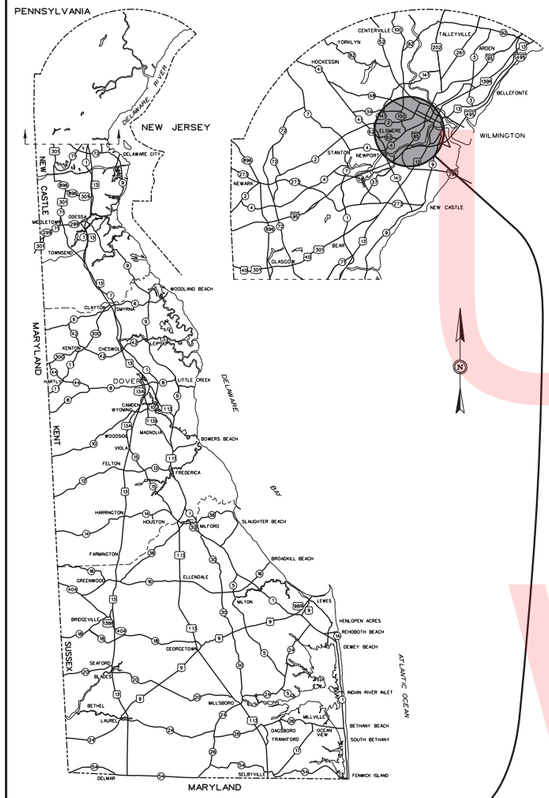


GENERAL LOCATION OF CONTRACT

THE STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY UNITS

CONSTRUCTION AND RIGHT-OF-WAY PLANS FOR:

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RAILROAD

CONSTRUCTION CONTRACT NUMBER: T201507403

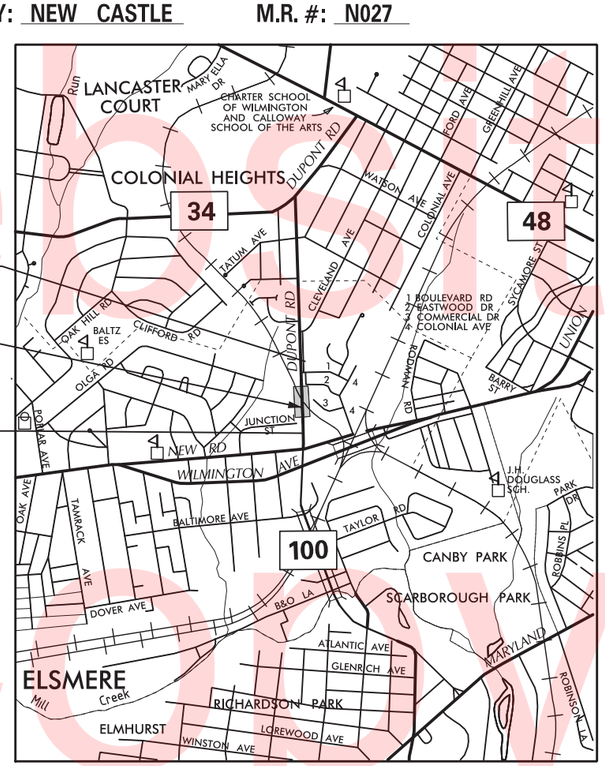
FEDERAL AID PROJECT NUMBER: EBHOS-N027(03)

COUNTY: NEW CASTLE M.R. #: N027

END CONTRACT STATION 53+75.02

BR 1-634

BEGIN CONTRACT STATION 43+50.00



LOCATION MAP

SCALE
0 1000 2000 3000
FEET

DESIGN DESIGNATION

FUNCTIONAL CLASS: MINOR ARTERIAL	D.H.V. PROJECTED: 638	YEAR: 2040
TYPE OF CONSTRUCTION: BRIDGE REHABILITATION	DESIGN SPEED: 30 M.P.H.	
A.A.D.T. CURRENT: 8424 YEAR: 2015	TRUCKS: 11%	
A.A.D.T. PROJECTED: 10000 YEAR: 2040	DIRECTION OF DISTRIBUTION: 58%	

INDEX OF SHEETS

TOTAL SHEETS: 71

APPROVED DESIGN EXCEPTIONS

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE

ADDENDA & REVISIONS

DESCRIPTION	NAME & DATE

ASSOCIATED CONTRACTS

CONTRACT NO.	CONTRACT NAME
1533	CONSTRUCTION OF CONTRACT NO 1533 STA 41+27.00 TO STA 86+50.00
88-074-06	BRIDGE NO's, 74-C, 191, 531, 634, AND 655 IN N.C.CO. SLOPE PAVING REPAIRS

PREPARED BY
THE CONSULTING FIRM OF

AECOM TECHNICAL SERVICES, INC
1700 MARKET STREET, SUITE 1600
PHILADELPHIA, PA 19103
(215) 735-0832

NEAL A. SHEALD LICENSE No. 16934 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED 05/03/2017
DATE

RECOMMENDED

AREA ENGINEER, CONSTRUCTION 08/04/2017 DATE

GROUP ENGINEER, CONSTRUCTION 08/04/2017 DATE

ASSISTANT DIRECTOR, CONSTRUCTION 08/04/2017 DATE

PREPARED BY
THE CONSULTING FIRM OF

PENNONI
121 CONTINENTAL DRIVE, SUITE 207
NEWARK, DE 19713
(302) 351-5243

PHILIP ANDREW HORSEY REGISTERED No. 12429 DELAWARE PROFESSIONAL ENGINEER
SEAL

PLAN SHEETS
60-62

RECOMMENDED 05/03/2017
DATE

RECOMMENDED

STORMWATER ENGINEER

05/12/2017
DATE

VINCENT W. DAVIS REGISTERED No. 12898 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED

SQUAD MANAGER, BRIDGE DESIGN

05/08/2017
DATE

STEPHEN DIRK RICHTER REGISTERED NO. 9235 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED

BRIDGE DESIGN ENGINEER

08/04/2017
DATE

JASON N. HASTINGS REGISTERED No. 13545 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED

ASSISTANT DIRECTOR, BRIDGE

08/04/2017
DATE

JASON N. HASTINGS REGISTERED No. 13545 DELAWARE PROFESSIONAL ENGINEER
SEAL

APPROVED

CHIEF ENGINEER

08/07/2017
DATE

ROBERT BRIAN MCCLEARY REGISTERED No. 8567 DELAWARE PROFESSIONAL ENGINEER
SEAL

LAST REVISED: 10/06/2015
\\USPHLIFP002\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T07 - REHAB BR.1-634\900 CAD\20 SHEETS\CIVIL\TC00.DGN

EXISTING SYMBOLS

DRAINAGE

—∞—	DITCH OR STREAM CENTERLINE
—→—	DIRECTIONAL STREAM FLOW ARROW
C.B. / D.I.	DRAINAGE INLET
J.B.	DRAINAGE JUNCTION BOX
Ⓓ	DRAINAGE MANHOLE
SIZE/TYPE LABEL	DRAINAGE PIPE AND FLOW ARROW
	DRAINAGE PIPE HEADWALL
	RIPRAP - AREA FEATURE
	RIPRAP - LINEAR FEATURE

MANMADE ROADSIDE FEATURES

	BOLLARD - STEEL POLE
	BOLLARD - WOOD POST
(TYPE LABEL)	CURB
(TYPE LABEL)	CURB AND GUTTER
—x—	FENCE - CHAINLINK OR STRANDED
—o—	FENCE - STOCKADE OR SPLIT RAIL
F.P.	FLAG POLE
	GUARDRAIL - STEEL BEAM
	GUARDRAIL - WIRE ROPE
LAMP	LAMP AND POST - RESIDENTIAL
MB	MAILBOX
P.M.	PARKING METER AND POST
	PAVEMENT - FLEXIBLE
	PAVEMENT - RIGID
	PILE - BRIDGE
	PILLAR OR MISCELLANEOUS POST
	TRAFFIC SIGN AND POST
	WALL - BRICK OR BLOCK
	WALL - STONE

NATURAL ROADSIDE FEATURES

	GRASS LAWN
	HEDGEROW OR THICKET
	MARSH BOUNDARY LINE
	TREE - CONIFEROUS
	TREE - DECIDUOUS
	TREE STUMP
	SHRUBBERY
WL	DELINEATED WETLAND BOUNDARY LINE
	WOODS LINE BOUNDARY

RIGHT-OF-WAY SYMBOLS

C.M.	PROPERTY MARKER - CONCRETE MON.
I.P.	PROPERTY MARKER - IRON PIPE
100+00	HISTORIC RIGHT-OF-WAY BASELINE
	EXISTING RIGHT-OF-WAY
PD	EXISTING PROPERTY LINE
EASEMENT TYPE	EXISTING EASEMENT
DA	EXISTING DENIAL OF ACCESS
R/W-DA	EXISTING R/W & DENIAL OF ACCESS

SURVEY CONTROL & MONUMENTATION

B.M.	SURVEY BENCHMARK LOCATION
T.P.	SURVEY TIE POINT LOCATION
△	SURVEY TRAVERSE POINT
⊙	POINT OF CURVATURE OR TANGENCY
⊚	POINT OF INTERSECTING TANGENTS

UTILITY

	SOIL BORING LOCATION
	UTILITY TEST HOLE LOCATION
TV	CABLE TV DISTRIBUTION BOX
Ⓔ	ELECTRIC MANHOLE
EM	ELECTRIC METER
E	ELECTRIC TRANSFORMER
	POLE MOUNTED LUMINAIRE
Ⓖ	GAS MANHOLE
G.M.	GAS METER
G.V.	GAS VALVE
G.P.	GAS PUMP - SERVICE STATION
	RAILROAD TRACKS
Ⓢ	SANITARY SEWER MANHOLE
S.V.	SANITARY SEWER VALVE
VENT	SANITARY SEWER VENT OR CLEANOUT
S.D.F.	SEPTIC DRAIN FIELD
B	TELEPHONE BOOTH
Ⓣ	TELEPHONE MANHOLE
T	TELEPHONE TEST POINT
J.W.	TRAFFIC - CONDUIT JUNCTION WELL
	TRAFFIC - LIGHT POLE AND BASE
	TRAFFIC - PEDESTRIAN POLE & BASE
	TRAFFIC - SIGNAL CABINET & BASE
⊗	TRAFFIC - SIGNAL POLE AND BASE
U	UTILITY BOX
	UTILITY POLE GUY WIRE ANCHOR
	UTILITY POLE
F.H.	WATER - FIRE HYDRANT
W.M.	WATER METER
W.V.	WATER VALVE
WELL	WELL HEAD
?	MANHOLE - UNDETERMINED OWNER

UTILITY COMPANY FACILITIES

DP-G	DP&L GAS
DP&L-OH	DP&L ELECTRIC - OVERHEAD
COM-C-OH	COMCAST - OVERHEAD
NCC-S	NEW CASTLE COUNTY
AW-W	ARTESIAN WATER

PROPOSED SYMBOLS

CONSTRUCTION

	CONCRETE SAFETY BARRIER - PERMANENT
BFS	BIOFILTRATION SWALE
	BRICK PATTERNED SURFACE
	BUTT JOINT
100+00	CONSTRUCTION BASELINE
CSF	CONSTRUCTION SAFETY FENCE
	CURB, TYPE 1 & TYPE 3
	CURB, TYPE 2
	CURB & GUTTER, TYPE 1
	CURB & GUTTER, TYPE 2
	CURB & GUTTER, TYPE 3
	CURB & GUTTER, TYPE 4
CZ	CLEAR ZONE
	DRAINAGE INLET
	DITCH
	FENCE - METAL
	FENCE - WOOD
	FLARED END SECTION
	GUARDRAIL, TYPE 1
	GUARDRAIL, TYPE 2
	GUARDRAIL, TYPE 3
	GUARDRAIL END ANCHORAGE
	GUARDRAIL END TREATMENT, TYPE 1
	GUARDRAIL END TREATMENT, TYPE 2
	GUARDRAIL END TREATMENT, TYPE 3
	IMPACT ATTENUATOR
	JUNCTION BOX - DRAINAGE
LO	LATERAL OFFSET
LOC	LIMIT OF CONSTRUCTION
MB	MAILBOX
	MANHOLE
	PAVEMENT PATCH
	PAVEMENT REMOVAL - TOPSOIL, SEED AND MULCH
	PIPE & DIRECTIONAL FLOW ARROW
	RIPRAP
	P.C.C. SIDEWALK - 4"
	P.C.C. SIDEWALK - 6" (USE 8" DEPTH FOR CHANNELIZATION ISLANDS.)
	UNDERDRAIN
	UNDERDRAIN OUTLET

RIGHT-OF-WAY SYMBOLS

	PROPOSED RIGHT-OF-WAY MONUMENT
DA	PROPOSED DENIAL OF ACCESS
PE	PROPOSED PERMANENT EASEMENT
R/W	PROPOSED RIGHT-OF-WAY
R/W-DA	PROPOSED R/W & DENIAL OF ACCESS
TCE	TEMPORARY CONSTRUCTION EASEMENT
100+00	PROPOSED RIGHT-OF-WAY BASELINE

IDENTIFIERS

A/C	ADJUST BY CONTRACTOR
A/O	ADJUST BY OTHERS
B	CONCRETE SAFETY BARRIER
C	CURB OR CURB & GUTTER
C/JB	CONVERT TO JUNCTION BOX
C/MH	CONVERT TO DRAINAGE MANHOLE
CO	CURB OPENING
CR	CURB RAMP / TYPE
CR-W	CURB RAMP / TYPE - WITHOUT SIDEWALK SURFACE DETECTABLE WARNING SYSTEM
CSF	CONSTRUCTION SAFETY FENCE
DI	DRAINAGE INLET
DND	DO NOT DISTURB
ED	ENERGY DISSIPATOR
F	FENCE
FES	FLARED END SECTION
FTC	FILL WITH FLOWABLE FILL
FS	FILTRATION STRUCTURE
GR	GUARDRAIL
JB	JUNCTION BOX
MH	MANHOLE
M	MONUMENT - RIGHT-OF-WAY
P	PIPE
RL/C	RELOCATE BY CONTRACTOR
RL/O	RELOCATE BY OTHERS
RM/C	REMOVE BY CONTRACTOR
RM/O	REMOVE BY OTHERS
UD	UNDERDRAIN / LENGTH
UDO	UNDERDRAIN OUTLET PIPE

LANDSCAPING

LS	LANDSCAPE PLANTINGS
	SHRUBBERY
	CONIFEROUS TREE
	DECIDUOUS TREE

TRAFFIC

ITMS-CON	ITMS CONDUIT
SIG-CON	SIGNAL CONDUIT
	CONDUIT JUNCTION WELL
	LUMINAIRE
	PAVEMENT MARKINGS
	PAVEMENT STRIPING
	TRAFFIC SIGN

UTILITY COMPANY FACILITIES

AW-W	PROPOSED ARTESIAN WATER - WATER LINE

PAVEMENT SECTION(S)

	RECONSTRUCTED PAVEMENT - 9" PORTLAND CEMENT CONCRETE PAVEMENT 6" GABC, TYPE B
	MAINTENANCE PAVEMENT - 2" SUPERPAVE, TYPE C 6" GABC, TYPE B

EROSION & SEDIMENT CONTROL

DWBAG	DEWATERING BAG
DWB	DEWATERING BASIN
ED	EARTH DIKE
	INLET SEDIMENT CONTROL
	PERIMETER DIKE/SWALE
PST	PORTABLE SEDIMENT TANK
SBD	SANDBAG DIKE
SB	SANDBAG DIVERSION
	STONE CHECK DAM
SCE	STABILIZED CONSTRUCTION ENTRANCE
SF	SILT FENCE / LENGTH
SF	SILT FENCE
RSF	SILT FENCE - REINFORCED
SP	SUMP PIT
ST	SEDIMENT TRAP / NUMBER
ST	SEDIMENT TRAP
ST	SEDIMENT TRAP WITH INLET AS OUTLET
ST	SEDIMENT TRAP PIPE OUTLET
SW	STILLING WELL
	TEMPORARY SWALE
TSD	TEMPORARY SLOPE DRAIN
TC XXX	TURBIDITY CURTAIN / LENGTH
T	TURBIDITY CURTAIN
GB	GEOTUBE / GEOTEXTILE DEWATERING BAG

CONSTRUCTION PHASING & M.O.T

	BARRICADE, TYPE 3
	CONCRETE SAFETY BARRIER - PORTABLE
CSF XXX	CONSTRUCTION SAFETY FENCE / LENGTH
CSF	CONSTRUCTION SAFETY FENCE
	CONSTRUCTION WARNING SIGN LOCATION
END ROAD WORK	CONSTRUCTION WARNING SIGN
	CRASH CUSHION ARRAY
	DRUM - TRAFFIC CONTROL
	FLAGGER LOCATION
PHASE 1	PHASING TRAFFIC FLOW ARROW
	TEMPORARY CONSTRUCTION
	TEMPORARY PAVEMENT MARKING ARROW
	TRUCK WITH MOUNTED ATTENUATOR
	WORK AREA - ACTIVE PHASE
	ARROW PANEL

LAST REVISED: 10/06/2015
P:\60323054 DELDOT AGR 1672 BDS\T07 - REHAB BR.1-634\900 CAD\20 SHEETS\CIVIL\LG01.DGN

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RAILROAD

CONTRACT	T201507403	BRIDGE NO.	1-634
COUNTY	NEW CASTLE	DESIGNED BY:	DRS
		CHECKED BY:	JLC

LEGEND

SHEET NO.	2
TOTAL SHTS.	71

GENERAL NOTES

1. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2016 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2001, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.

2.

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

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

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

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

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

( )	CROSS SECTIONS (WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR)
(X)	RIGHT-OF-WAY PLANS (INCLUDED IN PLAN SET)

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

( )	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
(X)	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR IS INCIDENTAL TO ITEM 801000.
( )	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE ATSSA SUPERVISOR'S SOLE JOB SHALL BE SUPERVISION OF THE INSTALLATION, OPERATION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES FOR THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT SHALL NOT BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR SHALL BE PAID FOR UNDER ITEM 743031.

6. THE DISTURBED AREA FOR THIS PROJECT IS 0.495 ACRES.
7. THE ADDITIONAL IMPERVIOUS AREA FOR THIS PROJECT IS 2,222 SF.
8. THE SEDIMENT AND STORMWATER MANAGEMENT PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE SEDIMENT AND STORMWATER MANAGEMENT PLANS ARE VALID FOR A FIVE YEAR PERIOD, BEGINNING ON THE DATE THE STORMWATER ENGINEER SIGNED THE CONSTRUCTION TITLE SHEET. IF THE FINAL ACCEPTANCE OF THE PROJECT IS ANTICIPATED TO EXTEND BEYOND THE FIVE YEARS, THE CONTRACTOR WILL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS. THE STORMWATER ENGINEER WILL REVIEW THE CURRENT SEDIMENT AND STORMWATER MANAGEMENT PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFICATIONS.
9. ALL REFERENCES FOR ITEM 763504 IN THE CONTRACT DOCUMENTS SHOULD REFER TO ITEM 801501 DUE TO RECENT CHANGE IN DELDOT STANDARD SPECIFICATIONS.

PROJECT NOTES

SECTION 100

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

SECTION 200

2. ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   - PARTIAL STRUCTURE REMOVAL
   - EXISTING GUARDRAIL

SECTION 300

3. A. THE CONTRACTOR MAY ELECT TO USE ANY OF THE FOLLOWING MATERIALS TO MEET THE REQUIREMENTS OF ITEM 301001 - GRADED AGGREGATE BASE COURSE, TYPE 'B':
   a. CRUSHED STONE (PER STANDARD SPECIFICATION 1005)
   b. CRUSHED CONCRETE (PER STANDARD SPECIFICATION 1005)
   c. HOT-MIX MILLINGS (PER SPECIAL PROVISION 301500 MILLED HOT-MIX BASE COURSE)

   THE CONTRACTOR WILL NOT BE ALLOWED TO MIX DIFFERENT MATERIALS (OR SIMILAR MATERIALS FROM DIFFERENT SOURCES) TO MEET THE REQUIREMENTS OF ITEM 301001 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

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

   B. THE QUANTITY USED FOR BASE OF EACH OF THE ABOVE LISTED MATERIALS WILL BE THE CONTRACTOR'S CHOICE, WITH THE TOTAL BEING EQUAL TO THE ACTUAL QUANTITY USED UNDER ITEM 301001 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

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

   D. HOT-MIX MILLINGS MAY BE GENERATED FROM THE FOLLOWING SOURCES:
   a. MATERIAL MADE AVAILABLE WHEN MILLED ON THIS CONTRACT UNDER THE MILLING ITEM UTILIZED ON THE CONTRACT.
   b. MATERIAL MILLED ON THIS CONTRACT AT THE CONTRACTOR'S CHOICE UNDER ITEM 202000.
   c. MILLED MATERIAL FURNISHED ON THE JOB FROM THE CONTRACTOR'S YARD OR OTHER OUTSIDE SOURCE.
   ALL MILLED MATERIALS SHALL MEET THE MATERIAL REQUIREMENTS OF ITEM 301500 - MILLED HOT-MIX BASE COURSE.

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

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

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

   d. MILLINGS USED FOR BASE COURSE SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIAL PROVISION 301500 - MILLED HOT-MIX BASE COURSE. NO SEPARATE PAYMENT WILL BE MADE TO FURNISH MILLINGS FROM AN OUTSIDE SOURCE OR TRANSPORT MILLINGS WITHIN THE PROJECT LIMITS. MILLINGS USED FOR BASE COURSE WILL BE PAID FOR AT THE UNIT BID PRICE FOR ITEM 301001 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

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

   f. SPECIAL PROVISION 301500 - MILLED HOT-MIX BASE COURSE IS PROVIDED TO SPECIFY THE MEANS OF LAY DOWN AND COMPACTION AS WELL AS THE MATERIAL REQUIREMENTS FOR MILLINGS USED AS BASE COURSE. ALL COSTS TO BRING THE MILLINGS INTO COMPLIANCE WITH THE REQUIREMENTS OF ITEM - 301500 MILLED HOT-MIX BASE COURSE ARE INCIDENTAL TO ITEM 301001 - GRADED AGGREGATE BASE COURSE, TYPE 'B'. NO PAYMENT WILL BE MADE FOR ITEM 301500 - MILLED HOT-MIX BASE COURSE. THE QUANTITY OF MILLINGS USED FOR BASE COURSE WILL BE PAID FOR UNDER ITEM 301001 - GRADED AGGREGATE BASE COURSE.

SECTION 700

4. IN AREAS WHERE PROPOSED CURB MEETS EXISTING CURB AND THE TWO CURB TYPES ARE NOT SIMILAR, THE PROPOSED CURB SHALL BE TRANSITIONED IN 10 LINEAR FEET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK, INCLUDING SAW CUTTING EXISTING CURB SHALL BE INCIDENTAL TO THE PROPOSED CURB ITEM.
5. WHERE PROPOSED CONCRETE SIDEWALK IS CONSTRUCTED TO MEET EXISTING SIDEWALK, THE EXISTING SIDEWALK SHALL BE SAWCUT AT THE TIE-IN POINT OR MEET THE NEAREST EXISTING SIDEWALK JOINT. ALL SAW CUTTING SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER AND SHALL BE PAID FOR UNDER ITEM 762001 - SAW CUTTING, CONCRETE, FULL DEPTH.
6. ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT.

SECTION 900

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

MISCELLANEOUS

8. LOCATION AND DESCRIPTION: BRIDGE NO. 1-634 IS LOCATED OVER EAST PENN RR IN ELSMERE, NEW CASTLE COUNTY, DELAWARE AND CARRIES NORTH DUPONT ROAD OVER EAST PENN RR.
9. AS BUILT PLANS OF THE EXISTING STRUCTURE ARE AVAILABLE AND SHALL BE OBTAINED THROUGH THE DEPARTMENT AND USED IN CONJUNCTION WITH THESE DRAWINGS WHEN DETERMINING EXISTING DIMENSIONS. ALL DIMENSIONS SHOWN ON THESE DRAWINGS WERE TAKEN FROM THE EXISTING PLANS AND SHOULD BE VERIFIED IN THE FIELD. THE EXISTING PLANS ARE AS FOLLOWS:

CONTRACT NO.	DESCRIPTION
15.33	CONSTRUCTION OF CONTRACT NO. 15.33 STA 41+27.00 TO STA 86+50.00
88-074-06	BRIDGE NO's 74-C, 191, 5.31, 6.34, AND 655 IN N.C.CO. SLOPE PAVING REPAIRS

10. ANY DAMAGE DONE BY THE CONTRACTOR'S OPERATIONS TO THE EXISTING FACILITIES NOT DESIGNATED FOR REPAIRS UNDER THE CONTRACT SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
11. THERE ARE NO ENVIRONMENTAL PERMITS ASSOCIATED WITH THIS PROJECT. AS SUCH, AN ENVIRONMENTAL COMPLIANCE SHEET WAS NOT PREPARED.
12. THE CONTRACTOR SHALL CONTACT JAMILA JONES, THE CHIEF OF SCHEDULING FOR DART FIRST STATE, 14 DAYS PRIOR TO THE START OF CONSTRUCTION AT 302-576-6019.

RAILROAD PROJECT NOTES

13. TEMPORARY PERMISSION IS GRANTED TO THE DELAWARE DEPARTMENT OF TRANSPORTATION TO ENTER THE PROPERTY OPERATED BY EAST PENN RAILROAD, L.L.C., FOR THE PURPOSE OF IMPLEMENTING THE IMPROVEMENTS HEREIN UNDER THE FOLLOWING TERMS AND CONDITIONS SET FORTH BELOW:

   A. USE OF PROPERTY. THE CONTRACTOR SHALL NOTIFY EAST PENN RAILROAD, LLC, ATTN BOB PARKER, PRESIDENT, 505 SOUTH BROAD STREET, KENNETT SQUARE, PA 19348, AT LEAST FOURTEEN (14) DAYS IN ADVANCE BEFORE ENTERING UPON, OR STARTING ANY WORK ON, THE PROPERTY. NO ENTRY UPON OR USE OF THE PROPERTY WILL BE PERMITTED UNTIL SPECIFIC PERMISSION TO ENTER UPON THE PROPERTY RECEIVED FROM THE RAILROAD.

   B. RAILROAD OPERATIONS. ALL OPERATIONS SHALL BE PERFORMED SO AS NOT TO INTERFERE WITH RAILROAD'S OPERATIONS OR WITH ANY OF RAILROAD'S FACILITIES. IN NO EVENT SHALL PERSONNEL, EQUIPMENT OR MATERIAL CROSS A TRACK OR TRACKS WITHOUT SPECIAL ADVANCE PERMISSION FROM RAILROAD'S PRESIDENT OR AUTHORIZED DESIGNEE. IF ADDITIONAL PROTECTION IS REQUESTED BY THE CONTRACTOR, RAILROAD WILL PROVIDE FLAGGING SERVICE AND/OR OTHER PROTECTION AT THE SOLE COST AND EXPENSE OF CONTRACTOR AND CONTRACTOR AGREES TO PAY TO RAILROAD FULL COST AND EXPENSE THEREFORE WITHIN SIXTY (60) DAYS OF RECEIPT OF RAILROAD'S BILL OR INVOICE.

   C. CLEARANCES. ALL EQUIPMENT AND MATERIAL OF CONTRACTOR SHALL BE KEPT AT ALL TIME NOT LESS THAN FIFTEEN (15) FEET FROM THE CENTERLINE OF OUTSIDE TRACK, UNLESS SPECIFICALLY OTHERWISE AUTHORIZED IN WRITING BY RAILROAD'S PRESIDENT OR AUTHORIZED DESIGNEE. CONTRACTOR SHALL CONDUCT ALL OPERATIONS SO THAT NO PART OF ANY EQUIPMENT SHALL FOUL AN OPERATED TRACK, TRANSMISSION, COMMUNICATION OR SIGNAL LINE, OR ANY OTHER STRUCTURE OR FACILITY OF RAILROAD.

   D. RESTORATION OF PREMISES. UPON COMPLETION OF ITS WORK, CONTRACTOR SHALL, AT THE OPTION OF RAILROAD,
      a. LEAVE THE PROPERTY IN A CONDITION SATISFACTORY TO RAILROAD, OR
      b. RESTORE THE PROPERTY TO ITS ORIGINAL CONDITION.
   THIS MAY INCLUDE, WITHOUT LIMITATION, THE RESTORATION OF ANY FENCES REMOVED OR DAMAGED BY CONTRACTOR.

   E. TERM OF PERMIT. CONTRACTOR AGREES TO NOTIFY RAILROAD WHEN USE OF THE PROPERTY OR WORK IS COMPLETED. UNDER NO CIRCUMSTANCES SHALL THIS TEMPORARY PERMIT BE CONSTRUED AS GRANTING THE CONTRACTOR ANY RIGHT TITLE OR INTEREST OF ANY KIND OR CHARACTER IN, ON, OR ABOUT ANY PROPERTY OF RAILROAD.

   F. INSURANCE. BEFORE CONTRACTOR COMMENCES ANY WORK IN, ON, OR ABOUT THE PROPERTY, CONTRACTOR SHALL FURNISH RAILROAD, WITH EVIDENCE OF ITS WORKMEN'S COMPENSATION, PUBLIC LIABILITY, PROPERTY DAMAGE, RAILROAD PROTECTIVE LIABILITY AND OTHER COVERAGE, AS SPECIFIED IN THE RAILROAD'S SPECIAL PROVISION.

   G. PROTECTION. ALL WORK IN, ON, OR ABOUT THE PROPERTY SHALL BE IN ACCORDANCE WITH THE RAILROAD'S SPECIAL PROVISION (EXHIBIT C IN RAILROAD AGREEMENT).

   H. REFER TO THE RAILROAD AGREEMENT FOR ADDITIONAL INFORMATION.

14. THE RAILROAD AND RAILROAD PROJECT MANAGER MUST BE PRESENT AT THE PRECONSTRUCTION MEETING.
15. WHEN PREPARING CONTRACTOR ACCESS ROAD FROM NEW ROAD THROUGH RAILROAD RIGHT-OF-WAY, A DELDOT INSPECTOR FROM THE RAILROAD SECTION MUST BE PRESENT AND RAILROAD FLAGGING WILL BE REQUIRED. THIS CAN BE SCHEDULED THROUGH THE RAILROAD PROJECT MANAGER AT (302) 760-2183.
16. MISS UTILITY SERVICES DO NOT LOCATE BURIED RAILROAD SIGNAL AND COMMUNICATIONS LINES. THE CONTRACTOR SHALL CONTACT THE RAILROAD'S REPRESENTATIVE TWO (2) DAYS IN ADVANCE OF ANY OPERATION WHERE EXCAVATION, PILE DRIVING, OR HEAVY LOADS MAY DAMAGE UNDERGROUND LINES ON RAILROAD PROPERTY. UPON REQUEST FROM THE CONTRACTOR OR AGENCY, RAILROAD SIGNAL FORCES WILL LOCATE AND PAINT MARK OR FLAG RAILROAD UNDERGROUND SIGNAL, COMMUNICATION, AND POWER LINES IN THE AREA TO BE DISTURBED. THE CONTRACTOR SHALL AVOID EXCAVATION OR OTHER DISTURBANCE OF THESE LINES WHICH ARE CRITICAL TO THE SAFETY OF THE RAILROAD AND THE PUBLIC. IF DISTURBANCE OR EXCAVATION IS REQUIRED NEAR A BURIED RAILROAD SIGNAL, COMMUNICATION, OR POWER LINE, THE LINE SHALL BE POTHOLED MANUALLY WITH CAREFUL HAND EXCAVATION BY THE CONTRACTOR AND PROTECTED BY THE CONTRACTOR DURING THE COURSE OF THE DISTURBANCE UNDER SUPERVISION AND DIRECTION OF A RAILROAD SIGNAL REPRESENTATIVE.
17. THE WORK AREA WILL BE FROM NEW ROAD TO APPROXIMATELY 50' NORTH OF BRIDGE 1-634.
18. THE STATE CONTRACTOR'S SHALL REMOVE THE ABANDONED EXISTING UTILITY POLE AND CLEAR THE AREA BETWEEN THE TRACK AND THE BUILDINGS TO FACILITATE MOVEMENT ALONG THE RAILROAD RIGHT-OF-WAY. ANY VOIDS SHALL BE FILLED WITH BALLAST (DE NO. 3 STONE).
19. AT NEW ROAD, THE RAILROAD WILL INSTALL A TEMPORARY CROSSING THAT WILL EFFECTIVELY WIDEN THE EXISTING CROSSING TO FACILITATE VEHICLE ACCESS ONTO THE RAILROAD RIGHT-OF-WAY. THIS CROSSING WILL BE APPROXIMATELY 15' FROM EDGE OF PAVEMENT.
20. THE RAILROAD WILL INSTALL A TEMPORARY TIMBER CROSSING UNDER THE EXISTING STRUCTURE TO ALLOW ACCESS TO BOTH SIDES OF THE BRIDGE. THE CROSSING WILL BE 12' WIDE.
21. THE RAILROAD WILL REMOVE THE BUMPER ON THE SIDING PRIOR TO THE STATE'S CONTRACTOR STARTING WORK. THE BUMPER WILL BE RELOCATED TO NORTH OF THE BRIDGE TO PREVENT ANY CARS FROM ROLLING INTO THE WORK ZONE.
22. THE STATE'S CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING DE #3 STONE (BALLAST) ALONG THE SIDING TO PROVIDE VEHICLE ACCESS. THIS WILL INCLUDE ADDING STONE ALONG THE EDGES OF ALL TEMPORARY CROSSINGS SO THERE ARE NO DROP OFFS (SIMILAR TO SAFETY EDGE BUT WITH STONE).
23. GEOTEXTILE (TWO LAYERS) SHALL BE PLACED OVER THE EXISTING SIDING TO PROTECT IT WHEN THE STONE IS PLACED AND FACILITATE ITS REMOVAL.
24. THE STATE'S CONTRACTOR WILL BE RESPONSIBLE TO REMOVE THE STONE AND GEOTEXTILE AFTER THE PROJECT IS FINISHED.
25. THE STATE'S CONTRACTOR MUST COORDINATE WITH THE RAILROAD REGARDING THE GRADING OF THE TEMPORARY STONE ALONG THE SIDING AND THE FINAL REMOVAL.
26. THE STATE'S CONTRACTOR MUST USE VEHICLES WITH RUBBER TIRES AND ARE APPROPRIATE FOR THE SITE CONDITIONS.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RAILROAD

CONTRACT	T201507403
COUNTY	NEW CASTLE
BRIDGE NO.	1-634
DESIGNED BY:	DRS (AECOM)
CHECKED BY:	ADM (AECOM)

NOTES

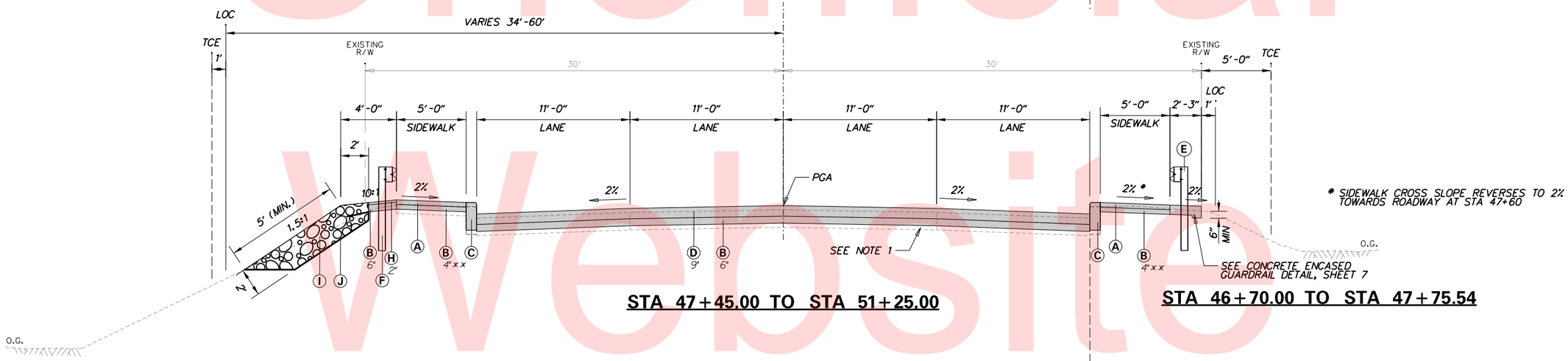
SHEET NO.	3
TOTAL SHTS.	71

LEGEND

- (A) ITEM 705001 - PORTLAND CEMENT CONCRETE SIDEWALK, 4"
- (B) ITEM 301001 - GRADED AGGREGATE BASE COURSE, TYPE B
- (C) ITEM 701013 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-8
- (D) ITEM 501002 - PORTLAND CEMENT CONCRETE PAVEMENT, 9"
- (E) ITEM 720021 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31
- (F) ITEM 720022 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 2-31
- (G) ITEM 908004 - TOPSOIL, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
- (H) ITEM 401001 - BITUMINOUS CONCRETE, SUPERPAVE TYPE C, 115 GYRATIONS PG 64-22 (CARBONATE STONE)
- (I) ITEM 707010 - RIPRAP, R-4
- (J) ITEM 708003 - GEOTEXTILES, RIPRAP

** ITEM IS INCIDENTAL TO ITEM 705001 - P.C.C. SIDEWALK, 4"

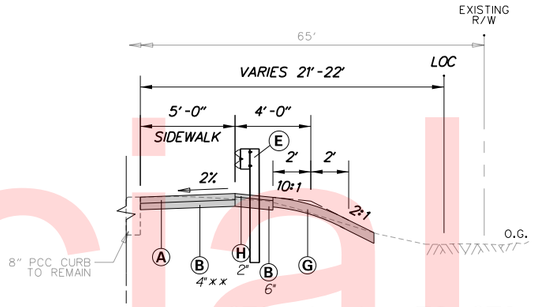
PGA - PROFILE GRADE APPLICATION



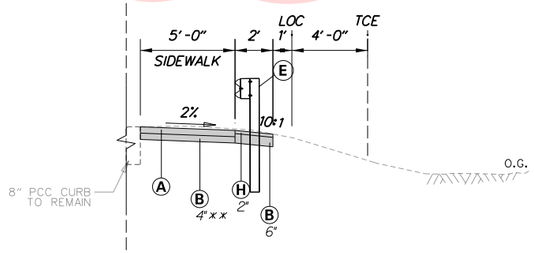
* SIDEWALK CROSS SLOPE REVERSES TO 2% TOWARDS ROADWAY AT STA 47+60

STA 47+45.00 TO STA 51+25.00

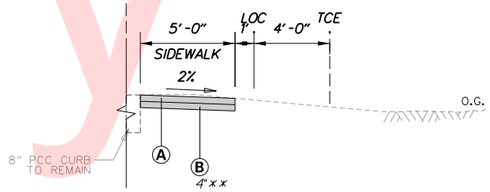
STA 46+70.00 TO STA 47+75.54



STA 50+10.44 TO STA 53+35.00



STA 44+75.00 TO STA 46+70.00



STA 43+72.00 TO STA 44+75.00

NOTES:

1) EXISTING PAVEMENT IS 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT LAID ON TOP OF 6" OF QUARRY WASTE.

LAST REVISED: 10/06/2015
PA\6032\3054 DELDOT AGR 1672 BDS\T07 - REHAB BR. 1-634\900 CAD\20 SHEETS\CIVIL\TS01.DGN

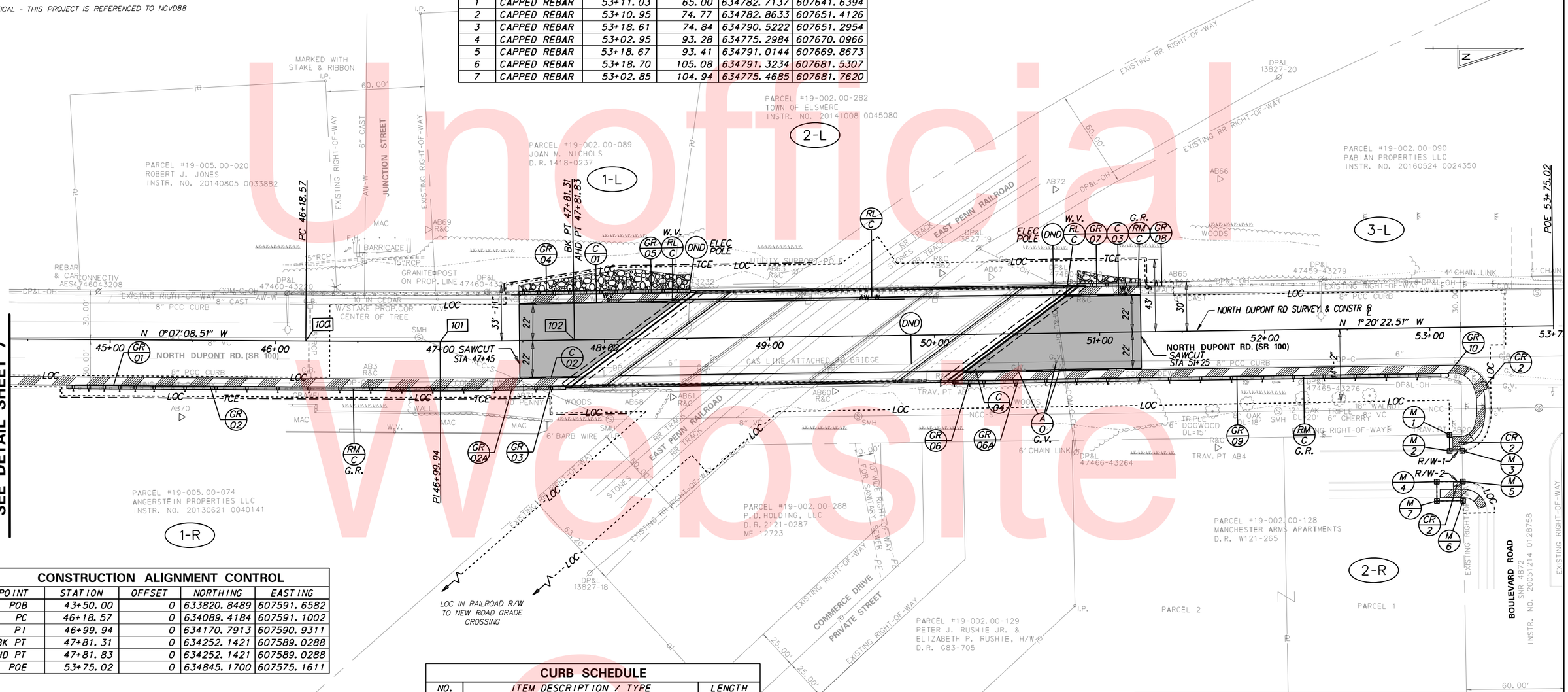
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RAILROAD	CONTRACT T201507403	BRIDGE NO. 1-634	TYPICAL SECTION	SHEET NO. 4
				COUNTY NEW CASTLE	DESIGNED BY: DRS (AECOM)		TOTAL SHTS. 71
					CHECKED BY: ADM (AECOM)		

DATUM REFERENCE
HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD83/91)

VERTICAL - THIS PROJECT IS REFERENCED TO NGVD88

RIGHT-OF-WAY MONUMENT SCHEDULE

NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
1	CAPPED REBAR	53+11.03	65.00	634782.7137	607641.6394
2	CAPPED REBAR	53+10.95	74.77	634782.8633	607651.4126
3	CAPPED REBAR	53+18.61	74.84	634790.5222	607651.2954
4	CAPPED REBAR	53+02.95	93.28	634775.2984	607670.0966
5	CAPPED REBAR	53+18.67	93.41	634791.0144	607669.8673
6	CAPPED REBAR	53+18.70	105.08	634791.3234	607681.5307
7	CAPPED REBAR	53+02.85	104.94	634775.4685	607681.7620



CONSTRUCTION ALIGNMENT CONTROL

POINT	STATION	OFFSET	NORTHING	EASTING
POB	43+50.00	0	633820.8489	607591.6582
PC	46+18.57	0	634089.4184	607591.1002
PI	46+99.94	0	634170.7913	607590.9311
BK PT	47+81.31	0	634252.1421	607589.0288
AHD PT	47+81.83	0	634252.1421	607589.0288
POE	53+75.02	0	634845.1700	607575.1611

CIRCULAR CURVE NO (1)

Element: Circular

PC STA (100)	46+18.57	634089.4184	607591.1002
PI STA (101)	46+99.94	634170.7913	607590.9311
CC STA ( )		634073.5443	599951.6767
PT STA (102)	47+81.83	634252.1421	607589.0288

Radius:	7639.44
Delta:	01°13'14" LEFT
Degree of Curvature(Arc)	00°45'00"
Length:	162.74
Tangent:	81.37
Chord:	162.74
Middle Ordinate:	0.43
External:	0.43
Tangent Direction:	N 00°07'09" W
Radial Direction:	N 89°52'51" E
Chord Direction:	N 00°43'46" W
Radial Direction:	N 88°39'37" E
Tangent Direction:	N 01°20'23" W

CURB SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	LENGTH
01	P.C.C. CURB, TYPE 1-8	95.9'
02	P.C.C. CURB, TYPE 1-8	35.5'
03	P.C.C. CURB, TYPE 1-8	45.9'
04	P.C.C. CURB, TYPE 1-8	108.1'

GUARDRAIL SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
01	GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1	44+73.00	27.75'	50.0'
02	GUARDRAIL, TYPE 1-31	45+23.00	27.75'	200.0'
02A	GUARDRAIL, TYPE 1-27 TO 1-31 TRANSITION	47+23.00	27.75'	28.1'
03	GUARDRAIL TO BARRIER CONNECTION, APPROACH, TYPE 2-31*	47+51.10	27.75'	26.94'
04	GUARDRAIL, TYPE 2-27	47+40.93	27.75'	100.0'
05	GUARDRAIL TO BARRIER CONNECTION, EXIT TYPE 31*	48+40.93	27.75'	14.23'
06	GUARDRAIL TO BARRIER CONNECTION, EXIT TYPE 31*	50+08.66	27.48'	14.23'
06A	GUARDRAIL, TYPE 1-27 TO 1-31 TRANSITION	50+22.89	27.75'	28.1'
07	GUARDRAIL TO BARRIER CONNECTION, APPROACH, TYPE 2-31*	50+85.29	27.48'	26.94'
08	GUARDRAIL, TYPE 1-27	51+12.23	27.75'	25.0
09	GUARDRAIL, TYPE 1-31	50+51.00	27.75'	250.0'
10	END ANCHORAGE 31	53+01.00	27.75'	12.5'

*MODIFY STANDARD DETAIL B-5 FOR A 27" HEIGHT BARRIER CONNECTION AND ADJUST GUARDRAIL SECTION OF BARRIER CONNECTION HORIZONTALLY TO CONNECT FLUSH AGAINST BARRIER.

HORIZONTAL / VERTICAL CONTROL DATA

POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
T.P. AB1	50+04.29	29.15 RT	634475.2263	607612.9703	122.40
T.P. AB2	50+83.88	30.39 LT	634553.4014	607551.5846	122.42
T.P. AB3	46+57.68	25.26 RT	634128.7120	607616.1830	112.30
T.P. AB4	51+70.34	70.76 RT	634642.1964	607650.6897	113.53
T.P. AB60	49+38.99	33.23 RT	634410.0394	607618.5803	103.91
T.P. AB61	48+40.74	35.37 RT	634311.8674	607623.0135	97.27
T.P. AB62	50+04.96	37.24 LT	634474.3388	607546.5850	99.09
T.P. AB63	49+03.98	32.40 LT	634373.4997	607553.7848	103.90
T.P. AB64	48+14.84	29.78 LT	634284.4436	607558.4857	118.83
T.P. AB65	51+48.46	29.31 LT	634617.9856	607551.1577	121.85
T.P. AB66	51+74.13	91.87 LT	634642.1878	607488.0099	111.35
T.P. AB67	50+34.65	34.52 LT	634504.0867	607548.6089	107.62
T.P. AB68	48+17.68	32.79 RT	634288.7468	607620.9706	105.18
T.P. AB69	46+92.58	67.71 LT	634162.6300	607522.8782	106.02
T.P. AB70	45+43.41	46.48 RT	634014.3509	607637.7384	98.77
T.P. AB71	47+51.21	28.46 RT	634222.6055	607618.1297	116.35
T.P. AB72	50+74.31	86.96 LT	634542.5064	607495.2565	101.10
T.P. AB202	53+28.77	55.97 RT	634800.2390	607632.1980	116.73

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 30 60 90
FEET

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RAILROAD

CONTRACT	T201507403
COUNTY	NEW CASTLE
BRIDGE NO.	1-634
DESIGNED BY:	DRS (AECOM)
CHECKED BY:	ADM (AECOM)

CONSTRUCTION PLAN

SHEET NO.	5
TOTAL SHTS.	71

LAST REVISED: 10/06/2015
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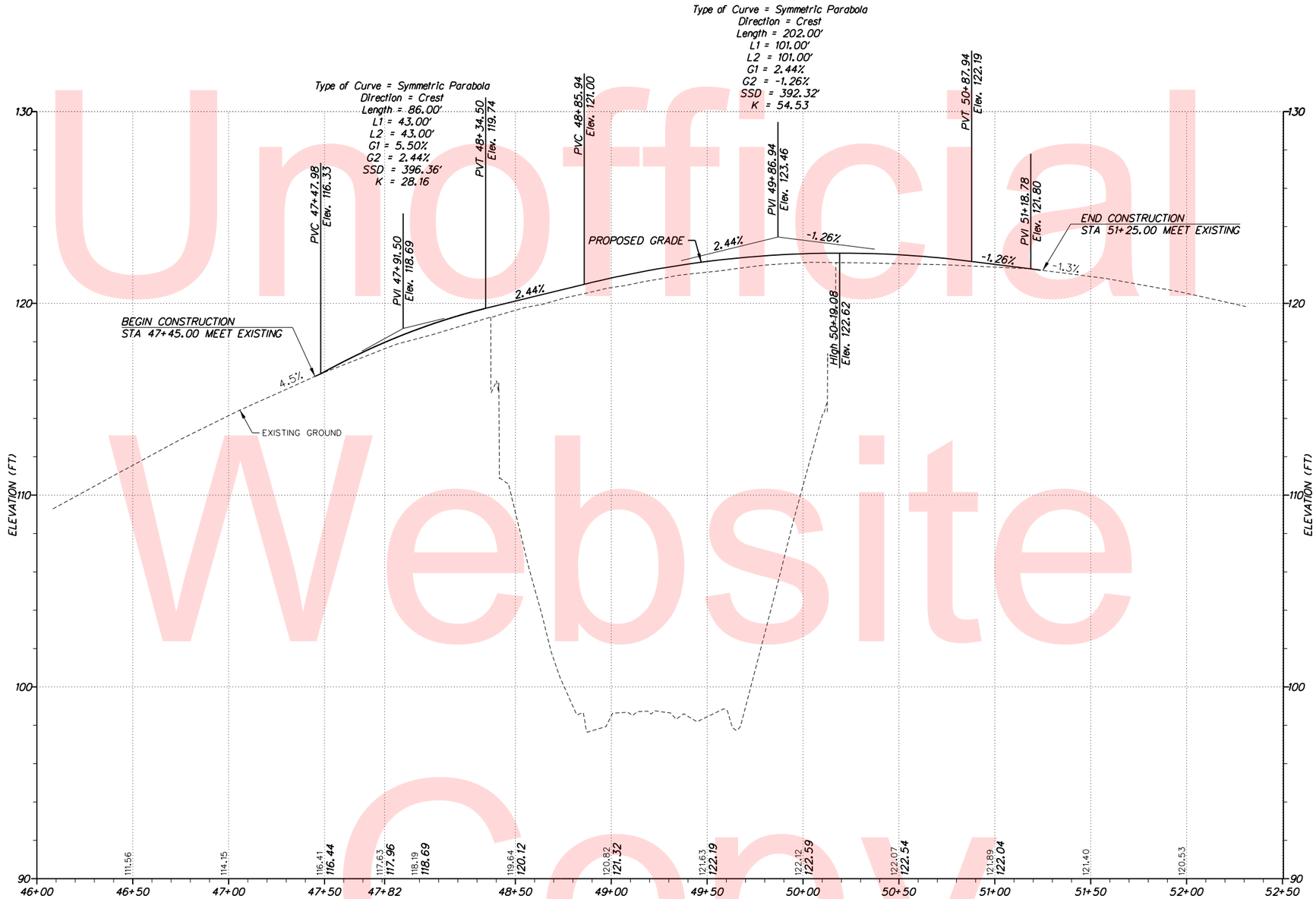
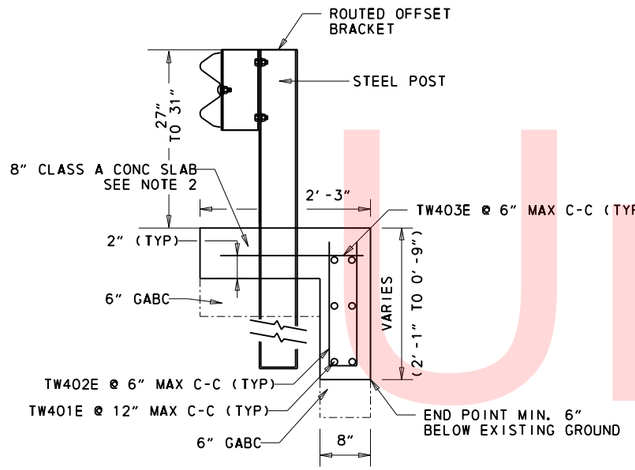


VERTICAL SCALE FEET
9
6
3
0

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RAILROAD	CONTRACT T201507403	BRIDGE NO. 1-634	PROFILE	SHEET NO. 6
				COUNTY NEW CASTLE	DESIGNED BY: DRS (AECOM)		TOTAL SHTS. 71
					CHECKED BY: ADM (AECOM)		

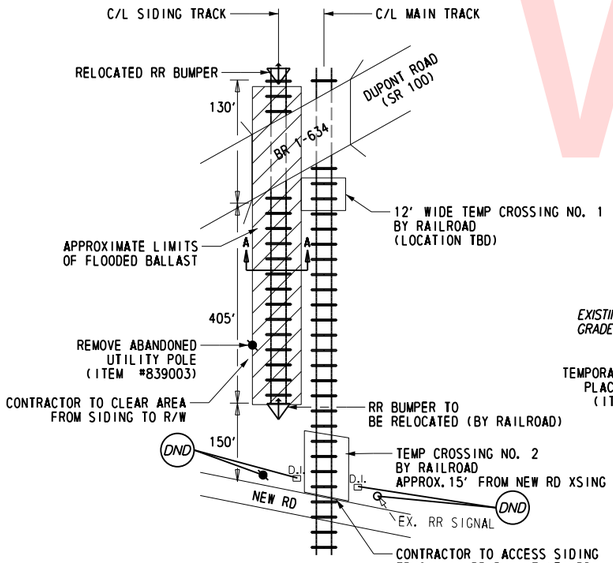


CONCRETE ENCASED GUARDRAIL DETAIL

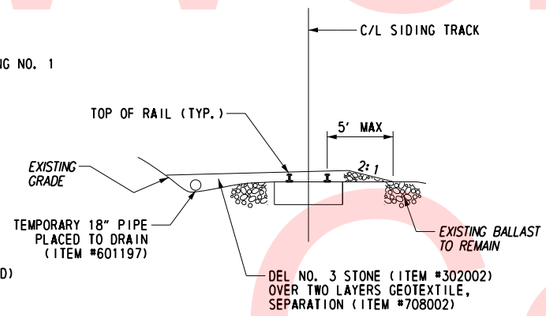
NOT TO SCALE

NOTES:

1. *INSTALL GALVANIZED STEEL BEAM GUARDRAIL IN ACCORDANCE WITH THE GUARDRAIL SCHEDULE, SHEET 5, PRIOR TO THE INSTALLATION OF THE CONCRETE SLAB AND REINFORCEMENT.*
2. *THE CONCRETE SLAB AND REINFORCEMENT WILL BE PAID FOR UNDER ITEM 610000 - PORTLAND CEMENT CONCRETE MASONRY, CLASS A, AND ITEM 611001 - BAR REINFORCEMENT, EPOXY COATED, RESPECTIVELY.*
3. *SEE SHEET 57 FOR CONCRETE ENCASED GUARDRAIL REINFORCEMENT BAR SCHEDULE.*



PLAN



SECTION A-A

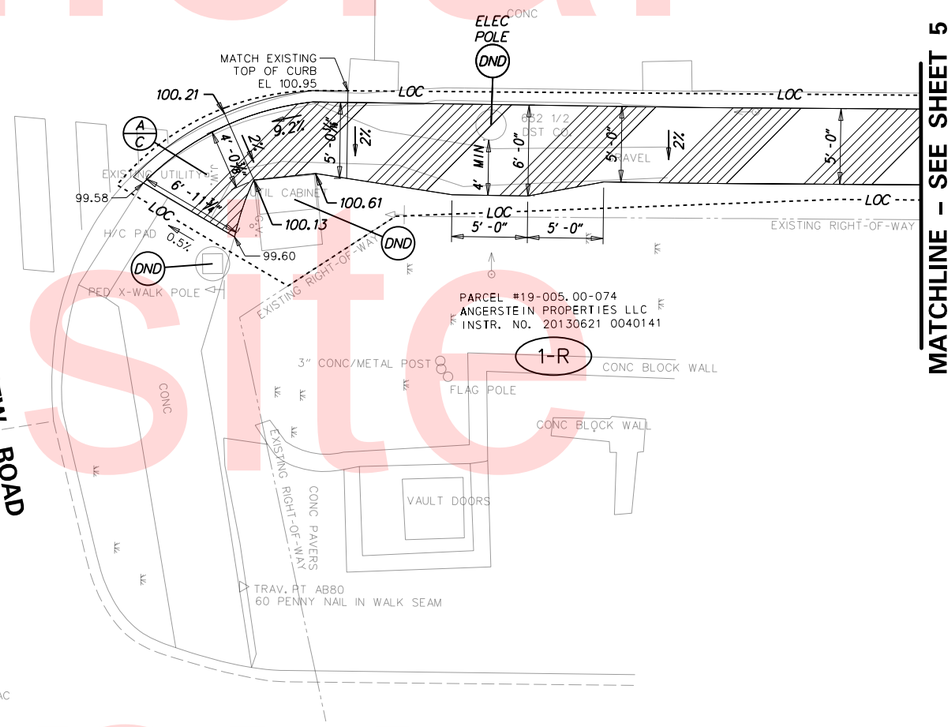
CONTRACTOR WORK AREA ACCESS

NOT TO SCALE

NOTES:

1. *INSTALL STEEL PLATES OVER EXISTING INLETS WITHIN THE LIMITS OF THE CONTRACTOR WORK/ACCESS AREA IN THE RAILROAD RIGHT-OF-WAY TO PROTECT FROM DAMAGE.*
2. *INSTALLATION AND REMOVAL OF TEMPORARY MATERIALS AND RESTORATION OF THE SIDING TRACK TO EXISTING CONDITIONS IS INCIDENTAL TO THE CONTRACTOR WORK AREA ACCESS PAY ITEMS SHOWN.*

NORTH DUPONT RD. (SR 100)



SIDEWALK CONSTRUCTION DETAIL

SCALE: 1" = 5'-0"

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RAILROAD	CONTRACT T201507403	BRIDGE NO. 1-634	CONSTRUCTION DETAILS	SHEET NO. 7
				COUNTY NEW CASTLE	DESIGNED BY: DRS (AECOM)		TOTAL SHTS. 71
					CHECKED BY: ADM (AECOM)		

LAST REVISED: 10/06/2015
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SECTION 200

1. REMOVAL OF STRUCTURES AND OBSTRUCTIONS:

ITEMS TO BE REMOVED UNDER ITEM NO. 211000 "REMOVAL OF STRUCTURES AND OBSTRUCTIONS" ASSOCIATED WITH BRIDGE 1-634 SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
-EXISTING DECK SLAB AND SHEAR CONNECTORS
-EXISTING BARRIERS ON BRIDGE
-EXISTING GUARDRAIL
-EXISTING APPROACH SLAB CONCRETE
-EXISTING DECK JOINTS
-EXISTING ABUTMENT & PIER PEDESTALS
-PARTIAL DEMOLITION OF WINGWALLS
-PARTIAL DEMOLITION OF ABUTMENT BACK WALL
-PARTIAL DEMOLITION OF PIER 1

2. SIGNING:

-TO AVOID DAMAGE, SIGNS WITHIN PROJECT LIMITS MAY BE REMOVED DURING CONSTRUCTION IF NEEDED, BUT MUST BE REPLACED TO MATCH EXISTING CONDITIONS BEFORE REOPENING THE ROADWAY. ALL WORK RELATED TO MOVING AND REINSTALLING THE SIGN SHALL BE INCIDENTAL TO ITEM NO. 211000 "REMOVAL OF STRUCTURES AND OBSTRUCTIONS." IF THE SIGN IS DAMAGED DURING CONSTRUCTION, THE SIGN MUST BE REPLACED AT THE CONTRACTOR'S EXPENSE.

3. SAWCUTTING AND CONCRETE REMOVAL:

-SAWCUTTING OF THE EXISTING DECK FOR REMOVAL SHALL BE PAID FOR UNDER ITEM NO. 211000.
-THE CONTRACTOR SHALL TAKE CARE TO AVOID CUTTING EXISTING GIRDER FLANGES DURING SAWCUTTING OPERATIONS AND SHALL REPORT ANY SAWCUT DAMAGES TO THE FLANGE AND REPAIR AT THE DIRECTION OF THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.
-CONTRACTOR SHALL USE WET DIAMOND BLADE SAW CUTTING FOR CONCRETE REMOVAL OPERATIONS.
-BLASTING OR USE OF EXPLOSIVES IS NOT PERMITTED FOR ANY PART OF THE CONCRETE REMOVAL OPERATIONS.

SECTION 600

4. PORTLAND CEMENT CONCRETE:

PORTLAND CEMENT CONCRETE FOR CAST-IN-PLACE ELEMENTS SHALL BE AS FOLLOWS:
(28 DAY COMPRESSIVE STRENGTH)
-ITEM NO. 610002 (CLASS A, F'c=4500 PSI) - ABUTMENT, WINGWALLS & ABUTMENT PEDESTALS
-ITEM NO. 610004 (CLASS A, F'c=4500 PSI) - PIER & PIER PEDESTALS
-ITEM NO. 610503 (SELF CONSOLIDATING CONCRETE , F'c=4500 PSI) - PIER INFILL CLOSURE POUR
-ITEM NO. 610008 (CLASS A, F'c=4500 PSI) - SIDEWALK AND BARRIERS
-ITEM NO. 610017 (CLASS D, F'c=4500 PSI) - DECK AND DIAPHRAGMS
-ITEM NO. 610018 (CLASS D, F'c=4500 PSI) - APPROACH SLAB AND SLEEPER SLAB

RAKE FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.

CONTRACTOR SHALL SUPPLY CONCRETE FOR THE BRIDGE DECK AND PARAPETS THAT INCLUDES A SHRINKAGE-REDUCING/COMPENSATING ADMIXTURE. THE ADMIXTURE MAY BE SUPPLIED BY ONE PRODUCT THAT PROVIDES BOTH EXPANSION AND PORE WATER SURFACE TENSION OR TWO SEPARATE PRODUCTS EACH ADDED AT DOSAGE RECOMMENDED BY MANUFACTURER'S TECHNICAL DATA SHEETS AND HAVING THE FOLLOWING CHARACTERISTICS:

(A) DESIGNED TO PROVIDE BOTH FOLLOWING CHARACTERISTICS:
  I. EXPANDS AT A RATE THAT CLOSELY COMPENSATES FOR SHRINKAGE OF THE CONCRETE MIX.
  II. REDUCES THE CAPILLARY SURFACE TENSION OF THE CONCRETE PORE WATER.

(B) PROVIDES AT LEAST 80% SHRINKAGE REDUCTION AS MEASURED AND DOCUMENTED BY FIELD PERFORMANCE.

(C) FORMULATED FOR USE IN FREEZING AND THAWING WEATHER.

CHAMFER ALL EXPOSED EDGES 3/4" X 3/4", UNLESS OTHERWISE NOTED.

NO SLIP FORMING OF BARRIERS WILL BE ALLOWED OR APPROVED.

ALL ADMIXTURES MUST BE COMPATIBLE WITH ALL OTHER CONCRETE-MIX DESIGN CONSTITUENTS. CALCIUM CHLORIDE IS NOT PERMITTED: NO CHEMICAL ADMIXTURES WHICH CONTAIN MORE THAN 0.1% CHLORIDE BY WEIGHT, WILL BE PERMITTED FOR USE. DOSAGE RATE AND MIXING SEQUENCE SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

5. DECK SLAB:

DECK SLAB THICKNESS INCLUDES 1/2" INTEGRAL WEARING SURFACE.

6. PROTECTIVE SHIELDING:

-THE CONTRACTOR SHALL PREVENT DEBRIS FROM FALLING INTO THE AREAS BELOW THE BRIDGE SUCH AS THE RAILROAD TRACKS IN ACCORDANCE WITH SECTION 604.03.4. CONTRACTOR SHALL CONSTRUCT ADEQUATE PROTECTIVE SHIELDS TO PREVENT DEBRIS FROM FALLING FROM THE BRIDGE. THE CONTRACTOR SHALL PROMPTLY REMOVE FALLEN DEBRIS TO THE SATISFACTION OF THE ENGINEER. IF THE ENGINEER DETERMINES THAT ADEQUATE PROTECTIVE DEVICES ARE NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED. CONTRACTOR SHALL SUBMIT SHIELDING DESIGN CALCULATIONS AND PLANS IN ACCORDANCE WITH SECTION 604.03.1. SHIELDING SHALL BE PAID FOR UNDER ITEM NO. 604001.
-THE COST OF FURNISHING, INSTALLING, MAINTAINING, REMOVING AND DISPOSING OF ALL PLATFORMS, NETS, SCREENS OR OTHER PROTECTIVE DEVICES SHALL BE INCLUDED UNDER PROTECTIVE SHIELD, ITEM 604001.

-DURING WORK THE CONTRACTOR SHALL USE CARE TO COLLECT ALL DEBRIS AND WATER USED FOR CONSTRUCTION PROMPTLY AND PREVENT ANY POLLUTION OF THE PROJECT AREA. THE CONTRACTOR SHALL BE HELD LIABLE FOR WATERWAY CONTAMINATION DUE TO NEGLIGENCE. THE COLLECTION AND DISPOSAL OF CONSTRUCTION WATER AND DEBRIS WILL NOT BE MEASURED, BUT WILL BE CONSIDERED INCIDENTAL TO THE WORK ITEM WHICH GENERATED THE WATER DEBRIS.

7. CONCRETE SEALER:

-REFER TO DIAGRAM CONTAINING CONCRETE SEALER LIMITS ON SHEET 9 FOR ITEMS 613001 SILICONE-BASED ACRYLIC CONCRETE SEALER AND 613003 HIGH MOLECULAR WEIGHT METHACRYLATE CONCRETE SEALER, APPLY EPOXY PROTECTIVE COATING (ITEM NO. 613000) TO TOP OF PIER CAPS, ABUTMENT BACKWALL, ABUTMENT BRIDGE SEATS AND ALL EXPOSED SURFACES OF CONCRETE PEDESTALS, AS SHOWN ON SHEETS 14, 15, 17, 21, AND 23.

8. BAR REINFORCEMENT:

-REINFORCING STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60.
-REINFORCING STEEL SHALL HAVE A 3" CLEAR COVER IF CAST AGAINST EARTH OR A 2" CLEAR COVER ELSEWHERE, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
-ALL REINFORCING STEEL SHALL BE PROTECTED WITH FUSION BONDED EPOXY. EPOXY COATED REINFORCING STEEL SHALL CONFORM TO AASHTO M284(D3963).
-ANY FIELD CUTTING OR FIELD BENDING MUST BE APPROVED BY THE ENGINEER. PAYMENT SHALL BE INCIDENTAL TO THE BAR REINFORCEMENT ITEM.
-GALVANIZED REINFORCING STEEL MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL AT NO ADDITIONAL COST TO THE DEPARTMENT WITH APPROVAL OF THE BRIDGE DESIGN ENGINEER.
-WELDING OF REINFORCEMENT DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED UNLESS SPECIFIED

9. STRUCTURAL STEEL:

-PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M270, GRADE 50 (ASTM A709 GRADE 50) DESIGNATION, EXCEPT WHEN NOTED OTHERWISE. NOTCH TOUGHNESS REQUIREMENTS ARE MANDATORY FOR: TOP FLANGE CONTINUITY PLATE
-PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH AASHTO/AWS D1.5M/D1.5 BRIDGE WELDING CODE (2015). AND CONTRACT DOCUMENTS. MAKE TACK WELDS WITH THE SAME TYPE OF ELECTRODES AND INCORPORATE IN THE FINAL WELD. NO OTHER TACK WELDING WILL BE PERMITTED.
-DO NOT USE FORM SUPPORT SYSTEMS THAT WILL CAUSE UNACCEPTABLE OVERSTRESS OR DEFORMATION TO PERMANENT BRIDGE MEMBERS.
-VERTICALLY ADJUST STAY-IN-PLACE FORMS TO ATTAIN FINISHED LINES AND GRADES REQUIRED ON THE PLANS.
-BLAST CLEAN THE FAYING SURFACES OF SPLICES AND CONNECTIONS THAT REMAIN UNASSEMBLED FOR A PERIOD OF 12 MONTHS OR MORE FOLLOWING THE INITIAL CLEANING. FAYING SURFACES MUST BE CLEANED PRIOR TO ASSEMBLY.
-ALL FASTENERS ARE 7/8" DIAMETER ASTM A325 HIGH STRENGTH BOLTS, UNLESS NOTED OTHERWISE.
-DO NOT WELD METAL DECK FORMS OR OTHER ATTACHMENTS TO GIRDER TOP FLANGES WITHIN 20 FEET ON EITHER SIDE OF THE PIER CENTERLINE. THREADED STUDS FOR THE SUPPORT OF THE DECK OVERHANG FORMING BRACKET ARE PERMITTED. PROVIDED THE THREADED STUD IS ATTACHED WITH THE SAME WELDING PROCESS AS SHEAR STUDS.
-PEENING OR UIT TREATMENT TO EXISTING COVER PLATE TERMINATION WELDS AS PER SPECIAL PROVISION 615505 SATISFIES THE INFINITE LIFE CRITERIA FOR DETAIL CATEGORY D IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7TH EDITION (2014) SECTION 6.6.1.2.3-1.
-SET ANCHOR BOLTS TO TEMPLATE OR IN PRE-FORMED HOLES. DO NOT DRILL UNLESS SPECIFICALLY INDICATED ON PLANS. FILL THE PRE-FORMED HOLES WITH NON-SHRINK GROUT.
-USE OVERSIZED HOLES ON DIAPHRAGM CONNECTORS. ALL BOLTS ON DIAPHRAGMS MUST BE FINGER TIGHT AT ERECTION. BOLTS ARE TO BE TORQUED BEFORE CONCRETE DECK IS POURED.

10. WELDING:

-WELDING SPECIFICATION: AASHTO/AWS D1.5M/D1.5 BRIDGE WELDING CODE (2015), STANDARD SPECIFICATIONS AND THE CONTRACT SPECIAL PROVISIONS. DO NOT FIELD-WELD ON ANY PART OF THE EXISTING BRIDGE, EXCEPT WHERE SHOWN ON THE PLANS, WITHOUT PRIOR APPROVAL OF THE ENGINEER.

11. WELDING OF EXISTING STRUCTURAL STEEL:

-USE THE SHIELDED METAL ARC PROCESS AND LOW HYDROGEN ELECTRODES WHICH ARE COMPATIBLE WITH THE BASE METAL AS SPECIFIED AND IN ACCORDANCE WITH AN APPROVED WELD PROCEDURE SPECIFICATION.
-DO NOT WELD WHEN SURFACES TO BE WELDED ARE MOIST OR EXPOSED TO RAIN, SNOW, OR WIND, OR WHEN WELDERS ARE EXPOSED TO INCLEMENT CONDITIONS THAT WILL ADVERSELY AFFECT THE QUALITY OF THE WORK.
-DO NOT WELD OR BURN WHEN THE TEMPERATURE IS BELOW 0°F. PREHEAT AND MAINTAIN THE TEMPERATURE OF THE METAL TO AT LEAST 70°F WHEN THE TEMPERATURE OF THE METAL IS BETWEEN 0°F AND 32°F DURING WELDING OR BURNING.
-PREHEAT THE STEEL TO THE SPECIFIED MINIMUM TEMPERATURE FOR A DISTANCE EQUAL TO THE THICKNESS OF THE PART BEING WELDED, BUT NOT LESS THAN 3IN. IN ALL DIRECTIONS FROM THE POINT OF WELDING.
-REMOVE BY APPLICATION OF HEAT ANY MOISTURE PRESENT AT POINT OF WELD. PROVIDE WINDBREAKS FOR PROTECTION FROM DIRECT WIND.
-PRIOR TO PLACING THE WELD, THOROUGHLY CLEAN ALL PORTIONS OF NEW AND EXISTING SURFACES TO RECEIVE WELDS OF ALL FOREIGN MATTER, INCLUDING PAINT FILM, FOR A DISTANCE OF 2IN. FROM EACH SIDE OF THE OUTSIDE LINES OF THE WELD.
-TEST COMPLETED WELD USING VISUAL AND NONDESTRUCTIVE METHODS IN ACCORDANCE WITH AASHTO/AWS D1.5M/ D1.5 BRIDGE WELDING CODE, CHAPTER 6.

12. CLEAN AND PAINT EXISTING STRUCTURAL STEEL:

-CLEANING AND PAINTING OF EXISTING STRUCTURAL STEEL (ITEM NO. 616000) SHALL BE IN ACCORDANCE WITH DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, SECTION 616.
-THE EXISTING BRIDGE STRUCTURAL MEMBERS MAY CONTAIN LEAD PAINT OR OTHER TOXIC MATERIALS. TEST AND DISPOSE OF WASTE MATERIAL IN ACCORDANCE WITH STANDARD SPECIFICATIONS SECTION 616. PAYMENT FOR THIS WORK IS UNDER ITEM 616003.
-CONTAINMENT MUST NOT EXTEND MORE THAN 6" BELOW BOTTOM FLANGES OF GIRDERS OVER NORTH TRACK, AT A DISTANCE OF 15 FEET FROM CENTERLINE OF TRACK EACH SIDE.

13. BEARINGS:

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

SECTION 800

14. MAINTENANCE OF TRAFFIC:

-MAINTENANCE OF TRAFFIC SHALL BE AS PER TRAFFIC CONTROL PLANS AND DETOUR PLAN. THE DETOUR SHALL REMAIN IN EFFECT UNTIL ALL STAGE 1 CONSTRUCTION ACTIVITIES ARE COMPLETE, AT WHICH TIME TRAFFIC CONTROL WILL BE INSTALLED AS SHOWN ON SHEETS 65-67 FOR REMAINDER OF CONSTRUCTION.

15. TEMPORARY MOUNTED BARRIERS:

-TEMPORARY BARRIERS PLACED ON BRIDGE DECK DO NOT NEED TO BE ANCHORED TO THE BRIDGE DECK IN ANY CONSTRUCTION STAGE, IF THE SUGGESTED CONSTRUCTION SCHEME SHOWN ON SHEETS 11 AND 12 IS USED. CONTRACTOR SHALL MAINTAIN LOCATION OF TEMPORARY BARRIERS AND MONITOR AGAINST MOVEMENT OF THE TEMPORARY BARRIERS DUE TO BRIDGE VIBRATION. MAINTENANCE AND MONITORING IS INCIDENTAL TO ITEM NO. 807001.

MISCELLANEOUS

16. DESIGN SPECIFICATIONS:

(A) 2016 DELDOT BRIDGE DESIGN MANUAL.
(B) 2014 AASHTO LRFD BRIDGE SPECIFICATIONS, 7TH EDITION, CUSTOMARY U.S. UNITS INCLUDING ANY INTERIMS.
(C) PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH THE AUGUST 2016 DELDOT STANDARD SPECIFICATIONS.

17. LOADING:

-DEAD LOADS INCLUDE 25 PSF FOR FUTURE WEARING SURFACE ON DECK SLAB AND 15 PSF FOR STAY-IN-PLACE FORMS (INCLUDES CONCRETE IN FORM CORRUGATIONS). PARAPET LOAD OF 337.5plf DISTRIBUTED 50% TO EXTERIOR GIRDER AND 50% TO FIRST INTERIOR GIRDER. HANDRAIL LOAD OF 6plf AND FENCE LOAD OF 20plf ARE DISTRIBUTED 75% TO EXTERIOR GIRDER AND 25% TO FIRST INTERIOR GIRDER.
-DESIGN LIVE LOADS INCLUDE HL-93 LOADING.
-FATIGUE DESIGN IS BASED ON THE FOLLOWING ONE DIRECTIONAL TRAFFIC VOLUMES: ADTT = 1100 IN 2040
-LIVE LOAD DISTRIBUTION TO THE GIRDERS IS BASED ON THE GRILLAGE METHOD
-THERMAL LOADS AND MOVEMENTS ARE BASED ON THE MODERATE TEMPERATURE RANGE AS STIPULATED IN THE AASHTO LRFD DESIGN SPECIFICATIONS AS 0°F TO 120°F FOR STEEL. THE NORMAL TEMPERATURE SHALL BE CONSIDERED TO BE 68°F.
-FOR SEISMIC LOADS, CONSIDER SEISMIC PERFORMANCE ZONE I WITH IMPORTANCE CATEGORY : TYPICAL.
-BARRIERS HAVE BEEN DESIGNED FOR NCHRP 350 TEST LEVEL 3 TL-3.
-WIND LOADS PER AASHTO LRFD 2016 INTERIM REVISIONS

18. EXISTING CONDITIONS:

-ALL EXISTING DIMENSIONS AND ELEVATIONS SHOWN ARE BASED ON THE BEST AVAILABLE INFORMATION AND ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS, GEOMETRY, AND ELEVATIONS AS NECESSARY PRIOR TO ORDERING ANY MATERIALS AND COMMENCING CONSTRUCTION TO ENSURE PROPER FIT OF THE PROPOSED CONSTRUCTION. PAYMENT SHALL BE INCIDENTAL TO ITEM 763501 CONSTRUCTION ENGINEERING.
-THE CONTRACTOR SHALL NOT CONSIDER ANY OF THE DATA ON THE EXISTING STRUCTURE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE BY THE DEPARTMENT OR ITS AUTHORIZED AGENTS AS POSITIVE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT WILL BE ENCOUNTERED IN THE FIELD.

19. ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.

20. UTILITIES:

-SEE UTILITY STATEMENT FOR FURTHER INFORMATION ON UTILITY COORDINATION.

21. RAILROAD COORDINATION DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH SPECIAL PROVISION 801501.

LOAD RATING SUMMARY

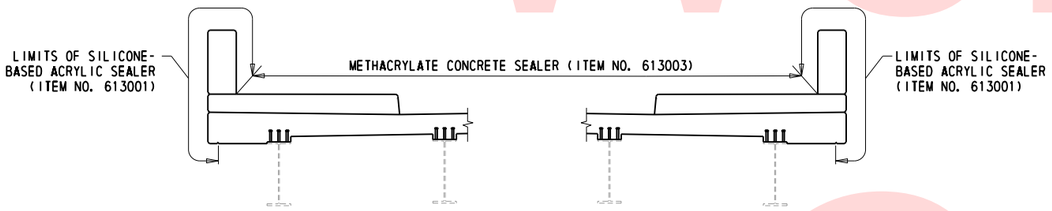
VEHICLE TYPE	RATING FACTOR	RATING WEIGHT (TONS)	CONTROLLING MEMBER	CONTROLLING POINT	LOAD EFFECT
HL-93 TRUCK (INVENTORY)	1.05	37.74	EXTERIOR BEAM	200	FLEXURE
HL-93 TANDEM (INVENTORY)	1.29	32.33	EXTERIOR BEAM	200	FLEXURE
HS20 (INVENTORY)	1.41	50.76	EXTERIOR BEAM	200	FLEXURE
HL-93 TRUCK (OPERATING)	1.36	48.92	EXTERIOR BEAM	200	FLEXURE
HL-93 TANDEM (OPERATING)	1.68	41.90	EXTERIOR BEAM	200	FLEXURE
HS20 (OPERATING)	1.83	65.80	EXTERIOR BEAM	200	FLEXURE
DE S220	2.61	52.29	INTERIOR BEAM	110	FLEXURE
DE S335	1.75	61.11	INTERIOR BEAM	110	FLEXURE
DE S437	1.66	60.75	INTERIOR BEAM	110	FLEXURE
DE T330	2.48	74.51	EXTERIOR BEAM	200	FLEXURE
DE T435	2.13	74.45	EXTERIOR BEAM	200	FLEXURE
DE T540	1.91	76.40	EXTERIOR BEAM	200	FLEXURE
SU4	2.17	58.65	INTERIOR BEAM	110	FLEXURE
SU5	2.12	65.76	INTERIOR BEAM	110	FLEXURE
SU6	1.93	67.19	EXTERIOR BEAM	200	FLEXURE
SU7	1.75	67.89	EXTERIOR BEAM	200	FLEXURE
B216	4.11	63.67	EXTERIOR BEAM	300	FLEXURE
B218	3.30	59.95	INTERIOR BEAM	110	FLEXURE
FE46	2.51	57.58	INTERIOR BEAM	110	FLEXURE
FR50	2.27	56.45	INTERIOR BEAM	110	FLEXURE
FE54	2.26	60.78	INTERIOR BEAM	110	FLEXURE
FL77	1.79	68.70	EXTERIOR BEAM	200	FLEXURE

ESTIMATED BRIDGE QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL
207000	STRUCTURAL EXCAVATION AND BACKFILL	CY	133
211000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	-
604000	JACKING BRIDGE	LS	-
604001	PROTECTIVE SHIELD	LS	-
610002	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT ABOVE FOOTING, CLASS A	CY	29
610004	PORTLAND CEMENT CONCRETE MASONRY, PIER ABOVE FOOTING, CLASS A	CY	190
610008	PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	CY	129
610017	PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	CY	360
610018	PORTLAND CEMENT CONCRETE MASONRY, APPROACH SLAB, CLASS D	CY	264
610503	WALL CLOSURE POUR •	CY	30
610504	INFILL WALL EPOXY INJECTION •	LS	-
611001	BAR REINFORCEMENT, EPOXY COATED	LB	185000
613000	EPOXY CONCRETE SEALER	SF	1900
613001	SILICONE-BASED ACRYLIC CONCRETE SEALER	SF	3760
613003	HIGH MOLECULAR WEIGHT METHACRYLATE CONCRETE SEALER	SF	13040
615001	STEEL STRUCTURES	LS	-
615004	REPLACING STEEL RIVETS/BOLTS	EACH	240
615505	FATIGUE REPAIRS •	LS	-
616000	CLEANING AND PAINTING OF EXISTING STEEL	LS	-
616003	TESTING AND DISPOSAL OF EXISTING HAZARDOUS STEEL COATING	LS	-
619500	CONCRETE BLOCK SLOPE PAVING REPAIR, 4" •	SY	164
623000	ELASTOMERIC BEARINGS	EACH	40
623003	REPLACE ANCHOR BOLTS	EACH	100
624000	PREFABRICATED EXPANSION JOINT SYSTEM, 3"	LF	200
626011	ALUMINUM RAILING, TYPE 1	LF	467
628001	REPAIR OF CONCRETE STRUCTURES BY EPOXY INJECTION	LF	12
628040	SHALLOW SPALL REPAIR	CF	1
628041	DEEP SPALL REPAIR	CF	100
628070	DRILLING HOLES AND INSTALLING DOWELS	EACH	2022
710500	INSTALLATION OF WATER MAIN AND ACCESSORIES•	LS	-
710501	REMOVAL OF EXISTING WATER MAIN AND ACCESSORIES•	LS	-
727000	CHAIN LINK FENCE ••	LF	155
801501	MAINTENANCE OF RAILROAD TRAFFIC •	LS	-

• SPECIAL PROVISION INCLUDED IN CONTRACT FOR THIS ITEM

•• QUANTITY SHOWN HERE DOES NOT INCLUDE TEMPORARY BARRIER MOUNTED FENCE USED DURING CONSTRUCTION STAGE 1. SEE CONSTRUCTION PHASING AND MAINTENANCE OF TRAFFIC PLANS ON SHEETS 63-67.



COATING LIMITS

PLAN LIMITS TO INCLUDE BRIDGE AND APPROACH SLABS
NOT TO SCALE

INDEX OF BRIDGE DRAWINGS

P:\60323054 DELDOT AGR 1672 BOS\T07 - REHAB BR. 1-634\900 CAD\20 SHEETS\STRUCTURES\BR1-634\BR-634-QT01.DGN

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

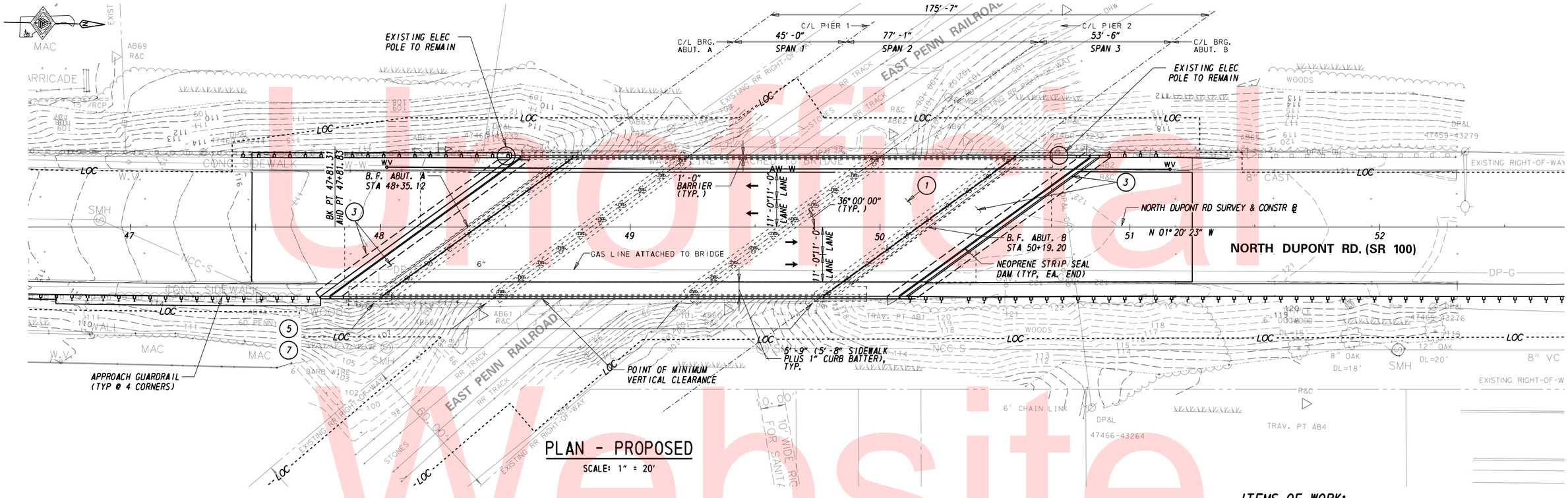
NOT TO SCALE

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	BRIDGE NO.	1-634
T201507403	DESIGNED BY:	SCF
COUNTY	CHECKED BY:	JAM
NEW CASTLE		

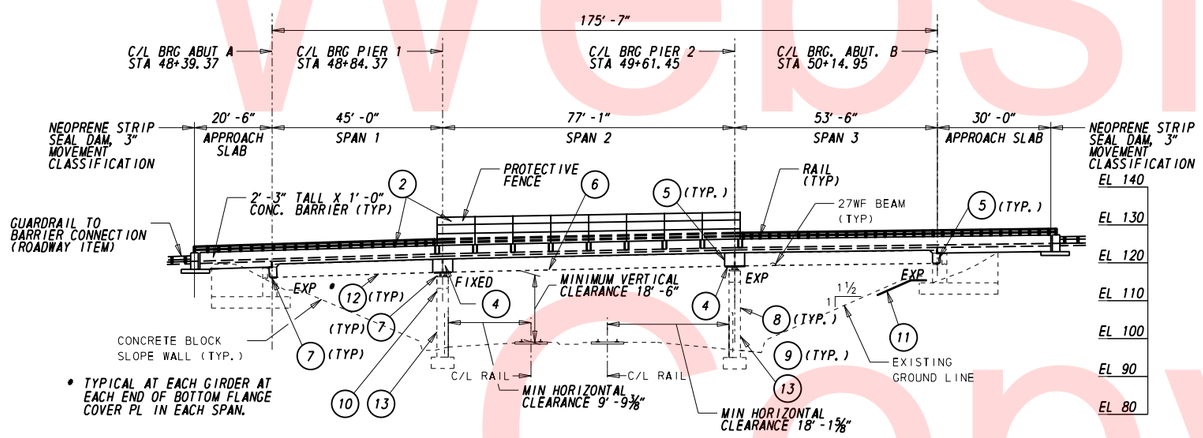
QUANTITIES AND INDEX OF SHEETS

SHEET NO.
9
TOTAL SHTS.
71



PLAN - PROPOSED

SCALE: 1" = 20'



• TYPICAL AT EACH GIRDER AT EACH END OF BOTTOM FLANGE COVER PL IN EACH SPAN.

ELEVATION - PROPOSED

SCALE: 1" = 20'

SR 100 VERTICAL CURVE DATA

+5.50% +2.44%

PVI 47+91.50
ELEV. 118.69
LENGTH = 86.00'
SSD = 396.36'
K = 28.16

+2.44%

PVT 48+34.50
ELEV. 119.74
PVC = 48+85.94
ELEV. 121.00

+2.44% -1.26%

PVI 49+86.94
ELEV. 123.46
LENGTH = 202.00'
SSD = 392.32'
K = 54.53

SR 100 HORIZONTAL CURVE DATA

TANGENT
REFER TO SHEET 5 FOR HORZONTAL CURVE DATA

ITEMS OF WORK:

1. REPLACE EXISTING DECK AND ASSOCIATED BARRIERS WITH CONTINUOUS SPAN CAST-IN-PLACE DECK. CONSTRUCT NEW CONCRETE SIDEWALK AND BARRIER.
2. INSTALL NEW RAIL AND PROTECTIVE FENCE.
3. REPLACE EXISTING APPROACH SLABS WITH NEW APPROACH SLABS AND SLEEPER SLABS.
4. INSTALL GIRDER TOP AND BOTTOM FLANGE CONTINUITY PLATES OVER PIERS.
5. CONSTRUCT CONTINUITY CONCRETE DIAPHRAGMS AT PIERS & END DIAPHRAGMS AT ABUTMENTS.
6. CLEAN AND PAINT ALL EXISTING STRUCTURAL STEEL.
7. REPLACE ALL BEARINGS WITH CIRCULAR ELASTOMERIC BEARINGS. THIS WORK WILL REQUIRE JACKING AND TEMPORARY SUPPORT OF GIRDERS.
8. REPAIR SPALLS ON SUBSTRUCTURE UNITS.
9. SEAL CRACKS ON SUBSTRUCTURE UNITS WITH EPOXY INJECTION.
10. PARTIAL DEMOLITION AND RECONSTRUCTION OF PIER 1. THIS WORK WILL INCLUDE JACKING AND TEMPORARY SUPPORT OF GIRDERS 1-3 @ PIER 1.
11. REPAIR ABUTMENT B SLOPE WALL. NOTE THAT CONTRACTOR'S PROPOSED MEANS OF TEMPORARY SUPPORT OF SUPERSTRUCTURE ADJACENT TO PIER 1 MAY ALSO REQUIRE PARTIAL RECONSTRUCTION OF ABUTMENT A SLOPE WALL, AS INDICATED HEREIN.
12. PERFORM STEEL FATIGUE REPAIR AT EXISTING BOTTOM FLANGE WELDED COVER PLATE TERMINATIONS IN EACH SPAN.
13. CONSTRUCT INFILL WALLS, TYPICAL AT PIER 1 & 2.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 20 40 60 FEET

BR 1-634
SR 100 DUPONT ROAD OVER EAST PENN RR

CONTRACT	
T201507403	
COUNTY	
NEW CASTLE	

BRIDGE NO.	1-634
DESIGNED BY:	SCF
CHECKED BY:	JAM

BRIDGE PLAN AND ELEVATION

SHEET NO.	
10	
TOTAL SHTS.	
71	

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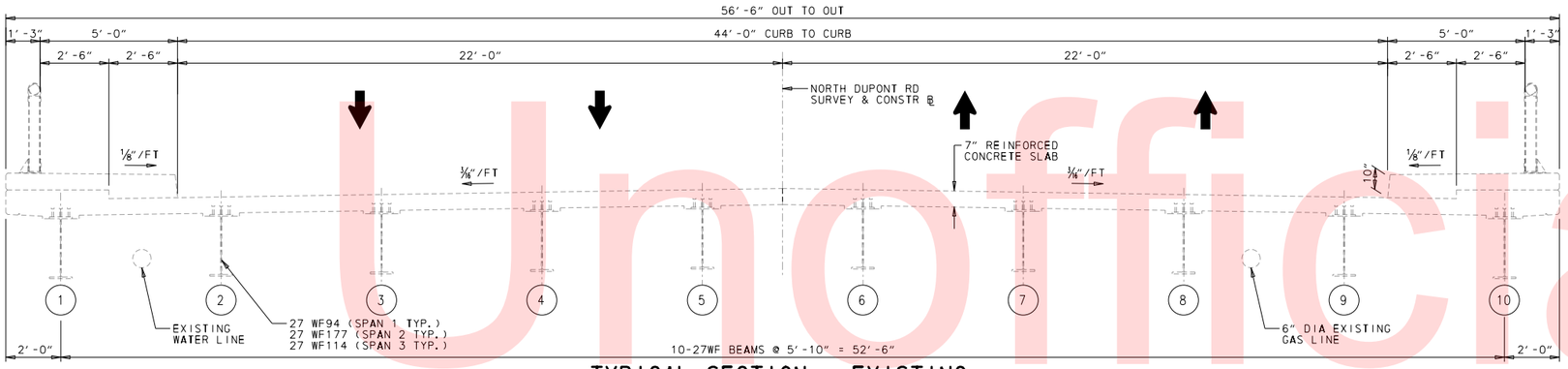
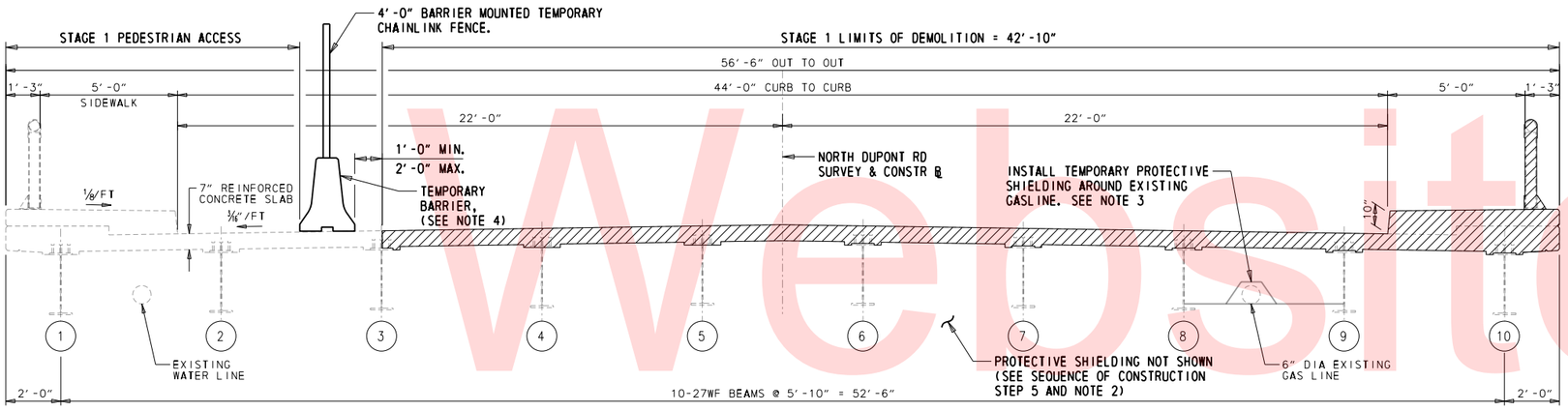


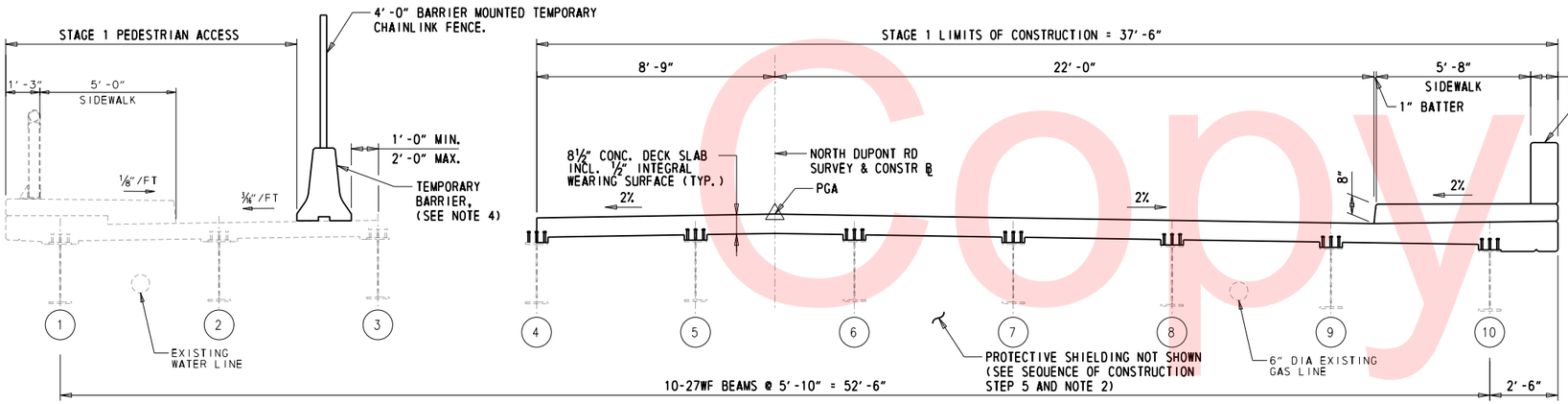
TYPICAL SECTION - EXISTING

SCALE: ⅜" = 1'-0"



TYPICAL SECTION - STAGE 1 DECK DEMOLITION

SCALE: ⅜" = 1'-0"



TYPICAL SECTION - STAGE 1 DECK CONSTRUCTION

SCALE: ⅜" = 1'-0"

SEQUENCE OF CONSTRUCTION:

1. PERFORM SUBSTRUCTURE CONCRETE REPAIRS AND EPOXY-INJECTION OF CRACKS IN SUBSTRUCTURES.

   STAGE 1 CONSTRUCTION:

2. SET UP STAGE 1 TRAFFIC CONTROL.
3. CLOSE BRIDGE TO HIGHWAY TRAFFIC AND OPEN BRIDGE FOR PEDESTRIAN USE WITHIN STAGE 1 PEDESTRIAN ACCESS LIMITS SHOWN.
4. REMOVE ALL EXISTING STEEL DIAPHRAMS BETWEEN GIRDER LINES 3 AND 4. CAREFULLY STORE FOR LATER RE-INSTALLATION (STEP 29).
5. INSTALL PROTECTIVE SHIELDING, FULL LENGTH & WIDTH OF BRIDGE. REMOVE EXISTING BRIDGE BARRIER, SIDEWALK, CONCRETE BRIDGE DECK AND APPROACH SLAB TO STAGE 1 LIMITS SHOWN. PERFORM PARTIAL BACKWALL AND WINGWALL DEMOLITION WITHIN STAGE 1 LIMITS.
6. PERFORM STAGE 1 JACKING, WHICH EQUATES TO JACKING GIRDER LINES 4 THROUGH 10. PLACE GIRDERS ON TEMPORARY SUPPORTS AND REMOVE EXISTING BEARINGS. STEPS 7 THROUGH 11 MAY BE PERFORMED SIMULTANEOUSLY OR IN ANY ORDER.
7. PERFORM PIER INFILL WALL CONSTRUCTION WITHIN STAGE 1 LIMITS AT PIER 1. AT PIER 2, PERFORM INFILL WALL CONSTRUCTION FOR THE FULL WIDTH, INCLUDING SECTIONS WITHIN STAGE 1 AND STAGE 2 LIMITS. FOR DETAILS AND SEQUENCE OF PIER INFILL WALL CONSTRUCTION, SEE SHEETS 21-24. EPOXY INJECTION AT TOP OF INFILL WALL SHALL BE PERFORMED AS NEAR AS PRACTICAL TO THE END OF THE CONSTRUCTION OF THE WHOLE PROJECT (STEP 39).
8. DEMOLISH AND RECONSTRUCT CONCRETE PEDESTAILS WITHIN STAGE 1 LIMITS (GIRDER LINES 4 - 10).
9. FOR GIRDER LINES 4 THROUGH 10, REMOVE EXISTING SHEAR STUDS. CLEAN TOP OF TOP FLANGES USING VACUUM-SHROUDED HAND TOOLS AND PLACE PRIME COAT ON TOP OF TOP FLANGES.
10. PERFORM DIAPHRAGM AND DIAPHRAGM CONNECTION PLATE REHABILITATION FOR DIAPHRAGMS FROM GIRDER LINES 4 TO 10. DURING PERFORMANCE OF WORK, ONLY ONE DIAPHRAGM CONNECTING AT A GIVEN BEAM WITHIN A GIVEN SPAN IS TO BE REMOVED AT A TIME. PAINT REMOVAL AND PRIME COAT TO BE PLACED FOR DIAPHRAGM AND DIAPHRAGM CONNECTION PLATE FAYING SURFACES.
11. INSTALL BOTTOM FLANGE CONTINUITY PLATES, WEDGE PLATES, BOLSTERS, AND NEW BEARINGS WITHIN STAGE 1 LIMITS (GIRDER LINES 4 -10). PAINT REMOVAL AND PRIME COAT TO BE PLACED FOR PLATE FAYING SURFACES.
12. JACK GIRDERS 4 THROUGH 10 TO REMOVE GIRDERS FROM TEMPORARY SUPPORTS AND PLACE GIRDERS ONTO NEW BEARINGS.
13. INSTALL STAGE 1 DECK SIP FORMS, TOP FLANGE CONTINUITY PLATES, AND SHEAR STUDS.
14. PLACE STAGE 1 CONCRETE DECK, CONCRETE CONTINUITY DIAPHRAGMS AND END DIAPHRAGMS, AND APPROACH SLAB FOLLOWING SEQUENCE SHOWN ON SHEETS 29-32, 41-54.
15. PLACE STAGE 1 CONCRETE SIDEWALK, BRIDGE BARRIER, BRIDGE RAILING AND PROTECTIVE FENCE.
16. STEP UP STAGE 2 TRAFFIC CONTROL. OPEN BRIDGE TO HIGHWAY TRAFFIC AND FOR PEDESTRIAN USE WITHIN STAGE 2 LIMITS SHOWN.

NOTES:

1. FOR STAGE 2 CONSTRUCTION SEQUENCE OF WORK, SEE SHEET 12.
2. PROTECTIVE SHIELDING TO BE PAID FOR UNDER ITEM 604001. THE SHIELDING MUST NOT EXTEND MORE THAN 6" BELOW THE BOTTOM FLANGES OF THE GIRDERS OVER THE NORTH TRACK AT A DISTANCE OF 15 FEET FROM THE CENTERLINE OF TRACK, EACH SIDE.
3. GAS LINE PROTECTIVE SHIELDING TO BE PAID UNDER ITEM 604001.
4. TEMPORARY BARRIER AND FENCE TO BE PAID UNDER ITEM 807001, 807004 AND 727000. SEE CONSTRUCTION PHASING, MAINTENANCE OF TRAFFIC, EROSION CONTROL PLANS, SHEET 63-67.

LEGEND:

▨ - LIMITS OF DEMOLITION. INCLUDES REMOVAL OF EXISTING SHEAR STUDS ON GIRDER TOP FLANGES

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

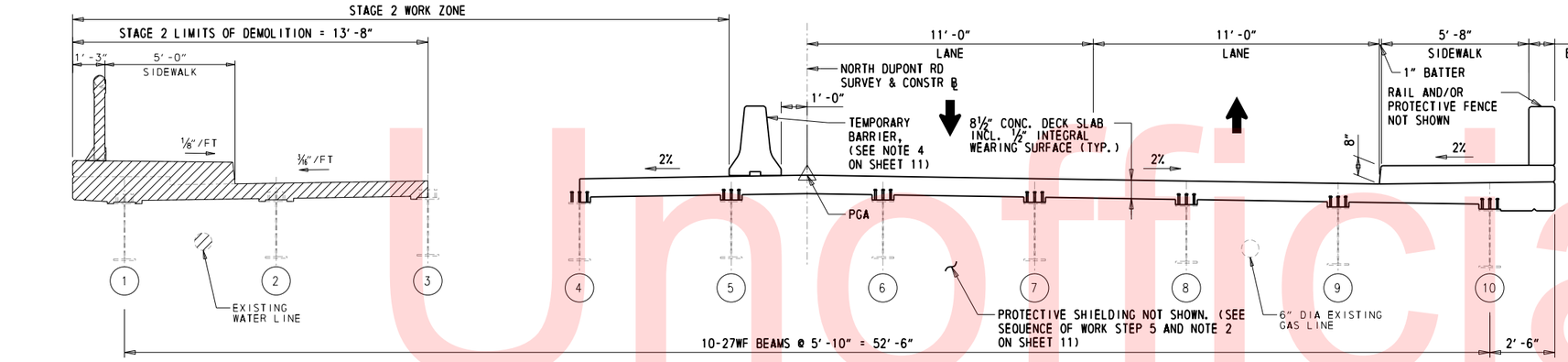
SCALE
1 0 1 2 3
FEET

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	BRIDGE NO.	1-634
T201507403	DESIGNED BY:	RPG
COUNTY	CHECKED BY:	JAM
NEW CASTLE		

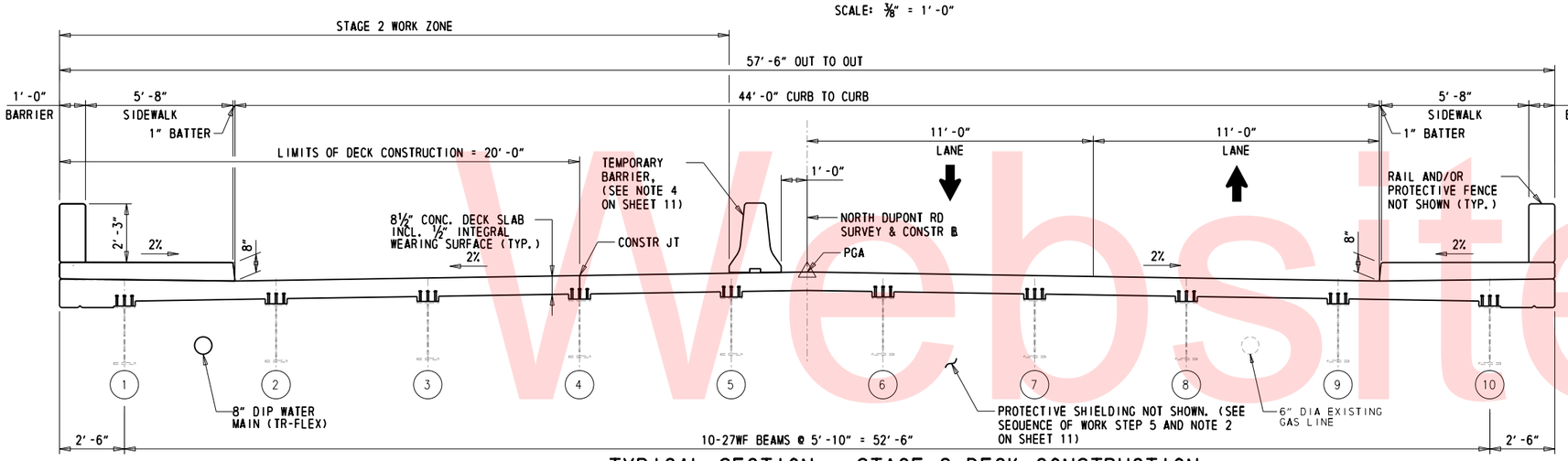
TYPICAL SECTIONS AND CONSTRUCTION STAGING - 1

SHEET NO.
11
TOTAL SHTS.
71



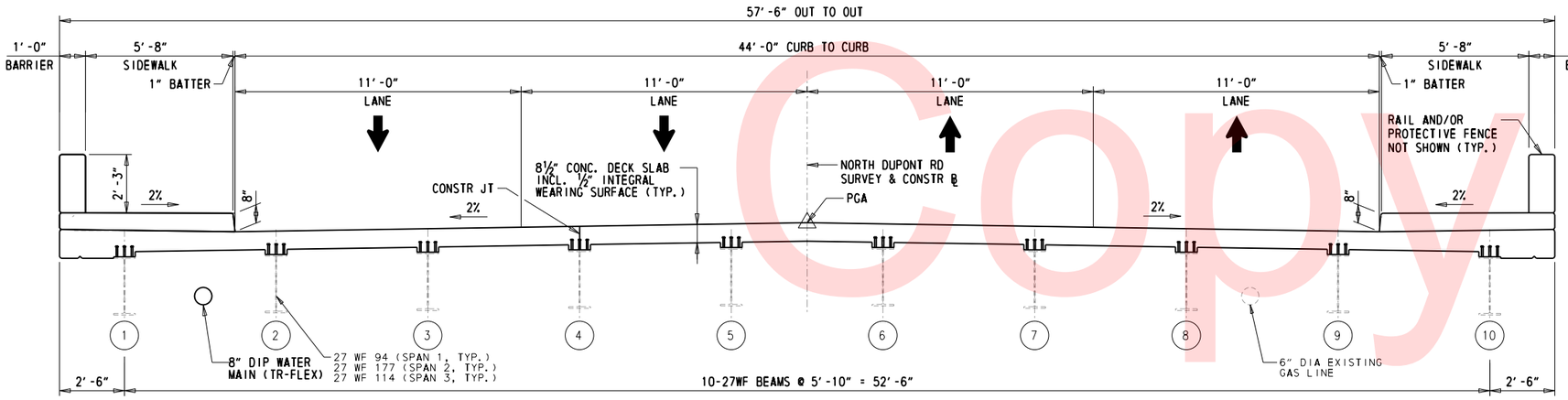
TYPICAL SECTION - STAGE 2 DECK DEMOLITION

SCALE: ⅜" = 1'-0"



TYPICAL SECTION - STAGE 2 DECK CONSTRUCTION

SCALE: ⅜" = 1'-0"



TYPICAL SECTION - PROPOSED FINAL CONDITION

SCALE: ⅜" = 1'-0"

SEQUENCE OF CONSTRUCTION: (CONT'D)

STAGE 2 CONSTRUCTION:

17. REMOVE EXISTING BRIDGE BARRIER, SIDEWALK, CONCRETE BRIDGE DECK, WATER LINE AND APPROACH SLAB TO STAGE 2 LIMITS SHOWN. PERFORM PARTIAL BACKWALL AND WINGWALL DEMOLITION WITHIN STAGE 2 LIMITS.
18. CONSTRUCT PIER 1 JACKING / TEMPORARY SUPPORT SYSTEM.
19. AT PIER 1, JACK GIRDER LINES 1- 3 AND PLACE GIRDERS ON TEMPORARY SUPPORTS. REMOVE EXISTING BEARINGS AT PIER 1.
20. DEMOLISH PIER 1 TO LIMITS SHOWN ON SHEET 17. RECONSTRUCT PIER 1 TO LIMITS SHOWN ON SHEET 21.
21. ALLOW PIER TO CURE. THEN, LOCATE JACKS FOR GIRDER LINES 1-3 UNDER JACKING DIAPHRAGMS AT PIER 1, AND TRANSFER GIRDERS TO TEMPORARY SUPPORT ON PIER 1.
22. JACK GIRDER LINES 1-3 AT ABUTMENT A, PIER 2 AND ABUTMENT B, PLACE GIRDERS ON TEMPORARY SUPPORTS. REMOVE EXISTING BEARINGS. STEPS 23 TO 27 MAY BE PERFORMED SIMULTANEOUSLY OR IN ANY ORDER.
23. CONSTRUCT PEDESTALS, INSTALL BOTTOM FLANGE CONTINUITY PLATES, WEDGE PLATES, BOLSTERS, AND BEARINGS AT PIER 1.
24. DEMOLISH AND RECONSTRUCT CONCRETE PEDESTALS WITHIN STAGE 2 LIMITS (GIRDER LINES 1 - 3) AT THE ABUTMENTS AND PIER 2.
25. FOR GIRDER LINES 1 THROUGH 3, REMOVE EXISTING SHEAR STUDS. CLEAN TOP OF TOP FLANGES USING VACUUM-SHROUDED HAND TOOLS AND PLACE PRIME COAT ON TOP OF TOP FLANGES.
26. PERFORM DIAPHRAGM AND DIAPHRAGM CONNECTION PLATE REHABILITATION FOR DIAPHRAGMS FROM GIRDER LINES 1 TO 3. DURING PERFORMANCE OF WORK, ONLY ONE DIAPHRAGM CONNECTING AT A GIVEN BEAM WITHIN A GIVEN SPAN IS TO BE REMOVED AT A TIME. PAINT REMOVAL AND PRIME COAT TO BE PLACED FOR DIAPHRAGM AND DIAPHRAGM CONNECTION PLATE FAYING SURFACES.
27. INSTALL REMAINING BOTTOM FLANGE CONTINUITY PLATES, BOLSTERS, WEDGE PLATES AND REMAINING NEW BEARINGS WITHIN STAGE 2 LIMITS (GIRDER LINES 1 - 3). PAINT REMOVAL AND PRIME COAT TO BE PLACED FOR PLATE FAYING SURFACES.
28. JACK GIRDERS 1 - 3 TO REMOVE GIRDERS FROM TEMPORARY SUPPORTS AND PLACE GIRDERS ONTO NEW BEARINGS.
29. ALIGN GIRDER LINE 3 WITH GIRDER LINE 4 IN ORDER TO RECONNECT DIAPHRAMS BETWEEN GIRDER LINE 3 AND 4. CONTRACTOR SHALL PERFORM HORIZONTAL JACKING OF GIRDERS, OR BY OTHER APPROVED METHODS, TO ALIGN G3 & G4 FOR CONNECTION OF DIAPHRAGMS. RECONNECT DIAPHRAGMS BETWEEN GIRDER LINES 3 AND 4, INSTALLING ONLY ONE BOLT AT EACH END OF DIAPHRAGM. HAND TIGHTEN BOLTS AND BACK OFF ¼" TURN. HORIZONTAL JACKING SHALL BE INCIDENTAL TO ITEM 604000.
30. INSTALL NEW WATER LINE.
31. INSTALL STAGE 2 DECK SIP FORMS, TOP FLANGE CONTINUITY PLATES, AND SHEAR STUDS.
32. REMOVAL OF PROTECTIVE SHIELDING MAY TAKE PLACE DURING ANY STEP FOLLOWING THIS STEP.
33. PLACE STAGE 2 CONCRETE DECK, CONCRETE CONTINUITY AND END DIAPHRAGMS, AND APPROACH SLAB FOLLOWING SEQUENCE SHOWN ON SHEETS 29-32, 41-54.
34. COMPLETE FULL INSTALLATION OF THE DIAPHRAGM CONNECTIONS BETWEEN GIRDER LINE 3 AND 4.
35. PLACE STAGE 2 CONCRETE SIDEWALK, BRIDGE BARRIER, BRIDGE RAILING AND PROTECTIVE FENCE.
36. INSTALL STRIP SEAL GLAND OVER FULL WIDTH OF BRIDGE FOR BOTH BRIDGE JOINTS.
37. PERFORM FATIGUE REPAIRS AT COVER PLATE TERMINATIONS AT ALL GIRDERS.
38. CLEAN AND PAINT STEEL SUPERSTRUCTURE FULL WIDTH.
39. PERFORM EPOXY-INJECTION AT TOP OF INFILL WALLS OVER ENTIRE WIDTH OF BRIDGE.
40. REMOVE STAGE 2 TRAFFIC CONTROL. OPEN BRIDGE TO HIGHWAY TRAFFIC AND FOR PEDESTRIAN USE TO PROPOSED FINAL CONDITION.

LEGEND:

▨ - LIMITS OF DEMOLITION. INCLUDES REMOVAL OF EXISTING SHEAR STUDS ON GIRDER TOP FLANGES

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

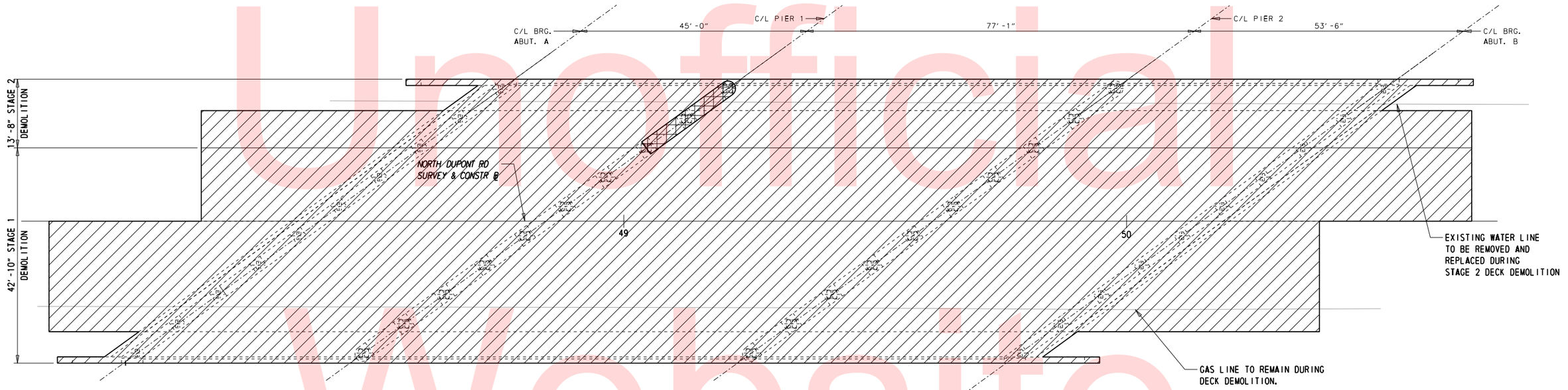
SCALE
1 0 1 2 3
FEET

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT T201507403	BRIDGE NO.	1-634
COUNTY NEW CASTLE	DESIGNED BY:	RPG
	CHECKED BY:	JAM

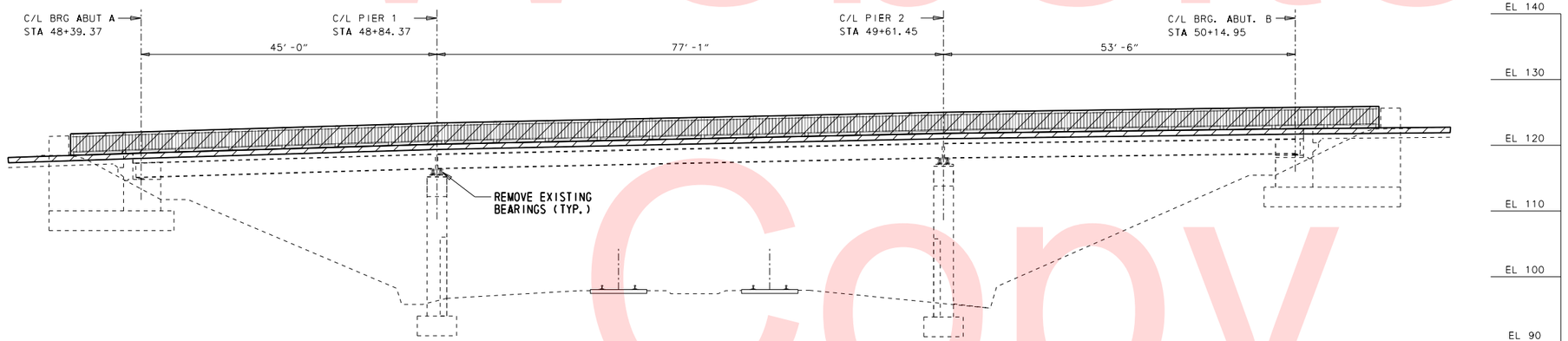
TYPICAL SECTIONS AND CONSTRUCTION STAGING - 2

SHEET NO.
12
TOTAL SHTS.
71



PLAN

SCALE: 1" = 10'



ELEVATION - EXISTING

SCALE: 1" = 10'

LEGEND:

- LIMITS OF BRIDGE DECK & APPROACH SLAB DEMOLITION
- LIMITS OF PIER 1 DEMOLITION

CROSS REFERENCE NOTES:

1. FOR ABUTMENT A DEMOLITION DETAILS, SEE SHEET 14.
2. FOR ABUTMENT B DEMOLITION DETAILS, SEE SHEET 15.
3. FOR WINGWALL DEMOLITION DETAILS, SEE SHEET 16.
4. FOR PIER 1 DEMOLITION DETAILS, SEE SHEET 17.

NOTES:

1. ALL EXISTING SHEAR STUDS SHALL BE REMOVED.
2. REMOVAL OF DECK, BARRIERS, APPROACH SLABS, SIDEWALKS AND SHEAR STUDS SHALL BE PAID FOR UNDER ITEM 211000.
3. PROTECTIVE SHIELDING (ITEM 604001) SHALL BE CONSTRUCTED UNDER FULL LENGTH OF BRIDGE SUPERSTRUCTURE. PROTECTIVE SHIELDING SHALL NOT EXTEND GREATER THAN 6" BELOW BOTTOM OF GIRDERS WITHIN MINIMUM RAILROAD HORIZONTAL CLEARANCE LIMITS OVER THE RAILROAD TRACKS.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

SCALE
0 10 20 30
FEET

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	BRIDGE NO.	1-634
T201507403	DESIGNED BY:	RPG
COUNTY	CHECKED BY:	JAM
NEW CASTLE		

SUPERSTRUCTURE DEMOLITION PLAN

SHEET NO.
13
TOTAL SHTS.
71

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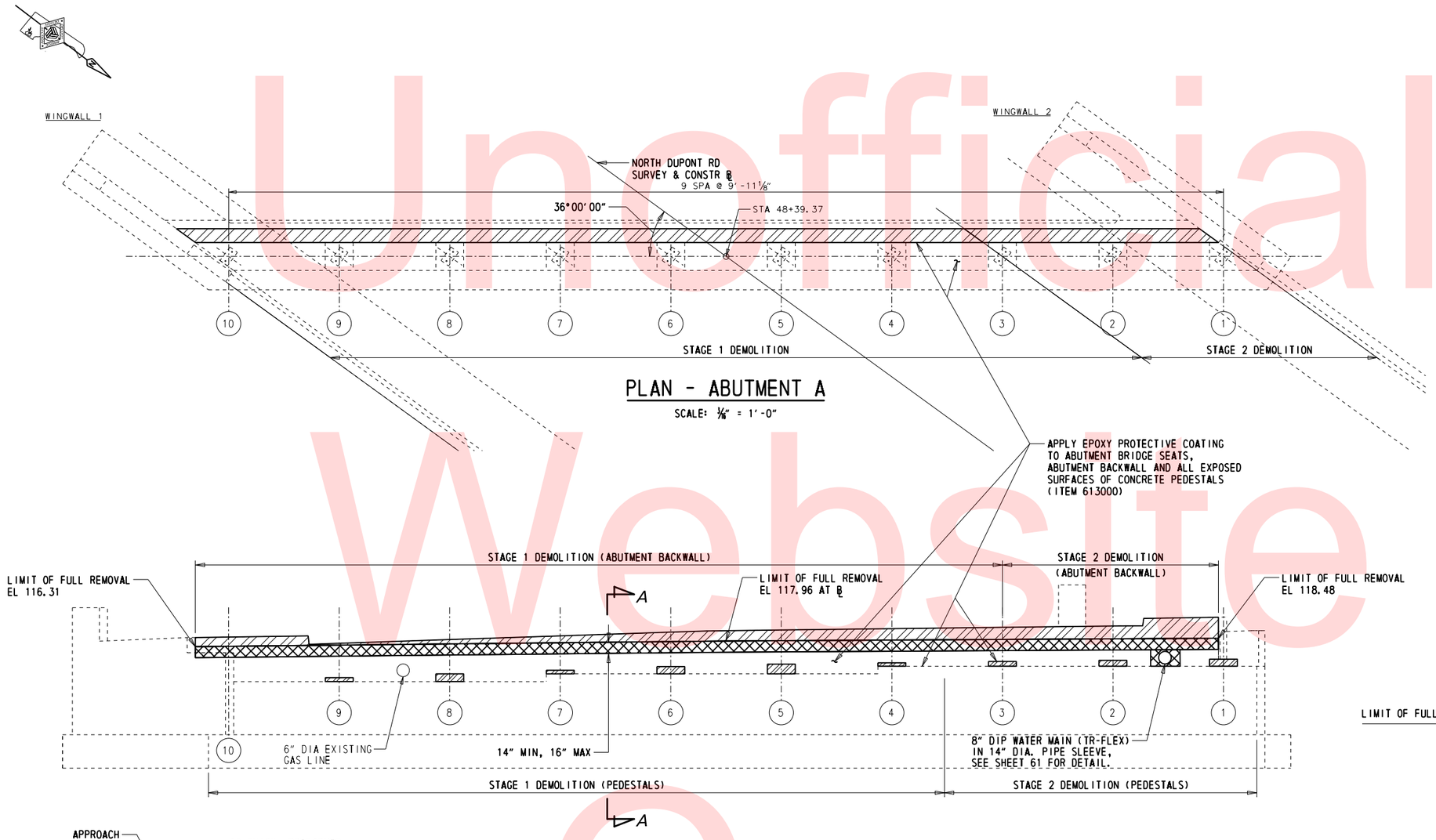
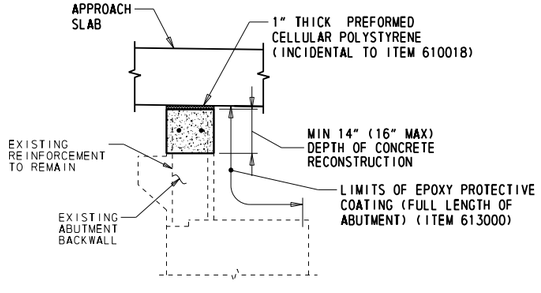


PLAN - ABUTMENT A

SCALE: ⅛" = 1'-0"

ELEVATION LOOKING SOUTH - ABUTMENT A

SCALE: ⅛" = 1'-0"



BACKWALL RECONSTRUCTION DETAIL

SCALE : ½" = 1'-0"

LEGEND:

- LIMITS OF SUBSTRUCTURE DEMOLITION (REINFORCEMENT IN THIS ZONE TO BE REMOVED)
- CONCRETE RECONSTRUCTION LIMITS
- LIMITS OF DEMOLITION USING HAND HELD TOOLS ONLY (REINFORCEMENT IN THIS ZONE SHALL REMAIN) (SEE NOTE 2)

CROSS REFERENCE NOTES:

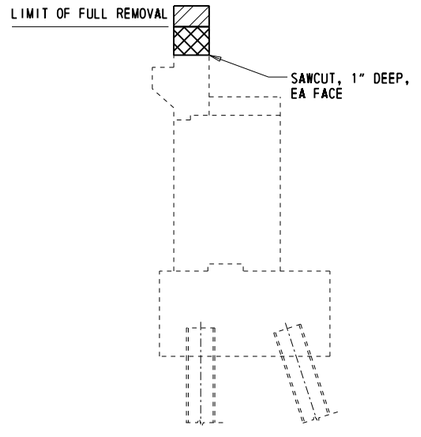
1. FOR SUPERSTRUCTURE DEMOLITION PLAN & ELEVATION, SEE SHEET 13.
2. FOR EXTENTS OF WINGWALL DEMOLITION, SEE SHEET 16.
3. FOR APPROACH SLAB DETAILS, SEE SHEETS 49, 50 AND 51.
4. FOR PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 36.
5. FOR WATERLINE RECONSTRUCTION DETAILS, SEE SHEET 60-62.

NOTES:

1. DEMOLITION SHALL BE PAID FOR UNDER ITEM 211000. BACKWALL RECONSTRUCTION SHALL BE PAID FOR UNDER ITEM 610002.
2. RECONSTRUCT CONCRETE BACKWALL TO LIMIT OF FULL REMOVAL ELEVATION.

RECONSTRUCTION NOTES:

1. SAW CUT CONCRETE AND REINFORCEMENT ALONG STRAIGHT LINES BETWEEN ELEVATIONS SHOWN.
2. AFTER SAW CUT, INTENTIONALLY ROUGHEN SURFACE AND REMOVE ALL LOOSE CONCRETE TO PROVIDE A SOUND BOND BETWEEN EXISTING AND NEW CONCRETE.
3. APPLY AN EPOXY BONDING COMPOUND BETWEEN EXISTING AND NEW CONCRETE, (INCIDENTAL TO ITEM 610002).
4. CLEAN ANY EXPOSED REINFORCEMENT USING MECHANICAL MEANS, (INCIDENTAL TO ITEM 610002).



SECTION A-A

SCALE : 3/8" = 1'-0"

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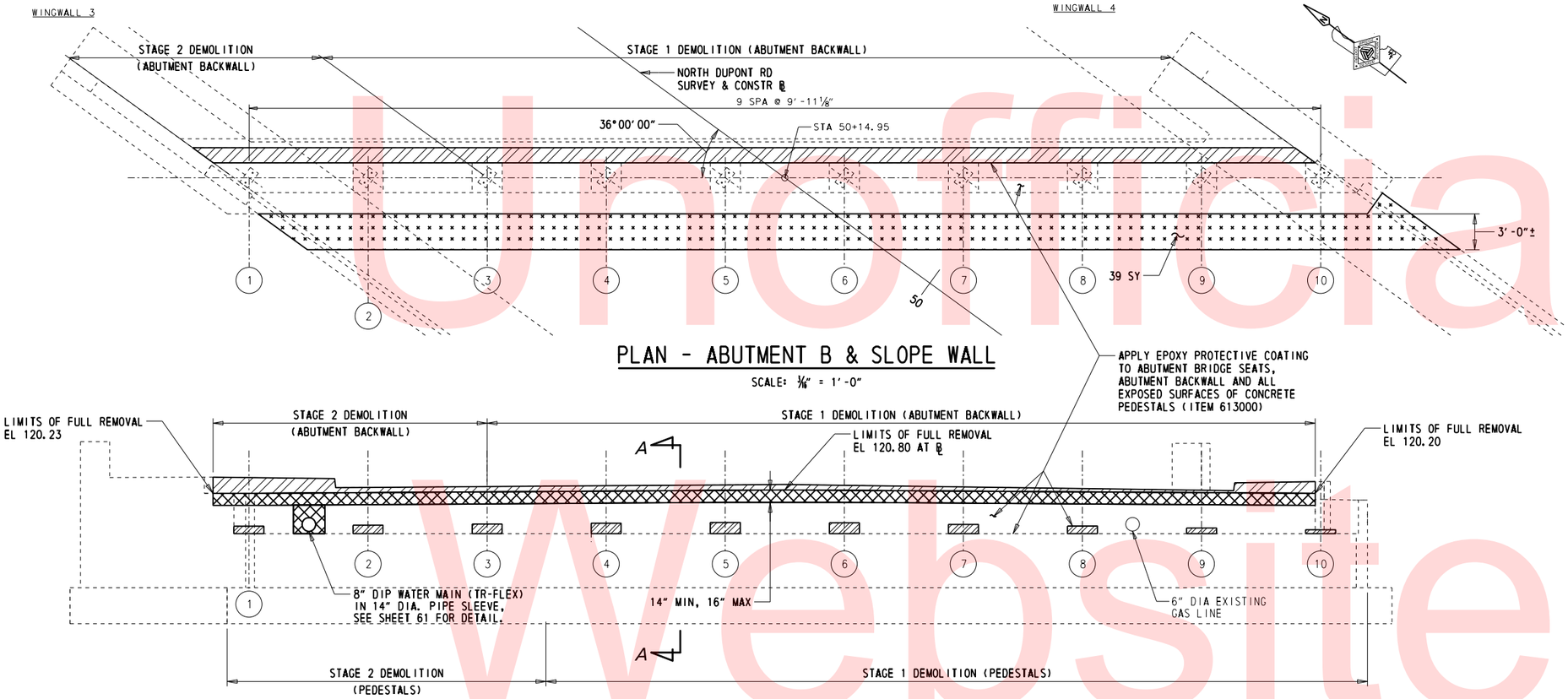
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	ABUTMENT A SELECTIVE DEMOLITION
				COUNTY NEW CASTLE	DESIGNED BY: SCF	SHEET NO. 14
					CHECKED BY: JAM	TOTAL SHTS. 71

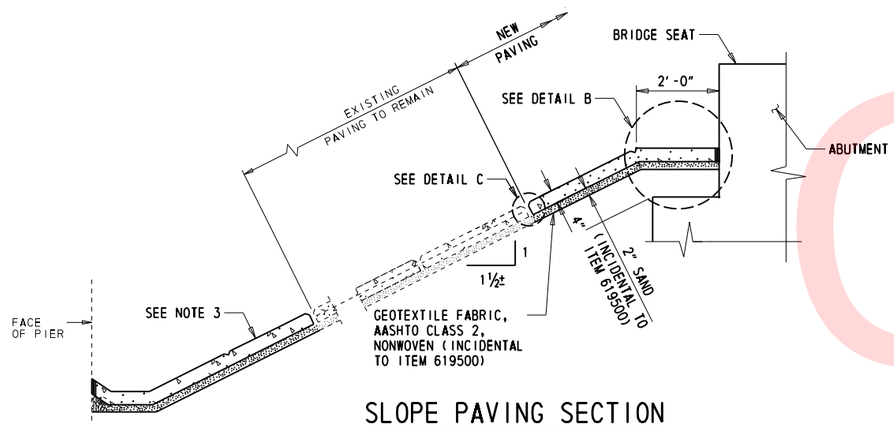


PLAN - ABUTMENT B & SLOPE WALL

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

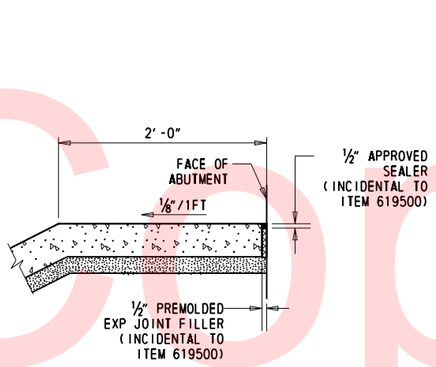
ELEVATION LOOKING NORTH - ABUTMENT B

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



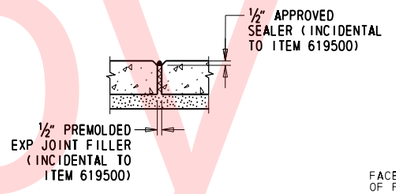
SLOPE PAVING SECTION

NOT TO SCALE



DETAIL B

NOT TO SCALE
(DETAIL AT PIER FACE SIMILAR)

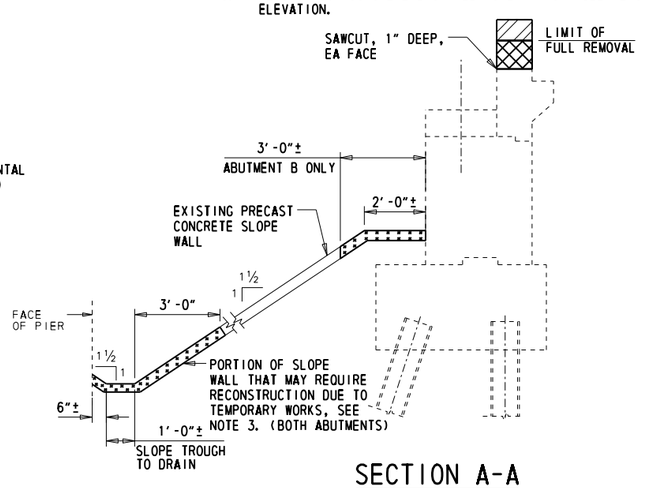


DETAIL C

NOT TO SCALE

PRECAST CONCRETE SLOPE PAVING

NOT TO SCALE



SECTION A-A

SCALE: 3/8" = 1'-0"

LEGEND:

- LIMITS OF SUBSTRUCTURE DEMOLITION (REINFORCEMENT IN THIS ZONE TO BE REMOVED)
- SLOPE WALL REMOVAL AND RECONSTRUCTION LIMITS (SEE NOTES 2 & 3)
- LIMITS OF DEMOLITION USING HAND HELD TOOLS ONLY (REINFORCEMENT IN THIS ZONE SHALL REMAIN) (SEE NOTE 5).

CROSS REFERENCE NOTES:

1. FOR SUPERSTRUCTURE DEMOLITION PLAN & ELEVATION, SEE SHEET 13.
2. FOR EXTENTS OF WINGWALL DEMOLITION, SEE SHEET 16.
3. FOR APPROACH SLAB DETAILS, SEE SHEET 49, 50 AND 51.
4. FOR BACKWALL RECONSTRUCTION DETAIL, SEE SHEET 14.
5. FOR PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 36.
6. FOR WATERLINE RECONSTRUCTION DETAILS, SEE SHEET 60-62.
7. FOR BACKWALL RECONSTRUCTION NOTES, SEE SHEET 14.

NOTES:

1. DEMOLITION SHALL BE PAID FOR UNDER ITEM 211000. BACKWALL RECONSTRUCTION SHALL BE PAID FOR UNDER ITEM 610002.
2. NEATLY REMOVE EXISTING CEMENT CONCRETE BLOCK SLOPE PAVING TO LIMITS SHOWN. CONSTRUCT PRECAST CEMENT CONCRETE BLOCK TO MATCH EXISTING WALL PROFILE. FILL ERODED AREAS WITH EMBANKMENT MATERIAL BENEATH SLOPEWALL REPAIR AREAS. REPAIR SHALL BE PAID FOR UNDER ITEM 619500.
3. ESTIMATED SLOPE WALL RECONSTRUCTION LIMITS INCLUDE SLOPE WALL RECONSTRUCTION THAT MAY BE REQUIRED ADJACENT TO PIERS DUE TO TEMPORARY WORKS NEEDED AS PART OF PIER PARTIAL RECONSTRUCTION. ANY ADDITIONAL SLOPE WALL RECONSTRUCTION OUTSIDE THE LIMITS SHOWN HERE DUE TO THE CONTRACTOR'S PROPOSED TEMPORARY WORKS UNDER (ITEM 604000) SHALL BE INCIDENTAL TO ITEM 619500.
4. CONTRACTOR TO PROVIDE CONCRETE PAVING BLOCK LAYOUT PLANS FOR APPROVAL. THIS WORK IS INCIDENTAL TO ITEM 619500.
5. RECONSTRUCT CONCRETE BACKWALL TO LIMIT OF FULL REMOVAL ELEVATION.

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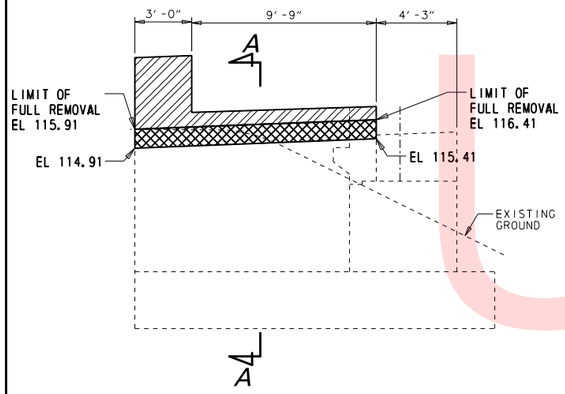
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403 / COUNTY NEW CASTLE	BRIDGE NO. 1-634 / DESIGNED BY: SCF / CHECKED BY: JAM

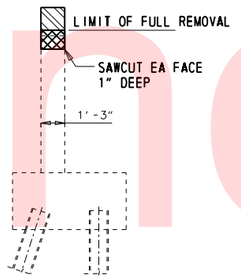
ABUTMENT B SELECTIVE DEMOLITION & SLOPEWALL REPAIR

SHEET NO. 15 / TOTAL SHTS. 71



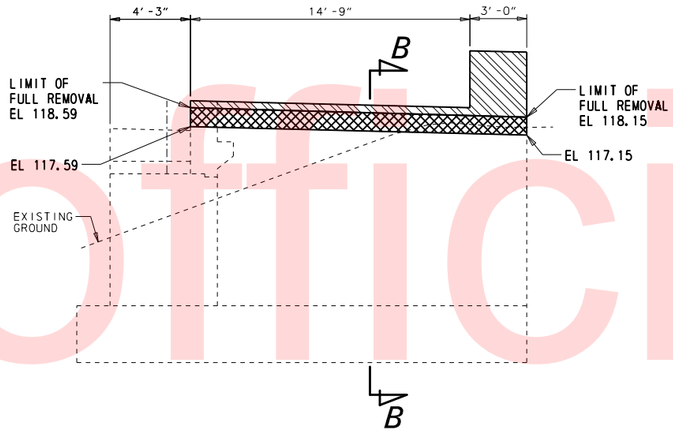
WINGWALL 1 ELEVATION

NOT TO SCALE
(STAGE 1 DEMOLITION)



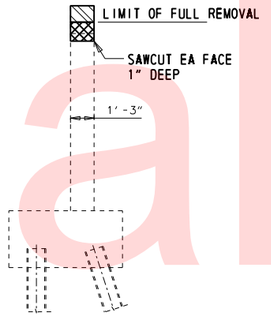
SECTION A-A

NOT TO SCALE



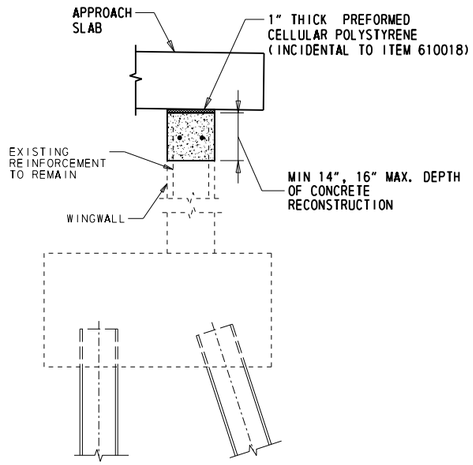
WINGWALL 2 ELEVATION

NOT TO SCALE
(STAGE 2 DEMOLITION)



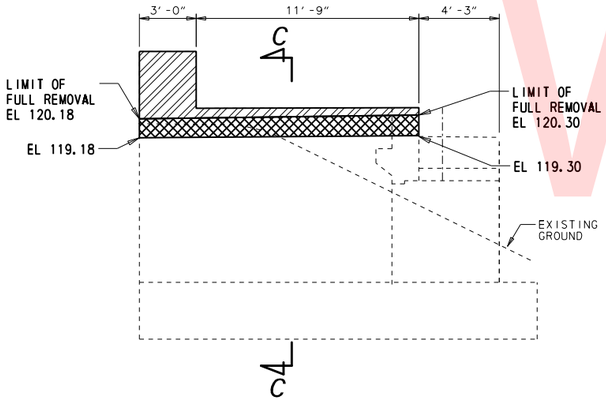
SECTION B-B

NOT TO SCALE



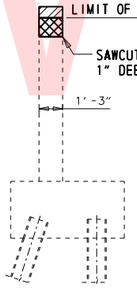
WINGWALL RECONSTRUCTION DETAIL

SCALE : ½″ = 1′-0″



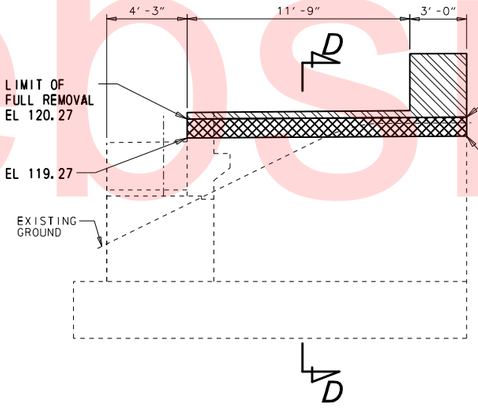
WINGWALL 3 ELEVATION

NOT TO SCALE
(STAGE 2 DEMOLITION)



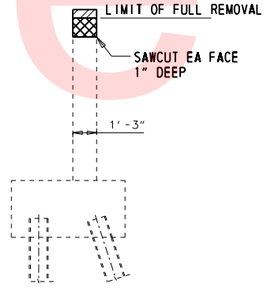
SECTION C-C

NOT TO SCALE



WINGWALL 4 ELEVATION

NOT TO SCALE
(STAGE 1 DEMOLITION)



SECTION D-D

NOT TO SCALE

RECONSTRUCTION NOTES:

1. REMOVE CONCRETE AND REINFORCEMENT ALONG STRAIGHT LINES BETWEEN ELEVATIONS SHOWN.
2. AFTER SAW CUT, INTENTIONALLY ROUGHEN SURFACE AND REMOVE ALL LOOSE CONCRETE TO PROVIDE A SOUND BOND BETWEEN EXISTING & NEW CONCRETE.
3. APPLY AN EPOXY BONDING COMPOUND BETWEEN EXISTING AND NEW CONCRETE. (INCIDENTAL TO ITEM 610002)
4. CLEAN ANY EXPOSED REINFORCEMENT USING MECHANICAL MEANS. (INCIDENTAL TO ITEM 610002)

LEGEND:

- LIMITS OF SUBSTRUCTURE DEMOLITION (REINFORCEMENT IN THIS ZONE TO BE REMOVED)
- CONCRETE RECONSTRUCTION LIMITS
- LIMITS OF DEMOLITION USING HAND HELD TOOLS ONLY (REINFORCEMENT IN THIS ZONE SHALL REMAIN) (SEE NOTE 2)

CROSS REFERENCE NOTES:

1. FOR SUPERSTRUCTURE DEMOLITION PLAN & ELEVATION, SEE SHEET 13.
2. FOR ABUTMENT A DEMOLITION DETAILS, SEE SHEET 14.
3. FOR ABUTMENT B DEMOLITION DETAILS, SEE SHEET 15.
4. FOR APPROACH SLAB DETAILS, SEE SHEETS 49, 50 AND 51.

NOTES:

1. DEMOLITION SHALL BE PAID FOR UNDER ITEM 211000. WINGWALL RECONSTRUCTION SHALL BE PAID FOR UNDER ITEM 610002.
2. RECONSTRUCT CONCRETE WINGWALLS TO LIMIT OF FULL REMOVAL ELEVATION.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	WINGWALL SELECTIVE DEMOLITION	SHEET NO. 16
				COUNTY NEW CASTLE	DESIGNED BY: RPG		TOTAL SHTS. 71
					CHECKED BY: JAM		

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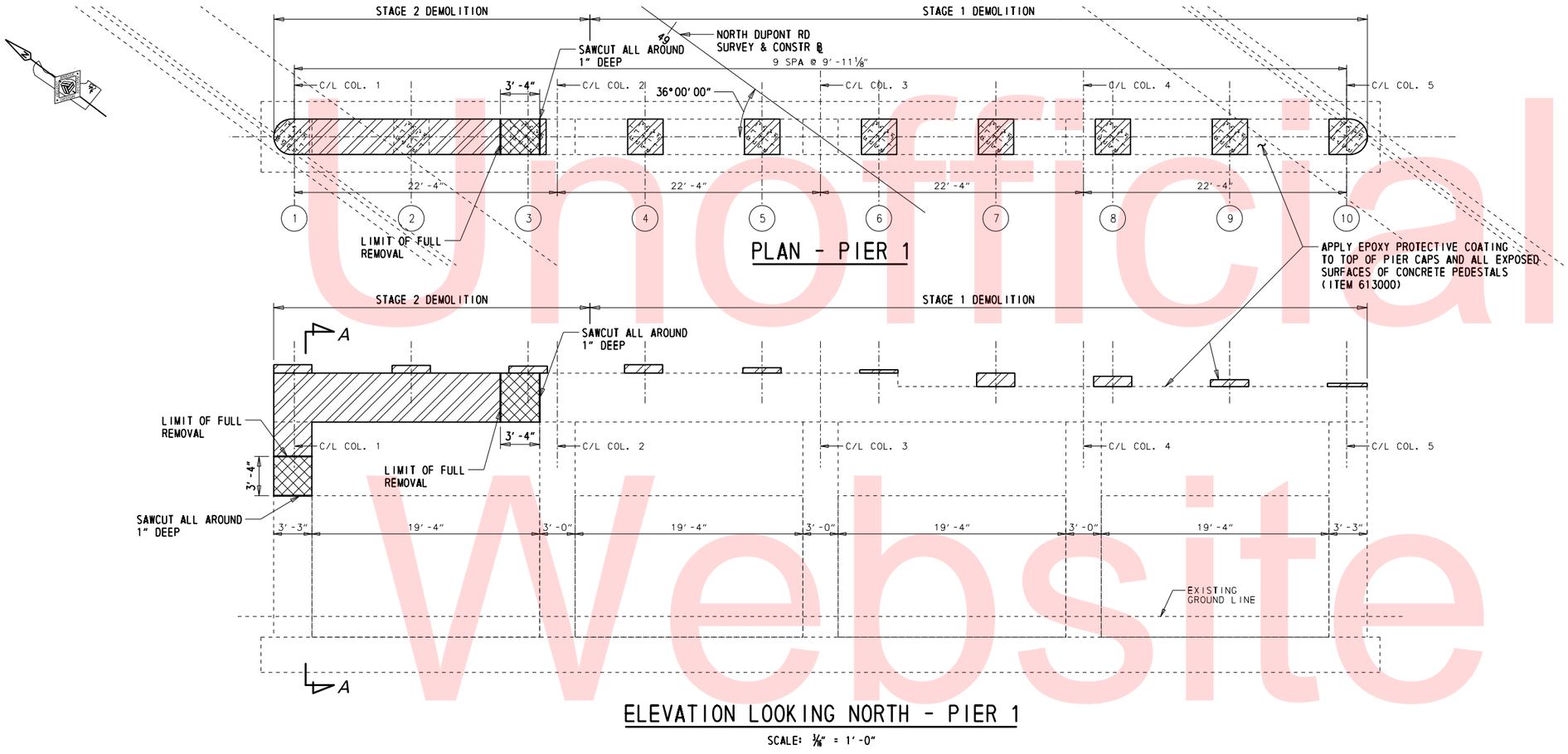
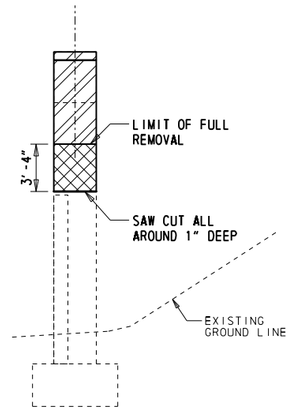


PLAN - PIER 1

ELEVATION LOOKING NORTH - PIER 1

SCALE: ⅛" = 1'-0"



SECTION A-A - PIER 1

SCALE: ⅛" = 1'-0"

NOTES:

1. AT PIER 2, ONLY THE BEARING PEDESTALS SHALL BE DEMOLISHED. THE REST OF THE PIER SHALL REMAIN.
2. CONTRACTOR SHALL SUBMIT DEMOLITION PLAN FOR DEMOLITION AND REMOVAL OF PIER 1 PIER CAP AND COLUMN SECTION FOR APPROVAL.
3. DEMOLITION SHALL BE PAID FOR UNDER ITEM 211000.

LEGEND:

- LIMITS OF SUBSTRUCTURE DEMOLITION (REINFORCEMENT IN THIS ZONE TO BE REMOVED)
- LIMITS OF DEMOLITION USING HAND HELD TOOLS ONLY (REINFORCEMENT IN THIS ZONE SHALL REMAIN)

CROSS REFERENCE NOTES:

1. FOR SUPERSTRUCTURE DEMOLITION PLAN & ELEVATION, SEE SHEET 13.
2. FOR PIER 1 RECONSTRUCTION DETAILS, SEE SHEETS 21 AND 22.
3. FOR SUBSTRUCTURE CONCRETE REPAIR DETAILS, SEE SHEET 18.
4. FOR PIER 1 CONCRETE REPAIR DETAILS, SEE SHEET 19.
5. FOR PEDESTAL ELEVATIONS, SEE SHEET 36.

P:\60323054 DELDOT AGR 1672 BOS\T07 - REHAB BR. 1-634\900 CAD\20 SHEETS\STRUCTURES\BR1-634\BR-634-SR11.DGN

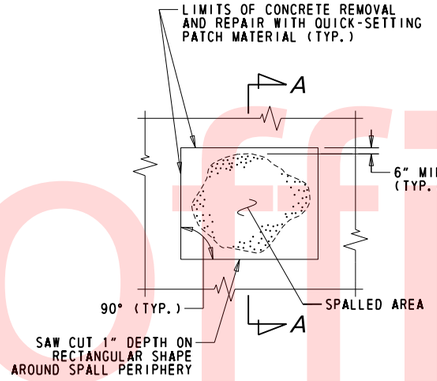
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 2 0 2 4 6 FEET	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	PIER 1 SELECTIVE DEMOLITION	SHEET NO. 17
				COUNTY NEW CASTLE	DESIGNED BY: SCF		TOTAL SHTS. 71
					CHECKED BY: JAM		

SUBSTRUCTURE REPAIR SCHEDULE - BRIDGE 1-634

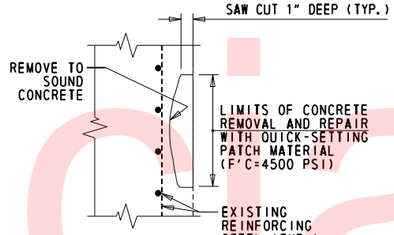
		REINFORCED CONCRETE REPAIR		CRACK REPAIR
		SHALLOW SPALL REPAIR	DEEP SPALL REPAIR	EPOXY
UNIT	LOCATION	SIZE (CF)	SIZE (CF)	SIZE (LF)
ABUTMENT A	N/A			
PIER 1	N FACE, PIER CAP BELOW PEDESTAL 3		0.67	
	N FACE, PIER CAP BELOW PEDESTAL 6		0.67	
	N FACE, PIER CAP BELOW PEDESTAL 6			4
	N FACE, CRASH WALL AT COLUMN 2		0.33	
	N FACE, CRASH WALL AT COLUMN 3		5	
	S FACE, PIER CAP BELOW PEDESTAL 8		5	
	S FACE, PIER CAP BELOW PEDESTAL 9		0.67	
	UNDERSIDE, PIER CAP BETWEEN COLUMNS 2 AND 3		16	
	UNDERSIDE, PIER CAP BETWEEN COLUMNS 3 AND 4		3.33	
	UNDERSIDE, PIER CAP BETWEEN COLUMNS 4 AND 5		4.67	
PIER 2	N FACE, PIER CAP BELOW PEDESTAL 3	0.17		
	N FACE, PIER CAP BETWEEN COLUMNS 3 AND 4		2.67	
	N FACE, PIER CAP BETWEEN COLUMNS 3 AND 4		0.33	
	N FACE, PIER CAP BETWEEN COLUMNS 3 AND 4		1.33	
	N FACE, PIER CAP BELOW PEDESTAL 8		1.33	
	N FACE, COLUMN 4 NW CORNER			5
	S FACE, PIER CAP BETWEEN COLUMNS 1 AND 2	0.17		
	S FACE, COLUMN 4	0.17		
	S FACE, CRASH WALL BETWEEN COLUMNS 1 AND 2	0.17		
	S FACE, CRASH WALL BETWEEN COLUMNS 3 AND 4		2	
	S FACE, CRASH WALL BETWEEN COLUMNS 3 AND 4		1.33	
	S FACE, CRASH WALL BETWEEN COLUMNS 4 AND 5		0.67	
	UNDERSIDE, PIER CAP BETWEEN COLUMNS 1 AND 2		5.33	
	UNDERSIDE, PIER CAP BETWEEN COLUMNS 2 AND 3		12.33	
	UNDERSIDE, PIER CAP BETWEEN COLUMNS 3 AND 4		14	
ABUTMENT B	N/A			
SUBTOTAL		0.67	77.67	9
25% INCREASE •		0.17	19.42	3
TOTAL		1	100	12

• THE SUPERSTRUCTURE REPAIR QUANTITIES BASED ON INSPECTION CONDUCTED IN MARCH 2015. ESTIMATED TOTAL AREA OF REPAIR HAS BEEN INCREASED BY A MINIMUM OF 25% TO ACCOUNT FOR INCREASE IN SPALL AREA SINCE THE TIME OF INSPECTION.

SHALLOW SPALL REPAIR

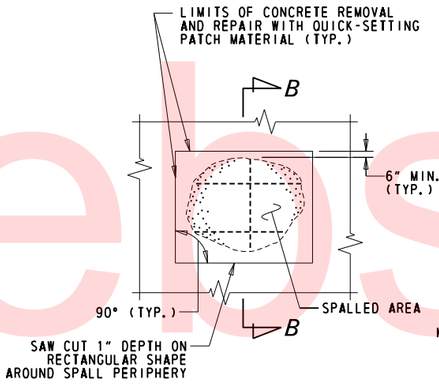


PLAN

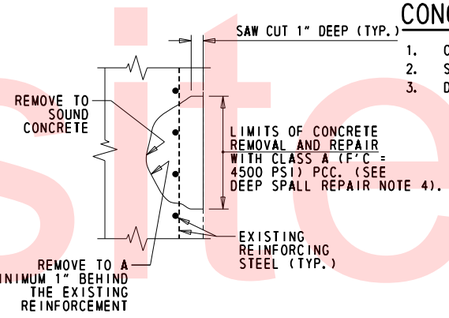


SECTION A-A

DEEP SPALL REPAIR



PLAN



SECTION B-B

SHALLOW SPALL REPAIR NOTES

1. SHALLOW SPALLS ARE DEFINED AS PATCHES THAT DO NOT EXTEND BELOW THE TOP MAT OF REBAR.
2. ALL WORK INVOLVING METHODS OF CONCRETE REMOVAL; CLEANING OF CONCRETE SURFACE; SURFACE PREPARATION; AND CONCRETE PLACEMENT SHALL BE PERFORMED IN ACCORDANCE SUBSECTION 628.03(E) OF THE STANDARD SPECIFICATIONS. PAYMENT INCIDENTAL TO 628040 - SHALLOW SPALL REPAIR.
3. FOR ANY SHALLOW SPALL REPAIR TO TAKE PLACE WITHIH THE SPLASH ZONE OR UNDERWATER, THE CONTRACTOR SHALL SUBMIT A WORKING DRAWING FOR APPROVAL IN ACCORDANCE WITH SUBSECTION 628.03(E)(2).

DEEP SPALL REPAIR NOTES

1. DEEP SPALLS ARE DEFINED AS PATCHES THAT EXTEND BELOW THE TOP MAT OF REINFORCEMENT.
2. ALL WORK INVOLVING METHODS OF CONCRETE REMOVAL; CLEANING OF CONCRETE SURFACE AND EXISTING REINFORCEMENT; REPAIRING OR REPLACING DAMAGED REINFORCEMENT AS RESULT OF CONSTRUCTION ACTIVITIES OR SECTION LOSS; PRESENCE OF CONTRACTION OR EXPANSION JOINTS; SURFACE PREPARATION; AND CONCRETE PLACEMENT SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 628.03(E) OF THE STANDARD SPECIFICATIONS. PAYMENT INCIDENTAL TO 628041 - DEEP SPALL REPAIR.
3. FOR ANY DEEP SPALL REPAIR TO TAKE PLACE WITHIN THE SPLASH ZONE OR UNDERWATER, THE CONTRACTOR SHALL SUBMIT A WORKING DRAWING IN ACCORDANCE WITH SUBSECTION 628.03(E)(2).
4. FOR DEEP SPALL PNEUMATICALLY APPLIED MORTAR AND RAPID HARDENING MATERIAL MAY BE SUBSTITUTED FOR CLASS A MIX DESIGN UPON APPROVAL OF ENGINEER WITH THE EXCEPTION OF BRIDGE SEAT AREAS. USE CLASS A PCC, OR APPROVED EQUAL, FOR ANY SPALL DEPTHS GREATER THAN 6IN.

EXAMPLES OF APPROPRIATE RAPID HARDENING CONCRETE PATCHING MATERIAL

1. CHEM MASTERS CHEMSPEED 65
2. SIKA SIKATOP 111 PLUS
3. DAYTON SUPERIOR PERMA PATCH

CROSS REFERENCE NOTES:

1. FOR PIER 1 DEMOLITION DETAILS, SEE SHEET 17.
2. FOR PIER 1 REPAIR DETAILS, SEE SHEET 19.
3. FOR PIER 2 REPAIR DETAILS, SEE SHEET 20.
4. FOR PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 36.

NOTES:

1. THE LOCATION & QUANTITIES OF REPAIRS ARE ESTIMATES ONLY, BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME THE DESIGN WAS ISSUED FOR CONSTRUCTION.

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DELAWARE DEPARTMENT OF TRANSPORTATION

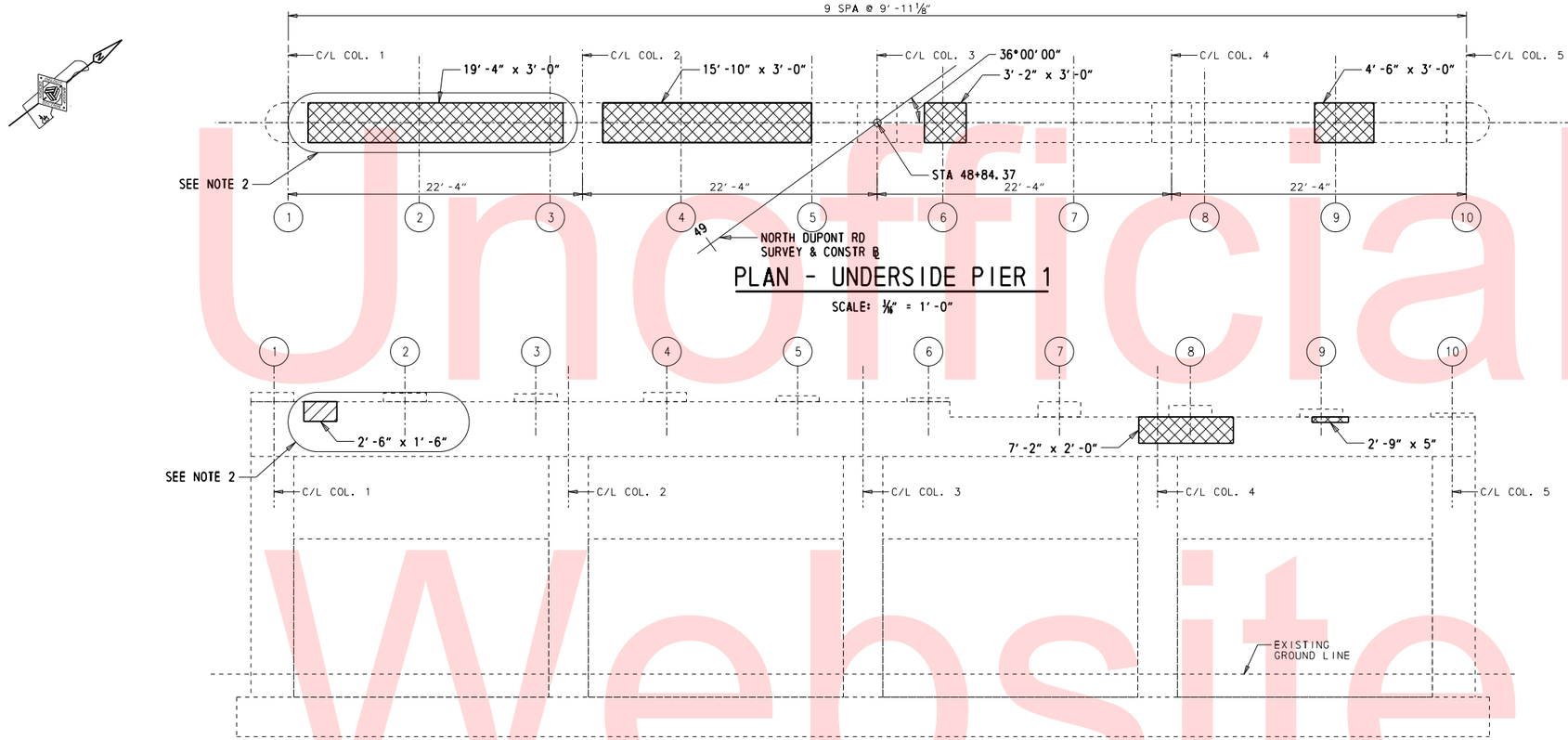
ADDENDUMS / REVISIONS	

NOT TO SCALE

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	BRIDGE NO.	1-634	SHEET NO.
T201507403	DESIGNED BY:	MDW	18
COUNTY			TOTAL SHTS.
NEW CASTLE	CHECKED BY:	MKS	71

SUBSTRUCTURE REPAIR DETAILS



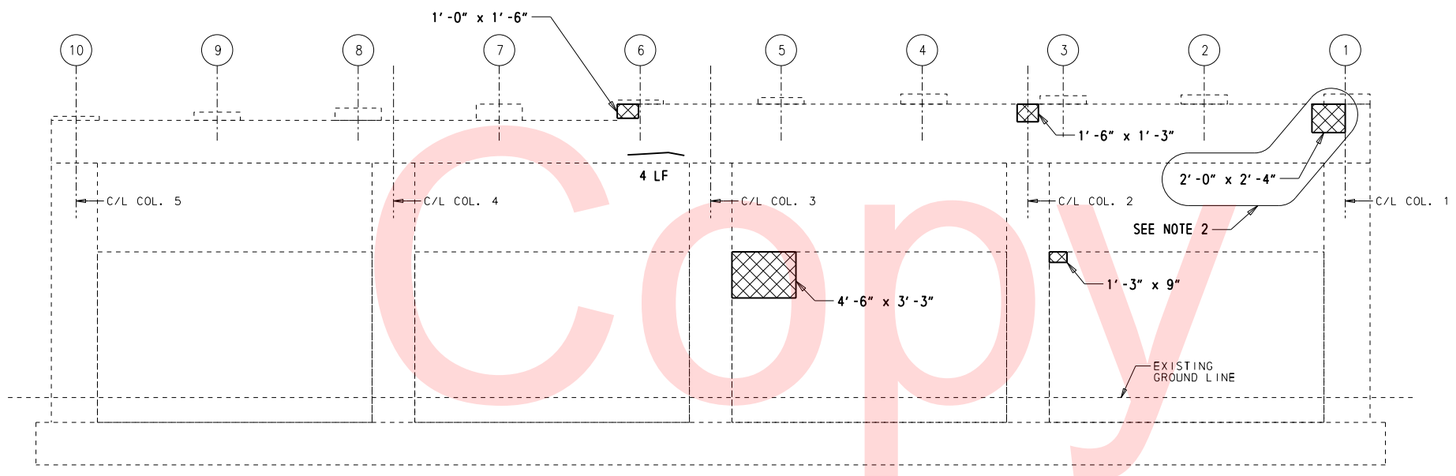
PLAN - UNDERSIDE PIER 1

SCALE: ⅛" = 1'-0"

ELEVATION LOOKING NORTH - PIER 1

(SOUTH FACE)

SCALE: ⅛" = 1'-0"



ELEVATION LOOKING SOUTH - PIER 1

(NORTH FACE)

SCALE: ⅛" = 1'-0"

LEGEND:

- CRACK REPAIR (ITEM 628001)
- SHALLOW SPALL REPAIR (ITEM 628040)
- DEEP SPALL REPAIR (ITEM 628041)

NOTES:

1. THE LOCATION AND QUANTITIES OF REPAIRS ARE ESTIMATES ONLY, BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME THE DESIGN WAS ISSUED FOR CONSTRUCTION.
2. SPALL REPAIRS ARE NOT REQUIRED IN THIS AREA OF PIER 1 DUE TO RECONSTRUCTION OF WEST SIDE OF PIER CAP AND COLUMN 1. REFER TO PIER 1 SELECTIVE DEMOLITION AND PIER 1 INFILL WALL CONSTRUCTION ON SHEETS 17 AND 21, RESPECTIVELY.

CROSS REFERENCE NOTES:

1. FOR CONCRETE REPAIR DETAILS AND NOTES, SEE SHEET 18.
2. FOR PIER 1 DEMOLITION DETAILS, SEE SHEET 17.
3. FOR PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 36.

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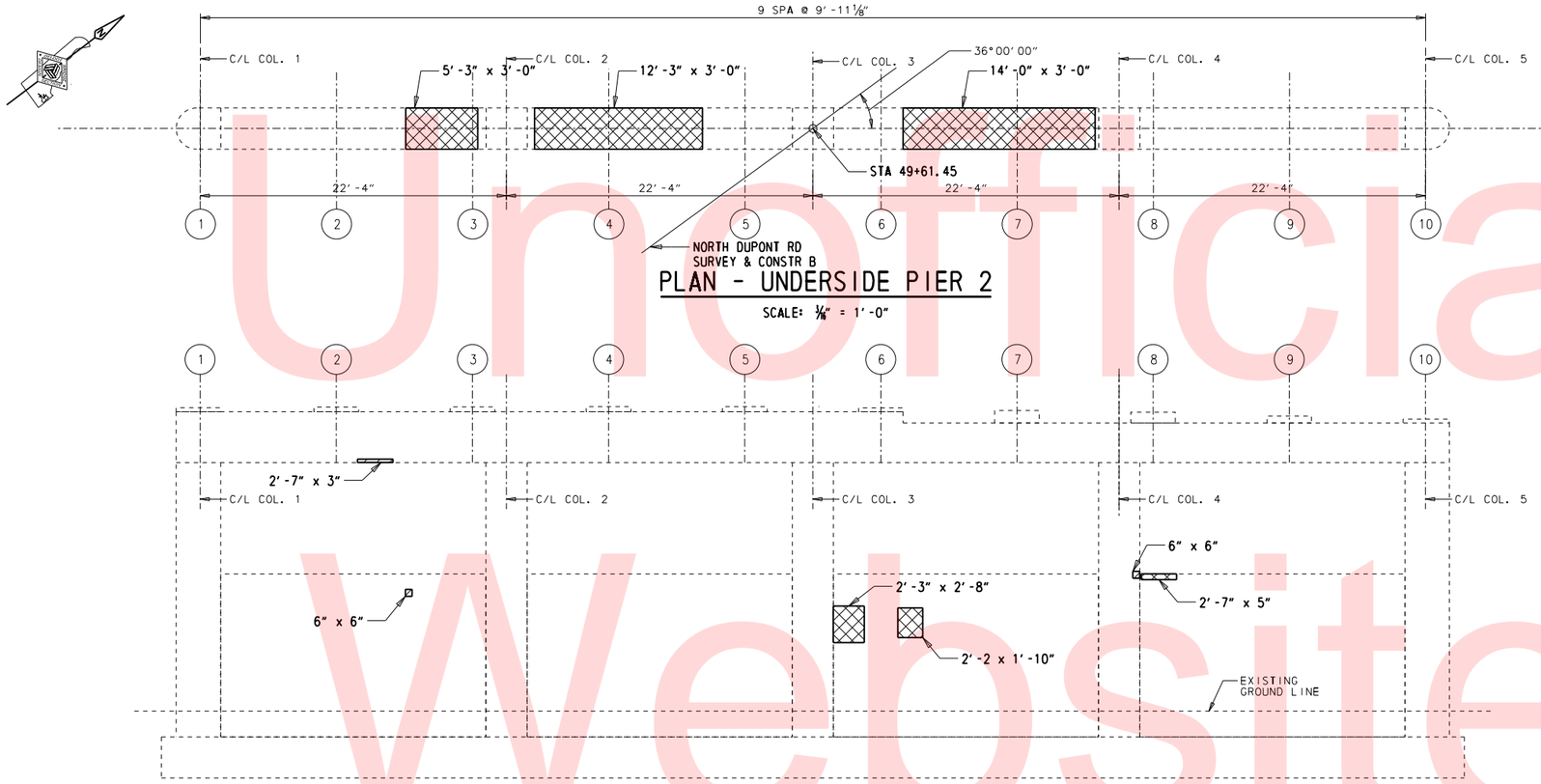
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 2 0 2 4 6 FEET	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	PIER 1 REPAIR DETAILS	SHEET NO. 19
				COUNTY NEW CASTLE	DESIGNED BY: MDW		TOTAL SHTS. 71
					CHECKED BY: MKS		

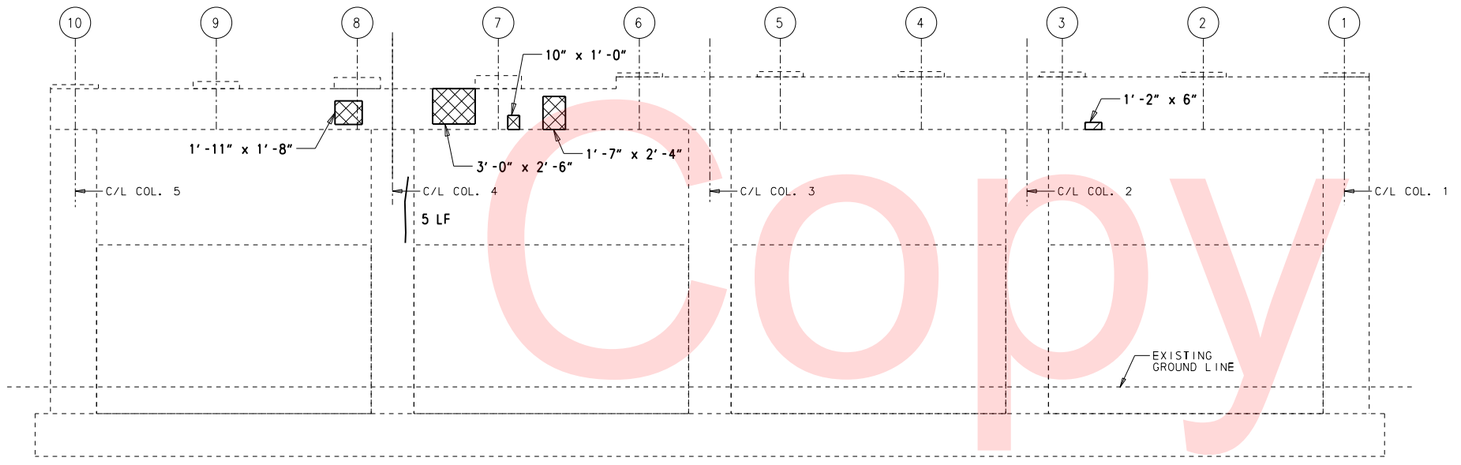


PLAN - UNDERSIDE PIER 2

SCALE: ⅛" = 1'-0"

ELEVATION LOOKING NORTH - PIER 2

(SOUTH FACE)
SCALE: ⅛" = 1'-0"



ELEVATION LOOKING SOUTH - PIER 2

(NORTH FACE)
SCALE: ⅛" = 1'-0"

LEGEND:

- CRACK REPAIR (ITEM 628001)
- SHALLOW SPALL REPAIR (ITEM 628040)
- DEEP SPALL REPAIR (ITEM 628041)

NOTES:

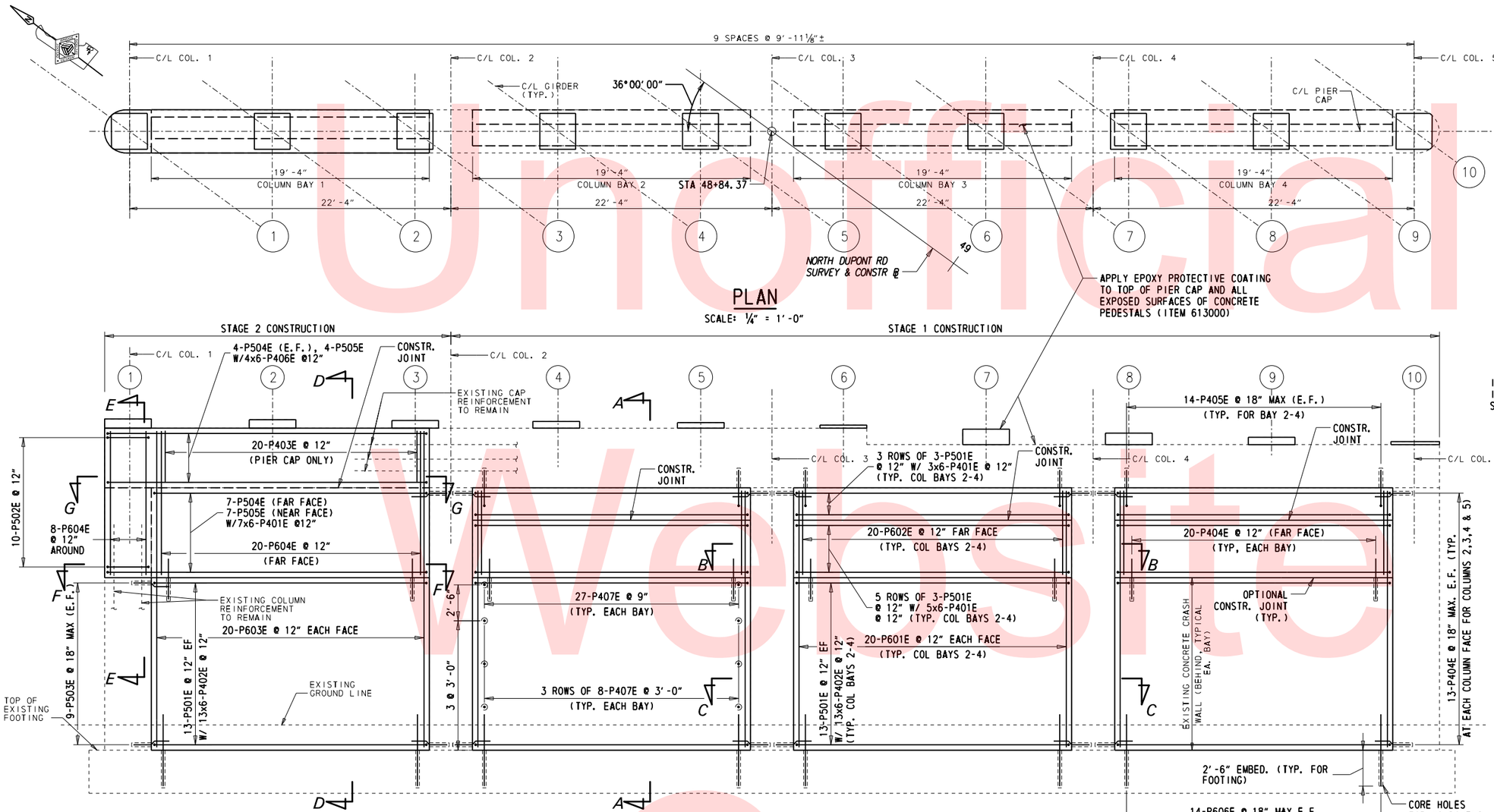
1. THE LOCATION & QUANTITIES OF REPAIRS ARE ESTIMATES ONLY, BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME THE DESIGN WAS ISSUED FOR CONSTRUCTION.

CROSS REFERENCE NOTES:

1. FOR PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 36.
2. FOR CONCRETE REPAIR DETAILS AND NOTES, SEE SHEET 18.

P:\60323054 DELDOT AGR 1672 BOS\T07 - REHAB BR. 1-634\900 CAD\20 SHEETS\STRUCTURES\BR1-634\BR-634-SR13.DGN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 2 0 2 4 6 FEET	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	PIER 2 REPAIR DETAILS	SHEET NO. 20
				COUNTY NEW CASTLE	DESIGNED BY: MDW		TOTAL SHTS. 71
					CHECKED BY: MKS		

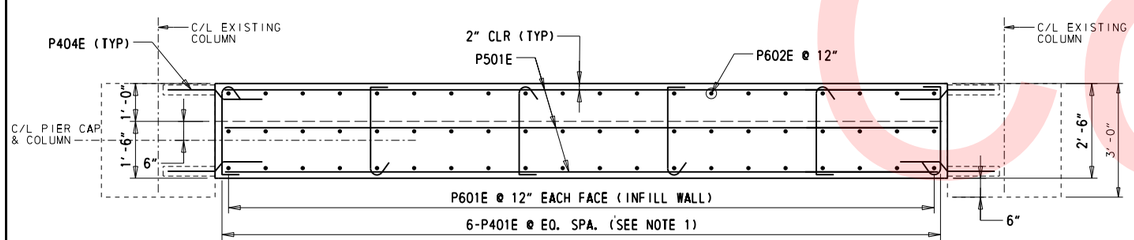


PLAN

SCALE: ¼" = 1'-0"

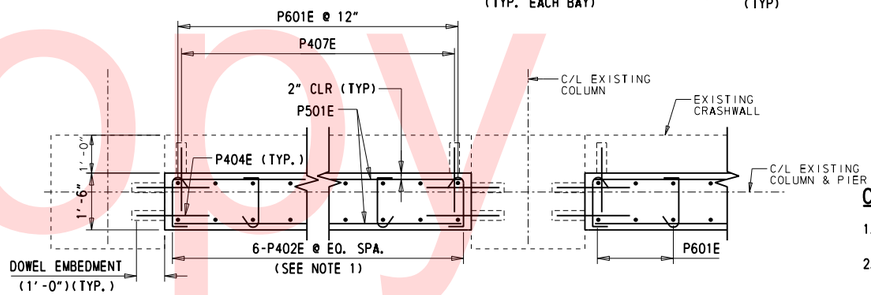
ELEVATION

(LOOKING NORTH)
SCALE: ¼" = 1'-0"



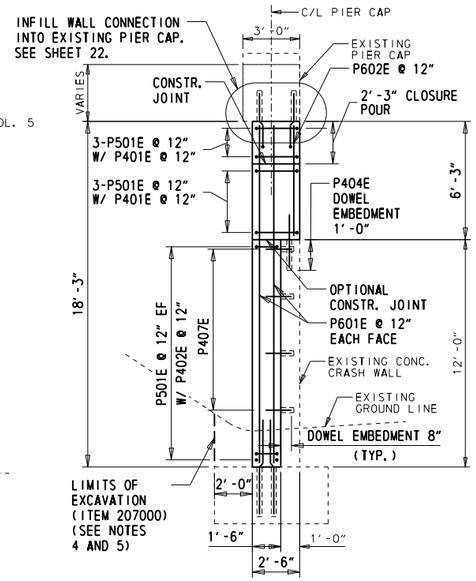
SECTION B-B

(TYPICAL IN COLUMN BAYS 2-4)
SCALE: ½" = 1'-0"



SECTION C-C

(TYPICAL IN COLUMN BAYS 2-4)
SCALE: ½" = 1'-0"



SECTION A-A

SCALE: ¼" = 1'-0"

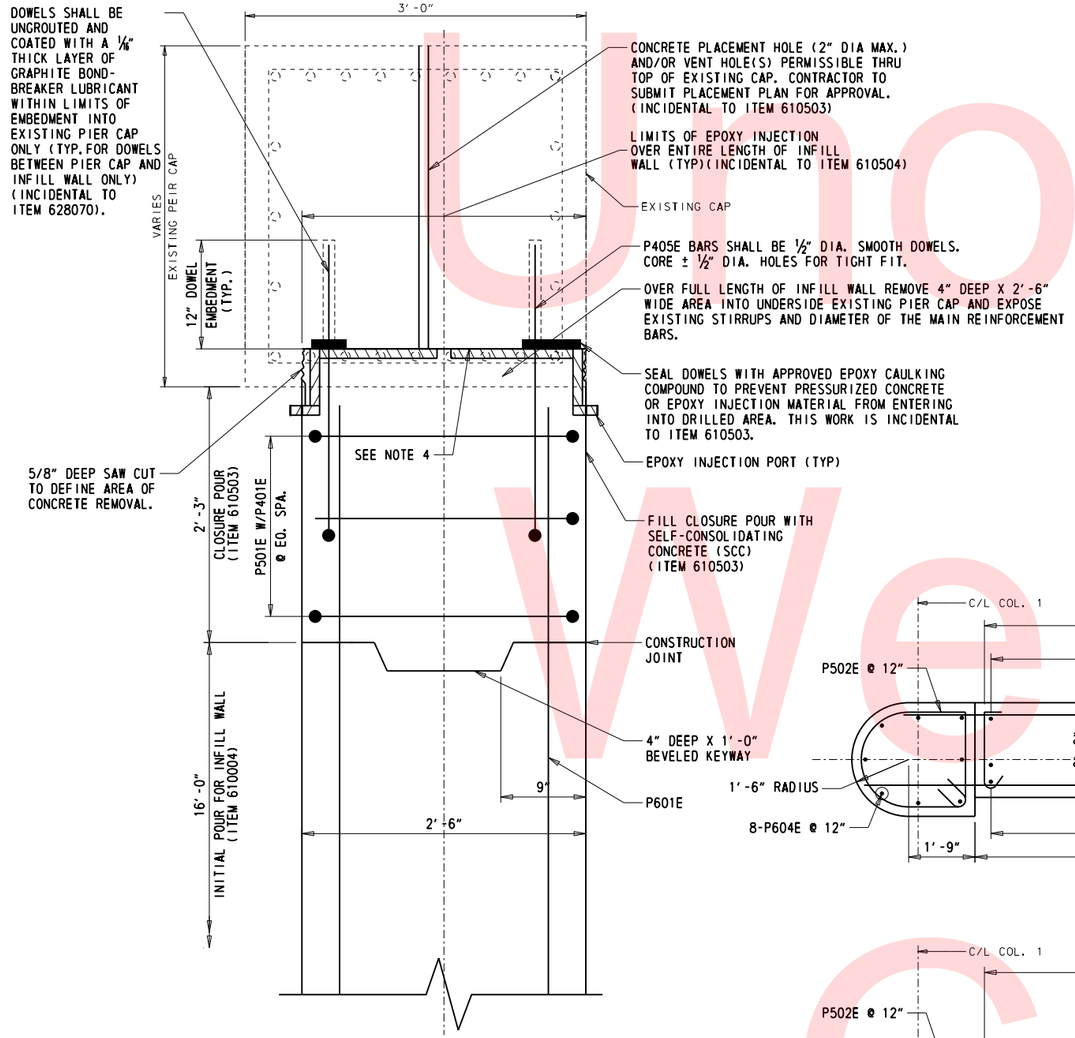
NOTES:

1. TIE FRONT AND BACK FACE OF REINFORCING STEEL IN INFILL WALLS PROVIDE TIE BARS WITH 90° HOOKS ON ONE END AND 135° HOOKS AT THE OTHER END. ALTERNATE 90° AND 135° HOOKS ON CROSS TIES AT 48" MAX SPACING.
2. AT INFILL WALL TO EXISTING CONCRETE INTERFACES CHIP AWAY CONCRETE DOWN TO EXISTING REINFORCEMENT BEFORE DRILLING DOWEL HOLES. INTENTIONALLY ROUGHEN ALL INTERFACES BETWEEN NEW AND EXISTING CONCRETE TO AMPLITUDE 1/4"
3. GROUT ALL HOLES WITH NON-SHRINK CEMENTITIOUS GROUT, EXCEPT AS NOTED FOR DOWELS INTO UNDERSIDE OF PIER CAP.
4. EXCAVATE AS NECESSARY FOR ACCESS TO TOP OF FOOTING ONLY. EXCAVATION OUTSIDE THE LIMITS SHOWN HERE IS INCIDENTAL TO ITEM 207000. TEMPORARY SHORING IS INCIDENTAL TO ITEM 207000.
5. AFTER WORK AT THE PIER IS COMPLETE, RESTORE SOIL TO EXISTING GROUND ELEVATION (INCIDENTAL TO ITEM 207000). RECONSTRUCT BOTTOM PORTIONS OF THE SLOPEWALL IN ACCORDANCE WITH DETAILS ON SHEET 15 (PAID FOR UNDER ITEM 619500).

CROSS REFERENCE NOTES:

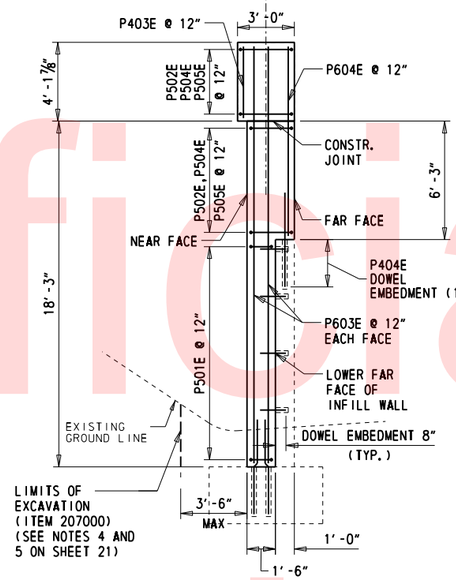
1. FOR PIER 1 DEMOLITION DETAILS, SEE SHEET 17.
2. FOR PEDESTAL RECONSTRUCTION DETAILS AND TOP OF PEDESTAL ELEVATIONS, SEE SHEET 36.
3. FOR SPALL AND CRACK REPAIR DETAILS, SEE SHEETS 18 AND 19.
4. WORK THIS SHEET WITH SHEET 22 FOR SECTIONS D-D, E-E, F-F AND G-G.
5. FOR CLOSURE POUR DETAILS, SEE SHEET 22.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	PIER 1 INFILL WALL	SHEET NO. 21
				COUNTY NEW CASTLE	DESIGNED BY: RPG		TOTAL SHTS. 71
					CHECKED BY: JAM		



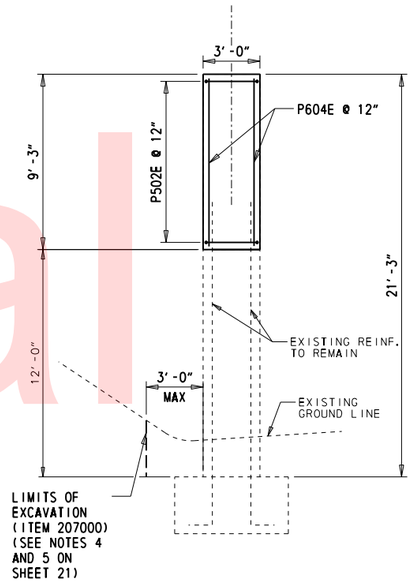
PIER 1 - INFILL WALL CONNECTION AT CAP

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



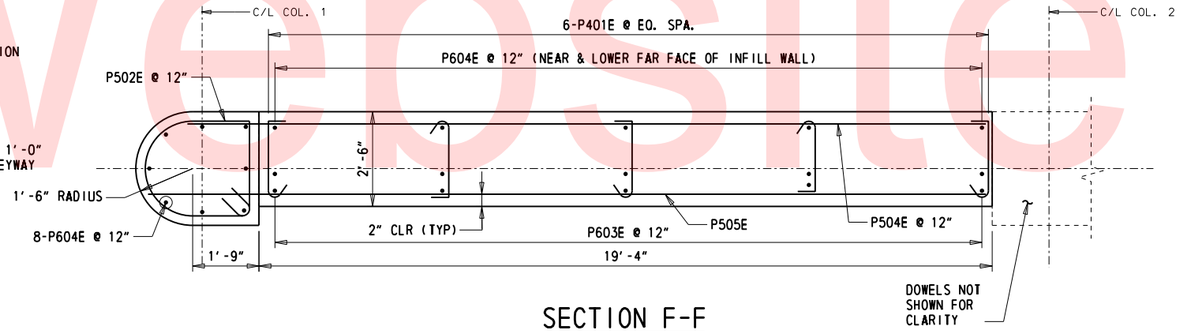
SECTION D-D

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



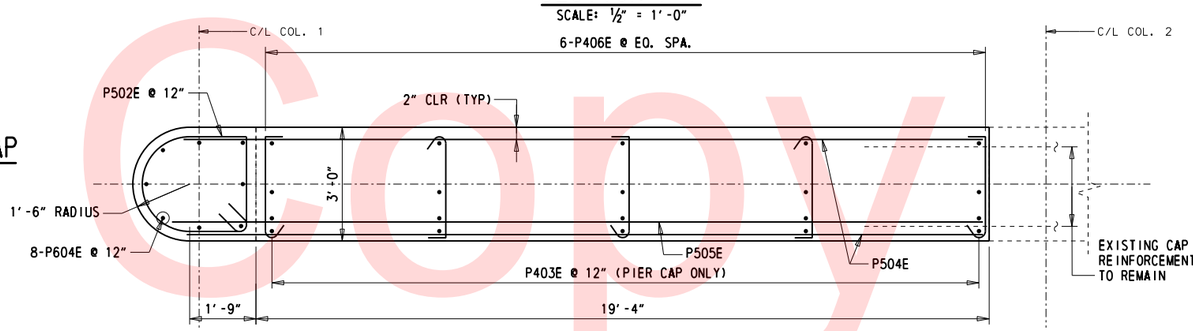
SECTION E-E

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



SECTION F-F

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



SECTION G-G

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

CLOSURE POUR NOTES:

1. PIER CLOSURE POUR TO BE COMPLETED A MINIMUM OF 28 DAYS AFTER COMPLETION OF INITIAL COLUMN POUR. PLACEMENT OF NEW DECK SHALL NOT BE PERFORMED UNTIL 7 DAYS AFTER PLACEMENT OF PIER CLOSURE POUR.
2. THE CLOSURE POUR SHALL BE VENTED IN ORDER TO REMOVE ALL TRAPPED AIR FROM CAVITY. THE VENTING SYSTEM SHALL BE PROPERLY SECURED TO FIXED OBJECTS TO PREVENT MOVEMENT DURING THE POUR. THE VENTING SYSTEM SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
3. PLACEMENT OF SELF-CONSOLIDATED CONCRETE SHALL BE ADEQUATELY PRESSURIZED TO FILL THE CLOSURE POUR CAVITY AND DISPLACE AIR THROUGH THE VENTING SYSTEM.
4. COMPONENTS NECESSARY FOR THE EPOXY INJECTION SYSTEM AT THE TOP OF THE INFILL WALL SHALL BE INSTALLED PRIOR TO THE CLOSURE POUR AND PROPERLY SECURED TO FIXED OBJECTS TO PREVENT MOVEMENT DURING INJECTION. INJECTION OF THE EPOXY SHALL BE PRESSURIZED AND VENTED. CONTRACTOR SHALL SUBMIT EPOXY INJECTION PLAN FOR APPROVAL. A METHOD OF VERIFYING THE SUCCESSFUL FILLING OF THE VOID AREA SHALL BE PROVIDED IN THE SUBMISSION.
5. CLOSURE POUR SHALL BE PAID FOR UNDER ITEM 610503.
6. EPOXY INJECTION AT TOP OF INFILL WALL SHALL BE PAID FOR UNDER ITEM 610504.

CROSS REFERENCE NOTES:

1. WORK THIS SHEET WITH SHEET 21.
2. FOR PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 36.

P:\60323054 DELDOT AGR 1672 BDS\T07 - REHAB BR. 1-634\900 CAD\20 SHEETS\STRUCTURES\BR1-634\BR-634-SR16.DGN

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

SCALE AS NOTED

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	T201507403
COUNTY	NEW CASTLE

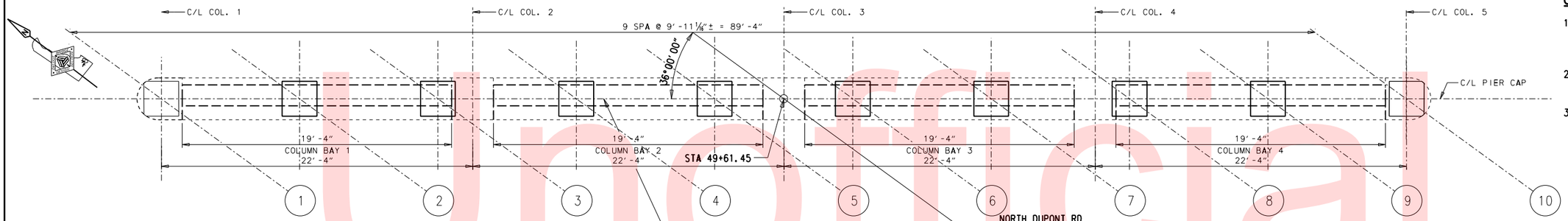
BRIDGE NO.	1-634
DESIGNED BY:	RPG
CHECKED BY:	JAM

PIER 1
INFILL WALL DETAILS

SHEET NO.	22
TOTAL SHTS.	71

CROSS REFERENCE NOTES:

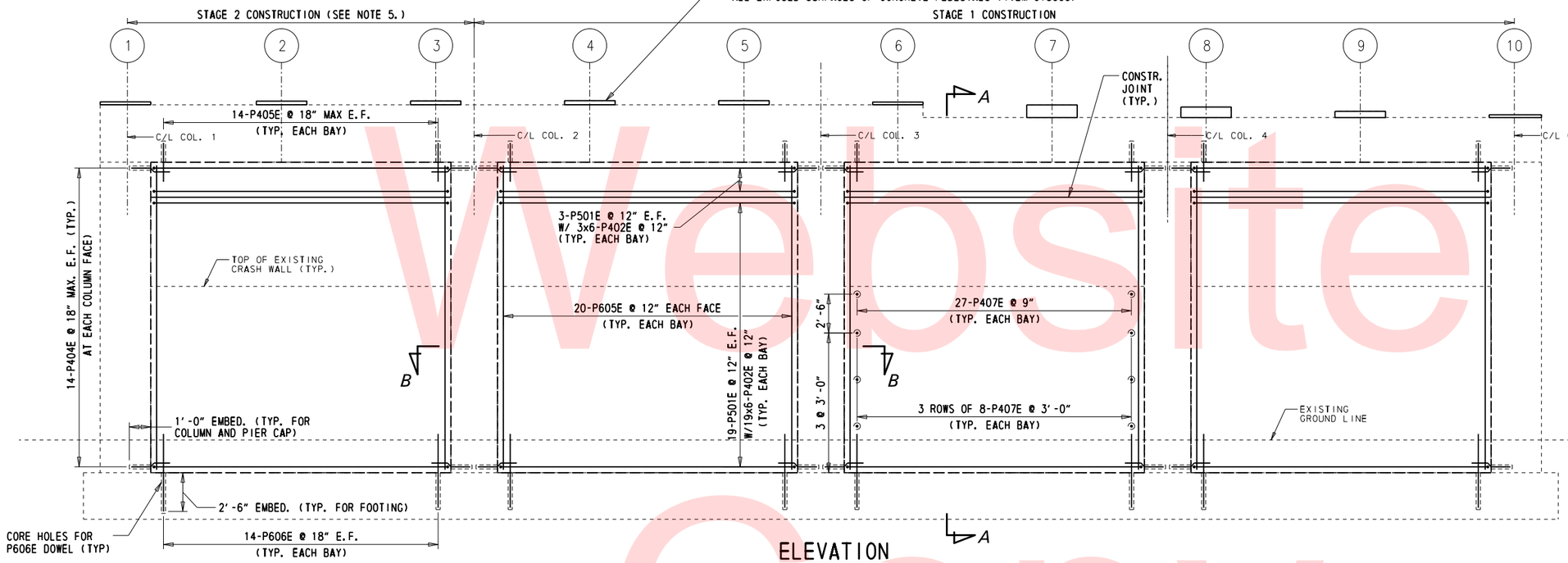
1. FOR PEDESTAL RECONSTRUCTION DETAILS AND TOP OF PEDESTAL ELEVATIONS, SEE SHEET 36.
2. FOR SPALL AND CRACK REPAIR DETAILS, SEE SHEET 18 AND 20.
3. FOR CLOSURE POUR NOTES AND DETAILS, SEE SHEET 24.



PLAN

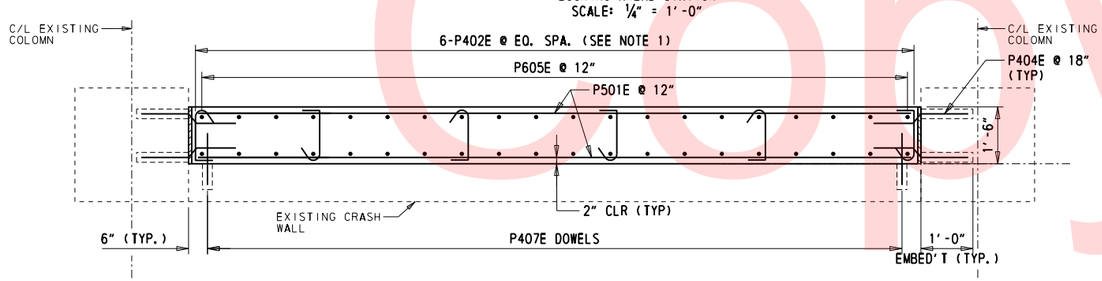
SCALE: ¼" = 1'-0"

APPLY EPOXY PROTECTIVE COATING TO TOP OF PIER CAP AND ALL EXPOSED SURFACES OF CONCRETE PEDESTALS (ITEM 613000)



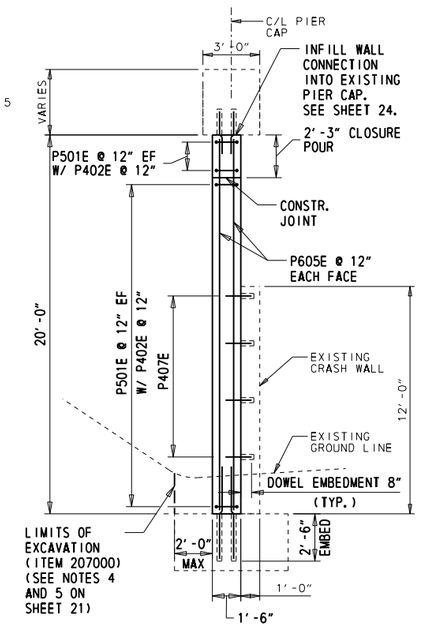
ELEVATION

LOOKING AHEAD STATION
SCALE: ¼" = 1'-0"



SECTION B-B

SCALE: ½" = 1'-0"



SECTION A-A

SCALE: ¼" = 1'-0"

NOTES:

1. TIE FRONT AND BACK FACE OF REINFORCING STEEL. PROVIDE TIE BARS WITH 90° HOOKS ON ONE END AND 135° HOOKS AT THE OTHER END. ALTERNATE 90° AND 135° HOOKS ON CROSS TIES AT 48" MAX SPACING.
2. AT INFILL WALL TO EXISTING CONCRETE INTERFACES CHIP AWAY CONCRETE DOWN TO EXISTING REINFORCEMENT BEFORE DRILLING DOWEL HOLES.
3. INTENTIONALY ROUGHEN ALL INTERFACES BETWEEN NEW AND EXISTING CONCRETE TO AMPLITUDE 1/4".
4. GROUT ALL HOLES WITH NON-SHRINK CEMENTITIOUS GROUT, EXCEPT AS NOTED FOR DOWELS INTO UNDERSIDE OF PIER CAP.
5. THE STAGE 2 SECTION OF INFILL WALL AT PIER 2 MAY BE CONSTRUCTED DURING STAGE 1. SEE CONSTRUCTION SEQUENCE ON SHEETS 11-12 FOR FURTHER DETAIL.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	PIER 2 INFILL WALL	SHEET NO. 23
				COUNTY NEW CASTLE	DESIGNED BY: RPG		TOTAL SHTS. 71
					CHECKED BY: JAM		

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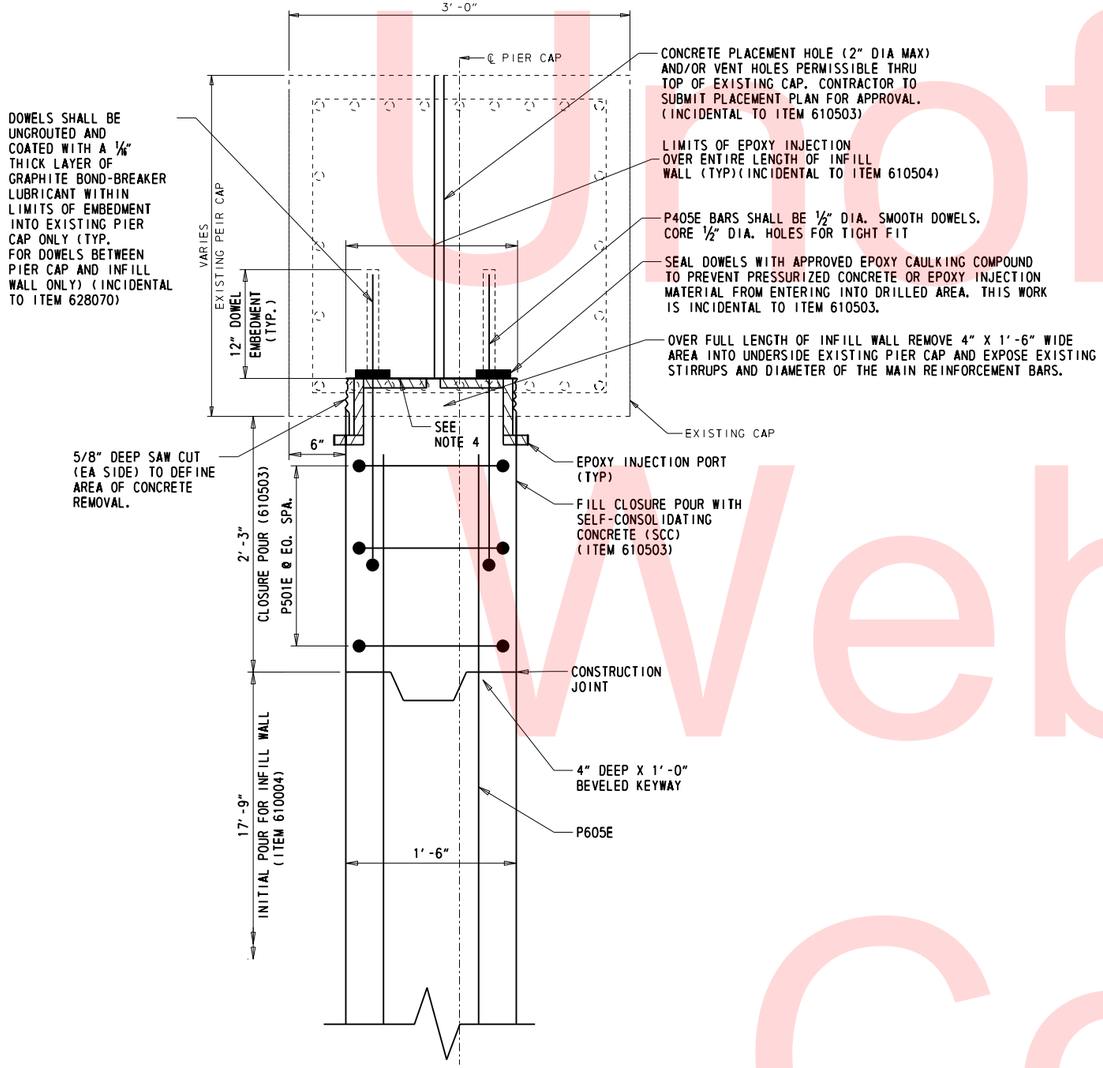

PIER 2 - INFILL WALL CONNECTION AT CAP

SCALE: 1 ½" = 1'-0"

CLOSURE POUR NOTES:

1. PIER CLOSURE POUR TO BE COMPLETED A MINIMUM OF 28 DAYS AFTER COMPLETION OF INITIAL COLUMN POUR. PLACEMENT OF NEW DECK SHALL NOT BE PERFORMED UNTIL 7 DAYS AFTER PLACEMENT OF PIER CLOSURE POUR.
2. THE CLOSURE POUR SHALL BE VENTED IN ORDER TO REMOVE ALL TRAPPED AIR FROM CAVITY. THE VENTING SYSTEM SHALL BE PROPERLY SECURED TO FIXED OBJECTS TO PREVENT MOVEMENT DURING THE POUR. THE VENTING SYSTEM SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
3. PLACEMENT OF SELF-CONSOLIDATED CONCRETE SHALL BE ADEQUATELY PRESSURIZED TO FILL THE CLOSURE POUR CAVITY AND DISPLACE AIR THROUGH THE VENTING SYSTEM.
4. COMPONENTS NECESSARY FOR THE EPOXY INJECTION SYSTEM AT THE TOP OF THE INFILL WALL SHALL BE INSTALLED PRIOR TO THE CLOSURE POUR AND PROPERLY SECURED TO FIXED OBJECTS TO PREVENT MOVEMENT DURING INJECTION. INJECTION OF THE EPOXY SHALL BE PRESSURIZED AND VENTED. CONTRACTOR SHALL SUBMIT EPOXT INJECTION PLAN FOR APPROVAL. A METHOD OF VERIFYING THE SUCCESSFUL FILLING OF THE VOID AREA SHALL BE PROVIDED IN THE SUBMISSION.
5. CLOSURE POUR SHALL BE PAID FOR UNDER ITEM 610503.
6. EPOXY INJECTION AT TOP OF INFILL WALL SHALL BE PAID FOR UNDER ITEM 610504.

CROSS REFERENCE NOTES:

1. FOR PIER 2 INFILL WALL CONSTRUCTION DETAILS, SEE SHEET 23.

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	PIER 2 CLOSURE POUR	SHEET NO. 24
				COUNTY NEW CASTLE	DESIGNED BY: RPG		TOTAL SHTS. 71
					CHECKED BY: MKS		

REINFORCEMENT BAR SCHEDULE

PIER 1 REINFORCEMENT (STAGE 1)

MARK	LENGTH	NUMBER	TYPE	A	B	C	D	E	R	REMARKS
P401E	2′-11″	144	T9	4½″	2′-2″				2″	G=4½″
P402E	1′-11″	234	T9	4½″	1′-2″				2″	G=4½″
P404E	2′-0″	216	STR							DOWELS
P405E	2′-6″	84	1	6″	2′-0″					J=4″; G=0″ DOWELS
P407E	1′-4″	153	STR							DOWELS
P501E	19′-0″	150	STR							
P601E	17′-11″	120	STR							
P602E	5′-11″	60	STR							
P606E	5′-0″	84	STR							DOWELS

PIER 2 REINFORCEMENT (STAGE 1)

MARK	LENGTH	NUMBER	TYPE	A	B	C	D	E	R	REMARKS
P402E	1′-11″	396	T9	4½″	1′-2″				2″	G=4½″
P404E	2′-0″	168	STR							DOWELS
P405E	2′-6″	84	1	6″	2′-0″					J=4″; G=0″ DOWELS
P407E	1′-4″	153	STR							DOWELS
P501E	19′-0″	132	STR							
P605E	19′-8″	120	STR							DOWELS
P606E	5′-0″	84	STR							

PIER 1 REINFORCEMENT (STAGE 2)

MARK	LENGTH	NUMBER	TYPE	A	B	C	D	E	R	REMARKS
P401E	2′-11″	42	T9	4½″	2′-2″				2″	G=4½″
P402E	1′-11″	78	T9	4½″	1′-2″				2″	G=4½″
P403E	3′-9¾″	20	STR							
P404E	2′-0″	46	STR							DOWELS
P406E	3′-5″	24	T9	4½″	2′-8″					G=4½″
P407E	1′-4″	51	STR							DOWELS
P501E	19′-0″	26	STR							
P502E	11′-0¼″	10	DE40	6″	1′-7″	4′-2¼″	1′-7″	2′-8″	1′-4″	G=6″
P503E	2′-6″	18	STR							DOWELS
P504E	20′-11″	15	STR							
P505E	21′-9 5/8″	11	STR							
P603E	22′-0¾″	40	STR							
P604E	10′-0¾″	28	STR							
P606E	5′-0″	28	STR							DOWELS

PIER 2 REINFORCEMENT (STAGE 2) (SEE NOTE 1)

MARK	LENGTH	NUMBER	TYPE	A	B	C	D	E	R	REMARKS
P402E	1′-11″	132	T9	4½″	1′-2″				2″	G=4½″
P404E	2′-0″	56	STR							DOWELS
P405E	2′-6″	28	1	6″	2′-0″					J=4″; G=0″, DOWELS
P407E	1′-4″	51	STR							DOWELS
P501E	19′-0″	44	STR							
P605E	19′-8″	40	STR							
P606E	5′-0″	28	STR							DOWELS

PEDESTAL ABUTMENT A REINFORCEMENT SCHEDULE (STAGE 1)

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
A501E	8	6′-3⅜″	17		2′-1″	2′-1⅜″	2′-1″			2 DOWELS PER BAR
A502E	16	5′-9⅜″	17		1′-10″	2′-1⅜″	1′-10″			2 DOWELS PER BAR
A503E	8	5′-3⅜″	17		1′-7″	2′-1⅜″	1′-7″			2 DOWELS PER BAR
A504E	16	4′-9⅜″	17		1′-4″	2′-1⅜″	1′-4″			2 DOWELS PER BAR

PEDESTAL ABUTMENT A REINFORCEMENT SCHEDULE (STAGE 2)

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
A502E	8	5′-9⅜″	17		1′-10″	2′-1⅜″	1′-10″			2 DOWELS PER BAR
A503E	16	5′-3⅜″	17		1′-7″	2′-1⅜″	1′-7″			2 DOWELS PER BAR

PEDESTAL ABUTMENT B REINFORCEMENT SCHEDULE (STAGE 1)

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
A502E	32	5′-9⅜″	17		1′-10″	2′-1⅜″	1′-10″			2 DOWELS PER BAR
A503E	8	5′-3⅜″	17		1′-7″	2′-1⅜″	1′-7″			2 DOWELS PER BAR
A504E	8	4′-9⅜″	17		1′-4″	2′-1⅜″	1′-4″			2 DOWELS PER BAR

PEDESTAL ABUTMENT B REINFORCEMENT SCHEDULE (STAGE 2)

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
A502E	8	5′-9⅜″	17		1′-10″	2′-1⅜″	1′-10″			2 DOWELS PER BAR
A503E	16	5′-3⅜″	17		1′-7″	2′-1⅜″	1′-7″			2 DOWELS PER BAR

PEDESTAL PIER 1 REINFORCEMENT SCHEDULE (STAGE 1)

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
P511E	9	6′-3⅜″	17		2′-1″	2′-1⅜″	2′-1″			2 DOWELS PER BAR
P512E	9	5′-9⅜″	17		1′-10″	2′-1⅜″	1′-10″			2 DOWELS PER BAR
P513E	27	5′-3⅜″	17		1′-7″	2′-1⅜″	1′-7″			2 DOWELS PER BAR
P514E	18	4′-9⅜″	17		1′-4″	2′-1⅜″	1′-4″			2 DOWELS PER BAR

PEDESTAL PIER 1 REINFORCEMENT SCHEDULE (STAGE 2)

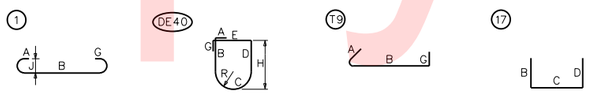
MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
P512E	18	5′-9⅜″	17		1′-10″	2′-1⅜″	1′-10″			2 DOWELS PER BAR
P513E	9	5′-3⅜″	17		1′-7″	2′-1⅜″	1′-7″			2 DOWELS PER BAR

PEDESTAL PIER 2 REINFORCEMENT SCHEDULE (STAGE 1)

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
P512E	18	5′-9⅜″	17		1′-10″	2′-1⅜″	1′-10″			2 DOWELS PER BAR
P513E	9	5′-3⅜″	17		1′-7″	2′-1⅜″	1′-7″			2 DOWELS PER BAR
P514E	36	4′-9⅜″	17		1′-4″	2′-1⅜″	1′-4″			2 DOWELS PER BAR

PEDESTAL PIER 2 REINFORCEMENT SCHEDULE (STAGE 2)

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
P514E	27	4′-9⅜″	17		1′-4″	2′-1⅜″	1′-4″			2 DOWELS PER BAR



NOTE:

1. THE INFILL WALL UNDER GIRDERS 1 TO 3 AT PIER 2 MAY BE CONSTRUCTED DURING STAGE 1. SEE CONSTRUCTION SEQUENCE ON SHEETS 11-12 FOR FURTHER DETAIL.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403 / COUNTY NEW CASTLE	BRIDGE NO. 1-634 / DESIGNED BY: RPG / CHECKED BY: SCF

SUBSTRUCTURE REINFORCEMENT SCHEDULE

SHEET NO. 25 / TOTAL SHTS. 71

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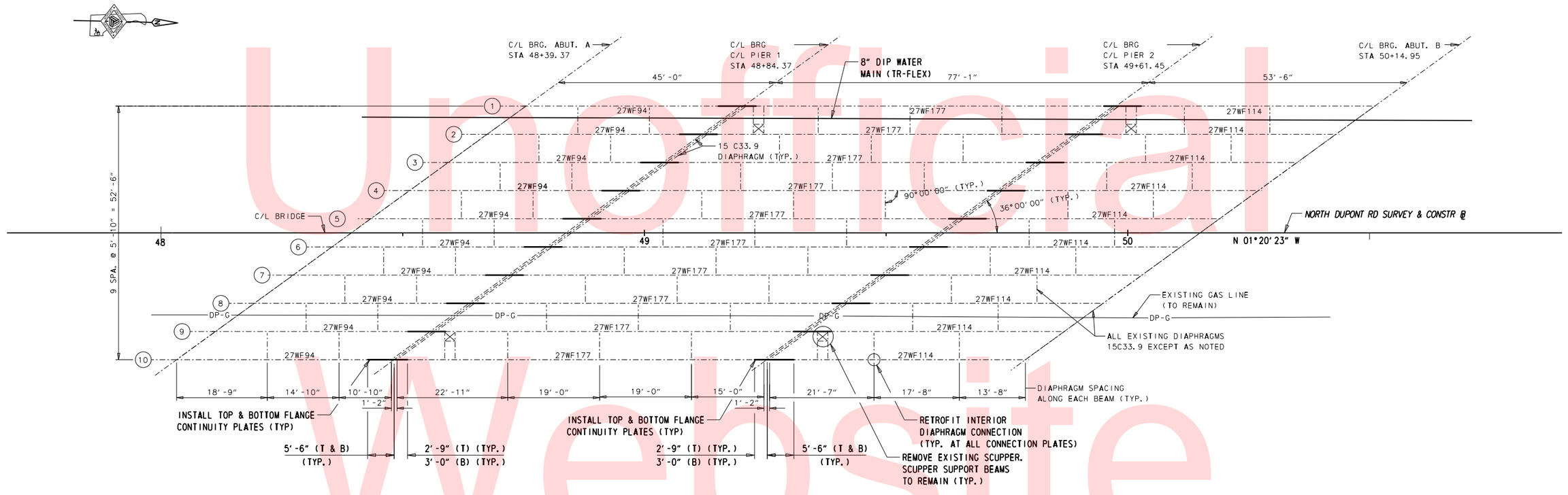

FRAMING PLAN

SCALE: 3/32" = 1'-0"

CROSS REFERENCE NOTES:

1. GIRDER ELEVATION, SEE SHEET 27.
2. FOR GIRDER CONTINUITY PLATES & DETAILS, SEE SHEETS 27 AND 28.
3. FOR RETROFIT OF INTERIOR DIAPHRAGM CONNECTION DETAILS, SEE SHEET 28.
4. FOR BEARING DETAILS, SEE SHEETS 33-36.

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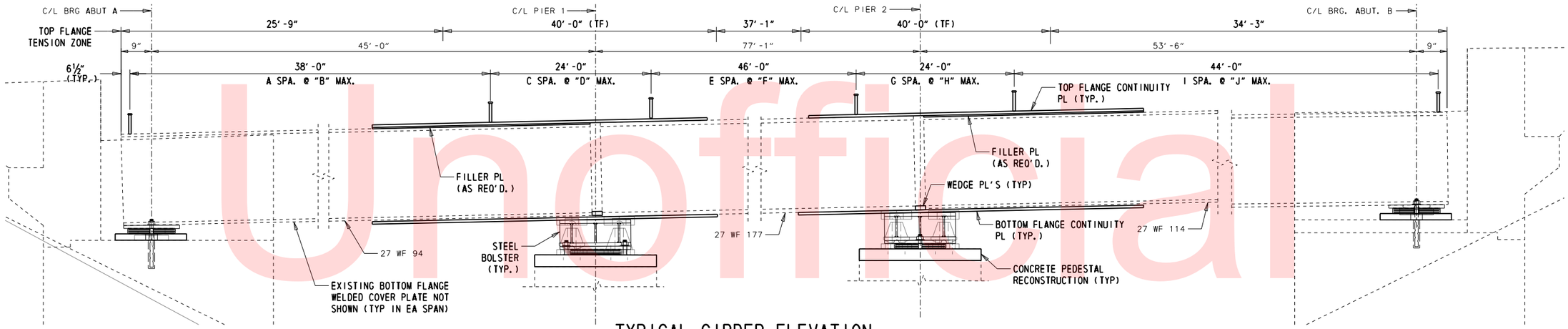
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	FRAMING PLAN	SHEET NO. 26
				COUNTY NEW CASTLE	DESIGNED BY: RPG		TOTAL SHTS. 71
					CHECKED BY: JAM		



TYPICAL GIRDER ELEVATION

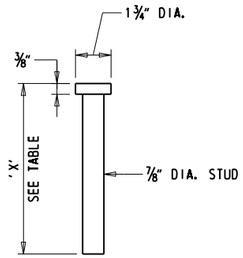
SCALE: 3/4" = 1'-0"

GIRDER	A	B (IN.)	C	D (IN).	E	F (IN.)	G	H (IN.)	I	J (IN.)
1 & 10	20	24"	12	24"	23	24"	12	24"	23	24"
2 - 9	38	12"	16	18"	27	21"	16	18"	36	15"

TABLE OF SHEAR STUD LENGTH 'X'

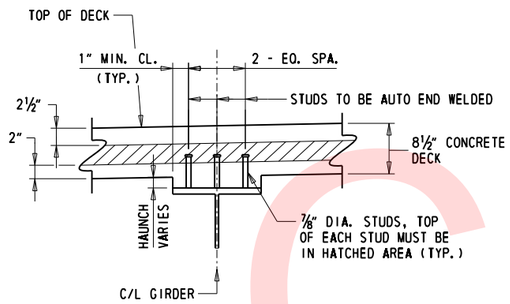
	SPAN 1 'X' IN	SPAN 2 'X' IN	SPAN 3 'X' IN
GIRDER 1	6	7	6
GIRDER 2	6	7	6
GIRDER 3	6	7	6
GIRDER 4	6	7	6
GIRDER 5	6	7	6
GIRDER 6	6	7	7
GIRDER 7	6	7	7
GIRDER 8	6	6	7
GIRDER 9	6	7	7
GIRDER 10	6	7	7

NOTE: AT C/L OF BEARING OR PIER, USE SMALLER STUD HEIGHT OF ADJACENT SPANS



STUD DETAIL

NOT TO SCALE

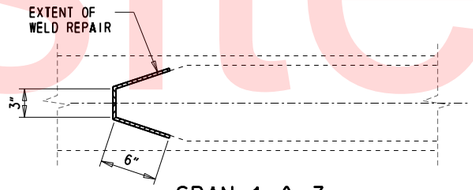


SHEAR STUD DETAIL

SCALE : 1" = 1'-0"

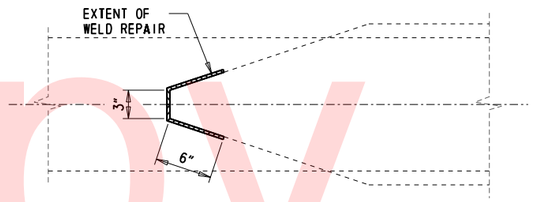
ESTIMATED HAUNCH DEPTHS AT SUPPORTS (IN)

	GIRDER 1	GIRDER 2	GIRDER 3	GIRDER 4	GIRDER 5	GIRDER 6	GIRDER 7	GIRDER 8	GIRDER 9	GIRDER 10
C/L BRG. ABUT. A	2.37	1.52	1.70	2.11	2.53	2.74	2.77	2.52	2.11	2.58
C/L BRG. PIER 1	2.65	1.78	1.92	1.90	1.99	1.65	1.22	0.80	0.49	1.32
C/L BRG. PIER 2	3.35	2.29	2.35	2.59	3.07	3.34	2.85	1.81	2.76	3.87
C/L BRG. ABUT. B	0.78	0.47	0.94	1.84	2.50	2.97	3.03	3.19	3.25	4.87



SPAN 1 & 3

EACH LOCATION SHOWN. EACH GIRDER AT EACH END = 40 LOCATIONS



SPAN 2

EACH LOCATION SHOWN. EACH GIRDER AT EACH END = 20 LOCATIONS

FATIGUE REPAIR OF WELDED COVER PLATE TERMINATIONS

SCALE : 1½" = 1'-0"

LEGEND:

(TF) TOP FLANGE TENSION ZONE

NOTES:

1. CONTRACTOR SHALL SURVEY EXISTING BOTTOM OF STEEL ELEVATIONS FOR EACH BEAM AT C/L OF BEARING PRIOR TO JACKING. CONTRACTOR MUST ENSURE THAT, UPON COMPLETION OF JACKING, SPAN 2 GIRDERS ARE RETURNED TO EXISTING BOTTOM OF STEEL ELEVATIONS AT C/L OF BEARINGS. FINAL SPAN 1 AND SPAN 3 BOTTOM OF STEEL ELEVATION AT CENTERLINE OF BEARING AT PIER 1 & 2 SHALL MATCH THAT OF THE SPAN 2 ADJACENT GIRDER. THIS ITEM IS INCIDENTAL TO ITEM 604000.
2. PERFORM FATIGUE REPAIR OF WELDED COVER PLATE TERMINATORS IN ACCORDANCE WITH ITEM NO. 615505.

CROSS REFERENCE NOTES:

1. FOR FRAMING PLAN, SEE SHEET 26.
2. FOR CONTINUITY PLATE DETAILS, SEE SHEET 28.
3. FOR WEDGE PLATE DETAILS, SEE SHEET 28.
4. FOR CONCRETE CONTINUITY DIAPHRAGM DETAILS, SEE SHEETS 31 AND 32.
5. FOR BEARING DETAILS, SEE SHEETS 33-36.
6. FOR PROPOSED PEDESTAL RECONSTRUCTION, SEE SHEET 36.
7. FOR BOLSTER DETAILS, SEE SHEET 35.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

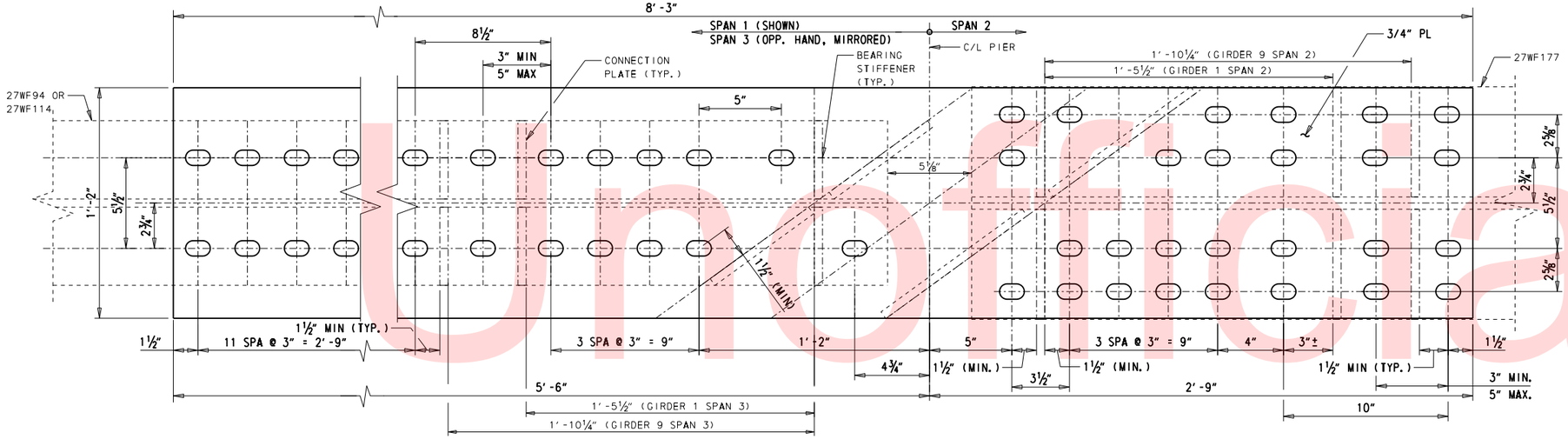
SCALE AS NOTED

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	T201507403
COUNTY	NEW CASTLE
BRIDGE NO.	1-634
DESIGNED BY:	MDM/SCF
CHECKED BY:	JAM

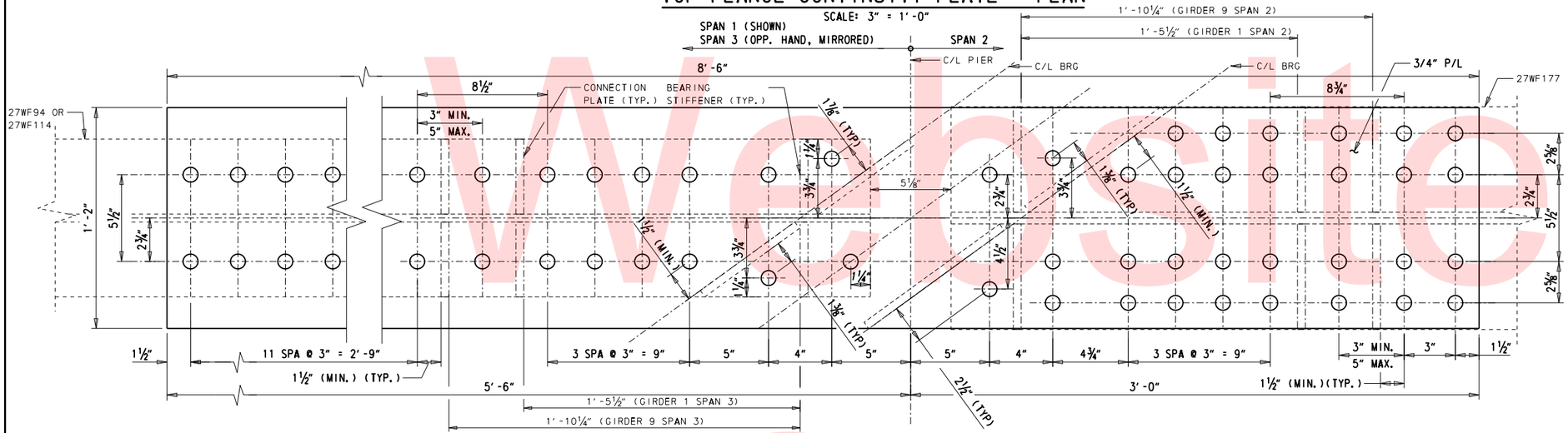
GIRDER ELEVATION

SHEET NO.	27
TOTAL SHTS.	71



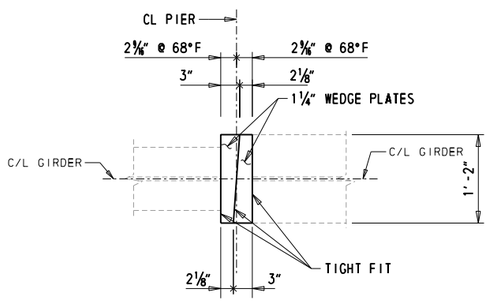
TOP FLANGE CONTINUITY PLATE - PLAN

SCALE: 3" = 1'-0"



BOTTOM FLANGE CONTINUITY PLATE - PLAN

SCALE: 3" = 1'-0"



WEDGE PLATE DETAIL

SCALE : 1" = 1'-0"

CROSS REFERENCE NOTES:

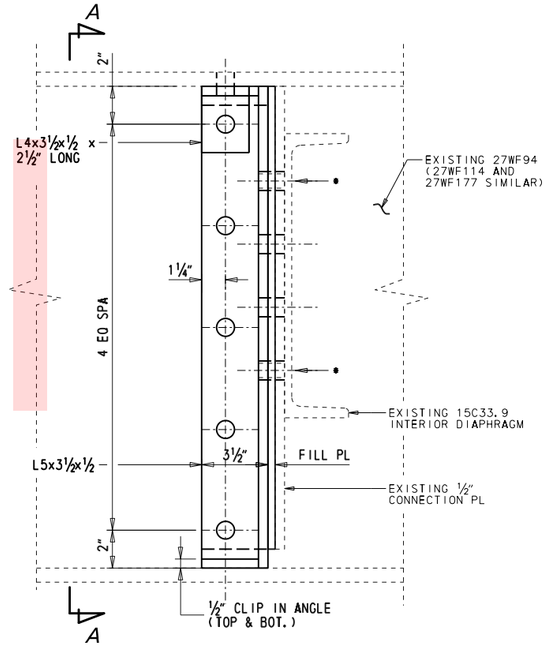
1. FOR GIRDER ELEVATION, SEE SHEET 27.
2. FOR FRAMING PLAN AND DIAPHRAGM SPACING, SEE SHEET 26.
3. FOR CONTINUITY & END DIAPHRAGM DETAILS, SEE SHEETS 29 - 32.

LEGEND

- STANDARD OVERSIZED HOLE IN CONTINUITY PL. STANDARD HOLE IN GIRDER FLANGE
- SLOTTED HOLE L=1¼" & W =⅞" IN CONTINUITY PL. STANDARD HOLE IN GIRDER FLANGES

NOTES:

1. ALL BOLTS ARE TO BE ⅞" DIA UNLESS OTHERWISE NOTED.
2. ALL NEW STRUCTURAL STEEL AND CONNECTIONS SHALL BE PAID FOR UNDER ITEM 615001, UNLESS NOTED OTHERWISE.
3. BOLTED CONNECTIONS OF THE TOP CONTINUITY PLATE FOR GIRDERS 4 TO 10 SHALL NOT BE TIGHTENED UNTIL AT LEAST 7 DAYS AFTER DECK POUR 2 IN STAGE 1. BOLTS CONNECTING THE TOP CONTINUITY PLATE FOR GIRDERS 1-3 SHALL NOT BE TIGHTENED UNTIL AT LEAST 7 DAYS AFTER DECK POUR 5 IN STAGE 2. (REFER TO SHEET 43 FOR DECK POUR SEQUENCE).
4. ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION. VERIFY THAT BOLT HOLE LOCATIONS HAVE THE PROPER CLEARANCE FROM EXISTING STEEL STIFFENERS AND CONNECTION PLATES.
5. BOLSTER TOP FLANGE NOT SHOWN ON BOTTOM FLANGE CONTINUITY PLATE PLAN. REFER TO SHEET 35.

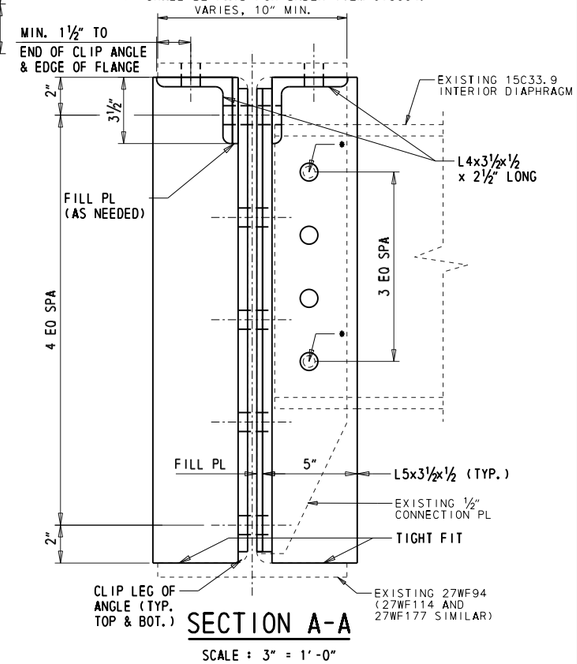


DETAIL-RETROFIT OF EXISTING INTERIOR DIAPHRAGM CONNECTION

SCALE : 3" = 1'-0"

NOTE:

• - EXISTING ¾" DIA BOLTS TO BE REPLACED WITH ⅞" A325 DIA BOLTS. REAM EXISTING BOLT HOLES TO STANDARD SIZE HOLES FOR NEW ⅞" BOLTS. REPLACE BOLTS ONE AT A TIME UNLESS NOTED OTHERWISE. REPLACING BOLTS IDENTIFIED WITH AN "•" SHALL BE PAID FOR UNDER ITEM 615004.



SECTION A-A

SCALE : 3" = 1'-0"

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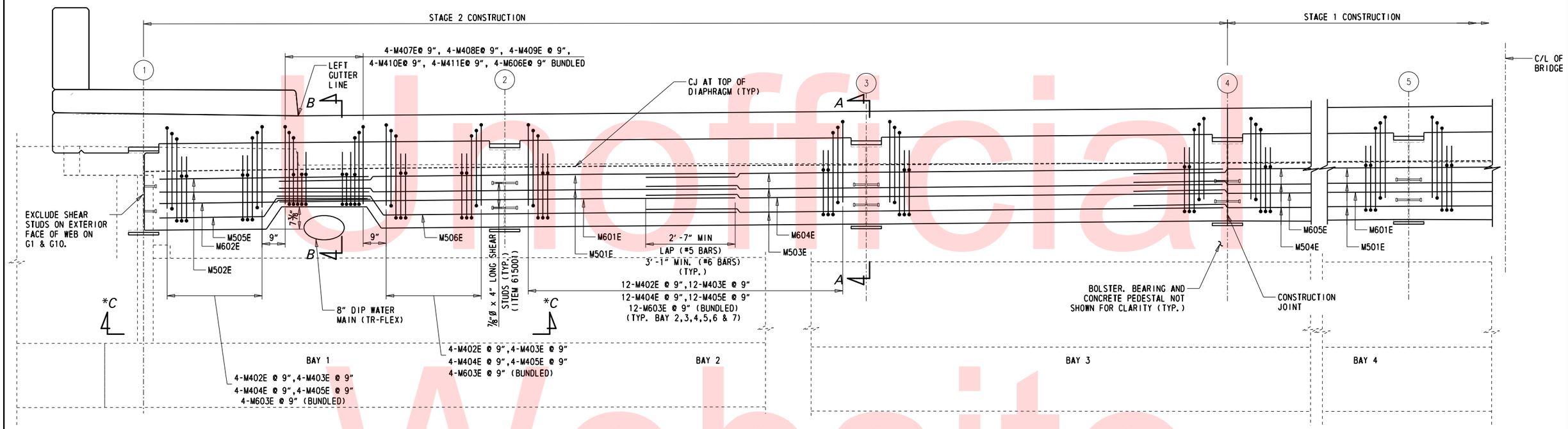
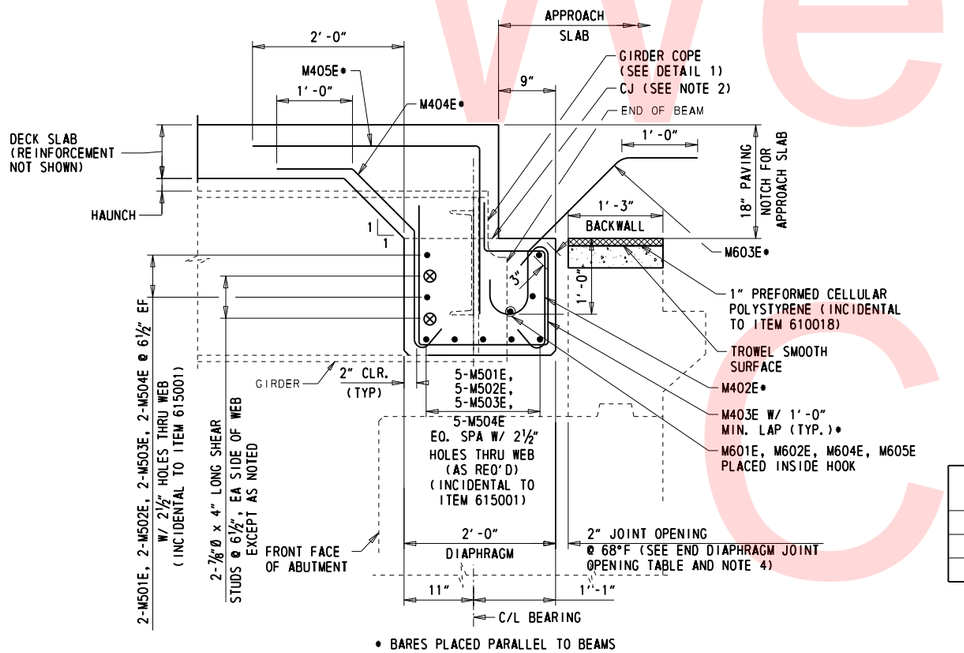
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	GIRDER DETAILS	SHEET NO. 28
				COUNTY NEW CASTLE	DESIGNED BY: SCF		TOTAL SHTS. 71
					CHECKED BY: JAM		



ELEVATION - CONCRETE DIAPHRAGM AT ABUTMENT B

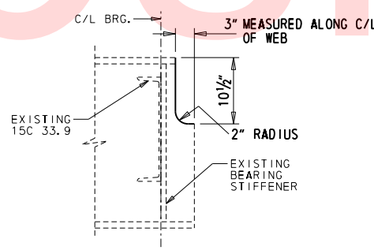
(ABUTMENT A SIMILAR, OPPOSITE HAND)
SCALE: 3/4" = 1'-0"
• FOR SECTION C-C, SEE SHEET 31.



• BARES PLACED PARALLEL TO BEAMS

SECTION A-A

(SECTION TAKEN PERPENDICULAR TO C/L OF ABUTMENT B; ABUTMENT A OPPOSITE HAND)
SCALE: 1" = 1'-0"



DETAIL 1 - GIRDER COPE

(SEE NOTE 3)
SCALE: 1" = 1'-0"

END DIAPHRAGM JOINT OPENING AT VARIOUS TEMPERATURES (IN)

TEMPERATURE (°F)	0	10	20	30	40	50	60	68	70	80	90	100	110	120
ABUTMENT A	2.14	2.12	2.10	2.08	2.06	2.04	2.02	2.00	2.00	1.98	1.95	1.93	1.91	1.89
ABUTMENT B	2.41	2.35	2.29	2.23	2.17	2.11	2.05	2.00	1.99	1.93	1.87	1.81	1.75	1.69

(SEE NOTE 4)

LEGEND:

⊗ - ⅞"Ø x 4" LONG SHEAR STUD

NOTES:

1. CONCRETE IN DIAPHRAGM SHALL BE PAID FOR UNDER ITEM 610017 AND REINFORCEMENT IN DIAPHRAGM SHALL BE PAID FOR UNDER ITEM 611001.
2. PLACE PORTION OF DIAPHRAGM TO THE CONSTRUCTION JOINT INDICATED. WAIT 2 HOURS MINIMUM BEFORE PLACING DECK CONCRETE.
3. COPE GIRDER FLANGE ALONG SKEW (PARALLEL TO ABUTMENT C/L OF BEARINGS).
4. JOINT OPENING IS MEASURED PERPENDICULAR TO FRONT FACE OF BACKWALL.
5. MINIMUM LAP SPLICE LENGTHS, NORMAL WEIGHT CONCRETE:
   2'-7 (#5 BARS)
   3'-1" (#6 BARS)
6. ALL HOLE DRILLING IN EXISTING STRUCTURAL STEEL REQUIRED FOR REBAR REPLACEMENT SHALL BE INCIDENTAL TO ITEM 615001.

CROSS REFERENCE NOTES:

1. FOR ABUTMENT & WINGWALL DEMOLITION & RECONSTRUCTION DETAILS, SEE SHEET 14-16.
2. FOR APPROACH SLAB DETAILS, SEE SHEETS 49-51.
3. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 55.
4. FOR SECTION B-B, SEE SHEET 30.

P:\60323054 DELDOT AGR 1672 BDS\T07 - REHAB BR. 1-634\900 CAD\20 SHEETS\STRUCTURES\BR1-634\BR-634-DPH01.DGN

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE AS NOTED

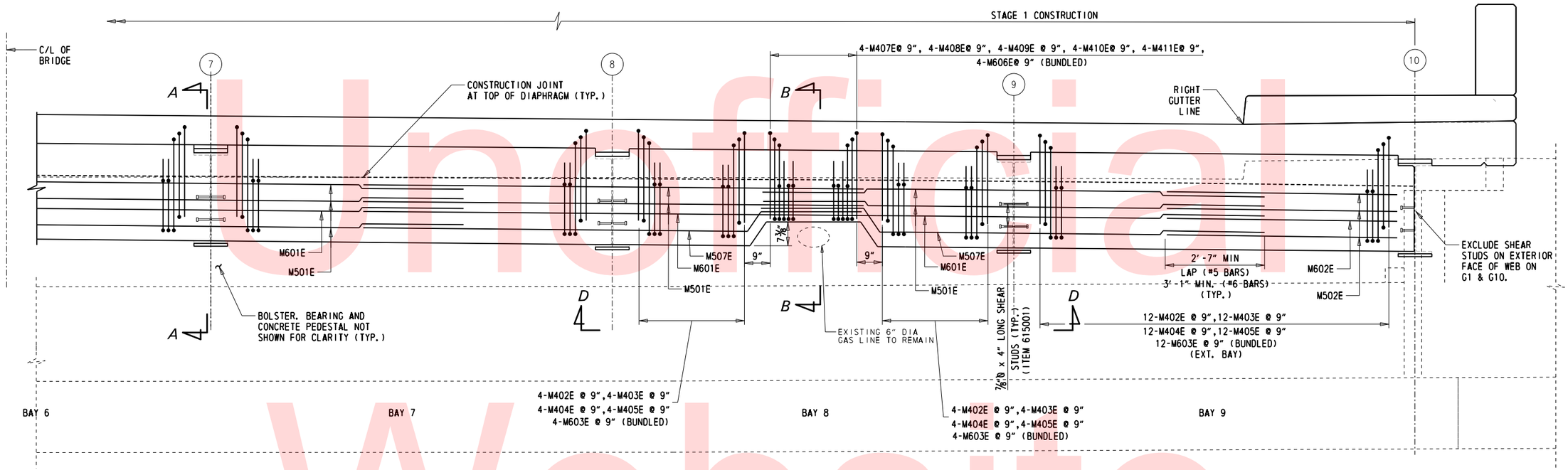
BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	T201507403
COUNTY	NEW CASTLE

BRIDGE NO.	1-634
DESIGNED BY:	MDW
CHECKED BY:	JAM

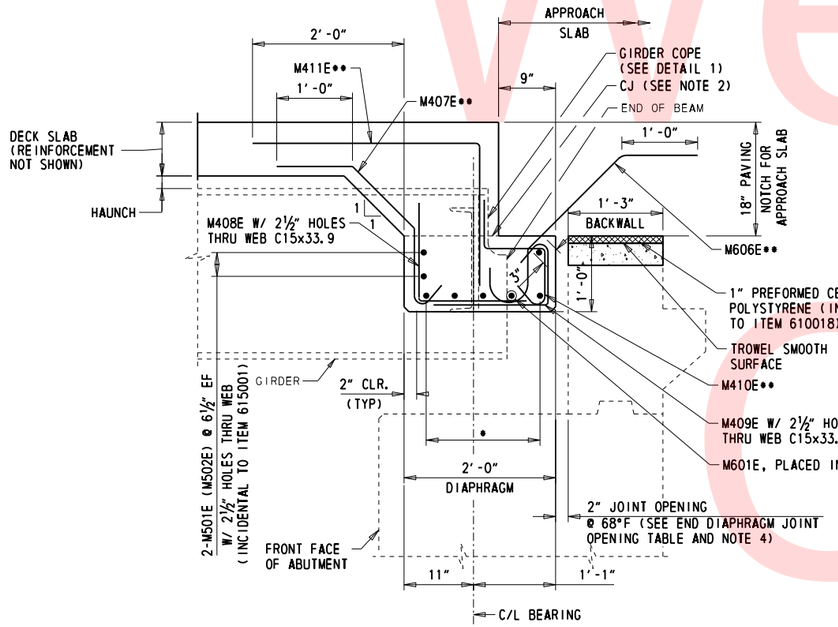
END DIAPHRAGM - ABUTMENTS - 1

SHEET NO.	29
TOTAL SHTS.	71



ELEVATION - CONCRETE DIAPHRAGM AT ABUTMENT B

(ABUTMENT A SIMILAR, OPPOSITE HAND)
SCALE: 3/4" = 1'-0"

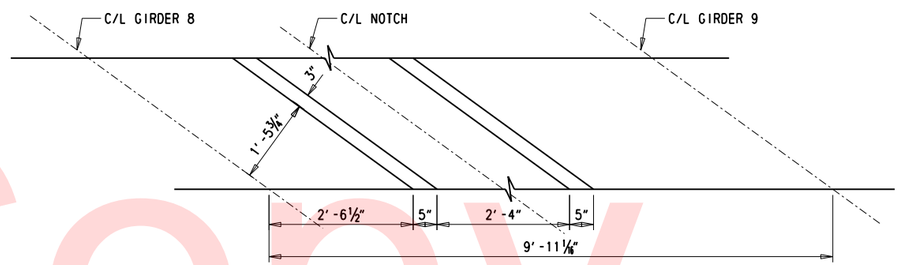


• 4-M505E & 4-M506E BUNDLED BAY 1
4-M507E & 4-M507E BUNDLED BAY 8
EQ SPA W 2½" HOLES THRU WEB
(INCIDENTAL TO ITEM 615001)

•• BARS PLACED PARALLEL TO BEAM

SECTION B-B

(SECTION TAKEN PERPENDICULAR TO C/L OF ABUTMENT B; ABUTMENT A OPPOSITE HAND)
SCALE: 1" = 1'-0"



SECTION D-D

SCALE: 3/4" = 1'-0"

LEGEND:

⊗ - ⅞"Ø x 4" LONG SHEAR STUD

NOTES:

1. CONCRETE IN DIAPHRAGM SHALL BE PAID FOR UNDER ITEM 610017 AND REINFORCEMENT IN DIAPHRAGM SHALL BE PAID FOR UNDER ITEM 611001.
2. PLACE PORTION OF DIAPHRAGM TO THE CONSTRUCTION JOINT INDICATED. WAIT 2 HOURS MINIMUM BEFORE PLACING DECK CONCRETE.
3. COPE GIRDER FLANGE ALONG SKEW (PARALLEL TO ABUTMENT C/L OF BEARINGS).
4. JOINT OPENING IS MEASURED PERPENDICULAR TO FRONT FACE OF BACKWALL.
5. MINIMUM LAP SPLICE LENGTHS, NORMAL WEIGHT CONCRETE:
   2'-7 (#5 BARS)
   3'-1" (#6 BARS)
6. ALL HOLE DRILLING IN EXISTING STRUCTURAL STEEL REQUIRED FOR REBAR REPLACEMENT SHALL BE INCIDENTAL TO ITEM 615001.

CROSS REFERENCE NOTES:

1. FOR ABUTMENT & WINGWALL DEMOLITION & RECONSTRUCTION DETAILS, SEE SHEET 14-16.
2. FOR APPROACH SLAB DETAILS, SEE SHEETS 49-51.
3. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 55.
4. FOR SECTION A-A AND DETAIL 1, SEE SHEET 29.

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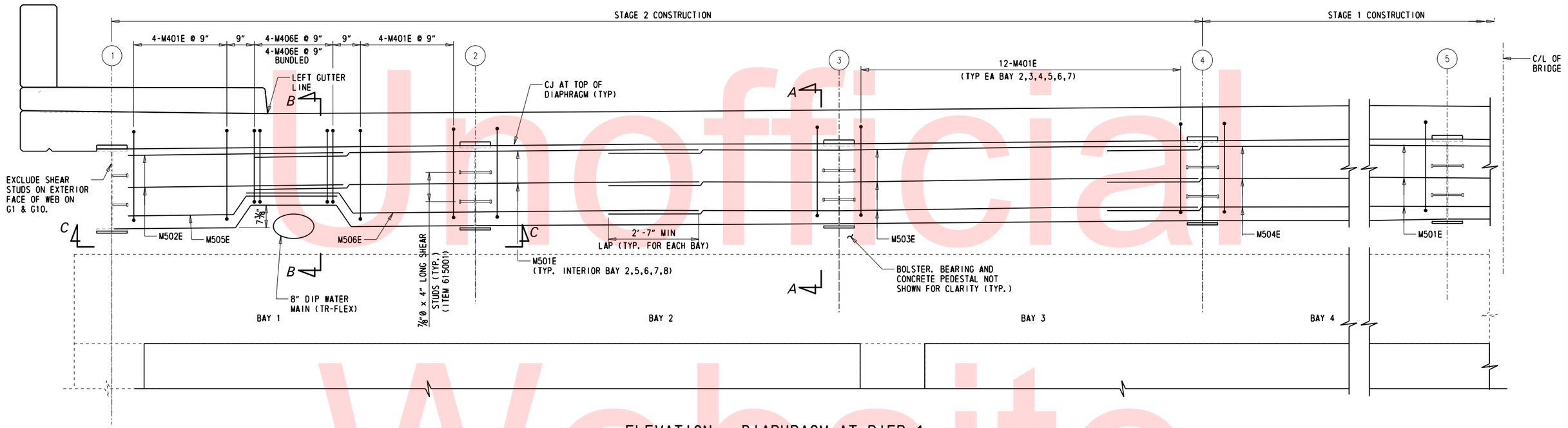
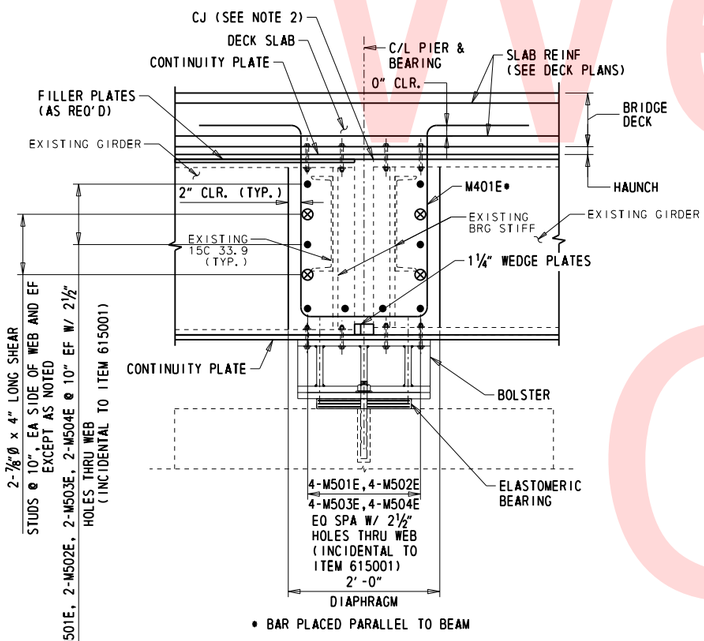
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	END DIAPHRAGM - ABUTMENTS - 2	SHEET NO. 30
				COUNTY NEW CASTLE	DESIGNED BY: MDW		TOTAL SHTS. 71
					CHECKED BY: JAM		



ELEVATION - DIAPHRAGM AT PIER 1

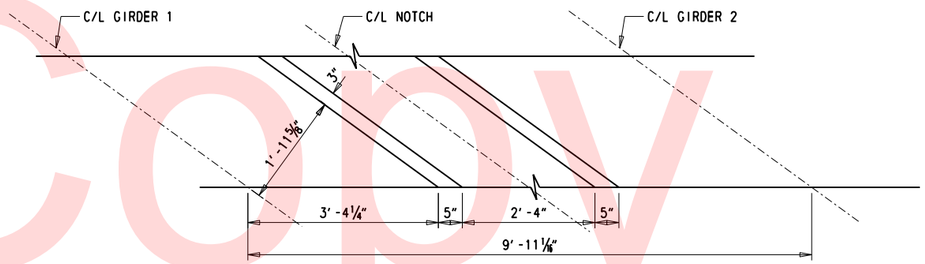
(PIER 2 SIMILAR)
SCALE: 3/4" = 1'-0"



• BAR PLACED PARALLEL TO BEAM

SECTION A-A

(SECTION TAKEN PERPENDICULAR TO C/L OF PIER)
SCALE: 1" = 1'-0"



SECTION C-C

SCALE: 3/4" = 1'-0"

LEGEND:

⊗ - ⅞"Ø x 4" LONG SHEAR STUD

NOTES:

1. CONCRETE IN DIAPHRAGM SHALL BE PAID FOR UNDER ITEM 610017 AND REINFORCEMENT IN DIAPHRAGM SHALL BE PAID FOR UNDER ITEM 611001.
2. PLACE PORTION OF DIAPHRAGM TO THE CONSTRUCTION JOINT INDICATED. WAIT 2 HOURS MINIMUM BEFORE PLACING DECK CONCRETE.
3. MINIMUM LAP SPLICE LENGTHS FOR MORMAL WEIGHT CONCRETE: 2'-7" (#5 BAR).
4. ALL HOLE DRILLING IN EXISTING STRUCTURAL STEEL REQUIRED FOR REBAR REPLACEMENT SHALL BE INCIDENTAL TO ITEM 615001.

CROSS REFERENCE NOTES:

1. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 55.
2. FOR WEDGE PLATE DETAIL, SEE SHEET 28.
3. FOR BOLSTER DETAILS, SEE SHEET 35.
4. FOR CONTINUITY PLATE DETAILS, SEE SHEET 27 AND 28.
5. FOR SECTION B-B, SEE SHEET 32.

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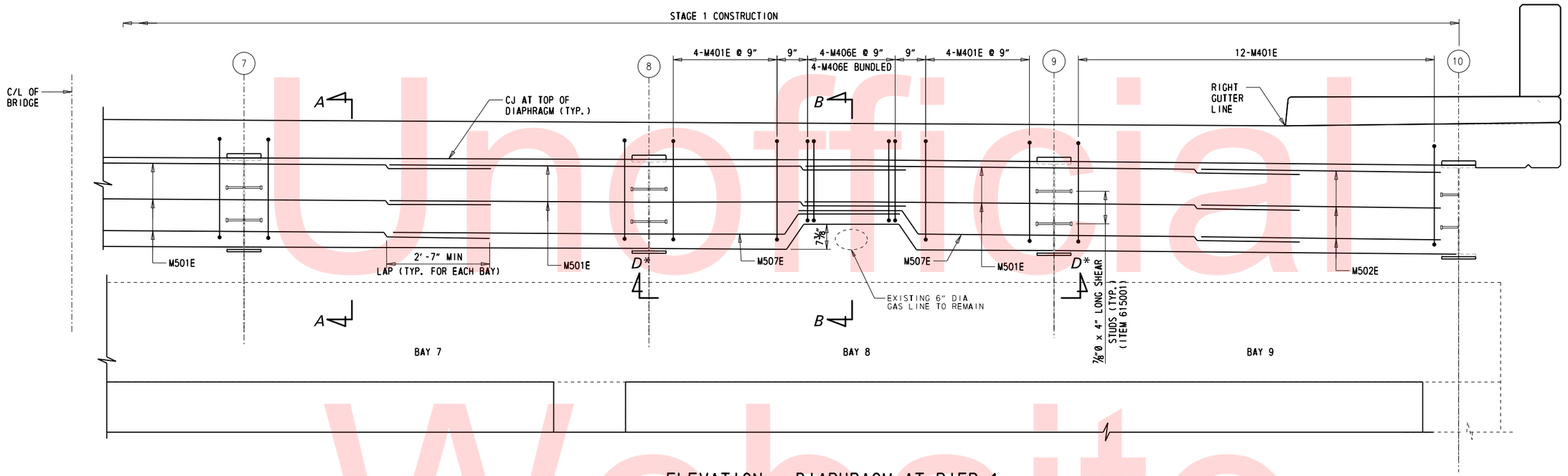
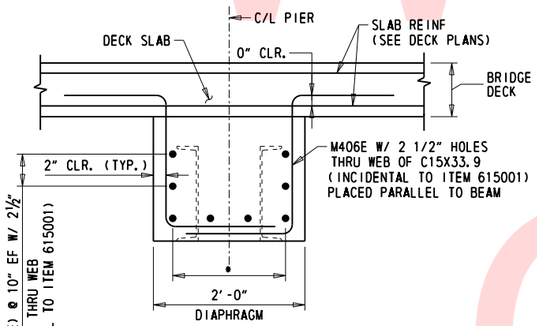
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	CONTINUITY DIAPHRAGM – PIERS – 1	SHEET NO. 31
				COUNTY NEW CASTLE	DESIGNED BY: MDW		TOTAL SHTS. 71
					CHECKED BY: JAM		



ELEVATION - DIAPHRAGM AT PIER 1

(PIER 2 SIMILAR)
SCALE: 3/4" = 1'-0"

• FOR SECTION D-D SEE SHEET 30



• 4-M505E & 4-M506E BUNDLED BAY 1
4-M507E & 4-M507E BUNDLED BAY 8
EQ SPA W 2½" HOLES THRU WEB
(INCIDENTAL TO ITEM 615001)

SECTION B-B

(SECTION TAKEN PERPENDICULAR TO C/L OF PIER)
SCALE: 1" = 1'-0"

LEGEND:

⊗ - ⅞"Ø x 4" LONG SHEAR STUD

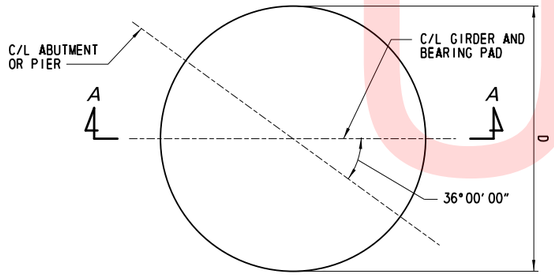
NOTES:

1. CONCRETE IN DIAPHRAGM SHALL BE PAID FOR UNDER ITEM 610017 AND REINFORCEMENT IN DIAPHRAGM SHALL BE PAID FOR UNDER ITEM 611001.
2. PLACE PORTION OF DIAPHRAGM TO THE CONSTRUCTION JOINT INDICATED. WAIT 2 HOURS MINIMUM BEFORE PLACING DECK CONCRETE.
3. MINIMUM LAP SPLICE LENGTHS FOR MORMAL WEIGHT CONCRETE: 2'-7" (#5 BAR).
4. ALL HOLE DRILLING IN EXISTING STRUCTURAL STEEL REQUIRED FOR REBAR REPLACEMENT SHALL BE INCIDENTAL TO ITEM 615001.

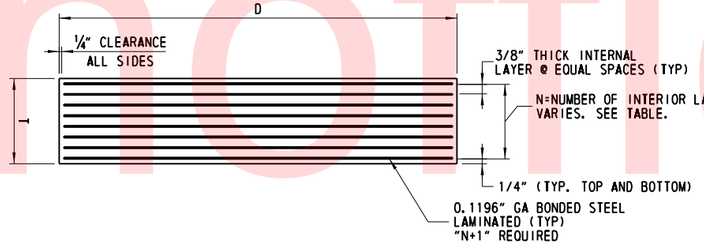
CROSS REFERENCE NOTES:

1. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 55.
2. FOR WEDGE PLATE DETAIL, SEE SHEET 28.
3. FOR BOLSTER DETAILS, SEE SHEET 35.
4. FOR CONTINUITY PLATE DETAILS, SEE SHEET 27 AND 28.
5. FOR SECTION A-A, SEE SHEET 31.
6. FOR SECTION D-D, SEE SHEET 30.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	CONTINUITY DIAPHRAGM - PIERS - 2	SHEET NO. 32
				COUNTY NEW CASTLE	DESIGNED BY: MDW		TOTAL SHTS. 71
					CHECKED BY: JAM		



PLAN



SECTION A-A

STEEL REINFORCED ELASTOMERIC BEARING PAD

NTS

STEEL REINFORCED ELASTOMERIC BEARING PAD TABLE

LOCATION	BEARING DESIGNATION				BEARING DESIGN BASIS		LAMINATED ELASTOMERIC BEARING					
							DIMENSION					
	MARK	TYPE	NEOPRENE HARDNESS (SHORE A)	TOTAL NO. REQD.	• REACTION (KIP)	•• MOVEMENT (IN)	D, (IN)	SHAPE FACTOR: INTERIOR LAYER	SHAPE FACTOR: COVER LAYER	AREA (IN^2)	INTERIOR LAYERS	TOTAL PAD THICKNESS, "T" (IN)
ABUT. A	E1	EXP.	50	10	135	7/16"	14	9.33	14.00	153.938	2	1.6088
PIER 1	F1	FIX.	50	10	171	N/A	15	10.00	15.00	176.710	2	1.6088
PIER 2	E2	EXP.	50	10	175	¾"	16	10.67	16.00	201.062	3	2.1034
ABUT. B	E3	EXP.	50	10	142	1¼"	15	10.00	15.00	176.715	6	3.5872

• MAX SERVICE I (UNFACTORED) REACTION PER BEARING (W/O DYNAMIC LOAD ALLOWANCE)
•• TEMPERATURE MOVEMENTS FROM 0°F TO 120°F.

BEARING NOTES (INCLUDES NOTES FOR ELASTOMERIC BEARINGS, SOLE PLATES AND ANCHOR BOLTS)

1. PROVIDE ALL STEEL REINFORCED ELASTOMERIC BEARINGS IN ACCORDANCE WITH SECTION 623 - 'BEARING DEVICES' OF THE STANDARD SPECIFICATIONS.
2. PROVIDE INTERNAL SHIMS AS PER ASTM A1011 GRADE 36.
3. SMOOTH CUT AND DEBURR METAL SHIMS.
4. GRIT BLAST AND DEGREASE METAL SHIMS.
5. ELASTOMERIC BEARINGS SHALL BE 50 DUROMETER HARDNESS SHORE TYPE A.
6. MINIMUM LOW TEMPERATURE ELASTOMER SHALL BE GRADE 3.
7. ALL BEARINGS ARE TO BE MOLDED TO DESIGN DIMENSIONS. CUTTING TO SIZE AFTER FABRICATION IS PROHIBITED.
8. HOLES ARE NOT PERMITTED IN THE ELASTOMERIC BEARINGS.
9. AVOID DAMAGING ELASTOMERIC PAD DURING WELDING.
10. FOR BEVELED SOLE PLATE, MARK THICKER END OF BEVELED SOLE PLATES TO IDENTIFY THICKER END IN FIELD.
11. USE APPLICABLE INFORMATION SHOWN ON THESE DRAWINGS TO DEVELOP SHOP DRAWINGS.
12. VERIFY ALL DIMENSIONS AND GEOMETRY OF THE EXISTING STRUCTURE IN THE FIELD PRIOR TO FABRICATION TO ENSURE PROPER FIT OF THE PROPOSED CONSTRUCTION.
13. ENSURE ALL BEARING SURFACES INCLUDING THE BEARING SEAT ARE LEVEL PRIOR TO INSTALLATION OF BEARINGS.
14. ANCHOR BOLTS AND WASHERS SHALL BE UNPAINTED A709 GRADE 36 GALVANIZED STEEL. ALL NUTS SHALL BE UNPAINTED A307 GALVANIZED STEEL. SET NUTS 1/4" CLEAR OF SOLE PLATES AND BURR THREADS ABOVE AND BELOW NUTS.
15. 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 3 1/2" WHEN DRILLING HOLES, DO NOT COME INTO CONTACT WITH THE REINFORCING BARS.
16. SOLE PLATE SHALL BE BEVELED AS PRESCRIBED IN THESE PLANS. STEEL SURFACES OF SOLE PLATES TO BE MACHINE FINISHED AS SHOWN IN THE DETAILS, MEASURED IN ACCORDANCE WITH ANSI B46.1.
17. SOLE PLATES SHALL MEET A FLATNESS REQUIREMENT OF 0.5 PERCENT IN THE DIRECTION BEING MEASURED (WIDTH, LENGTH, AND DIAGONALS) MAXIMUM, BUT NOT TO EXCEED 1/8 INCH.
18. USE WASHERS WITH ⅛" LARGER DIAMETER THAN BOLT DIAMETER.
19. STEEL REINFORCED ELASTOMERIC BEARINGS SHALL BE ATTACHED TO THE TOP OF CONCRETE PEDESTAL WITH AN APPROVED EPOXY ADHESIVE IN ACCORDANCE WITH SECTION 623.03(C) OF THE STANDARD SPECIFICATIONS IN SUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED. ENSURE THE EPOXY ADHESIVE HAS SET PRIOR TO PLACEMENT OF BEAMS.
20. PAYMENT FOR FABRICATION AND INSTALLATION OF STEEL REINFORCED ELASTOMERIC BEARINGS, SHALL BE INCIDENTAL TO 623000.
21. PAYMENT FOR ANCHOR BOLTS, NUTS AND WASHERS SHALL BE INCIDENTAL TO ITEM 623003.
22. SOLE PLATE SHALL BE PAID UNDER ITEM 615001.
23. FILL SLOTS AND HOLES AROUND ANCHOR BOLTS WITH AN APPROVED NON-HARDENING CAULKING COMPOUND OR ELASTIC JOINT SEALER. THIS WORK IS INCIDENTAL TO ITEM 623003.

CROSS REFERENCE NOTES:

1. FOR PEDESTAL ELEVATIONS AND PEDESTAL REINFORCEMENT DETAILS, SEE SHEET 36.
2. FOR BEVELED SOLE PLATE DIMENSIONS, SEE SHEET 36.
3. FOR ADDITIONAL BEARING DETAILS, SEE SHEETS 34-36.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

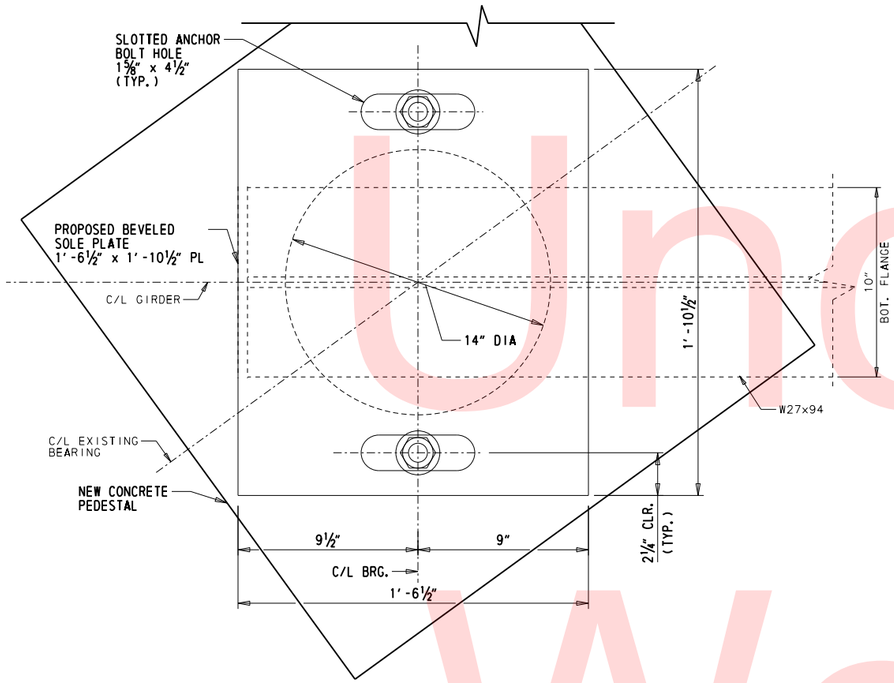
NOT TO SCALE

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	BRIDGE NO.	1-634
T201507403	DESIGNED BY:	RPG
COUNTY	CHECKED BY:	JAM
NEW CASTLE		

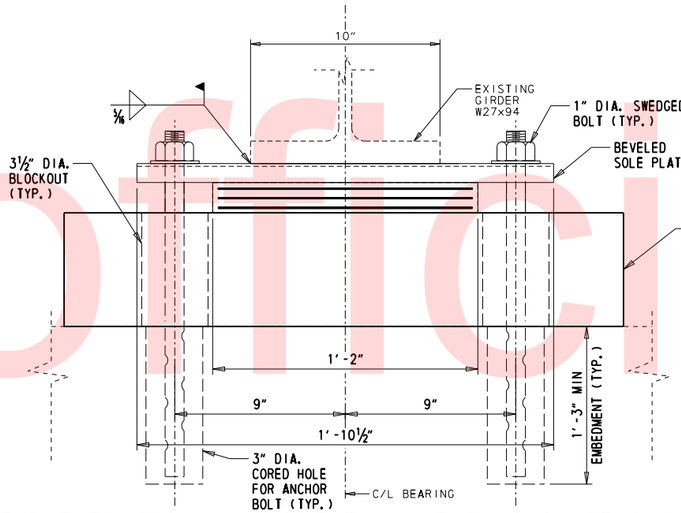
BEARING DETAILS - 1

SHEET NO.
33
TOTAL SHTS.
71



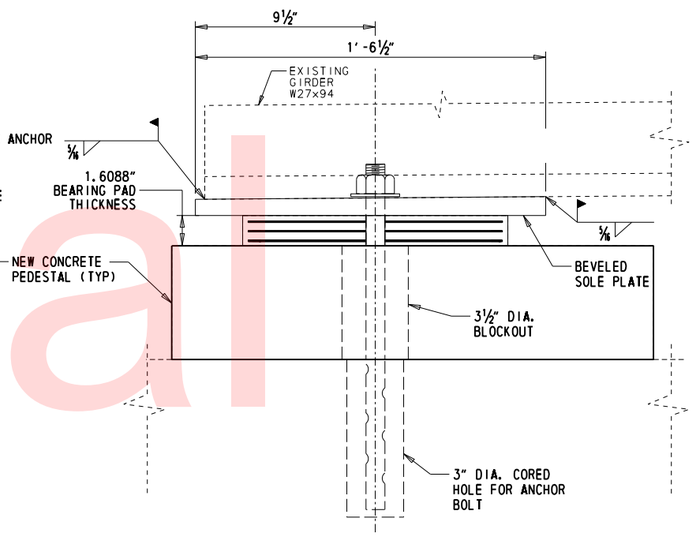
PLAN - ABUTMENT A - EXPANSION BEARING

SCALE: 3" = 1'-0"



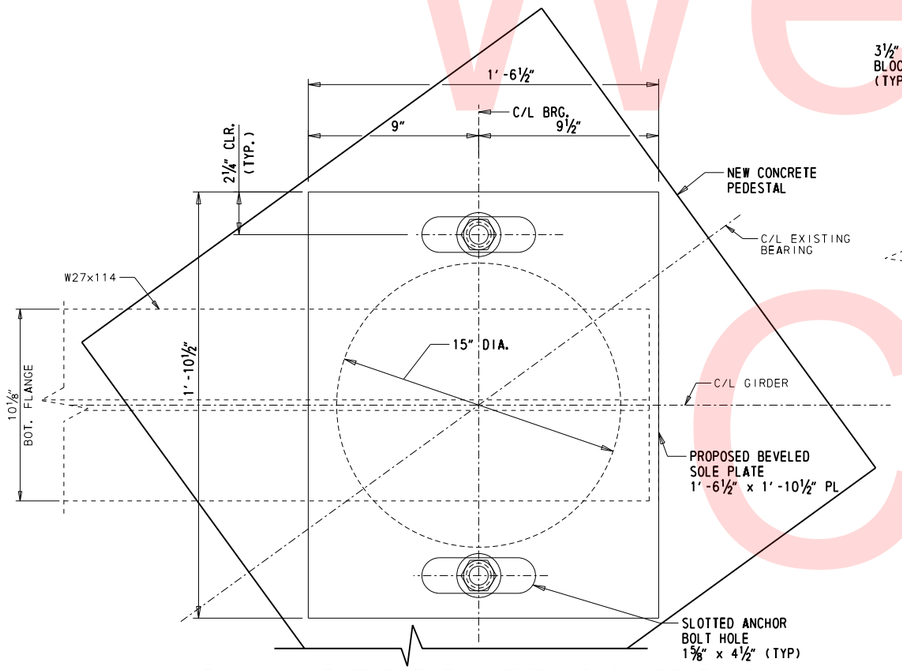
END ELEVATION - ABUTMENT A - EXPANSION BEARING

SCALE: 3" = 1'-0"



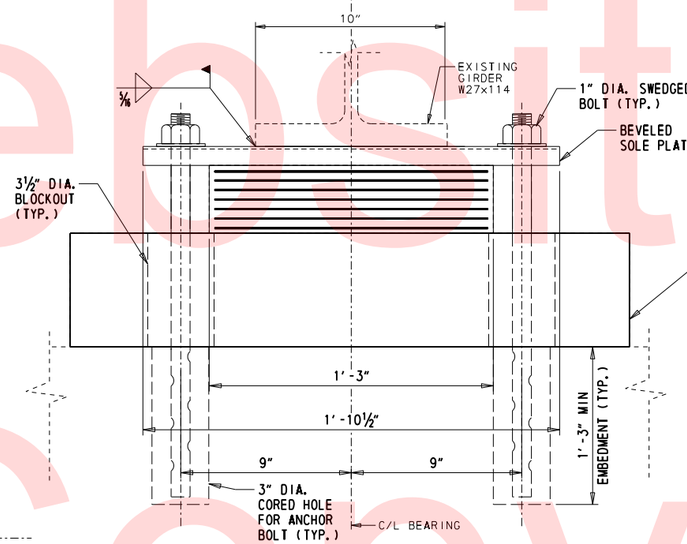
ELEVATION - ABUTMENT A - EXPANSION BEARING

SCALE: 3" = 1'-0"



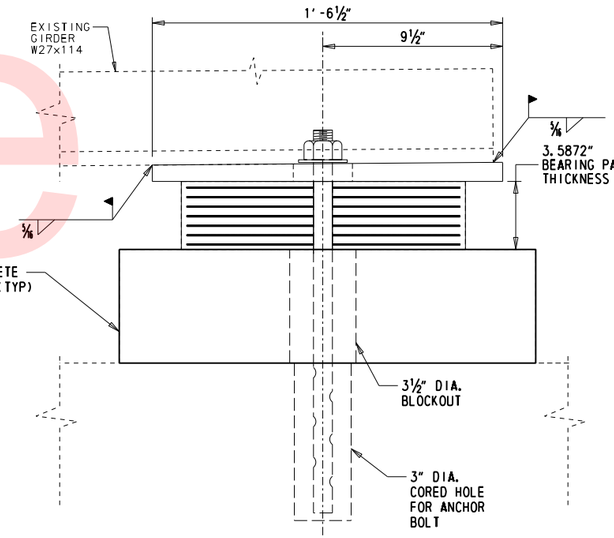
PLAN - ABUTMENT B - EXPANSION BEARING

SCALE: 3" = 1'-0"



END ELEVATION - ABUTMENT B - EXPANSION BEARING

SCALE: 3" = 1'-0"



ELEVATION - ABUTMENT B - EXPANSION BEARING

SCALE: 3" = 1'-0"

NOTES:

1. EXISTING ANCHOR BOLTS SHALL BE CORED OUT AND PROPOSED ANCHOR BOLTS SHALL BE PLACED IN EXISTING HOLES. THIS WORK SHALL BE INCIDENTAL TO ITEM 623003.
2. THE CONTRACTOR SHALL LOCATE THE EXISTING REINFORCEMENT BEFORE CORING THE ANCHOR BOLT HOLES TO ENSURE THAT EXISTING REINFORCEMENT IN THE ABUTMENT ARE NOT DAMAGED CORE HOLE DIAMETER TO BE AS REQUIRED FOR GROUTING OF ANCHOR BOLT HOLE. THIS WORK SHALL BE INCIDENTAL TO ITEM 623003.

CROSS REFERENCE NOTES:

1. FOR ELASTOMERIC BEARINGS DETAILS AND BEARING NOTES, SEE SHEETS 33.
2. FOR BEVELED SOLE PLATE DETAILS, SEE SHEET 36.
3. FOR PEDESTAL DETAILS, SEE SHEET 36.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

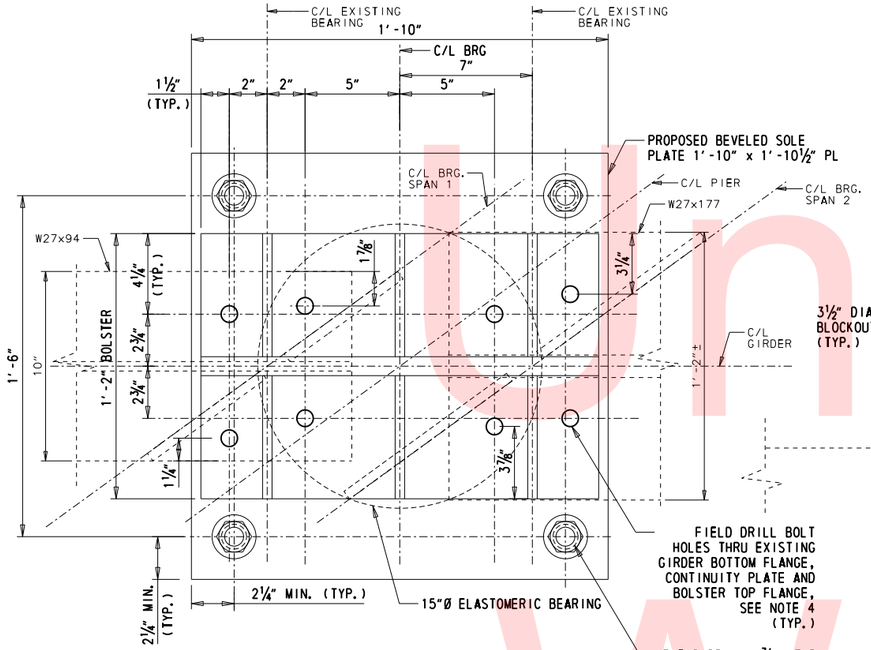
SCALE 1/2 0 1/2 FEET

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	BRIDGE NO.	1-634
T201507403	DESIGNED BY:	RPG
COUNTY	CHECKED BY:	JAM
NEW CASTLE		

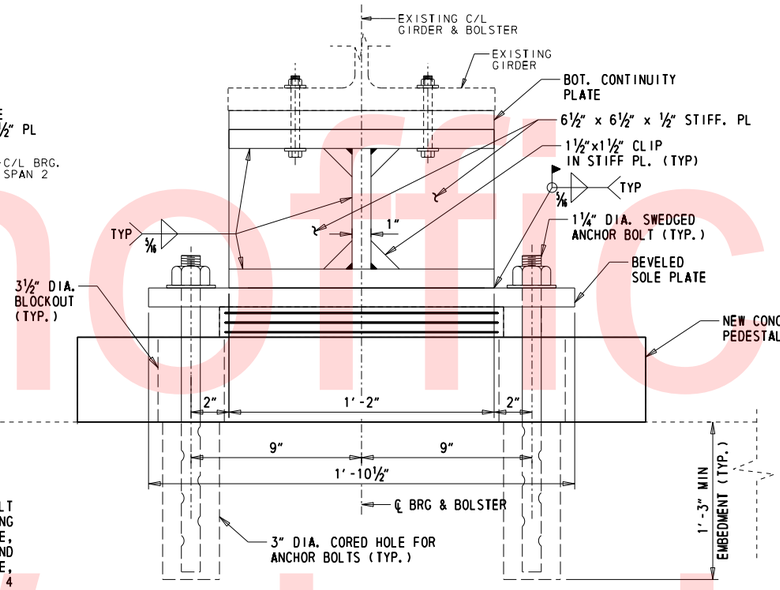
BEARING DETAILS - 2

SHEET NO.
34
TOTAL SHTS.
71



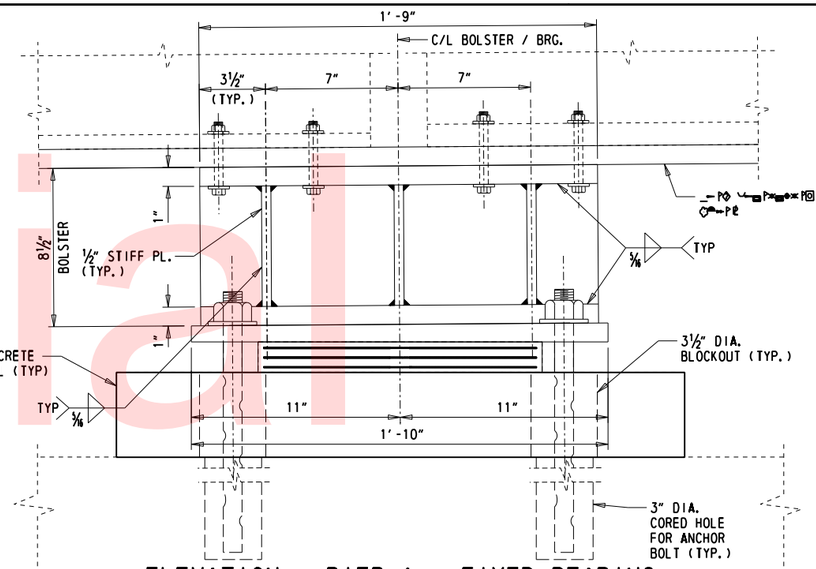
PLAN - PIER 1 - FIXED BEARING

SCALE: 3" = 1'-0"



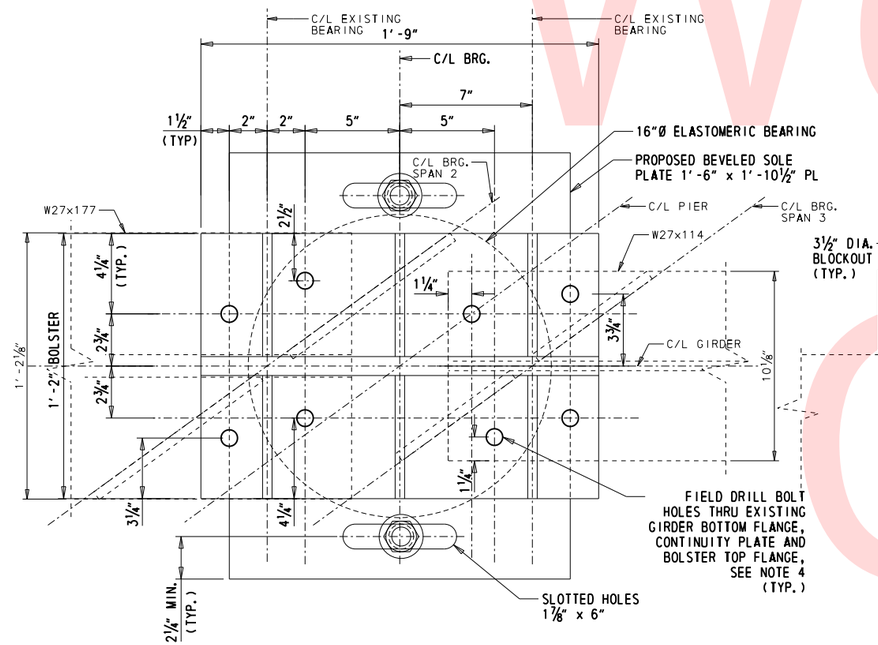
END ELEVATION - PIER 1 - FIXED BEARING

SCALE: 3" = 1'-0"



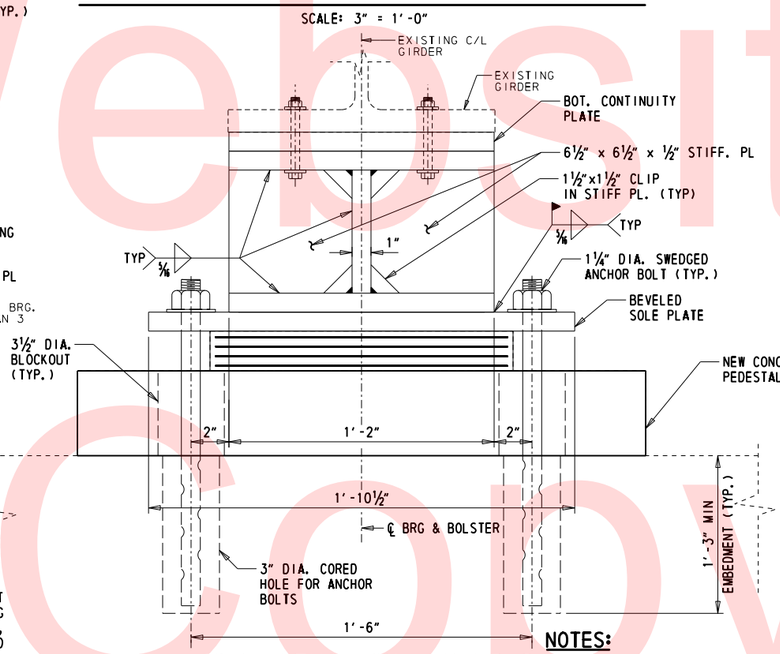
ELEVATION - PIER 1 - FIXED BEARING

SCALE: 3" = 1'-0"



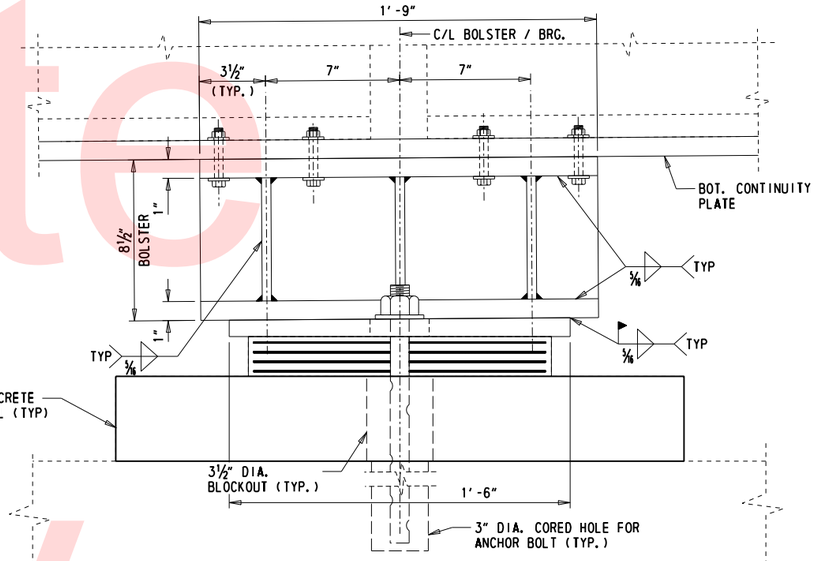
PLAN - PIER 2 - EXPANSION BEARING

SCALE: 3" = 1'-0"



END ELEVATION - PIER 2 EXPANSION BEARING

SCALE: 3" = 1'-0"



ELEVATION - PIER 2 - EXPANSION BEARING

SCALE: 3" = 1'-0"

NOTES:

1. MATCH BOLSTER BOLT HOLES TO CONTINUITY PLATE BOLT HOLES.
2. BOLSTER STIFFENER PLATES AND WEB INTERFACE WITH TOP AND BOTTOM PLATES TO BE MILL TO BEAR.
3. THE CONTRACTOR SHALL LOCATE THE EXISTING REINFORCEMENT BEFORE CORING THE ANCHOR BOLTS, TO ENSURE THAT EXISTING REINFORCEMENT IN PIER CAP WILL NOT BE DAMAGED. THIS WORK SHALL BE INCIDENTAL TO ITEM 623003.
4. THE CONTRACTOR SHALL FIELD DRILL BOLT HOLES AFTER LOCATING EXISTING BEARING STIFFENERS AND VERIFYING ADEQUATE TIGHTENING AND EDGE DISTANCE. THIS WORK SHALL BE INCIDENTAL TO ITEM 615001.
5. EXISTING ANCHOR BOLTS FOR PIER 1 TO BE REMOVED AND PROPOSED PIER 1 ANCHOR BOLTS TO BE PLACED AT EXISTING BOLT LOCATIONS. EXISTING ANCHOR BOLTS THAT DO NOT INTERFERE WITH NEW ANCHOR BOLTS MAY BE CUT FLUSH WITH EXISTING CONCRETE TOP SURFACE, OR REMOVED. THIS WORK SHALL BE INCIDENTAL TO ITEM 623003.
6. BOLSTERS SHALL BE PAID FOR UNDER ITEM 615001.

CROSS REFERENCE NOTES:

1. FOR ELASTOMERIC BEARINGS DETAILS AND BEARING NOTES, SEE SHEET 33.
2. FOR BEVELED SOLE PLATE DETAIL, SEE SHEET 36.
3. FOR CONTINUITY PLATE DETAILS, SEE SHEETS 27 AND 28.
4. FOR PEDESTAL DETAILS, SEE SHEET 36.

P:\60323054 DELDOT AGR 1672 BDS\T07 - REHAB BR. 1-634\900 CAD\20 SHEETS\STRUCTURES\BR1-634\BR-634-BD03.DGN

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

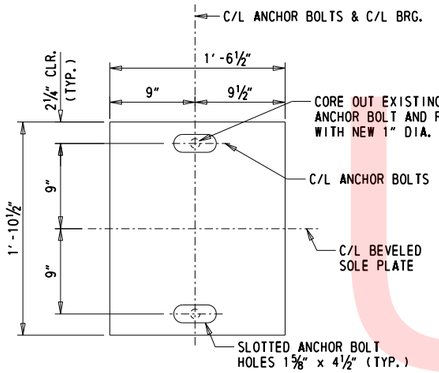
SCALE 1/2 0 1/2 FEET

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	BRIDGE NO.	1-634
T201507403	DESIGNED BY:	RPG
COUNTY	CHECKED BY:	JAM
NEW CASTLE		

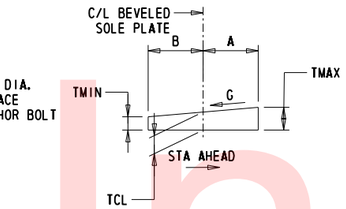
BEARING DETAILS - 3

SHEET NO.
35
TOTAL SHTS.
71



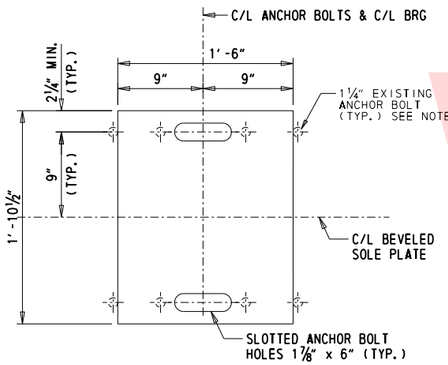
PLAN - BEVELED SOLE PLATE

ABUTMENT A & ABUTMENT B
SCALE: 1½" = 1'-0"



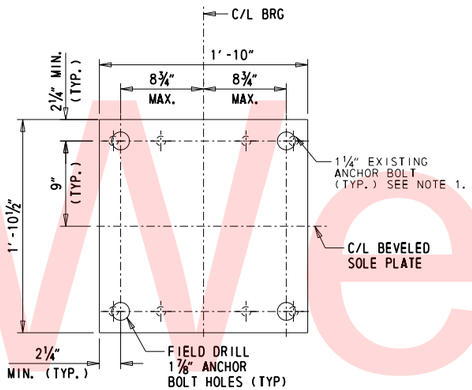
BEVELED SOLE PLATE DETAIL

NTS



PLAN - BEVELED SOLE PLATE

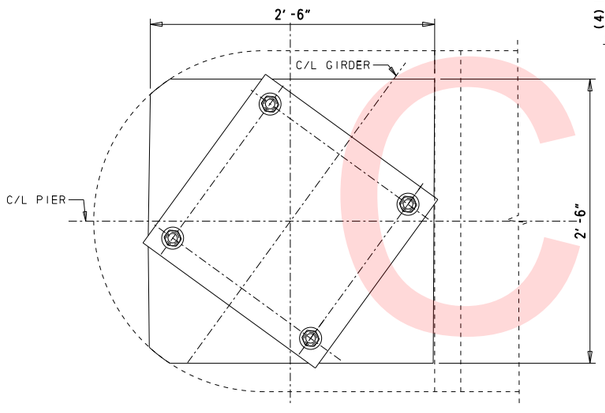
PIER 2
SCALE: 1½" = 1'-0"



PLAN - BEVELED SOLE PLATE

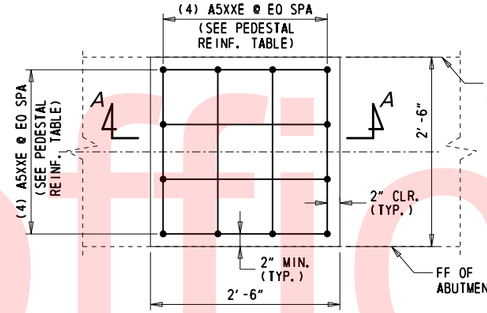
PIER 1
SCALE: 1½" = 1'-0"

PEDESTAL REINFORCEMENT TABLE			
TYPE	MARK	LOCATION	
1	A501E	ABUTMENT A	G5
		ABUTMENT B	-
2	A502E	ABUTMENT A	G1, G6, G8
		ABUTMENT B	G3, G4, G5, G6, G7
3	A503E	ABUTMENT A	G2, G3, G9
		ABUTMENT B	G1, G2, G8
4	A504E	ABUTMENT A	G4, G7
		ABUTMENT B	G9
5	P511E	PIER 1	G7
		PIER 2	-
6	P512E	PIER 1	G1, G2, G8
		PIER 2	G7, G8
7	P513E	PIER 1	G3, G4, G5, G9
		PIER 2	G9
8	P514E	PIER 1	G6, G10
		PIER 2	G1, G2, G3, G4, G5, G6, G10



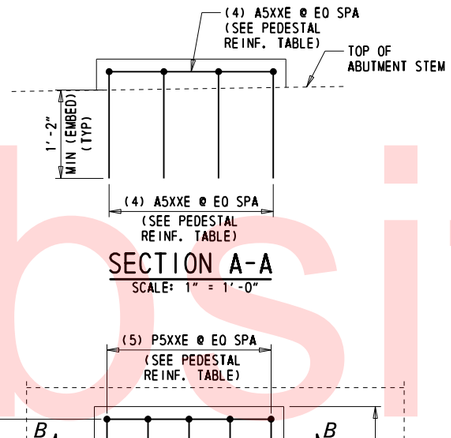
PEDESTAL PLAN

PIER 1 & 2 (G1 & G10)
SCALE: 1½" = 1'-0"



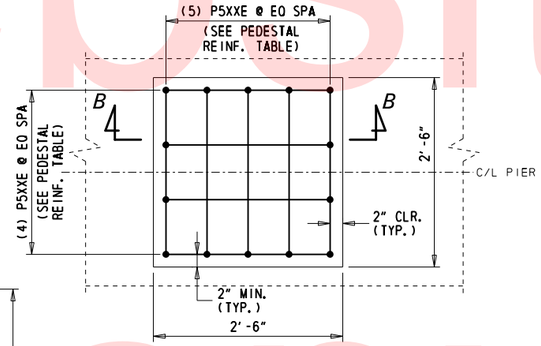
PEDESTAL PLAN

ABUTMENT A & B
SCALE: 1" = 1'-0"



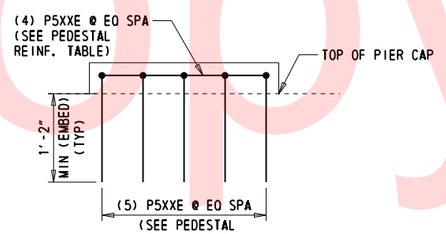
SECTION A-A

SCALE: 1" = 1'-0"



PEDESTAL PLAN

PIER 1 & 2 (EXCEPT G1 & G10)
SCALE: 1" = 1'-0"



SECTION B-B

SCALE: 1" = 1'-0"

BEVELED SOLE PLATE TABLE							
GIRDER	SUPPORT	TMIN, (IN)	TCL, (IN)*	TMAX (IN)	A (IN)	B (IN)	G (IN)
G1	ABUT. A	1	1.1875	1⅜	9¼	9¼	2.02%
	PIER 1	1	1.1563	1⅜	11	11	1.47%
	PIER 2	1	1.0625	1⅛	9	9	0.78%
	ABUT. B	1	1.0313	1¼	9¼	9¼	0.25%
G2	ABUT. A	1	1.1875	1⅜	9¼	9¼	2.13%
	PIER 1	1	1.1875	1⅜	11	11	1.59%
	PIER 2	1	1.0938	1¼	9	9	0.89%
	ABUT. B	1	1.0313	1¼	9¼	9¼	0.34%
G3	ABUT. A	1	1.2188	1¼	9¼	9¼	2.22%
	PIER 1	1	1.1875	1⅜	11	11	1.69%
	PIER 2	1	1.0938	1¼	9	9	1.00%
	ABUT. B	1	1.0313	1¼	9¼	9¼	0.47%
G4	ABUT. A	1	1.2188	1¼	9¼	9¼	2.35%
	PIER 1	1	1.1875	1⅜	11	11	1.80%
	PIER 2	1	1.0938	1¼	9	9	1.10%
	ABUT. B	1	1.0625	1⅛	9¼	9¼	0.56%
G5	ABUT. A	1	1.2188	1¼	9¼	9¼	2.44%
	PIER 1	1	1.2188	1¼	11	11	1.90%
	PIER 2	1	1.1250	1¼	9	9	1.22%
	ABUT. B	1	1.0625	1⅛	9¼	9¼	0.70%
G6	ABUT. A	1	1.2500	1½	9¼	9¼	2.55%
	PIER 1	1	1.2188	1¼	11	11	2.01%
	PIER 2	1	1.1250	1¼	9	9	1.32%
	ABUT. B	1	1.0625	1⅛	9¼	9¼	0.79%
G7	ABUT. A	1	1.2500	1½	9¼	9¼	2.66%
	PIER 1	1	1.2188	1¼	11	11	2.12%
	PIER 2	1	1.1250	1¼	9	9	1.43%
	ABUT. B	1	1.0938	1⅛	9¼	9¼	0.90%
G8	ABUT. A	1	1.2500	1½	9¼	9¼	2.77%
	PIER 1	1	1.2500	1½	11	11	2.28%
	PIER 2	1	1.1250	1¼	9	9	1.54%
	ABUT. B	1	1.0938	1⅛	9¼	9¼	0.88%
G9	ABUT. A	1	1.2813	1⅛	9¼	9¼	2.88%
	PIER 1	1	1.2500	1½	11	11	2.33%
	PIER 2	1	1.1563	1⅜	9	9	1.65%
	ABUT. B	1	1.0938	1⅛	9¼	9¼	1.13%
G10	ABUT. A	1	1.2813	1⅛	9¼	9¼	3.00%
	PIER 1	1	1.2813	1⅛	11	11	2.44%
	PIER 2	1	1.1563	1⅜	9	9	1.76%
	ABUT. B	1	1.1250	1¼	9¼	9¼	1.24%

* TCL THICKNESS AT CENTERLINE OF SOLE PLATE, WHICH MAY OR MAY NOT BE LOCATED AT THE CENTERLINE OF BEARING. SEE BEVELED SOLE PLATE DETAIL.

TOP OF PEDESTAL ELEVATIONS				
GIRDER	ABUT. A	PIER 1	PIER 2	ABUT. B
1	116.91	117.01	117.77	118.65
2	116.82	116.96	117.85	118.75
3	116.72	116.91	117.91	118.85
4	116.61	116.85	117.95	118.91
5	116.49	116.77	117.95	118.98
6	116.28	116.60	117.84	118.93
7	115.95	116.33	117.67	118.79
8	115.63	116.05	117.53	118.63
9	115.29	115.76	117.21	118.47
10	114.96	115.46	116.95	118.24

NOTES:

1. EXISTING ANCHOR BOLTS FOR PIER 1 TO BE REMOVED AND PROPOSED PIER 1 ANCHOR BOLTS TO BE PLACED AT EXISTING BOLT LOCATIONS. EXISTING ANCHOR BOLTS AT PIER 1 OR PIER 2 THAT DO NOT INTERFERE WITH NEW ANCHOR BOLTS MAY BE CUT FLUSH TO EXISTING CONCRETE SURFACE OR REMOVED. THIS WORK SHALL BE INCIDENTAL TO ITEM 623003.
2. SOLE PLATE SHALL BE PAID FOR UNDER ITEM 615001.
3. TOP OF PEDESTAL ELEVATIONS ARE MEASURED AT C/L OF BEARING.
4. CORING (EACH HOLE) FOR INSTALLATION OF NEW PEDESTAL REINFORCEMENT INTO EXISTING CONCRETE SHALL BE PAID FOR UNDER ITEM 628070.
5. PEDESTALS FOR G10 ON ABUTMENT A AND B ARE UNREINFORCED.

CROSS REFERENCE NOTES:

1. FOR ELASTOMERIC BEARINGS DETAILS AND BEARING NOTES, SEE SHEETS 33-35.
2. FOR PEDESTAL REINFORCEMENT SCHEDULE, SEE SHEET 25.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

SCALE AS NOTED

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	BRIDGE NO.	1-634
T201507403	DESIGNED BY:	RPG
COUNTY	CHECKED BY:	JAM
NEW CASTLE		

SOLE PLATE AND PEDESTAL DETAILS

SHEET NO.
36
TOTAL SHTS.
71

GENERAL JACKING NOTES:

1. PRIOR TO STARTING WORK, THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND ELEVATIONS AND NOTIFY THE DEPARTMENT OF ANY DISCREPANCIES. DO NOT PROCEED WITH REHABILITATION WORK UNTIL ALL DISCREPANCIES ARE RESOLVED TO THE SATISFACTION OF THE ENGINEER.

2. JACKING CONCEPTS SHOWN ON SHEETS 37-40 FOR BEARING REPLACEMENT AND FOR TEMPORARY SUPPORT FOR PIER 1 PARTIAL RECONSTRUCTION MAY BE DESIGNED AND CONSTRUCTED BY THE CONTRACTOR. THE CONTRACTOR MAY DESIGN AND CONSTRUCT ALTERNATE JACKING AND TEMPORARY SUPPORT SCHEMES. SUBMIT DRAWINGS INDICATING ALL DIMENSIONS AND JACKING PROCEDURE FOR APPROVAL PRIOR TO WORK, IN ACCORDANCE WITH SECTION 604 OF THE STANDARD SPECIFICATION, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF DELAWARE.

3. INSTALL THE NEW BEARING ASSEMBLIES FOLLOWING THE SEQUENCE OF WORK PROVIDED ON SHEETS 37-40 AND IN ACCORDANCE WITH THE OVERALL SEQUENCE OF WORK PROVIDED ON SHEETS 11 AND 12.

4. THE CAPACITY OF THE JACK IS TO BE 165% (INCLUDES STICKY FORCE) OF THE TOTAL ANTICIPATED JACKING LOAD. THE ANTICIPATED JACKING LOADS SHOWN ON THESE JACKING PLANS INCLUDE THE FULL DEAD LOAD OF THE EXISTING SUPERSTRUCTURE.

5. DO NOT LIFT OR LOWER ANY GIRDER GREATER THAN 1/8" DURING JACKING OPERATIONS.

6. PROVIDE TEMPORARY LOAD PLATES BELOW JACKS TO ENSURE DISTRIBUTION OF LOAD SO AS NOT TO OVERSTRESS CONCRETE.

7. USE SAME TWO BOLT (EXISTING 3/4" BOLTS) HOLE LOCATIONS FROM EXISTING DIAPHRAGM CONNECTION PLATE AND REAM OR DRILL 15/16" BOLT HOLES FOR 7/8" DIAMETER BOLTS AND CENTER THE 3RD BOLT AT EQUAL SPACING BETWEEN THE TWO EXISTING BOLTS.

8. ALL JACKING, TEMPORARY SUPPORT SYSTEMS AND ALL ASSOCIATED TEMPORARY WORKS FOR BEARING REPLACEMENT AND FOR PARTIAL PIER 1 RECONSTRUCTION SHALL BE PAID FOR UNDER ITEM 604000, UNLESS NOTED OTHERWISE.

SUGGESTED JACKING SEQUENCE FOR BEARING REPLACEMENT

1. INSTALL JACKING ANGLES L5x5x5/8" AND JACKING PLATES ON EXISTING STEEL DIAPHRAGMS AND NEW BOLTS FOR DIAPHRAGM TO GIRDER CONNECTION.

2. LOCATE THE JACKS UNDER THE JACKING DIAPHRAGM AS SHOWN ON THIS PLAN..

3. REPLACE THE BEARINGS AT ABUTMENT A & B AND PIER 2 FOR ALL GIRDERS (PIER 1, GIRDERS 4 TO 10) AS FOLLOWS:

   A. REMOVE WELD CONNECTING BEARINGS TO EXISTING GIRDERS.

   B. JACK GIRDERS ALONG A GIVEN BEARING LINE SIMULTANEOUSLY, WITHIN LIMITS OF STAGED CONSTRUCTION.

   C. REMOVE THE EXISTING BEARING AS SHOWN ON THESE PLANS. CUT THE EXISTING ANCHOR BOLTS FLUSH WITH THE TOP SURFACE OF THE EXISTING CONCRETE PEDESTAL, OR AS NOTED OTHERWISE.

   D. REMOVE THE EXISTING CONCRETE PEDESTALS. (ITEM 211000)

   E. CORE DRILL ANCHOR BOLT HOLES IN THE EXISTING CONCRETE ABUTMENT SEAT OR PIER CAP. (ITEM 623003)

   F. CONSTRUCT NEW PEDESTALS. (ITEM 610004 AT PIERS & ITEM 610002 AT ABUTMENTS)

   G. FOR ABUTMENTS ONLY, GRIND SMOOTH THE UNDERSIDE OF THE EXISTING GIRDER BOTTOM FLANGES IN PREPARATION FOR THE INSTALLATION OF THE NEW SOLE PLATES. (ITEM 615001)

   H. FOR ALL GIRDERS AT PIER 2 AND GIRDERS 4-10 AT PIER 1.

      1. INSTALL THE BOTTOM FLANGE CONTINUITY PLATE.

      2. AT THE PROPOSED INTERIOR SUPPORTS, INSTALL THE BOLSTER AND BEVELED SOLE PLATE.

   I. INSTALL NEW ELASTOMERIC BEARINGS. (ITEM 623000)

   J. LOWER THE SUPERSTRUCTURE ONTO THE NEW BEARING ASSEMBLIES AND REMOVE THE JACKS.

   K. FIELD WELD THE SOLE PLATE TO THE GIRDER BOTTOM FLANGE (ABUTMENTS) OR TO THE BOLSTER BOTTOM FLANGE (PIERS). (ITEM 615001)

   L. INSTALL AND GROUT ANCHOR BOLTS. (ITEM 623003)

   M. FOLLOW SEQUENCE FOR GIRDERS 1-3 AT PIER 1 UTILIZING SUGGESTED JACKING SCHEME SHOWN ON SHEET 39.

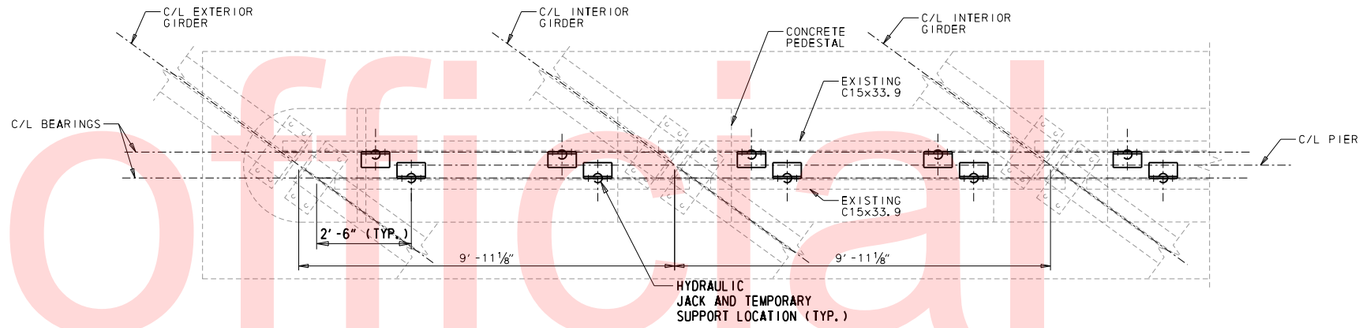
JACKING AND TEMPORARY SUPPORT LOADS ON STEEL DIAPHRAGMS:

1. FACTORED LOAD = 15.0 K (DL+15%). LOAD REFLECTS MAX GIRDER DEAD LOAD REACTION PLUS 30% INCREASE FOR JACKING, PER AASHTO LRFD SECTION 3.4.3.1.

2. UNFACTORED LOAD (DL+15%) = 11.5 K. LOAD REFLECTS MAX GIRDER DEAD LOAD REACTION.

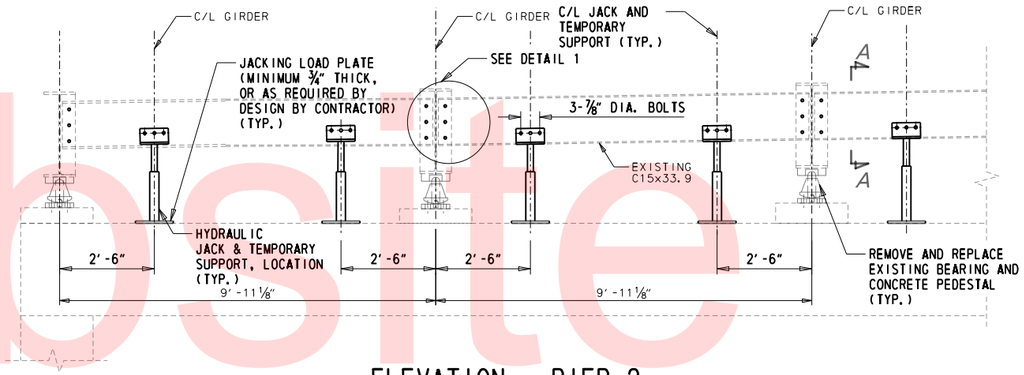
3. FOR DESIGN OF ANY TEMPORARY SUPPORT COMPONENTS, ADD AN ADDITIONAL 10% FACTOR TO FACTORED OR UNFACTORED LOADS ABOVE TO ACCOUNT FOR THE "STICKY FORCE".

4. A FACTOR OF 1.65 (1.5 FACTOR OF SAFETY + 0.10 "STICKY FORCE") SHALL BE USED TO DETERMINE MINIMUM JACK CAPACITY.



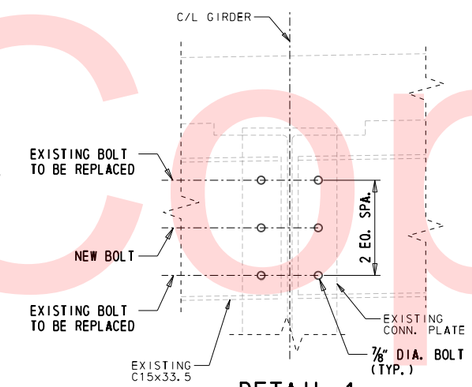
PLAN - PIER

PIER 2 (ALL GIRDERS) AND PIER 1 SIMILAR
SCALE : 1/2" = 1'-0"



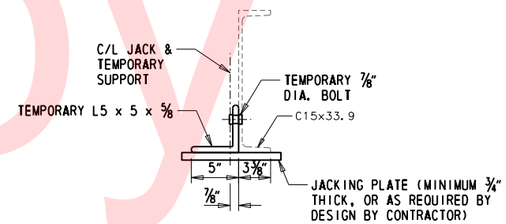
ELEVATION - PIER 2

(ALL GIRDERS) & PIER 1 SIMILAR
SCALE : 1/2" = 1'-0"



DETAIL 1

1 1/2" = 1'-0"



SECTION A-A

1 1/2" = 1'-0"

CROSS REFERENCE NOTES:

1. FOR SUGGESTED JACKING PLAN AT ABUTMENTS, SEE SHEET 38.
2. FOR BEARING DETAILS, SEE SHEETS 33-36.
3. FOR PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 36.
4. FOR FRAMING PLAN, SEE SHEET 26.
5. FOR SUGGESTED JACKING FOR PIER 1 PARTIAL RECONSTRUCTION, SEE SHEETS 39 AND 40.
6. FOR SEQUENCE OF WORK, SEE SHEETS 11 AND 12.

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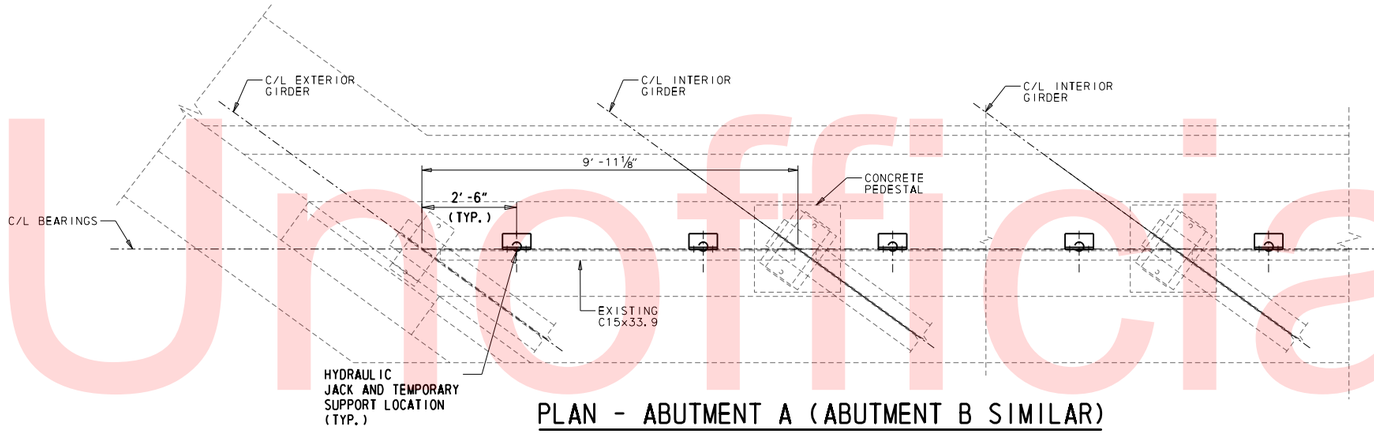
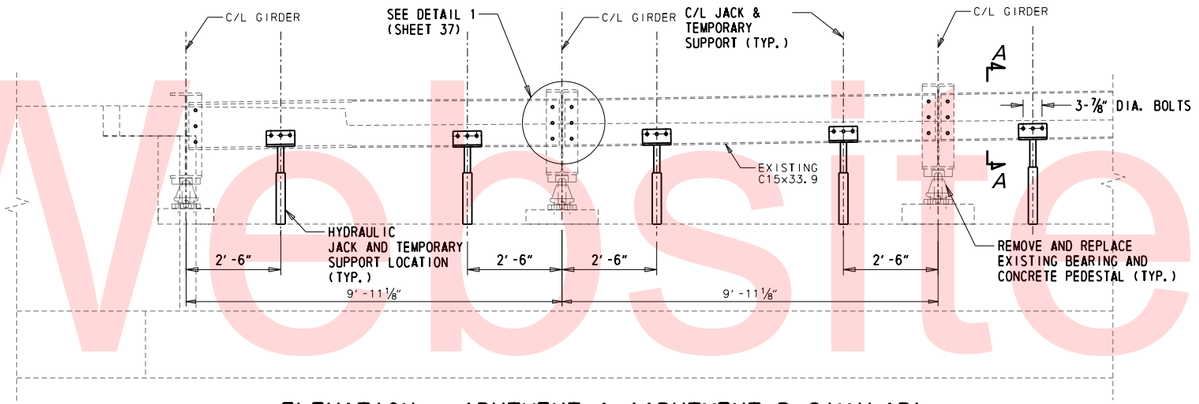
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	SUPERSTRUCTURE JACKING AT PIERS	SHEET NO. 37
				COUNTY NEW CASTLE	DESIGNED BY: RPG		TOTAL SHTS. 71
					CHECKED BY: JAM		



PLAN - ABUTMENT A (ABUTMENT B SIMILAR)

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



ELEVATION - ABUTMENT A (ABUTMENT B SIMILAR)

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

CROSS REFERENCE NOTES:

1. FOR JACKING NOTES, LOADS, JACKING SEQUENCE, AND SECTION A-A SEE SHEET 37.
2. FOR BEARING DETAILS, SEE SHEETS 33-36.
3. FOR PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 36.
4. FOR FRAMING PLAN, SEE SHEET 26.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	SUPERSTRUCTURE JACKING AT ABUTMENTS	SHEET NO. 38
				COUNTY NEW CASTLE	DESIGNED BY: RPG		TOTAL SHTS. 71
					CHECKED BY: JAM		

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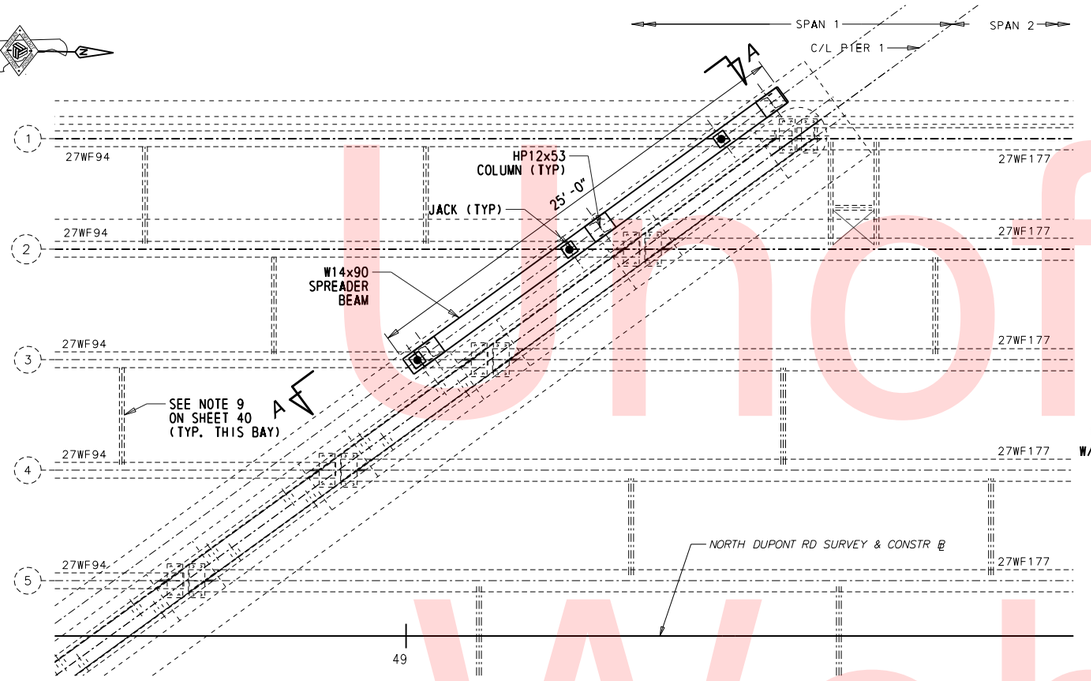
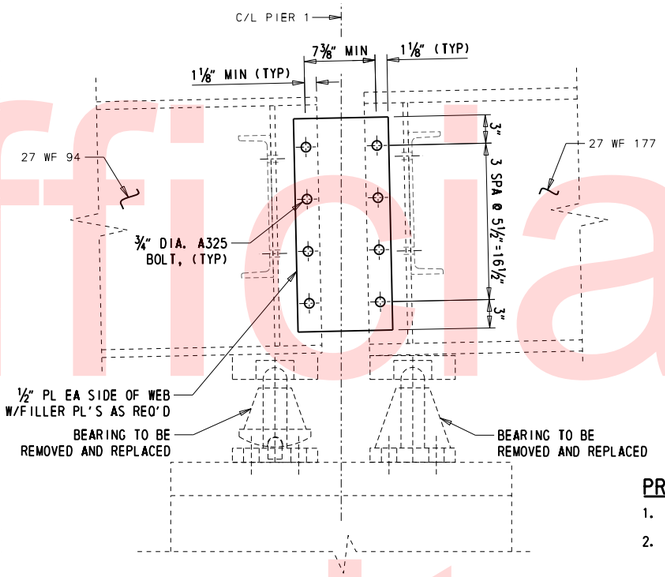


PARTIAL FRAMING PLAN

SCALE: ¼" = 1'-0"



WEB SPLICE DETAIL

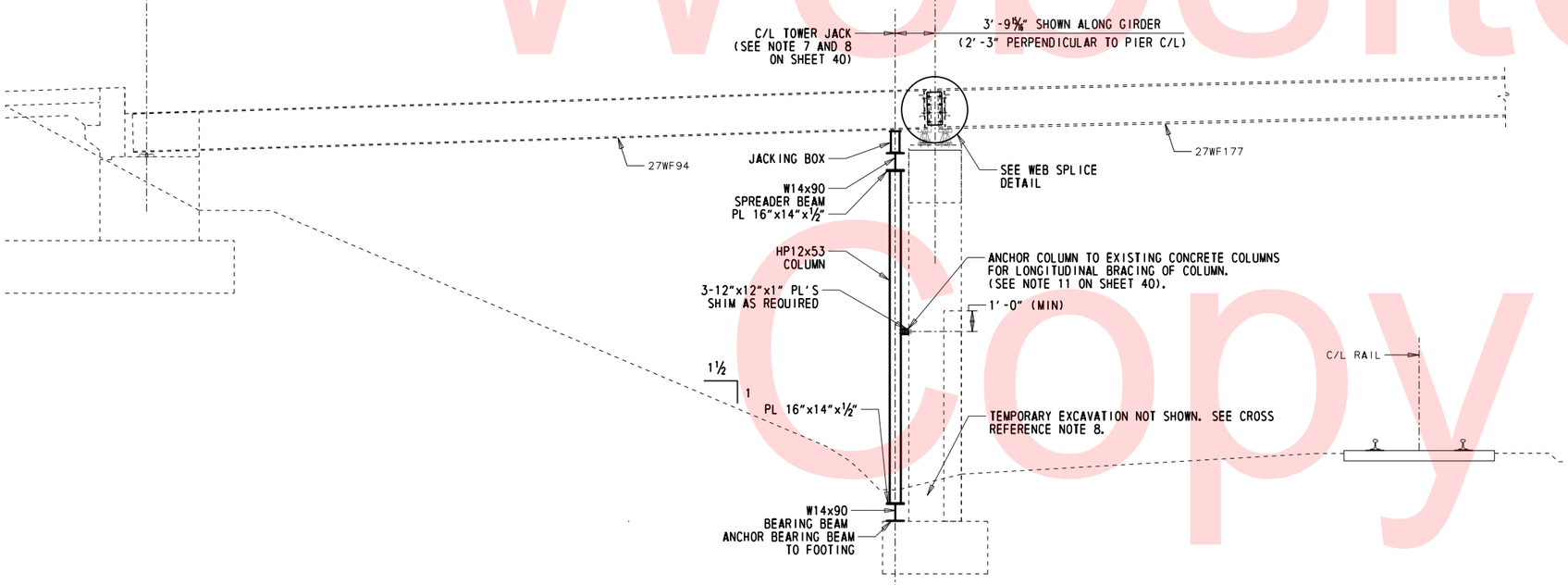
(SEE NOTE 4 AND 5 ON SHEET 40)
SCALE : 1½" = 1'-0"

LEGEND

- ⊕ - STANDARD OVERSIZED HOLE
- ● - JACK / TEMPORARY SUPPORT LOCATION

PROPOSED SEQUENCE OF WORK:

1. REMOVE STAGE 2 DECK.
2. CONSTRUCT SHORING TOWER IN DESIRED POSITION UNDER SPAN 1.
   (A) LOADS PROVIDED ARE FOR JACKING LOCATION IN SPAN 1 WITHIN 6 FEET OF THE C/L OF PIER 1.
   (B) JACKING IN SPAN 2 IS PROHIBITED DUE TO THE PRESENCE OF THE EAST PENN RAILROAD.
3. INSTALL WEB SPLICE PLATES CONNECTING SPAN 1 AND SPAN 2 GIRDERS FOR GIRDERS 1, 2, AND 3 AS SHOWN IN THE PLANS.
4. PIER 1 MAX JACKING LOADS TABLE SHOWS THE MAXIMUM ANTICIPATED JACKING FORCES FOR JACKING LOCATION IN SPAN 1 WITHIN 6 FEET OF C/L OF PIER 1 AND THE ANTICIPATED DEFLECTIONS AT THE C/L OF PIER 1. AT MINIMUM, PROVIDE CAPACITY OF JACK EQUAL TO 1.65 TIMES (1.50 FACTOR +0.10 FOR "STICKY FORCE") THAT SHOWN IN PIER 1 MAX JACKING LOADS TABLE ON SHEET 40 FOR THE APPLICABLE JACK LOCATION.
5. JACK GIRDERS TO RELEASE THEM FROM THEIR BEARINGS AT PIER 1.
6. REMOVE EXISTING BEARINGS AND PERFORM PIER 1 PARTIAL RECONSTRUCTION.
7. ALLOW PIER TO CURE. THEN, LOCATE JACKS UNDER JACKING DIAPHRAGMS FOR GIRDERS 1-3 AT PIER 1, AS SHOWN ON SHEET 37.
8. TRANSFER GIRDERS 1-3 TO TEMPORARY SUPPORT ON PIER 1, AS SHOWN ON SHEET 37.
9. CONSTRUCT CONCRETE PEDESTALS, INSTALL BOTTOM CONTINUITY PLATES, WEDGE PLATES, BOLSTERS, AND BEARINGS. LOWER GIRDERS 1, 2, AND 3 ONTO THE NEW BEARING ASSEMBLIES AND REMOVE JACKS AND WEB SPLICE PLATES.
10. CARRY OUT THE REMAINING SUPERSTRUCTURE REHABILITATION WORK.



PARTIAL GIRDER ELEVATION

SCALE: ¼" = 1'-0"

CROSS REFERENCE NOTES:

1. FOR FRAMING PLAN, SEE SHEET 26.
2. FOR PIER 1 DEMOLITION DETAILS, SEE SHEET 17.
3. FOR PIER 1 PARTIAL RECONSTRUCTION DETAILS, SEE SHEETS 21 AND 22.
4. FOR PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 36.
5. FOR PROPOSED BEARING DETAILS, SEE SHEETS 33-36.
6. FOR ADDITIONAL JACKING NOTES, SEE SHEETS 37 AND 40.
7. FOR SECTION A-A, SEE SHEET 40.
8. FOR LIMITS OF TEMPORARY EXCAVATION SEE SHEETS 21 AND 22.

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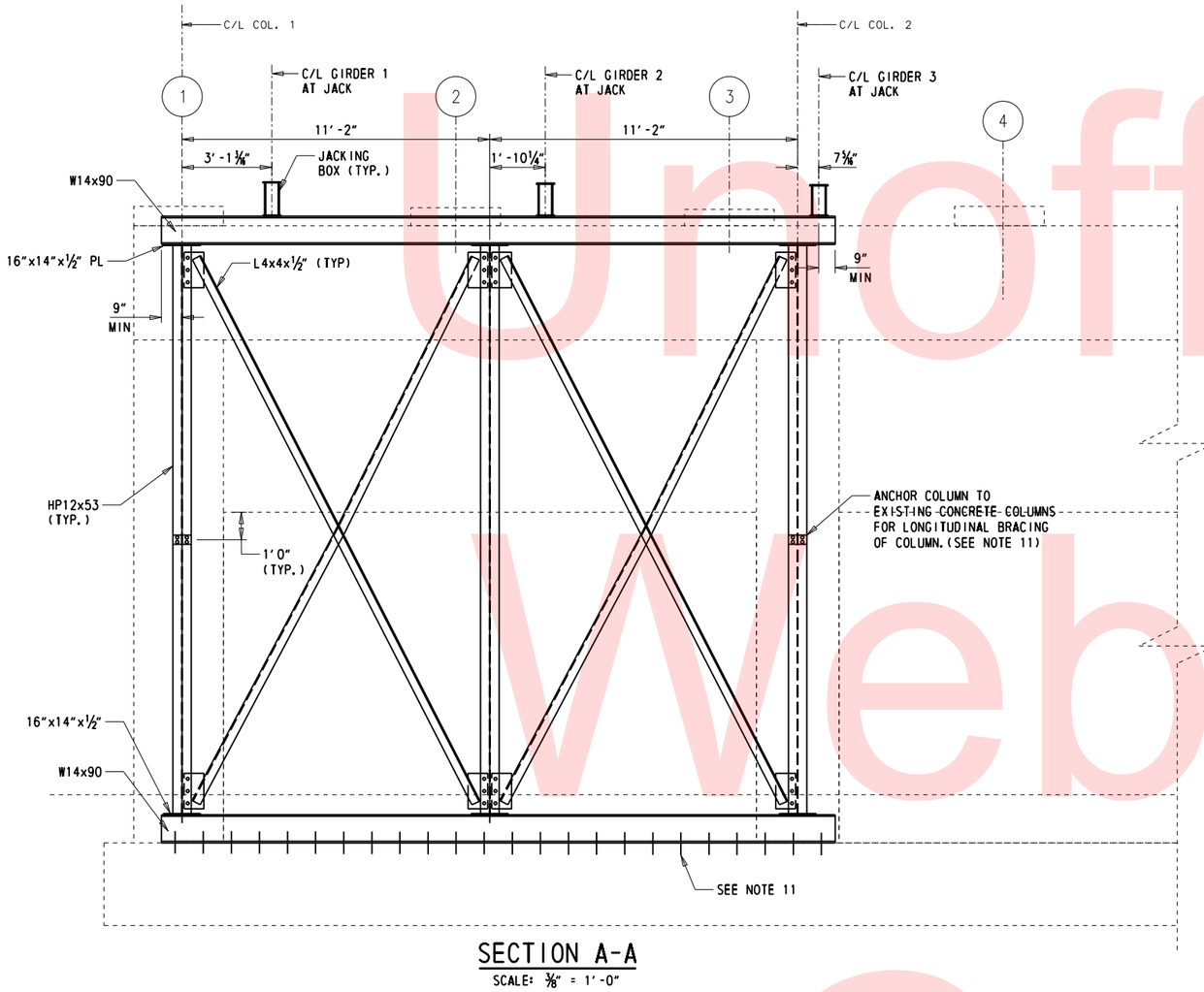
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	JACKING FOR PIER 1 RECONSTRUCTION	SHEET NO. 39
				COUNTY NEW CASTLE	DESIGNED BY: MDW/RPG		TOTAL SHTS. 71
					CHECKED BY: JAM		



SECTION A-A

SCALE: ⅜" = 1'-0"

PIER 1 MAX JACKING LOADS *

JACKING LOCATION FROM C/L OF PIER 1 ALONG GIRDER	LOAD	FACTORED LOAD ** (KIPS, EA JACK LOCATION)	UNFACTORED LOAD (KIPS, EA JACK LOCATION)	DEFLECTION AT PIER 1 (IN)
LESS THAN OR EQUAL TO 6 FT	STEEL DL ONLY + 15%	21.7	16.7	-0.071

* FOR DESIGN OF TEMPORARY COMPONENTS, ADD AN ADDITIONAL 10% FACTOR TO FACTORED OR UNFACTORED LOADS TO ACCOUNT FOR "STICKY FORCE". A FACTOR OF 1.65 (1.5 FACTOR OF SAFETY + 0.10 "STICKY FORCE") SHALL BE USED TO DETERMINE MINIMUM JACK CAPACITY.

** INCLUDES 30% ADDITIONAL FACTOR PER AASHTO LRFD SECTION 3.4.3.1

NOTES:

1. THIS WORK IS ONE SUGGESTED MEANS FOR THE JACKING AND TEMPORARY SUPPORT OF GIRDER (G1-G3) SUPPORTS AT PIER 1 FOR PARTIAL PIER RECONSTRUCTION AND G1-G3 BEARING REPLACEMENT.
2. STORAGE OR STOCKPILING MATERIALS OR EQUIPMENT ON THE BRIDGE DECK IS PROHIBITED WHILE THE BRIDGE IS BEING JACKED OR IN THE TEMPORARY SUPPORT CONDITION.
3. CONCEPT OF TEMPORARY WORK SHOWN. IF CONTRACTOR CHOOSES THIS CONCEPT, THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ALL PIER 1 JACKING TEMPORARY WORKS INCLUDING BUT NOT LIMITED TO THE DESIGN OF THE TEMPORARY SUPPORT AND BRACING SYSTEM, DETERMINING JACKING SEQUENCES, ENSURING AGAINST UPLIFT AT BEARINGS, PROVIDING ADEQUATE JACKING CAPACITY, AND CONFIRMING DEFLECTIONS AT PIER 1. THE CONTRACTOR MAY DESIGN AND CONSTRUCT AN ALTERNATE JACKING SCHEME, WITH APPROVAL OF THE ENGINEER.
4. WHERE ACCESS IS LIMITED, THE CONTRACTOR MAY SUBMIT FOR APPROVAL MODIFICATIONS TO THE BEARING STIFFENERS TO ALLOW ADEQUATE ACCESS TO THREAD AND TIGHTEN THE BOLTS AND NUTS FOR THE WEB SPLICE PLATES.
5. CONTRACTOR MUST SURVEY EXISTING BOTTOM OF STEEL ELEVATIONS FOR EACH BEAM AT C/L OF BEARING. CONTRACTOR MUST ENSURE THAT, UPON COMPLETION OF JACKING AND SUBSTRUCTURE REPAIRS, BEAMS ARE RETURNED TO THE SURVEYED EXISTING BOTTOM OF STEEL ELEVATIONS AT C/L OF BEARINGS.
6. SEE SHEET 15 FOR SLOPE WALL RECONSTRUCTION DETAILS.
7. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING AGAINST DIFFERENTIAL SETTLEMENT OF THE SUPPORT FOR ANY PROPOSED JACKING SCHEME DURING JACKING OF THE BRIDGE.
8. THE CONTRACTOR SHALL ENSURE AGAINST DAMAGE TO PIER 1 AND PIER 1 FOOTING WHEN CONSTRUCTING JACKING TOWERS AND DURING JACKING AND TEMPORARY SUPPORT OF GIRDERS 1-3 OVER PIER 1. ANY DAMAGE TO THE EXISTING STRUCTURE SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE DEPARTMENT.
9. ALL EXISTING DIAPHRAGMS BETWEEN GIRDER LINES 3 AND 4 ARE TO BE REMOVED PRIOR TO JACKING GIRDERS (STAGE 2 JACKING). REFER TO SEQUENCE OF WORK ON SHEETS 11 AND 12.
10. THE DESIGN DETAILING AND CONSTRUCTION OF ALL TEMPORARY SUPPORT COMPNENTS SHALL BE PAID UNDER ITEM 604000.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF ANY TEMPORARY ANCHORAGE SYSTEM. THE DESIGN AND DETAILING, INSTALLATION AND REMOVAL, AND REPAIR OF CONCRETE PIER REQUIRED DUE TO ANY TEMPORARY ANCHORAGE SYSTEM IS INCIDENTAL TO ITEM 604000.

CROSS REFERENCE NOTES:

1. FOR FRAMING PLAN, SEE SHEET 26.
2. FOR PIER 1 DEMOLITION DETAILS, SEE SHEET 17.
3. FOR PIER 1 PARTIAL RECONSTRUCTION DETAILS, SEE SHEETS 21 AND 22.
4. FOR PEDESTAL RECONSTRUCTION DETAILS, SEE SHEET 36.
5. FOR PROPOSED BEARING DETAILS, SEE SHEETS 33-36.
6. FOR ADDITIONAL JACKING NOTES, SEE SHEET 37.
7. FOR ADDITIONAL DETAILS & NOTES, SEE SHEET 39.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

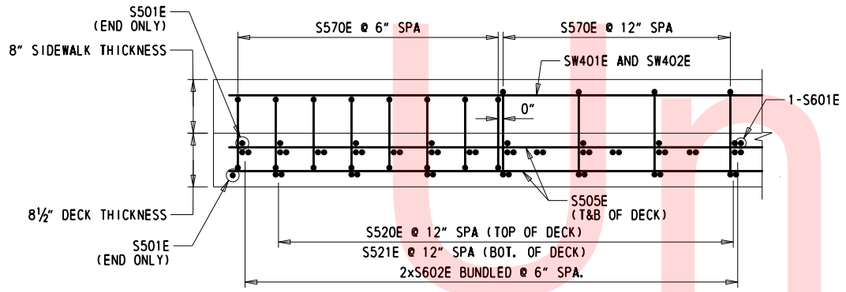
SCALE AS NOTED

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	BRIDGE NO.	1-634
T201507403	DESIGNED BY:	MDW/RPG
COUNTY	CHECKED BY:	JAM
NEW CASTLE		

JACKING FOR PIER 1 RECONSTRUCTION-2

SHEET NO.
40
TOTAL SHTS.
71



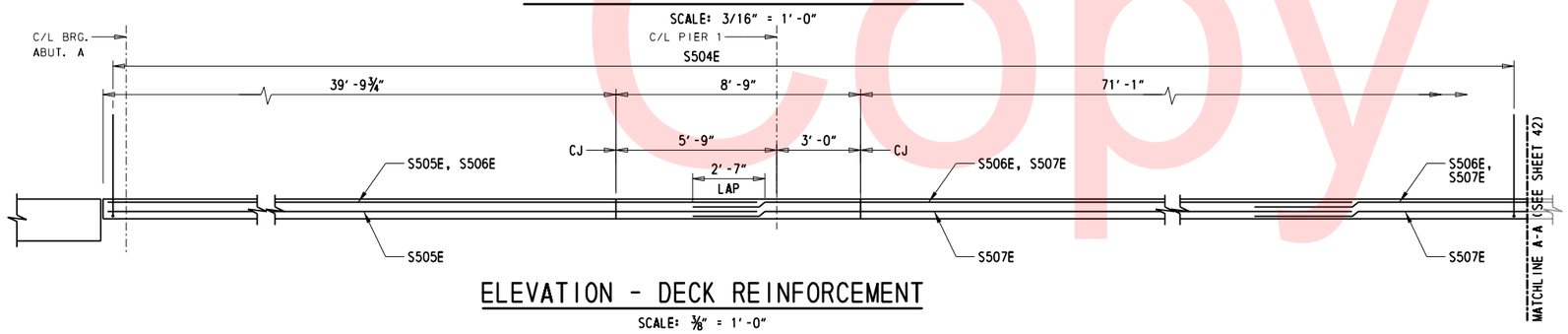
SECTION A

SCALE: 1" = 1'-0"

PLAN - DECK SLAB REINFORCEMENT

SCALE: 3/16" = 1'-0"

• FOR S505E, S506E, S507E & S508E THE SPACING OF THE BARS SHALL BE MEASURED PERPENDICULAR TO THE BAR ALIGNMENT.



ELEVATION - DECK REINFORCEMENT

SCALE: ⅜" = 1'-0"

NOTES:

1. CONCRETE IN DECK SLAB TO BE PAID FOR UNDER ITEM 610017 AND REINFORCEMENT SHALL BE PAID FOR UNDER ITEM 611001.
2. MINIMUM LAP SPLICE LENGTHS, NORMAL WEIGHT CONCRETE.
   2'-1" (#4 BARS)
   2'-7" (#5 BARS)
   3'-1" (#6 BARS)

CROSS REFERENCE NOTES:

1. FOR DECK PLACEMENT SEQUENCE, SEE SHEET 43.
2. FOR LIMITS OF DECK REMOVAL AND DETAILS, SEE SHEET 13.
3. FOR DECK SECTIONS, SEE SHEET 46.
4. FOR APPROACH SLAB SECTION AND DETAILS, SEE SHEETS 49-51.
5. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEETS 55-57.
6. FOR FINISHED BRIDGE DECK ELEVATIONS, SEE SHEET 47.
7. FOR SIDEWALK AND BARRIER DETAILS, SEE SHEETS 44, 45 AND 46.

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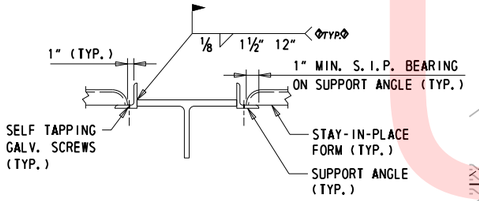
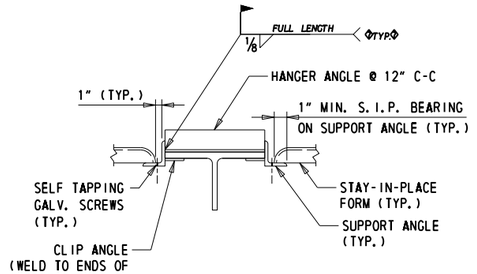
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	BRIDGE DECK REINFORCEMENT PLAN - 1	SHEET NO. 41
				COUNTY NEW CASTLE	DESIGNED BY: RPG		TOTAL SHTS. 71
					CHECKED BY: JAM		



COMPRESSION FLANGE STAY-IN-PLACE FORM CONNECTION DETAIL

NTS

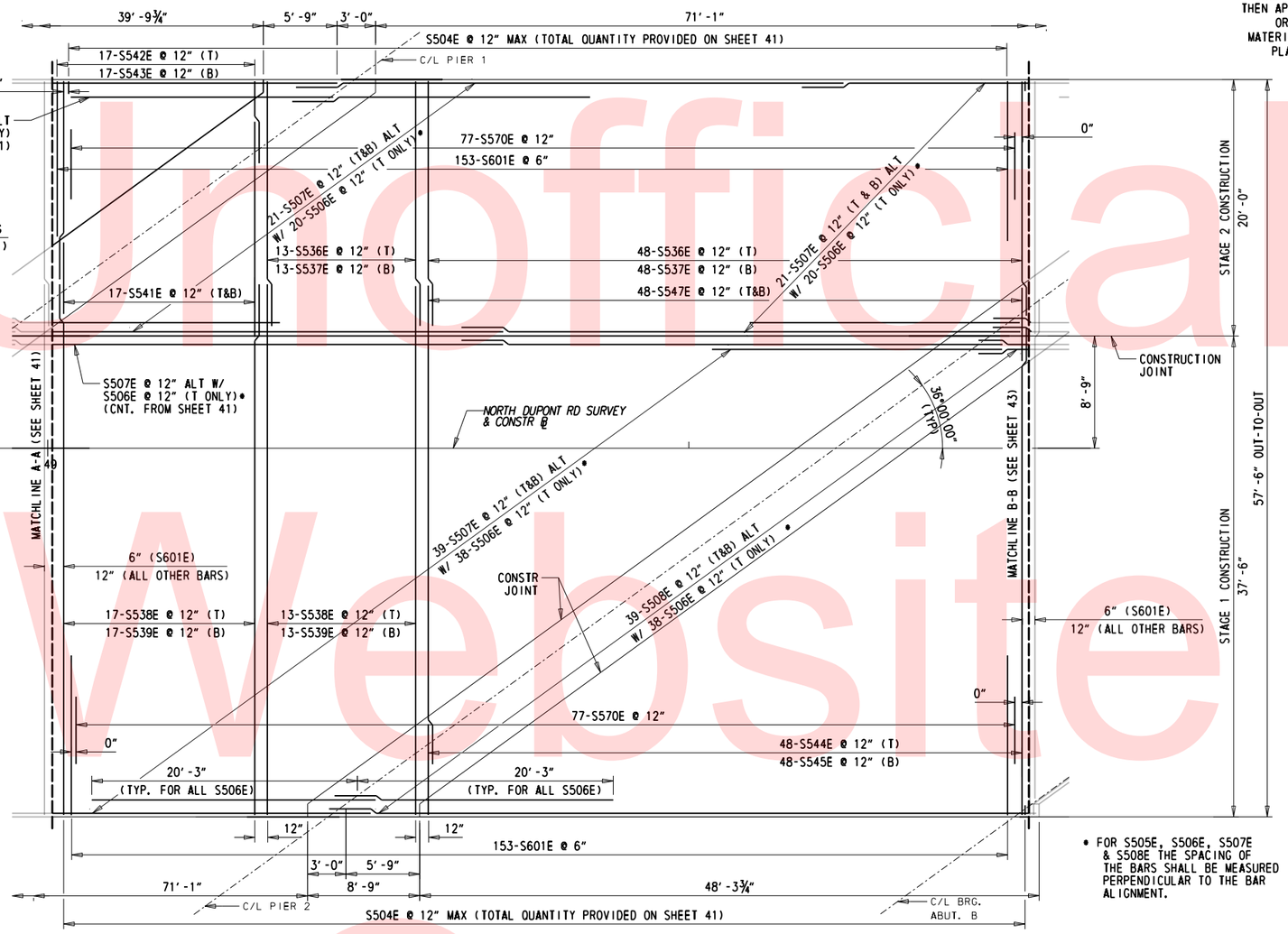


TENSION FLANGE STAY-IN-PLACE FORM CONNECTION DETAIL

NTS

STAY-IN-PLACE FORM NOTES

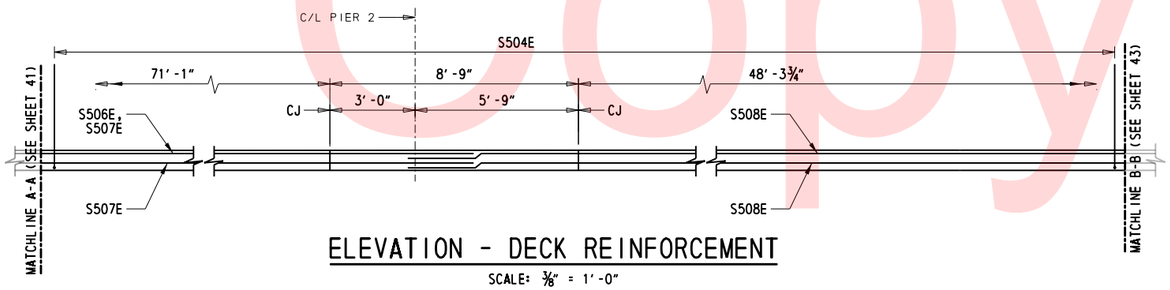
1. THESE FORMS SHALL BE VERTICALLY ADJUSTED TO ATTAIN LINE AND GRADE REQUIRED ON THE PLANS.
2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL. METAL FORMS MUST BE GALVANIZED AND MORTAR TIGHT. STEEL METAL SCREWS MUST BE NON-CORROSIVE. SELF TAPPING SCREWS SHALL BE INSTALLED AT THE SIDE LAP OF THE SHEETS AT MID-SPAN SUPPORTS. ALL ANGLES, WELDS, AND INSERTS MUST BE DESIGNED BY THE CONTRACTOR.
3. ALL MATERIALS AND LABOR NEEDED FOR FORMS SHALL BE INCIDENTAL TO ITEM 610017 - P.C.C. MASONRY, SUPERSTRUCTURE, CLASS D.
4. WELDING TO STEEL BEAM FLANGES IN TENSION ZONE IS STRICTLY PROHIBITED.



• FOR S505E, S506E, S507E & S508E THE SPACING OF THE BARS SHALL BE MEASURED PERPENDICULAR TO THE BAR ALIGNMENT.

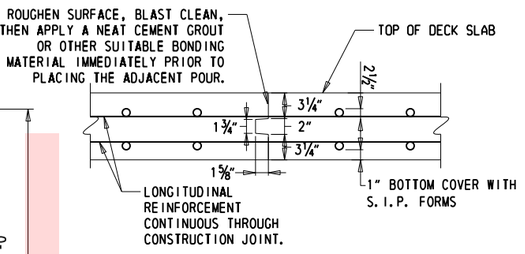
PLAN - DECK SLAB REINFORCEMENT

SCALE: 3/16" = 1'-0"



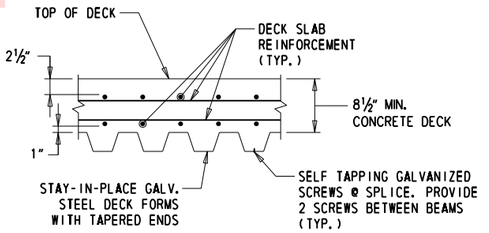
ELEVATION - DECK REINFORCEMENT

SCALE: 3/8" = 1'-0"



DECK SLAB CONSTRUCTION JOINT

NTS



STAY-IN-PLACE STEEL FORM DETAIL

NTS

CROSS REFERENCE NOTES:

1. FOR DECK PLACEMENT SEQUENCE, SEE SHEET 43.
2. FOR LIMITS OF DECK REMOVAL AND DETAILS, SEE SHEET 13.
3. FOR DECK SECTION, SEE SHEET 46.
4. FOR APPROACH SLAB SECTION AND DETAILS, SEE SHEETS 49-51.
5. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEETS 55-57.
6. FOR FINISHED BRIDGE DECK ELEVATIONS, SEE SHEET 47.
7. FOR SIDEWALK AND BARRIER DETAILS, SEE SHEETS 44, 45 AND 46.

NOTES:

1. CONCRETE IN DECK SLAB TO BE PAID FOR UNDER ITEM 610017 AND REINFORCEMENT SHALL BE PAID FOR UNDER ITEM 611001.
2. MINIMUM LAP SPLICE LENGTHS, NORMAL WEIGHT CONCRETE.
   2'-1" (#4 BARS)
   2'-7" (#5 BARS)
   3'-1" (#6 BARS)

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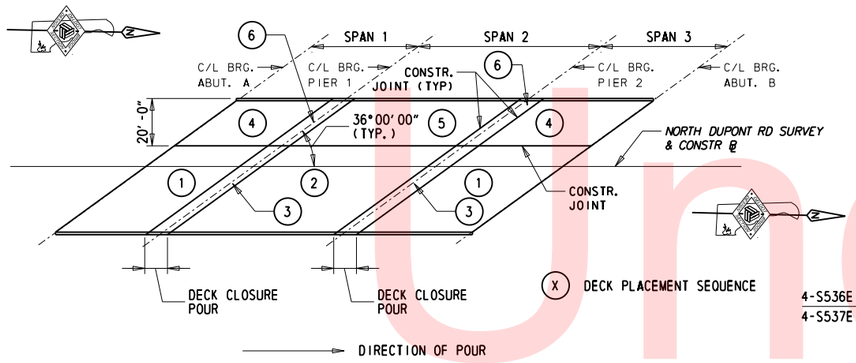
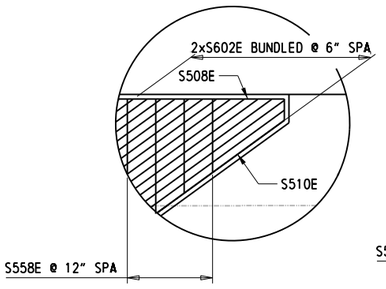
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	BRIDGE DECK REINFORCEMENT PLAN - 2	SHEET NO. 42
				COUNTY NEW CASTLE	DESIGNED BY: RPG		TOTAL SHTS. 71
					CHECKED BY: JAM		



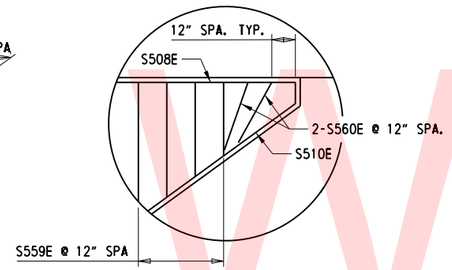
DECK PLACEMENT SEQUENCE PLAN

NOT TO SCALE



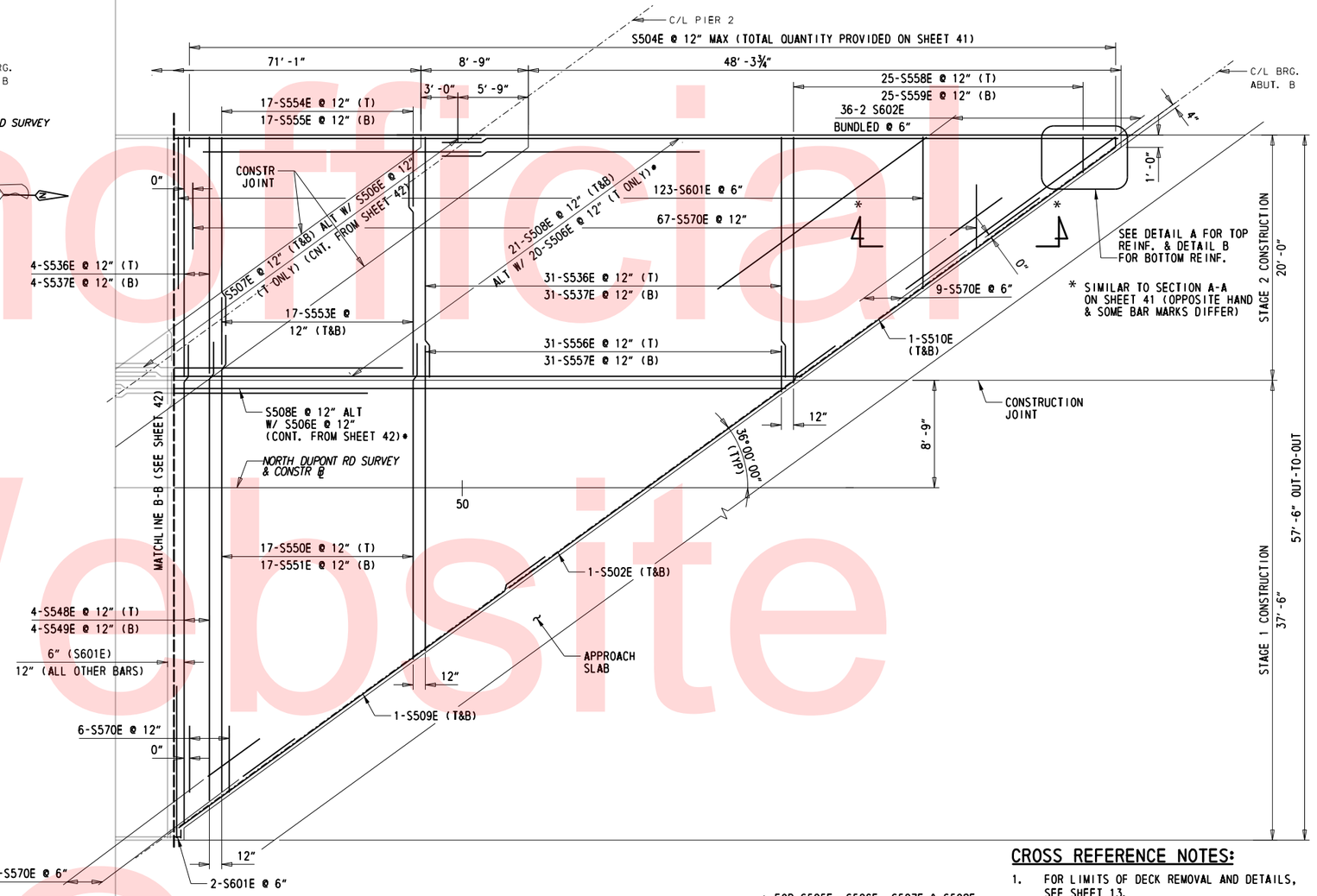
DETAIL A

NOT TO SCALE



DETAIL B

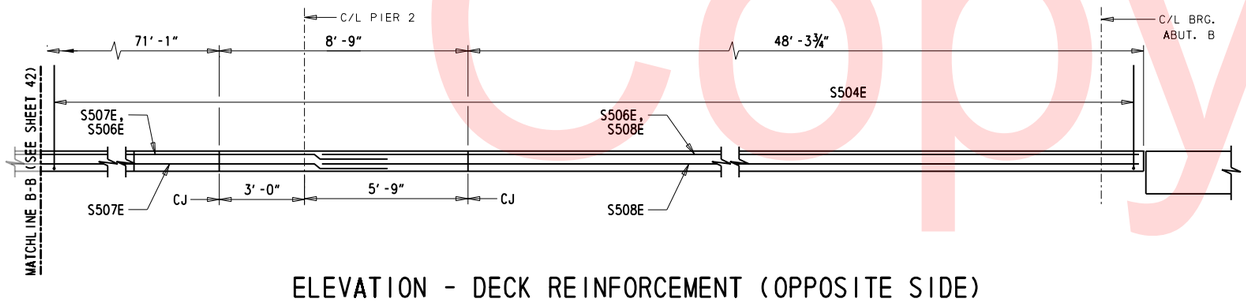
NOT TO SCALE



PLAN - DECK SLAB REINFORCEMENT

SCALE: 3/16" = 10'

• FOR S505E, S506E, S507E & S508E THE SPACING OF THE BARS SHALL BE MEASURED PERPENDICULAR TO THE BAR ALIGNMENT.



ELEVATION - DECK REINFORCEMENT (OPPOSITE SIDE)

SCALE: ⅜" = 10'

CROSS REFERENCE NOTES:

1. FOR LIMITS OF DECK REMOVAL AND DETAILS, SEE SHEET 13.
2. FOR DECK SECTIONS, SEE SHEET 46.
3. FOR APPROACH SLAB SECTION AND DETAILS, SEE SHEETS 49-51.
4. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEETS 55-57.
5. FOR FINISHED BRIDGE DECK ELEVATIONS, SEE SHEET 47.
6. FOR SIDEWALK AND BARRIER DETAILS, SEE SHEETS 44, 45 AND 46.

NOTES:

1. CONCRETE IN DECK SLAB TO BE PAID FOR UNDER ITEM 610017 AND REINFORCEMENT IN DECK SLAB SHALL BE PAID FOR UNDER ITEM 611001.
2. MINIMUM LAP SPLICE LENGTHS, NORMAL WEIGHT CONCRETE.
   2'-1" (#4 BARS)
   2'-7" (#5 BARS)
   3'-1" (#6 BARS)

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	BRIDGE DECK REINFORCEMENT PLAN - 3	SHEET NO. 43
				COUNTY NEW CASTLE	DESIGNED BY: RPG		TOTAL SHTS. 71
					CHECKED BY: JAM		

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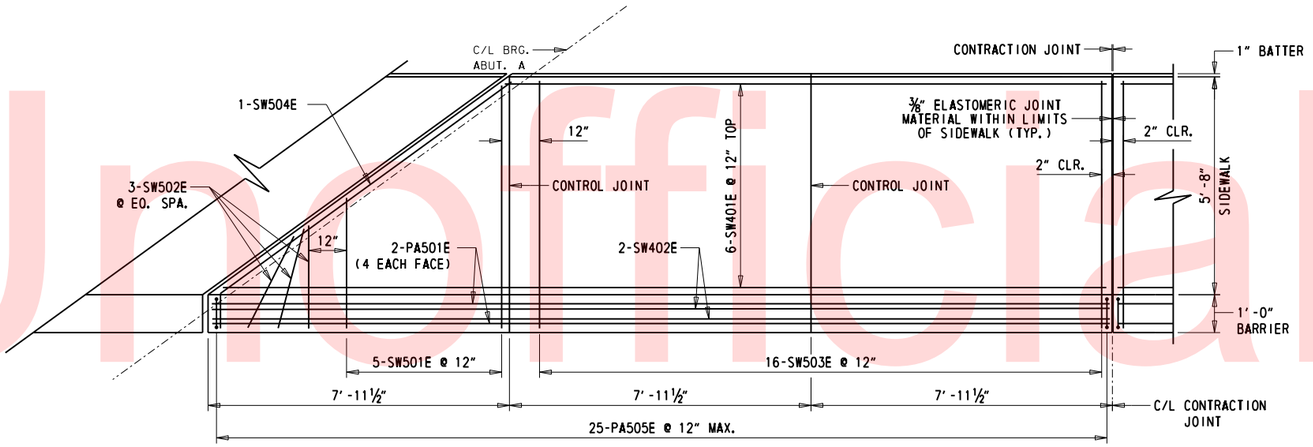
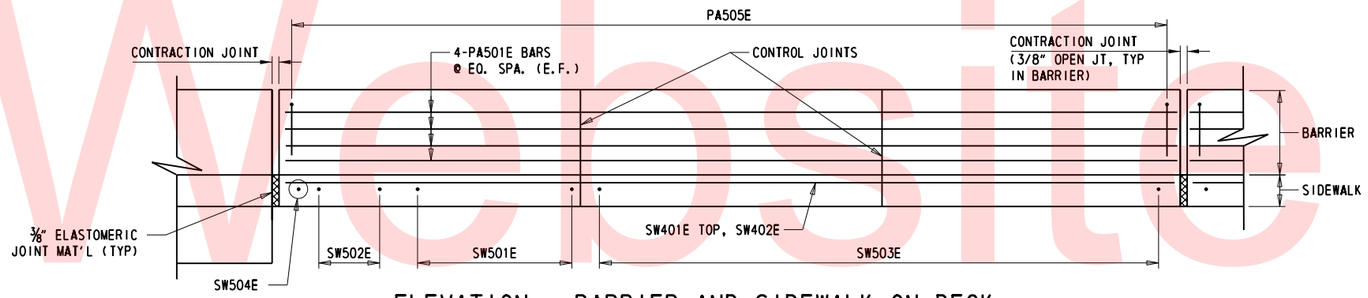


PLAN - BARRIER AND SIDEWALK ON DECK

SEGMENT A (RIGHT SIDEWALK AND BARRIER SHOWN, LEFT SIDEWALK AND BARRIER SIMILAR)
SCALE: ½" = 1'-0"



ELEVATION - BARRIER AND SIDEWALK ON DECK

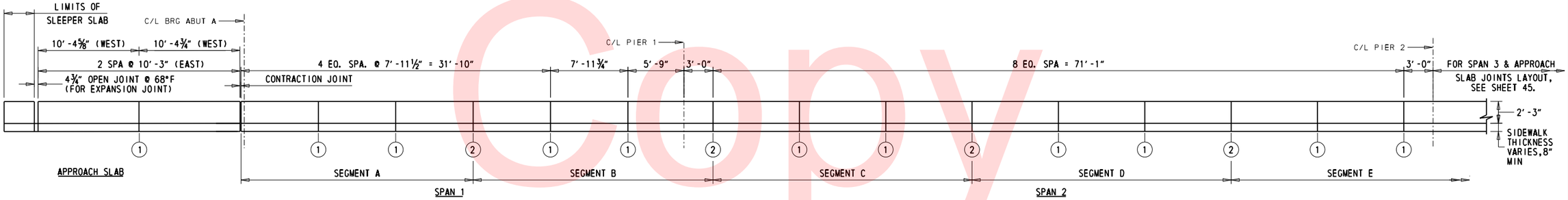
SEGMENT A (RIGHT SIDEWALK AND BARRIER SHOWN, LEFT SIDEWALK AND BARRIER SIMILAR)
SCALE: ½" = 1'-0"

CROSS REFERENCE NOTES:

1. WORK THIS SHEET WITH SHEETS 45 AND 52-54.
2. FOR DECK DETAILS AND REINFORCEMENT, SEE SHEETS 41-43.
3. FOR APPROACH SLAB BARRIER AND SIDEWALK DETAILS AND REINFORCEMENT, SEE SHEETS 51-54.

NOTES:

1. MINIMUM LAP SPLICE LENGTHS, NORMAL WEIGHT CONCRETE.
   2'-1" (#4 BARS)
   2'-7" (#5 BARS)
   3'-1" (#6 BARS)
2. BARRIER & SIDEWALK REINFORCEMENT ANCHORED INTO DECK AND APPROACH SLAB IS NOT SHOWN ON THIS SHEET. SEE DECK AND APPROACH SLAB PLANS.
3. BLISTERS IN REAR FACE OF BARRIER IN SPAN 2 TO SUPPORT SAFETY FENCE POST NOT SHOWN ON THIS SHEET. REFER TO SHEETS 46 AND 58 AND STANDARD CONSTRUCTION DETAILS M-10 FOR DETAILS.



BARRIER JOINT LAYOUT

(EAST SIDEWALK AND BARRIER SHOWN, WEST SIDEWALK AND BARRIER SIMILAR EXCEPT WHERE NOTED)
SCALE: ⅛" = 1'-0"

(1) CONTROL JOINT, FOR DETAILS, SEE SHEET 53.

(2) CONTRACTION JOINT, FOR DETAILS, SEE SHEET 53.
CONTRACTION JOINT IN BARRIERS = ⅜" OPEN JOINT
CONTRACTION JOINT IN SIDEWALK = ⅜" ELASTOMERIC JOINT MATERIAL

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	BRIDGE BARRIER & SIDEWALK REINFORCEMENT ON DECK - PLAN AND ELEVATION - 1
				COUNTY NEW CASTLE	DESIGNED BY: RPG	SHEET NO. 44
					CHECKED BY: JAM	TOTAL SHTS. 71

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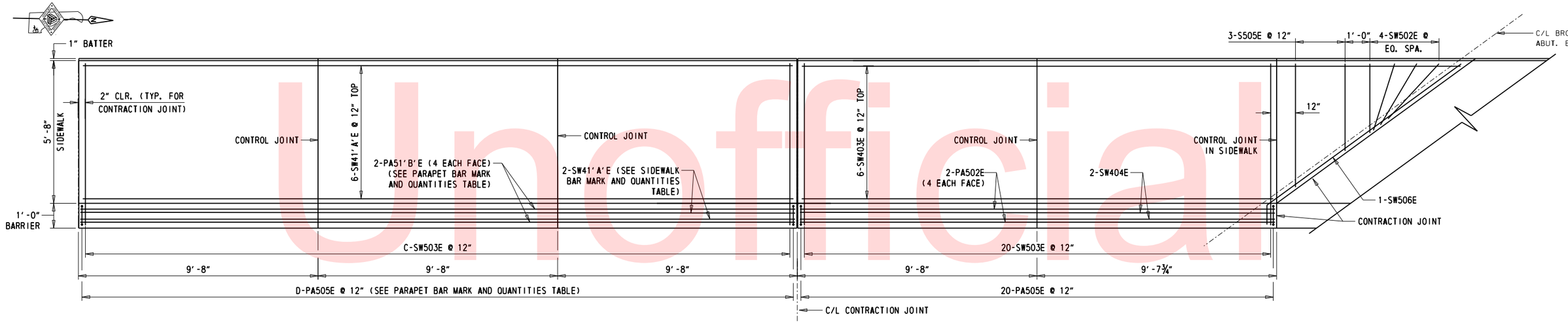
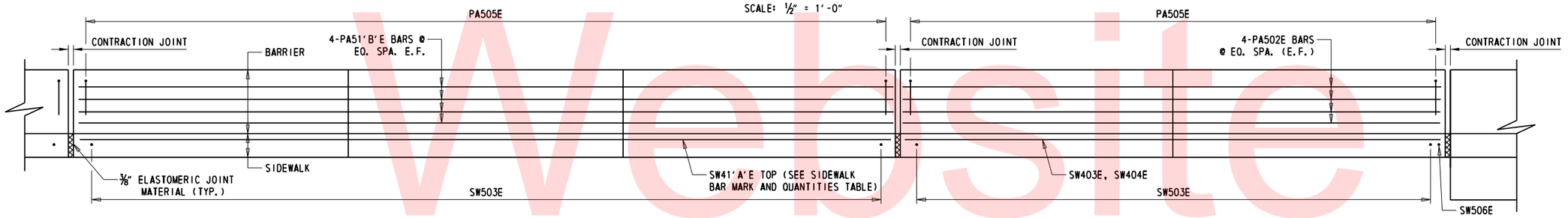


PLAN - BARRIER AND SIDEWALK - DECK

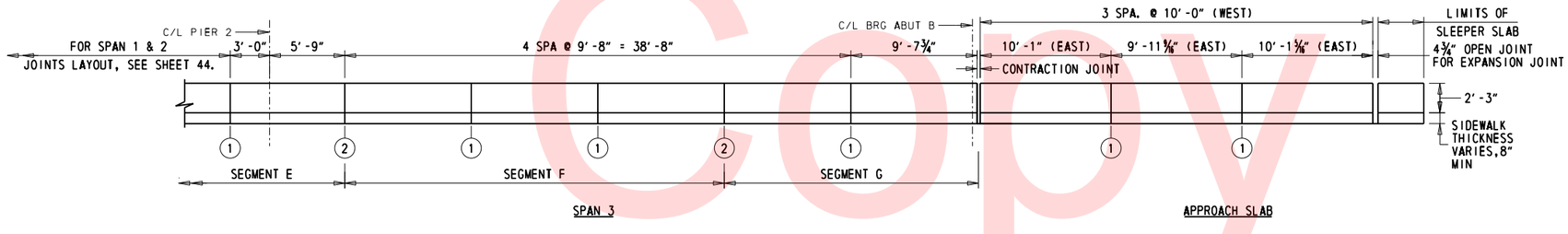
SEGMENT F (SEGMENT B, C, D & E SIMILAR) & SEGMENT G
(RIGHT SIDEWALK AND BARRIER SHOWN, LEFT SIDEWALK AND BARRIER SIMILAR)
SCALE: ½" = 1'-0"



ELEVATION - BARRIER AND SIDEWALK - DECK

SEGMENT F (SEGMENT B, C, D & E SIMILAR) & SEGMENT G
(RIGHT SIDEWALK AND BARRIER SHOWN, LEFT SIDEWALK AND BARRIER SIMILAR)
SCALE: ½" = 1'-0"

PARAPET AND SIDEWALK BAR MARK AND QUANTITIES				
LOCATION	BARMARK 'A'	BARMARK 'B'	QUANTITY 'C'	QUANTITY 'D'
SEGMENT B	1	1	26	26
SEGMENT C	2	2	28	28
SEGMENT D	2	2	28	28
SEGMENT E	3	3	28	28
SEGMENT F	4	4	30	30



BARRIER JOINT LAYOUT

SEGMENT F (SEGMENT B, C, D & E SIMILAR) & SEGMENT G
(RIGHT SIDEWALK AND BARRIER SHOWN, LEFT SIDEWALK AND BARRIER SIMILAR)
SCALE: ⅛" = 1'-0"

CROSS REFERENCE NOTES:

1. WORK THIS SHEET WITH SHEETS 44 AND 51-54.
2. FOR DECK DETAILS AND REINFORCEMENT, SEE SHEETS 41-43.
3. FOR APPROACH SLAB BARRIER AND SIDEWALK DETAILS AND REINFORCEMENT, SEE SHEETS 51-54.

NOTES:

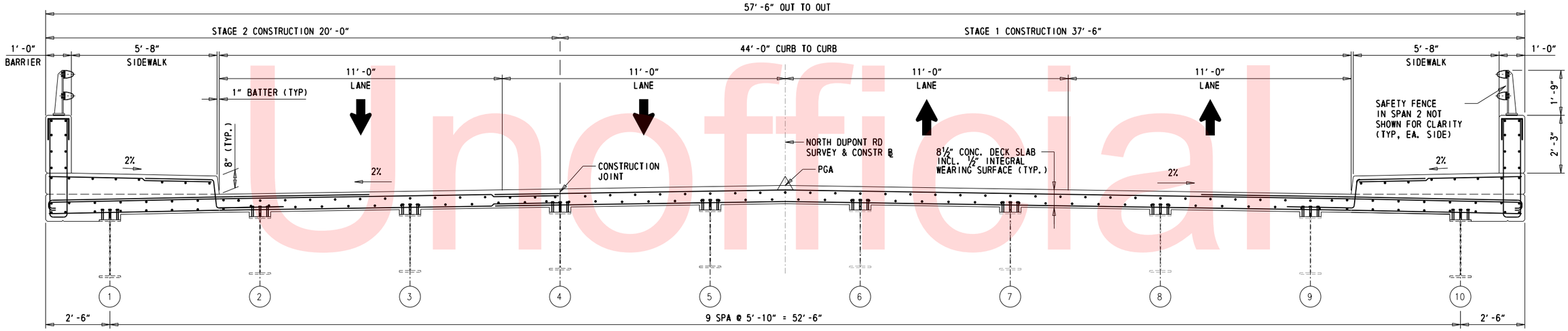
1. MINIMUM LAP SPLICE LENGTHS, NORMAL WEIGHT CONCRETE.
   2'-1" (#4 BARS)
   2'-7" (#5 BARS)
   3'-1" (#6 BARS)
2. BARRIER & SIDEWALK REINFORCEMENT ANCHORED INTO DECK AND APPROACH SLAB IS NOT SHOWN ON THIS SHEET. SEE DECK AND APPROACH SLAB PLANS.
3. BLISTERS IN REAR FACE OF BARRIER IN SPAN 2 TO SUPPORT SAFETY FENCE POST NOT SHOWN ON THIS SHEET. REFER TO SHEETS 46 AND 58 AND STANDARD CONSTRUCTION DETAILS M-10 FOR DETAILS.

(1) CONTROL JOINT, FOR DETAILS, SEE SHEET 53.

(2) CONTRACTION JOINT, FOR DETAILS, SEE SHEET 53.
CONTRACTION JOINT IN BARRIERS = ⅜" OPEN JOINT
CONTRACTION JOINT IN SIDEWALK = ⅜" ELASTOMERIC JOINT MATERIAL

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	BRIDGE BARRIER & SIDEWALK REINFORCEMENT ON DECK - PLAN AND ELEVATION - 2	SHEET NO. 45
				COUNTY NEW CASTLE	DESIGNED BY: RPG		TOTAL SHTS. 71
					CHECKED BY: JAM		

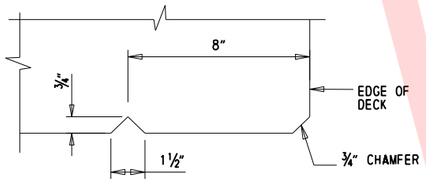
P:\60323054 DELDOT AGR 1672 BDS\T07 - REHAB BR. 1-634\900 CAD\20 SHEETS\STRUCTURES\BR1-634\BR-634-DP06.DGN



TYPICAL DECK SECTION - PROPOSED

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

• LONGITUDINAL BARS WILL BE SPACED @ 6" OVER THE PIERS

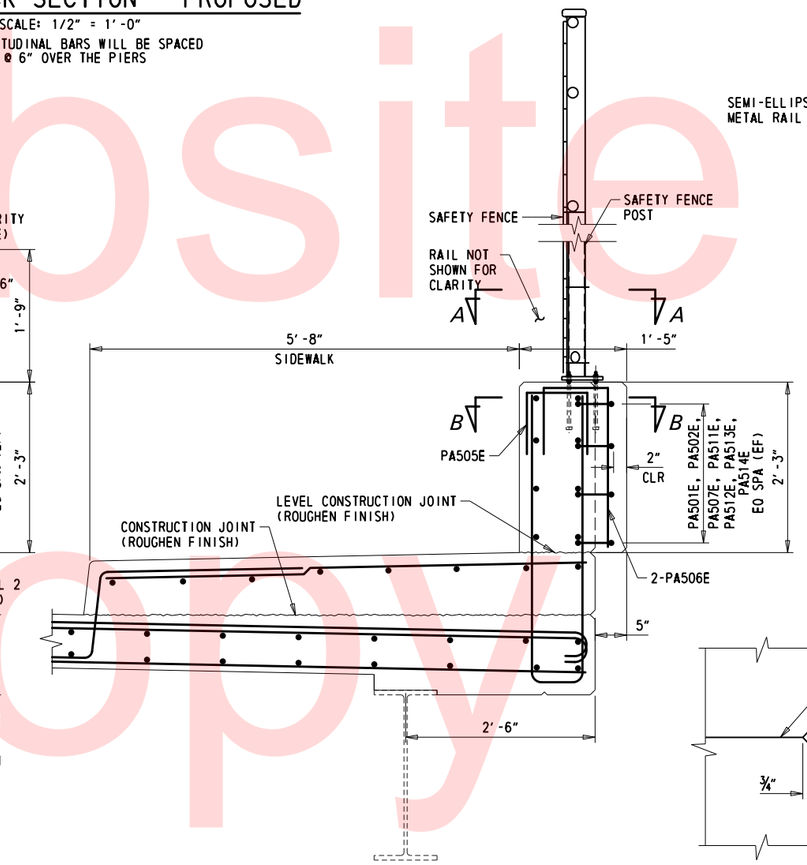


DETAIL 1

NOT TO SCALE

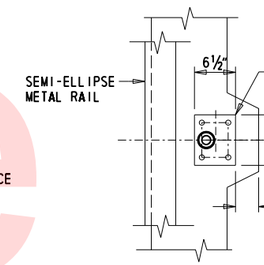
TYPICAL SECTION - PROPOSED

SCALE: 1" = 1'-0"



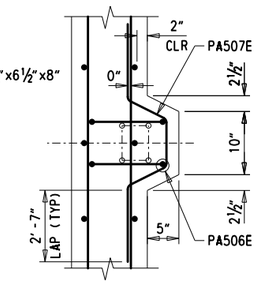
TYPICAL SECTION - PROPOSED AT SAFETY FENCE POST

SCALE: 1" = 1'-0"



SECTION A-A

SCALE: 1" = 1'-0"

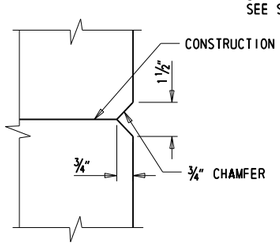


SECTION B-B

SCALE: 1" = 1'-0"

CROSS REFERENCE NOTES:

1. FOR DECK REINFORCEMENT PLANS, SEE SHEET 41-43.
2. FOR BRIDGE BARRIER & SIDEWALK DETAILS, SEE SHEETS 44-46, 51-54.
3. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEETS 55-57.
4. FOR RAIL DETAILS, SEE SHEET 58.
5. FOR SAFETY FENCE NOTES, SEE SHEET 58.
6. FOR DECK SLAB CONSTRUCTION JOINT DETAIL AND STAY-IN-PLACE STEEL FORM DETAIL AND NOTES, SEE SHEET 42.

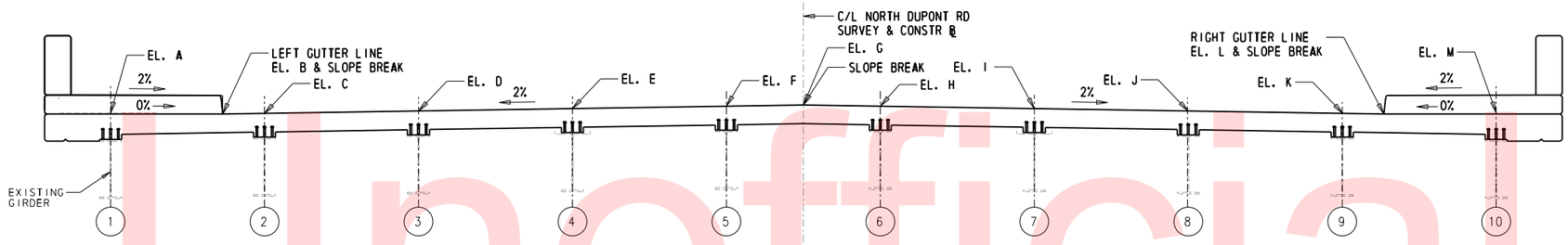


DETAIL 2

NOT TO SCALE

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403 / COUNTY NEW CASTLE / BRIDGE NO. 1-634 / DESIGNED BY: RPG / CHECKED BY: JAM	BRIDGE DECK SECTION & DETAILS	SHEET NO. 46 / TOTAL SHTS. 71

P:\60323054 DELDOT AGR 1672 BDS\T07 - REHAB BR. 1-634\900 CAD\20 SHEETS\STRUCTURES\BR1-634\BR-634-DD01.DGN



TYPICAL SECTION

SCALE: 3/8" = 1'-0"

TOP OF ROADWAY ELEVATIONS (INCLUDES 1/2" FUTURE WEARING SURFACE)

		A		B		C		D		E		F		G		H		I		J		K		L		M	
		STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.	STATION	EL.
C/L BRG. ABUT. A		48+75.51	120.30	48+69.65	120.16	48+67.47	120.14	48+59.44	120.06	48+51.41	119.98	48+43.38	119.90	48+39.37	119.86	48+35.36	119.70	48+27.33	119.38	48+19.30	119.04	48+11.27	118.67	48+09.09	118.57	48+03.23	118.37
SPAN 1	.1L	48+80.01	120.41	48+74.15	120.27	48+71.97	120.25	48+63.94	120.17	48+55.91	120.09	48+47.88	120.01	48+43.87	119.97	48+39.86	119.81	48+31.83	119.50	48+23.80	119.17	48+15.77	118.81	48+13.59	118.71	48+07.73	118.52
	.2L	48+84.51	120.52	48+78.65	120.38	48+76.47	120.36	48+68.44	120.28	48+60.41	120.20	48+52.38	120.12	48+48.37	120.08	48+44.36	119.92	48+36.33	119.61	48+28.30	119.29	48+20.27	118.95	48+18.09	118.85	48+12.23	118.67
	.3L	48+89.01	120.63	48+83.15	120.49	48+80.97	120.47	48+72.94	120.39	48+64.91	120.31	48+56.88	120.23	48+52.87	120.19	48+48.86	120.03	48+40.83	119.72	48+32.80	119.41	48+24.77	119.08	48+22.59	118.99	48+16.73	118.81
	.4L	48+93.51	120.74	48+87.65	120.60	48+85.47	120.58	48+77.44	120.50	48+69.41	120.42	48+61.38	120.34	48+57.37	120.30	48+53.36	120.14	48+45.33	119.83	48+37.30	119.52	48+29.27	119.20	48+27.09	119.11	48+21.23	118.95
	.5L	48+98.01	120.84	48+92.15	120.71	48+89.97	120.69	48+81.94	120.61	48+73.91	120.53	48+65.88	120.45	48+61.87	120.41	48+57.86	120.25	48+49.83	119.94	48+41.80	119.63	48+33.77	119.32	48+31.59	119.23	48+25.73	119.07
	.6L	49+02.51	120.94	48+96.65	120.81	48+94.47	120.79	48+86.44	120.72	48+78.41	120.64	48+70.38	120.56	48+66.37	120.52	48+62.36	120.36	48+54.33	120.05	48+46.30	119.74	48+38.27	119.43	48+36.09	119.34	48+30.23	119.19
	.7L	49+07.01	121.03	49+01.15	120.91	48+98.97	120.89	48+90.94	120.83	48+82.91	120.75	48+74.88	120.67	48+70.87	120.63	48+66.86	120.47	48+58.83	120.16	48+50.80	119.85	48+42.77	119.54	48+40.59	119.45	48+34.73	119.31
	.8L	49+11.51	121.12	49+05.65	121.00	49+03.47	120.99	48+95.44	120.93	48+87.41	120.86	48+79.38	120.78	48+75.37	120.74	48+71.36	120.58	48+63.33	120.27	48+55.30	119.96	48+47.27	119.65	48+45.09	119.56	48+39.23	119.42
	.9L	49+16.01	121.21	49+10.15	121.10	49+07.97	121.08	48+99.94	121.03	48+91.91	120.97	48+83.88	120.89	48+79.87	120.85	48+75.86	120.69	48+67.83	120.38	48+59.80	120.07	48+51.77	119.76	48+49.59	119.67	48+43.73	119.53
C/L BRG. PIER 1		49+20.51	121.29	49+14.65	121.18	49+12.47	121.17	49+04.44	121.13	48+96.41	121.07	48+88.38	121.00	48+84.37	120.96	48+80.36	120.80	48+72.33	120.49	48+64.30	120.18	48+56.27	119.87	48+54.09	119.78	48+48.23	119.64
SPAN 2	.1L	49+28.21	121.43	49+22.36	121.33	49+20.18	121.32	49+12.15	121.28	49+04.12	121.24	48+96.09	121.18	48+92.08	121.14	48+88.07	120.99	48+80.04	120.68	48+72.00	120.37	48+63.97	120.05	48+61.80	119.97	48+55.94	119.83
	.2L	49+35.92	121.55	49+30.07	121.46	49+27.89	121.45	49+19.86	121.43	49+11.83	121.39	49+03.80	121.35	48+99.79	121.32	48+95.78	121.17	48+87.74	120.87	48+79.71	120.55	48+71.68	120.24	48+69.51	120.16	48+63.65	120.01
	.3L	49+43.63	121.66	49+37.78	121.58	49+35.60	121.58	49+27.57	121.56	49+19.54	121.54	49+11.51	121.50	49+07.50	121.48	49+03.48	121.34	48+95.45	121.05	48+87.42	120.74	48+79.39	120.43	48+77.21	120.34	48+71.36	120.20
	.4L	49+51.34	121.76	49+45.48	121.69	49+43.31	121.69	49+35.28	121.69	49+27.25	121.68	49+19.21	121.65	49+15.20	121.63	49+11.19	121.50	49+03.16	121.22	48+95.13	120.92	48+87.10	120.62	48+84.92	120.53	48+79.07	120.39
	.5L	49+59.05	121.85	49+53.19	121.79	49+51.02	121.79	49+42.99	121.80	49+34.95	121.80	49+26.92	121.79	49+22.91	121.78	49+18.90	121.64	49+10.87	121.37	49+02.84	121.09	48+94.81	120.80	48+92.63	120.72	48+86.78	120.58
	.6L	49+66.76	121.93	49+60.90	121.87	49+58.72	121.88	49+50.69	121.90	49+42.66	121.91	49+34.63	121.91	49+30.62	121.91	49+26.61	121.78	49+18.58	121.52	49+10.55	121.25	49+02.52	120.97	49+00.34	120.89	48+94.48	120.76
	.7L	49+74.46	122.00	49+68.61	121.95	49+66.43	121.96	49+58.40	121.99	49+50.37	122.02	49+42.34	122.03	49+38.33	122.03	49+34.32	121.91	49+26.29	121.66	49+18.25	121.40	49+10.22	121.13	49+08.05	121.05	49+02.19	120.93
	.8L	49+82.17	122.06	49+76.32	122.02	49+74.14	122.03	49+66.11	122.07	49+58.08	122.11	49+50.05	122.13	49+46.04	122.13	49+42.03	122.02	49+33.99	121.78	49+25.96	121.54	49+17.93	121.28	49+15.76	121.20	49+09.90	121.09
	.9L	49+89.88	122.11	49+84.03	122.07	49+81.85	122.09	49+73.82	122.14	49+65.79	122.19	49+57.76	122.22	49+53.75	122.23	49+49.73	122.12	49+41.70	121.90	49+33.67	121.66	49+25.64	121.41	49+23.46	121.35	49+17.61	121.24
C/L BRG. PIER 2		49+97.59	122.14	49+91.73	122.11	49+89.56	122.13	49+81.53	122.20	49+73.50	122.26	49+65.46	122.30	49+61.45	122.32	49+57.44	122.22	49+49.41	122.00	49+41.38	121.78	49+33.35	121.54	49+31.17	121.47	49+25.32	121.38
SPAN 3	.1L	50+02.94	122.16	49+97.08	122.14	49+94.91	122.16	49+86.88	122.24	49+78.85	122.30	49+70.81	122.35	49+66.80	122.37	49+62.79	122.27	49+54.76	122.07	49+46.73	121.85	49+38.70	121.62	49+36.52	121.56	49+30.67	121.47
	.2L	50+08.29	122.17	50+02.43	122.16	50+00.26	122.18	49+92.23	122.27	49+84.20	122.34	49+76.16	122.40	49+72.15	122.42	49+68.14	122.33	49+60.11	122.13	49+52.08	121.92	49+44.05	121.70	49+41.87	121.64	49+36.02	121.55
	.3L	50+13.64	122.18	50+07.78	122.17	50+05.61	122.20	49+97.58	122.29	49+89.55	122.37	49+81.51	122.44	49+77.50	122.46	49+73.49	122.37	49+65.46	122.18	49+57.43	121.98	49+49.40	121.77	49+47.22	121.71	49+41.37	121.63
	.4L	50+18.99	122.18	50+13.13	122.18	50+10.96	122.21	50+02.93	122.31	49+94.90	122.39	49+86.86	122.47	49+82.85	122.50	49+78.84	122.42	49+70.81	122.23	49+62.78	122.04	49+54.75	121.84	49+52.57	121.78	49+46.72	121.70
	.5L	50+24.34	122.18	50+18.48	122.18	50+16.31	122.21	50+08.28	122.32	50+00.25	122.42	49+92.21	122.50	49+88.20	122.54	49+84.19	122.45	49+76.16	122.28	49+68.13	122.09	49+60.10	121.90	49+57.92	121.84	49+52.07	121.77
	.6L	50+29.69	122.17	50+23.83	122.18	50+21.66	122.21	50+13.63	122.33	50+05.60	122.43	49+97.56	122.52	49+93.55	122.56	49+89.54	122.48	49+81.51	122.32	49+73.48	122.14	49+65.45	121.95	49+63.27	121.90	49+57.42	121.83
	.7L	50+35.04	122.16	50+29.18	122.17	50+27.01	122.21	50+18.98	122.33	50+10.95	122.44	50+02.91	122.54	49+98.90	122.59	49+94.89	122.51	49+86.86	122.35	49+78.83	122.18	49+70.80	122.00	49+68.62	121.95	49+62.77	121.89
	.8L	50+40.39	122.14	50+34.53	122.16	50+32.36	122.20	50+24.33	122.33	50+16.30	122.45	50+08.26	122.55	50+04.25	122.60	50+00.24	122.53	49+92.21	122.38	49+84.18	122.22	49+76.15	122.05	49+73.97	122.00	49+68.12	121.95
	.9L	50+45.74	122.12	50+39.88	122.14	50+37.71	122.18	50+29.68	122.32	50+21.65	122.45	50+13.61	122.56	50+09.60	122.62	50+05.59	122.55	49+97.56	122.41	49+89.53	122.25	49+81.50	122.09	49+79.32	122.04	49+73.47	121.99
C/L BRG. ABUT. B		50+51.09	122.09	50+45.23	122.12	50+43.06	122.16	50+35.03	122.31	50+27.00	122.44	50+18.96	122.56	50+14.95	122.62	50+10.94	122.56	50+02.91	122.42	49+94.88	122.28	49+86.85	122.12	49+84.67	122.07	49+78.82	122.03

NOTE:

1. CONTRACTOR MUST SURVEY EXISTING BOTTOM OF STEEL ELEVATIONS FOR EACH BEAM AT C/L OF BEARING. CONTRACTOR MUST ENSURE THAT, UPON COMPLETION OF JACKING AND SUBSTRUCTURE REPAIRS, BEAMS ARE RETURNED TO CURRENT EXISTING BOTTOM OF STEEL ELEVATIONS AT C/L OF BEARINGS.
2. SEE NOTE 4 ON SHEET 48.

CROSS REFERENCE NOTES:

1. FOR DECK SECTION, SEE SHEET 46.
2. FOR VERTICAL CURVE DATA, SEE SHEET 10.
3. FOR DECK PLANS & PLACEMENT SEQUENCE, SEE SHEETS 41-43.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

SCALE AS NOTED

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	T201507403	BRIDGE NO.	1-634
COUNTY	NEW CASTLE	DESIGNED BY:	MDW
		CHECKED BY:	RJH

FINISHED BRIDGE
DECK ELEVATIONS

SHEET NO.
47
TOTAL SHTS.
71

DEAD LOAD DEFLECTIONS (VALUES SHOWN IN INCHES / UNFACTORED)

LOCATION		ABUT 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER 1
SPAN 1 G1	A	0.000	0.034	0.060	0.078	0.089	0.092	0.088	0.075	0.056	0.032	0.000
	B	0.000	0.134	0.237	0.310	0.353	0.365	0.347	0.299	0.223	0.125	0.000
	C	0.000	0.026	0.049	0.064	0.067	0.060	0.041	0.021	0.004	-0.005	0.000
LOCATION		PIER 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER 2
SPAN 2 G1	A	0.000	0.215	0.400	0.546	0.634	0.667	0.642	0.555	0.407	0.226	0.000
	B	0.000	0.465	0.864	1.179	1.369	1.442	1.388	1.200	0.882	0.490	0.000
	C	0.000	0.042	0.109	0.173	0.221	0.242	0.231	0.187	0.123	0.051	0.000
LOCATION		PIER 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	ABUT 2
SPAN 3 G1	A	0.000	0.059	0.108	0.146	0.170	0.179	0.171	0.147	0.110	0.062	0.000
	B	0.000	0.181	0.333	0.451	0.528	0.553	0.529	0.456	0.342	0.192	0.000
	C	0.000	-0.003	0.012	0.037	0.066	0.089	0.103	0.102	0.083	0.045	0.000
LOCATION		ABUT 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER1
SPAN 1 G2	A	0.000	0.032	0.058	0.078	0.091	0.096	0.092	0.790	0.058	0.032	0.000
	B	0.000	0.142	0.256	0.343	0.402	0.423	0.404	0.347	0.257	0.142	0.000
	C	0.000	0.017	0.028	0.033	0.030	0.022	0.012	0.002	-0.006	-0.008	0.000
LOCATION		PIER 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER 2
SPAN 2 G2	A	0.000	0.221	0.415	0.562	0.653	0.686	0.655	0.561	0.415	0.228	0.000
	B	0.000	0.533	1.001	1.352	1.572	1.652	1.578	1.355	1.004	0.552	0.000
	C	0.000	0.037	0.088	0.129	0.153	0.157	0.140	0.106	0.064	0.024	0.000
LOCATION		PIER 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	ABUT 2
SPAN 3 G2	A	0.000	0.058	0.108	0.148	0.173	0.181	0.173	0.149	0.111	0.061	0.000
	B	0.000	0.204	0.382	0.522	0.611	0.641	0.613	0.528	0.393	0.218	0.000
	C	0.000	0.004	0.021	0.041	0.060	0.072	0.075	0.069	0.054	0.029	0.000
LOCATION		ABUT 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER1
SPAN 1 G3	A	0.000	0.032	0.058	0.078	0.092	0.096	0.092	0.079	0.058	0.032	0.000
	B	0.000	0.143	0.257	0.344	0.403	0.424	0.405	0.348	0.258	0.143	0.000
	C	0.000	0.003	0.004	0.002	-0.002	-0.006	-0.011	-0.013	-0.012	-0.008	0.000
LOCATION		PIER 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER 2
SPAN 2 G3	A	0.000	0.227	0.414	0.559	0.651	0.684	0.653	0.560	0.414	0.227	0.000
	B	0.000	0.565	1.028	1.388	1.614	1.695	1.618	1.388	1.028	0.565	0.000
	C	0.000	0.021	0.045	0.063	0.071	0.069	0.057	0.039	0.020	0.006	0.000
LOCATION		PIER 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	ABUT 2
SPAN 3 G3	A	0.000	0.061	0.110	0.147	0.172	0.181	0.172	0.148	0.110	0.061	0.000
	B	0.000	0.220	0.396	0.529	0.618	0.648	0.619	0.532	0.396	0.220	0.000
	C	0.000	0.004	0.013	0.022	0.029	0.033	0.032	0.028	0.020	0.010	0.000
LOCATION		ABUT 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER1
SPAN 1 G4	A	0.000	0.033	0.059	0.079	0.092	0.097	0.093	0.080	0.059	0.033	0.000
	B	0.000	0.143	0.257	0.344	0.403	0.424	0.405	0.348	0.258	0.143	0.000
	C	0.000	-0.003	-0.005	-0.008	-0.010	-0.011	-0.012	-0.010	-0.008	-0.004	0.000
LOCATION		PIER 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER 2
SPAN 2 G4	A	0.000	0.227	0.414	0.559	0.651	0.684	0.653	0.560	0.414	0.227	0.000
	B	0.000	0.565	1.027	1.387	1.613	1.694	1.617	1.388	1.028	0.565	0.000
	C	0.000	0.008	0.016	0.020	0.022	0.020	0.015	0.009	0.004	0.001	0.000
LOCATION		PIER 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	ABUT 2
SPAN 3 G4	A	0.000	0.061	0.110	0.147	0.172	0.180	0.172	0.148	0.110	0.061	0.000
	B	0.000	0.220	0.396	0.528	0.617	0.647	0.618	0.532	0.396	0.220	0.000
	C	0.000	0.001	0.004	0.006	0.008	0.009	0.009	0.007	0.005	0.003	0.000
LOCATION		ABUT 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER1
SPAN 1 G5	A	0.000	0.033	0.059	0.079	0.092	0.097	0.093	0.080	0.059	0.033	0.000
	B	0.000	0.143	0.258	0.344	0.403	0.424	0.405	0.348	0.258	0.143	0.000
	C	0.000	-0.002	-0.005	-0.006	-0.007	-0.007	-0.007	-0.006	-0.004	-0.002	0.000
LOCATION		PIER 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER 2
SPAN 2 G5	A	0.000	0.227	0.414	0.559	0.651	0.684	0.653	0.560	0.414	0.227	0.000
	B	0.000	0.564	1.026	1.385	1.611	1.692	1.615	1.386	1.027	0.564	0.000
	C	0.000	0.003	0.004	0.005	0.005	0.004	0.003	0.002	0.001	0.000	0.000
LOCATION		PIER 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	ABUT 2
SPAN 3 G5	A	0.000	0.061	0.110	0.147	0.172	0.181	0.172	0.148	0.110	0.061	0.000
	B	0.000	0.220	0.396	0.528	0.617	0.647	0.618	0.532	0.396	0.220	0.000
	C	0.000	0.000	0.000	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	0.000

DEAD LOAD DEFLECTIONS (VALUES SHOWN IN INCHES / UNFACTORED)

LOCATION		ABUT 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER1
SPAN 1 G6	A	0.000	0.032	0.059	0.078	0.092	0.097	0.092	0.079	0.059	0.032	0.000
	B	0.000	0.143	0.258	0.345	0.404	0.425	0.406	0.349	0.258	0.143	0.000
	C	0.000	-0.001	-0.003	-0.004	-0.004	-0.004	-0.004	-0.004	-0.003	-0.001	0.000
LOCATION		PIER 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER 2
SPAN 2 G6	A	0.000	0.227	0.414	0.559	0.651	0.684	0.653	0.560	0.414	0.227	0.000
	B	0.000	0.564	1.026	1.385	1.611	1.692	1.615	1.386	1.027	0.564	0.000
	C	0.000	0.002	0.004	0.005	0.006	0.006	0.006	0.005	0.004	0.002	0.000
LOCATION		PIER 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	ABUT 2
SPAN 3 G6	A	0.000	0.061	0.110	0.147	0.172	0.181	0.173	0.148	0.110	0.061	0.000
	B	0.000	0.220	0.396	0.529	0.618	0.648	0.619	0.532	0.397	0.220	0.000
	C	0.000	-0.002	-0.004	-0.005	-0.006	-0.007	-0.006	-0.005	-0.004	-0.002	0.000
LOCATION		ABUT 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER1
SPAN 1 G7	A	0.000	0.033	0.059	0.079	0.092	0.097	0.093	0.080	0.059	0.033	0.000
	B	0.000	0.143	0.258	0.345	0.404	0.425	0.406	0.348	0.258	0.143	0.000
	C	0.000	0.000	0.000	0.000	-0.001	-0.001	-0.002	-0.002	-0.002	-0.002	0.000
LOCATION		PIER 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER 2
SPAN 2 G7	A	0.000	0.227	0.414	0.559	0.651	0.684	0.653	0.560	0.414	0.227	0.000
	B	0.000	0.565	1.027	1.388	1.614	1.695	1.619	1.389	1.029	0.566	0.000
	C	0.000	0.005	0.010	0.016	0.022	0.026	0.026	0.023	0.017	0.008	0.000
LOCATION		PIER 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	ABUT 2
SPAN 3 G7	A	0.000	0.061	0.110	0.147	0.172	0.181	0.173	0.148	0.110	0.061	0.000
	B	0.000	0.220	0.396	0.529	0.618	0.648	0.619	0.533	0.397	0.220	0.000
	C	0.000	-0.005	-0.008	-0.009	-0.009	-0.008	-0.005	-0.003	-0.001	0.000	0.000
LOCATION		ABUT 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER1
SPAN 1 G8	A	0.000	0.033	0.059	0.079	0.092	0.097	0.093	0.080	0.059	0.033	0.000
	B	0.000	0.143	0.258	0.345	0.404	0.425	0.406	0.348	0.258	0.143	0.000
	C	0.000	0.003	0.007	0.009	0.011	0.010	0.008	0.005	0.001	-0.001	0.000
LOCATION		PIER 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER 2
SPAN 2 G8	A	0.000	0.227	0.414	0.559	0.651	0.684	0.653	0.560	0.414	0.227	0.000
	B	0.000	0.565	1.028	1.389	1.615	1.696	1.619	1.390	1.029	0.566	0.000
	C	0.000	0.012	0.030	0.049	0.065	0.076	0.076	0.065	0.046	0.021	0.000
LOCATION		PIER 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	ABUT 2
SPAN 3 G8	A	0.000	0.061	0.111	0.148	0.173	0.181	0.173	0.149	0.111	0.062	0.000
	B	0.000	0.221	0.398	0.531	0.621	0.650	0.621	0.534	0.398	0.221	0.000
	C	0.000	-0.007	-0.008	-0.005	0.002	0.010	0.017	0.020	0.019	0.011	0.000
LOCATION		ABUT 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER1
SPAN 1 G9	A	0.000	0.032	0.059	0.079	0.092	0.097	0.093	0.080	0.059	0.033	0.000
	B	0.000	0.142	0.257	0.343	0.402	0.423	0.404	0.347	0.257	0.143	0.000
	C	0.000	0.015	0.026	0.034	0.036	0.033	0.026	0.015	0.005	-0.002	0.000
LOCATION		PIER 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER 2
SPAN 2 G9	A	0.000	0.221	0.411	0.559	0.652	0.685	0.655	0.561	0.415	0.228	0.000
	B	0.000	0.528	0.983	1.336	1.558	1.639	1.566	1.345	0.997	0.548	0.000
	C	0.000	0.027	0.072	0.115	0.147	0.164	0.159	0.132	0.090	0.038	0.000
LOCATION		PIER 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	ABUT 2
SPAN 3 G9	A	0.000	0.060	0.110	0.149	0.174	0.182	0.174	0.150	0.111	0.062	0.000
	B	0.000	0.207	0.382	0.519	0.607	0.637	0.609	0.525	0.391	0.217	0.000
	C	0.000	-0.004	0.006	0.022	0.043	0.061	0.073	0.073	0.062	0.035	0.000
LOCATION		ABUT 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER1
SPAN 1 G10	A	0.000	0.032	0.057	0.075	0.087	0.092	0.090	0.079	0.061	0.034	0.000
	B	0.000	0.125	0.224	0.296	0.342	0.362	0.354	0.311	0.238	0.134	0.000
	C	0.000	0.023	0.040	0.049	0.048	0.039	0.028	0.011	-0.005	-0.011	0.000
LOCATION		PIER 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	PIER 2
SPAN 2 G10	A	0.000	0.142	0.388	0.534	0.634	0.670	0.648	0.564	0.434	0.250	0.000
	B	0.000	0.305	0.830	1.142	1.354	1.428	1.380	1.201	0.922	0.531	0.000
	C	0.000	0.057	0.134	0.200	0.241	0.253	0.230	0.181	0.113	0.042	0.000
LOCATION		PIER 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	ABUT 2
SPAN 3 G610	A	0.000	0.056	0.106	0.144	0.167	0.176	0.171	0.150	0.115	0.065	0.000
	B	0.000	0.178	0.333	0.454	0.525	0.554	0.539	0.473	0.362	0.204	0.000
	C	0.000	0.005	0.031	0.063	0.100	0.128	0.138	0.127	0.096	0.050	0.000

CROSS REFERENCE NOTES:

1. FOR FRAMING PLAN, SEE SHEET 26.
2. FOR DECK SECTION, SEE SHEET 46.

NOTES:

1. DEFLECTIONS PROVIDED AT 10TH POINTS ALONG GIRDER WITHIN EACH SPAN.
2. DEFLECTIONS PROVIDED REFLECT LOADING IN FINAL CONDITION (FULL WIDTH OF DECK), NOT WITHIN A GIVEN STAGE OF CONSTRUCTION.
3. NEGATIVE DEFLECTIONS REFLECT UPWARD MOVEMENT.
4. CONTRACTOR SHALL SURVEY THE TOP OF STEEL GIRDERS WHEN DECK IS REMOVED. BY APPLYING DEFLECTIONS PROVIDED ON THIS SHEET, THE CONTRACTOR SHALL DETERMINE HAUNCH VALUES ACCORDINGLY. ANTICIPATED HAUNCH THICKNESSES AT SUPPORTS ARE SHOWN ON SHEET 27.

LEGEND:

A = WEIGHT OF STEEL
B = WEIGHT OF DECK CONCRETE
C = BARRIER

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

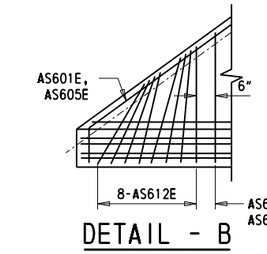
NOT TO SCALE

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	BRIDGE NO.	1-634
T201507403	DESIGNED BY:	RPG
COUNTY	CHECKED BY:	MKS
NEW CASTLE		

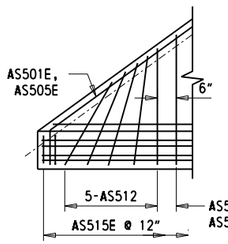
DEAD LOAD DEFLECTIONS

SHEET NO.
48
TOTAL SHTS.
71



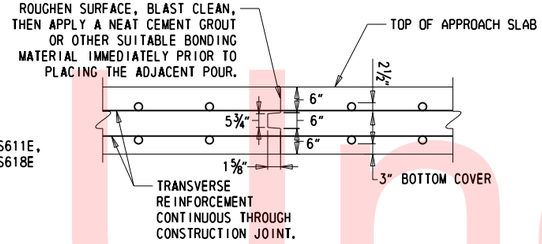
DETAIL - B

BOT. REINF.
SCALE: ½" = 1'-0"



DETAIL - A

TOP. REINF.
SCALE: ½" = 1'-0"

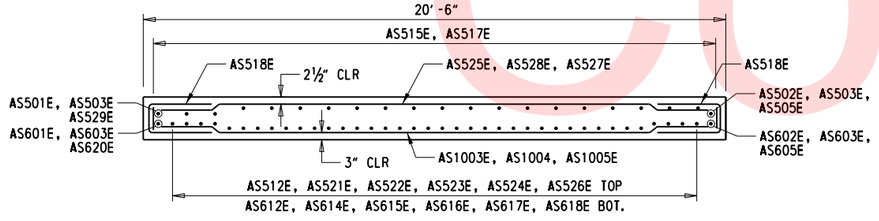


APPROACH SLAB LONGITUDINAL CONSTRUCTION JOINT

NOT TO SCALE

PLAN - APPROACH SLAB A REINFORCEMENT

SCALE: ⅛" = 1'-0"



SECTION - APPROACH SLAB A REINFORCEMENT

NOTE: SLEEPER SLAB NOT SHOWN
SCALE: ⅜" = 1'-0"

CROSS REFERENCE NOTES:

1. FOR SECTION A AND B, SEE SHEET 51.
2. FOR LIMITS OF EXISTING APPROACH SLAB REMOVAL AND DETAILS, SEE SHEET 13.
3. FOR APPROACH SLAB SECTION AND DETAILS, SEE SHEET 51.
4. FOR BRIDGE DECK AND REINFORCEMENT DETAILS, SEE SHEETS 41-43.
5. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 56.
6. FOR APPROACH SLAB BARRIER AND SIDEWALK REINFORCEMENT, SEE SHEETS 52-54.
7. FOR WINGWALL DETAILS, SEE SHEET 16.

NOTES:

1. CONSTRUCT BRIDGE APPROACH SLAB AFTER THE DECK SLAB IS CONSTRUCTED.
2. PLACE CONCRETE IN A CONTINUOUS OPERATION, UNLESS NOTED OTHERWISE.
3. TRANSVERSE CONSTRUCTION JOINTS ARE NOT PERMITTED IN THE CONCRETE APPROACH SLAB OR SLEEPER SLAB, UNLESS NOTED OTHERWISE.
4. BARRIER AND SIDEWALK REINFORCEMENT NOT SHOWN ON PLAN FOR CLARITY.
5. CONCRETE IN APPROACH SLAB AND SLEEPER SLAB TO BE PAID FOR UNDER ITEM 610018 AND REINFORCEMENT IN APPROACH SLAB SHALL BE PAID FOR UNDER ITEM 611001.
6. ALL BARS DESIGNATED WITH SSXXXE ARE LOCATED IN SLEEPER SLAB.
7. MINIMUM LAP SPLICE LENGTHS, NORMAL WEIGHT CONCRETE.
   2'-1" (#4 BARS)
   2'-7" (#5 BARS)
   3'-1" (#6 BARS)

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE AS NOTED

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	BRIDGE NO.	1-634
T201507403	DESIGNED BY:	RPG
COUNTY	CHECKED BY:	JAM
NEW CASTLE		

ABUTMENT A APPROACH SLAB REINFORCEMENT - PLAN AND ELEVATION

SHEET NO.	49
TOTAL SHTS.	71

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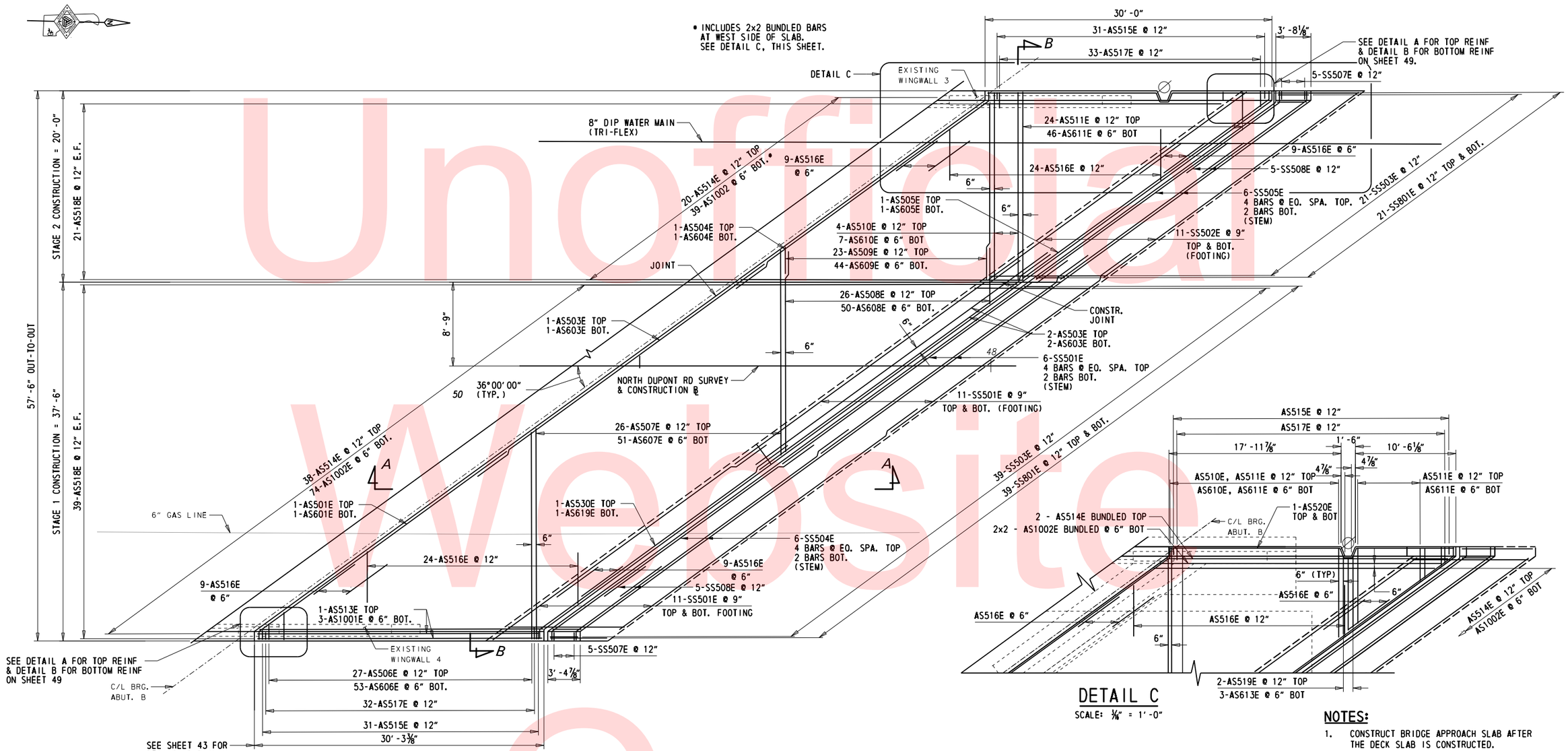
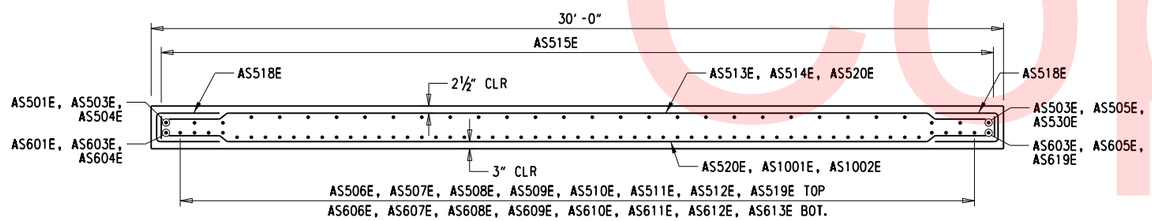


PLAN - APPROACH SLAB B REINFORCEMENT

SCALE: ⅛" = 1'-0"

DETAIL C

SCALE: ⅛" = 1'-0"



SECTION - APPROACH SLAB REINFORCEMENT

SLEEPER SLAB NOT SHOWN
SCALE: ⅜" = 1'-0"

CROSS REFERENCE NOTES:

1. FOR SECTION A AND B, SEE SHEET 51.
2. FOR LIMITS OF EXISTING APPROACH SLAB REMOVAL AND DETAILS, SEE SHEET 13.
3. FOR APPROACH SLAB SECTION AND DETAILS, SEE SHEET 51.
4. FOR BRIDGE DECK AND REINFORCEMENT DETAILS, SEE SHEETS 41-43.
5. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 57.
6. FOR APPROACH SLAB BARRIER AND SIDEWALK REINFORCEMENT, SEE SHEETS 52-54.
7. FOR SECTION A AND B, SEE SHEET 51.
8. FOR WINGWALL DETAILS, SEE SHEET 16.
9. FOR DETAIL A AND B, SEE SHEET 49.

NOTES:

1. CONSTRUCT BRIDGE APPROACH SLAB AFTER THE DECK SLAB IS CONSTRUCTED.
2. PLACE CONCRETE IN A CONTINUOUS OPERATION, UNLESS NOTED OTHERWISE.
3. TRANSVERSE CONSTRUCTION JOINTS ARE NOT PERMITTED IN THE CONCRETE APPROACH SLAB OR SLEEPER SLAB, UNLESS NOTED OTHERWISE.
4. BARRIER AND SIDEWALK REINFORCEMENT NOT SHOWN ON PLAN FOR CLARITY.
5. CONCRETE IN APPROACH SLAB AND SLEEPER SLAB TO BE PAID FOR UNDER ITEM 610018 AND REINFORCEMENT IN APPROACH SLAB SHALL BE PAID FOR UNDER ITEM 611001.
6. ALL BARS DESIGNATED WITH SSXXXE ARE LOCATED IN SLEEPER SLAB.
7. MINIMUM LAP SPLICE LENGTHS, NORMAL WEIGHT CONCRETE.
   2'-1" (#4 BARS)
   2'-7" (#5 BARS)
   3'-1" (#6 BARS)

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	ABUTMENT B APPROACH SLAB REINFORCEMENT - PLAN AND ELEVATION
				COUNTY NEW CASTLE	DESIGNED BY: RPG	SHEET NO. 50
					CHECKED BY: JAM	TOTAL SHTS. 71

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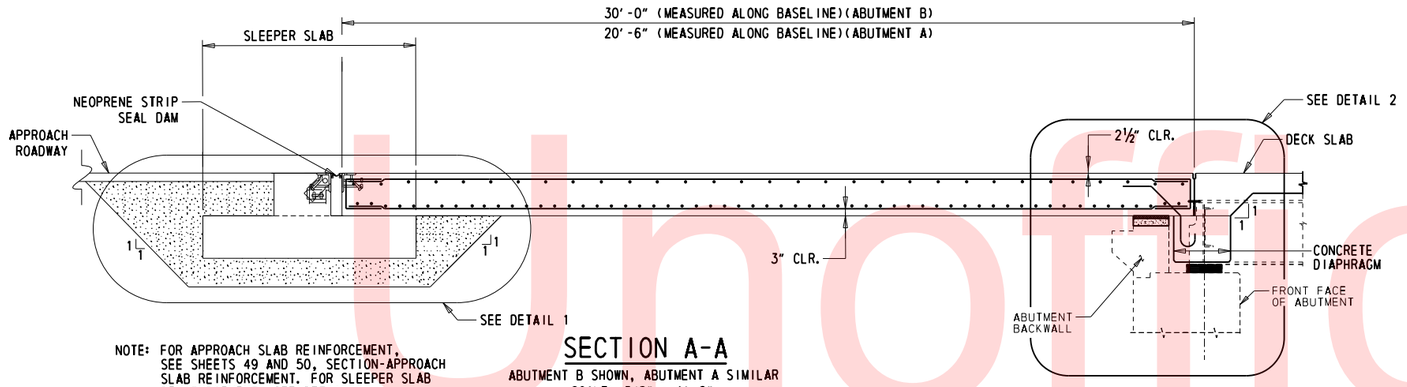
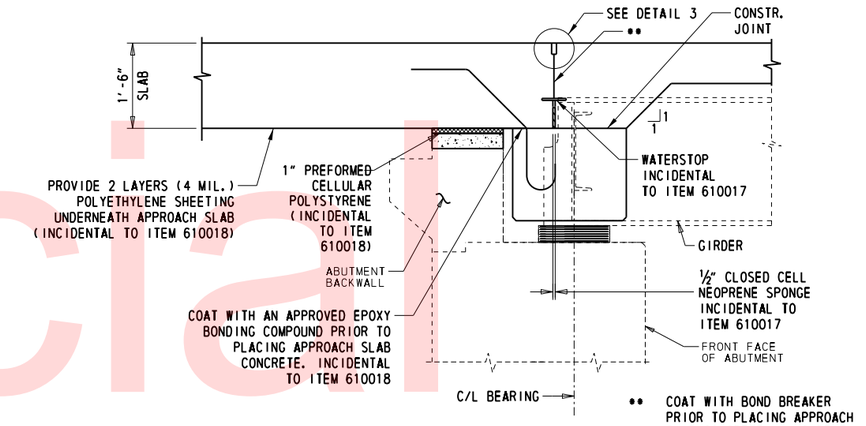


NOTE: FOR APPROACH SLAB REINFORCEMENT, SEE SHEETS 49 AND 50, SECTION-APPROACH SLAB REINFORCEMENT. FOR SLEEPER SLAB REINFORCEMENT, SEE DETAIL 1.

SECTION A-A

ABUTMENT B SHOWN, ABUTMENT A SIMILAR
SCALE: 3/8" = 1'-0"

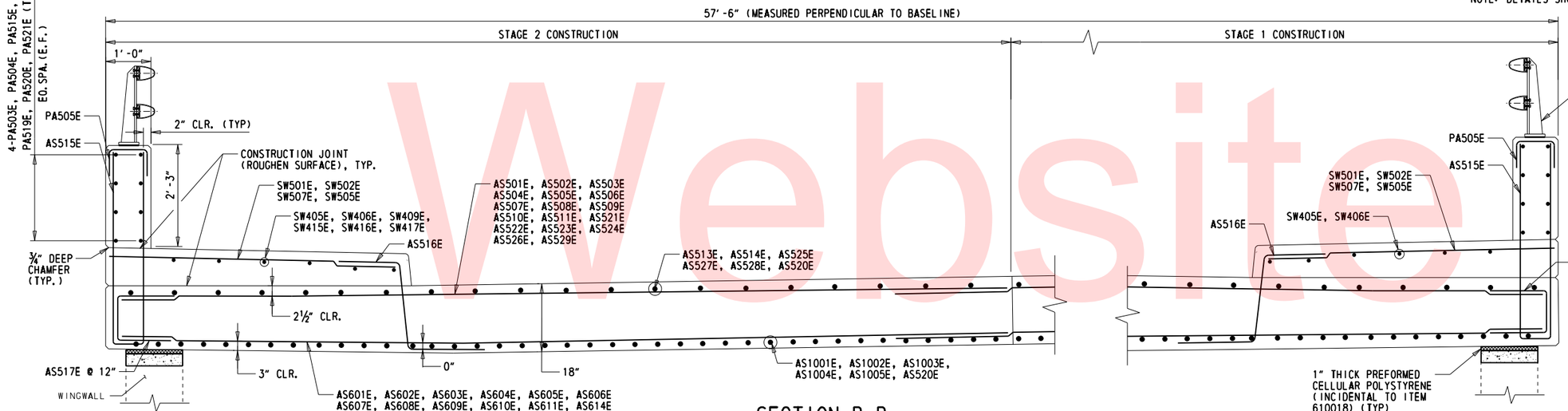


•• COAT WITH BOND BREAKER PRIOR TO PLACING APPROACH SLAB CONCRETE. (INCIDENTAL TO ITEM 610018)

NOTE: DETAILS SHOWN PERPENDICULAR TO FRONT FACE OF ABUTMENT.

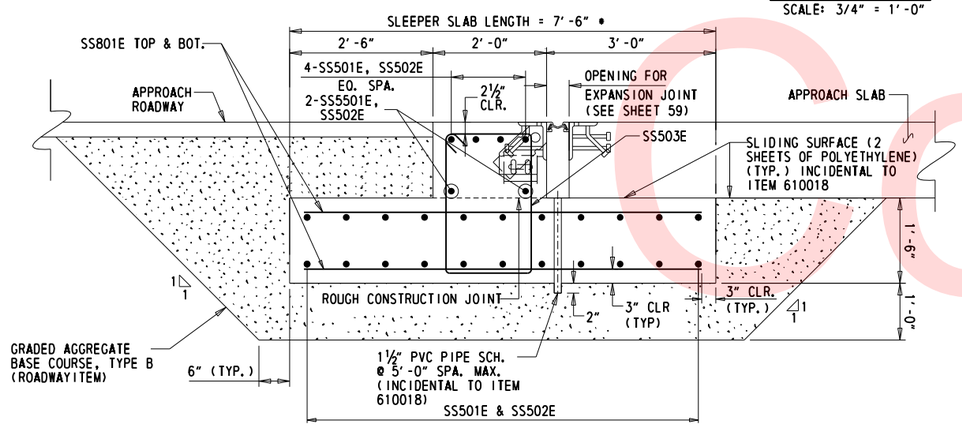
DETAIL 2

SCALE: 3/4" = 1'-0"



SECTION B-B

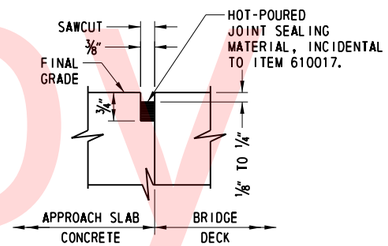
SCALE: 3/4" = 1'-0"



DETAIL 1

SCALE: 3/4" = 1'-0"

• MEASURED PERPENDICULAR TO EXPANSION JOINT



DETAIL 3

SCALE: 6" = 1'-0"

CROSS REFERENCE NOTES:

1. FOR APPROACH SLAB PLAN AND DETAILS, SEE SHEET 49 AND 50.
2. FOR APPROACH SLAB BARRIER AND SIDEWALK, SEE SHEET 52-54.
3. FOR ABUTMENT CONCRETE DIAPHRAGM DETAILS, SEE SHEET 29 & 30.
4. FOR EXPANSION JOINT DETAIL, SEE SHEET 59.
5. FOR PARTIAL WINGWALL DEMOLITION & RECONSTRUCTION DETAILS, SEE SHEET 16.
6. FOR PARTIAL ABUTMENT DEMOLITION & RECONSTRUCTION DETAILS, SEE SHEETS 14 AND 15.
7. FOR RAIL DETAILS, SEE SHEET 58.

NOTES:

1. CONSTRUCT BRIDGE APPROACH SLAB AFTER THE DECK SLAB IS CONSTRUCTED.
2. TRANSVERSE CONSTRUCTION JOINTS ARE NOT PERMITTED IN THE CONCRETE APPROACH SLAB OR SLEEPER SLAB, UNLESS NOTED OTHERWISE.
3. CONCRETE IN APPROACH SLAB TO BE PAID FOR UNDER ITEM 610018 AND REINFORCEMENT IN APPROACH SLAB SHALL BE PAID FOR UNDER ITEM 611001.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

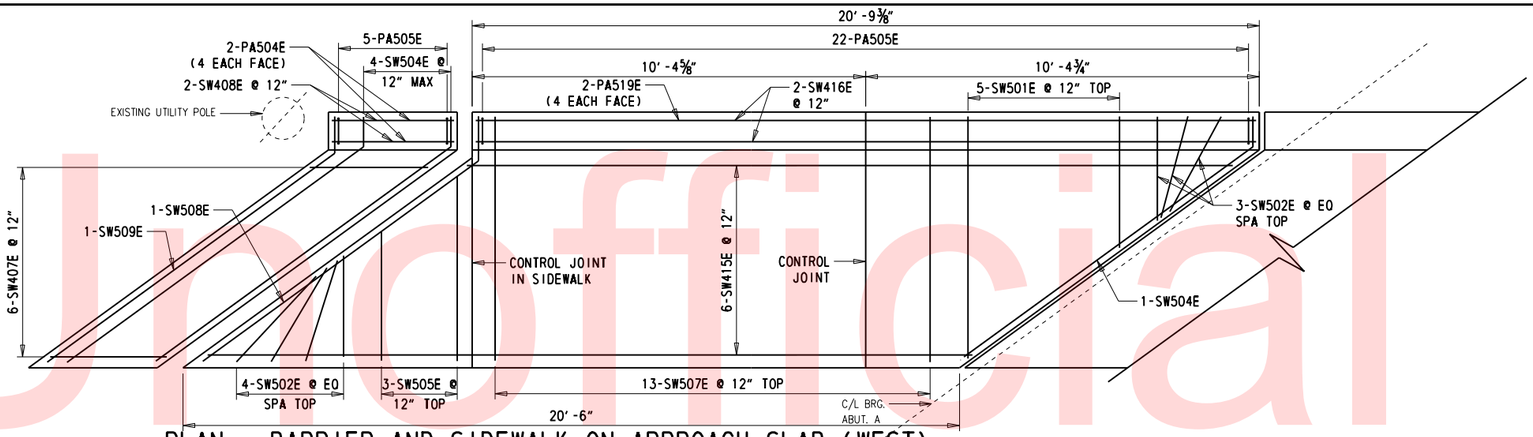
SCALE AS NOTED

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	BRIDGE NO.	1-634
T201507403	DESIGNED BY:	RPG
COUNTY	CHECKED BY:	JAM
NEW CASTLE		

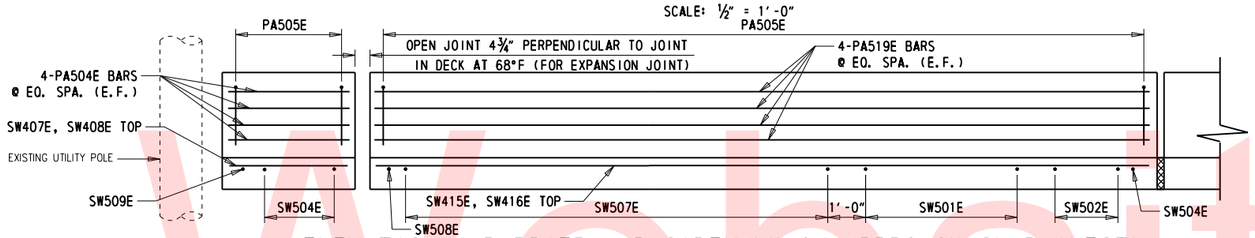
BRIDGE APPROACH SLAB REINFORCEMENT - SECTION AND DETAILS

SHEET NO.
51
TOTAL SHTS.
71



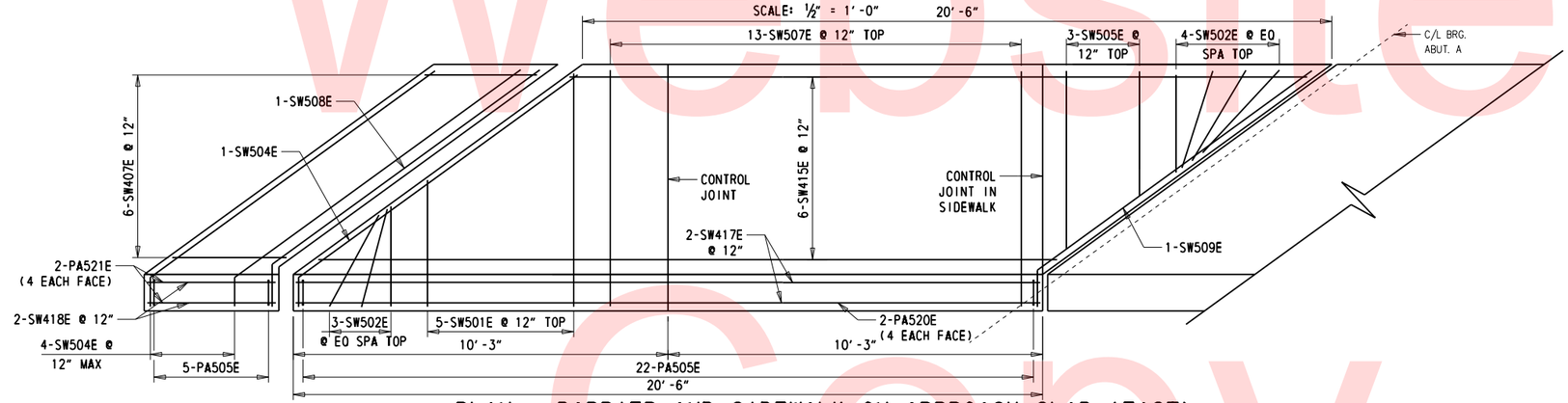
PLAN - BARRIER AND SIDEWALK ON APPROACH SLAB (WEST)

ABUTMENT A WEST APPROACH SLAB BARRIER
SCALE: ½" = 1'-0"



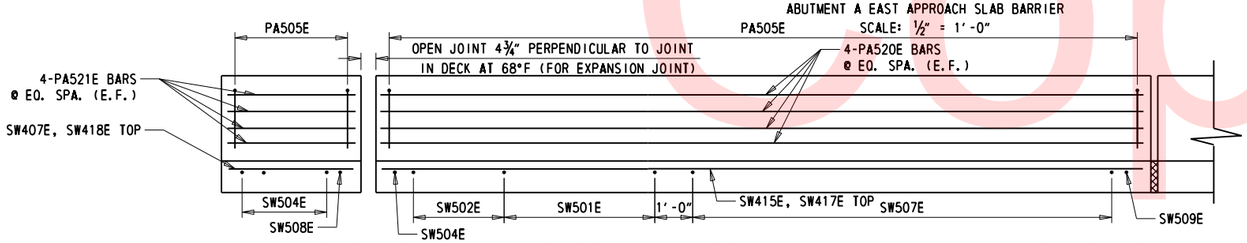
ELEVATION - BARRIER AND SIDEWALK ON APPROACH SLAB (WEST)

ABUTMENT A WEST APPROACH SLAB BARRIER
SCALE: ½" = 1'-0"



PLAN - BARRIER AND SIDEWALK ON APPROACH SLAB (EAST)

ABUTMENT A EAST APPROACH SLAB BARRIER
SCALE: ½" = 1'-0"



ELEVATION - BARRIER AND SIDEWALK ON APPROACH SLAB (EAST)

ABUTMENT A EAST APPROACH SLAB BARRIER
SCALE: ½" = 1'-0"

CROSS REFERENCE NOTES:

1. WORK THIS SHEET WITH SHEET 44.
2. FOR APPROACH SLAB AND SLEEPER SLAB DETAILS, SEE SHEET 49-51.

NOTES:

1. MINIMUM LAP SPLICE LENGTHS, NORMAL WEIGHT CONCRETE.
   2'-1" (#4 BARS)
   2'-7" (#5 BARS)
   3'-1" (#6 BARS)
2. BARRIER & SIDEWALK REINFORCEMENT ANCHORED INTO THE APPROACH SLAB IS NOT SHOWN ON THIS SHEET. SEE APPROACH SLAB PLANS.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	BRIDGE BARRIER & SIDEWALK REINFORCEMENT ON APPROACH SLAB A - PLAN AND ELEVATION	SHEET NO. 52
				COUNTY NEW CASTLE	DESIGNED BY: RPG		TOTAL SHTS. 71
					CHECKED BY: JAM		

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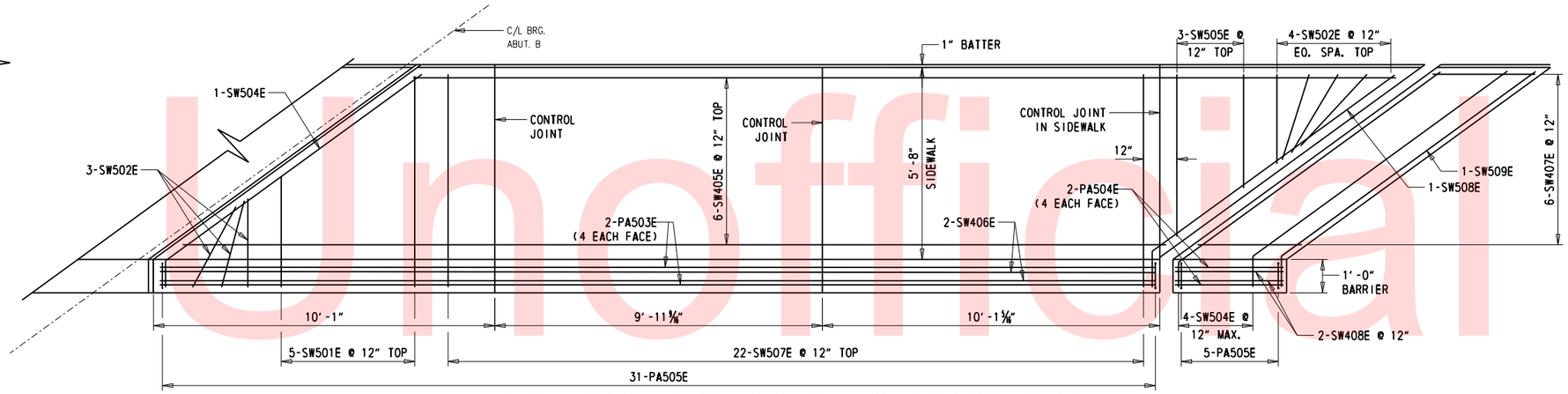
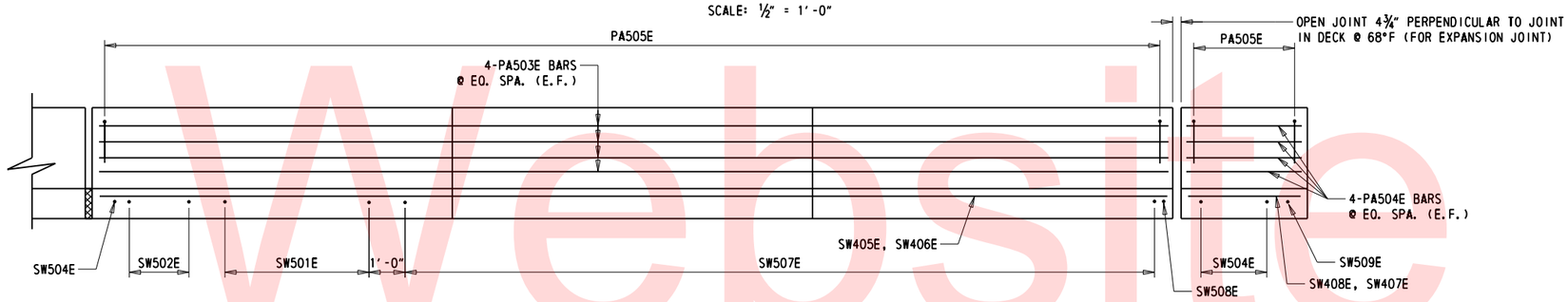


PLAN - BARRIER AND SIDEWALK ON APPROACH SLAB

ABUTMENT B EAST APPROACH SLAB BARRIER
SCALE: ½" = 1'-0"



ELEVATION - BARRIER AND SIDEWALK ON APPROACH SLAB

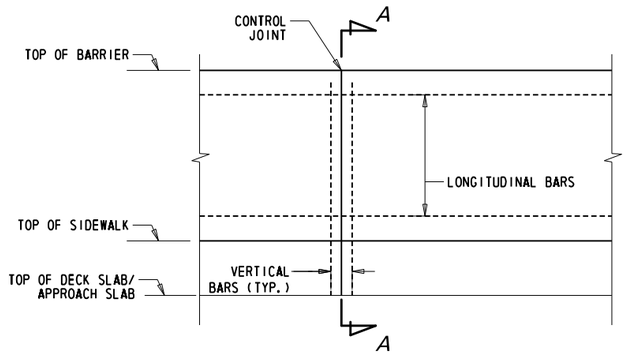
ABUTMENT B EAST APPROACH SLAB BARRIER SHOWN
SCALE: ½" = 1'-0"

CROSS REFERENCE NOTES:

1. WORK THIS SHEET WITH SHEET 45.
2. FOR APPROACH SLAB AND SLEEPER SLAB DETAILS, SEE SHEETS 49-51.

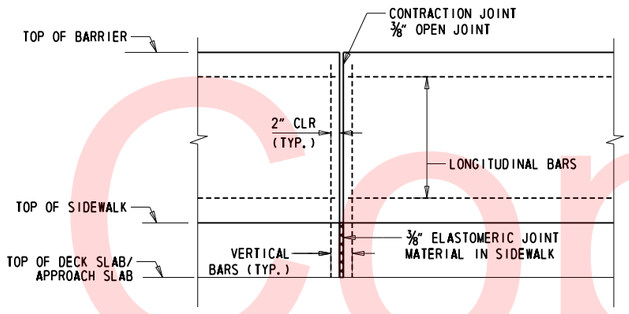
NOTES:

1. MINIMUM LAP SPLICE LENGTHS, NORMAL WEIGHT CONCRETE.
   2'-1" (#4 BARS)
   2'-7" (#5 BARS)
   3'-1" (#6 BARS)
2. BARRIER & SIDEWALK REINFORCEMENT ANCHORED INTO APPROACH SLAB IS NOT SHOWN ON THIS SHEET. SEE APPROACH SLAB PLANS.



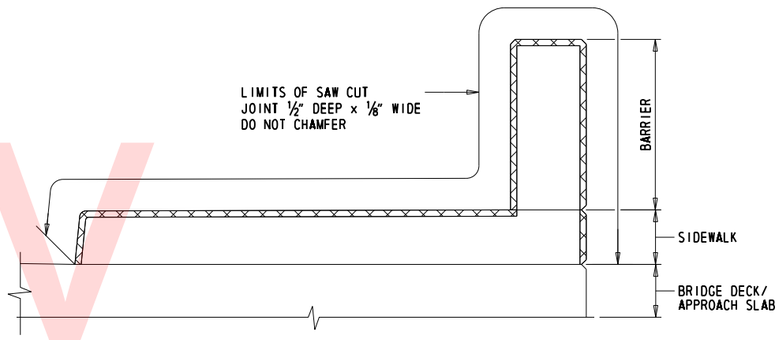
BARRIER CONTROL JOINT DETAIL (ELEVATION)

NOT TO SCALE



BARRIER CONTRACTION JOINT DETAIL (ELEVATION)

NOT TO SCALE



SECTION A-A

REINFORCEMENT NOT SHOWN FOR CLARITY
NOT TO SCALE

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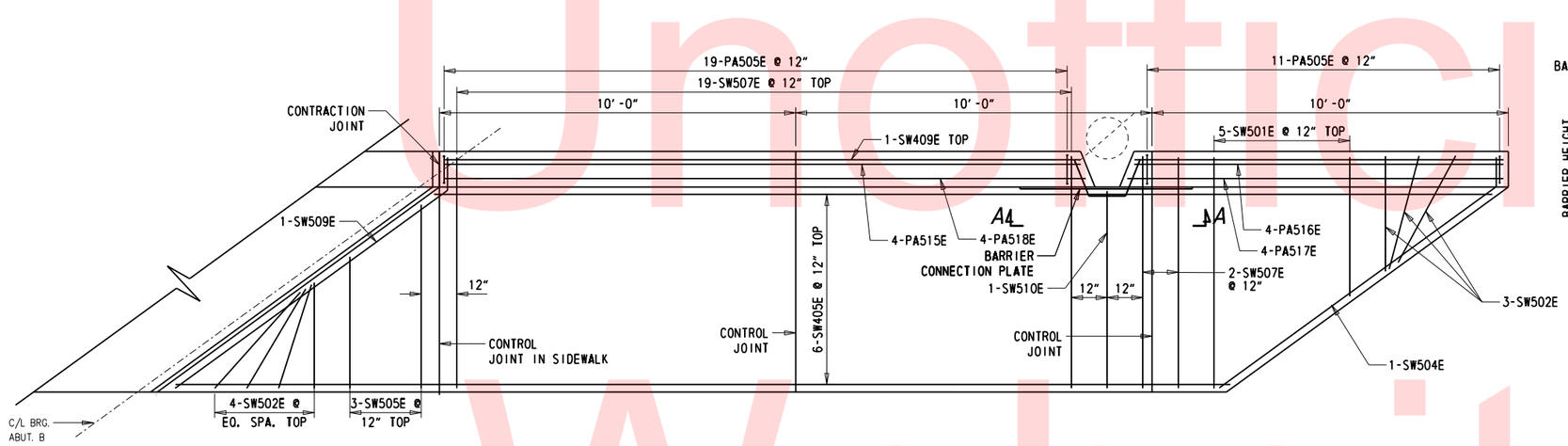
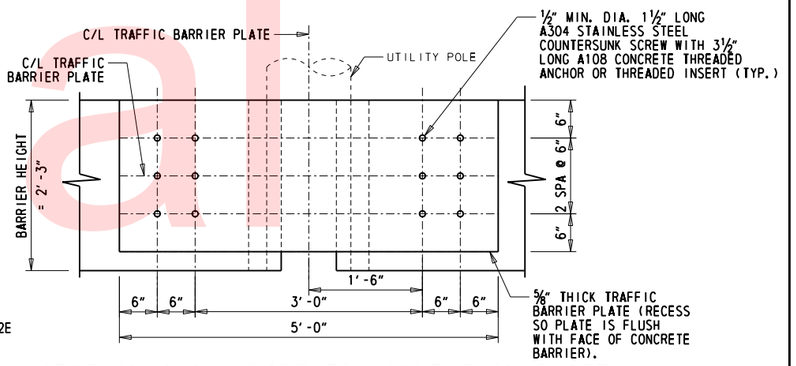
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	BRIDGE BARRIER & SIDEWALK REINFORCEMENT ON APPROACH SLAB B - PLAN AND ELEVATION - 1	SHEET NO. 53
				COUNTY NEW CASTLE	DESIGNED BY: RPG		TOTAL SHTS. 71
					CHECKED BY: JAM		



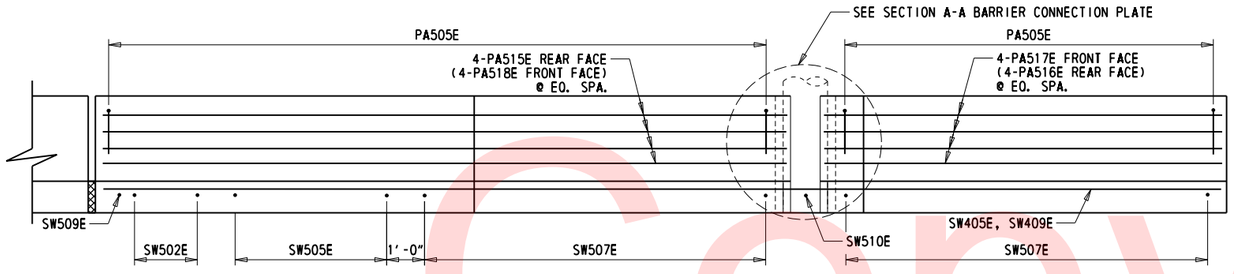
PLAN - BARRIER AND SIDEWALK - APPROACH SLAB AROUND UTILITY POLE

ABUTMENT B WEST APPROACH SLAB BARRIER
SCALE: ½" = 1'-0"



SECTION A-A - BARRIER CONNECTION PLATE

SCALE: 1" = 1'-0"



ELEVATION - BARRIER AND SIDEWALK - APPROACH SLAB AROUND UTILITY POLE

ABUTMENT B WEST APPROACH SLAB BARRIER
SCALE: ½" = 1'-0"

CROSS REFERENCE NOTES:

1. WORK THIS SHEET WITH SHEETS 45 AND 53.
2. FOR APPROACH SLAB AND SLEEPER SLAB DETAILS, SEE SHEET 49-51.

NOTES:

1. MINIMUM LAP SPLICE LENGTHS, NORMAL WEIGHT CONCRETE.
   2'-1" (#4 BARS)
   2'-7" (#5 BARS)
   3'-1" (#6 BARS)
2. BARRIER & SIDEWALK REINFORCEMENT ANCHORED INTO THE APPROACH SLAB IS NOT SHOWN ON THIS SHEET. SEE APPROACH SLAB PLANS.
3. BARRIER AND SIDEWALK ON ABUTMENT B WEST SLEEPER SLAB DETAILS TO MATCH ABUTMENT A EAST SLEEPER SLAB, AS SHOWN ON SHEET 52, AND ROTATED 180 DEGREES.

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO.	1-634	BRIDGE BARRIER & SIDEWALK REINFORCEMENT ON APPROACH SLAB B - PLAN AND ELEVATION - 2	SHEET NO. 54
				COUNTY NEW CASTLE	DESIGNED BY:	RPG		TOTAL SHTS. 71
					CHECKED BY:	JAM		

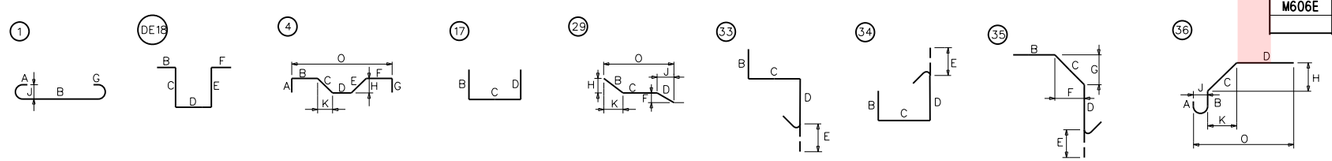
REINFORCEMENT BAR SCHEDULE

DECK REINFORCEMENT SCHEDULE (STAGE 1)

MARK	LENGTH	NUMBER	TYPE	A	B	C	D	G	J	O	R	REMARKS
S501E	33'-5⅝"	2	29		9"	32'-8⅝"	0"		0"	33'-1⅝"		F=0"; H=5¼"; K=5¼"
S502E	35'-7¼"	4	STR									
S504E	7'-8½"	185	17		3'-6¼"	8"	3'-6¼"					
S505E	46'-10"	78	STR									
S506E	21'-9½"	152	STR									
S507E	42'-9¼"	156	STR									
S508E	56'-5¼"	78	STR									
S509E	33'-7⅝"	2	29		11"	32'-8⅝"	0"			33'-3⅛"		F=0"; H=8⅞"; K=6½"
S520E	VARIES 3'-9" TO 36'-11½"	47	1	7"	VARIES 2'-7" TO 35'-9½"			7"	5"			VARY IN LENGTH BY 8⅜" EVERY BAR
S521E	VARIES 2'-7" TO 35'-9½"	47	STR									VARY IN LENGTH BY 8⅜" EVERY BAR
S522E	VARIES 6'-7½" TO 10'-3¼"	6	1	7"	VARIES 6'-0½" TO 9'-8¼"			0"	5"			VARY IN LENGTH BY 8¾" EVERY BAR
S523E	VARIES 6'-0½" TO 9'-8¼"	6	STR									VARY IN LENGTH BY 8¾" EVERY BAR
S525E	33'-3¾"	12	STR									
S526E	VARIES 10'-11⅝" TO 25'-7½"	22	1	7"	VARIES 10'-4⅝" TO 25'-0½"			0"	5"			VARY IN LENGTH BY 8⅜" EVERY BAR
S527E	VARIES 10'-4⅜" TO 25'-0½"	22	STR									VARY IN LENGTH BY 8⅜" EVERY BAR
S529E	VARIES 17'-11¼" TO 32'-7⅛"	44	STR									VARY IN LENGTH BY 8⅜" EVERY BAR
S532E	VARIES 26'-4¼" TO 37'-7¼"	19	1	7"	VARIES 25'-9¼" TO 37'-0¼"			0"	5"			VARY IN LENGTH BY 7½" EVERY BAR
S533E	VARIES 25'-9¼" TO 37'-0¼"	19	STR									VARY IN LENGTH BY 7½" EVERY BAR
S535E	VARIES 5'-10⅛" TO 17'-1"	38	STR									VARY IN LENGTH BY 7½" EVERY BAR
S538E	40'-9"	36	1	7"	40'-2"			0"	5"			
S539E	40'-2"	36	STR									
S544E	VARIES 6'-7⅜" TO 39'-10⅞"	48	1	7"	VARIES 6'-0⅜" TO 39'-3⅜"			0"	5"			VARY IN LENGTH BY 8½" EVERY BAR
S545E	VARIES 6'-0⅜" TO 39'-3⅜"	48	STR									VARY IN LENGTH BY 8½" EVERY BAR
S547E	VARIES 3'-5" TO 36'-8½"	96	STR									VARY IN LENGTH BY 8½" EVERY BAR
S548E	40'-9"	4	1	7"				0"	5"			
S549E	40'-2"	4	STR									
S550E	VARIES 26'-2¾" TO 38'-6¾"	17	1	7"	VARIES 25'-7¾" TO 37'-11¾"			0"	5"			VARY IN LENGTH BY 9¼" EVERY BAR
S551E	VARIES 25'-7¾" TO 37'-11¾"	17	STR									VARY IN LENGTH BY 9¼" EVERY BAR
S556E	VARIES 4'-7⅜" TO 25'-6⅝"	31	1	7"	VARIES 4'-0⅜" TO 24'-11⅝"			0"	5"			VARY IN LENGTH BY 8⅜" EVERY BAR
S557E	VARIES 4'-0⅜" TO 24'-11⅝"	31	STR									VARY IN LENGTH BY 8⅜" EVERY BAR
S560E	2'-7"	2	STR									
S570E	6'-3"	190	4	0"	2'-7"	1'-1"	2'-7"	0"				E=0", F=0", H=1'-1", K=1"
S601E	13'-1"	323	1	8"	12'-5"			0"	6"			
S602E	21'-9¼"	72	1	8"	21'-1¼"			0"	6"			

DECK REINFORCEMENT SCHEDULE (STAGE 2)

MARK	LENGTH	NUMBER	TYPE	A	B	C	D	G	J	O	R	REMARKS
S503E	33'-1⅛"	2	29		11"	32'-2⅛"	0"		0"	32'-8⅝"		F=0"; H=8⅞"; K=6½"
S504E	7'-8½"	185	17		3'-6¼"	8"	3'-6¼"					
S505E	46'-10"	42	STR									
S506E	21'-9½"	80	STR									
S507E	42'-9¼"	84	STR									
S508E	56'-5¼"	42	STR									
S510E	32'-11⅛"	2	29		9"	32'-2⅛"	0"			32'-7⅜"		F=0"; H=7¼"; K=5¼"
S531E	VARIES 3'-6⅜" TO 18'-2¼"	44	STR									VARY IN LENGTH BY 8⅜" EVERY BAR
S536E	20'-5"	121	1	7"	19'-10"			0"	5"			
S537E	19'-10"	121	STR									
S541E	VARIES 6'-10⅝" TO 16'-8⅜"	34	STR									VARY IN LENGTH BY 7⅜" EVERY BAR
S542E	VARIES 6'-11⅜" TO 15'-9⅜"	17	1	7"	VARIES 6'-4⅜" TO 15'-2⅜"			0"	5"			VARY IN LENGTH BY 6⅜" EVERY BAR
S543E	VARIES 6'-4⅜" TO 15'-2⅜"	17	STR									VARY IN LENGTH BY 6⅜" EVERY BAR
S553E	VARIES 6'-1¼" TO 16'-9¼"	34	STR									VARY IN LENGTH BY 8" EVERY BAR
S554E	VARIES 6'-6" TO 16'-2"	17	1	7"	VARIES 5'-11" TO 15'-7"			0"	5"			VARY IN LENGTH BY 7¼" EVERY BAR
S555E	VARIES 5'-11" TO 15'-7"	17	STR									VARY IN LENGTH BY 7¼" EVERY BAR
S558E	VARIES 3'-2" TO 20'-5"	25	1	7"	VARIES 2'-7" TO 19'-10"			7"	5"			VARY IN LENGTH BY 8⅜" EVERY BAR
S559E	VARIES 2'-7" TO 19'-10"	25	STR									VARY IN LENGTH BY 8⅜" EVERY BAR
S560E	2'-7"	2	STR									
S570E	6'-3"	190	4	0"	2'-7"	1'-1"	2'-7"	0"				E=0", F=0", H=1'-1", K=1"
S601E	13'-1"	323	1	8"	12'-5"			0"	6"			
S602E	21'-9¼"	72	1	8"	21'-1¼"			0"	6"			



CONTINUITY DIAPHRAGM REINFORCEMENT SCHEDULE (STAGE 1)

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
M401E	136	10'-9¾"	DE18		1'-3"	2'-8⅞"	2'-10"	2'-8⅞"		F=1'-3"
M406E	16	5'-11⅞"	DE18		1'-3"	1'-10⅛"	2'-10"	1'-10⅛"		F=1'-3"
M501E	72	12'-6⅛"	STR							
M502E	16	6'-1"	STR							
M504E	16	8'-10"	STR							
M507E	16	13'-8⅜"	4	0	2'-7"	9"	10'-4 3/8"	0		K=5"; H=7⅛"; F=0"; G=0"

CONTINUITY DIAPHRAGM REINFORCEMENT SCHEDULE (STAGE 2)

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
M401E	64	10'-9¾"	DE18		1'-3"	2'-8⅞"	2'-10"	2'-8⅞"		F=1'-3"
M406E	16	5'-11⅞"	DE18		1'-3"	1'-10⅛"	2'-10"	1'-10⅛"		F=1'-3"
M501E	8	12'-6⅛"	STR							
M502E	8	6'-1"	STR							
M503E	16	16'-0⅛"	STR							
M505E	8	6'-4⅝"	4	0	0	0	3'-0⅝"	9"		F=2'-7", G=0"; K=5"; H=7⅛"
M506E	8	12'-10"	4	0	2'-7"	9"	9'-6"	0		K=5"; H=7⅛"; F=0"; G=0"

END DIAPHRAGM REINFORCEMENT SCHEDULE (STAGE 1)

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
M402E	136	3'-8⅜"	33		4⅝"	1'-5"	1'-6¼"	4½"		
M403E	136	6'-4⅛"	34		1'-9⅛"	2'-8¼"	1'-6¼"	4½"		
M404E	136	4'-10"	35		1'-0"	1'-8¾"	1'-8¾"	4½"		G=10½"; F=1'-5⅞"
M405E	136	5'-3"	17		3'-0"	2'-3"	0"			
M407E	8	3'-10⅝"	35		1'-0"	1'-8¾"	9⅜"	4½"		G=10½"; F=1'-5⅞"
M408E	8	3'-9⅜"	17		1'-2⅛"	2'-8¼"	0"			
M409E	8	3'-7⅛"	34		0"	2'-8¼"	6⅜"	4½"		
M410E	8	2'-8⅝"	33		4⅝"	1'-5"	6½"	4½"		
M411E	8	4'-11"	17		3'-0"	1'-11"	0"			
M501E	82	12'-6⅛"	STR							
M502E	18	6'-1"	STR							
M504E	18	8'-10"	STR							
M507E	16	13'-8⅜"	4	0	2'-7"	9"	10'-4⅜"	0		K=5"; H=7⅛"; F=0"; G=0"
M601E	10	13'-0"	STR							
M602E	2	6'-4"	STR							
M603E	136	4'-7⅛"	36	8"	9"	2'-2⅛"	1'-0"			H=1'-6½"; K=1'-6½"; J=6"; O=3'-0½"
M605E	2	9'-7"	STR							
M606E	8	4'-2⅛"	36	5½"	6½"	2'-2⅛"	1'-0"			J=6"; H=1'-6½"; K=1'-6½"; O=3'-0½"

END DIAPHRAGM REINFORCEMENT SCHEDULE (STAGE 2)

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
M402E	64	3'-8⅜"	33		4⅝"	1'-5"	1'-6¼"	4½"		
M403E	64	6'-4⅛"	34		1'-9⅛"	2'-8¼"	1'-6¼"	4½"		
M404E	64	4'-10"	35		1'-0"	1'-8¾"	1'-8¾"	4½"		G=10½"; F=1'-5⅞"
M405E	64	5'-3"	17		3'-0"	2'-3"	0"			
M407E	8	3'-10⅝"	35		1'-0"	1'-8¾"	9⅜"	4½"		G=10½"; F=1'-5⅞"
M408E	8	3'-9⅜"	17		1'-2⅛"	2'-8¼"	0"			
M409E	8	3'-7⅛"	34		0"	2'-8¼"	6⅜"	4½"		
M410E	8	2'-8⅝"	33		4⅝"	1'-5"	6½"	4½"		
M411E	8	4'-11"	17		3'-0"	1'-11"	0"			
M501E	10	12'-6⅛"	STR							
M502E	8	6'-1"	STR							
M503E	18	16'-4⅝"	STR							
M505E	8	6'-5⅛"	4	0"	0"	0"	3'-6⅜"	9"		F=2'-7", G=0"; K=5"; H=7⅛"
M506E	8	12'-10"	4	0"	2'-7"	9"	9'-6"	0"		K=5"; H=7⅛"; F=0"; G=0"
M601E	2	13'-0"	STR							
M602E	2	6'-4"	STR							
M603E	64	4'-7⅛"	36	8"	9"	2'-2⅛"	1'-0"			H=1'-6½"; K=1'-6½"; J=6"; O=3'-0½"
M604E	2	16'-3⅛"	STR							
M606E	8	4'-2⅛"	36	5½"	6½"	2'-2⅛"	1'-0"			J=6"; H=1'-6½"; K=1'-6½"; O=3'-0½"

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	BRIDGE NO.	1-634
T201507403	DESIGNED BY:	SCF
COUNTY	CHECKED BY:	RPG
NEW CASTLE		

SUPERSTRUCTURE
REINFORCEMENT
SCHEDULE - 1

SHEET NO.
55
TOTAL SHTS.
71

REINFORCEMENT BAR SCHEDULE

APPROACH SLAB REINFORCEMENT SCHEDULE AT ABUTMENT A (STAGE 1)

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
AS501E	5	1	35′-4¾″	12	0″	0″	9″	34′-7¾″			K=20′-4⅜″; H=28′-0⅜″; O=21′-1⅜″; J=0″
AS502E	5	1	35′-3⅞″	12	0″	0″	11″	34′-4⅞″			K=20′-2⅜″; H=27′-9⅝″; O=21′-1⅜″; J=0″
AS503E	5	3	35′-11⅛″	STR							
AS512E	5	5	3′-1″	STR							
AS515E	5	22	9′-2″	17		4′-3″	8″	4′-3″			
AS516E	5	32	6′-11″	4	0″	2′-7″	1′-9″	2′-7″	0″		K=1″; O=5′-3″; H=1′-9″
AS517E	5	23	6′-1⅞″	17		2′-7″	11⅞″	2′-7″			
AS518E	5	78	6′-2½″	17		2′-7″	1′-0½″	2′-7″			
AS521E	5	18	VARIES 3′-5⅜″ TO 15′-5⅞″	STR							VARY IN LENGTH BY 8½″ EVERY BAR
AS522E	5	35	14′-5¾″	STR							
AS523E	5	15	VARIES 4′-0⅝″ TO 14′-1⅜″	STR							VARY IN LENGTH BY 8⅜″ EVERY BAR
AS527E	5	1	20′-2″	STR							
AS528E	5	38	19′-11¼″	STR							
AS601E	6	1	35′-4¾″	12	0″	0″	9″	34′-7¾″			K=20′-4⅜″; H=28′-0⅜″; O=21′-1⅜″; J=0″
AS602E	6	1	35′-3⅞″	12	0″	0″	11″	34′-4⅞″			K=20′-2⅜″; H=27′-9⅝″; O=21′-1⅜″; J=0″
AS603E	6	3	35′-11⅛″	STR							
AS612E	6	8	3′-1″	STR							
AS614E	6	34	VARIES 3′-5⅜″ TO 15′-5¾″	STR							VARY IN LENGTH BY 4⅛″ EVERY BAR
AS615E	6	69	14′-5¾″	STR							
AS616E	6	29	VARIES 4′-1″ TO 14′-0″	STR							VARY IN LENGTH BY 4¼″ EVERY BAR
AS1003E	10	3	20′-2″	STR							
AS1004E	10	74	19′-11¼″	STR							
SS501E	5	42	34′-9⅛″	STR							
SS503E	5	39	11′-11¾″	T1	5½″	2′-11⅞″	2′-6½″	2′-11⅞″	2′-6½″		G=5½″
SS504E	5	14	VARIES 33′-9¾″ TO 34′-2⅜″	12	0″	0″	VARIES 7⅝″ TO 1′-0¼″	33′-2⅛″			K=19′-6″; H=26′-10⅛″; O VARIES 20′-1⅝″ TO 20′-6¼″
SS507E	5	5	9′-2″	17		4′-3″	8″	4′-3″			
SS508E	5	5	6′-11″	4	0″	2′-7″	1′-9″	2′-7″	0″		K=1″; O=5′-3″; H=1′-9″
SS801E	8	72	11′-10⅞″	STR							
SS802E	8	8	VARIES 6′-10⅞″ TO 11′-10⅞″	STR							VARY IN LENGTH 1′-8″ EVERY BAR

APPROACH SLAB REINFORCEMENT SCHEDULE AT ABUTMENT A (STAGE 2)

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
AS505E	5	1	33′-2⅝″	12	0″	0″	9″	32′-5⅝″			K=19′-1″; H=26′-3¼″; O=19′-10″; J=0″
AS512E	5	5	3′-1″	STR							
AS515E	5	22	9′-2″	17		4′-3″	8″	4′-3″			
AS516E	5	32	6′-11″	4	0″	2′-7″	1′-9″	2′-7″	0″		K=1″; O=5′-3″; H=1′-9″
AS517E	5	23	6′-1⅞″	17		2′-7″	11⅞″	2′-7″			
AS518E	5	42	6′-2½″	17		2′-7″	1′-0½″	2′-7″			
AS522E	5	7	14′-5¾″	STR							
AS524E	5	16	VARIES 3′-5⅜″ TO 14′-4⅝″	STR							VARY IN LENGTH BY 8¼″ EVERY BAR
AS525E	5	1	20′-5⅜″	STR							
AS526E	5	18	VARIES 3′-5⅜″ TO 15′-1⅞″	STR							VARY IN LENGTH BY 8¼″ EVERY BAR
AS528E	5	20	19′-11¼″	STR							
AS529E	5	1	32′-11½″	12	0″	0″	1′-1½″	31′-10″			K=18′-8½″; H=25′-9⅛″; O=19′-10″; J=0″
AS605E	6	1	33′-2⅝″	12	0″	0″	9″	32′-5⅝″			K=19′-1″; H=26′-6¼″; O=19′-10″; J=0″
AS612E	6	8	3′-1″	STR							
AS615E	6	13	14′-5¾″	STR							
AS617E	6	32	VARIES 3′-6″ TO 14′-5¾″	STR							VARY IN LENGTH BY 4¼″ EVERY BAR
AS618E	6	33	VARIES 3′-5⅜″ TO 15′-0½″	STR							VARY IN LENGTH BY 4⅜″ EVERY BAR
AS620E	6	1	32′-11½″	12	0″	0″	1′-1½″	31′-10″			K=18′-8½″; H=25′-9⅛″; O=19′-10″; J=0″
AS1004E	10	39	19′-11¼″	STR							
AS1005E	10	3	20′-4⅜″	STR							
SS503E	5	21	11′-11¾″	T1	5½″	2′-11⅞″	2′-6½″	2′-11⅞″	2′-6½″		G=5½″
SS505E	5	14	VARIES 32′-9½″ TO 33′-2″	12	0″	0″	VARIES 7¾″ TO 1′-0¼″	32′-1¾″			K=18′-10¾″; H=26′-0″; O VARIES 19′-6½″ TO 19′-11″
SS506E	5	14	30′-5¾″	STR							
SS507E	5	5	9′-2″	17		4′-3″	8″	4′-3″			
SS508E	5	5	6′-11″	4	0″	2′-7″	1′-9″	2′-7″	0″		K=1″; O=5′-3″; H=1′-9″
SS801E	8	38	11′-10⅞″	STR							
SS803E	8	2	2′-11⅞″	STR							
SS804E	8	2	2′-6⅝″	STR							

SIDEWALK AND BARRIER REINFORCEMENT ON APPROACH SLAB AT ABUTMENT A (STAGE 1)

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
SW407E	4	6	2′-10″	STR							
SW415E	4	6	19′-11¼″	STR							
SW417E	4	2	20′-2″	STR							
SW418E	4	2	3′-4¼″	STR							
SW501E	5	5	VARIES 3′-3⅝″ TO 6′-2⅝″	STR							VARY IN LENGTH BY 8¾″ EVERY BAR
SW502E	5	7	2′-7″	STR							
SW504E	5	5	10′-2⅛″	12	0″	0″	9″	9′-5⅛″			J=0″; K=5′-6½″; H=7′-7½″; O=6′-3½″
SW505E	5	3	VARIES 3′-3¾″ TO 4′-9″	STR							VARY IN LENGTH BY 8⅝″ EVERY BAR
SW507E	5	13	6′-2⅞″	STR							
SW508E	5	1	9′-11″	12	0″	0″	1′-1½″	8′-9½″			J=0″; K=5′-2″; H=7′-1½″; O=6′-3½″
SW509E	5	1	10′-0¾″	12	0″	0″	11″	9′-1¾″			J=0″; K=5′-4½″; H=7′-4¾″; O=6′-3½″
PA505E	5	27	3′-8″	17		1′-6″	8″	1′-6″			
PA520E	5	8	20′-2″	STR							
PA521E	5	8	3′-3″	STR							

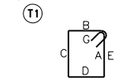
SIDEWALK AND BARRIER REINFORCEMENT ON APPROACH SLAB AT ABUTMENT A (STAGE 2)

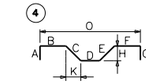
MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
SW407E	4	6	2′-10″	STR							
SW408E	4	2	3′-0⅞″	STR							
SW415E	4	6	19′-11¼″	STR							
SW416E	4	2	20′-5⅜″	STR							
SW501E	5	5	VARIES 3′-3⅝″ TO 6′-2⅝″	STR							VARY IN LENGTH BY 8¾″ EVERY BAR
SW502E	5	7	2′-7″	STR							
SW504E	5	5	10′-2⅛″	12	0″	0″	9″	9′-5⅛″			J=0″; K=5′-6½″; H=7′-7½″; O=6′-3½″
SW505E	5	3	VARIES 3′-3¾″ TO 4′-9″	STR							VARY IN LENGTH BY 8⅝″ EVERY BAR
SW507E	5	13	6′-2⅞″	STR							
SW508E	5	1	9′-11″	12	0″	0″	1′-1½″	8′-9½″			J=0″; K=5′-2″; H=7′-1½″; O=6′-3½″
SW509E	5	1	10′-0¾″	12	0″	0″	11″	9′-1¾″			J=0″; K=5′-4½″; H=7′-4¾″; O=6′-3½″
PA504E	5	8	2′-11⅞″	STR							
PA505E	5	27	3′-8″	17		1′-6″	8″	1′-6″			
PA519E	5	8	20′-5⅜″	STR							

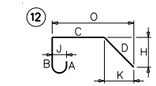
SIDEWALK AND BARRIER REINFORCEMENT ON DECK (STAGE 1 AND 2)

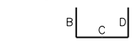
MARK	SIZE	STAGE 1 NUMBER	STAGE 2 NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
SW401E	4	6	6	VARIES 15′-11⅝″ TO 22′-10¼″	STR							VARY IN LENGTH BY 1′-4⅝″ EVERY BAR
SW402E	4	2	2	23′-6¼″	STR							
SW403E	4	6	6	VARIES 26′-3¾″ TO 19′-6⅛″	STR							VARY IN LENGTH BY 1′-4¼″ EVERY BAR
SW404E	4	2	2	18′-11⅞″	STR							
SW411E	4	8	8	24′-3¾″	STR							
SW412E	4	16	16	26′-3⅝″	STR							
SW413E	4	8	8	26′-2″	STR							
SW414E	4	8	8	28′-7⅝″	STR							
SW501E	5	5	5	VARIES 3′-3¾″ TO 6′-2⅝″	STR							VARY IN LENGTH BY 8¾″ EVERY BAR
SW502E	5	7	7	2′-7″	STR							
SW503E	5	176	176	6′-3½″	STR							
SW504E	5	1	1	10′-2⅛″	12	0″	0″	9″	9′-5⅛″			J=0″; K=5′-6½″; H=7′-7½″; O=6′-3½″
SW505E	5	3	3	VARIES 3′-3¾″ TO 4′-9⅛″	STR							VARY IN LENGTH BY 8 3/4″ EVERY BAR
SW506E	5	1	1	9′-11⅝″	12	0″	0″	11″	9′-0⅝″			J=0″; K=5′-3⅞″; H=7′-3⅞″; O=6′-2⅞″
PA501E	5	8	8	23′-6¼″	STR							
PA502E	5	8	8	18′-11⅞″	STR							
PA505E	5	185	185	3′-8″	17		1′-6″	8″	1′-6″			
PA506E	5	20•	20•	4′-4⅛″	17		1′-6″	11⅛″	1′-11″			
PA507E	5	40•	40•	6′-8¾″	4	0″	2′-7″	5⅞″	7½″	5⅝″		F=2′-7″; K=2½″; H=5″; G=0
PA511E	5	8	8	24′-3¾″	STR							
PA512E	5	16	16	26′-3⅝″	STR							
PA513E	5	8	8	26′-2″	STR							
PA514E	5	8	8	28′-7⅝″	STR							

• SEE NOTE 1.









NOTE:

1. QUANTITY OF BAR ASSUMES 10 SAFETY FENCE POSTS ON EACH SIDE OF THE BRIDGE. ACTUAL QUANTITY IS SUBJECT TO CONTRACTOR'S PROPOSED RAIL & FENCE LAYOUT & MAY VARY.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

NOT TO SCALE

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

CONTRACT	T201507403	BRIDGE NO.	1-634
COUNTY	NEW CASTLE	DESIGNED BY:	RPG
		CHECKED BY:	SCF

SUPERSTRUCTURE REINFORCEMENT SCHEDULE - 2

SHEET NO.	56
TOTAL SHTS.	71

P:\60323054 DELDOT AGR 1672 BDS\T07 - REHAB BR. 1-634\900 CAD\20 SHEETS\STRUCTURES\BR1-634\BR-634-RE01.DGN

REINFORCEMENT BAR SCHEDULE

APPROACH SLAB REINFORCEMENT SCHEDULE AT ABUTMENT B (STAGE 1)

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
AS501E	5	1	35′ -4¾″	12	0″	0″	9″	34′ -7¾″			K=20′ -4⅜″; H=28′ -0⅜″; O=21′ -1⅜″; J=0″
AS503E	5	3	35′ -11⅛″	STR							
AS506E	5	27	VARIES 3′ -5⅛″ TO 22′ -1⅜″	STR							VARY IN LENGTH BY 8⅜″ EVERY BAR
AS507E	5	26	21′ -4⅝″	STR							
AS508E	5	26	VARIES 4′ -1⅛″ TO 21′ -0¼″	STR							VARY IN LENGTH BY 8⅛″ EVERY BAR
AS512E	5	5	3′ -1″	STR							
AS513E	5	1	29′ -11⅜″	STR							
AS514E	5	38	29′ -5¼″	STR							
AS515E	5	31	9′ -2″	17		4′ -3″	8″	4′ -3″			
AS516E	5	42	6′ -11″	4	0″	2′ -7″	1′ -9″	2′ -7″	0″		K=1″; O=5′ -3″; H=1′ -9″
AS517E	5	32	6′ -1⅞″	17		2′ -7″	11⅞″	2′ -7″			
AS518E	5	78	6′ -2½″	17		2′ -7″	1′ -0½″	2′ -7″			
AS530E	5	1	35′ -5⅞″	12	0″	0″	1′ -1½″	34′ -4⅜″			K=20′ -2⅜″; H=27′ -9⅝″; O=21′ -3⅞″; J=0″
AS601E	6	1	35′ -4¾″	12	0″	0″	9″	34′ -7¾″			K=20′ -4⅜″; H=28′ -0⅜″; O=21′ -1⅜″; J=0″
AS603E	6	3	35′ -11⅛″	STR							
AS606E	6	53	VARIES 3′ -5⅛″ TO 22′ -1⅜″	STR							VARY IN LENGTH BY 4⅜″ EVERY BAR
AS607E	6	51	21′ -4⅝″	STR							
AS608E	6	50	VARIES 3′ -1⅞″ TO 21′ -0¼″	STR							VARY IN LENGTH BY 4⅛″ EVERY BAR
AS612E	6	8	3′ -1″	STR							
AS619E	6	1	35′ -5⅞″	12	0″	0″	1′ -1½″	34′ -4⅜″			K=20′ -2⅜″; H=27′ -9⅝″; O=21′ -3⅞″; J=0″
AS1001E	10	3	29′ -11⅜″	STR							
AS1002E	10	74	29′ -5¼″	STR							
SS501E	5	50	34′ -9¼″	STR							
SS503E	5	39	11′ -11¾″	T1	5½″	2′ -11⅞″	2′ -6½″	2′ -11⅞″	2′ -6½″		G=5½″
SS504E	5	6	VARIES 33′ -9¾″ TO 34′ -2⅜″	12	0″	0″	VARIES 7⅝″ TO 1′ -0¼″	33′ -2⅛″			K=19′ -6″; H=26′ -10⅛″; O VARIES 20′ -1⅝″ TO 20′ -6¼″
SS507E	5	5	9′ -2″	17		4′ -3″	8″	4′ -3″			
SS508E	5	5	6′ -11″	4	0″	2′ -7″	1′ -9″	2′ -7″	0″		K=1″; O=5′ -3″; H=1′ -9″
SS801E	8	78	11′ -10⅞″	STR							

APPROACH SLAB REINFORCEMENT SCHEDULE AT ABUTMENT B (STAGE 2)

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
AS504E	5	1	33′ -1⅛″	12	0″	0″	11″	32′ -2⅛″			K=18′ -11″; H=26′ -0⅜″; O=19′ -10″; J=0″
AS505E	5	1	33′ -2⅞″	12	0″	0″	9″	32′ -5⅝″			K=19′ -1″; H=26′ -3¼″; O=19′ -10″; J=0″
AS509E	5	23	VARIES 3′ -5⅜″ TO 18′ -9⅝″	STR							VARY IN LENGTH BY 8⅜″ EVERY BAR
AS510E	5	4	19′ -10″	STR							
AS511E	5	24	VARIES 3′ -5⅞″ TO 19′ -5⅞″	STR							VARY IN LENGTH BY 8⅛″ EVERY BAR
AS512E	5	5	3′ -1″	STR							
AS514E	5	20	29′ -5¼″	STR							
AS515E	5	31	9′ -2″	17		4′ -3″	8″	4′ -3″			
AS516E	5	42	6′ -11″	4	0″	2′ -7″	1′ -9″	2′ -7″	0″		K=1″; O=5′ -3″; H=1′ -9″
AS517E	5	33	6′ -1⅞″	17		2′ -7″	11⅞″	2′ -7″			
AS518E	5	42	6′ -2½″	17		2′ -7″	1′ -0½″	2′ -7″			
AS519E	5	2	VARIES 8′ -3⅜″ TO 7′ -6⅝″	STR							VARY IN LENGTH BY 8¾″ EVERY BAR
AS520E	5	2	31′ -0⅜″	4	0″	10′ -2¾″	1′ -1″	11″	1′ -1″		F=17′ -8⅝″; K=4⅞″; H=1′ -0″; G=0″
AS604E	6	1	33′ -1⅛″	12	0″	0″	11″	32′ -2⅛″			K=18′ -11″; H=26′ -0⅜″; O=19′ -10″; J=0″
AS605E	6	1	33′ -2⅞″	12	0″	0″	9″	32′ -5⅝″			K=19′ -1″; H=26′ -3¼″; O=19′ -10″; J=0″
AS609E	6	44	VARIES 3′ -5⅜″ TO 18′ -8⅛″	STR							VARY IN LENGTH BY 4¼″ EVERY BAR
AS610E	6	7	19′ -10″	STR							
AS611E	6	46	VARIES 3′ -5⅞″ TO 19′ -4⅞″	STR							VARY IN LENGTH BY 4¼″ EVERY BAR
AS612E	6	8	3′ -1″	STR							
AS613E	6	3	VARIES 8′ -3⅜″ TO 7′ -6⅝″	STR							VARY IN LENGTH BY 4⅜″ EVERY BAR
AS1002E	10	39	29′ -5¼″	STR							
SS502E	5	22	33′ -7¼″	STR							
SS503E	5	21	11′ -11¾″	T1	5½″	2′ -11⅞″	2′ -6½″	2′ -11⅞″	2′ -6½″		G=5½″
SS505E	5	6	VARIES 32′ -9½″ TO 33′ -2″	12	0″	0″	VARIES 7¾″ TO 1′ -0¼″	32′ -1¾″			K=18′ -10¾″; H=26′ -0″; O VARIES 19′ -6½″ TO 19′ -11″
SS507E	5	5	9′ -2″	17		4′ -3″	8″	4′ -3″			
SS508E	5	5	6′ -11″	4	0″	2′ -7″	1′ -9″	2′ -7″	0″		K=1″; O=5′ -3″; H=1′ -9″
SS801E	8	42	11′ -10⅞″	STR							

SIDEWALK AND BARRIER REINFORCEMENT ON APPROACH SLAB AT ABUTMENT B (STAGE 1)

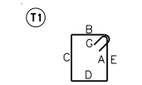
MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
SW405E	4	6	29′ -5¼″	STR							
SW406E	4	2	29′ -11⅜″	STR							
SW407E	4	6	2′ -10″	STR							
SW408E	4	2	3′ -0⅞″	STR							
SW501E	5	5	VARIES 3′ -3⅝″ TO 6′ -2⅝″	STR							VARY IN LENGTH BY 8¾″ EVERY BAR
SW502E	5	7	2′ -7″	STR							
SW504E	5	5	10′ -2⅛″	12	0″	0″	9″	9′ -5⅛″			J=0″; K=5′ -6½″; H=7′ -7½″; O=6′ -3½″
SW505E	5	3	VARIES 3′ -3¾″ TO 4′ -9″	STR							VARY IN LENGTH BY 8⅝″ EVERY BAR
SW507E	5	22	6′ -2⅞″	STR							
SW508E	5	1	9′ -11″	12	0″	0″	1′ -1½″	8′ -9½″			J=0″; K=5′ -2″; H=7′ -1½″; O=6′ -3½″
SW509E	5	1	10′ -0¾″	12	0″	0″	11″	9′ -1¾″			J=0″; K=5′ -4½″; H=7′ -4¾″; O=6′ -3½″
PA503E	5	8	29′ -11⅜″	STR							
PA504E	5	8	2′ -11⅞″	STR							
PA505E	5	36	3′ -8″	17		1′ -6″	8″	1′ -6″			

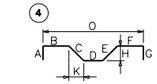
SIDEWALK AND BARRIER REINFORCEMENT ON APPROACH SLAB AT ABUTMENT B (STAGE 2)

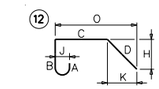
MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
SW405E	4	6	29′ -5¼″	STR							
SW407E	4	6	2′ -10″	STR							
SW409E	4	1	31′ -11⅜″	4	0″	17′ -8⅞″	1′ -0¼″	11″	1′ -0¼″		F=10′ -3″; K=4⅝″; H=11⅜″
SW418E	4	2	3′ -4¼″	STR							
SW501E	5	5	VARIES 3′ -3⅝″ TO 6′ -2⅝″	STR							VARY IN LENGTH BY 8¾″ EVERY BAR
SW502E	5	7	2′ -7″	STR							
SW504E	5	5	10′ -2⅛″	12	0″	0″	9″	9′ -5⅛″			J=0″; K=5′ -6½″; H=7′ -7½″; O=6′ -3½″
SW505E	5	3	VARIES 3′ -3¾″ TO 4′ -9″	STR							VARY IN LENGTH BY 8⅝″ EVERY BAR
SW507E	5	21	6′ -2⅞″	STR							
SW508E	5	1	9′ -11″	12	0″	0″	1′ -1½″	8′ -9½″			J=0″; K=5′ -2″; H=7′ -1½″; O=6′ -3½″
SW509E	5	1	10′ -0¾″	12	0″	0″	11″	9′ -1¾″			J=0″; K=5′ -4½″; H=7′ -4¾″; O=6′ -3½″
SW510E	5	1	5′ -3″	STR							
PA505E	5	35	3′ -8″	17		1′ -6″	8″	1′ -6″			
PA515E	5	4	17′ -8½″	STR							
PA516E	5	4	10′ -2″	STR							
PA517E	5	4	10′ -5″	STR							
PA518E	5	4	17′ -11½″	STR							
PA521E	5	8	3′ -3″	STR							

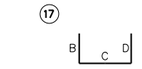
CONCRETE ENCASED GUARDRAIL REINFORCEMENT

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	REMARKS
TW401E	4	12	54′ -10″	STR					MIN LAP = 2′ -1″
TW402E	4	212	VARIES 1′ -2″ TO 3′ -10″	17		VARIES 5″ TO 1′ -9″	4″	VARIES 5″ TO 1′ -9″	
TW403E	4	212	1′ -11″	STR					









P:\60323054 DELDOT AGR 1672 BOS\T07 - REHAB BR. 1-634\900 CAD\20 SHEETS\STRUCTURES\BR1-634\BR-634-RE04.DGN

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

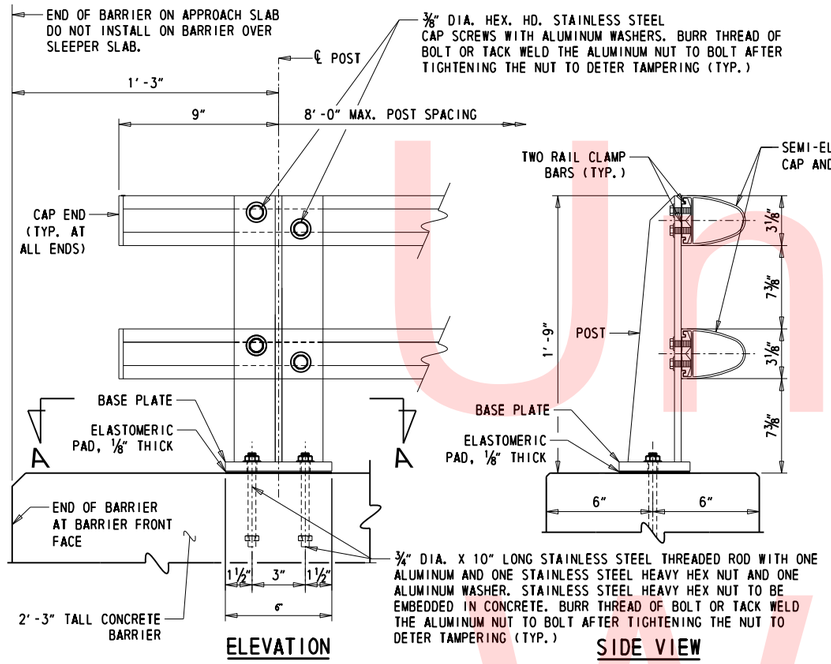
NOT TO SCALE

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RR

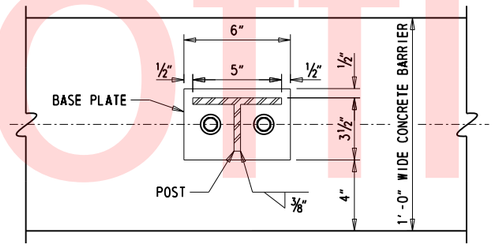
CONTRACT T201507403	BRIDGE NO.	1-634
	DESIGNED BY:	RPG
COUNTY NEW CASTLE	CHECKED BY:	SCF

SUPERSTRUCTURE
REINFORCEMENT
SCHEDULE – 3

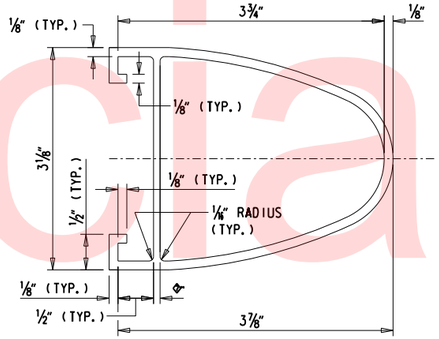
SHEET NO.	57
TOTAL SHTS.	71



METAL BRIDGE RAILING



SECTION A-A



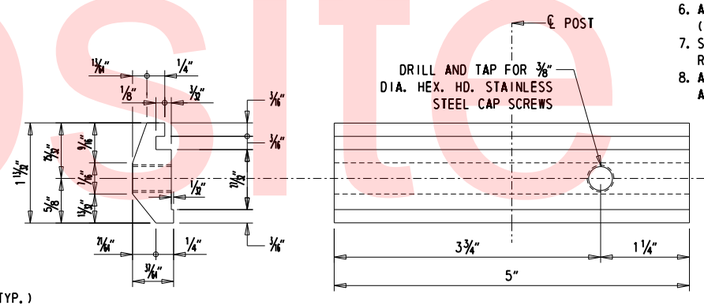
SEMI-ELLIPTICAL RAIL

GENERAL METAL RAILING AND SAFETY FENCE NOTES

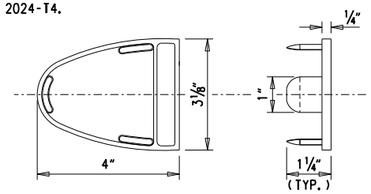
1. THE SAFETY FENCE (ITEM 727000) SHALL BE CONSTRUCTED ON BOTH BARRIERS (EA SIDE OF BRIDGE) WITHIN THE FULL LENGTH OF SPAN 2. THE SAFETY FENCE SHALL BE CONSTRUCTED PER DELDOT STANDARD DRAWING NO. M-10(2014)-BRIDGE SAFETY FENCE, TYPE 1. EXCEPT THAT IT SHALL BE 6'-2⅜" TALL (INSTEAD OF 5'-0½") AS MEASURED FROM THE BOTTOM OF THE FENCE POST BASE PLATE TO THE TOP OF THE FENCE POST.
2. THE CONTRACTOR SHALL SUBMIT THE PROPOSED LAYOUT FOR BRIDGE RAIL POSTS & SAFETY FENCE POSTS FOR APPROVAL. SEE NOTE 1 ON SHEET 56.
3. POSTS SHALL BE SET PERPENDICULAR TO GRADE.
4. ℄ HANDRAIL AND SAFETY FENCE POST MUST BE LOCATED A MINIMUM OF 6" FROM CONTROL JOINTS AND A MINIMUM OF 12" FROM EXPANSION OR CONTRACTION JOINTS.
5. RAILS SHALL BE CONTINUOUS WITH SPLICES WHERE RAIL SECTIONS CROSS EXPANSION JOINTS.
6. THE CENTERLINE OF ANY SPLICE SHALL BE LOCATED AT LEAST 2'-0" AWAY FROM CENTERLINE OF A POST.
7. SET NUTS ¼" CLEAR MINIMUM OF PLATES AND BURR THREADS ABOVE NUTS.
8. THE METAL RAILING DETAILS SHALL BE PLACED ALONG ENTIRE LENGTH OF 2'-3" TALL CONCRETE BARRIER.
9. FABRICATION AND INSTALLATION OF THE ALUMINUM RAILING SYSTEM WILL BE INCIDENTAL TO ITEM 626011 - ALUMINUM RAILING, TYPE 1.

METAL RAILING MATERIAL NOTES

1. POSTS, RAILS, SPLICE SLEEVES, CLAMP BARS, AND ALUMINUM HEX NUTS MUST MEET REQUIREMENTS OF ASTM B-221 ALLOY 6061-T6.
2. BASE PLATES MUST MEET REQUIREMENTS OF ASTM B209 ALLOY 6061-T6.
3. END CAPS MUST MEET REQUIREMENTS OF ASTM B26 ALLOY 356-F.
4. ELASTOMERIC PADS MUST MEET REQUIREMENTS OF 60 +/- SHORE A DUROMETER.
5. STAINLESS STEEL HEX NUTS MUST MEET REQUIREMENTS OF ASTM A-307, GRADE A.
6. ANCHOR BOLTS MUST MEET REQUIREMENTS OF ASTM A-276 TYPE 430 (THREADS TO BE ROLLED NOT CUT).
7. STAINLESS STEEL HEX HEAD CAP SCREWS (CLAMPS) MUST MEET REQUIREMENTS OF ASTM A-193, GRADE B-8.
8. ALUMINUM WASHERS MUST MEET REQUIREMENTS OF ASTM B-209 ALLOY ALCLAD 2024-T4.

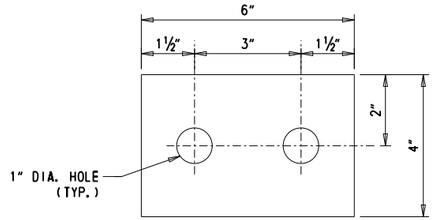


RAIL CLAMP BAR



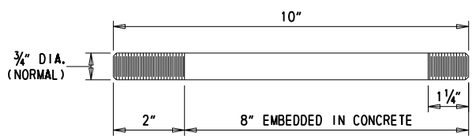
END CAP

NOTE: CAPS SHALL BE SPOT WELDED TO RAILS WITH WELDS GROUND SMOOTH (3 WELDS REQUIRED FOR EACH CAP)

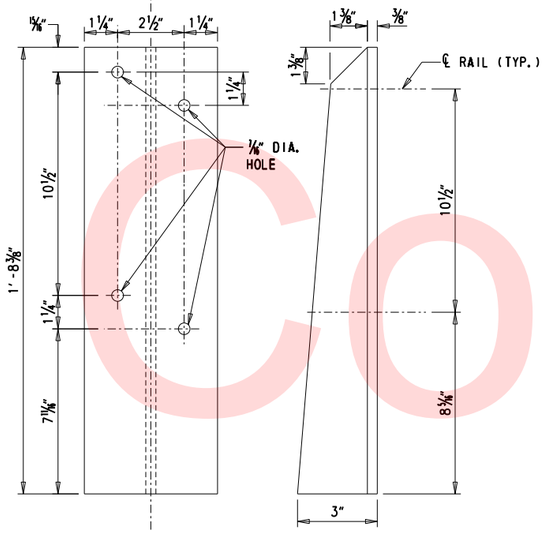


BASE PLATE

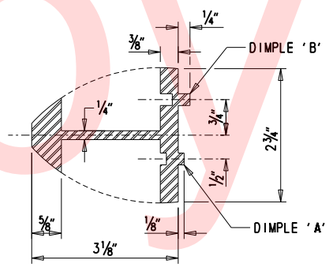
NOTE: BASE PLATE ½" THICK. THE ⅛" THICK ELASTOMERIC PAD WILL HAVE IDENTICAL DIMENSIONS AS BASE PLATE WITH 1" DIA x 1½" SLOTS.



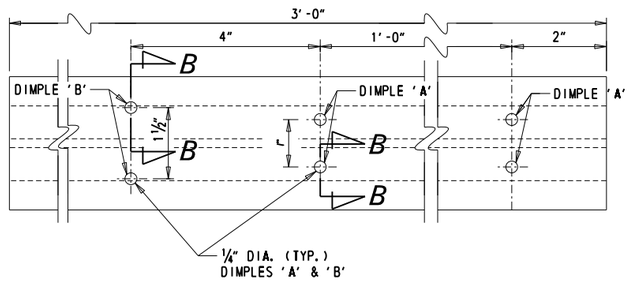
ANCHOR BOLT



POST

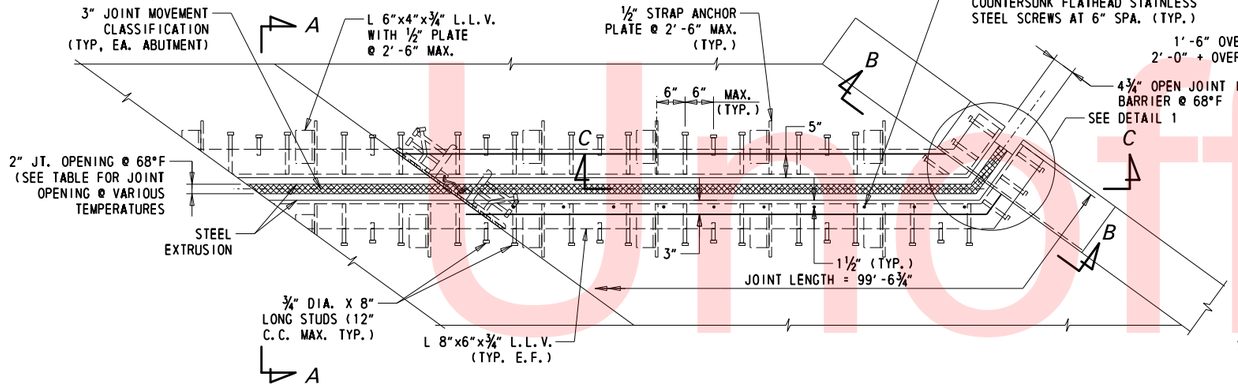


SECTION B-B



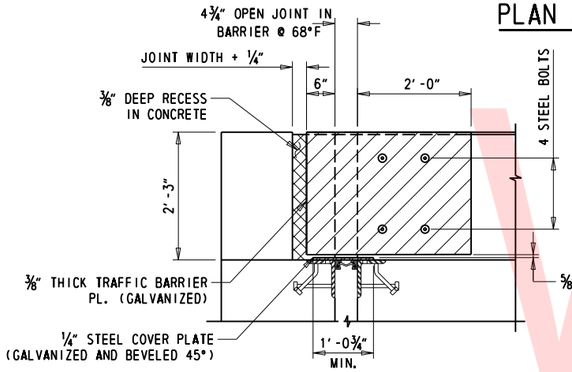
SLEEVE

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	BRIDGE RAILING DETAILS	SHEET NO. 58
				COUNTY NEW CASTLE	DESIGNED BY: RPG		TOTAL SHTS. 71
					CHECKED BY: JAM		



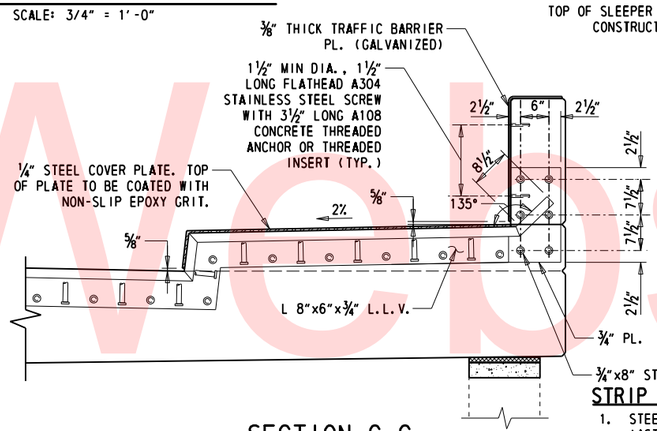
PLAN AT BARRIER & SIDEWALK

SCALE: 3/4" = 1'-0"



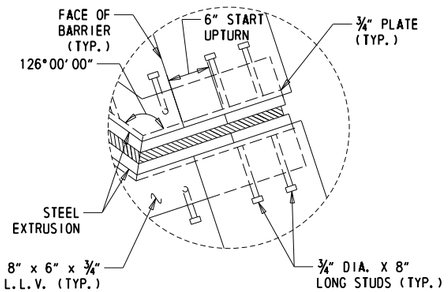
SECTION B-B

SCALE: 3/4" = 1'-0"



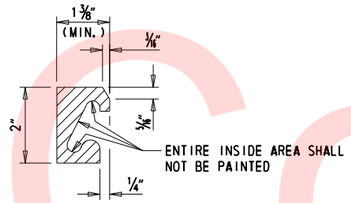
SECTION C-C

SCALE: 3/4" = 1'-0"



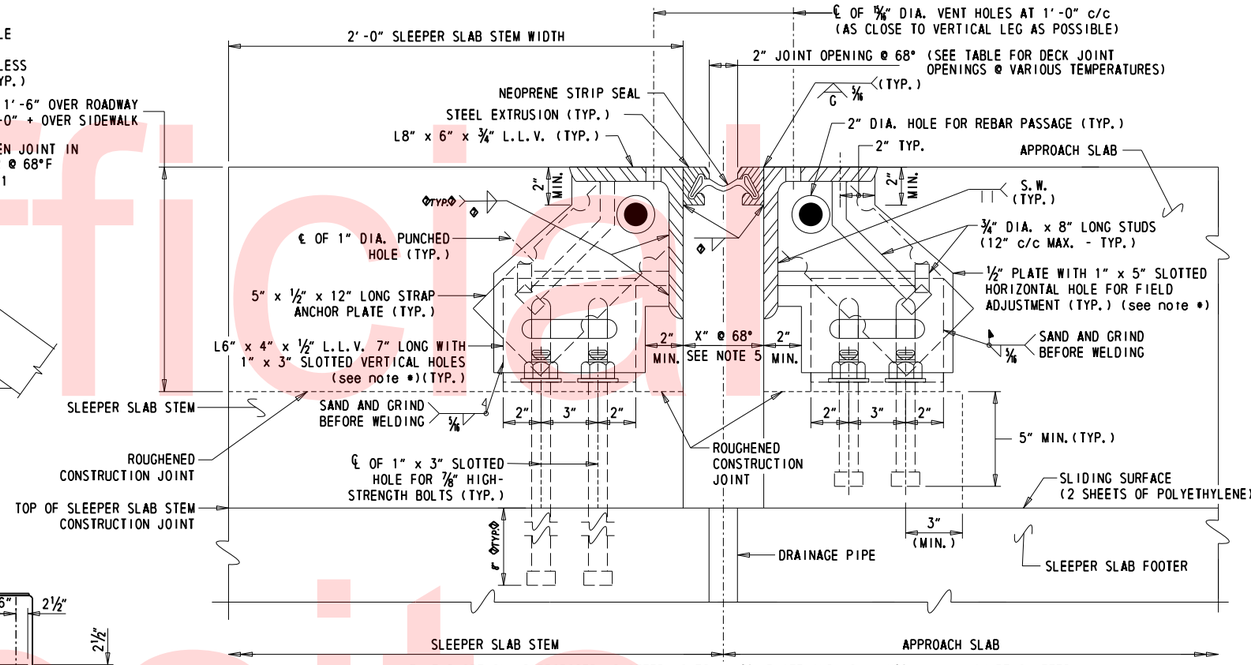
DETAIL 1

SCALE: 1 1/2" = 1'-0"
(SLIDING PLATE NOT SHOWN FOR CLARITY)



STEEL EXTRUSION DETAIL

NOT TO SCALE



• IF WELD OPTION IS PROPOSED, SLOTTED HOLES IN ½" PLATE AND L6"X4"X½" L.L.V MAY BE OMITTED

SECTION A-A (APPROACH SLAB TO SLEEPER SLAB)

SCALE: 3" = 1'-0"

NOTE: SLEEPER SLAB AND APPROACH SLAB REINFORCEMENT NOT SHOWN FOR CLARITY.

DECK JOINT OPENING @ VARIOUS TEMPERATURES (IN.)

TEMPERATURE (°F)	0	10	20	30	40	50	60	68	70	80	90	100	110	120
ABUTMENT A STRIP SEAL	2.23	2.20	2.17	2.13	2.10	2.06	2.03	2.00	1.99	1.96	1.92	1.89	1.86	1.82
ABUTMENT B STRIP SEAL	2.50	2.43	2.35	2.28	2.21	2.13	2.06	2.00	1.99	1.91	1.84	1.76	1.69	1.62

NOTE: JOINT OPENING IS MEASURED PERPENDICULAR TO THE STRIP SEAL & DECK JOINT

STRIP SEAL EXPANSION JOINT NOTES:

1. STEEL FOR DECK JOINTS AND STEEL EXTRUSIONS SHALL BE AASHTO M270, GR.36 (ASTM A36). STEEL EXTRUSIONS SHALL BE GALVANIZED IN ITS ENTIRETY AND PAINTED AS DETAILED IN "STEEL EXTRUSION DETAIL".
2. L.L.V. DENOTES LONG LEG VERTICAL.
3. NEOPRENE EXTRUSION TO MEET D-2628-81 MODIFIED, (RECOVERY TESTS EXCLUDED).
4. THE EXPANSION JOINT SHALL BE CAPABLE OF SEALING THE DECK TO PREVENT MOISTURE AND OTHER CONTAMINANTS FROM DESCENDING THROUGH THE JOINT.
5. THE CONTRACTOR SHALL ADJUST THE OPEN JOINT AS REQUIRED BY THE WIDTH OF THE STEEL EXTRUSION USED SO AS TO PROVIDE A 2" JOINT OPENING AT 68°F.
6. THE STRIP SEAL SHALL BE INSTALLED IN ONE PIECE ACROSS THE BRIDGE WIDTH. SPLICING OF THE STRIP SEAL IS NOT PERMITTED.
7. THE EXPANSION JOINT SYSTEM IS PAID FOR UNDER ITEM NO. 624000.
8. ENTIRE EXPANSION DAM SHALL BE PAINTED AFTER FABRICATION USING URETHANE SYSTEM UNLESS NOTED OTHERWISE.
9. LUBRICANT-ADHESIVE FOR USE IN INSTALLING AND BONDING NEOPRENE SEAL ELEMENTS TO STEEL JOINT COMPONENTS SHALL BE A ONE QUART MOISTURE-CURING POLYURETHANE 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%

10. HOLES SHALL BE PLACED IN THE RIB PLATES AND STRAP ANCHOR PLATES FOR BAR REINFORCEMENT. IF THIS IS DONE IN THE FIELD AN APPROVED EPOXY-BONDED PAINT SHALL BE USED TO TOUCH-UP THE HOLES. PAYMENT INCIDENTAL TO ITEM NO. 624000.
11. ANCHOR PLATE AND STEEL EXTRUSION SHALL BE WELDED TO BE WATERTIGHT AT CONSTRUCTION JOINTS. PAYMENT INCIDENTAL TO ITEM NO. 624000.
12. TRAFFIC BARRIER PLATES:
    -BOLTS SHALL BE FLAT HEAD A304 STAINLESS STEEL SCREW AND THREADED INSERTS OR CONCRETE THREADED ANCHORS SHALL BE A108.
    -HEAD OF BOLTS SHALL BE FLUSH WITH FACE OF STEEL PLATE.
    -THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS OF TRAFFIC BARRIER PLATES FOR APPROVAL.
13. STEEL FOR TRAFFIC BARRIER PLATES AND SIDEWALK COVER PLATES MUST BE ASTM A709, GRADE 36 OR 50 AND HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123.
14. APPLY EPOXY COATING ON BOTH SIDES OF THE STEEL SIDEWALK COVER PLATE. THE TOP OF PLATE (WALKING SURFACE) MUST RECEIVE NON-SLIP EPOXY GRIT COATING IN ACCORDANCE WITH ADA A4.5.
15. AT AREAS WHERE STEEL MEMBERS ARE TO BE SPLICED, USE OF COMPLETE JOINT PENETRATION (CJP) AND PARTIAL JOINT PENETRATION (PJP) WELD ARE BOTH PERMITTED. THE THICKNESS OF PJP WELD MUST BE MINIMUM HALF OF THE STEEL MEMBER THICKNESS.
16. THE CONTRACTOR SHALL SUBMIT A WORKING PLAN FOR PLACEMENT OF STRIP SEAL DUE TO PHASING.

CROSS REFERENCE NOTES:

1. FOR LOCATION OF EXPANSION JOINTS, SEE SHEETS 10, 49, 50 AND 51.
2. FOR APPROACH SLAB & SLEEPER SLAB REINFORCEMENT, SEE SHEETS 49-51.

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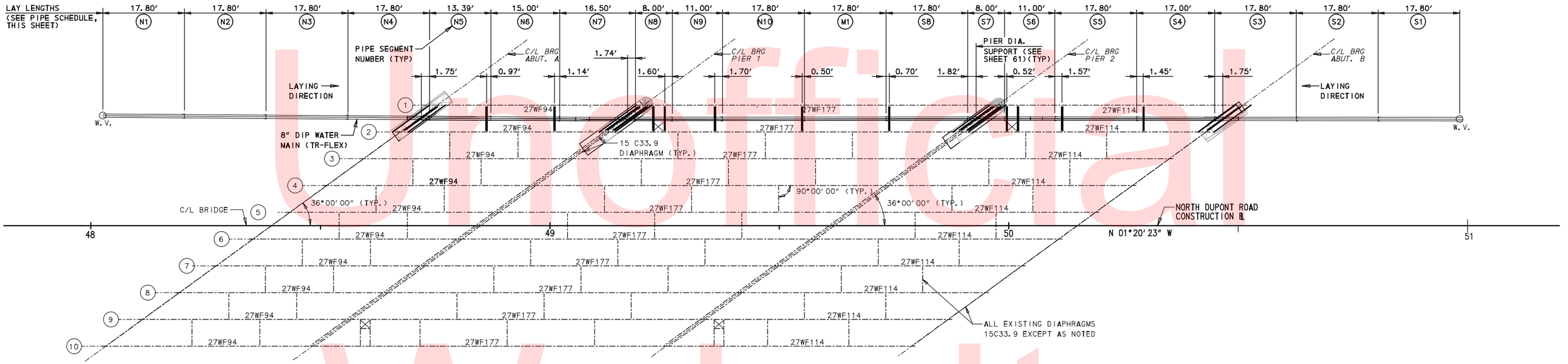
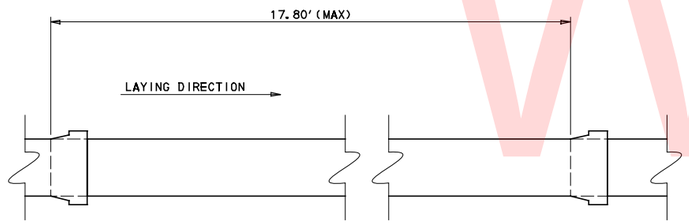
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	EXPANSION JOINT DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: SCF	SHEET NO. 59
					CHECKED BY: JAM	TOTAL SHTS. 71



WATERLINE LAY LENGTH PLAN

SCALE: 3/32" = 1'-0"



LAY LENGTH DETAIL

NOT TO SCALE

PIPE SCHEDULE	
PIPE SEGMENT	LAY LENGTH (FT)
N1	17.80
N2	17.80
N3	17.80
N4	17.80
N5	13.39
N6	15.00
N7	16.50
N8	8.00
N9	11.00
N10	17.80
M1	17.80
S8	17.80
S7	8.00
S6	11.00
S5	17.80
S4	17.00
S3	17.80
S2	17.80
S1	17.80

SEGMENT N1 STARTS AT WATER VALVE AT STA. 48+02.58 OFFSET 23.96′ LEFT.

NOTE: PIPE SEGMENTS NUMBERED BASED ON LAYING DIRECTION. "N" DENOTES THE LAYING DIRECTION IS NORTH AND "S" DENOTES THE LAYING DIRECTION IS SOUTH. SEGMENT M1 IS A STRAIGHT PIPE SECTION WITH NO BELL AND IS LOCATED BETWEEN SEGMENTS N10 AND S8.

SEGMENT S1 STARTS AT WATER VALVE AT STA. 50+98.27 OFFSET 23.17′ LEFT.

BRIDGE ATTACHMENT MATERIAL LIST		
TOTAL	UNIT	DESCRIPTION
342	LF	TR-FLEX 8" DIP (CLASS 50) x FULL LENGTHS
13	EA	EATON B-LINE PIPE ROLLER TYPE B3122-8
18	EA	7/8" DIA. x 1'-5" SS THREADED ROD WITH MATCHING NUTS AND WASHERS
8	EA	7/8" DIA. x 3'-1" SS THREADED J-ROD WITH MATCHING NUTS AND WASHERS
44	EA	GPT LINK SEAL MODEL: LS-575-C-11
10	LF	14 x 3/8 CASING

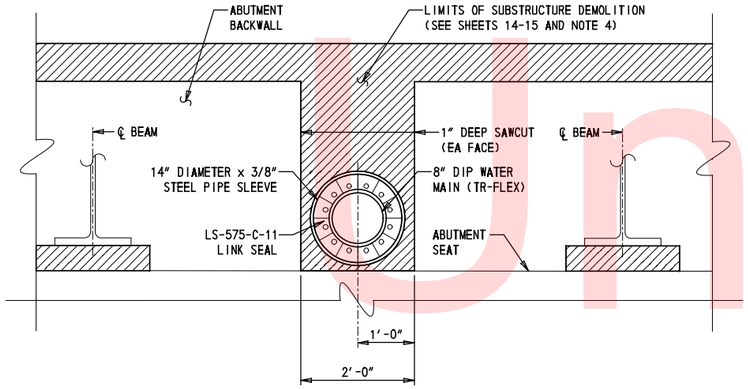
NOTE: ANY CHANGES SHALL BE APPROVED BY BOTH ARTESIAN WATER AND THE STATE ENGINEER.

NOTES:

1. UPON COMPLETION OF CONNECTING ALL PIPE SEGMENTS TOGETHER, THE WATERLINE SHALL BE PULLED FROM EACH END TO REMOVE ANY SLACK.

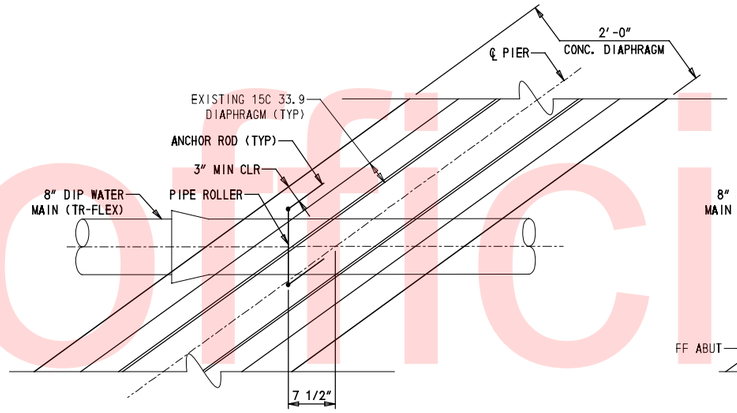
W:\PROJECTS\AWTR\AWTR1601-1-634 UTILITY ATTACHMENT\DESIGN\CT\BR1-634-PIPE LAYOUT.DGN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403 / COUNTY NEW CASTLE	BRIDGE NO. 1-634 / DESIGNED BY: LAA / CHECKED BY: NWB	WATERLINE LAYOUT	SHEET NO. 60 / TOTAL SHTS. 71



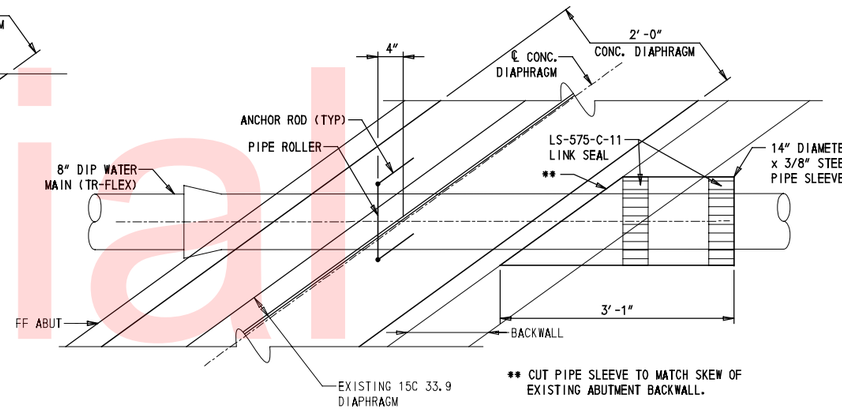
UTILITY AT ABUTMENT BACKWALL

1" = 1'-0"



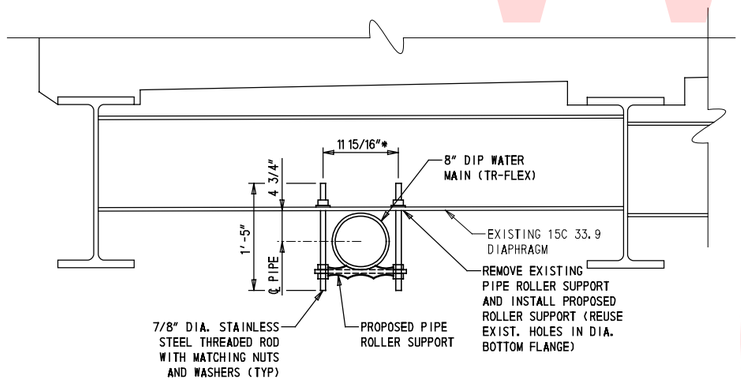
UTILITY SUPPORT PLAN AT PIERS

(PIER 2 SHOWN, PIER 1 MIRRORED)
1" = 1'-0"



UTILITY SUPPORT PLAN AT ABUTMENTS

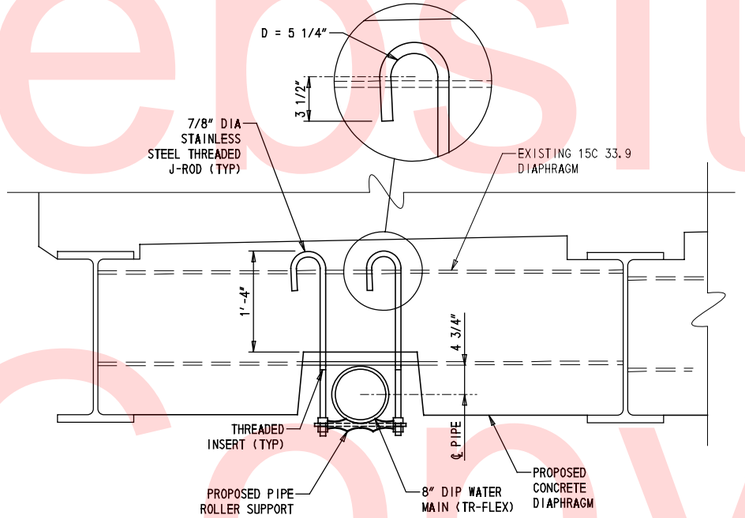
1" = 1'-0"



*CONTRACTOR TO FIELD VERIFY EXISTING BOLT HOLE SPACING AND ADJUST AS REQUIRED.

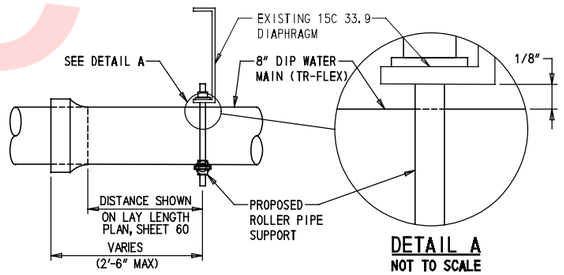
UTILITY SUPPORT DETAIL AT INTERIOR DIAPHRAGMS

1" = 1'-0"



UTILITY SUPPORT DETAIL AT PIER AND END DIAPHRAGMS

1" = 1'-0"



DETAIL A

NOT TO SCALE

UTILITY SUPPORT SIDE VIEW

1" = 1'-0"

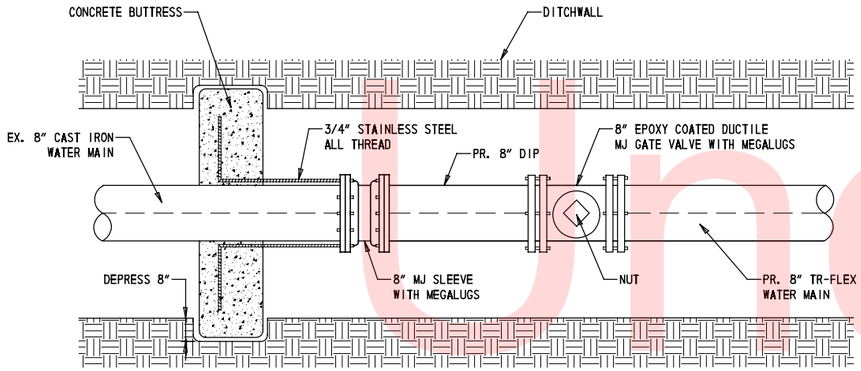
NOTES:

1) ROLLER SUPPORTS SHALL BE FURNISHED WITH NON-METALLIC ROLLERS WITH HOT-DIP GALVANIZED SOCKETS AND STAINLESS STEEL HARDWARE (MATERIALS PROVIDED BY ARTESIAN, PAID FOR UNDER ITEM 710500).
2) DISTANCE FROM PIPE JOINT TO ROLLER SUPPORT SHALL BE NO GREATER THAN 2'-6" AS MEASURED FROM BELL FACE.
3) PIPE TO BE TR-FLEX DIP (8" DIAMETER). PIPE TO BE FURNISHED BY ARTESIAN WATER.
4) ALL EXISTING REINFORCEMENT WITHIN LIMITS OF BACKWALL DEMOLITION TO REMAIN. EXISTING BARS SHALL BE BENT TO FIT AROUND PERIMETER OF NEW PIPE SLEEVE, AS NEEDED TO PROVIDE 2" OF CLEAR COVER. THIS WORK IS TO BE PERFORMED UNDER ITEM 211000.

W:\PROJECTS\AWTR\AWTR1601-1-634 UTILITY ATTACHMENT\DESIGN\CT\BR1-634 DETAILS.DGN

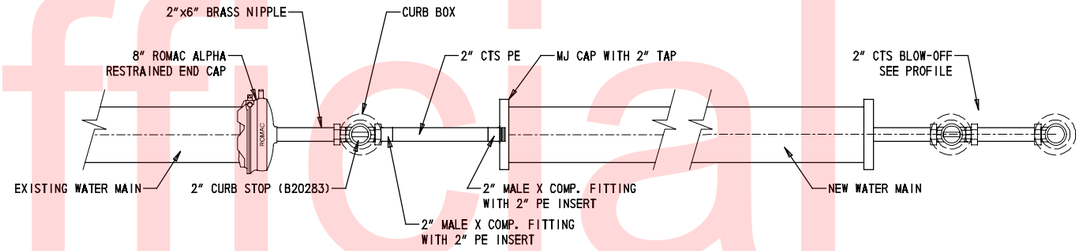
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	SHEET NO. 61
				COUNTY NEW CASTLE	DESIGNED BY: LAA	TOTAL SHTS. 71
					CHECKED BY: NWB	

WATERLINE SUPPORT DETAILS



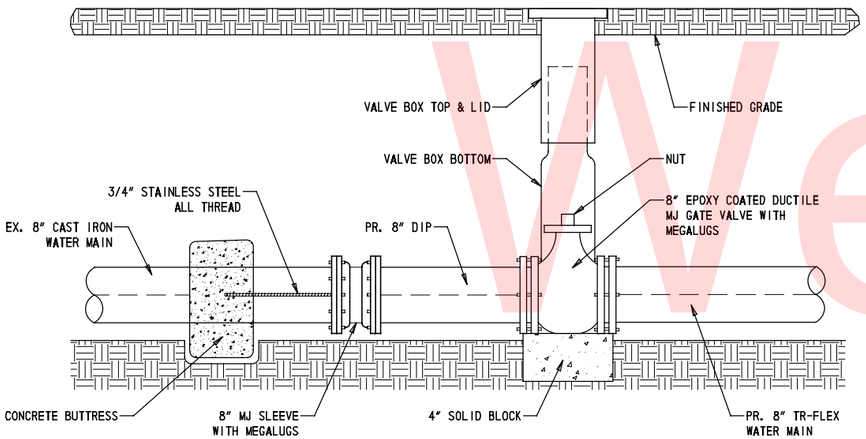
TR-FLEX TO CAST TIE-IN - PLAN

NOT TO SCALE



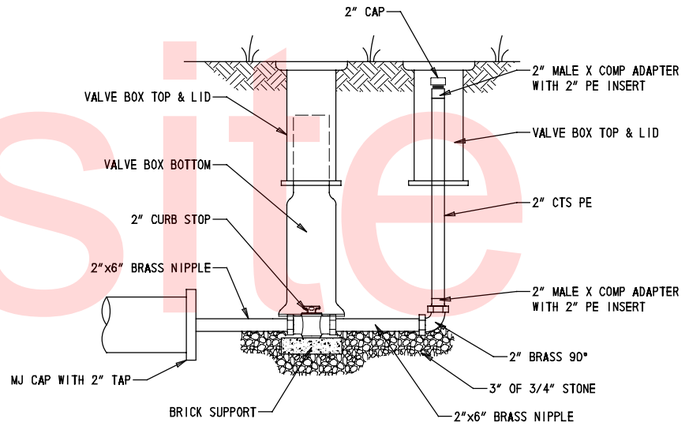
2" JUMPER ASSEMBLY

NOT TO SCALE



TR-FLEX TO CAST TIE-IN - PROFILE

NOT TO SCALE



2" CTS BLOW-OFF PROFILE

NOT TO SCALE

TIE-IN MATERIAL LIST	
TOTAL	DESCRIPTION
2	8" EPOXY COATED DUCTILE MJ GATE VALVE
2	8" MJ SLEEVE
36✳	8" DIP
1	VALVE BOX TOP & LID
1	VALVE BOX BOTTOM
10	8" MEGALUGS

✳CONTRACTOR SHALL VERIFY REQUIRED QUANTITIES WITH ARTESIAN WATER.

NOTE: ANY CHANGES SHALL BE APPROVED BY BOTH ARTESIAN WATER AND THE STATE ENGINEER.

JUMPER MATERIAL LIST			
TOTAL	B.O.	JUMPER	DESCRIPTION
3	2	1	2" X 6" NIPPLE
1	1	-	2" 90° BEND
2	1	1	2" CURBSTOP
4	2	2	2" MALE X COMP
1	-	1	8" ROMAC ALPHA END CAP
4	2	2	2" PE INSERTS
2	1	1	8" MJ CAP WITH 2" TAP
10	7' TYP.	✳	2" PE CTS
3	2	1	VALVE BOX TOP & LID
2	-	1	VALVE BOX BOTTOM
1	1	-	2" CAP

✳CONTRACTOR SHALL VERIFY REQUIRED QUANTITIES WITH ARTESIAN WATER.

NOTE: ANY CHANGES SHALL BE APPROVED BY BOTH ARTESIAN WATER AND THE STATE ENGINEER.

W:\PROJECTS\AWTR\AWTR1601-1-634 UTILITY ATTACHMENT\DESIGN\CT\BR1-634 DETAILS2.DGN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RR	CONTRACT T201507403	BRIDGE NO. 1-634	WATERLINE VALVE DETAILS
				COUNTY NEW CASTLE	DESIGNED BY: BJM	SHEET NO. 62
					CHECKED BY: NWB	TOTAL SHTS. 71

MOT GENERAL NOTES

1. MAINTENANCE OF TRAFFIC DURING LANE CLOSURES AND LANE SHIFTS SHALL CONFORM TO TYPICAL APPLICATIONS 3, 17A AND 32 OF THE DELAWARE MUTCD.

2. WITHIN THE MAINLINE WORK AREA, PERMANENT ADVANCE WARNING SIGNS WITH THE LEGENDS "ROAD WORK 1,500 FT", "ROAD WORK 1,000 FT" AND "ROAD WORK 500 FT". SHALL BE INSTALLED IN ADVANCE OF THE WORK AREA IN BOTH DIRECTIONS. AN "END ROAD WORK" SIGN SHALL BE LOCATED 500 FEET DOWNSTREAM FROM THE WORK AREA. ON ALL INTERSECTING STREETS APPROACHING THE WORK AREA, "ROAD WORK 1,500 FT." "ROAD WORK 1,000 FT." AND "ROAD WORK 500 FT." PERMANENT SIGNS SHALL BE PLACED AS SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER. AN "END ROAD WORK" SIGN SHALL BE PLACED ACROSS THE STREET FROM THE "ROAD WORK 500 FT." SIGN, VISIBLE TO TRAFFIC OPERATING THE WORK ZONE.

3. THE CONTRACTOR SHALL PROVIDE ONE TRAFFIC OFFICER FOR THE REMOVAL OF THE STAGE 2 TRAFFIC CONTROL. THE TRAFFIC OFFICER SHALL BE ON-SITE DURING THE TRAFFIC SWITCH AND DURING THE FIRST MORNING PEAK PERIOD (6AM-9PM) AND THE FIRST AFTERNOON PEAK PERIOD (3PM-7PM) AFTER THE STAGE 2 TRAFFIC CONTROL HAS BEEN PLACED.

4. ADDITIONAL USAGE OF TRAFFIC OFFICERS OUTSIDE OF THE ABOVE REQUIREMENTS SHALL BE APPROVED BY THE THE ENGINEER IN CONSULTATION WITH THE TRAFFIC SAFETY SECTION.

SEQUENCE OF CONSTRUCTION

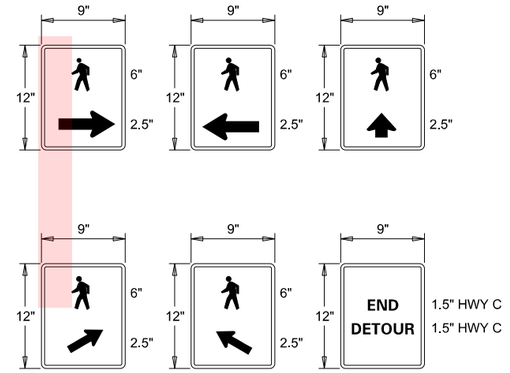
STAGE 1

1. CLOSE SR 100 DUPONT ROAD IN ACCORDANCE WITH DETOUR PLAN.
2. PLACE TEMPORARY BARRIER AND PEDESTRIAN SIGNS IN ACCORDANCE WITH STAGE 1 MOT PLAN.
3. PERFORM CLEARING AND GRUBING AND INSTALL E&S CONTROLS AS SHOWN ON PLANS. PLACE CONSTRUCTION SAFETY FENCE (ITEM #727006) AT THE PERIMETER OF THE NORTHBOUND BRIDGE APPROACHES AS A PRECAUTION AT THE DIRECTION OF THE ENGINEER.
4. CONSTRUCT SIDEWALK AND CURB RAMPS ADJACENT TO BOULEVARD ROAD IN ACCORDANCE WITH TA-3 AND TA-28.
5. SEE SHEET 11 FOR STAGE 1 STRUCTURE CONSTRUCTION.
6. RECONSTRUCT STAGE 1 LIMITS OF PROPOSED CONCRETE PAVEMENT, SIDEWALK, CURB, AND GUARDRAIL ALONG NB SR 100 DUPONT ROAD.
7. UPON COMPLETION OF STAGE 1 PROPOSED WORK, RESET TEMPORARY CONCRETE BARRIER AND SET UP TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH STAGE 2 MOT PLANS.
8. REMOVE TEMPORARY E&S CONTROL DEVICES AFTER ADEQUATE STABILIZATION OF ALL DISTURBED AREAS.

STAGE 2

1. OPEN SR 100 DUPONT ROAD TO REDUCED TRAFFIC LANES AS SHOWN ON STAGE 2 MOT PLANS AND REMOVE DETOUR SIGNING.
2. PERFORM CLEARING AND GRUBING AND INSTALL E&S CONTROLS AS SHOWN ON PLANS.
3. SEE SHEET 12 FOR STAGE 2 STRUCTURE CONSTRUCTION.
4. INSTALL PROPOSED LIMITS OF CONCRETE CURB AND SIDEWALK.
5. RECONSTRUCT STAGE 2 LIMITS OF PROPOSED CONCRETE PAVEMENT ALONG SB SR 100 DUPONT ROAD.
6. INSTALL REMAINING GUARDRAIL.
7. INSTALL PERMANENT PAVEMENT MARKINGS UTILIZING TA-17A AS NEEDED AND ROADWAY SIGNS IN ACCORDANCE WITH SIGNING AND STRIPING PLAN.
8. REMOVE REMAINING TRAFFIC CONTROL DEVICES AND OPEN SR 100 DUPONT ROAD.
9. REMOVE ALL E&S DEVICES AFTER FINAL VEGETATIVE STABILIZATION OF ALL DISTURBED AREAS AND WITH CONCURRENCE FROM DELDOT'S STORMWATER ENGINEER.

SPECIAL SIGN DETAILS



LAST REVISED: 10/06/2015
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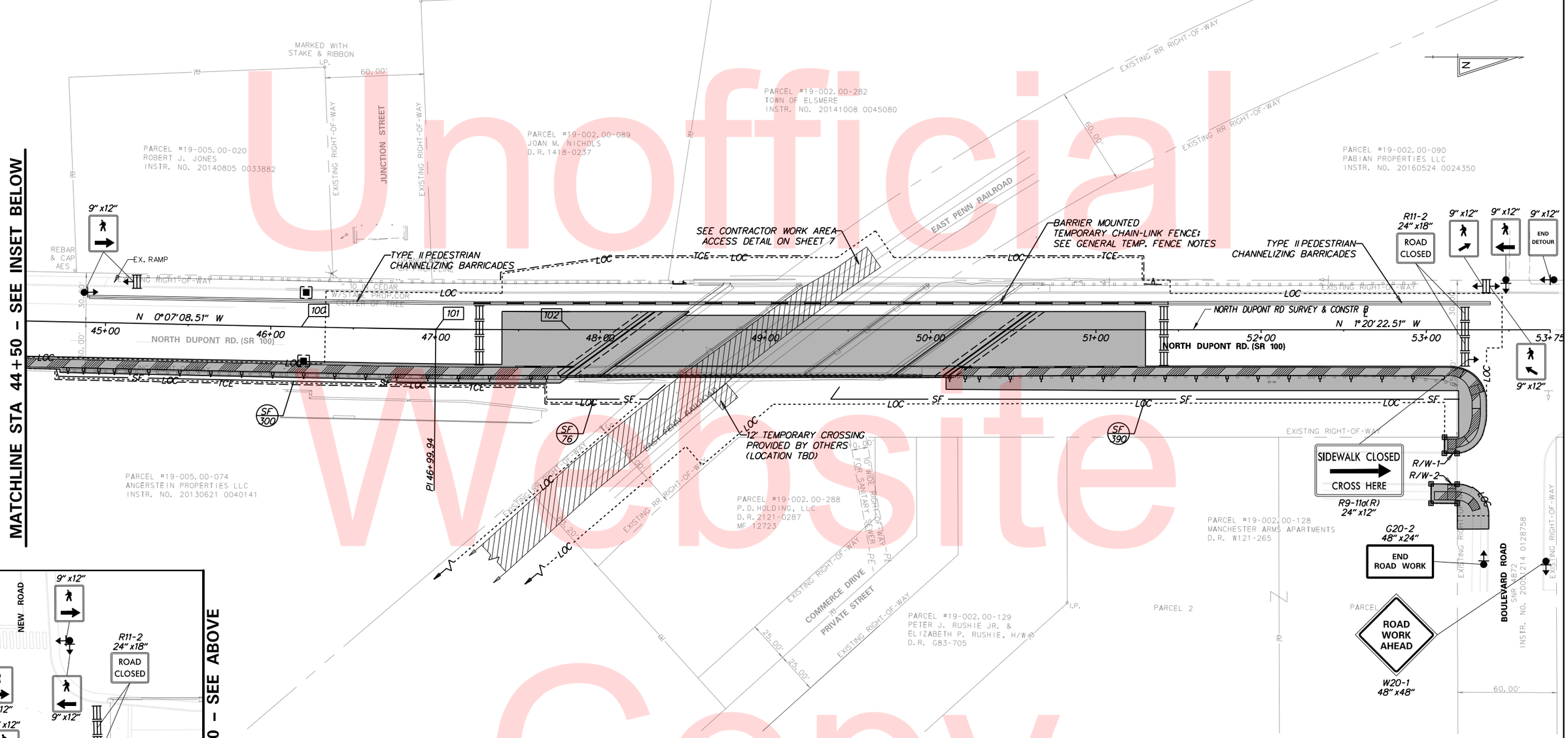
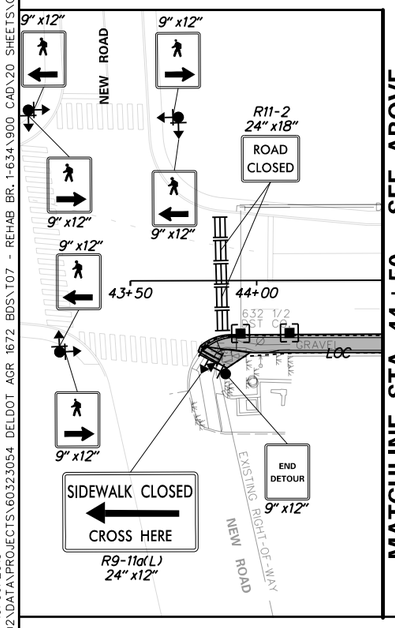
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RAILROAD	CONTRACT T201507403	BRIDGE NO. 1-634	CONSTRUCTION PHASING, MAINTENANCE OF TRAFFIC, EROSION CONTROL PLANS NOTES	SHEET NO. 63
				COUNTY NEW CASTLE	DESIGNED BY: DRS (AECOM)		TOTAL SHTS. 71
					CHECKED BY: ADM (AECOM)		

MATCHLINE STA 44+50 – SEE INSET BELOW

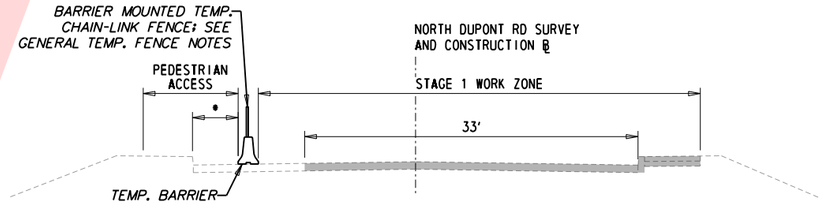


MATCHLINE STA 44+50 – SEE ABOVE



GENERAL TEMPORARY FENCE NOTES

1. TEMPORARY CHAIN-LINK FENCE SHALL BE MOUNTED ON TOP OF THE FULL LENGTH OF TEMPORARY CONCRETE BARRIER USED IN STAGE 1 FOR PEDESTRIAN TRAFFIC CONTROL.
2. THE BARRIER MOUNTED TEMPORARY CHAIN-LINK FENCE SHALL BE 4' HIGH.
3. THE TEMPORARY FENCE ITSELF SHALL BE CONSTRUCTED PER STANDARD DETAIL M-7(2006) AND SECTION 727.03.4 OF THE 2016 STANDARD SPECIFICATIONS.
4. REFER TO STANDARD DETAIL M-10, SHEETS 1 AND 3 FOR MOUNTING THE TEMPORARY CHAIN-LINK FENCE TO BARRIER.
5. BARRIER MOUNTED TEMPORARY CHAIN-LINK FENCE WILL BE PAID FOR UNDER ITEM 727000 - CHAIN-LINK FENCE.



• MAXIMIZE DISTANCE BETWEEN BARRIER AND CURB WHERE PEDESTRIANS WILL UTILIZE CLOSED ROADWAY TO ACCESS CURB RAMP AND SIDEWALK, NO LESS THAN 36".

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

SCALE
0 30 60 90
FEET

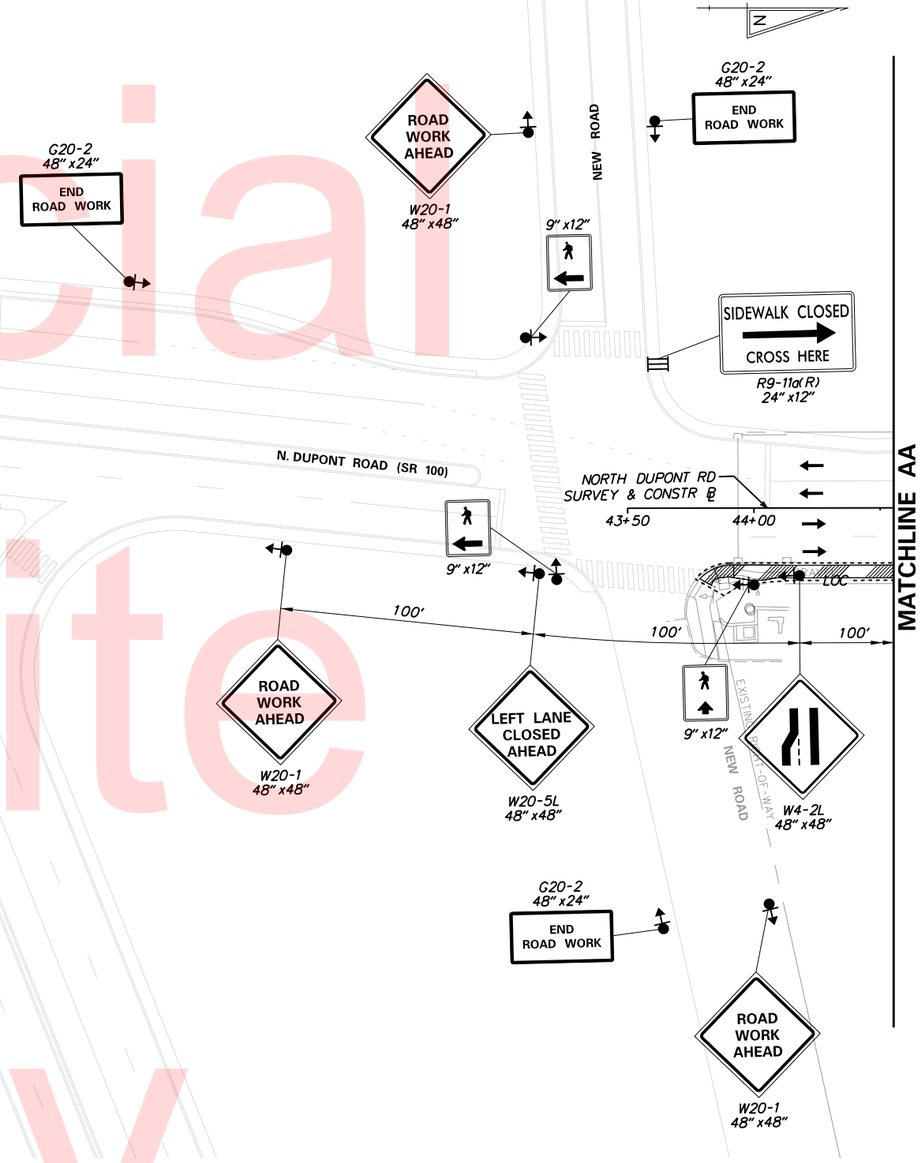
BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RAILROAD

CONTRACT T201507403	BRIDGE NO.	1-634
COUNTY NEW CASTLE	DESIGNED BY: DRS (AECOM)	
	CHECKED BY: ADM (AECOM)	

CONSTRUCTION PHASING, MAINTENANCE OF TRAFFIC, EROSION CONTROL PLANS STAGE 1 SHEET 1 OF 1

SHEET NO.
64
TOTAL SHTS.
71

LAST REVISED: 10/06/2015
\\USPHLIFP002\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T07 - REHAB BR. 1-634\900 CAD\20 SHEETS\CIVIL\CS02.DGN



LAST REVISED: 10/06/2015
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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

SCALE
0 30 60 90
FEET

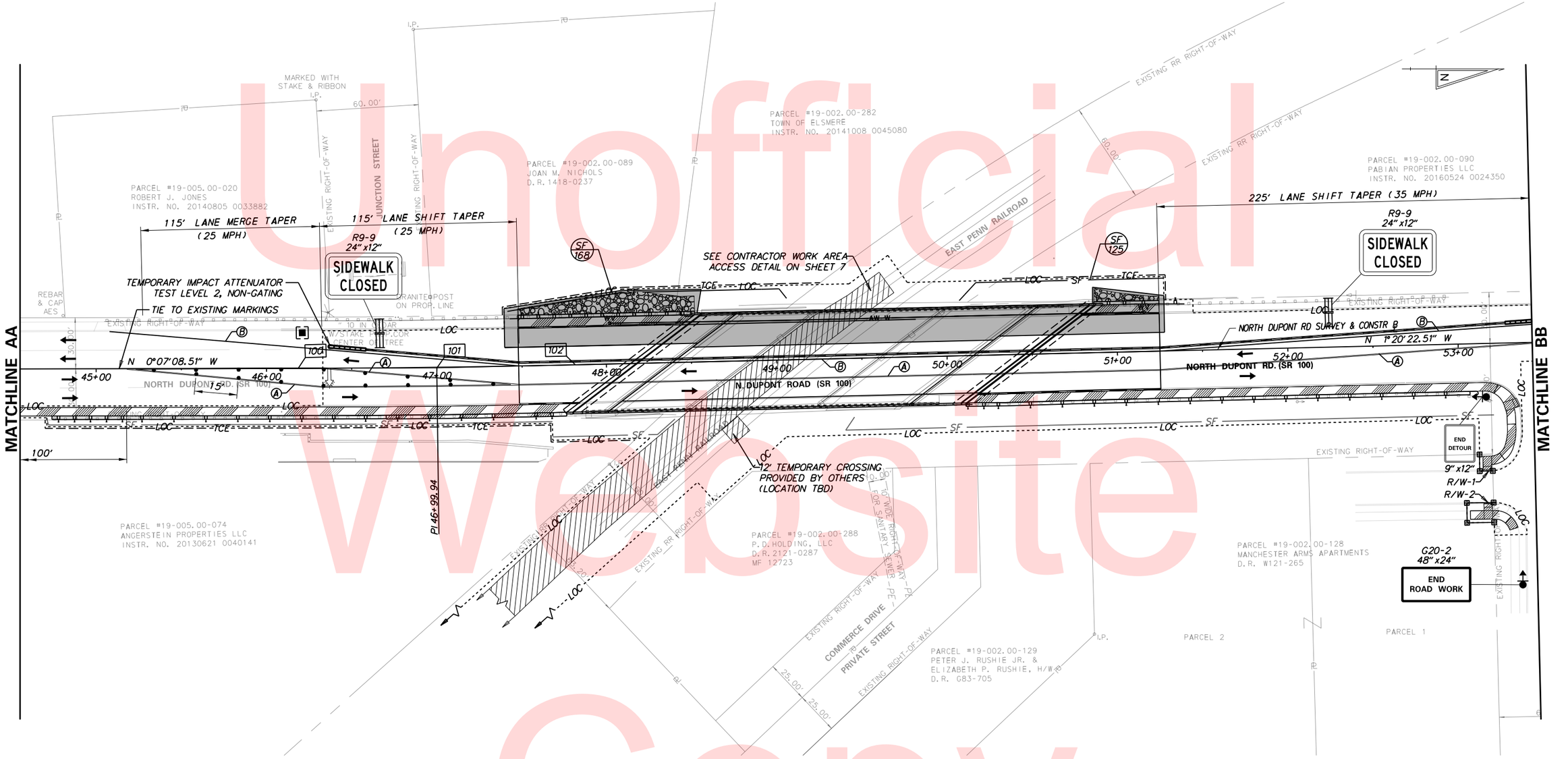
BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RAILROAD

CONTRACT	T201507403
COUNTY	NEW CASTLE

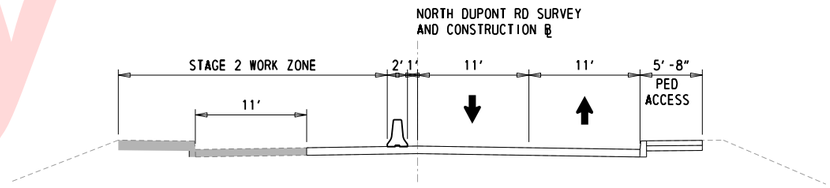
BRIDGE NO.	1-634
DESIGNED BY:	DRS (AECOM)
CHECKED BY:	ADM (AECOM)

CONSTRUCTION PHASING, MAINTENANCE OF TRAFFIC, EROSION CONTROL PLANS
STAGE 2 SHEET 1 OF 3

SHEET NO.
65
TOTAL SHTS.
71



TEMPORARY PAVEMENT MARKINGS LEGEND		
SYMBOL	ITEM	QUANTITY
(A)	4" YELLOW TEMPORARY TAPE MARKINGS (ITEM 817009)	2,140 LF
(B)	4" WHITE TEMPORARY TAPE MARKINGS (ITEM 817009)	1,296 LF



DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

SCALE
0 30 60 90
FEET

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RAILROAD

CONTRACT	BRIDGE NO.	1-634
T201507403	DESIGNED BY: DRS (AECOM)	
COUNTY	CHECKED BY: ADM (AECOM)	
NEW CASTLE		

CONSTRUCTION PHASING, MAINTENANCE OF TRAFFIC, EROSION CONTROL PLANS STAGE 2 SHEET 2 OF 3

SHEET NO.
66
TOTAL SHTS.
71

LAST REVISED: 10/06/2015
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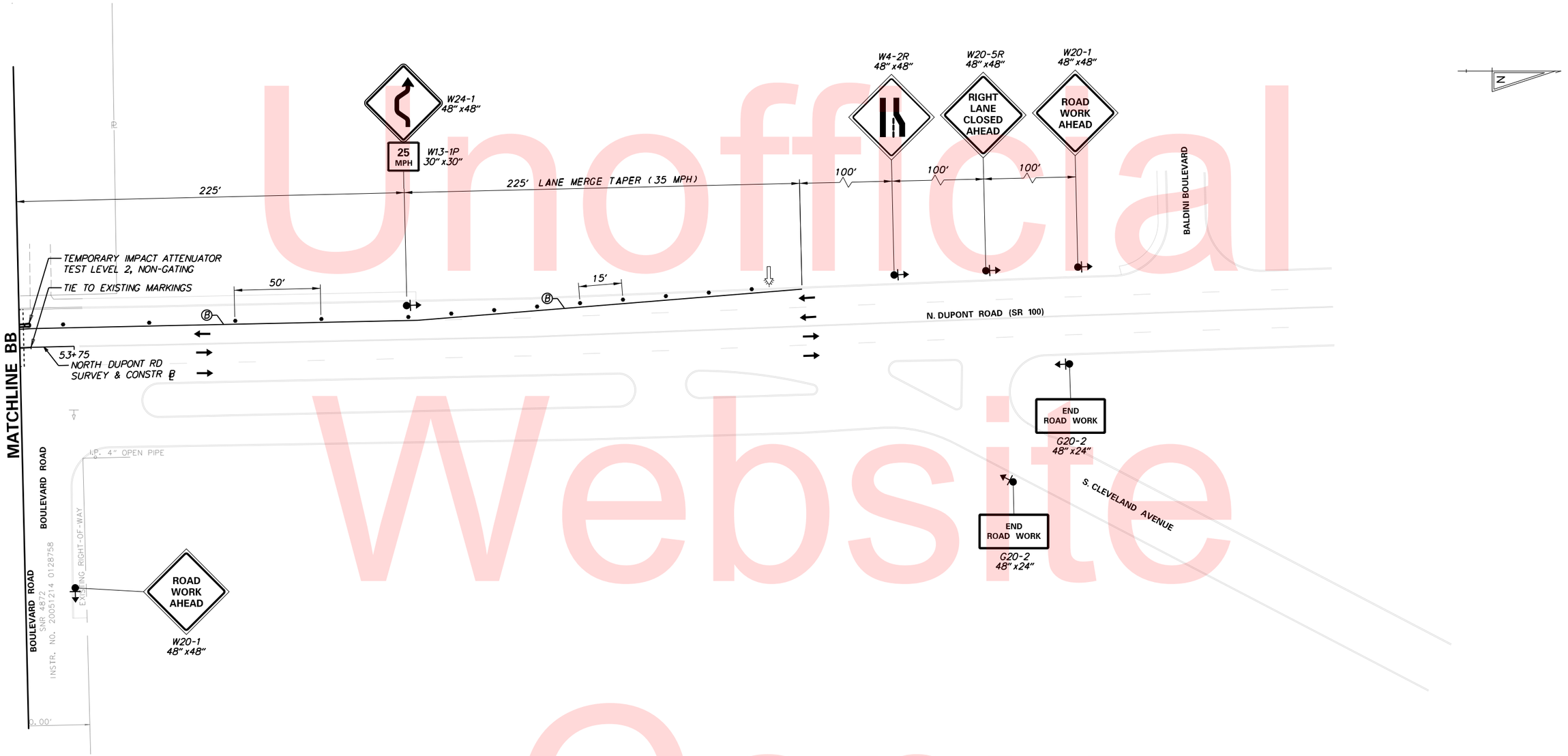


LAST REVISED: 10/06/2015
\\USPHLIFP002\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T07 - REHAB BR. 1-634\900 CAD\20 SHEETS\CIVIL\CS05.DGN

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	BR 1-634 SR 100 DUPONT ROAD OVER EAST PENN RAILROAD	CONTRACT T201507403	BRIDGE NO. 1-634	CONSTRUCTION PHASING, MAINTENANCE OF TRAFFIC, EROSION CONTROL PLANS STAGE 2 SHEET 3 OF 3	SHEET NO. 67
				COUNTY NEW CASTLE	DESIGNED BY: DRS (AECOM)		TOTAL SHTS. 71
					CHECKED BY: ADM (AECOM)		

PORTABLE CHANGEABLE MESSAGE SIGNS

PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-1

SR 100 TO CLOSE	STARTING XX/XX/XX

DURING DETOUR
(DISPLAY FOR 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

PCMS-2

SR 100 SOUTH OF SR 34	CLOSED FOLLOW DETOUR

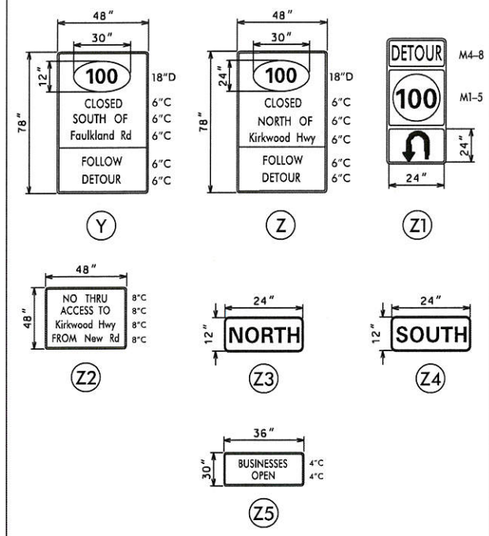
DURING DETOUR
(DISPLAY FOR 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

PCMS-3

SR 100 NORTH OF SR 2	CLOSED FOLLOW DETOUR

SPECIAL SIGNS

*ROUTE SHIELDS–WHITE BACKGROUND; BLACK LEGEND



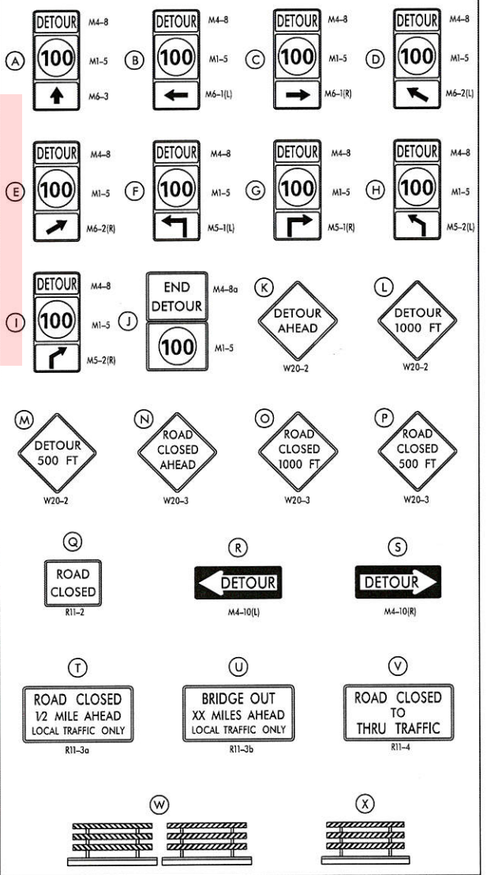
*D/G RETROREFLECTIVE FLUORESCENT ORANGE BACKGROUND; BLACK LEGEND

SPECIAL NOTES

1. CLOSE RIGHT LANE ON NB DE 100, SOUTH OF DE 2, USING TA-21 FROM THE MUTCD. NORTH OF DE 2, SHIFT NB TRAFFIC FROM THE LEFT LANE TO THE RIGHT LANE TO ALLOW A WIDER SWING FOR U-TURNING TRAFFIC.

LEGEND

*ROUTE SHIELDS–WHITE BACKGROUND; BLACK LEGEND



GENERAL NOTES

1. ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.)
2. THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD PART 6) FOR BARRICADES AND SIGNS (AS PER LATEST REVISION.)
3. DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.
4. SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.) SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.
5. THE COLORS, DIMENSIONS, AND CHARACTERISTICS OF ALL INTERSTATE, U.S ROUTE, AND STATE ROUTE SHIELD SIGNS SHALL BE IN ACCORDANCE WITH SECTION 2D.11 OF "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.)
6. SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.
7. FIELD CONDITIONS MAY DICTATE CHANGES AT SOME TIME DURING THE LIFE OF THE CONTRACT. IN THE EVENT OF OMISSIONS OR CORRECTIONS, THE SIGNING PROVISIONS OF "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD) WILL PREVAIL.
8. SIGNS "N" THROUGH "Q" AND "T" AND "V", THE WORD "ROAD" SHOULD BE CHANGED TO "RAMP", "RR XING", OR "BRIDGE" WHERE APPLICABLE.
9. WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.
10. "W" BARRICADES SHALL COMPLETELY RUN THE FULL WIDTH OF THE ROADWAY.
11. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.

RECOMMENDED Michael F. Rivera DATE:

RECOMMENDED DATE:

RECOMMENDED DATE:

APPROVED CHIEF SAFETY OFFICER DATE: 6-13-17

APPROVED TRAFFIC ENGINEER DATE: 6/13/17

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

NOT TO SCALE

BR 1-634 ON SR100 DUPONT ROAD OVER EAST PENN RR

CONTRACT	ROAD NO.	N27
T201507403	DESIGNED BY: MFR	
COUNTY	CHECKED BY: SWN	
NEW CASTLE		

DETOUR PLAN

SHEET NO.
68
TOTAL SHTS.
71

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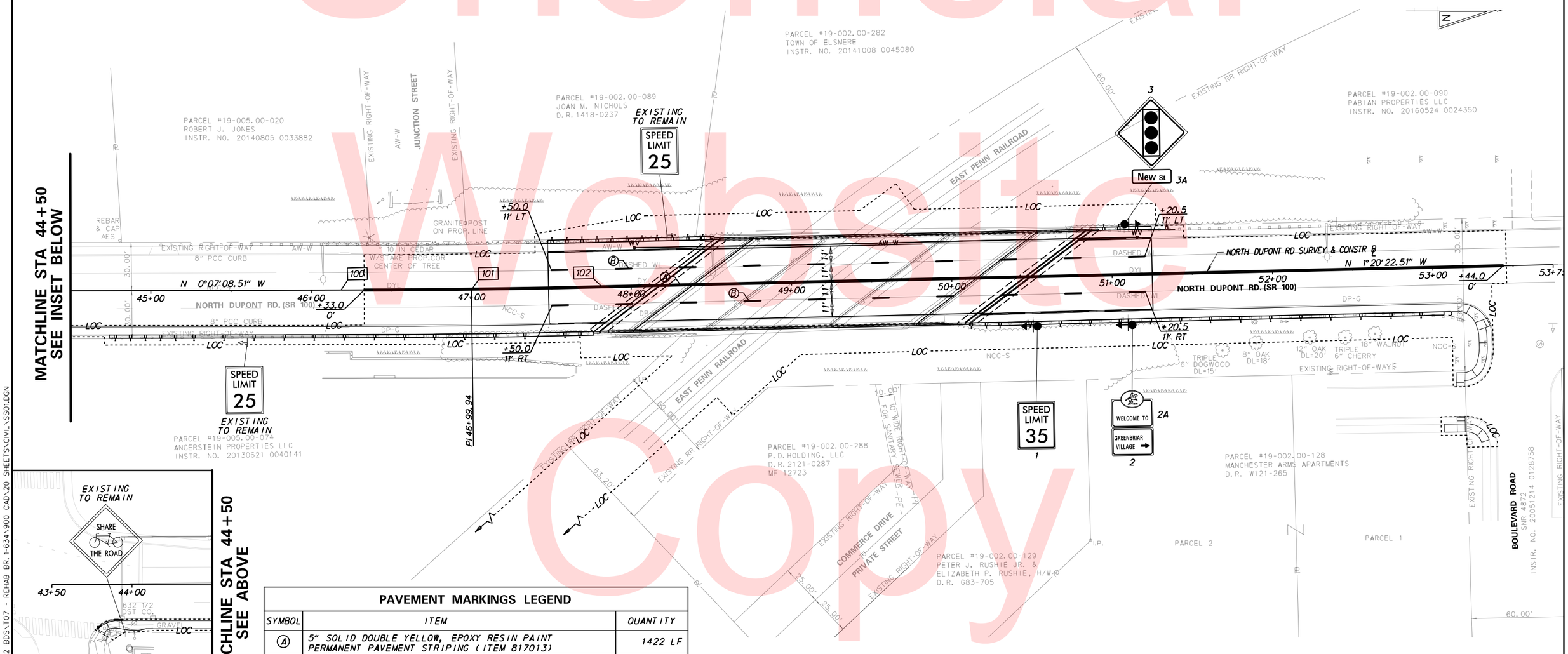
PERMANENT SIGN SCHEDULE

SHEET NO.	PLAN INDICATOR	CODE	QTY.	DESCRIPTION	ASSEMBLY NO.	SIGN WIDTH (IN)	SIGN HEIGHT (IN)	SIGN AREA (SF)	ITEM 819018 SINGLE POST (EACH)			ITEM 819019 MULTI POST (POST NEEDED)			POST INSTALLATION TYPE	CODE X11 12' POST (W/BASEPOST)	ITEM 819016 4" HOLE, 0-6" (EACH)	ITEM 819017 4" HOLE >6" (EACH)	REMARKS
									SIGN DISPOSITION	REMOVE	INSTALL	SIGN DISPOSITION	REMOVE	INSTALL					
SS-01	1	R2-1 (24)	1	SPEED LIMIT 35	1	24	30	5	REPLACE	1	1				BITUMINOUS	1		1	"35 MPH"
SS-01	2	D3-2-DE2	1	DEVELOPMENT NAME	2	36	24	6	REPLACE	1	1				BITUMINOUS	1		1	"GREENBRIER VILLAGE"
SS-01	2A	D3-2-DE1	1	WELCOME TO	2	36	32	8.0	ADD TO		1				BITUMINOUS				
SS-01	3	W3-3	1	TRAFFIC SIGNAL AHEAD	3	30	30	6.3	REPLACE	1	1				BITUMINOUS	1		1	
SS-01	3A	W16-8P	1	ADVANCE STREET NAME	3	42	9	2.6	REPLACE (ADD TO)	1	1				BITUMINOUS				"NEW ST"



PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
Ⓐ	5" SOLID DOUBLE YELLOW, EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING (ITEM 817013)	1422 LF
Ⓑ	5" BROKEN WHITE, EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING, 10' LINE & 30' GAP (ITEM 817013)	186 LF
	5" BROKEN BLACK, EPOXY RESIN PAINT PERMANENT PAVEMENT STRIPING, 10' LINE & 30' GAP (ITEM 817019)	186 LF

LAST REVISED: 10/06/2015
PW:\60323054 DELDOT ADR 1672 BDS\T07 - REHAB BR. 1-634\900 CAD\20 SHEETS\CIVIL\SS01.DGN

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RAILROAD

CONTRACT	T201507403
COUNTY	NEW CASTLE
BRIDGE NO.	1-634
DESIGNED BY:	DRS (AECOM)
CHECKED BY:	ADM (AECOM)

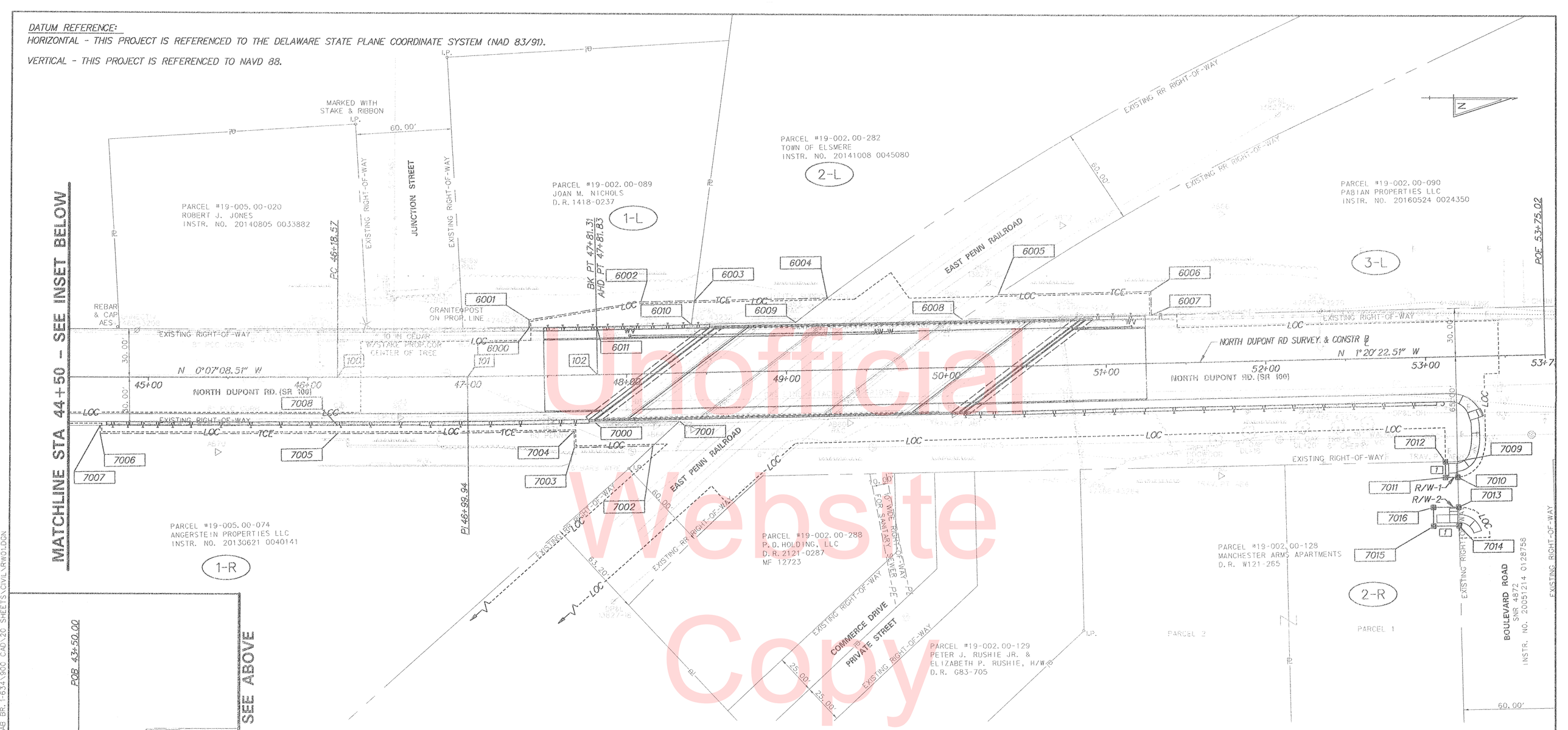
SIGNING, STRIPING AND CONDUIT PLAN

SS-01

SHEET NO.	69
TOTAL SHTS.	71

DATUM REFERENCE:
HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/91).

VERTICAL - THIS PROJECT IS REFERENCED TO NAVD 88.



NOTE:
R.O.W. APPROVAL CONTIGENT UPON RAILROAD AGREEMENT & PERMIT TO ENTER PROPERTY.

LEGEND

FEE	AREA OF ACQUISITION
R/W	AREA OCCUPIED BY EXISTING R/W
P/E	PERMANENT EASEMENT
TCE	TEMPORARY CONSTRUCTION EASEMENT

NEIL A. SHEMO LICENSE No. 16934 DELAWARE PROFESSIONAL ENGINEER

THIS SHEET PREPARED BY
THE CONSULTING FIRM OF

AECOM TECHNICAL SERVICES, INC.
1700 MARKET STREET, SUITE 1600
PHILADELPHIA, PA 19103
(215) 735-0832

PROJECT MANAGER — DATE 08/04/2017

RECOMMENDED AS PER REVISION 1

MANAGER, ROW ENGINEERING — DATE 8/14/17

PROGRAM MANAGER, TEAM SUPPORT — DATE

TECHNICAL REVIEWER, TEAM SUPPORT — DATE 8/7/17

ORIGINAL SIGNATURE DATE: 08-29-2016

NOTE: THIS SHEET SHALL BE USED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS
1 PARCEL 2-R ACQUISITION TYPES CHANGED FROM PE TO FEE - DRS 7/12/2017

SCALE 0 30 60 90 FEET

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RAILROAD

CONTRACT	BRIDGE NO.	1-634
T201507403	DESIGNED BY:	DRS
COUNTY	CHECKED BY:	ADM
NEW CASTLE		

RIGHT-OF-WAY

SHEET NO.	70
TOTAL SHTS.	71

\\USPHLFP002\DATA\PROJECT S\60323054 DELDOT AGR 1672 BDST107 - REHAB BR. 1-634\900 CAD\20 SHEETS\CIVIL\RW01.DGN

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
19-002.00-089	(1-L) JOAN M. NICHOLS	TCE	D.R. 1418-0237	0.632

ALIGNMENT NUMBER & DESCRIPTION: NORTH DUPONT RD SURVEY & CONSTRUCTION BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6000	1	47+38.96	-30.00	634209.2627	607559.9063	S 88°53'42.79" W	4.75				
6001	1	47+38.95	-34.75	634209.1711	607555.1562	N 9°20'41.78" W	70.96				
6002	1	48+09.93	-44.75	634279.1883	607543.6341	N 1°20'22.51" W	33.43				
6003	1	48+43.36	-44.75	634312.6105	607542.8525	S 82°34'49.40" E	14.92				
6010	1	48+41.09	-30.00	634310.6832	607557.6516	S 1°20'22.51" E	59.26				
6011	1	47+81.31	-30.00	634251.4407	607559.0370			S 1°10'50.81" E	42.19	42.19	7609.44
6000	1	47+38.96	-30.00	634209.2627	607559.9063						

FIGURE TCE 1-L AREA = 1164.0037 SQ. FT. (0.0267 ACRES)

NOTE: WEST OF CONST & RW BASELINE

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
19-002.00-282	(2-L) TOWN OF ELSMERE	TCE	INSTR. NO. 20141008 0045080	7.289

ALIGNMENT NUMBER & DESCRIPTION: NORTH DUPONT RD SURVEY & CONSTRUCTION BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6003	1	48+43.36	-44.75	634312.6105	607542.8525	N 1°20'22.51" W	83.08				
6004	1	49+26.44	-44.75	634395.6653	607540.9103			S 37°36'26.52" E	24.93	24.93	-1522.69
6009	1	49+06.34	-30.00	634375.9122	607556.1263	S 1°20'22.51" E	65.25				
6010	1	48+41.09	-30.00	634310.6832	607557.6516	N 82°34'49.40" W	14.92				
6003	1	48+43.36	-44.75	634312.6105	607542.8525						

FIGURE TCE 2-L AREA = 1093.0435 SQ. FT. (0.0251 ACRES)

NOTE: WEST OF CONST & RW BASELINE

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
19-002.00-090	(3-L) PABIAN PROPERTIES LLC	TCE	INSTR. NO. 20160524 0024350	0.940

ALIGNMENT NUMBER & DESCRIPTION: NORTH DUPONT RD SURVEY & CONSTRUCTION BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6005	1	50+33.42	-44.75	634502.6144	607538.4094	N 1°20'22.51" W	95.58				
6006	1	51+29.00	-44.75	634598.1710	607536.1748	N 88°39'37.49" E	14.75				
6007	1	51+29.00	-30.00	634598.5159	607550.9208	S 1°20'22.51" E	118.36				
6008	1	50+10.64	-30.00	634480.1910	607553.6878			N 34°16'07.94" W	27.13	27.13	1462.69
6005	1	50+33.42	-44.75	634502.6144	607538.4094						

FIGURE TCE 3-L AREA = 1578.9451 SQ. FT. (0.0362 ACRES)

NOTE: WEST OF CONST & RW BASELINE

*" – " OFFSET IS LEFT OF BASELINE
**" – " CURVE TURNS TO THE LEFT

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
19-005.00-074	(1-R) ANGERSTEIN PROPERTIES LLC	TCE	INSTR. NO. 20130621 0040141	1.730

ALIGNMENT NUMBER & DESCRIPTION: NORTH DUPONT RD SURVEY & CONSTRUCTION BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
7000	1	47+79.72	30.00	634251.2483	607619.0535	N 1°20'11.45" W	52.47				
7001	1	48+32.70	30.00	634303.7033	607617.8297			S 42°37'08.04" E	22.74	22.74	-1522.69
7002	1	48+15.62	45.00	634286.9703	607633.2266	S 1°20'22.51" E	49.13				
7003	1	47+66.06	45.02	634237.8576	607634.3751	S 88°39'37.49" W	10.02				
7004	1	47+66.04	35.00	634237.6235	607624.3625			S 0°40'19.39" E	148.15	148.15	7674.44
7005	1	46+18.57	35.00	634089.4876	607626.1002	S 0°07'08.51" E	148.57				
7006	1	44+70.00	35.00	633940.9214	607626.4088	S 89°52'51.49" W	5.00				
7007	1	44+70.00	30.00	633940.9110	607621.4088	N 0°07'08.51" W	148.57				
7008	1	46+18.57	30.00	634089.4807	607621.1002			N 0°43'29.46" W	161.78	161.78	-7605.15
7000	1	47+79.72	30.00	634251.2483	607619.0535						

FIGURE TCE 1-R AREA = 2347.8872 SQ. FT. (0.0539 ACRES)

NOTE: EAST OF CONST & RW BASELINE

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
19-002.00-128	(2-R) MANCHESTER ARMS APARTMENTS	FEE-1	D.R. W121-265	3.088

ALIGNMENT NUMBER & DESCRIPTION: NORTH DUPONT RD SURVEY & CONSTRUCTION BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
7009	1	53+18.58	65.00	634790.2617	607641.4629	N 88°28'55.76" E	9.84				
7010	1	53+18.61	74.84	634790.5222	607651.2954	S 0°52'36.74" E	7.66				
7011	1	53+10.95	74.77	634782.8633	607651.4126	S 89°07'23.26" W	9.77				
7012	1	53+11.03	65.00	634782.7137	607641.6394	N 1°20'22.51" W	7.55				
7009	1	53+18.58	65.00	634790.2617	607641.4629						

FIGURE FEE-1 2-R AREA = 74.5658 SQ. FT. (0.0017 ACRES)

NOTE: EAST OF CONST & RW BASELINE

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
19-002.00-128	(2-R) MANCHESTER ARMS APARTMENTS	FEE-2	D.R. W121-265	3.088

ALIGNMENT NUMBER & DESCRIPTION: NORTH DUPONT RD SURVEY & CONSTRUCTION BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
7013	1	53+18.67	93.41	634791.0144	607669.8673	N 88°28'55.76" E	11.67				
7014	1	53+18.70	105.08	634791.3234	607681.5307	S 0°50'08.38" E	15.86				
7015	1	53+02.85	104.94	634775.4685	607681.7620	S 89°09'51.62" W	11.67				
7016	1	53+02.95	93.28	634775.2984	607670.0966	N 0°50'08.38" W	15.72				
7013	1	53+18.67	93.41	634791.0144	607669.8673						

FIGURE FEE-2 2-R AREA = 184.1830 SQ. FT. (0.0042 ACRES)

NOTE: EAST OF CONST & RW BASELINE

COUNTY ASSESSMENT PARCEL NUMBER	PLAN SHEET NUMBER	OWNERSHIP OF RECORD	TITLE SOURCE	PROPERTY AREA BEFORE ACQUISITION (ACRE) D=DEED C=CALCULATED A=ASSESMENT	ACQUISITION CODE FEE, R/W, P/E, TCE	AREA TO BE ACQUIRED				PROPERTY AREA REMAINING (SQ. FEET /ACRES)	DEED RECORD OF ACQUISITION	REMARKS
						ACQUISITION (SQ. FEET /ACRES)	AREA OCCUPIED BY EXISTING RIGHT OF WAY (SQ. FEET /ACRES)	EASEMENT PERMANENT (SQ. FEET /ACRES)	EASEMENT TEMPORARY (SQ. FEET /ACRES)			
19-002.00-089	61	(1-L) JOAN M. NICHOLS	D.R. 1418-0237	C - 0.63	TCE				1164.0037 / 0.03	27517.7108 / 0.63		
19-002.00-282	61	(2-L) TOWN OF ELSMERE	INSTR. NO. 20141008 0045080	D - 7.29	TCE				1093.0435 / 0.03	317508.84 / 7.29		
19-002.00-090	61	(3-L) PABIAN PROPERTIES LLC	INSTR. NO. 20160524 0024350	C - 0.94	TCE				1578.9451 / 0.04	40924.7531 / 0.94		
19-005.00-074	61	(1-R) ANGERSTEIN PROPERTIES LLC	INSTR. NO. 20130621 0040141	D - 1.73	TCE				2347.8872 / 0.05	75358.80 / 1.73		
19-002.00-128	61	(2-R) MANCHESTER ARMS APARTMENTS	D.R. W121-265	D - 3.09	7 FEE-1	74.5658 / 0.00						
					7 FEE-2	184.183 / 0.00				134513.2800 / 3.09		

ACQUISITION CODES
FEE – ACQUISITION P/E – PERMANENT EASEMENT
R/W – AREA OCCUPIED BY EXISTING R/W TCE – TEMPORARY EASEMENT

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	
7 PARCEL 2-R ACQUISITION TYPES CHANGED	
FROM PE TO FEE - DRS 7/12/2017	

NOT TO SCALE

BR 1-634
SR 100 DUPONT ROAD
OVER EAST PENN RAILROAD

CONTRACT	T201507403	
COUNTY	NEW CASTLE	
BRIDGE NO.	1-634	
DESIGNED BY:	DRS	
CHECKED BY:	ADM	

RIGHT-OF-WAY TABULATION SHEET

SHEET NO.	TOTAL SHTS.
71	71

LAST REVISED: 07/16/2015
\\USPHLTP002\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T07 - REHAB BR. 1-634\900 CAD\20 SHEETS\CIVIL\RW02.DGN