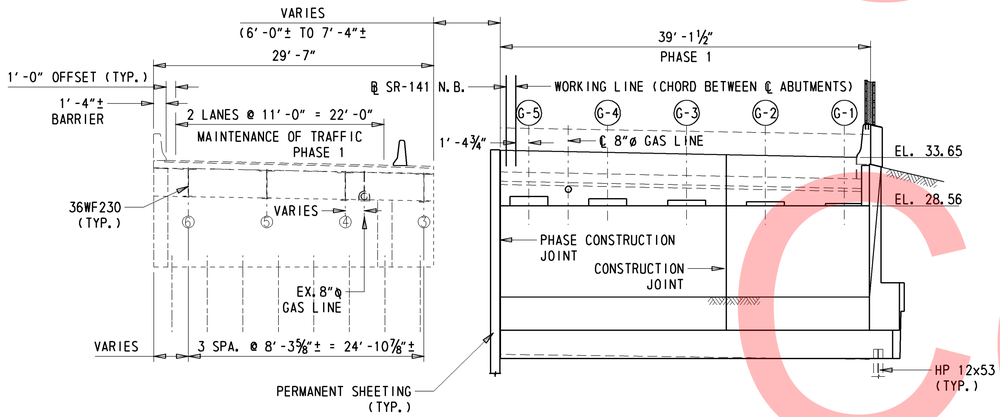
NOTES:
1. SEE DWG. SR-01 SHEET 116 FOR SEQUENCE OF CONSTRUCTION - PHASE 1 -REMOVAL AND CONSTRUCTION.
2. FOR MORE INFORMATION ON THE M.O.T. ON I-95 AND I-295 FOR PHASE 1 WORK, SEE THE CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS.
3. 1. HP 12X53 PILES IN ABUTMENT A AND B ELEVATION VIEWS ARE NOT SHOWN FOR CLARITY.
4. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS



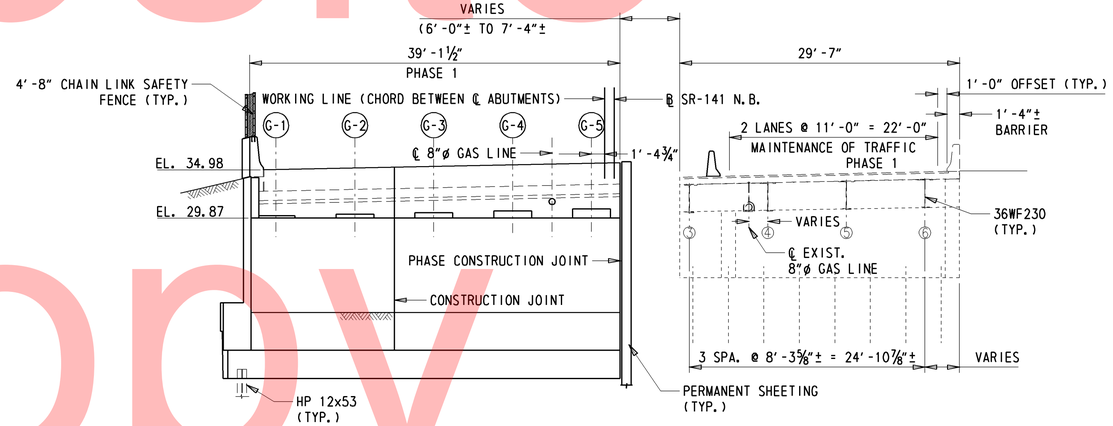
ABUTMENT A ELEVATION
PHASE I - REMOVAL



ABUTMENT B ELEVATION
PHASE I - REMOVAL



ABUTMENT A ELEVATION
PHASE I - CONSTRUCTION



ABUTMENT B ELEVATION
PHASE I - CONSTRUCTION

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

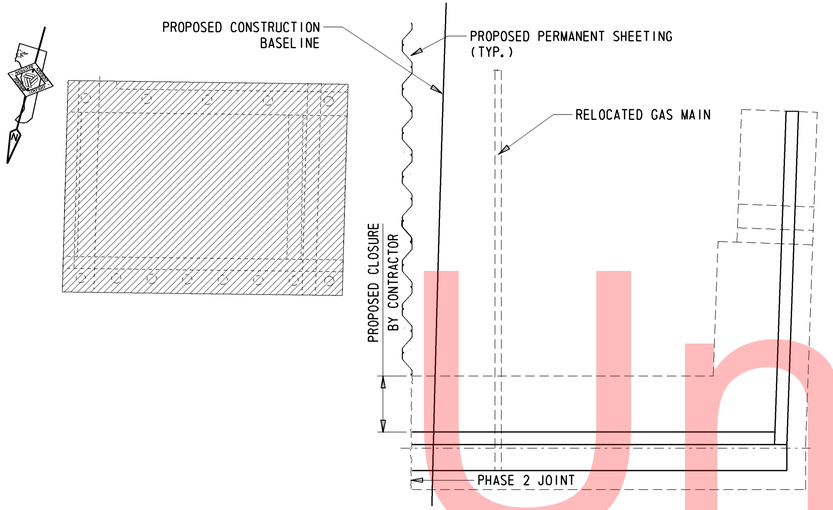
SCALE 0 8 16 24 FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO. 1-675
T201109002	DESIGNED BY: PM
COUNTY	CHECKED BY: KL
NEW CASTLE	

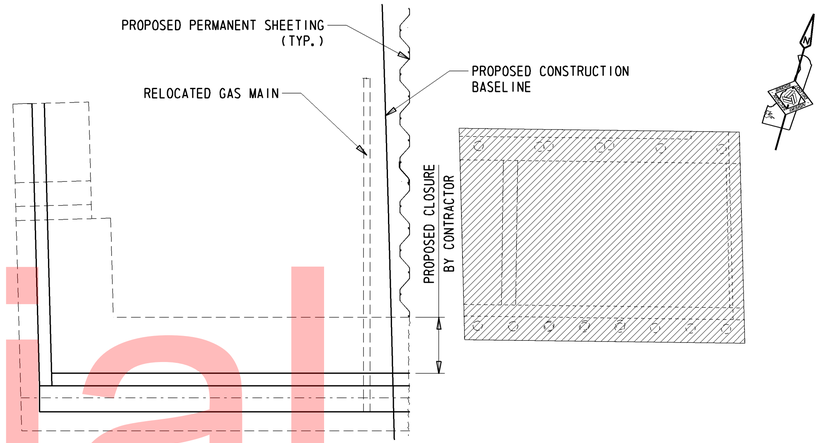
CONSTRUCTION PHASING ABUTMENT – PHASE 1

SR-03
SHEET NO. 118
TOTAL SHTS. 481

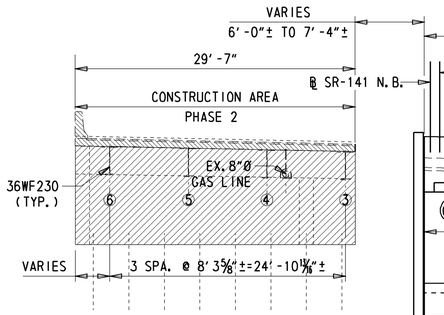


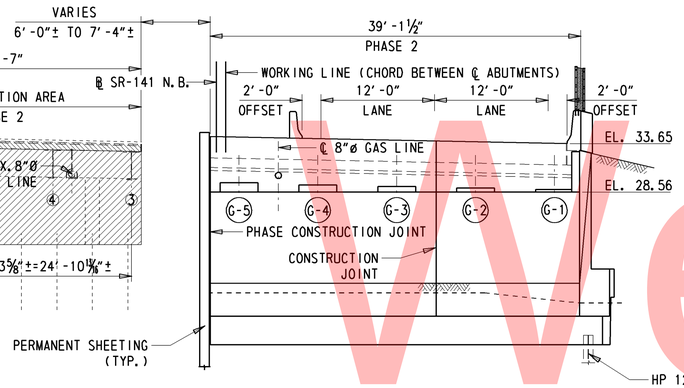
ABUTMENT A PLAN
PHASE 2 - REMOVAL

NOTES:
1. SEE DWG. SR-02 SHEET 117 FOR SEQUENCE OF CONSTRUCTION - PHASE 1 -REMOVAL AND CONSTRUCTION.
2. FOR MORE INFORMATION ON THE M.O.T. ON I-95 AND I-295 FOR PHASE 1 WORK, SEE THE CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS.
3. 1. HP 12X53 PILES IN ABUTMENT A AND B ELEVATION VIEWS ARE NOT SHOWN FOR CLARITY.
4. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS

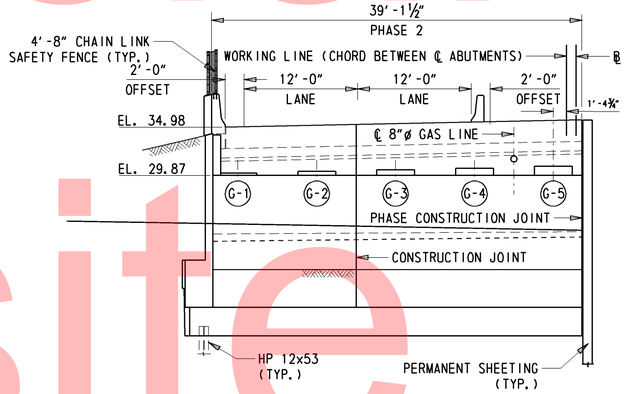


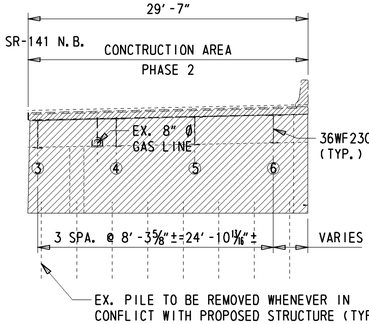
ABUTMENT B PLAN
PHASE 2 - REMOVAL



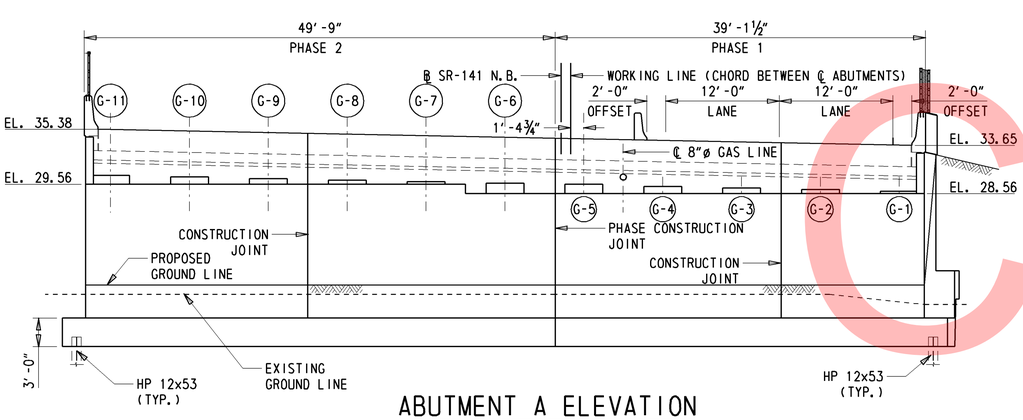


ABUTMENT A ELEVATION
PHASE 2 - REMOVAL

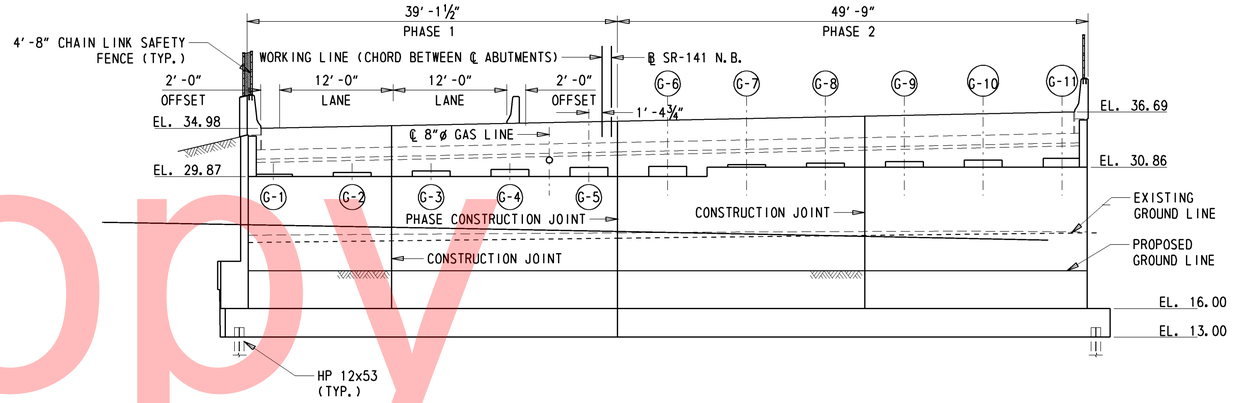




ABUTMENT B ELEVATION
PHASE 2 - REMOVAL



ABUTMENT A ELEVATION
PHASE 2 - CONSTRUCTION



ABUTMENT B ELEVATION
PHASE 2 - CONSTRUCTION

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 8 16 24 FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

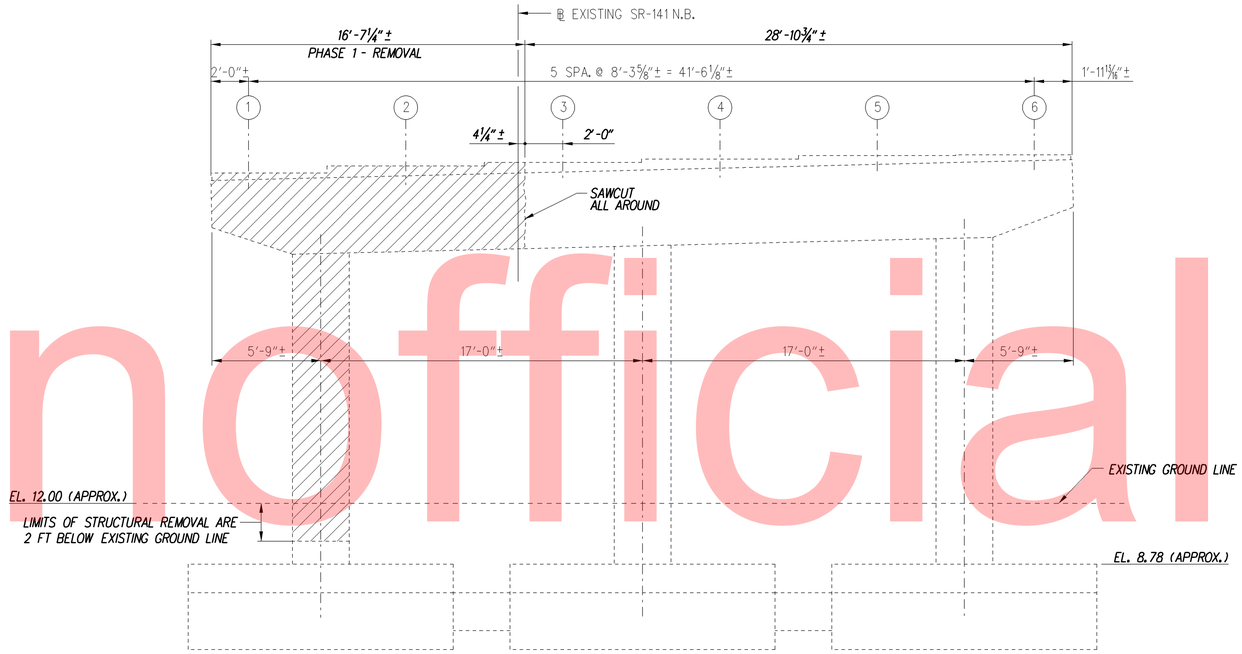
CONTRACT	BRIDGE NO.	1-675
T201109002	DESIGNED BY: PM	
COUNTY	CHECKED BY: KL	
NEW CASTLE		

CONSTRUCTION PHASING ABUTMENT – PHASE 2

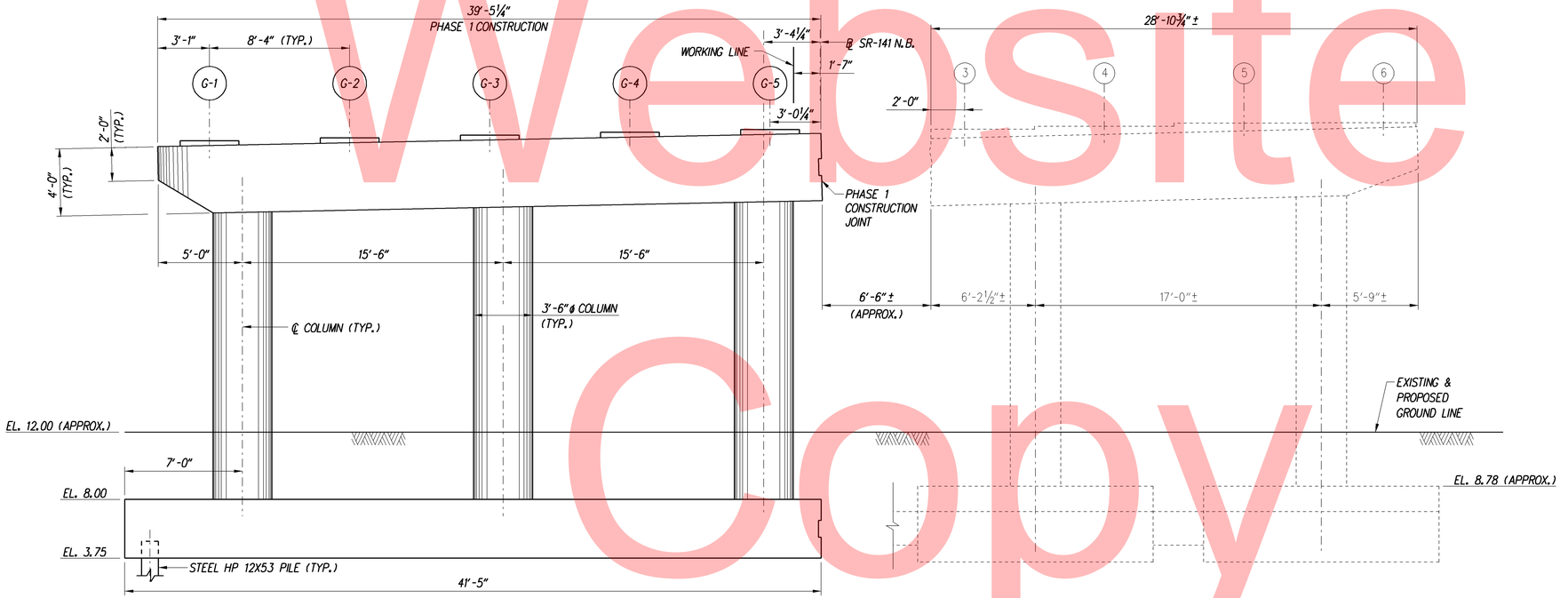
SR-04

SHEET NO.	TOTAL SHTS.
119	481

NOTES:
1. SEE DWG. SR-01 SHEET 116 FOR SEQUENCE OF CONSTRUCTION - PHASE 1 -REMOVAL AND CONSTRUCTION.
2. FOR MORE INFORMATION ON THE M.O.T. ON I-95 AND I-295 FOR PHASE 1 WORK, SEE THE CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS.
3. HP 12X53 PILES IN PIER ELEVATION VIEWS ARE NOT SHOWN FOR CLARITY.



PHASE 1 - REMOVAL



PHASE 1 - CONSTRUCTION

LEGEND

PORTION OF EXISTING STRUCTURE TO BE REMOVED

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 4 8 12 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002 / COUNTY NEW CASTLE	BRIDGE NO. 1-675 / DESIGNED BY: KRL / CHECKED BY: PAM

CONSTRUCTION PHASING PIER ELEVATION – PHASE 1

SR-05 | SHEET NO. 120 | TOTAL SHTS. 481

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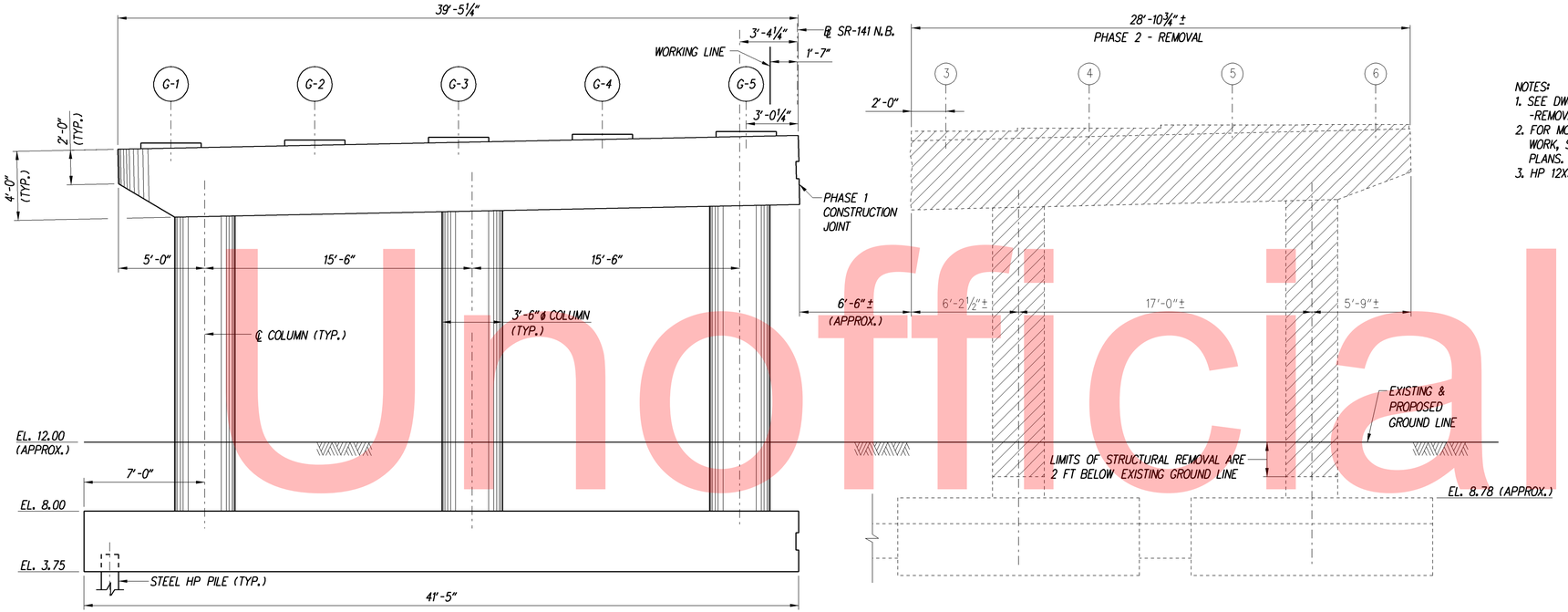


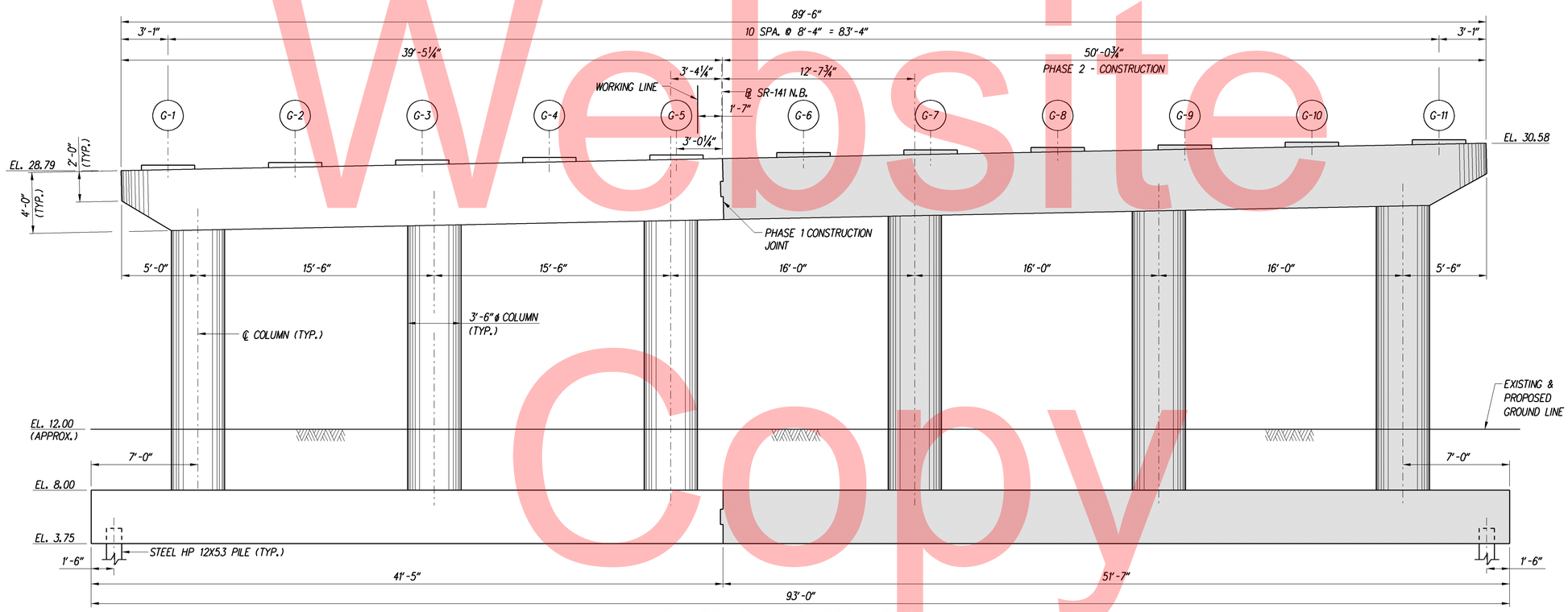
PHASE 2 - REMOVAL

NOTES:
1. SEE DWG. SR-02 SHEET 117 FOR SEQUENCE OF CONSTRUCTION - PHASE 1 -REMOVAL AND CONSTRUCTION.
2. FOR MORE INFORMATION ON THE M.O.T. ON I-95 AND I-295 FOR PHASE 1 WORK, SEE THE CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS.
3. HP 12X53 PILES IN PIER ELEVATION VIEWS ARE NOT SHOWN FOR CLARITY.

LEGEND

PORTION OF EXISTING STRUCTURE TO BE REMOVED

PHASE 2 - CONSTRUCTION

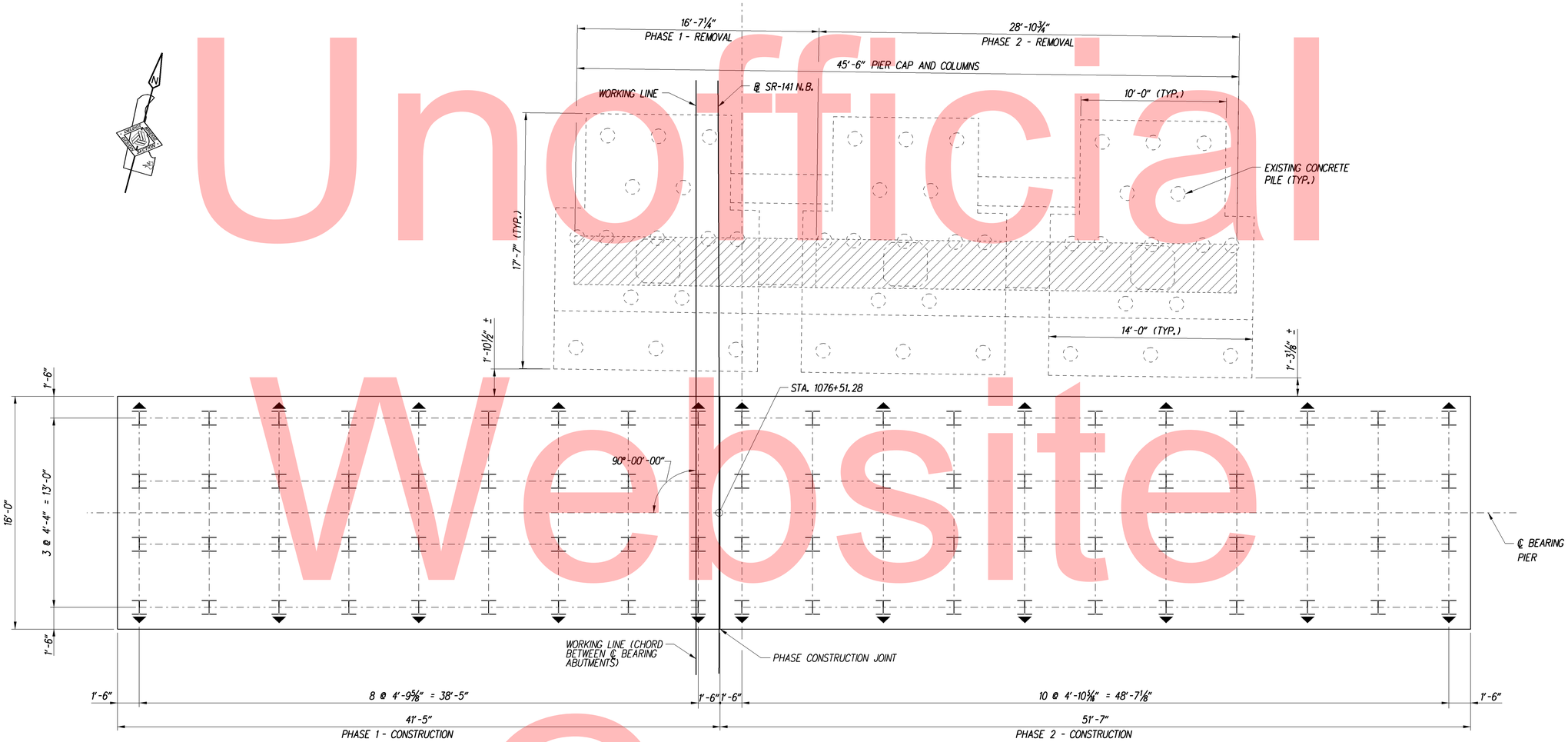


PHASE 2 - CONSTRUCTION

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 4 8 12 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002 / COUNTY NEW CASTLE	BRIDGE NO. 1-675 / DESIGNED BY: KRL / CHECKED BY: PAM

CONSTRUCTION PHASING PIER ELEVATION – PHASE 2

SR-06	
SHEET NO.	121
TOTAL SHTS.	481



PLAN

LEGEND

- PORTION OF EXISTING STRUCTURE TO BE REMOVED
- = DENOTES PLUMB HP 12 x 53 PILE
- = DENOTES HP 12 x 53 PILE BATTERED AT 1H:6V

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

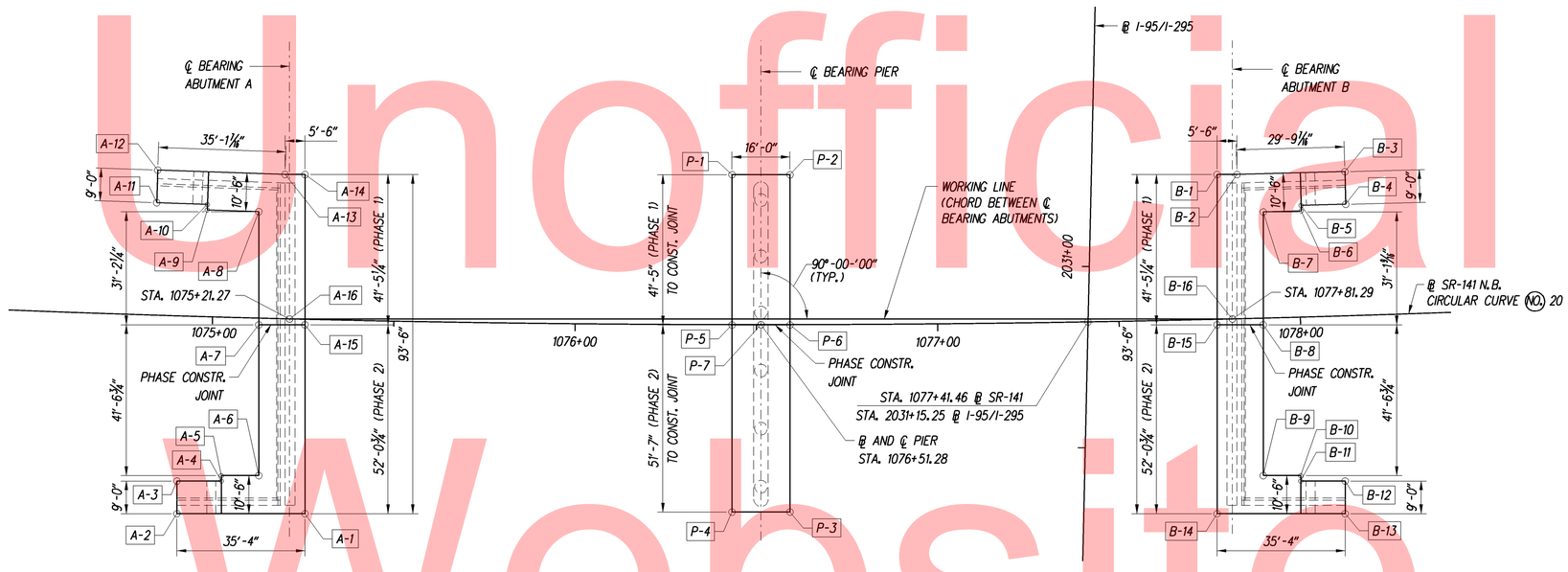
SCALE
0 4 8 12
FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO. 1-675
T201109002	DESIGNED BY: KRL
COUNTY	CHECKED BY: PAM
NEW CASTLE	

CONSTRUCTION PHASING PIER PLAN – PHASES 1 & 2

SR-07
SHEET NO. 122
TOTAL SHTS. 481



FOOTING LAYOUT PLAN

NOTE:
ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND PARAPETS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EXPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

ABUTMENT A WORKING POINTS

POINT	STATION	OFFSET	NORTHING	EASTING
A-1	1075+26.77	53.57' RT	619222.6184	604274.0005
A-2	1074+91.81	54.51' RT	619188.4758	604283.0959
A-3	1074+91.54	45.52' RT	619186.1590	604274.3991
A-4	1075+03.68	45.16' RT	619197.9962	604271.2458
A-5	1075+03.64	43.66' RT	619197.6101	604269.7964
A-6	1075+13.88	43.39' RT	619207.5952	604267.1364
A-7	1075+12.82	1.84' RT	619196.8963	604226.9741
A-8	1075+12.00	29.34' LT	619188.8685	604196.8389
A-9	1074+97.69	29.44' LT	619174.9988	604200.0198
A-10	1074+97.70	30.94' LT	619174.6635	604198.5577
A-11	1074+83.62	31.01' LT	619161.0163	604201.6876
A-12	1074+83.65	40.01' LT	619159.0044	604192.9153
A-13	1075+19.03	39.77' LT	619193.2348	604185.0650
A-14	1075+24.57	39.91' LT	619198.5495	604183.6492
A-15	1075+25.56	1.52' RT	619209.2166	604223.6921
A-16	1075+21.27	0.00'	619204.6916	604223.2163

PIER WORKING POINTS

POINT	STATION	OFFSET	NORTHING	EASTING
P-1	1076+43.22	41.35' LT	619312.3433	604153.3832
P-2	1076+59.35	41.35' LT	619327.8041	604149.2646
P-3	1076+59.21	51.65' RT	619351.7438	604239.1306
P-4	1076+43.36	51.65' RT	619336.2830	604243.2492
P-5	1076+43.28	0.08' RT	619323.0064	604193.4108
P-6	1076+59.28	0.08' RT	619338.4672	604189.2922
P-7	1076+51.28	0.00'	619330.7185	604191.2830

ABUTMENT B WORKING POINTS

POINT	STATION	OFFSET	NORTHING	EASTING
B-1	1077+77.99	39.90' LT	619441.5746	604118.9110
B-2	1077+83.53	39.77' LT	619446.8893	604117.4952
B-3	1078+13.54	39.75' LT	619475.4541	604109.0610
B-4	1078+13.51	30.75' LT	619478.0027	604117.6926
B-5	1078+01.10	30.78' LT	619466.1741	604121.1852
B-6	1078+01.10	29.28' LT	619466.5989	604122.6238
B-7	1077+90.56	29.28' LT	619456.5488	604125.5913
B-8	1077+89.75	1.84' RT	619464.5616	604155.6701
B-9	1077+88.68	43.39' RT	619475.2606	604195.8323
B-10	1077+98.93	43.66' RT	619485.2457	604193.1724
B-11	1077+98.89	45.16' RT	619485.6318	604194.6218
B-12	1078+11.03	45.52' RT	619497.4690	604191.4685
B-13	1078+10.76	54.51' RT	619499.7857	604200.1652
B-14	1077+75.79	53.57' RT	619465.6431	604209.2606
B-15	1077+77.01	1.52' RT	619452.2413	604158.9521
B-16	1077+81.30	0.00'	619455.9299	604156.2883

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 20 40 60 FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-675
T201109002	DESIGNED BY: KRL	
COUNTY	CHECKED BY: PAM	
NEW CASTLE		

FOOTING LAYOUT PLAN

FL-01

SHEET NO.	TOTAL SHTS.
123	481

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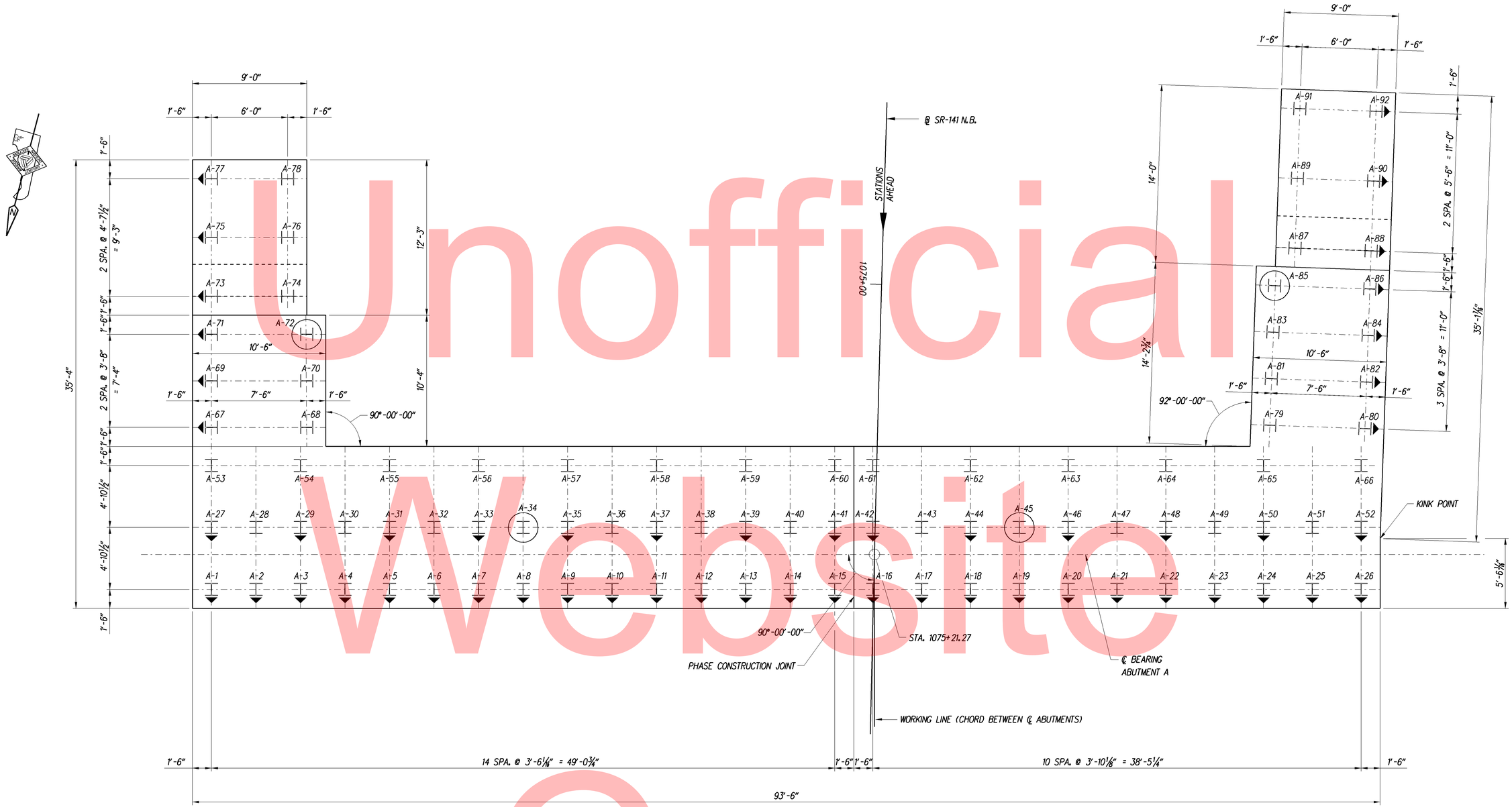

ABUTMENT A PILE LAYOUT PLAN

PILE INSTALLATION DATA

SUBSTRUCTURE UNIT	DESIGN DATA		ACTUAL FIELD DATA		
	NOMINAL PILE DRIVING RESISTANCE (KIPS)	ESTIMATED PILE TIP ELEVATION	ACTUAL MINIMUM TIP ELEVATION	ACTUAL AVERAGE TIP ELEVATION	ACTUAL MAXIMUM TIP ELEVATION
ABUTMENT A	482	-70			

LEGEND

= DENOTES PLUMB HP 12 x 53 PILE

= DENOTES HP 12 x 53 PILE BATTERED AT 1H:6V

= DENOTES TEST PILE

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 4 8 12
FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-675
T201109002	DESIGNED BY: KRL	
COUNTY	CHECKED BY: PAM	
NEW CASTLE		

PILE LAYOUT PLAN
ABUTMENT A

PL-01

SHEET NO.	TOTAL SHTS.
124	481

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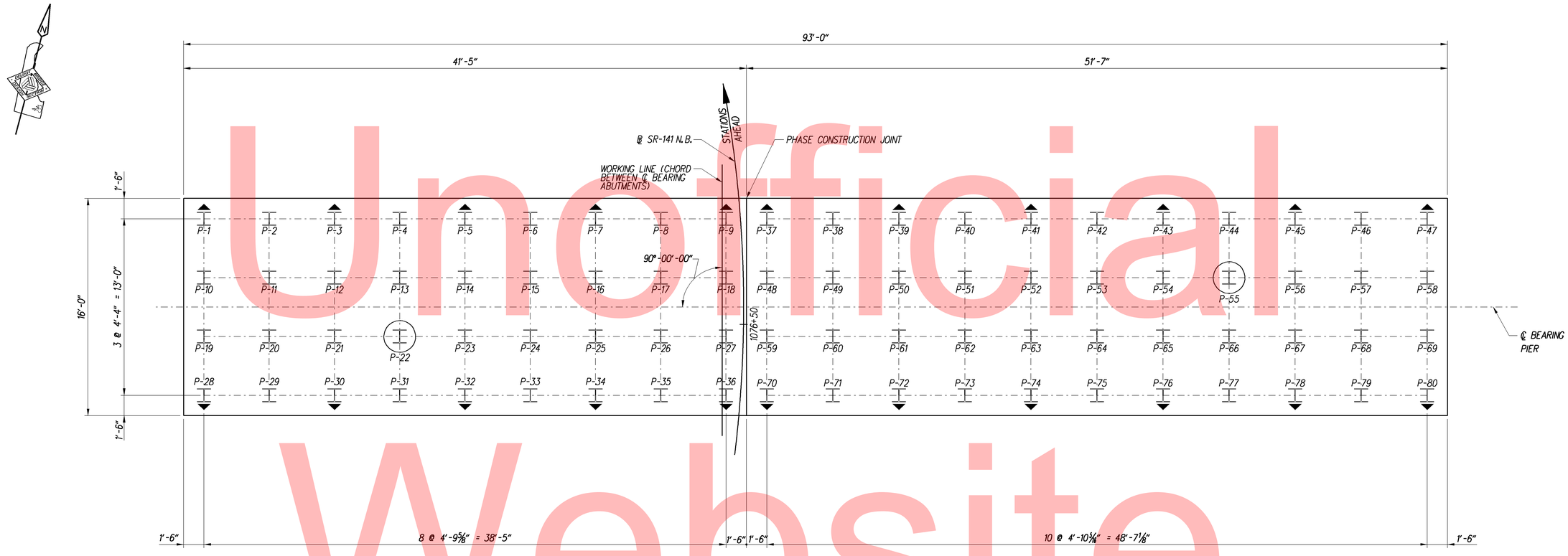

PIER PILE LAYOUT PLAN

PILE INSTALLATION DATA

	DESIGN DATA		ACTUAL FIELD DATA		
SUBSTRUCTURE UNIT	NOMINAL PILE DRIVING RESISTANCE (KIPS)	ESTIMATED PILE TIP ELEVATION	ACTUAL MINIMUM TIP ELEVATION	ACTUAL AVERAGE TIP ELEVATION	ACTUAL MAXIMUM TIP ELEVATION
PIER	231	-55			

LEGEND

= DENOTES PLUMB HP 12 x 53 PILE

= DENOTES HP 12 x 53 PILE BATTERED AT 1H:6V

= DENOTES TEST PILE

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 4 8 12 FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT T201109002

COUNTY NEW CASTLE

BRIDGE NO. 1-675

DESIGNED BY: KRL

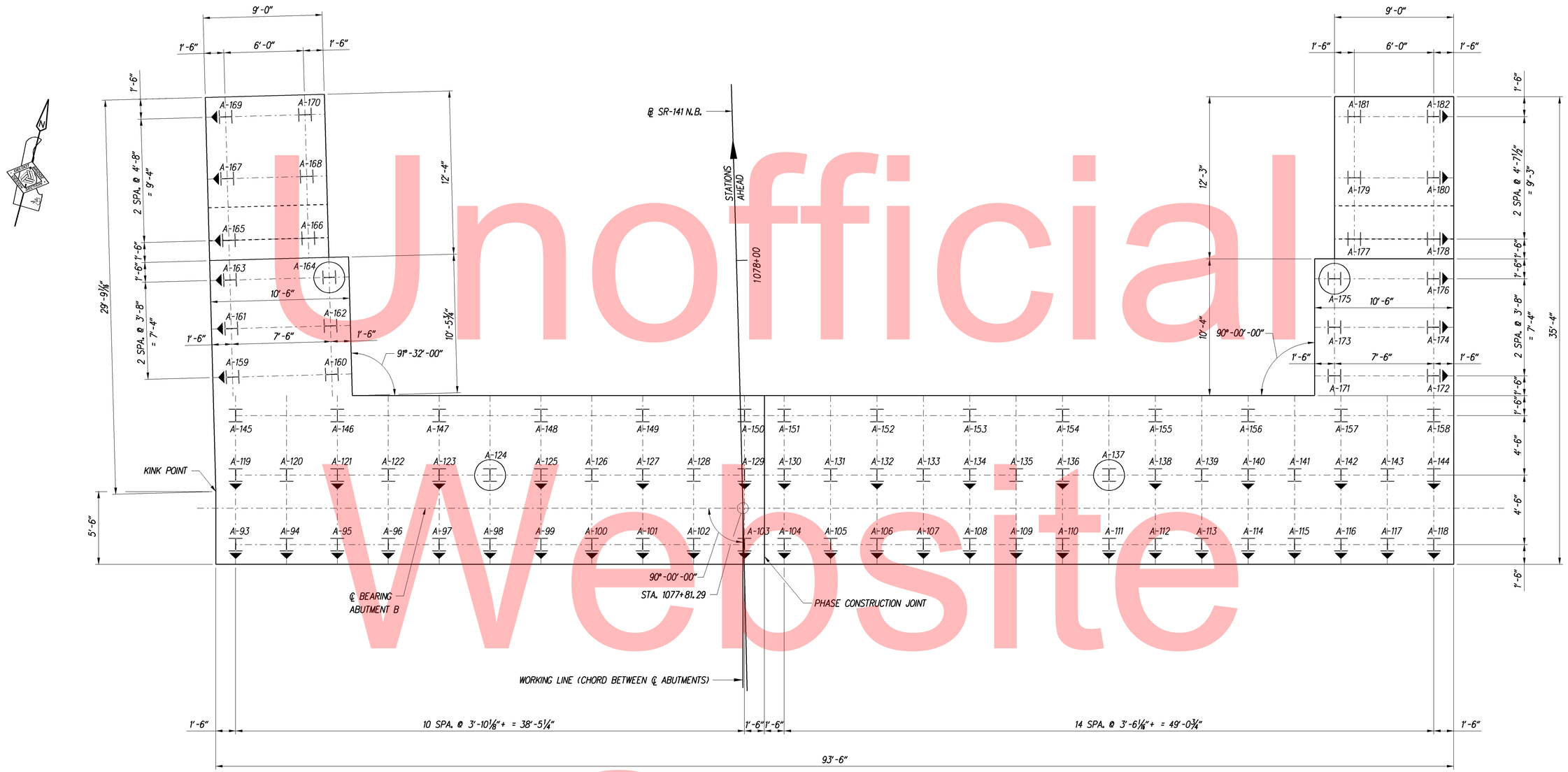
CHECKED BY: PAM

PILE LAYOUT PLAN PIER

PL-02

SHEET NO. 125

TOTAL SHTS. 481



ABUTMENT B PILE LAYOUT PLAN

PILE INSTALLATION DATA

SUBSTRUCTURE UNIT	DESIGN DATA		ACTUAL FIELD DATA		
	NOMINAL PILE DRIVING RESISTANCE (KIPS)	ESTIMATED PILE TIP ELEVATION	ACTUAL MINIMUM TIP ELEVATION	ACTUAL AVERAGE TIP ELEVATION	ACTUAL MAXIMUM TIP ELEVATION
ABUTMENT B	497	-70			

LEGEND

= DENOTES PLUMB HP 12 x 53 PILE

= DENOTES HP 12 x 53 PILE BATTERED AT 1H:6V

= DENOTES TEST PILE

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 4 8 12
FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-675
T201109002	DESIGNED BY: KRL	
COUNTY		
NEW CASTLE	CHECKED BY: PAM	

PILE LAYOUT PLAN
ABUTMENT B

PL-03
SHEET NO. 126
TOTAL SHTS. 481

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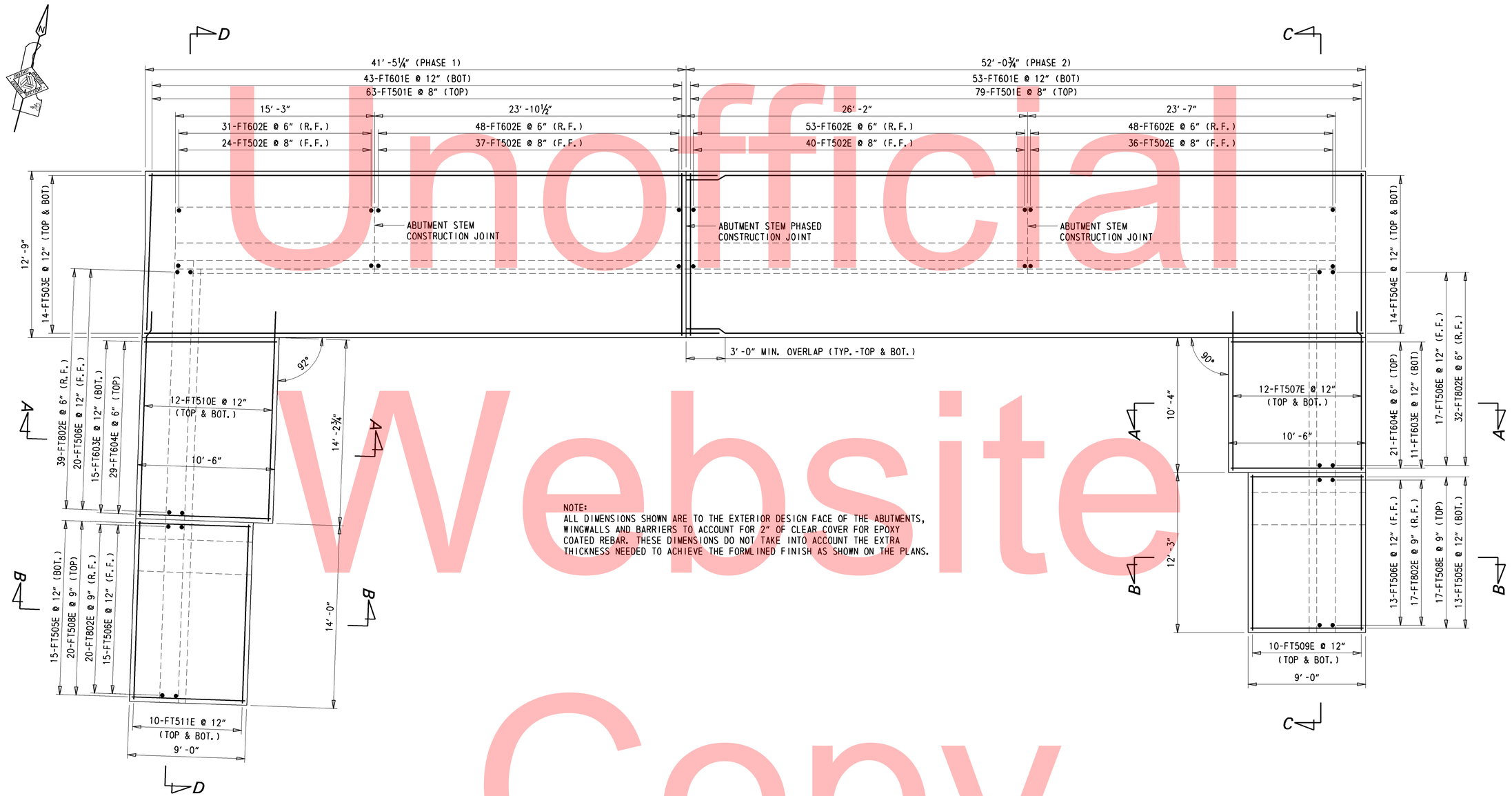

NOTE:
ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2″ OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

ABUTMENT A FOOTING PLAN

NOTES:
1. FOR TYPICAL WINGWALL SECTIONS (A-A AND B-B), SEE DWG. NO. WW-02.
2. FOR WINGWALL ELEVATIONS (C-C AND D-D), SEE DWG. NO. WW-01.

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 4 8 12 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	ABUTMENT A FOOTING REINFORCEMENT DETAILS	FT-01
				COUNTY NEW CASTLE	DESIGNED BY: KRL		SHEET NO. 127
					CHECKED BY: PAM		TOTAL SHTS. 481

NOTE:
ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

ABUTMENT B FOOTING PLAN

NOTES:
1. FOR TYPICAL WINGWALL SECTIONS (A-A AND B-B), SEE DWG. NO. WW-02.
2. FOR WINGWALL ELEVATIONS (E-E AND F-F), SEE DWG. NO. WW-01.

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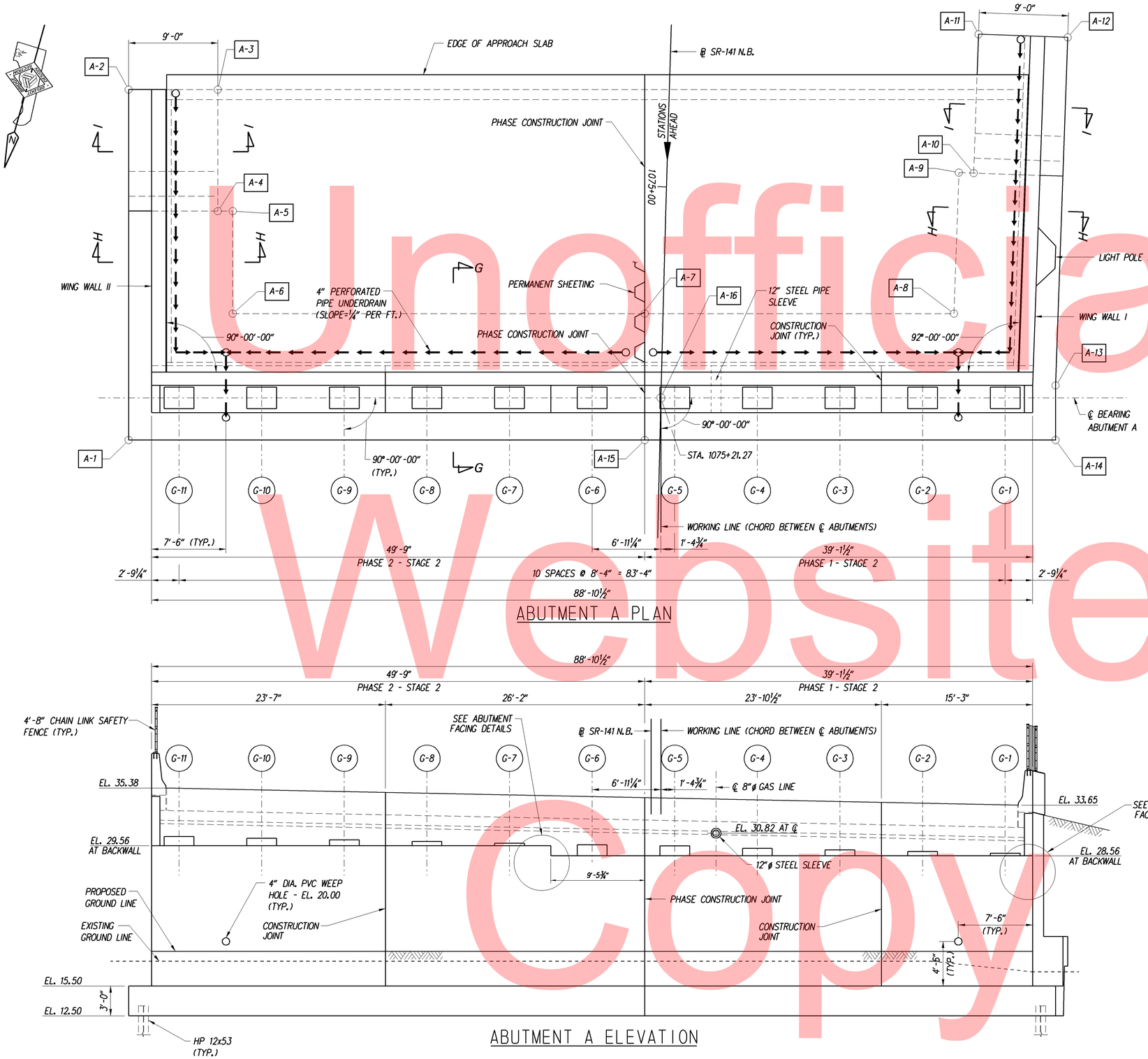
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 4 8 12 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	ABUTMENT B FOOTING REINFORCEMENT DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: KRL	
					CHECKED BY: PAM	

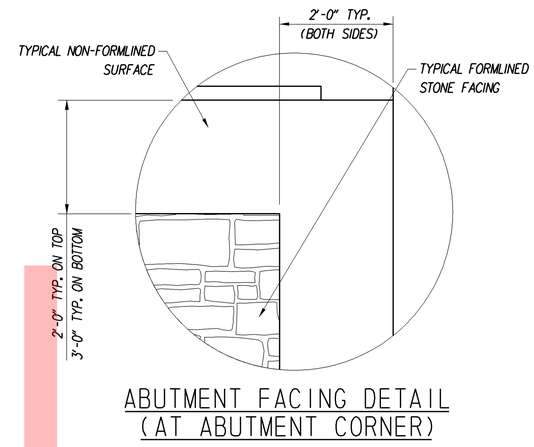
FT-02

SHEET NO.	TOTAL SHTS.
128	481

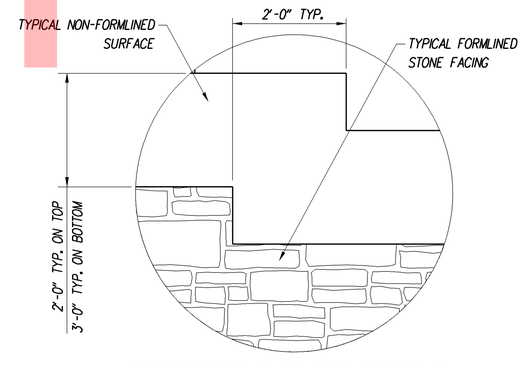


ABUTMENT A PLAN

ABUTMENT A ELEVATION



ABUTMENT FACING DETAIL (AT ABUTMENT CORNER)



ABUTMENT FACING DETAIL (AT ABUTMENT STEP UP)

MASONRY PAD ELEVATIONS	
PAD	ELEVATION
G-1	28.66
G-2	28.82
G-3	28.99
G-4	29.16
G-5	29.33
G-6	29.49
G-7	29.66
G-8	29.83
G-9	30.00
G-10	30.27
G-11	30.33

NOTES:

1. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENT, WINGWALLS, AND BARRIER TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
2. FOR ABUTMENT A REINFORCEMENT DETAILS, SEE DWG. NO. AB-04.
3. FOR TYPICAL SECTIONS (G-G, H-H AND I-I), SEE DWG. NO. AB-03.
4. FOR ADDITIONAL WORKING POINTS INFORMATION, SEE DWG. NO. FL-01.
5. FOR ADDITIONAL LIGHT POLE BASE AND CONDUIT DETAILS, SEE DWG. NO. LB-01.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

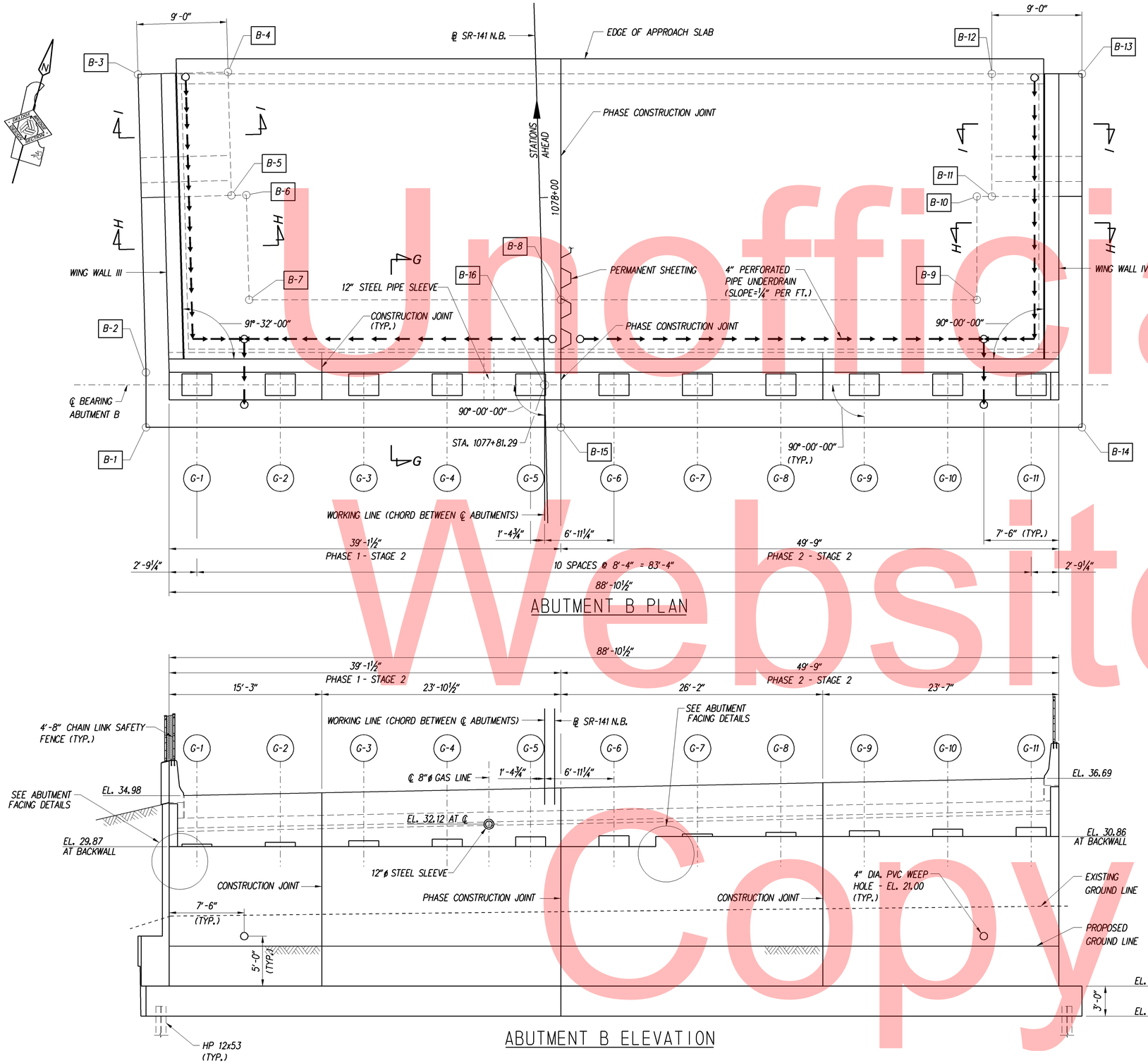
SCALE
0 5 3333 10 6667 16
FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	T201109002
COUNTY	NEW CASTLE
BRIDGE NO.	1-675
DESIGNED BY:	KRL
CHECKED BY:	PAM

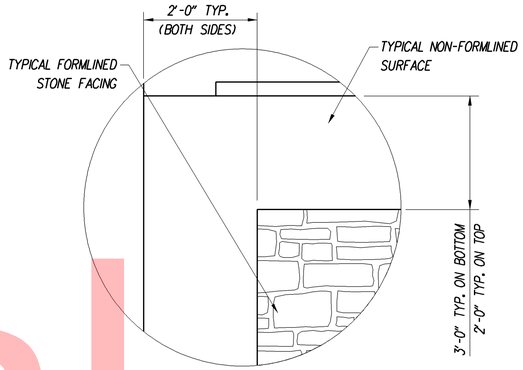
ABUTMENT A PLAN AND ELEVATION

AB-01	
SHEET NO.	129
TOTAL SHTS.	481

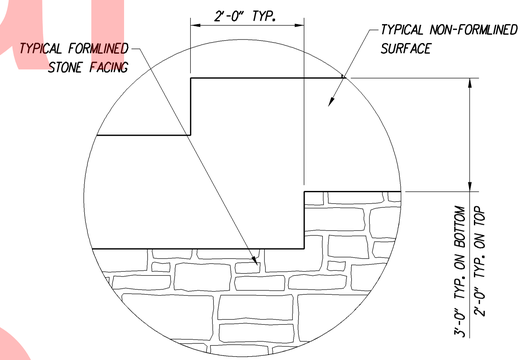


ABUTMENT B PLAN

ABUTMENT B ELEVATION



ABUTMENT FACING DETAIL (AT ABUTMENT CORNER)



ABUTMENT FACING DETAIL (AT ABUTMENT STEP UP)

MASONRY PAD ELEVATIONS	
PAD	ELEVATION
G-1	29.97
G-2	30.14
G-3	30.30
G-4	30.47
G-5	30.63
G-6	30.80
G-7	30.96
G-8	31.13
G-9	31.30
G-10	31.46
G-11	31.63

NOTES:

1. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENT, WINGWALLS, AND BARRIER TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
2. FOR ABUTMENT B REINFORCEMENT DETAILS, SEE DWG. NO. AB-05.
3. FOR TYPICAL SECTIONS (G-G, H-H AND I-I), SEE DWG. NO. AB-03.
4. FOR ADDITIONAL WORKING POINTS INFORMATION, SEE DWG. NO. FL-01.
5. FOR ADDITIONAL LIGHT POLE BASE AND CONDUIT DETAILS, SEE DWG. NO. LB-01.

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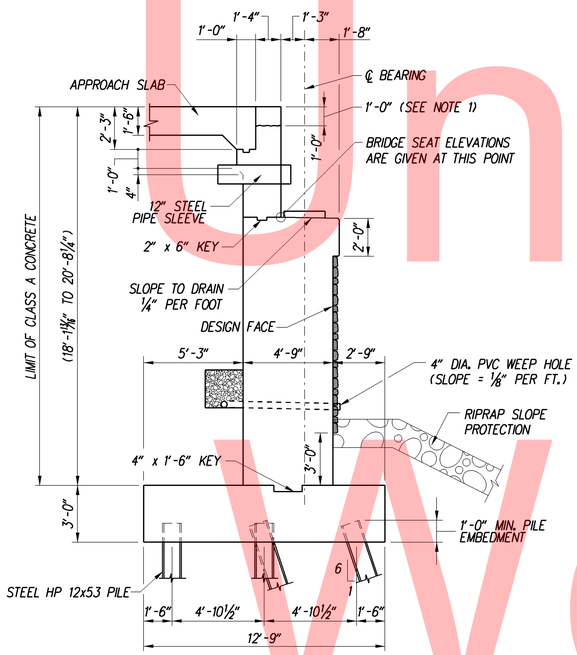
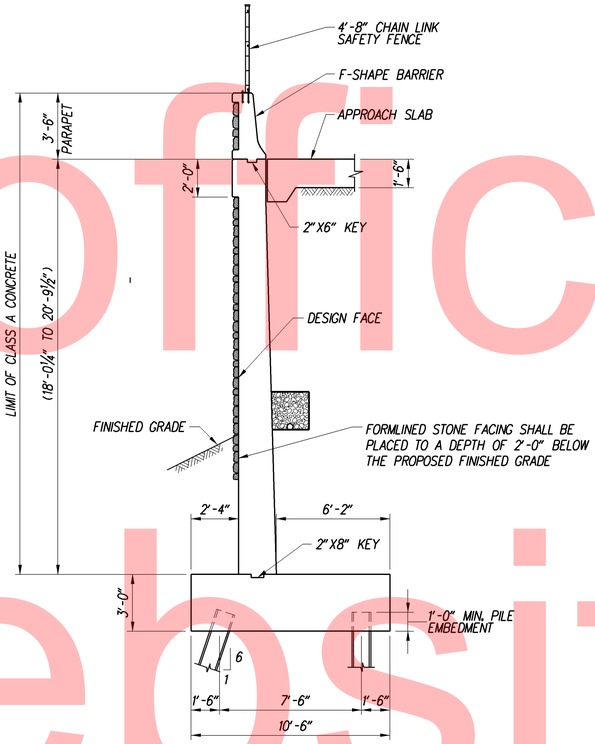
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 5 3333 10 6667 16 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	ABUTMENT B PLAN AND ELEVATION
				COUNTY NEW CASTLE	DESIGNED BY: KRL	SHEET NO. 130
					CHECKED BY: PAM	TOTAL SHTS. 481

AB-02



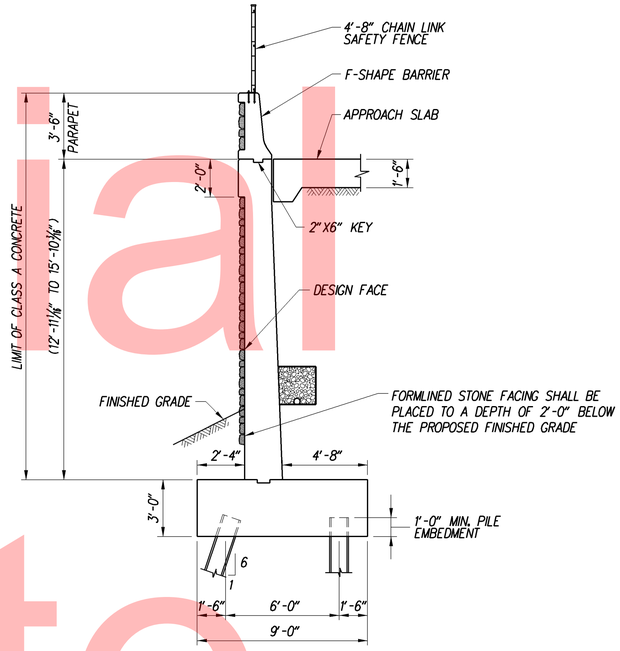
TYPICAL ABUTMENT SECTION G-G

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



TYPICAL WING WALL SECTION H-H

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

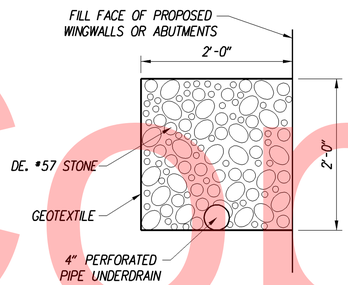


TYPICAL WING WALL SECTION I-I

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

NOTE:

1. TOP PORTION OF BACKWALL SHALL NOT BE PLACED UNTIL ENTIRE BRIDGE DECK SLAB IS COMPLETELY IN PLACE.



UNDERDRAIN DETAILS

SCALE: 1" = 1'-0"

NOTES:

1. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENT, WINGWALLS, AND BARRIER TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
2. FOR LOCATIONS OF SECTIONS (G-G, H-H AND I-I), SEE DWG. NOS. AB-01 AND AB-02.
3. FOR ADDITIONAL BARRIER DETAILS, SEE DWG. NO. PA-01.

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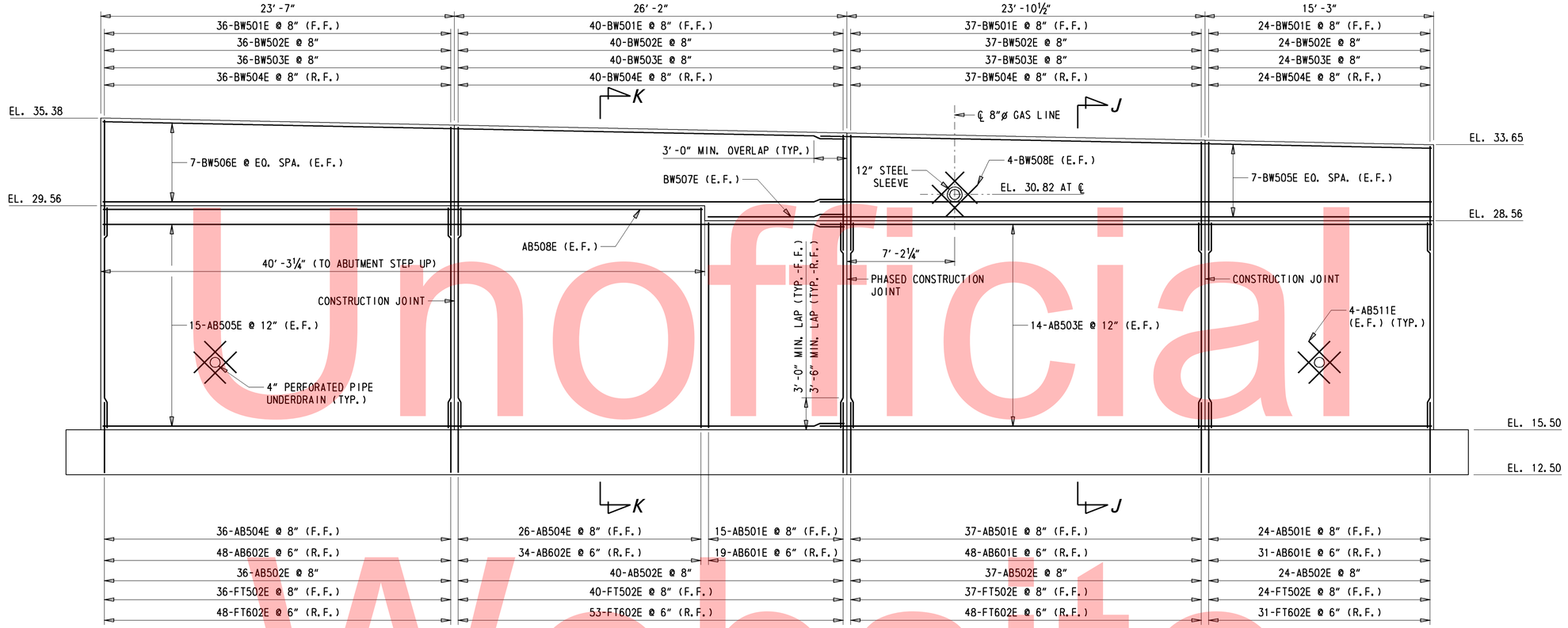
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE: AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	ABUTMENT AND WINGWALL SECTIONS	AB-03
				COUNTY NEW CASTLE	DESIGNED BY: KRL		SHEET NO. 131
					CHECKED BY: PAM		TOTAL SHTS. 481

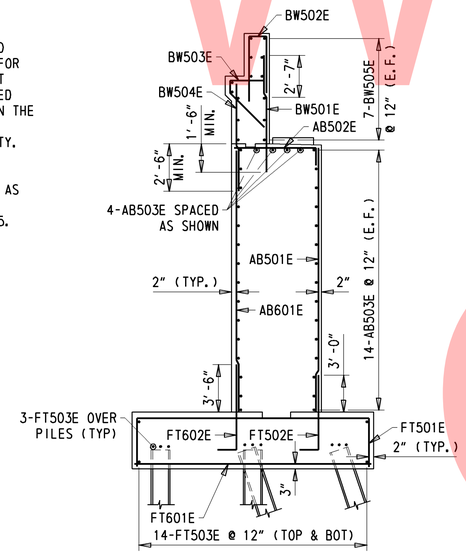


ABUTMENT A REINFORCEMENT ELEVATION

¼″ = 1′-0″

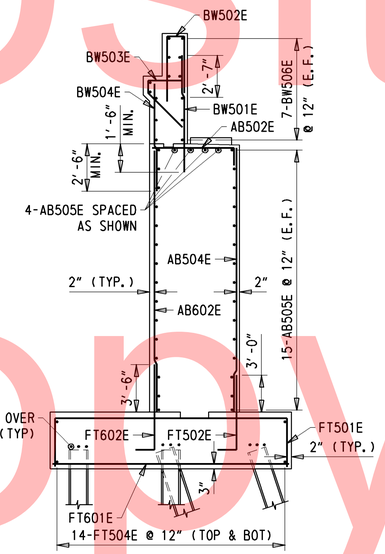
NOTES:

1. MASONRY PADS NOT SHOWN FOR CLARITY. FOR MASONRY PAD LOCATIONS, SEE DWG. NOS. AB-01 AND AB-02.
2. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2″ OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
3. FORMLINED SURFACES ARE NOT SHOWN FOR CLARITY. SEE DWG. NO. AB-01 FOR FORMLINER DETAILS.
4. THE CONTRACTOR SHALL CUT AND ADJUST REBARS AS NECESSARY TO ACCOMMODATE THE STEEL CASING. PAYMENT SHALL BE INCIDENTAL TO ITEM #614605.



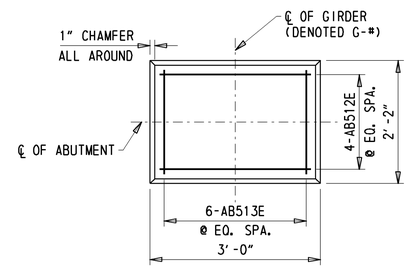
SECTION J-J

¼″ = 1′-0″



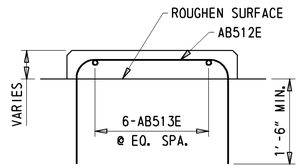
SECTION K-K

¼″ = 1′-0″



MASONRY PAD-PLAN

¾″ = 1′-0″



MASONRY PAD-ELEVATION

¾″ = 1′-0″

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	ABUTMENT A REINFORCEMENT DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: KRL	
					CHECKED BY: PAM	

AB-04 | SHEET NO. 132 | TOTAL SHTS. 481

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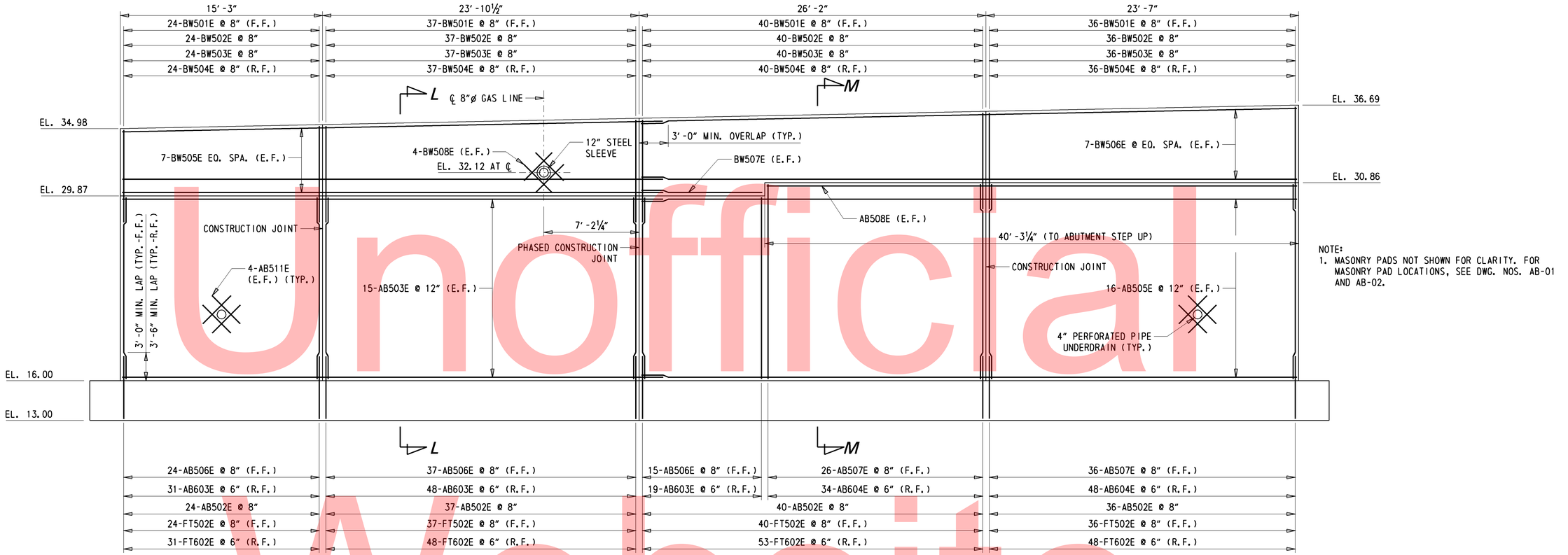
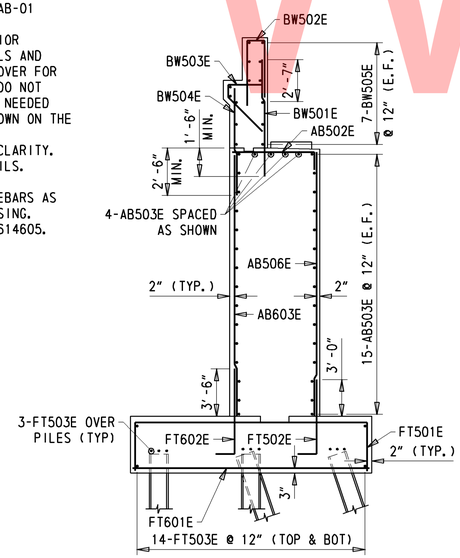


NOTE:
1. MASONRY PADS NOT SHOWN FOR CLARITY. FOR MASONRY PAD LOCATIONS, SEE DWG. NOS. AB-01 AND AB-02.

ABUTMENT B REINFORCEMENT ELEVATION

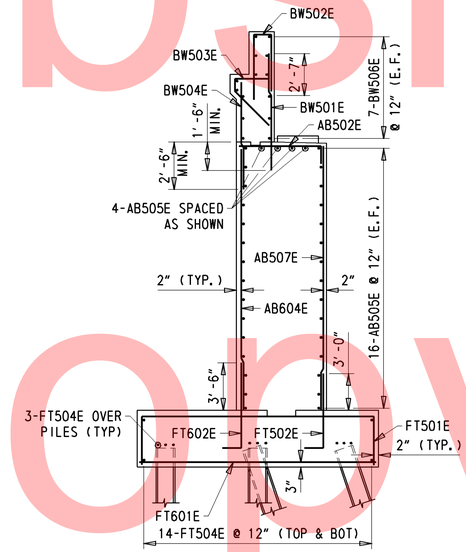
¼″ = 1′-0″

NOTES:
1. MASONRY PADS NOT SHOWN FOR CLARITY. FOR MASONRY PAD LOCATIONS, SEE DWG. NOS. AB-01 AND AB-02.
2. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2″ OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
3. FORMLINED SURFACES ARE NOT SHOWN FOR CLARITY. SEE DWG. NO. AB-01 FOR FORMLINER DETAILS.
4. THE CONTRACTOR SHALL CUT AND ADJUST REBARS AS NECESSARY TO ACCOMMODATE THE STEEL CASING. PAYMENT SHALL BE INCIDENTAL TO ITEM #614605.



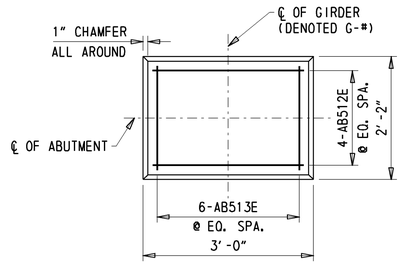
SECTION L-L

¼″ = 1′-0″



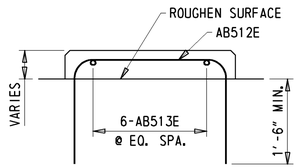
SECTION M-M

¼″ = 1′-0″



MASONRY PAD-PLAN

¾″ = 1′-0″



MASONRY PAD-ELEVATION

¾″ = 1′-0″

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	ABUTMENT B REINFORCEMENT DETAILS	AB-05
				COUNTY NEW CASTLE	DESIGNED BY: KRL		SHEET NO. 133
					CHECKED BY: PAM		TOTAL SHTS. 481

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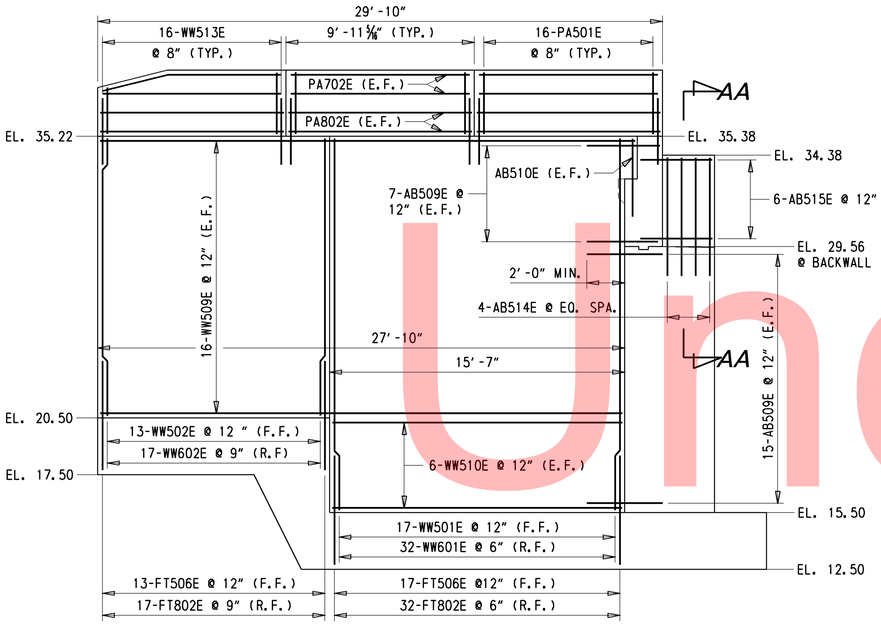
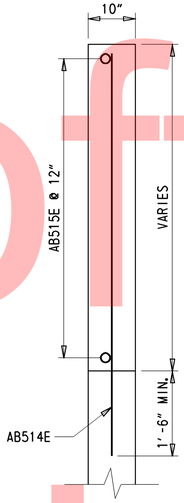


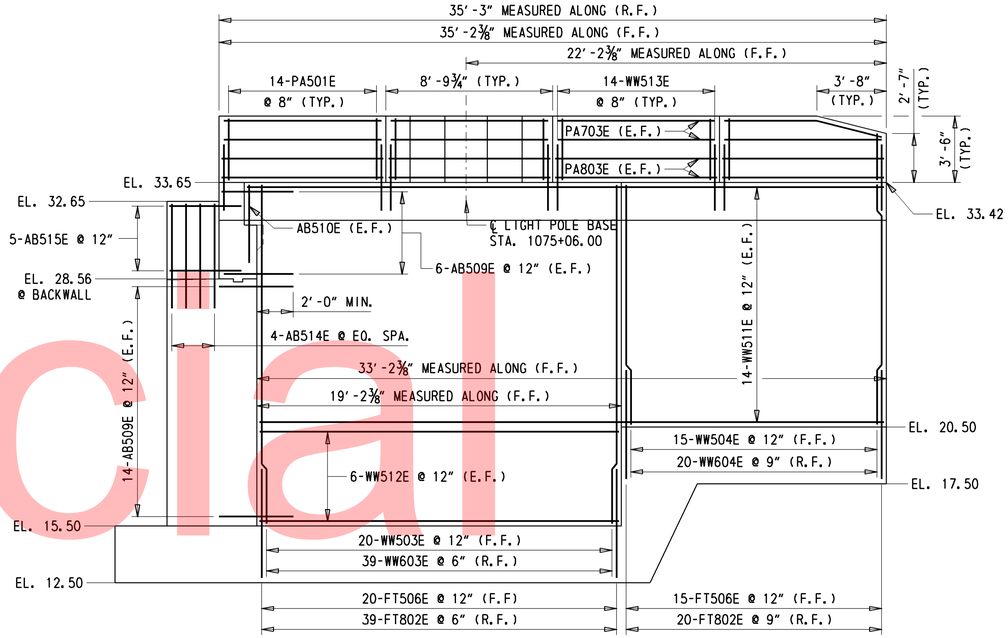
SOUTHEAST WINGWALL ELEVATION (C-C)

¼″ = 1′



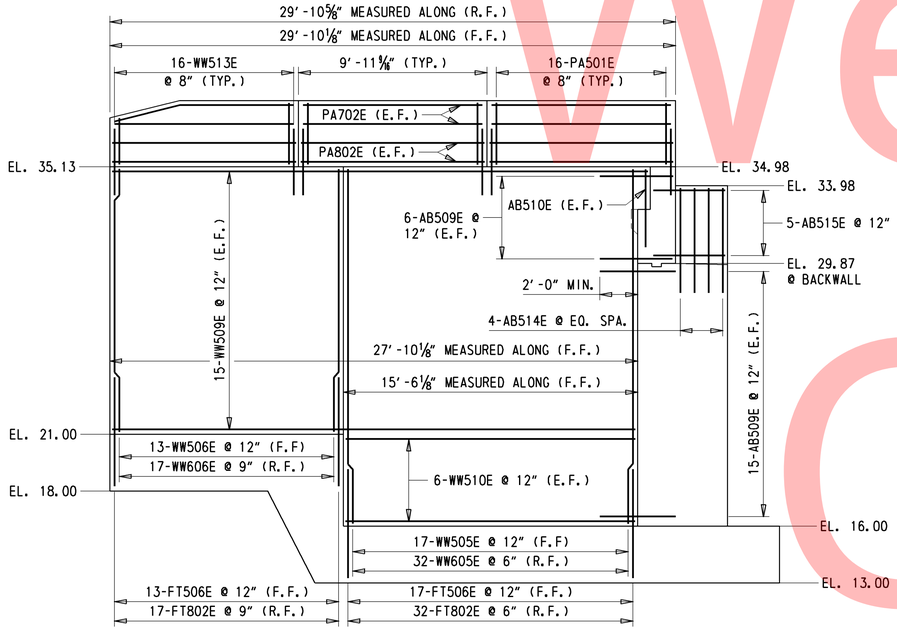
SECTION AA-AA

¾″ = 1′



SOUTHWEST WINGWALL ELEVATION (D-D)

¼″ = 1′

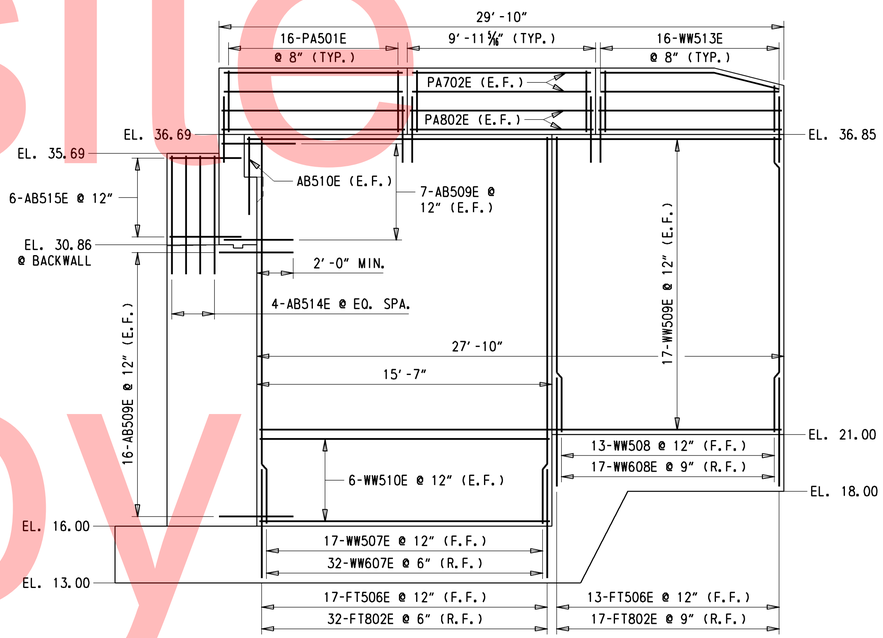


NORTHWEST WINGWALL ELEVATION (E-E)

¼″ = 1′

NOTES:

1. FOR LOCATIONS OF ELEVATIONS (C-C, D-D, E-E AND F-F), SEE DWG. NOS. FT-01 AND FT-02.
2. FOR ADDITIONAL REINFORCEMENT DETAILS, SEE DWG. NOS. WW-02 AND BA-01.
3. FOR ADDITIONAL LIGHT POLE BASE AND CONDUIT DETAILS, SEE DWG. NO. LB-01.
4. FIELD CUT OR BEND BARS AS NEEDED. PAYMENT INCIDENTAL TO ITEM #604000 - BAR REINFORCEMENT, EPOXY COATED.
5. ALL JOINTS BETWEEN BARRIER SECTIONS SHALL BE PARAFFIN COATED CONTRACTION JOINTS.
6. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2″ OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
7. FORMLINED SURFACES ARE NOT SHOWN FOR CLARITY. SEE DWG. NO. PE-01 FOR FORMLINER DETAILS.
8. END BARRIER SECTIONS ON THE WINGWALLS SHALL NOT BE FORMLINED. ALL OTHER BARRIER SECTIONS SHALL BE FORMLINED AS SHOWN ON DWG. NO. BA-01.



NORTHEAST WINGWALL ELEVATION (F-F)

¼″ = 1′

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	WINGWALL ELEVATIONS
				COUNTY NEW CASTLE	DESIGNED BY: KRL	
					CHECKED BY: PAM	

WW-01

SHEET NO. 134

TOTAL SHTS. 481

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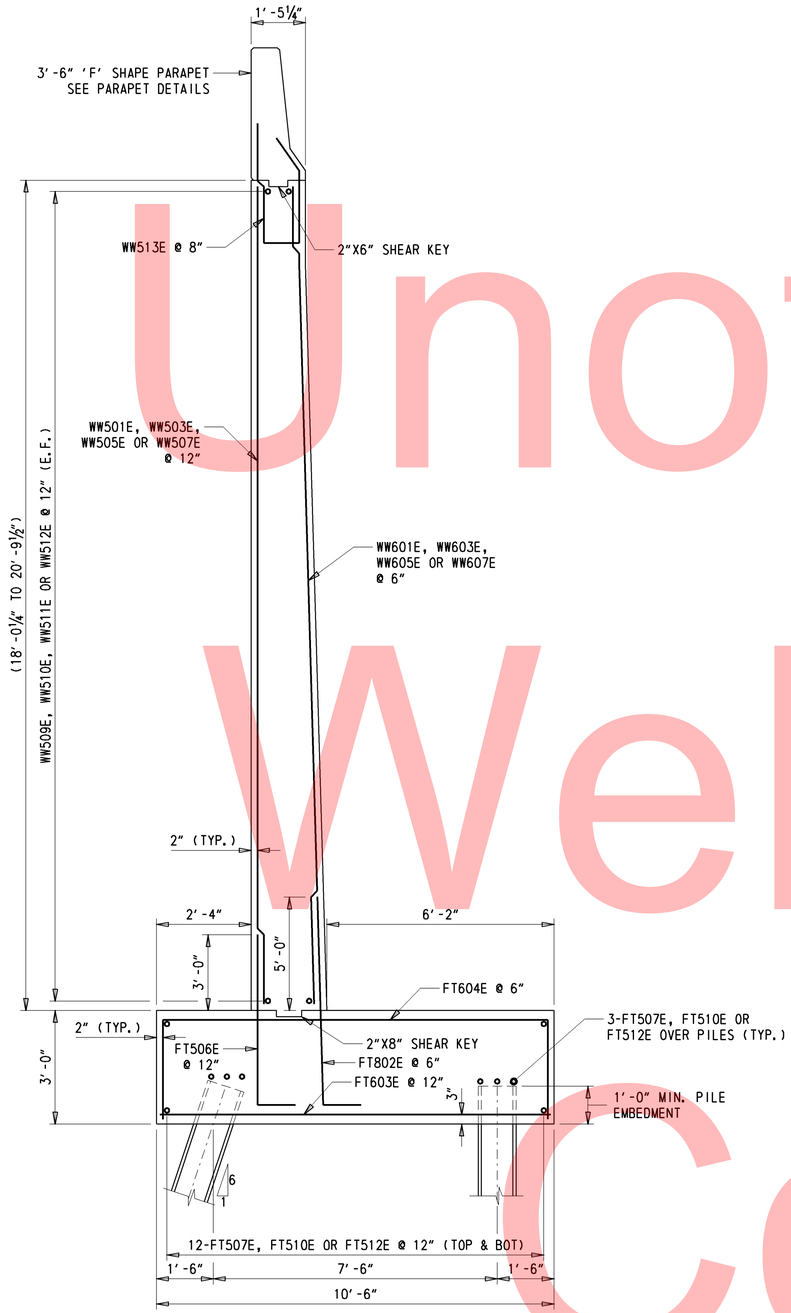
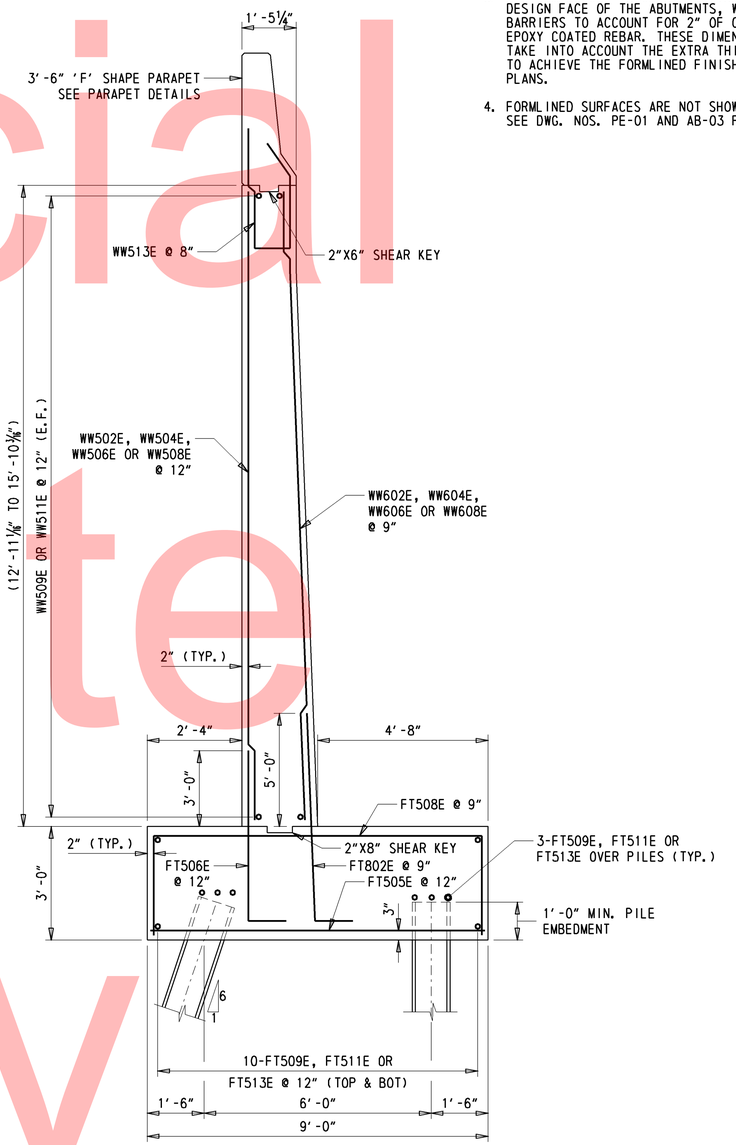


TYPICAL WINGWALL SECTION (A-A)



TYPICAL WINGWALL SECTION (B-B)

NOTES:
1. FOR LOCATION OF SECTIONS (A-A AND B-B), SEE DWG. NOS. FT-01 AND FT-02.
2. FIELD BEND BARS WW601E, WW602E, WW603E, WW604E, WW605E, WW606E, WW607E AND WW608E AS NEEDED. PAYMENT INCIDENTAL TO 604000 - BAR REINFORCEMENT, EPOXY COATED.
3. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
4. FORMLINED SURFACES ARE NOT SHOWN FOR CLARITY. SEE DWG. NOS. PE-01 AND AB-03 FOR FORMLINER DETAILS.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

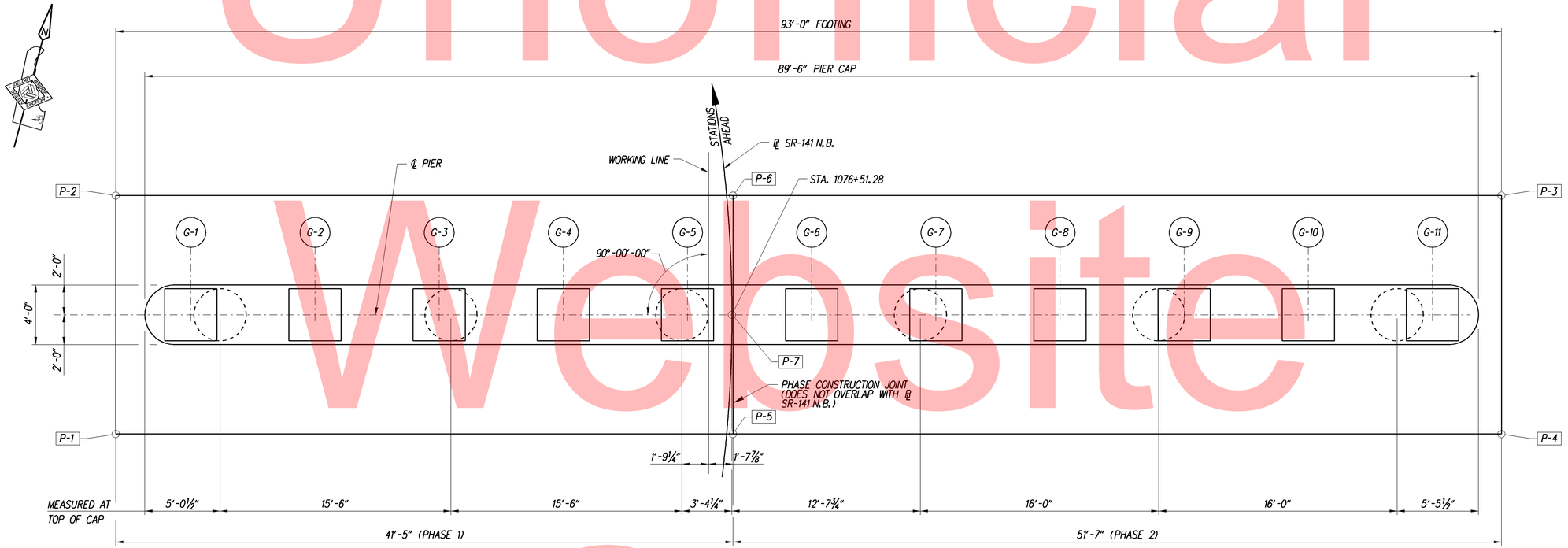
SCALE
0 2 4 6
FEET

I-95 AND SR 141 INTERCHANGE,
RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO. 1-675
T201109002	DESIGNED BY: KRL
COUNTY	CHECKED BY: PAM
NEW CASTLE	

WINGWALL REINFORCEMENT DETAILS

WW-02	
SHEET NO.	135
TOTAL SHTS.	481



PIER PLAN

NOTE:

1. FOR ADDITIONAL WORKING POINTS INFORMATION, SEE DWG. NO. FL-01.

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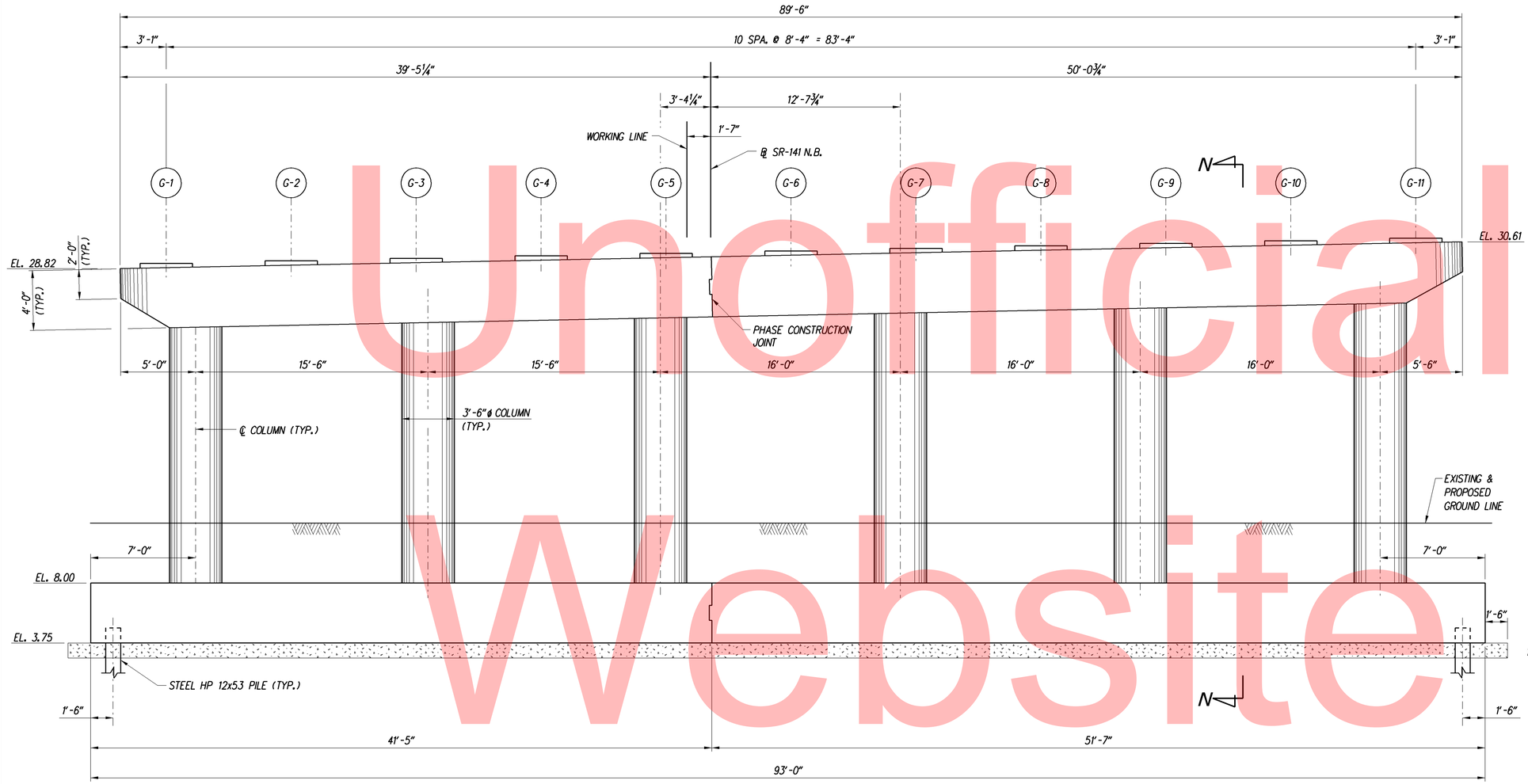
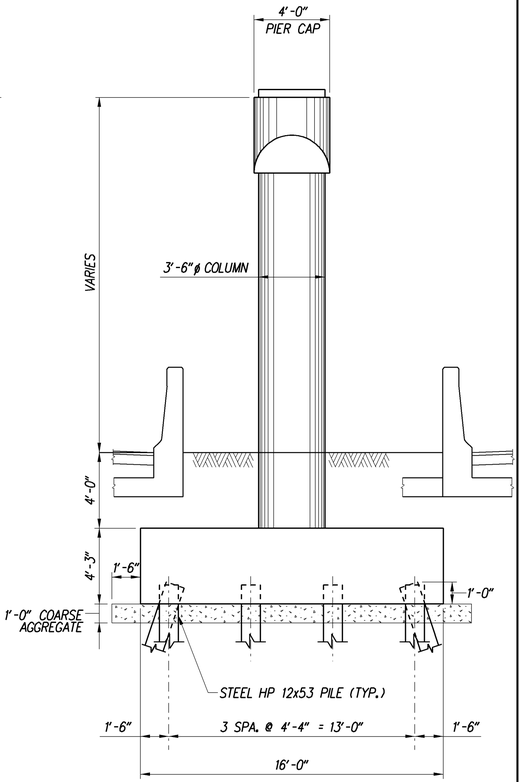
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 4 8 12 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	PIER PLAN
				COUNTY NEW CASTLE	DESIGNED BY: KRL	
					CHECKED BY: PAM	

PR-01

SHEET NO.	TOTAL SHTS.
136	481



PIER ELEVATION



END VIEW (SECTION N-N)

SCALE: ¼" = 1'-0"

MASONRY PAD ELEVATIONS	
PAD	ELEVATION
G-1	29.22
G-2	29.39
G-3	29.55
G-4	29.72
G-5	29.89
G-6	30.05
G-7	30.22
G-8	30.39
G-9	30.55
G-10	30.72
G-11	30.89

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 4 8 12 FEET

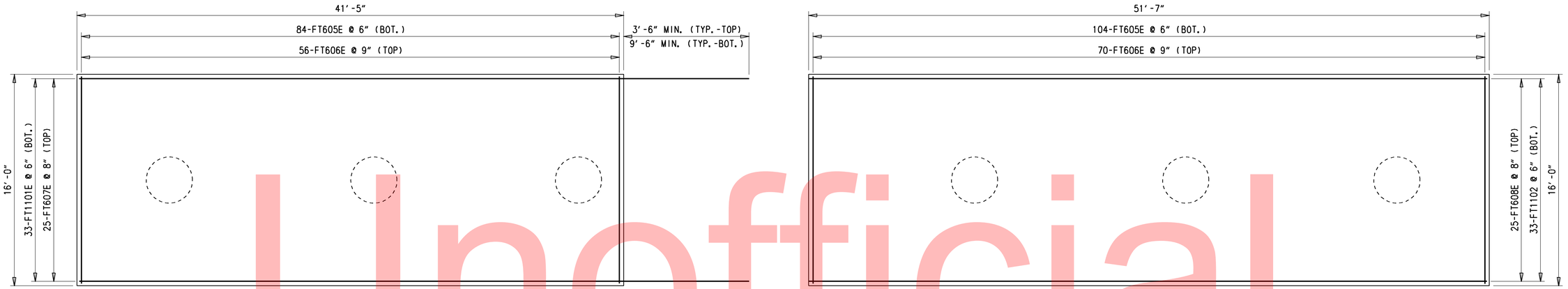
I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	T201109002
COUNTY	NEW CASTLE
BRIDGE NO.	1-675
DESIGNED BY:	KRL
CHECKED BY:	PAM

PIER ELEVATION AND SECTION

PR-02

SHEET NO.	137
TOTAL SHTS.	481

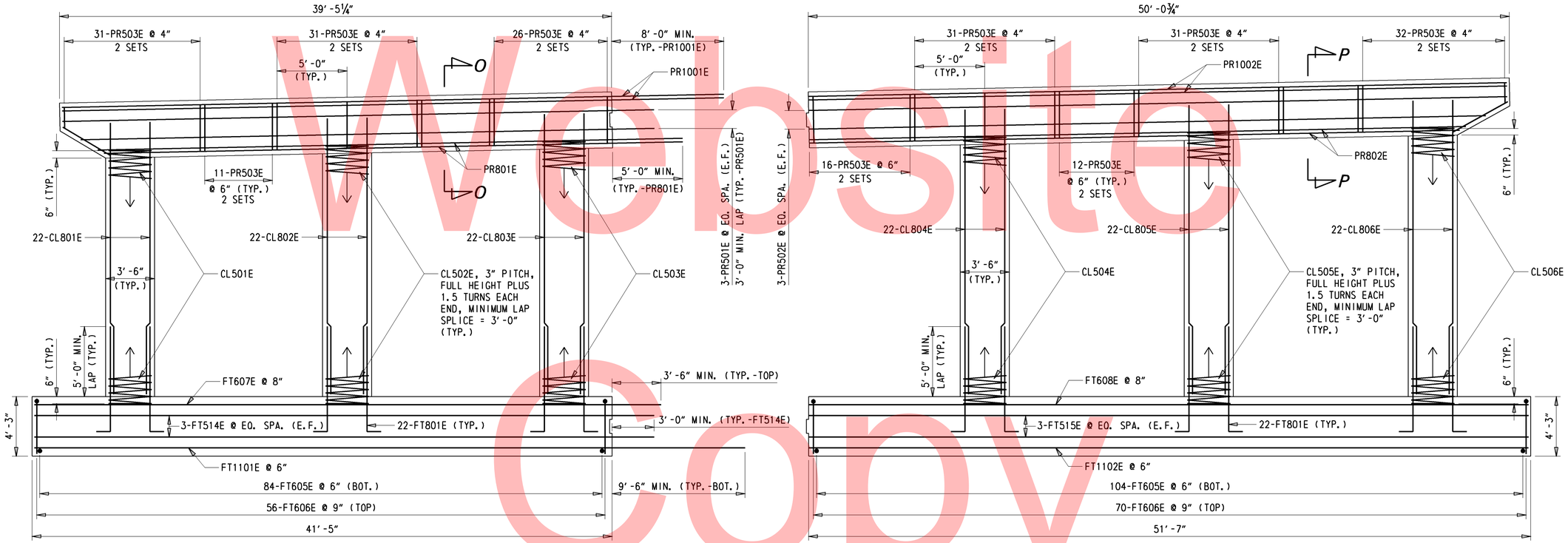


FOOTING REINFORCEMENT PLAN - PHASE 1

FOOTING REINFORCEMENT PLAN - PHASE 2

NOTE: FIELD CUT OR BEND BARS AS NEEDED. PAYMENT INCIDENTAL TO ITEM #604000 - BAR REINFORCEMENT, EPOXY COATED.

NOTES:
1. FOR TYPICAL SECTIONS (O-O AND P-P), SEE DWG. NO. PR-04.
2. FOR ADDITIONAL REINFORCEMENT DETAILS, SEE DWG. NO. PR-04



PIER REINFORCEMENT ELEVATION - PHASE 1

PIER REINFORCEMENT ELEVATION - PHASE 2

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 4 8 12 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	PIER REINFORCEMENT DETAILS – 1
				COUNTY NEW CASTLE	DESIGNED BY: KRL	
					CHECKED BY: PAM	

PR-03
SHEET NO. 138
TOTAL SHTS. 481

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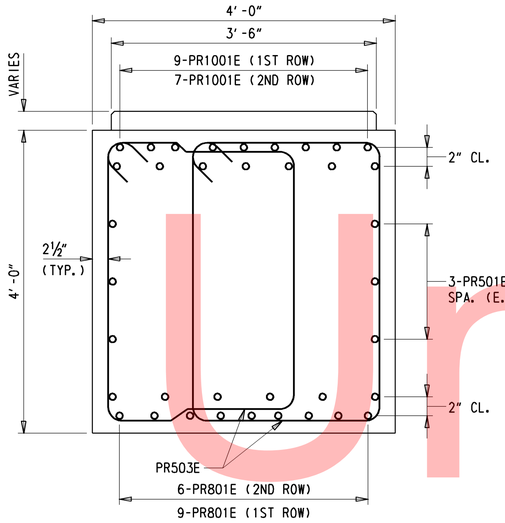
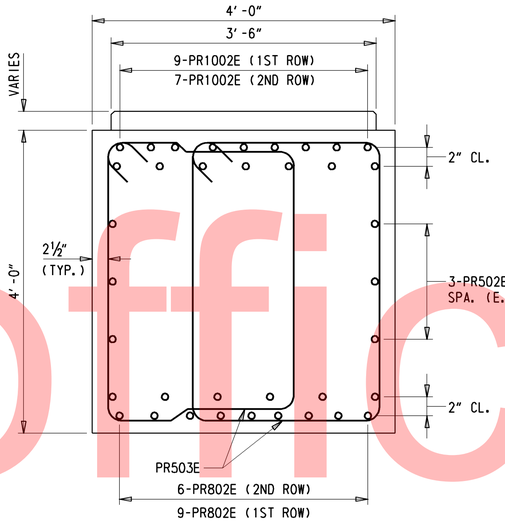


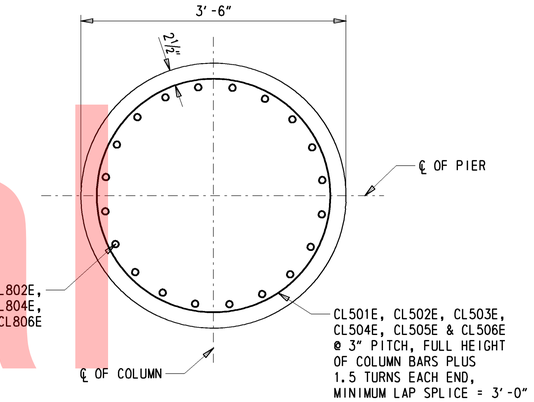
SECTION O-O

1″ = 1′-0″



SECTION P-P

1″ = 1′-0″



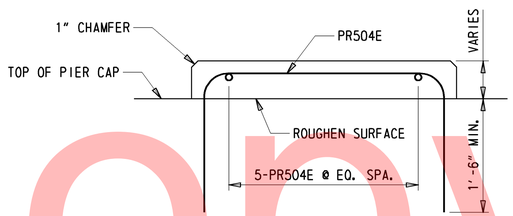
TYPICAL COLUMN SECTION

1″ = 1′-0″

PIER FOOTING REINFORCEMENT SECTION

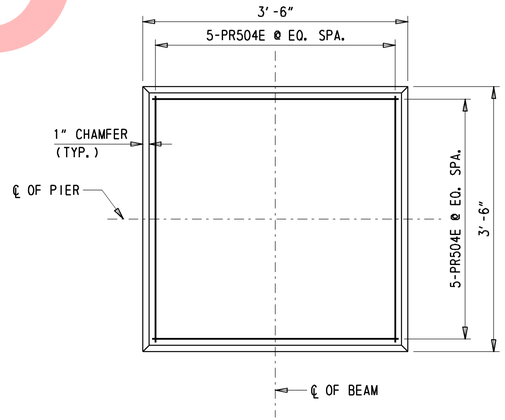
½″ = 1′-0″

NOTE:
1. FOR LOCATION OF SECTIONS (O-O AND P-P), SEE DWG. NO. PR-03



MASONRY PAD ELEVATION

1″ = 1′-0″



MASONRY PAD PLAN

1″ = 1′-0″

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	PIER REINFORCEMENT DETAILS – 2
				COUNTY NEW CASTLE	DESIGNED BY: KRL	
					CHECKED BY: PAM	

PR-04

SHEET NO. 139

TOTAL SHTS. 481

BEARING NOTES:

1. DESIGN OF STEEL LAMINATE IS BASED ON ASTM A 709 GRADE 36. SOLE PLATE SHALL BE ASTM A 709 GRADE 50W.

2. NEOPRENE IN BEARING PAD SHALL HAVE A SHORE 'A' DUROMETER HARDNESS OF 60. PAYMENT FOR ELASTOMERIC PADS, AND INSTALLATION SHALL BE INCIDENTAL TO ITEM #605002 - STEEL STRUCTURES.

3. ANCHOR BOLTS AND WASHERS SHALL BE UNPAINTED A709 GRADE 36 GALVANIZED STEEL. ALL NUTS SHALL BE UNPAINTED A307 GALVANIZED STEEL. SET NUTS ¼" CLEAR OF SOLE PLATES AND BURR THREADS ABOVE AND BELOW NUTS.

4. USE SWEDGED ANCHOR BOLTS. BOLTS MAY BE CAST-IN-PLACE OR GROUTED IN PREFORMED (SLEEVED OR DRILLED) HOLES. SLEEVED HOLES SHALL BE CORRUGATED TO PREVENT SLIPPAGE. THE PREFORMED HOLES SHALL HAVE A DIAMETER OF AT LEAST 2" LARGER THAN THE DIAMETER OF THE BOLTS. WHEN DRILLING HOLES, DO NOT UNDER ANY CIRCUMSTANCES COME INTO CONTACT WITH THE REINFORCING BARS.

5. SOLE PLATES ARE TO BE BEVELED TO MATCH GRADE WHEN GRADE EXCEEDS 1 PERCENT.

6. STEEL SURFACES OF SOLE PLATE TO BE MACHINE FINISHED AS SHOWN IN THE DETAILS, MEASURED IN ACCORDANCE WITH ANSI B46.1.

7. STEEL PLATES SHALL MEET A FLATNESS REQUIREMENT OF 0.5 PERCENT IN THE DIRECTION BEING MEASURED (WIDTH, LENGTH, AND DIAGONALS) MAXIMUM, BUT NOT TO EXCEED ⅛ INCH.

8. BEARING SHALL BE PLACED NORMAL TO CENTERLINE OF BEAM.

9. FILL SLOTS AND HOLES AROUND ANCHOR BOLTS WITH AN APPROVED NON-HARDENING CAULKING COMPOUND OR ELASTIC JOINT SEALER.

10. FOR EXPANSION BEARINGS
USE 1⅞" x 3" SLOTS IN SOLE PLATE AND ⅜" x 3" x 5½" WASHERS WITH 1⅝" DIA. HOLE IN WASHERS.

FOR FIXED BEARINGS
USE 1⅞" DIA. HOLES IN SOLE PLATE AND ⅜" x 3" DIA. WASHERS WITH 1⅝" DIA. HOLE IN WASHER.

BEARING TABLE

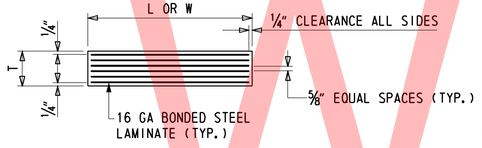
LOCATION	BEARING DESIGNATION						LAMINATED ELASTOMERIC PAD					
	MARK	TYPE	NEOPRENE HARDNESS (SHORE A)	TOTAL NO REOD	CAPACITY/PAD		DIM				INTERIOR LAYERS	TOTAL PAD THICKNESS "T"
					REACTION ⊗	MOVEMENT ☒	'L'	'W'	SHAPE FACTOR ▲	AREA 1N'		
ABUTMENT A	EX 1	EXP	60± 5 DURO	11	163.51 K	.6365"	11"	17.0"	5.34	187.00	4	3.3125"
PIER	FX 1	FIX	60± 5 DURO	11	421.45 K	-	22"	17.0"	7.67	374.00	5	4.0000"
ABUTMENT B	EX 1	EXP	60± 5 DURO	11	163.51 K	.6365"	11"	17.0"	5.34	187.00	4	3.3125"

LEGEND:

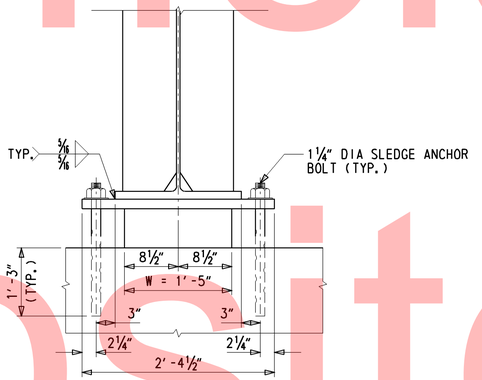
⊗ MAX. UN-FACTURED SERVICE 1 REACTION (W/O DYNAMIC LOAD ALLOWANCE).

☒ TEMPERATURE MOVEMENT FOR 68°F.

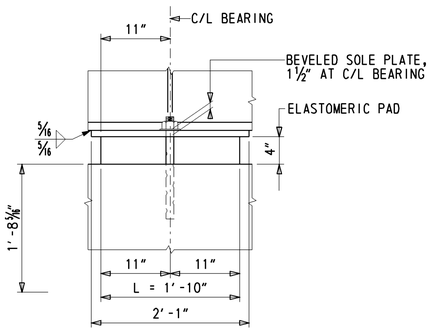
▲ INTERIOR LAYERS.



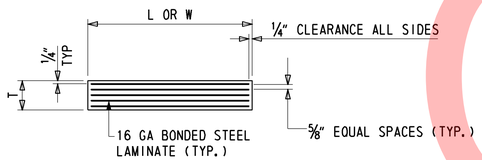
PIER LAMINATED ELASTOMERIC PAD
NOT TO SCALE



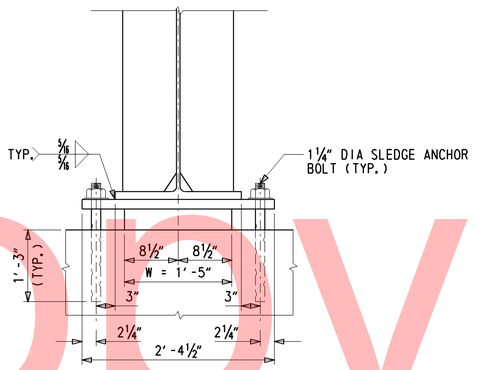
PIER BEARING ELEVATION
SCALE: 1" = 1'-0"



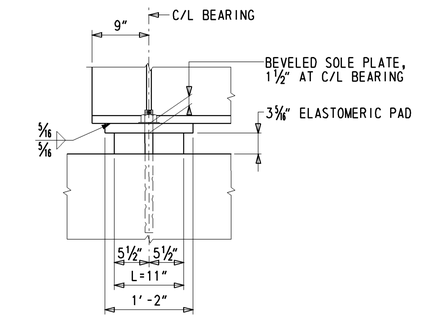
PIER SIDE ELEVATION
SCALE: 1" = 1'-0"



ABUT. A & B LAMINATED ELASTOMERIC PAD
NOT TO SCALE



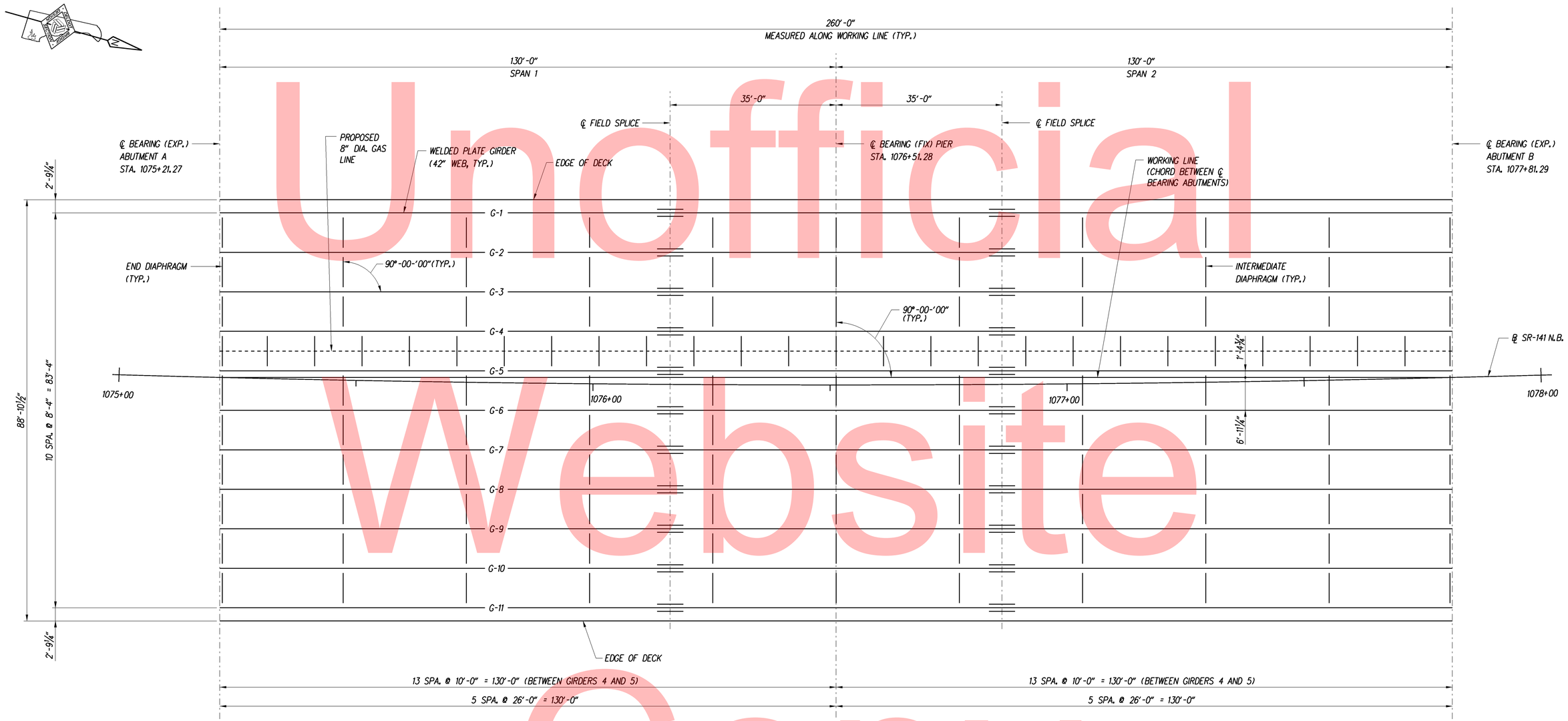
ABUT. A & B BEARING ELEVATION
SCALE: 1" = 1'-0"



ABUT. A & B SIDE ELEVATION
SCALE: 1" = 1'-0"

W:\MSV8\CELLS\PROJDEV\SB.CEL

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	BEARING DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: PAM	BD-01
					CHECKED BY: KRL	SHEET NO. 140
						TOTAL SHTS. 481



FRAMING PLAN

NOTE:
1. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

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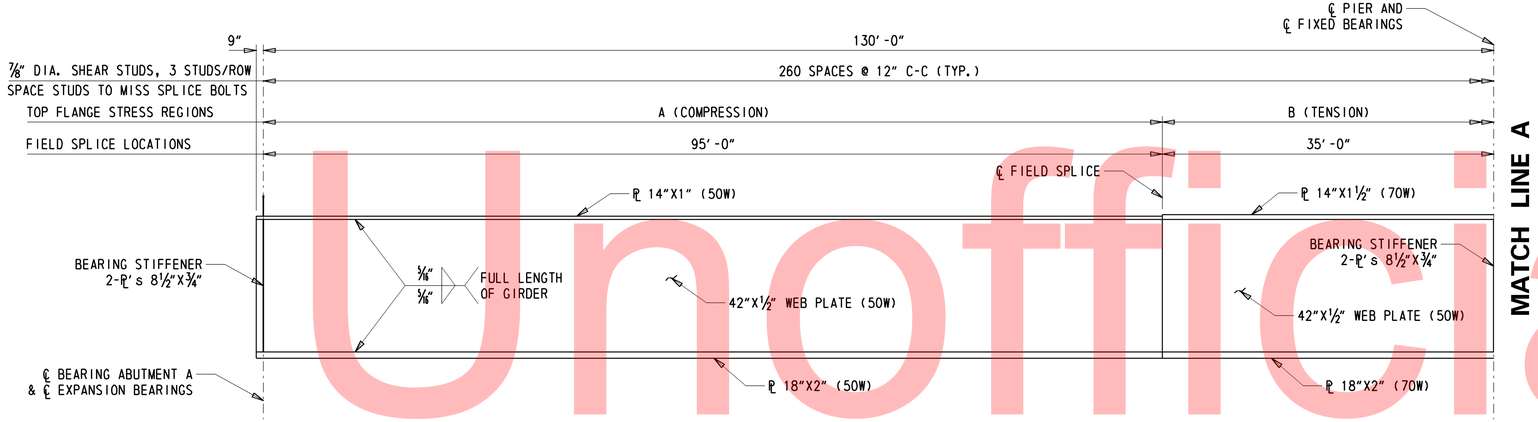
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 10 6667 213333 32 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	FRAMING PLAN
				COUNTY NEW CASTLE	DESIGNED BY: KRL	
					CHECKED BY: PAM	

FR-01

SHEET NO.	TOTAL SHTS.
141	481

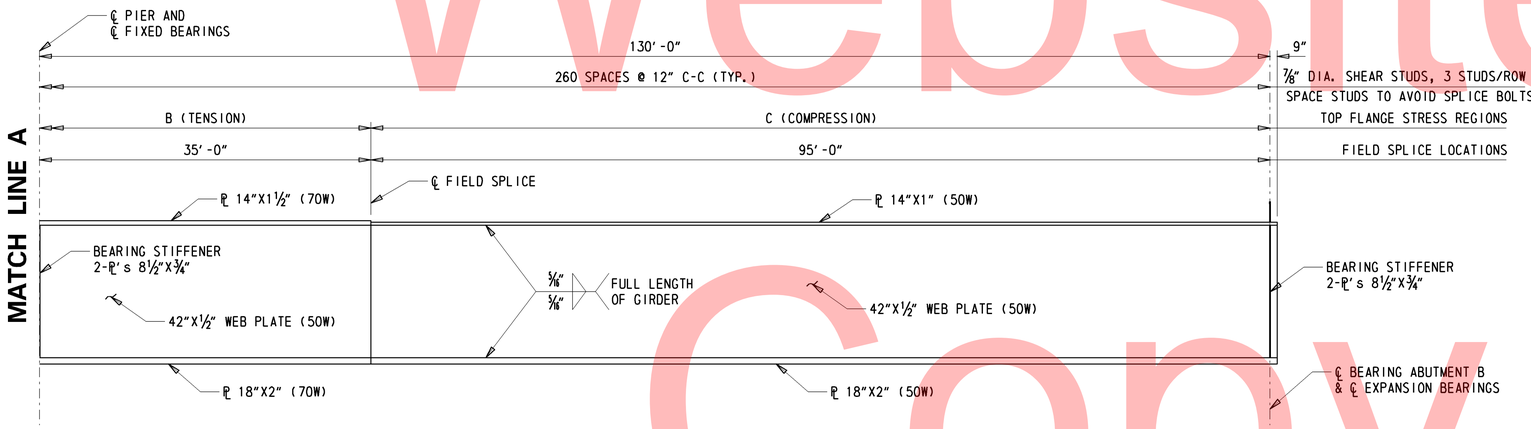


GIRDER ELEVATION SPAN-1

HORIZONTAL SCALE: ⅛" = 1'-0"
VERTICLE SCALE: ½" = 1'-0"

STEEL NOTES:

1. WELDING SHALL CONFORM TO THE CURRENT ANSI/AASHTO/AWS BRIDGE WELDING CODE D1.5-10. WELDING AND NONDESTRUCTIVE TESTING SYMBOLS SHALL CONFORM TO SYMBOLS FOR WELDING, BRAZING, AND NONDESTRUCTIVE EXAMINATION AWS A2.4-2007.
2. JOINT WELDING PROCEDURES, OVERALL FABRICATION METHODS, AND QUALITY CONTROL INSPECTION PROCEDURE SHALL BE INCLUDED AS WRITTEN PROCEDURE SPECIFICATIONS WITH THE SHOP PLAN SUBMISSION.
3. GIRDER WEBS SHALL BE GROUND SMOOTH AND SHALL BE PLUMB AT THE ENDS UNDER FULL DEAD LOAD.
4. THE GIRDERS SHALL BE PAINTED WITH A URETHANE PAINT SYSTEM IN ACCORDANCE WITH SECTION 605 FROM EACH END TO A DISTANCE OF 5' FROM FACE OF ABUTMENT AND THE DISTANCE BETWEEN 5' FROM EACH FACE OF PIER CAP. THE COLOR OF THE FINISHED PAINT SHALL BE BROWN (NO. 10076) FROM FEDERAL STANDARD 595C. AT ALL LOCATIONS WHERE THE CONTRACTOR'S WORK DAMAGES THE EXISTING PAINT SYSTEM, THE CONTRACTOR SHALL CLEAN THE DAMAGED LOCATION AND REPAINT THE AREA. ALL CLEANING AND PAINTING IS INCIDENTAL TO ITEM #605002 - STEEL STRUCTURES.
5. BEARING AREAS: PROVIDE BOTTOM FLANGE IN A TRUE HORIZONTAL PLANE IN TRANSVERSE DIRECTION AND IN A TRUE PLANE LONGITUDINALLY OVER DIMENSION "L", WHERE L = WIDTH OF SOLE PLATE + 6" AHEAD AND BACK. WHERE APPLICABLE. IF THE SOLE PLATE IS WELDED TO THE BOTTOM FLANGE, PROVIDE THE SOLE PLATE MEETING THE SAME FLATNESS REQUIREMENTS. EACH BEARING MUST BE STRESSED UNIFORMLY AFTER ALL DEAD LOAD IS PLACED. MAKE NECESSARY SHOP AND/OR FIELD ADJUSTMENTS TO PROVIDE UNIFORM BEARING STRESS UNDER ALL DEAD LOADS.



GIRDER ELEVATION SPAN-2

HORIZONTAL SCALE: ⅛" = 1'-0"
VERTICLE SCALE: ½" = 1'-0"

NOTES:
1. THERE SHALL BE NO FIELD WELDING TO THE TOP FLANGE, EXCEPT FOR SHEAR STUDS, IN THE TENSION REGIONS.
2. CROSS FRAME CONNECTION PLATE SPACING NOT SHOWN. FOR LOCATION OF CROSS FRAME CONNECTION PLATES, SEE DWG. NO. FR-01.
3. FOR BEARING STIFFENER AND CONNECTION PLATE DETAILS, SEE DWG. NO. BM-02.
4. FOR FIELD SPLICE DETAILS, SEE DWG. NO. BM-03.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	GIRDER ELEVATION	BM-01
				COUNTY NEW CASTLE	DESIGNED BY: KRL		SHEET NO. 142
					CHECKED BY: PAM		TOTAL SHTS. 481

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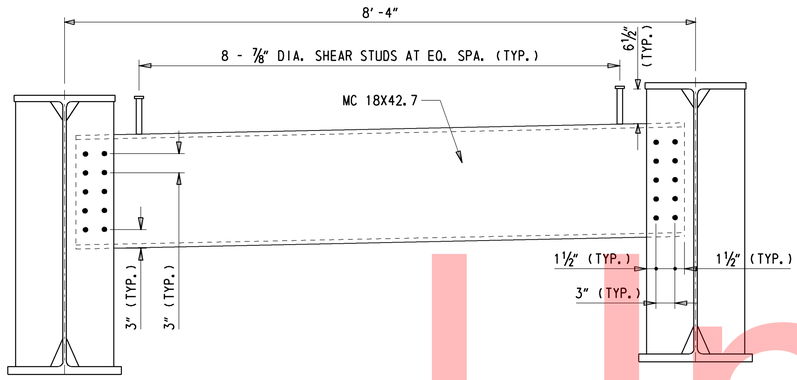
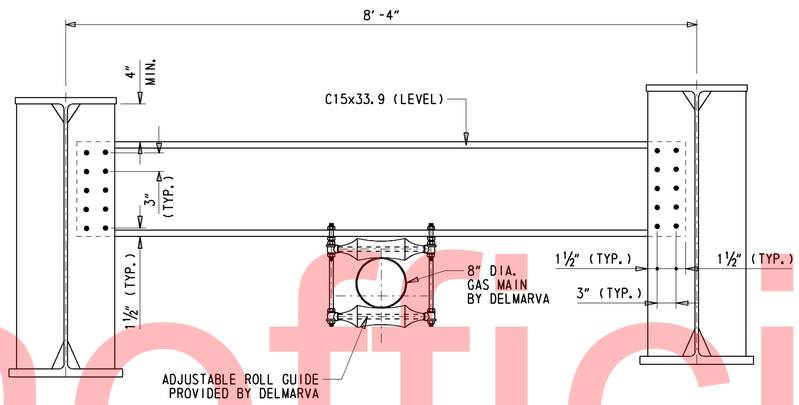


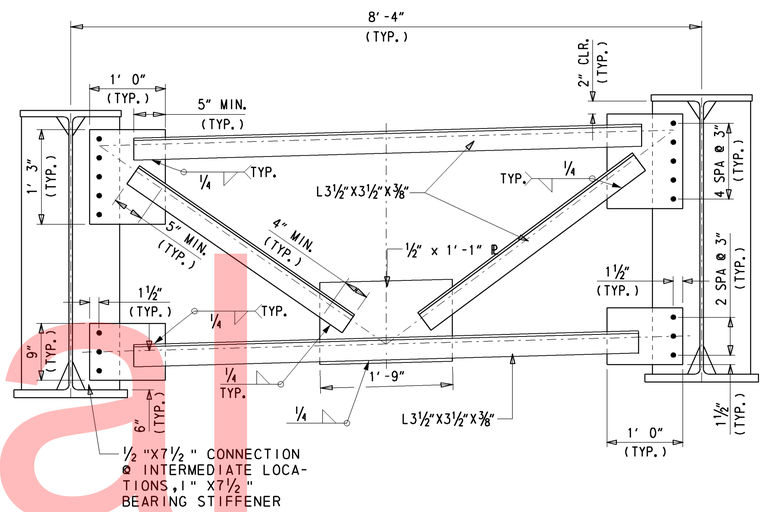
END DIAPHRAGM DETAILS
(AT ABUTMENTS)
1″ = 1′-0″



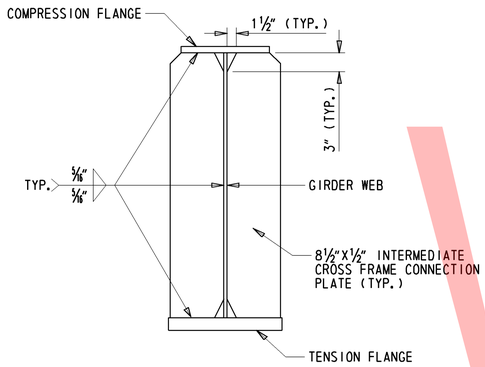
DIAPHRAGM BETWEEN GIRDERS 4 & 5 ONLY
(PHASE 1 STAGE 2)
1″ = 1′-0″

NOTE:

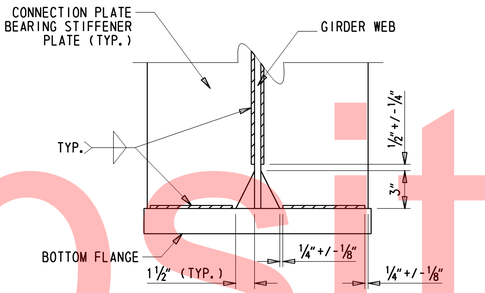
1. END DIAPHRAGMS BETWEEN GIRDERS 4 & 5 SHALL BE INSTALLED AT A 2% CROSS SLOPE TO MATCH THE DECK END HAUNCH. 8 SHEAR STUDS AT EQUAL SPACING SHALL BE WELDED TO THE C15X33.9 END DIAPHRAGMS. INTERMEDIATE C15X33.9 DIAPHRAGMS BETWEEN GIRDERS 4 & 5 SHALL BE INSTALLED AS PER THEIR RESPECTIVE DETAIL SHOWN.



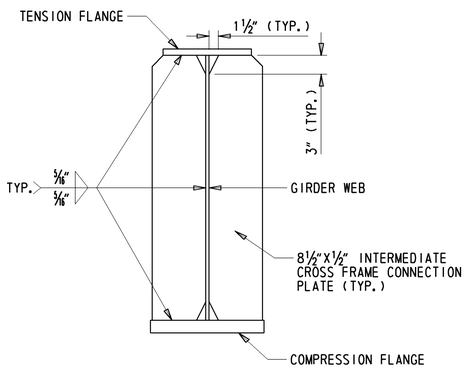
INTERMEDIATE DIAPHRAGM DETAILS
(AT PIER AND INTERMEDIATE LOCATIONS)
1″ = 1′-0″



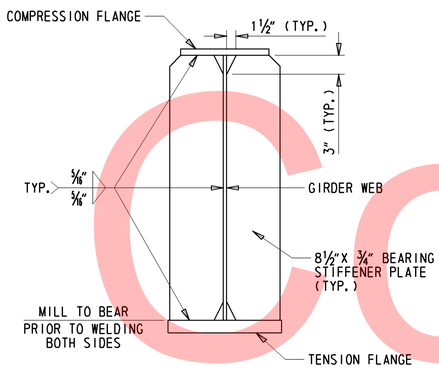
INTERMEDIATE DIAPHRAGM CONNECTION PLATES
(POSITIVE MOMENT ZONE)
1″ = 1′-0″



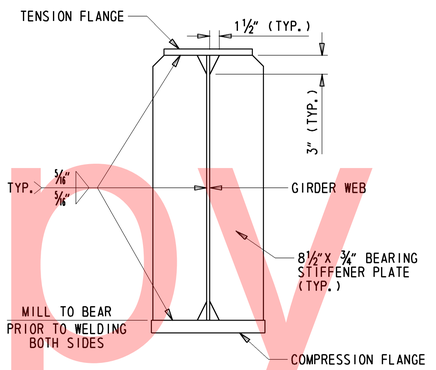
STIFFENER & CONNECTION PLATE WELD TERMINATION DETAIL
2″ = 1′-0″



INTERMEDIATE DIAPHRAGM CONNECTION PLATES
(NEGATIVE MOMENT ZONE)
1″ = 1′-0″



ABUTMENT BEARING STIFFENER
1″ = 1′-0″



PIER BEARING STIFFENER
1″ = 1′-0″

NOTES:

1. JOINT WELDING PROCEDURES, OVERALL FABRICATION METHODS, AND QUALITY CONTROL INSPECTION PROCEDURE SHALL BE INCLUDED AS WRITTEN PROCEDURE SPECIFICATIONS WITH THE SHOP PLAN SUBMISSION.
2. ALL BOLTED CONNECTIONS SHALL BE MADE WITH 7*8″ DIAMETER ASTM A325 HIGH STRENGTH BOLTS, TYPE 3, EXCEPT WHERE GIRDER IS PRIMED. WHERE PRIMED, TYPE 1 BOLTS SHALL BE USED. TYPE 1 BOLTS MAY BE EITHER HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232, CLASS C, OR MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 50. NUTS TO BE USED WITH ASTM A 325 TYPE 3 BOLTS SHALL BE ASTM A 563, GRADE C3 OR DH3. WASHERS SHALL CONFORM TO ASTM F436. GALVANIZED, WASHERS SHALL BE OF THE SAME STANDARD AS THAT OF GALVANIZED BOLTS.
3. OVERSIZED HOLES SHALL BE USED ON DIAPHRAGM CONNECTORS.
4. ALL BOLTS ON DIAPHRAGMS SHALL BE FINGER TIGHT AT ERECTION. BOLTS ARE TO BE TORQUED BEFORE THE DECK CONCRETE IS POURED. DIAPHRAGMS CONNECTING PHASE 1 AND PHASE 2 GIRDERS (G4 AND G5), SHALL BE TORQUED AFTER PHASE 2 DECK CONCRETE HAS BEEN POURED.
5. DIRECTION OF WELDS IS NOT APPLICABLE IF STIFFENERS ARE FITTED WITH TACK WELDS.
6. INTERMEDIATE DIAPHRAGM CONNECTION PLATES ARE NOT REQUIRED ON FASCIA SIDE OF EXTERIOR GIRDERS.

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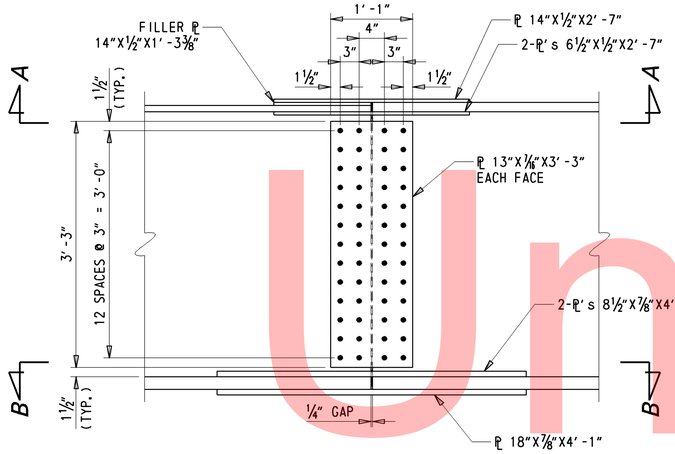
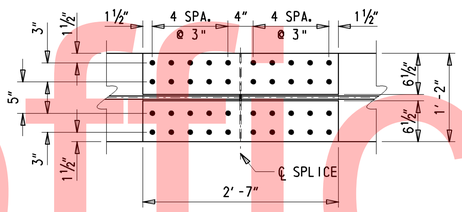
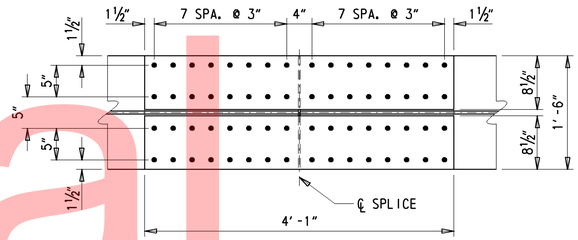
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	CROSS FRAME, STIFFENER & CONNECTION PLATE DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: KRL	BM-02
					CHECKED BY: PAM	SHEET NO. 143
						TOTAL SHTS. 481



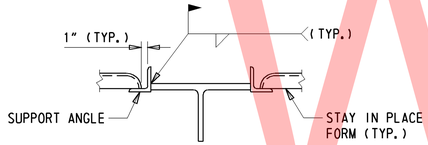
FIELD SPLICE DETAIL
(WEB)



SECTION A-A

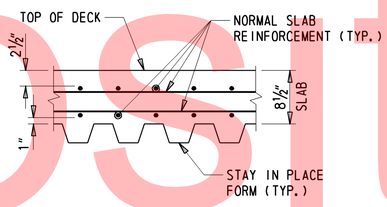


SECTION B-B

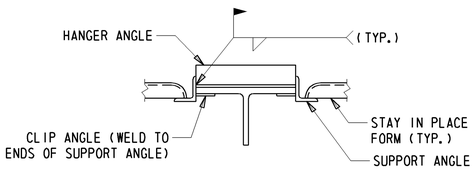


NOTE: ALL ANGLES, WELDS, AND INSERTS MUST BE DESIGNED BY THE CONTRACTOR AND SUBMITTED FOR APPROVAL

COMPRESSION FLANGE S.I.P. FORM DETAIL



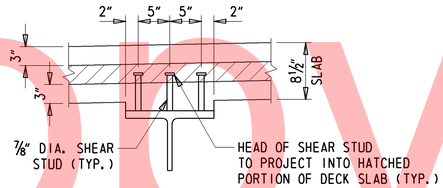
S.I.P. FORM PLACEMENT DETAIL



NOTE: ALL ANGLES, WELDS, AND INSERTS MUST BE DESIGNED BY THE CONTRACTOR AND SUBMITTED FOR APPROVAL

NO S.I.P. FORM BETWEEN GIRDERS 5 AND 6.

TENSION FLANGE S.I.P. FORM DETAIL



SHEAR STUD DETAIL

NOTES:

1. ALL BOLTED CONNECTIONS SHALL BE MADE WITH ⅞" DIAMETER ASTM A325 HIGH STRENGTH BOLTS, TYPE 3, EXCEPT WHERE GIRDER IS PRIMED . WHERE PRIMED, TYPE 1 BOLTS SHALL BE USED. TYPE 1 BOLTS MAY BE EITHER HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232, CLASS C, OR MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 50. NUTS TO BE USED WITH ASTM A 325 TYPE 3 BOLTS SHALL BE ASTM A 563, GRADE C3 OR DH3. WASHERS SHALL CONFORM TO ASTM F436. GALVANIZED, WASHERS SHALL BE OF THE SAME STANDARD AS THAT OF GALVANIZED BOLTS.
2. BOLT HEADS SHALL BE ON THE EXTERIOR FACE OF THE EXTERIOR GIRDERS AND THE BOTTOM OF THE BOTTOM FLANGES.
3. BOLT PITCH SHALL BE 3" UNLESS OTHERWISE NOTED.
4. MINIMUM EDGE DISTANCE IS 1½" UNLESS OTHERWISE SHOWN OR NOTED.
5. FLANGE AND WEB SPLICES SHALL BE LOCATED WHERE SHOWN ON PLANS. FIELD SPLICE DESIGNS ARE BASED ON CLASS A SURFACE (UNPAINTED CLEAN MILL SCALE, AND BLASTED-CLEANED SURFACES WITH CLASS A COATING). MINOR CHANGES IN LOCATION, ALONG WITH ANY ADDITIONAL SPLICES REQUESTED, SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. LENGTHS OF PLATES SHALL BE CONSISTENT WITH THE LENGTHS OF PLATES AVAILABLE FROM THE MILL. LOCATIONS SHALL BE AT POINTS OF REDUCED TENSILE STRESS. SHOP WEB SPLICES SHALL BE AT LEAST 12" FROM SHOP FLANGE SPLICES AND/OR CONNECTION PLATES FOR CROSS FRAMES.
6. ALLOWANCES SHALL BE MADE IN THE SHOP FOR SHRINKAGE DUE TO WELDING AND BURNING. IF UNEVEN SHRINKAGE IS ANTICIPATED, CAMBER ORDINATES SHALL BE ADJUSTED ACCORDINGLY.
7. FLANGE AND WEB SHOP SPLICES ARE TO BE COMPLETED AND WELDMENTS INSPECTED BEFORE FITTING AND WELDING FLANGES TO WEBS. FABRICATION METHODS SHALL BE INCLUDED IN THE WRITTEN WELDING PROCEDURE SPECIFICATIONS OF THE SHOP DRAWING.
8. STAY-IN-PLACE FORMS SHALL NOT BE WELDED TO FLANGE IN THE TENSION ZONE.
9. STAY IN PLACE FORMS SHALL BE VERTICALLY ADJUSTED TO ATTAIN FINISHED LINES AND GRADES REQUIRED ON THE PLANS.
10. BAY BETWEEN GIRDERS 5 AND 6 SHALL BE FORMED. NO S.I.P. FORMS SHALL BE USED AT THIS LOCATION.
11. SHEAR CONNECTOR STUDS SHALL BE ASHTO M 169, GRADE 1015, 1018, OR 1020, EITHER SEMI OR FULLY KILLED.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 1 2 3 FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO. 1-675
T201109002	DESIGNED BY: KRL
COUNTY	CHECKED BY: PAM
NEW CASTLE	

SPLICE AND SUPERSTRUCTURE DETAILS

BM-03

SHEET NO.	TOTAL SHTS.
144	481

NOTES:

1. ALL GIRDERS (TYP.) SHALL BE CAMBERED FOR DEAD LOAD ORDINATES TO THE DIMENSIONS SHOWN ON THESE PLANS. THE CAMBER TOLERANCE IS ZERO UNDER TO ¾ INCH OVER.

LEGEND:

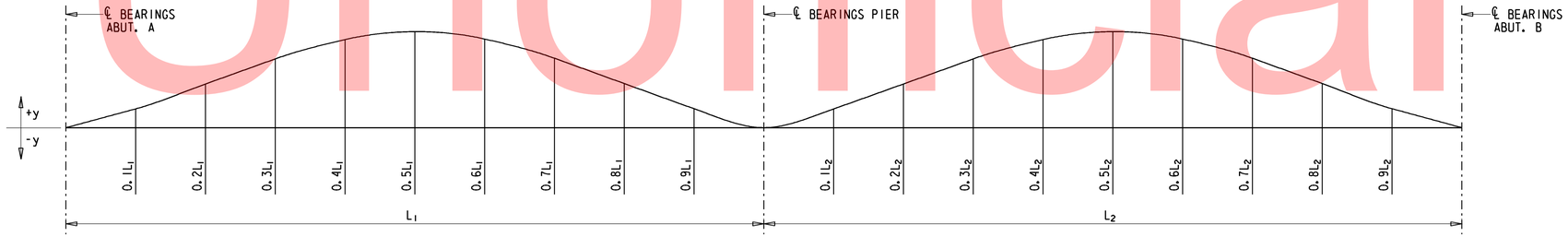
DLS = DENOTES DEFLECTION DUE TO STRUCTURAL STEEL

DLC = DENOTES DEFLECTION DUE TO CONCRETE DECK SLAB, HAUNCH, & S.I.P. FORMS

SDL = DENOTES DEFLECTION DUE TO BARRIER, SAFETY FENCE & FUTURE WEARING SURFACE

TD&C = DENOTES TOTAL DEAD LOAD DEFLECTION & CAMBER

VCO = DENOTES CAMBER FOR VERTICAL CURVE ORDINATE DUE TO ROADWAY PROFILE



DEFLECTION AND TOTAL CAMBERS (INCHES)

PROPOSED GIRDERS		℄ BRG. ABUT. A	0.1L1	0.2L1	0.3L1	0.4L1	0.5L1	0.6L1	0.7L1	0.8L1	0.9L1	℄ BRG. PIER	0.1L2	0.2L2	0.3L2	0.4L2	0.5L2	0.6L2	0.7L2	0.8L2	0.9L2	℄ BRG. ABUT. B
GIRDER 1	DLS	0	3/8	5/8	13/16	7/8	7/8	11/16	1/2	1/4	1/8	0	1/16	1/4	7/16	11/16	13/16	7/8	15/16	5/8	3/8	0
	DLC	0	1 5/16	2 5/16	3	3 5/16	3 3/16	2 5/8	1 5/16	1	7/16	0	1/4	1	1 3/4	2 5/8	3 1/16	3 5/16	3	2 5/16	1 5/16	0
	SDL	0	3/8	5/8	13/16	7/8	7/8	11/16	1/2	1/4	1/8	0	1/16	1/4	1/2	11/16	13/16	7/8	15/16	5/8	3/8	0
	TD & C	0	2 1/16	3 5/16	4 5/8	5 1/16	4 15/16	4	2 15/16	1 1/2	11/16	0	3/8	2 1/2	2 11/16	4	4 11/16	5 1/16	4 5/8	3 5/16	2 1/16	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2 1/16	3 5/16	4 5/8	5 1/16	4 15/16	4	2 15/16	1 1/2	11/16	0	3/8	2 1/2	2 11/16	4	4 11/16	5 1/16	4 5/8	3 5/16	2 1/16	0
GIRDER 2	DLS	0	3/8	5/8	13/16	15/16	7/8	3/4	9/16	5/16	1/8	0	1/16	1/4	1/2	3/4	7/8	15/16	13/16	5/8	3/8	0
	DLC	0	1 3/8	2 7/16	3 1/8	3 1/2	3 3/8	2 13/16	2 1/16	1 1/16	7/16	0	1/4	1 1/16	1 13/16	2 3/4	3 1/4	3 1/2	3 3/16	2 1/16	1 1/8	0
	SDL	0	1/4	7/16	9/16	5/8	5/8	1/2	3/8	3/16	1/16	0	1/16	3/16	3/8	1/2	5/8	5/8	9/16	7/16	1/4	0
	TD & C	0	2	3 1/2	4 1/2	5 1/16	4 7/8	4 1/16	3	1 15/16	5/8	0	3/8	1 1/2	2 11/16	4	4 3/4	5 1/16	4 9/16	3 1/2	2	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2	3 1/2	4 1/2	5 1/16	4 7/8	4 1/16	3	1 15/16	5/8	0	3/8	1 1/2	2 11/16	4	4 3/4	5 1/16	4 9/16	3 1/2	2	0
GIRDER 3	DLS	0	3/8	11/16	7/8	15/16	15/16	3/4	9/16	5/16	1/8	0	1/16	5/16	1/2	3/4	7/8	15/16	7/8	11/16	3/8	0
	DLC	0	1 7/16	2 9/16	3 1/4	3 5/8	3 1/2	2 7/8	2 1/8	1 1/8	7/16	0	1/4	1 1/8	1 15/16	2 7/8	3 3/8	3 5/8	3 5/16	2 9/16	1 7/16	0
	SDL	0	3/16	5/16	3/8	7/16	7/16	3/8	1/4	1/8	1/16	0	1/16	1/8	1/4	3/8	7/16	7/16	7/16	5/16	3/16	0
	TD & C	0	2	3 5/16	4 1/2	5	4 1/8	4	2 15/16	1 13/16	5/8	0	3/8	1 15/16	2 11/16	4	4 11/16	5	4 5/8	3 5/16	2	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2	3 5/16	4 1/2	5	4 1/8	4	2 15/16	1 13/16	5/8	0	3/8	1 15/16	2 11/16	4	4 11/16	5	4 5/8	3 5/16	2	0
GIRDER 4	DLS	0	3/8	11/16	15/16	1	1	13/16	9/16	5/16	1/8	0	1/16	5/16	9/16	13/16	15/16	1	15/16	11/16	3/8	0
	DLC	0	1 7/16	2 5/8	3 7/16	3 3/4	3 9/16	3	2 1/8	1 1/8	3/8	0	5/16	1 1/8	2 1/8	3	3 5/16	3 3/4	3 7/16	2 5/8	1 7/16	0
	SDL	0	1/8	1/4	5/16	5/16	5/16	1/4	3/16	1/8	1/16	0	0	1/8	3/16	1/4	5/16	5/16	5/16	1/4	1/8	0
	TD & C	0	1 15/16	3 5/16	4 11/16	5 1/16	4 7/8	4 1/16	2 7/8	1 5/16	9/16	0	3/8	1 5/16	2 7/8	4 1/16	4 13/16	5 1/16	4 11/16	3 5/16	1 15/16	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	1 15/16	3 5/16	4 11/16	5 1/16	4 7/8	4 1/16	2 7/8	1 5/16	9/16	0	3/8	1 5/16	2 7/8	4 1/16	4 13/16	5 1/16	4 11/16	3 5/16	1 15/16	0
GIRDER 5	DLS	0	3/8	11/16	15/16	1	1	13/16	9/16	5/16	1/8	0	1/16	5/16	9/16	13/16	15/16	1	15/16	11/16	3/8	0
	DLC	0	1 7/16	2 5/8	3 3/8	3 3/4	3 9/16	3	2 1/8	1 1/8	3/8	0	5/16	1 1/8	2 1/16	2 15/16	3 9/16	3 11/16	3 3/8	2 5/8	1 7/16	0
	SDL	0	1/8	3/16	1/4	5/16	5/16	1/4	3/16	1/8	0	0	0	1/8	3/16	1/4	5/16	5/16	1/4	3/16	1/8	0
	TD & C	0	1 15/16	3 1/2	4 9/16	5 1/16	4 7/8	4 1/16	2 7/8	1 9/16	1/2	0	3/8	1 9/16	2 11/16	4	4 13/16	5	4 9/16	3 1/2	1 15/16	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	1 15/16	3 1/2	4 9/16	5 1/16	4 7/8	4 1/16	2 7/8	1 9/16	1/2	0	3/8	1 9/16	2 11/16	4	4 13/16	5	4 9/16	3 1/2	1 15/16	0

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-675
T201109002	DESIGNED BY: KRL	
COUNTY	CHECKED BY: PAM	
NEW CASTLE		

CAMBER DETAILS – 1

CT-01

SHEET NO. 145

TOTAL SHTS. 481

NOTES:

1. ALL GIRDERS SHALL BE CAMBERED FOR DEAD LOAD ORDINATES TO THE DIMENSIONS SHOWN ON THESE PLANS. THE CAMBER TOLERANCE IS ZERO UNDER TO ¾ INCH OVER.

LEGEND:

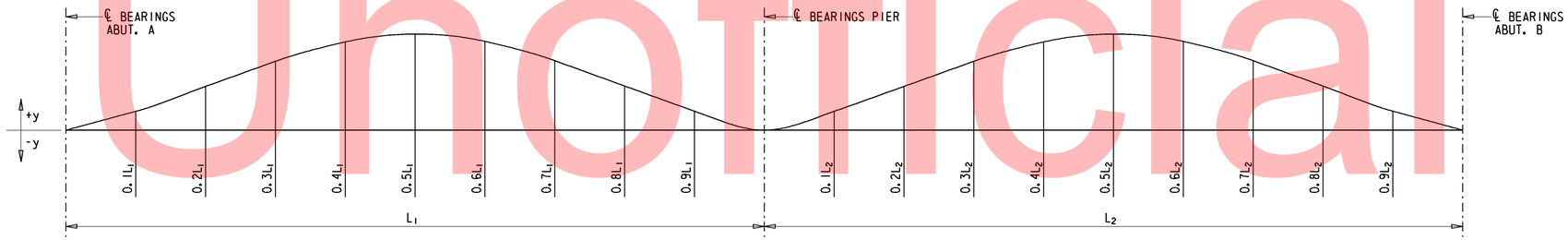
DLS = DENOTES DEFLECTION DUE TO STRUCTURAL STEEL

DLC = DENOTES DEFLECTION DUE TO CONCRETE DECK SLAB, HAUNCH, & S.I.P. FORMS

SDL = DENOTES DEFLECTION DUE TO BARRIER, SAFETY FENCE & FUTURE WEARING SURFACE

TD&C = DENOTES TOTAL DEAD LOAD DEFLECTION & CAMBER

VCO = DENOTES CAMBER FOR VERTICAL CURVE ORDINATE DUE TO ROADWAY PROFILE



DEFLECTION AND TOTAL CAMBERS (INCHES)

PROPOSED GIRDERS		℄ BRG. ABUT. A	0.1L1	0.2L1	0.3L1	0.4L1	0.5L1	0.6L1	0.7L1	0.8L1	0.9L1	℄ BRG. PIER	0.1L2	0.2L2	0.3L2	0.4L2	0.5L2	0.6L2	0.7L2	0.8L2	0.9L2	℄ BRG. ABUT. B
GIRDER 6	DLS	0	3/8	11/16	7/8	15/16	15/16	3/4	9/16	5/16	1/8	0	1/16	5/16	1/2	3/4	7/8	15/16	7/8	11/16	3/8	0
	DLC	0	1 1/2	2 5/8	3 3/8	3 3/4	3 9/16	2 5/8	2 3/16	1 1/8	1/2	0	1/4	1 1/8	1 5/8	2 5/16	3 1/2	3 11/16	3 3/8	2 5/8	1 1/2	0
	SDL	0	1/8	3/16	1/4	5/16	5/16	1/4	3/16	1/8	1/16	0	0	1/8	3/16	1/4	5/16	5/16	1/4	3/16	1/8	0
	TD & C	0	2	3 1/2	4 1/2	5	4 11/16	3 5/16	2 5/16	1 3/16	11/16	0	5/16	1 3/16	2 5/8	3 5/16	4 11/16	4 5/16	4 1/2	3 1/2	2	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2	3 1/2	4 1/2	5	4 11/16	3 5/16	2 5/16	1 3/16	11/16	0	5/16	1 3/16	2 5/8	3 5/16	4 11/16	4 5/16	4 1/2	3 1/2	2	0
GIRDER 7	DLS	0	3/8	5/8	13/16	15/16	7/8	3/4	9/16	5/16	1/8	0	1/16	1/4	1/2	3/4	7/8	15/16	13/16	5/8	3/8	0
	DLC	0	1 1/2	2 5/8	3 3/8	3 3/4	3 9/16	2 5/8	2 3/16	1 1/8	1/2	0	1/4	1 1/8	1 5/8	2 5/16	3 1/16	3 11/16	3 3/8	2 5/8	1 1/2	0
	SDL	0	1/8	3/16	1/4	5/16	5/16	1/4	3/16	1/8	1/16	0	0	1/8	3/16	1/4	5/16	5/16	1/4	3/16	1/8	0
	TD & C	0	2	3 1/16	4 1/16	5	4 3/4	3 5/16	2 5/16	1 3/16	11/16	0	5/16	1 1/2	2 5/8	3 5/16	4 5/8	4 5/16	4 7/16	3 3/16	2	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2	3 1/16	4 1/16	5	4 3/4	3 5/16	2 5/16	1 3/16	11/16	0	5/16	1 1/2	2 5/8	3 5/16	4 5/8	4 5/16	4 7/16	3 3/16	2	0
GIRDER 8	DLS	0	3/8	5/8	13/16	15/16	7/8	3/4	9/16	5/16	1/8	0	1/16	1/4	1/2	3/4	7/8	7/8	13/16	5/8	3/8	0
	DLC	0	1 1/2	2 9/16	3 5/16	3 11/16	3 9/16	2 5/8	2 3/16	1 1/8	1/2	0	1/4	1 1/8	1 5/8	2 5/16	3 1/16	3 11/16	3 3/8	2 9/16	1 1/2	0
	SDL	0	1/8	1/4	5/16	3/8	5/16	1/4	3/16	1/8	1/16	0	0	1/8	3/16	1/4	5/16	3/8	5/16	1/4	1/8	0
	TD & C	0	2	3 1/16	4 1/16	5	4 3/4	3 5/16	2 5/16	1 3/16	11/16	0	5/16	1 1/2	2 5/8	3 5/16	4 5/8	4 5/16	4 1/2	3 3/16	2	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2	3 1/16	4 1/16	5	4 3/4	3 5/16	2 5/16	1 3/16	11/16	0	5/16	1 1/2	2 5/8	3 5/16	4 5/8	4 5/16	4 1/2	3 3/16	2	0
GIRDER 9	DLS	0	3/8	5/8	13/16	15/16	7/8	3/4	9/16	1/4	1/8	0	1/16	1/4	1/2	11/16	13/16	7/8	13/16	5/8	3/8	0
	DLC	0	1 1/16	2 3/16	3 1/4	3 5/8	3 1/2	2 3/8	2 1/8	1 1/8	7/16	0	1/4	1 1/8	1 5/16	2 1/8	3 3/8	3 3/8	3 5/16	2 3/16	1 1/16	0
	SDL	0	3/16	5/16	3/8	7/16	7/16	3/8	1/4	1/8	1/16	0	1/16	1/8	1/4	3/8	7/16	7/16	7/16	5/16	3/16	0
	TD & C	0	2	3 1/2	4 1/16	5	4 11/16	4	2 5/16	1 1/2	5/8	0	3/8	1 1/2	2 11/16	3 5/16	4 5/8	4 5/16	4 9/16	3 1/2	2	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2	3 1/2	4 7/16	5	4 11/16	4	2 5/16	1 1/2	5/8	0	3/8	1 1/2	2 11/16	3 5/16	4 5/8	4 5/16	4 9/16	3 1/2	2	0
GIRDER 10	DLS	0	3/8	5/8	11/16	15/16	7/8	3/4	9/16	1/4	1/8	0	1/16	1/4	1/2	11/16	13/16	7/8	11/16	5/8	3/8	0
	DLC	0	1 3/8	2 1/16	3 3/16	3 1/2	3 3/8	2 11/16	2 1/16	1 1/16	7/16	0	1/4	1 1/16	1 11/16	2 11/16	3 1/4	3 1/2	3 3/16	2 1/16	1 3/16	0
	SDL	0	1/4	7/16	9/16	5/8	5/8	1/2	3/8	3/16	1/16	0	1/16	3/16	3/8	1/2	5/8	5/8	9/16	7/16	1/4	0
	TD & C	0	2	3 1/2	4 9/16	5 1/16	4 7/8	4 1/16	3	1 1/2	5/8	0	3/8	1 1/2	2 11/16	4	4 11/16	5	4 9/16	3 1/2	2	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2	3 1/2	4 9/16	5 1/16	4 7/8	4 1/16	3	1 1/2	5/8	0	3/8	1 1/2	2 11/16	4	4 11/16	5	4 9/16	3 1/2	2	0
GIRDER 11	DLS	0	3/8	5/8	11/16	7/8	7/8	3/4	9/16	1/4	1/8	0	1/16	1/4	7/16	11/16	13/16	7/8	11/16	5/8	3/8	0
	DLC	0	1 5/16	2 5/16	3	3 5/16	3 3/16	2 5/8	1 15/16	1	7/16	0	1/4	1	1 3/4	2 5/8	3 1/16	3 5/16	3	2 5/16	1 5/16	0
	SDL	0	3/8	5/8	13/16	7/8	7/8	11/16	1/2	1/4	1/8	0	1/16	1/4	1/2	11/16	13/16	7/8	11/16	5/8	3/8	0
	TD & C	0	2 1/16	3 9/16	4 5/8	5 1/16	4 5/16	4 1/16	3	1 1/2	11/16	0	3/8	1 1/2	2 11/16	4	4 11/16	5 1/16	4 5/8	3 9/16	2 1/16	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2 1/16	3 9/16	4 5/8	5 1/16	4 5/16	4 1/16	3	1 1/2	11/16	0	3/8	1 1/2	2 11/16	4	4 11/16	5 1/16	4 5/8	3 9/16	2 1/16	0

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT T201109002	BRIDGE NO. 1-675	CAMBER DETAILS – 2	CT-02
COUNTY NEW CASTLE	DESIGNED BY: KRL		SHEET NO. 146
	CHECKED BY: PAM		TOTAL SHTS. 481

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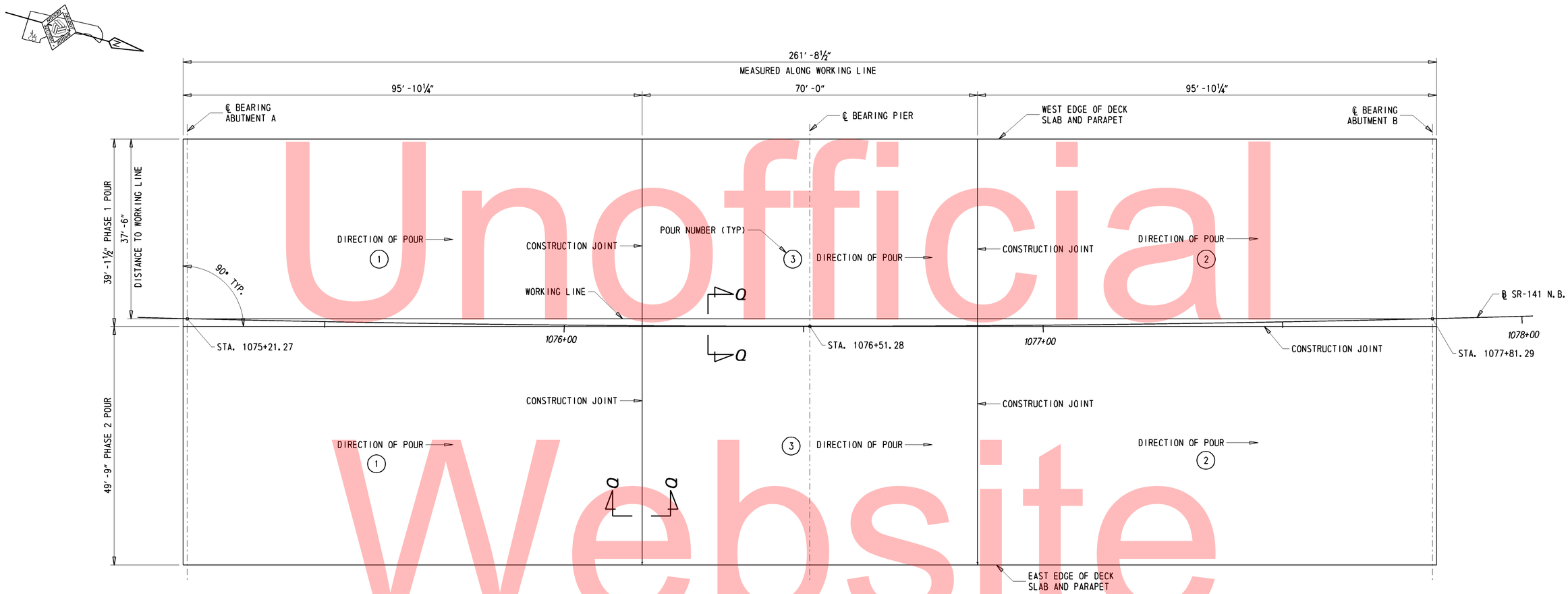
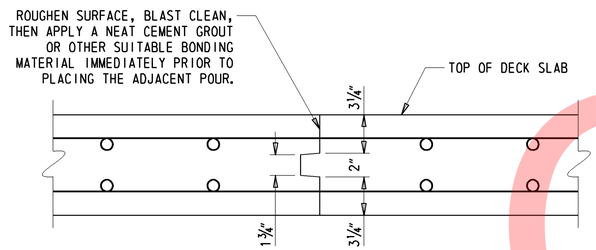


DECK SLAB POURING SEQUENCE

½" = 1'-0"



SECTION Q-Q

20" = 1'-0"

NOTES:

1. THE CONTRACTOR SHALL FOLLOW THE POURING SEQUENCE SHOWN ON THESE PLANS. ANY OTHER ALTERNATE POURING SEQUENCE MUST BE APPROVED BY THE ENGINEER.
2. THE POURING SEQUENCE FOR THE DECK SLAB SHALL BE MADE IN THE NUMBERED ORDER AND DIRECTION OF POUR INDICATED. THE PREVIOUS POUR MUST ATTAIN 50% OF THE REQUIRED 28 DAY STRENGTH PRIOR TO THE START OF THE NEXT NUMBERED POUR. THE CONTRACTOR MAY REVERSE THE ORDER OF POURS 1 AND 2.
3. FOR FINISHED ROADWAY ELEVATIONS, SEE DWG. NO. FD-01.
4. FOR DECK SLAB REINFORCEMENT, SEE DWG. NO. DK-01 THRU DK-02.
5. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	DECK SLAB POURING SEQUENCE
				COUNTY NEW CASTLE	DESIGNED BY: KRL	PS-01
					CHECKED BY: PAM	SHEET NO. 147
						TOTAL SHTS. 481

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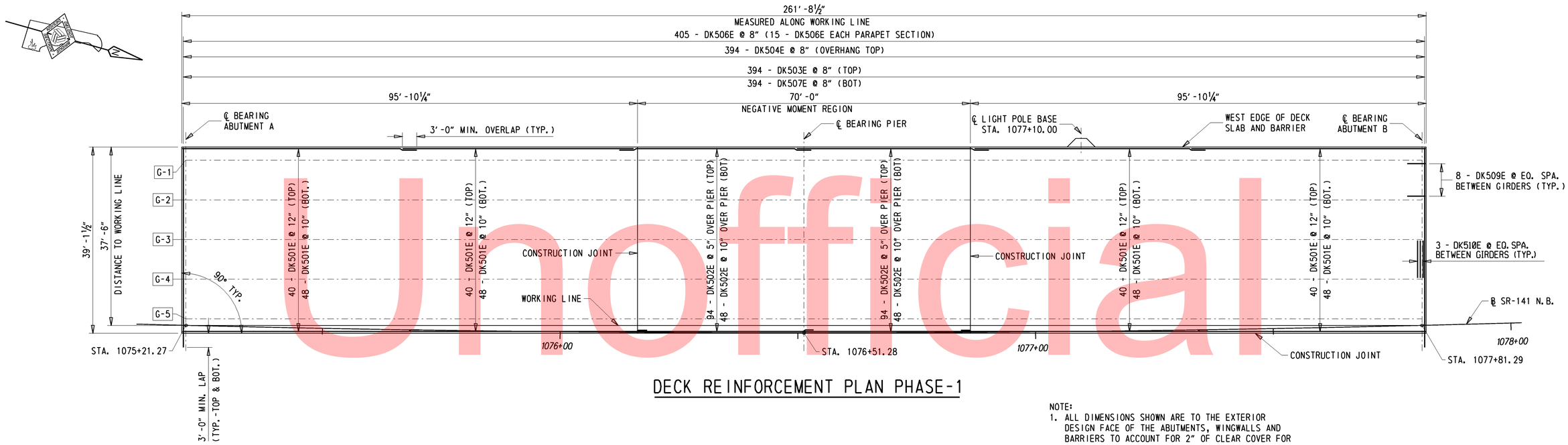
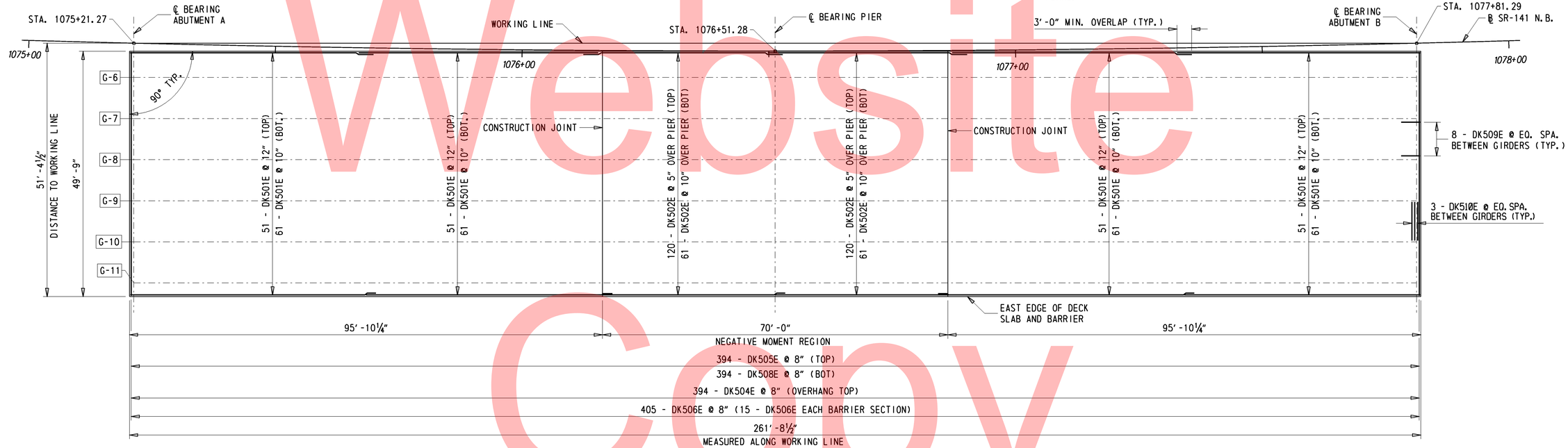


DECK REINFORCEMENT PLAN PHASE-1

NOTE:
1. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.



DECK REINFORCEMENT PLAN PHASE-2

NOTES:

1. FOR ADDITIONAL DECK SLAB REINFORCEMENT DETAILS, SEE DWG. NO. DK-02.
2. FOR ADDITIONAL LIGHT POLE BASE AND CONDUIT DETAILS, SEE DWG. NO. LB-01.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 10 6667 213333 32 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	DK-01
				COUNTY NEW CASTLE	DESIGNED BY: KRL	SHEET NO. 148
					CHECKED BY: PAM	TOTAL SHTS. 481
					DECK SLAB REINFORCEMENT PLAN	

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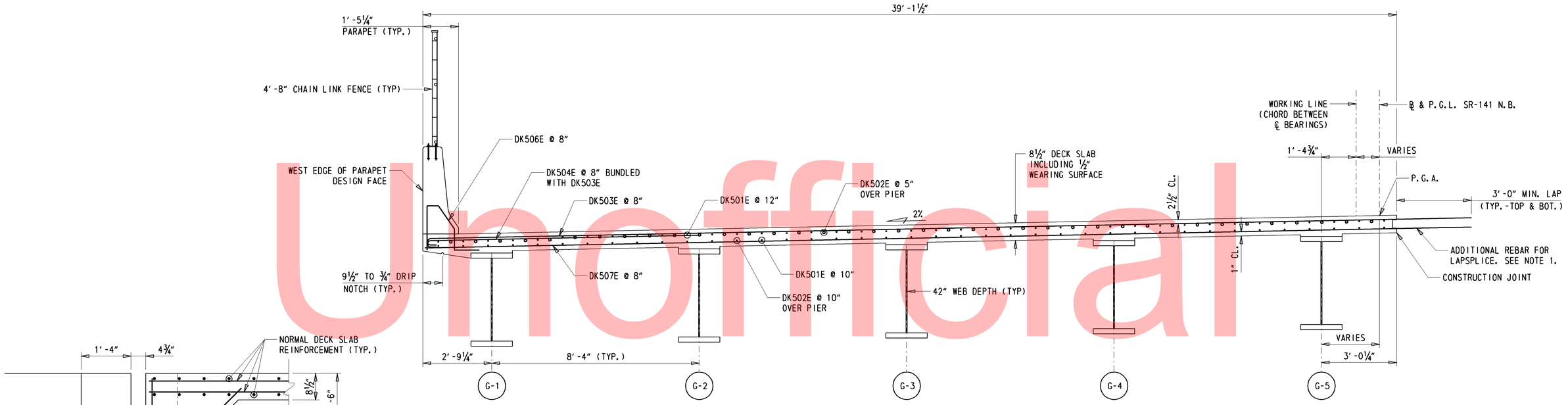
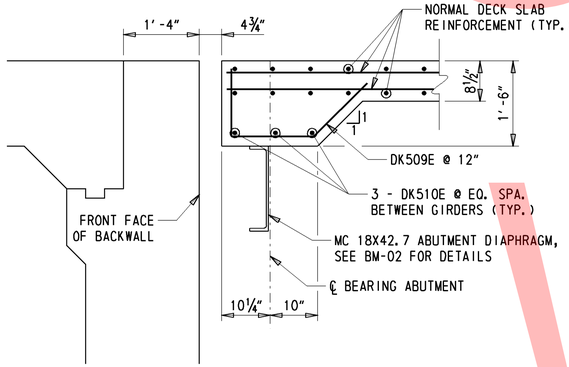


TYPICAL DECK REINFORCEMENT SECTION PHASE-1

½″ = 1′-0″

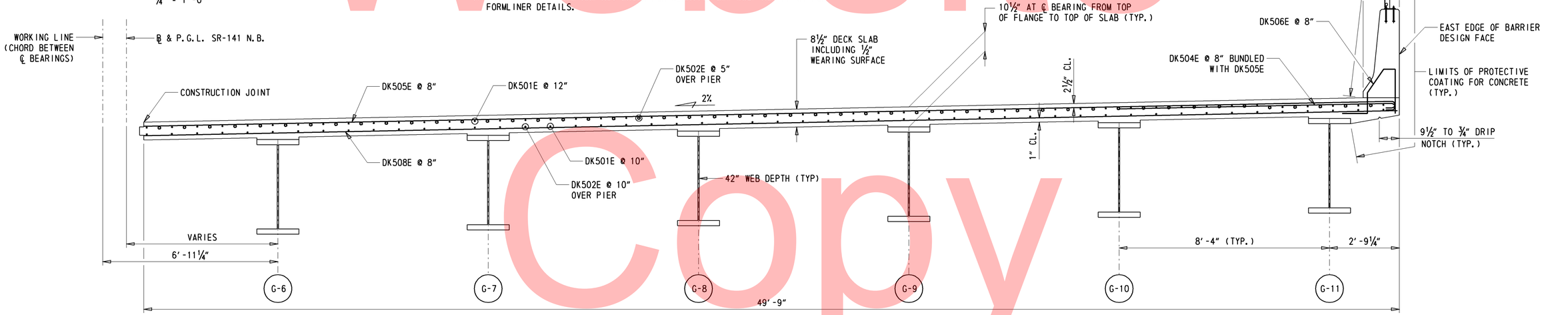


TYPICAL END HAUNCH SECTION AT ABUTMENTS

¾″ = 1′-0″

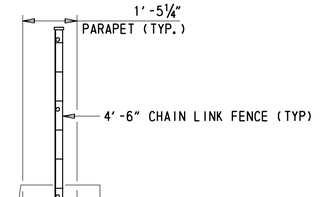
NOTES:

1. THE CONTRACTOR IS PERMITTED TO USE MECHANICAL COUPLERS IN LIEU OF LAP SLPICES FOR BAR REINFORCEMENT. IF USED, MECHANICAL COUPLERS SHALL BE EPOXY COATED. PAYMENT FOR MECHANICAL COUPLERS SHALL BE INCIDENTAL TO ITEM #604000-BAR REINFORCEMENT, EPOXY COATED.
2. BAY BETWEEN GIRDERS 5 AND 6 SHALL BE FORMED. NO S.I.P. FORMS SHALL BE USED AT THIS LOCATION.
3. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2″ OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
4. FORMLINED SURFACES ARE NOT SHOWN FOR CLARITY. SEE DWG. NO. PA-01 FOR FORMLINER DETAILS.



TYPICAL DECK REINFORCEMENT SECTION PHASE-2

½″ = 1′-0″



DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	DECK SLAB REINFORCEMENT DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: KRL	DK-02
					CHECKED BY: PAM	SHEET NO. 149
						TOTAL SHTS. 481

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FINISHED BRIDGE DECK ELEVATIONS

NOTES:

1. FINISHED BRIDGE DECK ELEVATIONS SHOWN ARE TOP OF PROPOSED CONCRETE DECK SLAB.
2. FOR VERTICAL CURVE DATA, SEE DWG. NO. PE-01.
3. WORKING LINE ELEVATIONS CAN BE PROVIDED UPON REQUEST.
4. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 10 6667 213333 32 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675
				COUNTY NEW CASTLE	DESIGNED BY: KRL
					CHECKED BY: PAM

FINISHED BRIDGE DECK ELEVATIONS

FD-01 | SHEET NO. 150 | TOTAL SHTS. 481

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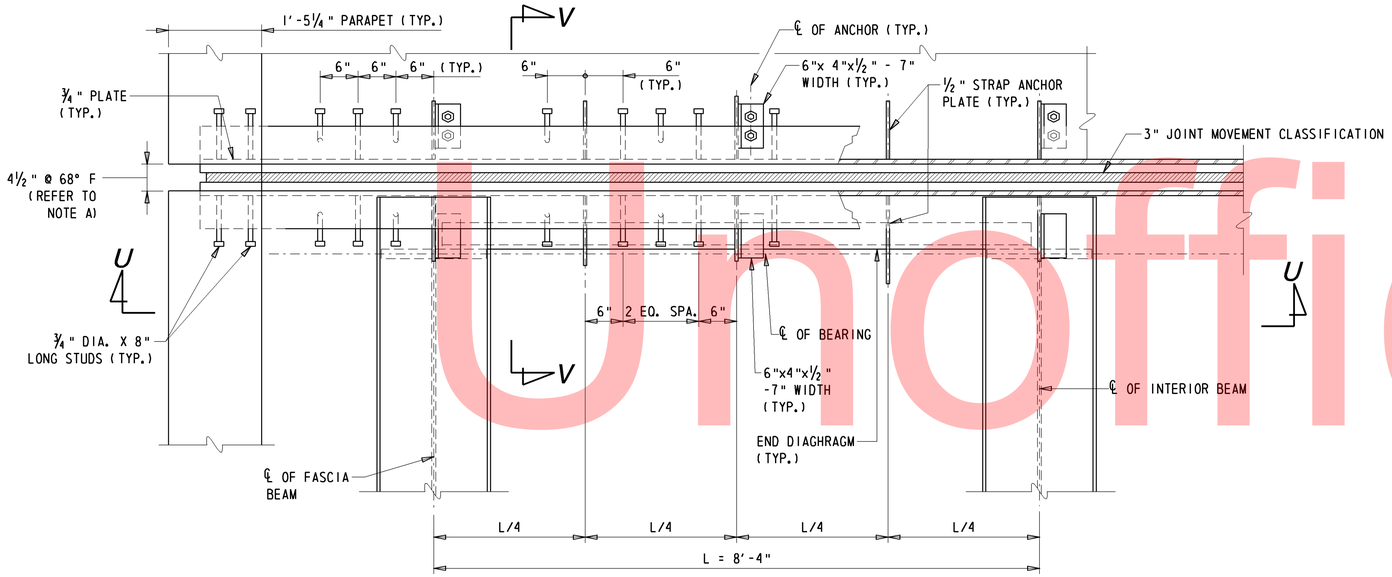


TYPICAL JOINT PLAN

1" = 1'-0"

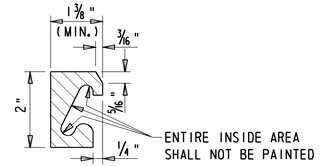
EXPANSION JOINT NOTES:

1. STEEL FOR DECK JOINTS AND STEEL EXTRUSIONS SHALL BE AASHTO M270, GR. 36 (ASTM A36)
2. NEOPRENE EXTRUSION TO MEET D-2628-81 MODIFIED, (RECOVERY TESTS EXCLUDED).
3. THE EXPANSION JOINT SHALL BE CAPABLE OF SEALING THE DECK TO PREVENT MOISTURE AND OTHER CONTAIMINANTS FROM DESCENDING THROUGHT THE JOINT.
4. ENTIRE EXPANSION DAM SHALL BE PAINTED AFTER FABRICATION USING URETHANE SYSTEM, EXCEPT AS NOTED.
5. LUBRICANT-ADHESIVE FOR USE IN INSTALLING AND BONDING NEPORENE SEAL ELEMENTS TO STEEL JOINT COMPONENTS SHALL BE A ONE QUART MOISTURE-CURING POLYURETHAN AND HYDROCARBON SOLVENT MIXTURE HAVING THE FOLLOWING PHYSICAL PROPERTIES:

AVERAGE WEIGHT, POUNDS PER GALLON	8 +/- 10%
SOLIDS CONTENT	65%
ADHESIVE SHALL REMAIN LIQUID FROM	5°F TO 120°F
FILM STRENGTH, AS PER ASTM D-412	2,000 PSI
ELONGATION	250%

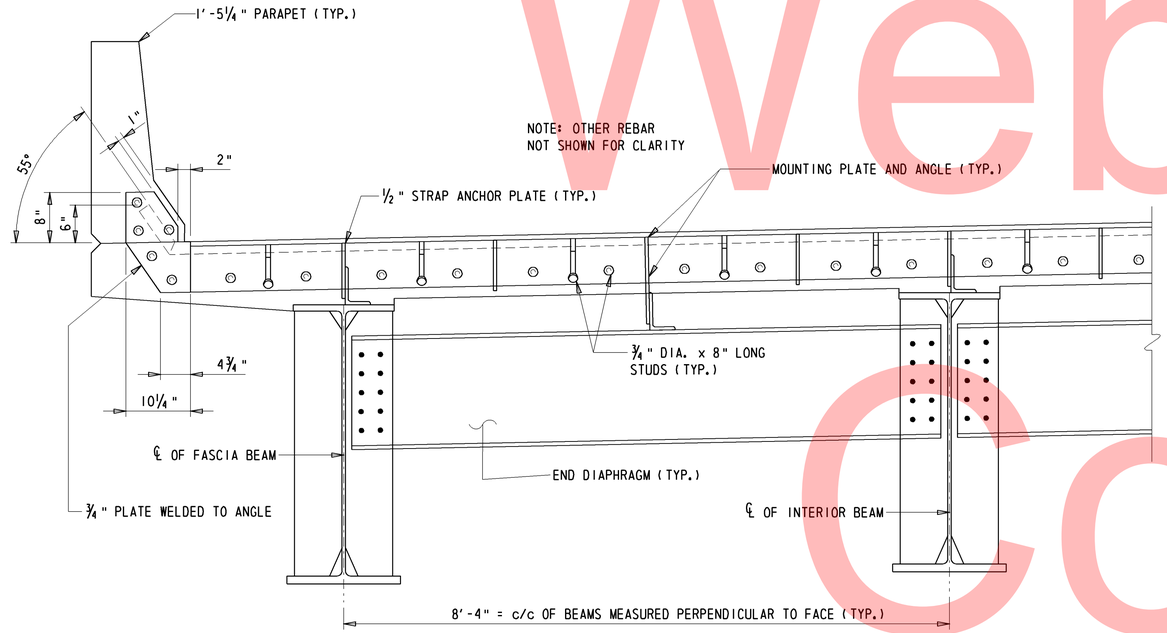
6. HOLES SHALL BE PLACED IN THE RIB PLATES AND STRAP ANCHOR PLATES FOR BAR REINFORCEMENT. IF THIS IS DONE IN THE FIELD AN APPROVED PAINT SHALL BE USED TO TOUCH-UP THE HOLES.

NOTE A:
THE CONTRACTOR SHALL ADJUST THE OPEN DECK JOINT AS REQUIRED BY THE WIDTH OF THE STEEL EXTRUSION USED SO AS TO PROVIDE A 3" JOINT OPENING AT 68°F.



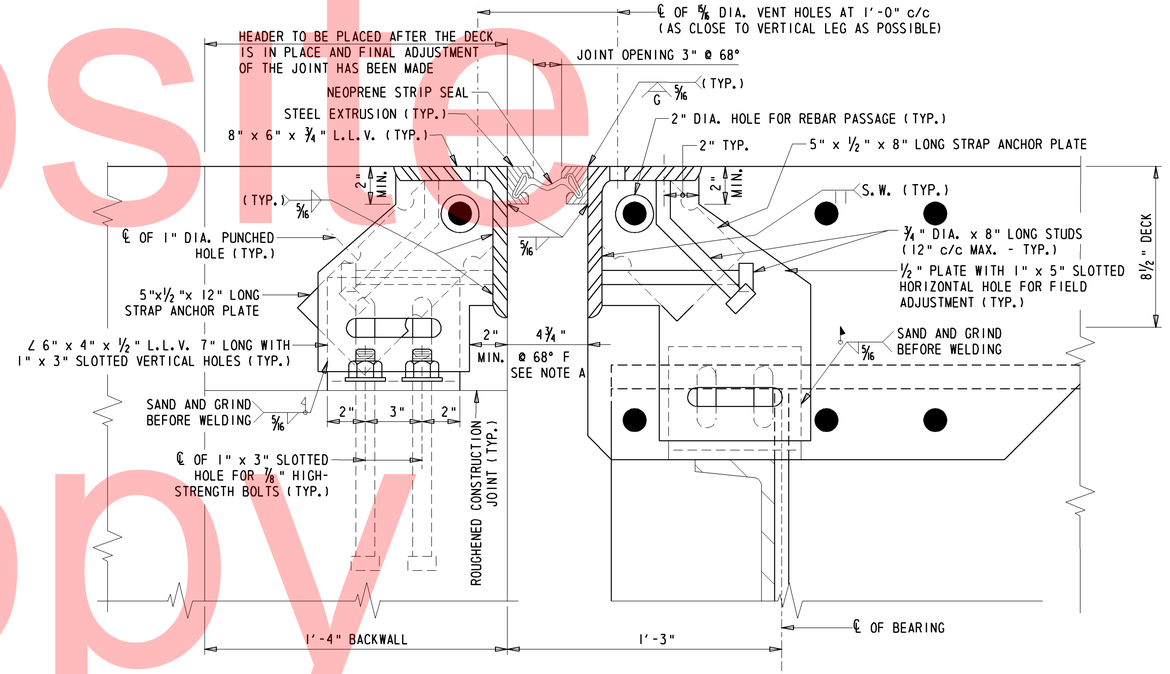
STEEL EXTRUSION DETAIL

6" = 1'-0"



SECTION U-U

1" = 1'-0"



SECTION V-V

N.T.S.

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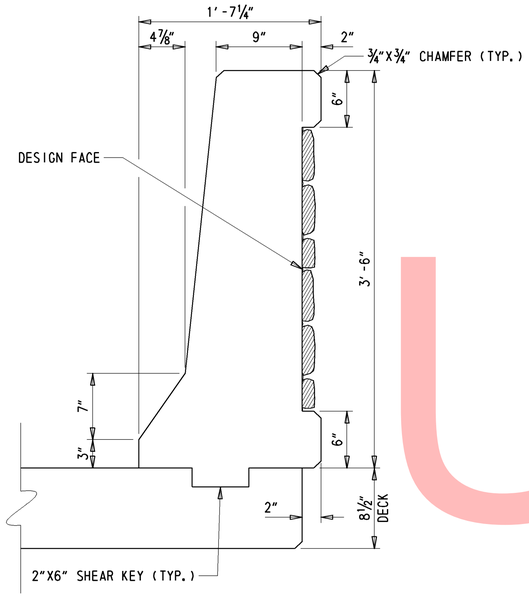
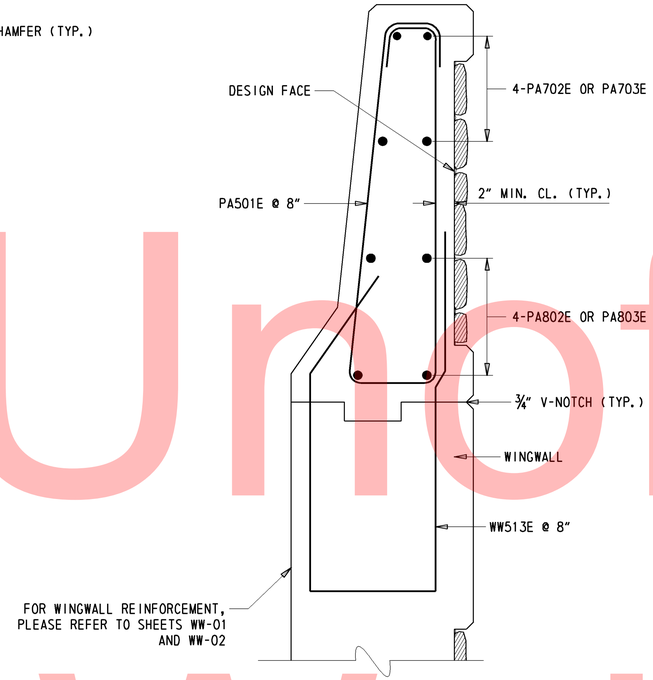
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	EXPANSION JOINT DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: KRL	
					CHECKED BY: PAM	

EX-01

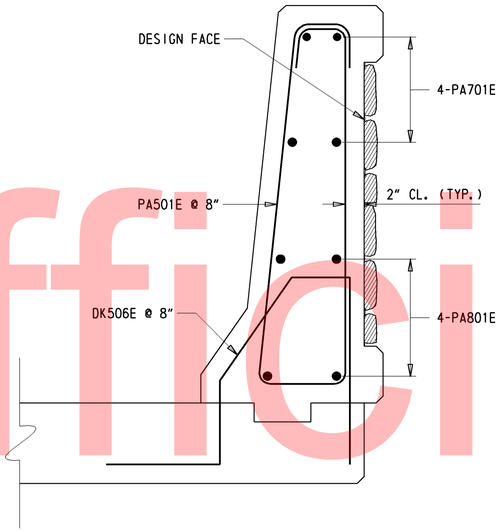
SHEET NO.	151
TOTAL SHTS.	481



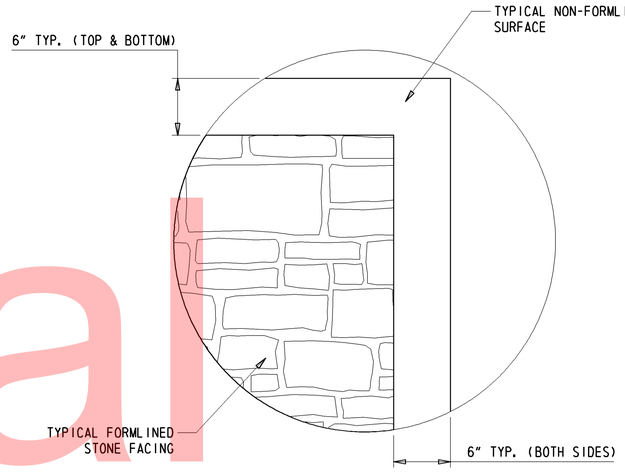
TYPICAL BARRIER SECTION



TYPICAL SECTION @ WINGWALL



TYPICAL SECTION @ DECK



BARRIER & WINGWALL FACING DETAIL

NOTE:

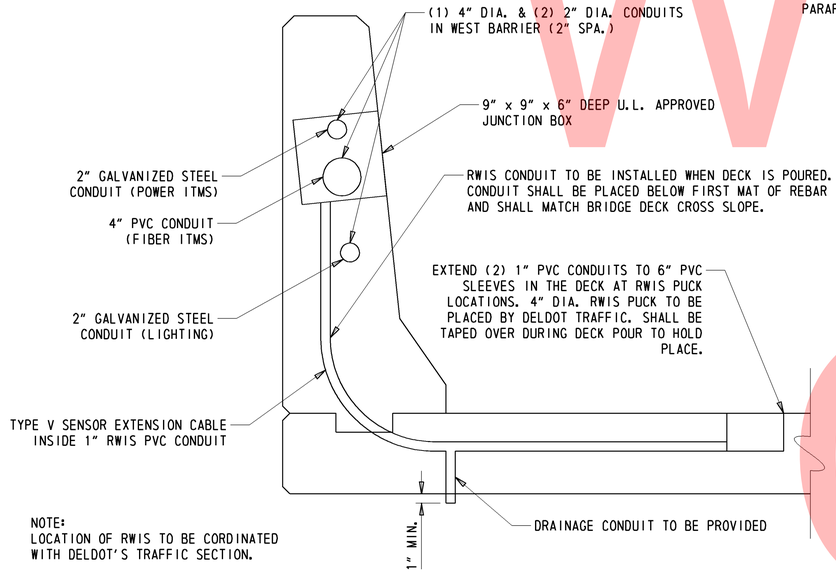
1. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENT, WINGWALLS, AND BARRIER TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

NOTE:

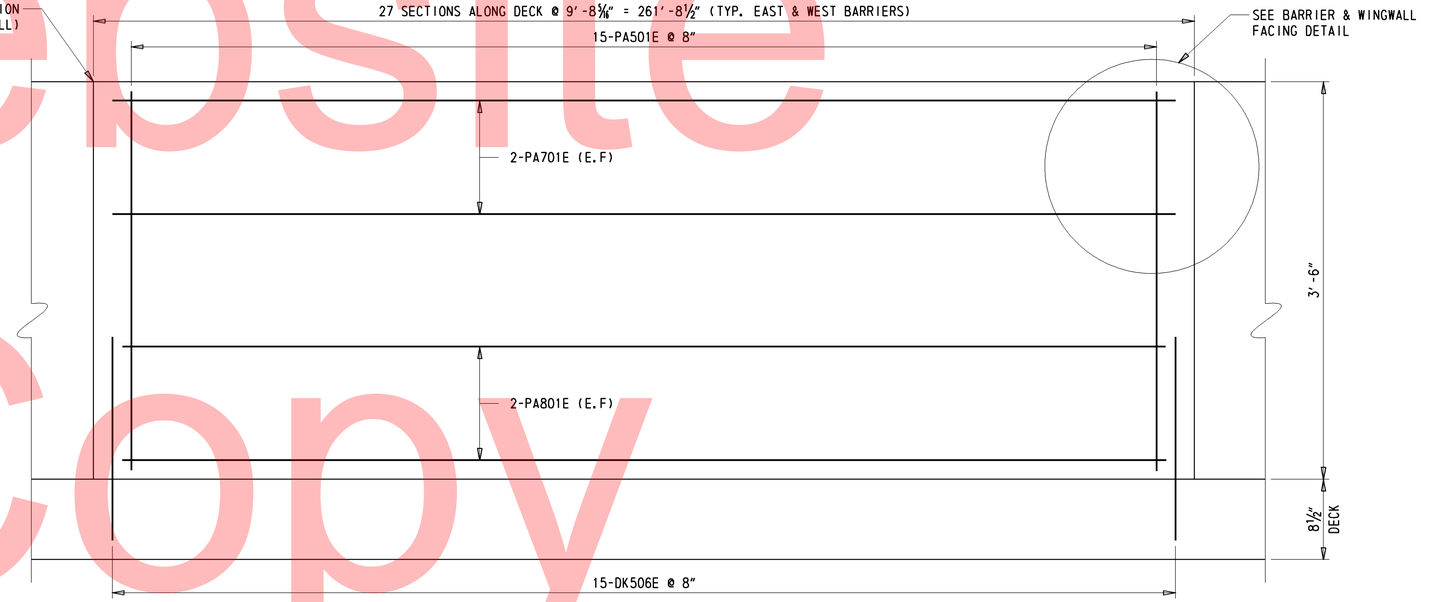
1. ALL GALVANIZED STEEL AND PVC CONDUITS USED TO INSTALL THE RWIS SYSTEM, ITMS SYSTEM, AND LIGHTING SYSTEM IN THE BARRIER AND DECK SECTIONS AS SHOWN, SHALL BE PAID UNDER ITEM 746538 - BRIDGE ELECTRICAL SYSTEM.

NOTE:

1. FOR BARRIER ELEVATION VIEW AND REINFORCEMENT DETAILS AT WINGWALLS, SEE SHEET WW-01.



TYPICAL SECTION OF WEST DECK BARRIER AT RWIS (STA. 1075+75)



DECK BARRIER ELEVATION

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 6667 13333 2 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	BARRIER DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: KRL	
					CHECKED BY: PAM	

BA-01

SHEET NO. 152

TOTAL SHTS. 481

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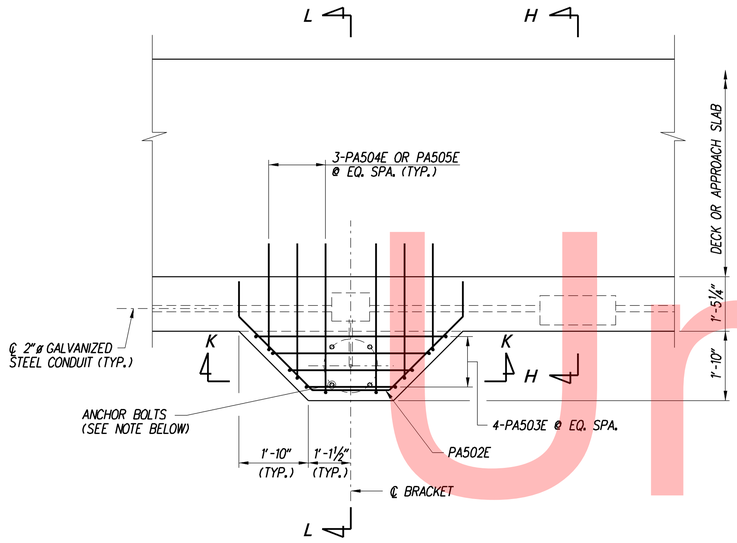
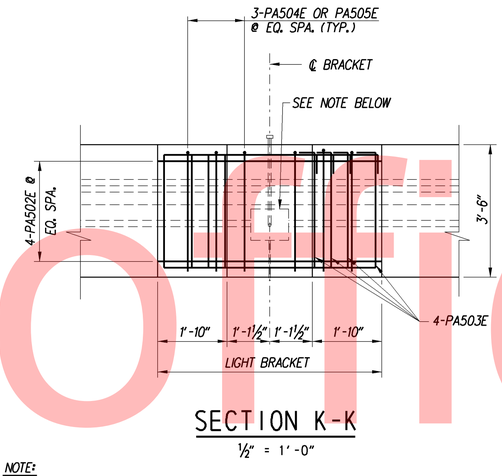


PLAN

½" = 1'-0"

NOTE:

BOLT CIRCLE DIMENSION AND SIZE OF ANCHOR BOLTS SHALL BE BASED ON LIGHT BASE BEING USED ON THIS PROJECT. ALL LIGHT POLES TO BE SET PLUMB USING LEVELING NUTS ON ANCHOR BOLTS. ONLY LIGHT POLES WITH A DIAMETER OF 13" OR LESS SHALL BE USED.

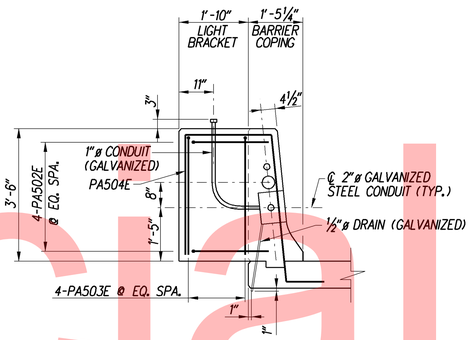


SECTION K-K

½" = 1'-0"

NOTE:

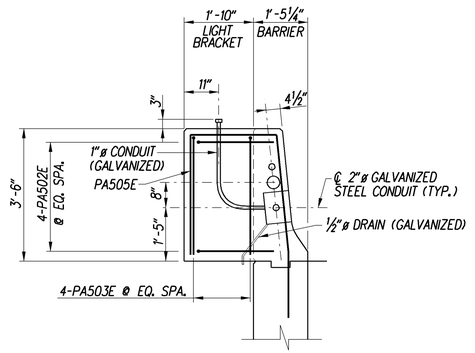
12" x 10" x 8" NEMA 4X JUNCTION BOX WITH COVER PROVIDE HOLES IN BOX FOR 2"ø CONDUIT.



SECTION L-L

(AT DECK STA. 1077+10.00)

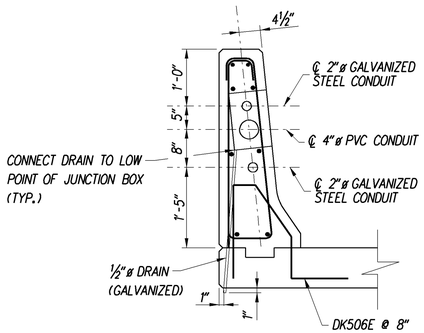
½" = 1'-0"



SECTION L-L

(AT WINGWALL STA. 1075+06.00)

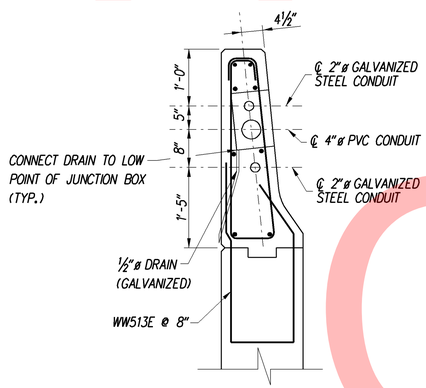
½" = 1'-0"



SECTION H-H

(AT DECK STA. 1077+10.00)

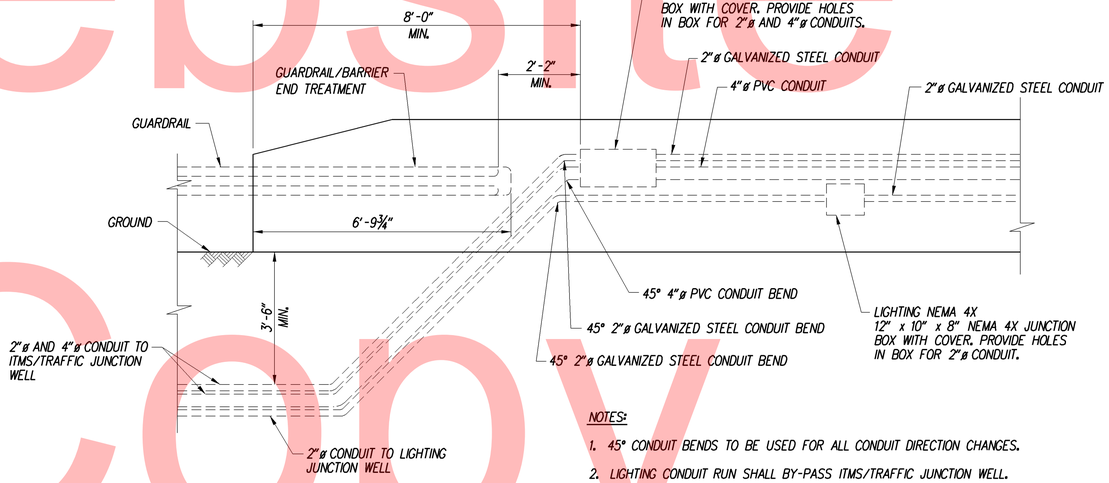
¾" = 1'-0"



SECTION H-H

(AT WINGWALL STA. 1075+06.00)

¾" = 1'-0"



NOTES:

1. 45° CONDUIT BENDS TO BE USED FOR ALL CONDUIT DIRECTION CHANGES.
2. LIGHTING CONDUIT RUN SHALL BY-PASS ITMS/TRAFFIC JUNCTION WELL.
3. ITMS CONDUIT RUN SHALL BY-PASS LIGHTING JUNCTION WELL.
4. ORDER OF PULL BOX LOCATIONS MAY VARY.

CONDUIT TRANSITION FROM BARRIER/WALL

½" = 1'-0"

NOTES:

1. ALL REINFORCING SHALL BE CONTINUOUS AT JUNCTION BOX. ADJUST PARAPET REINFORCING AS REQUIRED TO CLEAR JUNCTION BOX.
2. ALL GALVANIZED STEEL AND PVC CONDUITS USED TO INSTALL THE RWIS SYSTEM, ITMS SYSTEM, AND LIGHTING SYSTEM IN THE PARAPET AND DECK SECTIONS AS SHOWN, SHALL BE PAID UNDER ITEM 746538 - BRIDGE ELECTRICAL SYSTEM.
3. FOR LIGHT POLE LOCATIONS, SEE LIGHTING PLAN SHEETS LI-01 AND LI-02.
4. FOR LIGHTING ANCHOR BASE DETAIL AND LUMINAIRE CONNECTION DETAIL, SEE LIGHTING PLAN SHEET LI-09.
5. FOR ADDITIONAL PARAPET REINFORCEMENT DETAILS, SEE DWG. NOS. WW-01, WW-02 AND PA-01.
6. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND PARAPETS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EXPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

Y:\NEWCASTL\056\BRIDGE\T201109002\PLANS\LB1.DGN

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE AS NOTED

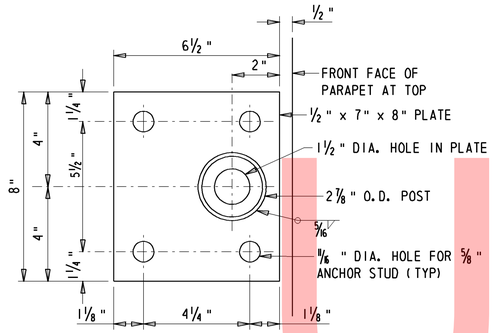
I-95 AND SR 141 INTERCHANGE,
RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO. 1-675
T201109002	DESIGNED BY: KRL
COUNTY	CHECKED BY: PAM
NEW CASTLE	

LIGHT POLE BRACKET
AND CONDUIT DETAILS

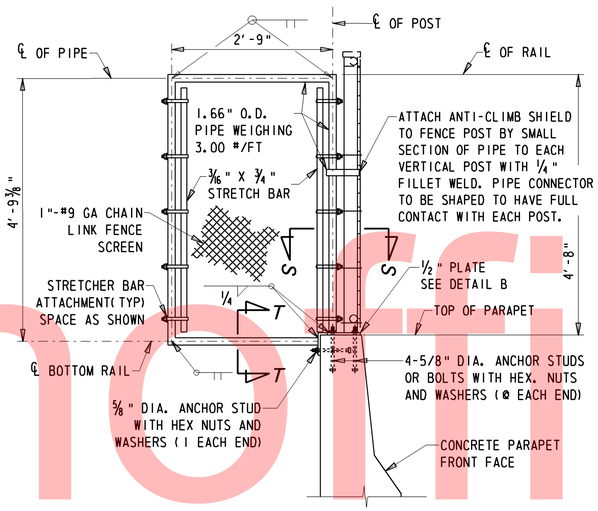
LB-01

SHEET NO.	TOTAL SHTS.
153	481



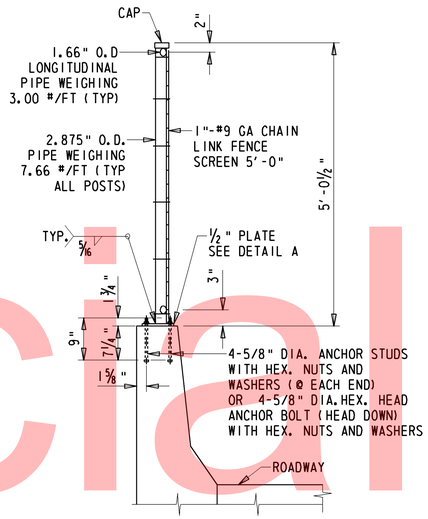
BASE PLATE DETAIL

N.T.S



ANTI-CLIMB SHIELD DETAIL

N.T.S

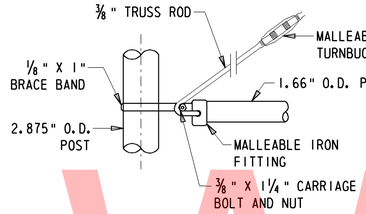


SECTION R-R

N.T.S

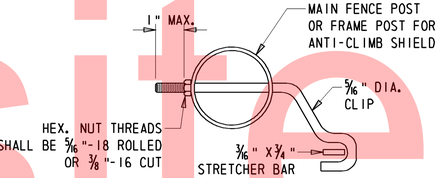
BRIDGE SAFETY FENCE NOTES

1. MATERIALS - SEE SPECIAL PROVISIONS FOR ITEM 727507 - BRIDGE SAFETY FENCE.
2. POST SPACING - POST SPACING ALL BE DETERMINED BY THE CONTRACTOR AND INCLUDED IN THE SHOP DRAWINGS. EACH POST MUST BE A MINIMUM OF 1'-0" FROM ANY PARAPET JOINT.
3. WORKING DRAWINGS - CONTRACTOR SHALL SUBMIT WORKING DRAWINGS FOR THE FENCE FOR REVIEW BY THE ENGINEER
4. PAYMENT - CHAIN LINK FENCE INCLUDING ANTI-CLIMB SHIELD ITEMS WILL BE PAID UNDER ITEM 727507 - BRIDGE SAFETY FENCE.



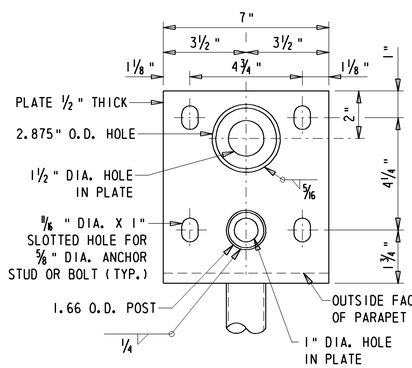
TRUSS ROD ATTACHMENT

N.T.S



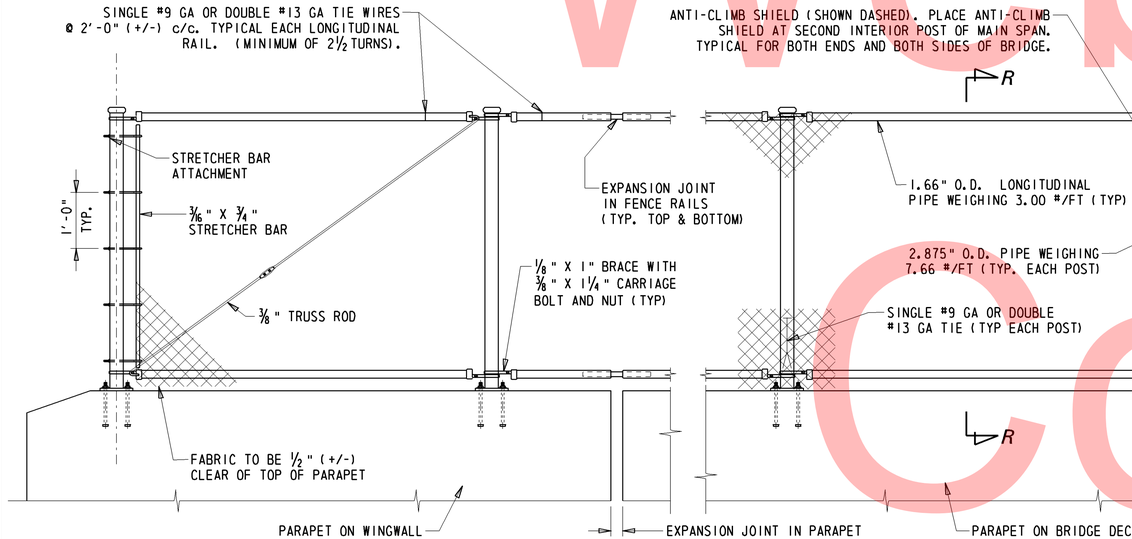
STRETCHER BAR ATTACHMENT

1½" = 1'-0"



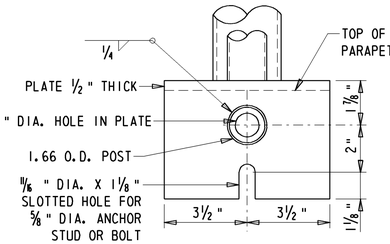
SECTION S-S

N.T.S



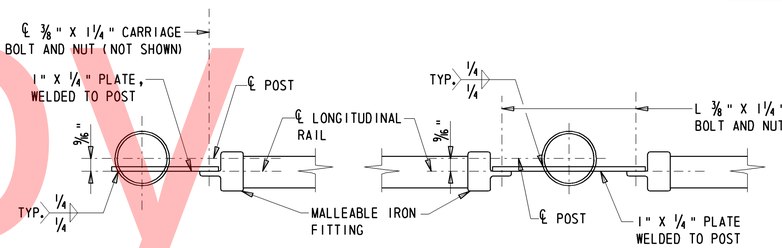
SAFETY FENCE ELEVATION

N.T.S



SECTION T-T

N.T.S



TOP LONGITUDINAL RAIL-POST ATTACHMENT

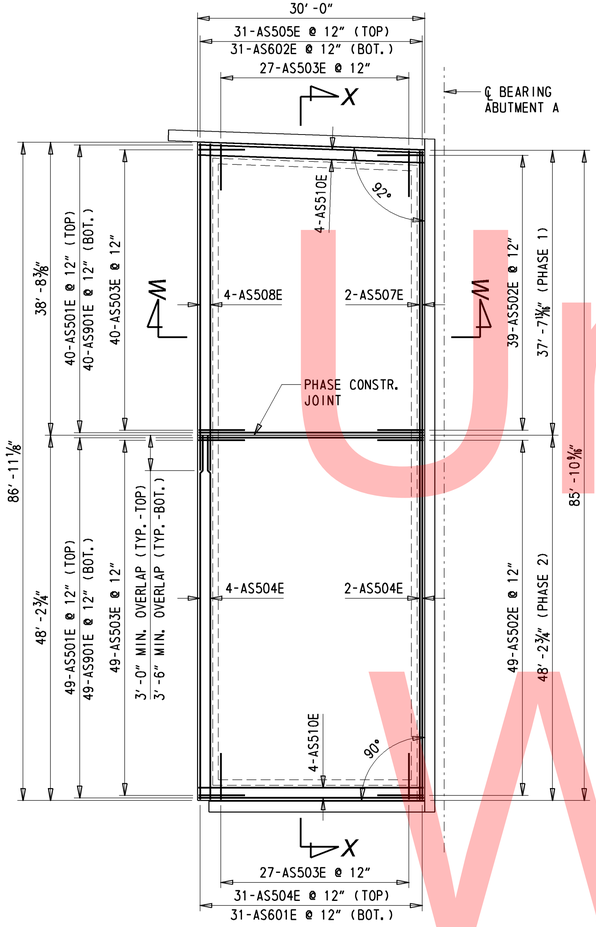
N.T.S

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	SAFETY FENCE DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: KRL	
					CHECKED BY: PAM	

SF-01

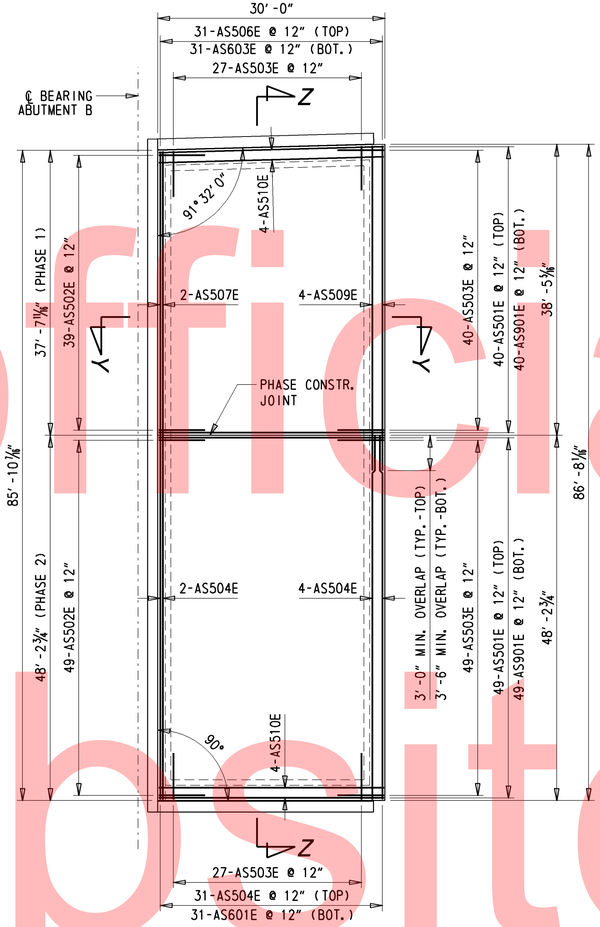
SHEET NO. 154

TOTAL SHTS. 481



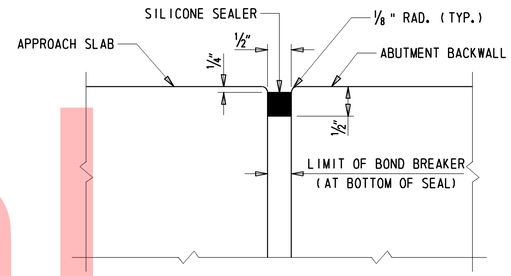
SOUTH APPROACH SLAB

1" = 10' -0"



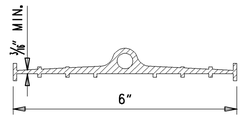
NORTH APPROACH SLAB

1" = 10' -0"



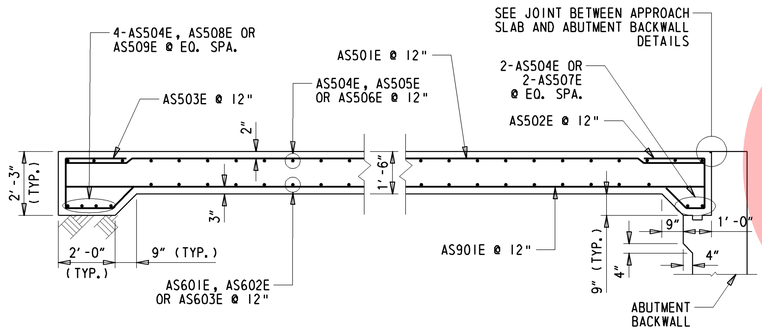
JOINT BETWEEN APPROACH SLAB AND ABUTMENT BACKWALL

N. T. S.



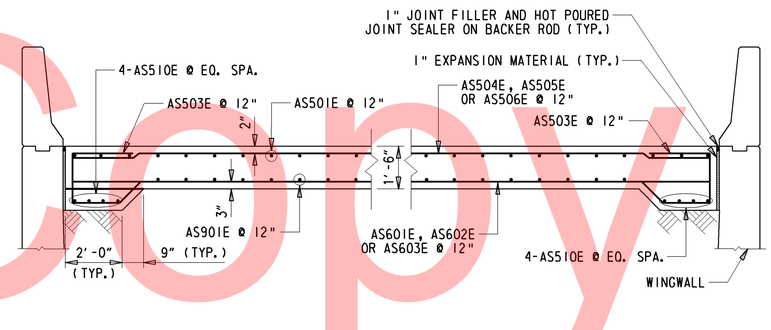
P. V. C WATERSTOP

N. T. S



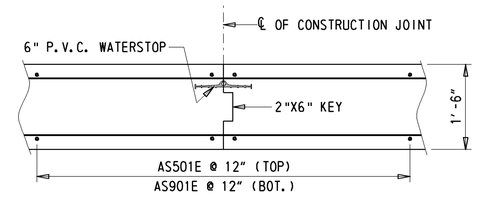
SECTION W-W & Y-Y

⅜" = 1' -0"



SECTION X-X & Z-Z

⅜" = 1' -0"



CONSTRUCTION JOINT DETAIL

¾" = 1' -0"

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002 / COUNTY NEW CASTLE	BRIDGE NO. 1-675 / DESIGNED BY: KRL / CHECKED BY: PAM

BR 1-675 APPROACH SLAB DETAILS

AS-01 | SHEET NO. 155 | TOTAL SHTS. 481

Y:\NEWCASTL\056\BRIDGE\T201109002\PLANS\AS01.DGN

① ANY MARK NUMBER WITH SUFFIX 'E' DENOTES EPOXY COATED REINFORCING STEEL.

② ALL MARK 'LOCATION PREFIXES' SHALL CONSIST OF TWO LETTERS AND ARE AS FOLLOWS: AB = ABUTMENT, AS = APPROACH SLAB, BC = BOX CULVERT, BW = BACKWALL, CL = COLUMN, DK = DECK, DL = DOWEL, FT = FOOTING, HW = HEADWALL, MS = MISC. BARS, PA = PARAPET, PR = PIER, SC = SHEETPILE CAP, SL = SLAB, TW = TOEWALL, WL = WALL (UNIQUE LOCATION), WW = WINGWALL

SPECIFICATIONS					BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)										
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O
76	5	12-100	AB501E	STR		12-100									
274	5	5-50	AB502E	17		1-00	4-50								
66	5	41-112	AB503E	STR		41-112									
62	5	13-100	AB504E	STR		13-100									
70	5	49-70	AB505E	STR		49-70									
76	5	13-73	AB506E	STR		13-73									
62	5	14-72	AB507E	STR		14-72									
4	5	39-111	AB508E	STR		39-111									
172	5	5-00	AB509E	17		1-00	4-00								
8	5	4-00	AB510E	STR		4-00									
32	5	3-00	AB511E	STR		3-00									
88	5	7-60	AB512E	17		2-50	2-80	2-50							
132	5	6-80	AB513E	17		2-50	1-100	2-50							
132	5	6-80	AB513E	17		2-50	1-100	2-50							
16	5	6-60	AB514E	STR		6-60									
22	5	4-90	AB515E	17		1-00	3-90								
98	6	12-102	AB601E	STR		12-102									
81	6	13-102	AB602E	STR		13-102									
98	6	13-81	AB603E	STR		13-81									
81	6	14-81	AB604E	STR		14-81									
178	5	29-80	AS501E	STR		29-80									
176	5	6-43	AS502E	16	2-00	1-100	0-100	1-60				1-03		1-03	1-83
286	5	7-43	AS503E	16	2-00	1-100	1-100	1-60				1-03		1-03	2-83
74	5	48-03	AS504E	STR		48-03									
1X31	5	40-53	AS505E	STR		40-53									
		T0				T0									
		41-62				41-62									
1X31	5	40-53	AS506E	STR		40-53									
		T0				T0									
		41-32				41-32									
4	5	40-53	AS507E	STR		40-53									
4	5	41-62	AS508E	STR		41-62									
4	5	41-32	AS509E	STR		41-32									
16	5	29-80	AS510E	STR		29-80									
62	6	48-03	AS601E	STR		48-03									
1X31	6	40-53	AS602E	STR		40-53									
		T0				T0									
		41-62				41-62									
1X31	6	40-53	AS603E	STR		40-53									

SPECIFICATIONS					BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)										
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O
		T0				T0									
		41-32				41-32									
178	9	29-80	AS901E	STR		29-80									
274	5	7-42	BW501E	STR		7-42									
274	5	6-20	BW502E	17		2-70	1-00	2-70							
274	5	5-71	BW503E	16		2-00	0-91	2-100				2-00		2-00	2-91
274	5	6-12	BW504E	STR		6-12									
28	5	41-112	BW505E	STR		41-112									
28	5	49-70	BW506E	STR		49-70									
4	5	9-33	BW507E	STR		9-33									
16	5	3-00	BW508E	STR		3-00									
1	5	707-41	CL501E	X						0-30		17-70	70	1.5	3-10
1	5	717-02	CL502E	X						0-30		17-103	71	1.5	3-10
1	5	726-83	CL503E	X						0-30		18-21	72	1.5	3-10
1	5	746-11	CL504E	X						0-30		18-61	74	1.5	3-10
1	5	755-92	CL505E	X						0-30		18-100	75	1.5	3-10
1	5	765-53	CL506E	X						0-30		19-20	76	1.5	3-10
22	8	19-70	CL801E	STR		19-70									
22	8	19-103	CL802E	STR		19-103									
22	8	20-21	CL803E	STR		20-21									
22	8	20-61	CL804E	STR		20-61									
22	8	20-100	CL805E	STR		20-100									
22	8	21-20	CL806E	STR		21-20									
800	5	49-30	DK501E	STR		49-30									
646	5	39-60	DK502E	STR		39-60									
394	5	42-62	DK503E	18	0-70	41-112							0-50		
788	5	11-70	DK504E	18	0-70	11-00							0-50		
394	5	50-00	DK505E	18	0-70	49-50							0-50		
810	5	4-111	DK506E	T15		1-73	0-52	1-12	0-82	1-00		0-82	0-73		1-11
394	5	41-112	DK507E	STR		41-112									
394	5	49-50	DK508E	STR		49-50									
176	5	4-02	DK509E	16		1-20	1-52	1-50				1-00		1-00	2-52
60	5	7-110	DK510E	STR		7-110									
284	5	17-70	FT501E	17		2-70	12-50	2-70							
274	5	6-00	FT502E	17		1-00	5-00								
74	5	44-62	FT503E	STR		44-62									

SPECIFICATIONS					BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)										
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O
74	5	51-83	FT504E	STR		51-83									
54	5	8-80	FT505E	STR		8-80									
125	5	6-60	FT506E	17		1-00	5-60								
60	5	13-20	FT507E	STR		13-20									
71	5	13-100	FT508E	17		2-70	8-80	2-70							
52	5	11-110	FT509E	STR		11-110									
30	5	17-03	FT510E	STR		17-03									
26	5	13-80	FT511E	STR		13-80									
30	5	13-33	FT512E	STR		13-33									
26	5	12-00	FT513E	STR		12-00									
18	5	44-03	FT514E	STR		44-03	15-80	3-70							
18	5	51-30	FT515E	STR		51-30									
192	6	12-50	FT601E	STR		12-50									
360	6	6-60	FT602E	17		1-00	5-60								
49	6	10-20	FT603E	STR		10-20									
93	6	15-40	FT604E	17		2-70	10-20	2-70							
188	6	15-80	FT605E	STR		15-80									
126	6	23-40	FT606E	17		3-100	15-80	3-100							
25	6	44-90	FT607E	STR		44-90									
25	6	51-30	FT608E	STR		51-30									
132	8	8-60	FT801E	17		1-00	7-60								
206	8	8-60	FT802E	17		1-00	7-60								
33	1	50-90	FT1101	STR		50-90									
33	1	51-30	FT1102	STR		51-30									
1010	5	8-63	PA501E	T7	0-60	3-20	0-91	3-21	0-51		0-60	3-20		0-40	
8	5	8-21	PA502E	14	0-41	2-81	2-11	2-81	0-41			1-103		1-103	5-103
2X4	5	11-62	PA503E	T2	0-60	2-11	3-20	2-11	3-20		0-60				
		T0			T0	T0	T0	T0	T0		T0				
		17-62			0-60	5-11	3-20	5-11	3-20		0-60				
2X3	5	6-22	PA504E	T15		3-20	1-13	0-43		1-60			0-43		1-62
		T0			T0	T0	T0	T0	T0	T0		T0	T0	T0	T0
		7-40				3-20	2-31	0-43		1-60			0-43		2-80
2X3	5	9-80	PA505E	T15		3-20	1-13	3-41	2-00			2-00	0-40	3-40	1-53
		T0			T0	T0	T0	T0	T0	T0		T0	T0	T0	T0
		10-92				3-20	2-31	3-41	2-00			2-00	0-40	3-40	2-71
216	7	9-41	PA701E	STR		9-41									
36	7	9-71	PA702E	STR		9-71									
16	7	8-53	PA703E	STR		8-53									
216	8	9-41	PA801E	STR		9-41									

ASTM STANDARD ENGLISH REINFORCING BARS

BAR SIZE	NOMINAL DIMENSIONS: DIAMETER (INCHES)	NOMINAL DIMENSIONS: AREA (INCHES²)	NOMINAL DIMENSIONS: WEIGHT (LBS./FT.)
3	0.375	0.110	0.376
4	0.500	0.200	0.668
5	0.625	0.310	1.043
6	0.750	0.440	1.502
7	0.875	0.600	2.044
8	1.000	0.790	2.670
9	1.128	1.000	3.400
10	1.270	1.270	4.303
11	1.410	1.560	5.313
14	1.693	2.250	7.650
18	2.257	4.000	13.600

RECOMMENDED END HOOKS, APPLICABLE TO ALL GRADES

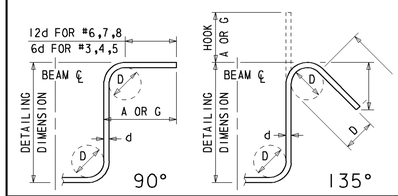
BAR SIZE	180° HOOKS: D	180° HOOKS: A OR G	180° HOOKS: J	90° HOOKS: A OR G
3	2¼"	5"	3"	6"
4	3"	6"	4"	8"
5	3¾"	7"	5"	10"
6	4½"	8"	6"	1'-0"
7	5¼"	10"	7"	1'-2"
8	6"	11"	8"	1'-4"
9	9½"	1'-3"	11¾"	1'-7"
10	10¾"	1'-5"	1'-1¼"	1'-10"
11	1'-0"	1'-7"	1'-2¾"	2'-0"
14	1'-6¼"	2'-3"	1'-9¾"	2'-7"
18	2'-0"	3'-0"	2'-4½"	3'-5"

STIRRUP AND TIE HOOKS, APPLICABLE TO ALL GRADES

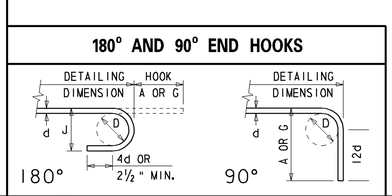
BAR SIZE	90° HOOK: D	90° HOOK: A OR G	135° HOOK: A OR G	135° HOOK: A OR G
3	1½"	4"	4"	2½"
4	2"	4½"	4½"	3"
5	2½"	6"	5½"	3¾"
6	4½"	1'-0"	8"	4½"
7	5¼"	1'-2"	9"	5¼"
8	6"	1'-4"	10½"	6"

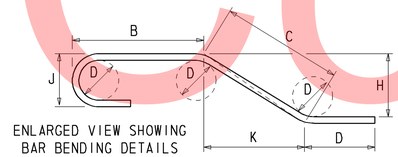
NOTES:
1. FIGURES SHOWN IN CIRCLES REPRESENT BAR BEND TYPES.
2. STANDARD BAR BENDS INCLUDE ONLY THOSE TYPES BELOW, INDICATED AS SUCH.
3. ALL DIMENSIONS OUT-TO-OUT, EXCEPT "A" AND "G" ON STD. 180° AND 135° HOOKS.
4. "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD 'ACI' HOOKS ARE TO BE USED.
5. WHERE "J" IS NOT SHOWN, "J" WILL BE KEPT EQUAL TO OR LESS THAN "H" ON TYPES 3, 5 AND 22. WHERE "J" CAN EXCEED "H", IT SHALL BE SHOWN.
6. "H" DIMENSIONS OF STIRRUPS TO BE SHOWN AS NEEDED TO FIT WITHIN THE CONCRETE.
7. UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR (EXCEPT FOR BEND TYPES 11 AND 13).
8. WHERE SLOPE DIFFERS FROM 45° OFFSET, "H" AND "K" MUST BE SHOWN.
9. WHERE BARS ARE TO BE BENT MORE ACCURATELY THAN STANDARD BENDING TOLERANCES, BENDING DIMENSIONS REQUIRING CLOSER FABRICATION SHOULD HAVE LIMITS INDICATED.
10. FOR RECOMMENDED DIAMETER "D", OF BENDS, HOOKS, ETC., REFER TO TABLE ABOVE, 'CRSI' OR 'ACI' TABLES WHERE APPLICABLE AND REQUIRED.
11. TYPE S1-S6, S11, T1-T3 AND T6-T9 APPLICABLE TO BAR SIZES #3 THROUGH #8.

STIRRUP AND TIE HOOKS



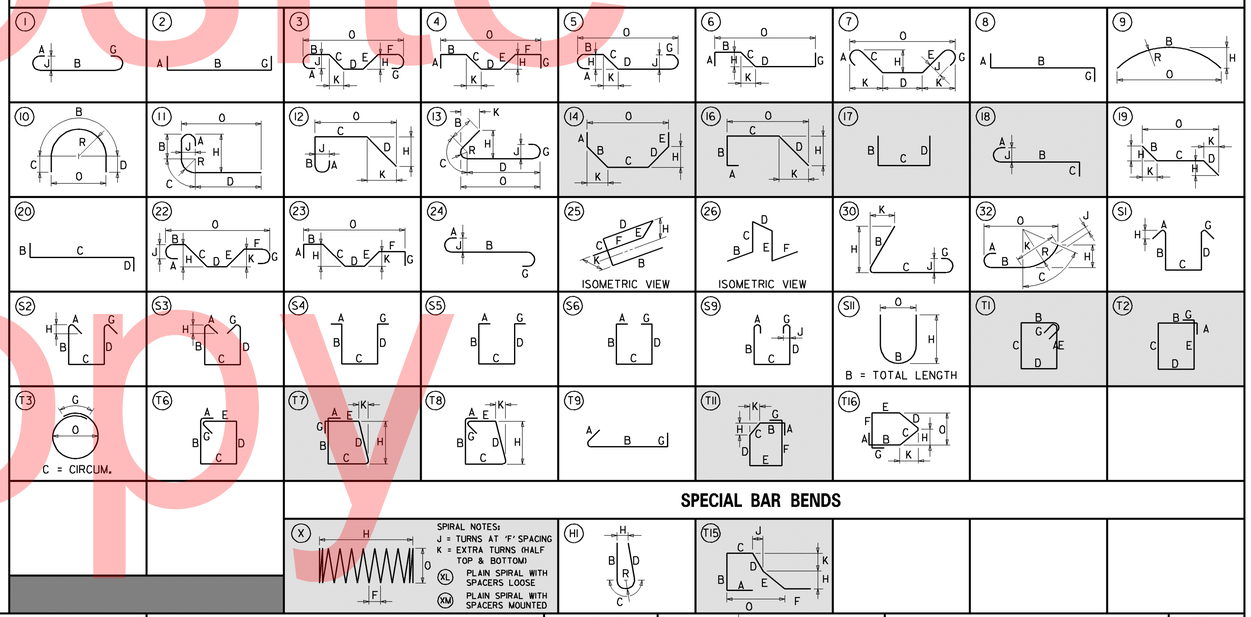
180° AND 90° END HOOKS





ENLARGED VIEW SHOWING BAR BENDING DETAILS

STANDARD BAR BENDS



SPECIAL BAR BENDS

W:\MSV8\CELLS\PROJDEV\SB.CEL

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-675
T201109002	DESIGNED BY: KL	
COUNTY	CHECKED BY: PM	
NEW CASTLE		

REINFORCEMENT BAR LIST - 1

SHEET NO.	TOTAL SHTS.
156	481

(1) ANY MARK NUMBER WITH SUFFIX 'E' DENOTES EPOXY COATED REINFORCING STEEL.

(2) ALL MARK 'LOCATION PREFIXES' SHALL CONSIST OF TWO LETTERS AND ARE AS FOLLOWS: AB = ABUTMENT, AS = APPROACH SLAB, BC = BOX CULVERT, BW = BACKWALL, CL = COLUMN, DK = DECK, DL = DOWEL, FT = FOOTING, HW = HEADWALL, MS = MISC. BARS, PA = PARAPET, PR = PIER, SC = SHEETPILE CAP, SL = SLAB, TW = TOEWALL, WL = WALL (UNIQUE LOCATION), WW = WINGWALL

SPECIFICATIONS					BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)									
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O
36	8	9-71	PA802E	STR		9-71									
16	8	8-53	PA803E	STR		8-53									
6	5	42-23	PR501E	STR		42-23									
6	5	49-91	PR502E	STR		49-91									
488	5	13-70	PR503E	T1	0-52	2-90	3-70	2-90	3-70		0-52				
110	5	6-80	PR504E	17		1-90	3-20	1-90							
15	8	44-23	PR801E	STR		44-23									
15	8	49-91	PR802E	STR		49-91									
16	1	47-23	PR1001	STR		47-23									
16	1	49-91	PR1002	STR		49-91									
17	5	19-52	WW501E	STR		19-52									
13	5	14-42	WW502E	STR		14-42									
20	5	17-81	WW503E	STR		17-81									
15	5	12-70	WW504E	STR		12-70									
17	5	18-73	WW505E	STR		18-73									
13	5	13-83	WW506E	STR		13-83									
17	5	20-41	WW507E	STR		20-41									
13	5	15-52	WW508E	STR		15-52									
96	5	27-60	WW509E	STR		27-60									
36	5	15-30	WW510E	STR		15-30									
28	5	32-102	WW511E	STR		32-102									
12	5	18-110	WW512E	STR		18-110									
200	5	7-92	WW513E	T11			0-113	2-22	1-11	3-60		0-93		0-63	
32	6	19-52	WW601E	STR		19-52									
17	6	14-42	WW602E	STR		14-42									
39	6	17-81	WW603E	STR		17-81									
20	6	12-70	WW604E	STR		12-70									
32	6	18-73	WW605E	STR		18-73									
17	6	13-83	WW606E	STR		13-83									
32	6	20-41	WW607E	STR		20-41									
17	6	15-52	WW608E	STR		15-52									

SPECIFICATIONS					BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)									
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O

SPECIFICATIONS					BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)									
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O

ASTM STANDARD ENGLISH REINFORCING BARS

BAR SIZE	NOMINAL DIMENSIONS: DIAMETER (INCHES)	NOMINAL DIMENSIONS: AREA (INCHES²)	NOMINAL DIMENSIONS: WEIGHT (LBS./FT.)
3	0.375	0.110	0.376
4	0.500	0.200	0.668
5	0.625	0.310	1.043
6	0.750	0.440	1.502
7	0.875	0.600	2.044
8	1.000	0.790	2.670
9	1.128	1.000	3.400
10	1.270	1.270	4.303
11	1.410	1.560	5.313
14	1.693	2.250	7.650
18	2.257	4.000	13.600

RECOMMENDED END HOOKS, APPLICABLE TO ALL GRADES

	180° HOOKS		90° HOOKS
D	A OR G	J	A OR G
2¼"	5"	3"	6"
3"	6"	4"	8"
3¾"	7"	5"	10"
4½"	8"	6"	1-0"
5¼"	10"	7"	1-2"
6"	11"	8"	1-4"
9½"	1-3"	11¾"	1-7"
10¾"	1-5"	1-1¼"	1-10"
1-0"	1-7"	1-2¾"	2-0"
1-6¼"	2-3"	1-9¾"	2-7"
2-0"	3-0"	2-4½"	3-5"

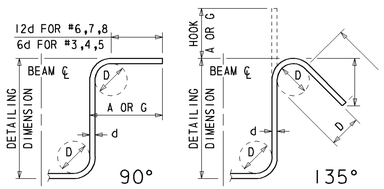
STIRRUP AND TIE HOOKS, APPLICABLE TO ALL GRADES

90° HOOK	135° HOOK	
D	A OR G	A OR G
1½"	4"	2½"
2"	4½"	3"
2½"	5½"	3¾"
4½"	6"	4½"
5¼"	7"	5¼"
6"	8"	6"
	9"	
	10½"	

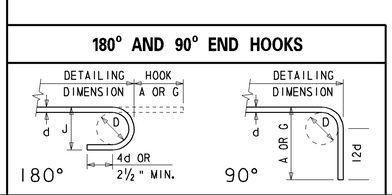
NOTES:

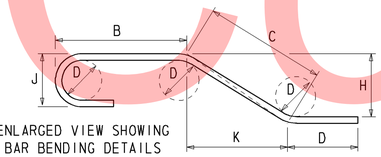
1. FIGURES SHOWN IN CIRCLES REPRESENT BAR BEND TYPES.
2. STANDARD BAR BENDS INCLUDE ONLY THOSE TYPES BELOW, INDICATED AS SUCH.
3. ALL DIMENSIONS OUT-TO-OUT, EXCEPT "A" AND "G" ON STD. 180° AND 135° HOOKS.
4. "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD 'ACI' HOOKS ARE TO BE USED.
5. WHERE "J" IS NOT SHOWN, "J" WILL BE KEPT EQUAL TO OR LESS THAN "H" ON TYPES 3, 5 AND 22. WHERE "J" CAN EXCEED "H", IT SHALL BE SHOWN.
6. "H" DIMENSIONS OF STIRRUPS TO BE SHOWN AS NEEDED TO FIT WITHIN THE CONCRETE.
7. UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR (EXCEPT FOR BEND TYPES 11 AND 13).
8. WHERE SLOPE DIFFERS FROM 45° OFFSET, "H" AND "K" MUST BE SHOWN.
9. WHERE BARS ARE TO BE BENT MORE ACCURATELY THAN STANDARD BENDING TOLERANCES, BENDING DIMENSIONS REQUIRING CLOSER FABRICATION SHOULD HAVE LIMITS INDICATED.
10. FOR RECOMMENDED DIAMETER "D", OF BENDS, HOOKS, ETC., REFER TO TABLE ABOVE, 'CRSI' OR 'ACI' TABLES WHERE APPLICABLE AND REQUIRED.
11. TYPE S1-S6, S11, T1-T3 AND T6-T9 APPLICABLE TO BAR SIZES #3 THROUGH #8.

STIRRUP AND TIE HOOKS

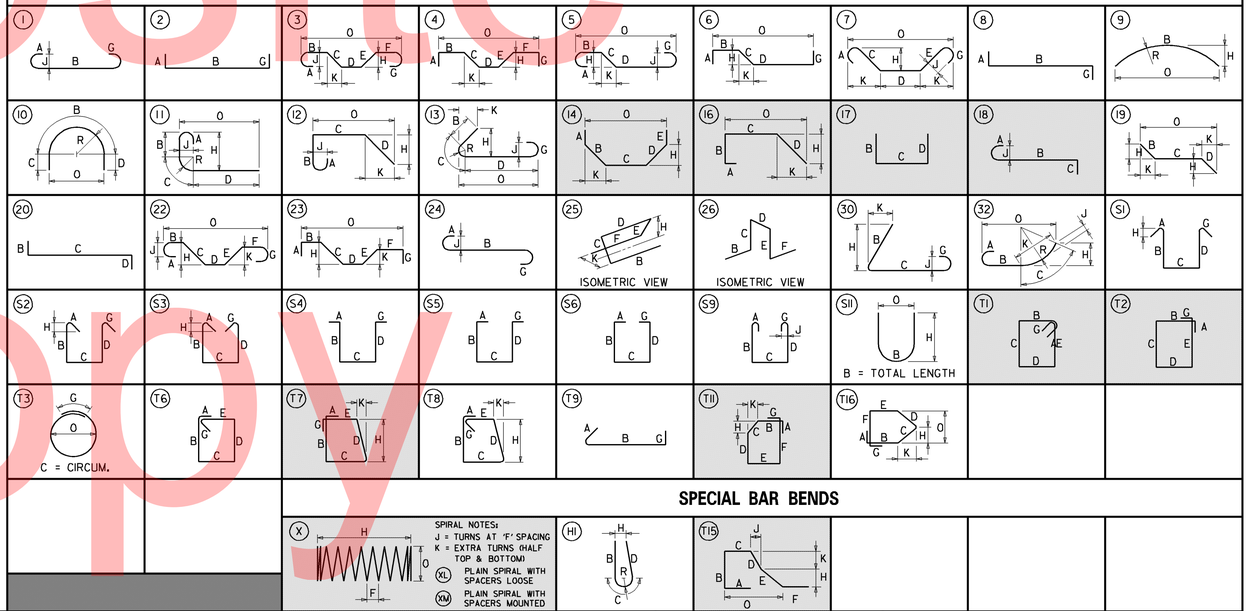


180° AND 90° END HOOKS





STANDARD BAR BENDS



SPECIAL BAR BENDS

W:\MSV8\CELLS\PROJDEV\SB.CEL

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-675
T201109002	DESIGNED BY: KL	
COUNTY	CHECKED BY: PM	
NEW CASTLE		

REINFORCEMENT BAR LIST - 2

SHEET NO.	TOTAL SHTS.
157	481

BORING: B0-1 | **DATE DRILLED:** 3/21/12
STATION: 1075+30.52 | **OFFSET:** -27.49 | **ELEVATION:** | **NORTHING:** 619207.22 | **EASTING:** 604194.33
COMMENTS: N/A

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0	4 3 5 13	MOIST LOOSE BROWN COARSE TO FINE SAND W/SOME SILT AND FINE GRAVEL.	A-1-B	
2	0.0 2.0	8 9 9 8	MOIST MEDIUM DENSE BROWN COARSE TO FINE SAND W/SOME SILT AND FINE GRAVEL.	A-1-B	
3	2.0 4.0	9 33 50	MOIST VERY DENSE BROWN FINE GRAVEL AND COARSE TO FINE SAND W/SOME SILT.	A-1-B	
4	4.0 6.0	2 5 12 14	MOIST MEDIUM DENSE BROWN CLAYEY COARSE TO FINE SAND W/SOME FINE GRAVEL AND SILT.	A-2-4(0)	
5	6.0 8.0	5 8 12 19	WET MEDIUM DENSE BROWN COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF SILT.	A-1-B	
6	8.0 10.0	8 8 9 10	WET MEDIUM DENSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
7	10.0 12.0	2 2 3 7	WET LOOSE BROWN COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF SILT.	A-1-B	
8	12.0 14.0	3 3 5 6	WET LOOSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
9	14.0 16.0	3 6 6 6	WET MEDIUM DENSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
10	16.0 18.0	2 1 2 3	WET VERY LOOSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
11	18.0 23.0	1 3 4 4	WET FIRM GRAY COARSE SANDY CLAYEY SILT W/SOME FINE SAND, TRACE OF FINE GRAVEL.	A-4(1)	
12	23.0 28.0	3 5 11 15	SATURATED VERY STIFF GRAY SILT W/SOME FINE SAND, TRACE OF COARSE SAND AND FINE GRAVEL.	A-4(1)	
13	28.0 33.0	23 13 12 7	SATURATED MEDIUM DENSE GRAY COARSE SANDY FINE GRAVEL W/SOME FINE SAND, TRACE OF SILT.	A-1-A	
14	33.0 38.0	7 11 22 23	SATURATED HARD REDDISH BROWN FINE SANDY CLAY W/SOME SILT, TRACE OF COARSE SAND AND FINE GRAVEL.	A-6(3)	
15	38.0 43.0	5 7 14 14	SATURATED HARD REDDISH BROWN FINE SANDY SILTY CLAY W/TRACE OF COARSE SAND AND FINE GRAVEL.	A-6(6)	
16	43.0 48.0		SATURATED REDDISH BROWN FINE GRAVELLY SILTY CLAY W/SOME FINE SAND, TRACE OF COARSE SAND.	A-6(2)	
U-1	48.0 50.0				
17	50.0 53.0	17 17 17 21	SATURATED DENSE GRAY SILTY FINE SAND W/TRACE OF COARSE SAND.	A-2-4(0)	
18	53.0 58.0	16 13 14 17	SATURATED MEDIUM DENSE GRAY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-3	
19	58.0 63.0	35 37 37 44	NOT ENOUGH MATERIAL FOR TESTING.		
20	63.0 68.0	13 16 16 14	SATURATED HARD RED CLAYEY FINE SANDY SILT W/SOME COARSE SAND, TRACE OF FINE GRAVEL.	A-4(2)	
21A	68.0 73.0	6 8	SATURATED MEDIUM DENSE WHITE FINE SAND W/SOME COARSE SAND AND SILT.	A-2-4(0)	
21B	73.0 74.0	9 9	SATURATED VERY STIFF PINK CLAY W/SOME FINE SAND, TRACE OF COARSE SAND AND SILT.	A-7-6(31)	
22	74.0 78.0	10 10 20 21	SATURATED VERY STIFF GRAY FINE SANDY SILTY CLAY W/TRACE OF COARSE SAND.	A-6(10)	
23	78.0 83.0	16 26 28 32	SATURATED VERY DENSE WHITE FINE TO COARSE SAND W/SOME SILT.	A-2-4(0)	
24	83.0 88.0	7 16 20 21	SATURATED HARD PINK FINE SANDY SILTY CLAY W/TRACE OF COARSE SAND.	A-6(10)	
25	88.0 93.0	17 22 26 31	SATURATED DENSE WHITE FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	
26	93.0 98.0	7 11 17 21	SATURATED MEDIUM DENSE PINK CLAYEY FINE SAND W/SOME SILT, TRACE OF COARSE SAND.	A-6(6)	

BORING: B0-1 CONT.

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
	98.0 100.0		END BORING.		

BORING: B0-2 | **DATE DRILLED:** 2/28/12
STATION: 1076+53.16 | **OFFSET:** -27.61 | **ELEVATION:** 11.50 | **NORTHING:** 619325.417 | **EASTING:** 604164.125
COMMENTS: BORING LOCATION OFFSET 5' WEST

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0 2.0	8 9 10 9	MOIST VERY STIFF GRAY FINE GRAVELLY SILT W/SOME COARSE SAND AND CLAY, TRACE OF FINE SAND.	A-4(0)	
2	0.0 2.0	9 9 10 10	MOIST MEDIUM DENSE GRAY FINE GRAVEL AND COARSE SAND W/SOME FINE SAND AND SILT.	A-1-B	
3	2.0 4.0	20 19 27 27	MOIST DENSE BROWN SILTY COARSE TO FINE SAND W/SOME FINE GRAVEL AND CLAY.	A-2-4(0)	
4	4.0 6.0	20 19 50	MOIST VERY DENSE BROWN SILTY COARSE TO FINE SAND W/SOME FINE GRAVEL.	A-2-4(0)	
5	6.0 8.0	7 5 6 5	WET MEDIUM DENSE BROWN SILTY COARSE TO FINE SAND W/TRACE OF FINE GRAVEL.	A-2-4(0)	
6	8.0 10.0	9 10 9 9	WET MEDIUM DENSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
7	10.0 12.0	6 6 6 10	WET MEDIUM DENSE BROWN COARSE TO FINE SAND W/SOME FINE GRAVEL AND SILT.	A-1-B	
8	12.0 14.0	3 1 2 3	WET VERY LOOSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
9	14.0 16.0	3 4 3 4	WET LOOSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
10	16.0 18.0	6 2 2 3	WET VERY LOOSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
11	18.0 23.0	3 4 10 12	WET MEDIUM DENSE GRAY SILTY COARSE SAND AND FINE GRAVEL W/SOME FINE SAND.	A-1-B	
12	23.0 28.0	23 16 13 17	WET DENSE GRAY COARSE SANDY FINE GRAVEL W/SOME FINE SAND AND SILT.	A-1-B	
13	28.0 33.0	23 8 8 9	WET MEDIUM DENSE GRAY SILTY COARSE TO FINE SAND AND FINE GRAVEL.	A-1-B	
14	33.0 38.0	9 9 18 15	WET VERY STIFF REDDISH BROWN CLAY W/SOME FINE SAND, TRACE OF COARSE SAND AND SILT.	A-7-6(19)	
15	38.0 43.0	7 10 12 13	WET MEDIUM DENSE GRAY SILTY FINE SAND W/SOME COARSE SAND.	A-2-4(0)	
16	43.0 48.0	4 5 9 13	WET STIFF GRAY CLAYEY FINE SANDY SILT.	A-4(3)	
17	48.0 53.0	8 9 14 13	WET MEDIUM DENSE GRAY COARSE TO FINE SAND W/TRACE OF SILT AND FINE GRAVEL.	A-1-B	
18	53.0 58.0	13 20 16 12	WET DENSE GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	
19	58.0 63.0	12 9 15 16	WET VERY STIFF GRAY FINE SANDY SILT W/TRACE OF COARSE SAND.	A-4(0)	
20	63.0 68.0	5 8 10 11	WET MEDIUM DENSE GRAY FINE SAND W/SOME SILT, TRACE OF COARSE SAND.	A-3	
21	68.0 73.0	5 8 10 13	WET VERY STIFF REDDISH BROWN CLAY W/SOME FINE SAND, TRACE OF COARSE SAND.	A-7-6(18)	
22	73.0 78.0	3 4 8 11	WET STIFF REDDISH BROWN FINE SANDY CLAY W/TRACE OF COARSE SAND AND SILT.	A-7-6(14)	
23	78.0 83.0	7 11 16 22	WET VERY STIFF REDDISH BROWN FINE SANDY SILT W/TRACE OF COARSE SAND AND CLAY.	A-4(0)	
24	83.0 88.0	29 25 30 50	WET VERY DENSE GRAY FINE SAND W/SOME COARSE SAND AND SILT.	A-2-4(0)	

BORING: B0-2 CONT.

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
25	88.0 93.0	16 10 9 15	WET MEDIUM DENSE GRAY SILTY FINE SAND W/TRACE OF COARSE SAND.	A-2-4(0)	
26	93.0 98.0	8 9 18 18	WET VERY STIFF GRAY SILTY FINE SANDY CLAY W/TRACE OF COARSE SAND.	A-6(11)	
	98.0 100.0		END BORING.		

Y:\NEWCASTL\056\BRIDGE\T201109002\PLANS\B001.DGN

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT T201109002 | COUNTY NEW CASTLE | BRIDGE NO. 1-675 | DESIGNED BY: KRL | CHECKED BY: PAM

BORING LOG - 1

BO-01 | SHEET NO. 158 | TOTAL SHTS. 481

BORING: B0-3 | **DATE DRILLED:** 3/21/12
STATION: 1077+68.72 | **OFFSET:** -25.54 | **ELEVATION:** | **NORTHING:** 619436.743 | **EASTING:** 604135.280
COMMENTS: N/A

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0	2	MOIST LOOSE BROWN SILTY COARSE TO FINE SAND W/TRACE OF FINE GRAVEL.	A-1-B	
		3			
		5			
	0.0	6			
2	0.0	12	MOIST MEDIUM DENSE BROWN COARSE SAND W/SOME FINE SAND AND SILT, TRACE OF FINE GRAVEL.	A-1-B	
		8			
		6			
	2.0	4			
3	2.0	7	MOIST LOOSE BROWN SILTY COARSE SAND W/SOME FINE SAND AND FINE GRAVEL.	A-1-B	
		4			
		5			
	4.0	9			
4	4.0	10	MOIST DENSE BROWN SILTY COARSE SAND W/SOME FINE SAND AND FINE GRAVEL, TRACE OF CLAY.	A-2-4(0)	
		16			
		16			
	6.0	12			
5	6.0	9	MOIST MEDIUM DENSE BROWN SILTY FINE GRAVELLY COARSE SAND W/SOME FINE SAND AND CLAY.	A-2-4(0)	
		11			
		11			
	8.0	11			
6	8.0	29	MOIST DENSE BROWN SILTY COARSE TO FINE SAND W/SOME FINE GRAVEL.	A-1-B	
		25			
	10.0	20			
7	10.0	9	WET DENSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
		15			
		18			
	12.0	21			
8	12.0	6	WET MEDIUM DENSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
		7			
		5			
	14.0	6			
9	14.0	4	WET MEDIUM DENSE BROWN FINE TO COARSE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-3	
		7			
		8			
	16.0	9			
10	16.0	1	WET LOOSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-3	
		2			
		4			
	18.0	4			
11	18.0	4	NO RECOVERY		
		2			
		3			
	23.0	4			
12	23.0	5	WET STIFF GRAY CLAY W/SOME FINE TO COARSE SAND AND FINE GRAVEL AND SILT.	A-6(4)	
		5			
		7			
	28.0	7			
13	28.0	13	WET MEDIUM DENSE BROWN FINE GRAVELLY COARSE SAND AND FINE SAND AND SILT.	A-1-B	
		10			
		9			
	33.0	9			
14	33.0	10	WET VERY STIFF REDDISH BROWN FINE SANDY SILTY CLAY W/TRACE OF COARSE SAND.	A-6(8)	
		9			
		11			
	38.0	15			
U-1	38.0		WET REDDISH BROWN FINE SAND W/ SOME COARSE SAND AND SILT.	A-2-4(0)	
	41.0				
15	41.0	5	WET VERY STIFF GRAY FINE SANDY SILT W/TRACE OF COARSE SAND AND CLAY.	A-4(0)	
		5			
		17			
	43.0	19			
16	43.0	16	WET VERY STIFF GRAY FINE SANDY SILT W/TRACE OF COARSE SAND.	A-4(0)	
		9			
		12			
	48.0	13			
17	48.0	13	WET DENSE GRAY SILTY FINE SAND W/SOME COARSE SAND, TRACE OF FINE GRAVEL.	A-2-4(0)	
		14			
		17			
	53.0	20			
18	53.0	12	SATURATED MEDIUM DENSE GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	
		12			
		17			
	58.0	16			
19	58.0	8	SATURATED VERY STIFF REDDISH BROWN SILTY CLAY W/TRACE OF FINE SAND.	A-7-5(23)	
		11			
		13			
	63.0	13			
20	63.0	9	SATURATED VERY STIFF REDDISH BROWN FINE SANDY SILT.	A-4(0)	
		14			
		16			
	68.0	16			
21	68.0	9	SATURATED VERY STIFF REDDISH BROWN FINE SANDY SILTY CLAY W/TRACE OF COARSE SAND.	A-6(13)	
		11			
		16			
	73.0	14			
22	73.0	9	SATURATED MEDIUM DENSE REDDISH BROWN SILTY FINE SAND W/TRACE OF COARSE SAND.	A-2-4(0)	
		11			
		16			
	78.0	14			
23	78.0	23	SATURATED VERY DENSE GRAYISH BROWN COARSE TO FINE SAND W/SOME SILT.	A-2-4(0)	
		27			
		27			
	83.0	26			
24	83.0	20	SATURATED DENSE GRAYISH BROWN COARSE TO FINE SAND W/TRACE OF SILT.	A-1-B	
		19			
		20			
	88.0	15			
25	88.0	15	SATURATED MEDIUM DENSE GRAYISH BROWN SILTY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL.	A-2-4(0)	
		16			
		9			
	93.0	8			

BORING: B0-3 CONT.

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
26	93.0	5	SATURATED MEDIUM DENSE GRAYISH BROWN SILTY COARSE TO FINE SAND W/TRACE OF FINE GRAVEL.	A-2-4(0)	
		5			
		15			
	98.0	13			
	98.0		END BORING.		
	100.0				

BORING: B0-4 | **DATE DRILLED:** 3/26/12
STATION: 1075+31.26 | **OFFSET:** 48.51 | **ELEVATION:** | **NORTHING:** 619225.836 | **EASTING:** 604268.015
COMMENTS: N/A

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0	WH	MOIST MEDIUM DENSE BROWN FINE GRAVELLY COARSE SAND W/SOME FINE SAND AND SILT.	A-1-B	
		5			
		10			
	0.0	17			
2	0.0	14	MOIST DENSE BROWN SILTY COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF CLAY.	A-2-4(0)	
		16			
		20			
	2.0	22			
3	2.0	9	MOIST VERY DENSE BROWN COARSE SANDY FINE GRAVEL W/SOME FINE SAND AND SILT.	A-1-B	
		31			
		28			
	4.0	20			
4	4.0	23	MOIST DENSE BROWN SILTY COARSE TO FINE SAND AND FINE GRAVEL.	A-2-4(0)	
		21			
		16			
	6.0	18			
5	6.0	16	MOIST DENSE BROWN COARSE SAND W/SOME FINE SAND, FINE GRAVEL AND SILT.	A-1-B	
		14			
		17			
	8.0	19			
6	8.0	14	MOIST MEDIUM DENSE BROWN FINE GRAVELLY COARSE SAND W/SOME FINE SAND, TRACE OF SILT.	A-1-B	
		14			
		14			
	10.0	10			
7	10.0	3	WET MEDIUM DENSE BROWN FINE GRAVELLY FINE SAND W/SOME COARSE SAND, TRACE OF SILT.	A-3	
		7			
		10			
	12.0	10			
8	12.0	8	WET MEDIUM DENSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
		9			
		10			
	14.0	10			
9	14.0	7	WET MEDIUM DENSE BROWN COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF SILT.	A-1-B	
		7			
		7			
	16.0	5			
10	16.0	4	WET LOOSE BROWN COARSE SAND W/SOME FINE SAND AND FINE GRAVEL, TRACE OF SILT.	A-1-B	
		3			
		2			
	18.0	2			
11	18.0	7	WET SOFT BROWN COARSE SANDY SILT W/SOME FINE SAND, TRACE OF FINE GRAVEL.	A-4(0)	
		2			
		1			
	23.0	1			
12	23.0	8	WET SOFT BROWN FINE SANDY SILT W/SOME COARSE SAND, FINE GRAVEL AND CLAY.	A-4(0)	
		9			
		8			
	28.0	7			
13	28.0	18	NO SIEVE ANALYSIS - INDICATION OF WET MEDIUM DENSE BROWN GRAVEL.		
		22			
		24			
	33.0	18			
14	33.0	27	WET MEDIUM DENSE BROWN SILTY FINE SAND AND FINE GRAVEL W/SOME CLAY AND COARSE SAND.	A-2-4(0)	
		8			
		9			
	38.0	13			
15	38.0	5	WET VERY STIFF REDDISH BROWN SILTY CLAY W/SOME FINE SAND, TRACE OF COARSE SAND.	A-6(10)	
		6			
		11			
	43.0	11			
U-1	43.0		WET REDDISH BROWN SILTY CLAY W/ FINE SAND.	A-6(12)	
	46.0				
16	46.0	5	WET VERY STIFF GRAY FINE SANDY SILT W/SOME CLAY, TRACE OF COARSE SAND.	A-4(0)	
		10			
		8			
	48.0	10			
17	48.0	9	WET VERY STIFF REDDISH BROWN GRAVELLY FINE SANDY SILT.	A-4(3)	
		9			
		11			
	53.0	18			
18	53.0	13	WET DENSE GRAY FINE SAND W/SOME COARSE SAND AND SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	
		22			
		22			
	58.0	29			
19	58.0	24	WET VERY DENSE GRAY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-3	
		29			
		31			
	63.0	29			
20	63.0	22	WET DENSE GRAY FINE TO COARSE SAND W/TRACE OF SILT.	A-3	
		27			
		22			
	68.0	21			
21	68.0	11	WET STIFF REDDISH BROWN SILTY CLAY W/SOME FINE SAND, TRACE OF COARSE SAND.	A-6(9)	
		6			
		6			
	73.0	11			
22	73.0	12	WET HARD GRAY FINE SANDY CLAY W/SOME SILT AND COARSE SAND.	A-6(4)	
		12			
		19			
	78.0	29			

BORING: B0-4 CONT.

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
23	78.0	14	WET MEDIUM DENSE GRAY CLAYEY FINE SAND W/SOME COARSE SAND, FINE GRAVEL AND SILT.	A-2-6(0)	
		11			
		13			
	83.0	18			
24	83.0	14	WET DENSE GRAY CLAYEY FINE SAND W/SOME COARSE SAND AND SILT.	A-2-6(1)	
		19			
		19			
	88.0	19			
25	88.0	23	WET VERY DENSE GRAY FINE SAND W/SOME COARSE SAND AND SILT.	A-2-4(0)	
		28			
	93.0	50			
26	93.0	29	WET HARD REDDISH BROWN FINE SANDY SILTY CLAY W/TRACE OF COARSE SAND.	A-6(13)	
		29			
	98.0	50			
	98.0		END BORING.		
	100.0				

Y:\NEWCASTL\056\BRIDGE\T201109002\PLANS\B002.DGN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-675	BORING LOG – 2	BO-2
				COUNTY NEW CASTLE	DESIGNED BY: KRL		SHEET NO. 159
					CHECKED BY: PAM		TOTAL SHTS. 481

BORING: B0-5 **DATE DRILLED:** 2/23/12
STATION: 1076+52.17 **OFFSET:** 48.39 **ELEVATION:** **NORTHING:** 619344.040 **EASTING:** 604237.815
COMMENTS: N/A

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
		SAMPLE INFORMATION			
1	0.0	6	MOIST DENSE BROWN COARSE SANDY FINE GRAVEL W/SOME FINE SAND AND SILT.	A-1-B	
		16			
		23			
	0.0	18			
2	0.0	18	MOIST MEDIUM DENSE BROWN SILTY COARSE TO FINE SAND AND FINE GRAVEL.	A-1-B	
		10			
		8			
	2.0	8			
3	2.0	14	NO SIEVE ANALYSIS - INDICATION OF MOIST MEDIUM DENSE BROWN SILTY SAND.		
		11			
		10			
	4.0	9			
4	4.0	9	MOIST DENSE BROWN SILTY COARSE TO FINE SAND W/SOME FINE GRAVEL.	A-2-4(0)	
		15			
		18			
	6.0	16			
5	6.0	4	WET MEDIUM DENSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
		4			
		8			
	8.0	10			
6	8.0	4	WET MEDIUM DENSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
		7			
		10			
	10.0	11			
7	10.0	3	WET LOOSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
		4			
		6			
	12.0	7			
8	12.0	4	WET LOOSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
		3			
		2			
	14.0	3			
9	14.0	1	WET VERY LOOSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
		2			
		2			
	16.0	2			
10	16.0	3	WET VERY LOOSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
		2			
		1			
	18.0	1			
11	18.0	6	WET STIFF GRAY FINE SANDY SILT W/SOME COARSE SAND, TRACE OF FINE GRAVEL.	A-4(0)	
		6			
		8			
	23.0	10			
12	23.0	7	WET MEDIUM DENSE GRAY SILTY COARSE TO FINE SAND W/TRACE OF FINE GRAVEL.	A-1-B	
		8			
		16			
	28.0	14			
13	28.0	12	WET MEDIUM DENSE GRAY COARSE SANDY FINE GRAVEL W/TRACE OF FINE SAND AND SILT.	A-1-A	
		10			
		11			
	33.0	8			
14	33.0	5	NO RECOVERY.		
		7			
		11			
	38.0	12			
15	38.0	11	WET VERY STIFF LIGHT GRAY SILTY CLAY W/SOME FINE SAND, TRACE OF COARSE SAND.	A-6(12)	
		18			
		11			
	43.0	14			
16	43.0	3	WET STIFF REDDISH BROWN CLAY W/SOME FINE SAND, TRACE OF COARSE SAND AND SILT.	A-7-6(13)	
		4			
		8			
	48.0	9			
17	48.0	6	WET MEDIUM DENSE LIGHT GRAY SILTY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL.	A-2-4(0)	
		9			
		9			
	53.0	13			
18	53.0	11	WET MEDIUM DENSE LIGHT GRAY COARSE TO FINE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-1-B	
		8			
		9			
	58.0	10			
19	58.0	6	SATURATED VERY STIFF REDDISH BROWN CLAY W/TRACE OF FINE TO COARSE SAND AND SILT.	A-7-5(28)	
		8			
		12			
	63.0	14			
20	63.0	8	SATURATED VERY STIFF REDDISH BROWN CLAY W/SOME FINE SAND, TRACE OF COARSE SAND AND SILT.	A-7-5(21)	
		8			
		16			
	68.0	21			
21	68.0	10	SATURATED VERY STIFF REDDISH BROWN SILTY FINE SANDY CLAY W/TRACE OF COARSE SAND.	A-6(6)	
		11			
		18			
	73.0	18			
22	73.0	11	SATURATED VERY STIFF REDDISH BROWN SILTY FINE SANDY CLAY W/TRACE OF COARSE SAND.	A-6(9)	
		19			
		19			
	78.0	20			
23	78.0	8	SATURATED MEDIUM DENSE GRAY SILTY FINE SAND W/TRACE OF COARSE SAND.	A-2-4(0)	
		11			
		18			
	83.0	31			
24	83.0	22	SATURATED VERY DENSE GRAY SILTY COARSE TO FINE SAND W/TRACE OF FINE GRAVEL.	A-2-4(0)	
		23			
		38			
	88.0	40			
25	88.0	25	SATURATED DENSE GRAY SILTY FINE SAND W/TRACE OF COARSE SAND.	A-2-4(0)	
		27			
		26			
	93.0	29			

BORING: B0-5 CONT.

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
		SAMPLE INFORMATION			
26	93.0	11	SATURATED VERY STIFF REDDISH BROWN SILTY FINE SANDY CLAY W/TRACE OF COARSE SAND.	A-6(7)	
		11			
		11			
	98.0	20			
	98.0		END BORING.		
	100.0				

BORING: B0-6 **DATE DRILLED:** 3/15/12
STATION: 1077+66.10 **OFFSET:** 50.46 **ELEVATION:** **NORTHING:** 619455.374 **EASTING:** 604209.004
COMMENTS: ROLLER BIT REFUSAL AT 15.0'. BORING TERMINATED AND WILL BE OFFSET AND REDRILLED.

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
		SAMPLE INFORMATION			
1	0.0	2	MOIST LOOSE BROWN COARSE SAND AND FINE GRAVEL W/SOME FINE SAND AND SILT.	A-1-B	
		2			
		3			
	0.0	4			
2	0.0	3	MOIST MEDIUM DENSE BROWN COARSE SAND W/SOME FINE GRAVEL, FINE SAND AND SILT.	A-1-B	
		13			
		14			
	2.0	7			
3	2.0	3	MOIST MEDIUM DENSE BROWN SILTY COARSE TO FINE SAND W/SOME FINE GRAVEL.	A-1-B	
		5			
		10			
	4.0	3			
4	4.0	4	MOIST VERY LOOSE BROWN SILTY COARSE SAND W/SOME FINE GRAVEL AND FINE SAND.	A-1-B	
		2			
		1			
	6.0	3			
5	6.0	6	MOIST MEDIUM DENSE BROWN SILTY COARSE TO FINE SAND AND FINE GRAVEL.	A-1-B	
		10			
		9			
	8.0	10			
6	8.0	13	MOIST MEDIUM DENSE BROWN SILTY COARSE TO FINE SAND W/TRACE OF FINE GRAVEL.	A-2-4(0)	
		10			
		11			
	10.0	10			
7	10.0	9	MOIST MEDIUM DENSE BROWN SILTY COARSE TO FINE SAND W/SOME FINE GRAVEL.	A-2-4(0)	
		8			
		14			
	12.0	19			
8	12.0	26	MOIST VERY DENSE BROWN SILTY COARSE SAND AND FINE GRAVEL W/SOME FINE SAND.	A-1-B	
		28			
		40			
	14.0	26			
9	14.0	31	MOIST VERY DENSE BROWN SILTY COARSE TO FINE SAND W/SOME FINE GRAVEL.	A-2-4(0)	
		27			
		50			
	16.0				
	16.0		END BORING		
	18.0				

BORING: B0-6A **DATE DRILLED:** 3/16/12
STATION: 1077+66.10 **OFFSET:** 50.46 **ELEVATION:** **NORTHING:** 619455.374 **EASTING:** 604209.004
COMMENTS: BORING B0-6 OFFSET 8' SOUTH AND REDRILLED.

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
		SAMPLE INFORMATION			
1	0.0	6	MOIST MEDIUM DENSE BROWN COARSE SANDY FINE GRAVEL W/SOME FINE SAND AND SILT.	A-1-B	
		6			
		9			
	0.0	12			
2	0.0	15	MOIST MEDIUM DENSE BROWN SILTY COARSE TO FINE SAND W/SOME FINE GRAVEL.	A-1-B	
		9			
		10			
	2.0	12			
3	2.0	13	MOIST MEDIUM DENSE BROWN FINE GRAVELLY COARSE SAND W/SOME FINE SAND AND SILT.	A-1-B	
		7			
		7			
	4.0	7			
4	4.0	5	MOIST MEDIUM DENSE BROWN COARSE TO FINE SAND AND FINE GRAVEL W/SOME SILT.	A-1-B	
		6			
		7			
	6.0	12			
5	6.0	15	MOIST DENSE BROWN SILTY COARSE TO FINE SAND AND FINE GRAVEL W/SOME CLAY.	A-1-B	
		19			
		31			
	8.0	35			
6	8.0	15	MOIST VERY DENSE BROWN COARSE TO FINE SAND AND FINE GRAVEL W/SOME SILT.	A-1-B	
		22			
		33			
	10.0	27			
7	10.0	1	MOIST MEDIUM DENSE BROWN FINE GRAVELLY COARSE SAND W/SOME FINE SAND, TRACE OF SILT.	A-1-B	
		4			
		7			
	12.0	7			
8	12.0	7	WET MEDIUM DENSE BROWN FINE TO COARSE SAND W/SOME FINE GRAVEL, TRACE OF SILT.	A-1-B	
		7			
		12			
	14.0	15			
9	14.0	10	WET MEDIUM DENSE BROWN COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF SILT.	A-1-B	
		12			
		9			
	16.0	8			
10	16.0	12	WET LOOSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
		4			
		4			
	18.0	5			
11	18.0	2	SATURATED VERY LOOSE BROWN SILTY COARSE TO FINE SAND W/SOME CLAY, TRACE OF FINE GRAVEL.	A-2-4(0)	
		1			
		3			
	23.0	2			
U-1	23.0		SATURATED GRAY SILT W/ SOME CLAY AND FINE SAND, TRACE OF FINE SAND AND FINE GRAVEL.	A-4(5)	
	26.0				
12	26.0	6	SATURATED VERY STIFF GRAY SILTY CLAY W/SOME FINE SAND, TRACE OF COARSE SAND AND FINE GRAVEL.	A-6(8)	
		6			
		10			
	28.0	13			

BORING: B0-6A CONT.

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
		SAMPLE INFORMATION			
		9			
	33.0	11			
14	33.0	9	SATURATED VERY STIFF BROWN CLAYEY FINE SANDY SILT W/TRACE OF COARSE SAND AND FINE GRAVEL.	A-4(0)	
		13			
		14			
	38.0	18			
15	38.0	8	SATURATED VERY STIFF GRAY FINE SANDY SILT W/SOME COARSE SAND AND CLAY.	A-4(0)	
		15			
		11			
	43.0	14			
16	43.0	9	SATURATED VERY STIFF GRAY FINE SANDY SILT W/TRACE OF COARSE SAND.	A-4(0)	
		8			
		17			
	48.0	14			
17	48.0	13	SATURATED DENSE GRAY COARSE TO FINE SAND W/TRACE OF SILT AND FINE GRAVEL.	A-3	
		19			
		20			
	53.0	25			
18	53.0	11	SATURATED MEDIUM DENSE GRAY SILTY COARSE TO FINE SAND W/TRACE OF FINE GRAVEL.	A-2-4(0)	
		7			
		9			
	58.0	11			
19	58.0	7	SATURATED VERY STIFF GRAY CLAY W/SOME FINE SAND, TRACE OF SILT AND COARSE SAND.	A-7-6(19)	
		10			
		15			
	63.0	11			
20	63.0	10	SATURATED VERY STIFF GRAY FINE SANDY SILT W/SOME COARSE SAND AND CLAY.	A-4(0)	
		9			
		11			
	68.0	15			
21	68.0	14	SATURATED HARD GRAY CLAYEY FINE SANDY SILT W/SOME COARSE SAND.	A-4(1)	
		19			
		15			
	73.0	15			
22	73.0	10	SATURATED VERY STIFF BROWN CLAYEY FINE SANDY SILT W/SOME COARSE SAND.	A-4(0)	
		8			
		16			
	78.0	18			
23	78.0	23	SATURATED HARD BROWN CLAYEY FINE SANDY SILT W/SOME COARSE SAND.	A-4(1)	
		46			
		33			
	83.0	32			
24	83.0	25	SATURATED VERY DENSE BROWN SILTY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL.	A-2-4(0)	
		23			
		36			
	88.0	27			
25	88.0	15	SATURATED VERY STIFF BROWN CLAYEY FINE TO COARSE SANDY SILT W/TRACE OF FINE GRAVEL.	A-4(0)	
		11			
		16			
	93.0	19			
26	93.0	12	SATURATED HARD BROWN FINE SANDY CLAY W/SOME SILT, TRACE OF COARSE SAND.	A-6(4)	
		16			
		14			
	98.0	14			
	98.0		END BORING.		
	100.0				

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT T201109002
COUNTY NEW CASTLE
BRIDGE NO. 1-675
DESIGNED BY: KRL
CHECKED BY: PAM

BORING LOG - 3

BO-3
SHEET NO. 160
TOTAL SHTS. 481

Y:\NEWCASTL\056\BRIDGE\T201109002\PLANS\B003.DGN

BRIDGE PROJECT NOTES

1. LOCATION
PROPOSED SR-141 BRIDGE 1-678 OVER I-95, NEW CASTLE COUNTY, DELAWARE.

2. DESIGN CRITERIA
2012 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6th EDITION, U.S. CUSTOMARY UNITS.
INCLUDING ALL INTERIM SPECIFICATIONS THROUGH 2013.

3. GENERAL
PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ANSI/AASHTO/AWS D1.5-08 BRIDGE WELDING CODE AND PROJECT SPECIAL PROVISIONS. ALL DIMENSIONS ARE HORIZONTAL, EXCEPT AS NOTED. SUPERSTRUCTURE DIMENSIONS SHOWN ARE FOR A NORMAL TEMPERATURE OF 68 DEGREES FAHRENHEIT.

4. LOADING
- UNIT WEIGHTS OF MATERIALS SHALL BE IN ACCORDANCE WITH THE DELDOT BRIDGE MANUAL.
- DEAD LOAD INCLUDES 25 PSF FOR FUTURE WEARING SURFACE AND 15 PSF FOR S.I.P. FORMS (INCLUDES CONCRETE IN FORM CORRUGATIONS).
- VEHICLE LIVE LOAD SHALL BE HL-93, WHICH CONSISTS OF A DESIGN TRUCK OR TANDEM WITH DYNAMIC LOAD ALLOWANCE AND A LANE LOAD.
- BARRIERS HAVE BEEN DESIGNED FOR TEST LEVEL FOUR (TL-4).

FOR THERMAL LOADS, CONSIDER THE MODERATE TEMPERATURE RANGE AS STIPULATED IN THE AASHTO LRFD DESIGN SPECIFICATIONS. 68°F WAS TAKEN AS THE NORMAL TEMPERATURE.

5. PORTLAND CEMENT CONCRETE
STRUCTURAL ELEMENTS OF PORTLAND CEMENT CONCRETE SHALL BE AS NOTED:
(f'c = 28 DAY COMPRESSIVE STRENGTH)
CLASS A - PARAPETS, ABUTMENT FOOTINGS, ABUTMENTS, PIER ABOVE FOOTING AND WING WALLS (f'c = 4.5 KSI)
CLASS B - PIER FOOTING (f'c = 3.0 KSI)
CLASS D - CONCRETE DECK AND APPROACH SLAB (f'c = 4.5 KSI)
MIX REQUIREMENTS SHALL CONFORM TO SECTION 812 OF THE STANDARD SPECIFICATIONS. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾" 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.

NO SLIP-FORMING OF BARRIERS IS PERMITTED.

6. STRUCTURAL STEEL
STEEL PLATE GIRDER TOP AND BOTTOM FLANGES (POSITIVE MOMENT REGION), STEEL PLATE WEB, STIFFENERS, SOLE PLATES, CONNECTION PLATES AND CROSS FRAMES SHALL BE ASTM A709 GRADE 50W. STEEL PLATE GIRDER TOP AND BOTTOM FLANGES (NEGATIVE MOMENT REGION ONLY) SHALL BE ASTM A709 GRADE 70W. THE ADDITIONAL REQUIREMENTS FOR CHARPY V-NOTCH TESTING OF AASHTO M270 FOR PRIMARY LOAD CARRYING MEMBERS SHALL BE INCLUDED.

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.

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)

PROVIDE WELDED STUD SHEAR CONNECTORS MANUFACTURED FROM STEEL CONFORMING TO AASHTO M 169, GRADES 1015, 1018, OR 1020, EITHER SEMI OR FULLY KILLED.

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

7. BEARING
ALL STEEL BEARINGS SHALL CONFORM TO SUBSECTION 605 OF THE STANDARD SPECIFICATIONS.

8. BAR REINFORCEMENT
REINFORCING STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60. REINFORCING STEEL SHALL HAVE A 3" 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). THE CONTRACTOR IS PERMITTED TO USE MECHANICAL COUPLERS AND THREADED INSERTS IN LIEU OF LAP SPLICES FOR THE BAR REINFORCEMENT. IF USED, THE MECHANICAL COUPLERS AND THEARDED INSERTS SHALL BE EPOXY COATED. PAYMENT FOR MECHANICAL COUPLERS AND THREADED INSERTS SHALL BE INCIDENTAL TO ITEM 604000-BAR REINFORCEMENT, EPOXY COATED. ALL BARS THAT ARE FIELD CUT SHALL HAVE THE CUTTED END EPOXY COATED. THE PAYMENT FOR ALL NECESSARY FIELD CUTTING, BENDING, AND CUTTED END EPOXY COATED SHALL BE INCIDENTAL TO ITEM 604000-BAR REINFORCEMENT, EPOXY COATED. .

9. PLAN DIMENSIONS
ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND PARAPETS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EXPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

10. CONSTRUCTION JOINTS
KEYED CONSTRUCTION JOINTS SHALL BE 2 INCHES X 4 INCHES OR AS NOTED. ALL EXPOSED CONSTRUCTION JOINTS SHALL HAVE A ¾" V-NOTCH. ANY WATERSTOPS SHALL BE INCIDENTAL TO THE APPROPRIATE CONCRETE ITEM.

11. CONCRETE SEALER
SILICONE ACRYLIC CONCRETE SEALER SHALL BE APPLIED TO THE EXPOSED FACES OF BACKWALLS, ABUTMENTS, ABUTMENT SEATS, WING WALLS, PIER CAP, PIER COLUMNS, BARRIERS AND OUTSIDE FACE AND UNDERSIDE OF DECK TO FASCIA BEAM. PAYMENT UNDER ITEM *602646 - SILICONE ACRYLIC CONCRETE SEALER.

12. DECK SLAB
THE DECK SLAB THICKNESS INCLUDES ½" INTEGRAL WEARING SURFACE.

13. DEMOLITION OF EXISTING STRUCTURE
EXISTING BRIDGE SUPERSTRUCTURE SHALL BE REMOVED IN PHASES AS SHOWN ON PLAN IN ITS ENTIRETY TO ENABLE CONSTRUCTION OF THE PROPOSED BRIDGE. WINGWALLS, PIER SUPPORTS, PIER WALL, INCLUDING FOOTINGS AND ABUTMENTS SHALL BE REMOVED ENTIRELY WHEN OBSTRUCTING THE PROPOSED CONSTRUCTION OR TO A DEPTH OF TWO (2) FEET BELOW THE EXISTING GROUND LEVEL PROVIDED THAT THEY DO NOT INTERFERE WITH PROPOSED STRUCTURE. THE CONTRACTOR SHALL INSTALL PERMANENT SHEETINGS TO RETAIN THE BACKFILL OF THE PROPOSED STRUCTURE AND TO MAINTAIN THE INTEGRITY OF THE REMAINING EXISTING STRUCTURE. THE CONTRACTOR SHALL SUBMIT A PROPOSED PLAN FOR THE PERMANENT SHEETINGS INCLUDING THE LENGTH OF SHEETING NECESSARY AND CLOSURE AT THE HEEL OF THE ABUTMENTS FOR APPROVAL BY THE ENGINEER.
THE SUBMITTAL SHALL INCLUDE ANY DRAWINGS AND CALCULATIONS ASSOCIATED WITH THE WORK AND SHALL BE STAMPED BY A DELAWARE REGISTERED PROFESSIONAL ENGINEER. PAYMENT FOR INSTALLATION OF PERMANENT SHEETING, AS WELL AS THE MATERIALS AND WORK ASSOCIATED WITH THE SUBMITTAL, SHALL BE MADE UNDER ITEM *207501-SHEETING AND SHORING. PAYMENT FOR SUPERSTRUCTURE AND SUBSTRUCTURE REMOVAL SHALL BE UNDER ITEM *211550 - DEMOLITION OF EXISTING BRIDGE. AS-BUILT PLANS (CONTRACT # 1-1(21)-1 & 7248) OF THE EXISTING STRUCTURE ARE AVAILABLE AND MAY BE OBTAINED THROUGH THE DEPARTMENT.

14. HAZARDOUS MATERIAL
THE CONTRACTOR IS ADVISED THAT THE EXISTING STRUCTURE OVER I-95 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 - DEMOLITION OF EXISTING BRIDGE.

15. PILE FOUNDATIONS
ABUTMENTS A & B WILL UTILIZE CANTILEVER ABUTMENTS ON STEEL H-PILES. THE PIER WILL UTILIZE PIER FOOTER ON STEEL H-PILES. THE ENGINEER WILL VERIFY, FROM THE TEST PILE DRIVING RESULTS, THE CAPABILITY OF THE PILE DRIVING HAMMER SELECTED BY THE CONTRACTOR. PILES SHALL BE DRIVEN TO THE MINIMUM BEARING RESISTANCE SHOWN ON PLANS.

CONTRACTOR SHALL PERFORM DYNAMIC PILE MONITORING ON THE TEST PILES AT THE LOCATIONS SHOWN ON PLANS AND IF DIRECTED ON SELECT BEARING PILES AT LOCATIONS AS DETERMINED BY THE ENGINEER.

ALL PILES SHALL BE HP12x53 AND SHALL CONFORM TO ASTM A709, GRADE 50.

16. TEMPORARY MOUNTED BARRIERS
THE CONTRACTOR SHALL PREPARE A WORKING DRAWING SUBMITTAL OF THE PROPOSED MEANS AND METHODS TO ANCHOR THE PORTABLE PCC STRUCTURE MOUNTED BARRIER DESIGNED FOR TL-3 IMPACT AND THE REPAIRS OF THE BOLT HOLES IN THE DECK TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL ADJUST THE LOCATION OF ANCHORS TO AVOID THE BAR REINFORCEMENT IN THE SLAB. PAYMENT INCIDENTAL TO ITEM *743013 - PORTABLE PCC STRUCTURE MOUNTED BARRIER.

17. SHEETING AND SHORING
THE CONTRACTOR SHALL SUBMIT A PROPOSED PLAN FOR SHEETING OR SHORING OF THE EXCAVATION. THE SUBMITTAL SHALL INCLUDE ANY DRAWINGS AND CALCULATIONS ASSOCIATED WITH THE WORK AND SHALL BE STAMPED BY A DELAWARE REGISTERED PROFESSIONAL ENGINEER. PAYMENT FOR SHEETING AND SHORING, AS WELL AS THE MATERIALS AND WORK ASSOCIATED WITH THE SUBMITTAL, SHALL BE MADE UNDER ITEM *207501 - SHEETING AND SHORING.

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

19. UTILITIES
VERIZON HAS CONDUITS ATTACHED TO THE EXISTING BRIDGE. THE SERVICE WILL BE RE-ATTACHED TO THE NEW STRUCTURE. THE CONTRACTOR SHALL PROVIDE AND INSTALL A 6"x18" STEEL CASING IN BOTH ABUTMENTS, AS SHOWN ON PLANS FOR THE ENCASEMENT OF THE NEW PVC 4" CONDUITS. PAYMENT FOR THE PROVISION AND INSTALLATION OF 6"x18" STEEL CASING SHALL BE UNDER ITEM *614910-STEEL CASING PIPE. PAYMENT FOR THE FURNISHING AND INSTALLATION OF THE PVC 4" CONDUITS, ALL STEEL PLATES, BOLTS, AND INCIDENTALS, SEE DWG AB06, SHALL BE PAID UNDER ITEM 745605 - FURNISHING AND INSTALLING SCHEDULE 80 PVC CONDUIT ON STRUCTURE. THE CONDUITS INSTALLATION SHALL BE DONE AFTER THE GIRDERS ARE STABILIZED BUT BEFORE THE CASTING OF THE DECK DURING PHASE 1 CONSTRUCTION

20. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATIONS OF THE EXISTING PILES THAT MAY CONFLICT WITH PROPOSED PILES MARKED P-11, P-12, P-13, P-16, P-17 AND P-18 RESPECTIVELY, PRIOR TO THE INSTALLATION OF THE PILES. IN THE EVENT OF A CONFLICT, THE PROPOSED PILES MAY BE SHIFTED A MAXIMUM OF 1'-3" TO THE RIGHT OR LEFT TO AVOID THE EXISTING PILES. PAYMENT FOR THE DETERMINATION OF THE LOCATIONS OF THE EXISTING PILES SHALL BE INCIDENTAL TO ITEM 619040-INSTALL STEEL H PILES, HP 12X53.

21. SWEDGED ANCHOR BOLTS. BOLTS MAY BE CAST-IN-PLACE OR GROUTED IN PREFORMED (SLEEVED OR DRILLED) HOLES. SLEEVED HOLES SHALL BE CORRUGATED TO PREVENT SLIPPAGE. THE PREFORMED HOLES SHALL HAVE A DIAMETER OF AT LEAST 2" LARGER THAN THE DIAMETER OF THE BOLTS. WHEN DRILLING HOLES, DO NOT UNDER ANY CIRCUMSTANCES COME INTO CONTACT WITH THE REINFORCING BARS.

INDEX OF SHEETS

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	T201109002
COUNTY	NEW CASTLE
BRIDGE NO.	1-678
DESIGNED BY: PAM	
CHECKED BY: KL	

BR. 1-678
PROJECT NOTES

	PN-01
SHEET NO.	161
TOTAL SHTS.	481

QUANTITIES

ITEM NUMBER	ITEM TITLE	UNIT	QUANTITY
207000	EXCAVATION AND BACKFILL FOR STRUCTURES	CY	3217
207501	SHEETING AND SHORING	LS	1
209003	BORROW TYPE 'C'	CY	1185
210000	FURNISHING BORROW TYPE 'C' FOR PIPE, UTILITY TRENCH, AND STRUCTURE BACKFILL	CY	3711
211550	DEMOLITION OF EXISTING BRIDGE	LS	1
302012	DEL. NO. 57 STONE	TON	910
601502	TEMPORARY PROTECTIVE SHIELD	LS	1
602001	PORTLAND CEMENT CONCRETE MASONRY, CLASS A	CY	24.0
602003	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT FOOTING, CLASS A	CY	244
602006	PORTLAND CEMENT CONCRETE MASONRY, PIER FOOTING, CLASS B	CY	128.0
602007	PORTLAND CEMENT CONCRETE MASONRY, PIER ABOVE FOOTING, CLASS A	CY	83
602013	PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	CY	518
602014	PORTLAND CEMENT CONCRETE MASONRY, APPROACH SLAB, CLASS D	CY	197
602015	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT ABOVE FOOTING, CLASS A	CY	300
602017	PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	CY	78
602549	FORMLINERS	SF	2930
602646	SILICONE ACRYLIC CONCRETE SEALER	SF	2666
604000	BAR REINFORCEMENT, EPOXY COATED	LB	288899
605002	STEEL STRUCTURES	LS	1
605511	PREFABRICATED EXPANSION JOINT SYSTEM, 3"	LF	151
608000	COARSE AGGREGATE FOR FOUNDATION STABILIZATION AND SUBFOUNDATION BACKFILL	TON	66
612501	PVC PIPE, 4"	LF	24
614910	STEEL CASING PIPE	LF	12
618060	STEEL H PILES, HP 12 X 53	LF	10350
618063	STEEL H TEST PILES, HP 12 X 53	LF	468
619040	INSTALL STEEL H PILES, HP 12 X 53	LF	10350
619043	INSTALL STEEL H TEST PILES, HP 12 X 53	LF	468
619519	DYNAMIC PILE TESTING BY CONTRACTOR	EA	6
712005	RIPRAP, R-4	SY	551
713002	GEOTEXTILES, RIPRAP	SY	794
715000	PERFORATED PIPE UNDERDRAINS, 4"	LF	227
727507	BRIDGE SAFETY FENCE	LF	598
743013	PORTABLE PCC STRUCTURE MOUNTED SAFETY BARRIER	LF	325
743014	RELOCATE PORTABLE PCC STRUCTURE MOUNTED SAFETY BARRIER	LF	325
745605	FURNISHING AND INSTALLING SCHEDULE 80 PVC CONDUITS ON STRUCTURE	LF	1080
760017	RUMBLE STRIPS, CONCRETE	LB	600

LOAD RATING SUMMARY

DESIGN VEHICLE	RATING FACTOR	RATING WEIGHT (TON)	CONTROLLING MEMBER	CONTROLLING POINT	LOAD EFFECT
HL-93 TRUCK (INVENTORY)	1.18	N/A	SPAN 1: INTERIOR GIRDER	105	FLEXURE
HL-93 TANDEM (INVENTORY)	1.10	N/A	SPAN 1: INTERIOR GIRDER	105	FLEXURE
HL-93 TRUCK TRAIN (INVENTORY)	N/A	N/A	N/A	N/A	N/A
HS-20 (INVENTORY)	1.85	66.43	SPAN 1: EXTERIOR GIRDER	105	FLEXURE
HL-93 TRUCK (OPERATING)	1.53	N/A	SPAN 1: INTERIOR GIRDER	105	FLEXURE
HL-93 TANDEM (OPERATING)	1.43	N/A	SPAN 1: INTERIOR GIRDER	105	FLEXURE
HL-93 TRUCK TRAIN (OPERATING)	N/A	N/A	N/A	N/A	N/A
HS-20 (OPERATING)	2.39	86.11	SPAN 1: INTERIOR GIRDER	105	FLEXURE
DE S220 & LEGAL-LANE (LEGAL)	3.13	62.61	SPAN 1: INTERIOR GIRDER	105	FLEXURE
DE S335 & LEGAL-LANE (LEGAL)	2.05	71.14	SPAN 1: INTERIOR GIRDER	105	FLEXURE
DE S437 & LEGAL-LANE (LEGAL)	1.97	72.16	SPAN 1: INTERIOR GIRDER	105	FLEXURE
DE S330 & LEGAL-LANE (LEGAL)	2.39	71.58	SPAN 1: INTERIOR GIRDER	105	FLEXURE
DE S435 & LEGAL-LANE (LEGAL)	2.12	74.05	SPAN 1: INTERIOR GIRDER	105	FLEXURE
DE S540 & LEGAL-LANE (LEGAL)	1.91	76.30	SPAN 1: INTERIOR GIRDER	105	FLEXURE

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

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

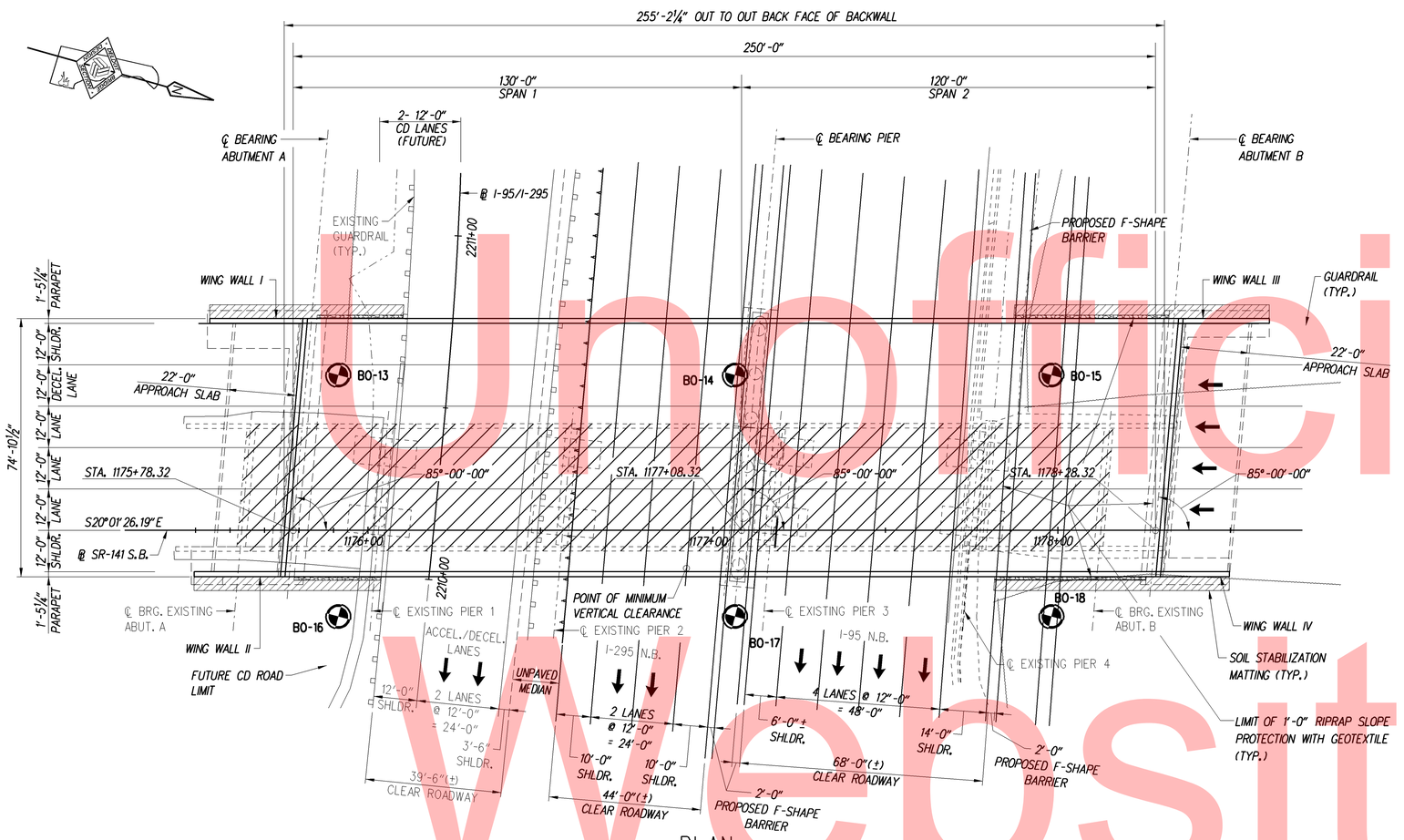
NOT TO SCALE

I-95 AND SR 141 INTERCHANGE,
RAMPS G & F IMPROVEMENTS

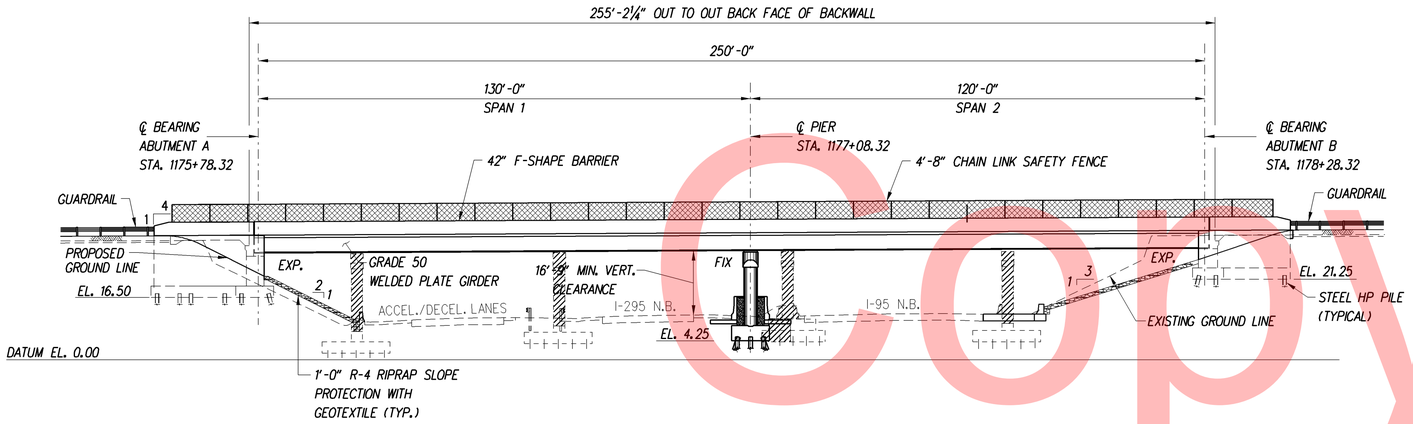
CONTRACT T201109002
COUNTY NEW CASTLE
BRIDGE NO. 1-678
DESIGNED BY: KRL
CHECKED BY: PAM

BRIDGE QUANTITIES

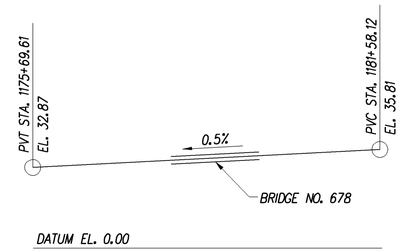
PN-02
SHEET NO. 162
TOTAL SHTS. 481



PLAN



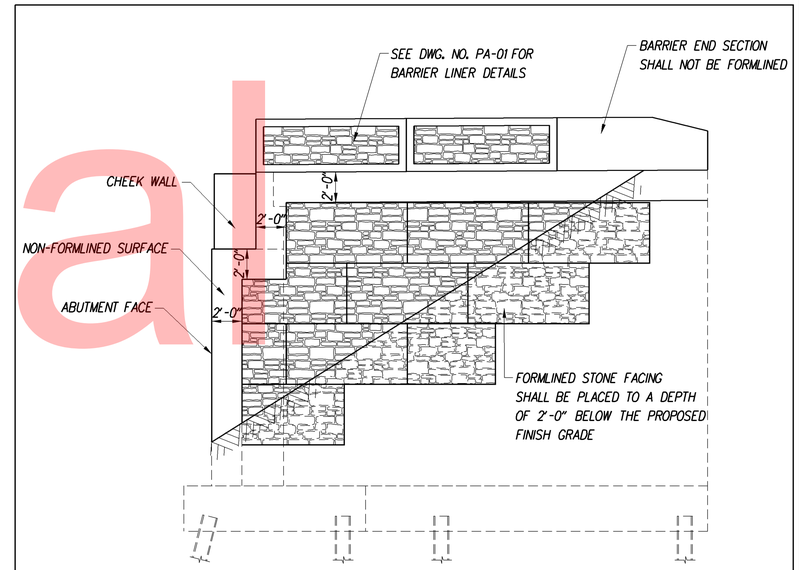
ELEVATION



PROFILE
NOT TO SCALE

NOTES:

1. ⊕ INDICATES BORINGS TAKEN FOR THIS PROJECT.



WINGWALL AND BARRIER FORMLINER DETAIL
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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

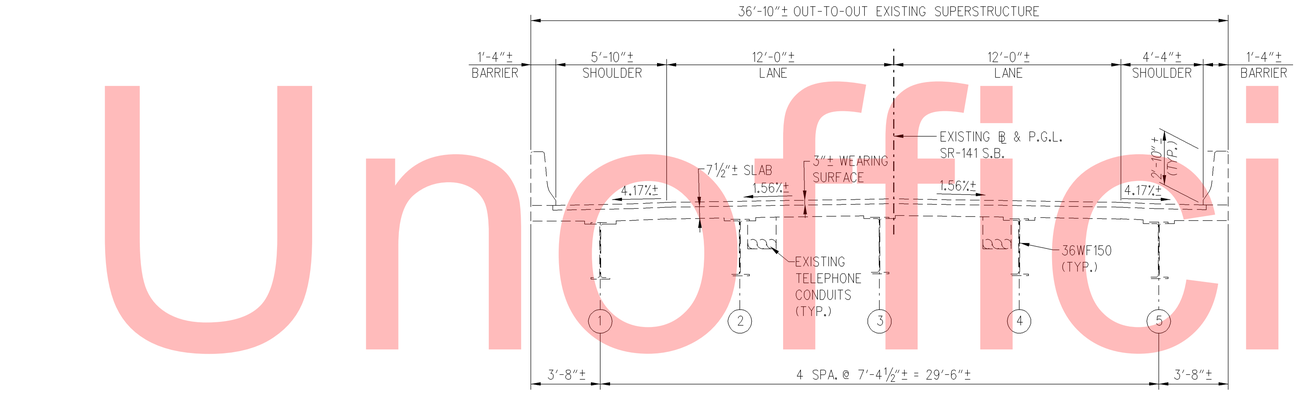
SCALE 0 20 40 60 FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

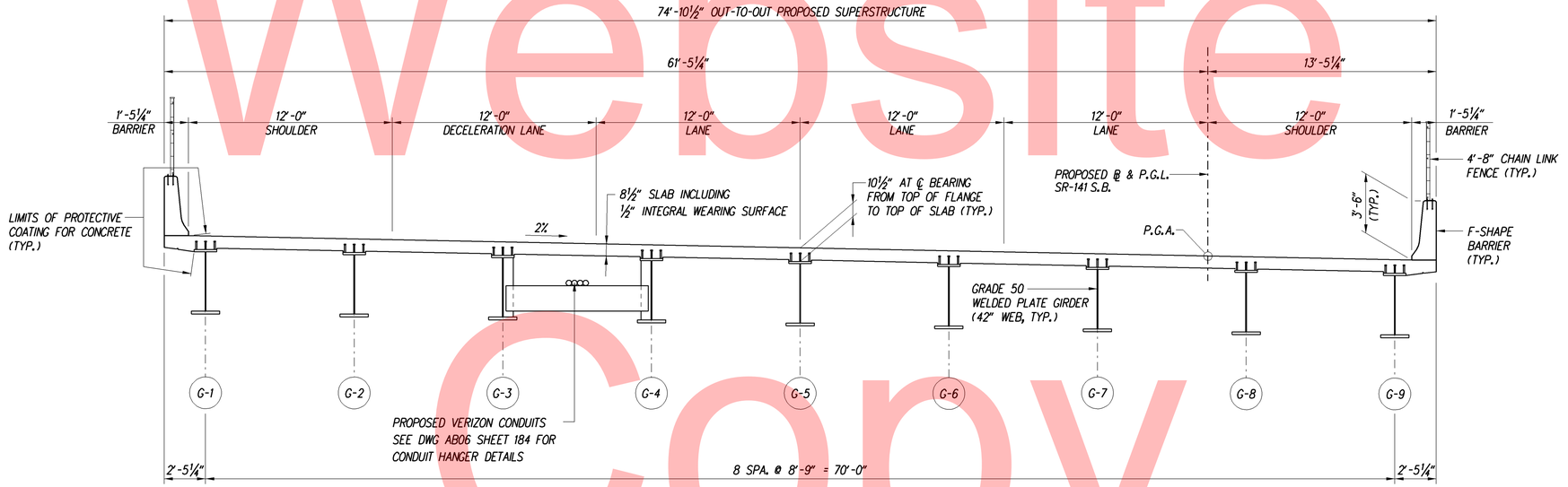
CONTRACT T201109002
COUNTY NEW CASTLE
BRIDGE NO. 1-678
DESIGNED BY: PAM
CHECKED BY: KL

BRIDGE PLAN AND ELEVATION

PE-01
SHEET NO. 163
TOTAL SHTS. 481



EXISTING TYPICAL SECTION



TYPICAL SECTION

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 4 8 12 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	BRIDGE TYPICAL SECTIONS
				COUNTY NEW CASTLE	DESIGNED BY: PAM	
					CHECKED BY: KL	

TS-01
SHEET NO. 164
TOTAL SHTS. 481

BRIDGE 1-678 CONSTRUCTION PHASING

SEQUENCE OF CONSTRUCTION - PHASE 1 - REMOVAL:

1. SHIFT TRAFFIC TO EAST SIDE OF THE EXISTING BRIDGE ON SOUTHBOUND SR 141 AS SHOWN ON THE PHASE 1 CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS.
2. INSTALL TEMPORARY BARRIER ALONG SOUTHBOUND SR 141 AS SHOWN ON THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS.
3. INSTALL PORTION OF PERMANENT SHEETING TO BACK OF EXISTING FOUNDATION. REMAINDER OF SHEET PILE TO BE INSTALLED AS STATED IN NOTE 9 BELOW. CONTRACTOR SHALL DETERMINE THE LOCATION OF EXISTING PILES PRIOR TO DRIVING SHEET PILE AND MAKE NECESSARY ADJUSTMENTS TO AVOID PILES OR REMOVE THE PILES.

THE FOLLOWING MOT SHALL BE ON I-95 & I-295:

4. INSTALL TEMPORARY PROTECTIVE SHIELD UTILIZING TYPICAL APPLICATIONS PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS AND THE DELAWARE MUTCD.
5. REMOVE PORTIONS OF THE EXISTING SUPERSTRUCTURE AS SHOWN ON THE PHASE 1 CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS.
6. SHIFT TRAFFIC PER THE PHASE 1 GIRDER REMOVAL - STAGE I, II AND III PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS TO REMOVE THE GIRDERS AS NOTED ON THE BRIDGE 1-678 CONSTRUCTION PHASING - PHASE 1 SHEETS.
7. SHIFT TRAFFIC PER THE PIER DEMO PHASE 1 - STAGE I AND II PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS.
8. CONSTRUCT VERTICAL SHIELDS TO PROTECT VEHICLES ADJACENT TO WORKING AREA. PAYMENT FOR VERTICAL SHEETING SHALL BE INCIDENTAL TO ITEM 211550 - DEMOLITION OF EXISTING BRIDGE.
9. REMOVE PORTION OF ABUTMENTS AND PIERS AS SHOWN ON PLAN FOR EACH RESPECTIVE PIER DEMO STAGE. INSTALL REMAINDER OF PERMANENT SHEETING TO BACK OF PROPOSED ABUTMENT PILE CAPS. CONTRACTOR SHALL PROPOSE A MEANS AND METHODS TO RETAIN PROPOSED BACKFILL OVER THE HEEL OF THE PROPOSED FOUNDATION. PAYMENT INCIDENTAL TO PERMANENT SHEETING.

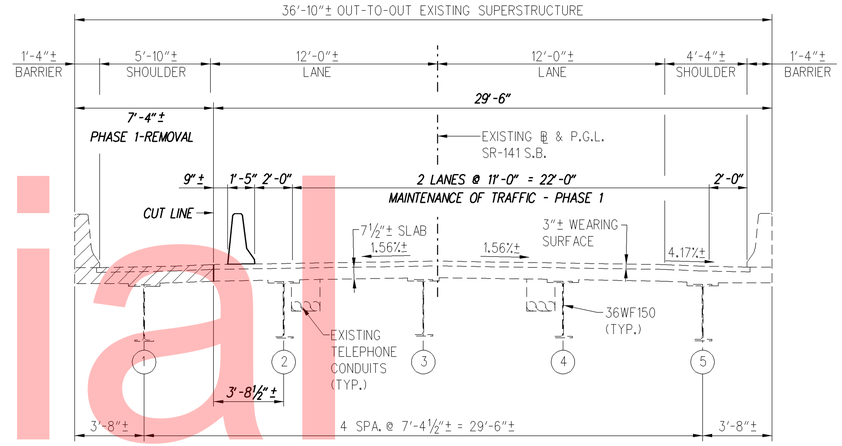
SEQUENCE OF CONSTRUCTION - PHASE 1 - CONSTRUCTION:

THE FOLLOWING MOT SHALL BE ON NB I-95 & I-295:

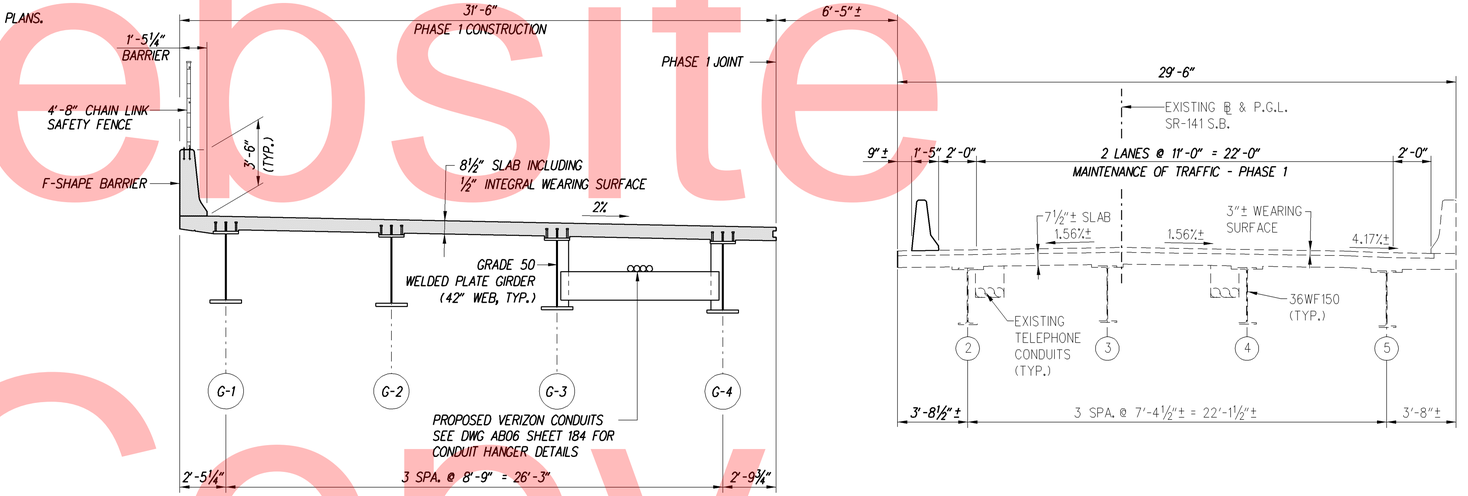
1. SHIFT TRAFFIC PER THE PHASE 1 GIRDER REPLACEMENT- STAGE I, II AND III PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS TO PLACE THE GIRDERS 1 THROUGH 4 AND DIAPHRAMS AS NOTED ON THE BRIDGE 1-678 CONSTRUCTION PHASING - PHASE 1 SHEETS.
2. CONSTRUCT PORTION OF ABUTMENTS AND PIER AS SHOWN ON PLANS. INSTALL PROPOSED 6"x12" STEEL PIPE SLEEVE
3. INSTALL ALL SCHEDULE 80 PVC CONDUIT AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.
4. POUR PORTION OF THE DECK SLAB AS SHOWN, PROVIDE ADEQUATE REINFORCING LAPSPLICE LENGTH FOR PHASE 2 WORK.
5. CONSTRUCT F-SHAPE PARAPET AS SHOWN ON PLANS.
6. CONSTRUCT PORTION OF APPROACH SLAB AS SHOWN ON PLANS.
7. INSTALL TEMPORARY TRAFFIC BARRIER AS SHOWN IN PREPARATION FOR PHASE 2 WORK.

NOTE:

1. FOR MORE INFORMATION ON THE M.O.T. ON I-95 AND I-295 FOR PHASE 1 WORK, SEE THE CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS.



PHASE 1 - REMOVAL



PHASE 1 - CONSTRUCTION

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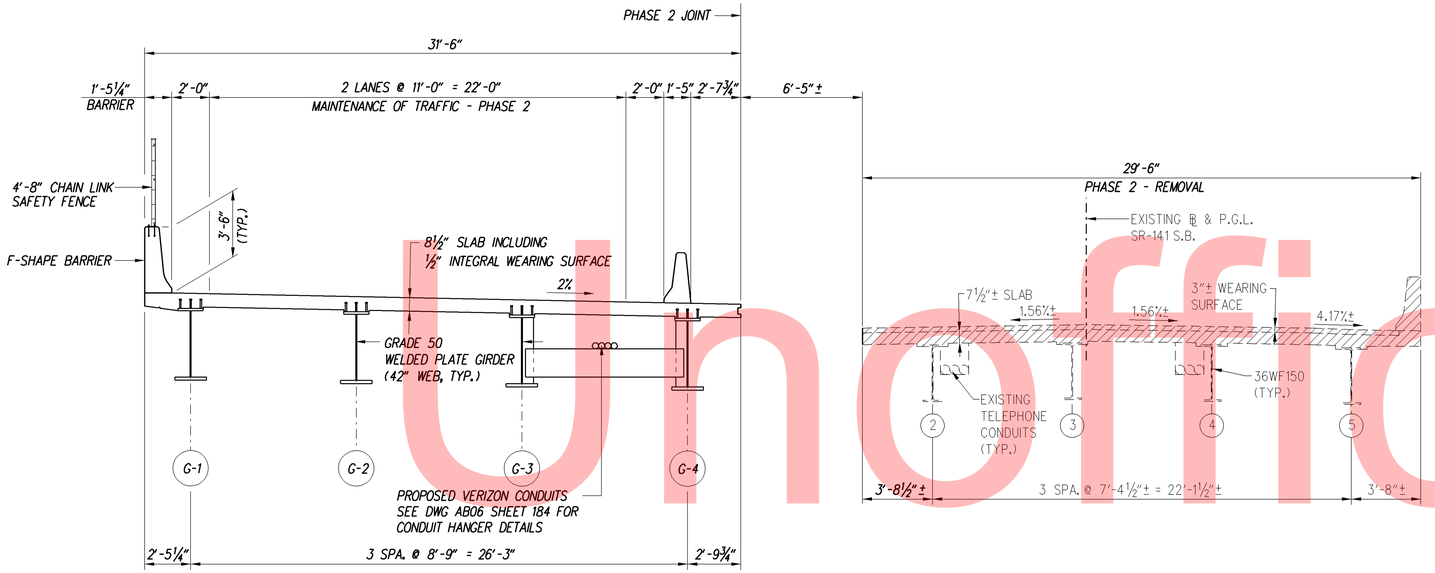
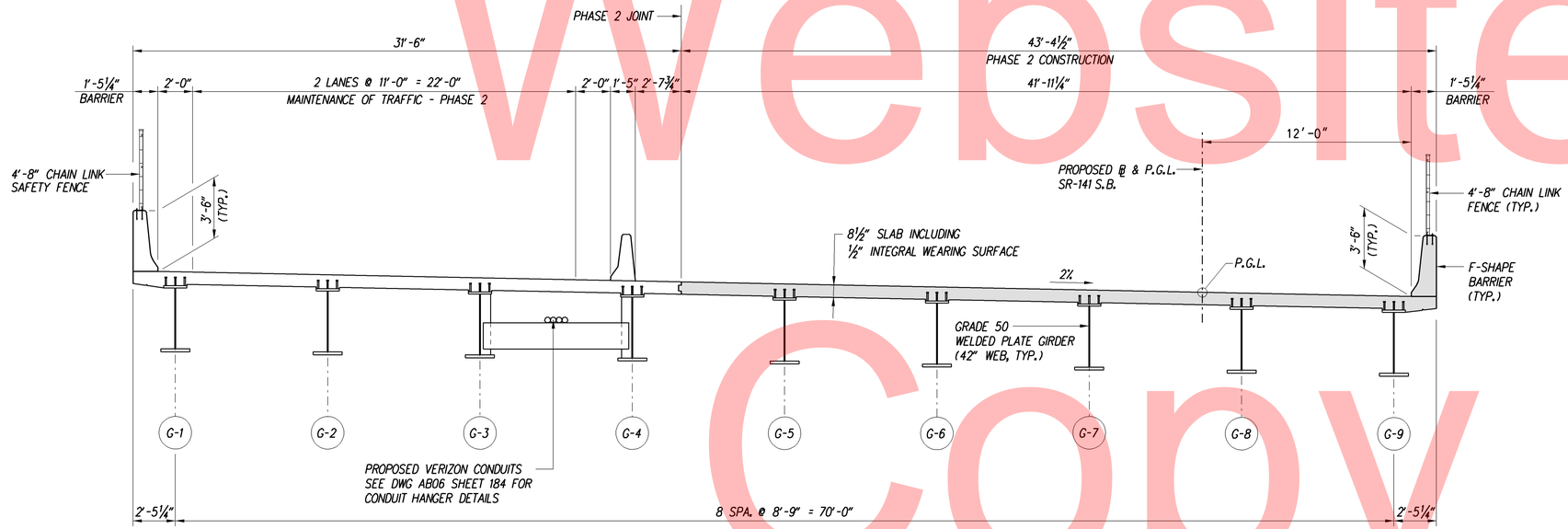
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 4 8 12 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	CONSTRUCTION PHASING PHASE 1	SR-01
				COUNTY NEW CASTLE	DESIGNED BY: PAM		SHEET NO. 165
					CHECKED BY: KL		TOTAL SHTS. 481



PHASE 2 - REMOVAL



PHASE 2 - CONSTRUCTION

SEQUENCE OF CONSTRUCTION - PHASE 2 - REMOVAL:

1. *SWITCH TRAFFIC TO NEWLY CONSTRUCTED WEST SIDE OF THE BRIDGE ON SOUTHBOUND SR 141 AS SHOWN ON THE PHASE 2 CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS.*

THE FOLLOWING MOT SHALL BE ON I-95 & I-295:

2. *INSTALL TEMPORARY PROTECTIVE SHIELD UTILIZING TYPICAL APPLICATIONS PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS AND THE DELAWARE MUTCD.*
3. *REMOVE PORTIONS OF THE EXISTING SUPERSTRUCTURE AS SHOWN ON THE PHASE 2 CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS.*
4. *SHIFT TRAFFIC PER THE PHASE 2 GIRDER REMOVAL - STAGE I, II AND III PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS TO REMOVE THE GIRDERS AS NOTED ON THE BRIDGE 1-678 CONSTRUCTION PHASING - PHASE 2 SHEETS.*
5. *SHIFT TRAFFIC PER THE PIER DEMO PHASE 2 - STAGE I AND II PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS.*
6. *CONSTRUCT VERTICAL SHIELDS TO PROTECT VEHICLES ADJACENT TO WORKING AREA. PAYMENT FOR VERTICAL SHEETING SHALL BE INCIDENTAL TO ITEM 211550 - DEMOLITION OF EXISTING BRIDGE.*
7. *REMOVE REMAINING PORTION OF ABUTMENTS AND PIERS AS SHOWN ON PLAN FOR EACH RESPECTIVE LANE SHIFT.*

SEQUENCE OF CONSTRUCTION - PHASE 2 - CONSTRUCTION:

THE FOLLOWING MOT SHALL BE ON NB I-95 & I-295:

1. *SHIFT TRAFFIC PER THE PHASE 2 GIRDER REPLACEMENT - STAGE I, II AND III PER THE CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS TO PLACE THE GIRDERS 5 THROUGH 9 AND DIAPHRAMS AS NOTED ON THE BRIDGE 1-678 CONSTRUCTION PHASING - PHASE 2 SHEETS.*
2. *CONSTRUCT REMAINING PORTION OF ABUTMENTS AND PIER AS SHOWN ON PLANS FOR EACH RESPECTIVE LANE SHIFT.*
3. *POUR REMAINING PORTION OF THE DECK SLAB AS SHOWN ON PLANS.*
4. *CONSTRUCT F-SHAPE PARAPET AS SHOWN ON PLANS.*
5. *CONSTRUCT REMAINING PORTION OF APPROACH SLAB AS SHOWN ON THE PLANS.*
6. *REMOVE TEMPORARY TRAFFIC BARRIER AND OPEN THE ENTIRE BRIDGE TO TRAFFIC.*

NOTE:

1. *FOR MORE INFORMATION ON THE M.O.T. ON I-95 AND I-295 FOR PHASE 2 WORK, SEE THE CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS.*

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 4 8 12 FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT T201109002
COUNTY NEW CASTLE
BRIDGE NO. 1-678
DESIGNED BY: PM
CHECKED BY: KRL

STRUCTURAL REMOVAL PHASE 2

SR-02
SHEET NO. 166
TOTAL SHTS. 481

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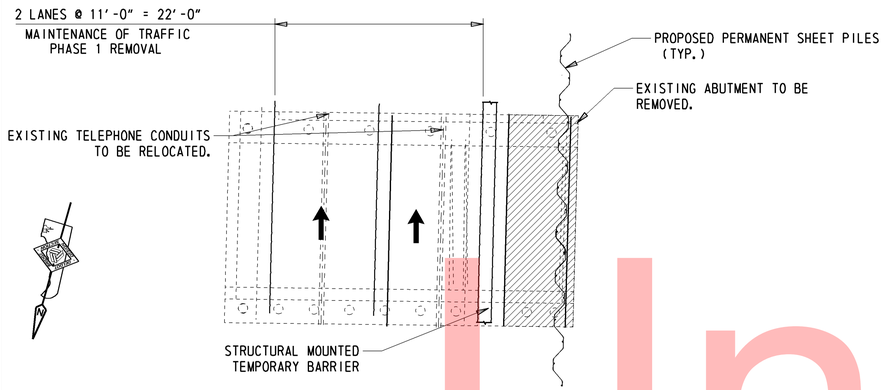
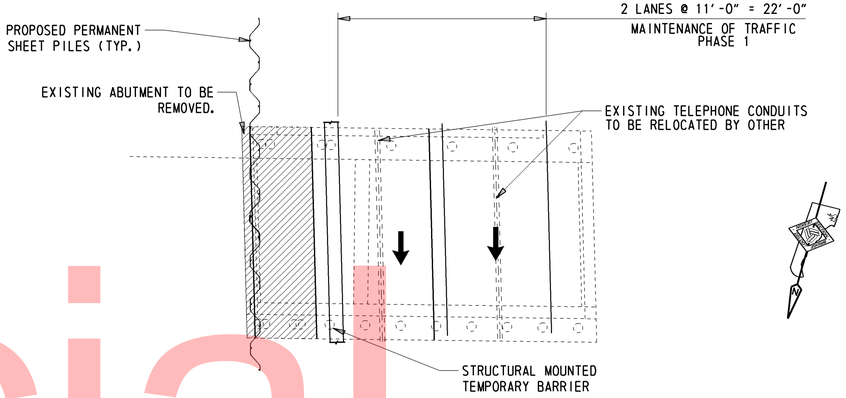
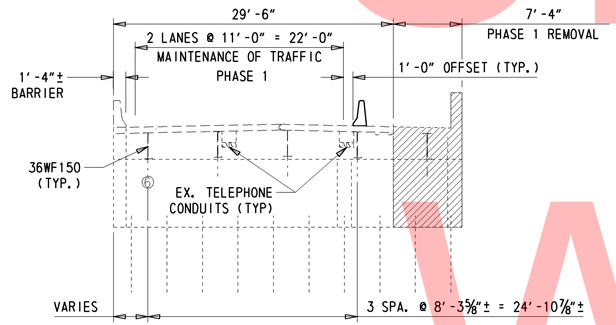


ABUTMENT A PLAN
PHASE I - REMOVAL

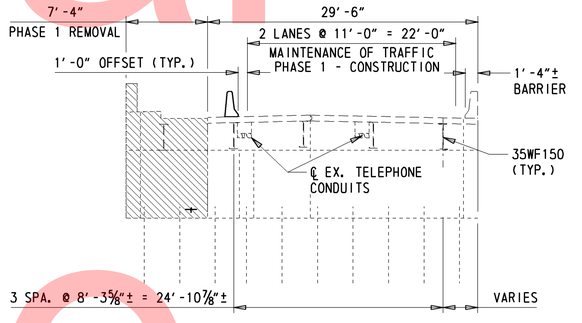
NOTES:
1. SEE DWG. SR-01 SHEET 165 FOR SEQUENCE OF CONSTRUCTION - PHASE 1 -REMOVAL AND CONSTRUCTION.
2. FOR MORE INFORMATION ON THE M.O.T. ON 1-95 AND 1-295 FOR PHASE 1 WORK, SEE THE CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS.
3. 1. HP 12X53 PILES IN ABUTMENT A AND B ELEVATION VIEWS ARE NOT SHOWN FOR CLARITY.
4. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS



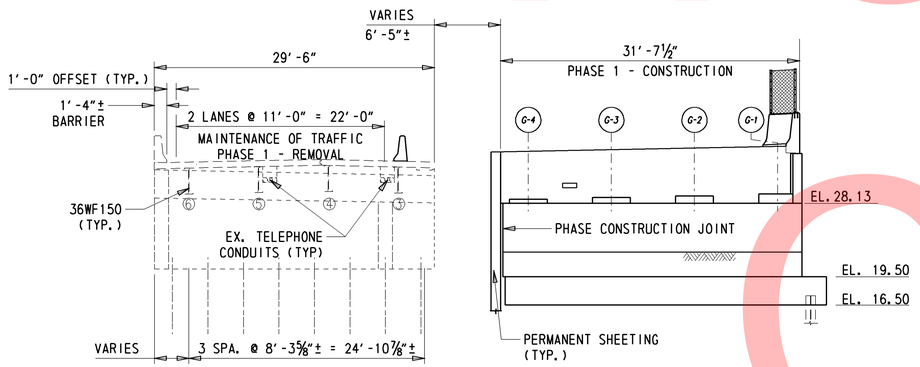
ABUTMENT B PLAN
PHASE I - REMOVAL



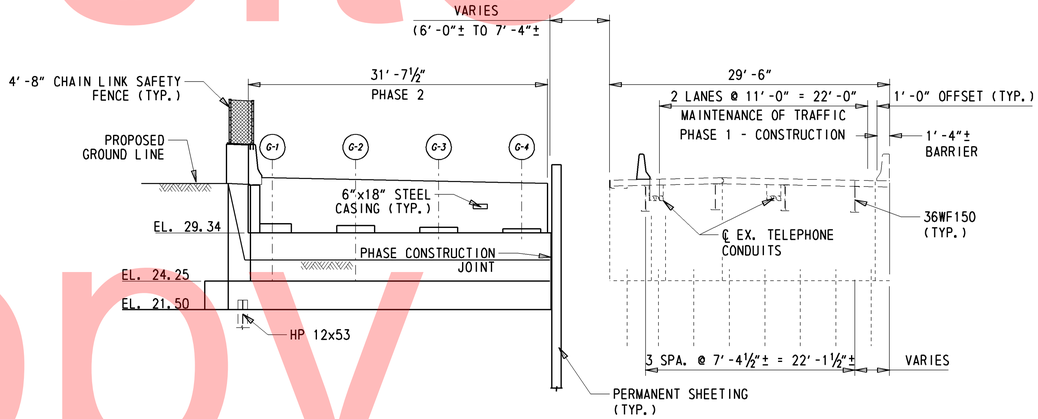
ABUTMENT A ELEVATION
PHASE I - REMOVAL



ABUTMENT B ELEVATION
PHASE I - REMOVAL



ABUTMENT A ELEVATION
PHASE I - CONSTRUCTION



ABUTMENT B ELEVATION
PHASE I - CONSTRUCTION

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 8 16 24 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	CONSTRUCTION PHASING ABUTMENT – PHASE 1
				COUNTY NEW CASTLE	DESIGNED BY: PM	SR-03 / SHEET NO. 167 / TOTAL SHTS. 481
					CHECKED BY: KL	

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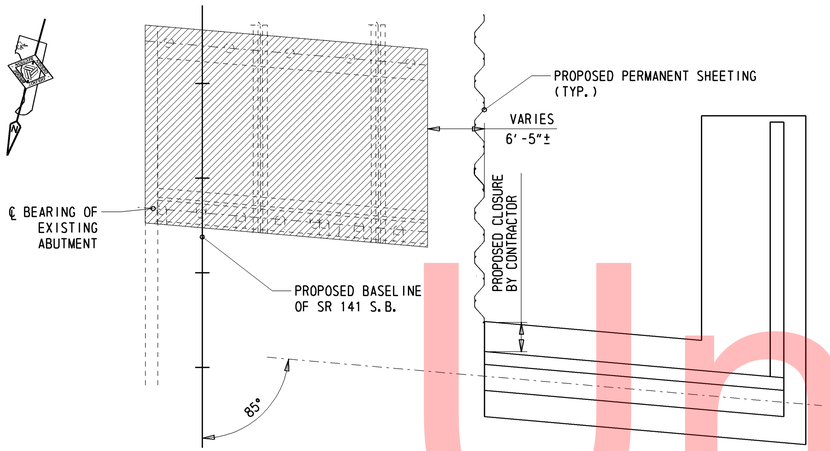
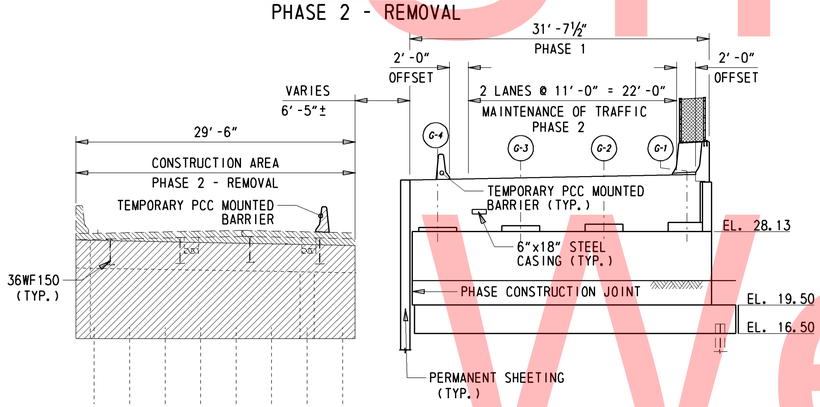
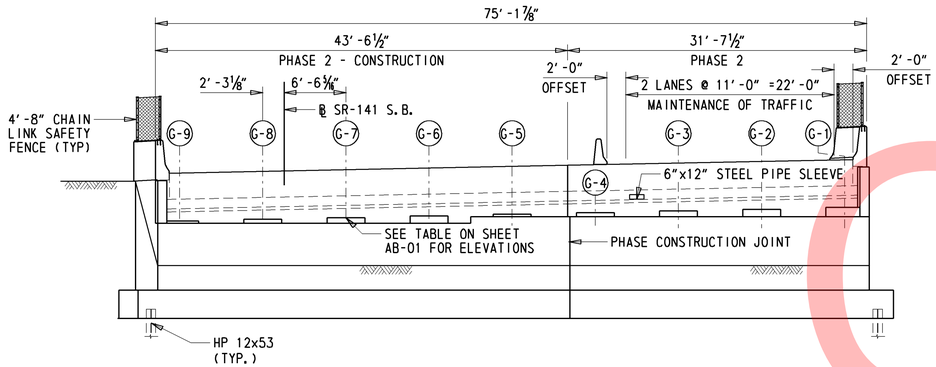


NOTES:
1. SEE DWG. SR-02 SHEET 166 FOR SEQUENCE OF CONSTRUCTION - PHASE 1 -REMOVAL AND CONSTRUCTION.
2. FOR MORE INFORMATION ON THE M.O.T. ON 1-95 AND 1-295 FOR PHASE 1 WORK, SEE THE CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS.
3. HP 12X53 PILES IN ABUTMENT A AND B ELEVATION VIEWS ARE NOT SHOWN FOR CLARITY.
4. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS

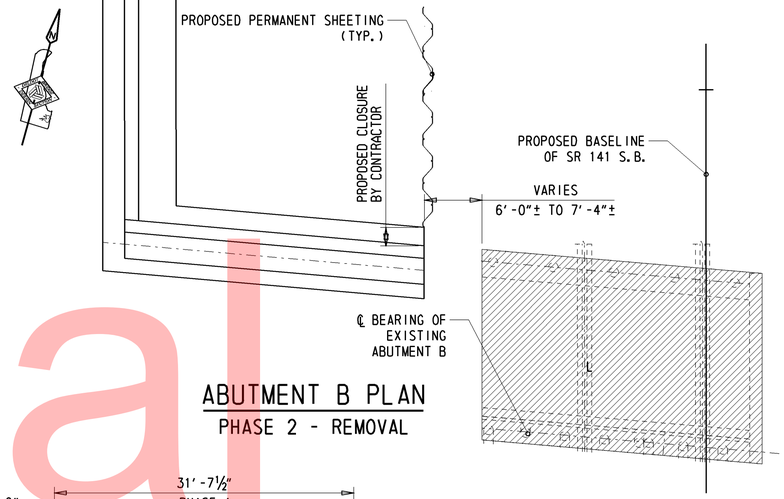
ABUTMENT A PLAN
PHASE 2 - REMOVAL



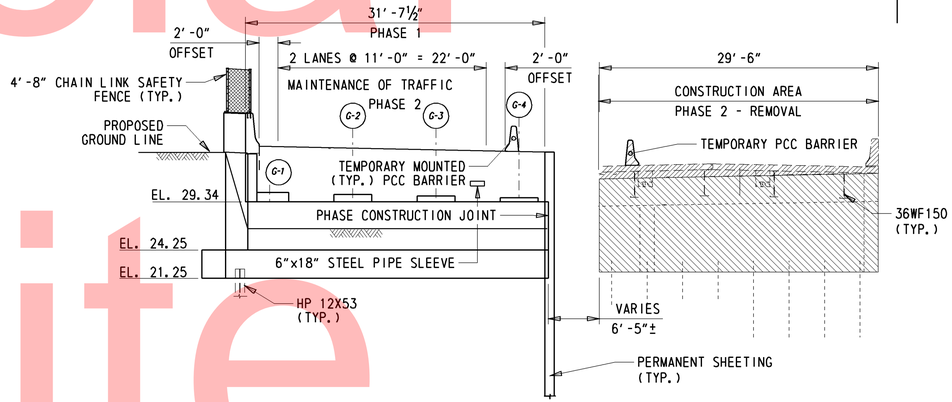
ABUTMENT A ELEVATION
PHASE 2 - REMOVAL



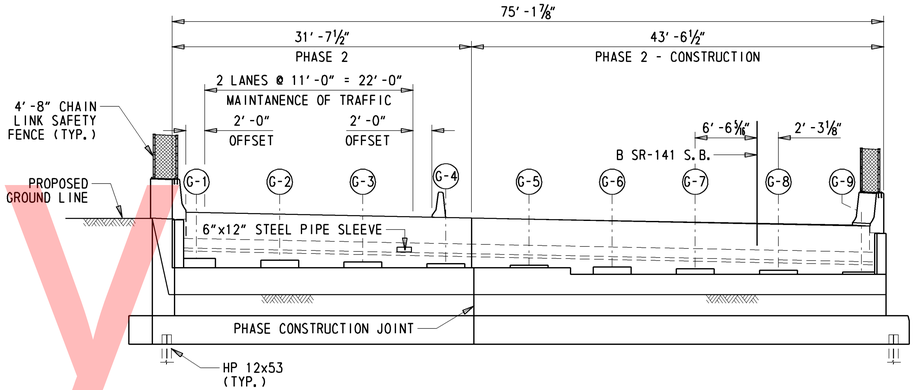
ABUTMENT A ELEVATION
PHASE 2 - CONSTRUCTION



ABUTMENT B PLAN
PHASE 2 - REMOVAL



ABUTMENT B ELEVATION
PHASE 2 - REMOVAL



ABUTMENT B ELEVATION
PHASE 2 - CONSTRUCTION

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 8 16 24 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002 / COUNTY NEW CASTLE	BRIDGE NO. 1-678 / DESIGNED BY: PM / CHECKED BY: KL	CONSTRUCTION PHASING ABUTMENT – PHASE 2	SR-04 / SHEET NO. 168 / TOTAL SHTS. 481

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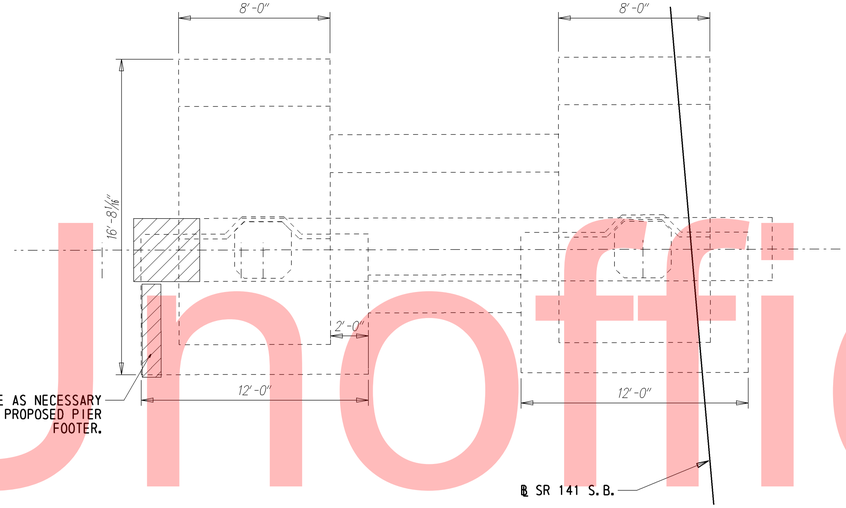
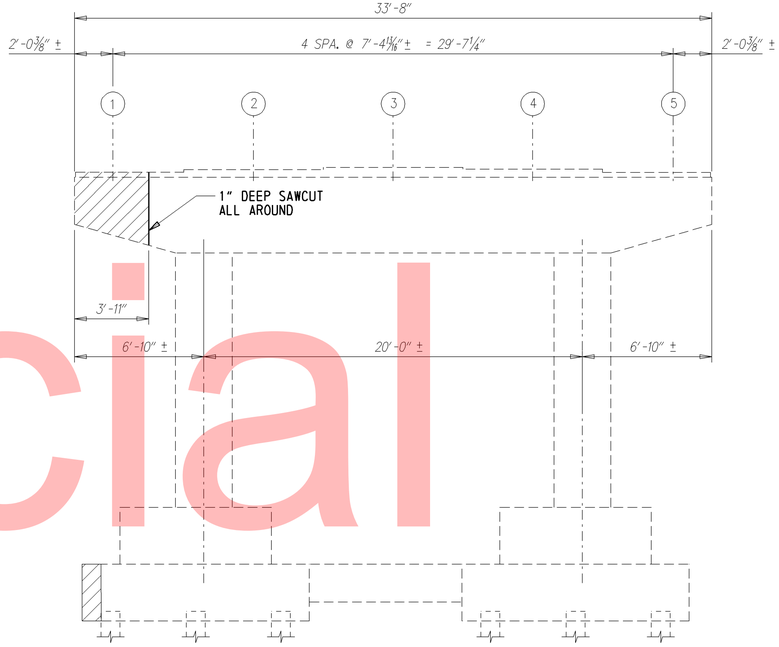


PIER PLAN - PHASE 1 REMOVAL

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



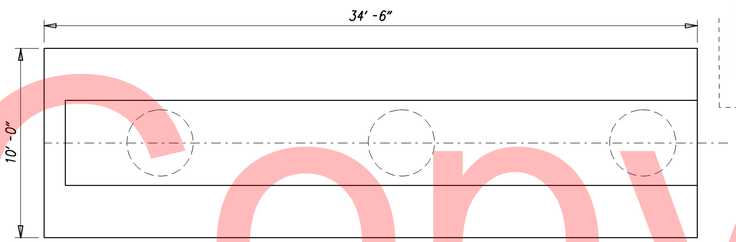
PIER ELEVATION - PHASE 1 REMOVAL

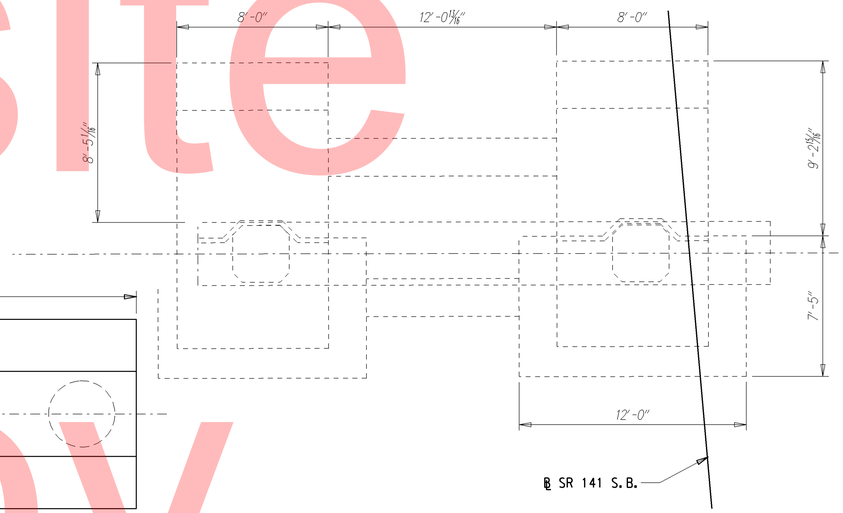
SCALE: 1/4" = 1'-0"

NOTES:
1. SEE DWG. SR-01 SHEET 165 FOR SEQUENCE OF CONSTRUCTION - PHASE 1 -REMOVAL AND CONSTRUCTION.
2. FOR MORE INFORMATION ON THE M.O.T. ON 1-95 AND 1-295 FOR PHASE 1 WORK, SEE THE CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS.
3. 1. HP 12X53 PILES IN ABUTMENT A AND B ELEVATION VIEWS ARE NOT SHOWN FOR CLARITY.
4. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS

LEGEND

PORTION OF EXISTING STRUCTURE TO BE REMOVED AS NECESSARY OR AS DIRECTED BY THE ENGINEER





PIER PLAN - PHASE 1 CONSTRUCTION

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

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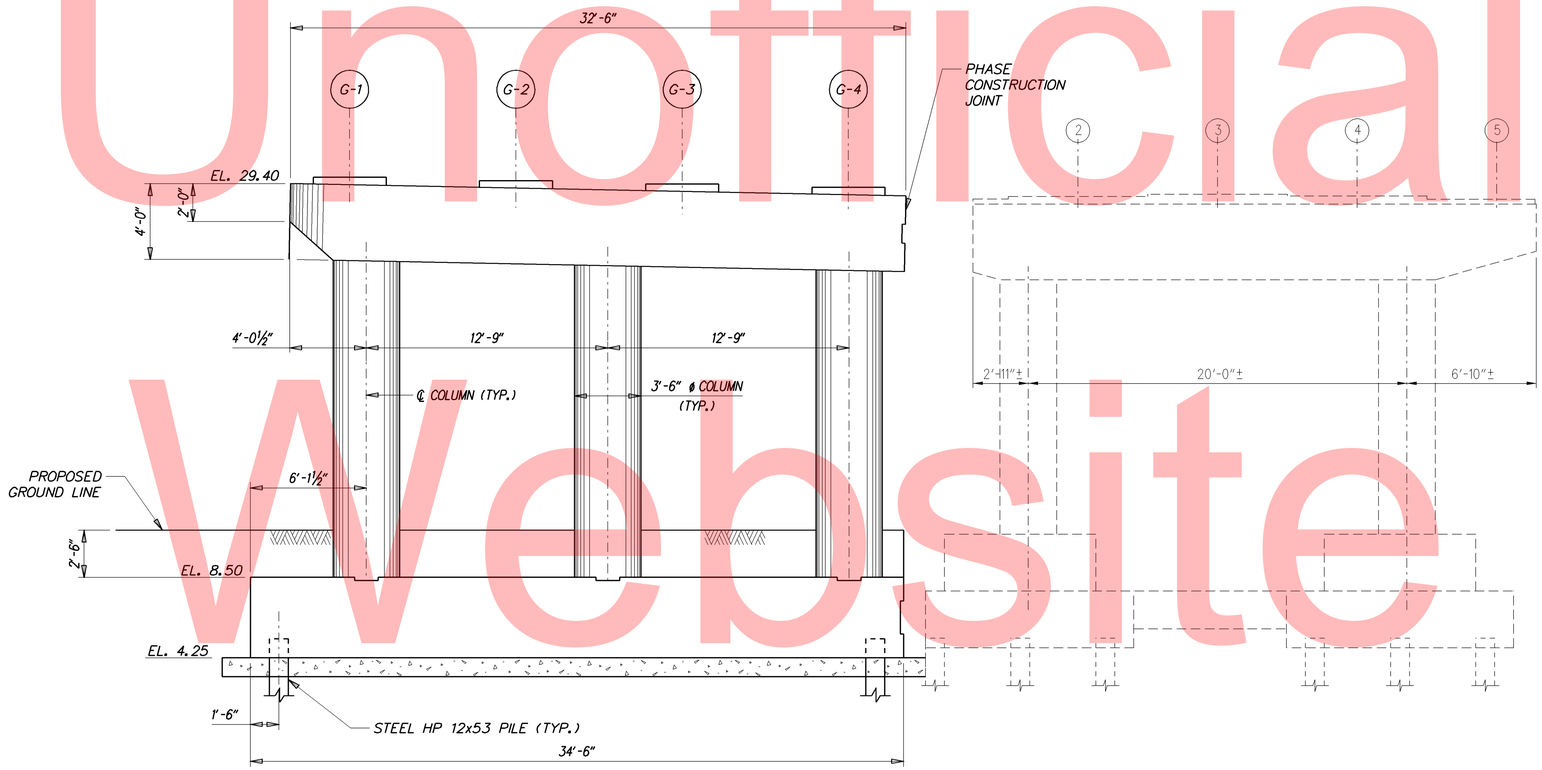
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	CONSTRUCTION PHASING PIER PLAN - PHASE 1	SR-05
				COUNTY NEW CASTLE	DESIGNED BY: PM		SHEET NO. 169
					CHECKED BY: KRL		TOTAL SHTS. 481

NOTES:
1. SEE DWG. SR-01 SHEET 165 FOR SEQUENCE OF CONSTRUCTION - PHASE 1 -REMOVAL AND CONSTRUCTION.
2. FOR MORE INFORMATION ON THE M.O.T. ON 1-95 AND 1-295 FOR PHASE 1 WORK, SEE THE CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS.
3. HP 12X53 PILES IN PIER ELEVATION VIEWS ARE NOT SHOWN FOR CLARITY.



PIER ELEVATION - PHASE 1 CONSTRUCTION

SCALE: ¼" = 1'-0"

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	CONSTRUCTION PHASING PIER ELEVATION – PHASE 1	SR-06
				COUNTY NEW CASTLE	DESIGNED BY: PAM		SHEET NO. 170
					CHECKED BY: KL		TOTAL SHTS. 481

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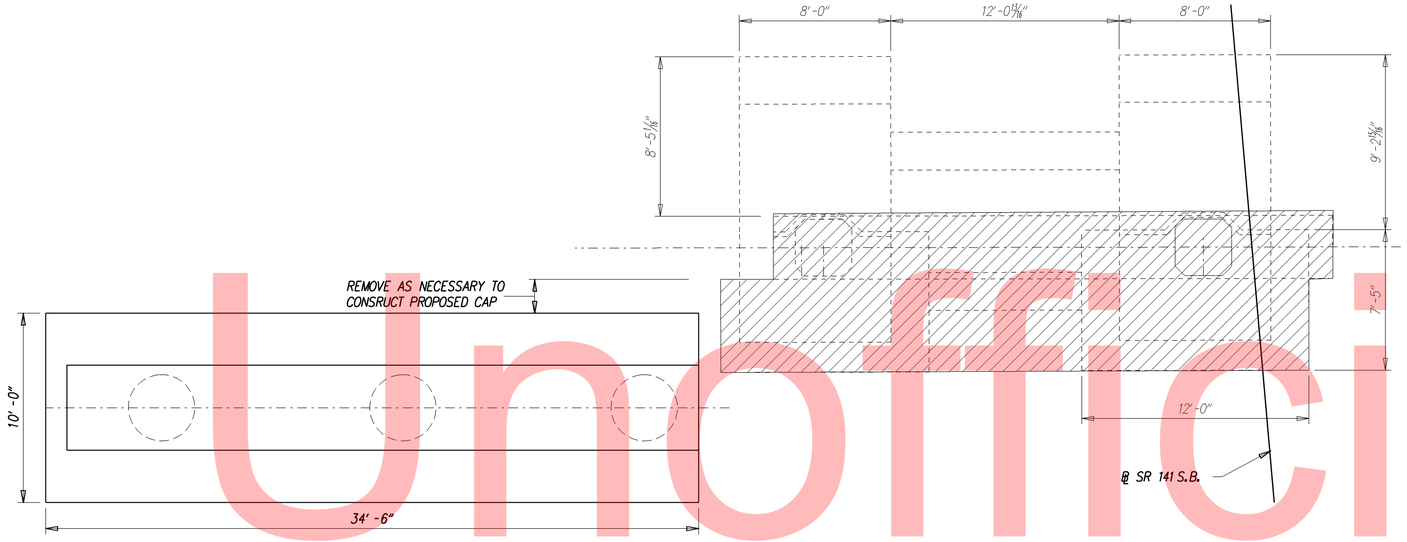


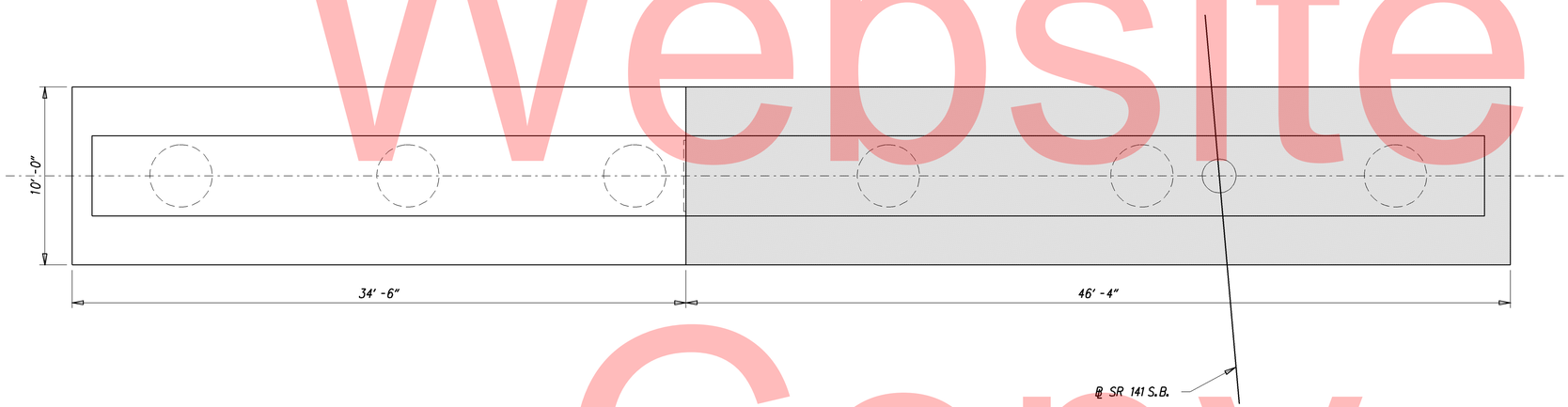
PIER PLAN - PHASE 2 REMOVAL

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

LEGEND

PORTION OF EXISTING STRUCTURE TO BE REMOVED IN ITS ENTIRETY WHEN OBSTRUCTING THE PROPOSED CONSTRUCTION OR TO A DEPTH OF TWO (2) FEET BELOW THE EXISTING GROUND LEVEL PROVIDED THAT THEY DO NOT INTERFERE WITH PROPOSED STRUCTURE. PORTION OF EXISTING PIER CAP UNDER PAVEMENT SHALL NOT BE DISTURBED.

PHASE 2 - CONSTRUCTION



PIER PLAN - PHASE 2 CONSTRUCTION

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

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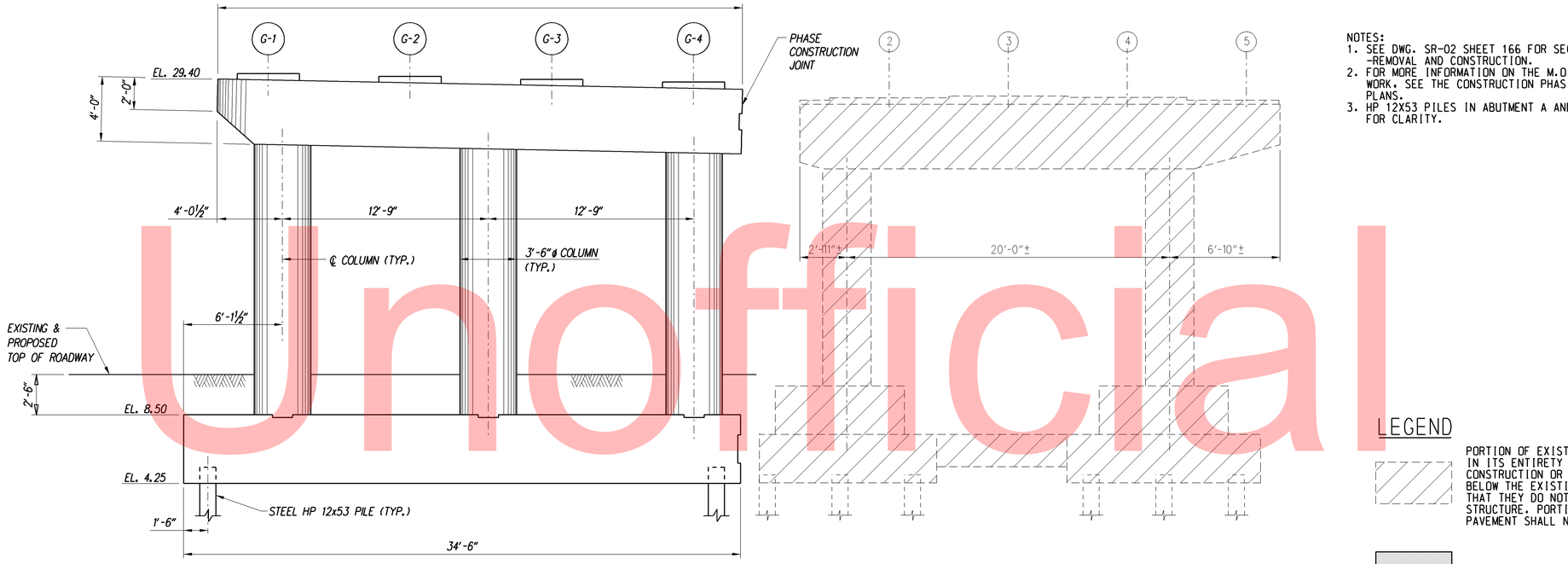
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	CONSTRUCTION PHASING PIER PLAN – PHASE 2	SR-07
				COUNTY NEW CASTLE	DESIGNED BY: PM		SHEET NO. 171
					CHECKED BY: KRL		TOTAL SHTS. 481



PIER ELEVATION - PHASE 2 REMOVAL

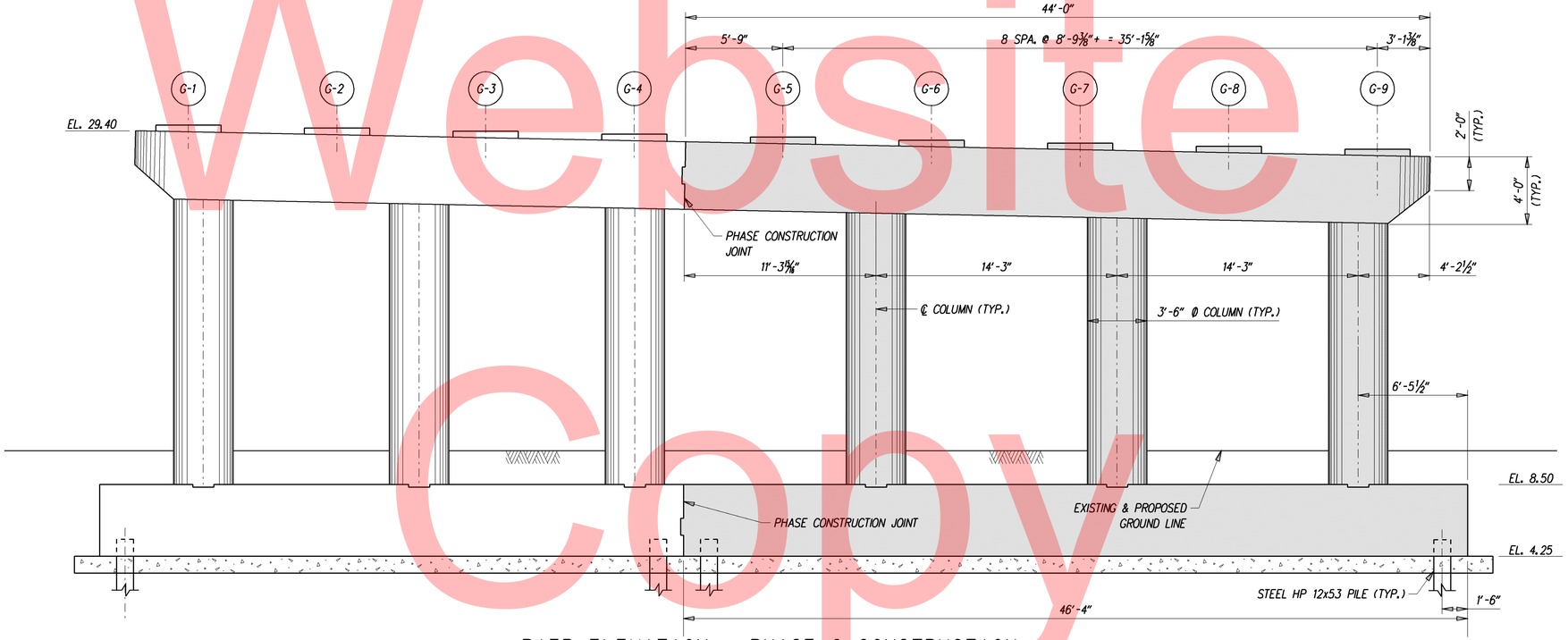
SCALE: ¼" = 1'-0"

NOTES:
1. SEE DWG. SR-02 SHEET 166 FOR SEQUENCE OF CONSTRUCTION - PHASE 1 -REMOVAL AND CONSTRUCTION.
2. FOR MORE INFORMATION ON THE M.O.T. ON 1-95 AND 1-295 FOR PHASE 1 WORK, SEE THE CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS.
3. HP 12X53 PILES IN ABUTMENT A AND B ELEVATION VIEWS ARE NOT SHOWN FOR CLARITY.

LEGEND

PORTION OF EXISTING STRUCTURE TO BE REMOVED IN ITS ENTIRETY WHEN OBSTRUCTING THE PROPOSED CONSTRUCTION OR TO A DEPTH OF TWO (2) FEET BELOW THE EXISTING GROUND LEVEL PROVIDED THAT THEY DO NOT INTERFERE WITH PROPOSED STRUCTURE. PORTION OF EXISTING PIER FOOTER UNDER PAVEMENT SHALL NOT BE DISTURBED.

PHASE 2 - CONSTRUCTION



PIER ELEVATION - PHASE 2 CONSTRUCTION

SCALE: ¼" = 1'-0"

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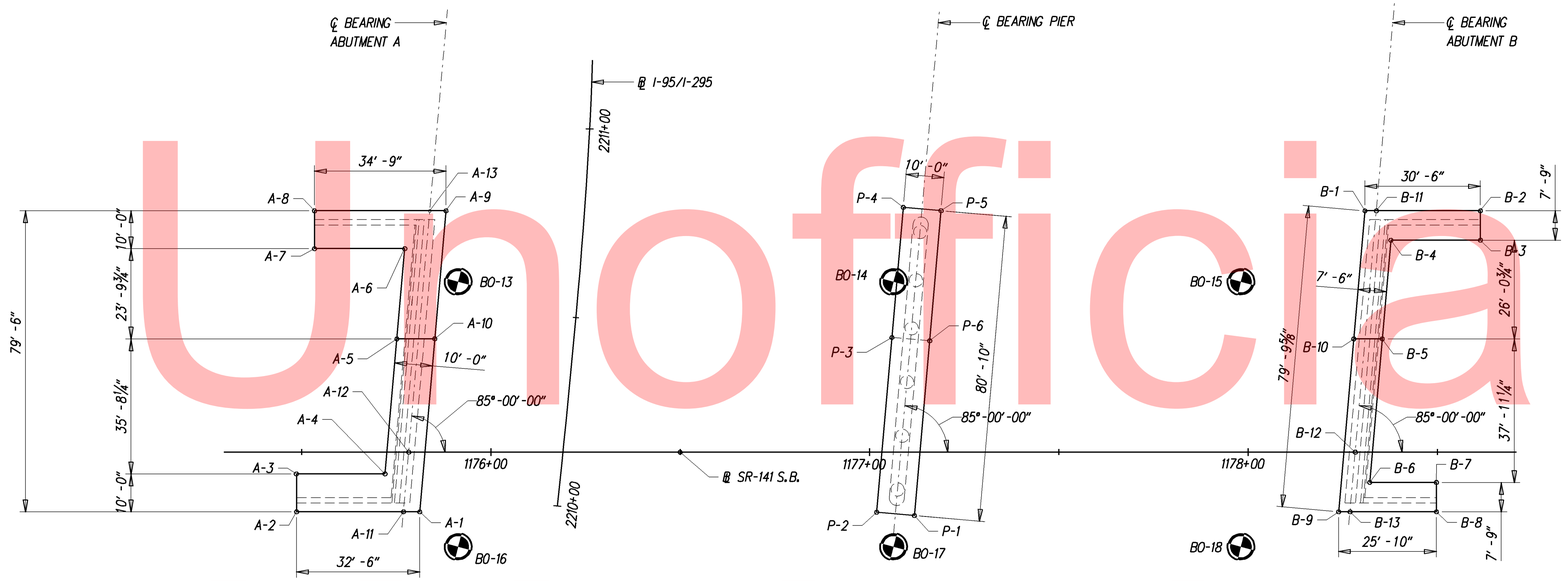
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	CONSTRUCTION PHASING PIER ELEVATION-PHASE 2
				COUNTY NEW CASTLE	DESIGNED BY: PAM	SR-08
					CHECKED BY: KL	SHEET NO. 172
						TOTAL SHTS. 481



PLAN

NOTES:

1. ◎ INDICATES BORINGS TAKEN FOR THIS PROJECT.

NOTE:
ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND PARAPETS TO ACCOUNT FOR 2″ OF CLEAR COVER FOR EXPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

ABUTMENT A WORKING POINTS

POINT	STATION	OFFSET	NORTHING	EASTING
A-1	1175+81.21	15.75 RT	619038.57	603558.57
A-2	1175+48.71	15.75 RT	619008.04	603569.70
A-3	1175+48.71	5.75 RT	619004.61	603550.31
A-4	1175+72.05	5.75 RT	619026.54	603552.32
A-5	1175+75.17	29.94 LT	619017.25	603517.72
A-6	1175+77.25	53.75 LT	619011.06	603494.63
A-7	1175+53.42	53.75 LT	618988.66	603502.79
A-8	1175+53.42	63.75 LT	618985.24	603493.40
A-9	1175+88.16	63.75 LT	619017.89	603481.50
A-10	1175+85.21	29.94 LT	619026.68	603514.28
A-11	1175+76.94	15.75 RT	619034.56	603560.04
A-12	1175+78.32	0.00	619030.47	603544.77
A-13	1175+83.90	63.75 LT	619013.88	603482.96

PIER WORKING POINTS

POINT	STATION	OFFSET	NORTHING	EASTING
P-1	1177+11.88	16.74 RT	619161.68	603514.76
P-2	1177+01.92	15.87 RT	619152.02	603517.36
P-3	1177.05.95	30.29 LT	619140.01	603472.61
P-4	1177+08.96	64.66 LT	619131.07	603439.29
P-5	1177+18.92	63.79 LT	619140.73	603436.69
P-6	1177+15.92	29.42 LT	619149.67	603470.01

ABUTMENT B WORKING POINTS

POINT	STATION	OFFSET	NORTHING	EASTING
B-1	1178+30.89	63.75 LT	619245.94	603398.39
B-2	1178+61.39	63.75 LT	619274.59	603387.94
B-3	1178+61.39	56.00 LT	619277.25	603395.23
B-4	1178+37.74	56.00 LT	619255.03	603403.32
B-5	1178+35.46	29.94 LT	619261.81	603428.59
B-6	1178+32.14	8.00 RT	619271.68	603465.37
B-7	1178+49.76	8.00 RT	619288.24	603459.34
B-8	1178+49.76	15.75 RT	619290.89	603466.62
B-9	1178+23.93	15.75 RT	619266.62	603475.46
B-10	1178+27.93	29.94 LT	619254.73	603431.17
B-11	1178+33.90	63.75 LT	619248.76	603397.36
B-12	1178+28.32	0.00	619265.35	603459.16
B-13	1178+26.94	15.75 RT	619269.45	603474.43

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

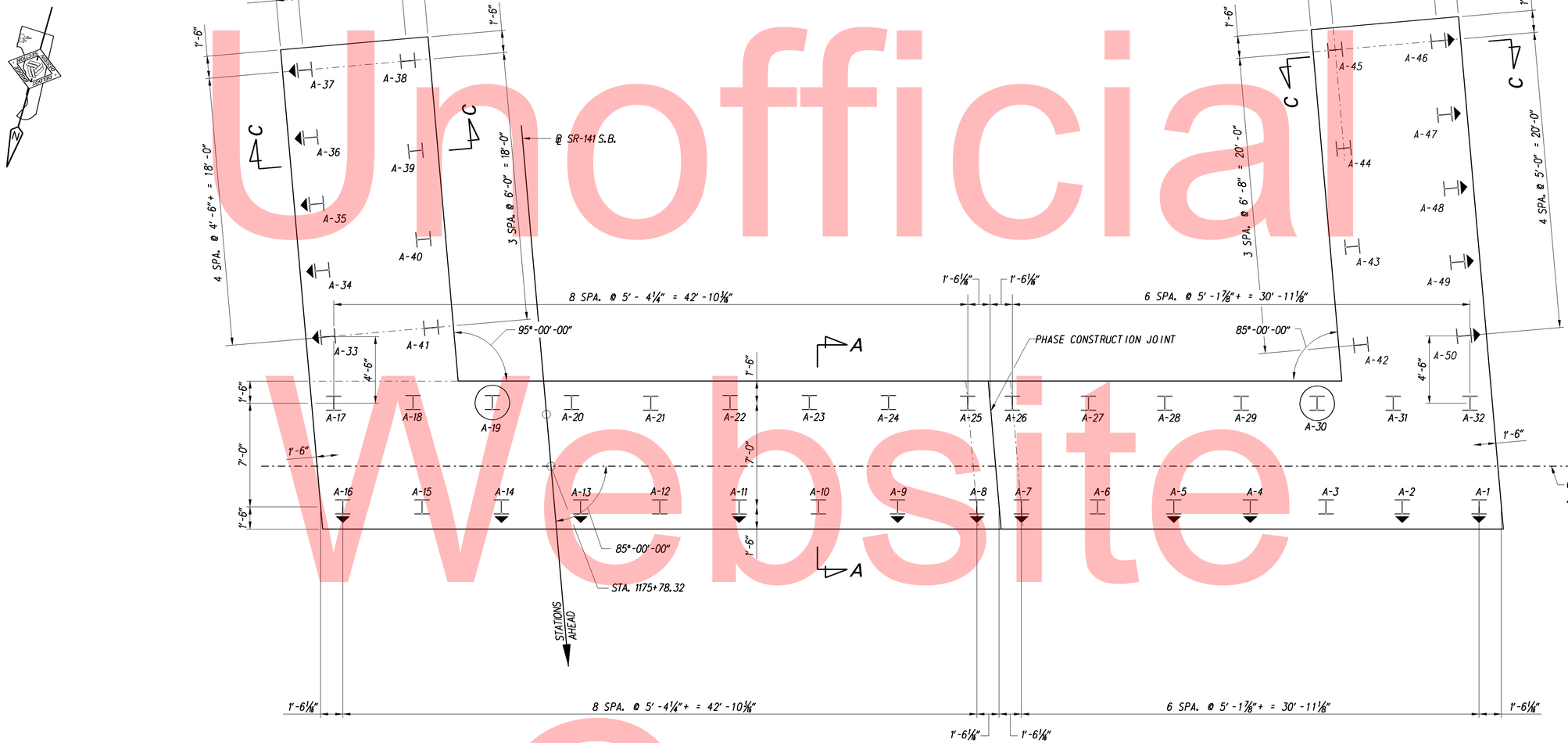
SCALE
0 20 40 60
FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT T201109002
COUNTY NEW CASTLE
BRIDGE NO. 1-678
DESIGNED BY: PAM
CHECKED BY: KL

FOOTING LAYOUT PLAN

FL-01
SHEET NO. 173
TOTAL SHTS. 481



ABUTMENT A PILE LAYOUT PLAN

PILE INSTALLATION DATA					
	DESIGN DATA		ACTUAL FIELD DATA		
SUBSTRUCTURE UNIT	NOMINAL PILE DRIVING RESISTANCE (KIPS)	ESTIMATED PILE TIP ELEVATION	ACTUAL MINIMUM TIP ELEVATION	ACTUAL AVERAGE TIP ELEVATION	ACTUAL MAXIMUM TIP ELEVATION
ABUTMENT A	396	-62			

LEGEND

= DENOTES PLUMB HP 12 x 53 PILE

= DENOTES HP 12 x 53 PILE BATTERED AT 1H:6V

= DENOTES TEST PILE

Y:\NEWCASTL\056\BRIDGE\T201109001\PLANS\PL01.DGN

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

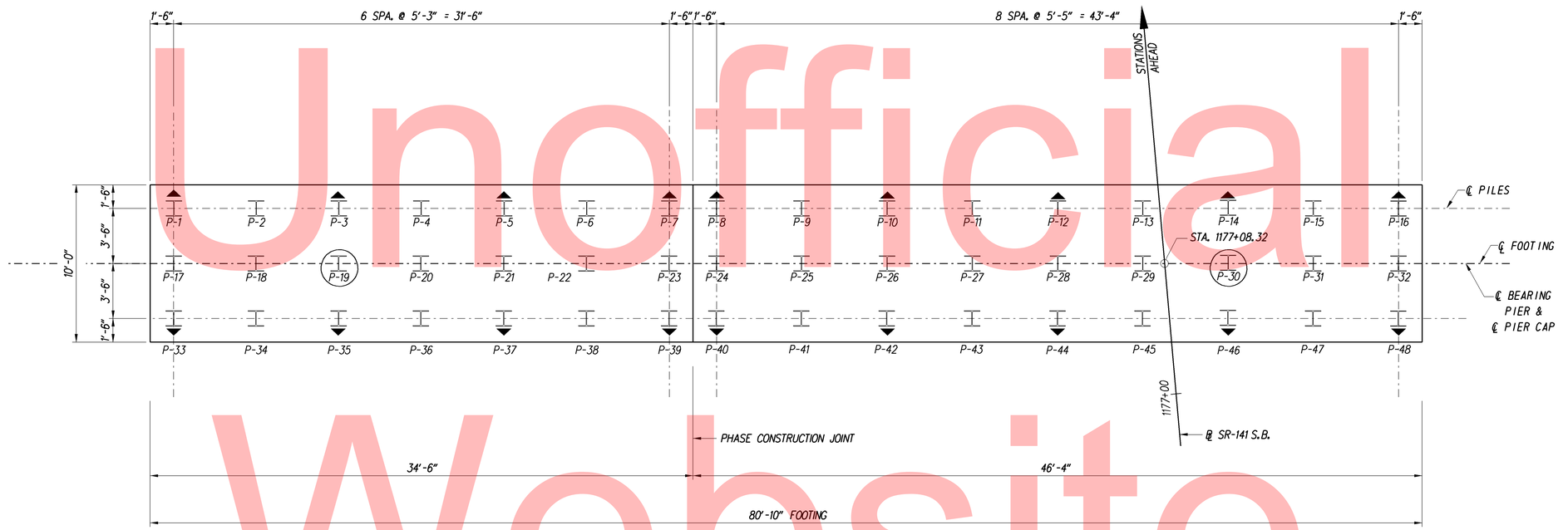
SCALE
0 4 8 12
FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT T201109002
COUNTY NEW CASTLE
BRIDGE NO. 1-678
DESIGNED BY: PAM
CHECKED BY: KL

PILE LAYOUT PLAN ABUTMENT A

PL-01
SHEET NO. 174
TOTAL SHTS. 481



PIER PILE LAYOUT PLAN

PILE INSTALLATION DATA					
	DESIGN DATA		ACTUAL FIELD DATA		
SUBSTRUCTURE UNIT	NOMINAL PILE DRIVING RESISTANCE (KIPS)	ESTIMATED PILE TIP ELEVATION	ACTUAL MINIMUM TIP ELEVATION	ACTUAL AVERAGE TIP ELEVATION	ACTUAL MAXIMUM TIP ELEVATION
PIER	282	-51			

LEGEND

= DENOTES PLUMB HP 12 x 53 PILE

= DENOTES HP 12 x 53 PILE BATTERED AT 1H:6V

= DENOTES TEST PILE

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

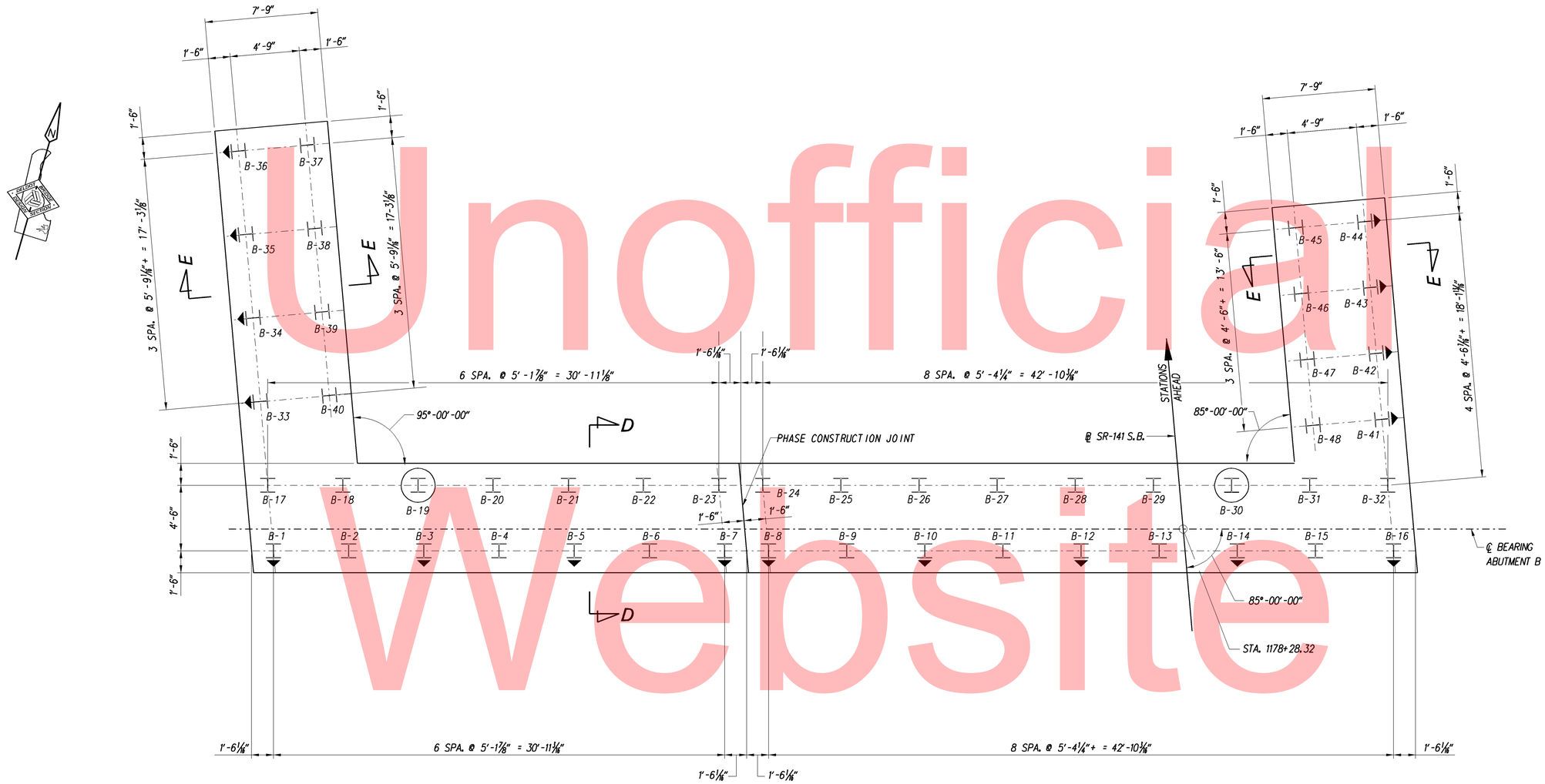
SCALE 0 4 8 12 FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT T201109002
COUNTY NEW CASTLE
BRIDGE NO. 1-678
DESIGNED BY: PAM
CHECKED BY: KL

PILE LAYOUT PLAN PIER

PL-02
SHEET NO. 175
TOTAL SHTS. 481



ABUTMENT B PILE LAYOUT PLAN

PILE INSTALLATION DATA					
	DESIGN DATA		ACTUAL FIELD DATA		
SUBSTRUCTURE UNIT	NOMINAL PILE DRIVING RESISTANCE (KIPS)	ESTIMATED PILE TIP ELEVATION	ACTUAL MINIMUM TIP ELEVATION	ACTUAL AVERAGE TIP ELEVATION	AVERAGE MAXIMUM TIP ELEVATION
ABUTMENT B	394	-61			

LEGEND

= DENOTES PLUMB HP 12 x 53 PILE

= DENOTES HP 12 x 53 PILE BATTERED AT 1H:6V

= DENOTES TEST PILE

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

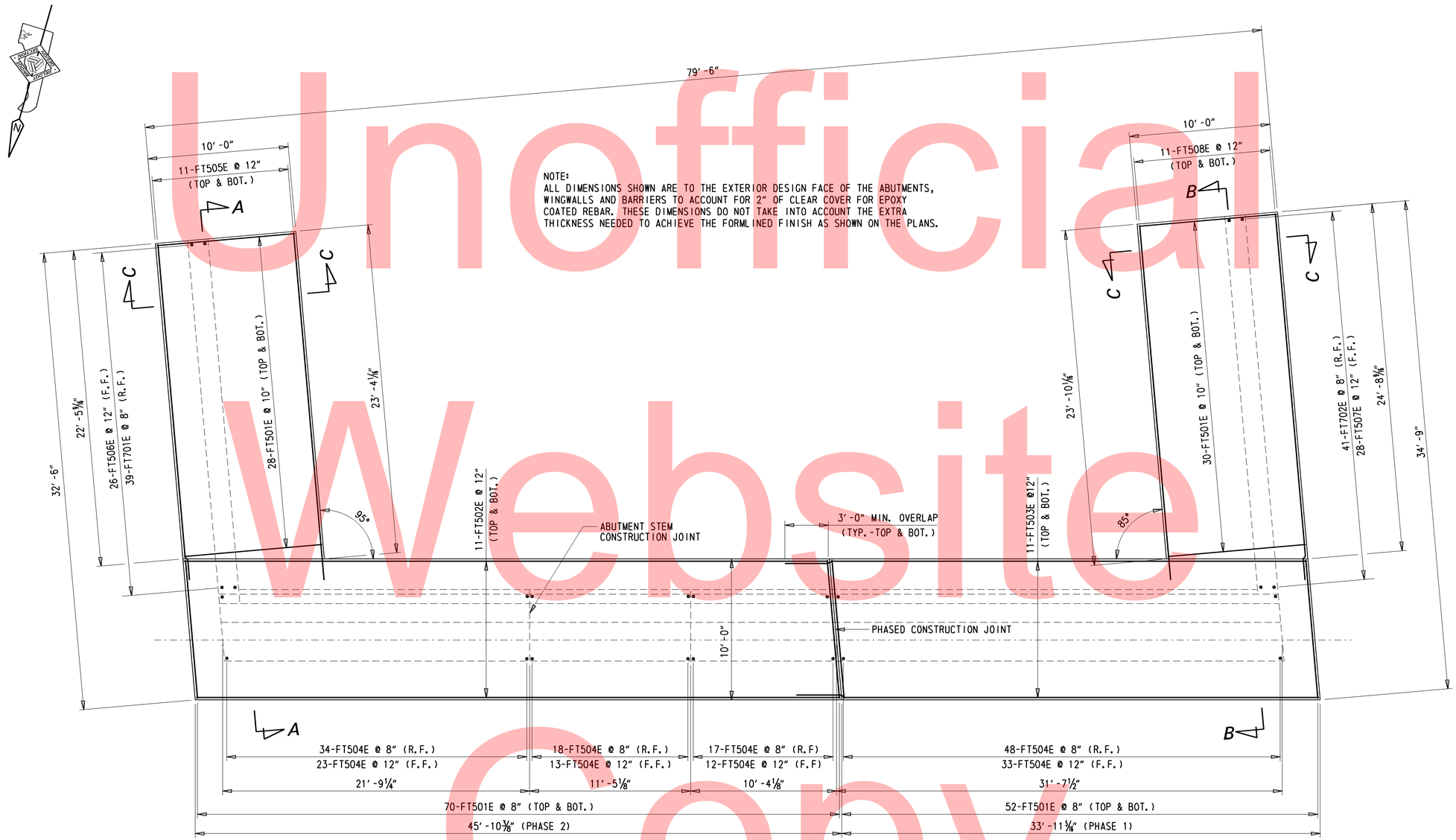
SCALE
0 4 8 12
FEET

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO. 1-678
T201109002	DESIGNED BY: PAM
COUNTY	CHECKED BY: KL
NEW CASTLE	

PILE LAYOUT PLAN
ABUTMENT B

PL-03	
SHEET NO.	176
TOTAL SHTS.	481



NOTE:
ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2″ OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

LEGEND:

R.R. REAR FACE

F.F. FRONT FACE

ABUTMENT A FOOTING PLAN

NOTES:
1. FOR TYPICAL WINGWALL SECTION (C-C), SEE DWG. NO. WW-02.
2. FOR WINGWALL ELEVATIONS (A-A AND B-B), SEE DWG. NO. WW-01.
3. FOR TYPICAL ABUTMENT SECTIONS (K-K AND L-L) SEE DWG. NO. AB-04

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 4 8 12 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	ABUTMENT A FOOTING REINFORCEMENT DETAILS	FT-01
				COUNTY NEW CASTLE	DESIGNED BY: PAM		SHEET NO. 177
					CHECKED BY: KL		TOTAL SHTS. 481

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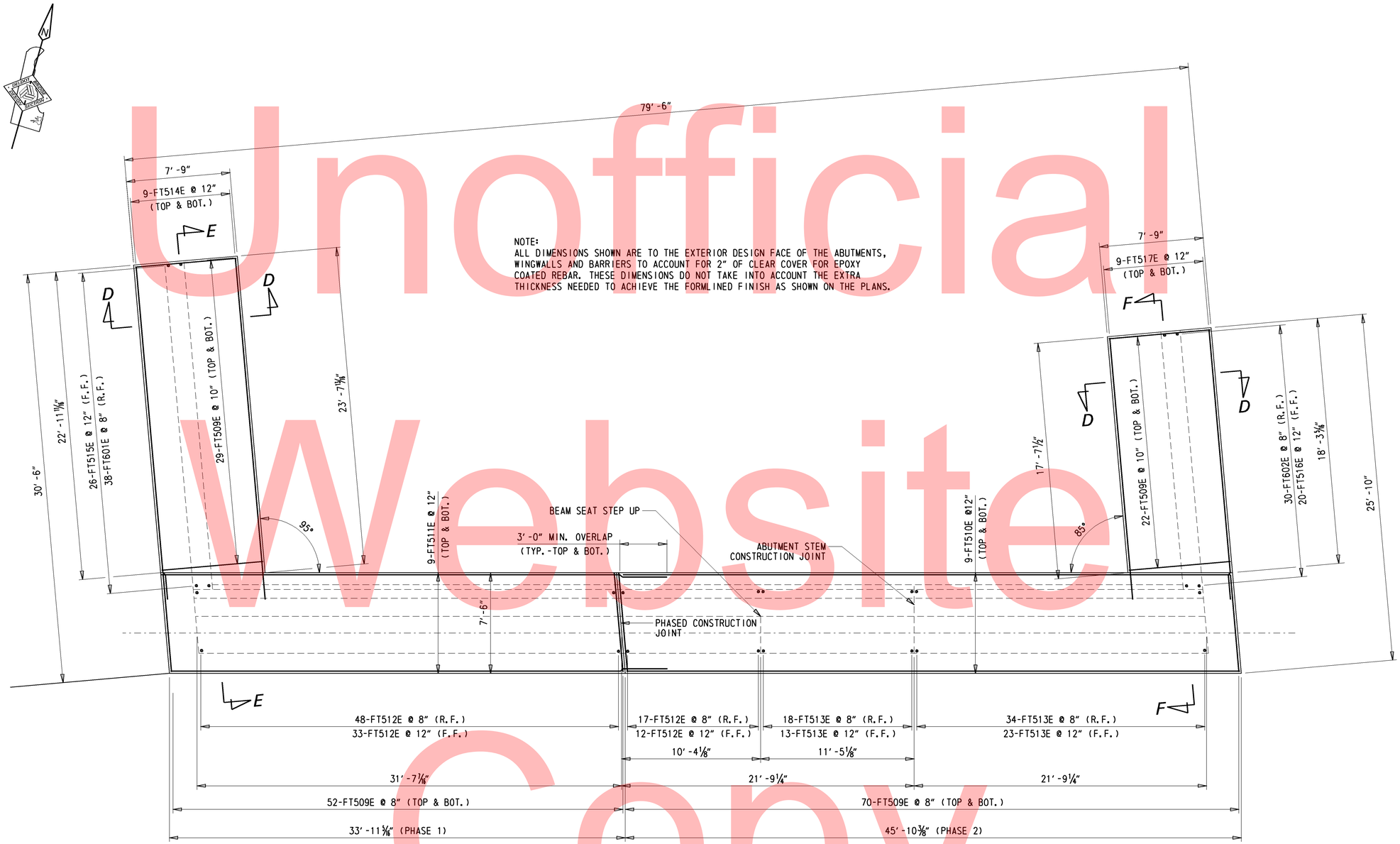

NOTE:
ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2″ OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

ABUTMENT B FOOTING PLAN

NOTES:
1. FOR TYPICAL WINGWALL SECTION (D-D), SEE DWG. NO. WW-02.
2. FOR WINGWALL ELEVATIONS (E-E AND F-F), SEE DWG. NO. WW-01.

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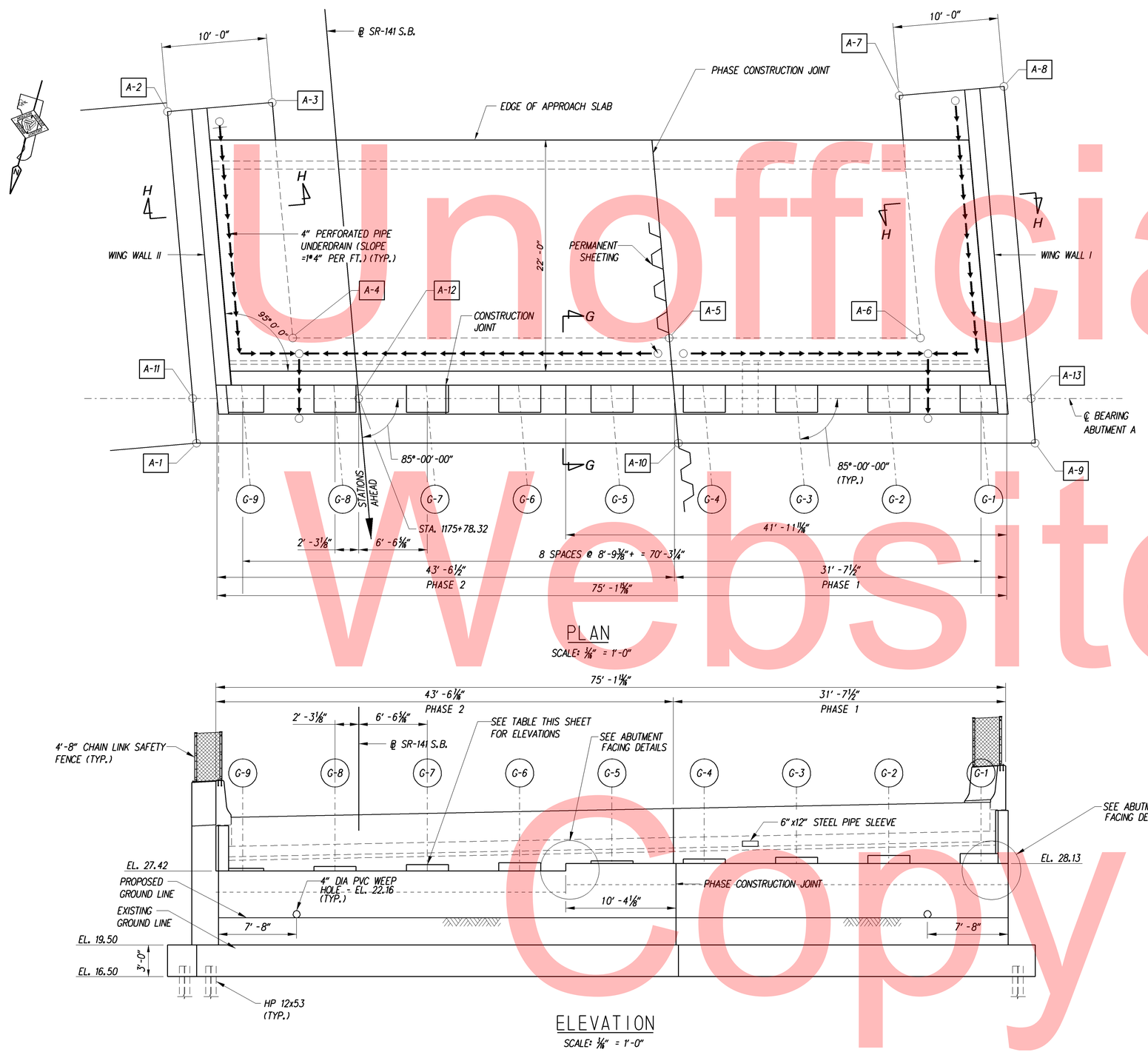
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 4 8 12 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	ABUTMENT B FOOTING REINFORCEMENT DETAILS	FT-02
				COUNTY NEW CASTLE	DESIGNED BY: PAM		SHEET NO. 178
					CHECKED BY: KL		TOTAL SHTS. 481

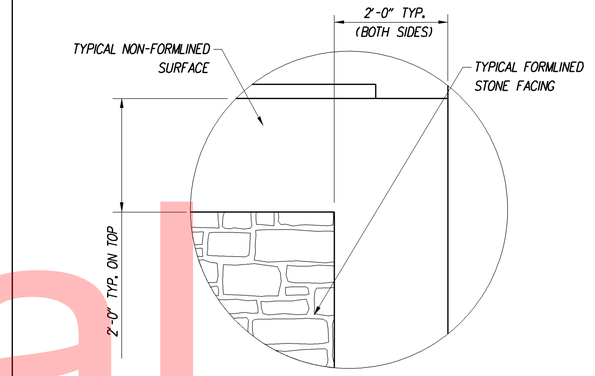


PLAN

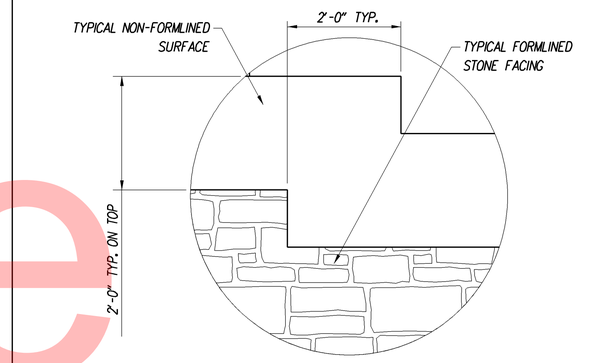
SCALE: ⅛" = 1'-0"

ELEVATION

SCALE: ⅛" = 1'-0"



ABUTMENT FACING DETAIL
(AT ABUTMENT CORNER)



ABUTMENT FACING DETAIL
(AT ABUTMENT STEP UP)

NOT TO SCALE

MASONRY PAD ELEVATIONS	
PAD	ELEVATION
G-1	29.09
G-2	28.92
G-3	28.74
G-4	28.56
G-5	28.38
G-6	28.20
G-7	28.02
G-8	27.84
G-9	27.67

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE AS NOTED

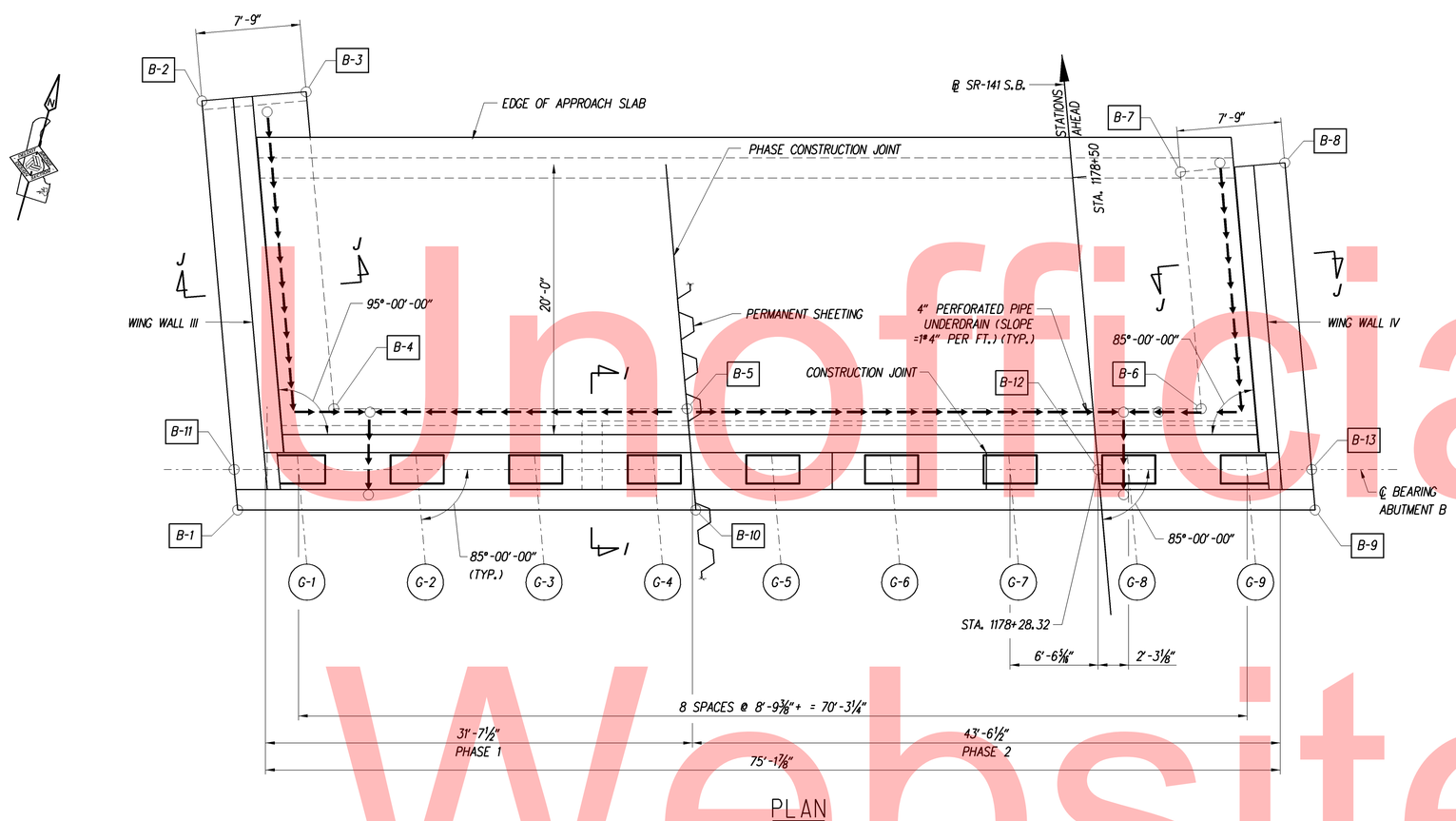
I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-678
T201109002	DESIGNED BY: PAM	
COUNTY	CHECKED BY: KL	
NEW CASTLE		

ABUTMENT A
PLAN AND ELEVATION

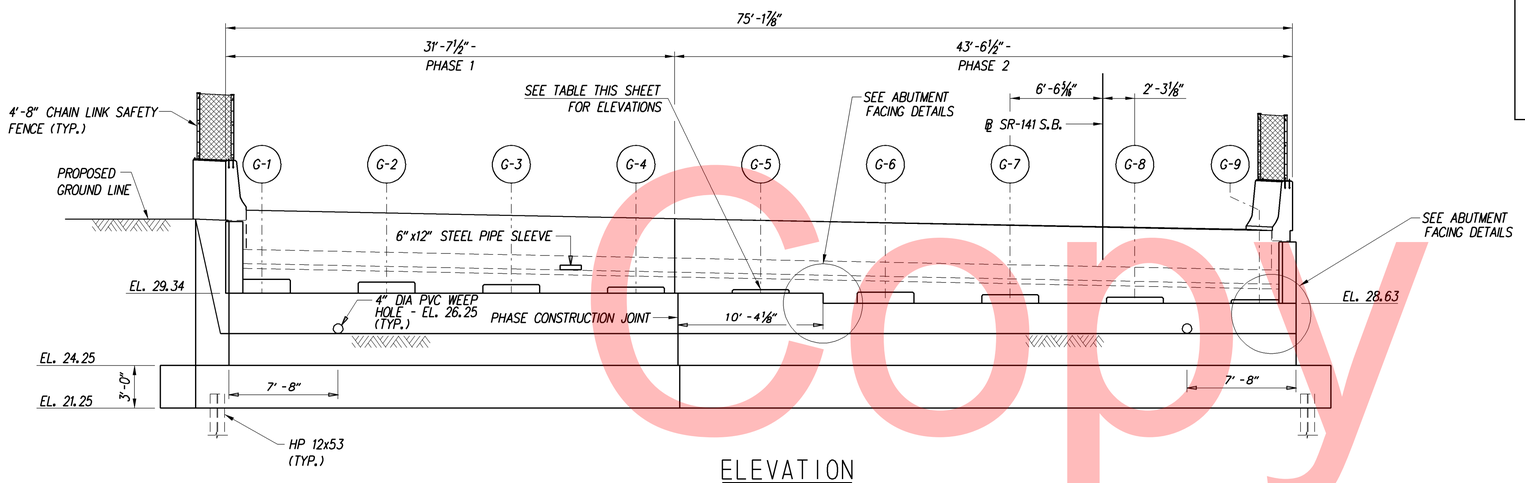
AB-01

SHEET NO.	179
TOTAL SHTS.	481



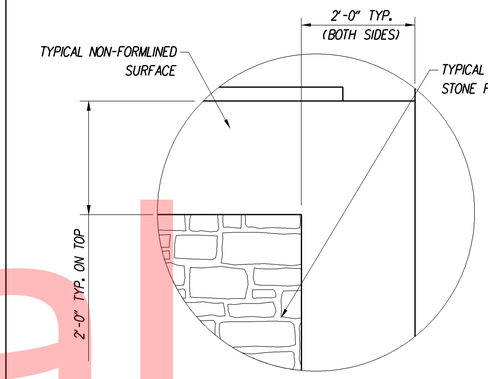
PLAN

SCALE: 1/16" = 1'-0"

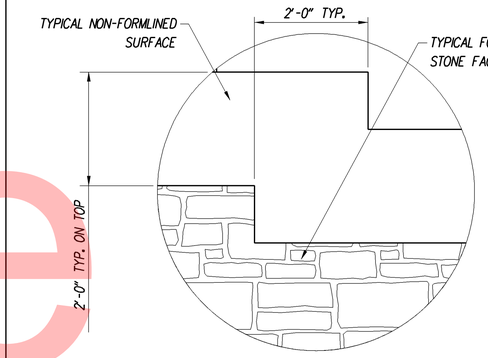


ELEVATION

SCALE: 1/16" = 1'-0"



ABUTMENT FACING DETAIL
(AT ABUTMENT CORNER)



ABUTMENT FACING DETAIL
(AT ABUTMENT STEP UP)

NOT TO SCALE

MASONRY PAD ELEVATIONS	
PAD	ELEVATION
G-1	30.34
G-2	30.17
G-3	29.99
G-4	29.81
G-5	29.63
G-6	29.45
G-7	29.27
G-8	29.10
G-9	28.91

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

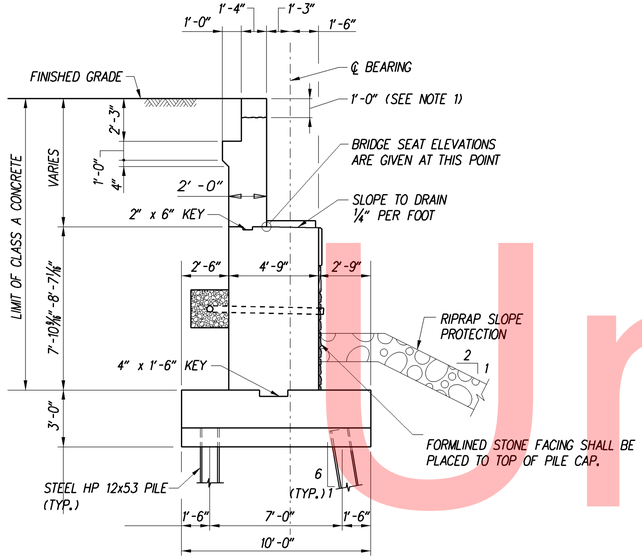
SCALE AS NOTED

I-95 AND SR 141 INTERCHANGE,
RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-678
T201109002	DESIGNED BY: PAM	
COUNTY	CHECKED BY: KL	
NEW CASTLE		

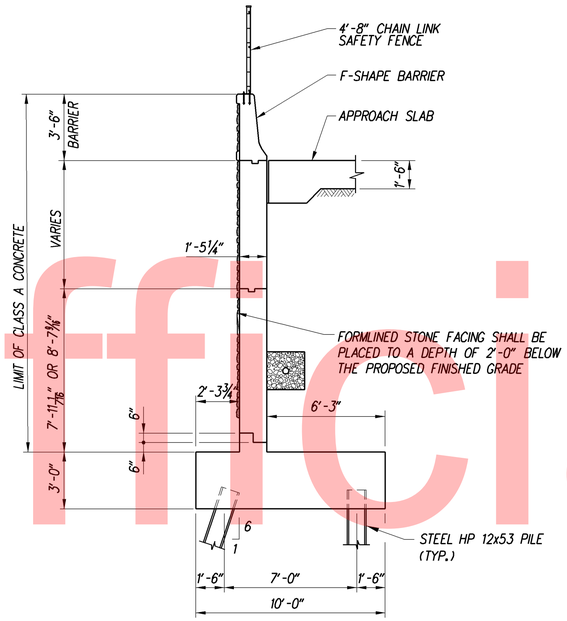
ABUTMENT B
PLAN AND ELEVATION

AB-02	
SHEET NO.	180
TOTAL SHTS.	481



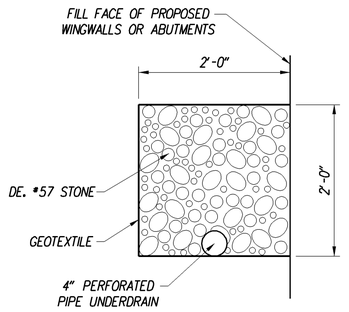
TYPICAL ABUTMENT SECTION (G-G)

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



TYPICAL WINGWALL SECTION (H-H)

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

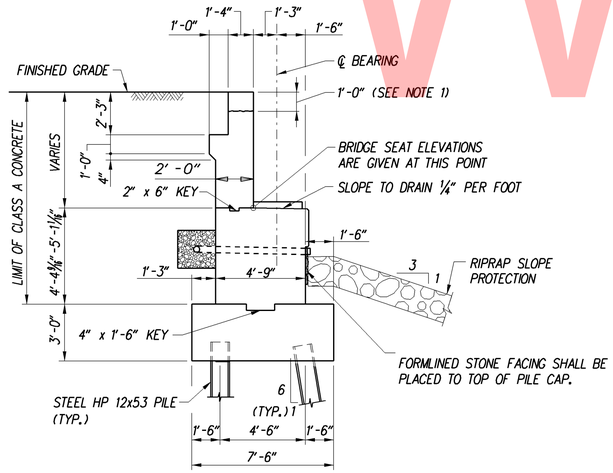


UNDERDRAIN DETAILS

SCALE: 1" = 1'-0"

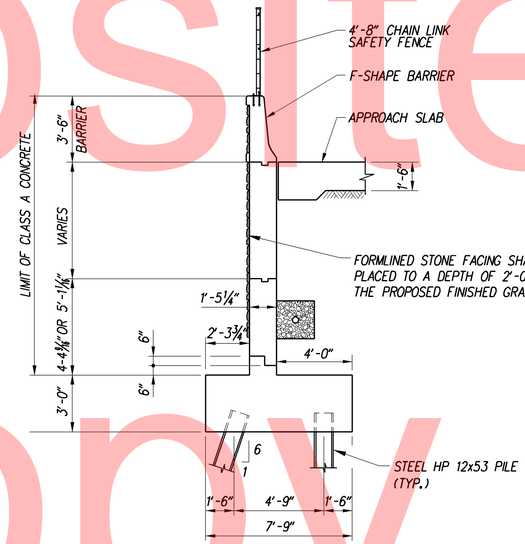
NOTES:

1. TOP PORTION OF BACKWALL SHALL NOT BE PLACED UNTIL ENTIRE BRIDGE DECK SLAB IS COMPLETELY IN PLACE.
2. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENT, WINGWALLS, AND BARRIER TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
3. FOR LOCATIONS OF SECTIONS (G-G, H-H, I-I AND J-J), SEE DWG. NOS. AB-01 AND AB-02.
4. FOR ADDITIONAL BARRIER DETAILS, SEE DWG. NO. BA-01.
5. SEE DWG AB06 SHEET 184 FOR STEEL CASING DETAILS .



TYPICAL ABUTMENT SECTION (I-I)

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



TYPICAL WINGWALL SECTION (J-J)

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

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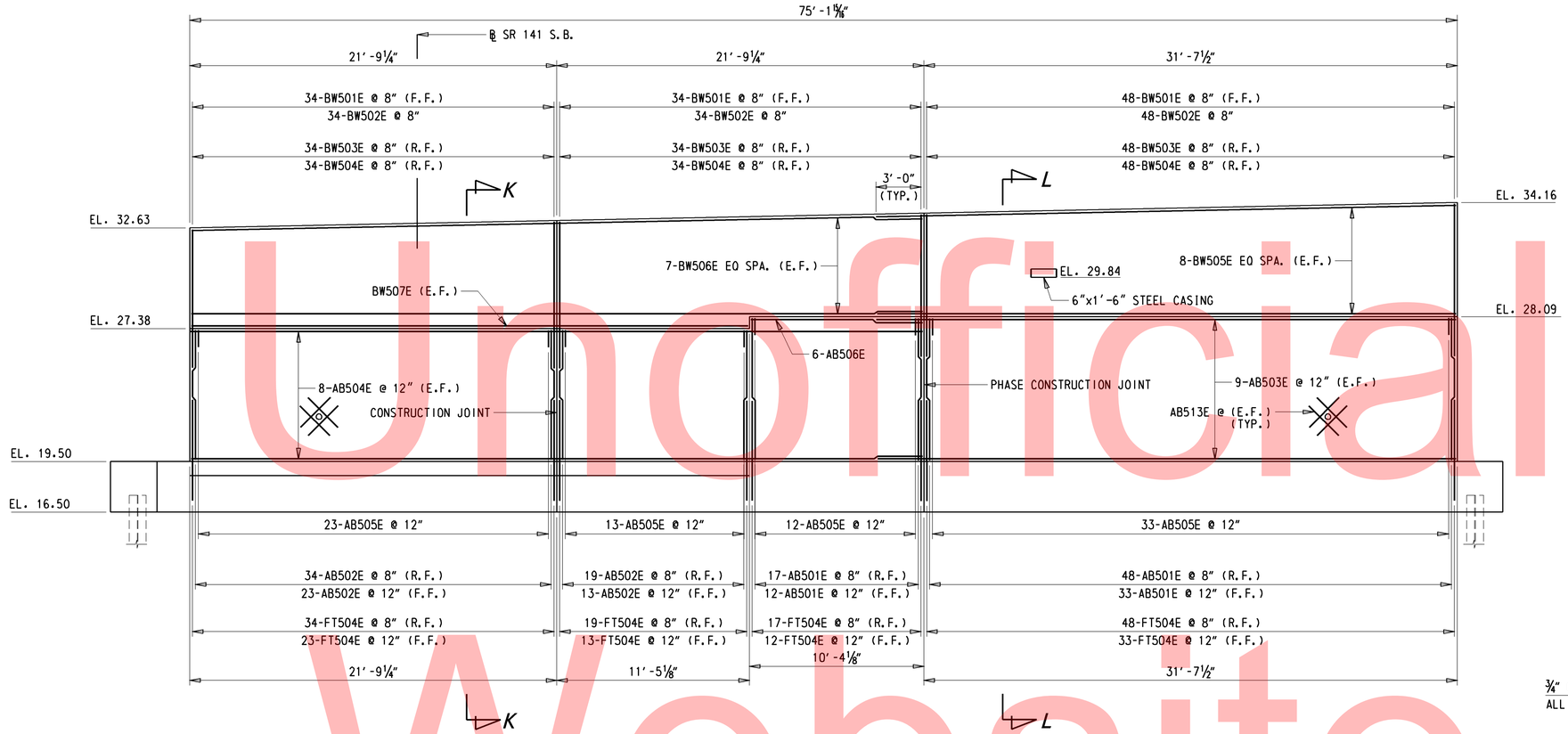
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE: AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	ABUTMENT AND WINGWALL SECTIONS
				COUNTY NEW CASTLE	DESIGNED BY: PAM	
					CHECKED BY: KL	

AB-03

SHEET NO. 181

TOTAL SHTS. 481

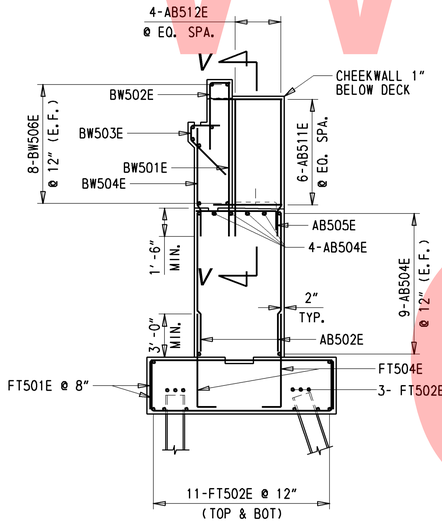


ABUTMENT A REINFORCEMENT ELEVATION

¼″ = 1′-0″

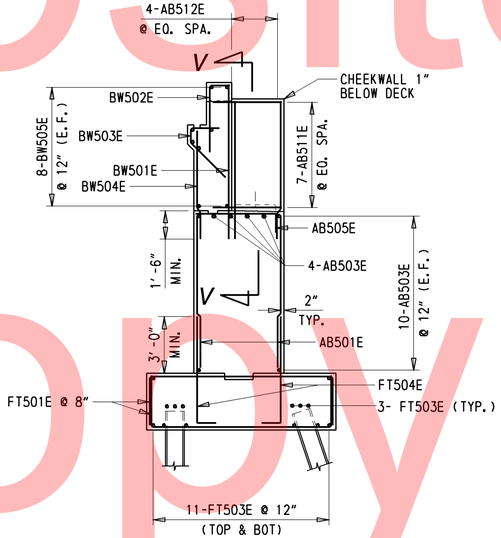
NOTES:

1. MASONRY PADS NOT SHOWN FOR CLARITY. FOR MASONRY PAD LOCATIONS, SEE DWG. NO. AB-01
2. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2″ OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
3. FORMLINED SURFACES ARE NOT SHOWN FOR CLARITY. SEE DWG. NO. AB-01 FOR FORMLINER DETAILS.
4. CUT AND ADJUST REBARS AS NECESSARY TO ACCOMMODATE THE STEEL CASING AND PERFORATED UNDERDRAIN PIPE. PAYMENT SHALL BE INCIDENTAL TO ITEM 614910.
5. STEEL CASING NOT SHOWN IN SECTIONS FOR CLARITY.



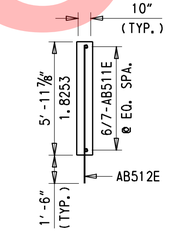
SECTION K-K

¼″ = 1′-0″



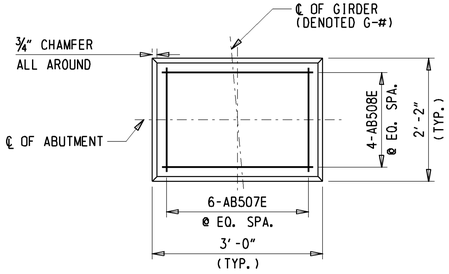
SECTION L-L

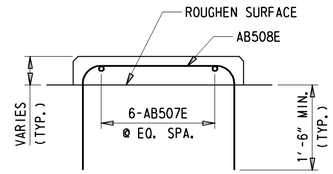
¼″ = 1′-0″



SECTION V-V

¼″ = 1′-0″





MASONRY PAD-ELEVATION

¾″ = 1′-0″

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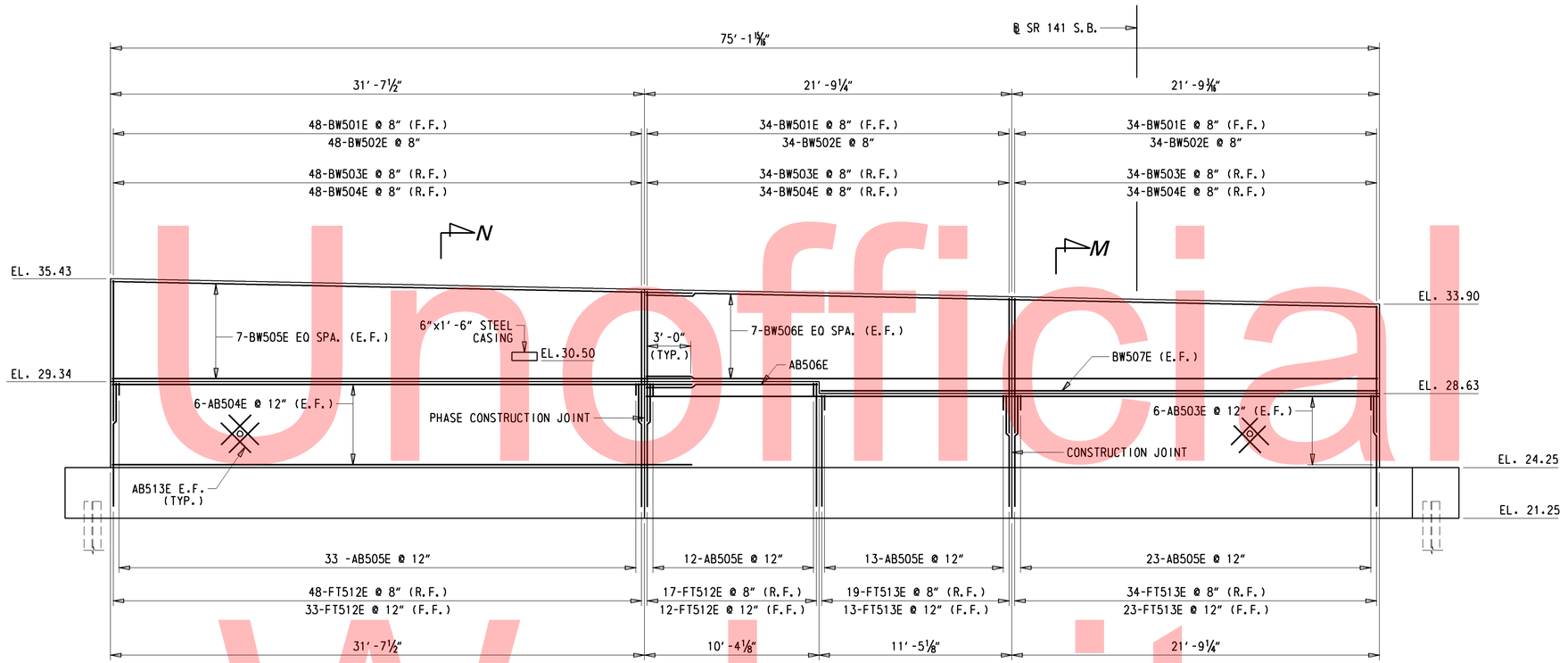
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	ABUTMENT A REINFORCEMENT DETAILS	AB-04
				COUNTY NEW CASTLE	DESIGNED BY: PAM		SHEET NO. 182
					CHECKED BY: KL		TOTAL SHTS. 481

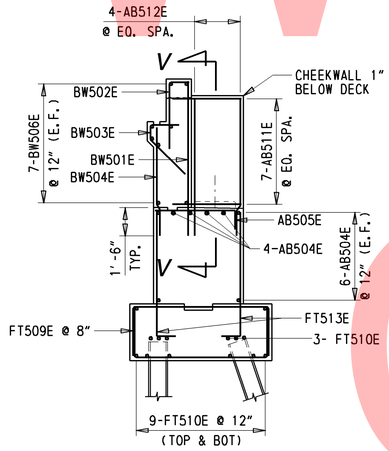


ABUTMENT B REINFORCEMENT ELEVATION

¼″ = 1′-0″

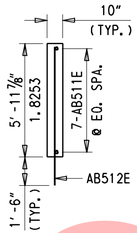
NOTES:

1. MASONRY PADS NOT SHOWN FOR CLARITY. FOR MASONRY PAD LOCATIONS, SEE DWG. NO AB-02.
2. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2″ OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
3. FORMLINED SURFACES ARE NOT SHOWN FOR CLARITY. SEE DWG. NO. AB-02 FOR FORMLINER DETAILS.
4. THE CONTRACTOR SHALL CUT AND ADJUST REBARS AS NECESSARY TO ACCOMMODATE THE STEEL CASING. PAYMENT SHALL BE INCIDENTAL TO ITEM #614910.
5. STEEL CASING NOT SHOWN IN SECTIONS FOR CLARITY.



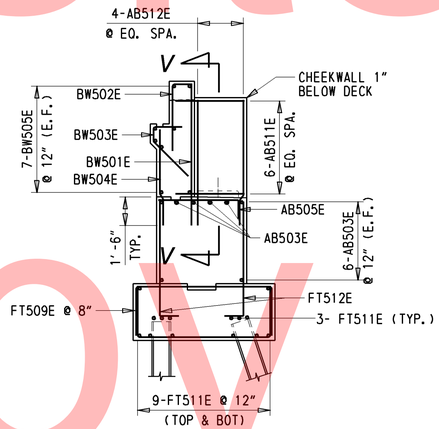
SECTION N-N

¼″ = 1′-0″



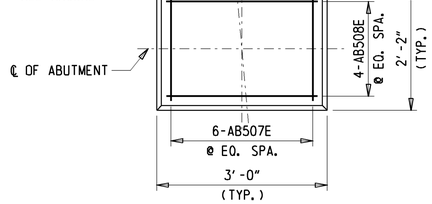
SECTION V-V

¼″ = 1′-0″



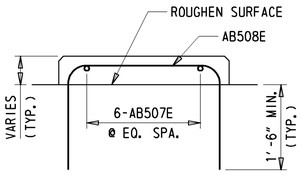
SECTION M-M

¼″ = 1′-0″



MASONRY PAD - PLAN

¾″ = 1′-0″



MASONRY PAD - ELEVATION

¾″ = 1′-0″

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109001	BRIDGE NO. 1-678	ABUTMENT B REINFORCEMENT DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: PAM	
					CHECKED BY: KL	

AB-05 | SHEET NO. 183 | TOTAL SHTS. 481

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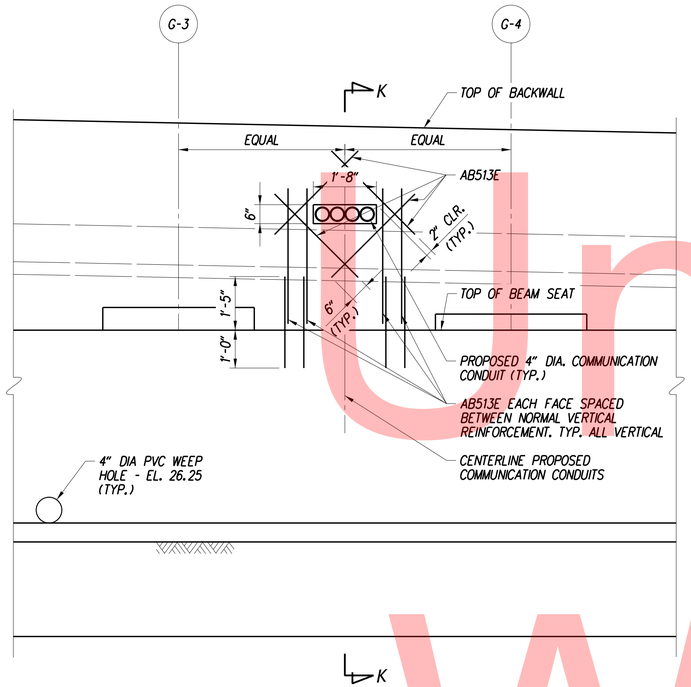
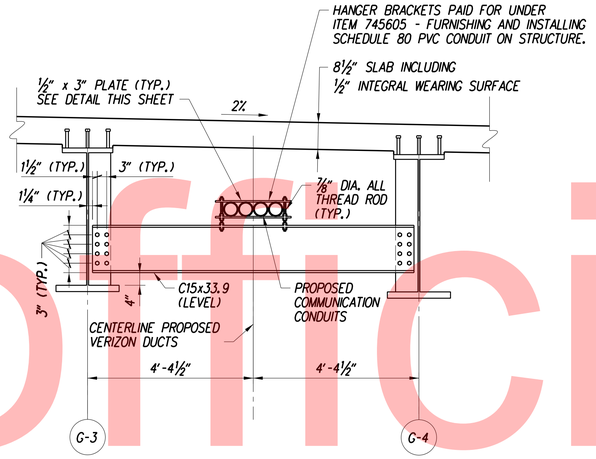


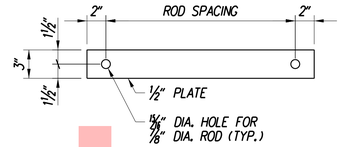
ELEVATION
ADDITIONAL REINFORCING AT COMMUNICATION CONDUIT OPENING
SCALE: ½" = 1'-0"



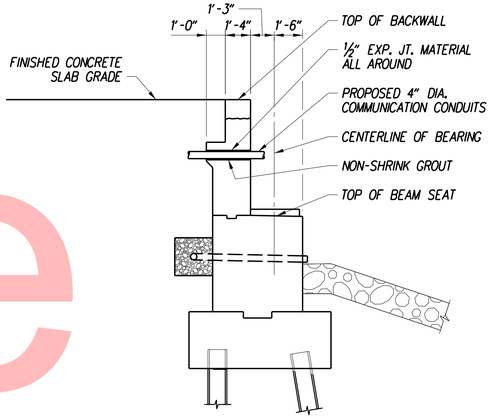
UTILITY SUPPORT NOTES:

1. ALL STEEL PLATES SHALL BE ASTM A 992 GRADE 50.
2. ALL THREADED RODS SHALL BE ASTM F 1554 GRADE 36.
3. ALL BOLTS TO BE ⅞" DIA. ASTM A325.
4. ALL BOLT HOLES TO BE 15/16" DIA.

ELEVATION
COMMUNICATION CONDUIT HANGER DETAIL
SCALE: ½" = 1'-0"



PLAN
COMMUNICATION CONDUIT SUPPORT PLATE DETAIL
SCALE: 1½" = 1'-0"

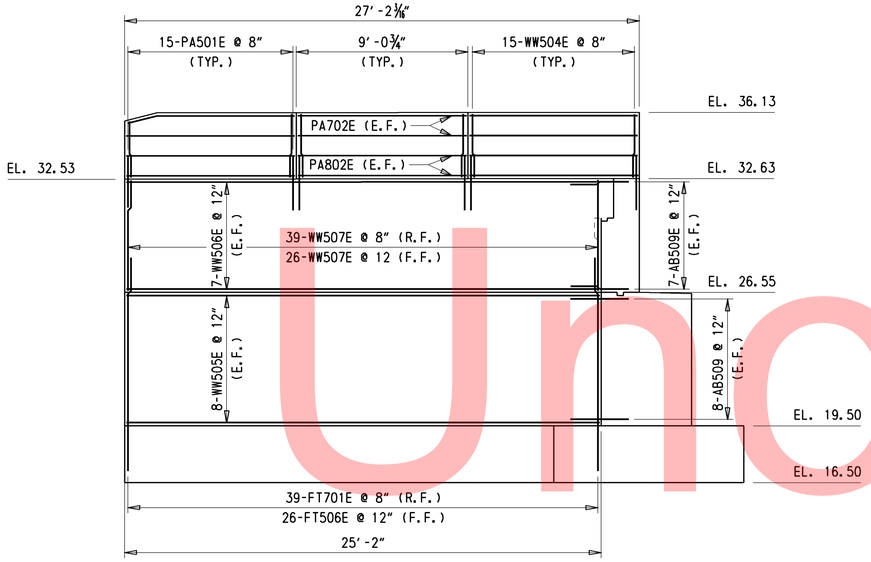


SECTION (K-K)
COMMUNICATION CONDUIT OPENING
SCALE: ¼" = 1'-0"

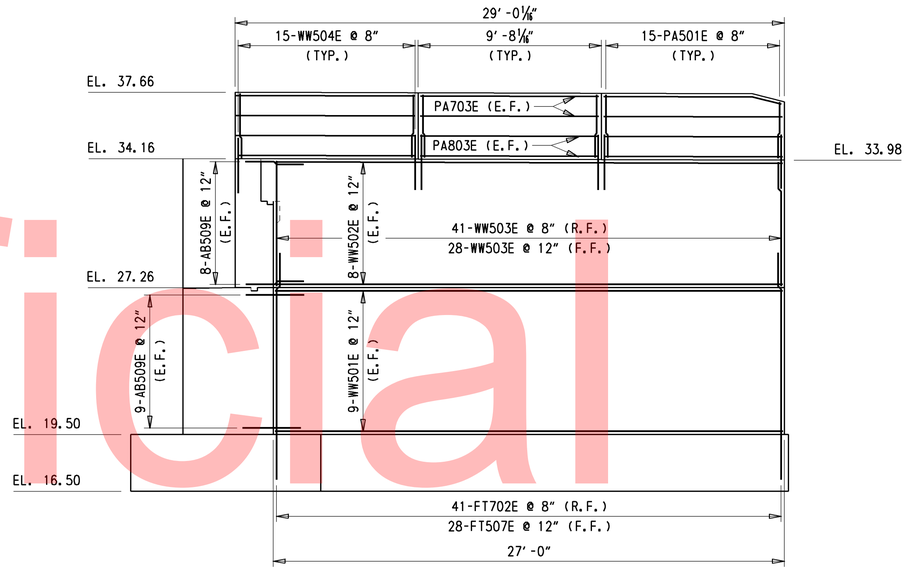
NOTE: ALL WORK AS DETAILED ON THIS SHEET SHALL OCCUR DURING PHASE 1 CONSTRUCTION.

M:\2013\02133109\VR\DRAWINGS\AB02.DGN

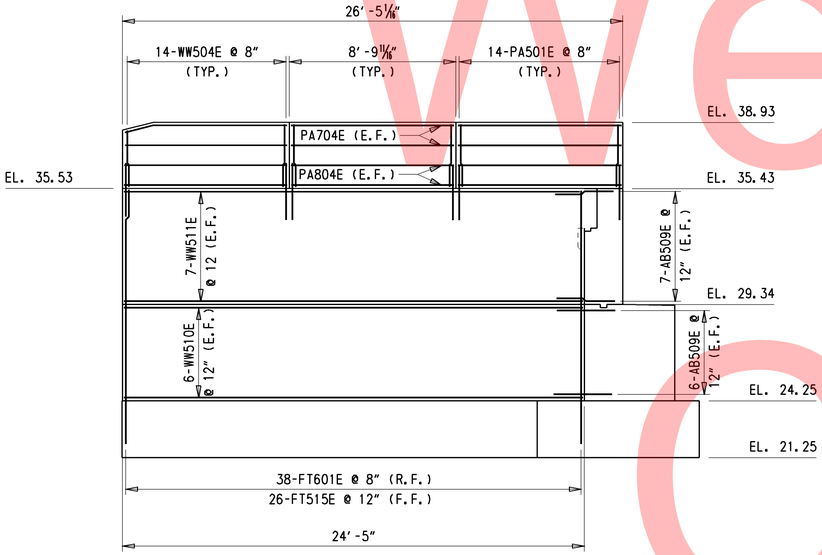
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	UTILITY HANGER & BACKWALL PENETRATION DETAILS	AB-06
				COUNTY NEW CASTLE	DESIGNED BY: PAM		SHEET NO. 184
					CHECKED BY: KL		TOTAL SHTS. 481



WINGWALL II ELEVATION (A-A)

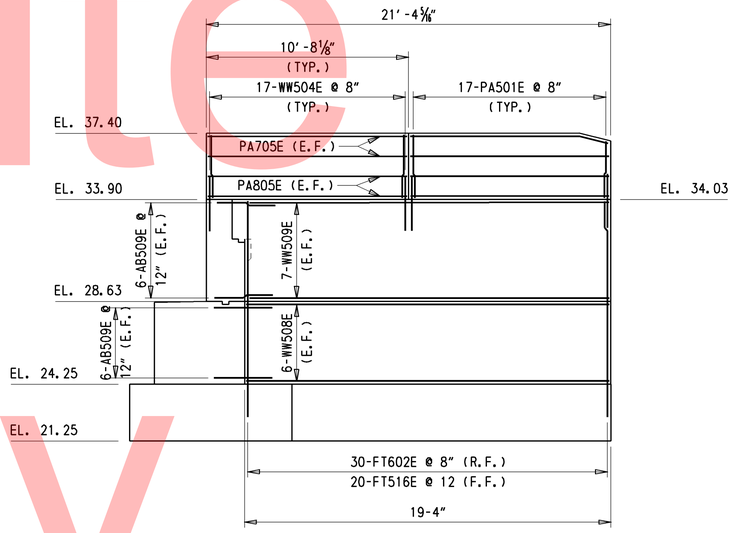


WINGWALL I ELEVATION (B-B)



WINGWALL III ELEVATION (E-E)

NOTES:
1. FOR LOCATIONS OF ELEVATIONS (A-A, B-B, E-E AND F-F), SEE DWG. NOS. FT-01 AND FT-02.
2. FOR ADDITIONAL REINFORCEMENT DETAILS, SEE DWG. NOS. WW-02 AND BA-01.
3. FIELD CUT OR BEND BARS AS NEEDED. PAYMENT INCIDENTAL TO ITEM #604000 - BAR REINFORCEMENT, EPOXY COATED.
4. ALL JOINTS BETWEEN BARRIER SECTIONS SHALL BE PARAFFIN COATED CONTRACTION JOINTS.
5. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2″ OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
6. FORMLINED SURFACES ARE NOT SHOWN FOR CLARITY. SEE DWG. NO. PE-01 FOR FORMLINER DETAILS.
7. END BARRIER SECTIONS ON THE WINGWALLS SHALL NOT BE FORMLINED. ALL OTHER BARRIER SECTIONS SHALL BE FORMLINED AS SHOWN ON DWG. NO. BA-01.
8. ALL REBARS PA702E, PA802E, PA703E, PA803E, PA704E, PA804E, PA705E AND PA805E ARE TYPICAL FOR THE ELEVATION SHOWN.



WINGWALL IV ELEVATION (F-F)

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 4 8 12 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	WINGWALL ELEVATIONS
				COUNTY NEW CASTLE	DESIGNED BY: PAM	
					CHECKED BY: KL	

WW-01
SHEET NO. 185
TOTAL SHTS. 481

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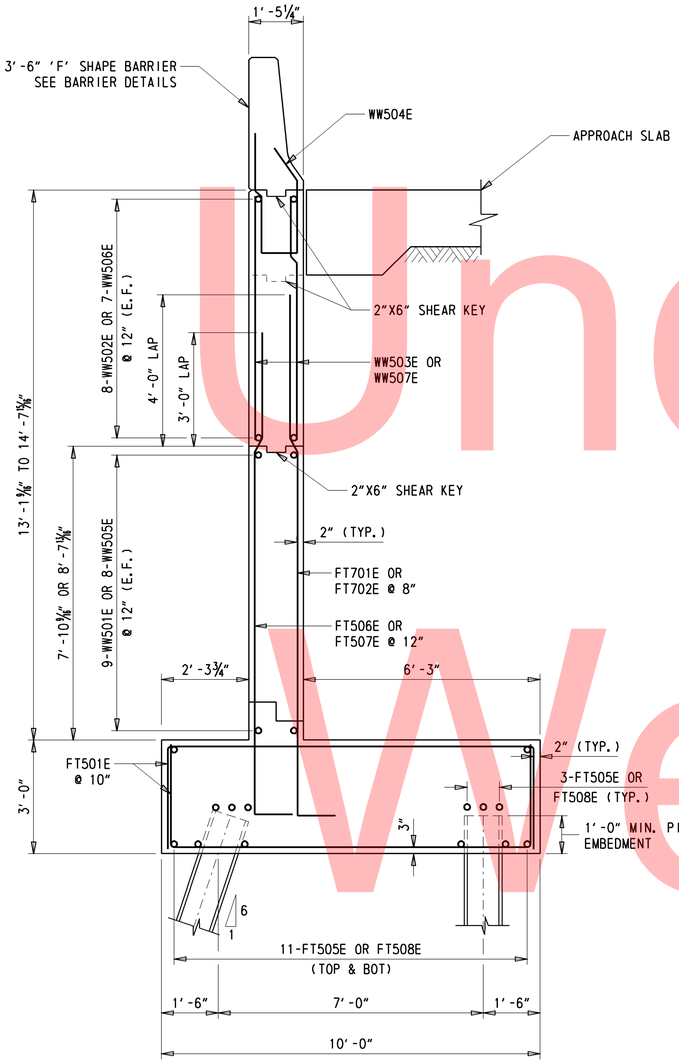
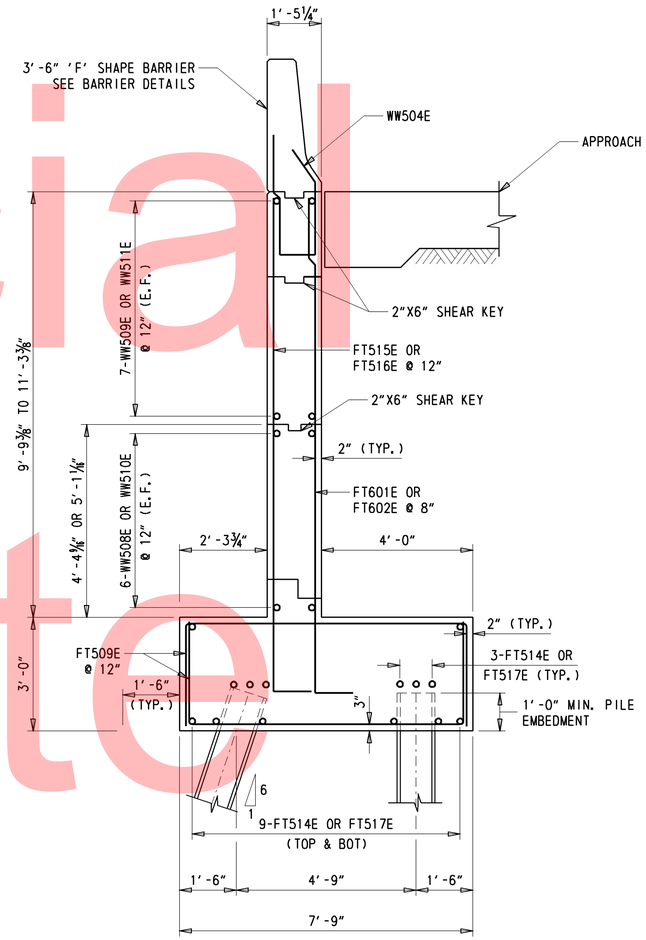


TYPICAL WING WALLS SECTION (C-C)

NOTES:

1. FOR LOCATION OF SECTIONS (C-C AND D-D), SEE DWG. NOS. FT-01 AND FT-02.
2. FOR ADDITIONAL REBAR DETAILS, SEE DWG. NO WW01
3. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
4. FORMLINED SURFACES ARE NOT SHOWN FOR CLARITY. SEE DWG. NOS. PE-01 AND AB-03 FOR FORMLINER DETAILS.



TYPICAL WINGWALL SECTION (D-D)

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 2 4 6 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	WINGWALL REINFORCEMENT DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: PAM	WW-02
					CHECKED BY: KL	SHEET NO. 186
						TOTAL SHTS. 481

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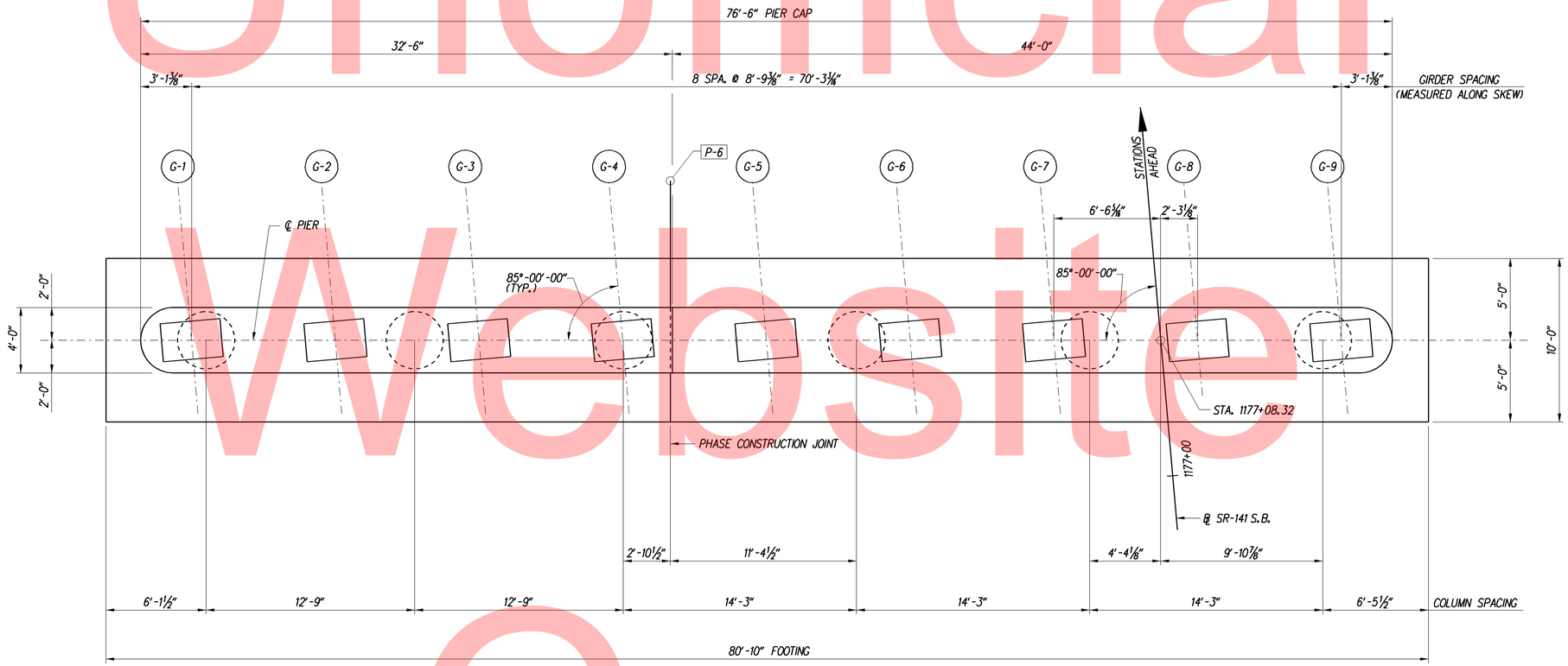

PLAN

SCALE: ¼" = 1'-0"

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	PIER PLAN	PR-01
				COUNTY NEW CASTLE	DESIGNED BY: PAM		SHEET NO. 187
					CHECKED BY: KL		TOTAL SHTS. 481

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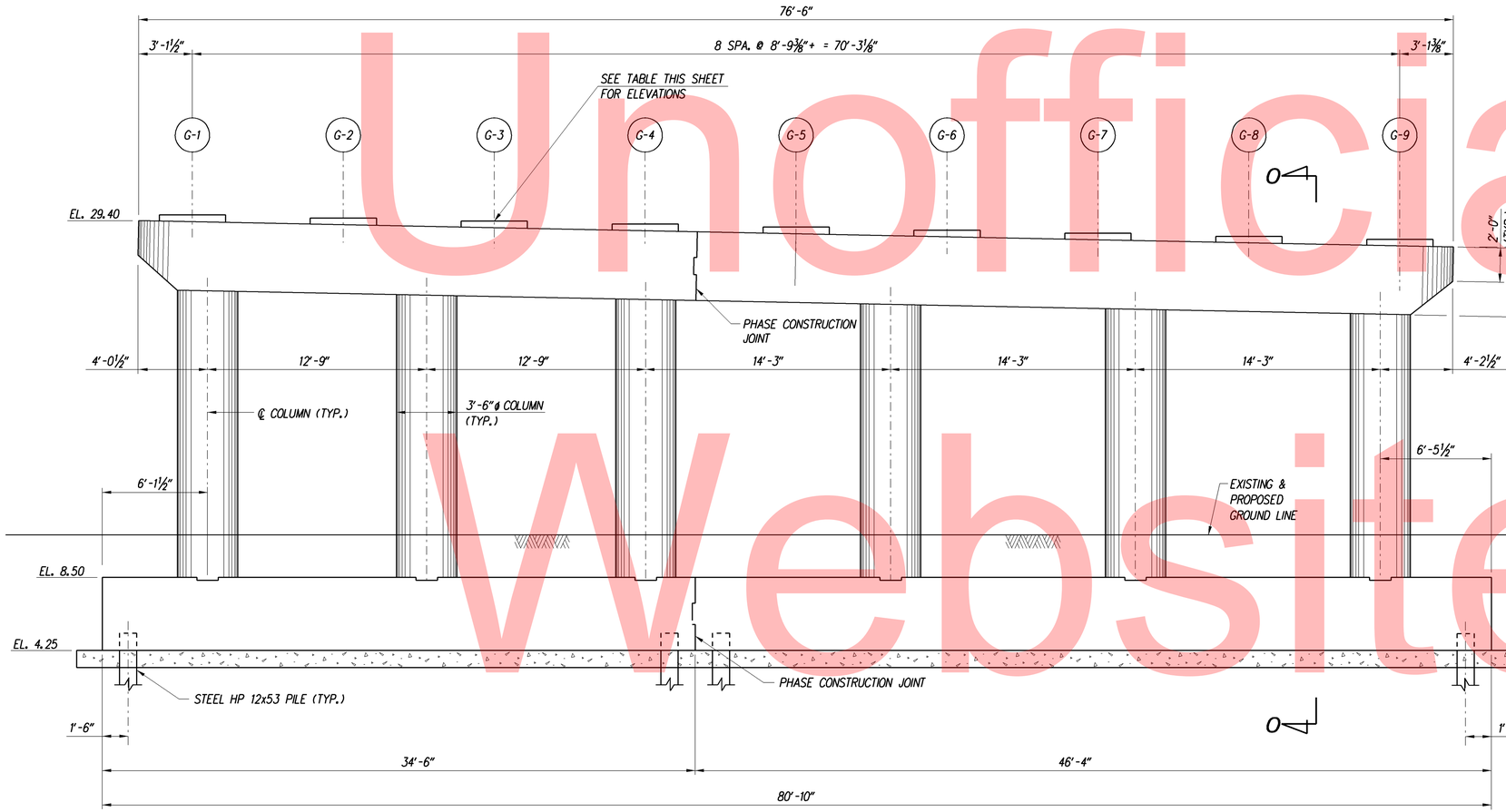
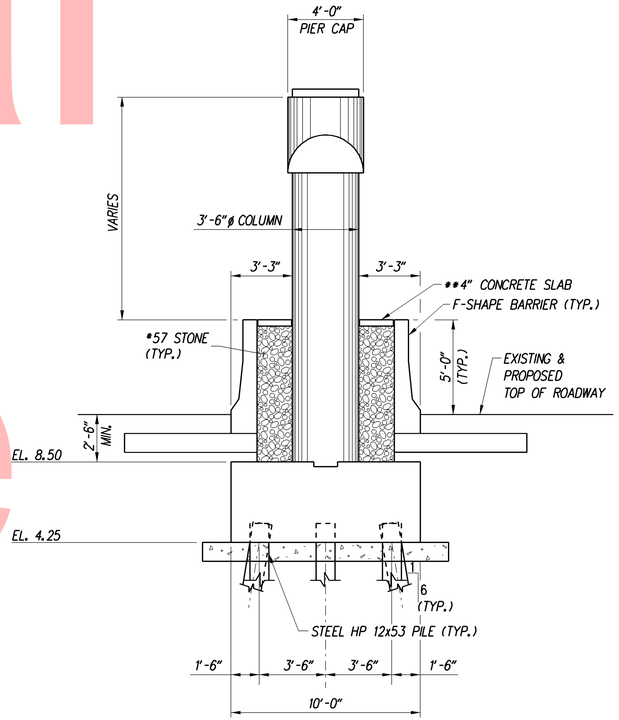


ELEVATION

SCALE: ¼" = 1'-0"

MASONRY PAD ELEVATIONS	
PAD	ELEVATION
G-1	29.72
G-2	29.54
G-3	29.36
G-4	29.18
G-5	29.00
G-6	28.82
G-7	28.64
G-8	28.48
G-9	28.29



END VIEW (SECTION O-O)

SCALE: ¼" = 1'-0"

** NOTE:
PAYMENT FOR 4" CONCRETE SLAB SHALL BE UNDER ITEM 602001 - PCC MASONRY, CLASS A

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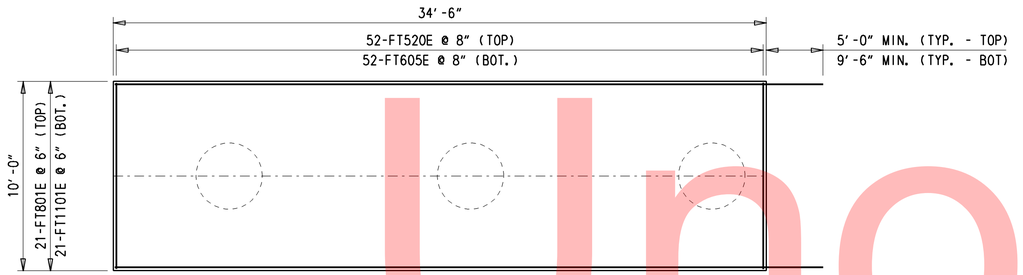
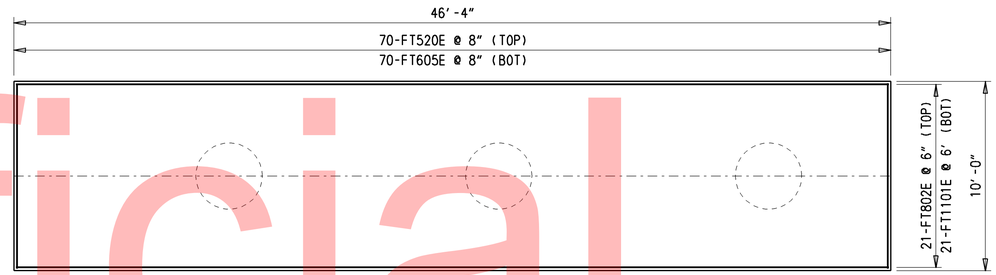
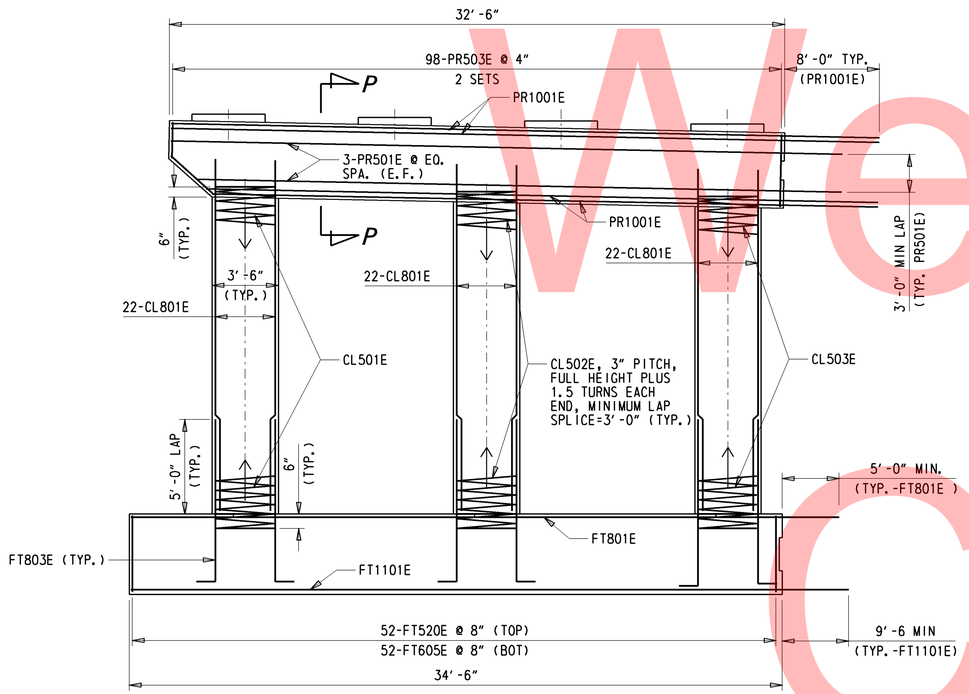
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	PIER ELEVATION AND SECTION
				COUNTY NEW CASTLE	DESIGNED BY: PAM	PR-02
					CHECKED BY: KL	SHEET NO. 188
						TOTAL SHTS. 481



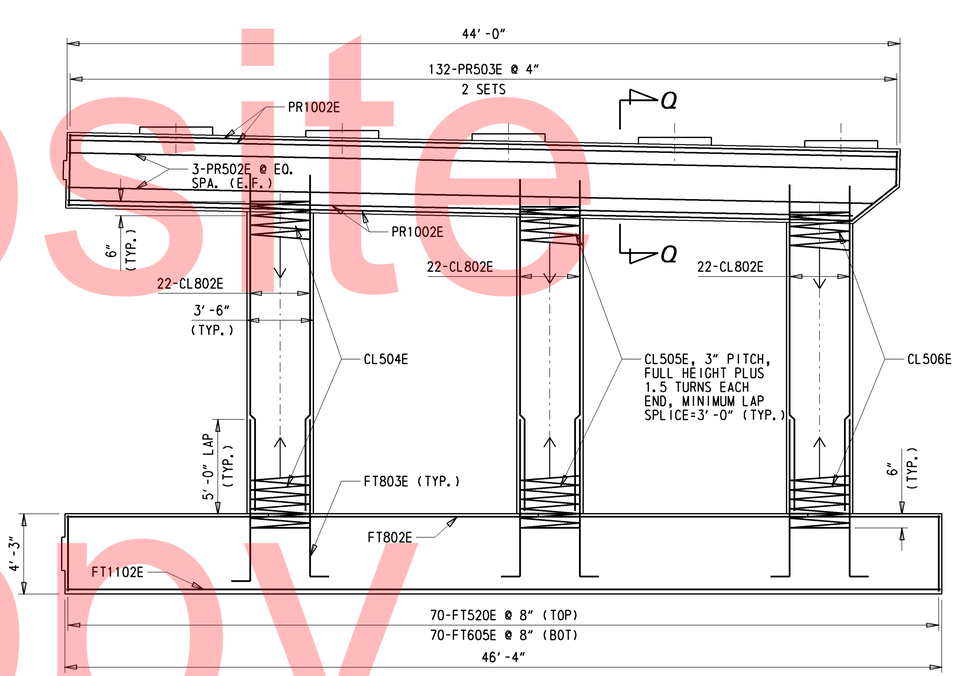
FOOTING REINFORCEMENT PLAN - PHASE 1



FOOTING REINFORCEMENT PLAN - PHASE 2



FOOTING REINFORCEMENT ELEVATION - PHASE 1



FOOTING REINFORCEMENT ELEVATION - PHASE 2

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 4 8 12 FEET	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002 / COUNTY NEW CASTLE	BRIDGE NO. 1-678 / DESIGNED BY: PAM / CHECKED BY: KL

PIER REINFORCEMENT DETAILS – 1

PR-03

SHEET NO. 189

TOTAL SHTS. 481

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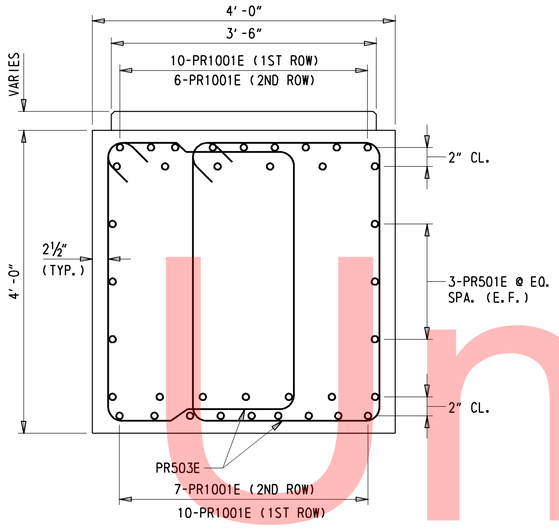
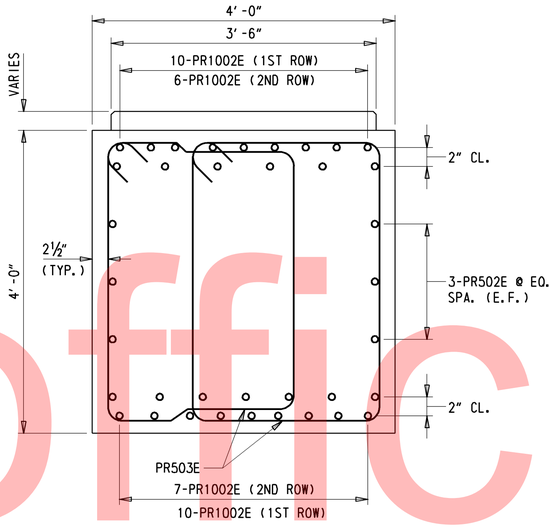


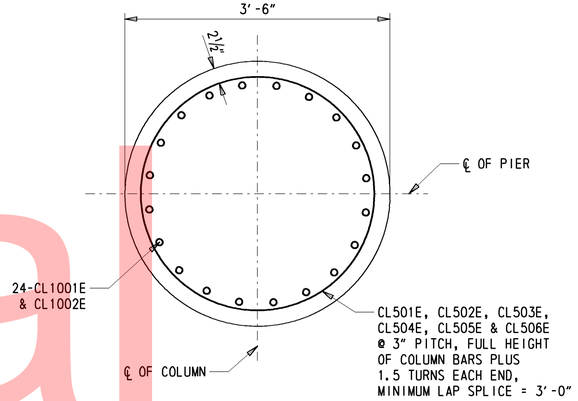
SECTION P-P

1″ = 1′-0″



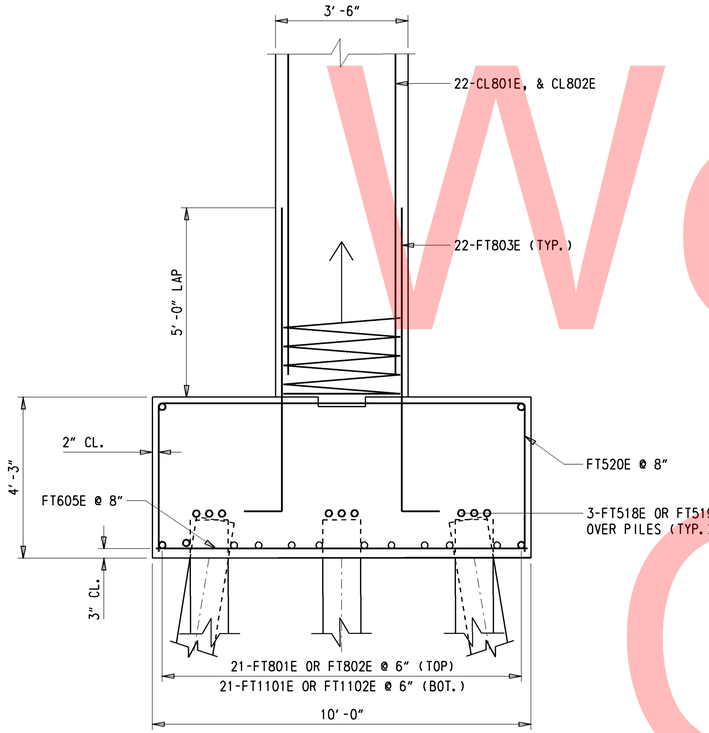
SECTION Q-Q

1″ = 1′-0″



TYPICAL COLUMN SECTION

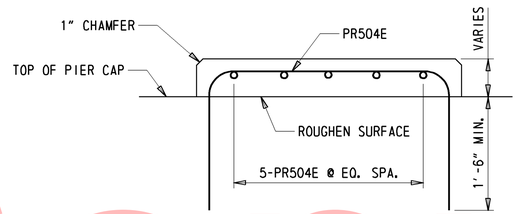
1″ = 1′-0″



PIER FOOTING REINFORCEMENT SECTION

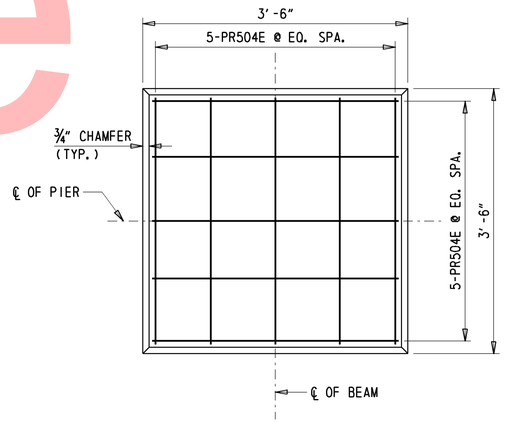
½″ = 1′-0″

NOTE:
1. FOR LOCATION OF SECTIONS (P-P AND Q-Q), SEE DWG. NO. PR-03



MASONRY PAD ELEVATION

1″ = 1′-0″



MASONRY PAD PLAN

1″ = 1′-0″

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1–678	PIER REINFORCEMENT DETAILS – 2
				COUNTY NEW CASTLE	DESIGNED BY: PAM	
					CHECKED BY: KL	

PR-04
SHEET NO. 190
TOTAL SHTS. 481

BEARING NOTES:

1. DESIGN OF STEEL LAMINATE IS BASED ON ASTM A 709 GRADE 36. SOLE PLATE SHALL BE ASTM A 709 GRADE 50W.

2. NEOPRENE IN BEARING PAD SHALL HAVE A SHORE 'A' DUROMETER HARDNESS OF 60. PAYMENT FOR ELASTOMERIC PADS, AND INSTALLATION SHALL BE INCIDENTAL TO ITEM #605002 - STEEL STRUCTURES.

3. ANCHOR BOLTS AND WASHERS SHALL BE UNPAINTED A709 GRADE 36 GALVANIZED STEEL. ALL NUTS SHALL BE UNPAINTED A307 GALVANIZED STEEL. SET NUTS ¼" CLEAR OF SOLE PLATES AND BURR THREADS ABOVE AND BELOW NUTS.

4. USE SWEDGED ANCHOR BOLTS. BOLTS MAY BE CAST-IN-PLACE OR GROUTED IN PREFORMED (SLEEVED OR DRILLED) HOLES. SLEEVED HOLES SHALL BE CORRUGATED TO PREVENT SLIPPAGE. THE PREFORMED HOLES SHALL HAVE A DIAMETER OF AT LEAST 2" LARGER THAN THE DIAMETER OF THE BOLTS. WHEN DRILLING HOLES, DO NOT UNDER ANY CIRCUMSTANCES COME INTO CONTACT WITH THE REINFORCING BARS.

5. SOLE PLATES ARE TO BE BEVELED TO MATCH GRADE WHEN GRADE EXCEEDS 1 PERCENT.

6. STEEL SURFACES OF SOLE PLATE TO BE MACHINE FINISHED AS SHOWN IN THE DETAILS, MEASURED IN ACCORDANCE WITH ANSI B46.1.

7. STEEL PLATES SHALL MEET A FLATNESS REQUIREMENT OF 0.5 PERCENT IN THE DIRECTION BEING MEASURED (WIDTH, LENGTH, AND DIAGONALS) MAXIMUM, BUT NOT TO EXCEED ⅛ INCH.

8. BEARING SHALL BE PLACED NORMAL TO CENTERLINE OF BEAM.

9. FILL SLOTS AND HOLES AROUND ANCHOR BOLTS WITH AN APPROVED NON-HARDENING CAULKING COMPOUND OR ELASTIC JOINT SEALER.

10. FOR EXPANSION BEARINGS
USE 1⅞" x 3" SLOTS IN SOLE PLATE AND ⅜" x 3" x 5½" WASHERS WITH 1⅝" DIA. HOLE IN WASHERS.

FOR FIXED BEARINGS
USE 1⅞" DIA. HOLES IN SOLE PLATE AND ⅜" x 3" DIA. WASHERS WITH 1⅝" DIA. HOLE IN WASHER.

BEARING TABLE

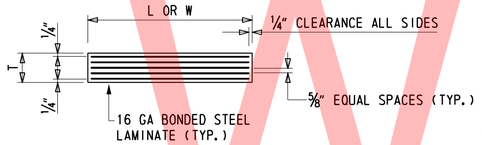
LOCATION	BEARING DESIGNATION MARK	TYPE	NEOPRENE HARDNESS (SHORE A)	TOTAL NO REOD	CAPACITY/PAD REACTION ⊗	MOVEMENT ☒	LAMINATED ELASTOMERIC PAD DIM 'L'	'W'	SHAPE FACTOR ▲	AREA 1N'	INTERIOR LAYERS	TOTAL PAD THICKNESS "T"
ABUTMENT A	EX 1	EXP	60± 5 DURO	9	189.78 K	.6365"	11"	17.0"	5.34	187.00	4	3.3125"
PIER	FX 1	FIX	60± 5 DURO	9	456.66 K	-	21"	17.0"	7.58	357.00	4	3.6250"
ABUTMENT B	EX 1	EXP	60± 5 DURO	9	177.86 K	.5875"	11"	17.0"	5.34	187.00	4	3.3125"

LEGEND:

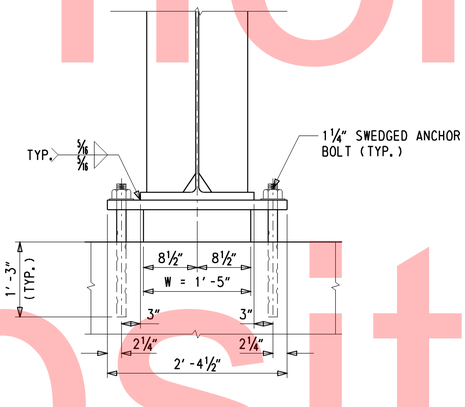
⊗ MAX. UN-FACTURED SERVICE 1 REACTION (W/O DYNAMIC LOAD ALLOWANCE).

☒ TEMPERATURE MOVEMENT.

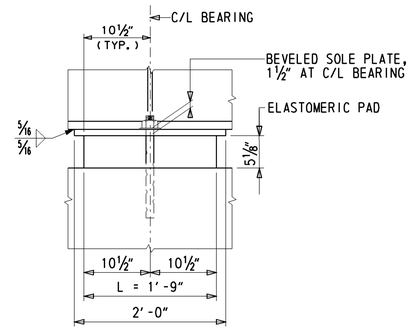
▲ SHAPE FACTOR.



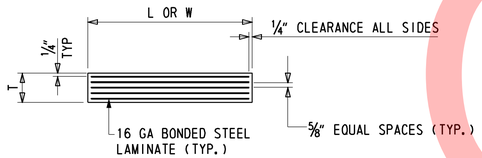
PIER LAMINATED ELASTOMERIC PAD
NOT TO SCALE



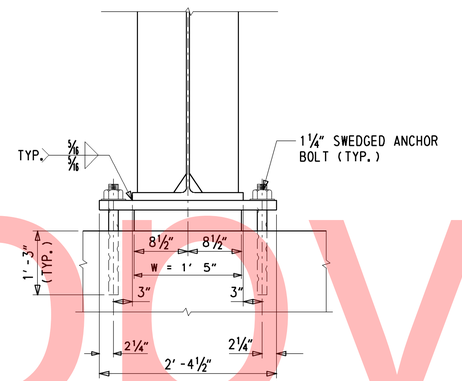
PIER BEARING ELEVATION
SCALE: 1" = 1'-0"



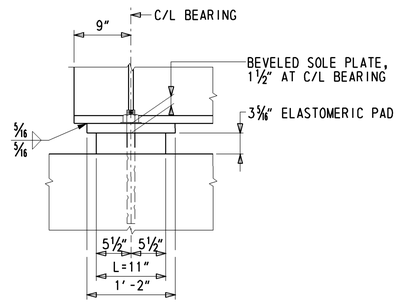
PIER SIDE ELEVATION
SCALE: 1" = 1'-0"



ABUT. A & B LAMINATED ELASTOMERIC PAD
NOT TO SCALE



ABUT. A & B BEARING ELEVATION
SCALE: 1" = 1'-0"



ABUT. A & B SIDE ELEVATION
SCALE: 1" = 1'-0"

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

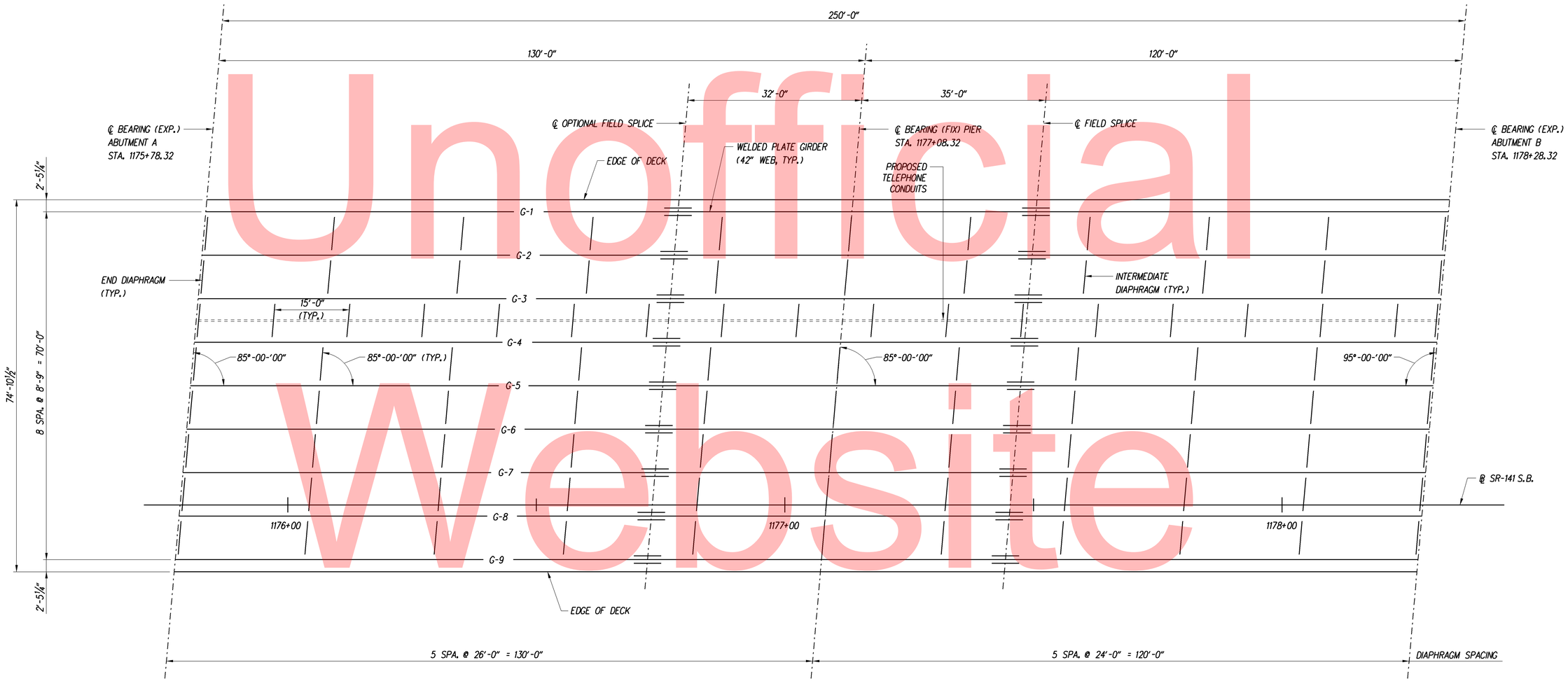
SCALE AS NOTED

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT T201109002
COUNTY NEW CASTLE
BRIDGE NO. 1-678
DESIGNED BY: PAM
CHECKED BY: KRL

BEARING DETAILS

BD-01
SHEET NO. 191
TOTAL SHTS. 481



FRAMING PLAN

SCALE: 1/8" = 1'-0"

NOTES:
1. FOR DIAPHRAGM AND GIRDER DETAILS, SEE SHEETS BM-01 AND BM-02.
2. FOR FIELD SPLICE DETAILS, SEE SHEET BM-03.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

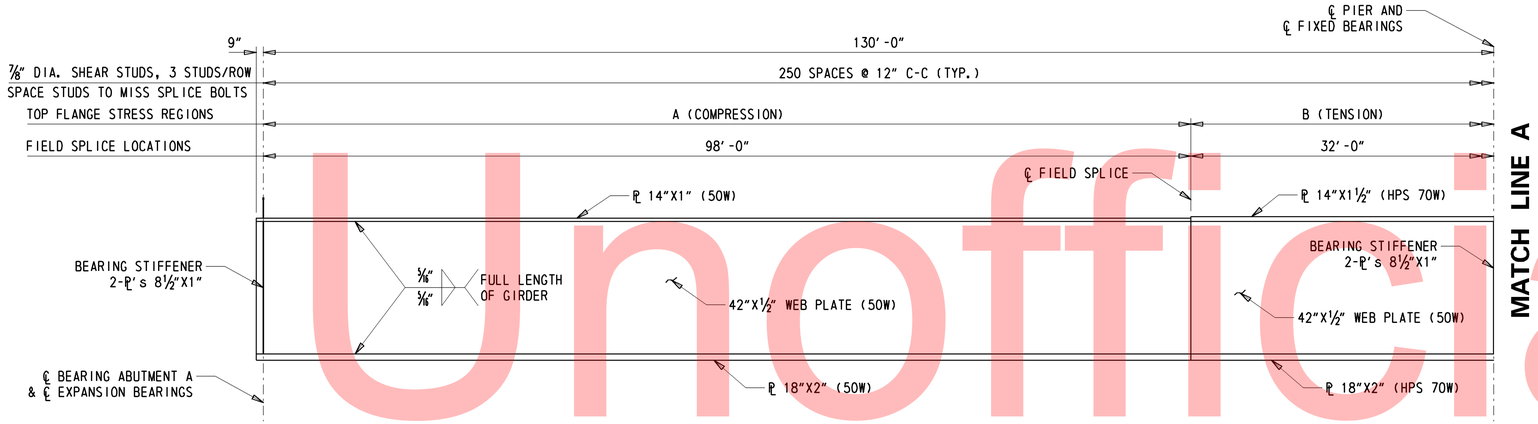
SCALE AS NOTED

I-95 AND SR 141 INTERCHANGE,
RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-678
T201109002	DESIGNED BY: PAM	
COUNTY		
NEW CASTLE	CHECKED BY: KL	

FRAMING PLAN

FR-01	
SHEET NO.	192
TOTAL SHTS.	481

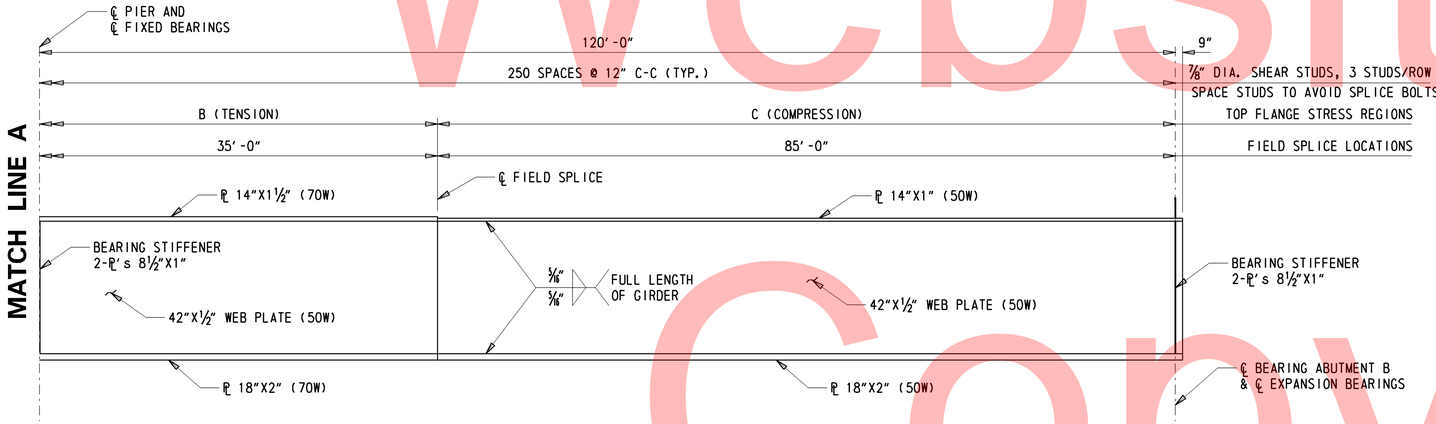


GIRDER ELEVATION SPAN-1

HORIZONTAL SCALE: ⅛" = 1'-0"
VERTICLE SCALE: ½" = 1'-0"

STEEL NOTES:

1. WELDING SHALL CONFORM TO THE CURRENT ANSI/AASHTO/AWS BRIDGE WELDING CODE D1.5-10. WELDING AND NONDESTRUCTIVE TESTING SYMBOLS SHALL CONFORM TO SYMBOLS FOR WELDING, BRAZING, AND NONDESTRUCTIVE EXAMINATION AWS A2.4-2007.
2. JOINT WELDING PROCEDURES, OVERALL FABRICATION METHODS, AND QUALITY CONTROL INSPECTION PROCEDURE SHALL BE INCLUDED AS WRITTEN PROCEDURE SPECIFICATIONS WITH THE SHOP PLAN SUBMISSION.
3. GIRDER WEBS SHALL BE GROUND SMOOTH AND SHALL BE PLUMB AT THE ENDS UNDER FULL DEAD LOAD.
4. THE GIRDERS SHALL BE PAINTED WITH A URETHANE PAINT SYSTEM IN ACCORDANCE WITH SECTION 605 FROM EACH END TO A DISTANCE OF 5' FROM FACE OF ABUTMENT AND THE DISTANCE BETWEEN 5' FROM EACH FACE OF PIER CAP.
   THE COLOR OF THE FINISHED PAINT SHALL BE BROWN (NO. 10076) FROM FEDERAL STANDARD 595C. AT ALL LOCATIONS WHERE THE CONTRACTOR'S WORK DAMAGES THE EXISTING PAINT SYSTEM, THE CONTRACTOR SHALL CLEAN THE DAMAGED LOCATION AND REPAINT THE AREA. ALL CLEANING AND PAINTING IS INCIDENTAL TO ITEM #605002 - STEEL STRUCTURES.
5. BEARING AREAS: PROVIDE BOTTOM FLANGE IN A TRUE HORIZONTAL PLANE IN TRANSVERSE DIRECTION AND IN A TRUE PLANE LONGITUDINALLY OVER DIMENSION "L", WHERE L = WIDTH OF SOLE PLATE + 6" AHEAD AND BACK. WHERE APPLICABLE. IF THE SOLE PLATE IS WELDED TO THE BOTTOM FLANGE, PROVIDE THE SOLE PLATE MEETING THE SAME FLATNESS REQUIREMENTS. EACH BEARING MUST BE STRESSED UNIFORMLY AFTER ALL DEAD LOAD IS PLACED. MAKE NECESSARY SHOP AND/OR FIELD ADJUSTMENTS TO PROVIDE UNIFORM BEARING STRESS UNDER ALL DEAD LOADS.



GIRDER ELEVATION SPAN-2

HORIZONTAL SCALE: ⅛" = 1'-0"
VERTICLE SCALE: ½" = 1'-0"

NOTES:
1. THERE SHALL BE NO FIELD WELDING TO THE TOP FLANGE, EXCEPT FOR SHEAR STUDS, IN THE TENSION REGIONS.
2. CROSS FRAME CONNECTION PLATE SPACING NOT SHOWN. FOR LOCATION OF CROSS FRAME CONNECTION PLATES, SEE DWG. NO. FR-01.
3. FOR BEARING STIFFENER AND CONNECTION PLATE DETAILS, SEE DWG. NO. BM-02.
4. FOR FIELD SPLICE DETAILS, SEE DWG. NO. BM-03.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	GIRDER ELEVATION	BM-01
				COUNTY NEW CASTLE	DESIGNED BY: PAM		SHEET NO. 193
					CHECKED BY: KL		TOTAL SHTS. 481

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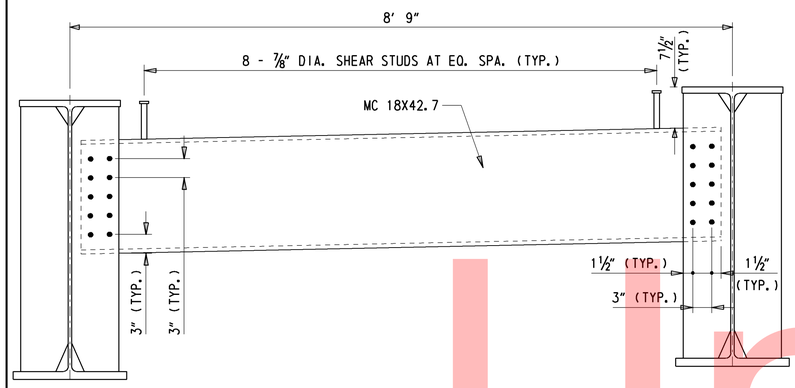
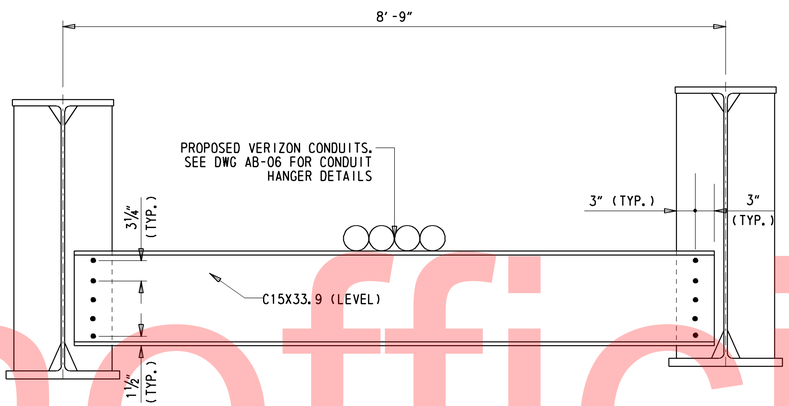


END DIAPHRAGM DETAILS

(AT ABUTMENTS)

1" = 1'-0"



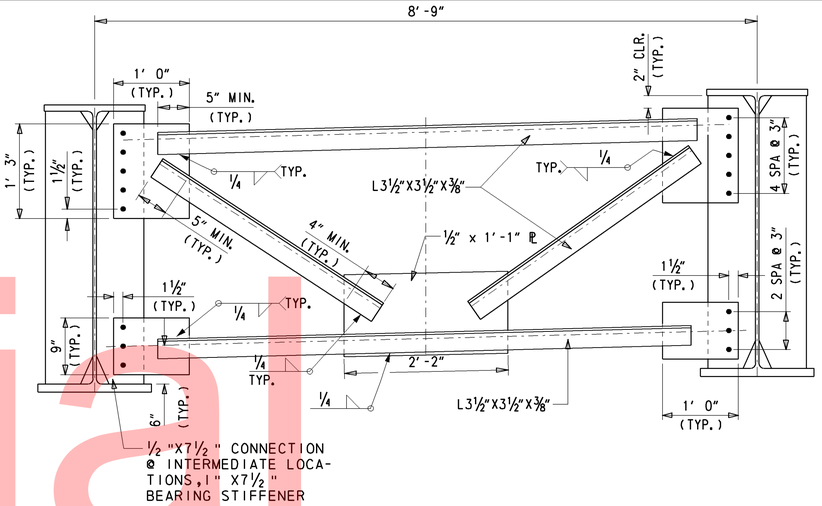
DIAPHRAGM BETWEEN GIRDERS 3 & 4 ONLY

(PHASE 1 STAGE 2)

1" = 1'-0"

NOTE:

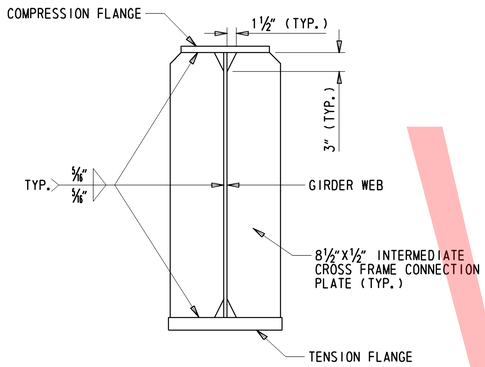
1. END DIAPHRAGMS BETWEEN GIRDERS 3 & 4 SHALL BE INSTALLED AT A 2% CROSS SLOPE TO MATCH THE DECK END HAUNCH. 8 SHEAR STUDS AT EQUAL SPACING SHALL BE WELDED TO THE C18X42.7 END DIAPHRAGMS. INTERMEDIATE C15X33.9 DIAPHRAGMS BETWEEN GIRDERS 3 & 4 SHALL BE INSTALLED AS PER THEIR RESPECTIVE DETAIL SHOWN.



INTERMEDIATE DIAPHRAGM DETAILS

(AT PIER AND INTERMEDIATE LOCATIONS)

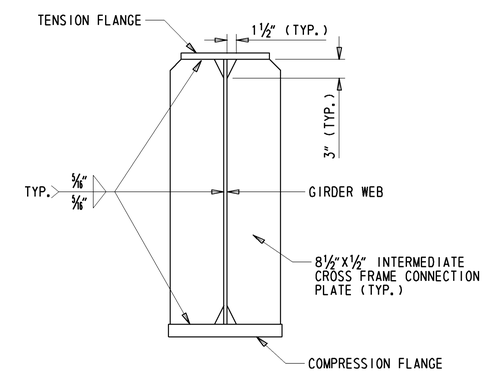
1" = 1'-0"



INTERMEDIATE DIAPHRAGM CONNECTION PLATES

(POSITIVE MOMENT ZONE)

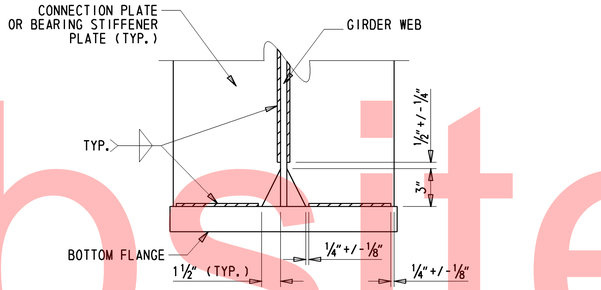
1" = 1'-0"



INTERMEDIATE DIAPHRAGM CONNECTION PLATES

(NEGATIVE MOMENT ZONE)

1" = 1'-0"

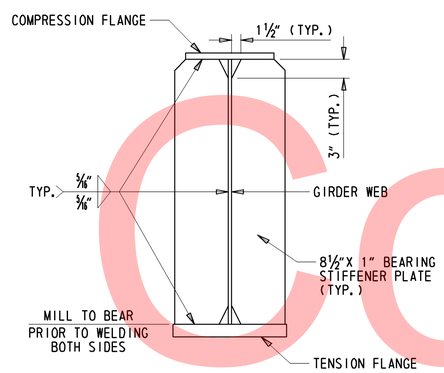


STIFFENER & CONNECTION PLATE WELD TERMINATION DETAIL

2" = 1'-0"

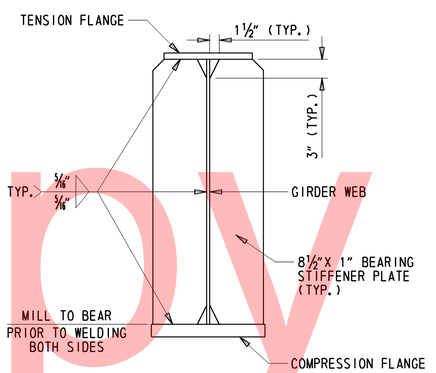
NOTES:

1. JOINT WELDING PROCEDURES, OVERALL FABRICATION METHODS, AND QUALITY CONTROL INSPECTION PROCEDURE SHALL BE INCLUDED AS WRITTEN PROCEDURE SPECIFICATIONS WITH THE SHOP PLAN SUBMISSION.
2. ALL BOLTED CONNECTIONS SHALL BE MADE WITH ⅞" DIAMETER ASTM A325 HIGH STRENGTH BOLTS, TYPE 3, EXCEPT WHERE GIRDER IS PRIMED . WHERE PRIMED, TYPE 1 BOLTS SHALL BE USED. TYPE 1 BOLTS MAY BE EITHER HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232, CLASS C, OR MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 50. NUTS TO BE USED WITH ASTM A 325 TYPE 3 BOLTS SHALL BE ASTM A 563, GRADE C3 OR DH3. WASHERS SHALL CONFORM TO ASTM F436. GALVANIZED, WASHERS SHALL BE OF THE SAME STANDARD AS THAT OF GALVANIZED BOLTS.
3. OVERSIZED HOLES SHALL BE USED ON DIAPHRAGM CONNECTORS.
4. ALL BOLTS ON DIAPHRAGMS SHALL BE FINGER TIGHT AT ERECTION. BOLTS ARE TO BE TORQUED BEFORE THE DECK CONCRETE IS POURED. DIAPHRAGMS CONNECTING PHASE 1 AND PHASE 2 GIRDERS (G4 AND G5), SHALL BE TORQUED AFTER PHASE 2 DECK CONCRETE HAS BEEN POURED.
5. DIRECTION OF WELDS IS NOT APPLICABLE IF STIFFENERS ARE FITTED WITH TACK WELDS.
6. INTERMEDIATE DIAPHRAGM CONNECTION PLATES ARE NOT REQUIRED ON FASCIA SIDE OF EXTERIOR GIRDERS.



ABUTMENT BEARING STIFFENER

1" = 1'-0"



PIER BEARING STIFFENER

1" = 1'-0"

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002 / COUNTY NEW CASTLE	BRIDGE NO. 1-678 / DESIGNED BY: PAM / CHECKED BY: KL

CROSS FRAME, STIFFENER & CONNECTION PLATE DETAILS

BM-02 | SHEET NO. 194 | TOTAL SHTS. 481

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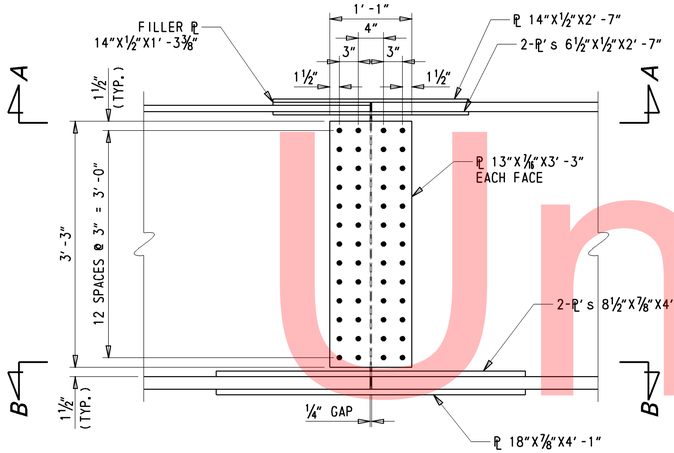
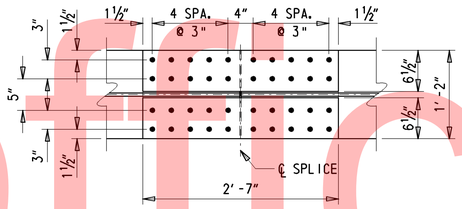
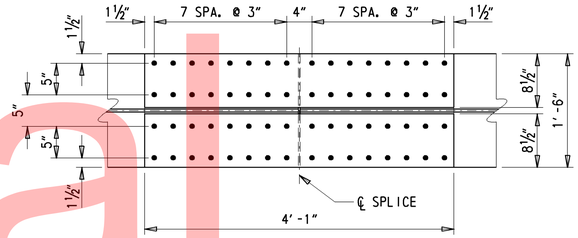


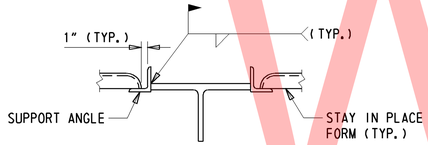
FIELD SPLICE DETAIL
(WEB)



SECTION A-A



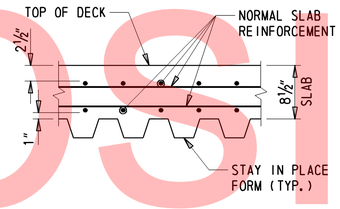
SECTION B-B



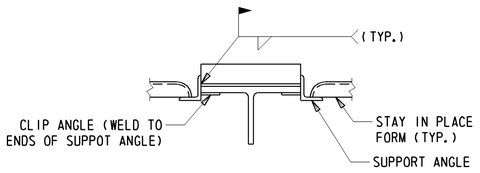
NOTE: ALL ANGLES, WELDS, AND INSERTS MUST BE DESIGNED BY THE CONTRACTOR AND SUBMITTED FOR APPROVAL

NO S.I.P. FORM BETWEEN GIRDERS 4 AND 5.

COMPRESSION FLANGE S.I.P. FORM DETAIL



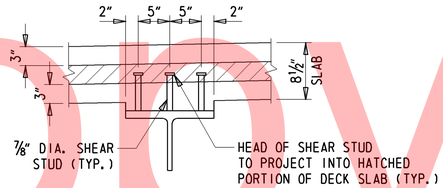
S.I.P. FORM PLACEMENT DETAIL



NOTE: ALL ANGLES, WELDS, AND INSERTS MUST BE DESIGNED BY THE CONTRACTOR AND SUBMITTED FOR APPROVAL

NO S.I.P. FORM BETWEEN GIRDERS 4 AND 5.

TENSION FLANGE S.I.P. FORM DETAIL



SHEAR STUD DETAIL

NOTES:

1. ALL BOLTED CONNECTIONS SHALL BE MADE WITH ⅞" DIAMETER ASTM A325 HIGH STRENGTH BOLTS, TYPE 3, EXCEPT WHERE GIRDER IS PRIMED. WHERE PRIMED, TYPE 1 BOLTS SHALL BE USED. TYPE 1 BOLTS MAY BE EITHER HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232, CLASS C, OR MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 50. NUTS TO BE USED WITH ASTM A 325 TYPE 3 BOLTS SHALL BE ASTM A 563, GRADE C3 OR DH3. WASHERS SHALL CONFORM TO ASTM F436. GALVANIZED, WASHERS SHALL BE OF THE SAME STANDARD AS THAT OF GALVANIZED BOLTS.
2. BOLT HEADS SHALL BE ON THE EXTERIOR FACE OF THE EXTERIOR GIRDERS AND THE BOTTOM OF THE BOTTOM FLANGES.
3. BOLT PITCH SHALL BE 3" UNLESS OTHERWISE NOTED.
4. MINIMUM EDGE DISTANCE IS 1½" UNLESS OTHERWISE SHOWN OR NOTED.
5. FLANGE AND WEB SPLICES SHALL BE LOCATED WHERE SHOWN ON PLANS. FIELD SPLICE DESIGNS ARE BASED ON CLASS A SURFACE (UNPAINTED CLEAN MILL SCALE, AND BLASTED-CLEANED SURFACES WITH CLASS A COATING). MINOR CHANGES IN LOCATION, ALONG TOGETHER WITH ANY ADDITIONAL SPLICES REQUESTED, SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. LENGTHS OF PLATES SHALL BE CONSISTENT WITH THE LENGTHS OF PLATES AVAILABLE FROM THE MILL. LOCATIONS SHALL BE AT POINTS OF REDUCED TENSILE STRESS. SHOP WEB SPLICES SHALL BE AT LEAST 12" FROM SHOP FLANGE SPLICES AND/OR CONNECTION PLATES FOR CROSS FRAMES.
6. ALLOWANCES SHALL BE MADE IN THE SHOP FOR SHRINKAGE DUE TO WELDING AND BURNING. IF UNEVEN SHRINKAGE IS ANTICIPATED, CAMBER ORDINATES SHALL BE ADJUSTED ACCORDINGLY.
7. FLANGE AND WEB SHOP SPLICES ARE TO BE COMPLETED AND WELDMENTS INSPECTED BEFORE FITTING AND WELDING FLANGES TO WEBS. FABRICATION METHODS SHALL BE INCLUDED IN THE WRITTEN WELDING PROCEDURE SPECIFICATIONS OF THE SHOP DRAWING.
8. STAY-IN-PLACE FORMS SHALL NOT BE WELDED TO FLANGE IN THE TENSION ZONE.
9. STAY IN PLACE FORMS SHALL BE VERTICALLY ADJUSTED TO ATTAIN FINISHED LINES AND GRADES REQUIRED ON THE PLANS.
10. BAY BETWEEN GIRDERS 4 AND 5 SHALL BE FORMED. NO S.I.P. FORMS SHALL BE USED AT THIS LOCATION.
11. SHEAR CONNECTOR STUDS SHALL BE ASHTO M 169, GRADE 1015, 1018, OR 1020, EITHER SEMI OR FULLY KILLED.

NOTES:

1. ALL GIRDERS SHALL BE CAMBERED FOR DEAD LOAD ORDINATES TO THE DIMENSIONS SHOWN ON THESE PLANS. THE CAMBER TOLERANCE IS ZERO UNDER TO ¾ INCH OVER.

LEGEND:

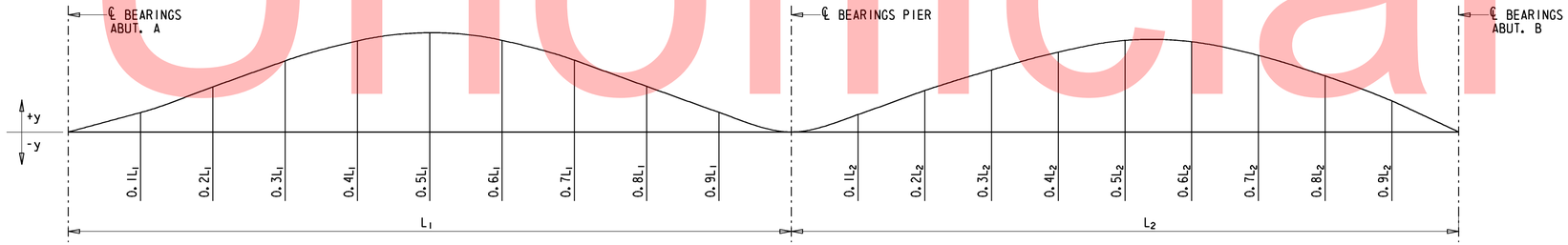
DLS = DENOTES DEFLECTION DUE TO STRUCTURAL STEEL

DLC = DENOTES DEFLECTION DUE TO CONCRETE DECK SLAB, HAUNCH, & S.I.P. FORMS

SDL = DENOTES DEFLECTION DUE TO BARRIER, SAFETY FENCE & FUTURE WEARING SURFACE

TD&C = DENOTES TOTAL DEAD LOAD DEFLECTION & CAMBER

VCO = DENOTES CAMBER FOR VERTICAL CURVE ORDINATE DUE TO ROADWAY PROFILE



DEFLECTION AND TOTAL CAMBERS (INCHES)

PROPOSED GIRDERS		℄ BRG. ABUT. A	0.1L1	0.2L1	0.3L1	0.4L1	0.5L1	0.6L1	0.7L1	0.8L1	0.9L1	℄ BRG. PIER	0.1L2	0.2L2	0.3L2	0.4L2	0.5L2	0.6L2	0.7L2	0.8L2	0.9L2	℄ BRG. ABUT. B
GIRDER 1	DLS	0	5/16	1	1 5/16	1 7/16	1 3/8	1 3/16	7/8	1/2	3/16	0	1/16	3/16	7/16	5/8	3/4	11/16	3/4	5/8	3/8	0
	DLC	0	1 5/16	2 3/8	3 1/16	3 7/16	3 5/16	2 11/16	2 1/16	1 1/4	7/16	0	1/16	7/16	1	1 1/2	1 11/16	1 5/16	1 1/16	1 7/16	13/16	0
	SDL	0	5/16	5/16	3/4	11/16	11/16	9/16	1/2	5/16	1/8	0	1/16	3/16	5/16	7/16	1/2	1/2	1/2	3/8	1/4	0
	TD & C	0	2 3/16	3 5/16	5 1/8	5 11/16	5 1/2	4 11/16	3 13/16	2 1/16	3/4	0	3/16	11/16	1 3/4	2 9/16	3 1/16	3 1/4	3 1/16	2 1/16	1 7/16	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2 3/16	3 5/16	5 1/8	5 11/16	5 1/2	4 11/16	3 13/16	2 1/16	3/4	0	3/16	11/16	1 3/4	2 9/16	3 11/16	3 1/4	3 1/16	2 1/16	1 7/16	0
GIRDER 2	DLS	0	5/16	1	1 5/16	1 7/16	1 1/16	1 1/4	7/8	5/8	3/16	0	1/16	1/4	7/16	5/8	11/16	7/8	13/16	5/8	3/8	0
	DLC	0	1 3/8	2 1/2	3 1/4	3 5/8	3 1/2	3	2 1/16	1 5/16	1/2	0	1/8	1/2	1 1/16	1 1/16	2	2 1/8	1 15/16	1 1/2	7/8	0
	SDL	0	1/4	3/8	1/2	5/16	5/16	1/2	3/8	1/4	1/8	0	1/16	1/8	3/16	5/16	5/16	3/8	5/16	1/4	3/16	0
	TD & C	0	2 3/16	3 3/8	5 1/16	5 5/8	5 1/2	4 3/4	3 7/16	2 1/8	13/16	0	1/4	7/8	1 11/16	2 1/2	3 1/8	3 3/8	3 1/16	2 3/8	1 7/16	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2 3/16	3 3/8	5 1/16	5 5/8	5 1/2	4 3/4	3 7/16	2 1/8	13/16	0	1/4	7/8	1 11/16	2 1/2	3 1/8	3 3/8	3 1/16	2 3/8	1 7/8	0
GIRDER 3	DLS	0	5/16	1 1/16	1 3/8	1 1/2	1 1/16	1 1/4	15/16	9/16	3/16	0	1/16	1/4	7/16	11/16	11/16	7/8	15/16	5/8	3/8	0
	DLC	0	1 7/16	2 5/8	3 1/16	3 11/16	3 11/16	3 1/8	2 3/16	1 3/16	1/2	0	1/8	5/16	1 1/8	1 11/16	2 1/16	2 1/4	2 1/16	1 5/8	7/8	0
	SDL	0	1/8	1/4	5/16	3/8	3/8	5/16	1/4	1/8	1/16	0	1/16	1/16	1/8	3/16	3/16	3/16	3/16	3/16	1/8	0
	TD & C	0	2 1/8	3 5/16	5 1/8	5 11/16	5 1/2	4 11/16	3 1/2	2 1/16	3/4	0	1/4	7/8	1 11/16	2 9/16	3 1/16	3 5/16	3 1/16	2 1/16	1 3/8	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2 1/8	3 5/16	5 1/8	5 11/16	5 1/2	4 11/16	3 1/2	2 1/16	3/4	0	1/4	7/8	1 11/16	2 9/16	3 1/16	3 5/16	3 1/16	2 1/16	1 3/8	0
GIRDER 4	DLS	0	5/16	1 1/16	1 3/8	1 1/2	1 1/2	1 1/4	15/16	9/16	3/16	0	1/16	1/4	7/16	11/16	11/16	7/8	15/16	5/8	3/8	0
	DLC	0	1 1/2	2 11/16	3 1/2	3 7/8	3 3/4	3 1/4	2 3/8	1 3/8	1/2	0	1/8	9/16	1 1/8	1 11/16	2 1/8	2 1/4	2 1/8	1 5/8	15/16	0
	SDL	0	1/8	1/8	3/16	3/16	3/16	3/16	1/8	1/8	1/16	0	0	1/16	1/16	1/16	1/8	1/8	1/8	1/16	1/16	0
	TD & C	0	2 3/16	3 1/8	5 1/16	5 5/16	5 1/16	4 11/16	3 1/16	2 1/16	3/4	0	3/16	7/8	1 5/8	2 1/16	3 1/16	3 1/4	3 1/16	2 5/16	1 3/8	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2 3/16	3 3/8	5 1/16	5 5/16	5 7/16	4 11/16	3 7/16	2 1/16	3/4	0	3/16	7/8	1 5/8	2 7/16	3 1/16	3 1/4	3 1/16	2 5/16	1 3/8	0
GIRDER 5	DLS	0	5/16	1 1/16	1 3/8	1 1/2	1 1/2	1 1/4	15/16	9/16	1/4	0	1/16	1/4	7/16	11/16	7/8	7/8	11/16	5/8	3/8	0
	DLC	0	1 1/2	2 11/16	3 5/16	3 7/16	3 11/16	3 1/4	2 3/8	1 3/8	1/2	0	1/8	5/16	1 1/8	1 3/4	2 1/8	2 5/16	2 1/8	1 5/8	15/16	0
	SDL	0	1/16	1/8	1/8	3/16	3/16	1/8	1/8	1/16	1/16	0	0	1/16	1/16	1/16	1/16	1/16	1/16	1/16	1/16	0
	TD & C	0	2 1/8	3 1/8	5 1/16	5 5/8	5 1/2	4 5/8	3 7/16	2	11/16	0	3/16	7/8	1 5/8	2 1/2	3 1/16	3 1/4	3	2 5/16	1 3/8	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2 1/8	3 1/8	5 1/16	5 5/8	5 1/2	4 5/8	3 7/16	2	11/16	0	3/16	7/8	1 5/8	2 1/2	3 1/16	3 1/4	3	2 5/16	1 3/8	0

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT	BRIDGE NO.	1-678
T201109002	DESIGNED BY: PAM	
COUNTY	CHECKED BY: KL	
NEW CASTLE		

CAMBER DETAILS – 1

CT-01

SHEET NO.	TOTAL SHTS.
196	481

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NOTES:

1. ALL GIRDERS SHALL BE CAMBERED FOR DEAD LOAD ORDINATES TO THE DIMENSIONS SHOWN ON THESE PLANS. THE CAMBER TOLERANCE IS ZERO UNDER TO ¾ INCH OVER.

LEGEND:

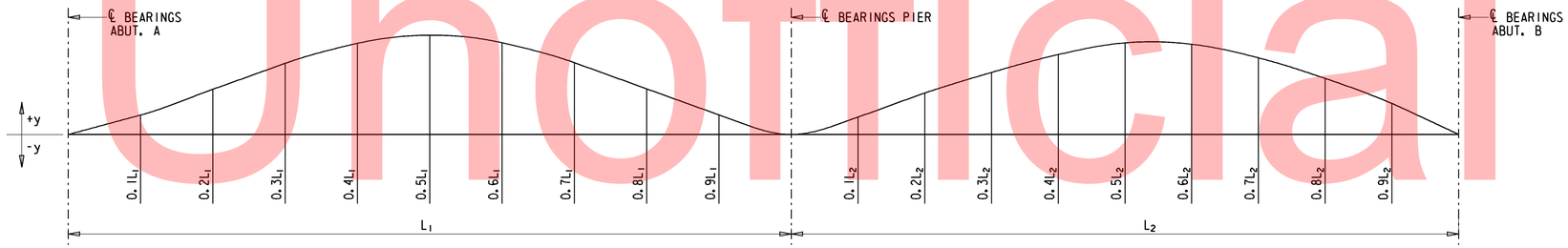
DLS = DENOTES DEFLECTION DUE TO STRUCTURAL STEEL

DLC = DENOTES DEFLECTION DUE TO CONCRETE DECK SLAB, HAUNCH, & S.I.P. FORMS

SDL = DENOTES DEFLECTION DUE TO BARRIER, SAFETY FENCE & FUTURE WEARING SURFACE

TD&C = DENOTES TOTAL DEAD LOAD DEFLECTION & CAMBER

VCO = DENOTES CAMBER FOR VERTICAL CURVE ORDINATE DUE TO ROADWAY PROFILE



DEFLECTION AND TOTAL CAMBERS (INCHES)

PROPOSED GIRDERS		℄ BRG. ABUT. A	0.1L_1	0.2L_1	0.3L_1	0.4L_1	0.5L_1	0.6L_1	0.7L_1	0.8L_1	0.9L_1	℄ BRG. PIER	0.1L_2	0.2L_2	0.3L_2	0.4L_2	0.5L_2	0.6L_2	0.7L_2	0.8L_2	0.9L_2	℄ BRG. ABUT. B
GIRDER 6	DLS	0	9/16	1 11/16	1 3/8	1 1/2	1 1/2	1 1/4	15/16	9/16	3/16	0	1/16	1/4	7/16	11/16	15/16	7/8	15/16	5/8	3/8	0
	DLC	0	1 1/2	2 11/16	3 1/2	3 7/8	3 11/16	3 1/4	2 3/8	1 3/8	1/2	0	1/8	9/16	1 1/8	1 11/16	2 1/8	2 1/4	2 1/8	1 5/8	7/8	0
	SDL	0	1/8	1/8	3/16	3/16	3/16	3/16	1/8	1/8	1/16	0	0	1/16	1/16	1/16	1/8	1/8	1/8	1/16	1/16	0
	TD & C	0	2 3/16	3 7/8	5 1/16	5 5/16	5 1/2	4 11/16	3 3/16	2 1/16	3/4	0	3/16	7/8	1 5/8	2 7/16	3 1/16	3 1/4	3 1/16	2 5/16	1 5/16	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2 3/16	3 7/8	5 1/16	5 5/16	5 1/2	4 11/16	3 7/16	2 1/16	3/4	0	3/16	7/8	1 5/8	2 7/16	3 1/16	3 1/4	3 1/16	2 5/16	1 5/16	0
GIRDER 7	DLS	0	9/16	1 1/16	1 3/8	1 1/2	1 7/16	1 1/4	15/16	9/16	3/16	0	1/16	1/4	7/16	11/16	15/16	7/8	15/16	5/8	3/8	0
	DLC	0	1 7/16	2 5/8	3 7/16	3 11/16	3 11/16	3 3/16	2 5/16	1 3/8	1/2	0	1/8	1/2	1 1/16	1 5/8	2 1/16	2 3/16	2	1 9/16	7/8	0
	SDL	0	1/8	1/4	5/16	3/8	5/16	5/16	1/4	1/8	1/16	0	1/16	1/16	1/8	3/16	3/16	3/16	3/16	1/8	1/8	0
	TD & C	0	2 1/8	3 5/16	5 1/8	5 11/16	5 7/16	4 3/4	3 1/2	2 1/16	3/4	0	1/4	15/16	1 5/8	2 1/2	3 1/16	3 1/4	3	2 5/16	1 3/8	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2 1/8	3 5/16	5 1/8	5 11/16	5 7/16	4 3/4	3 1/2	2 1/16	3/4	0	1/4	15/16	1 5/8	2 1/2	3 1/16	3 1/4	3	2 5/16	1 3/8	0
GIRDER 8	DLS	0	9/16	1	1 5/16	1 7/16	1 7/16	1 1/4	7/8	9/16	3/16	0	1/16	1/4	7/16	5/8	13/16	7/8	13/16	5/8	3/8	0
	DLC	0	1 3/8	2 9/16	3 5/16	3 11/16	3 9/16	3 1/16	2 1/4	1 5/16	1/2	0	1/16	1/2	1	1 9/16	1 15/16	2 1/16	1 15/16	1 1/2	13/16	0
	SDL	0	1/4	3/8	1/2	9/16	9/16	1/2	3/8	1/4	1/8	0	1/16	1/8	3/16	1/4	5/16	3/8	5/16	1/4	3/16	0
	TD & C	0	2 3/16	3 5/16	5 1/8	5 11/16	5 9/16	4 11/16	3 1/2	2 1/8	13/16	0	3/16	7/8	1 5/8	2 7/16	3 1/16	3 5/16	3 1/16	2 3/8	1 3/8	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2 3/16	3 5/16	5 1/8	5 11/16	5 9/16	4 11/16	3 1/2	2 1/8	13/16	0	3/16	7/8	1 5/8	2 7/16	3 1/16	3 5/16	3 1/16	2 3/8	1 3/8	0
GIRDER 9	DLS	0	9/16	1	1 5/16	1 7/16	1 3/8	1 3/16	7/8	1/2	3/16	0	1/16	3/16	7/16	5/8	3/4	13/16	3/4	5/8	5/16	0
	DLC	0	1 5/16	2 1/16	3 1/8	3 1/2	3 3/8	2 7/8	2 1/8	1 1/4	1/2	0	1/16	7/16	15/16	1 1/16	1 3/4	1 7/8	1 3/4	1 1/8	3/4	0
	SDL	0	5/16	9/16	3/4	15/16	15/16	11/16	1/2	5/16	1/8	0	1/16	3/16	5/16	7/16	1/2	1/2	1/2	3/8	1/4	0
	TD & C	0	2 3/16	4	5 3/16	5 3/4	5 5/16	4 3/4	3 1/2	2 1/16	13/16	0	3/16	13/16	1 11/16	2 1/2	3	3 3/16	3	2 3/8	1 5/16	0
	VCO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TD & C + VCO	0	2 3/16	4	5 3/16	5 3/4	5 5/16	4 3/4	3 1/2	2 1/16	13/16	0	3/16	13/16	1 11/16	2 1/2	3	3 3/16	3	2 3/8	1 5/16	0

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

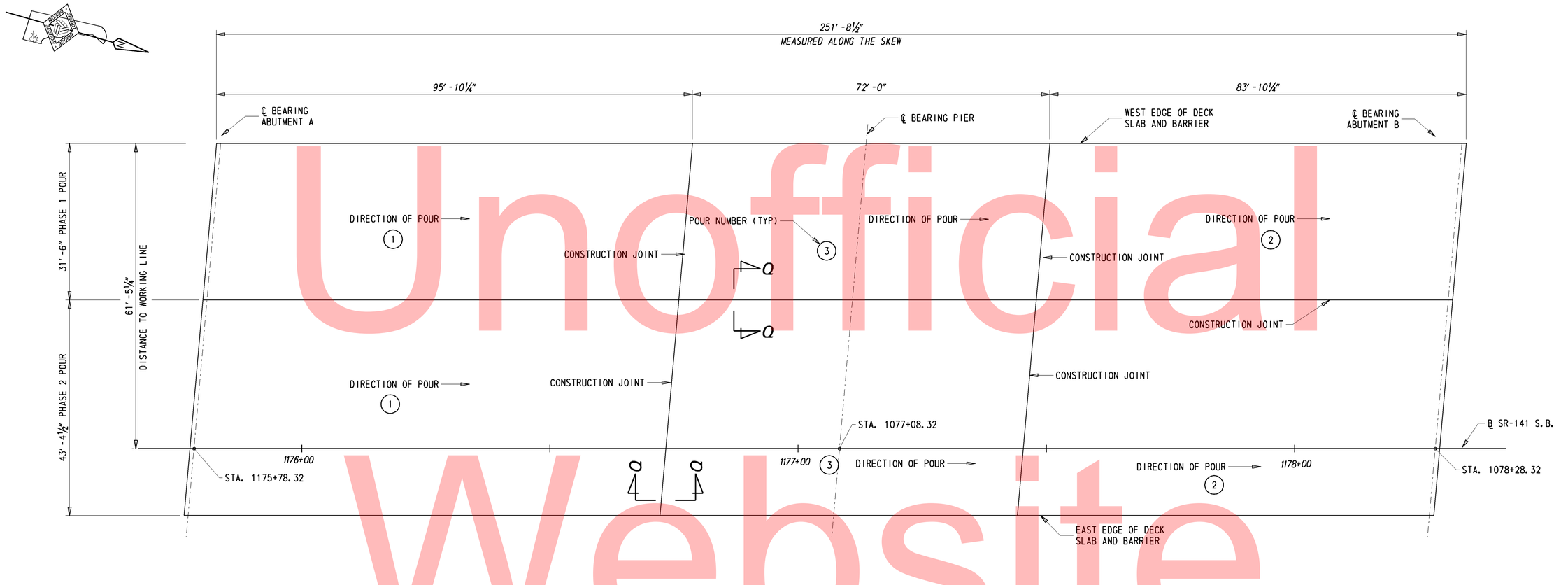
NOT TO SCALE

I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS

CONTRACT T201109002
COUNTY NEW CASTLE
BRIDGE NO. 1-678
DESIGNED BY: KRL
CHECKED BY: PAM

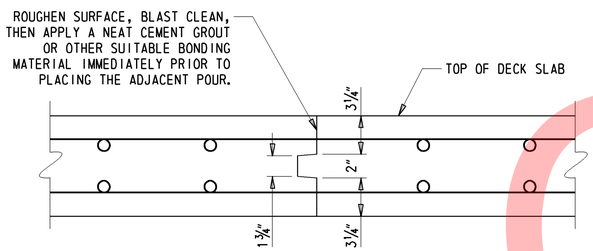
CAMBER DETAILS – 2

CT-02
SHEET NO. 197
TOTAL SHTS. 481



DECK SLAB POURING SEQUENCE

½" = 1'-0"



SECTION Q-Q

20" = 1'-0"

NOTES:

1. THE CONTRACTOR SHALL FOLLOW THE POURING SEQUENCE SHOWN ON THESE PLANS. ANY OTHER ALTERNATE POURING SEQUENCE MUST BE APPROVED BY THE ENGINEER.
2. THE POURING SEQUENCE FOR THE DECK SLAB SHALL BE MADE IN THE NUMBERED ORDER AND DIRECTION OF POUR INDICATED. THE PREVIOUS POUR MUST ATTAIN 50% OF THE REQUIRED 28 DAY STRENGTH PRIOR TO THE START OF THE NEXT NUMBERED POUR. THE CONTRACTOR MAY REVERSE THE ORDER OF POURS 1 AND 2.
3. FOR FINISHED ROADWAY ELEVATIONS, SEE DWG. NO. FD-01.
4. FOR DECK SLAB REINFORCEMENT, SEE DWG. NOS. DK-01 AND DK-02.
5. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

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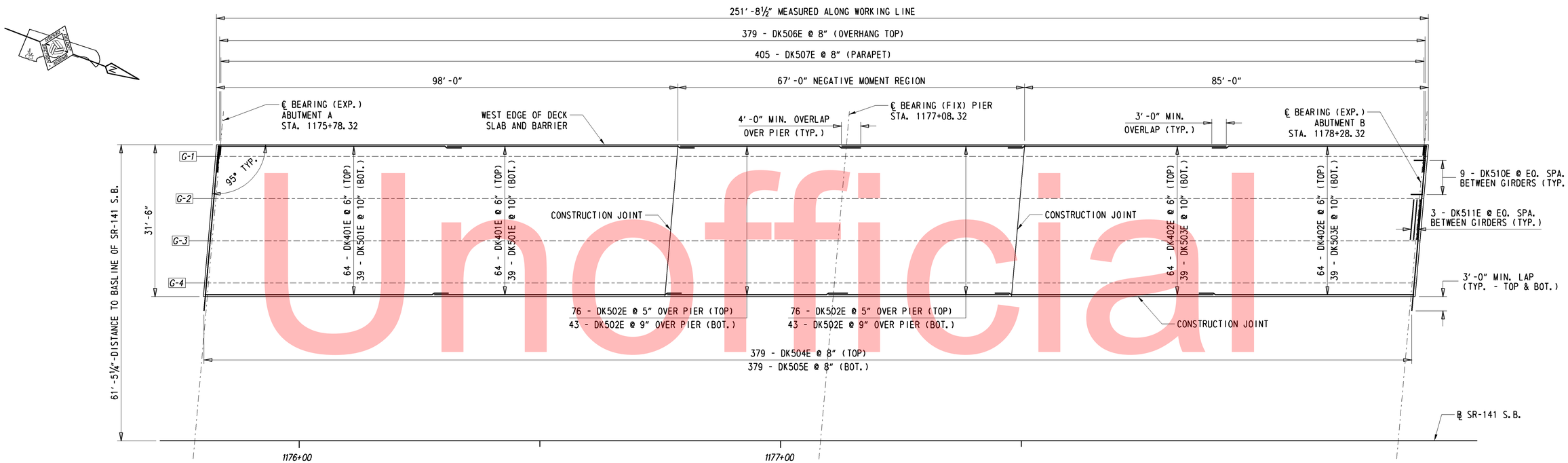
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	DECK SLAB POURING SEQUENCE
				COUNTY NEW CASTLE	DESIGNED BY: PAM	
					CHECKED BY: KL	

PS-01

SHEET NO. 198

TOTAL SHTS. 481



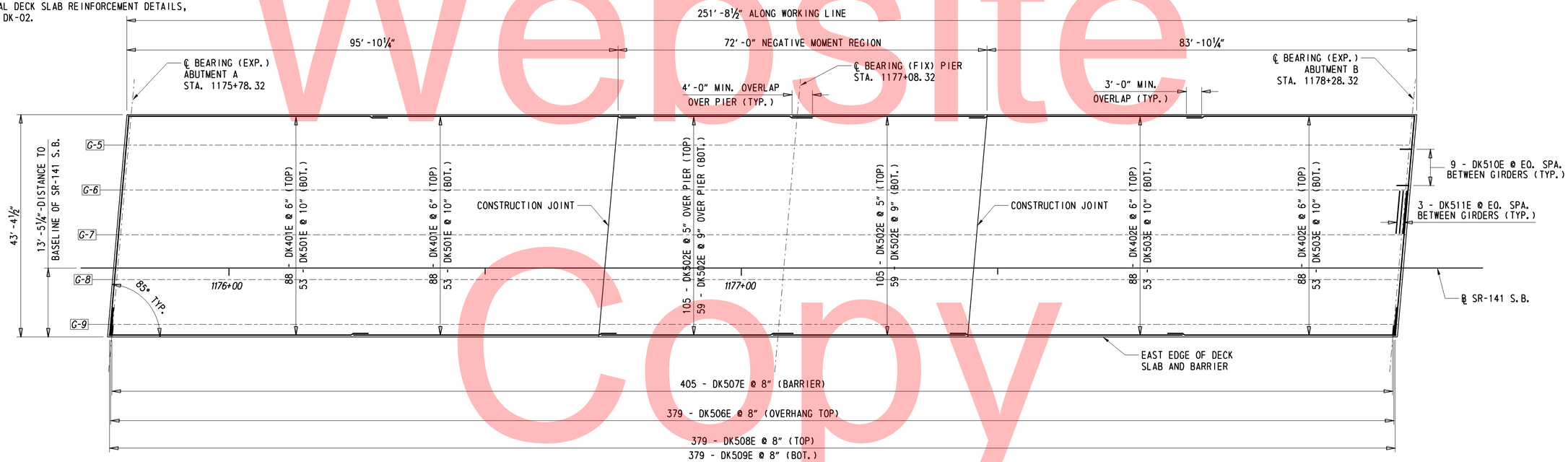
DECK REINFORCEMENT PLAN PHASE-1

SCALE: ⅛″ = 1′-0″

NOTES:

1. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS, AND BARRIERS TO ACCOUNT FOR 2″ OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.

2. FOR ADDITIONAL DECK SLAB REINFORCEMENT DETAILS, SEE DWG. NO. DK-02.



DECK REINFORCEMENT PLAN PHASE-2

SCALE: ⅛″ = 1′-0″

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002	BRIDGE NO. 1-678	DECK SLAB REINFORCEMENT PLAN
				COUNTY NEW CASTLE	DESIGNED BY: NED	
					CHECKED BY: PAM	

DK-01 | SHEET NO. 199 | TOTAL SHTS. 481

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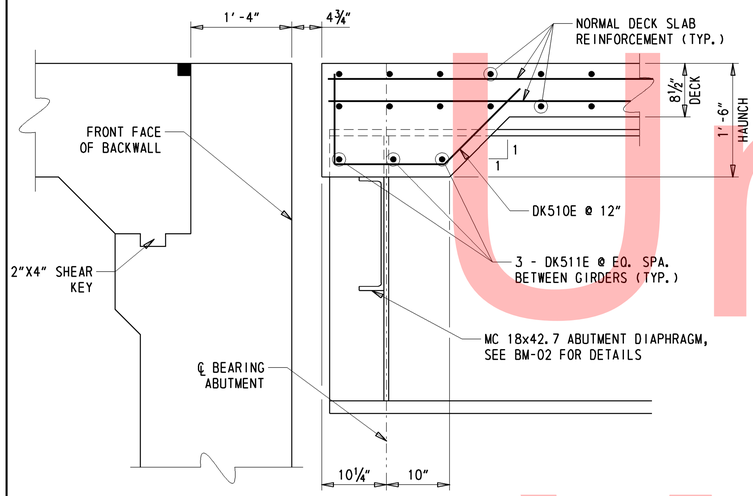
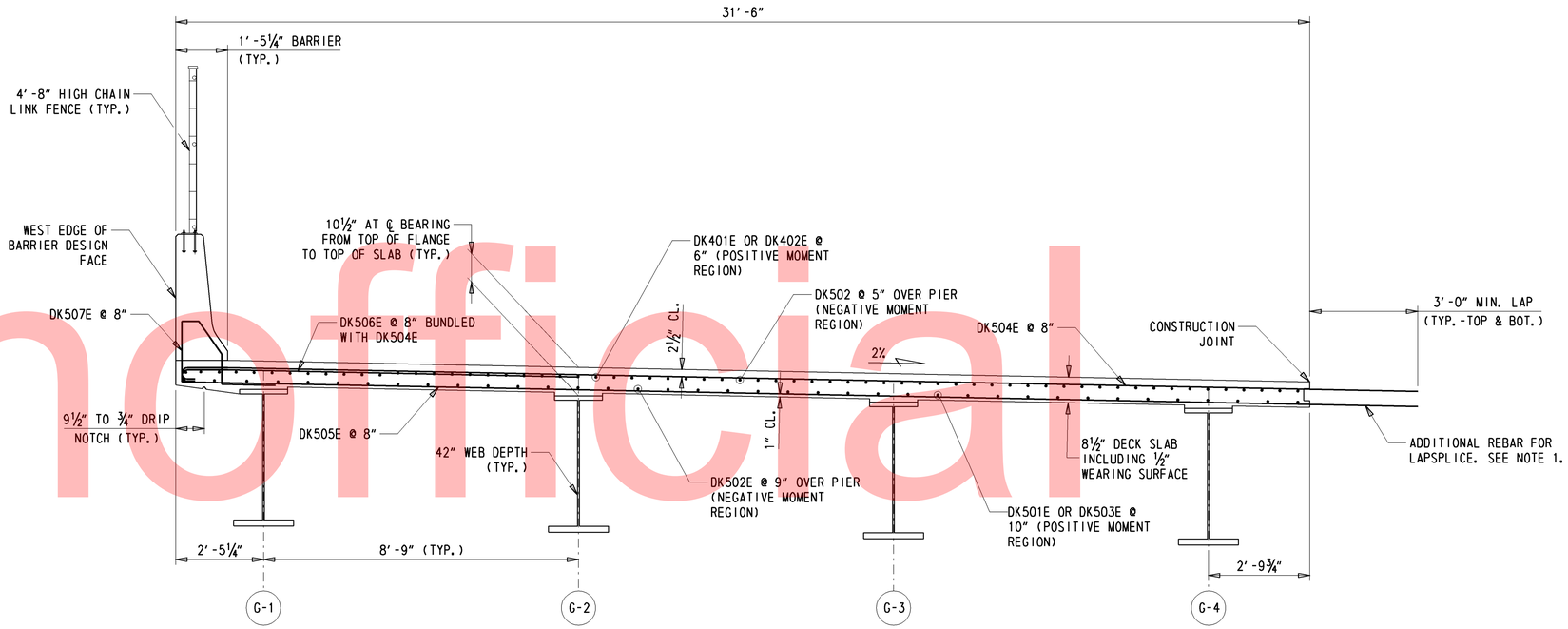
NOTES:

1. BAY BETWEEN GIRDERS 4 AND 5 SHALL BE FORMED. NO S.I.P. FORMS SHALL BE USED AT THIS LOCATION.
2. ALL DIMENSIONS SHOWN ARE TO THE EXTERIOR DESIGN FACE OF THE ABUTMENTS, WINGWALLS, AND BARRIERS TO ACCOUNT FOR 2" OF CLEAR COVER FOR EPOXY COATED REBAR. THESE DIMENSIONS DO NOT TAKE INTO ACCOUNT THE EXTRA THICKNESS NEEDED TO ACHIEVE THE FORMLINED FINISH AS SHOWN ON THE PLANS.
3. SEE DWG AS-01 SHEET 202 FOR APPROACH SLAB DETAILS
4. SEE DWG EX-01 SHEET 205 FOR EXPANSION JOINT DETAILS



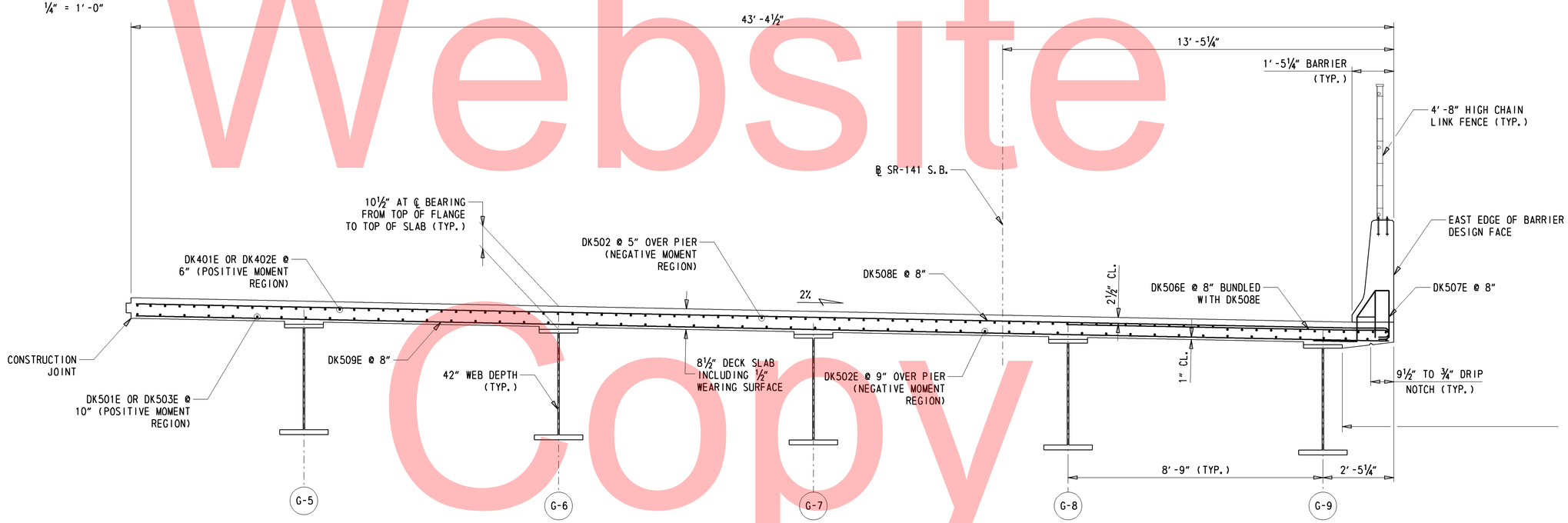
TYPICAL END HAUNCH SECTION AT ABUTMENTS

¼" = 1'-0"



TYPICAL DECK REINFORCEMENT SECTION PHASE-1

½" = 1'-0"



TYPICAL DECK REINFORCEMENT SECTION PHASE-2

½" = 1'-0"

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	I-95 AND SR 141 INTERCHANGE, RAMPS G & F IMPROVEMENTS	CONTRACT T201109002 / COUNTY NEW CASTLE	BRIDGE NO. 1-678 / DESIGNED BY: NED / CHECKED BY: PAM	DECK SLAB REINFORCEMENT DETAILS	DK-02 / SHEET NO. 200 / TOTAL SHTS. 481

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