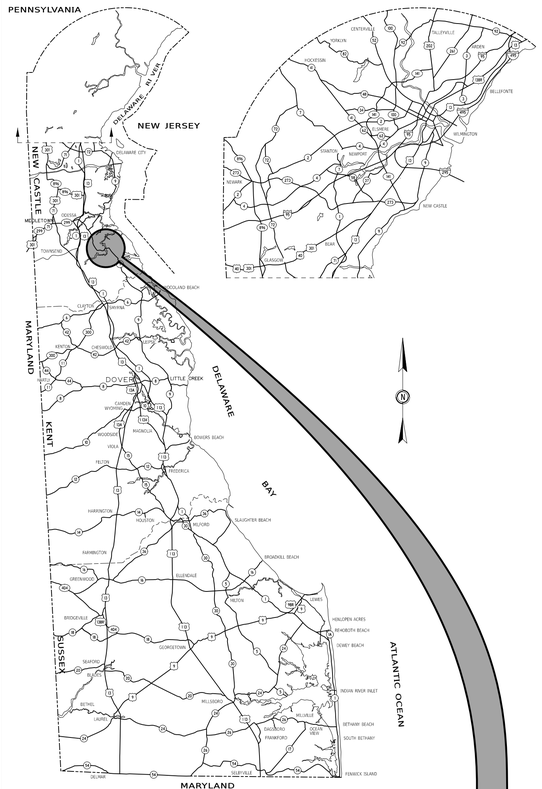


GENERAL LOCATION OF CONTRACT

THE STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION

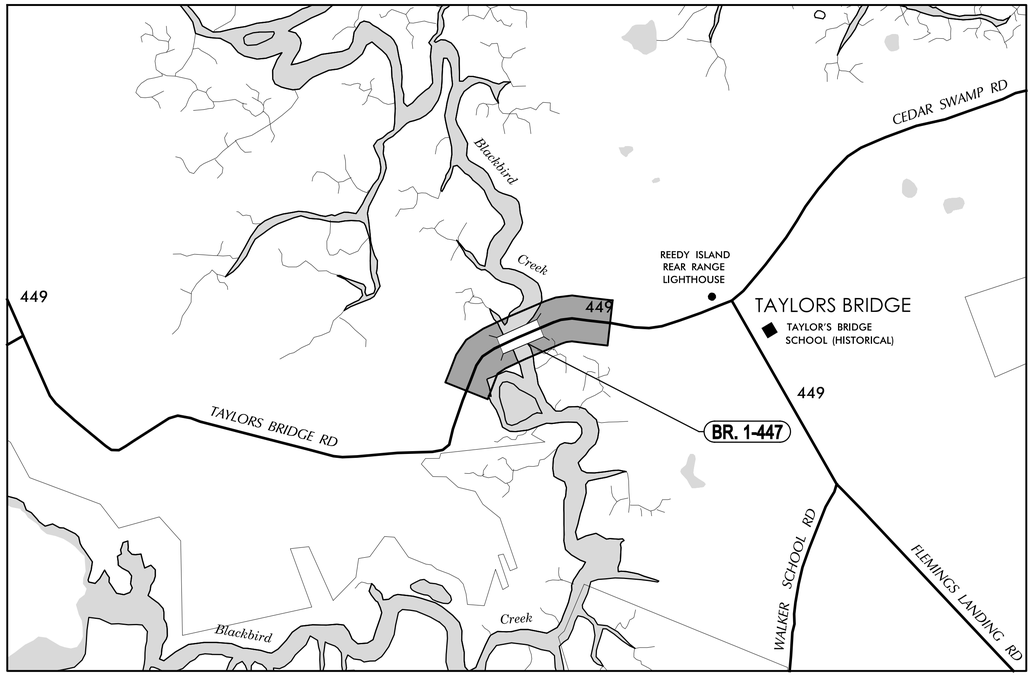
U.S. CUSTOMARY UNITS

CONSTRUCTION AND RIGHT OF WAY PLANS FOR:

ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT NUMBER: T201907102
FEDERAL AID PROJECT NUMBER: EBROS-N449 (2)

COUNTY: NEW CASTLE M.R. #: N449



LOCATION MAP
NOT TO SCALE

DESIGN DESIGNATION

MRD #: N449	ROAD NAME: TAYLORS BRIDGE ROAD		
FUNCTIONAL CLASS: RURAL MAJOR COLLECTOR		D.H.V. PROJECTED: 260	YEAR: 2050
TYPE OF CONSTRUCTION: BRIDGE REPLACEMENT		DESIGN SPEED: 45 M.P.H.	
A.A.D.T. CURRENT: 900	YEAR: 2020	TRUCKS: 7 %	
A.A.D.T. PROJECTED: 2000	YEAR: 2050	DIRECTION OF DISTRIBUTION: 61%	

APPROVED DESIGN EXCEPTIONS

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE

ADDENDA / REVISIONS

ASSOCIATED CONTRACTS

CONTRACT NO.	CONTRACT NAME
1090	BRIDGE 447 (TAYLORS BRIDGE) ON SR 9 OVER BLACKBIRD CREEK

APPROVED FOR ADVERTISEMENT

DIRECTOR OF TRANSPORTATION SOLUTIONS — DATE: 08/08/2025

PREPARED BY
PENNONI ASSOCIATES INC.

Pennoni

2/24/25
DATE

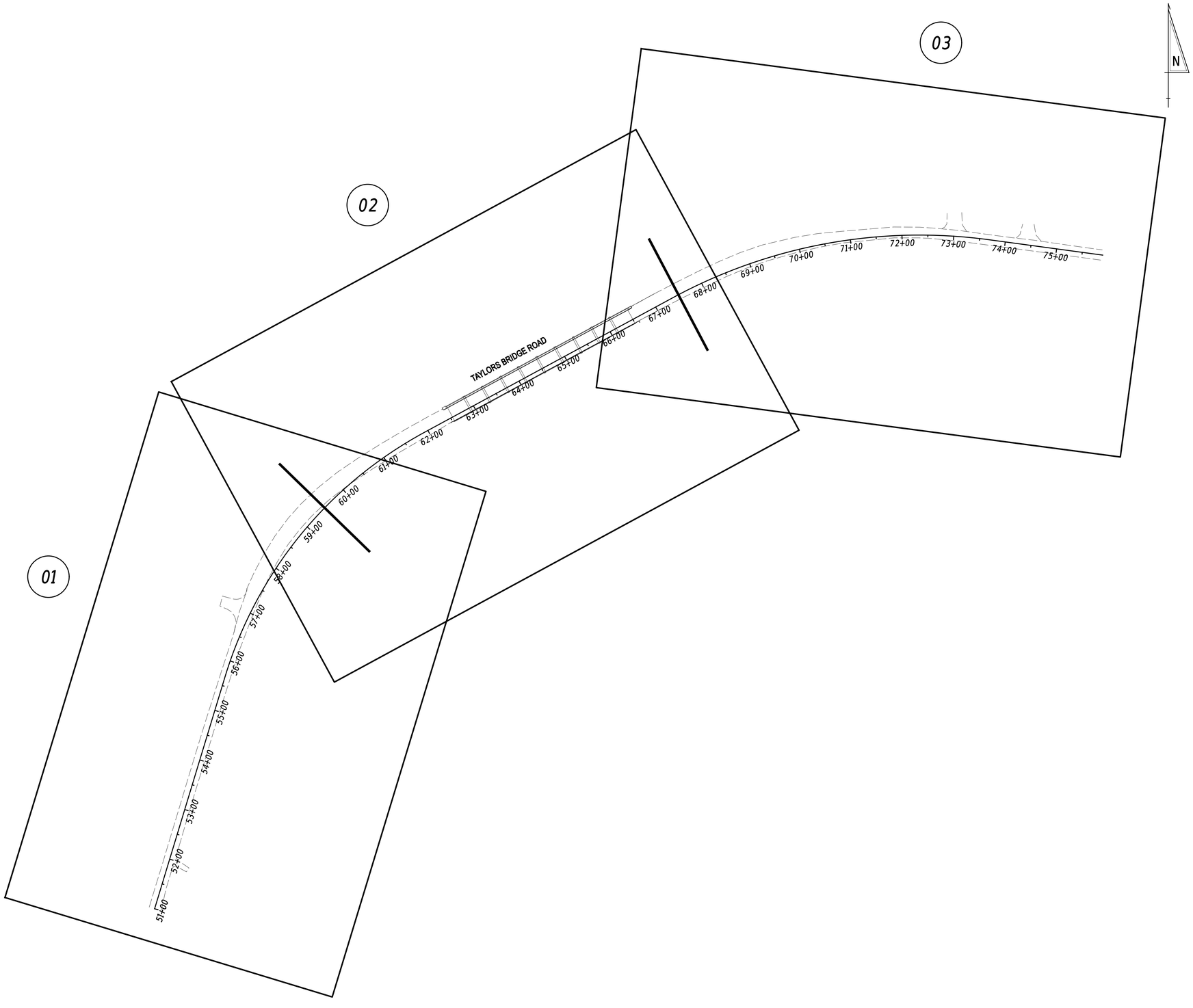
THIS SEAL APPLIES TO ALL SHEETS BEARING THE "PAI" SECTION DESIGNATION.

HOUSTON A. BROWN LICENSE No. 18197 DELAWARE PROFESSIONAL ENGINEER

SEAL

INDEX OF SHEETS

SHEET DESCRIPTION	SHEET NO(S)
TITLE	1
INDEX OF SHEETS	2
ADDENDA AND REVISIONS	3
LEGEND	4
NOTES	5-6
TYPICAL SECTIONS	7
HORIZONTAL AND VERTICAL CONTROL	8
CONSTRUCTION PLAN (CP)	9-11
PROFILES	12-13
GRADES AND GEOMETRICS (GG)	14-16
PLAN AND ELEVATION	17
BRIDGE AND APPROACH TYPICAL SECTIONS	18
FOUNDATION LAYOUT PLAN	19
FOOTING AND PILE LAYOUT PLAN	20
STEEL H PILE DETAILS	21
RETAINING WALL PLAN AND DETAILS - 1	22
RETAINING WALL PLAN AND DETAILS - 2	23
TIE ROD DETAILS	24
RETAINING WALL ELEVATIONS	25
ABUTMENT PLAN AND ELEVATION	26
ABUTMENT TYPICAL SECTION	27
PIER 1 DETAILS	28
PIER 2 DETAILS	29
PIER 3 DETAILS	30
PIER TYPICAL SECTIONS	31
BEARING DETAILS	32
PRESTRESSED BEAM DETAILS 1	33
PRESTRESSED BEAM DETAILS 2	34
FRAMING PLAN	35
ABUTMENT AND PIER DIAPHRAGM DETAILS	36
CONCRETE DECK PLAN	37
CONCRETE DECK SECTIONS	38
CONCRETE DECK DETAILS	39
FINISHED DECK ELEVATIONS	40
SIDEWALK AND PARAPET DETAILS	41
PARAPET DETAILS	42
SCUPPER DETAILS	43
BRIDGE RAILING DETAILS	44
EXPANSION JOINT DETAILS 1	45
EXPANSION JOINT DETAILS 2	46
APPROACH SLAB DETAILS	47
SLEEPER SLAB DETAILS	48
MOMENT SLAB DETAILS	49
STANDPIPE AND MONITORING WELL DETAILS	50
REINFORCEMENT SCHEDULE 1	51
REINFORCEMENT SCHEDULE 2	52
BORING LOGS	53
HISTORICAL BORING LOGS 1	54
HISTORICAL BORING LOGS 2	55
ENVIRONMENTAL COMPLIANCE NOTES	56
ENVIRONMENTAL COMPLIANCE PLAN (EC)	57-59
WETLAND MITIGATION SITE NOTES	60
WETLAND MITIGATION SITE GRADING PLAN (WM)	61-63
WETLAND MITIGATION SITE LANDSCAPING PLAN (WM)	64-66
WETLAND MITIGATION PLANTING DETAILS	67
CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS	68-71
DETOUR PLANS	72
SIGNING, STRIPING AND CONDUIT PLANS (SS)	73-75
PERMANENT SIGN SCHEDULE	76
RIGHT-OF-WAY PLAN (RW)	77-79
RIGHT-OF-WAY DATA SHEET	80-82
RIGHT-OF-WAY TABULATION SHEET	83



PENNONI ASSOCIATES INC.
FILE NAME: $FILEAS
MICROSTATION VERSION: $VERSIONS
MICROSTATION WORKSPACE: $WORKSPACES
PEN TABLE: $PENTBLS$
PLOT DRIVER: $PLTDRVS$
DATE PLOTTED: 16-SEP-2025 @ 13:59
USER NAME: $USERS
OFFICE LOCATION: $OFFICENAM

ADDENDA / REVISIONS	

SCALE
0 100 200 300
FEET

ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447	SECTION
T201907102	DESIGNED BY:	E. HARASTY	PAI
COUNTY			SHEET NO.
NEW CASTLE	CHECKED BY:	O. GREEN	2

INDEX OF SHEETS

PENNONI ASSOCIATES INC.	PEN TABLE: $PENTBL$$
FILE NAME: $PLEA$	PLOT DRIVER: $PLTDRV$$
MICROSTATION VERSION: $VERSION$	DATE PLOTTED: 16-SEP-2025 @ 14:00
MICROSTATION WORKSPACE: $WORKSPACE$	USER NAME: $USER$ OFFICE LOCATION: $OFFICENAME$

ADDENDA / REVISIONS		NOT TO SCALE	ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT	CONTRACT	BRIDGE NO.	1-447	ADDENDA AND REVISIONS	SECTION
				T201907102	DESIGNED BY:	E. HARASTY		
				COUNTY				SHEET NO.
				NEW CASTLE	CHECKED BY:	O. GREEN		3

MANMADE ROADSIDE FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED	ID
BOLLARD - STEEL POLE			
BOLLARD - WOOD POST			
CURB, TYPE 1 AND TYPE 3	CURB, TYPE "X"		
CURB, TYPE 2			
CURB & GUTTER, TYPE 1			C XXX
CURB & GUTTER, TYPE 2	C&G, TYPE "X"		
CURB & GUTTER, TYPE 3			
CURB OPENING - SUMP / ON GRADE			C O
CURB OPENING WITH SIDEWALK			CO SW
FENCE - CHAINLINK OR STRANDED			F XXX
FENCE - STOCKADE OR SPLIT RAIL			
FLAG POLE	F.P.		
GUARDRAIL - STEEL BEAM, TYPE 1			
GUARDRAIL - STEEL BEAM, TYPE 2			
GUARDRAIL - STEEL BEAM, TYPE 3			
GUARDRAIL - WIRE ROPE			
GUARDRAIL - END ANCHORAGE			GR XXX
GUARDRAIL - END TREATMENT, TYPE 1			
GUARDRAIL - END TREATMENT, TYPE 2			
GUARDRAIL - END TREATMENT, TYPE 3			
GUARDRAIL - IMPACT ATTENUATOR			
LAMP AND POST - RESIDENTIAL	LAMP		
MAILBOX	MB	MB	
PARKING METER AND POST	P.M.		
PAVEMENT - FLEXIBLE			
PAVEMENT - RIGID			
PILE - BRIDGE			
PILLAR OR MISCELLANEOUS POST			
TRAFFIC SIGN AND POST			
WALL - BRICK OR BLOCK			
WALL - STONE			

DRAINAGE FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED	ID
BIOFILTRATION SWALE		BFS	
DITCH OR STREAM CENTERLINE			
DIRECTIONAL STREAM FLOW ARROW			
DRAINAGE INLET	C.B. / D.I.		DI XXX
DRAINAGE JUNCTION BOX	J.B.		JB XXX
DRAINAGE MANHOLE	Ⓓ		MH XXX
DRAINAGE PIPE AND FLOW ARROW	SIZE/TYPE LABEL		P XXX
FLARED END SECTION			FES XXX
RIPRAP - AREA FEATURE*			RR XXX
RIPRAP - LINEAR FEATURE			
SAFETY END SECTION			SES XXX
UNDERDRAIN			UD XXX
UNDERDRAIN OUTLET			UDO XXX

UTILITY FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED
COMMUNICATIONS DISTRIBUTION BOX	CD TV	
COMMUNICATIONS MANHOLE	Ⓒ Ⓣ	
COMMUNICATIONS TEST POINT	CT T	
COMMUNICATIONS - UNDERGROUND	COMM(A)	COMM
ELECTRIC - UNDERGROUND	E(A)	E
ELECTRIC MANHOLE	Ⓔ	
ELECTRIC METER	EM	
ELECTRIC TRANSFORMER	E	
GAS - UNDERGROUND	G(A)	G
GAS MANHOLE	Ⓖ	
GAS METER	G.M.	
GAS VALVE	G.V.	
GAS PUMP - SERVICE STATION	G.P.	
IRRIGATION - UNDERGROUND	IR(A)	IR
ITMS - UNDERGROUND	ITMS(A)	ITMS
LIGHTING - UNDERGROUND	LI(A)	LI
LUMINAIRE - POLE MOUNTED		
MANHOLE - UNDETERMINED OWNER	?	
RAILROAD TRACKS		
SANITARY - UNDERGROUND	S(A)	S
SANITARY SEWER MANHOLE	Ⓢ	
SANITARY SEWER VALVE	S.V.	
SANITARY SEWER CLEANOUT OR VENT	S.C.O.	
SEPTIC DRAIN FIELD	S.D.F.	
SIGNALIZATION - UNDERGROUND	SIG(A)	SIG
SOIL BORING LOCATION		
TELEPHONE BOOTH	B	
TRAFFIC - CONDUIT JUNCTION WELL	J.W.	
TRAFFIC - LIGHT POLE AND BASE		
TRAFFIC - PEDESTRIAN POLE & BASE		
TRAFFIC - SIGNAL CABINET & BASE		
TRAFFIC - SIGNAL POLE AND BASE		
UTILITY BOX	U	
UTILITY MARKER	UM	
UTILITY POLE GUY WIRE ANCHOR		
UTILITY POLE		
UTILITY TEST HOLE LOCATION		
WATER - UNDERGROUND	W(A)	W
WATER - FIRE HYDRANT	F.H.	F.H.
WATER METER	W.M.	
WATER VALVE	W.V.	W.V.
WELL HEAD	WELL	

PAVEMENT SECTION(S)

OVERLAY PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS	
RECONSTRUCTED PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS	
DRIVEWAY, ENTRANCE, AND GUARDRAIL MAINTENANCE STRIP PAVEMENT - SEE NOTES FOR MATERIALS AND DEPTHS	

NATURAL ROADSIDE FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED
HEDGEROW OR THICKET		
MARSH BOUNDARY LINE		
TREE - CONIFEROUS		
TREE - DECIDUOUS		
TREE STUMP		
SHRUBBERY		
WETLAND BOUNDARY - DELINEATED	WL	
WOODS LINE BOUNDARY		
TOP OF BANK		

RIGHT-OF-WAY FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED
DENIAL OF ACCESS	DA	DA
EASEMENT - OTHERS	EASEMENT TYPE	
PERMANENT EASEMENT	PE	PE
PROPERTY LINE		
PROPERTY MARKER - CONCRETE	C.M.	
PROPERTY MARKER - IRON PIPE	I.P.	
RIGHT-OF-WAY BASELINE	100+00	100+00
RIGHT-OF-WAY LINE	R/W	R/W
RIGHT-OF-WAY BY PE	R/W-PE	
RIGHT-OF-WAY & DENIAL OF ACCESS	R/W-DA	R/W-DA
RIGHT-TO-ENTER		RTE
TEMPORARY CONSTRUCTION EASEMENT		TCE

SURVEY CONTROL & MONUMENTATION

FEATURE DESCRIPTION	EXISTING
POINT OF CURVATURE OR TANGENCY	
POINT OF INTERSECTING TANGENTS	
SURVEY BENCHMARK LOCATION	B.M.
SURVEY NGS POINT LOCATION	
SURVEY TIE POINT LOCATION	T.P.
SURVEY TRAVERSE POINT	

MISCELLANEOUS FEATURES

FEATURE DESCRIPTION	PROPOSED
BARRIER, DOUBLE-FACED, PERMANENT	
BARRIER, SINGLE-FACED, PERMANENT, TEST LEVEL 4 / TEST LEVEL 5	
BRICK PATTERNED SURFACE	
BUTT JOINT	
CLEAR ZONE	CZ
CONSTRUCTION BASELINE	100+00
LATERAL OFFSET	LO
LIMIT OF CONSTRUCTION	LOC
PAVEMENT PATCH	
PAVEMENT REMOVAL - TOPSOIL, SEED AND MULCH	
P.C.C. SIDEWALK - 4"	
P.C.C. SIDEWALK - 6" (USE 8" DEPTH FOR CHANNELIZATION ISLANDS.)	

IDENTIFIERS

FEATURE DESCRIPTION	ID
ABANDON BY CONTRACTOR	AB C
ABANDON BY OTHERS	AB O
ADJUST BY CONTRACTOR	A C
ADJUST BY OTHERS	A O
BEST MANAGEMENT PRACTICE	BMP XXXX
BUS STOP PAD / TYPE	BSP X
BUS STOP WITH SHELTER PAD / TYPE	BSSP X
CONCRETE SAFETY BARRIER	B XXX
CONVERT TO JUNCTION BOX	CJB XXX
CONVERT TO DRAINAGE MANHOLE	CMH XXX
DO NOT DISTURB	DND
ENERGY DISSIPATOR	ED XXX
FILL WITH FLOWABLE FILL	FF C
LANDSCAPE PLANTINGS	LS XXX
PEDESTRIAN CONNECTION / TYPE	PC XX
PEDESTRIAN CONNECTION / TYPE WITHOUT DETECTABLE WARNING SYSTEM	PC-N XXX
RELOCATE BY CONTRACTOR	RL C
RELOCATE BY OTHERS	RL O
RELOCATE BY PROPERTY OWNER	RL PO
REMOVE BY CONTRACTOR	RM C
REMOVE BY OTHERS	RM O
REMOVE BY TRAFFIC CONTRACTOR	RM TC
RIGHT-OF-WAY MONUMENT	M XXX

PENNONI ASSOCIATES INC.
FILE NAME: $FILEAS
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$$
PLOT DRIVER: $PLTDRV$$
DATE PLOTTED: $DATE$
USER NAME: $USER$
@ $TIME$
OFFICE LOCATION: $OFFICENAME$

ADDENDA / REVISIONS

NOT TO SCALE

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	T201907102	BRIDGE NO.	1-447
COUNTY	NEW CASTLE	DESIGNED BY:	E. HARASTY
		CHECKED BY:	O. GREEN

LEGEND

SECTION: PAI
SHEET NO.: 4

GENERAL NOTES

1. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED JANUARY 2024 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2024, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.

2. ELECTRONIC DESIGN DATA FILES THAT WILL BE MADE AVAILABLE TO THE BIDDERS INCLUDE:

( )	NONE
(X)	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
(X)	DESIGN FILE, IN .DGN FILE FORMAT, THAT CONTAINS 3D TRIANGLES REPRESENTING THE EXISTING SURFACE.
(X)	DESIGN FILE, IN .DGN FILE FORMAT, THAT CONTAINS 3D FEATURE LINES FOR THE PROPOSED DESIGN. 3D FEATURE LINES ARE FOR THE PROPOSED TOP SURFACE ELEVATION ONLY.

NOTE: THE DOCUMENT ENTITLED "ELECTRONIC FILE SHARING RELEASE" MUST BE SIGNED BY ALL PARTIES PRIOR TO THE DELIVERY OF ANY ELECTRONIC PROJECT FILES.

NOTE: THERE MAY BE SOME AREAS OF THE PROJECT NOT INCLUDED IN THE ELECTRONIC DESIGN DATA FILE(S). IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE DESIGN DATA FILE AND DETERMINE THE LIMITS OF THE PROJECT INCLUDED.

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

(X)	CROSS SECTIONS
(X)	RIGHT-OF-WAY PLANS (INCLUDED IN PLANS)

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.

2. THE CONTRACTOR WILL CONTACT THE DELAWARE TMC AT 302-659-4600 PRIOR TO ANY UNMANNED AERIAL VEHICLE (UAV) FLIGHTS. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THE FOLLOWING INFORMATION: THE REGISTRATION NUMBER OF THE UAV, THE FLIGHT TIME, LOCATION OF THE FLIGHT, THE PILOT'S NAME AND THE PILOT'S CONTACT NUMBER DURING THE FLIGHT.

3. NIGHT WORK IS NOT PERMITTED ON THIS PROJECT UNLESS THE CONTRACTOR OBTAINS: APPROVAL FROM THE ENGINEER, ACCEPTABLE RESPONSES ON NIGHT WORK SURVEYS, AND ACCEPTANCE FROM THE MUNICIPALITY. METHOD AND FORMAT OF NIGHT WORK SURVEYS WILL BE PROVIDED BY THE ENGINEER UPON REQUEST. NIGHT WORK, SURVEYS, AND COORDINATION WITH MUNICIPALITIES IS NOT COMPENSABLE AND THE TIME TO COMPLETE THE SURVEYS IS NOT EXCUSABLE.

SECTION 200

4. THE CONTRACTOR SHALL REMOVE AND RESET ALL MAILBOXES TO MAINTAIN MAIL SERVICE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL RELOCATE MAILBOXES AS REQUIRED BY THE PROPOSED GEOMETRICS AND AS DIRECTED BY THE ENGINEER. WHEN RELOCATING MAILBOXES IN OPEN SECTIONS, THE FACE OF THE MAILBOX SHALL SET BACK 8 INCHES FROM THE EDGE OF THE PAVED SHOULDER. THE BOTTOM OF THE MAILBOX SHALL BE POSITIONED IN ACCORDANCE WITH THE LATEST VERSION OF THE UNITED STATES POSTAL SERVICE GUIDELINES. MAILBOXES LOCATED AT DRIVEWAY ENTRANCES SHALL BE PLACED ON THE FAR SIDE OF THE DRIVEWAY IN THE DIRECTION OF TRAVEL. ACCEPTABLE POST SHALL BE 4 INCH X 4 INCH WOOD POST OR 4 INCH DIAMETER WOOD POST. FOR RELOCATING MULTIPLE MAILBOXES TOGETHER ALL POST SHALL BE SEPARATED BY A DISTANCE OF NO LESS THAN 3/4 OF THEIR FULL HEIGHT ABOVE THE GROUND. MULTIPLE MAILBOXES ATTACHED TO A SINGLE HORIZONTAL BOARD SHALL NOT BE LOCATED INSIDE THE CLEARZONE. EACH MAILBOX SHALL BE PLACED ON AN INDIVIDUAL POST MEETING THE CRITERIA ABOVE. ALL MAILBOXES SHALL BE SET NOT TO IMPEDE THE MINIMUM PAR (PEDESTRIAN ACCESS ROUTE) WIDTH AS DETERMINED BY THE CURRENT EDITION OF THE PEDESTRIAN ACCESSIBILITY STANDARDS FOR FACILITIES IN THE PUBLIC RIGHT OF WAY. IF MAILBOXES ARE NOT SET IN ACCORDANCE WITH THE ABOVE DIRECTIONS, RESETTING OF THE MAILBOXES WILL BE AT THE COST OF THE CONTRACTOR. COST FOR ALL WORK AND MATERIALS SHALL BE PAID UNDER ITEM 201000 - CLEARING AND GRUBBING.

5. ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   a. SUPERSTRUCTURE INCLUDING BARRIERS, DECK, BEAMS, AND BEARINGS.
   b. SUBSTRUCTURE INCLUDING ABUTMENTS, PIER CAPS. CONTRACTOR HAS THE OPTION TO PULL EXISTING PILES OR CUT OFF DOWN TO 2-FEET BELOW THE MUDLINE. DO PULL PILES FOR EXISTING PIER 5 (LOCATED AT PROPOSED PROPOSED PIER 2) AND BOTH EXISTING ABUTMENTS.

6. ITEMS TO BE REMOVED UNDER ITEM 211002 - REMOVAL OF GUARDRAIL AND FENCE SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   a. ALL EXISTING GUARDRAIL WITHIN THE PROJECT LIMITS UNLESS OTHERWISE SPECIFIED ON THE CONSTRUCTION PLANS.

7. ONLY EXISTING FEATURES WITHIN THE LOC IDENTIFIED WITH REMOVE BY CONTRACTOR OR BY OTHER METHODS ARE TO BE REMOVED OR DISTURBED.

SECTION 400

8. THE PAVEMENT SECTION FOR FLEXIBLE PAVEMENT RESIDENTIAL DRIVEWAYS SHALL BE 2" BITUMINOUS CONCRETE, TYPE 'C' OVER 8" GRADED AGGREGATE BASE COURSE, TYPE 'B', UNLESS OTHERWISE NOTED ON THE PLANS OR AS DETERMINED BY ENGINEER IN THE FIELD AS NEEDED TO MATCH EXISTING.

SECTION 600

9. ALL DEBRIS ASSOCIATED WITH DEMOLITION OF THE STRUCTURES SHALL BE PREVENTED FROM ENTERING BLACKBIRD CREEK. A DEMOLITION PLAN INCLUDING BUT NOT LIMITED TO THE DEMOLITION PROCEDURE, TOOLS, EQUIPMENT, AND SHIELDING SHALL BE SUBMITTED FOR APPROVAL BY THE ENGINEER. THE CONTRACTOR'S DEMOLITION PLAN SHALL BE SEALED BY A DELAWARE PROFESSIONAL ENGINEER PRIOR TO SUBMISSION FOR APPROVAL. ALL WORK ASSOCIATED TO THE DEMO PLAN AND DEMO WORK SHALL BE PAID UNDER ITEM 604001.

10. PORTLAND CEMENT CONCRETE:
    USE PORTLAND CEMENT CONCRETE FOR CAST-IN-PLACE ELEMENTS AS FOLLOWS:
    (f'c = 28-DAY COMPRESSIVE STRENGTH)
    CLASS A - ABUTMENT PILE CAP, PIER WALLS, PIER CAP, BRIDGE PARAPET, SHEET PILE COPING (f'c = 4.5 ksi)
    CLASS B - PIER FOOTINGS (f'c = 3.0 ksi)
    CLASS D - BRIDGE DECK SLAB, APPROACH SLAB, APPROACH BARRIERS, MOMENT SLABS (f'c =4.5 ksi)

    SUPPLY THE CONCRETE FOR THE BRIDGE DECK, APPROACH SLAB, 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 OF TWO SEPARATE PRODUCTS EACH ADDED AT THE DOSAGE RECOMMENDED BY THE MANUFACTURERS TECHNICAL DATA SHEETS AND HAVING THE FOLLOWING CHARACTERISTICS:
    (a.) DESIGNED TO PROVIDE BOTH OF THE FOLLOWING CHARACTERISTICS:
    (i.) EXPANDS AT A RATE THAT CLOSELY COMPENSATES FOR THE 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 FIE PERFORMANCE
    (c.) FORMULATED FOR USE IN FREEZING AND THAWING WEATHER
    - ALL ADMIXTURES MUST BE COMPATIBLE WITH ALL OTHER CONCRETE-MIX DESIGN CONSTITUENTS.
    CALCIUM CHLORIDE IS NOT PERMITTED; CHEMICAL ADMIXTURES THAT CONTAIN MORE THAN 0.1% CHLORIDE BY WEIGHT WILL NOT BE PERMITTED FOR USE. DOSAGE RATE AND MIXING SEQUENCE WILL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
    (d.) DOCUMENTED PERFORMANCE OF ASTM C1581, RING TEST, RUN WITH CONCRETE (MAXIMUM AGGREGATE SIZE NOT TO EXCEED 0.5 INCHES): NO CRACKING FOR MINIMUM 120 DAYS.
    (e.) CERTIFIED BY NSF/ANSI STANDARD 61: DRINKING WATER SYSTEM COMPONENTS - HEALTH EFFECTS.
    CONTRACTORS AND SUPPLIERS THAT DO NOT HAVE DOCUMENTED EXPERIENCE WITH SHRINKAGE COMPENSATING ADMIXTURES SHALL INCLUDE SUFFICIENT TIME FOR LABORATORY TESTING AND A TRIAL BATCH TO CONFIRM DOSAGE AND ADMIXTURES WILL PERFORM AS INTENDED TO MEET THE DESIGN INTENT.

11. USE PORTLAND CEMENT CONCRETE FOR PRECAST ELEMENTS AS FOLLOWS:
    (f'c = 28-DAY COMPRESSIVE STRENGTH)
    (f'ci = COMPRESSIVE STRENGTH AT INITIAL PRESTRESS)
    PRESTRESSED GIRDERS:
    f'c = 8 ksi, f'ci = 6.4 ksi
    DESIGN ASSUMPTIONS: THE PRESTRESSED CONCRETE BEAMS WERE DESIGNED FOR NORMAL EXPOSURE.

12. THE ABUTMENTS, PIER CAPS, AND PIER WALLS ARE DESIGNATED AS MASS CONCRETE POURS. A TEMPERATURE CONTROL PLAN IS REQUIRED FOR THESE ELEMENTS. REFER TO SECTIONS 610.3.1.A.2 AND 610.3.4.D.3 OF THE STANDARD SPECIFICATIONS FOR MORE INFORMATION.

13. DECK SLAB:
    - THE DECK SLAB THICKNESS INCLUDES ½" INTEGRAL WEARING SURFACE.

14. BAR REINFORCEMENT:
    - PROVIDE REINFORCING STEEL CONFORMING TO AASHTO M31 (ASTM A615), GRADE 60.
    - PROVIDE A 3" CLEAR COVER FOR ALL REINFORCING STEEL PLACED IN CONCRETE CAST AGAINST EARTH OR A 2" CLEAR COVER ELSEWHERE, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
    - ALL REINFORCEMENT SHALL BE EPOXY COATED UNLESS NOTED OTHERWISE

    - WITH APPROVAL OF THE BRIDGE DESIGN ENGINEER, GALVANIZED REINFORCING STEEL MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STELL AT NO ADDITIONAL COST TO THE DEPARTMENT.

15. PRECAST BEAMS AND PIER DIAPHRAGMS:
    - TIME FROM CASTING OF BEAMS TO POURING OF PIER DIAPHRAGMS MUST BE MORE THAN 90 DAYS. IF THIS TIME FRAME IS NOT SUFFICIENT, THE CONTRACTOR MUST SUBMIT FOR APPROVAL THE DESIGN SHOWING STRUCTURAL CALCULATIONS TO ACCOUNT FOR RESTRAINT MOMENTS.

16. INTERMEDIATE DIAPHRAGMS:

    - THE PRECASTER AND/OR THE CONTRACTOR MAY USE A PRECAST CONCRETE OR GALVANIZED STEEL ALTERNATE FOR THE INTERMEDIATE DIAPHRAGMS. IF THIS OPTION IS CHOSEN, INCLUDE NEW CONNECTION DETAILS IN THE PRECAST PRESTRESSED BEAM WORKING DRAWINGS FOR APPROVAL.

17. CONCRETE SEALER:
    - REFER TO DIAGRAMS CONTAINING CONCRETE SEALER LIMITS.

18. COFFERDAMS:
    -TO BE PROVIDED AND PAID FOR IN ACCORDANCE WITH ITEM 604002 - COFFERDAMS.
    -CONTRACTOR WILL SELECT THE TYPE OF COFFERDAM TO BE CONSTRUCTED, HOWEVER, DESIGN AND CONSTRUCT THE COFFERDAM IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF SECTION 604 OF THE STANDARD SPECIFICATIONS.
    -THE CONTRACTOR MAY SUBMIT FOR APPROVAL PROPRIETARY DIVERSION DEVICES SUCH AS PORTADAM, AQUA-BARRIER OR APPROVED EQUAL.

SECTION 700

19. 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

20. 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

21. THE CONTRACTOR SHALL NOTIFY DART FIRST STATE AT DOT_DETOURS@DELAWARE.GOV AT LEAST 14 DAYS PRIOR TO THE START OF ANY DETOURS OR CONSTRUCTION, AND DOT_DTC_PROJECTDEVELOPMENT@DELAWARE.GOV AT SUCH TIME THE FACILITY IS COMPLETED AND OPERABLE FOR TRANSIT OPERATIONS. FOR EMERGENCY DETOUR INFORMATION ONLY, PLEASE CONTACT DTC'S CHIEF SCHEDULER AT 302-576-6019.

22. DESIGN SPECIFICATIONS:
    (A) DELDOT BRIDGE DESIGN MANUAL, 2024 EDITION
    (B) AASHTO LRFD BRIDGE SPECIFICATIONS, 2017, 8TH EDITION, CUSTOMARY U.S. UNITS

23. -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).
    -DESIGN LIVE LOADS INCLUDE HL-93 LOADING.
    -FATIGUE DESIGN IS BASED ON THE FOLLOWING ONE DIRECTIONAL TRAFFIC VOLUMES: ADTT = 1,738 (2019).
    -LIVE LOAD DISTRIBUTION TO THE GIRDERS IS BASED ON THE AASHTO SIMPLIFIED METHOD.
    -LIVE LOAD DEFLECTION IS L/800.
    -BARRIERS ON RETAINING WALL HAVE BEEN DESIGNED FOR (MASH) TEST LEVEL 4 (TL-4).
    -BARRIERS ON SIDEWALK HAVE BEEN DESIGNED FOR (MASH) TEST LEVEL 2 (TL-2).

24. HYDRAULIC DATA:

DRAINAGE AREA:	24.5 sq. miles	DESIGN FREQUENCY:	50-YEAR
DESIGN DISCHARGE:	29,317 cfs	100-YEAR DISCHARGE:	32,214 cfs
EXISTING 50-YEAR WSE:	EL. 7.75 ft	PROPOSED 50-YEAR WSE:	EL. 7.68 ft
EXISTING 50-YEAR VELOCITY:	7.01 fps	PROPOSED 50-YEAR VELOCITY:	6.71 fps
EXISTING 100-YEAR WSE:	EL. 8.25 ft	PROPOSED 100-YEAR WSE:	EL. 8.17 ft
EXISTING 100-YEAR VELOCITY:	7.56 fps	PROPOSED 100-YEAR VELOCITY:	7.09 fps
EXISTING WATERWAY OPENING:	4656 sq. ft	PROPOSED WATERWAY OPENING:	5293 sq. ft

    HYDRAULIC DATA BASED ON UNSTEADY STORM SURGE SCENARIO FOR BLACKBIRD CREEK. PROPOSED WATERWAY OPENING IS THE FLOW AREA FOR THE DESIGN STORM.

25. SCOUR ANALYSIS:
    SCOUR DESIGN FREQUENCY: 200 YEARS (AS PER GUIDANCE OF SECTION 104.4 - 'SCOUR EVALUATION AND PROTECTION' FIGURE 104-8)
    SCOUR DESIGN FLOOD DISCHARGE: 36,069 cfs
    SCOUR DESIGN FLOOD VELOCITY: 7.37 fps (AT BRIDGE OUTLET)
    WATER SURFACE ELEVATION: 9.18 ft (IMMEDIATELY UPSTREAM OF BRIDGE)
    TOTAL CALCULATED SCOUR DEPTH AT WEST ABUTMENT: 14.8'
    TOTAL CALCULATED SCOUR DEPTH AT PIER 1: 13.8'
    TOTAL CALCULATED SCOUR DEPTH AT PIER 2: 14.7'
    TOTAL CALCULATED SCOUR DEPTH AT PIER 3: 19.2'
    TOTAL CALCULATED SCOUR DEPTH AT EAST ABUTMENT: 4.9'

    NOTE FOR TIDAL AREAS THE FOLLOWING ADDITIONAL INFORMATION IS REQUIRED:
    MEAN HIGH WATER ELEVATION: 2.55'
    MEAN LOW WATER ELEVATION: -2.79'
    VERTICAL UNDER CLEARANCE: 10.28'

    SCOUR COUNTERMEASURES HAVE BEEN DESIGNED FOR THE SCOUR DESIGN FLOOD IN ACCORDANCE WITH HEC 23 - BRIDGE SCOUR AND STREAM INSTABILITY COUNTERMEASURES.

26. ANY STAGING AND/OR STOCKPILE AREA(S) OUTSIDE THE PROJECT'S LIMIT OF CONSTRUCTION (LOC) THAT INDIVIDUALLY OR CUMULATIVELY ARE LARGER THAN 10,000 SQUARE FEET, MUST BE APPROVED BY DELDOT'S ARCHAEOLOGIST. CONTACT THE CONSTRUCTION AREA ENGINEER WHO WILL COORDINATE WITH DELDOT'S ARCHAEOLOGIST.
    WITHIN 30 DAYS, DELDOT WILL;
    1) APPROVE THE USE OF THE PROPOSED STAGING AND STOCKPILE AREA(S);
    2) REJECT THE REQUEST; OR
    3) PERFORM AN ARCHAEOLOGICAL SURVEY TO DETERMINE WHETHER TO APPROVE OR REJECT THE REQUEST, WHICH MAY TAKE UP TO 3 MONTHS. IF AN ARCHAEOLOGICAL SURVEY IS NECESSARY, DELDOT OR A CONSULTANT ON ITS BEHALF WILL UNDERTAKE THE SURVEY.

27. UTILITIES:
    SEE UTILITY STATEMENT AND UTILITY RELOCATION PLAN SHEETS FOR FURTHER INFORMATION ON UTILITY COORDINATION.

28. THE BRIDGE PLANS WERE DEVELOPED FROM A 3D MODEL USING THE ALLPLAN BRIDGE SOFTWARE AS PART OF A PILOT PROJECT WITH THE DEPARTMENT. THE PRESENTATION STYLE OF THE DETAILS AND REINFORCEMENT MAY NOT BE CONSISTENT WITH THE DRAWING PRESENTATION STANDARDS OF THE DEPARTMENT.

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRVR$
DATE PLOTTED: 16-SEP-2025 @ 14:00
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

ADDENDA / REVISIONS		NOT TO SCALE	ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT	CONTRACT	BRIDGE NO. 1-447	NOTES	SECTION
				T201907102	DESIGNED BY: E. HARASTY		PAI
				COUNTY			SHEET NO.
				NEW CASTLE	CHECKED BY: O. GREEN		5

BRIDGE 1-447 LOAD RATING SUMMARY

DESIGN VEHICLE	RATING FACTOR	RATING WEIGHT (TONS)	CONTROLLING MEMBER	CONTROLLING POINT	LOAD EFFECT
HL-93 TRUCK (INVENTORY)	1.25	N/A	SPAN 1/4, INT.	MIDSPAN	SERVICE III
HL-93 TANDEM (INVENTORY)	1.45	N/A	SPAN 1/4, INT.	MIDSPAN	SERVICE III
HS20 (INVENTORY)	1.77	63.86	SPAN 1/4, INT.	MIDSPAN	SERVICE III
HL-93 TRUCK (OPERATING)	2.06	N/A	SPAN 1/4, EXT.	PIER 1/3	STRENGTH I
HL-93 TANDEM (OPERATING)	2.43	N/A	SPAN 1/4, EXT.	PIER 1/3	STRENGTH I
HS20 (OPERATING)	3.23	116.28	SPAN 1/4, EXT.	PIER 1/3	STRENGTH I
DE S220	2.44	48.80	SPAN 1/4, INT.	MIDSPAN	SERVICE III
DE S335	1.37	47.95	SPAN 1/4, INT.	MIDSPAN	SERVICE III
DE S437	1.30	48.10	SPAN 1/4, INT.	MIDSPAN	SERVICE III
DE T330	1.85	55.50	SPAN 1/4, INT.	MIDSPAN	SERVICE III
DE T435	1.61	56.35	SPAN 1/4, INT.	MIDSPAN	SERVICE III
DE T540	1.43	57.20	SPAN 1/4, INT.	MIDSPAN	SERVICE III
EV2	1.71	49.16	SPAN 1/4, INT.	MIDSPAN	SERVICE III
EV3	1.13	48.59	SPAN 1/4, INT.	MIDSPAN	SERVICE III
SU4	1.77	47.79	SPAN 1/4, INT.	MIDSPAN	SERVICE III
SU5	1.59	49.29	SPAN 1/4, INT.	MIDSPAN	SERVICE III
SU6	1.42	49.35	SPAN 1/4, INT.	MIDSPAN	SERVICE III
SU7	1.30	50.38	SPAN 1/4, INT.	MIDSPAN	SERVICE III

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

EARTHWORK SUMMARY

EXCAVATION	
EXCAVATION FROM CROSS SECTIONS	5389 C.Y.
ROCK EXCAVATION FOR ROADWAY AND TRENCHES	0 C.Y.
TOPSOIL STRIPPING	0 C.Y.
TOTAL EXCAVATION	5389 C.Y.
EXCAVATION AVAILABLE FOR EMBANKMENT	
EXCAVATION MEETING BORROW TYPE 'A'	0 C.Y.
EXCAVATION MEETING BORROW TYPE 'F'	0 C.Y.
EXCAVATION MEETING TOPSOIL	0 C.Y.
EMBANKMENT REQUIREMENTS	
BORROW TYPE 'C' REQUIRED (INCLUDING UNDERCUT)	16469 C.Y.
BORROW TYPE 'F' REQUIRED	0 C.Y.
TOPSOIL REQUIRED	295 C.Y.
MATERIAL BALANCE ("+"= EXCESS, "-"= NEED)	
BORROW TYPE 'C'	-16469 C.Y.
BORROW TYPE 'F'	0 C.Y.
TOPSOIL	-295 C.Y.
UNSUITABLE MATERIAL	5389 C.Y.

NOTES:
1) THE VALUES LISTED IN THE EARTHWORK SUMMARY ARE APPROXIMATE AND ARE NOT TO BE USED AS A BASIS OF PAYMENT. THE EARTHWORK SUMMARY IS CONSIDERED FOR INFORMATIONAL PURPOSES ONLY.

2) OTHER SOURCES OF EXCAVATION MAY INCLUDE PIPE TRENCH EXCAVATION, STRUCTURE EXCAVATION, UNDERCUT EXCAVATION, STORMWATER MANAGEMENT POND EXCAVATION, ENVIRONMENTAL SITE EXCAVATION, MAINTENANCE OF TRAFFIC EXCAVATION, ETC.

3) UNSUITABLE MATERIALS INCLUDE UNDERCUT SOILS, BITUMINOUS PAVEMENT, ETC.

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$$
PLOT DRIVER: $PLTDRV$$
DATE PLOTTED: 16-SEP-2025 @ 14:00
USER NAME: $USER$ OFFICE LOCATION: $OFFICE$

ADDENDA / REVISIONS

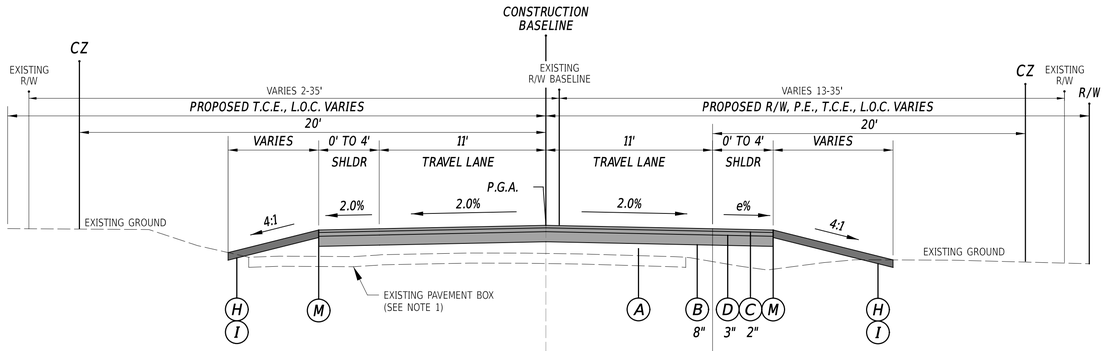
NOT TO SCALE

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

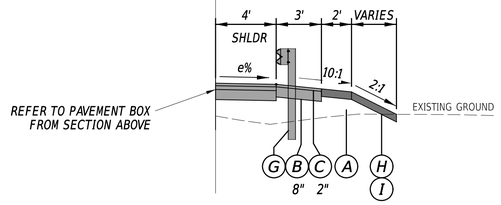
CONTRACT T201907102
COUNTY NEW CASTLE
BRIDGE NO. 1-447
DESIGNED BY: E. HARASTY
CHECKED BY: O. GREEN

NOTES

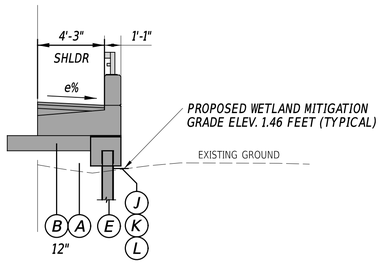
SECTION PAI
SHEET NO. 6



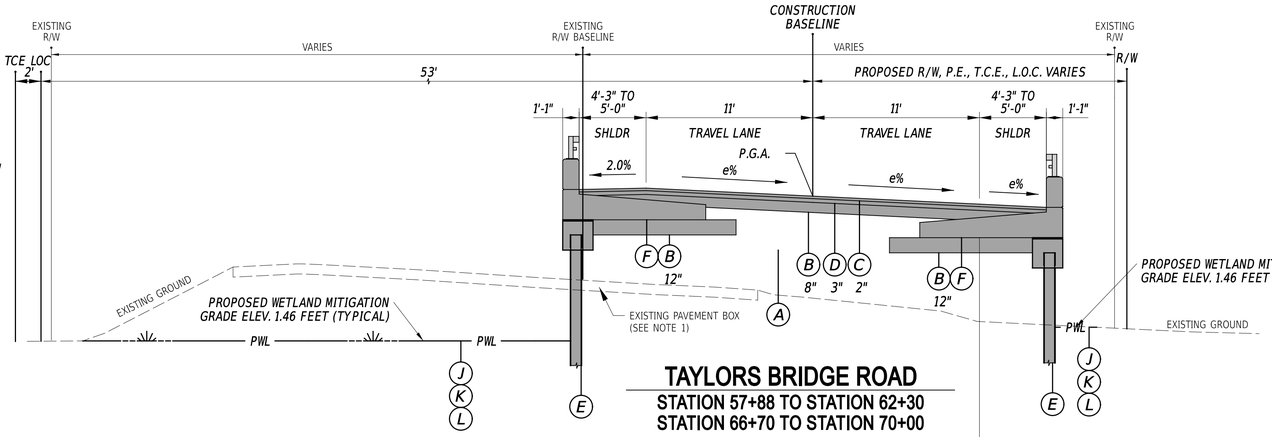
TAYLORS BRIDGE ROAD
STATION 51+00 TO STATION 57+20
STATION 72+25 TO STATION 75+90



TAYLORS BRIDGE ROAD
STATION 55+00 TO STATION 56+24
STATION 72+75 TO STATION 73+40

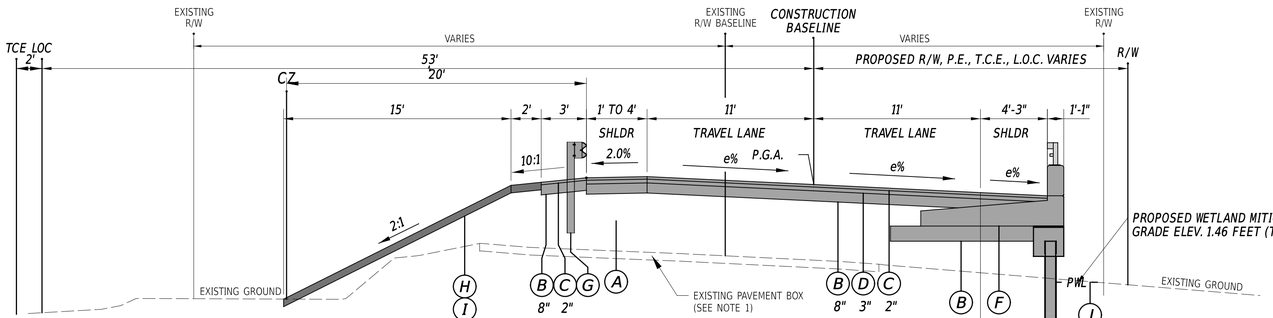


TAYLORS BRIDGE ROAD
STATION 56+24 TO STATION 57+20



TAYLORS BRIDGE ROAD
STATION 57+88 TO STATION 62+30
STATION 66+70 TO STATION 70+00

TAYLORS BRIDGE ROAD
STATION 61+93 TO STATION 62+30
STATION 66+70 TO STATION 67+08



TAYLORS BRIDGE ROAD
STATION 57+20 TO STATION 57+88
STATION 70+00 TO STATION 72+25

TAYLORS BRIDGE ROAD
STATION 72+00 TO STATION 72+75

NOTES:

1. *EXISTING PAVEMENT SECTION PER ARCHIVE CONTRACT 1090 (REFER TO ROAD CORE SCHEDULES ON CONSTUCTION PLANS FOR MORE INFORMATION).*

MATERIAL TYPE	BINDER GRADE	LIFT THICKNESS (IN)	
		MINIMUM	MAXIMUM
TYPE C (4.75 MM MIX)	ALL	0.5	1.0
TYPE C (9.5 MM MIX)	ALL	1.25	2.0
TYPE C (12.5 MM MIX)	ALL	1.5	2.0
TYPE B (19 MM MIX)	76-22, 70-22	2.25	4.0
TYPE B (19 MM MIX)	64-22	2.25	6.0
TYPE BCBC (25 MM MIX)	64-22	3.0	6.0
GABC	-	4.0	8.0

LEGEND

- (A) ITEM 209004 - BORROW, TYPE C
- (B) ITEM 301001 - GABC
- (C) ITEM 401005 - SUPERPAVE TYPE C, PG 64-22 (CARBONATE STONE)
- (D) ITEM 401014 - SUPERPAVE TYPE B, PG 64-22
- (E) ITEM 608000 - STEEL SHEET PILES, PZ 22
- (F) ITEM 610017 - PCC MASONRY SUPERSTRUCTURE, CLASS D
- (G) ITEM 720021 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31
- (H) ITEM 908004 - TOPSOIL, 6" DEPTH
  ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
- (I) ITEM 908020- EROSION CONTROL BLANKET MULCH
- (J) ITEM 202000 - EXCAVATION AND EMBANKMENT
- (K) ITEM 911000 - PLANTINGS
- (L) ITEM 908515 - TEMPORARY GRASS SEEDING, WET GROUND (IF AND WHEN DIRECTED)
- (M) SAFETY EDGE FOR ROADWAY PAVEMENT

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$$
PLOT DRIVER: $PLTDRV$$
DATE PLOTTED: 16-SEP-2025 @ 14:00
USER NAME: $USER$$
OFFICE LOCATION: $OFFICENAME$

ADDENDA / REVISIONS		NOT TO SCALE	ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT	CONTRACT	BRIDGE NO. 1-447	TYPICAL SECTIONS	SECTION
				T201907102	DESIGNED BY: E. HARASTY		PAI
				COUNTY	CHECKED BY: O. GREEN		SHEET NO.
				NEW CASTLE			7

CIRCULAR CURVE NO. (7)

		STATION	NORTHING	EASTING
PC	(10016)	55+68.68	511130.0774	603937.8088
PI	(10017)	58+97.18	511444.4141	604033.2462
CC			510897.6614	604703.3039
PT	(10018)	61+92.10	511600.9702	604322.0472

Radius:	800.00'
Delta:	44°38'57.24" Right
Degree of Curvature (Arc):	23°29'50.06"
Length:	623.42'
Tangent:	328.51'
Chord:	607.77'
Middle Ordinate:	59.96'
External:	64.82'
Tangent Direction:	N 16°53'20.73"E
Radial Direction:	S 73°06'39.27"E
Chord Direction:	N 39°12'49.35"E
Radial Direction:	S 28°27'42.03"E
Tangent Direction:	N 61°32'17.97"E

CONSTRUCTION ALIGNMENT CONTROL

POINT NO.	STATION	OFFSET	NORTHING	EASTING
10000	51+00.00	0.00	510681.6159	603801.6490
10007	75+89.77	0.00	511943.1450	605630.1961

HORIZONTAL / VERTICAL CONTROL DATA

POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEV.
TBR1	56+45.05	-19.79	511209.5124	603945.1504	5.50
TBRA	53+10.23	-17.49	510887.8627	603845.9937	6.76

SPIRAL CURVE NO. (1)

		STATION	NORTHING	EASTING
TS	(10001)	3+33.73	511098.2236	603927.9712
SPI	(10002)	5+34.60	511290.7883	603985.1523
SC	(10003)	6+33.73	511375.2863	604040.1068

Entrance Radius:	0.00'
Exit Radius:	520.87'
Length:	300.00'
Angle:	16°29'59.92" Right
Constant:	395.30'
Long Tangent:	200.88'
Short Tangent:	100.80'
Long Chord:	298.89'
Xs:	297.52'
Ys:	28.63'
P:	7.18'
K:	149.59'
Tangent Direction:	N 16°32'18.72" E
Radial Direction:	S 73°27'41.28" E
Chord Direction:	N 22°02'04.76" E
Radial Direction:	S 56°57'41.36" E
Tangent Direction:	N 33°02'18.64" E

CIRCULAR CURVE NO. (2)

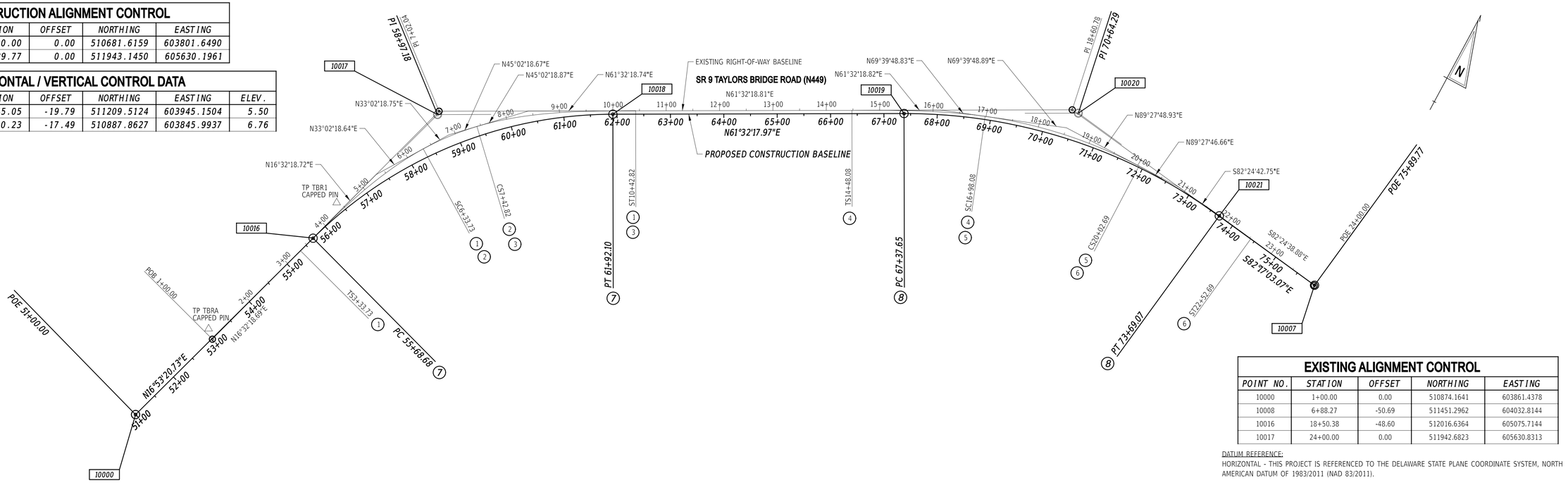
		STATION	NORTHING	EASTING
SC	(10003)	6+33.73	511375.2863	604040.1068
PI	(10004)	6+88.47	511421.1797	604069.9542
CC	(10018)		511091.3064	604476.7542
CS	(10005)	7+42.82	511459.8646	604108.6912

Radius:	520.87'
Delta:	11°59'59.92" Right
Degree of Curvature (Arc):	11°00'00.05"
Length:	109.09'
Tangent:	54.75'
Chord:	108.89'
Middle Ordinate:	2.85'
External:	2.87'
Tangent Direction:	N 33°02'18.75" E
Radial Direction:	S 56°57'41.25" E
Chord Direction:	N 39°02'18.71" E
Radial Direction:	S 44°57'41.33" E
Tangent Direction:	N 45°02'18.67" E

SPIRAL CURVE NO. (3)

		STATION	NORTHING	EASTING
CS	(10005)	7+42.82	511459.8646	604108.6912
SPI	(10006)	8+43.62	511531.0903	604180.0129
ST	(10007)	10+42.82	511626.8209	604356.6097

Entrance Radius:	520.87'
Exit Radius:	0.00'
Length:	300.00'
Angle:	16°29'59.87" Right
Constant:	395.30'
Long Tangent:	200.88'
Short Tangent:	100.80'
Long Chord:	298.89'
Xs:	297.52'
Ys:	28.63'
P:	7.18'
K:	149.59'
Tangent Direction:	N 45°02'18.87" E
Radial Direction:	S 44°57'41.13" E
Chord Direction:	N 56°02'32.71" E
Radial Direction:	S 28°27'41.26" E
Tangent Direction:	N 61°32'18.74" E



EXISTING ALIGNMENT CONTROL

POINT NO.	STATION	OFFSET	NORTHING	EASTING
10000	1+00.00	0.00	510874.1641	603861.4378
10008	6+88.27	-50.69	511451.2962	604032.8144
10016	18+50.38	-48.60	512016.6364	605075.7144
10017	24+00.00	0.00	511942.6823	605630.8313

DATUM REFERENCE:
HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983/2011 (NAD 83/2011).

VERTICAL - THIS PROJECT IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

CIRCULAR CURVE NO. (8)

		STATION	NORTHING	EASTING
PC	(10019)	67+37.65	511860.9659	604801.6645
PI	(10020)	70+64.29	512016.6296	605088.8193
CC			510981.8298	605277.2353
PT	(10021)	73+69.07	511972.7760	605412.4950

Radius:	1000.00'
Delta:	36°10'38.96" Right
Degree of Curvature (Arc):	18°47'52.054"
Length:	631.42'
Tangent:	326.63'
Chord:	620.98'
Middle Ordinate:	49.42'
External:	51.99'
Tangent Direction:	N 61°32'17.97"E
Radial Direction:	S 28°27'42.03"E
Chord Direction:	N 79°37'37.45"E
Radial Direction:	S 07°42'56.93"W
Tangent Direction:	S 82°17'03.07"E

SPIRAL CURVE NO. (4)

		STATION	NORTHING	EASTING
TS	(10009)	14+48.08	511819.9537	604712.8877
SPI	(10010)	16+14.92	511899.4651	604859.5648
SC	(10011)	16+98.08	511928.4816	604937.8535

Entrance Radius:	0.00'
Exit Radius:	881.47'
Length:	250.00'
Angle:	8°07'30.01" Right
Constant:	469.43'
Long Tangent:	166.84'
Short Tangent:	83.49'
Long Chord:	249.78'
Xs:	249.50'
Ys:	11.80'
P:	2.95'
K:	124.92'
Tangent Direction:	N 61°32'18.82" E
Radial Direction:	S 28°27'41.18" E
Chord Direction:	N 64°14'47.16" E
Radial Direction:	S 20°20'11.17" E
Tangent Direction:	N 69°39'48.83" E

CIRCULAR CURVE NO. (5)

		STATION	NORTHING	EASTING
SC	(10011)	16+98.08	511928.4816	604937.8535
PI	(10012)	18+51.92	511981.9463	605082.1055
CC	(10019)		511101.9551	605244.1923
CS	(10013)	20+02.69	511983.3865	605235.9400

Radius:	881.47'
Delta:	19°48'00.00" Right
Degree of Curvature (Arc):	6°30'00.09"
Length:	304.61'
Tangent:	153.84'
Chord:	303.10'
Middle Ordinate:	13.13'
External:	13.32'
Tangent Direction:	N 69°39'48.89" E
Radial Direction:	S 20°20'11.11" E
Chord Direction:	N 79°33'48.91" E
Radial Direction:	S 00°32'11.07" E
Tangent Direction:	N 89°27'48.93" E

SPIRAL CURVE NO. (6)

		STATION	NORTHING	EASTING
CS	(10013)	20+02.69	511983.3865	605235.9400
SPI	(10014)	20+86.18	511984.1691	605319.4309
ST	(10015)	22+52.69	511962.1370	605484.8151

Entrance Radius:	881.47'
Exit Radius:	0.00'
Length:	250.00'
Angle:	8°07'30.58" Right
Constant:	469.44'
Long Tangent:	166.84'
Short Tangent:	83.49'
Long Chord:	249.78'
Xs:	249.50'
Ys:	11.80'
P:	2.95'
K:	124.92'
Tangent Direction:	N 89°27'46.66" E
Radial Direction:	S 00°32'13.34" E
Chord Direction:	S 85°07'11.29" E
Radial Direction:	S 07°35'17.25" W
Tangent Direction:	S 82°24'42.75" E

PENNONI ASSOCIATES INC.
FILE NAME: $FILEAS
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRV$
DATE PLOTTED: 20-FEB-2025 @ 14:56
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

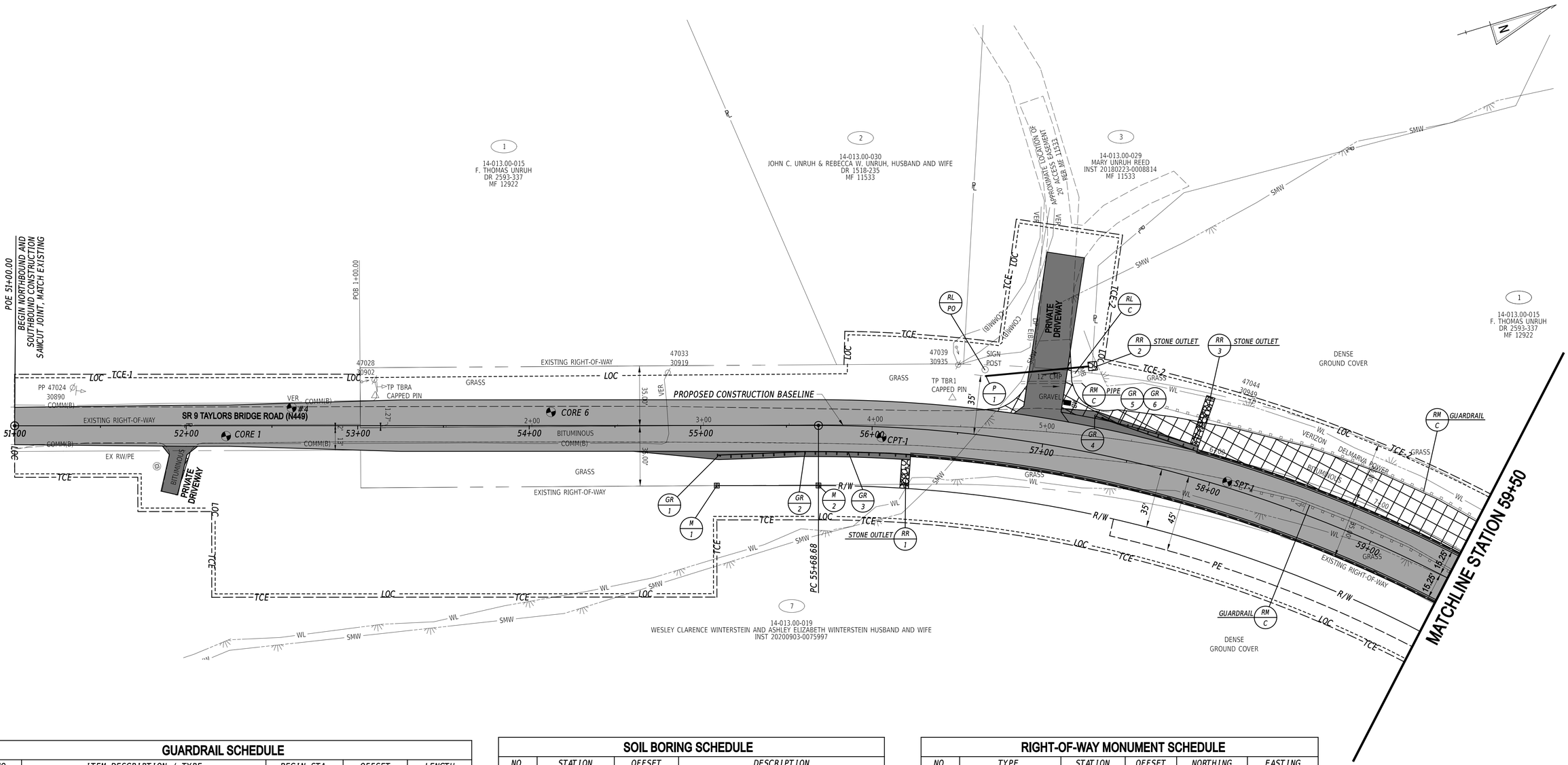
ADDENDA / REVISIONS

SCALE
0 100 200 300
FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447	SECTION
T201907102	DESIGNED BY:	E. HARASTY	PAI
COUNTY			SHEET NO.
NEW CASTLE	CHECKED BY:	O. GREEN	8

HORIZONTAL AND VERTICAL CONTROL



GUARDRAIL SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
1	GUARDRAIL END TREATMENT, TYPE 1-31, TL3	55+08.00	17.08	50.00
2	STEEL BEAM GUARDRAIL, TYPE 1-31	55+58.00	15.10	25.00
3	GR TO BARRIER CONNECTION, APPROACH TYPE 3-31	55+83.00	15.17	43.56
4	GUARDRAIL END ANCHORAGE, TYPE 31, TL3	57+26.55	21.89	14.17
5	STEEL BEAM GUARDRAIL, TYPE 1-31	57+40.72	19.21	12.50
6	GR TO BARRIER CONNECTION, APPROACH TYPE 3-31	57+53.22	16.07	43.56

DRAINAGE PIPE SCHEDULE

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INVERT EL.	DIS. EL.
1	15" RCP	III	60.00	0.0150	3.90	3.00

SOIL BORING SCHEDULE

NO.	STATION	OFFSET	DESCRIPTION
SPT-1	58+09.68	-3.26	5.5" ASPHALT, 20" GABC
CPT-1	56+05.82	6.01	6" COMBINED ASPHALT AND GABC

ROAD CORE SCHEDULE

NO.	STATION	OFFSET	DESCRIPTION
1	52+23.00	6.10	1" SURFACE TREATMENT, 6" ASPHALT
6	54+13.00	-7.90	1" SURFACE TREATMENT, 6.5" ASPHALT

RIPRAP SCHEDULE

NO.	TYPE	AREA (SY)
1*	R-4	9.33
2*	R-4	2.78
3*	R-4	16.50

* REFER TO STANDARD DETAIL E-21 (2024)

RIGHT-OF-WAY MONUMENT SCHEDULE

NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
1	CONCRETE MONUMENT	55+09.43	35.00	511063.2140	603954.0857
2	CONCRETE MONUMENT	55+68.68	35.00	511119.9092	603971.2992

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRV$
DATE PLOTTED: 16-SEP-2025 @ 14:00
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

ADDENDA / REVISIONS

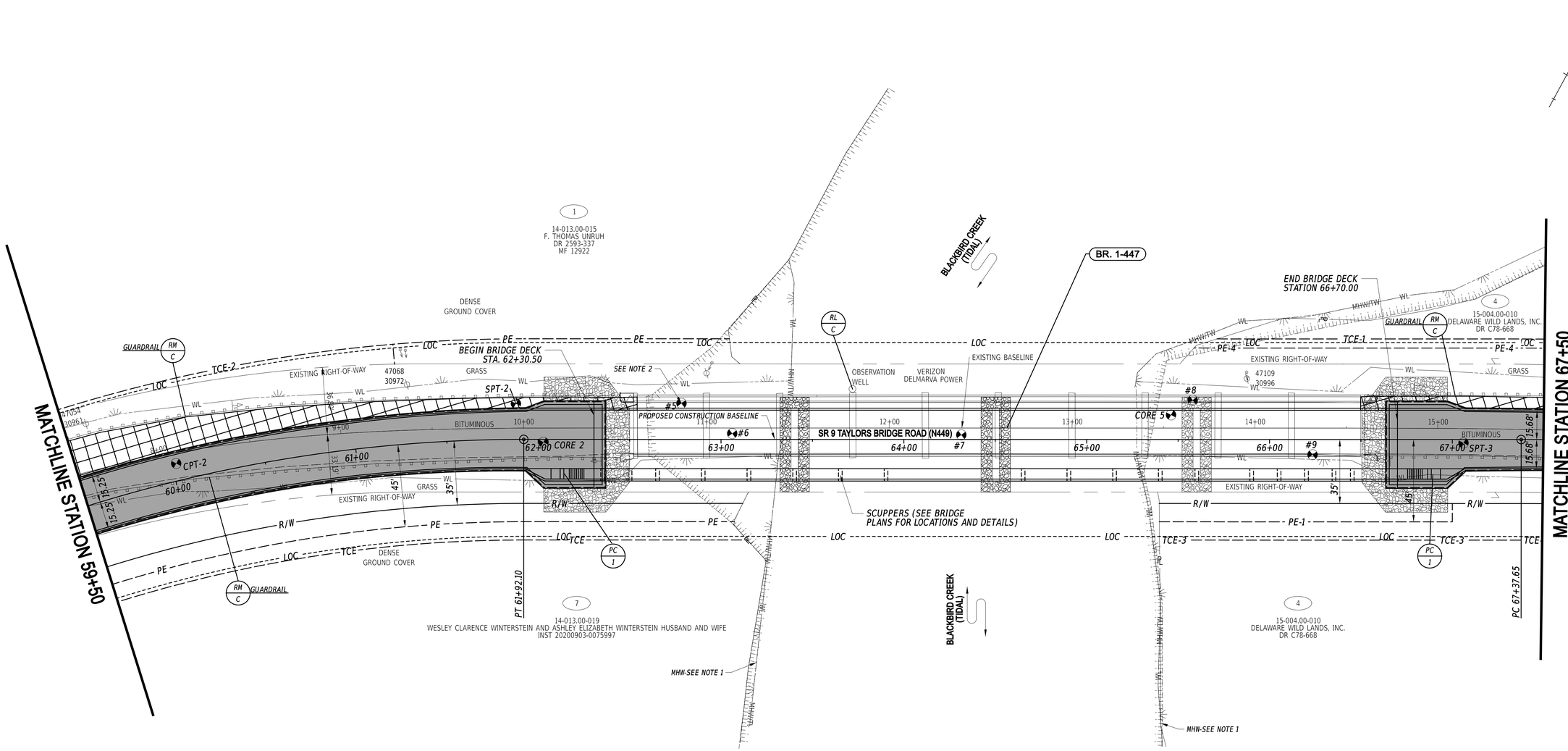
SCALE
0 30 60 90
FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	E. HARASTY
COUNTY	CHECKED BY:	O. GREEN
NEW CASTLE		

CONSTRUCTION PLAN

	CP-01
SECTION	PAI
SHEET NO.	9



ROAD CORE SCHEDULE

NO.	STATION	OFFSET	DESCRIPTION
2	62+03.00	1.55	1.75" SURFACE TREATMENT, 25.75" ASPHALT
5	65+46.00	-13.40	1" SURFACE TREATMENT, 11" ASPHALT

SOIL BORING SCHEDULE

NO.	STATION	OFFSET	DESCRIPTION
SPT-2	61+87.91	-19.56	20" ASPHALT, 14.4" GABC
SPT-3	67+06.11	1.88	15" ASPHALT, 8.4" GABC
CPT-2	60+02.43	-8.39	6" COMBINED ASPHALT AND GABC

NOTES:

1. MEAN HIGH WATER LINEWORK SHOWN WAS DEVELOPED USING ELEVATIONS AND TIDE GAUGE DATA
2. SEE SOIL BORING SHEETS FOR HISTORICAL BORING INFORMATION: BORINGS #5, #6, #7, #8, #9

PENNONI ASSOCIATES INC.
FILE NAME: $FILEAS
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$S
PLOT DRIVER: $PLTDRV$S
DATE PLOTTED: 16-SEP-2025 @ 14:00
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

ADDENDA / REVISIONS

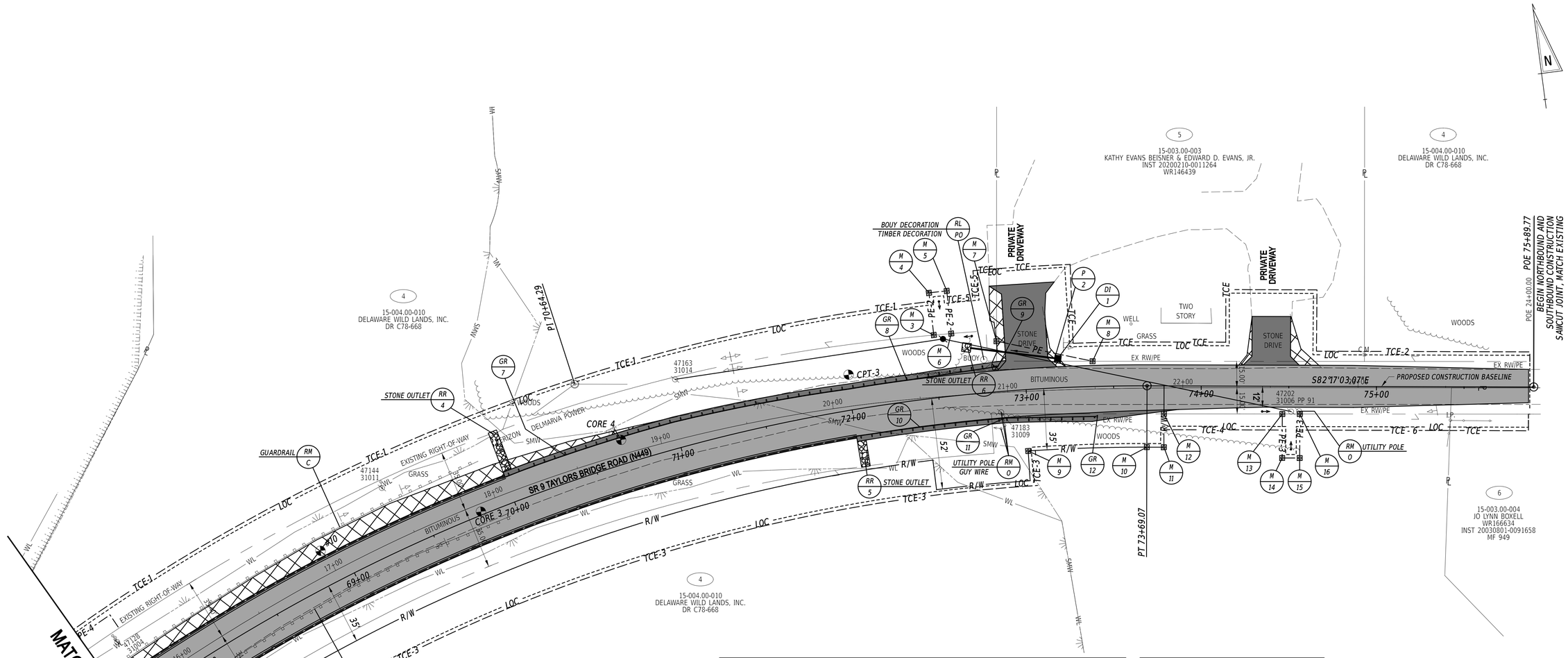
SCALE
0 30 60 90
FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	E. HARASTY
COUNTY	CHECKED BY:	O. GREEN
NEW CASTLE		

CONSTRUCTION PLAN

	CP-02
SECTION	PAI
SHEET NO.	10



RIGHT-OF-WAY MONUMENT SCHEDULE

NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
3	CAPPED REBAR	72+51.22	-35.78	512017.4586	605295.6529
4	CAPPED REBAR	72+51.22	-60.00	512041.6799	605296.0602
5	CAPPED REBAR	72+60.87	-60.00	512041.4584	605306.2922
6	CAPPED REBAR	72+60.87	-35.55	512017.0150	605305.6450
7	CAPPED REBAR	72+85.38	-28.80	512009.2960	605330.6566
8	CAPPED REBAR	73+38.38	-14.41	511990.7659	605383.5191
9	CONCRETE MONUMENT	73+03.06	35.00	511944.8296	605340.3675
10	CONCRETE MONUMENT	73+69.07	35.00	511938.0929	605407.7959
11	CONCRETE MONUMENT	73+78.79	35.00	511936.7882	605417.4257
12	CONCRETE MONUMENT	73+78.79	15.98	511955.6429	605419.9803
13	CAPPED REBAR	74+46.32	15.82	511946.7231	605486.9267
14	CAPPED REBAR	74+46.32	40.94	511921.8394	605483.5504
15	CAPPED REBAR	74+56.32	40.94	511920.4948	605493.4596
16	CAPPED REBAR	74+56.32	15.80	511945.4024	605496.8392

RIPRAP SCHEDULE

NO.	TYPE	AREA (SY)
4*	R-4	13.33
5*	R-4	8.33
6*	R-4	2.78

** REFER TO STANDARD DETAIL E-21 (2024)*

GUARDRAIL SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
7	GR TO BARRIER CONNECTION, APPROACH TYPE 3-31	70+36.56	15.25	43.56
8	STEEL BEAM GUARDRAIL, TYPE 1-31	72+36.56	15.16	200.00
9	GUARDRAIL END TREATMENT, TYPE 1-31, TL3	72+86.56	12.00	50.00
10	GR TO BARRIER CONNECTION, APPROACH TYPE 3-31	72+00.03	15.25	43.56
11	STEEL BEAM GUARDRAIL, TYPE 1-31	72+36.59	15.16	50.00
12	GUARDRAIL END TREATMENT, TYPE 1-31, TL3	72+86.59	17.25	50.00

SOIL BORING SCHEDULE

NO.	STATION	OFFSET	DESCRIPTION
CPT-3	72+01.33	-20.15	6" COMBINED ASPHALT AND GABC

DRAINAGE PIPE SCHEDULE

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INVERT EL.	DIS. EL.
2	12" RCP	III	48.00	0.0146	7.70	7.00

DRAINAGE INLET SCHEDULE

NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
1	73+19.20	16.73	34" x 24"	2	9.92	7.70

ROAD CORE SCHEDULE

NO.	STATION	OFFSET	DESCRIPTION
3	69+80.00	-1.90	0.75" SURFACE TREATMENT, 4.25" ASPHALT
4	70+69.00	-13.70	1" SURFACE TREATMENT, 6" ASPHALT

NOTES:

1. SEE SOIL BORING SHEETS FOR HISTORICAL BORING INFORMATION: BORING #10.

PENNONI ASSOCIATES INC.
FILE NAME: $FILEAS
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBLSS
PLOT DRIVER: $PLTDRIVSS
DATE PLOTTED: 16-SEP-2025 @ 14:00
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

Pennoni

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

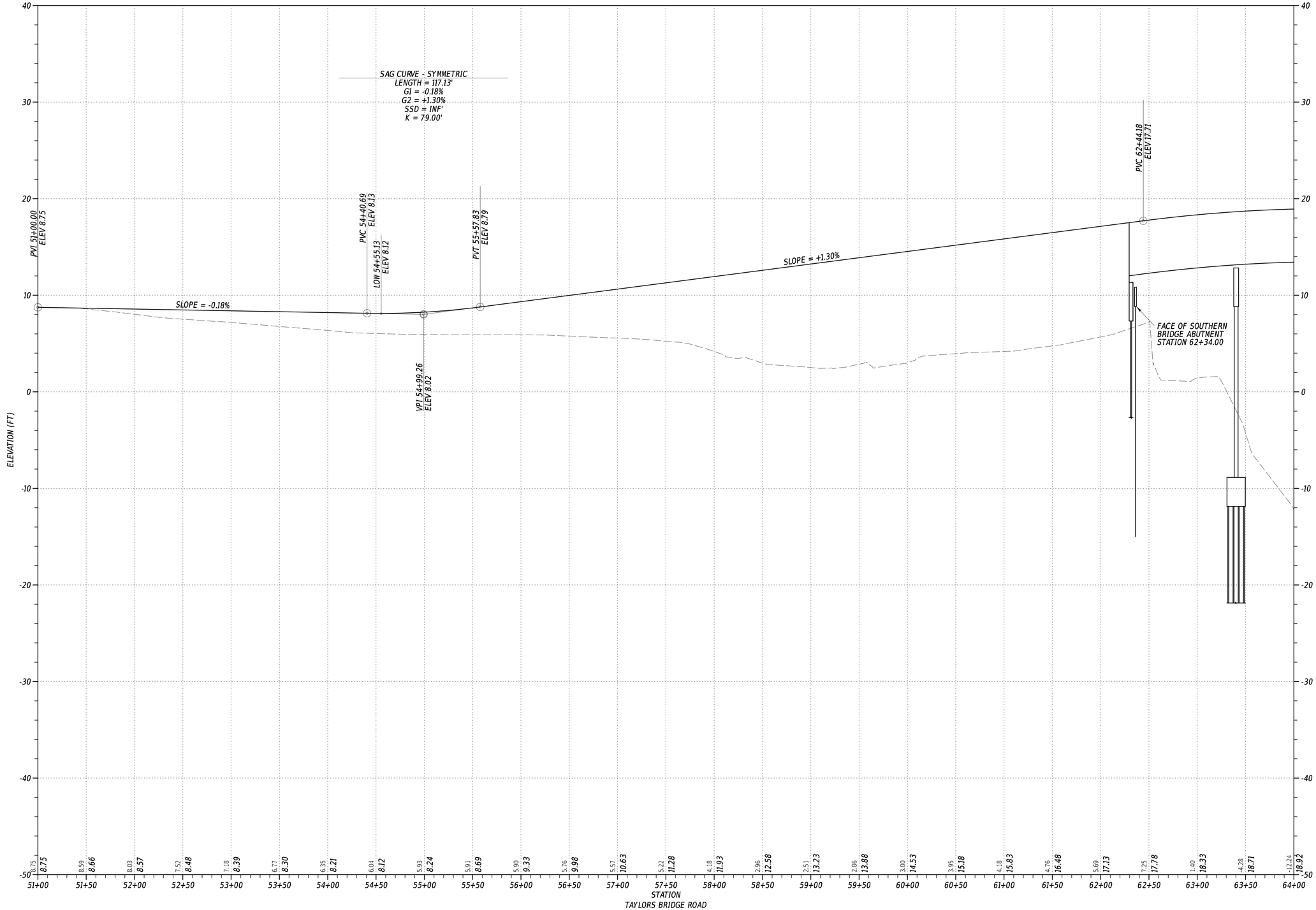
ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	T201907102	
COUNTY	NEW CASTLE	
BRIDGE NO.	1-447	
DESIGNED BY:	E. HARASTY	
CHECKED BY:	O. GREEN	

CONSTRUCTION PLAN

CP-03

SECTION	PAI
SHEET NO.	11



PENNONI ASSOCIATES INC.
FILE NAME: $FILEAS
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRV$
DATE PLOTTED: 16-SEP-2025 @ 14:00
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

Pennoni

ADDENDA / REVISIONS

SCALE
0 50 100 150
FEET

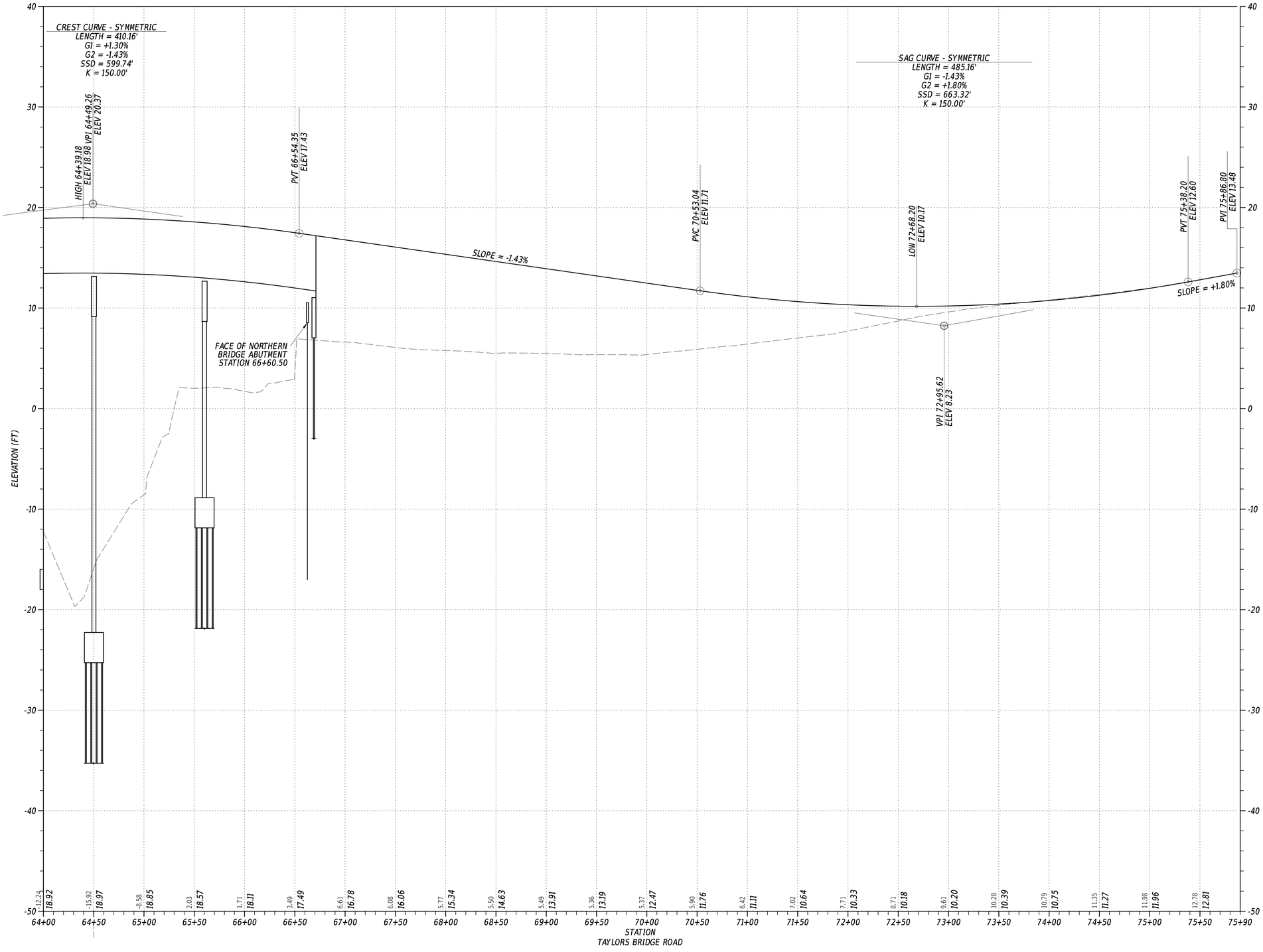
ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	E. HARASTY
COUNTY	CHECKED BY:	O. GREEN
NEW CASTLE		

PROFILES

SECTION
PAI
SHEET NO.
12

VERTICAL SCALE FEET
15
10
5
0



VERTICAL SCALE FEET
15
10
5
0

PENNONI ASSOCIATES INC.	PEN TABLE: $PENTBL$$
FILE NAME: $FILEA$	PLOT DRIVER: $PLTDRIV$$
MICROSTATION VERSION: $VERSION$	DATE PLOTTED: 16-SEP-2025 @ 14:00
MICROSTATION WORKSPACE: $WORKSPACE$	USER NAME: $USER$ OFFICE LOCATION: $OFFICE$

Pennoni

ADDENDA / REVISIONS

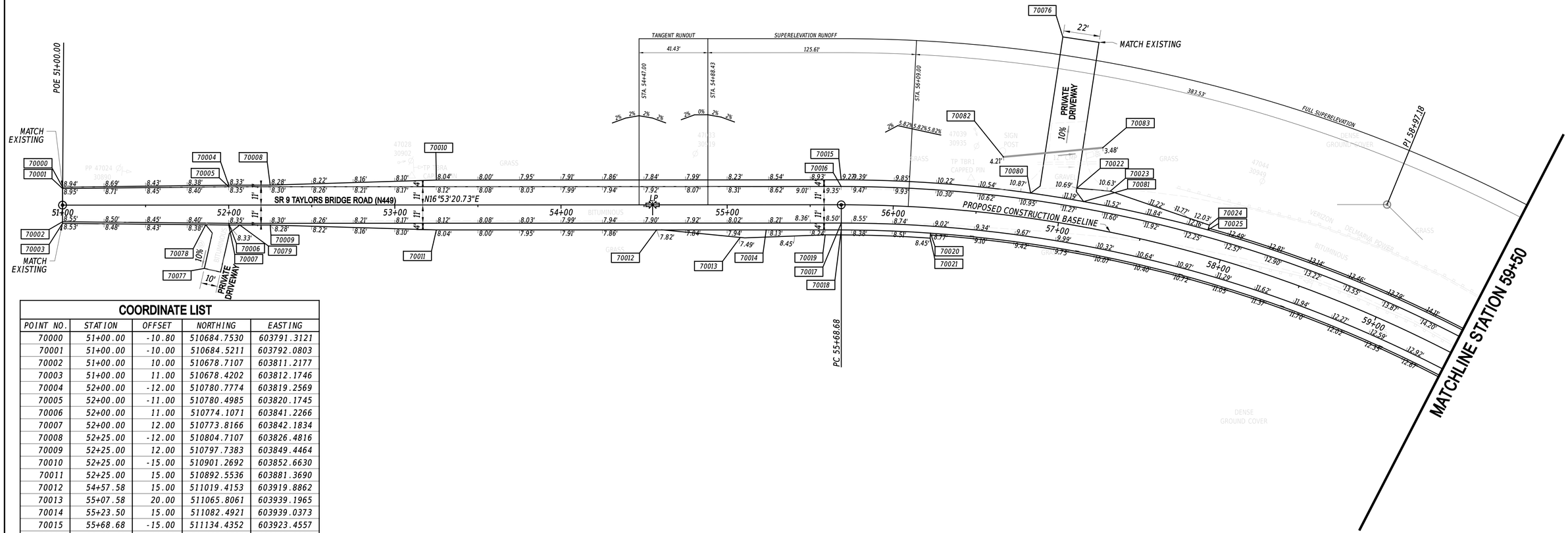
SCALE
0 50 100 150
FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	E. HARASTY
COUNTY	CHECKED BY:	O. GREEN
NEW CASTLE		

PROFILES

SECTION
PAI
SHEET NO.
13



COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
70000	51+00.00	-10.80	510684.7530	603791.3121
70001	51+00.00	-10.00	510684.5211	603792.0803
70002	51+00.00	10.00	510678.7107	603811.2177
70003	51+00.00	11.00	510678.4202	603812.1746
70004	52+00.00	-12.00	510780.7774	603819.2569
70005	52+00.00	-11.00	510780.4985	603820.1745
70006	52+00.00	11.00	510774.1071	603841.2266
70007	52+00.00	12.00	510773.8166	603842.1834
70008	52+25.00	-12.00	510804.7107	603826.4816
70009	52+25.00	12.00	510797.7383	603849.4464
70010	52+25.00	-15.00	510901.2692	603852.6630
70011	52+25.00	15.00	510892.5536	603881.3690
70012	54+57.58	15.00	511019.4153	603919.8862
70013	55+07.58	20.00	511065.8061	603939.1965
70014	55+23.50	15.00	511082.4921	603939.0373
70015	55+68.68	-15.00	511134.4352	603923.4557
70016	55+68.68	-11.00	511133.2731	603927.2832
70017	55+68.68	11.00	511126.8817	603948.3343
70018	55+68.68	15.00	511125.7196	603952.1618
70019	55+59.00	18.09	511115.5636	603952.3063
70020	56+23.50	15.25	511176.4750	603969.7542
70021	56+23.50	18.25	511175.4638	603972.5839
70022	57+07.32	22.23	511268.6244	603969.5106
70023	57+25.00	-24.23	511287.3803	603977.0282
70024	57+88.00	-18.25	511338.5000	604013.9615
70025	57+88.00	-15.25	511336.8585	604016.5940
70076	56+86.29	-110.81	511287.0824	603879.9379
70077	51+85.34	38.14	510752.1972	603862.9341
70078	51+86.18	11.86	510760.6330	603838.0363
70079	52+06.66	12.00	510780.1873	603844.1177
70080	56+80.95	-15.00	511241.1953	603964.2440
70081	57+12.63	-15.05	511270.2048	603978.3786
70082	52+62.50	-34.50	511231.8670	603938.6555
70083	57+17.84	-49.01	511290.6432	603950.7119

NOTES:

1. OFFSETS SHOWN IN THE GEOMETRY TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION BASELINE.
2. PROPOSED PAVEMENT OR CURBS THAT TIE INTO EXISTING PAVEMENT OR EXISTING CURBS SHALL MATCH THE EXISTING PAVEMENT OR EXISTING CURB ELEVATIONS.
4. ALL WORK REQUIRED FOR CALCULATING AND STAKING OF GRADES SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRV$
DATE PLOTTED: 16-SEP-2025 @ 14:01
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

Pennoni

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

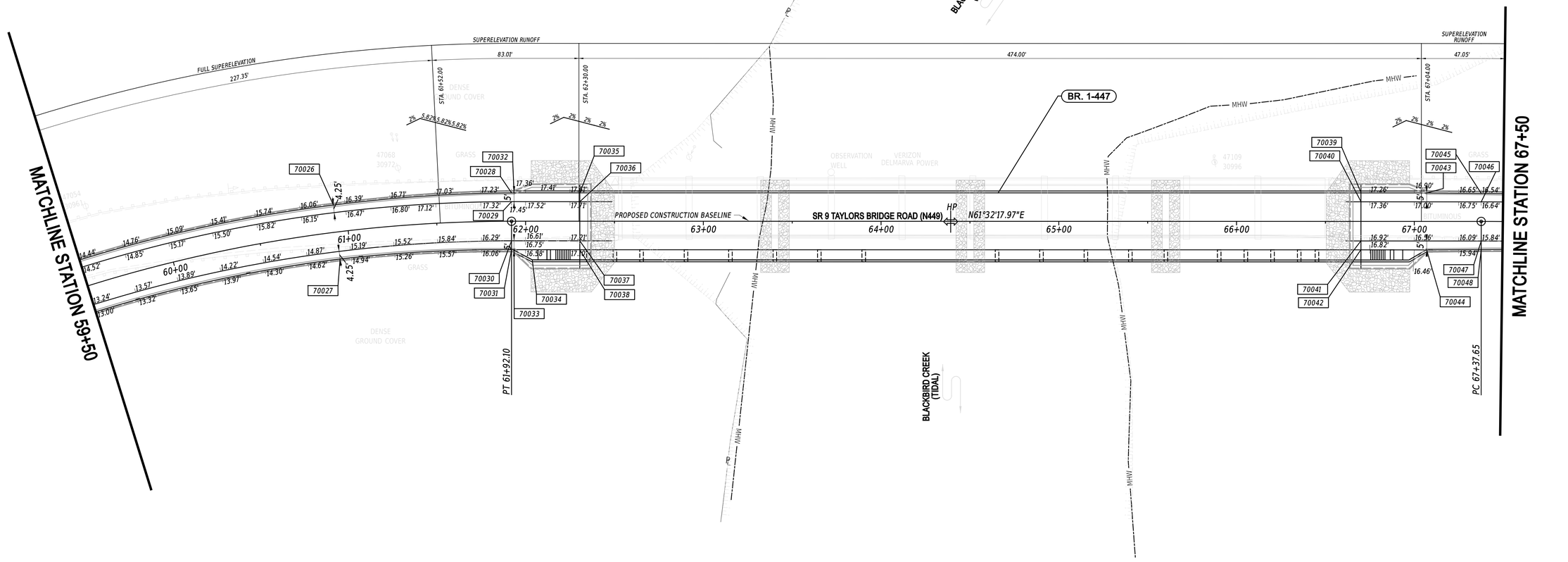
CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	E. HARASTY
COUNTY	CHECKED BY:	O. GREEN
NEW CASTLE		

GRADES AND GEOMETRICS

GG-01
SECTION
PAI
SHEET NO.
14

COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
70026	60+93.50	-15.25	511561.1776	604229.6176
70027	60+93.50	15.25	511536.3543	604247.3391
70028	61+92.10	-16.00	511615.0266	604314.4274
70029	61+92.10	-11.00	511610.6396	604316.8056
70030	61+92.10	11.00	511591.2998	604327.2895
70031	61+92.10	16.00	511586.9133	604329.6674
70032	61+93.50	-16.00	511615.6971	604315.6409
70033	61+93.50	16.00	511587.5821	604330.9199
70034	62+03.76	21.67	511587.4797	604342.6319
70035	62+30.50	-16.00	511633.3375	604348.1823
70036	62+30.50	-11.00	511628.9420	604350.5656
70037	62+30.50	11.00	511609.6020	604361.0520
70038	62+30.50	16.00	511605.2066	604363.4353
70039	66+70.00	-16.00	511842.8288	604734.6335
70040	66+70.00	-11.00	511838.4213	604736.9946
70041	66+70.00	11.00	511819.0285	604747.3836
70042	66+70.00	16.00	511814.6222	604749.7441
70043	67+07.00	-16.00	511860.4242	604767.0920
70044	67+07.00	16.00	511832.2919	604782.3423
70045	67+37.65	-15.77	511874.8300	604794.1489
70046	67+37.65	-11.00	511870.6364	604796.4222
70047	67+37.65	11.00	511851.2954	604806.9067
70048	67+37.65	15.77	511847.1018	604809.1800



NOTES:

1. OFFSETS SHOWN IN THE GEOMETRY TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION BASELINE.
2. PROPOSED PAVEMENT OR CURBS THAT TIE INTO EXISTING PAVEMENT OR EXISTING CURBS SHALL MATCH THE EXISTING PAVEMENT OR EXISTING CURB ELEVATIONS.
4. ALL WORK REQUIRED FOR CALCULATING AND STAKING OF GRADES SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRV$
DATE PLOTTED: 16-SEP-2025 @ 14:01
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

ADDENDA / REVISIONS

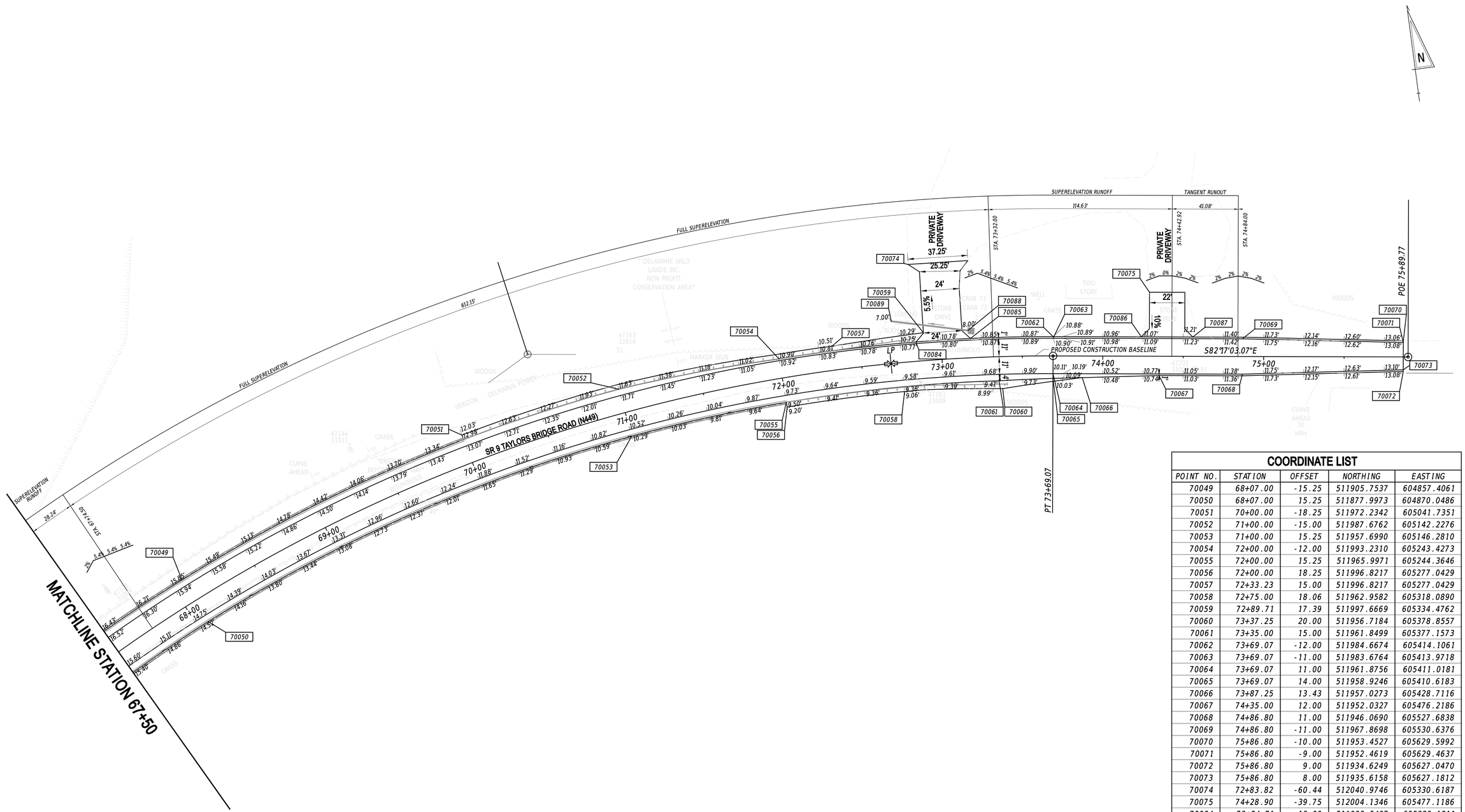
SCALE
0 30 60 90
FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT T201907102	BRIDGE NO.	1-447
COUNTY NEW CASTLE	DESIGNED BY:	E. HARASTY
	CHECKED BY:	O. GREEN

GRADES AND GEOMETRICS

GG-02
SECTION PAI
SHEET NO. 15



COORDINATE LIST

POINT NO.	STATION	OFFSET	NORTHING	EASTING
70049	68+07.00	-15.25	511905.7537	604857.4061
70050	68+07.00	15.25	511877.9973	604870.0486
70051	70+00.00	-18.25	511972.2342	605041.7351
70052	71+00.00	-15.00	511987.6762	605142.2276
70053	71+00.00	15.25	511957.6990	605146.2810
70054	72+00.00	-12.00	511993.2310	605243.4273
70055	72+00.00	15.25	511965.9971	605244.3646
70056	72+00.00	18.25	511996.8217	605277.0429
70057	72+33.23	15.00	511996.8217	605277.0429
70058	72+75.00	18.06	511962.9582	605318.0890
70059	72+89.71	17.39	511997.6669	605334.4762
70060	73+37.25	20.00	511956.7184	605378.8557
70061	73+35.00	15.00	511961.8499	605377.1573
70062	73+69.07	-12.00	511984.6674	605414.1061
70063	73+69.07	-11.00	511983.6764	605413.9718
70064	73+69.07	11.00	511961.8756	605411.0181
70065	73+69.07	14.00	511958.9246	605410.6183
70066	73+87.25	13.43	511957.0273	605428.7116
70067	74+35.00	12.00	511952.0327	605476.2186
70068	74+86.80	11.00	511946.0690	605527.6838
70069	74+86.80	-11.00	511967.8698	605530.6376
70070	75+86.80	-10.00	511953.4527	605629.5992
70071	75+86.80	-9.00	511952.4619	605629.4637
70072	75+86.80	9.00	511934.6249	605627.0470
70073	75+86.80	8.00	511935.6158	605627.1812
70074	72+83.82	-60.44	512040.9746	605330.6187
70075	74+28.90	-39.75	512004.1346	605477.1186
70084	72+84.71	-12.00	511992.5497	605329.1211
70085	73+18.30	-12.00	511990.2704	605363.0391
70086	74+23.90	-12.00	511977.3061	605468.4380
70087	74+55.90	-12.00	511973.0098	605500.1483
70088	73+17.22	-16.95	511995.3544	605362.1202
70089	72+81.97	-23.32	512007.3201	605315.6356

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRV$
DATE PLOTTED: 16-SEP-2025 @ 14:01
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

ADDENDA / REVISIONS

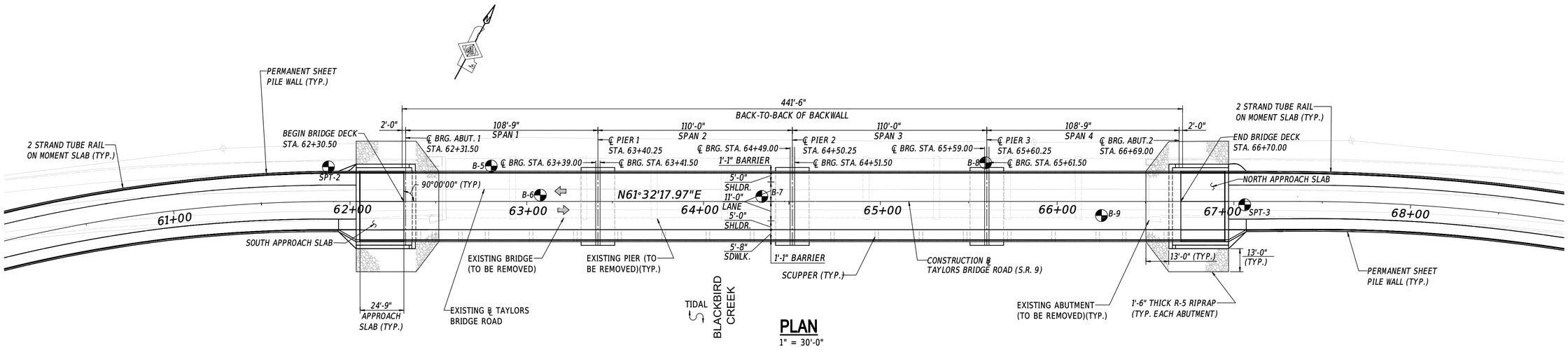
SCALE
0 30 60 90
FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

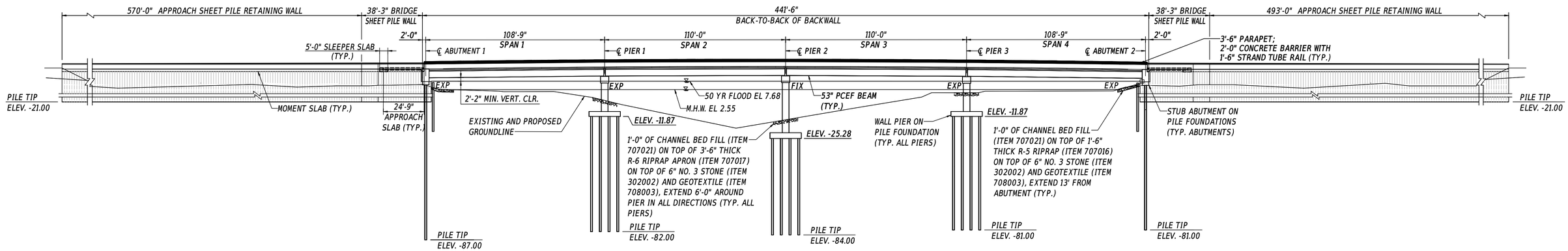
CONTRACT	T201907102
COUNTY	NEW CASTLE
BRIDGE NO.	1-447
DESIGNED BY:	E. HARASTY
CHECKED BY:	O. GREEN

GRADES AND GEOMETRICS

	GG-03
SECTION	PAI
SHEET NO.	16



PLAN
1" = 30'-0"



ELEVATION
1" = 30'-0"

NOTES:

1. FOR PROJECT NOTES, SEE SHEETS 5-6.
2. EXISTING BRIDGE TO BE REMOVED, SEE CONTRACT NO. 1090 FOR DETAILS OF EXISTING BRIDGE.
3. FOR SCUPPER LOCATIONS, SEE SHEET 37.

PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\1-PLAN AND ELEVATION
ALLPLAN VERSION: Allplan 2023
MICROSTATION WORKSPACE:
PEN TABLE: SPENTBL$$
PLOT DRIVER: SPLTDRV$$
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall
OFFICE LOCATION:

ADDENDA / REVISIONS

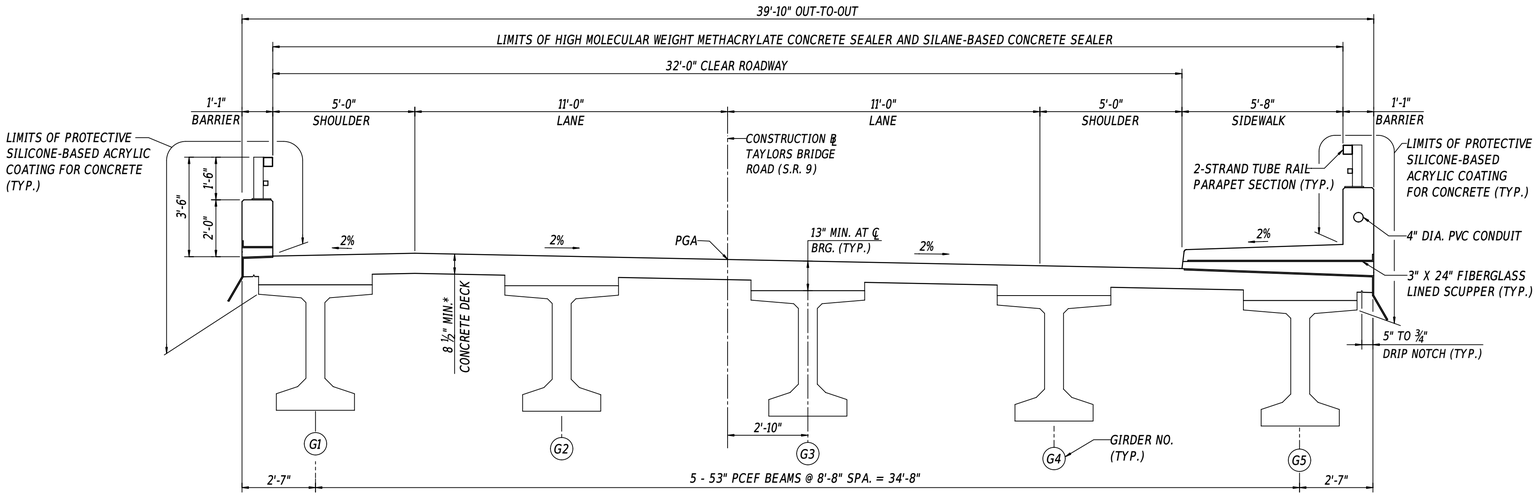
SCALE AS NOTED

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

PLAN AND ELEVATION

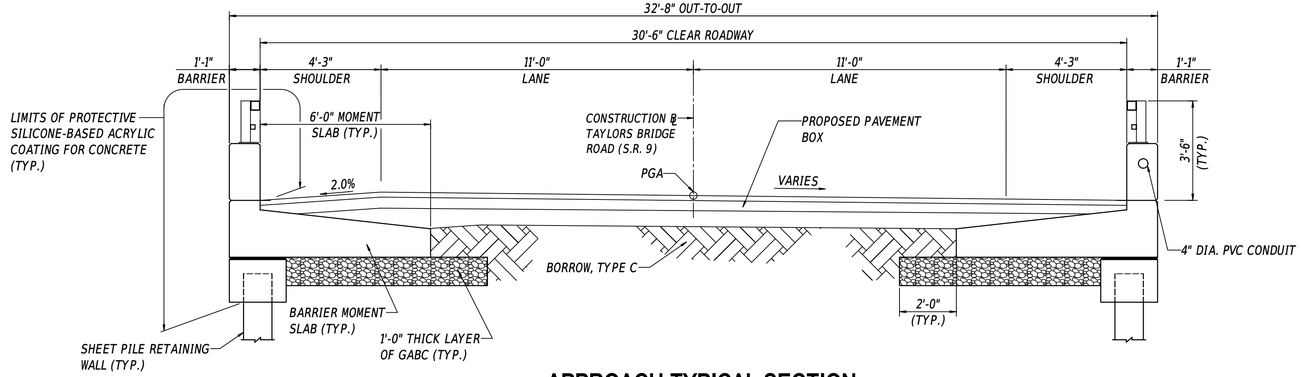
SECTION
PAI
SHEET NO.
17



BRIDGE TYPICAL SECTION

3/8" = 1'-0"

*INCLUDES 1/2" INTEGRAL WEARING SURFACE.



APPROACH TYPICAL SECTION

3/8" = 1'-0"

NOTES:

1. BARRIER REFLECTORS SHALL BE INSTALLED ALONG EACH PARAPET, INCIDENTAL TO ITEM 610008 - PCC MASONRY, PARAPET, CLASS A.
2. FOR SHEET PILE RETAINING WALL DETAILS, SEE SHEETS 22 AND 23.
3. FOR SIDEWALK AND PARAPET DETAILS, SEE SHEETS 41 AND 42.
4. FOR DRAINAGE SCUPPER DETAILS, SEE SHEET 43.
5. FOR RAILING DETAILS, SEE SHEET 44.
6. FOR MOMENT SLAB DETAILS, SEE SHEET 49.

PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-05-26\2-BRIDGE AND APPROACH TYP
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

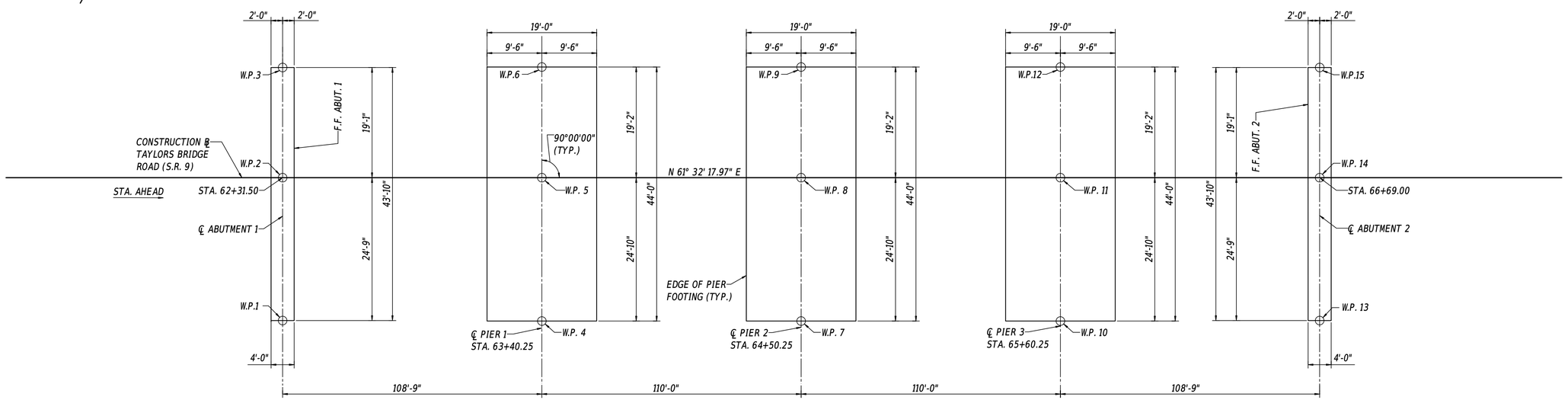
ADDENDA / REVISIONS

SCALE AS NOTED

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447	SECTION
T201907102	DESIGNED BY:	B.MARSHALL	PAI
COUNTY			SHEET NO.
NEW CASTLE	CHECKED BY:	H.BROWN	18

BRIDGE AND APPROACH TYPICAL SECTIONS



LAYOUT PLAN
NOT TO SCALE

WORK POINT COORDINATES				
W.P.	STATION	OFFSET	NORTHING	EASTING
W.P. 1	62+31.50	24.750' R	511597.9904	604368.4828
W.P. 2	62+31.50	0.00	511619.7486	604356.6879
W.P. 3	62+31.50	19.083' L	511636.5256	604347.5933
W.P. 4	63+40.25	24.833' R	511649.7467	604464.1272
W.P. 5	63+40.25	0.00	511671.5757	604452.2940
W.P. 6	63+40.25	19.167' L	511688.4287	604443.1581
W.P. 7	64+50.25	24.833' R	511702.1669	604560.8336
W.P. 8	64+50.25	0.00	511723.9985	604548.9989
W.P. 9	64+50.25	19.167' L	511740.8489	604539.8645
W.P. 10	65+60.25	24.833' R	511754.5897	604657.5386
W.P. 11	65+60.25	0.00	511776.4213	604645.7039
W.P. 12	65+60.25	19.167' L	511793.2717	604636.5695
W.P. 13	66+69.00	24.750' R	511806.4928	604753.1034
W.P. 14	66+69.00	0.00	511828.2483	604741.3100
W.P. 15	66+69.00	19.083' L	511845.0280	604732.2139

PENNONI ASSOCIATES INC.
FILE NAME: ...\1-447 Taylors Bridge 2023-09-2617-FOUNDATION LAYOUT PLAN
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

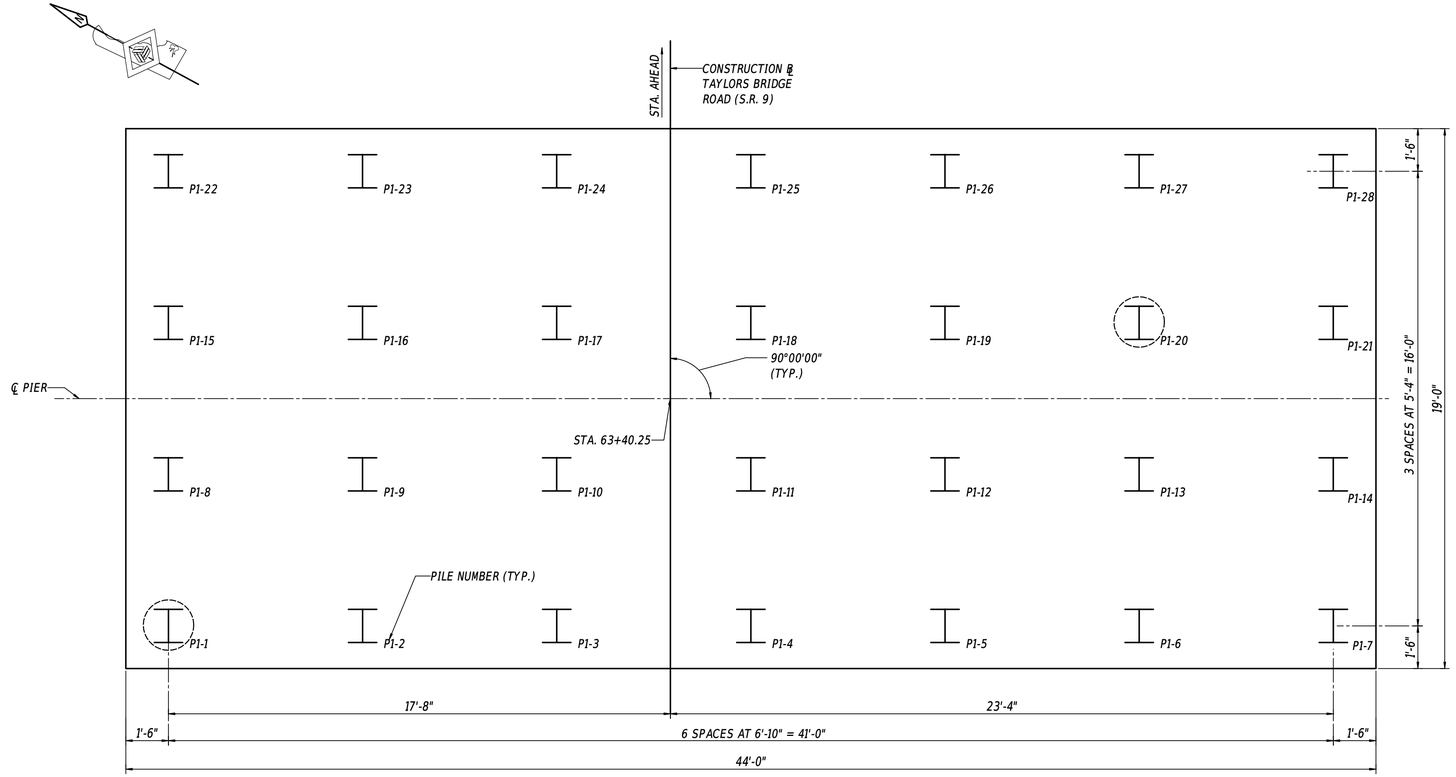
ADDENDA / REVISIONS

NOT TO SCALE

ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447	SECTION
T201907102	DESIGNED BY:	B.MARSHALL	PAI
COUNTY	CHECKED BY:	H.BROWN	SHEET NO.
NEW CASTLE			19

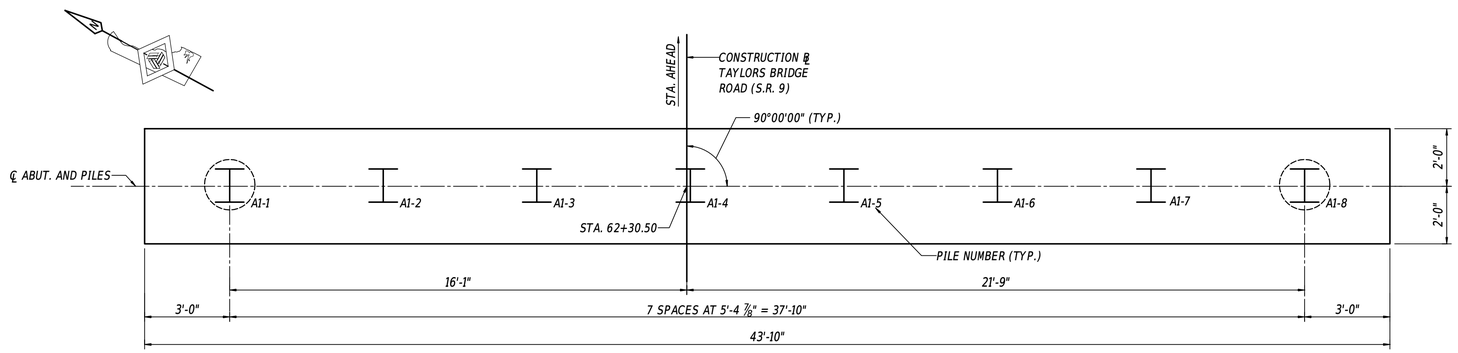
FOUNDATION LAYOUT PLAN



PIER FOOTING AND PILE LAYOUT PLAN

(PIER 1 SHOWN, PIERS 2 AND 3 SIMILAR)

3/8" = 1'-0"



ABUTMENT PILE LAYOUT PLAN

(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)

3/8" = 1'-0"

NOTE: ABUTMENT PILES SHALL NOT BE INSTALLED UNTIL AFTER 90% SETTLEMENT OF THE APPROACH HAS OCCURRED. SEE SHEET 22 FOR MORE INFORMATION.

PILE LEGEND:

HP14x89 PILE

HP14x89 TEST PILE

PILE COORDINATES

PILE NO.	NORTHING	EASTING
ABUTMENT 1		
A1-1 *	511633.8882	604349.0230
A1-2	511629.1367	604351.5987
A1-3	511624.3852	604354.1745
A1-4	511619.6338	604356.7502
A1-5	511614.8823	604359.3259
A1-6	511610.1308	604361.9016
A1-7	511605.3793	604364.4774
A1-8 *	511600.6278	604367.0531
PIER 1		
P1-1 *	511690.9226	604450.9061
P1-2	511684.9152	604454.1626
P1-3	511678.9077	604457.4192
P1-4	511672.9003	604460.6758
P1-5	511666.8929	604463.9323
P1-6	511660.8854	604467.1889
P1-7	511654.8780	604470.4455
P1-8	511688.3809	604446.2173
P1-9	511682.3734	604449.4739
P1-10	511676.3660	604452.7305
P1-11	511670.3586	604455.9870
P1-12	511664.3512	604459.2436
P1-13	511658.3437	604462.5002
P1-14	511652.3363	604465.7567
P1-15	511685.8392	604441.5286
P1-16	511679.8317	604444.7852
P1-17	511673.8243	604448.0417
P1-18	511667.8169	604451.2983
P1-19	511661.8094	604454.5549
P1-20 *	511655.8020	604457.8114
P1-21	511649.7946	604461.0680
P1-22	511683.2975	604436.8399
P1-23	511677.2900	604440.0964
P1-24	511671.2826	604443.3530
P1-25	511665.2752	604446.6096
P1-26	511659.2677	604449.8661
P1-27	511653.2603	604453.1227
P1-28	511647.2529	604456.3793
PIER 2		
P2-1 *	511743.3427	604547.6125
P2-2	511737.3353	604550.8690
P2-3	511731.3279	604554.1256
P2-4	511725.3205	604557.3822
P2-5	511719.3130	604560.6387
P2-6	511713.3056	604563.8953
P2-7	511707.2982	604567.1519
P2-8	511740.8010	604542.9237
P2-9	511734.7936	604546.1803
P2-10	511728.7862	604549.4369
P2-11	511722.7787	604552.6934
P2-12	511716.7713	604555.9500
P2-13	511710.7639	604559.2066
P2-14	511704.7564	604562.4631
P2-15	511738.2593	604538.2350
P2-16	511732.2519	604541.4916
P2-17	511726.2445	604544.7481
P2-18	511720.2370	604548.0047
P2-19	511714.2296	604551.2613
P2-20 *	511708.2222	604554.5178
P2-21	511702.2147	604557.7744
P2-22	511735.7176	604533.5463
P2-23	511729.7102	604536.8028
P2-24	511723.7027	604540.0594
P2-25	511717.6953	604543.3160
P2-26	511711.6879	604546.5725
P2-27	511705.6805	604549.8291
P2-28	511699.6730	604553.0857

PILE NO.	NORTHING	EASTING
PIER 3		
P3-1 *	511795.7655	604644.3174
P3-2	511789.7581	604647.5740
P3-3	511783.7507	604650.8306
P3-4	511777.7432	604654.0871
P3-5	511771.7358	604657.3437
P3-6	511765.7284	604660.6003
P3-7	511759.7209	604663.8568
P3-8	511793.2238	604639.6287
P3-9	511787.2164	604642.8853
P3-10	511781.2090	604646.1418
P3-11	511775.2015	604649.3984
P3-12	511769.1941	604652.6550
P3-13	511763.1867	604655.9115
P3-14	511757.1792	604659.1681
P3-15	511790.6821	604634.9400
P3-16	511784.6747	604638.1965
P3-17	511778.6672	604641.4531
P3-18	511772.6598	604644.7097
P3-19	511766.6524	604647.9662
P3-20 *	511760.6450	604651.2228
P3-21	511754.6375	604654.4794
P3-22	511788.1404	604630.2512
P3-23	511782.1330	604633.5078
P3-24	511776.1255	604636.7644
P3-25	511770.1181	604640.0209
P3-26	511764.1107	604643.2775
P3-27	511758.1032	604646.5341
P3-28	511752.0958	604649.7907
ABUTMENT 2		
A2-1 *	511842.3906	604733.6436
A2-2	511837.6391	604736.2193
A2-3	511832.8876	604738.7951
A2-4	511828.1361	604741.3708
A2-5	511823.3846	604743.9465
A2-6	511818.6332	604746.5223
A2-7	511813.8817	604749.0980
A2-8 *	511809.1302	604751.6737

* DENOTES TEST PILE

REFERENCE:

1. FOR PROJECT NOTES, SEE SHEETS 5-6.
2. FOR FOUNDATION LAYOUT PLAN, SEE SHEET 19.
3. FOR ABUTMENT DETAILS, SEE SHEETS 26-27.
4. FOR PIER DETAILS, SEE SHEETS 28-31.

PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-05-26\5-FOOTING AND PILE LAYOUT
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

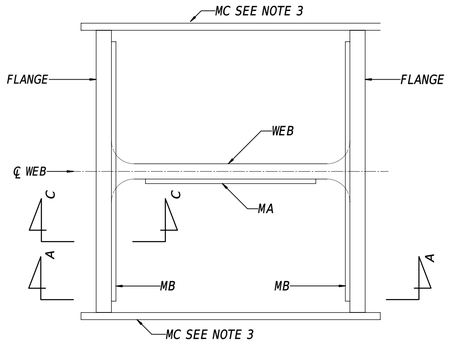
ADDENDA / REVISIONS

SCALE AS NOTED

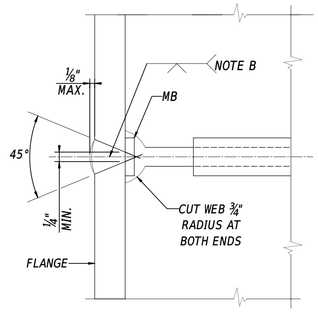
ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT

CONTRACT T201907102	BRIDGE NO.	1-447	SECTION PAI
COUNTY NEW CASTLE	DESIGNED BY: B.MARSHALL		SHEET NO. 20
	CHECKED BY: H.BROWN		

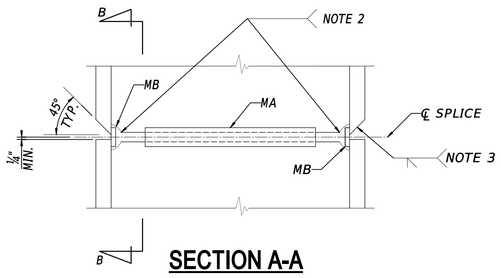
FOOTING AND PILE LAYOUT PLAN



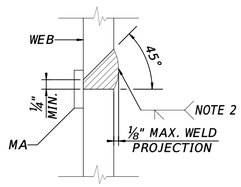
PLAN



SECTION C-C
ALTERNATE FLANGE WEB



SECTION A-A



SECTION B-B

STEEL H-PILE SPLICE DETAILS

PROJECT SPECIFIC PILE NOTES

1. PILE TYPE:
   THIS PROJECT SHALL UTILIZE HP 14X89 PILES CONFORMING TO ASTM A709, GRADE 50.
2. REFER TO TABLE FOR ESTIMATED PRODUCTION PILE LENGTH.
3. REFER TO TABLE FOR FACTORED DRIVING BEARING RESISTANCE. A RESISTANCE FACTOR OF 0.65 WAS USED.
4. REFER TO THE PILE INSTALLATION DATA TABLE FOR MINIMUM TIP ELEVATION.

GENERAL PILE NOTES

1. FOR MORE INFORMATION REGARDING PILE DRIVING, INSTALLATION, MATERIALS, AND FABRICATION, REFER TO SECTION 605 - DRIVEN PILES OF THE STANDARD SPECIFICATIONS.
2. TEST PILES, AS NOTED, SHALL BE DRIVEN FIRST TO ESTABLISH DRIVING CRITERIA FOR THE OTHER PILES IN EACH SUBSTRUCTURE ELEMENT. TEST PILES SHALL BE ORDERED 10 FEET LONGER THAN THE PRODUCTION FOR EACH UNIT.
3. THE INITIAL DRIVE OF EACH TEST PILE SHALL BE DYNAMICALLY TESTED BY THE CONTRACTOR AND IS PAID PER ITEM 605201 - DYNAMIC PILE TESTING BY CONTRACTOR FOR TEST PILE INITIAL DRIVE. DYNAMIC TESTING FOR RESTRIKES AND PRODUCTION PILES SHALL BE PAID PER ITEM 605202 - DYNAMIC PILE TESTING BY CONTRACTOR FOR RESTRIKE OR PRODUCTION PILE. PILE RESTRIKES WITHOUT THE NEED FOR DYNAMIC TESTING WILL BE PAID PER ITEM 605200 - PILE RESTRIKE. THE NEED TO RESTRIKE EITHER A TEST PILE OR A PRODUCTION PILE SHALL BE THE SOLE DECISION OF THE ENGINEER.

STEEL H-PILE NOTES

1. THE CONTRACTOR MAY CONSIDER USING ALTERNATIVE STEEL H-PILE SPLICE DETAILS. ALL ALTERNATIVE DETAILS FOR STEEL H-PILE SPLICING SHALL BE SUBMITTED TO THE DEPARTMENT FOR APPROVAL.

SPLICE MATERIAL REQUIREMENTS
HP 14"
1 BAR MA 1" x 1/4" x 1'-0"
2 BAR MB 1" x 1/4" x 1'-2 1/2"
2 BAR MC 1" x 3/8" x 1'-3"

2. END OF WELD SHALL BE SMOOTH AND FLUSH WITH WEB CUT, 1/4" MIN. EFFECTIVE THROAT.
3. BAR MC SHALL BE TACK WELDED TO FLANGE AT SPLICE TO BACK UP END OF FLANGE WELD, REMOVE MC AFTER WELD IS COMPLETED. END OF WELD MUST BE SMOOTH AND FLUSH WITH EDGE OF FLANGE. GRIND WELD SMOOTH WITH EDGE OF FLANGE IF PILE IS UNSUPPORTED IN WELD AREA SUCH AS: IN AIR, WATER, OR SOFT MUD, 1/4" MIN. EFFECTIVE THROAT.
4. LET WELDS COOL TO AIR TEMPERATURE BEFORE RESUMING THE PILE DRIVING.
5. NO PILE SPLICING SHALL BE ALLOWED ON ANY PORTION OF PILE THAT IS TO REMAIN EXPOSED OR TO BE ABOVE FINISHED GROUNDLINE IN COMPLETED STRUCTURE.
6. ALL SPLICE MATERIALS SHALL BE ASTM A709, GRADE 50.
7. THE 0.25-INCH THICKNESS FOR MA AND MB BARS SPECIFIED IN THE 'SPLICE MATERIAL REQUIREMENTS' TABLE MAY BE REDUCED TO MINIMUM OF 0.203-INCH THICK.

PILE INSTALLATION DATA

SUBSTRUCTURE UNIT	DESIGN DATA				ACTUAL FIELD DATA		
	FACTORED RESISTANCE PER PILE (KIPS)	MINIMUM TIP ELEVATION (FT)	ESTIMATED PILE TIP ELEVATION (FT)	ESTIMATED PRODUCTION PILE LENGTH (FT)	ACTUAL MINIMUM TIP ELEVATION (FT)	ACTUAL AVERAGE TIP ELEVATION (FT)	ACTUAL MAXIMUM TIP ELEVATION (FT)
ABUTMENT 1	293	-48	-87	104			
PIER 1	186	-67	-82	80			
PIER 2	231	-77	-84	69			
PIER 3	179	-62	-81	79			
ABUTMENT 2	244	-57	-81	98			

NOTE: DO NOT DRIVE ABUTMENT PILES UNTIL 90% SETTLEMENT HAS OCCURED ON THE APPROACHES. SEE SHEET 22 FOR MORE INFORMATION.

PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\06-STEEL H PILE DETAILS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

NOT TO SCALE

ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT

CONTRACT	T201907102
COUNTY	NEW CASTLE
BRIDGE NO.	1-447
DESIGNED BY:	B.MARSHALL
CHECKED BY:	H.BROWN

STEEL H PILE DETAILS

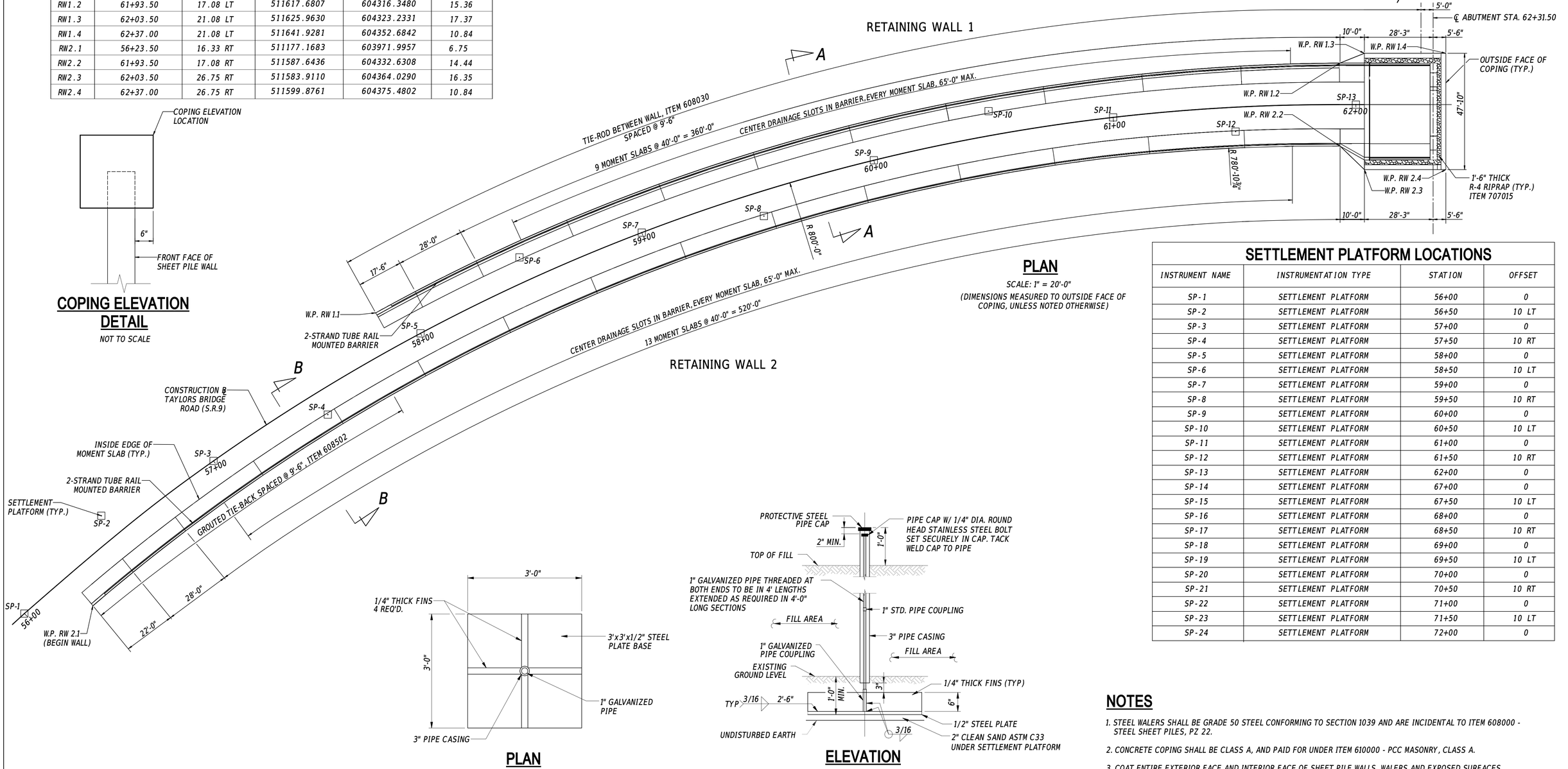
SECTION	PAI
SHEET NO.	21

WORK POINT COORDINATES - OUTSIDE FACE OF COPING

W.P.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
RW1.1	57+88.00	16.33 LT	511338.4648	604016.7671	10.33
RW1.2	61+93.50	17.08 LT	511617.6807	604316.3480	15.36
RW1.3	62+03.50	21.08 LT	511625.9630	604323.2331	17.37
RW1.4	62+37.00	21.08 LT	511641.9281	604352.6842	10.84
RW2.1	56+23.50	16.33 RT	511177.1683	603971.9957	6.75
RW2.2	61+93.50	17.08 RT	511587.6436	604332.6308	14.44
RW2.3	62+03.50	26.75 RT	511583.9110	604364.0290	16.35
RW2.4	62+37.00	26.75 RT	511599.8761	604375.4802	10.84

COPING ELEVATION DETAIL

NOT TO SCALE



PLAN

SCALE: 1" = 20'-0"

(DIMENSIONS MEASURED TO OUTSIDE FACE OF COPING, UNLESS NOTED OTHERWISE)

SETTLEMENT PLATFORM LOCATIONS

INSTRUMENT NAME	INSTRUMENTATION TYPE	STATION	OFFSET
SP-1	SETTLEMENT PLATFORM	56+00	0
SP-2	SETTLEMENT PLATFORM	56+50	10 LT
SP-3	SETTLEMENT PLATFORM	57+00	0
SP-4	SETTLEMENT PLATFORM	57+50	10 RT
SP-5	SETTLEMENT PLATFORM	58+00	0
SP-6	SETTLEMENT PLATFORM	58+50	10 LT
SP-7	SETTLEMENT PLATFORM	59+00	0
SP-8	SETTLEMENT PLATFORM	59+50	10 RT
SP-9	SETTLEMENT PLATFORM	60+00	0
SP-10	SETTLEMENT PLATFORM	60+50	10 LT
SP-11	SETTLEMENT PLATFORM	61+00	0
SP-12	SETTLEMENT PLATFORM	61+50	10 RT
SP-13	SETTLEMENT PLATFORM	62+00	0
SP-14	SETTLEMENT PLATFORM	67+00	0
SP-15	SETTLEMENT PLATFORM	67+50	10 LT
SP-16	SETTLEMENT PLATFORM	68+00	0
SP-17	SETTLEMENT PLATFORM	68+50	10 RT
SP-18	SETTLEMENT PLATFORM	69+00	0
SP-19	SETTLEMENT PLATFORM	69+50	10 LT
SP-20	SETTLEMENT PLATFORM	70+00	0
SP-21	SETTLEMENT PLATFORM	70+50	10 RT
SP-22	SETTLEMENT PLATFORM	71+00	0
SP-23	SETTLEMENT PLATFORM	71+50	10 LT
SP-24	SETTLEMENT PLATFORM	72+00	0

PLAN

ELEVATION

SETTLEMENT PLATFORM DETAILS

¼" = 1'-0"

NOTES

1. STEEL WALERS SHALL BE GRADE 50 STEEL CONFORMING TO SECTION 1039 AND ARE INCIDENTAL TO ITEM 608000 - STEEL SHEET PILES, PZ 22.
2. CONCRETE COPING SHALL BE CLASS A, AND PAID FOR UNDER ITEM 610000 - PCC MASONRY, CLASS A.
3. COAT ENTIRE EXTERIOR FACE AND INTERIOR FACE OF SHEET PILE WALLS, WALERS AND EXPOSED SURFACES OF TIE-RODS IN ACCORDANCE WITH SECTION 1032.3.2. THE PROTECTIVE COATING IS INCIDENTAL TO ITEM 608000 - STEEL SHEET PILES, PZ 22.
4. TO ACCELERATE PRIMARY CONSOLIDATION OF THE UNDERLYING CLAY/SILT LAYER, REDUCE THE NECESSARY DURATION BETWEEN FILL PLACEMENT AND FOUNDATION CONSTRUCTION AND TO REDUCE THE POTENTIAL FOR DETRIMENTAL SETTLEMENT WICK DRAINS WILL BE PLACED THROUGHOUT THE ROADWAY APPROACHES. THE WICK DRAINS SHOULD BE SPACED 4 FEET ON CENTER SPACING IN A TRIANGLE PATTERN THROUGHOUT THE EXTENT OF THE ROADWAY (30 FEET) INSTALLED 40 FEET BELOW EXISTING GRADE BETWEEN THE FOLLOWING STATIONS 56+23.50 TO 62+30.50 AND 66+70.00 TO 72+00.00.
5. REFER TO SPECIAL PROVISIONS FOR MORE INFORMATION ON INSTALLATION OF ITEM 202520 - WICK DRAINS, ITEM 608502 - GROUTED TIE-BACK ANCHORS, AND ITEM 202517 - SETTLEMENT PLATFORMS.
6. SEE SHEET 24 FOR SECTIONS A-A AND B-B.

PENNONI ASSOCIATES INC.
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\03-SOUTH APPROACH RETAINI
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

SCALE AS NOTED

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

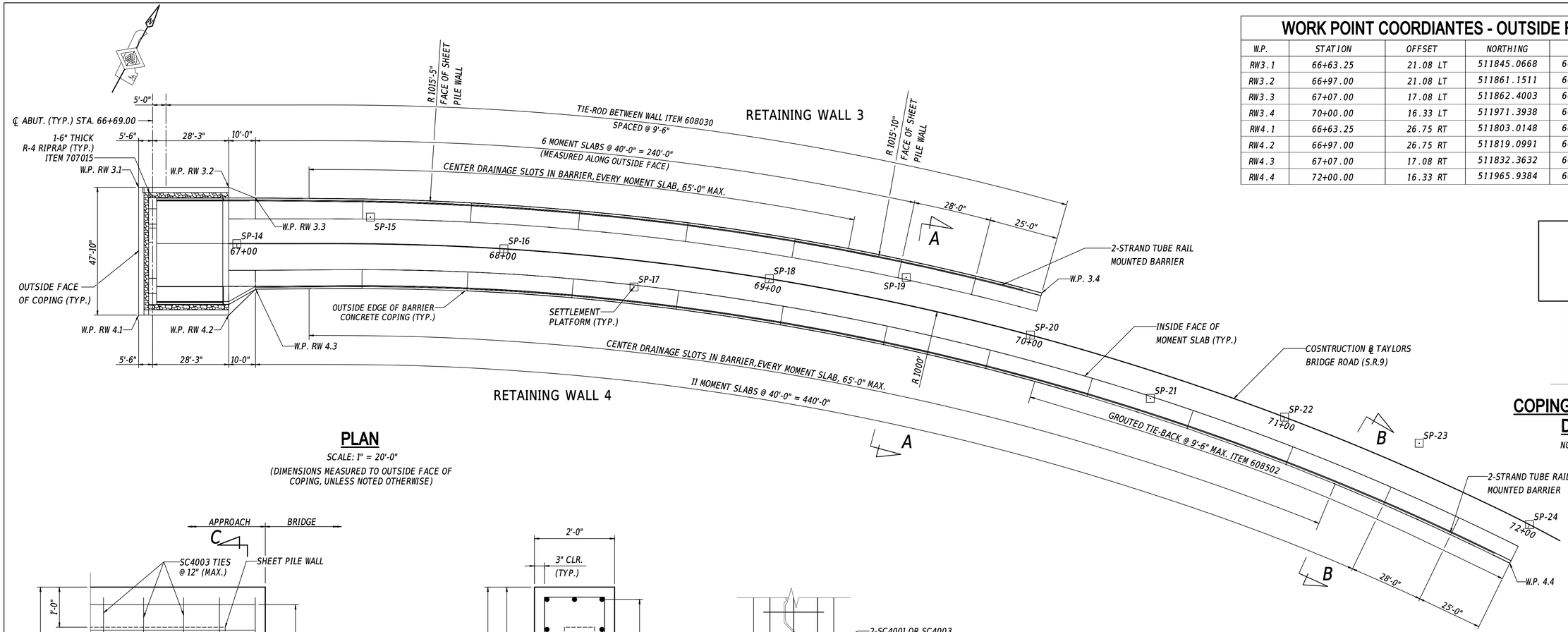
CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

RETAINING WALL PLAN AND DETAILS - 1

SECTION
PAI
SHEET NO.
22

WORK POINT COORDIANTES - OUTSIDE FACE OF COPING

W.P.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
RW3.1	66+63.25	21.08 LT	511845.0668	604727.4167	10.53
RW3.2	66+97.00	21.08 LT	511861.1511	604757.0876	16.87
RW3.3	67+07.00	17.08 LT	511862.4003	604767.7853	14.84
RW3.4	70+00.00	16.33 LT	511971.3938	605043.3904	10.98
RW4.1	66+63.25	26.75 RT	511803.0148	604750.2127	10.53
RW4.2	66+97.00	26.75 RT	511819.0991	604779.8836	16.32
RW4.3	67+07.00	17.08 RT	511832.3632	604784.0681	14.33
RW4.4	72+00.00	16.33 RT	511965.9384	605245.6123	7.50



PLAN

SCALE: 1" = 20'-0"

(DIMENSIONS MEASURED TO OUTSIDE FACE OF COPING, UNLESS NOTED OTHERWISE)

COPING ELEVATION DETAIL

NOT TO SCALE

ELEVATION AT ABUTMENT WALLS

SECTION C-C

TYPICAL PLAN

TYPICAL SECTION

SECTION AT APPROACH SLAB

CONCRETE COPING STRUCTURAL DETAILS

NOTE: CONTROL JOINTS SHALL BE SPACED AT 20-FEET ALONG LENGTH OF CAP.

SCALE: ¾"= 1'-0"

NOTES

1. SEE SHEET 24 FOR SECTIONS A-A AND B-B.

PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-05-26\38-NORTH APPROACH RETAINI
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

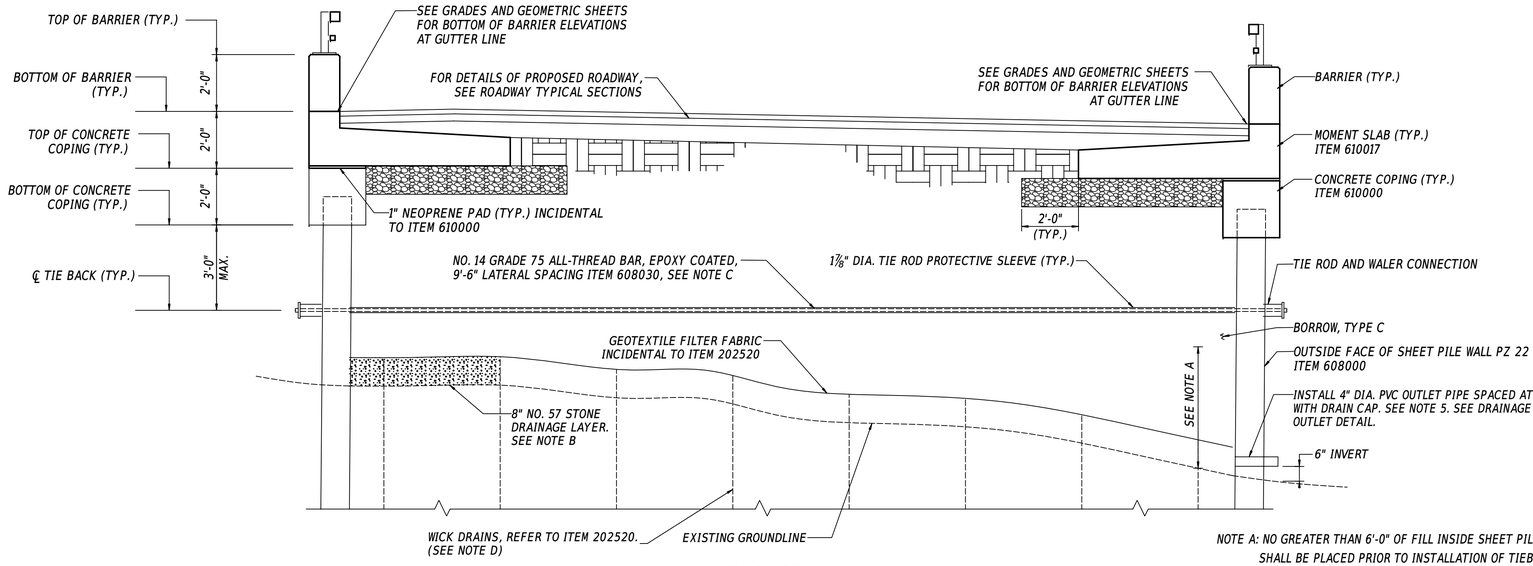
SCALE AS NOTED

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

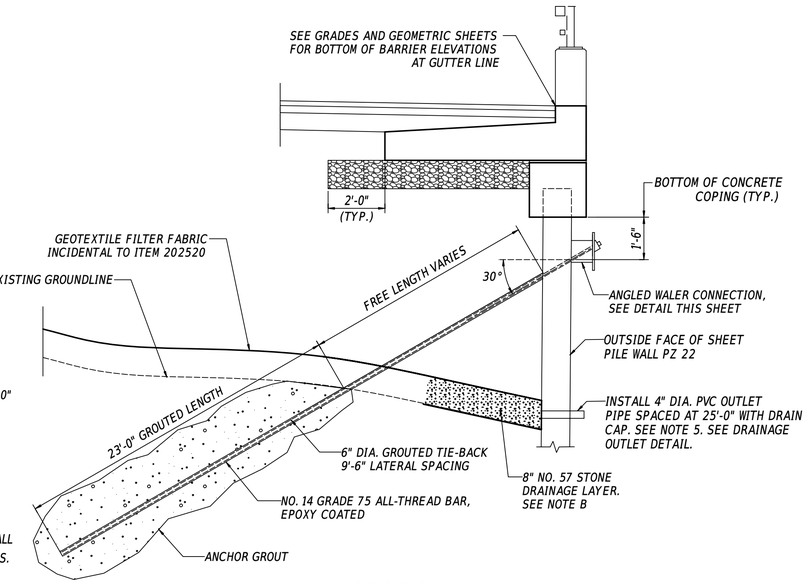
RETAINING WALL PLAN AND DETAILS - 2

SECTION
PAI
SHEET NO.
23



SECTION A-A

(STATION 57+88.00 TO STATION 61+93.50)
(STATION 67+01.00 TO STATION 70+00)
3/8" = 1'-0"



SECTION B-B

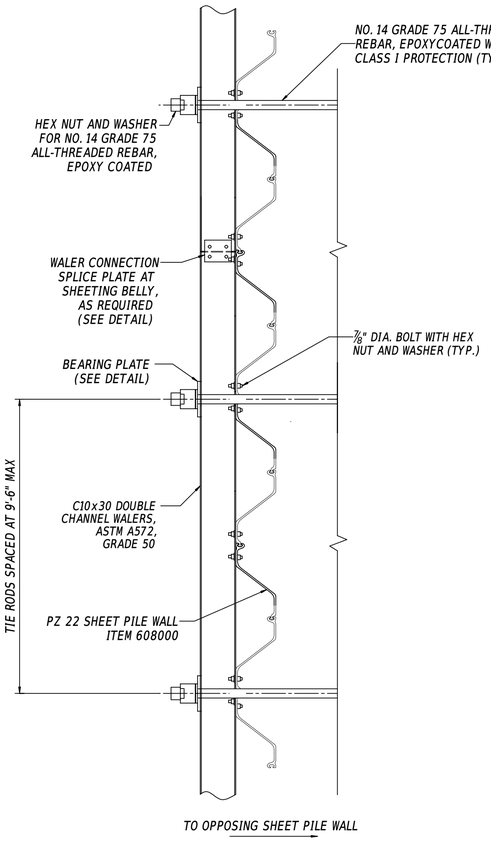
(STATION 56+23.50 TO STATION 57+88.00)
(STATION 70+00 TO STATION 72+00)
3/8" = 1'-0"

NOTE A: NO GREATER THAN 6'-0" OF FILL INSIDE SHEET PILE WALL SHALL BE PLACED PRIOR TO INSTALLATION OF TIEBACKS.

NOTE B: INSTALL 8" THICK DRAINAGE LAYER PRIOR TO INSTALLATION OF WICK DRAINS. INDICENTAL TO ITEM 202520. (SEE NOTE 7)

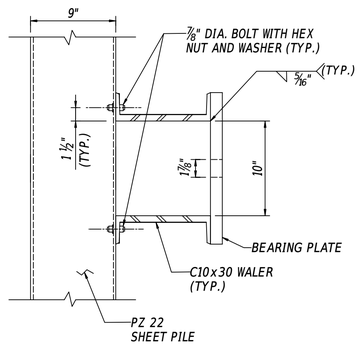
NOTE C: PROVIDE ARTICULATED TIE ROD CONNECTION AT EACH END OF TIE ROD ADJACENT TO SHEET PILE. THE CONNECTION SHALL BE STRUCTURAL STEEL AND GALVANIZED IN ACCORDANCE WITH SECTION 1039, AND HAVE A TENSILE CAPACITY GREATER THAN 120 KIPS. CONTRACTOR TO SUBMIT A PRODUCT FOR APPROVAL. PAYMENT INCIDENTAL TO ITEM 608030.

NOTE D: WICK DRAINS SHALL BE SPACED AT 4 FEET ON CENTER SPACING IN A TRIANGLE PATTERN THROUGHOUT THE WIDTH OF THE ROADWAY (30 FEET) AND INSTALLED 40 FEET BELOW EXISTING GRADE BETWEEN THE FOLLOWING STATIONS: 56+23.50 TO 62+30.50 AND 66+70.00 TO 72+00.00.



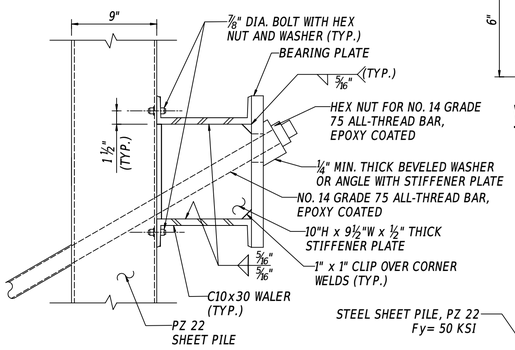
TYPICAL TIE ROD DETAIL BETWEEN WALLS, PLAN

⅜" = 1'-0"



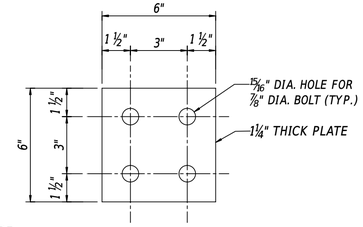
WALER DETAIL

SCALE: 1½" = 1'-0"



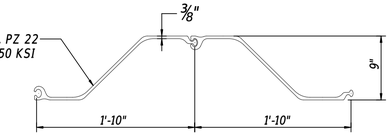
ANGLED CONNECTION DETAIL

SCALE: 1½" = 1'-0"



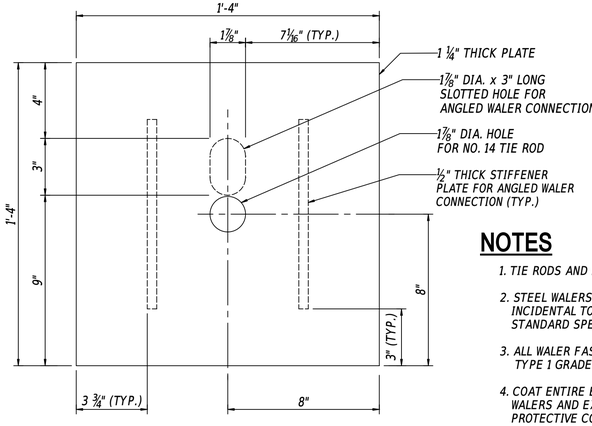
WALER SPLICE DETAIL

3" = 1'-0"



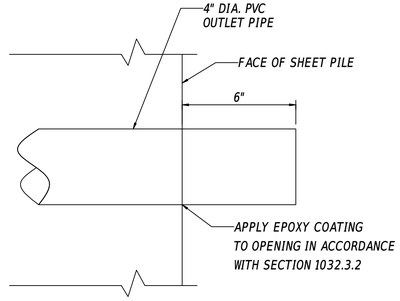
TYPICAL SHEET PILE

NOT TO SCALE



BEARING PLATE DETAIL

3" = 1'-0"



DRAINAGE OUTLET DETAIL

3" = 1'-0"

NOTES

1. TIE RODS AND HARDWARE SHALL BE GALVANIZED GRADE 75 AND CONFORM TO SECTION 1039.
2. STEEL WALERS SHALL BE GRADE 50 STEEL CONFORMING TO SECTION 1039 AND ARE INCIDENTAL TO ITEM 608000. STEEL WALERS TO BE COATED PER SECTION 616 OF THE STANDARD SPECIFICATIONS WITH COLOR TO MATCH PROPOSED STEEL SHEET PILE WALLS.
3. ALL WALER FASTENERS ARE GALVANIZED ⅞" DIAMETER ASTM F3125 HIGH STRENGTH BOLTS, TYPE 1 GRADE A325, UNLESS OTHERWISE NOTED.
4. COAT ENTIRE EXTERIOR FACE AND INTERIOR FACE OF SHEET PILE WALLS, AND WALERS AND EXPOSED SURFACES OF TIE-RODS IN ACCORDANCE WITH SECTION 1032.3.2 THE PROTECTIVE COATING IS INCIDENTAL TO ITEM 608000.
5. REFER TO SPECIAL PROVISIONS FOR MORE INFORMATION OF ITEM 202520 - WICK DRAINS, ITEM 608502 - GROUTED TIE-BACK SYSTEM, AND ITEM 202517 - SETTLEMENT PLATFORMS.
6. AT COMPLETION OF CONSTRUCTION, PVC OUTLET DRAINS SHALL BE CAPPED.
7. FOR MOMENT SLAB DETAILS SEE SHEET 49.
8. CONTRACTOR MAY SUBMIT AN ALTERNATIVE WICK DRAIN DESIGN AT NO ADDITIONAL COST TO THE DEPARTMENT.

PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2022\06-2634-TIE ROD DETAILS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall
OFFICE LOCATION:

ADDENDA / REVISIONS

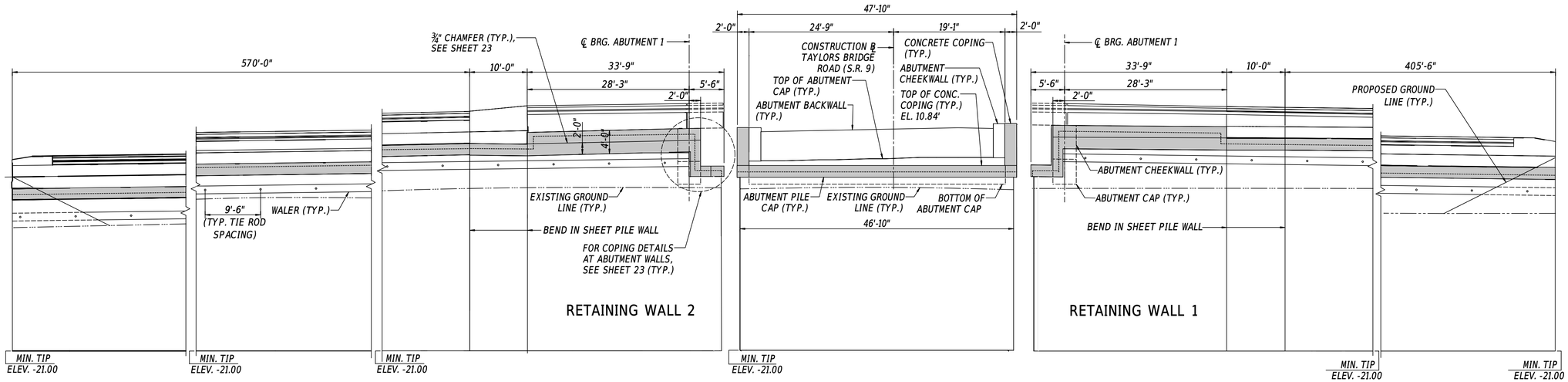
SCALE AS NOTED

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

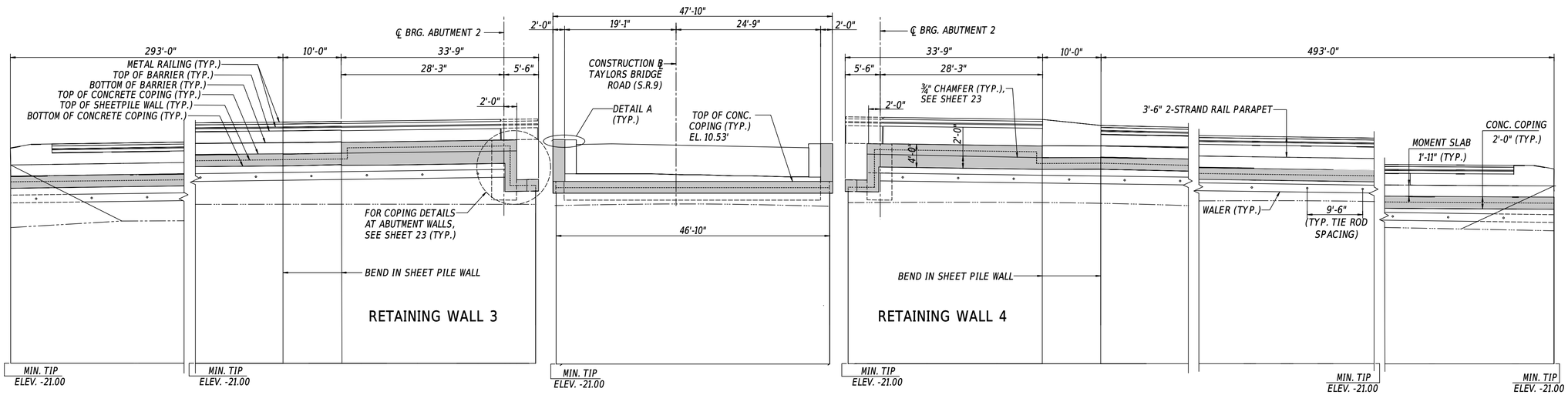
TIE ROD DETAILS

SECTION
PAI
SHEET NO.
24



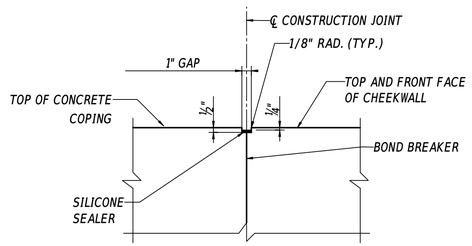
RETAINING WALLS 1 AND 2 ELEVATION

1"=10'-0"



RETAINING WALLS 3 AND 4 ELEVATION

1" = 10'-0"



DETAIL A

1½" = 1'-0"

NOTES

1. SEE SHEETS 14-16 FOR BOTTOM OF BARRIER ELEVATIONS ON APPROACHES, AND SHEETS 22-23 FOR COPING ELEVATIONS.
2. SEE SHEETS 22 AND 23 FOR RETAINING WALL LAYOUT, LIMITS OF TIE ROD AND GROUTED ANCHORS, AND COPING DETAILS.
3. SEE SHEET 24 FOR TIE ROD AND WALER DETAILS.
4. SEE SHEET 41 FOR SIDEWALK AND PARAPET DETAILS.
5. SEE SHEET 49 FOR MOMENT SLAB DETAILS.

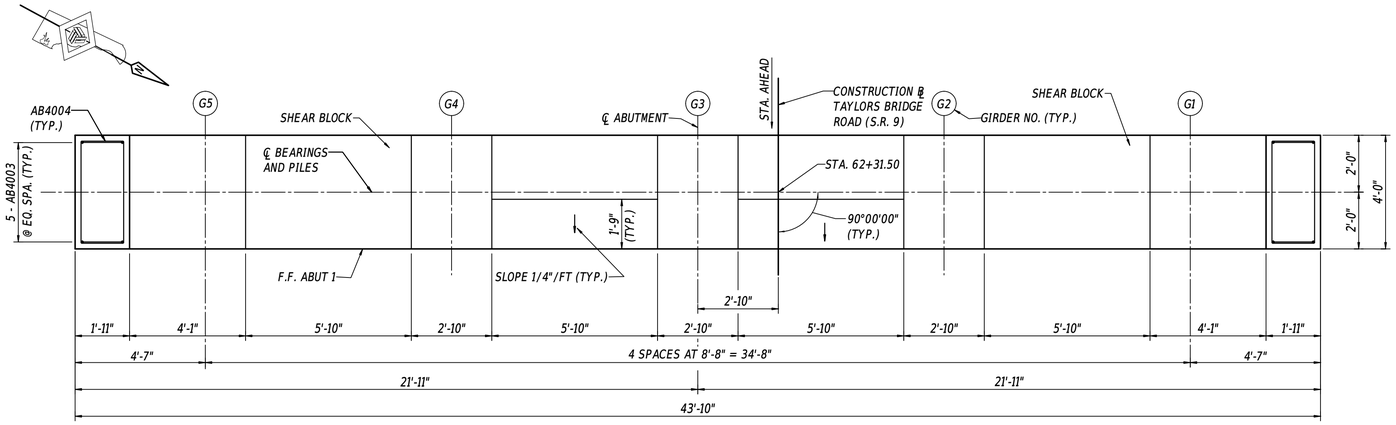
PENNONI ASSOCIATES INC.
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\42-RETAINING WALL ELEVATI
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 14:18
USER NAME: BMarshall

ADDENDA / REVISIONS

SCALE AS NOTED

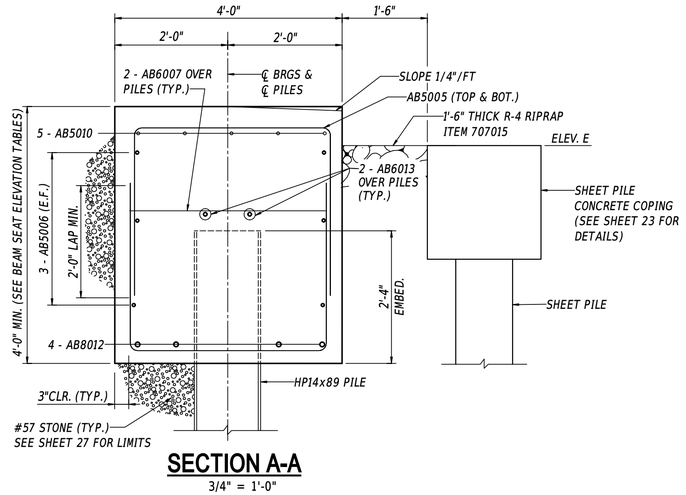
ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT T201907102	BRIDGE NO. 1-447	RETAINING WALL ELEVATIONS	SECTION PAI
COUNTY NEW CASTLE	DESIGNED BY: B.MARSHALL		SHEET NO. 25
	CHECKED BY: H.BROWN		



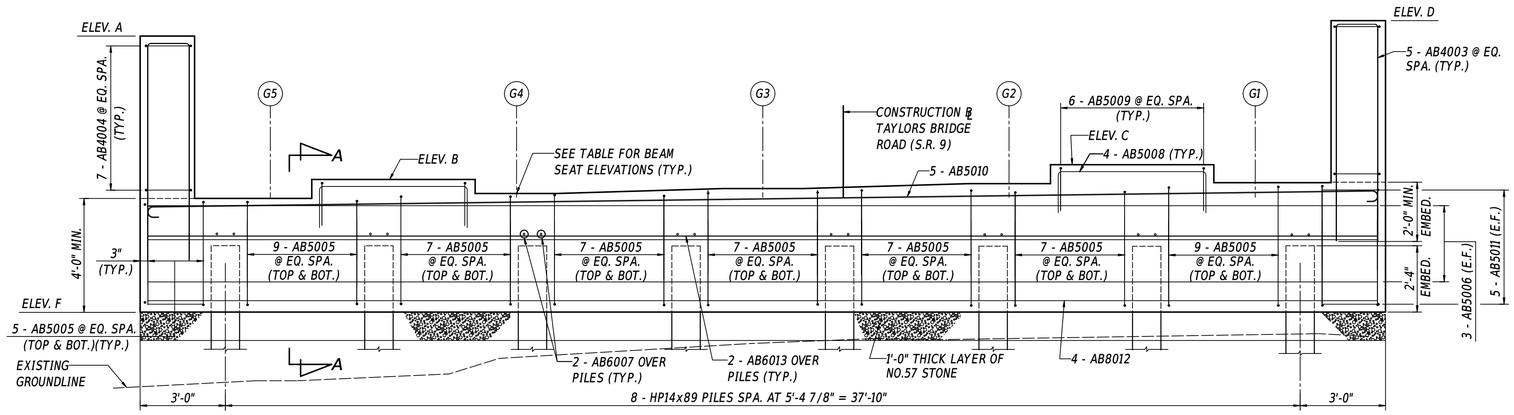
ABUTMENT PLAN

(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)
3/8" = 1'-0"



SECTION A-A

3/4" = 1'-0"



ABUTMENT ELEVATION

(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)
3/8" = 1'-0"

ABUTMENT 1 ELEVATIONS	
GIRDER NO.	ELEVATION (FT)
G1	11.89
G2	11.85
G3	11.68
G4	11.51
G5	11.33
ELEV. A	17.11
ELEV. B	12.01
ELEV. C	12.39
ELEV. D	17.68
ELEV. E	10.71
ELEV. F	7.33

ABUTMENT 2 ELEVATIONS	
GIRDER NO.	ELEVATION (FT)
G1	11.56
G2	11.53
G3	11.35
G4	11.18
G5	11.01
ELEV. A	16.80
ELEV. B	11.68
ELEV. C	12.06
ELEV. D	17.36
ELEV. E	10.39
ELEV. F	7.00

REFERENCE:

1. FOR PROJECT NOTES, SEE SHEETS 5-6.
2. FOR GENERAL PLAN AND ELEVATION, SEE SHEET 17.
3. FOR FOUNDATION LAYOUT PLAN, SEE SHEET 19.
4. FOR LAYOUT AND DETAILS OF SHEET PILE RETAINING WALL AROUND ABUTMENT, SEE SHEETS 22 AND 23.
5. FOR ABUTMENT TYPICAL SECTION, SEE SHEET 27.
6. FOR DIAPHRAGM DETAILS, SEE SHEET 36.

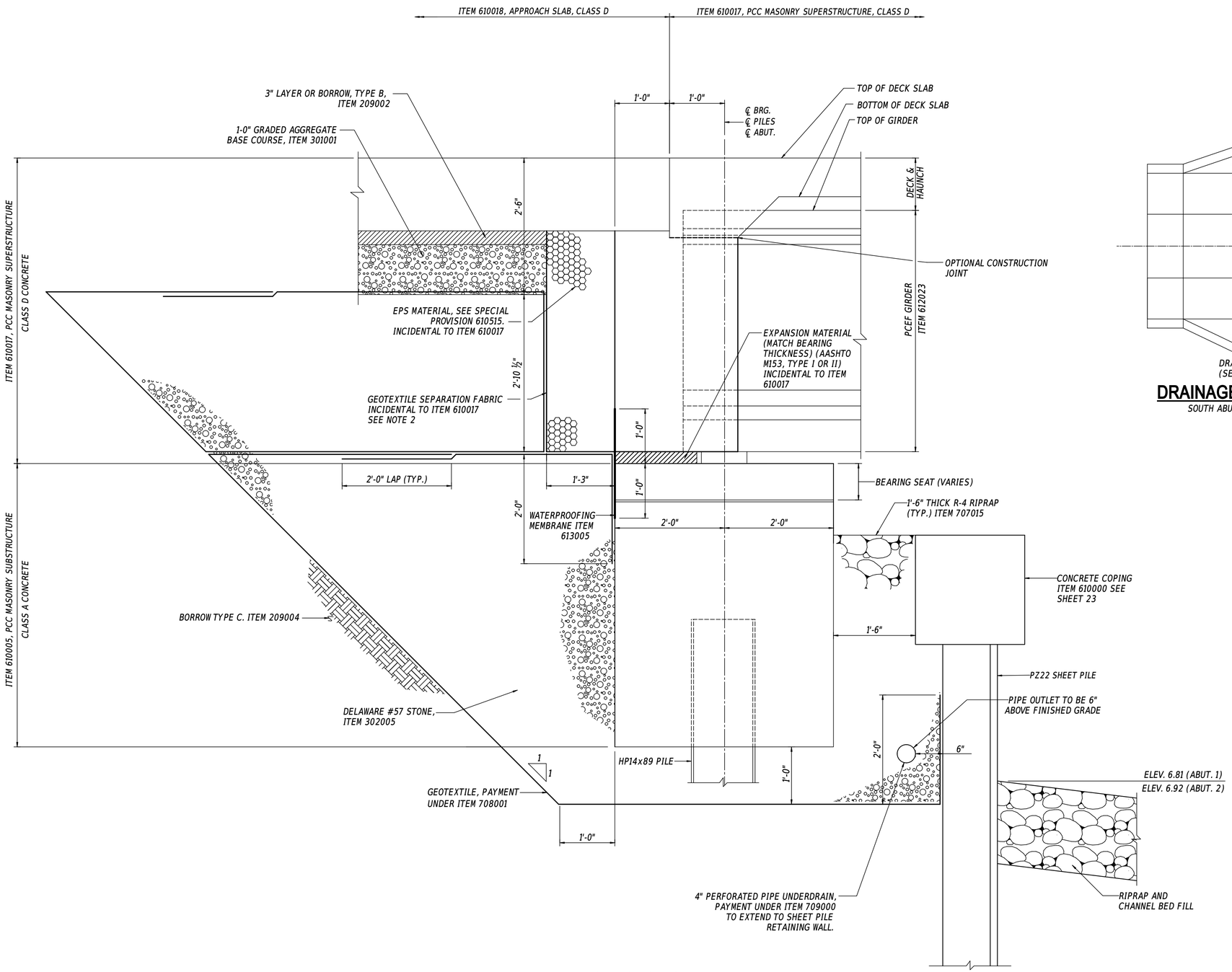
PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\8-ABUTMENT PLAN AND ELEVA
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 2/20/2025 @ 11:38
USER NAME: - BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

SCALE AS NOTED

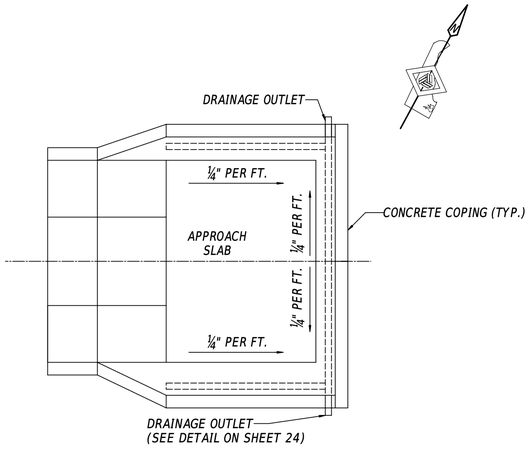
ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447	ABUTMENT PLAN AND ELEVATION	SECTION
T201907102	DESIGNED BY:	B.MARSHALL		PAI
COUNTY				SHEET NO.
NEW CASTLE	CHECKED BY:	H.BROWN		26



ABUTMENT TYPICAL SECTION

1" = 1'-0"



DRAINAGE PLAN SCHEMATIC

SOUTH ABUTMENT SHOWN, NORTH SIMILAR
NOT TO SCALE

NOTES

1. BACKFILL OPERATIONS ABOVE ABUTMENT BEAM SEAT LEVEL SHALL NOT BE STARTED UNTIL THE DECK HAS BEEN PLACED AND CURED TO A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
2. GEOTEXTILE SEPERATION FABRIC SHALL BE WRAPPED AROUND THE ENDS OF THE EPS MATERIAL TO FULLY ENCLOSE IT.
3. SEE ABUTMENT PLAN AND ELEVATION ON SHEET 26 FOR REINFORCEMENT PLACEMENT AND VARYING CROSS SLOPE OF ABUTMENT.

PENNONI ASSOCIATES INC.
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\45-ABUTMENT TYPICAL SECTI
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:18
USER NAME: BMarshall OFFICE LOCATION:

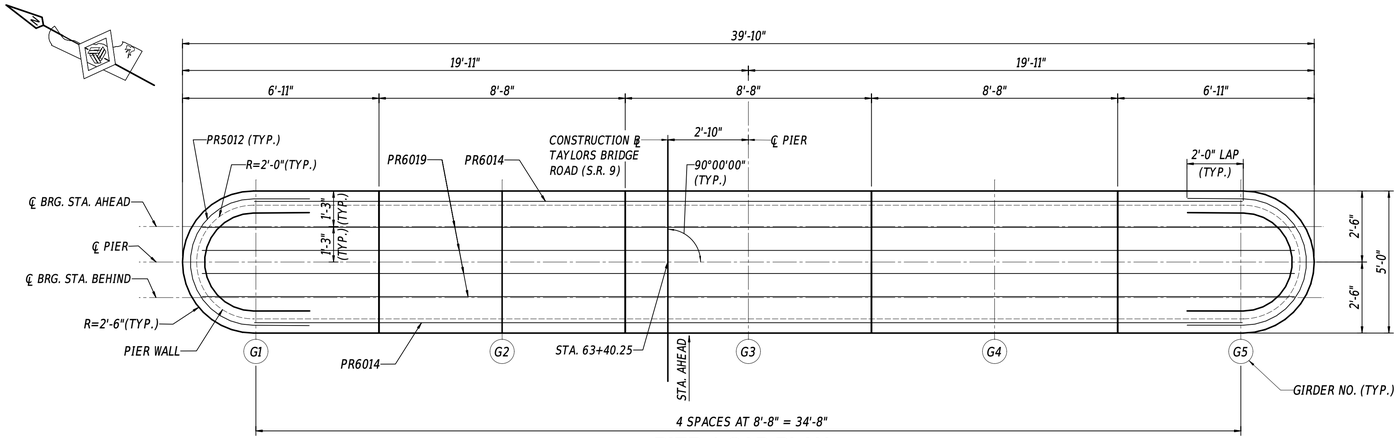
ADDENDA / REVISIONS

SCALE AS NOTED

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

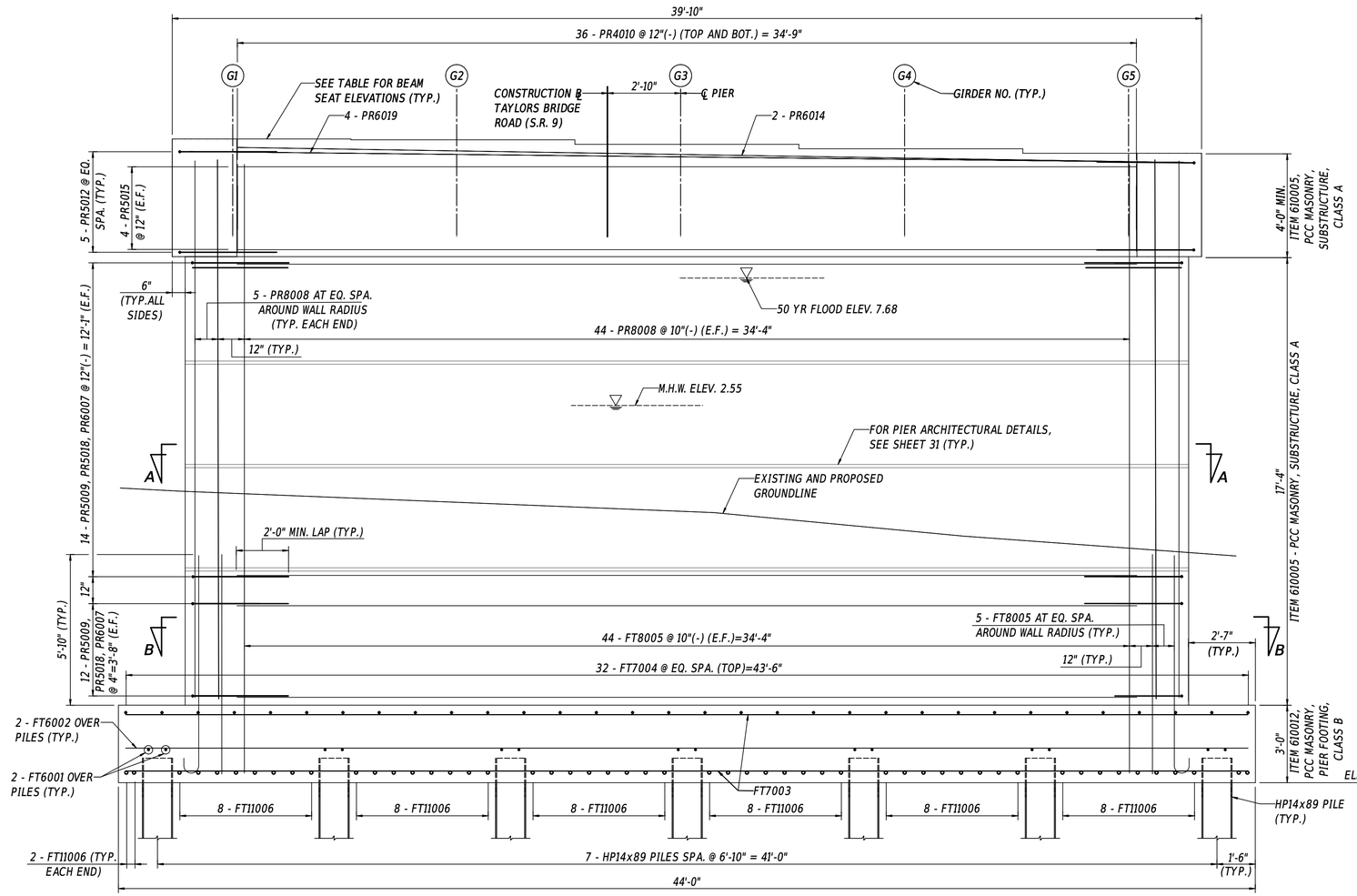
CONTRACT	BRIDGE NO.	1-447	SECTION
T201907102	DESIGNED BY:	B.MARSHALL	PAI
COUNTY	CHECKED BY:	H.BROWN	SHEET NO.
NEW CASTLE			27

ABUTMENT TYPICAL SECTION



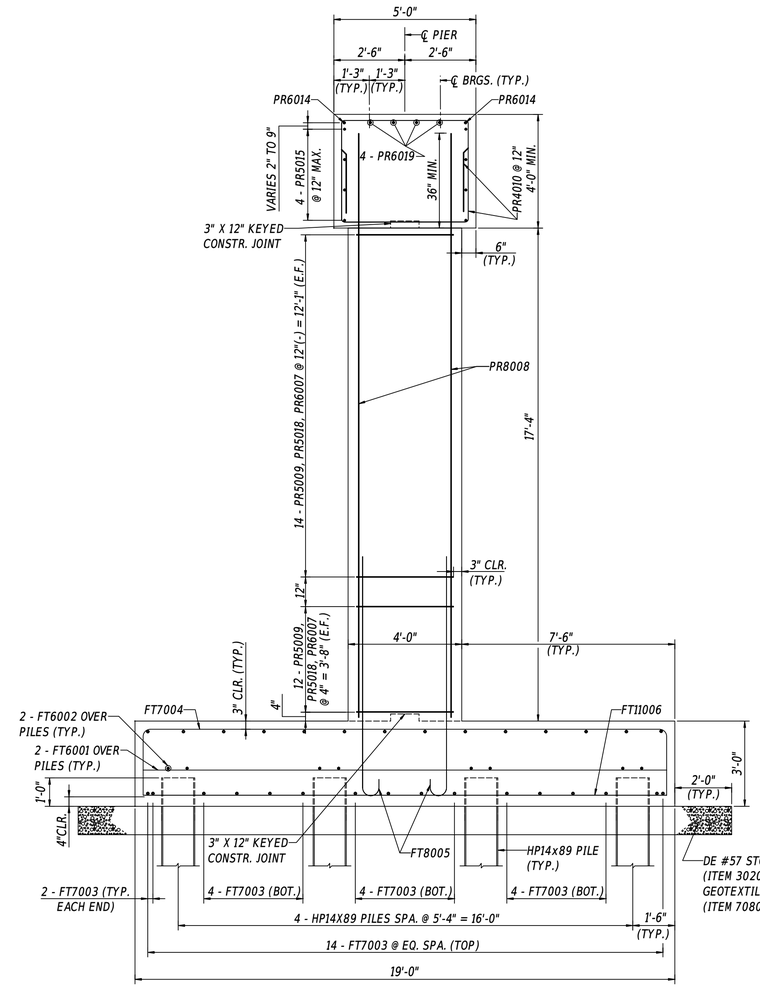
PIER 1 CAP PLAN

3/8" = 1'-0"



PIER 1 ELEVATION

3/8" = 1'-0"



PIER 1 TYPICAL SECTION

3/8" = 1'-0'

PIER 1 BEAM SEAT ELEVATIONS	
GIRDER NO.	ELEVATION (FT)
G1	13.02
G2	12.99
G3	12.82
G4	12.64
G5	12.47

REFERENCE:

1. FOR PROJECT NOTES, SEE SHEETS 5-6.
2. FOR FOUNDATION LAYOUT PLAN, SEE SHEET 19.
3. FOR FOOTING AND PILE LAYOUT PLAN, SEE SHEET 20.
4. FOR SECTIONS A-A AND B-B, SEE SHEET 31.

PENNONI ASSOCIATES INC.
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\4-PIER 1 DETAILS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 7/22/2025 @ 09:38
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

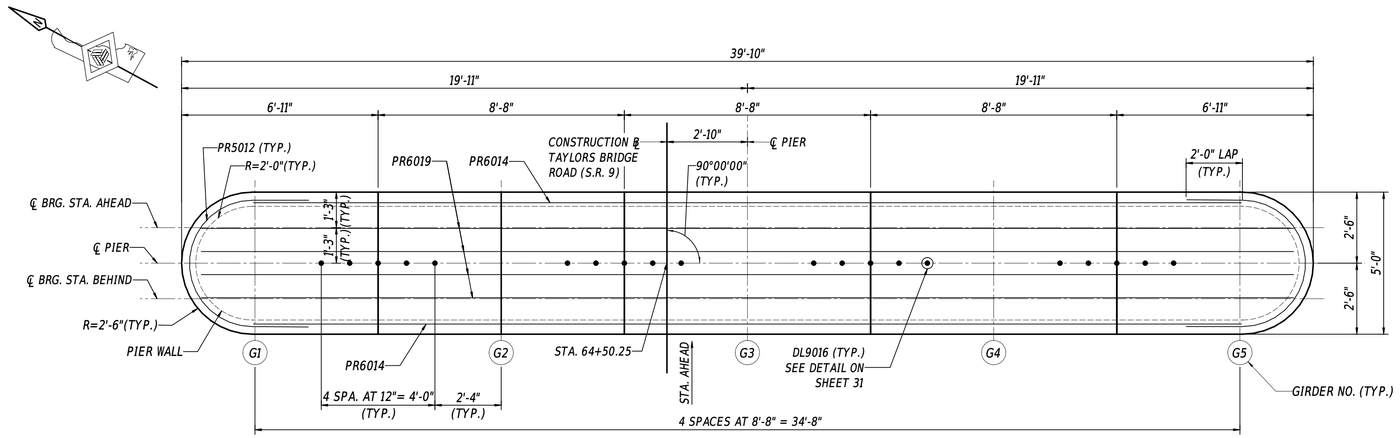
SCALE AS NOTED

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

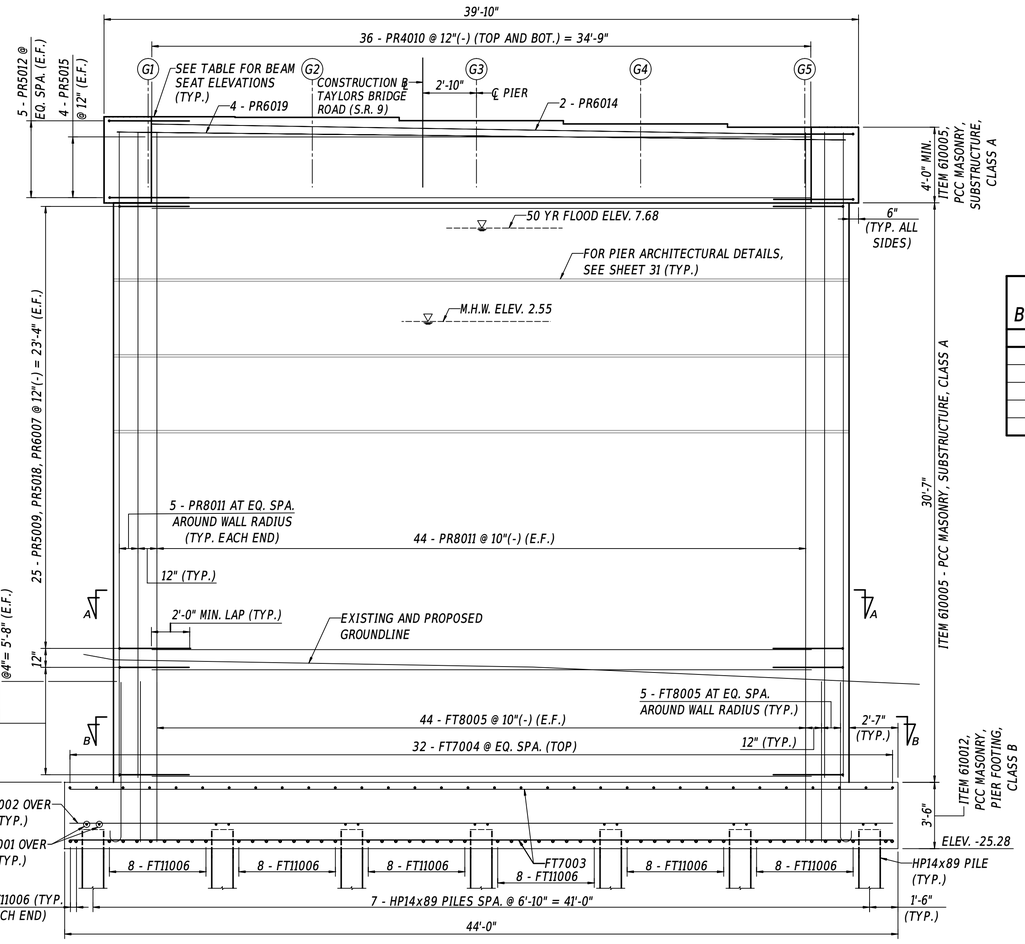
PIER 1 DETAILS

SECTION
PAI
SHEET NO.
28



PIER 2 CAP PLAN

3/8" = 1'-0"

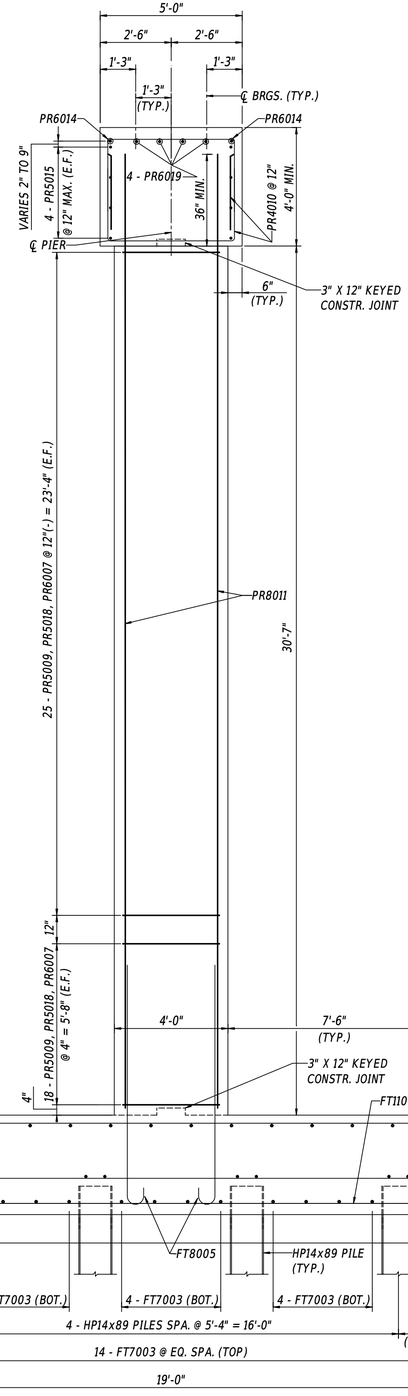


PIER 2 ELEVATION

1/4" = 1'-0"

PIER 2 BEAM SEAT ELEVATIONS

GIRDER NO.	ELEVATION (FT)
G1	13.36
G2	13.32
G3	13.15
G4	12.98
G5	12.80



PIER 2 TYPICAL SECTION

3/8" = 1'-0'

REFERENCE:

1. FOR PROJECT NOTES, SEE SHEETS 5-6.
2. FOR FOUNDATION LAYOUT PLAN, SEE SHEET 19.
3. FOR FOOTING AND PILE LAYOUT PLAN, SEE SHEET 20.
4. FOR SECTIONS A-A AND B-B, SEE SHEET 31.

PENNONI ASSOCIATES INC.
FILE NAME: 11-447 Taylors Bridge 2023-09-26\8-PIER 2 DETAILS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 7/22/2025 @ 09:39
USER NAME: BMarshall OFFICE LOCATION:

Pennoni

ADDENDA / REVISIONS

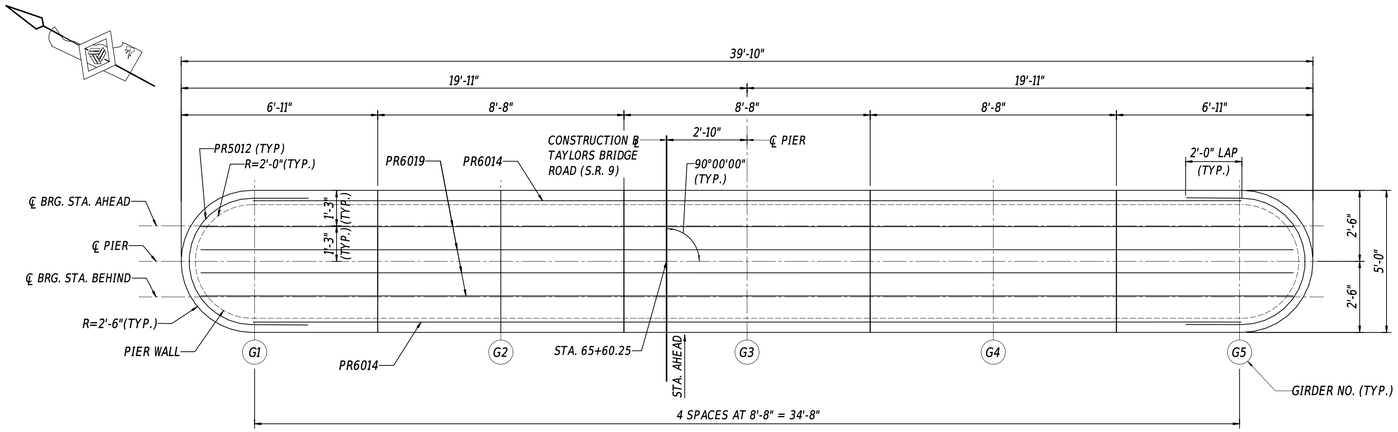
SCALE AS NOTED

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

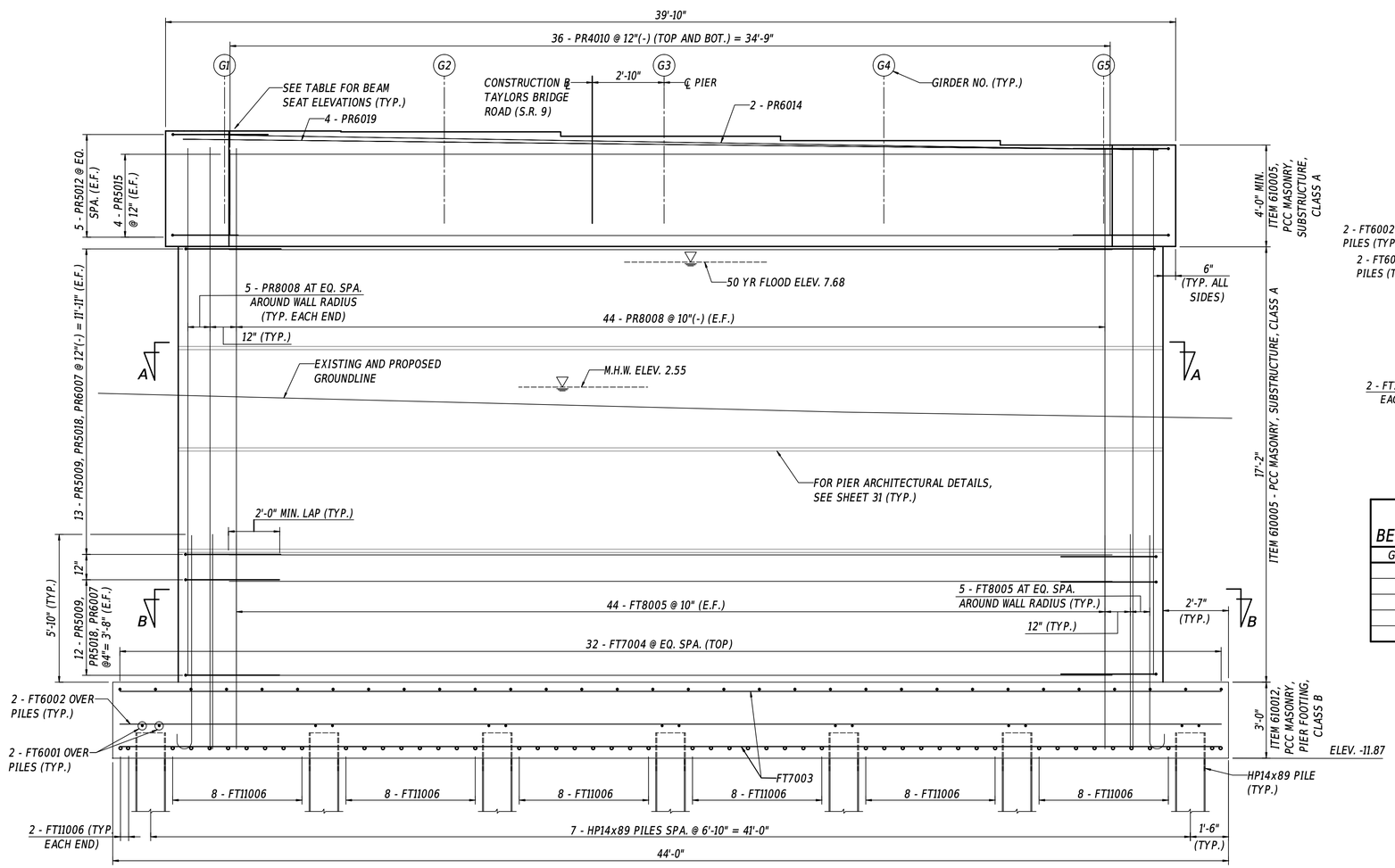
PIER 2 DETAILS

SECTION
PAI
SHEET NO.
29



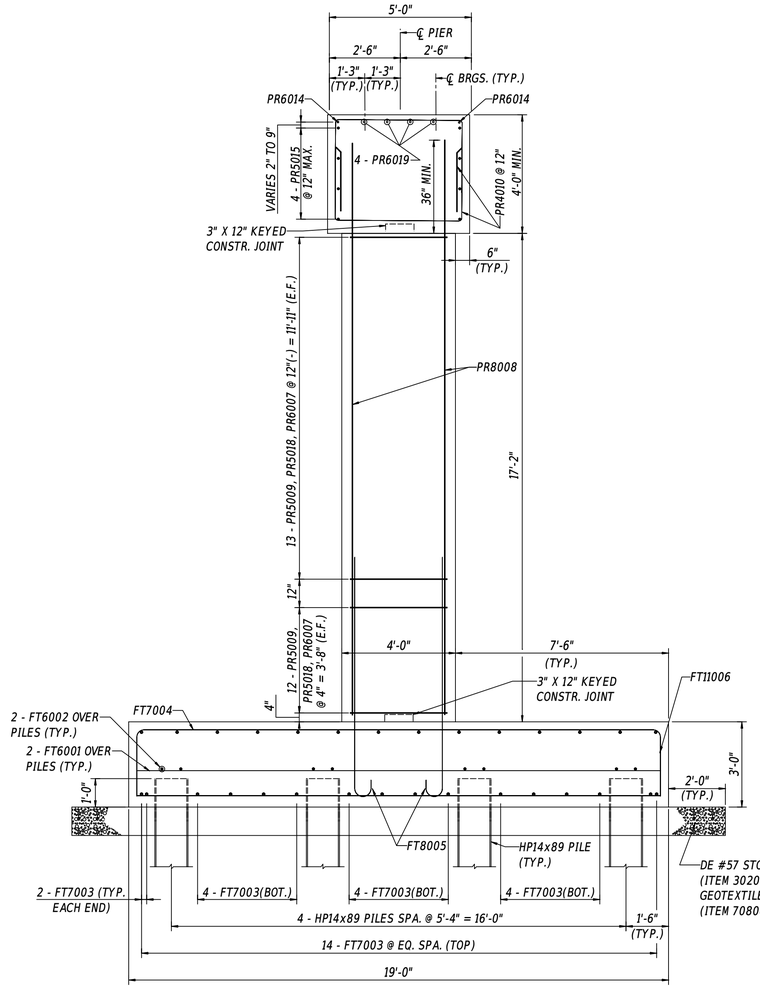
PIER 3 CAP PLAN

3/8" = 1'-0"



PIER 3 ELEVATION

3/8" = 1'-0"



PIER 3 TYPICAL SECTION

3/8" = 1'-0'

PIER 3 BEAM SEAT ELEVATIONS	
GIRDER NO.	ELEVATION (FT)
G1	12.86
G2	12.83
G3	12.65
G4	12.48
G5	12.30

REFERENCE:

1. FOR PROJECT NOTES, SEE SHEETS 5-6.
2. FOR FOUNDATION LAYOUT PLAN, SEE SHEET 19.
3. FOR FOOTING AND PILE LAYOUT PLAN, SEE SHEET 20.
4. FOR SECTIONS A-A AND B-B, SEE SHEET 31.

PENNONI ASSOCIATES INC.
FILE NAME: 11-447 Taylors Bridge 2023-09-26\10-PIER 3 DETAILS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 7/22/2025 @ 09:40
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

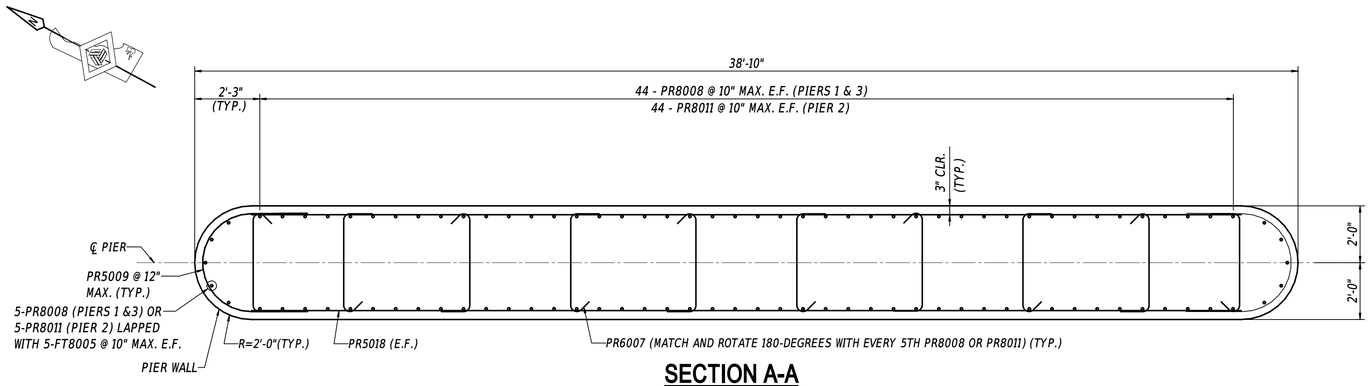
SCALE AS NOTED

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

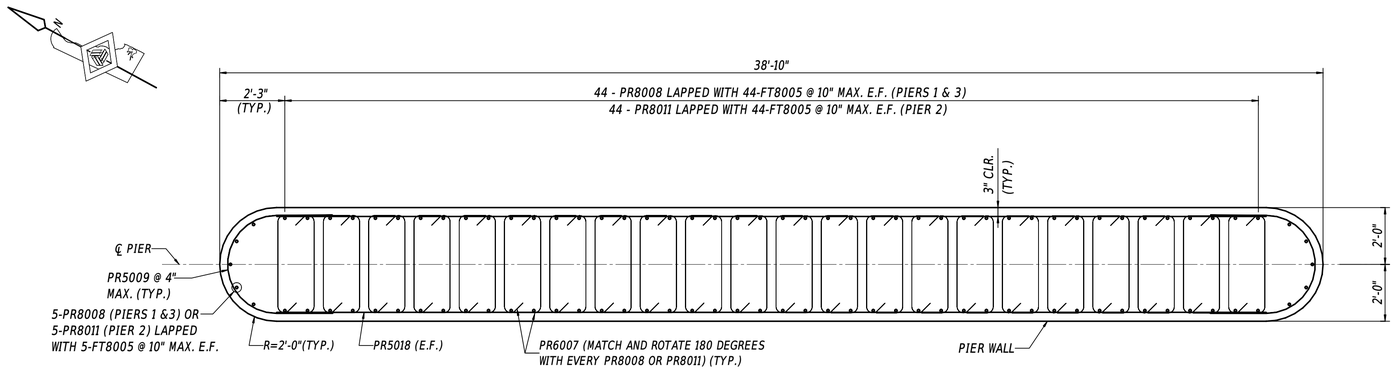
PIER 3 DETAILS

SECTION
PAI
SHEET NO.
30



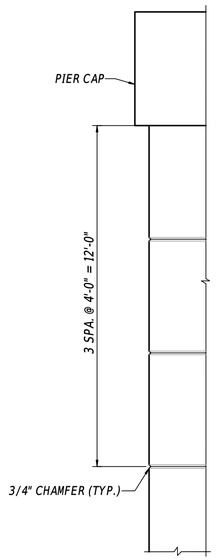
SECTION A-A

3/8" = 1'-0"



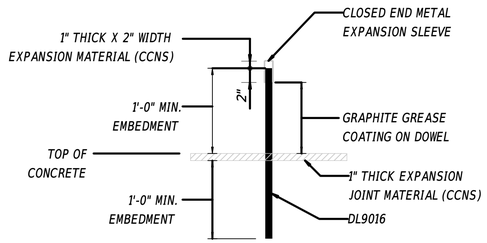
SECTION B-B

3/8" = 1'-0"



PIER ARCHITECTURAL DETAIL

(TYP. PIERS 1,2,3; ALL 4 SIDES)
NOT TO SCALE



DOWEL DETAIL SLAB AT PIER 2 (FIXED PIER)

(ALL MATERIAL SHOWN IN THIS DETAIL INCIDENTAL TO ITEM 611001)
(NOT TO SCALE)

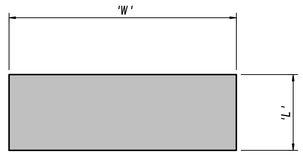
REFERENCE:

1. *FOR PROJECT NOTES, SEE SHEETS 5-6.*
2. *FOR PIER DETAILS, SEE SHEETS 28-30.*

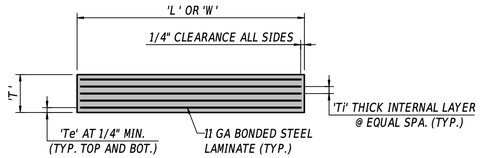
PENNONI ASSOCIATES INC.
FILE NAME: 11-447 Taylors Bridge 2023-09-26\44-PIER TYPICAL SECTIONS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 2/19/2025 @ 12:00
USER NAME: BMarshall OFFICE LOCATION:

Pennoni

ADDENDA / REVISIONS	SCALE AS NOTED	ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT	CONTRACT T201907102	BRIDGE NO. 1-447	PIER TYPICAL SECTIONS	SECTION PAI
			COUNTY NEW CASTLE	DESIGNED BY: B.MARSHALL		SHEET NO. 31
				CHECKED BY: H.BROWN		



STEEL REINFORCED ELASTOMERIC BEARING PLAN
(NOT TO SCALE)



STEEL REINFORCED ELASTOMERIC BEARING SECTION
(NOT TO SCALE)

STEEL REINFORCED ELASTOMERIC BEARING SCHEDULE

LOCATION	BEARING DESIGNATION						LAMINATED ELASTOMERIC BEARING					
	MARK	TYPE	NEOPRENE HARDNESS (SHORE A)	TOTAL NO REQD.	CAPACITY PER PAD		DIMENSION					TOTAL PAD THICKNESS 'T' (IN)
					REACTION ⊗ (KIP)	MOVEMENT ⊠ (IN)	'L' (IN)	'W' (IN)	LAYER THICKNESS 'Ti' (IN)	LAYER THICKNESS 'Te' (IN)	INTERIOR LAYERS	
ABUTMENT 1	EX 1	EXP.	60± 5 DURO	5	212	1.26	10	23	0.25	0.375	4	2.60
PIER 1	EX 2	EXP.	60± 5 DURO	10	233	0.63	11	23	0.25	0.375	3	2.10
PIER 2	FX 1	FIX.	60± 5 DURO	10	222	N/A	11	23	0.25	0.375	3	2.10
PIER 3	EX 2	EXP.	60± 5 DURO	10	233	0.63	11	23	0.25	0.375	3	2.10
ABUTMENT 2	EX 1	EXP.	60± 5 DURO	5	212	1.26	10	23	0.25	0.375	4	2.60

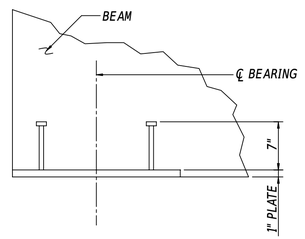
LEGEND:

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

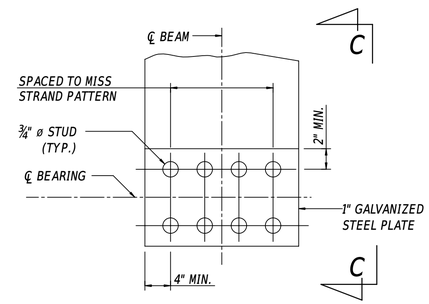
⊠ TEMPERATURE MOVEMENT (IN).

BEVELED SOLE PLATE SCHEDULE

BEAM	ABUTMENT 1		SPAN 1 @ PIER 1		SPAN 2 @ PIER 1		SPAN 2 @ PIER 2		SPAN 3 @ PIER 2		SPAN 3 @ PIER 3		SPAN 4 @ PIER 3		ABUTMENT 2	
	PT1	PT2	PT1	PT2	PT1	PT2	PT1	PT2	PT1	PT2	PT1	PT2	PT1	PT2	PT1	PT2
1	1"	1⅛"	1⅛"	1"	1 3/16"	1 5/16"	1"	1"	1"	1"	1¼"	1⅜"	1⅛"	1"	1"	1¼"
2	1"	1⅛"	1⅛"	1"	1 3/16"	1 5/16"	1"	1"	1"	1"	1¼"	1⅜"	1⅛"	1"	1"	1¼"
3	1"	1⅛"	1⅛"	1"	1 3/16"	1 5/16"	1"	1"	1"	1"	1¼"	1⅜"	1⅛"	1"	1"	1¼"
4	1"	1⅛"	1⅛"	1"	1 3/16"	1 5/16"	1"	1"	1"	1"	1¼"	1⅜"	1⅛"	1"	1"	1¼"
5	1"	1⅛"	1⅛"	1"	1 3/16"	1 5/16"	1"	1"	1"	1"	1¼"	1⅜"	1⅛"	1"	1"	1¼"



SECTION C-C
(NOT TO SCALE)



ALTERNATE ANCHOR DETAIL
(NOT TO SCALE)

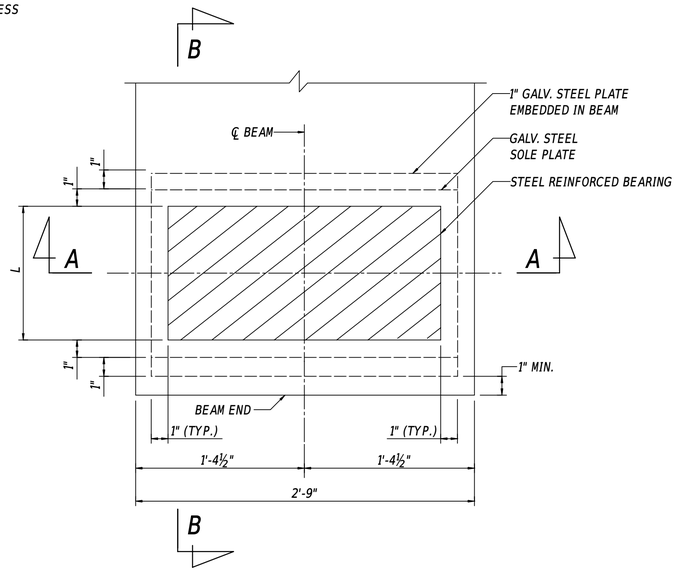
LEGEND

L = BEARING PAD LENGTH

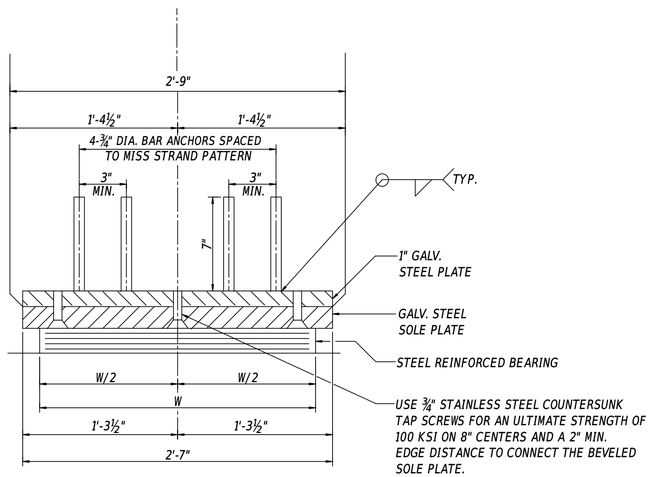
W = BEARING PAD WIDTH

T = BEARING PAD THICKNESS

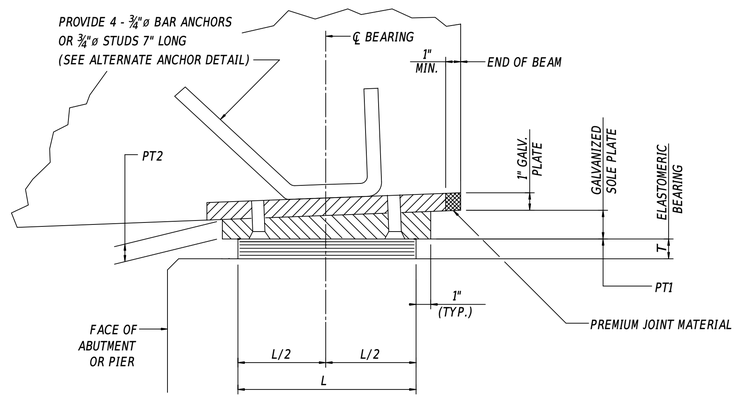
PT = SOLE PLATE THICKNESS



PLAN VIEW
(NOT TO SCALE)



SECTION A-A
(NOT TO SCALE)



SECTION B-B
SOLE PLATE DETAIL
(NOT TO SCALE)

PENNONI ASSOCIATES INC.
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\15-BEARING DETAILS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

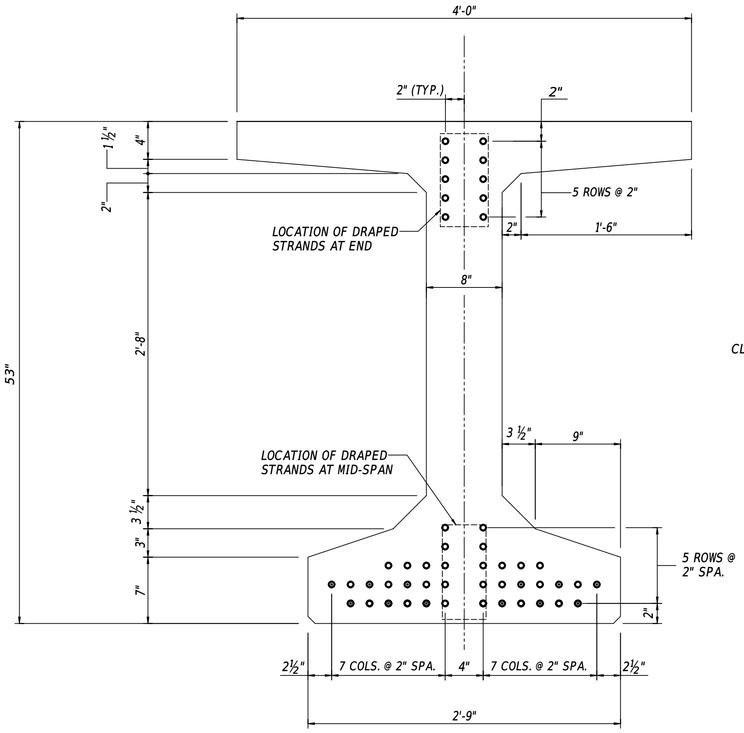
SCALE AS NOTED

ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

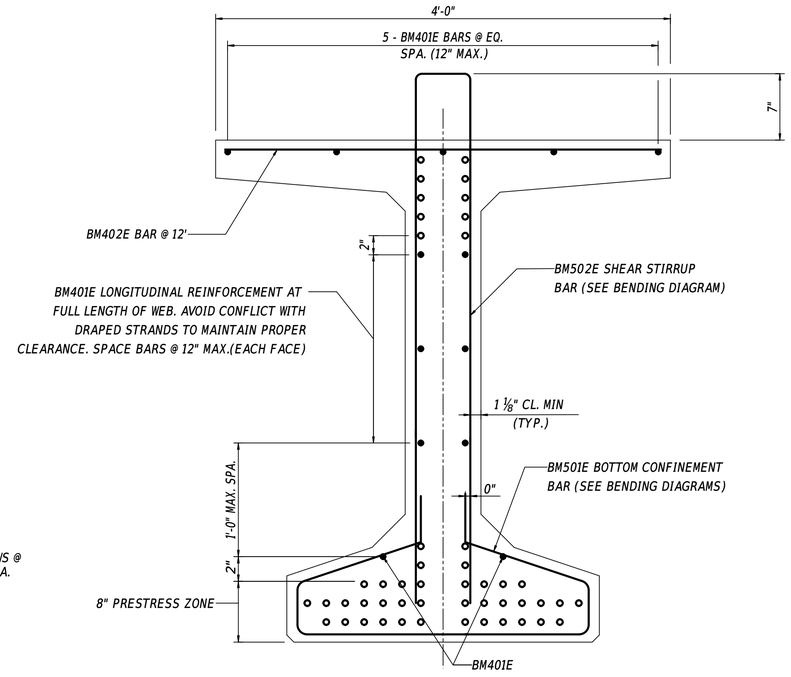
BEARING DETAILS

SECTION
PAI
SHEET NO.
32



STRAND CONFIGURATION

1½" = 1'-0"



TYPICAL REINFORCING SECTION

1½" = 1'-0"

GIRDER NOTES

1. GIRDERS ARE PCEF 53/48 (DEPTH 53")/ BULB TEE.
2. 5 TOTAL BEAMS ARE REQUIRED FOR EACH SPAN:
   -3 INTERIOR BEAMS
   -2 EXTERIOR BEAMS
3. INFORMATION PERTAINING TO THE PRESTRESSED PRECAST REINFORCED BULB TEE BEAMS IS INTENDED TO SERVE AS AN INDICATION OF THE TYPE OF CONSTRUCTION ACCEPTABLE FOR USE. THE CONTRACTOR IS REQUIRED TO PREPARE AND SUBMIT, FOR APPROVAL, A COMPLETE SET OF DETAILED SHOP DRAWINGS FOR THE PRESTRESSED PRECAST UNITS.
4. TOP SURFACE OF ALL GIRDERS SHALL BE ROUGH FINISHED TO A FULL AMPLITUDE OF 1/4" AND SCRUBBED TRANSVERSLY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND TO PRODUCE A ROUGHENED SURFACE FOR BONDING.
5. NO CLEAR COVER LESS THAN AS SHOWN ON THESE PLANS WILL BE ACCEPTED.
6. PROVIDE THREADED INSERTS ON INSIDE AND OUTSIDE FACE OF BEAMS AT ABUTMENT AND PIER DIAPHRAGMS, INSIDE AND OUTSIDE FACE FOR INTERIOR BEAMS AT INTERMEDIATE DIAPHRAGMS, AND INSIDE FACE FOR EXTERIOR BEAMS AT INTERMEDIATE DIAPHRAGMS
7. APPROXIMATE BEAM DEAD WEIGHT: 24.3 TONS.
8. PRESTRESSED BEAMS SHALL BE HANDLED ONLY BY THE APPROVED LIFTING ELEMENTS PROVIDED SPECIFICALLY FOR THIS PURPOSE.
9. ALL ELEMENTS RELATED TO THE LIFTING OF THE BEAMS SHALL BE SPACED SO THAT THEY DO NOT INTERFERE WITH STRAND SPACING PRECASTER SHALL ENSURE PROPER PLACEMENT OF THE LIFTING ELEMENTS TO AVOID CONFLICT WITH THE BARRIER AND METAL BRIDGE RAILING SYSTEM. THE PRECASTER SHALL INCLUDE DETAILS OF THE PLACEMENT OF THESE ITEMS IN THEIR SUBMITTED SHOP DRAWINGS.
10. SUPPORT BEAMS ONLY AT SPECIFIED BEARING POINTS DURING STORAGE AND TRANSPORTING. SEE SHEET 32 FOR INFORMATION ON BEVELED SOLE PLATES AND BEARINGS.
11. ALL BAR REINFORCEMENT AND CHAIR SUPPORTS SHALL BE EPOXY-COATED IN ACCORDANCE WITH AASHTO M31, GRADE 60 AND ASTM A775.
12. PAYMENT FOR REINFORCING BARS IN INCIDENTAL TO ITEM 612023 - PRESTRESSED REINFORCED CONCRETE MEMBERS, BULB T BEAMS.

PRESTRESS NOTES

1. CAST BEAM ENDS SO THAT THE END FACES WILL BE IN TRUE VERTICAL WHEN THEY ARE PLACED IN THEIR FINAL POSITION.
2. END ZONE REINFORCEMENT MAY BE INCREASED BY FABRICATOR TO REFLECT FABRICATOR'S EXPERIENCE AND/OR TO CONTROL CRACKING.
3. USE A 1" DEEP RECESS AROUND LOCAL STRAND GROUPS WITH 2" MINIMUM EDGE CLEARANCE AND FILL WITH PNEUMATICALLY APPLIED MORTAR IMMEDIATELY AFTER CLIPPING THE STRANDS. AN APPROVED EPOXY MORTAR COVERING THE ENDS OF THE STRANDS WITH MINIMUM THICKNESS OF ⅞" MAY BE USED AS AN ALTERNATIVE.

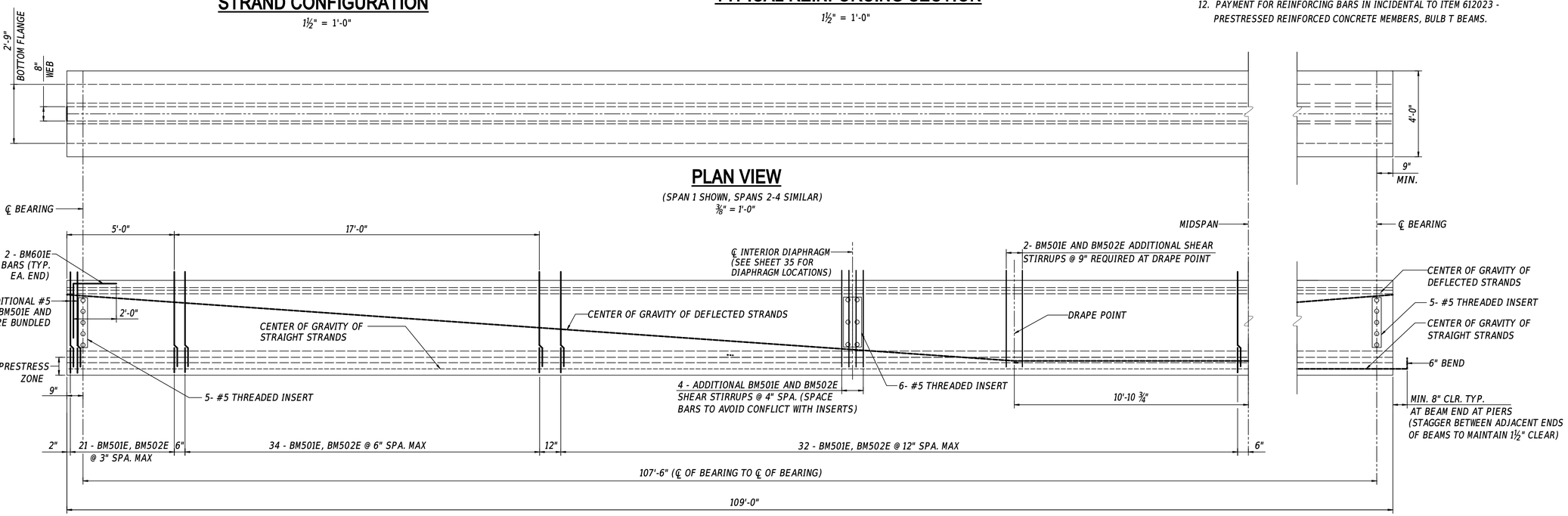
LEGEND

○ = 0.6" DIA., 270 ksi PRESTRESSING STRANDS

◙ = 0.6" DIA., 270 ksi PRESTRESSING STRANDS TO BE EXTENDED INTO THE PIER DIAPHRAGM.

BEAM PRESTRESS VALUES

1. Pj - JACKING PRESTRESSING FORCE = 1669.82 KIPS.
2. PRESTRESS FORCE AT TRANSFER = 1435.63 KIPS.
3. gm - DISTANCE FROM BOTTOM OF BEAM TO CENTER OF GRAVITY OF STRANDS AT MIDSPAN = 4.32".
4. ge - DISTANCE FROM BOTTOM OF BEAM TO CENTER OF GRAVITY OF STRANDS AT CENTERLINE OF BEARING = 14.82".
5. f'ci - COMPRESSIVE STRENGTH OF CONCRETE AT INITIAL RELEASE = 6.4 KSI.
6. f'c - COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS = 8.0 KSI.
7. USE ONLY 0.6" DIA. OVERSIZE, 270 KSI, LOW-RELAXATION PRESTRESSING STRANDS. STRAND DIAMETER = 0.60 INCH, STRAND AREA = 0.217 SQUARE INCHES.



PLAN VIEW

(SPAN 1 SHOWN, SPANS 2-4 SIMILAR)
⅜" = 1'-0"

BEAM ELEVATION

(SPAN 1 SHOWN, SPANS 2-4 SIMILAR)
⅜" = 1'-0"

PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\32-PRESTRESSED BEAM DETAI
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

SCALE AS NOTED

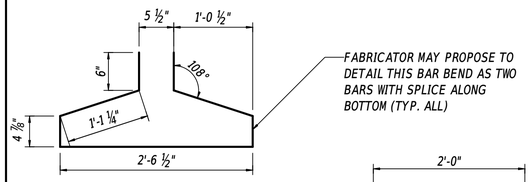
ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447		SECTION
T201907102	DESIGNED BY:	B.MARSHALL	PRESTRESSED BEAM DETAILS 1	PAI
COUNTY				SHEET NO.
NEW CASTLE	CHECKED BY:	H.BROWN		33

REINFORCING BAR LIST

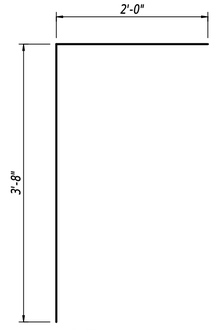
STRAIGHT BARS				BENT BARS			
MARK	SIZE	NUMBER	LENGTH	MARK	SIZE	NUMBER	LENGTH
BM401E	4	13	108'-8"	BM501E	5	188	6'-6¾"
BM402E	4	110	3'-8"	BM502E	5	188	9'- 9½"
DM501E	5	6	7'-8"	BM601E	6	4	5'-8"
DM502E	5	12	3'-6"	DM503E	5	9	5'-7"

BENDING DIAGRAMS



BM501

FABRICATOR MAY PROPOSE TO DETAIL THIS BAR BEND AS TWO BARS WITH SPLICE ALONG BOTTOM (TYP. ALL)



BM502

BM601

DM503

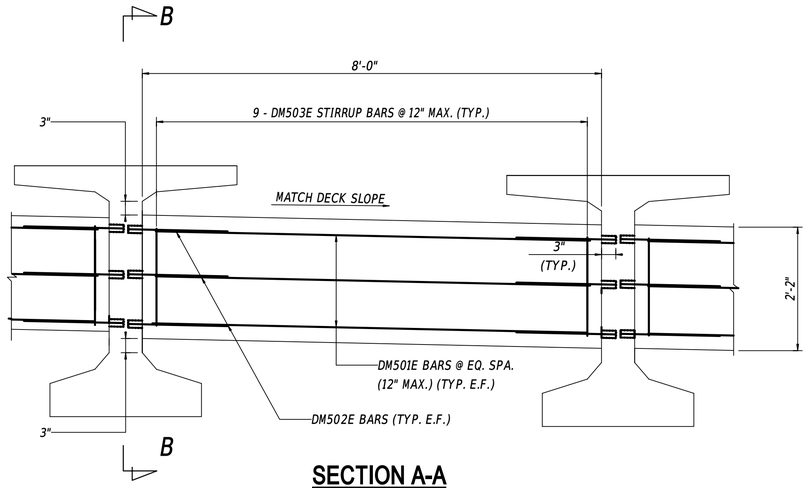
NOTE:

-ALL DIMENSIONS ARE FROM OUT TO OUT.

-REINFORCING BAR LIST COUNT IS PER BEAM AND PER DIAPHRAGM.

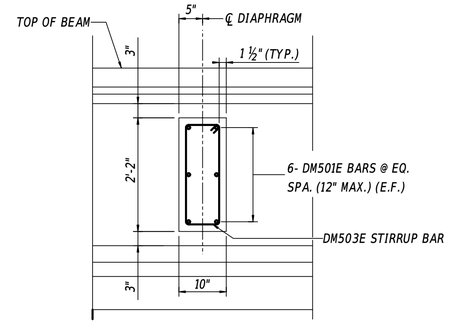
- ALL REINFORCEMENT FOR THE PCEF BEAM AND DIAPHRAGMS ARE INCIDENTAL TO ITEM 612023.

-ALL BARS ARE EPOXY COATED



SECTION A-A
INTERMEDIATE DIAPHRAGM ELEVATION

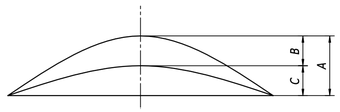
¾" = 1'-0"



SECTION B-B
INTERMEDIATE DIAPHRAGM SECTION

¾" = 1'-0"

CAMBER (INCHES)							
SPAN	A	B	C	SPAN	A	B	C
S1-G1	3.851	1.970	1.881	S3-G1	3.851	1.781	2.070
S1-G2	3.851	2.178	1.673	S3-G2	3.851	2.099	1.752
S1-G3	3.851	2.178	1.673	S3-G3	3.851	2.099	1.752
S1-G4	3.851	2.259	1.592	S3-G4	3.851	2.125	1.726
S1-G5	3.851	2.179	1.672	S3-G5	3.851	1.848	2.003
S2-G1	3.851	1.781	2.070	S4-G1	3.851	1.970	1.881
S2-G2	3.851	2.099	1.752	S4-G2	3.851	2.178	1.673
S2-G3	3.851	2.099	1.752	S4-G3	3.851	2.178	1.673
S2-G4	3.851	2.125	1.726	S4-G4	3.851	2.259	1.592
S2-G5	3.851	1.848	2.003	S4-G5	3.851	2.179	1.672



A= ESTIMATED PRESTRESS CAMBER LESS DEFLECTION DUE TO DEAD LOAD OF BEAM TIMES CREEP.
B= DEFLECTION DUE TO DEAD LOAD OF (SLAB OR OVERLAY) AND PARAPET.
C= A - B = NET CAMBER

CAMBER DIAGRAM

NOTES:

1. *PAYMENT FOR FURNISHING AND INSTALLING INTERMEDIATE DIAPHRAGM CONCRETE SHALL BE PAID FOR UNDER ITEM 610017 - PCC MASONRY SUPERSTRUCTURE, CLASS A.*
2. *FOR BEAM DETAILS, SEE SHEET 33.*
3. *FOR LOCATIONS OF SECTION A-A. SEE SHEET 35.*

PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\19-PRESTRESSED BEAM DETAI
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

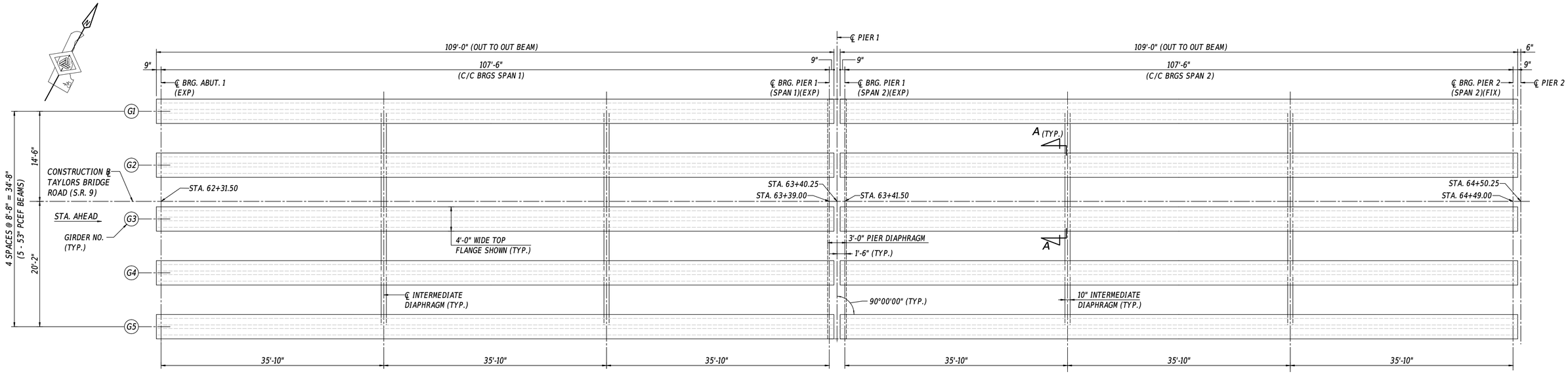
SCALE AS NOTED

ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

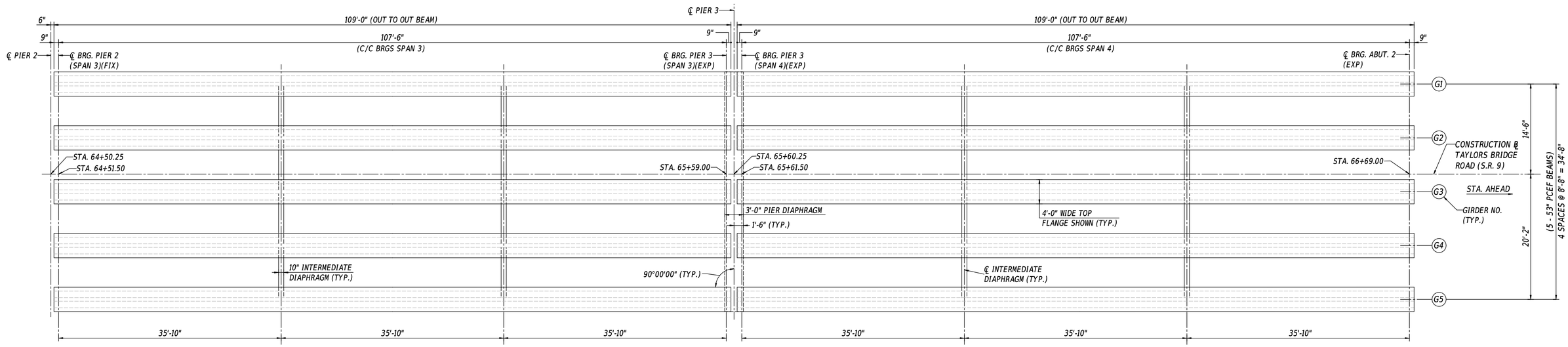
PRESTRESSED BEAM DETAILS 2

SECTION
PAI
SHEET NO.
34



FRAMING PLAN (SPANS 1-2)

1/8" = 1'-0"



FRAMING PLAN (SPANS 3-4)

1/8" = 1'-0"

REFERENCE:

1. FOR PROJECT NOTES, SEE SHEETS 5-6.
2. FOR SECTION A-A, SEE SHEET 34.

PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\6-FRAMING PLAN
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

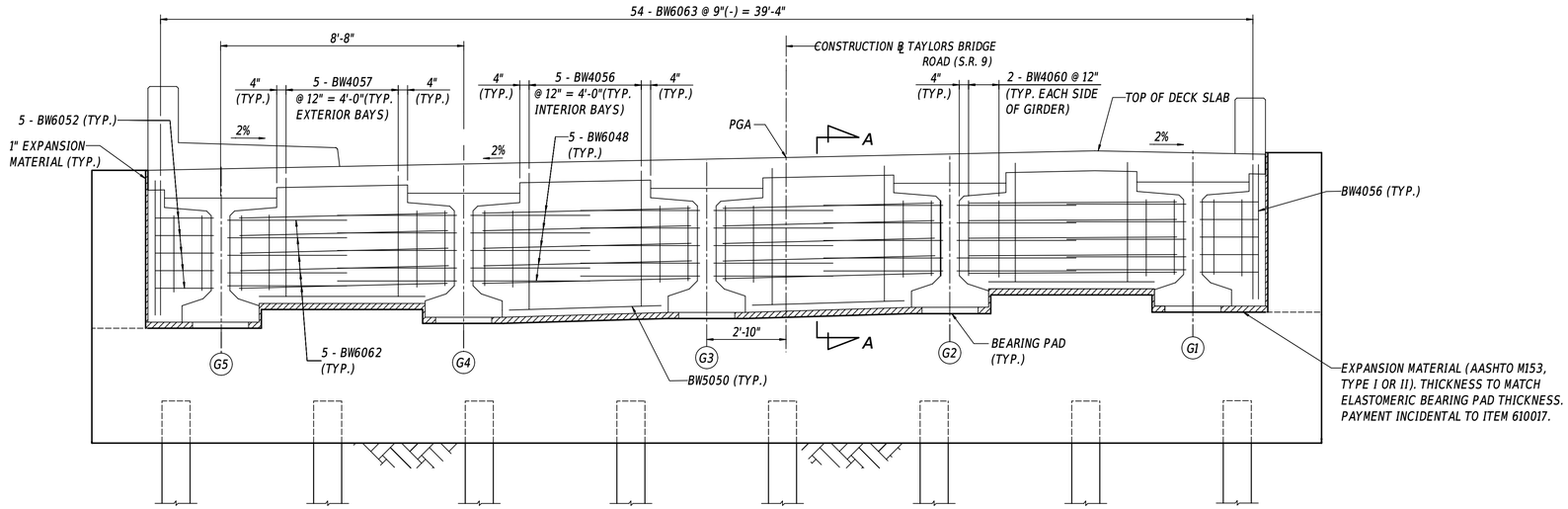
SCALE AS NOTED

ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

FRAMING PLAN

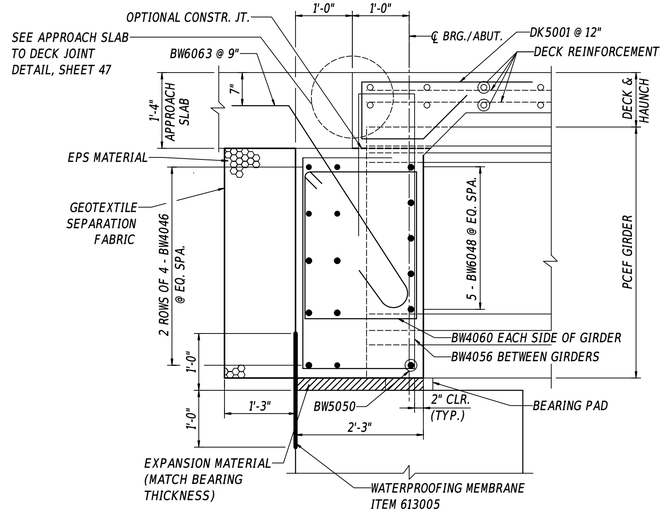
SECTION
PAI
SHEET NO.
35



NOTE: DECK AND ABUTMENT REINFORCEMENT NOT SHOWN FOR CLARITY.

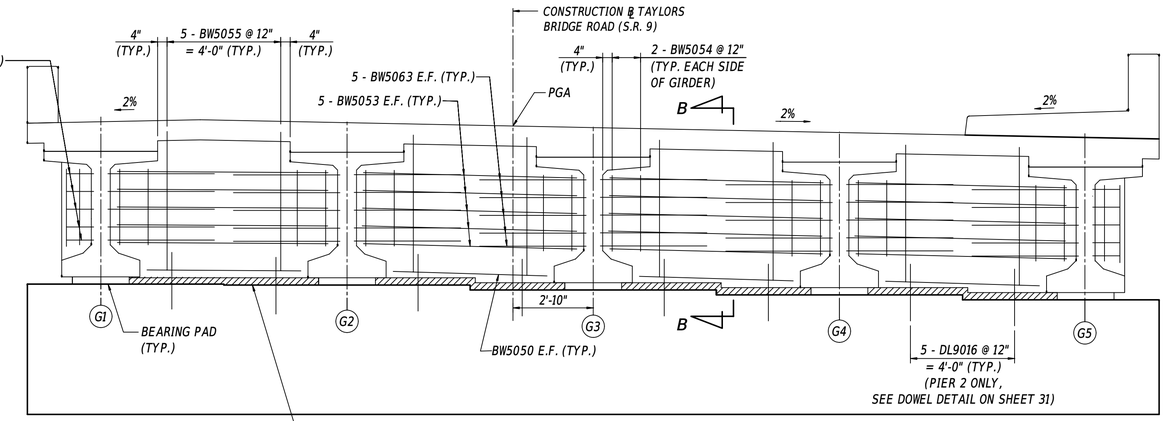
ABUTMENT 1 DIAPHRAGM

(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)
3/8" = 1'-0"



SECTION A-A

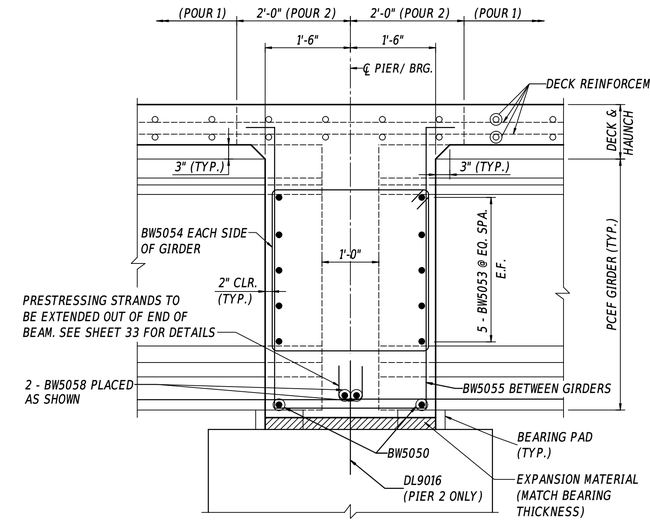
3/4" = 1'-0"



NOTE: DECK AND PIER REINFORCEMENT NOT SHOWN FOR CLARITY.

TYPICAL PIER DIAPHRAGM

3/8" = 1'-0"



SECTION B-B

3/4" = 1'-0"

REFERENCE:

1. FOR PROJECT NOTES, SEE SHEETS 5-6.
2. FOR ABUTMENT DETAILS, SEE SHEETS 26-27.
3. FOR PIER DETAILS, SEE SHEETS 28-31.
4. FOR BEAM DETAILS, SEE SHEET 33-34.

PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\50-DIAPHRAGM SECTIONS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall
OFFICE LOCATION:

ADDENDA / REVISIONS

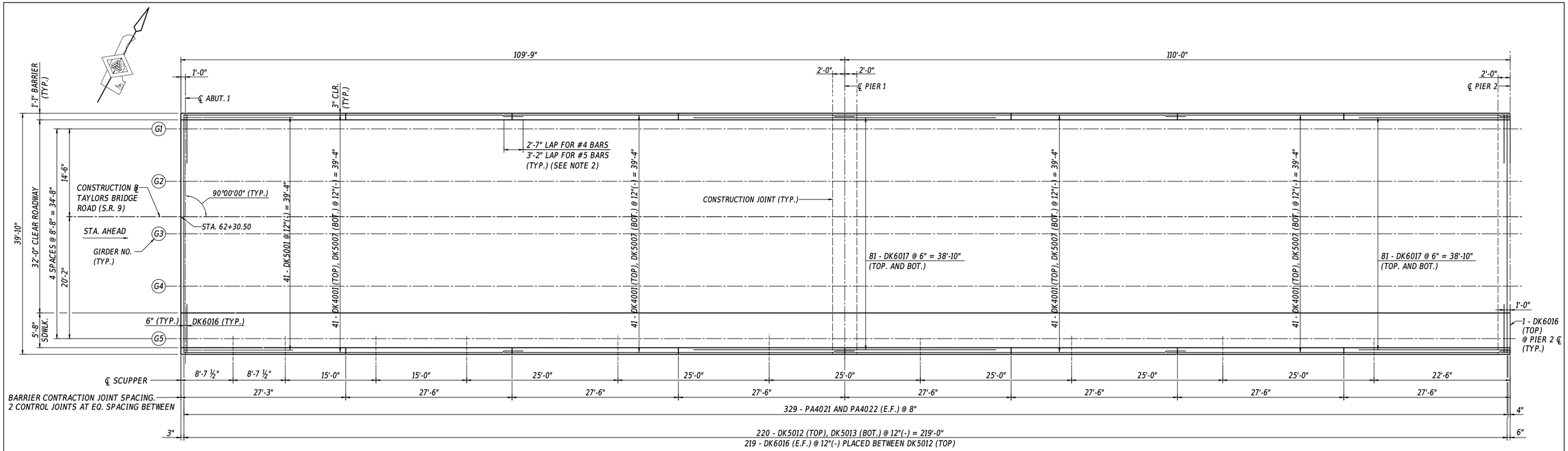
SCALE AS NOTED

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

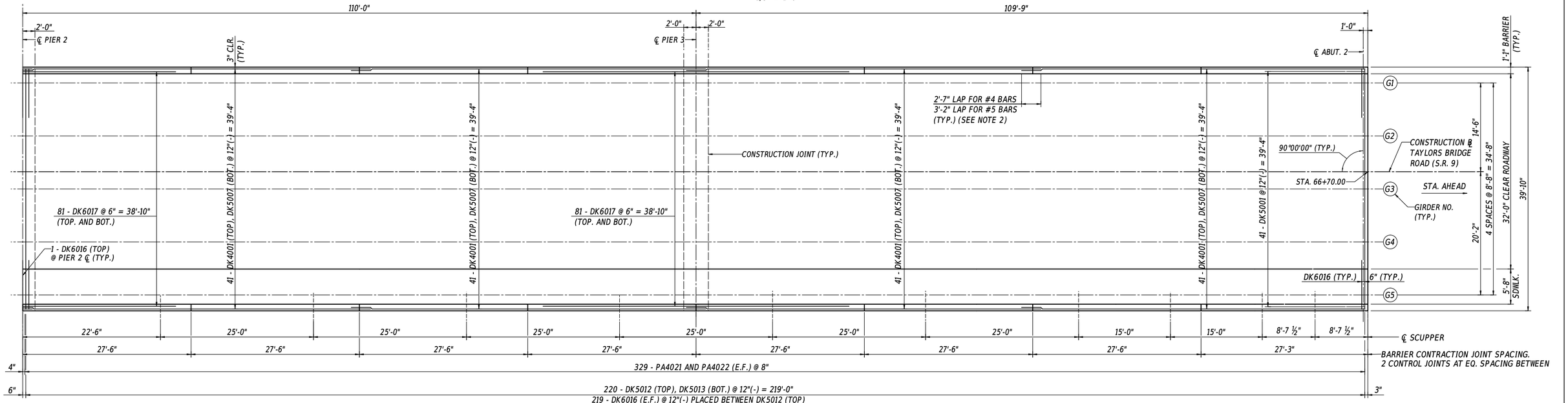
ABUTMENT AND PIER DIAPHRAGM DETAILS

SECTION
PAI
SHEET NO.
36



DECK PLAN (SPANS 1-2)

1/8" = 1'-0"



DECK PLAN (SPANS 3-4)

1/8" = 1'-0"

NOTES:

1. BARRIER REINFORCEMENT NOT SHOWN FOR CLARITY, SEE SHEETS 41 AND 42 FOR DETAILS.
2. STAGGER LAPS OF LONGITUDINAL BARS.

REFERENCE:

1. FOR PROJECT NOTES, SEE SHEETS 5-6.
2. FOR BEAM DETAILS, SEE SHEETS 33-34.
3. FOR FRAMING PLAN, SEE SHEET 35.
4. FOR TYPICAL REINFORCEMENT SECTIONS AND DECK POUR SEQUENCE, SEE SHEET 38.

PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\17-CONCRETE DECK PLAN
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

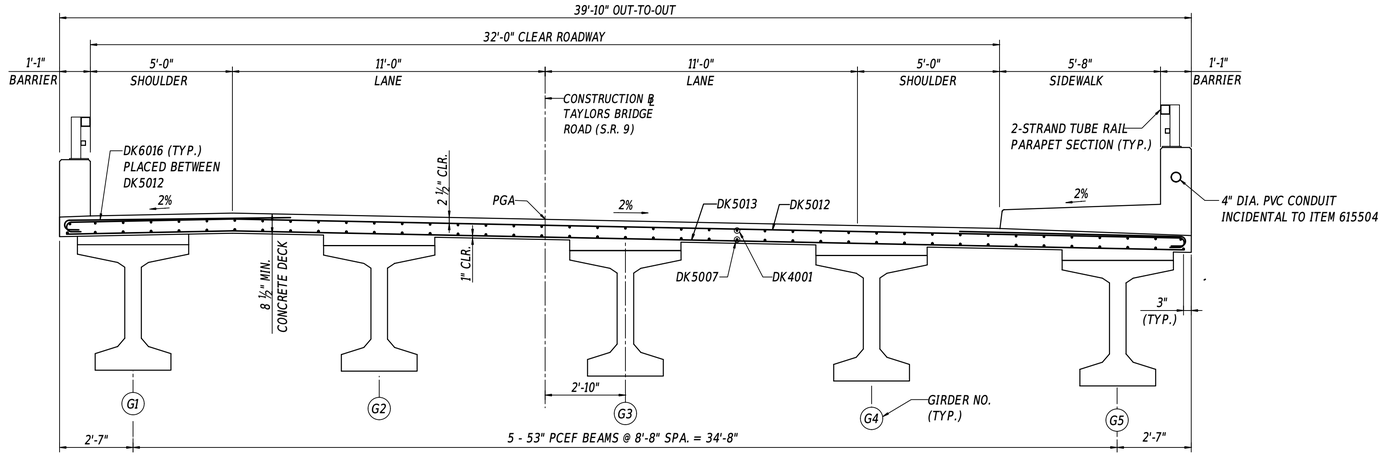
SCALE AS NOTED

ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

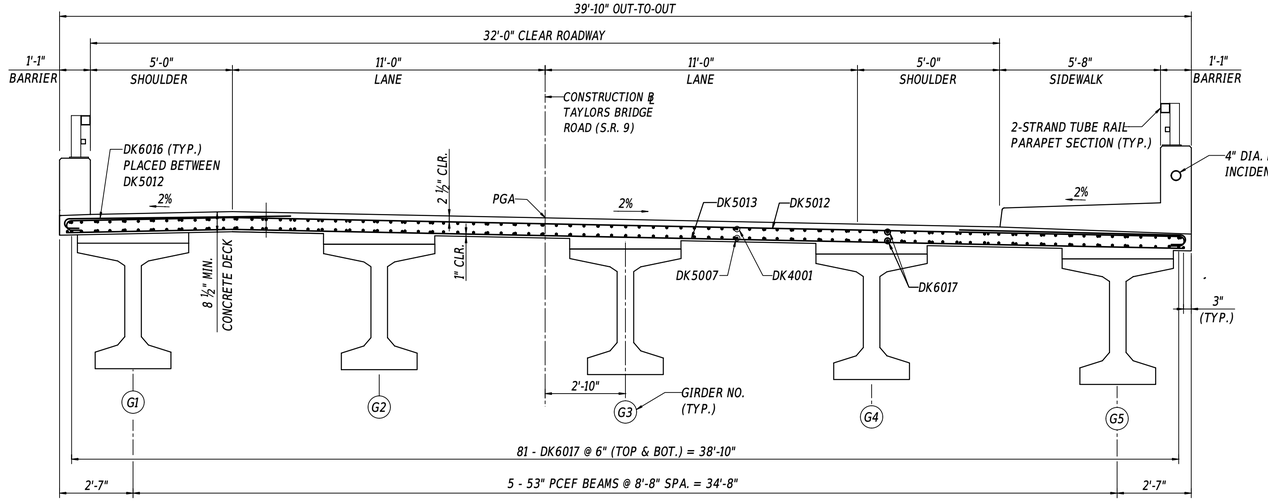
CONCRETE DECK PLAN

SECTION	
PAI	
SHEET NO.	
37	



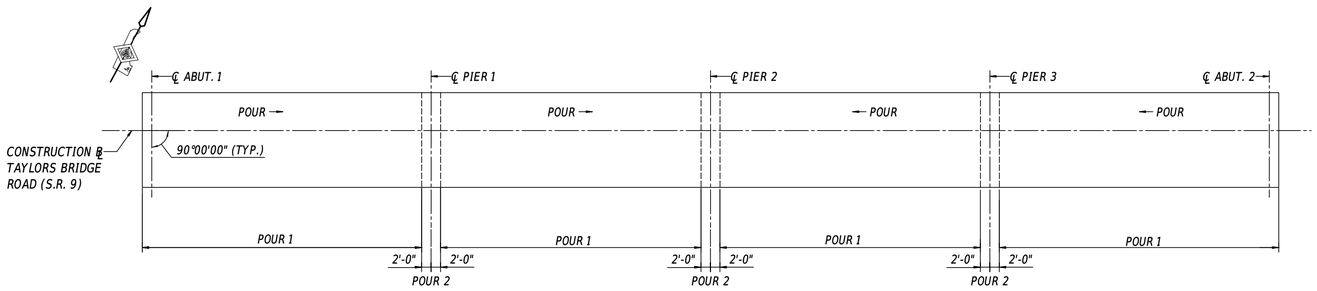
TYPICAL SECTION

(POSITIVE MOMENT REGIONS / MIDPSAN)
3/8" = 1'-0"



TYPICAL SECTION

(NEGATIVE MOMENT REGIONS / OVER PIERS)
3/8" = 1'-0"



DECK POURING SEQUENCE

NOT TO SCALE

NOTES:

1. BARRIER AND SIDEWALK REINFORCEMENT NOT SHOWN FOR CLARITY, SEE SHEETS 41 AND 42 FOR DETAILS.
2. POUR 1 MAY BE PLACED IN ANY ORDER OR SIMULTANEOUSLY. POURING OF ABUTMENT END DIAPHRAGMS MAY OCCUR PRIOR TO THE DECK POUR UP TO THE OPTIONAL CONSTRUCTION JOINT, OR CAN BE CAST ALONG WITH THE DECK AS A PART OF POUR 1.
3. POUR 2 SHALL BE PLACED AFTER ADJACENT POUR 1 IS COMPLETE.
4. CLOSURE DIAPHRAGM AND PORTION OF DECK SLAB ABOVE SHALL BE CAST TOGETHER WITHOUT A CONSTRUCTION JOINT. FOR CLOSURE DIAPHRAGM DETAILS, SEE SHEET 36.
5. ALL REINFORCEMENT SHALL BE EPOXY COATED.

REFERENCE:

1. FOR PROJECT NOTES, SEE SHEETS 5-6.
2. FOR FRAMING PLAN, SEE SHEET 35.
3. FOR DECK SLAB PLAN, SEE SHEET 37.

PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\18-CONCRETE DECK SECTIONS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

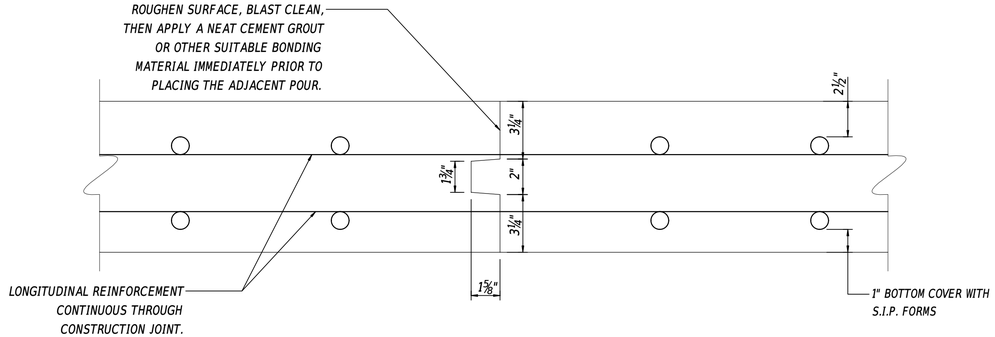
SCALE AS NOTED

ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

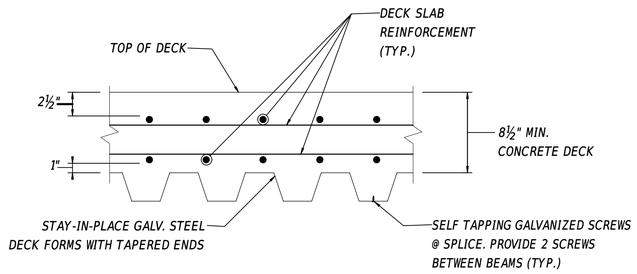
CONCRETE DECK SECTIONS

SECTION	PAI
SHEET NO.	38



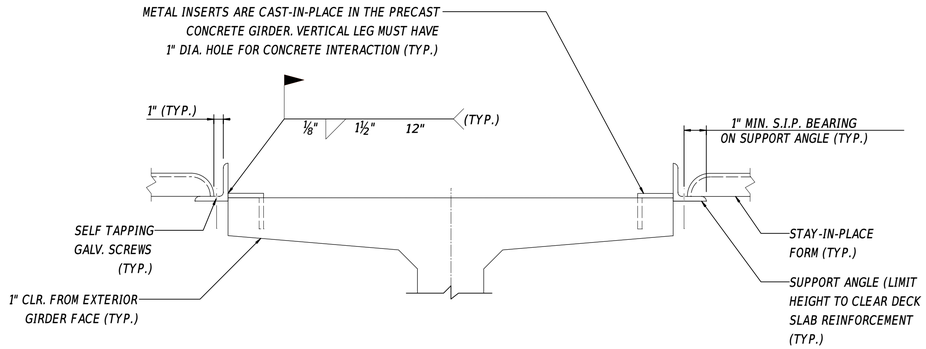
DECK SLAB CONSTRUCTION JOINT

(NOT TO SCALE)



STAY-IN-PLACE STEEL FORM DETAIL

(NOT TO SCALE)



FLANGE STAY-IN-PLACE FORM CONNECTION DETAIL

(NOT TO SCALE)

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.

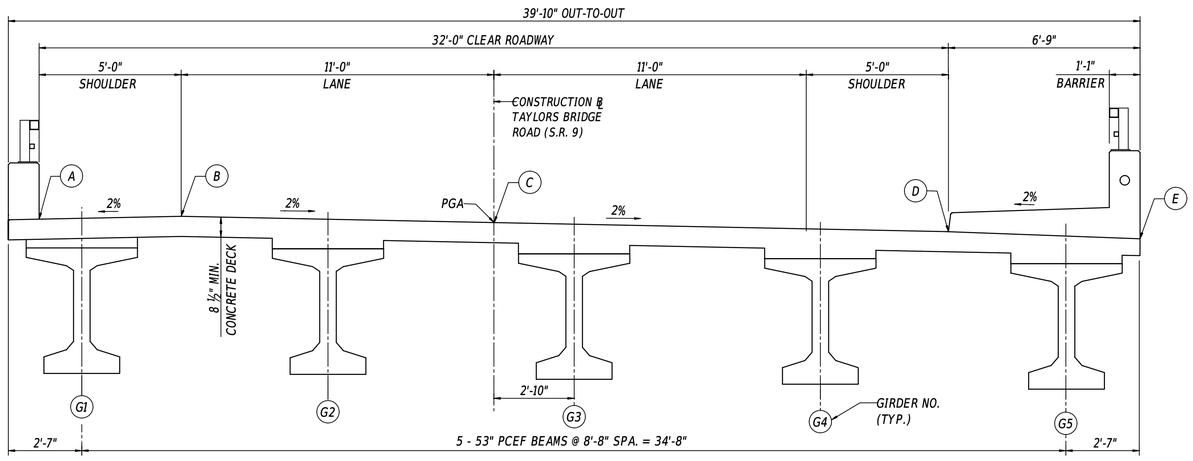
PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\04-CONCRETE DECK DETAILS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall
OFFICE LOCATION:

Pennoni

ADDENDA / REVISIONS	SCALE AS NOTED	ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT	CONTRACT T201907102	BRIDGE NO. 1-447	CONCRETE DECK DETAILS	SECTION PAI
			COUNTY NEW CASTLE	DESIGNED BY: B.MARSHALL		SHEET NO. 39
				CHECKED BY: H.BROWN		

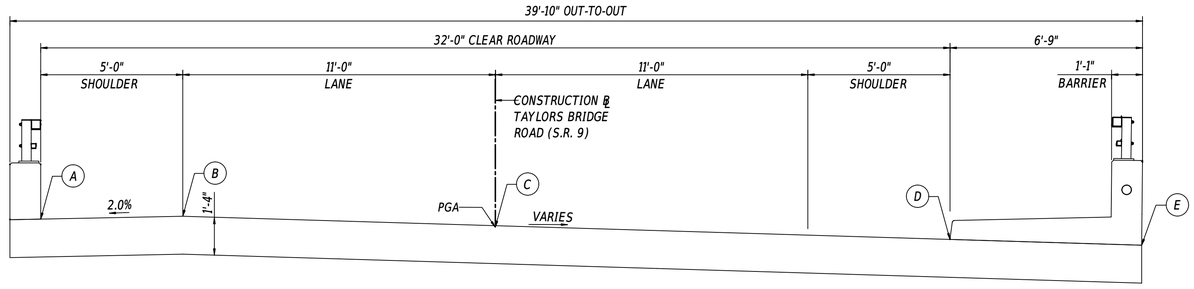
	South Approach Slab			Span 1											Span 2											
Location	Begin Appr.	Mid.	End Appr. Begin Deck	CL. Brg. CL. Abut 1	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL. Brg.	CL. Pier 1	CL. Brg.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL Brg.	CL. Pier 2
(A) Left Edge of Barrier	17.46	17.55	17.65	17.66	17.79	17.93	18.06	18.19	18.30	18.41	18.51	18.60	18.69	18.76	18.76	18.77	18.84	18.89	18.95	18.99	19.03	19.06	19.08	19.09	19.09	19.09	19.09
Girder G1	-	-	-	17.69	17.82	17.96	18.09	18.22	18.33	18.44	18.54	18.63	18.72	18.79	-	18.80	18.87	18.92	18.98	19.02	19.06	19.09	19.11	19.12	19.12	19.12	-
(B) Roadway Crown	17.56	17.65	17.75	17.76	17.89	18.03	18.16	18.29	18.40	18.51	18.61	18.70	18.79	18.86	18.86	18.87	18.94	18.99	19.05	19.09	19.13	19.16	19.18	19.19	19.19	19.19	19.19
Girder G2	-	-	-	17.66	17.79	17.93	18.06	18.19	18.30	18.41	18.51	18.60	18.69	18.76	-	18.77	18.83	18.89	18.95	18.99	19.03	19.05	19.07	19.09	19.09	19.09	-
(C) PGA	17.21	17.37	17.53	17.54	17.67	17.81	17.95	18.07	18.19	18.30	18.40	18.49	18.57	18.64	18.65	18.66	18.65	18.72	18.78	18.83	18.88	18.91	18.94	18.96	18.98	18.97	18.97
Girder G3	-	-	-	17.49	17.62	17.76	17.89	18.01	18.13	18.24	18.34	18.43	18.52	18.58	-	18.60	18.66	18.72	18.77	18.82	18.85	18.88	18.90	18.91	18.92	18.92	-
Girder G4	-	-	-	17.31	17.44	17.58	17.71	17.84	17.95	18.06	18.16	18.25	18.34	18.41	-	18.42	18.49	18.54	18.60	18.64	18.68	18.71	18.73	18.74	18.74	18.74	-
(D) Right Edge of Sidewalk	16.69	16.95	17.21	17.22	17.35	17.49	17.62	17.75	17.86	17.97	18.07	18.16	18.25	18.32	18.32	18.33	18.40	18.45	18.51	18.55	18.59	18.62	18.64	18.65	18.65	18.65	18.65
Girder G5	-	-	-	17.14	17.27	17.41	17.54	17.67	17.78	17.89	17.99	18.08	18.17	18.23	-	18.25	18.31	18.37	18.43	18.47	18.50	18.53	18.55	18.57	18.57	18.57	-
(E) Right Edge of Deck	16.56	16.82	17.09	17.09	17.22	17.36	17.49	17.62	17.73	17.84	17.94	18.03	18.12	18.19	-	18.20	18.19	18.26	18.32	18.38	18.42	18.46	18.48	18.50	18.52	18.52	-

	Span 3												Span 4										North Approach Slab		
Location	CL. Pier 2	CL. Brg.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL. Brg.	CL. Pier 3	CL. Brg.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL. Brg. CL. Abut 2	End Deck Begin Appr.	Mid.	End Appr. Slab
(A) Left Edge of Barrier	19.09	19.09	19.08	19.06	19.03	18.99	18.95	18.89	18.84	18.76	18.69	18.61	18.60	18.59	18.51	18.41	18.30	18.19	18.06	17.93	17.79	17.64	17.49	17.34	17.33	17.15	16.97
Girder G1	-	19.12	19.11	19.09	19.06	19.02	18.98	18.92	18.87	18.79	18.72	18.64	-	18.62	18.54	18.44	18.33	18.22	18.09	17.96	17.82	17.67	17.52	17.37	-	-	-
(B) Roadway Crown	19.19	19.19	19.18	19.16	19.13	19.09	19.05	18.99	18.94	18.86	18.79	18.71	18.70	18.69	18.61	18.51	18.40	18.29	18.16	18.03	17.89	17.74	17.59	17.44	17.43	17.25	17.07
Girder G2	-	19.09	19.08	19.06	19.03	18.99	18.94	18.89	18.83	18.76	18.69	18.61	-	18.59	18.51	18.41	18.30	18.18	18.06	17.93	17.78	17.64	17.48	17.34	-	-	-
(C) PGA	18.97	18.97	18.96	18.94	18.91	18.87	18.83	18.78	18.72	18.65	18.57	18.50	18.49	18.48	18.39	18.29	18.19	18.07	17.94	17.81	17.67	17.52	17.37	17.22	17.21	17.03	16.85
Girder G3	-	18.91	18.90	18.88	18.85	18.82	18.77	18.72	18.66	18.59	18.52	18.44	-	18.42	18.34	18.24	18.13	18.01	17.89	17.75	17.61	17.46	17.31	17.17	-	-	-
Girder G4	-	18.74	18.73	18.71	18.68	18.64	18.60	18.54	18.49	18.41	18.34	18.26	-	18.24	18.16	18.06	17.95	17.84	17.71	17.58	17.44	17.29	17.14	16.99	-	-	-
(D) Right Edge of Sidewalk	18.65	18.65	18.64	18.62	18.59	18.55	18.51	18.45	18.40	18.32	18.25	18.17	18.16	18.15	18.07	17.97	17.86	17.75	17.62	17.49	17.35	17.20	17.05	16.90	16.89	16.71	16.53
Girder G5	-	18.57	18.55	18.54	18.50	18.47	18.42	18.37	18.31	18.24	18.17	18.09	-	18.07	17.99	17.89	17.78	17.66	17.54	17.41	17.26	17.12	16.96	16.82	-	-	-
(E) Right Edge of Deck	-	18.52	18.50	18.48	18.46	18.42	18.38	18.32	18.26	18.19	18.12	18.04	-	18.02	17.94	17.84	17.73	17.61	17.49	17.36	17.22	17.07	16.91	16.77	16.75	16.57	16.40



TYPICAL BRIDGE DECK SECTION

3/8" = 1'-0"



TYPICAL APPROACH SLAB SECTION

3/8" = 1'-0"

REFERENCE:

1. FOR PROJECT NOTES, SEE SHEETS 5-6.
2. FOR FRAMING PLAN, SEE SHEET 35.

PENNONI ASSOCIATES INC.
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\43-FINISHED DECK ELEVATIO
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 14:18
USER NAME: BMarshall

ADDENDA / REVISIONS

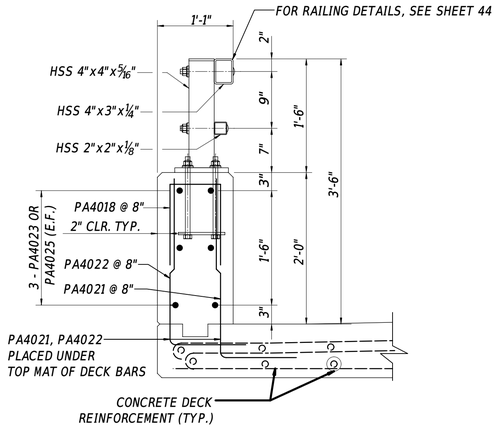
SCALE AS NOTED

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

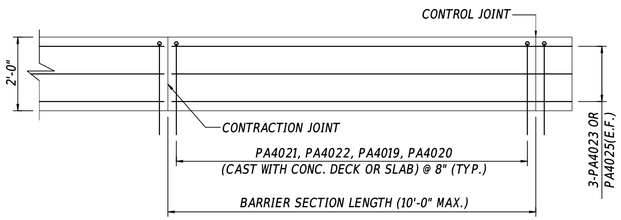
FINISHED DECK ELEVATIONS

SECTION
PAI
SHEET NO.
40



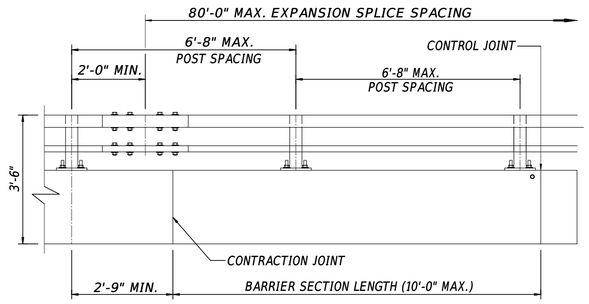
2 STRAND TUBE RAIL PARAPET SECTION ON BRIDGE

1" = 1'-0"



TYPICAL BRIDGE AND APPROACH BARRIER

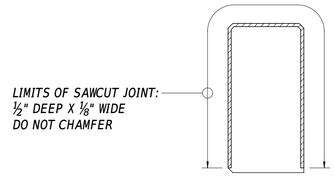
(NOT TO SCALE)



NOTE: PLACE EXPANSION RAILING SPLICES AT PIERS AND BRIDGE EXPANSION JOINTS.
CONTRACTOR WILL COORDINATE/SUBMIT APPROACH FOR POST SPACING TO DELDOT FOR APPROVAL.

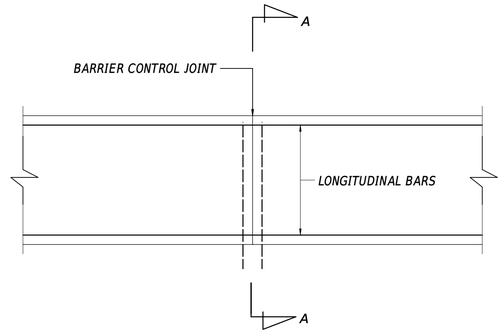
TYPICAL RAILING POST SPACING

(NOT TO SCALE)



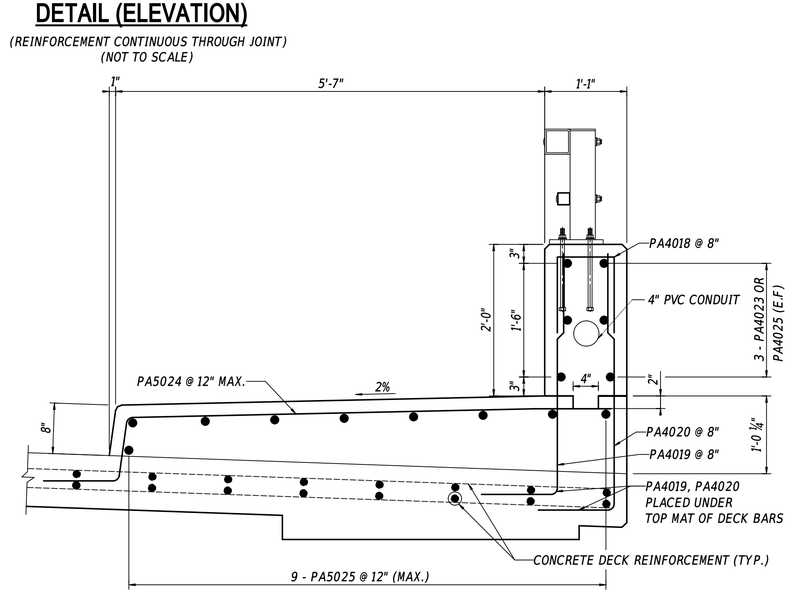
SECTION A-A TYPICAL BARRIER SECTION

(REINFORCEMENT NOT SHOWN FOR CLARITY)
(NOT TO SCALE)



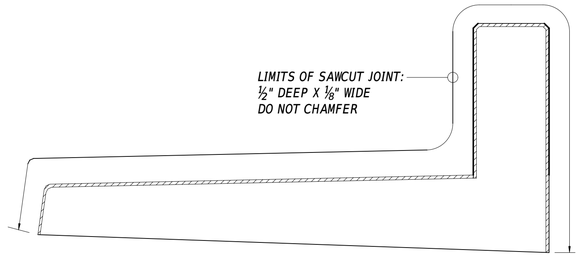
BARRIER CONTROL JOINT DETAIL (ELEVATION)

(REINFORCEMENT CONTINUOUS THROUGH JOINT)
(NOT TO SCALE)



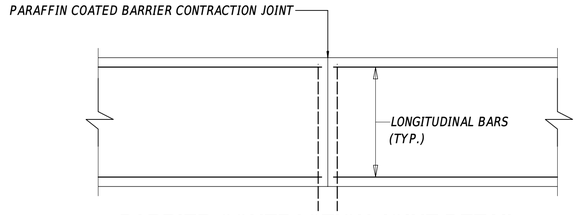
TYPICAL SIDEWALK SECTION

1" = 1'-0"



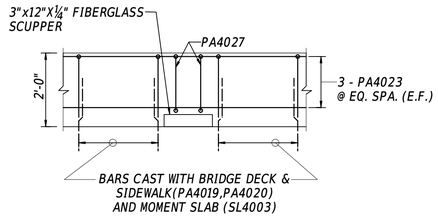
SECTION A-A TYPICAL BARRIER AND SIDEWALK SECTION

(REINFORCEMENT NOT SHOWN FOR CLARITY)
(NOT TO SCALE)



BARRIER CONTRACTION JOINT DETAIL

(REINFORCEMENT NOT CONTINUOUS THROUGH JOINT)
(NOT TO SCALE)



NOTE: BRIDGE BARRIER SHOWN, APPROACH BARRIER SIMILAR. RAILING NOT SHOWN FOR CLARITY

TYPICAL BARRIER WITH SCUPPER

(NOT TO SCALE)

NOTES:

1. MATCH JOINTS IN SIDEWALK WITH JOINTS IN BARRIER.
2. BARRIER REFLECTORS SHALL BE INSTALLED ALONG EACH PARAPET, INCIDENTAL TO ITEM 610008.
3. FOR APPROACH SLAB REINFORCEMENT DETAILS, SEE SHEET 47.
4. FOR SLEEPER SLAB REINFORCEMENT DETAILS, SEE SHEET 48.
5. FOR MOMENT SLAB REINFORCEMENT DETAILS, SEE SHEET 49.

PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\26-SIDEWALK AND PARAPET D
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

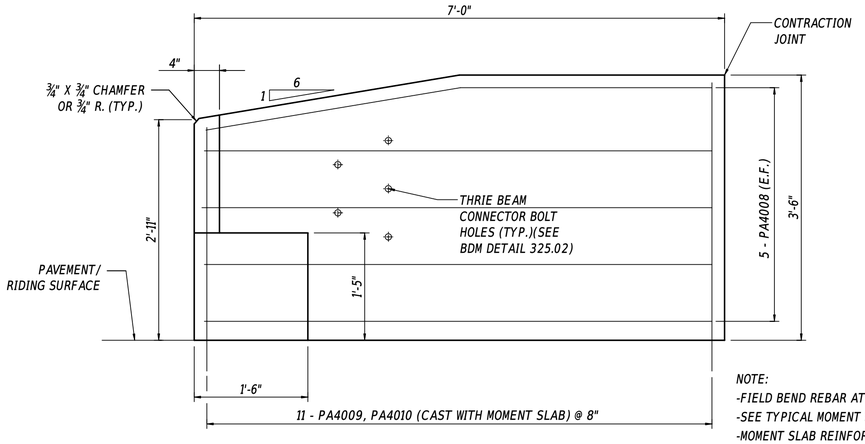
SCALE AS NOTED

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

SIDEWALK AND PARAPET DETAILS

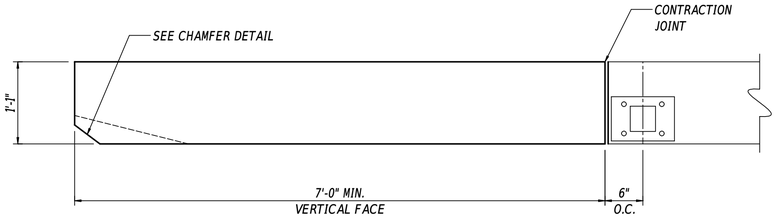
SECTION	
	PAI
SHEET NO.	
	41



NOTE:
-FIELD BEND REBAR AT CHAMFER
-SEE TYPICAL MOMENT SLAB DETAIL ON SHEET 49
-MOMENT SLAB REINFORCEMENT NOT SHOWN FOR CLARITY

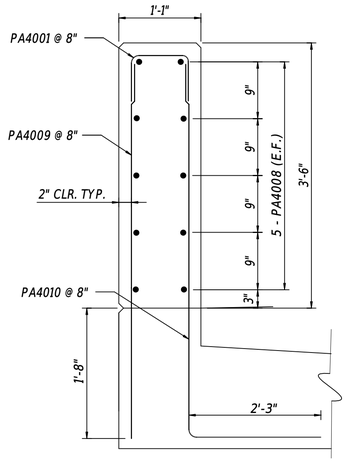
VERTICAL FACE BARRIER END POST ELEVATION

1" = 1'-0"



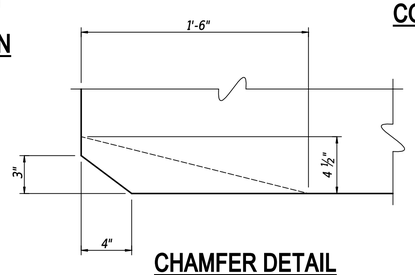
2 STRAND TUBE RAIL BARRIER END POST PLAN

1" = 1'-0"



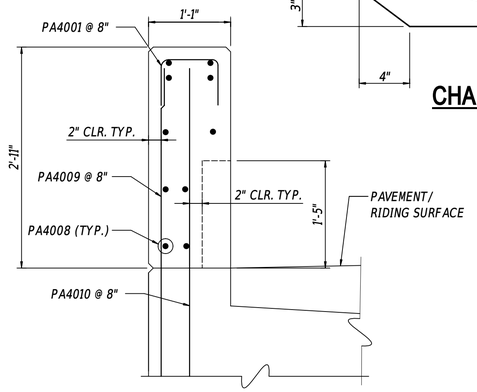
2 STRAND TUBE RAIL BARRIER END POST SECTION

1" = 1'-0"



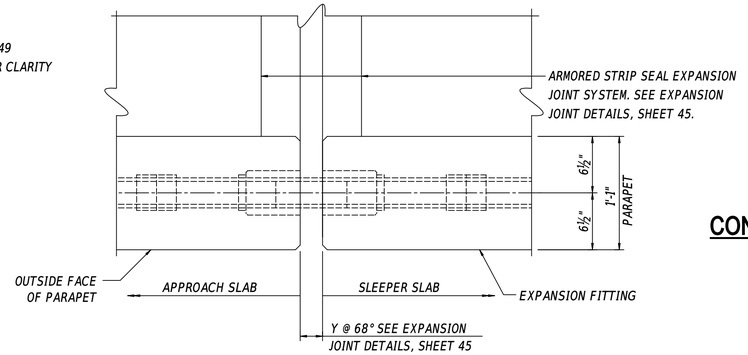
CHAMFER DETAIL

NOT TO SCALE



VERTICAL REINFORCING DETAIL IN CHAMFER

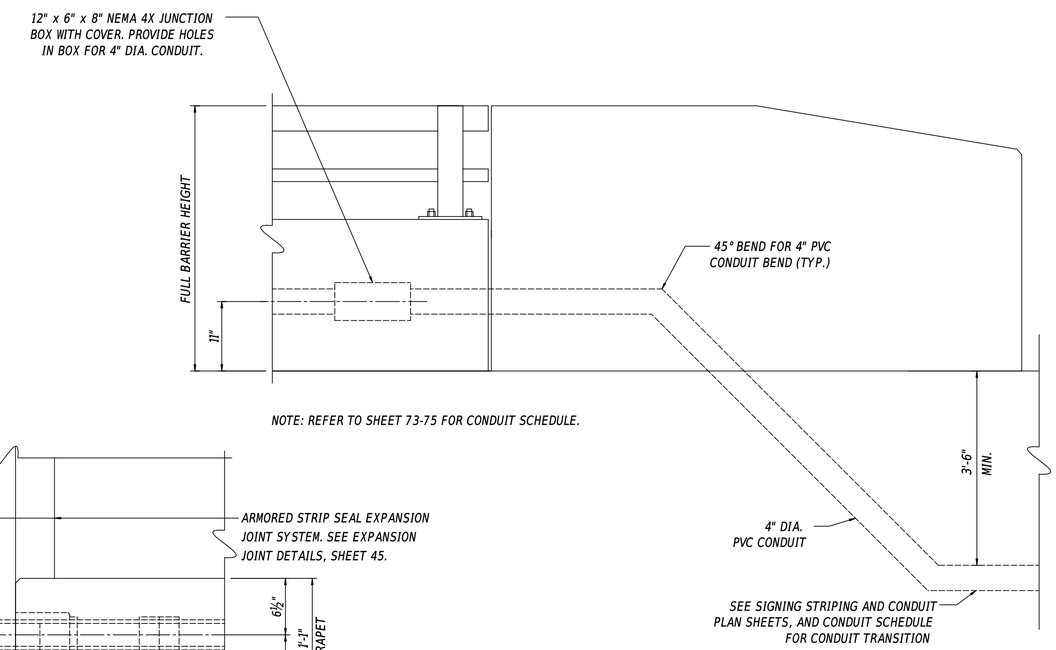
1" = 1'-0"



NOTE: EXPANSION FITTINGS FOR USE WITH RIGID PVC CONDUIT SHALL CONSIST OF SCHEDULE 80 PVC AND SHALL WRAP WITH SPONGE RUBBER ¼" THICK NOMINAL.

CONDUIT EXPANSION JOINT DETAIL

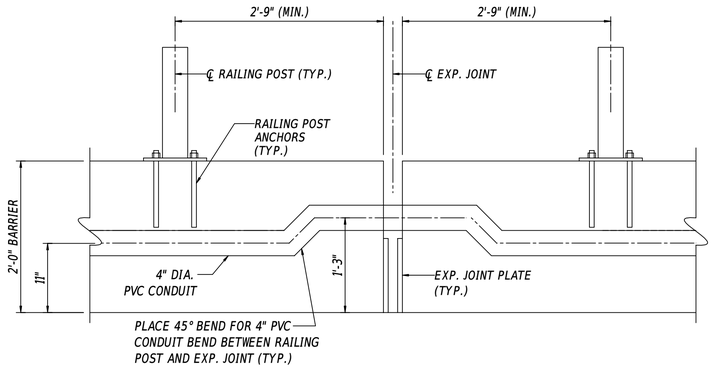
NOT TO SCALE



NOTE: REFER TO SHEET 73-75 FOR CONDUIT SCHEDULE.

CONDUIT TRANSITION FROM PARAPET

1" = 1'-0"



CONDUIT TRANSITION AT EXPANSION JOINTS

NOT TO SCALE

CONDUIT NOTES:

1. LIGHTING CONDUITS RUN ALONG SOUTH PARAPET ONLY.
2. CONDUIT SHALL BE SCHEDULE 80 PVC IN ACCORDANCE WITH DELDOT SPECIFICATION SECTION 831 AND 1062.
3. ALL REINFORCING SHALL BE CONTINUOUS AT JUNCTION BOX. ADJUST PARAPET REINFORCING AS REQUIRED TO CLEAR JUNCTION BOX.
4. USE 45° CONDUIT BENDS FOR ALL CHANGES IN CONDUIT DIRECTION.
5. PLACE EXPANSION JOINT IN PIPE CONDUIT AND PARAPET AT OPEN JOINT IN THE EAST PARAPET. CERTIFY THAT EXPANSION FITTINGS USED AT THE GIVEN LOCATIO ARE RATED TO ACCOMMODATE THE ANTICIPATED MOVEMENT SPECIFIED IN THE EXPANSION JOINT DETAILS ON SHEET 45 AND 46.
6. #10 GALVANIZED PULL WIRE TO BE PROVIDED FOR FULL LENGTH OF CONDUIT AND LEFT IN PLACE.
7. ALL PIPE AND EXPANSION JOINTS MUST BE U.L. APPROVED FOR ENCASEMENT IN CONCRETE.
8. FITTINGS TO BE SCHEDULE 80 PVC.
9. ALL CONDUITS, BENDS, NEMA BOXES, BOX DRAINS, FITTINGS, EXPANSION FITTINGS, AND ANY OTHER INCIDENTALS USED TO INSTALL THE ITMS CONDUIT SYSTEM IN THE PARAPET, WILL BE PAID UNDER ITEM #615504 - BRIDGE ELECTRICAL SYSTEM

PENNONI ASSOCIATES INC.
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\27-PARAPET DETAILS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

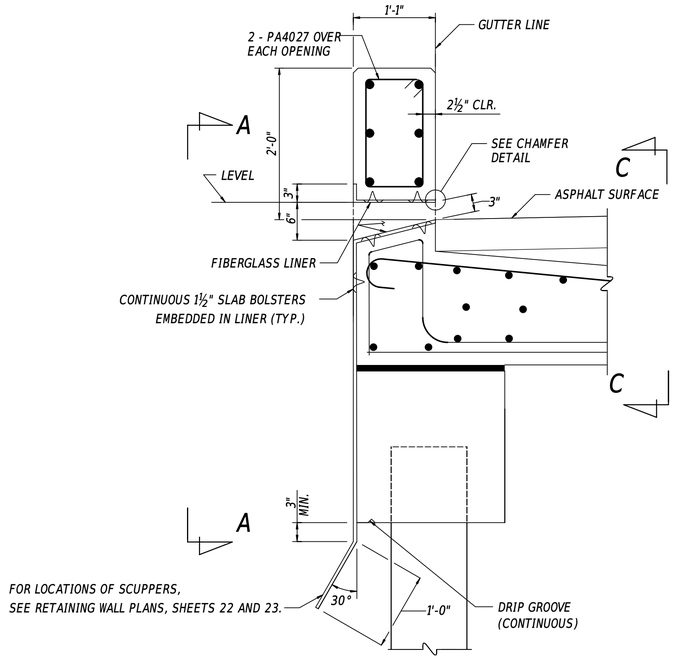
ADDENDA / REVISIONS

SCALE AS NOTED

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

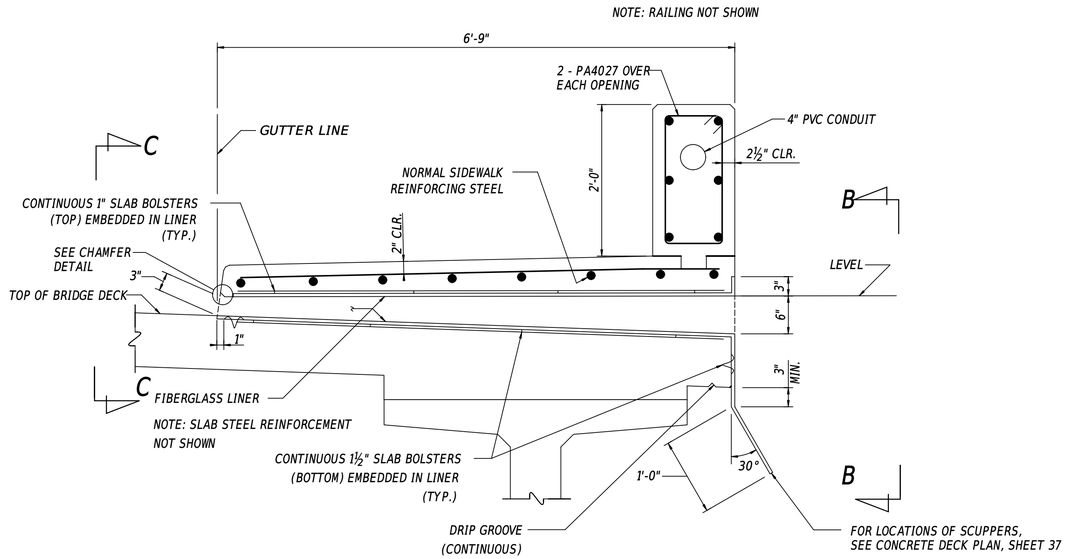
CONTRACT	BRIDGE NO.	1-447	SECTION
T201907102	DESIGNED BY:	B.MARSHALL	PAI
COUNTY	CHECKED BY:	H.BROWN	SHEET NO.
NEW CASTLE			42

PARAPET DETAILS



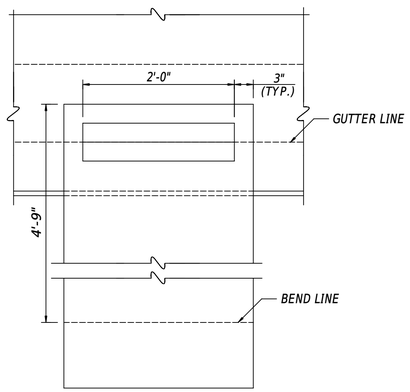
SCUPPER DETAIL - APPROACH BARRIER

1" = 1'-0"



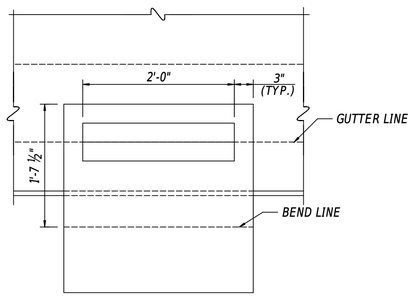
SCUPPER DETAIL - SIDEWALK

1" = 1'-0"



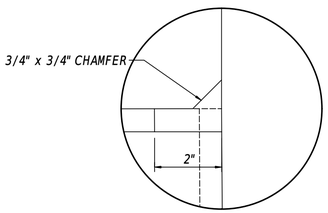
SECTION A-A

1" = 1'-0"

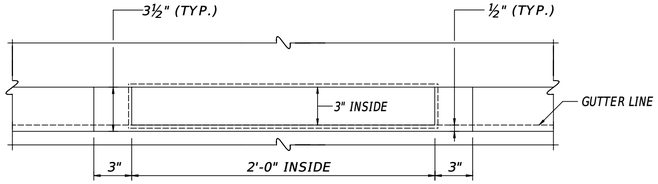


SECTION B-B

1" = 1'-0"



CHAMFER DETAIL



SECTION C-C

½" = 1'-0"

SCUPPER NOTES

1. SCUPPER LINERS SHALL BE FABRICATED OUT OF PREFORMED FIBERGLASS WITH A MINIMUM THICKNESS OF 3/16, BE FEDERAL STD. COLOR: 26622, AND HAVE THE FOLLOWING PROPERTIES:
   - DENSITY: 1.25 g/cm (ASTM D792)
   - ABSORPTION: 1% (ASTM D570)
   - TENSILE STRENGTH: 10,000 PSI (ASTM D638)
2. THE CONTRACTOR MAY ELECT TO SUBSITITE THE FIBERGLASS SCUPPERS WITH GALVANIZED STEEL SCUPPERS AT NO ADDITIONAL COST TO THE DEPARTMENT.
   a. ALL STRUCTURAL STEEL SHALL CONFORM TO DELDOT STANDARD SPECIFICATION 1039.01 - STRUCTURAL STEEL, GRADE 36.
   b. ALL STEEL COATING SHALL CONFORM TO DELDOT STANDARD SPECIFICATION 1039.10 - GALVANIZING.

PENNONI ASSOCIATES INC.
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\30-SCUPPER DETAILS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall
OFFICE LOCATION:

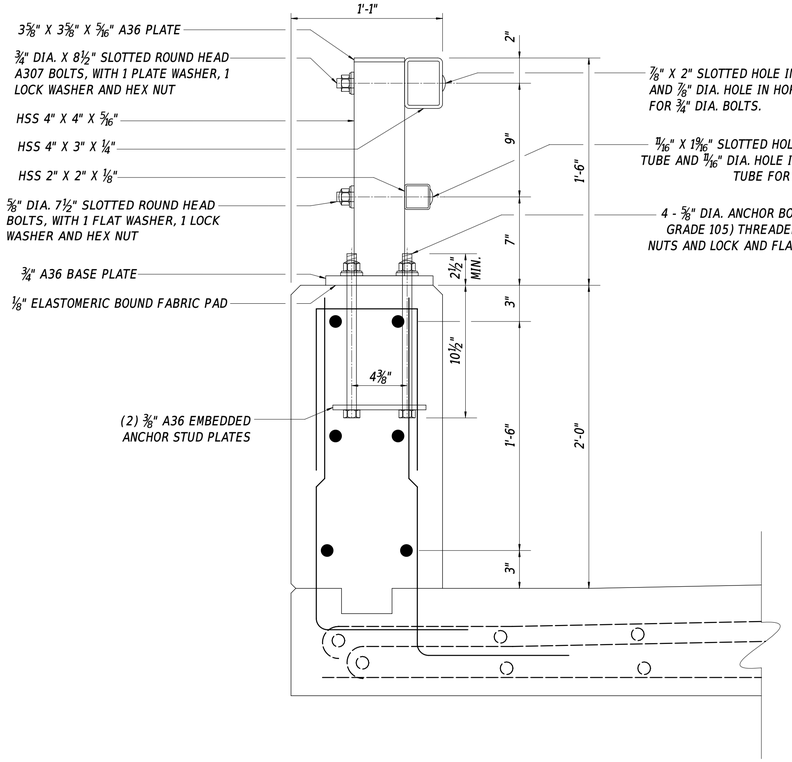
ADDENDA / REVISIONS

SCALE AS NOTED

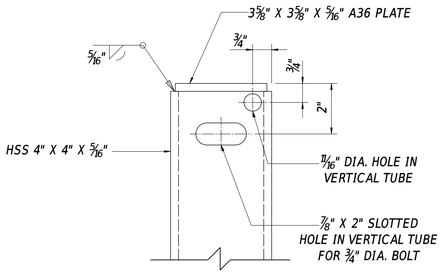
ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447	SECTION
T201907102	DESIGNED BY:	B.MARSHALL	PAI
COUNTY			SHEET NO.
NEW CASTLE	CHECKED BY:	H.BROWN	43

SCUPPER DETAILS



2 STRAND TUBE RAIL PARAPET SECTION



VERTICAL TUBE DETAIL

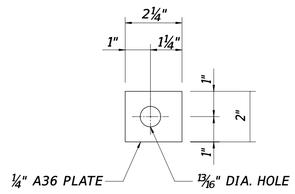
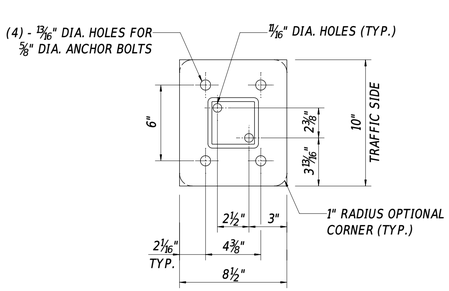
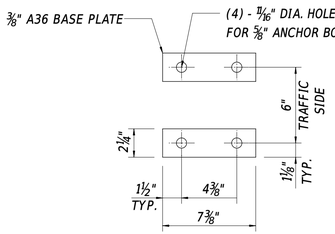


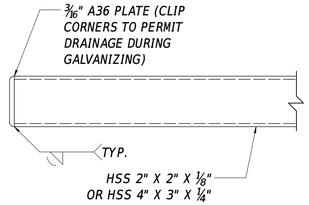
PLATE WASHER DETAIL



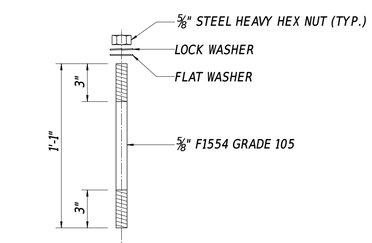
BASE PLATE DETAIL



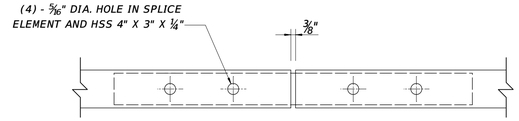
EMBEDDED ANCHOR STUD DETAIL



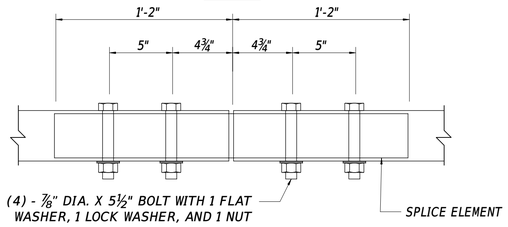
END OF RAIL



ANCHOR BOLT DETAIL



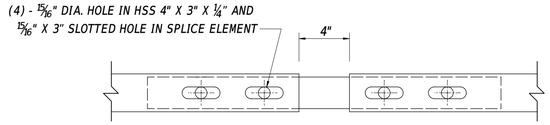
PLAN



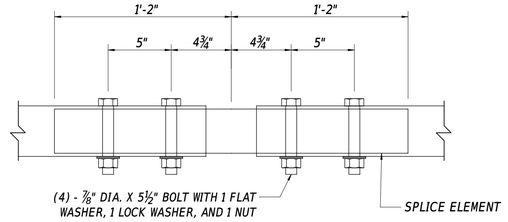
SECTION

FIXED JOINT SPLICE PLAN AND SECTION

HSS 4" X 3" X ¼"



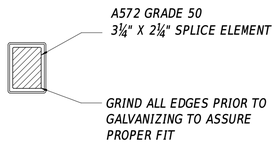
PLAN



SECTION

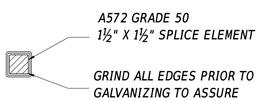
EXPANSION JOINT SPLICE PLAN AND SECTION

HSS 4" X 3" X ¼"



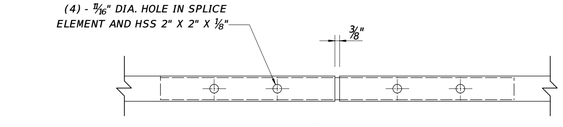
SPLICE ELEMENT

HSS 4" X 3" X ¼"

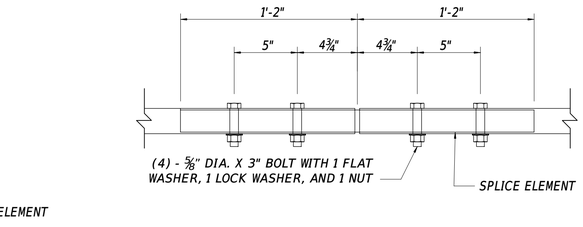


SPLICE ELEMENT

HSS 2" X 2" X ¼"



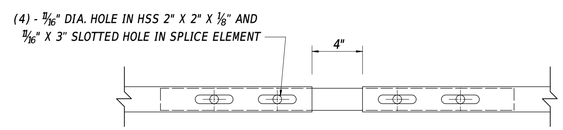
PLAN



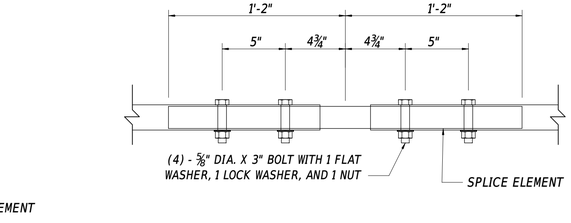
SECTION

FIXED JOINT SPLICE PLAN AND SECTION

HSS 2" X 2" X ⅛"



PLAN



SECTION

EXPANSION JOINT SPLICE PLAN AND SECTION

HSS 2" X 2" X ⅛"

GENERAL 2 STRAND TUBE RAIL PARAPET NOTES

1. THE CENTER LINE OF ANY SPLICE AND/OR CONTRACTION JOINT SHALL BE LOCATED AT LEAST 2'-0" AWAY FROM CENTER LINE OF A POST. CONTRACTION AND/ OR SPLICE JOINTS FOR EACH STRAND OF TWO STRAND RAILING SHALL BE PLACED IN THE SAME LOCATION AND IN THE SAME PANEL.
2. RAIL ELEMENTS SHALL BE STRUCTURAL TUBING IN ACCORDANCE WITH ASTM A500 GRADE C.
3. POSTS SHALL BE SET VERTICAL. MAXIMUM POST SPACING IS 6'-8".
4. ALL STRUCTURAL STEEL COMPONENTS INCLUDING FASTENERS SHALL BE HOT-DIP GALVANIZED AS PER ASTM A123 AFTER FABRICATION, EXCEPT AS NOTED.
5. PLATE WASHERS SHALL BE POSITIONED TO COMPLETELY COVER SLOTTED HOLES.
6. FABRICATION AND INSTALLATION OF THE 2 STRAND TUBE RAIL PARAPET SYSTEM WILL BE INCIDENTAL TO ITEM 626502 - TWO STRAND TUBE RAIL PARAPET.
7. TUBE RAIL SECTION SHALL BE BENT TO FOLLOW ROADWAY CURVATURE. NO FIELD BENDING IS ALLOWED. SEE SHEETS 22-23 FOR APPROACH WALL PLANS.
8. LOCATE EXPANSION JOINT SPLICES AT JOINT LOCATIONS AND AT CENTERLINE OF EACH PIER.

PENNONI ASSOCIATES INC.
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\16-BRIDGE RAILING DETAILS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

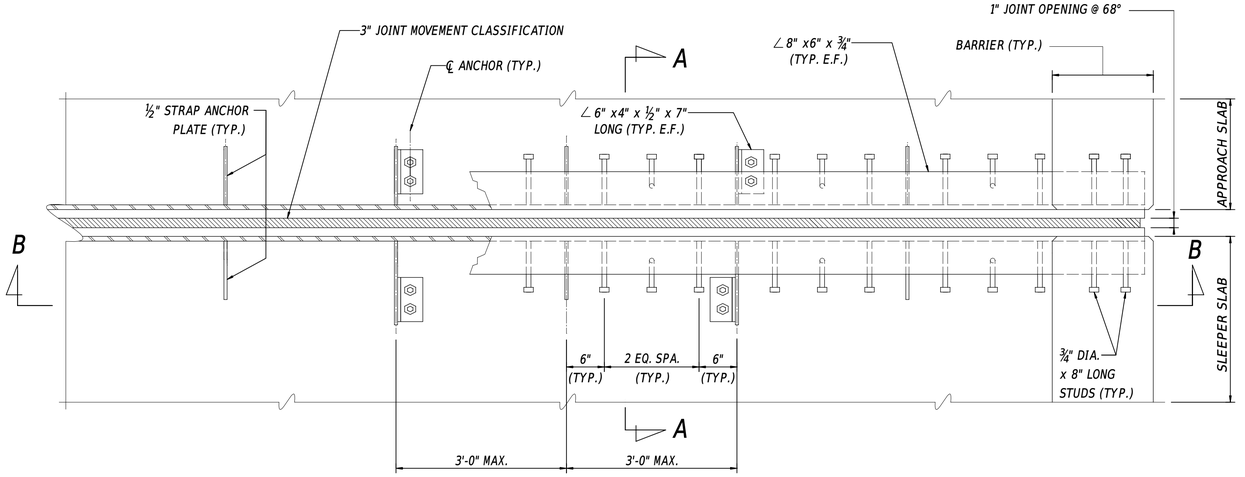
NOT TO SCALE

ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY		
NEW CASTLE	CHECKED BY:	H.BROWN

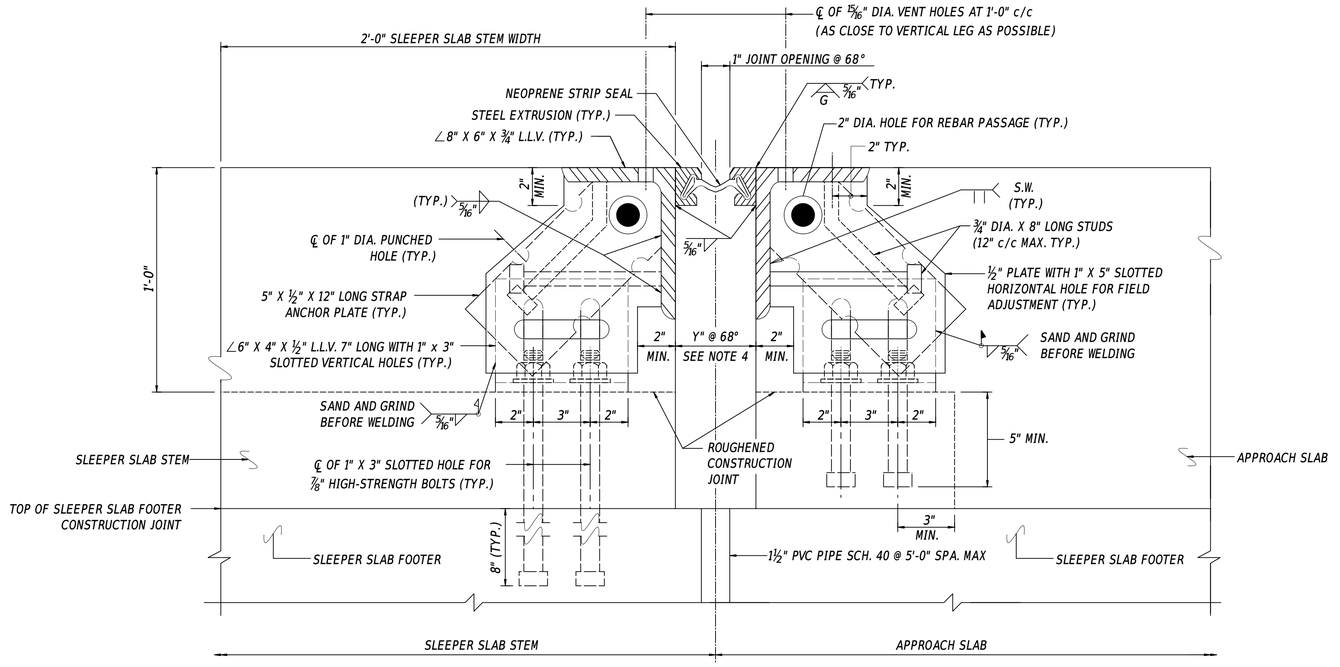
BRIDGE RAILING DETAILS

SECTION
PAI
SHEET NO.
44



TYPICAL JOINT PLAN

(NOT TO SCALE)



SECTION A-A (APPROACH SLAB TO SLEEPER SLAB)

(NOT TO SCALE)

STRIP SEAL EXPANSION JOINT NOTES

1. STEEL FOR DECK JOINTS AND STEEL EXTRUSIONS SHALL BE AASHTO M270, GR. 36 (ASTM A36) AT MINIMUM.
2. NEOPRENE EXTRUSION TO MEET ASTM D2628-91 MODIFIED, (RECOVERY TESTS EXCLUDED).
3. THE EXPANSION JOINT SHALL BE CAPABLE OF SEALING THE DECK TO PREVENT MOISTURE AND OTHER CONTAMINANTS FROM DESCENDING THROUGH THE JOINT.
4. THE CONTRACTOR SHALL ADJUST THE OPEN JOINT (defined as 'Y') AS REQUIRED BY THE WIDTH OF THE STEEL EXTRUSION USED SO AS TO PROVIDE A 1" JOINT OPENING AT 68°F.
5. THE STRIP SEAL SHALL BE INSTALLED IN ONE PIECE ACROSS THE BRIDGE WIDTH. SPLICING OF THE STRIP SEAL IS NOT PERMITTED.
6. THE EXPANSION JOINT SYSTEM IS PAID FOR UNDER ITEM 624000.
7. ENTIRE EXPANSION DAM SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 624 OF THE STANDARD SPECIFICATIONS.
8. 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%p 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%

9. HOLES SHALL BE PLACED IN THE RIB PLATES AND STRAP ANCHOR PLATES FOR BAR REINFORCEMENT. IF THIS IS DONE IN THE FIELD, TOUCH-UP THE HOLES IN ACCORDANCE WITH ASTM A780. PAYMENT INCIDENTAL TO ITEM 624000.
10. ANCHOR PLATE AND STEEL EXTRUSION SHALL BE WELDED TO BE WATERTIGHT AT CONSTRUCTION JOINTS. PAYMENT INCIDENTAL TO ITEM 624000.
11. 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.
12. TRAFFIC BARRIER PLATE SHALL BE CONNECTED WITH TYPE 316 STAINLESS STEEL COUNTERSUNK FLATHEAD SCREWS WITH ASTM A1 CONCRETE THREADED ANCHOR OR THREADED INSERT. THE HEAD OF THE SCREWS SHALL BE FLUSH WITH FACE OF STEEL PLATE. PAYMENT INCIDENTAL TO ITEM 624000.
13. THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS OF TRAFFIC BARRIER PLATE AND STRIP SEAL JOINT FOR APPROVAL.

JOINT OPENING (INCH)

LOCATION	TEMPERATURE (°F)					MOVEMENT CLASSIFICATION
	10	30	50	70	90	
BOTH APPROACHES	2⅜	1⅞	1⅜	⅞	⅜	3"

NOTES:

1. FOR SECTION B-B SEE SHEET 46.

PENNONI ASSOCIATES INC.
FILE NAME: 11-447 Taylors Bridge 2023-09-26\31-EXPANSION JOINT DETAIL
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

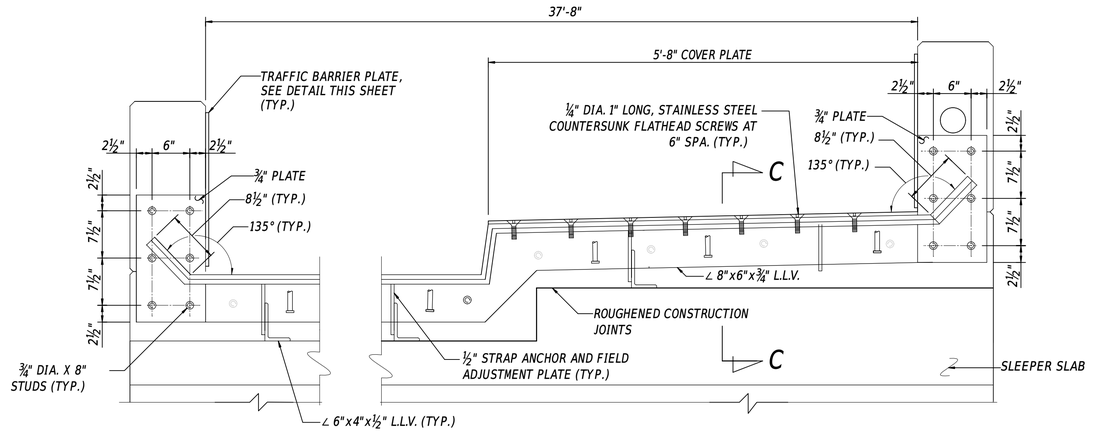
NOT TO SCALE

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

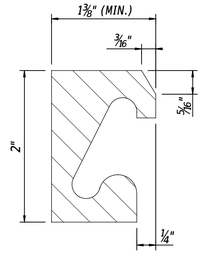
EXPANSION JOINT DETAILS 1

SECTION	
PAI	
SHEET NO.	
45	



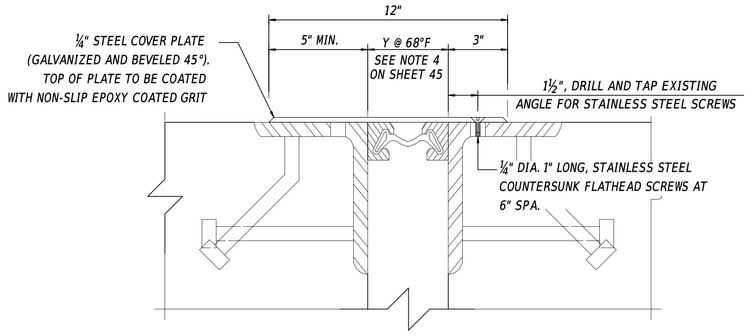
SECTION B-B

(NOT TO SCALE)



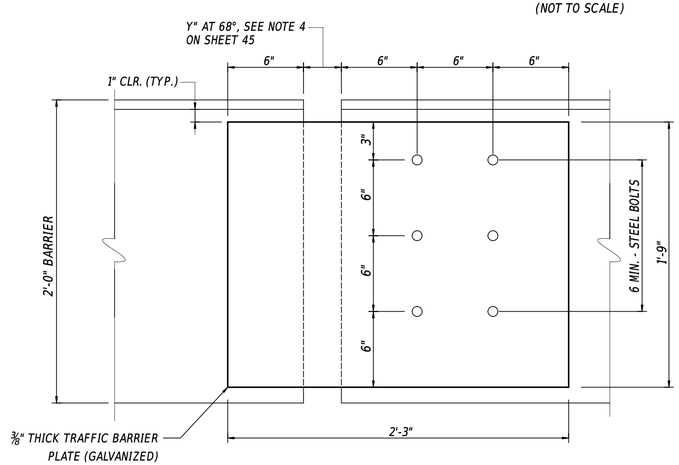
STEEL EXTRUSION DETAIL

(NOT TO SCALE)



SECTION C-C
JOINT SECTION AT SIDEWALK

(NOT TO SCALE)



TRAFFIC BARRIER PLATE DETAIL

(NOT TO SCALE)

NOTES:

1. FOR LOCATION OF SECTION B-B, SEE SHEET 45.
2. A TYPE Q SHAPE EXTRUSION JOINT MAY BE SUBMITTED AS AN APPROVED ALTERNATIVE TO THE DETAILED EXPANSION JOINT SYSTEM AT NO ADDITIONAL COST TO THE DEPARTMENT. THE CONTRACTOR IS RESPONSIBLE FOR ACCOMMODATING ANY CHANGES ASSOCIATED WITH A JOINT SYSTEM OF A DIFFERENT GEOMETRY. THIS INCLUDES ADJUSTMENTS TO THE 'Y' DIMENSION, APPROACH SLABS, SLEEPER SLABS, BARRIERS, AND RAILINGS TO MAINTAIN THE PLAN-SPECIFIED OPENING BETWEEN THESE ELEMENTS AT THE JOINT LOCATIONS. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE JOINT TO THE PLAN-SPECIFIED FINAL GRADE AND ELEVATION. INCLUDE ALL REVISED ELEMENTS AND THE PROPOSED METHOD FOR SUPPORTING THE JOINT EXTRUSIONS IN THE EXPANSION JOINT SHOP DRAWINGS FOR REVIEW AND APPROVAL.

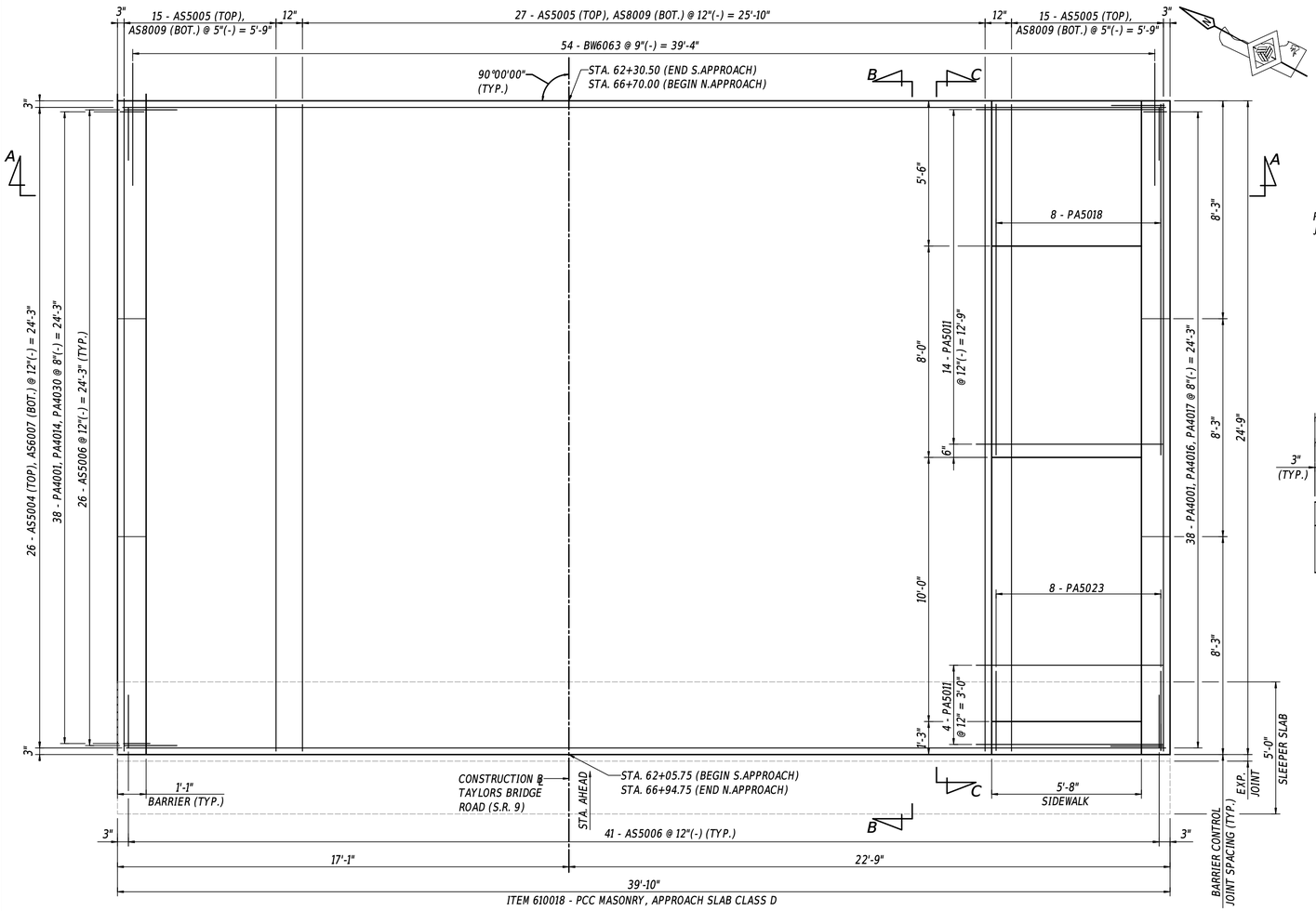
PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\25-EXPANSION JOINT DETAIL
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

SCALE AS NOTED

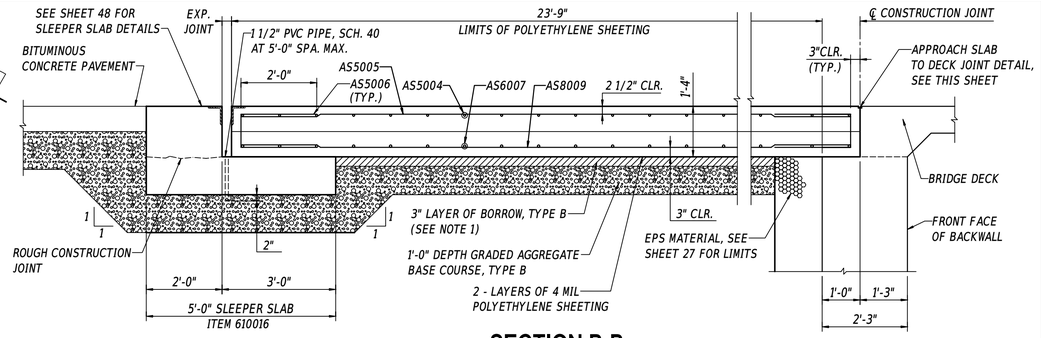
ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447	EXPANSION JOINT DETAILS 2	SECTION
T201907102	DESIGNED BY:	B.MARSHALL		PAI
COUNTY				SHEET NO.
NEW CASTLE	CHECKED BY:	H.BROWN		46



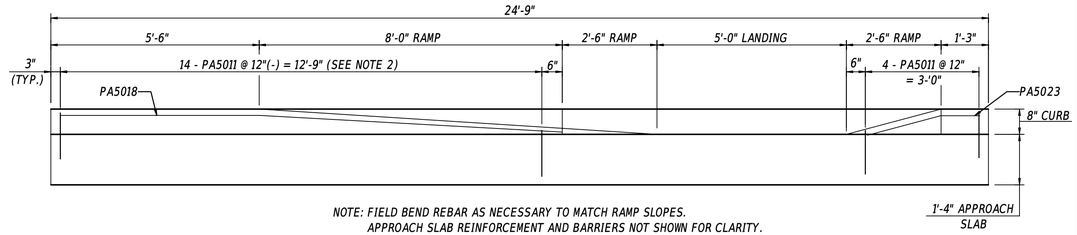
SOUTH APPROACH SLAB PLAN

(NORTH APPROACH SLAB SIMILAR)
3/8" = 1'-0"



SECTION B-B

1/2" = 1'-0"



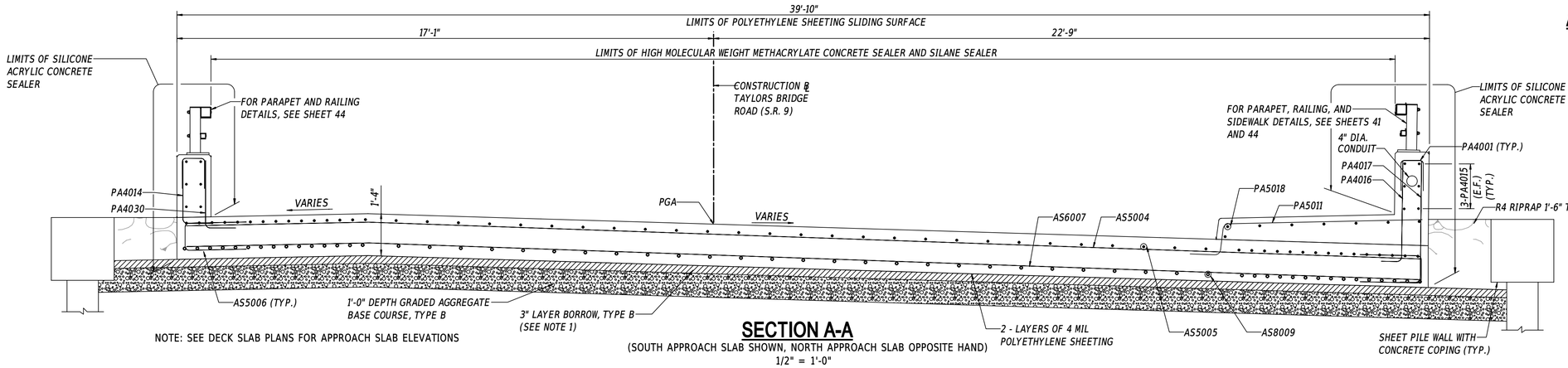
NOTE: FIELD BEND REBAR AS NECESSARY TO MATCH RAMP SLOPES.
APPROACH SLAB REINFORCEMENT AND BARRIERS NOT SHOWN FOR CLARITY.

SECTION C-C

NOTE: PAYMENT OF WATERSTOP, SEALER, AND BONDBREAKER IS INCIDENTAL TO ITEM 610018.

APPROACH SLAB TO DECK JOINT DETAIL

1 1/2" = 1'-0"



NOTE: SEE DECK SLAB PLANS FOR APPROACH SLAB ELEVATIONS

SECTION A-A

(SOUTH APPROACH SLAB SHOWN, NORTH APPROACH SLAB OPPOSITE HAND)
1/2" = 1'-0"

NOTES:

1. PLACE A 3" LAYER OF BORROW, TYPE B BETWEEN THE GABC UNDER THE APPROACH SLAB AND THE POLYETHYLENE SLIDING SURFACE. PAID FOR UNDER ITEM 209002 - BORROW, TYPE B.
2. PLACE PA5011 TO MATCH THE CROSS SLOPE OF THE SIDEWALK RAMP.

REFERENCE:

1. FOR PROJECT NOTES, SEE SHEETS 5-6.
2. FOR JOINT DETAILS, SEE SHEETS 45 AND 46.
3. FOR SLEEPER SLAB DETAILS, SEE SHEET 48.

PENNONI ASSOCIATES INC.
FILE NAME: - 11-447 Taylors Bridge 2023-09-26\11-APPROACH SLAB DETAILS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 2/28/2025 @ 14:55
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

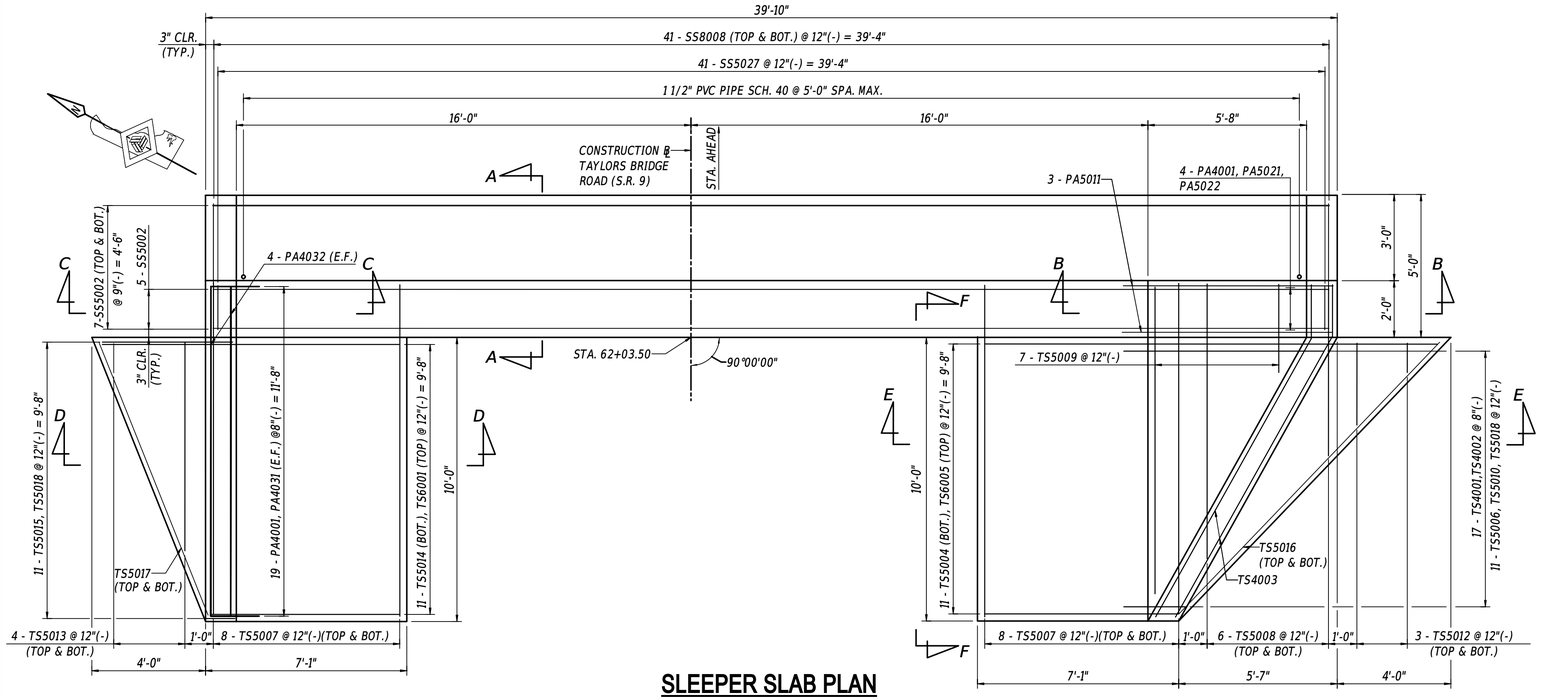
SCALE AS NOTED

**ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT**

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

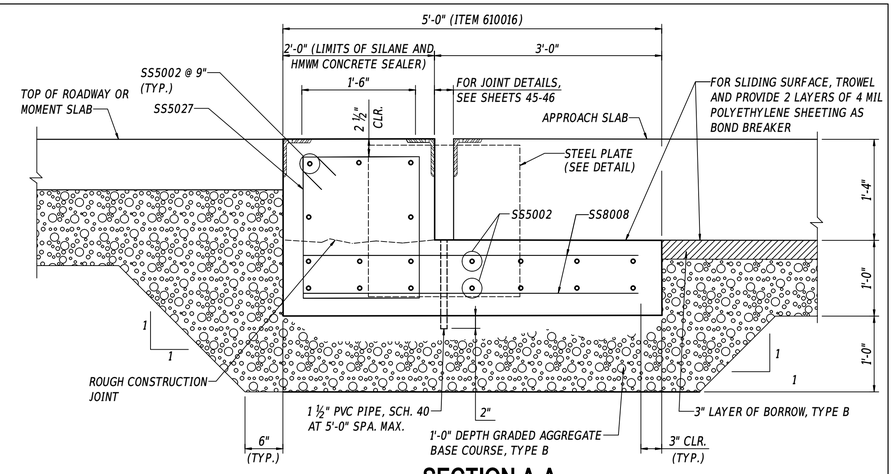
APPROACH SLAB DETAILS

SECTION
PAI
SHEET NO.
47



SLEEPER SLAB PLAN

(SOUTH SLEEPER SLAB SHOWN, NORTH SLEEPER SLAB SIMILAR)
3/8" = 1'-0"



SECTION A-A

1" = 1'-0"

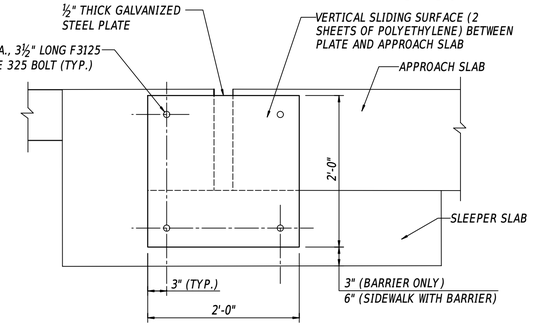
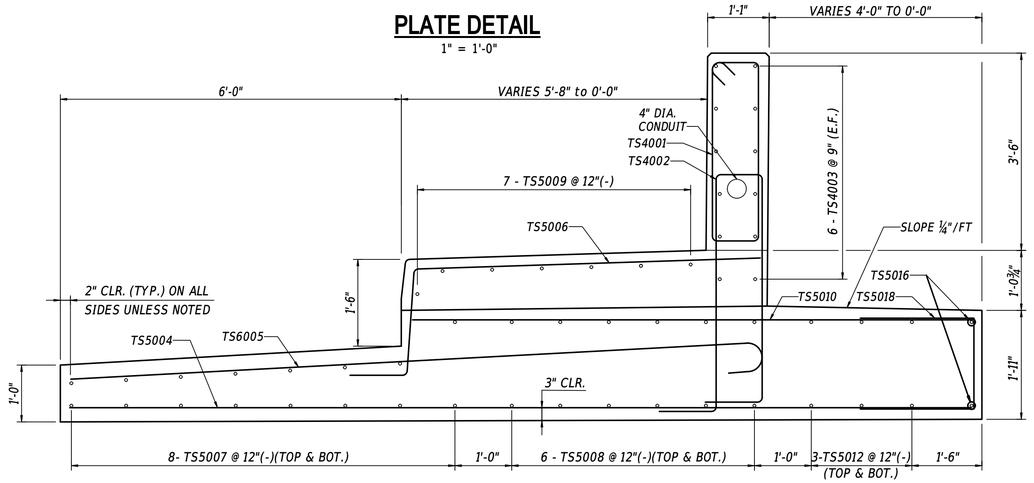


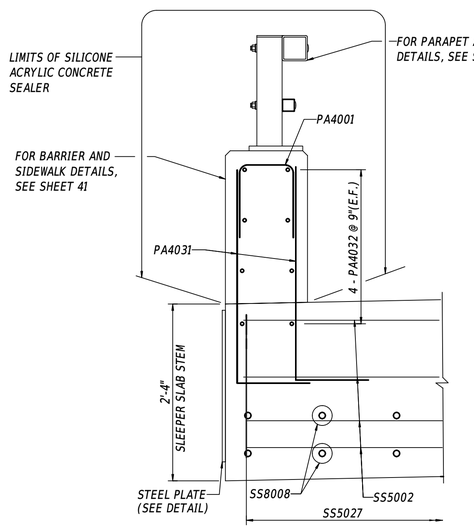
PLATE DETAIL

1" = 1'-0"



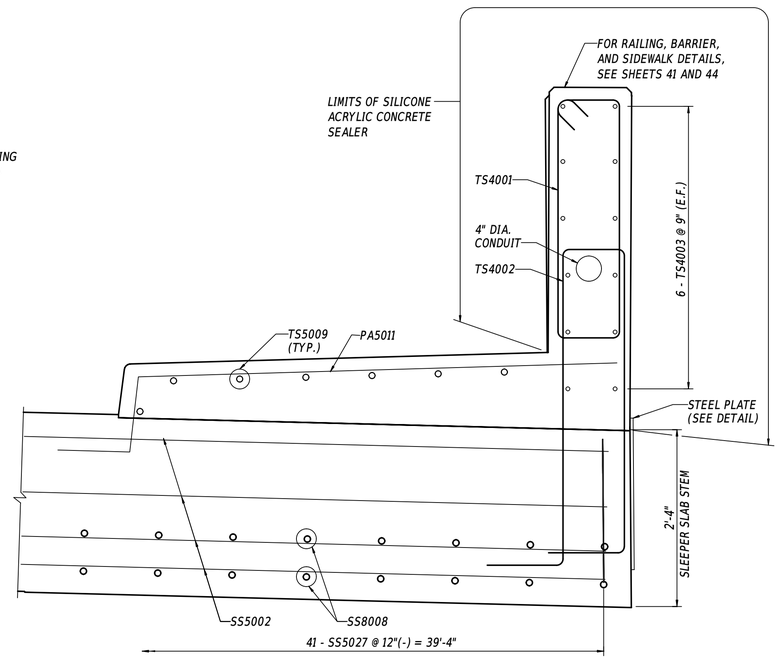
SECTION E-E, TRANSITION SLAB SECTION

SCALE: ¾" = 1'-0"



SECTION C-C

1" = 1'-0"



SECTION B-B

1" = 1'-0"

REFERENCE:

1. FOR PROJECT NOTES, SEE SHEETS 5-6.
2. FOR APPROACH SLAB DETAILS, SEE SHEET 47.
3. FOR EXPANSION JOINT DETAILS, SEE SHEET 45 AND 46.
4. FOR SECTIONS D-D AND F-F, SEE SHEET 49.

PENNONI ASSOCIATES INC.
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\13-SLEEPER SLAB DETAILS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

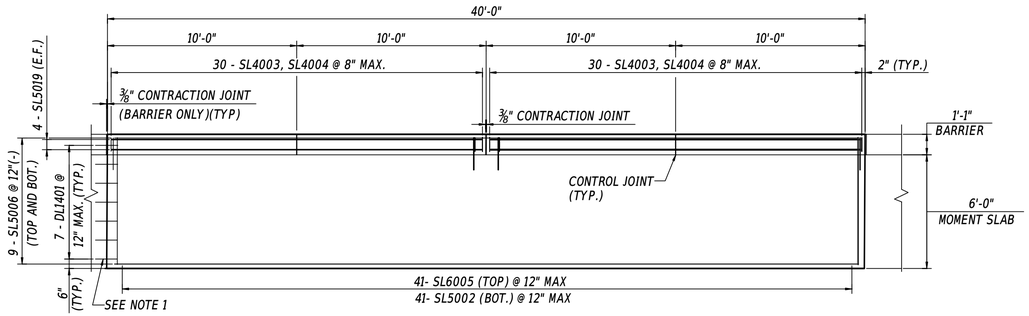
SCALE AS NOTED

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

SLEEPER SLAB DETAILS

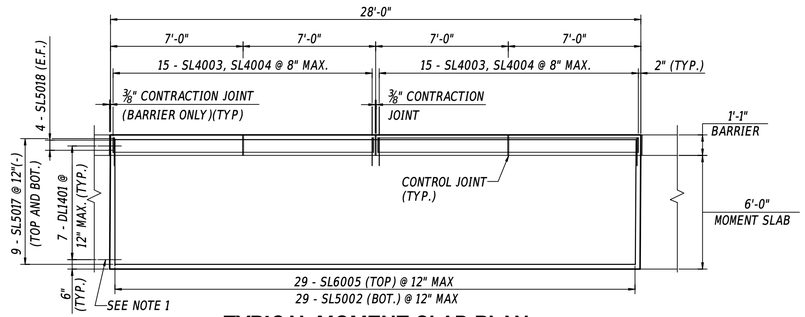
SECTION
PAI
SHEET NO.
48



TYPICAL MOMENT SLAB PLAN

(ROADWAY CURVATURE NOT SHOWN FOR CLARITY, SEE SHEETS 22 AND 23 FOR CURVE DATA)

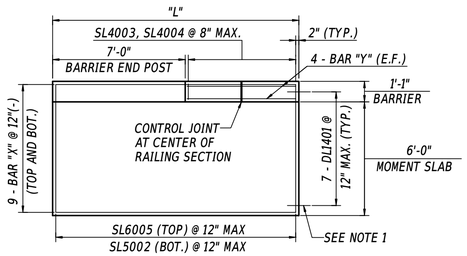
SCALE: ¼" = 1'-0"



TYPICAL MOMENT SLAB PLAN (ADJACENT TO END MOMENT SLAB)

SCALE: ¼" = 1'-0"

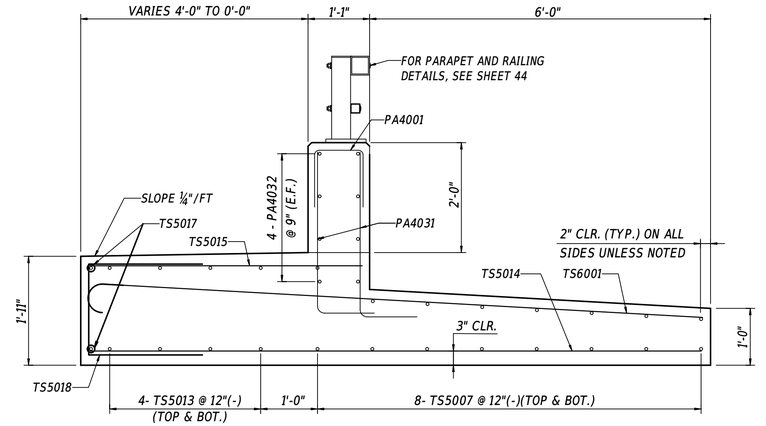
END MOMENT SLAB REINFORCEMENT			
UNIT	LENGTH "L"	BAR "X"	BAR "Y"
RETAINING WALL 1	17'-6"	SL5011	SL4012
RETAINING WALL 2	22'-0"	SL5013	SL4014
RETAINING WALL 3	25'-0"	SL5015	SL4016
RETAINING WALL 4	25'-0"	SL5015	SL4016



TYPICAL END MOMENT SLAB PLAN

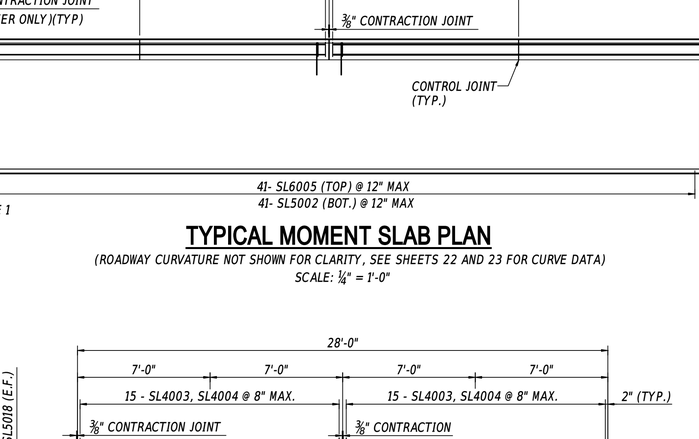
(FOR BARRIER END POST REINFORCMENT DETAILS, SEE SHEET 42)

SCALE: ¼" = 1'-0"



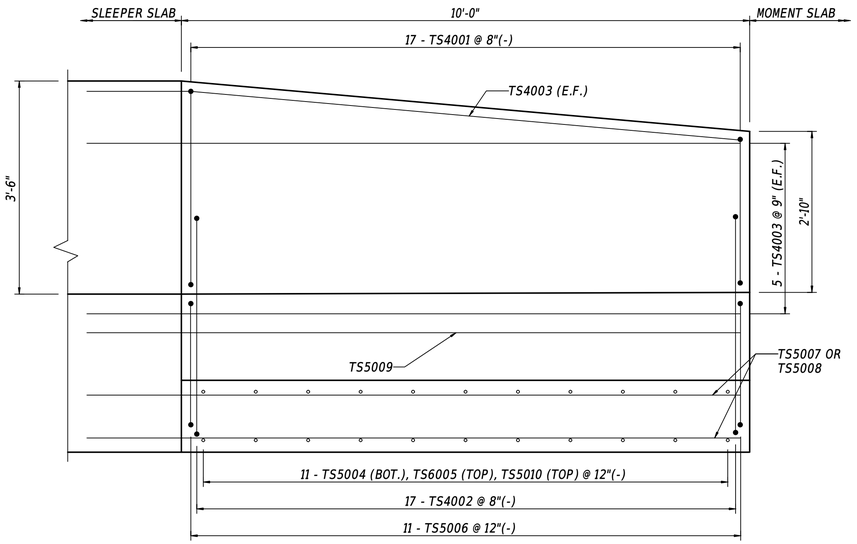
SECTION D-D, TRANSITION SLAB SECTION

SCALE: ¾ = 1'-0"



TYPICAL MOMENT SLAB SECTION

SCALE: 1" = 1'-0"



SECTION F-F,TRANSITION SLAB ELEVATION

SCALE: ¾= 1'-0"

NOTES:

1. *INSTALL DOWELS DL1401 PER DELDOT STANDARD NO. DETAIL P--1 (2024).*

REFERENCE:

1. *FOR MOMENT SLAB LAYOUT, SEE SHEETS 22-23.*
2. *FOR TRANSITION SLAB DETAILS, SEE SHEET 48.*

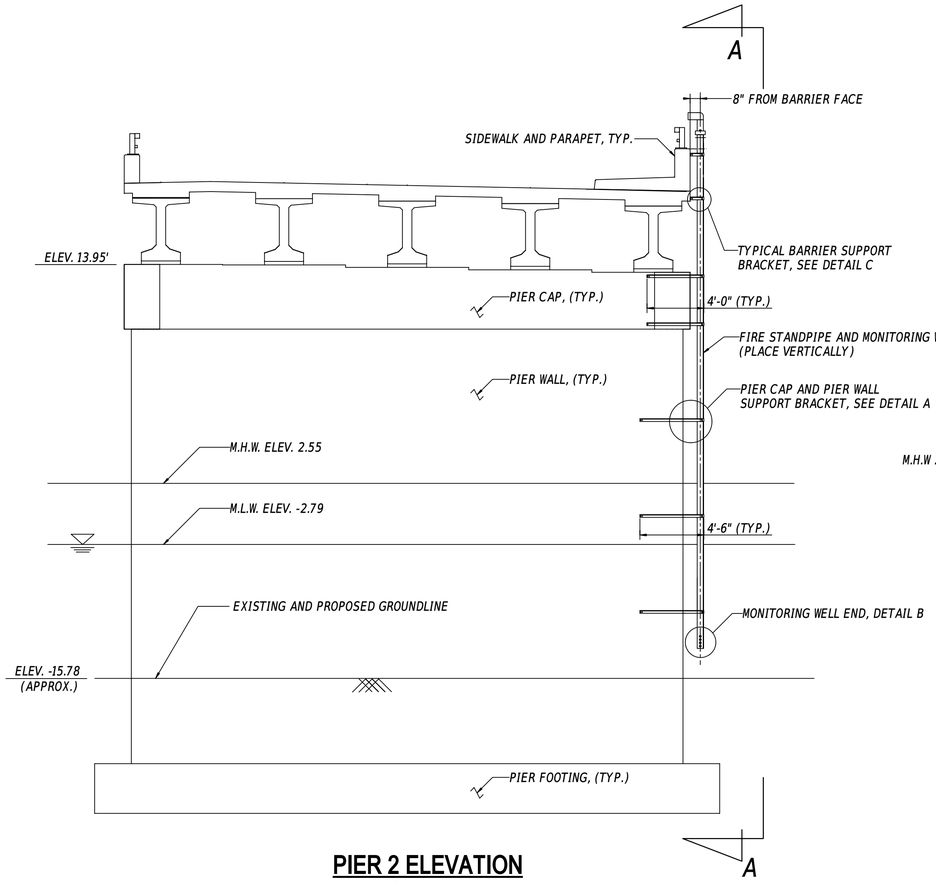
PENNONI ASSOCIATES INC.
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\08-MOMENT SLAB DETAILS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

SCALE AS NOTED

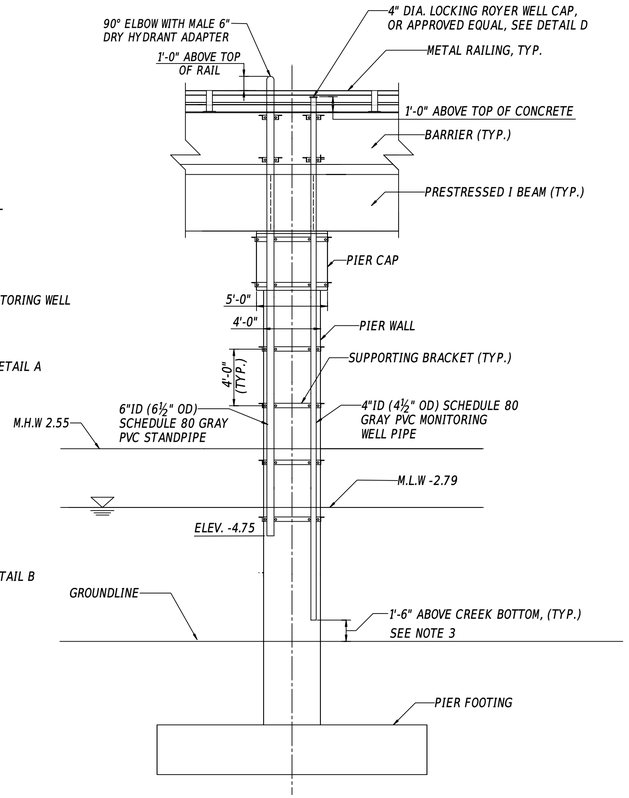
ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447	MOMENT SLAB DETAILS	SECTION
T201907102	DESIGNED BY:	B.MARSHALL		PAI
COUNTY				SHEET NO.
NEW CASTLE	CHECKED BY:	H.BROWN		49



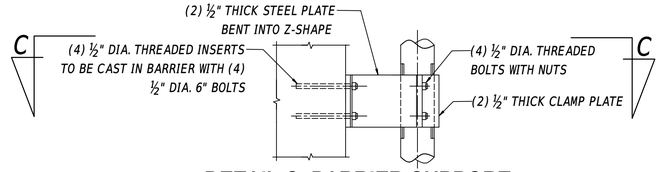
PIER 2 ELEVATION

3/16" = 1'-0"



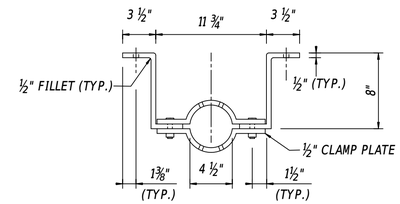
VIEW A-A

3/16" = 1'-0"



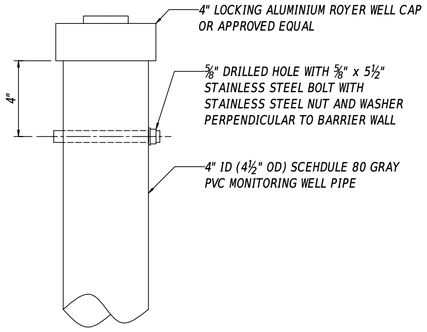
DETAIL C, BARRIER SUPPORT BRACKET ELEVATION

SCALE: 1½" = 1'-0"



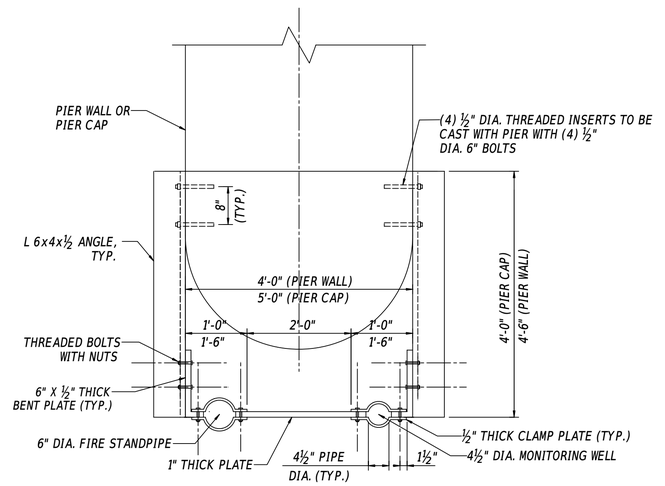
SECTION C-C BARRIER SUPPORT BRACKET PLAN

SCALE: 1½" = 1'-0"



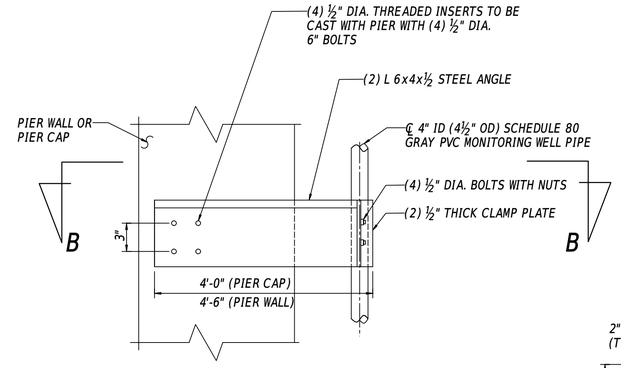
DETAIL D, MONITORING WELL CAP

SCALE: 3" = 1'-0"



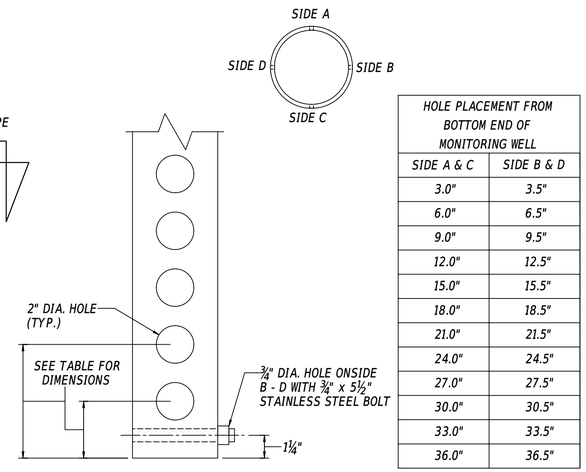
SECTION B-B, PIER CAP AND PIER WALL BRACKET DETAIL PLAN

3/4" = 1'-0"



DETAIL A, PIER CAP AND PIER WALL BRACKET DETAIL ELEVATION

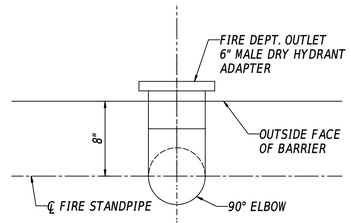
NOT TO SCALE



HOLE PLACEMENT FROM BOTTOM END OF MONITORING WELL	
SIDE A & C	SIDE B & D
3.0"	3.5"
6.0"	6.5"
9.0"	9.5"
12.0"	12.5"
15.0"	15.5"
18.0"	18.5"
21.0"	21.5"
24.0"	24.5"
27.0"	27.5"
30.0"	30.5"
33.0"	33.5"
36.0"	36.5"

DETAIL B, MONITORING WELL END DETAIL

SIDE A SHOWN
NOT TO SCALE



DETAIL E, FIRE VALVE

SCALE: 1½" - 1'-0"

NOTES:

1. REFER TO SPECIAL PROVISION 601520 - REMOVAL AND INSTALLATION OF MONITORING WELL, FOR MORE INFORMATION.
2. ALL WORK ON THIS SHEET IS INCIDENTAL TO ITEM 601520.
3. CONTRACTOR TO VERIFY FINISHED ELEVATION OF THE STREAM BOTTOM PRIOR TO SETTING BOTTOM OF PIPE.

PENNONI ASSOCIATES INC
FILE NAME: ...\1-447 Taylors Bridge 2023-09-28\07-STANDPIPE DETAILS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

SCALE AS NOTED

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

STANDPIPE AND MONITORING WELL DETAILS

SECTION
PAI
SHEET NO.
50

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

SPECIFICATIONS					BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)										
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F / R	G	H	J	K	O
20	9	2- 0 0	DL9016	STR		2 - 0 0									
156	11	18- 6 0	FT11006	STR		18 - 6 0									
42	6	18- 6 0	FT6001	STR		18 - 6 0									
24	6	43- 6 0	FT6002	STR		43 - 6 0									
90	7	43- 6 0	FT7003	STR		43 - 6 0									
96	7	23- 6 0	FT7004	02	2- 6 0	18 - 6 0					2 - 6 0				
294	8	10- 1 0	FT8005	01	1- 2 0	8 - 6 0							0 - 8 0		
216	4	10- 0 0	PR4010	17		2 - 9 0	4- 6 0	2 - 9 0							
188	5	9- 4 2	PR5009	10		5 - 4 2	2- 0 0	2 - 0 0		1 - 8 2					3 - 5 0
30	5	10-11 1	PR5012	10		6-11 1	2- 0 0	2 - 0 0		2 - 2 2					4 - 5 0
24	5	34-10 0	PR5015	STR		34-10 0									
188	5	34-10 2	PR5018	STR		34-10 2									
2208	6	5- 2 0	PR6007	T9	0- 8 0	3 - 6 0					1 - 0 0				
6	6	34-10 0	PR6014	STR		34-10 0									
12	6	38- 6 1	PR6019	STR		38 - 6 1									
196	8	20-10 1	PR8008	STR		20-10 1									
98	8	34- 1 0	PR8011	STR		34 - 1 0									
20	4	16-10 0	AB4003	17		7 - 8 0	1- 6 0	7 - 8 0							
28	4	11- 4 0	AB4004	T1	0- 6 0	3 - 7 0	1- 7 0	3 - 7 0	1- 7 0		0 - 6 0				
252	5	9- 6 0	AB5005	17		3 - 0 0	3- 6 0	3 - 0 0							
12	5	43- 4 0	AB5006	STR		43 - 4 0									
16	5	8- 3 0	AB5008	17		1 - 6 0	5- 3 0	1 - 6 0							
24	5	6- 6 0	AB5009	17		1 - 6 0	3- 6 0	1 - 6 0							
10	5	44- 6 0	AB5010	01	0- 7 0	43 - 4 0					0 - 7 0		0 - 5 0		
20	5	7- 6 0	AB5011	17		2 - 0 0	3- 6 0	2 - 0 0							
32	6	3- 6 0	AB6007	STR		3 - 6 0									
4	6	43- 4 0	AB6013	STR		43 - 4 0									
8	8	43- 4 0	AB8012	STR		43 - 4 0									
16	4	39- 6 0	BW4046	STR		39 - 6 0									
20	4	15- 4 2	BW4056	D13		0-11 0	4-10 0	1-11 0	3- 8 2	1- 6 0		2 - 6 0			
20	4	14- 4 2	BW4057	D13		0-11 0	4- 4 0	1-11 0	3- 2 2	1- 6 0		2 - 6 0			
40	4	9- 9 0	BW4060	T1	0- 4 2	1-11 0	2- 7 0	1-11 0	2- 7 0		0 - 4 2				
32	5	5- 6 0	BW5050	STR		5 - 6 0									
120	5	7- 4 0	BW5053	STR		7 - 4 0									
60	5	11- 9 3	BW5054	T1	0- 5 2	2 - 8 0	2- 9 1	2 - 8 0	2- 9 1		0 - 5 2				
60	5	13- 5 0	BW5055	S4	0- 6 0	4-11 0	2- 7 0	4-11 0			0 - 6 0				
6	5	37- 1 0	BW5058	STR		37 - 1 0									
240	5	3- 9 0	BW5063	STR		3 - 9 0									
60	5	0-10 3	BW5064	STR		0-10 3									
40	6	7- 4 0	BW6048	STR		7 - 4 0									
20	6	2- 0 2	BW6052	STR		2 - 0 2									
80	6	4- 3 0	BW6062	STR		4 - 3 0									
108	6	6- 2 0	BW6063	3	0- 8 0	4 - 0 0	1- 0 0	0 - 0 0	0 - 0 0	0 - 0 0	0 - 0 0	0 - 0 0	0 - 6 0	0 - 6 2	

SPECIFICATIONS					BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)										
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F / R	G	H	J	K	O
329	14	1- 8 0	DL1401	STR		1 - 8 0									
44	4	2- 9 0	PA4001	17		1 - 0 0	0- 9 0	1 - 0 0							
40	4	6- 8 0	PA4008	STR		6 - 8 0									
44	4	5- 0 0	PA4009	STR		5 - 0 0									
44	4	7- 3 0	PA4010	17		5 - 0 0	2- 3 0								
2556	4	8- 6 2	SL4003	D19		1 - 0 1	2-10 2	0 - 9 0	2-10 2	1- 0 1					
2556	4	5- 7 0	SL4004	T1	0- 4 2	1 - 8 0	0- 9 0	1 - 8 0	0- 9 0		0 - 4 2				
8	4	10- 2 0	SL4012	STR		10 - 2 0									
8	4	14- 8 0	SL4014	STR		14 - 8 0									
16	4	17- 8 0	SL4016	STR		17 - 8 0									
1810	5	6- 8 3	SL5002	STR		6 - 8 3									
1118	5	39- 4 1	SL5006	STR		39 - 4 1									
18	5	17- 2 0	SL5011	STR		17 - 2 0									
18	5	21- 8 0	SL5013	STR		21 - 8 0									
36	5	24- 8 0	SL5015	STR		24 - 8 0									
18	5	5- 4 1	SL5017	STR		5 - 4 1									
64	5	13- 8 0	SL5018	STR		13 - 8 0									
312	5	19- 8 0	SL5019	STR		19 - 8 0									
1810	6	7- 5 1	SL6005	01	0- 8 0	6 - 9 1							0 - 6 0		
1910	4	5- 6 0	SC4001	T6		1 - 6 0	1- 6 0	1 - 6 0	1- 0 0						
120	4	9- 4 0	SC4003	T6		3 - 5 0	1- 6 0	3 - 5 0	1- 0 0						
8	4	18- 0 0	SC4004	T6		7 - 9 0	1- 6 0	7 - 9 0	1- 0 0						
329	5	40- 0 0	SC5002	STR		40 - 0 0									
52	5	29- 6 0	SC5004	STR		29 - 6 0									
14	5	13- 5 0	SC5005	STR		13 - 5 0									
14	5	10- 3 1	SC5006	STR		10 - 3 1									
14	5	47- 4 0	SC5007	STR		47 - 4 0									
28	5	5- 0 0	SC5008	STR		5 - 0 0									
24	5	1- 6 0	SC5009	STR		1 - 6 0									

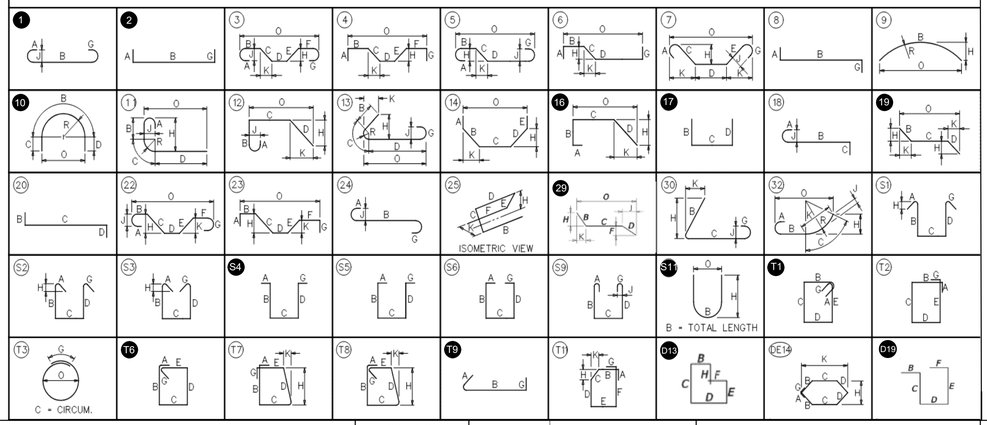
SPECIFICATIONS					BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)										
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F / R	G	H	J	K	O
2 x 17	4	7- 1 2	TS4001	T1	0- 4 2	0 - 9 0	2- 5 1	0 - 9 0	2- 5 1		0 - 4 2				
		TO					TO		TO						
		8- 6 0					3- 1 2		3- 1 2						
34	4	10- 9 0	TS4002	D19		1 - 0 0	4- 0 0	0 - 9 0	4- 0 0	1 - 0 0					
24	4	13- 0 0	TS4003	12	0 - 0 0	0 - 0 0	11 - 3 0	1 - 9 0					5 - 6 0	0 - 0 0	9 - 9 3	11 - 6 0
2 x 11	5	7- 1 3	TS5004	STR		7 - 1 3									
		TO				TO									
		16 - 0 0				16 - 0 0									
2 x 11	5	4- 9 0	TS5006	29		1 - 2 1	2- 5 1	1 - 0 0		1 - 0 0			1 - 2 1	0 - 0 0	0 - 0 1	2 - 5 2
		TO				TO	TO						TO	TO	TO	TO
		9- 3 3				5-11 3	2- 4 0						5-11 2	0 - 0 3	0 - 6 0	2-10 3
64	5	11- 8 0	TS5007	STR		11 - 8 0									
2 x 10	5	6- 0 0	TS5008	STR		6 - 0 0									
		TO				TO									
		9- 8 0				9 - 8 0									
2 x 7	5	2- 9 0	TS5009	STR		2 - 9 0									
		TO				TO									
		10- 9 0				10 - 9 0									
2 x 11	5	1- 2 0	TS5010	STR		1 - 2 0									
		TO				TO									
		10- 0 0				10 - 0 0									
4 x 3	5	1- 3 0	TS5012	STR		1 - 3 0									
		TO				TO									
		3- 1 0				3 - 1 0									
4 x 4	5	1- 7 0	TS5013	STR		1 - 7 0									
		TO				TO									
		7-10 0				7-10 0									
2 x 11	5	6-10 0	TS5014	STR		6-10 0									
		TO				TO									
		10- 7 0				10 - 7 0									
2 x 11	5	1- 0 0	TS5015	STR		1 - 0 0									
		TO				TO									
		4- 7 0				4 - 7 0									
4	5	13- 3 0	TS5016	STR		13 - 3 0									
4	5	10- 4 0	TS5017	STR		10 - 4 0									
44	5	5- 6 0	TS5018	17		2 - 0 0	1- 6 0	2 - 0 0							
2 x 11	6	7- 6 0	TS6001	01	0- 8 0	6-10 0								0 - 6 0	
		TO				TO									
		11- 3 0				10 - 7 0									
2 x 11	6	7- 7 0	TS6005	01	0- 8 0	6-11 0								0 - 6 0	
		TO				TO									
		17- 0 0				16 - 4 0									

NOTE: BARS MARKED WITH PREFIX DL ARE SMOOTH BARS.

ASTM STANDARD ENGLISH REINFORCING BARS				RECOMMENDED END HOOKS, APPLICABLE TO ALL GRADES				STIRRUP AND TIE HOOKS, APPLICABLE TO ALL GRADES			
	NOMINAL DIMENSIONS				180 ° HOOKS		90 ° HOOKS		90 ° HOOK	135 ° HOOK	
BAR SIZE	DIAMETER (INCHES)	AREA (INCHES²)	WEIGHT (LBS. / FT.)	D	A OR G	J	A OR G	D	A OR G	A OR G	A OR G
3	0.375	0.110	0.376	2 1/4"	5"	3"	6"	1 1/2"	4"	4"	2 1/2"
4	0.500	0.200	0.668	3"	6"	4"	8"	2"	4 1/2"	4 1/2"	3"
5	0.625	0.310	1.043	3 3/4"	7"	5"	10"	2 1/2"	6"	5 1/2"	3 3/4"
6	0.750	0.440	1.502	4 1/2"	8"	6"	1-0"	4 1/2"	1-0"	8"	4 1/2"
7	0.875	0.600	2.044	5 1/4"	10"	7"	1-2"	5 1/4"	1-2"	9"	5 1/4"
8	1.000	0.790	2.670	6"	11"	8"	1-4"	6"	1-4"	10 1/2"	6"
9	1.128	1.000	3.400	9 1/2"	1-3"	11 3/4"	1-7"				
10	1.270	1.270	4.303	10 3/4"	1-5"	1-1 1/4"	1-10"				
11	1.410	1.560	5.313	1-0"	1-7"	1-2 3/4"	2-0"				
14	1.693	2.250	7.650	1-6 1/4"	2-3"	1-9 3/4"	2-7"				
18	2.257	4.000	13.600	2-0"	3-0"	2-4 1/2"	3-5"				

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

STANDARD BAR BENDS



ADDENDA / REVISIONS

NOT TO SCALE

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

REINFORCEMENT SCHEDULE 1

SECTION: PAI
SHEET NO.: 51

PENNONI ASSOCIATES INC.
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\46-REINFORCEMENT SCHEDULE
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:18
USER NAME: BMarshall
OFFICE LOCATION:

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

SPECIFICATIONS					BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)										
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F / R	G	H	J	K	O
328	4	57- 1 3	DK4001	STR		57- 1 3									
82	5	8- 4 0	DK5001	16	3 - 0 0	1 - 0 0	1 - 1 0	1 - 1 0				0 - 9 0		0 - 9 0	1 -10 0
328	5	57- 7 3	DK5007	STR		57- 7 3									
440	5	40- 6 0	DK5012	01	0 - 7 0	39 - 4 0					0 - 7 0		0 - 5 0		
440	5	39- 4 0	DK5013	STR		39 - 4 0									
880	6	8- 8 0	DK6016	01	0 - 8 0	8 - 0 0							0 - 6 0		
486	6	50- 0 0	DK6017	STR		50 - 0 0									
1318	4	2- 9 0	PA4018	17		1 - 0 0	0 - 9 0	1 - 0 0							
664	4	4- 2 0	PA4019	17		3 - 2 0	1 - 0 0								
664	4	4- 5 0	PA4020	17		3 - 5 0	1 - 0 0								
664	4	3- 4 0	PA4021	17		2 - 4 0	1 - 0 0								
664	4	3- 3 0	PA4022	17		2 - 3 0	1 - 0 0								
168	4	27- 2 0	PA4023	STR		27 - 2 0									
24	4	26-11 0	PA4025	STR		26 -11 0									
90	4	5- 1 0	PA4027	T1	0 - 4 2	0 - 9 1	1 - 5 0	0 - 9 0	1 - 5 0		0 - 4 2				
439	5	8- 4 0	PA5024	29		6 - 4 2	0-11 2	1 - 0 0		1 - 0 0		6 - 4 2	0 - 0 2	0 - 1 2	2 - 1 1
72	5	57- 7 3	PA5025	STR		57 - 7 3									
56	5	39- 4 0	AS5004	STR		39 - 4 0									
114	5	24- 6 1	AS5005	STR		24 - 6 1									
268	5	4-11 0	AS5006	17		2 - 0 0	0-11 0	2 - 0 0							
52	6	39- 4 0	AS6007	STR		39 - 4 0									
114	8	24- 6 1	AS8009	STR		24 - 6 1									
168	4	2- 9 0	PA4001	17		1 - 0 0	0 - 9 0	1 - 0 0							
76	4	3- 0 2	PA4014	17		2 - 0 2	1 - 0 0								
24	4	24- 3 2	PA4015	STR		24 - 3 2									
76	4	3-11 0	PA4016	02	0 - 8 0	3 - 3 0									
76	4	4- 6 3	PA4017	02	0 - 8 0	3 -10 3									
76	4	3- 2 1	PA4030	17		2 - 2 1	1 - 0 0								
40	5	7- 5 0	PA4031	17		6 - 4 2	1 - 0 2								
40	5	6- 4 2	PA4032	STR		6 - 4 2									
42	5	8- 5 0	PA5011	29		6 - 4 2	1 - 0 2	1 - 0 0		1 - 0 0		6 - 4 2	0 - 2 0	0 - 1 2	2 - 1 1
16	5	13- 3 0	PA5018	STR		13 - 3 0									
16	5	5- 1 0	PA5020	17		4 - 1 0	1 - 0 0								
8	5	7- 4 0	PA5021	17		6 - 4 0	1 - 0 0								
8	5	7- 1 0	PA5022	17		6 - 1 0	1 - 0 0								
16	5	3- 0 0	PA5023	STR		3 - 0 0									
38	5	39- 4 0	SS5002	STR		39 - 4 0									
82	5	7-11 0	SS5027	T1	0 - 5 2	1 -11 0	1 - 7 0	1 -11 0	1 - 7 0		0 - 5 2				
164	8	4- 6 0	SS8008	STR		4 - 6 0									

NOTE: BARS MARKED WITH PREFIX DL ARE SMOOTH BARS.

ASTM STANDARD ENGLISH REINFORCING BARS				RECOMMENDED END HOOKS, APPLICABLE TO ALL GRADES				STIRRUP AND TIE HOOKS, APPLICABLE TO ALL GRADES			
	NOMINAL DIMENSIONS				180° HOOKS		90° HOOKS		90° HOOK	135° HOOK	
BAR SIZE	DIAMETER (INCHES)	AREA (INCHES²)	WEIGHT (LBS. / FT.)	D	A OR G	J	A OR G	D	A OR G	A OR G	A OR G
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6	0.750	0.440	1.502	4 1/2"	8"	6"	1-0"	4 1/2"	1-0"	8"	4 1/2"
7	0.875	0.600	2.044	5 1/4"	10"	7"	1-2"	5 1/4"	1-2"	9"	5 1/4"
8	1.000	0.790	2.670	6"	11"	8"	1-4"	6"	1-4"	10 1/2"	6"
9	1.128	1.000	3.400	9 1/2"	1-3"	11 3/4"	1-7"				
10	1.270	1.270	4.303	10 3/4"	1-5"	1-1 1/4"	1-10"				
11	1.410	1.560	5.313	1-0"	1-7"	1-2 3/4"	2-0"				
14	1.693	2.250	7.650	1-6 1/4"	2-3"	1-9 3/4"	2-7"				
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NOTES:
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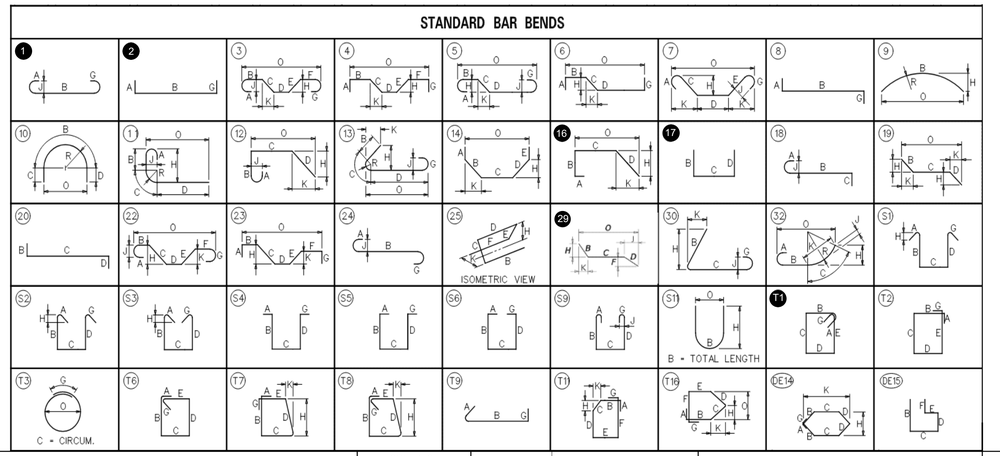
11. TYPE S1-S6, S11, T1-T3 AND T6-T9 APPLICABLE TO BAR SIZES #3 THROUGH #8.

STANDARD BAR BENDS



PENNONI ASSOCIATES INC.
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\21-REINFORCEMENT SCHEDULE
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 @ 14:17
USER NAME: BMarshall OFFICE LOCATION:

ADDENDA / REVISIONS

NOT TO SCALE

ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	B.MARSHALL
COUNTY	CHECKED BY:	H.BROWN
NEW CASTLE		

REINFORCEMENT SCHEDULE 2

SECTION
PAI
SHEET NO.
52

TEST BORING LOG

TEST BORING SPT-1
PAGE 1 OF 2

NORTHING 511348.577
EASTING 604038.544

CLIENT Delaware Department of Transportation
PROJECT NAME AGR1970F Task 1 BR 1-447 on N449 Taylors Bridge Road
PROJECT NUMBER DEDOT20020
PROJECT LOCATION Odessa, New Castle County, Delaware
DATE STARTED 7/20/21 **COMPLETED** 7/20/21
GROUND ELEVATION 4.0' NAVD88
DRILLING CONTRACTOR CGC Geoservices, LLC
WATER ENCOUNTERED:
DRILLING METHOD Hollow Stem Auger w/ Mud
▽ **DURING DRILLING** 5.0' / Elev -1.0'
DRILLER / HELPER Bill / Kevin / Ceece
▼ **AT END OF DRILLING** 5.7' / Elev -1.7'
LOGGED BY A. Spencer **CHECKED BY** T. Thomson
AFTER DRILLING

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (in.)	BLOW COUNTS	GRAPHIC LOG	STRATA	DESCRIPTION	Depth	Elev.	REMARKS
0					P	5.5" Asphalt	0.4	3.6	
	S-1	8	8		F	GABC	2.0	2.0	
	S-2	20	9-5-4-3			Gray to black fine to medium to coarse SAND, little silt - AASHTO Class: A-2	4.0		Moist
5	S-3	24	2-5-5-6		A	Gray medium to fine to coarse SAND, little silt, trace fine gravel - AASHTO Class: A-2	6.0		Wet
	S-4	24	4-5-3-3			Gray medium to fine SAND, trace silt - AASHTO Class: A-2	8.0	-4.0	Wet on spoon
10	S-5	24	1-WOH-WOH-WOH		B	Black SILT, some organics (Meadow Matt) - AASHTO Class: A-7-5	9.0	-5.0	
						Gray CLAY, trace fine gravel, trace fine to medium sand - AASHTO Class: A-7-5	13.0		
15	S-6	24	1-2-2-1			Gray to tan CLAY - AASHTO Class: A-7-5			
	ST-1	24	REC=100%						
	S-7	24	WOH-WOH-2-2		C	Gray to light blue CLAY, little medium to fine sand - AASHTO Class: A-7-5	17.0		Wet on spoon, brown discoloration
20									
25	S-8	24	WOR-WOH-WOH-1						Seams of coarse sand
							28.0	-24.0	
30	S-9	24	WOR-WOR-WOH-2			Orange to gray fine to medium SAND, little silt - AASHTO Class: A-2			Moist Switched to mud rotary. Water introduced to borehole @30'
							33.0		
35	S-10	20	1-1-2-3		D	Orange to tan medium to fine to coarse SAND, little silt, trace fine gravel - AASHTO Class: A-2			Moist
							38.0		
40	S-11	21	1-2-3-2			Tan to black to orange medium to fine SAND, trace silt - AASHTO Class: A-2			Wet

NOTES:
Elevation estimated from drawing package titled "Preliminary Plans - BR 1-447 On N449 Taylors Bridge Road over Blackbird Creek," prepared by Pennoni Associates Inc.

(Continued Next Page)

TEST BORING LOG

TEST BORING SPT-1
PAGE 2 OF 2

CLIENT Delaware Department of Transportation
PROJECT NAME AGR1970F Task 1 BR 1-447 on N449 Taylors Bridge Road
PROJECT NUMBER DEDOT20020
PROJECT LOCATION Odessa, New Castle County, Delaware

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (in.)	BLOW COUNTS	GRAPHIC LOG	STRATA	DESCRIPTION	Depth	Elev.	REMARKS
40						Tan to black to orange medium to fine SAND, trace silt - AASHTO Class: A-2 *(continued)*			
	S-12	24	12-15-15-12		D	Tan to gray fine to medium to coarse SAND, little fine gravel, trace silt - AASHTO Class: A-2	43.0		Wet
45							48.0		
50	S-13	24	5-14-12-15			Tan medium to fine to coarse SAND, little fine to coarse gravel, trace silt - AASHTO Class: A-2	50.0	-46.0	Moist
						Borehole terminated at 50.0 feet.			

NOTES:
Elevation estimated from drawing package titled "Preliminary Plans - BR 1-447 On N449 Taylors Bridge Road over Blackbird Creek," prepared by Pennoni Associates Inc.

TEST BORING LOG

TEST BORING SPT-2
PAGE 1 OF 2

NORTHING 511616.113
EASTING 604308.955

CLIENT Delaware Department of Transportation
PROJECT NAME AGR1970F Task 1 BR 1-447 on N449 Taylors Bridge Road
PROJECT NUMBER DEDOT20020
PROJECT LOCATION Odessa, New Castle County, Delaware
DATE STARTED 7/21/21 **COMPLETED** 7/21/21
GROUND ELEVATION 5.8' NAVD88
DRILLING CONTRACTOR CGC Geoservices, LLC
WATER ENCOUNTERED:
DRILLING METHOD Hollow Stem Auger w/ Mud
▽ **DURING DRILLING** 7.0' / Elev -1.3'
DRILLER / HELPER Bill / Kevin / Ceece
AT END OF DRILLING Not Measured
LOGGED BY A. Spencer **CHECKED BY** T. Thomson
AFTER DRILLING

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (in.)	BLOW COUNTS	GRAPHIC LOG	STRATA	DESCRIPTION	Depth	Elev.	REMARKS
0					P	20" Asphalt	1.6	4.2	
	S-1	0	REC=0%		F	GABC	2.8	3.0	
	S-2	24	7-9-7-6			Gray fine to medium to coarse SAND, little silt, trace fine gravel - AASHTO Class: A-2	4.0		
5	S-3	17	7-5-5-4			Gray fine to medium SAND, little silt, trace organics - AASHTO Class: A-2	6.0		Moist
	S-4	20	4-5-3-3		A	Gray fine to medium to coarse SAND, little silt, little fine gravel, trace organics - AASHTO Class: A-2	8.0		Wet/saturated
10	S-5	7	4-6-3-1			Gray fine to medium to coarse SAND, little silt, trace fine gravel, trace organics - AASHTO Class: A-2	13.0	-7.3	Moist
15	S-6	16	1-1-1-1			Gray SILT- AASHTO Class: A-7-5	14.0		Organic smell
						Gray fine to medium SILT and SAND - AASHTO Class: A-7-5	18.0		
20	S-7	24	WOH-1-1-2			Black SILT, some organics, trace medium to fine to coarse sand (Meadow Matt) - AASHTO Class: A-7-5			
	ST-1	24	REC=100%						
	S-8	24	WOH-WOH-WOH-2			Dark gray to black SILT, trace organics - AASHTO Class: A-7-5	22.0		
25					B				
30	S-9	24	WOR-WOR-WOH-1			Black SILT, trace fine sand, trace organics - AASHTO Class: A-7-5	28.0		Wet on spoon Switched to mud rotary. Water introduced to borehole @30'
35	S-10	24	WOH-WOH-WOH-1			Black SILT, trace organics - AASHTO Class: A-7-5	34.0		
	ST-2	24	REC=100%						
40	S-11	24	WOR-WOR-WOH-WOH			Black SILT, trace organics - AASHTO Class: A-7-5	38.0		

NOTES:
Elevation estimated from drawing package titled "Preliminary Plans - BR 1-447 On N449 Taylors Bridge Road over Blackbird Creek," prepared by Pennoni Associates Inc.

(Continued Next Page)

TEST BORING LOG

TEST BORING SPT-2
PAGE 2 OF 2

CLIENT Delaware Department of Transportation
PROJECT NAME AGR1970F Task 1 BR 1-447 on N449 Taylors Bridge Road
PROJECT NUMBER DEDOT20020
PROJECT LOCATION Odessa, New Castle County, Delaware

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (in.)	BLOW COUNTS	GRAPHIC LOG	STRATA	DESCRIPTION	Depth	Elev.	REMARKS
40					B	Black SILT, trace organics - AASHTO Class: A-7-5 *(continued)*	43.0	-37.3	
	S-12	18	6-10-11-10			Gray fine to medium to coarse SAND, trace fine gravel, trace silt - AASHTO Class: A-2			
45							48.0		
50	S-13	22	9-9-15-10			Gray medium to fine to coarse SAND, trace fine to coarse gravel, trace silt - AASHTO Class: A-2			
							53.0		
55	S-14	19	10-17-18-11			Gray medium to fine to coarse SAND, trace fine to coarse gravel, trace silt - AASHTO Class: A-2			
							58.0		
60	S-15	19	9-9-8-11		D	Gray to black medium to fine SAND, trace fine gravel, trace silt - AASHTO Class: A-2			
							63.0		
65	S-16	20	16-14-14-16			Gray to black to tan fine to medium to coarse SAND, little silt - AASHTO Class: A-2			
							68.0		
70	S-17	22	11-13-20-26			Tan medium to fine SAND, trace silt - AASHTO Class: A-2			
							73.0		
75	S-18	24	9-9-11-11			Tan to black medium to fine SAND, trace silt, trace shell fragments - AASHTO Class: A-2	75.0	-69.3	Shell fragments
						Borehole terminated at 75.0 feet.			

NOTES:
Elevation estimated from drawing package titled "Preliminary Plans - BR 1-447 On N449 Taylors Bridge Road over Blackbird Creek," prepared by Pennoni Associates Inc.

TEST BORING LOG

TEST BORING SPT-3
PAGE 1 OF 2

NORTHING 511844.282
EASTING 604774.826

CLIENT Delaware Department of Transportation
PROJECT NAME AGR1970F Task 1 BR 1-447 on N449 Taylors Bridge Road
PROJECT NUMBER DEDOT20020
PROJECT LOCATION Odessa, New Castle County, Delaware
DATE STARTED 7/22/21 **COMPLETED** 7/22/21
GROUND ELEVATION 6.5' NAVD88
DRILLING CONTRACTOR CGC Geoservices, LLC
WATER ENCOUNTERED:
DRILLING METHOD Hollow Stem Auger w/ Mud
▽ **DURING DRILLING** 10.0' / Elev -3.5'
DRILLER / HELPER Bill / Kevin / Ceece
AT END OF DRILLING Not measured
LOGGED BY A. Spencer **CHECKED BY** T. Thomson
AFTER DRILLING

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (in.)	BLOW COUNTS	GRAPHIC LOG	STRATA	DESCRIPTION	Depth	Elev.	REMARKS
0					P	15" Asphalt	1.3	5.3	
	S-1	0	REC=0%		F	GABC	2.0	4.5	
	S-2	17	7-7-16-11			Tan medium to fine to coarse SAND, little fine to coarse gravel, trace silt - AASHTO Class: A-2	4.0		
5	S-3	12	6-5-6-6		A	Tan SILT and fine to medium to coarse SAND, trace fine gravel, trace shell fragments - AASHTO Class: A-7-5	6.0	0.0	Moist
	S-4	24	5-5-7-9			Light gray fine gravel sized ROCK FRAGMENTS and shell fragments - AASHTO Class: A-1	6.5		
10	S-5	20	3-1-2-1			Brown SILT, some to and SAND, trace organics - AASHTO Class: A-7-5	8.0		Moist
					B	Gray to brown SILT, organics, trace shell fragments - AASHTO Class: A-7-5	9.3		
15	S-6	10	1-2-2-5			Black SILT, some organics (Meadow Matt) - AASHTO Class: A-7-5	13.0	-6.5	Wet/saturated
					A	Gray fine to medium to coarse SAND, some to and SILT, trace shell fragments - AASHTO Class: A-2	18.0	-11.5	
20	S-7	3	WOH-2-2-2			Gray CLAY, little medium to fine to coarse sand, trace fine gravel - AASHTO Class: A-7-5			
	ST-1	24	REC=100%						Wet on spoon
	S-8	24	WOH-WOH-2-2				22.0		
25					C	Gray CLAY, trace fine sand - AASHTO Class: A-7-5			Discoloration Wet on spoon
30	S-9	22	2-4-5-8			Brown to tan fine to medium SAND, trace silt - AASHTO Class: A-2	28.0	-21.5	
35	S-10	24	7-6-10-11		D	Tan to orange to black medium to fine SAND, trace silt - AASHTO Class: A-2	33.0		
40	S-11	20	8-10-11-15			Tan to orange to black medium to fine SAND, trace silt - AASHTO Class: A-2	38.0		

NOTES:
Elevation estimated from drawing package titled "Preliminary Plans - BR 1-447 On N449 Taylors Bridge Road over Blackbird Creek," prepared by Pennoni Associates Inc.

(Continued Next Page)

TEST BORING LOG

TEST BORING SPT-3
PAGE 2 OF 2

CLIENT Delaware Department of Transportation
PROJECT NAME AGR1970F Task 1 BR 1-447 on N449 Taylors Bridge Road
PROJECT NUMBER DEDOT20020
PROJECT LOCATION Odessa, New Castle County, Delaware

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (in.)	BLOW COUNTS	GRAPHIC LOG	STRATA	DESCRIPTION	Depth	Elev.	REMARKS
40						Tan to orange to black medium to fine SAND, trace silt - AASHTO Class: A-2 *(continued)*			
	S-12	18	8-8-8-9			Tan to orange to black medium to fine to coarse SAND, trace silt - AASHTO Class: A-2	43.0		
45									
50	S-13	22	12-10-7-12			Tan to black medium to fine SAND, trace fine gravel, trace shell fragments, trace silt - AASHTO Class: A-2	48.0		
							53.0		
55	S-14	17	8-9-7-9			Tan medium to fine SAND, trace silt - AASHTO Class: A-2			
					D		58.0		
60	S-15	18	20-14-10-8			Tan to gray fine to medium SAND, little fine gravel, trace silt - AASHTO Class: A-2			Auger chatter
							63.0		
65	S-16	23	9-9-8-10			Tan to gray fine to medium to coarse SAND, trace silt - AASHTO Class: A-2			
							68.0		
70	S-17	24	9-7-8-11			Tan to gray fine to medium to coarse SAND, trace fine gravel, trace silt - AASHTO Class: A-2			
							73.0		
75	S-18		14-10-15-16			Tan medium to fine to coarse SAND, trace fine gravel, trace silt - AASHTO Class: A-2	75.0	-68.5	
						Borehole terminated at 75.0 feet.			

NOTES:
Elevation estimated from drawing package titled "Preliminary Plans - BR 1-447 On N449 Taylors Bridge Road over Blackbird Creek," prepared by Pennoni Associates Inc.

FOR BORING LOCATIONS, SEE CP SHEETS

PENNONI ASSOCIATES INC.
FILE NAME: - 11-447 Taylors Bridge 2023-09-26\39-BORING LOGS
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 14:17
USER NAME: BMarshall

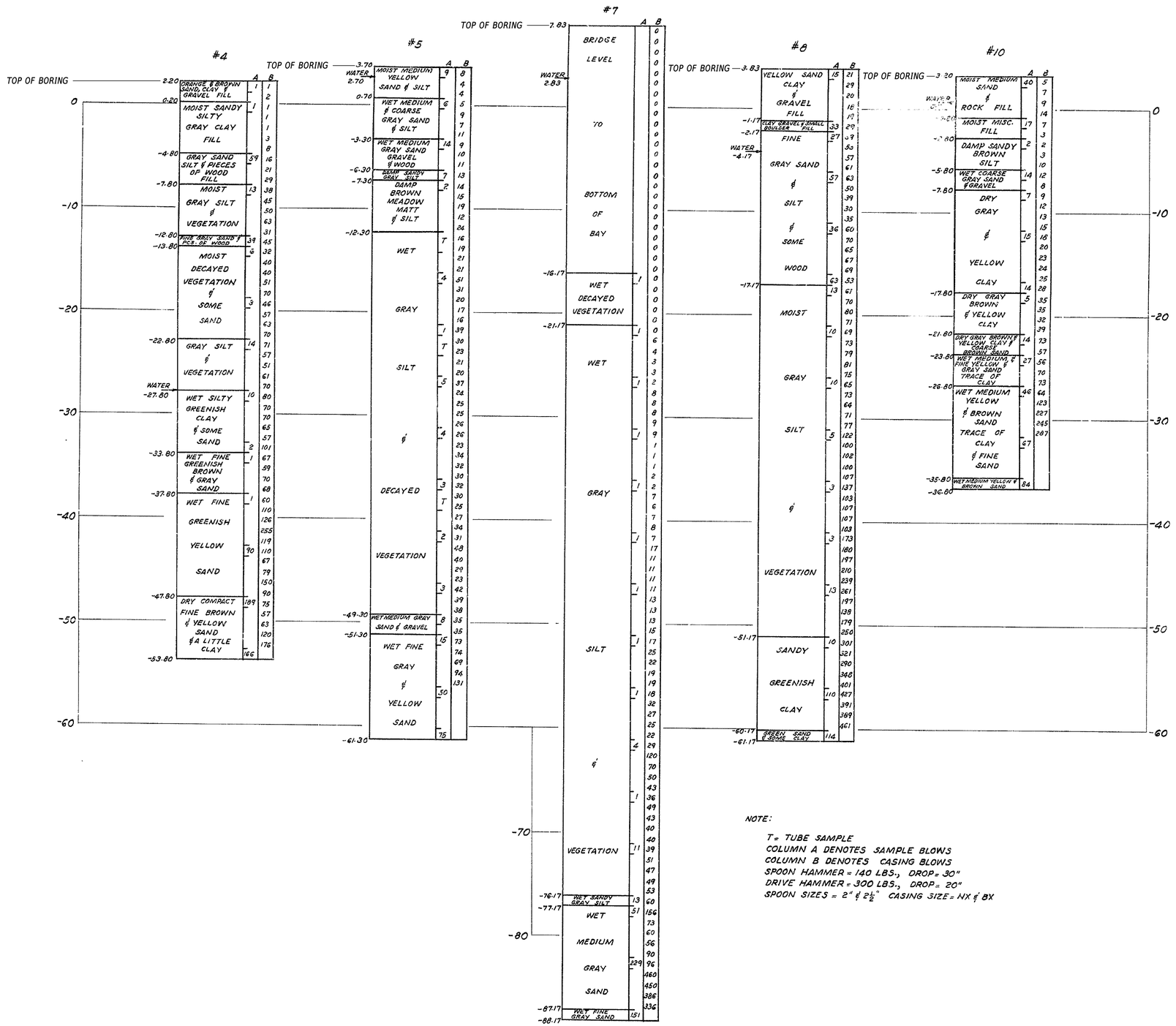
ADDENDA / REVISIONS

NOT TO SCALE

ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447	SECTION
T201907102	DESIGNED BY:	B.MARSHALL	PAI
COUNTY			SHEET NO.
NEW CASTLE	CHECKED BY:	H.BROWN	53

BORING LOGS



NOTE:

T = TUBE SAMPLE
COLUMN A DENOTES SAMPLE BLOWS
COLUMN B DENOTES CASING BLOWS
SPOON HAMMER = 140 LBS., DROP = 30"
DRIVE HAMMER = 300 LBS., DROP = 20"
SPOON SIZES = 2" & 2½" CASING SIZE = NX & BX

NOTE:

ELEVATIONS SHOWN ARE FROM THE ORIGINAL CONTRACT PLANS DATED 1964.
CONVERT ELEVATIONS TO NAVD88.

FOR BORING LOCATIONS, SEE CP SHEETS.

PENNONI ASSOCIATES INC | DATE PLOTTED: 9/16/2025 14:18
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\40-HISTORIC BORING LOGS 1 | USER NAME: BMarshall
ALLPLAN VERSION: Allplan 2023

ADDENDA / REVISIONS

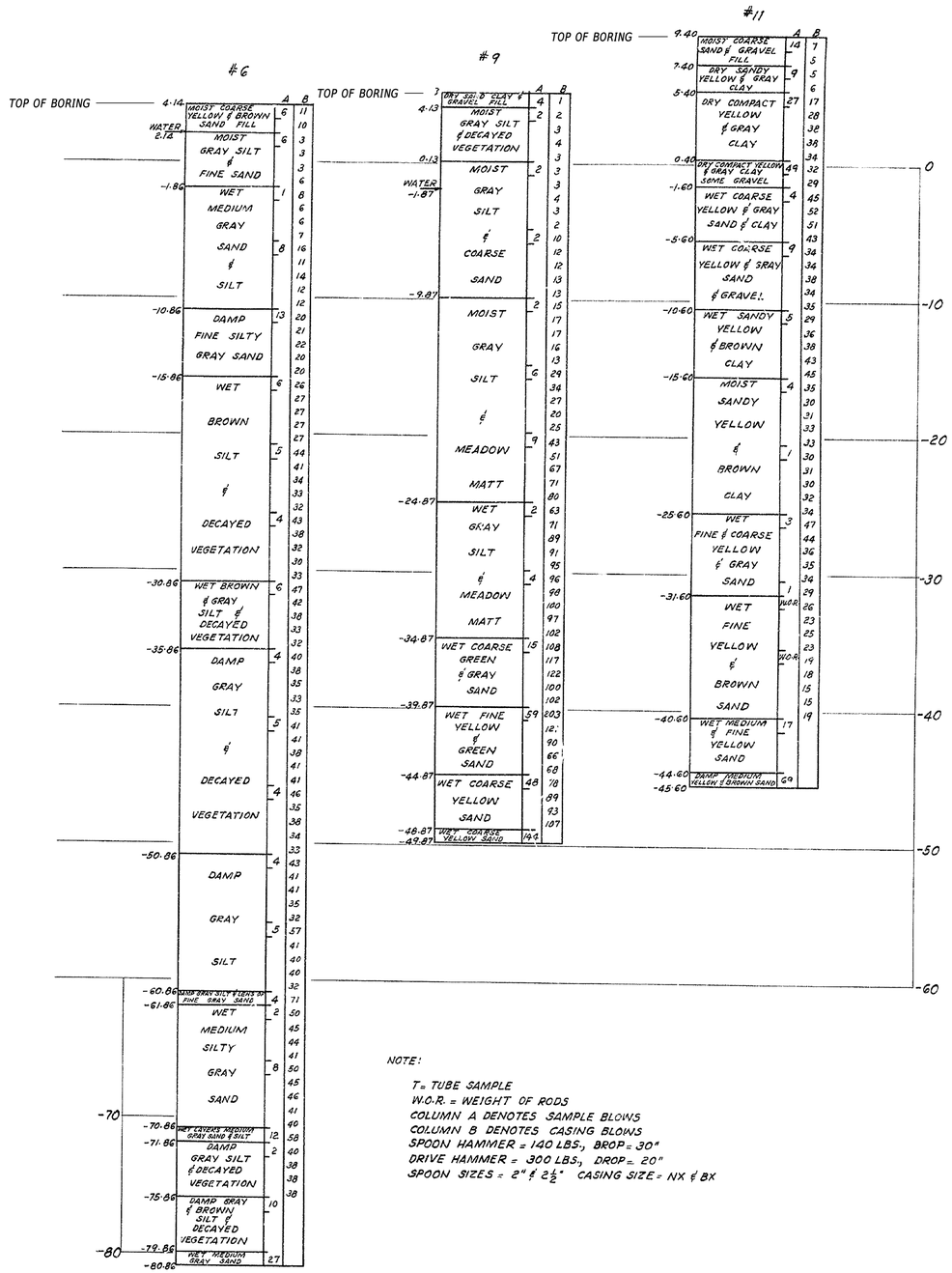
NOT TO SCALE

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	N. DIMARIANO
COUNTY	CHECKED BY:	M. ALESTRA
NEW CASTLE		

HISTORIC BORING LOGS 1

SECTION
PAI
SHEET NO.
54



NOTE:

T = TUBE SAMPLE
W.O.R. = WEIGHT OF RODS
COLUMN A DENOTES SAMPLE BLOWS
COLUMN B DENOTES CASING BLOWS
SPOON HAMMER = 140 LBS., DROP = 30"
DRIVE HAMMER = 300 LBS., DROP = 20"
SPOON SIZES = 2" & 2½" CASING SIZE = NX & BX

NOTE:

ELEVATIONS SHOWN ARE FROM THE ORIGINAL CONTRACT PLANS DATED 1964.
CONVERT ELEVATIONS TO NAVD88.

FOR BORING LOCATIONS, SEE CP SHEETS.

PENNONI ASSOCIATES INC.
FILE NAME: ...\1-447 Taylors Bridge 2023-09-26\41-HISTORIC BORING LOGS 2
ALLPLAN VERSION: Allplan 2023
DATE PLOTTED: 9/16/2025 14:18
USER NAME: BMarshall

ADDENDA / REVISIONS

NOT TO SCALE

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	N. DIMARIANO
COUNTY	CHECKED BY:	M. ALESTRA
NEW CASTLE		

HISTORIC BORING LOGS 2

SECTION
PAI
SHEET NO.
55

ENVIRONMENTAL COMPLIANCE NOTES

1. GENERAL NOTES:

   A. THE PURPOSE OF THIS SHEET IS TO IDENTIFY THOSE ITEMS ASSOCIATED WITH ENVIRONMENTAL COMPLIANCE. IMPACT CALCULATIONS ARE FOR THE AGENCY PERMIT REPORTING PURPOSES ONLY AND ARE NOT TO BE USED FOR BIDDING PURPOSES.

   B. IF A DEPARTURE FROM THE APPROVED PLANS (WHICH WOULD AFFECT ANY NATURAL AND/OR CULTURAL RESOURCES) IS NECESSARY, CONTACT THE ENVIRONMENTAL STUDIES SECTION AT (302) 760-2264 OR DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV) TO ALLOW FOR COORDINATION WITH THE APPROPRIATE RESOURCE AGENCIES AND APPROVAL.

   C. USE OF THIS SHEET DOES NOT ALLEVIATE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE ENVIRONMENTAL STATEMENT AND PERMITS.

2. NATURAL RESOURCE ISSUES:

   A. PERMIT REQUIREMENTS/APPROVALS *:
   U.S. ARMY CORPS OF ENGINEERS (COE): NATIONWIDE PERMIT NWP 23 WITH PRECONSTRUCTION NOTIFICATION (PCN)
   DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): WETLANDS & SUBAQUEOUS LANDS PERMIT
   DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): ISSUED NWP 23
   NCC DEPT. OF LAND USE (NCC):
   US COAST GUARD (USCG): N/A

   * THE PERMITS/APPROVALS LISTED ARE THOSE REQUIRED FOR THIS PROJECT. THE ENVIRONMENTAL STUDIES SECTION IS RESPONSIBLE FOR COORDINATING AND/OR OBTAINING THESE APPROVALS.
   ** THE CONTRACTOR MUST ENSURE THAT THESE PERMITS/APPROVALS ARE IN THEIR POSSESSION PRIOR TO BEGINNING CONSTRUCTION IN THE PERMITTED AREA(S) AND ENSURE THEY ARE DISPLAYED ON-SITE DURING THE ENTIRE CONSTRUCTION PERIOD.
   *** USCG Note: PRIOR TO BRIDGE CONSTRUCTION, THE BRIDGE OWNER (DELDOT) SHOULD SUBMIT A BRIDGE MAINTENANCE PROJECT PLAN TO THE USCG OFFICE AT LEAST 30 DAYS (PREFERABLY 90 DAYS) PRIOR TO WORK COMMENCING ON OR OVER THE NAVIGABLE WATERWAY.

   AT NO TIME DURING THE PROJECT WILL THE WATERWAY BE CLOSED TO NAVIGATION WITHOUT THE PRIOR NOTIFICATION AND APPROVAL OF THE COAST GUARD. THE BRIDGE OWNER OR CONTRACTOR IS REQUIRED TO MAINTAIN CLOSE AND REGULAR CONTACT WITH COAST GUARD SECTOR DELAWARE AT D05-SMB-SECDELBAY-WWM@USCG.MIL TO KEEP INFORMED OF ACTIVITIES ON THE WATERWAY.

   B. CONSTRUCTION RESTRICTIONS:
   FISHERIES-BLACKBIRD CREEK PROVIDES SPAWNING HABITAT FOR ANADROMOUS SPECIES INCLUDING BLUEBACK HERRING (ALOSA AESTIVALIS) AND ALEWIFE (ALOSA PSEUDOHARENGUS), COLLECTIVELY REFERRED TO AS "RIVER HERRING," AS WELL AS POTENTIALLY AMERICAN SHAD (ALOSA SAPIDISSIMA). TO PROTECT THESE SPECIES DURING SPAWNING AND MIGRATORY ACTIVITIES, A TIME OF YEAR RESTRICTION OF MARCH 1ST TO JUNE 30TH IS REQUESTED DURING WHICH NO IN-WATER WORK SHOULD BE PERFORMED.

   FISHERIES- USACE NATIONWIDE PERMIT REGIONAL GENERAL CONDITION G-6(8), IN ORDER TO PROTECT DIADROMOUS FISH MIGRATIONS, SPAWNING ACTIVITIES, AND EFH, IN-WATER WORK SHALL BE AVOIDED FROM MARCH 1 TO JUNE 30 IN ALL WATERS. WORK WITHIN COFFERDAMS THAT FULLY ENCLOSE AND DEWATER THE PROJECT AREA CAN PROCEED ANY TIME DURING THE YEAR PROVIDED THE COFFERDAMS ARE INSTALLED OR REMOVED OUTSIDE OF THE SEASONAL WORK RESTRICTION AND DO NOT PRECLUDE THE FREE MOVEMENT OF MIGRATING OR SPAWNING AQUATIC SPECIES TO ENSURE COMPLIANCE WITH NWP GENERAL CONDITION 2 AND 3.

   MIGRATORY BIRDS - BRIDGE 1-447 HAS NOT BEEN SURVEYED FOR THE PRESENCE OF NESTING MIGRATORY BIRDS, WHICH ARE PROTECTED BY TITLE 7, DELAWARE CODE, CHAPTER 7, SECTIONS 734 AND 735. IF WORK IS PROPOSED DURING THE BREEDING SEASON (APRIL 15 – AUGUST 1), A SURVEY SHOULD BE COMPLETED PRIOR TO THE START OF WORK TO DETERMINE IF ONE OR MORE PAIRS OF BARN SWALLOW (HIRUNDO RUSTICA) AND/OR EASTERN PHOEBE (SAYORNIS PHOEBE) NESTS ARE PRESENT UNDER THE BRIDGE. IF A SURVEY DETECTS NESTING ACTIVITY, THE FOLLOWING STEPS SHOULD BE TAKEN TO AVOID NEST DESTRUCTION AND TAKE, WHICH IS A VIOLATION OF STATE LAW:

      1. PERFORM CONSTRUCTION ACTIVITIES FROM AUGUST 1 TO APRIL 15.

      2. IF CONSTRUCTION CANNOT BE PERFORMED IN THIS TIME PERIOD, A DETERRENT SUCH AS MESH NETTING SHOULD BE USED TO BLOCK ACCESS TO NESTING SITES ON THE UNDERSIDE OF THE BRIDGE(S). THE MATERIAL WOULD NEED TO BE IN PLACE NO LATER THAN APRIL 15, THE UNDERSIDE OF THE BRIDGE(S) WOULD NEED TO BE FULLY ENCAPSULATED, AND THE MATERIAL SHOULD BE LEFT IN PLACE UNTIL CONSTRUCTION BEGINS. IF ACTIVE NESTS ARE DISCOVERED DURING THE COURSE OF WORK, ACTIVITIES SHOULD BE HALTED IMMEDIATELY AND SCRP CONTACTED FOR FURTHER GUIDANCE.

   MARSH NESTING BIRDS - THE AREA SURROUNDING THE PROJECT SITE IS MAPPED AS QUALITY MARSH HABITAT, AND IT HAS THE POTENTIAL TO SUPPORT NESTING MARSH BIRDS. DNREC REQUESTS A TIME-OF-YEAR RESTRICTION FOR WORK CONDUCTED IN THE SURROUND MARSH FROM APRIL 1 TO JULY 31 TO PROTECT MARSH NESTING BIRDS AND THEIR YOUNG.

   BLACKBIRD CREEK IS USED BY LARGE NUMBERS OF AMERICAN EEL (ANGUILLA ROSTRATA). DNREC REQUESTS THAT IN-STREAM WORK NOT TAKE PLACE FROM MARCH 1ST TO MAY 15TH TO ALLOW UPSTREAM PASSAGE OF ELVERS (YOUNG EELS).

   NO IN-WATER WORK FROM MARCH 1ST TO JUNE 30TH.

   - FOR NON-TIDAL LOCATIONS, NO WORK CAN BE DONE BELOW THE ORDINARY HIGH WATER (OHW) LINE.

   - FOR TIDAL LOCATIONS, NO WORK CAN BE DONE BELOW THE MEAN HIGH WATER TIDE LINE (MHWL).

   **PLEASE NOTE THAT TIDAL LINES (HTL, MHW, MLW) VARY BASED ON DIFFERENT NATURAL OCCURRENCES, THEREFORE THE LINES SHOWN ON PLANS MAY DIFFER FROM ONSITE CONDITIONS. SHOULD YOU HAVE QUESTIONS ABOUT WHERE THE "MHW" TIDE LINE IS, PLEASE CONTACT THE ENVIRONMENTAL STUDIES OFFICE AT DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV.

   THIS PROJECT WILL REQUIRE A "SOFT START" FOR WHEN DRIVING PILES. IF PILE DRIVING IS OCCURRING DURING A TIME OF YEAR WHEN ESA-LISTED SPECIES MAY BE PRESENT, AND THE ANTICIPATED NOISE IS ABOVE THE BEHAVIORAL NOISE THRESHOLD, A "SOFT START" IS REQUIRED TO ALLOW ANIMALS AN OPPORTUNITY TO LEAVE THE PROJECT VICINITY BEFORE SOUND PRESSURE LEVELS INCREASE.

   - USE A SOFT START EACH DAY OF PILE DRIVING, AFTER A BREAK OF 30 MINUTES OR MORE, AND IF ANY INCREASE IN PILE INSTALLATION OR REMOVAL INTENSITY IS REQUIRED. BUILD UP POWER SLOWLY FROM A LOW ENERGY START-UP OVER A 20-MINUTE PERIOD TO WARN FISH TO LEAVE THE VICINITY. THIS BUILDUP SHALL OCCUR IN UNIFORM STAGES TO PROVIDE A CONSTANT INCREASE IN OUTPUT

3. CULTURAL RESOURCE ISSUES:

   A. SHPO HAS CONCURRED WITH DELDOT'S ARCHAEOLOGICAL INVESTIGATION AND FINDINGS FOR THE PROJECT (09/13/2022).
   B. SHPO HAS CONCURRED WITH DELDOT'S FINDING OF NO HISTORIC PROPERTIES AFFECTED (TO BE ISSUED ON/BY 12/10/2022).

ENVIRONMENTAL COMPLIANCE NOTES (CONT'D)

4. PROTECTION OF RESOURCES:

   A. KEEP CLEARING IN WETLAND AREAS TO A MINIMUM ABSOLUTELY NECESSARY FOR CONSTRUCTION ACCESS. SUPPORT ALL EQUIPMENT TRAVERSING WETLANDS AND SUBAQUEOUS LAND ON MATS. PAYMENT FOR MATS WILL BE MADE UNDER ITEM 621500 - TEMPORARY TIMBER MAT. IN WETLAND AREAS THAT ARE CLEARED, NO GRUBBING EXCEPT WHERE NECESSARY TO CONSTRUCT PROJECT COMPONENTS SUCH AS FOUNDATIONS AND RIPRAP PROTECTION IS PERMITTED. CUT VEGETATION FLUSH WITH THE GROUND (I.E. NO DISTURBANCE OF THE ROOT MAT). RESTORE TEMPORARILY DISTURBED WETLAND AREAS TO GRADE AND SEED WITH ITEM 908515 - TEMPORARY GRASS SEEDING, WET GROUND.

   B. USE SILT FENCE OR CONSTRUCTION SAFETY FENCE ALONG THE LIMITS OF CONSTRUCTION IN ALL AREAS WHERE WATER WETLANDS ARE BEING IMPACTED (AS SHOWN ON ENVIRONMENTAL COMPLIANCE SHEETS), AND ALSO IN ANY AREA WHERE WATER/WETLANDS EXIST WITHIN 20 FEET OF THE LIMIT OF CONSTRUCTION (AS SHOWN ON CONSTRUCTION PLAN SHEETS). ANY CONTRACTOR ACCESS BEYOND THE LIMIT OF CONSTRUCTION IS STRICTLY PROHIBITED.

   C. USE SANDBAGS OR COMPOST FILTER LOG (CFL) TO SECURE SILT FENCE AT AREAS ADJACENT TO WOODED UPLANDS/ ALL WETLANDS IN LIEU OF TRENCHING UNLESS PROPER EROSION AND SEDIMENT CONTROL CANNOT BE MAINTAINED. REMOVE SANDBAGS AND CFLS (AND CONTENTS) IN THEIR ENTIRETY WHEN NO LONGER NEEDED. SANDBAGS/CFLS USED TO SECURE THE SILT FENCE IS INCIDENTAL TO ITEM 905001 - SILT FENCE. THE ENVIRONMENTAL STUDIES SECTION (302-760-2259 OR DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV) CAN PROVIDE FURTHER GUIDANCE REGARDING THIS METHOD OF INSTALLATION.

   D. CLEARLY MARK ALL TREES TO BE REMOVED WITH PAINT PRIOR TO THE EROSION AND SEDIMENT CONTROL MEETING.

5. STREAM RESTORATION AND RIPRAP TREATMENT:

   A. FOLLOW THE SPECIAL PROVISION FOR ITEM 707021 - CHANNEL BED FILL IN REGARDS TO THE SALVAGING OF ON-SITE NATURAL STREAM BOTTOM MATERIAL OR THE FURNISHING OF OFFSITE MATERIAL. IF USING CHANNEL BED FILL, USE HEAVY GRADATION AS IT WILL WASH AWAY IF YOU USE THE LIGHT GRADATION OF CBF. IF SUFFICIENT SOURCES FOR CHANNEL BED FILL DO NOT EXIST ON-SITE, ANY NEW MATERIAL MUST CONFORM TO THE REQUIREMENTS OF ITEM 707021 - CHANNEL BED FILL. RECESS ALL RIPRAP IN THE CHANNEL BOTTOM (I.E. BELOW THE WATER LINE) ONE FOOT BELOW STREAM BED ELEVATION AND CHOKE WITH BORROW TYPE 'B' SO THAT ALL OF THE VOIDS IN THE RIPRAP ARE FILLED WITH SPECIFIED MATERIAL. PAYMENT UNDER ITEM 209002 - BORROW, TYPE B. COVER THE RIPRAP WITH A MINIMUM OF 12" CHANNEL BED FILL. MATCH THE FINAL CHANNEL ELEVATIONS WITH EXISTING ELEVATIONS AT THE UPSTREAM AND DOWNSTREAM PROJECT LIMITS. THROUGH THE STRUCTURE, ELEVATIONS WILL BE AS NOTED ON THE PLANS. PAYMENT UNDER ITEM 707021 -CHANNEL BED FILL.

   B. RESTORE OTHER AREAS OF THE CHANNEL BOTTOM AFFECTED BY CONSTRUCTION (INCLUDING, BUT NOT LIMITED TO, THE LOCATION OF SUMP PITS, STABILIZED OUTFALLS, TEMPORARY PIPES AND/OR SANDBAG DIKES AND DIVERSIONS) TO EXISTING CONDITIONS. FILL ANY CAVITIES OR SCOUR HOLES RESULTING FROM CONSTRUCTION ACTIVITIES WITH CHANNEL BED FILL. PAYMENT UNDER ITEM 707021 - CHANNEL BED FILL.

   C. WHEN ALL EROSION AND SEDIMENT CONTROL MEASURES ARE REMOVED AND THE STREAM RETURNS TO ITS NATURAL FLOW CONDITIONS, THE FLOW MUST REMAIN ABOVE GROUND AND ABOVE THE RIPRAP (I.E. THE FLOW CANNOT BE "LOST" IN THE RIPRAP OR BENEATH THE STRUCTURE). IF THIS IS NOT ACHIEVED, THE CONTRACTOR WILL BE REQUIRED TO TAKE CORRECTIVE ACTION AT THE CONTRACTOR'S EXPENSE.

   D. CHOKE ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, WITH DELAWARE #57 STONE. PLACE JUST ENOUGH CHOKE MATERIAL TO PREVENT THE LOSS OF CHANNEL BED FILL OR TOPSOIL (DEPENDING ON LOCATION AS INDICATED BELOW) THROUGH THE RIPRAP.
      1. BENEATH THE BRIDGE: AFTER PLACING ITEM 302005 - DELAWARE #57 STONE, PERFORM A FINAL CHOKE OF CHANNEL BED FILL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. PAYMENT UNDER ITEM 707021 - CHANNEL BED FILL. DELAWARE #57 STONE IS INCIDENTAL TO THE RIPRAP ITEM.
      2. ALL OTHER LOCATIONS: FINISH FILLING THE VOIDS WITH TOPSOIL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. PLACE AN ADDITIONAL 6-INCH TOPSOIL LAYER ON TOP OF THE RIPRAP. SLOPE SEEDING WILL BE DONE WITH ITEM 908019 - STREAMBANK SEED MIX, SEEDING. FOLLOWING THE SEEDING OPERATION, INSTALL ITEM 908020 - EROSION CONTROL BLANKET (ECB) MULCH, OR OTHER BLANKET AS SHOWN ON THE PLANS. ECB AT TOE OF SLOPE CAN BE EITHER TRENCHED IN OR STAPLED AT 6" ON CENTER. COMPLETE ALL WORK, STARTING WITH THE INITIAL CHOKING WITH TOPSOIL THROUGH THE SEEDING AND MULCHING PRIOR TO ANY RAIN EVENT. DELAWARE #57 STONE IS INCIDENTAL TO THE RIPRAP ITEM. ALL OTHER ITEMS WILL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

6. THE CONTRACTOR SHALL ACCESS THE STREAM FROM THE STAGING AREAS AND ACCESS ROADS ONLY. CONTRACTOR ACCESS BEYOND THE LOC (AS DEFINED ON THESE PLANS) IS STRICTLY PROHIBITED. ANY CHANGE IN THE LOC MUST BE COORDINATED WITH THE DELDOT ENVIRONMENTAL STUDIES SECTION.

PROJECT AREA DELINEATED BY PENNONI ON 06/26/2020 IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (1987) AND THE EASTERN MOUNTAINS AND PIEDMONT SUPPLEMENT (2012).
ORIGINAL SHEET PREPARED BY PENNONI ON 01/22/2021. SHEET LAST UPDATED ON 12/02/2022.

WETLAND CREATION AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
1-E-01	WETLAND CREATION	797.74	0.0183	19.71	USACE/DNREC
1-E-02	WETLAND CREATION	4833.64	0.1110	119.41	USACE/DNREC
2-E-03	WETLAND CREATION	5078.79	0.1166	125.46	USACE/DNREC
2-E-04	WETLAND CREATION	359.54	0.0083	8.88	USACE/DNREC
2-E-05	WETLAND CREATION	2693.09	0.0618	66.53	USACE/DNREC
2-E-06	WETLAND CREATION	173.36	0.0040	4.28	USACE/DNREC
2-E-07	WETLAND CREATION	1256.24	0.0288	31.03	USACE/DNREC
3-E-08	WETLAND CREATION	4638.83	0.1065	114.60	USACE/DNREC
3-E-09	WETLAND CREATION	2381.20	0.0547	58.82	USACE/DNREC
3-E-10	WETLAND CREATION	965.55	0.0222	23.85	USACE/DNREC
PROJECT TOTALS		23177.99	0.5321	572.58	USACE/DNREC

WETLAND ENHANCEMENT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
1-WE-01	WETLAND ENHANCEMENT	6999.63	0.1607	172.92	USACE/DNREC
2-WE-02	WETLAND ENHANCEMENT	8386.61	0.1925	207.18	USACE/DNREC
2-WE-03	WETLAND ENHANCEMENT	3636.65	0.0835	89.84	USACE/DNREC
3-WE-04	WETLAND ENHANCEMENT	6041.62	0.1387	149.25	USACE/DNREC
3-WE-05	WETLAND ENHANCEMENT	241.65	0.0055	5.97	USACE/DNREC
TOTAL FOR THIS SHEET		25306.16	0.5809	625.16	USACE/DNREC

PERMANENT WETLAND IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	IMPACT/LOSS
1-W-01	ROADWAY/EMBANKMENT	35.33	0.0008	2.62	USACE/DNREC	LOSS
1-W-02	ROADWAY/EMBANKMENT	163.17	0.0037	12.09	USACE/DNREC	LOSS
1-W-03	ROADWAY/RETAINING WALL	1888.95	0.0434	139.92	USACE/DNREC	LOSS
2-W-04	ROADWAY/RETAINING WALL	962.39	0.0221	71.29	USACE/DNREC	LOSS
2-W-05	ROADWAY/RET. WALL/RIPRAP	731.93	0.0168	54.22	USACE/DNREC	LOSS
2-W-06	RIPRAP	312.34	0.0072	23.14	USACE/DNREC	LOSS
2-W-07	ROADWAY/RET. WALL/RIPRAP	881.52	0.0202	65.30	USACE/DNREC	LOSS
2-W-08	RIPRAP	97.00	0.0022	7.19	USACE/DNREC	LOSS
2-W-09	AERIAL COVERAGE (BR. DECK)	1003.17	0.0230	74.31	DNREC	IMPACT
2-W-10	RIPRAP	15.55	0.0004	1.15	USACE/DNREC	LOSS
2-W-11	RIPRAP	12.12	0.0003	0.90	USACE/DNREC	LOSS
3-W-12	AERIAL COVERAGE (BR. DECK)	325.49	0.0075	24.11	DNREC	IMPACT
2-W-13	AERIAL COVERAGE (BR. DECK)	1004.14	0.0231	74.38	DNREC	IMPACT
3-W-14	ROADWAY/EMBANKMENT	50.65	0.0012	3.75	USACE/DNREC	LOSS
PROJECT TOTALS		5150.94	0.1182	381.55	USACE/DNREC	LOSS

TEMPORARY WETLAND IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
1-WT-01	WORK AREA / E&S CONTROLS	726.58	0.0167	53.82	USACE/DNREC
1-WT-02	WORK AREA / E&S CONTROLS	3858.79	0.0886	285.84	USACE/DNREC
1-WT-03	WORK AREA / E&S CONTROLS	1744.35	0.0400	129.21	USACE/DNREC
2-WT-04	WORK AREA / E&S CONTROLS	7531.31	0.1729	557.87	USACE/DNREC
2-WT-05	WORK AREA / E&S CONTROLS	2899.90	0.0666	214.81	USACE/DNREC
2-WT-06	WORK AREA / E&S CONTROLS	4379.58	0.1005	324.41	USACE/DNREC
2-WT-07	WORK AREA / E&S CONTROLS	2204.18	0.0506	163.27	USACE/DNREC
2-WT-08	WORK AREA / E&S CONTROLS	350.50	0.0080	25.96	USACE/DNREC
3-WT-09	WORK AREA / E&S CONTROLS	4770.15	0.1095	353.34	USACE/DNREC
3-WT-10	WORK AREA / E&S CONTROLS	8491.04	0.1949	628.97	USACE/DNREC
PROJECT TOTALS		36956.38	0.8484	2737.51	USACE/DNREC

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
2-OT-01	WORK AREA / E&S CONTROLS	11094.36	0.2547	274.07	USACE/DNREC
2-OT-02	WORK AREA / E&S CONTROLS	6017.63	0.1381	148.66	USACE/DNREC
PROJECT TOTALS		17111.99	0.3928	422.73	USACE/DNREC

PERMANENT OPEN WATER IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	IMPACT/LOSS
2-O-01	PIER/RIPRAP	747.77	0.0172	55.39	USACE/DNREC	IMPACT
2-O-02	PIER/RIPRAP	829.33	0.0190	61.43	USACE/DNREC	IMPACT
2-O-03	WORK AREA/E&S CONT.	20.93	0.0005	1.55	USACE/DNREC	IMPACT
2-O-04	WORK AREA/E&S CONT.	1266.16	0.0291	93.79	USACE/DNREC	IMPACT
2-O-05	WORK AREA/E&S CONT.	959.53	0.0220	71.08	USACE/DNREC	IMPACT
PROJECT TOTALS		3823.73	0.0878	283.24	USACE/DNREC	IMPACT

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTABLE$
PLOT DRIVER: $PTDRIVE$
DATE PLOTTED: $DATE$ @ $TIME$
USER NAME: $USER$
OFFICE LOCATION: $OFFICE$

ADDENDA / REVISIONS

NOT TO SCALE

ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE
RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	E. HARASTY
COUNTY	CHECKED BY:	J. GRAUPENSPERGER
NEW CASTLE		

ENVIRONMENTAL COMPLIANCE NOTES

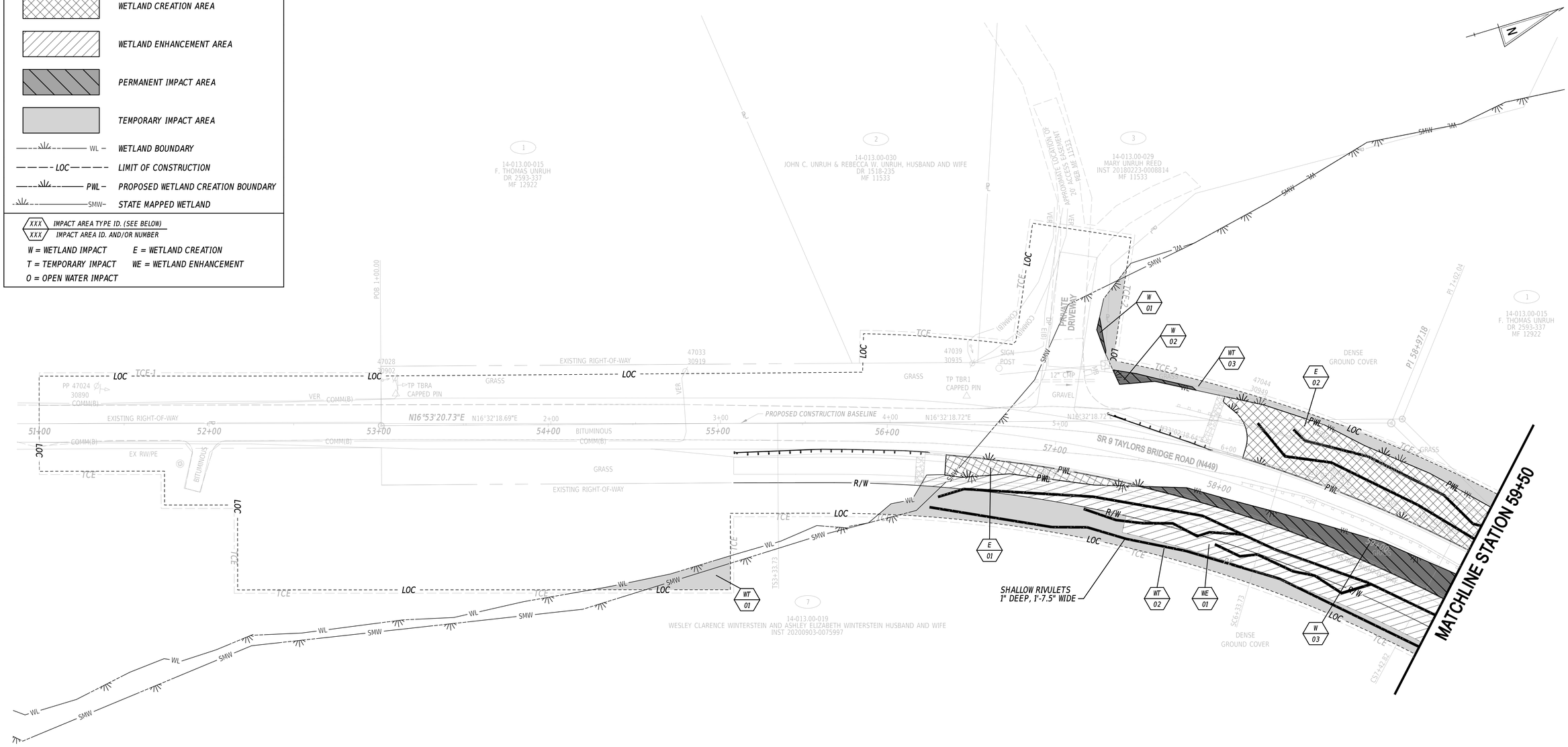
SECTION: PAI
SHEET NO.: 56

LEGEND

- WETLAND CREATION AREA
- WETLAND ENHANCEMENT AREA
- PERMANENT IMPACT AREA
- TEMPORARY IMPACT AREA
- WL – WETLAND BOUNDARY
- LOC – LIMIT OF CONSTRUCTION
- PWL – PROPOSED WETLAND CREATION BOUNDARY
- SMW – STATE MAPPED WETLAND

XXX / XXX — IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER

W = WETLAND IMPACT
E = WETLAND CREATION
T = TEMPORARY IMPACT
WE = WETLAND ENHANCEMENT
O = OPEN WATER IMPACT



TEMPORARY WETLAND IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
1-WT-01	WORK AREA / E&S CONTROLS	726.58	0.0167	53.82	USACE/DNREC
1-WT-02	WORK AREA / E&S CONTROLS	3858.79	0.0886	285.84	USACE/DNREC
1-WT-03	WORK AREA / E&S CONTROLS	1744.35	0.0400	129.21	USACE/DNREC
TOTAL FOR THIS SHEET		6329.72	0.1453	468.87	USACE/DNREC

PERMANENT WETLAND IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	IMPACT/LOSS
1-W-01	ROADWAY/EMBANKMENT	35.33	0.0008	2.62	USACE/DNREC	LOSS
1-W-02	ROADWAY/EMBANKMENT	163.17	0.0037	12.09	USACE/DNREC	LOSS
1-W-03	ROADWAY/RETAINING WALL	1888.95	0.0434	139.92	USACE/DNREC	LOSS
TOTAL FOR THIS SHEET		2087.45	0.0479	154.63	USACE/DNREC	LOSS

WETLAND CREATION AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
1-E-01	WETLAND CREATION	797.74	0.0183	19.71	USACE/DNREC
1-E-02	WETLAND CREATION	4833.64	0.1110	119.41	USACE/DNREC
TOTAL FOR THIS SHEET		5631.38	0.1293	139.12	USACE/DNREC

WETLAND ENHANCEMENT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
1-WE-01	WETLAND ENHANCEMENT	6999.63	0.1607	172.92	USACE/DNREC
TOTAL FOR THIS SHEET		6999.63	0.1607	172.92	USACE/DNREC

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$$
PLOT DRIVER: $PTDRIV$$
DATE PLOTTED: 24-OCT-2025 @ 11:31
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	T201907102
COUNTY	NEW CASTLE
BRIDGE NO.	1-447
DESIGNED BY:	E. HARASTY
CHECKED BY:	J. GRAUPENSPERGER

ENVIRONMENTAL COMPLIANCE PLAN

EC-01
SECTION PAI
SHEET NO. 57

TEMPORARY WETLAND IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
2-WT-04	WORK AREA / E&S CONTROLS	7531.31	0.1729	557.87	USACE/DNREC
2-WT-05	WORK AREA / E&S CONTROLS	2899.90	0.0666	214.81	USACE/DNREC
2-WT-06	WORK AREA / E&S CONTROLS	4379.58	0.1005	324.41	USACE/DNREC
2-WT-07	WORK AREA / E&S CONTROLS	2204.18	0.0506	163.27	USACE/DNREC
2-WT-08	WORK AREA / E&S CONTROLS	350.50	0.0080	25.96	USACE/DNREC
TOTAL FOR THIS SHEET		17365.47	0.3987	1286.33	USACE/DNREC

PERMANENT WETLAND IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	IMPACT/LOSS
2-W-04	ROADWAY/RETAINING WALL	962.39	0.0221	71.29	USACE/DNREC	LOSS
2-W-05	ROADWAY/RET. WALL/RIPRAP	731.93	0.0168	54.22	USACE/DNREC	LOSS
2-W-06	RIPRAP	312.34	0.0072	23.14	USACE/DNREC	LOSS
2-W-07	ROADWAY/RET. WALL/RIPRAP	881.52	0.0202	65.30	USACE/DNREC	LOSS
2-W-08	RIPRAP	97.00	0.0022	7.19	USACE/DNREC	LOSS
2-W-09 *	AERIAL COVERAGE (BR. DECK)	1003.17	0.0230	74.31	DNREC	IMPACT
2-W-10	RIPRAP	15.55	0.0004	1.15	USACE/DNREC	LOSS
2-W-11	RIPRAP	12.12	0.0003	0.90	USACE/DNREC	LOSS
2-W-12 *	AERIAL COVERAGE (BR. DECK)	325.49	0.0075	24.11	DNREC	IMPACT
2-W-13 *	AERIAL COVERAGE (BR. DECK)	1004.14	0.0231	74.38	DNREC	IMPACT
TOTAL FOR THIS SHEET		3012.85	0.0692	223.17	USACE/DNREC	LOSS

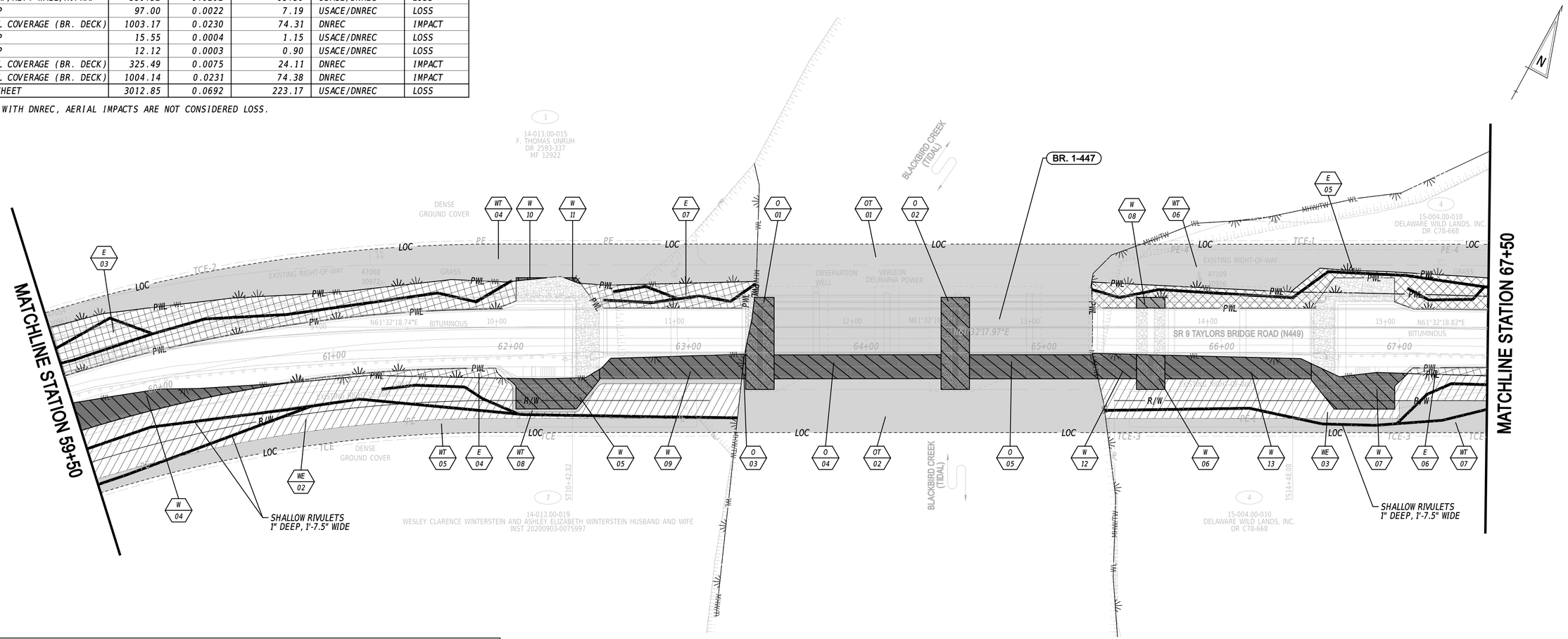
*PER COORDINATION WITH DNREC, AERIAL IMPACTS ARE NOT CONSIDERED LOSS.

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
2-OT-01	WORK AREA / E&S CONTROLS	11094.36	0.2547	821.80	USACE/DNREC
2-OT-02	WORK AREA / E&S CONTROLS	6017.63	0.1381	445.75	USACE/DNREC
TOTAL FOR THIS SHEET		17111.99	0.3928	1267.55	USACE/DNREC

PERMANENT OPEN WATER IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	IMPACT/LOSS
2-O-01	PIER/RIPRAP	747.77	0.0172	55.39	USACE/DNREC	IMPACT
2-O-02	PIER/RIPRAP	829.33	0.0190	61.43	USACE/DNREC	IMPACT
2-O-03	DNREC AERIAL COVERAGE	20.93	0.0005	1.55	DNREC	IMPACT
2-O-04	DNREC AERIAL COVERAGE	1266.16	0.0291	93.79	DNREC	IMPACT
2-O-05	DNREC AERIAL COVERAGE	959.53	0.0220	71.08	DNREC	IMPACT
TOTAL FOR THIS SHEET		3823.73	0.0878	283.24	USACE/DNREC	IMPACT



LEGEND

- WETLAND CREATION AREA
- WETLAND ENHANCEMENT AREA
- PERMANENT IMPACT AREA
- TEMPORARY IMPACT AREA
- TOP OF BANK
- WL – WETLAND BOUNDARY
- LOC – LIMIT OF CONSTRUCTION
- PWL – PROPOSED WETLAND CREATION BOUNDARY
- SMW – STATE MAPPED WETLAND
- XXX / XXX – IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER
- W = WETLAND IMPACT
- T = TEMPORARY IMPACT
- O = OPEN WATER IMPACT
- E = WETLAND CREATION
- WE = WETLAND ENHANCEMENT

WETLAND CREATION AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
2-E-03	WETLAND CREATION	5078.79	0.1166	125.46	USACE/DNREC
2-E-04	WETLAND CREATION	359.54	0.0083	8.88	USACE/DNREC
2-E-05	WETLAND CREATION	2693.09	0.0618	66.53	USACE/DNREC
2-E-06	WETLAND CREATION	173.36	0.0040	4.28	USACE/DNREC
2-E-07	WETLAND CREATION	1256.24	0.0288	31.03	USACE/DNREC
TOTAL FOR THIS SHEET		9561.02	0.2195	236.19	USACE/DNREC

WETLAND ENHANCEMENT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
2-WE-02	WETLAND ENHANCEMENT	8386.61	0.1925	207.18	USACE/DNREC
2-WE-03	WETLAND ENHANCEMENT	3636.65	0.0835	89.84	USACE/DNREC
TOTAL FOR THIS SHEET		12023.26	0.2760	297.02	USACE/DNREC

Pennoni

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT T201907102	BRIDGE NO.	1-447
COUNTY NEW CASTLE	DESIGNED BY:	E. HARASTY
	CHECKED BY:	J. GRAUPENSPERGER

ENVIRONMENTAL COMPLIANCE PLAN

EC-02	
SECTION	PAI
SHEET NO.	58

TEMPORARY WETLAND IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
3-WT-09	WORK AREA / E&S CONTROLS	4770.15	0.1095	353.34	USACE/DNREC
3-WT-10	WORK AREA / E&S CONTROLS	8491.04	0.1949	628.97	USACE/DNREC
TOTAL FOR THIS SHEET		13261.19	0.3044	982.31	USACE/DNREC

WETLAND CREATION AREA SCHEDULE

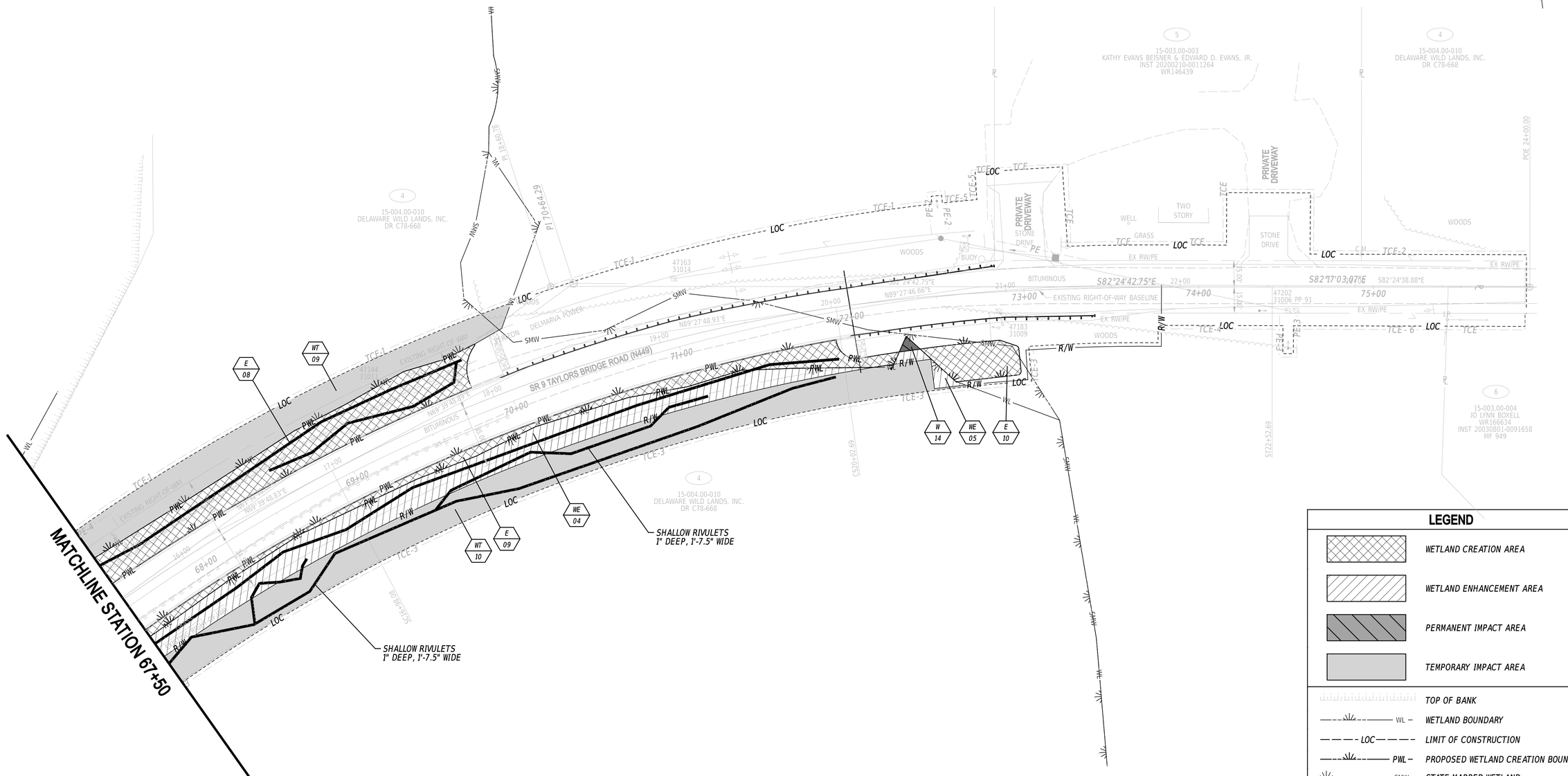
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
3-E-08	WETLAND CREATION	4638.83	0.1065	114.60	USACE/DNREC
3-E-09	WETLAND CREATION	2381.20	0.0547	58.82	USACE/DNREC
3-E-10	WETLAND CREATION	965.55	0.0222	23.85	USACE/DNREC
TOTAL FOR THIS SHEET		7985.59	0.1833	197.27	USACE/DNREC

PERMANENT WETLAND IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	IMPACT/LOSS
3-W-14	ROADWAY/EMBANKMENT	50.65	0.0012	3.75	USACE/DNREC	LOSS
TOTAL FOR THIS SHEET		50.65	0.0012	3.75	USACE/DNREC	LOSS

WETLAND ENHANCEMENT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
3-WE-04	WETLAND ENHANCEMENT	6041.62	0.1387	149.25	USACE/DNREC
3-WE-05	WETLAND ENHANCEMENT	241.65	0.0055	5.97	USACE/DNREC
TOTAL FOR THIS SHEET		6283.27	0.1442	155.22	USACE/DNREC



LEGEND

- WETLAND CREATION AREA
- WETLAND ENHANCEMENT AREA
- PERMANENT IMPACT AREA
- TEMPORARY IMPACT AREA
- TOP OF BANK
- WL – WETLAND BOUNDARY
- LOC – LIMIT OF CONSTRUCTION
- PWL – PROPOSED WETLAND CREATION BOUNDARY
- SMW – STATE MAPPED WETLAND
- XXX / XXX – IMPACT AREA TYPE ID. (SEE BELOW) / IMPACT AREA ID. AND/OR NUMBER

W = WETLAND IMPACT E = WETLAND CREATION
T = TEMPORARY IMPACT WE = WETLAND ENHANCEMENT
O = OPEN WATER IMPACT

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	T201907102
COUNTY	NEW CASTLE
BRIDGE NO.	1-447
DESIGNED BY:	E. HARASTY
CHECKED BY:	J. GRAUPENSPERGER

ENVIRONMENTAL COMPLIANCE PLAN

EC-03
SECTION PAI
SHEET NO. 59

Pennoni

WETLAND MITIGATION NOTES

SECTION 200

1. THIS WORK INCLUDES THE EXCAVATION, REMOVAL AND DISPOSAL OF MIXTURES OF SOIL, PEATS, AND ORGANIC MATTER. THE METHOD OF EXCAVATION SHALL MINIMIZE THE COMPACTION OF EXISTING AND CREATED WETLANDS AND SUBAQUEOUS LANDS. ALL EQUIPMENT WITHIN EXISTING AND CREATED WETLANDS AND SUBAQUEOUS LANDS SHALL BE LOW GROUND-CONTACT (LGP) EQUIPMENT OR SHALL BE SUPPORTED ON MATS. ALL EXCAVATION EQUIPMENT, LGP EQUIPMENT, AND MATS ARE SUBJECT TO APPROVAL BY THE ENGINEER. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE MATS WILL SUPPORT THE EQUIPMENT. MANUFACTURERS SPECIFICATIONS AND ADVERTISED MATERIALS FOR LGP EQUIPMENT AND MATS SHALL BE FORWARDED TO THE ENGINEER FOR APPROVAL WITHIN THIRTY (30) DAYS OF THE AWARD OF THE CONTRACT. ALL PAGES FROM THE APPROPRIATE PERFORMANCE REFERENCE HANDBOOK DETAILING GROUND PRESSURE FOR ALL THE PROPOSED EQUIPMENT SHALL BE SUPPLIED WITHOUT EDIT HANDBOOK COVER PAGE, COMPLETE PAGES, AND COMPLETE TABLES. ANY PIECE OF EQUIPMENT NOT CONSIDERED LOW GROUND-CONTACT PRESSURE BY THE ENGINEER SHALL ONLY BE UTILIZED ON MATS. ALL OFF-MAT EQUIPMENT SHALL BE ADVERTISED BY THE MANUFACTURER AS LGP EQUIPMENT. SHOE WIDTH SHALL BE THE LARGEST AVAILABLE FOR THE MODEL AS MANUFACTURED BY THE MANUFACTURER. THE ENGINEER MAY REQUIRE THE USE OF MATS IF THE GROUND PRESSURE EXCEEDS 10 PSI EVEN IF THE MAXIMUM SHOE WIDTH IS UTILIZED. EXCAVATION WILL BE STAGED SUCH THAT LGP EQUIPMENT, MATS, AND MAT-SUPPORTED EQUIPMENT SHALL NOT OPERATE ON EXCAVATED AREAS AFTER FINAL GRADE IS REACHED, I.E. EXCAVATION SHALL BACK OUT OF THE SITE. PAYMENT FOR ALL MATERIALS (MATS, ETC.), EQUIPMENT, LABOR, AND INCIDENTALS REQUIRED FOR EXCAVATION OF THE WETLAND MITIGATION AREAS SHALL BE INCIDENTAL TO ITEM 202000 EXCAVATION AND EMBANKMENT. NO SEPARATE PAYMENT WILL BE MADE UNDER ITEM 621500 - TEMPORARY TIMBER MAT.

2. THE GRADING TOLERANCE FOR THE WETLAND MITIGATION IS PLUS OR MINUS ONE TENTH (0.1) OF A FOOT OF THE PLAN GRADES AND LINES. THIS WETLAND MITIGATION GRADING REQUIREMENT SHALL BE STRICTLY ADHERED TO FOR ALL EXCAVATION/GRADING OPERATIONS UNLESS OTHERWISE DIRECTED IN WRITING BY THE ENGINEER. ONLY AT THE WRITTEN DIRECTION OF THE ENGINEER SHALL THE CONTRACTOR MODIFY THE GRADING SPECIFIED IN THESE DESIGN PLANS. THE GRADE FOR THE WETLAND MITIGATION IS SHOWN ON SHEETS 61-63.

SECTION 700

3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE POSITIVE DRAINAGE AT ALL TIMES DURING WORK ACTIVITIES REQUIRING ANY EXCAVATION WITHIN THE WETLAND MITIGATION. NO WORK IS ALLOWED THAT WOULD POND THE WETLAND MITIGATION OR RESTRICT THE TIDAL PRISM. FOR ALL WORK, INCLUDING WORK OUTSIDE THE WETLAND MITIGATION, THE CONTRACTOR SHALL ALSO PROVIDE NECESSARY DEWATERING TO STABILIZE SLOPE EXCAVATION DURING CONSTRUCTION UNTIL THE SLOPES STABILIZE AS DETERMINED BY THE ENGINEER. IN ADDITION, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO GATHER ALL NECESSARY DATA AND INFORMATION TO OBTAIN ANY PERMITS FOR PUMPING GROUNDWATER THAT MAY BE REQUIRED FOR THEIR OPERATIONS. PUMPING PERMITS ARE OBTAINABLE FROM THE DNREC DIVISION OF WATER RESOURCES, WATER SUPPLY WELL PERMITTING AND LICENSING BRANCH. ALL COSTS SHALL BE INCIDENTAL TO ITEM 763501 - CONSTRUCTION ENGINEERING.

4. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE MASTER BENCHMARK DURING THE CONSTRUCTION. THE MASTER BENCHMARK SHALL NOT BE RE-SET OR RE-EVALUATED FOR ELEVATIONS. ALL GRADING ELEVATIONS SHALL BE REFERENCED TO THE MASTER BENCHMARK DATUM. AT A MINIMUM, PROTECTION SHALL INCLUDE PROTECTION FENCING AROUND THE BENCHMARK. MATERIALS AND METHODS FOR PROTECTION SHALL BE INCIDENTAL TO ITEM 736501 - CONSTRUCTION ENGINEERING.

SECTION 900

5. IF DIRECTED BY THE ENGINEER, ITEM 908515 - TEMPORARY GRASS SEEDING, WET GROUND WILL BE BROADCAST OR HYDROSEEDED. THIS WOULD OCCUR OVER THE WETLAND MITIGATION, AS DIRECTED BY THE ENGINEER.

ADDITIONAL WETLAND MITIGATION NOTES INCLUDING SEQUENCE OF CONSTRUCTION

1. ALL WORK FOR THE WETLAND MITIGATION SHALL BE COMPLETED IN ONE CONSTRUCTION SEASON. APPROVAL OF THE FINAL GRADING AS-BUILT DRAWINGS SHALL OCCUR SO ITEM NO. 911000 - PLANTINGS MAY BE INSTALLED BETWEEN APRIL 1ST TO MAY 15TH OR SEPTEMBER 15TH AND OCTOBER 15TH AS NOTED BELOW. THE WETLAND MITIGATION INCLUDES ALL AREAS DESIGNATED FOR ITEM 911000 - PLANTINGS, PLUS AS DETERMINED BY THE ENGINEER.

2. DELDOT MAY ELECT TO CONDUCT PHRAGMITES CONTROL SPRAYING DURING THE WORK. WHILE THIS WORK IS BEING CONDUCTED, OTHER WORK MAY BE TEMPORALLY SUSPENDED IN PART OR WHOLE BY THE ENGINEER.

3. INSTALL OR INSPECT AND MAINTAIN ANY EROSION AND SEDIMENT CONTROL ITEMS.

4. INSTALL OR INSPECT AND MAINTAIN ITEM NO. 908023 - STABILIZED CONSTRUCTION ENTRANCES AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLANS.

5. PERFORM THE CLEARING AND GRUBBING OF THE SITE SO THE WORK ONLY DISTURBS AREAS THAT WILL BE EXCAVATED TO THE GRADE ELEVATION WITHIN THE NEXT FOURTEEN CALENDAR DAYS.

6. AT LOW TIDE THE WETLAND MITIGATION SHALL DRAIN OF SURFACE WATER, AS SOLELY DETERMINED BY THE ENGINEER. SHALLOW RIVULETS 1-INCH DEEP, 12-INCHES WIDE WILL BE ALLOWED TO PROMOTE DRAINAGE. DEEPER RIVULETS ARE NOT ALLOWED. AT THE INTERSECTION OF THE MARSH PLAIN AND THE CREEK, THE MARSH PLAIN SHOULD BE ABLE TO FREELY DRAIN INTO THE CREEK, AS SOLELY DETERMINED BY THE ENGINEER. THE CONTRACTOR NEEDS TO PROVIDE THESE DRAINAGE ELEMENTS. THESE DRAINAGE ELEMENTS MAYBE HAND EXCAVATED. DRAINAGE ELEMENTS WILL BE ESTABLISHED AT THE DIRECTION OF THE ENGINEER. ALL COSTS SHALL BE INCIDENTAL TO ITEM NO. 202000 EXCAVATION AND EMBANKMENT.

7. EXCAVATE THE WETLAND MITIGATION SITE TO THE DESIGN ELEVATIONS. THE EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED. THIS EXCAVATION AND THE DISPOSAL OF THE MATERIAL SHALL BE PAID UNDER ITEM NO. 202000 - EXCAVATION AND EMBANKMENT. THIS MATERIAL MAY BE IMMEDIATELY REMOVED FROM THE PROJECT, BUT TEMPORARY STOCKPILE LOCATIONS MAY BE APPROVED BY THE ENGINEER. THIS EXCAVATED MATERIAL SHALL BE COMPLETELY REMOVED FROM THE PROJECT LOCATION PRIOR THE CONTRACTOR PERFORMING THE AS-BUILT SURVEY AND DELDOT APPROVING THE GRADING ELEVATION AND AS-BUILT SUBMITTAL. THESE STOCKPILES SHALL ONLY BE PLACED IN UPLAND LOCATIONS APPROVED BY THE ENGINEER. THIS MATERIAL WILL NOT BE USED TO ESTABLISH ANY TOPSOIL ON THE PROJECT. THE ENGINEER MAY REQUIRE TEMPORARY SEEDING AND EROSION CONTROL ELEMENTS TO BE PLACED. THIS STABILIZATION WORK WOULD BE INCIDENTAL TO ITEM NO. 202000 - EXCAVATION AND EMBANKMENT.

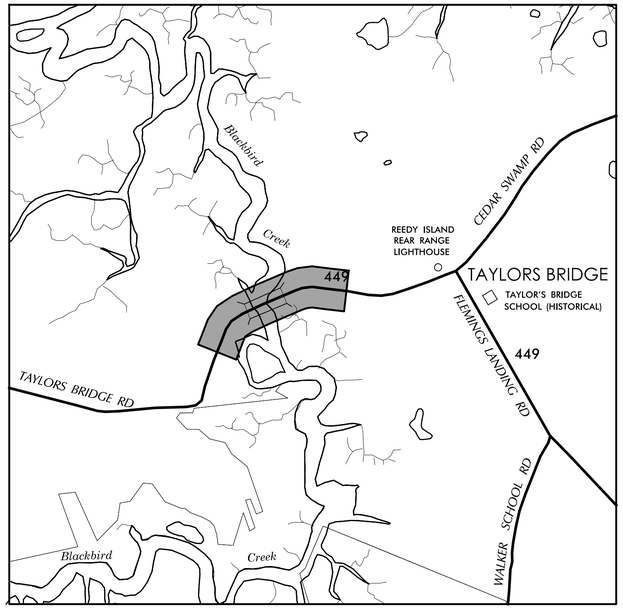
8. THE CONTRACTOR SHALL PREPARE AND SUBMIT AS-BUILT TOPOGRAPHIC PLANS FOR THE GRADING. ALL AS-BUILT SUBMITTALS WILL BE TIED TO THE HORIZONTAL/VERTICAL MASTER BENCHMARK, TBRA (SHEET 8, HORIZONTAL AND VERTICAL CONTROL). THE MAXIMUM HORIZONTAL DISTANCE BETWEEN SPOT ELEVATIONS SHALL BE 20 FEET AND ADDITIONAL SPOT ELEVATIONS SHALL BE OBTAINED AS NECESSARY TO IDENTIFY ALL BREAKS IN GRADE AND OTHER FEATURES. SPOTS ELEVATIONS SHALL EXTEND A MINIMUM OF 50 FEET BEYOND THE EXCAVATED AREAS.

9. ESTABLISH THE PERIMETER OF THE WETLAND MITIGATION EXCAVATION. THESE LIMITS SHALL BE SHOWN ON THE AS-BUILTS. SPOT ELEVATIONS SHALL BE ESTABLISHED ON MAXIMUM 20 CENTERS STARTING WITHIN 1-FOOT OF THE OUTER LIMITS OF THE WETLAND MITIGATION EXCAVATION IN ALL DIRECTIONS AND LINES (TO THE INSIDE OF THE EXCAVATION); THEN ADD INTERIOR AND EXTERIOR SPOTS AS NEED TO MEET THE SPOT DISTANCE AND SURVEY REQUIREMENTS. SPOT ELEVATIONS SHALL BE OBTAINED AND SHOWN ON THE AS-BUILT PLAN TO ONE-HUNDRETH OF A FOOT. THE DRAWINGS SHALL BE SUBMITTED TO DELDOT IN BOTH DIGITAL AND PAPER FORMAT CONFORMING TO CURRENT DELDOT CADD STANDARDS. DIGITAL INFORMATION SHALL BE SUBMITTED IN .DGN FORMAT AND .DTM FORMAT AND SHALL INCLUDE ALL SURVEY DATA IN .TXT FORMAT. THE DRAWINGS SHALL BE AT 30 SCALE. CONTOURS SHALL BE SHOWN AT 0.1 INTERVALS AND THE CONTOUR LINES SHALL BE LABELED FREQUENTLY ENOUGH THAT IT IS POSSIBLE TO CLEARLY ASCERTAIN THE ELEVATION OF ANY PARTICULAR CONTOUR LINE ANYWHERE ON THE PLAN SHEET. SPOT ELEVATIONS ON THE AS-BUILTS SHALL BE LABELED AND SHALL BE SUCH THAT THE PLAN SHEET TEXT SHALL BE LEGIBLE, SOLID BLACK CHARACTERS, IN SIZE APPROPRIATE TO THE SCALE OF THE DRAWINGS AND SEPARATED, NOT SUPERIMPOSED, ON TOP OF ONE ANOTHER. A PROFESSIONAL ENGINEER OR LAND SURVEYOR REGISTERED IN THE STATE OF DELAWARE SHALL SIGN AND SEAL THE AS-BUILTS. THE CONTRACTOR SHALL SUBMIT THE AS-BUILTS WITHIN SEVEN CALENDAR DAYS OF REACHING FINAL GRADE. ALL COSTS FOR PREPARING THE AS-BUILT PLANS SHALL BE PAID FOR UNDER ITEM NO. 763501 - CONSTRUCTION ENGINEERING.

10. DELDOT SHALL REVIEW THE SUBMITTED AS-BUILT DRAWINGS TO ENSURE THE PROJECT IS GRADED IN ACCORDANCE WITH THE LINE AND GRADES OF THE PLANS AND SHALL RESPOND TO THE CONTRACTOR WITHIN TEN CALENDAR DAYS. IF THE SITE IS NOT PROPERLY GRADED, DELDOT SHALL MARK THE ERRORS ON THE DRAWINGS AND RETURN THEM TO THE CONTRACTOR. THE CONTRACTOR SHALL GRADE ANY DEFECTIVE AREAS WITHIN SEVEN CALENDAR DAYS OF RECEIVING THE MARKED PLANS FROM DELDOT. IF FILL IS NEEDED, THE FILL MATERIAL SHALL BE A MEDIUM SAND OR COARSE SAND, AS SOLELY DETERMINED BY THE ENGINEER. THE FILL MATERIAL SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER. NO ADDITIONAL COMPENSATION WILL BE PAID FOR THIS FILL PLACEMENT. THE CONTRACTOR THEN SHALL PREPARE AND SUBMIT TO DELDOT A NEW SET OF PAPER AND ELECTRONIC AS-BUILT PLANS FOR THE ENTIRE SITE SHOWING THE CORRECTIVE WORK AREAS WITHIN SEVEN CALENDAR DAYS OF COMPLETING THE CORRECTIVE WORK. DELDOT SHALL REVIEW AND, IF NECESSARY, RETURN THE PLANS TO THE CONTRACTOR WITH ANY ERRORS AGAIN MARKED ON THE PLANS WITHIN FIVE CALENDAR DAYS. THIS PROCESS SHALL CONTINUE UNTIL THE PROJECT AND AS-BUILT DRAWINGS CONFORM TO THE PLANS AND ALL OTHER REQUIREMENTS OF THE CONTRACT DOCUMENTS. ALL COSTS FOR PREPARING THE FINAL AS-BUILT PLANS SHALL BE PAID FOR UNDER ITEM NO. 763501 - CONSTRUCTION ENGINEERING.

11. TWO OR THREE DAYS PRIOR TO STARTING THE WETLAND PLANTING, THE GRADED MARSH PLAIN AND THE LOC WILL BE INSPECTED AT LOW TIDE IN THE PRESENCE OF THE ENGINEER. DURING THE LOW-TIDE CYCLE, THE MARSH PLAIN SHALL FREELY DRAIN TO THE CREEK CHANNEL, AS SOLELY DETERMINED BY THE ENGINEER. WATER SHALL NOT POND ON THE MARSH PLAIN DURING THE FALLING TIDE, AS SOLELY DETERMINED BY THE ENGINEER. PRIOR TO PLANTING, ALL DEBRIS, STRAW AND ANY VEGETATION RACK SHALL BE REMOVED FROM THE WETLAND MITIGATION AND LOC, AND PROPERLY DISPOSED OF, AS SOLELY DETERMINED BY THE ENGINEER. AT THE DIRECTION OF THE ENGINEER, THE TURBIDITY CURTAIN SHALL BE REMOVED PRIOR TO CONDUCTING THE PLANTING.

12. AFTER ACCEPTANCE OF THE WETLAND MITIGATION GRADING BY DELDOT, THE CONTRACTOR SHALL PLANT THE WETLAND MITIGATION, ITEM 911000 - PLANTINGS. THIS ELEVATION SHOULD BE INUNDATED ON THE DAILY HIGH TIDE. THE REQUIREMENT FOR SALINITY ACCLIMATION IS WAIVED (MATERIALS, (C)). PRIOR TO PEAT-POT PLACEMENT, TWO 21-GRAM 20-10-5 AGIFORM SLOW-RELEASE FERTILIZER TABLETS SHALL BE PLACED AT THE BOTTOM OF EACH PLANTING HOLE. THIS FERTILIZER PLACEMENT IS INCIDENTAL TO ITEM 911000 - PLANTINGS.



WETLAND CREATION SITE EARTHWORK SUMMARY

EXCAVATION	
EXCAVATION FROM CROSS SECTIONS	4430 C.Y.
ROCK EXCAVATION FOR ROADWAY AND TRENCHES	0 C.Y.
TOPSOIL STRIPPING	0 C.Y.
TOTAL EXCAVATION	4430 C.Y.
EXCAVATION AVAILABLE FOR EMBANKMENT	
EXCAVATION MEETING BORROW TYPE 'A'	0 C.Y.
EXCAVATION MEETING BORROW TYPE 'C'	0 C.Y.
EXCAVATION MEETING BORROW TYPE 'F'	0 C.Y.
EXCAVATION MEETING TOPSOIL	0 C.Y.
EMBANKMENT REQUIREMENTS	
BORROW TYPE 'A' REQUIRED (INCLUDING UNDERCUT)	0 C.Y.
BORROW TYPE 'C' REQUIRED	0 C.Y.
BORROW TYPE 'F' REQUIRED	0 C.Y.
TOPSOIL REQUIRED (TOPSOILING, 6 INCH)	0 C.Y.
MATERIAL BALANCE ("+"= EXCESS, "-"= NEED)	
BORROW TYPE 'A'	0 C.Y.
BORROW TYPE 'C'	0 C.Y.
BORROW TYPE 'F'	0 C.Y.
TOPSOIL	0 C.Y.
UNSUITABLE MATERIAL	4430 C.Y.

NOTES:
1) THE VALUES LISTED IN THE EARTHWORK SUMMARY ARE APPROXIMATE AND ARE NOT TO BE USED AS A BASIS OF PAYMENT. THE EARTHWORK SUMMARY IS CONSIDERED FOR INFORMATIONAL PURPOSES ONLY.

2) OTHER SOURCES OF EXCAVATION MAY INCLUDE PIPE TRENCH EXCAVATION, STRUCTURE EXCAVATION, UNDERCUT EXCAVATION, STORMWATER MANAGEMENT POND EXCAVATION, ENVIRONMENTAL SITE EXCAVATION, MAINTENANCE OF TRAFFIC EXCAVATION, ETC.

3) UNSUITABLE MATERIALS INCLUDE UNDERCUT SOILS, BITUMINOUS PAVEMENT, ETC.

NOTES:

1) THE VALUES LISTED ABOVE ARE ALSO INCLUDED IN THE EARTHWORK SUMMARY FOR THE ENTIRE PROJECT. SEE THE PROJECT EARTHWORK SHEET FOR THIS INFORMATION.

PENNONI ASSOCIATES INC.
FILE NAME: $FILEAS
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$$
PLOT DRIVER: $PLTDRV$$
DATE PLOTTED: 24-OCT-2025 @ 11:31
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

Pennoni

ADDENDA / REVISIONS		NOT TO SCALE	ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT	CONTRACT T201907102	BRIDGE NO. 1-447	WETLAND MITIGATION SITE NOTES	SECTION PAI
				COUNTY NEW CASTLE	DESIGNED BY: E. HARASTY		SHEET NO. 60
					CHECKED BY: J. GRAUPENSPERGER		

PROJECT NOTES (SECTION NOTES RELATING TO WETLAND MITGATION) ARE SHOWN ON SHEETS 60 AND 67.

N

2
14-013.00-030
JOHN C. UNRUH & REBECCA W. UNRUH, HUSBAND AND WIFE
DR 1518-235
MF 11533

3
14-013.00-029
MARY UNRUH REED
INST 20180223-0008814
MF 11533

1
14-013.00-01!
F. THOMAS UNF
DR 2593-33'
MF 12922

7
14-013.00-019
WESLEY CLARENCE WINTERSTEIN AND ASHLEY ELIZABETH WINTERSTEIN HUSBAND AND WIFE
INST 20200903-0075997

POE 51+00.
POB 1+00.00
MASTER BENCH MARK
ELEV. 6.76
TP TBRA
CAPPED PIN
TP TBR6
CAPPED PIN
N16°53'20.73"E
N16°32'18.69"E
EXISTING RIGHT-OF-WAY
PROPOSED CONSTRUCTION BASELINE
EX RW/PE
PRIVATE DRIVEWAY
PROPOSED ACCESS EASEMENT TO BE CONSTRUCTED BY CONTRACTOR
SR 9 TAYLORS BRIDGE ROAD (N449)
PROPOSED WETLAND CREATION AREA
PROPOSED WETLAND ACCESS ROAD
PROPOSED WETLAND ENHANCEMENT AREA
SHALLOW RIVULETS 1" DEEP, 1'-7.5" WIDE
PC 55+68.68
P.I. 58+97.18
MATCHLINE STATION 59+50
LOC
TCE-1
TCE-2
TCE
CSE
R/W
PWL
WL
SMW
PE

PENNONI ASSOCIATES INC.
FILE NAME: $FILE4$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRVR$
DATE PLOTTED: $DATE$ @ $TIME$
USER NAME: $USER$ OFFICE LOCATION: $OFFICENAME$

LEGEND

- WETLAND CREATION AREA
- WETLAND ENHANCEMENT AREA
- WETLAND ACCESS ROAD
- WL — WETLAND BOUNDARY
- LOC — LIMIT OF CONSTRUCTION
- PWL — PROPOSED WETLAND CREATION BOUNDARY
- SMW — STATE MAPPED WETLAND

ADDENDA / REVISIONS

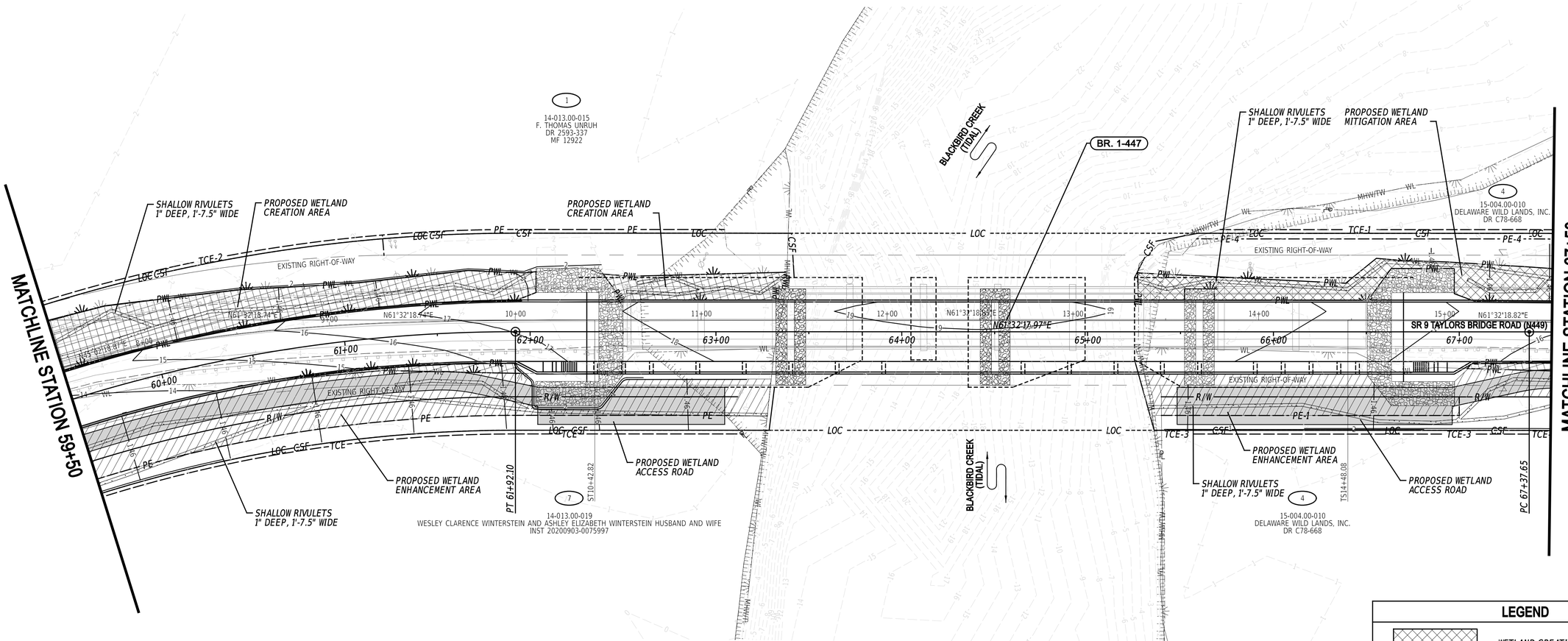
SCALE
0 30 60 90
FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	E. HARASTY
COUNTY	CHECKED BY:	J. GRAUPENSPERGER
NEW CASTLE		

WETLAND MITIGATION SITE GRADING PLAN

WM-01	
SECTION	PAI
SHEET NO.	61



LEGEND

- WETLAND CREATION AREA
- WETLAND ENHANCEMENT AREA
- WETLAND ACCESS ROAD
- TOP OF BANK
- WL – WETLAND BOUNDARY
- LOC – LIMIT OF CONSTRUCTION
- PWL – PROPOSED WETLAND CREATION BOUNDARY
- SMW – STATE MAPPED WETLAND

Pennoni

ADDENDA / REVISIONS	

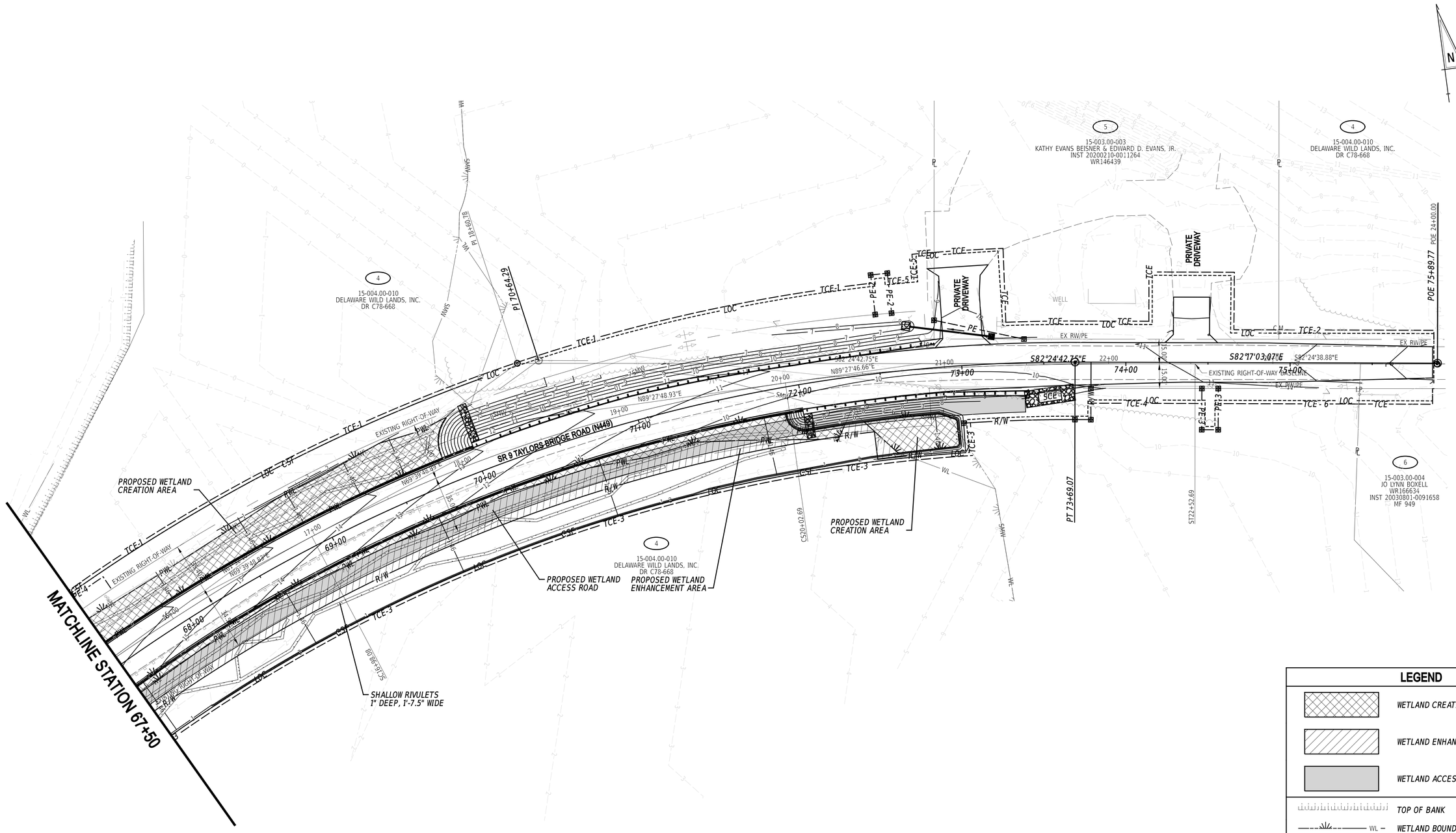
SCALE
0 30 60 90
FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	T201907102	BRIDGE NO.	1-447
COUNTY	NEW CASTLE	DESIGNED BY:	E. HARASTY
		CHECKED BY:	J. GRAUPENSPERGER

WETLAND MITIGATION SITE GRADING PLAN

	WM-02
SECTION	PAI
SHEET NO.	62



LEGEND

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- WETLAND ENHANCEMENT AREA
- WETLAND ACCESS ROAD
- TOP OF BANK
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- SMW – STATE MAPPED WETLAND

ADDENDA / REVISIONS		SCALE 0 30 60 90 FEET	ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT	CONTRACT T201907102	BRIDGE NO. 1-447	WETLAND MITIGATION SITE GRADING PLAN	WM-03
				COUNTY NEW CASTLE	DESIGNED BY: E. HARASTY		SECTION PAI
					CHECKED BY: J. GRAUPENSPERGER		SHEET NO. 63

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HORIZONTAL / VERTICAL CONTROL DATA

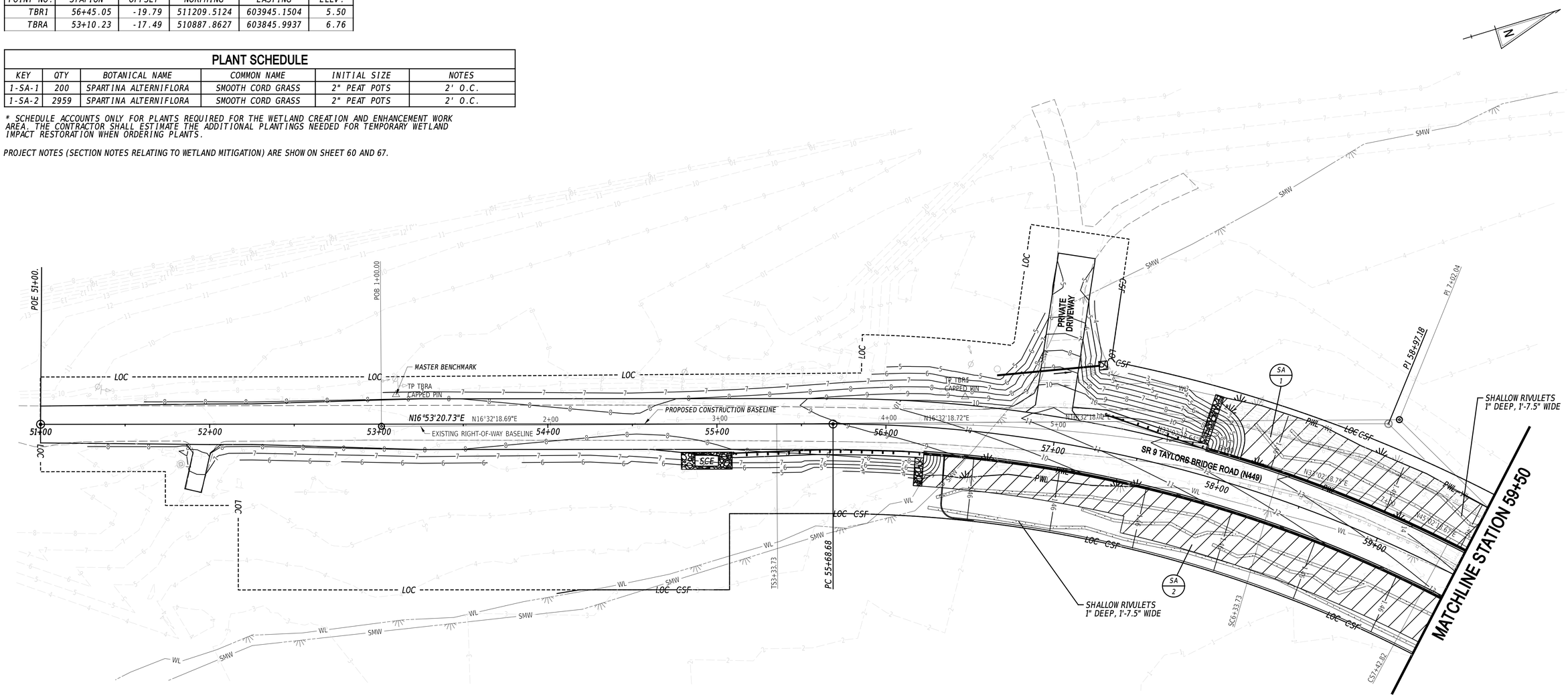
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEV.
TBR1	56+45.05	-19.79	511209.5124	603945.1504	5.50
TBRA	53+10.23	-17.49	510887.8627	603845.9937	6.76

PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	INITIAL SIZE	NOTES
1-SA-1	200	SPARTINA ALTERNIFLORA	SMOOTH CORD GRASS	2" PEAT POTS	2' O.C.
1-SA-2	2959	SPARTINA ALTERNIFLORA	SMOOTH CORD GRASS	2" PEAT POTS	2' O.C.

* SCHEDULE ACCOUNTS ONLY FOR PLANTS REQUIRED FOR THE WETLAND CREATION AND ENHANCEMENT WORK AREA. THE CONTRACTOR SHALL ESTIMATE THE ADDITIONAL PLANTINGS NEEDED FOR TEMPORARY WETLAND IMPACT RESTORATION WHEN ORDERING PLANTS.

PROJECT NOTES (SECTION NOTES RELATING TO WETLAND MITIGATION) ARE SHOW ON SHEET 60 AND 67.



LEGEND

- PLANTING AREA
- WL – WETLAND BOUNDARY
- LOC – LIMIT OF CONSTRUCTION
- PWL – PROPOSED WETLAND CREATION BOUNDARY
- SMW – STATE MAPPED WETLAND
- XXX / XXX – PLANTING IDENTIFIER / PLANTING ID NUMBER

SA = SPARTINA ALTERNIFLORA

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRV$
DATE PLOTTED: $DATE$ @ $TIME$
USER NAME: $USER$ OFFICE LOCATION: $OFFICENAME$

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	E. HARASTY
COUNTY	CHECKED BY:	J. GRAUPENSPERGER
NEW CASTLE		

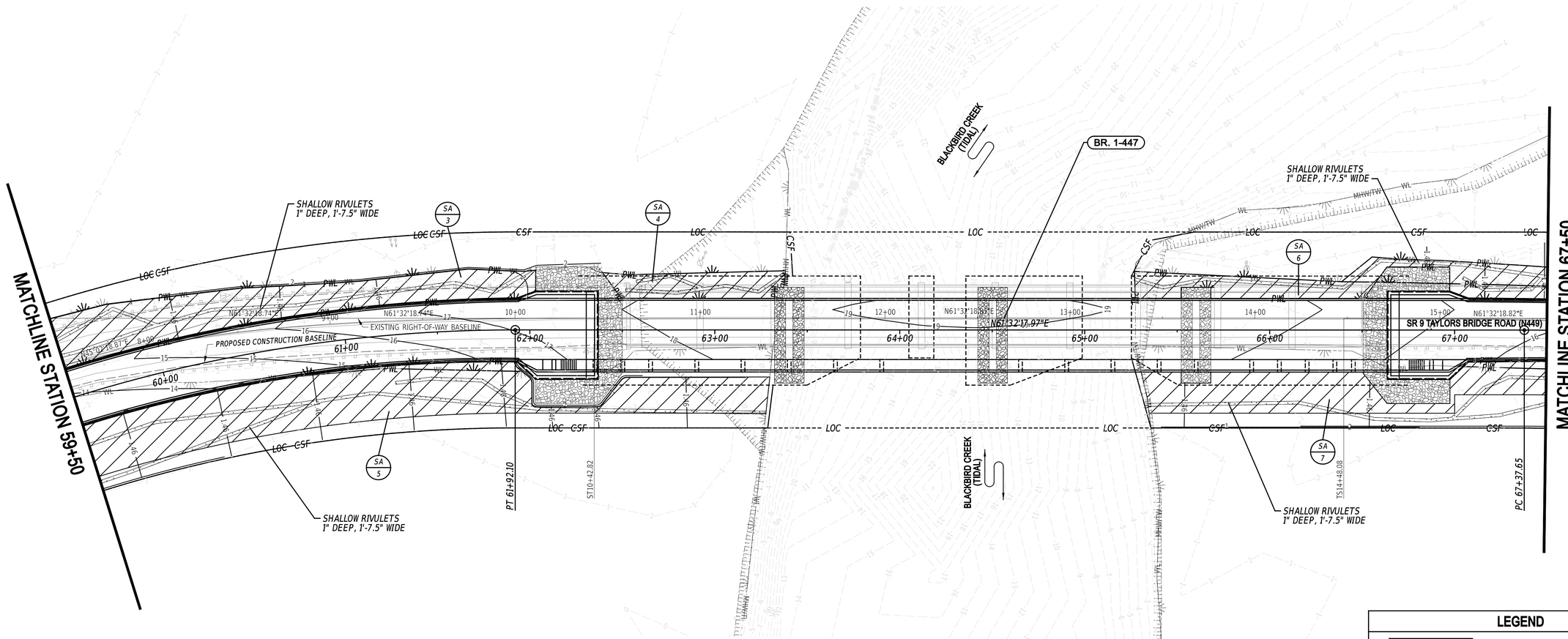
WETLAND MITIGATION SITE LANDSCAPING PLANS

SECTION	WM-04
PAI	
SHEET NO.	64

PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	INITIAL SIZE	NOTES
2-SA-3	1270	SPARTINA ALTERNIFLORA	SMOOTH CORD GRASS	2" PEAT POTS	2' O.C.
2-SA-4	315	SPARTINA ALTERNIFLORA	SMOOTH CORD GRASS	2" PEAT POTS	2' O.C.
2-SA-5	2187	SPARTINA ALTERNIFLORA	SMOOTH CORD GRASS	2" PEAT POTS	2' O.C.
2-SA-6	674	SPARTINA ALTERNIFLORA	SMOOTH CORD GRASS	2" PEAT POTS	2' O.C.
2-SA-7	954	SPARTINA ALTERNIFLORA	SMOOTH CORD GRASS	2" PEAT POTS	2' O.C.

* SCHEDULE ACCOUNTS ONLY FOR PLANTS REQUIRED FOR THE WETLAND CREATION AND ENHANCEMENT WORK AREA. THE CONTRACTOR SHALL ESTIMATE THE ADDITIONAL PLANTINGS NEEDED FOR TEMPORARY WETLAND IMPACT RESTORATION WHEN ORDERING PLANTS.



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SA = SPARTINA ALTERNIFLORA

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ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	T201907102
COUNTY	NEW CASTLE
BRIDGE NO.	1-447
DESIGNED BY:	E. HARASTY
CHECKED BY:	J. GRAUPENSPERGER

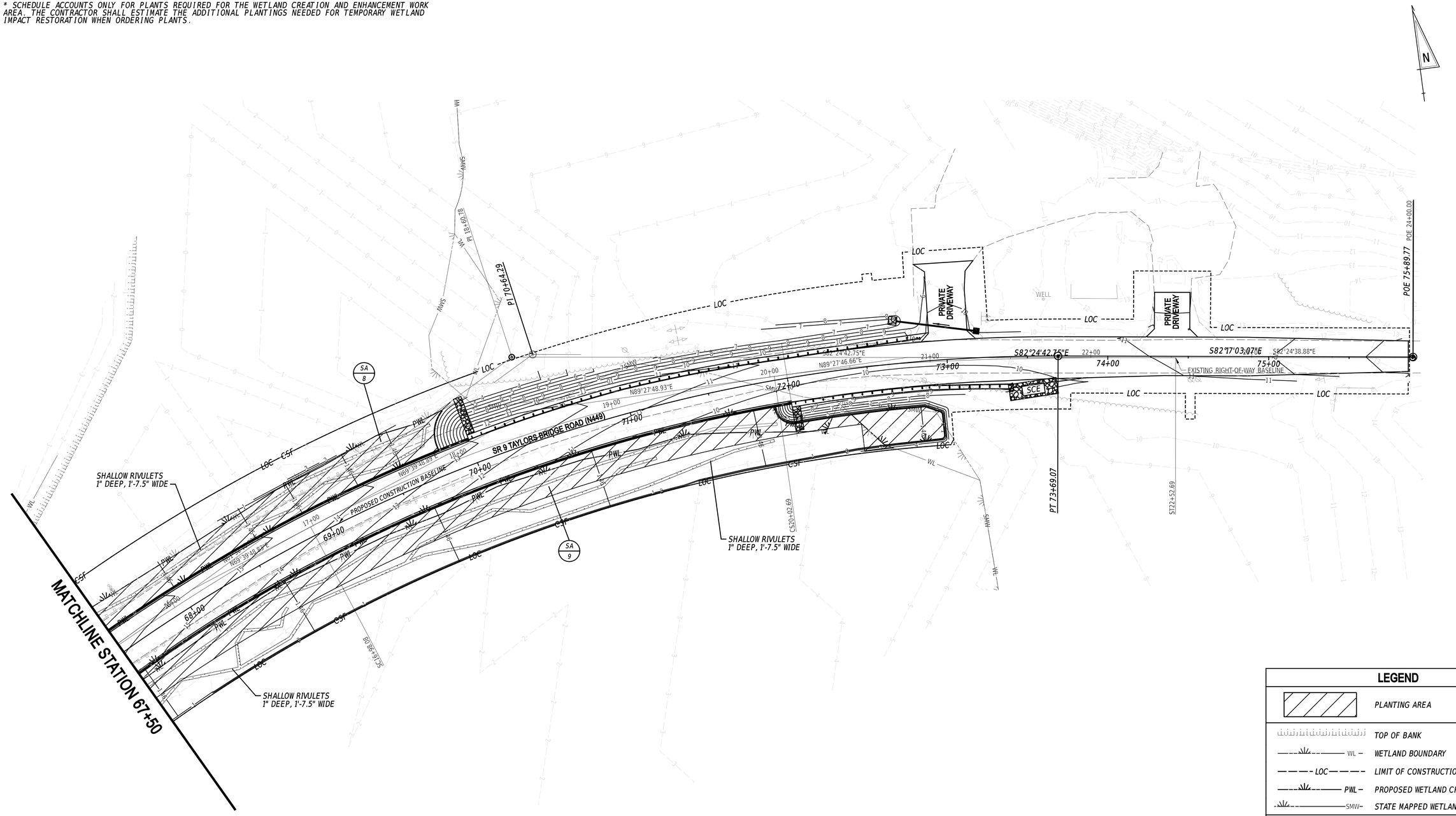
WETLAND MITIGATION SITE LANDSCAPING PLANS

	WM-05
SECTION	PAI
SHEET NO.	65

PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	INITIAL SIZE	NOTES
3-SA-8	1160	SPARTINA ALTERNIFLORA	SMOOTH CORD GRASS	2" PEAT POTS	2' O.C.
3-SA-9	2410	SPARTINA ALTERNIFLORA	SMOOTH CORD GRASS	2" PEAT POTS	2' O.C.

* SCHEDULE ACCOUNTS ONLY FOR PLANTS REQUIRED FOR THE WETLAND CREATION AND ENHANCEMENT WORK AREA. THE CONTRACTOR SHALL ESTIMATE THE ADDITIONAL PLANTINGS NEEDED FOR TEMPORARY WETLAND IMPACT RESTORATION WHEN ORDERING PLANTS.



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SA = SPARTINA ALTERNIFLORA

Pennoni

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	E. HARASTY
COUNTY	CHECKED BY:	J. GRAUPENSPERGER
NEW CASTLE		

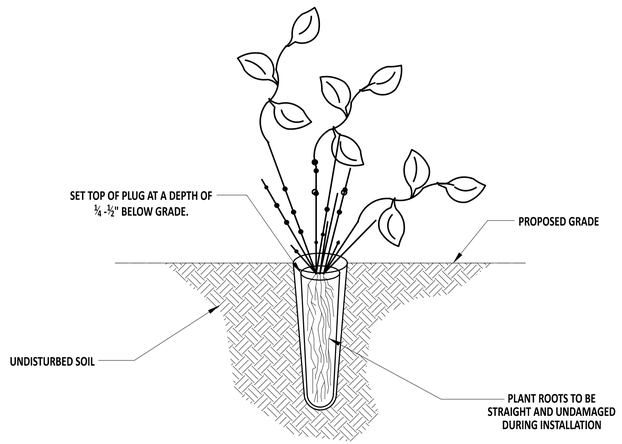
WETLAND MITIGATION SITE LANDSCAPING PLANS

WM-06	
SECTION	PAI
SHEET NO.	66

PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	INITIAL SIZE	NOTES
SA	12,129*	SPARTINA ALTERNIFLORA	SMOOTH CORD GRASS	2" PEAT POTS	2' O.C.

* SCHEDULE ACCOUNTS ONLY FOR PLANTS REQUIRED FOR THE WETLAND CREATION AND ENHANCEMENT WORK AREA. THE CONTRACTOR SHALL ESTIMATE THE ADDITIONAL PLANTINGS NEEDED FOR TEMPORARY WETLAND IMPACT RESTORATION WHEN ORDERING PLANTS.



SECTION VIEW

NOTES:
1). PLANT USING A DIBBLE BAR, STEEL STAKE OR SIMILAR APPROVED PLANTING DEVICE.
2). PLANTING PIT SHALL BE SLIGHTLY LARGER THAN THE PLANT ROOT MASS.
3). DO NOT DAMAGE LEAVES, ROOTS OR STAKES DURING CONSTRUCTION.
4). PLANT AQUATIC PLUGS IN GROUPS OF 50 PLANTS MIN, PER SPECIES.

AQUATIC PLANTING DETAIL - 2" PLUG
NOT TO SCALE

GENERAL PLANTING NOTES

1. THE PEAT-POTTED STOCK SHALL HAVE BEEN GROWN IN 2-INCH SIDED PEAT POTS LONG ENOUGH AND UNDER PROPER CONDITIONS FOR THE ROOT SYSTEM TO BE SUFFICIENTLY WELL DEVELOPED THROUGH THE SIDES AND BOTTOM OF THE POT TO A PREVENT EASY REMOVAL OF THE PLANT FROM THE POT. PLANTS THAT CAN BE REMOVED FROM THE POTS BY HOLDING THE STEM GROWTH AND GENTLY PULLING ON THE POTS SHALL BE REJECTED WITHOUT COMPENSATION. EACH PEAT POT SHALL CONTAIN A MINIMUM TWO STEMS PER POT, NOT LESS THAN 40MM TALL.
2. FROM THE TIME THE SPARTINA LEAVES THE NURSEY UNTIL IT IS INSTALLED AND NORMAL HYDROLOGIC REGIME (I.E., UNRESTRICTED TIDAL FLOW OF NORMAL WATER LEVELS) IS ESTABLISHED, ALL STOCK SHALL BE WATERED WITH FRESH WATER. SALINE OR BRACKISH WATER SHALL NOT BE USED FOR WATERING.
3. THE PLANTING WINDOWS FOR SPARTINA ALTERNIFLORA ARE APRIL 1ST TO MAY 15TH AND SEPTEMBER 1ST TO OCTOBER 15TH. A SPRING PLANTING IS PREFERRED.
4. FOR EACH SPARTINA PLUG, PLACE TWO 21-GRAM AGRIFROM 20-10-5 SLOW RELEASE TABLETS (OR APPROVED EQUAL) AT THE BOTTOM OF THE PLANTING HOLE.
5. MAINTENANCE WATERING IS NOT REQUIRED FOR THE SPARTINA AFTER INSTALLATION.

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRVR$
DATE PLOTTED: 24-OCT-2025 @ 11:33
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

ADDENDA / REVISIONS		NOT TO SCALE	ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT	CONTRACT	BRIDGE NO. 1-447	WETLAND MITIGATION PLANTING DETAILS	SECTION
				T201907102	DESIGNED BY: E. HARASTY		PAI
				COUNTY			SHEET NO.
				NEW CASTLE	CHECKED BY: J. GRAUPENSPERGER		67

GENERAL MAINTENANCE OF TRAFFIC NOTES:

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

(X)	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
( )	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 801500.

2. THE USE OF MILLINGS AND GRADED AGGREGATE BASE COURSE (GABC) IN THE TRAVEL WAY, TEMPORARY TRAVEL WAY, HIGH VOLUME ENTRANCES AND ACCESS RAMP FOR THE PURPOSE OF PROVIDING A TEMPORARY ROADWAY SURFACE, POTHOLE REPAIR, TAPERED EDGE FOR UTILITIES, BUTT JOINTS, AND LONGITUDINAL DROP-OFFS (MILLING AND PAVING OPERATIONS) IS PROHIBITED UNLESS IT IS OTHERWISE DESIGNATED TO BE USED IN THE CONTRACT PLANS. USE COLD PATCH, BITUMINOUS CONCRETE, BITUMINOUS CONCRETE WEDGE, OR TAPER MILL, AS NOTED IN THE CONTRACT DOCUMENTS OR APPROVED BY THE ENGINEER. PAYMENT FOR COLD PATCH, BITUMINOUS CONCRETE OR BITUMINOUS CONCRETE WEDGE SHALL BE PAID AS NOTED IN THE CONTRACT DOCUMENTS. TAPER MILL BITUMINOUS CONCRETE SHALL BE PAID UNDER THE BITUMINOUS CONCRETE MILLING ITEM.

   MILLINGS OR GABC SHALL BE USED AT THE FOLLOWING LOCATIONS WHERE ACCESS TO A BUSINESS, RESIDENCE, OR EDGE DROP OFF NEEDS TO BE MAINTAINED UNLESS OTHERWISE NOTED IN THE PLANS OR DIRECTED BY THE ENGINEER TO USE BITUMINOUS CONCRETE OR COLD PATCH. ALL MILLINGS AND GABC WILL BE ROLLED AND COMPACTED TO HELP PREVENT THE MATERIAL FROM UNRAVELLING:

   a. DRIVEWAYS
   b. ENTRANCES
   c. LOW VOLUME ACCESS RAMPS (IDENTIFIED IN THE CONTRACT DOCUMENTS)
   d. EDGE DROP-OFFS ADJACENT TO LIVE ROADWAY(LANES AND SHOULDER) AND THE PROPOSED ROAD CONSTRUCTION
   e. EDGE OF ROADWAY DROP-OFF

   GRADING AND MAINTAINING BASE COURSE THAT IS BEING USED FOR ROADWAY WEDGE/FILLET BETWEEN TRAVEL LANES AND PAVEMENT BOX, EDGE OF TRAVELWAY, DRIVEWAY OR ENTRANCE ACCESS SHALL BE INCIDENTAL TO ITEM NO. 801500 - MAINTENANCE OF TRAFFIC - ALL INCLUSIVE. THE BASE COURSE MATERIAL SHALL BE PLACED AT NO GREATER THAN THE SLOPE SPECIFIED IN TABLE 6G-1 AND SHALL BE COMPACTED. EXCESS BASE COURSE MATERIAL SHALL BE PUSHED AHEAD AND USED IN THE NEXT SEGMENT AND SHALL BE INCIDENTAL TO THE PARTICULAR BASE COURSE PAY ITEM. NO SEPARATE PAYMENT SHALL BE MADE FOR MILLINGS OR GABC TEMPORARY ROADWAY MATERIAL (TRM) USED TO PROTECT EDGE DROP-OFFS, UNLESS THE MATERIAL IS EVENTUALLY UTILIZED AS PART OF A PERMANENT ROADWAY AT WHICH TIME THE MATERIAL WOULD BE PAID FOR UNDER THE RESPECTIVE CONTRACT MATERIAL ITEM.

   VERTICAL DIFFERENCES SHALL BE CORRECTED IN ACCORDANCE WITH TABLE 6G-1 OF THE DELAWARE MUTCD.

3. ALL NECESSARY SIGNS, PAVEMENT MARKINGS AND ROADSIDE APPURTENANCES SHALL BE INSTALLED PRIOR TO THE OPENING/REOPENING OF A ROADWAY OR RAMP. A WALKTHROUGH WTH THE ENGINEER, TRAFFIC SAFETY, TRAFFIC CONSTRUCTION AND OTHER PERSONNEL SHALL OCCUR NO LESS THAN 48 HOURS PRIOR TO THE OPENING/REOPENING OF ANY ROAD OR RAMP.

4. THE CONTRACTOR WILL MAINTAIN ACCESS TO ALL DRIVEWAYS WITHIN THE PROJECT LIMITS THROUGHOUT THE DURATION OF CONSTRUCTION. DURING THE PAVING OPERATIONS OF THE APPROACH ROADWAYS, THE CONTRACTOR WILL NOTIFY THE PROPERTY OWNERS OF THE WORK AND ASSOCIATED LIMITED ACCESS AT LEAST A WEEK PRIOR TO BEGINNING WORK. PEDESTRIAN ACCESS TO PROPERTIES WILL BE MAINTAINED, UNIMPEDED THROUGHOUT THE DURATION OF THE PROJECT.

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	PHASING TRAFFIC FLOW ARROW
	TEMPORARY CONSTRUCTION
	TEMPORARY PAVEMENT MARKING ARROW
	TRUCK WITH MOUNTED ATTENUATOR
	WORK AREA - ACTIVE PHASE

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. PLAN APPROVAL IS VALID FOR A ONE YEAR PERIOD BEGINNING ON THE DATE OF THE STORMWATER ENGINEER'S SIGNATURE. ANY DEVIATIONS TO THE SWPPP NEED APPROVAL FROM THE ENGINEER.

Steven Sisson — 2/20/2025
DELDOT STORMWATER ENGINEER — DATE

"I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THESE PLANS MEET THE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS AND THAT ALL CLEARING, GRADING, AND CONSTRUCTION WILL BE ACCOMPLISHED PURSUANT TO THE PLAN."

AMOUNT OF DISTURBED AREA FOR THE PROJECT	4.91 AC
ADDED IMPERVIOUS FOR THE PROJECT	10,019 SF
HUC-10 WATERSHED	APPOQUINIMINK RIVER - DELAWARE RIVER

2. ASSIGN A RESPONSIBLE PERSON TO BE ON SITE DURING ALL EARTH DISTURBING ACTIVITIES AND BE AN ACTIVE DNREC BLUE CARD HOLDER AS DEFINED IN SECTION 6.2 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS (DSSR). BE FAMILIAR WITH AND COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION GENERAL PERMIT.

3. FILE AS A CO-PERMITTEE IN ACCORDANCE WITH SECTION 901 OF THE STANDARD SPECIFICATIONS. POSTING AND MAINTENANCE OF THE NOI PERMIT COVERAGE IS INCIDENTAL TO THE CONTRACT.

4. REVISIONS TO THE SWPPP OR ENVIRONMENTAL COMPLIANCE PLAN SHEET(S) SHALL BE APPROVED PRIOR TO INITIATION IN THE FIELD. THE ENGINEER IS RESPONSIBLE FOR APPROVING ALL REDLINES AND REVISIONS TO THE SWPPP.

5. IMPLEMENTING AND MAINTAINING POLLUTION PREVENTION DEVICES AND PRACTICES IS REQUIRED UNDER THE DELAWARE CONSTRUCTION GENERAL PERMIT AND THE DSSR AND ARE INCIDENTAL TO THE CONTRACT.

6. A SOIL STOCKPILE, AS DESCRIBE IN DELDOT STANDARD SPECIFICATIONS AND DEFINED IN THE DELAWARE EROSION & SEDIMENT CONTROL HANDBOOK, IS ANY LOCATION WITHIN THE LIMITS OF CONSTRUCTION WHERE A TEMPORARY DEPOSIT OF EXCAVATED SOIL IS BEING RESERVED FOR FUTURE USE. A SOIL STOCKPILE SHALL BE LOCATED A MINIMUM OF 50 FEET FROM A STORM DRAIN INLET, OPEN CHANNEL, WETLAND, OR WATERBODY. A REQUEST MAY BE MADE TO THE ENGINEER TO PERMIT LOCATING A SOIL STOCKPILE LESS THAN 50 FEET FROM A STORM DRAIN INLET OR OPEN CHANNEL. UPON APPROVAL, IF ANY PART OF A SOIL STOCKPILE IS LESS THAN 50 FEET FROM A STORM DRAIN INLET OR OPEN CHANNEL, INSTALL A SUPER SILT FENCE PERIMETER TO PROTECT THE SOIL STOCKPILE. THE SUPER SILT FENCE MUST BE CONSTRUCTED IN ACCORDANCE WITH 905.3.B.3 OF THE STANDARD SPECIFICATIONS. THE COST FOR INSTALLATION AND MAINTENANCE OF THE STOCKPILE SUPER SILT FENCE IS INCIDENTAL TO THE CONTRACT.

7. PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF FROM LEAVING THE SITE. CHECK PERIMETER CONTROLS DAILY AND ADJUST OR REPAIR TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. REMOVE ACCUMULATED SEDIMENT BEFORE IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. ADJUST OR ALTER MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE ENGINEER.

8. ANY SEDIMENT LADEN DISCHARGE LEAVING THE LIMIT OF CONSTRUCTION SHALL IMMEDIATELY BE ADDRESSED THROUGH BEST AVAILABLE TECHNOLOGIES TO CONTROL ANY FURTHER SEDIMENT LADEN DISCHARGE. REMEDIATION MAY INCLUDE STANDARD E&S PRACTICES OR OTHER METHODS AS APPROVED BY THE ENGINEER.

9. ALL TEMPORARY CONCENTRATED FLOW AREAS INCLUDING CHANNEL SIDE SLOPES SHALL HAVE EROSION CONTROL BLANKET MULCH AS DIRECTED BY THE ENGINEER. INSTALL WITHIN SEVEN CALENDAR DAYS UPON CONSTRUCTION INITIATION. A TEMPORARY CONCENTRATED FLOW AREA MAY INCLUDE DITCHES, SWALES, BERMS, CONCENTRATED RUNOFF AREAS, ETC.

10. MAINTAIN POSITIVE DRAINAGE IN EXISTING AND PROPOSED DRAINAGE SYSTEMS BY EXECUTING CONSTRUCTION, CLEANING EXISTING DRAINAGE SYSTEMS, AND PROPERLY DISPOSING OF SEDIMENT THROUGHOUT THE DURATION OF THE PROJECT.

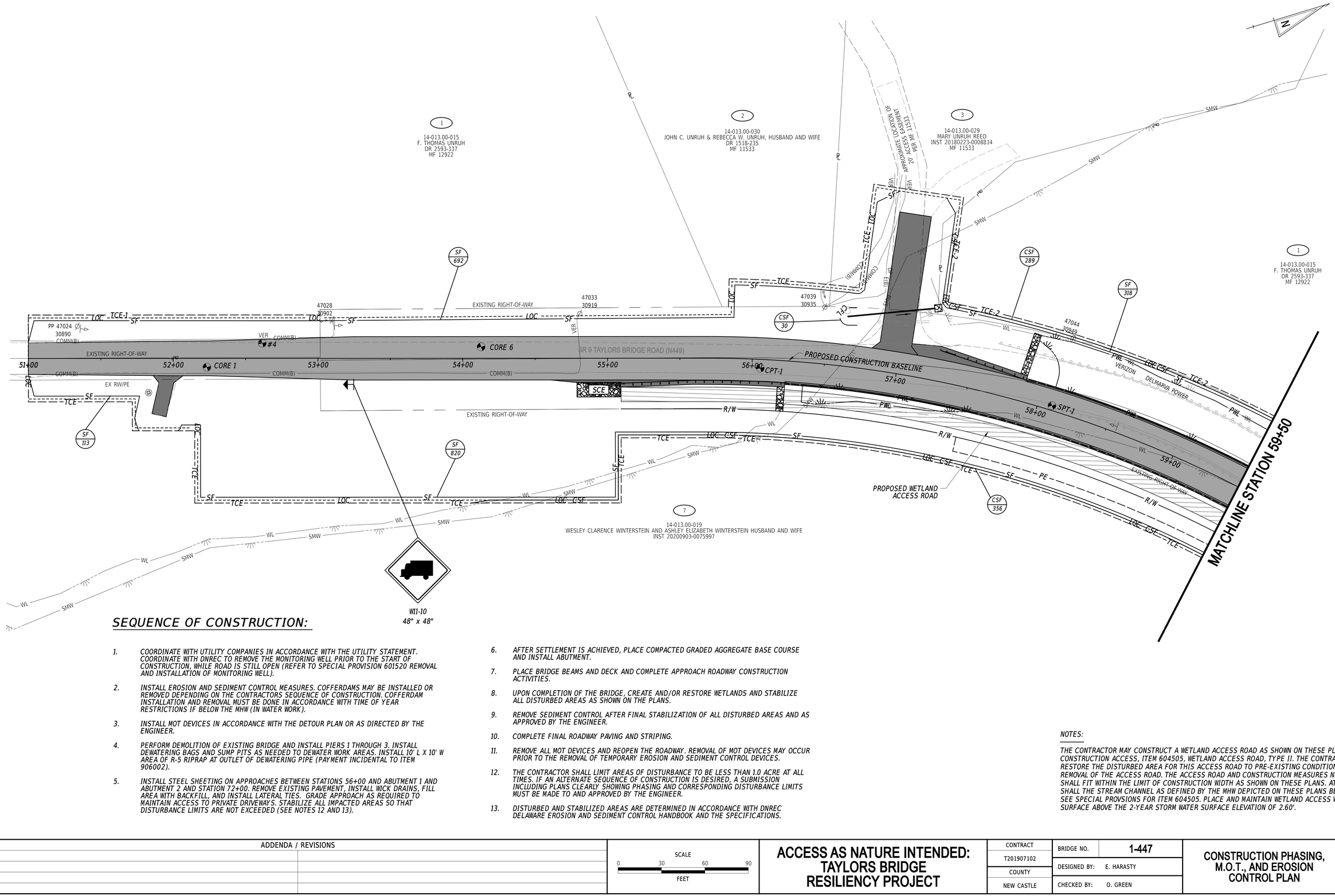
11. PER SIDEWALK, TRAIL, OR OTHER LINEAR IMPERVIOUS SURFACES STANDARD PLAN APPROVAL, NO MORE THAN 1.0 ACRE MAY BE DISTURBED AT ANY TIME. FURTHER DISTURBANCE MAY NOT PROCEED UNTIL TEMPORARY OR PERMANENT STABILIZATION OF THE PREVIOUSLY DISTURBED AREA IS COMPLETED TO THE SATISFACTION OF AND AS APPROVED BY THE ENGINEER.

EROSION & SEDIMENT CONTROL	
	COFFERDAM
CFL	COMPOST FILTER LOG
CFL	COMPOST FILTER LOG / LENGTH
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
SCCE	STABILIZED CONSTRUCTION ENTRANCE
SF	SILT FENCE / LENGTH
SF	SILT FENCE
RSF	REINFORCED SILT FENCE / LENGTH
RSF	REINFORCED SILT FENCE
SSF	SUPER SILT FENCE / LENGTH
SSF	SUPER SILT FENCE
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
T XXX	TURBIDITY CURTAIN / LENGTH
T	TURBIDITY CURTAIN

PENNONI ASSOCIATES INC.
FILE NAME: $FILEAS
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$$
PLOT DRIVER: $PLTDRIVE$
DATE PLOTTED: 16-SEP-2025 @ 14:02
USER NAME: $USER$ OFFICE LOCATION: $OFFICENAME$

Pennoni

ADDENDA / REVISIONS		NOT TO SCALE	ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT	CONTRACT T201907102	BRIDGE NO. 1-447	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN	SECTION PAI
				COUNTY NEW CASTLE	DESIGNED BY: E. HARASTY		SHEET NO. 68
					CHECKED BY: O. GREEN		



SEQUENCE OF CONSTRUCTION:

1. COORDINATE WITH UTILITY COMPANIES IN ACCORDANCE WITH THE UTILITY STATEMENT. COORDINATE WITH DNREC TO REMOVE THE MONITORING WELL PRIOR TO THE START OF CONSTRUCTION, WHILE ROAD IS STILL OPEN (REFER TO SPECIAL PROVISION 601520 REMOVAL AND INSTALLATION OF MONITORING WELL).
2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES. COFFERDAMS MAY BE INSTALLED OR REMOVED DEPENDING ON THE CONTRACTORS SEQUENCE OF CONSTRUCTION. COFFERDAM INSTALLATION AND REMOVAL MUST BE DONE IN ACCORDANCE WITH TIME OF YEAR RESTRICTIONS IF BELOW THE MHW (IN WATER WORK).
3. INSTALL MOT DEVICES IN ACCORDANCE WITH THE DETOUR PLAN OR AS DIRECTED BY THE ENGINEER.
4. PERFORM DEMOLITION OF EXISTING BRIDGE AND INSTALL PIERS 1 THROUGH 3. INSTALL DEWATERING BAGS AND SUMP PITS AS NEEDED TO DEWATER WORK AREAS. INSTALL 10' L X 10' W AREA OF R-5 RIPRAP AT OUTLET OF DEWATERING PIPE (PAYMENT INCIDENTAL TO ITEM 906002).
5. INSTALL STEEL SHEETING ON APPROACHES BETWEEN STATIONS 56+00 AND ABUTMENT 1 AND ABUTMENT 2 AND STATION 72+00. REMOVE EXISTING PAVEMENT, INSTALL WICK DRAINS, FILL AREA WITH BACKFILL, AND INSTALL LATERAL TIES. GRADE APPROACH AS REQUIRED TO MAINTAIN ACCESS TO PRIVATE DRIVEWAYS. STABILIZE ALL IMPACTED AREAS SO THAT DISTURBANCE LIMITS ARE NOT EXCEEDED (SEE NOTES 12 AND 13).
6. AFTER SETTLEMENT IS ACHIEVED, PLACE COMPACTED GRADED AGGREGATE BASE COURSE AND INSTALL ABUTMENT.
7. PLACE BRIDGE BEAMS AND DECK AND COMPLETE APPROACH ROADWAY CONSTRUCTION ACTIVITIES.
8. UPON COMPLETION OF THE BRIDGE, CREATE AND/OR RESTORE WETLANDS AND STABILIZE ALL DISTURBED AREAS AS SHOWN ON THE PLANS.
9. REMOVE SEDIMENT CONTROL AFTER FINAL STABILIZATION OF ALL DISTURBED AREAS AND AS APPROVED BY THE ENGINEER.
10. COMPLETE FINAL ROADWAY PAVING AND STRIPING.
11. REMOVE ALL MOT DEVICES AND REOPEN THE ROADWAY. REMOVAL OF MOT DEVICES MAY OCCUR PRIOR TO THE REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.
12. THE CONTRACTOR SHALL LIMIT AREAS OF DISTURBANCE TO BE LESS THAN 1.0 ACRE AT ALL TIMES. IF AN ALTERNATE SEQUENCE OF CONSTRUCTION IS DESIRED, A SUBMISSION INCLUDING PLANS CLEARLY SHOWING PHASING AND CORRESPONDING DISTURBANCE LIMITS MUST BE MADE TO AND APPROVED BY THE ENGINEER.
13. DISTURBED AND STABILIZED AREAS ARE DETERMINED IN ACCORDANCE WITH DNREC DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK AND THE SPECIFICATIONS.

NOTES:

THE CONTRACTOR MAY CONSTRUCT A WETLAND ACCESS ROAD AS SHOWN ON THESE PLANS FOR CONSTRUCTION ACCESS, ITEM 604505, WETLAND ACCESS ROAD, TYPE II. THE CONTRACTOR SHALL RESTORE THE DISTURBED AREA FOR THIS ACCESS ROAD TO PRE-EXISTING CONDITIONS FOLLOWING REMOVAL OF THE ACCESS ROAD. THE ACCESS ROAD AND CONSTRUCTION MEASURES NECESSARY SHALL FIT WITHIN THE LIMIT OF CONSTRUCTION WIDTH AS SHOWN ON THESE PLANS. AT NO TIME SHALL THE STREAM CHANNEL AS DEFINED BY THE MHW DEPICTED ON THESE PLANS BE DISTURBED. SEE SPECIAL PROVSIONS FOR ITEM 604505. PLACE AND MAINTAIN WETLAND ACCESS WORKING SURFACE ABOVE THE 2-YEAR STORM WATER SURFACE ELEVATION OF 2.60'.

PENNONI ASSOCIATES INC.
FILE NAME: $FILEAS
MICROSTATION VERSION: $VERSIONS
MICROSTATION WORKSPACE: $WORKSPACES
PEN TABLE: $PENTBLS$
PLOT DRIVER: $PLTDRVS$
DATE PLOTTED: 16-SEP-2025 @ 14:02
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAMES

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

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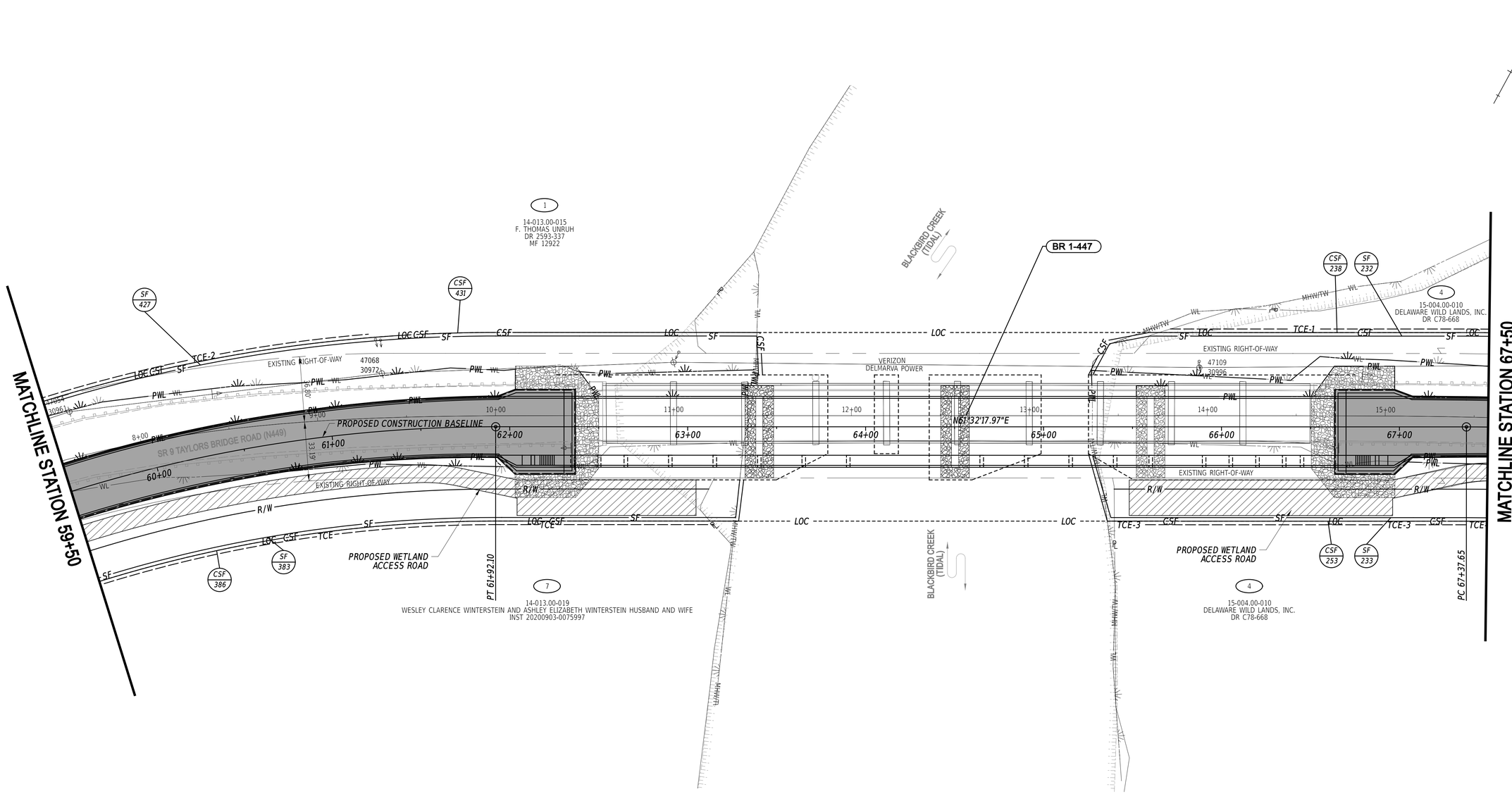
CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	E. HARASTY
COUNTY	CHECKED BY:	O. GREEN
NEW CASTLE		

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN

SECTION
PAI
SHEET NO.
69



NOTES:

COFFERDAMS SHOWN ON PLANS ARE CONCEPTUAL. CONTRACTOR SHALL SUBMIT FOR APPROVAL A PROPOSED COFFERDAM LAYOUT USED TO FACILITATE REMOVAL OF EXISTING BRIDGE PIERS AND CONSTRUCTION OF PROPOSED PIERS. INSTALLATION AND REMOVAL OF COFFERDAMS SHOULD CONSIDER TIME OF YEAR RESTRICTIONS. THE PROPOSED TOP OF COFFERDAMS SHALL BE AT A MINIMUM OF ELEVATION 3.6. THIS ELEVATION WAS DETERMINED TO PREVENT WATER IN THE WORKZONE DURING MEAN HIGH WATER COMBINED WITH A 2-YEAR PREDICTED RIVERINE FLOW OF 774 CFS. IN-WATER WORK BLOCKING MORE THAN 50% OF THE BLACKBIRD CREEK CHANNEL AT ANY GIVEN TIME IS PROHIBITED.

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$$
PLOT DRIVER: $PLTDRV$$
DATE PLOTTED: 16-SEP-2025 @ 14:02
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

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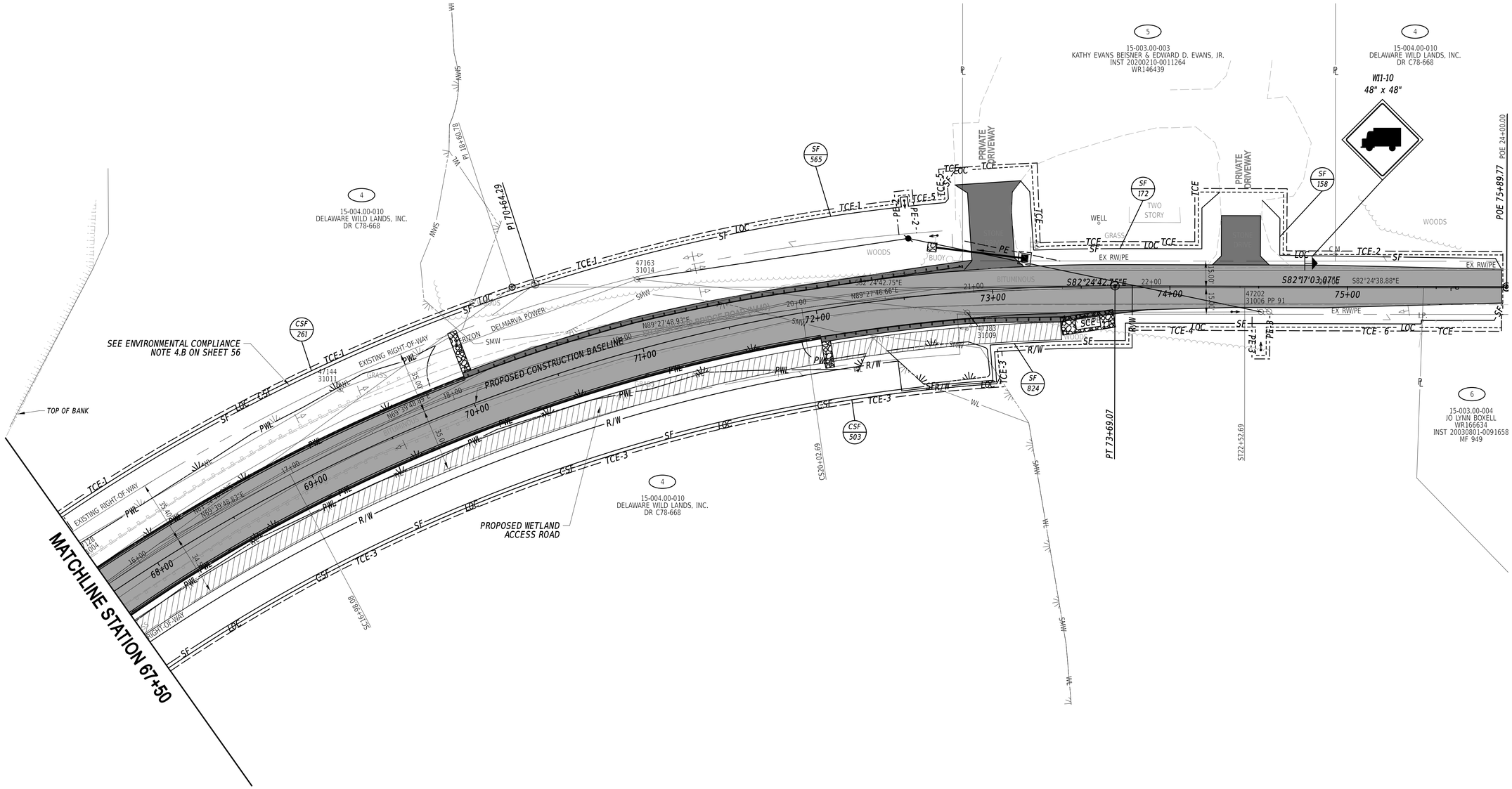
CONTRACT	BRIDGE NO.	1-447	SECTION
T201907102	DESIGNED BY:	E. HARASTY	PAI
COUNTY	CHECKED BY:	O. GREEN	SHEET NO.
NEW CASTLE			70

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN

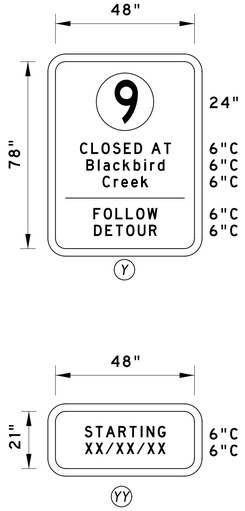


PENNONI ASSOCIATES INC.	
FILE NAME: $FILE$	PEN TABLE: $PENTBL$$
MICROSTATION VERSION: $VERSION$	PLOT DRIVER: $PLTDRV$$
MICROSTATION WORKSPACE: $WORKSPACE$	DATE PLOTTED: 16-SEP-2025 @ 14:02
	USER NAME: $USER$
	OFFICE LOCATION: $OFFICENAME$

ADDENDA / REVISIONS		SCALE	ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT	CONTRACT	BRIDGE NO. 1-447	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN	SECTION
		0 30 60 90		T201907102	DESIGNED BY: E. HARASTY		PAI
		FEET		COUNTY	CHECKED BY: O. GREEN		SHEET NO.
				NEW CASTLE			71

PORTABLE CHANGEABLE MESSAGE SIGNS

SPECIAL SIGNS



1. DISPLAY (Y) SIGNS, ALONG WITH THE (YY) PLAQUE, FOR 10 DAYS PRIOR TO THE IMPLEMENTATION OF THE DETOUR. (YY) PLAQUE TO COMPLETELY COVER "FOLLOW DETOUR" LEGEND ON (Y) SIGNS. UPON IMPLEMENTATION OF THE DETOUR, REMOVE (YY) PLAQUE FROM (Y) SIGNS AND RELOCATE (Y) SIGNS TO A LOCATION OUTSIDE OF THE CLOSURE AREA.
2. ALL SIGNS SHALL HAVE A BLACK LEGEND AND BORDER ON A RETROREFLECTIVE, PRISMATIC, FLUORESCENT ORANGE BACKGROUND. DELAWARE ROUTE SYMBOL SHALL HAVE A BLACK LEGEND ON A WHITE BACKGROUND.

PREPARED BY
PENNONI ASSOCIATES INC.

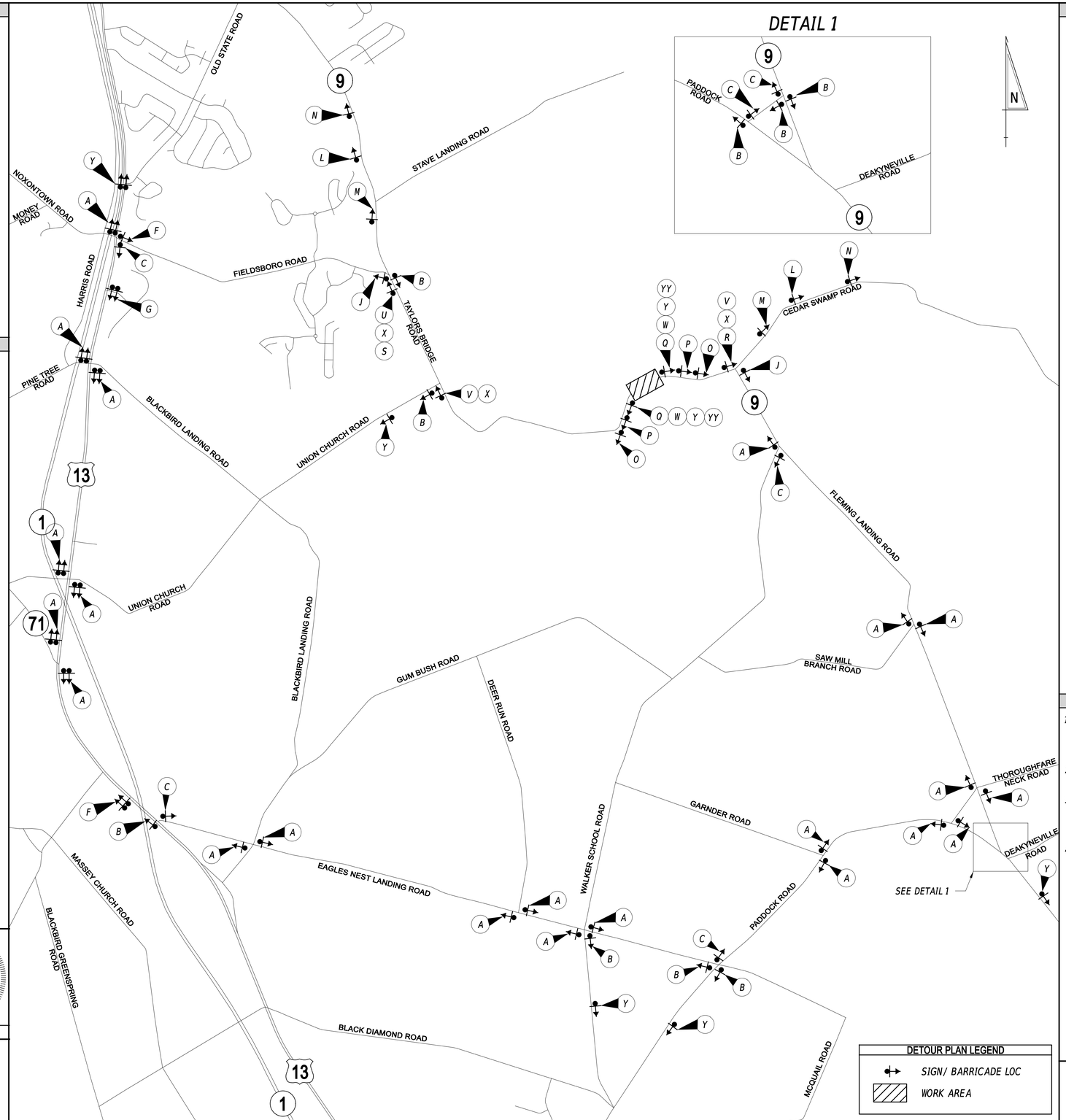
Pennoni

Teresa Scrocca — 8/14/2025
THIS SEAL APPLIES TO ALL SHEETS BEARING THE "PAI" SECTION DESIGNATION. — DATE

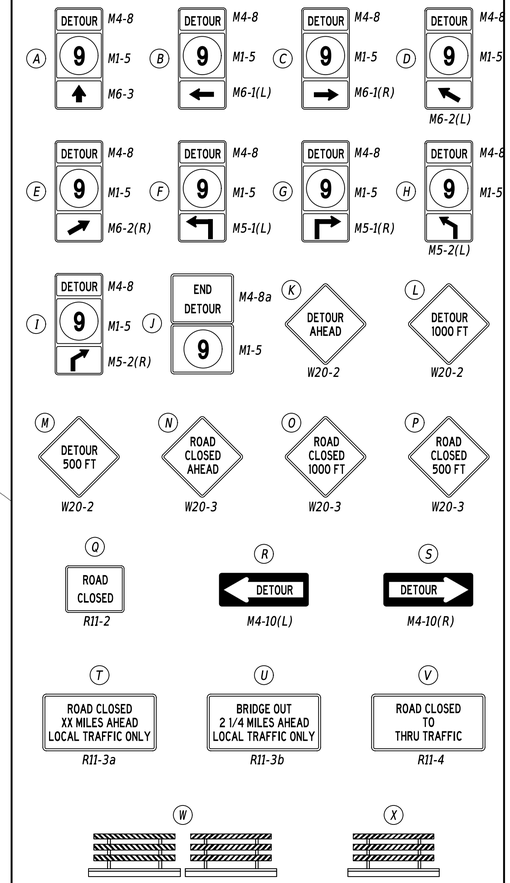
TERESA M. SCROCCA LICENSE No. 24274 DELAWARE PROFESSIONAL ENGINEER
SEAL

Zach Brander — 8/14/2025
QA/QC REVIEWER — DATE

*I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THIS DETOUR PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."



LEGEND



GENERAL NOTES

1. ALL TEMPORARY TRAFFIC CONTROL DEVICES ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR AND SHALL BE IN COMPLIANCE WITH THIS PLAN AND THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE MUTCD) LATEST EDITION.
2. SIGNS "N" THROUGH "Q" AND "T" AND "V", THE WORD "ROAD" SHALL BE CHANGED TO "RAMP", "RR XING" OR "BRIDGE" WHERE APPLICABLE.
3. "W" TYPE 3 BARRICADES AT A ROAD CLOSURE SHALL BE PLACED COMPLETELY ACROSS THE ROADWAY, FROM CURB TO CURB, OR FROM EDGE OF ROAD TO EDGE OF ROAD, WITH THE STRIPES POSITIONED DOWNWARD TOWARD THE CENTER OF THE ROADWAY.
4. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.

DETOUR PLAN LEGEND
- SIGN/ BARRICADE LOC
- WORK AREA

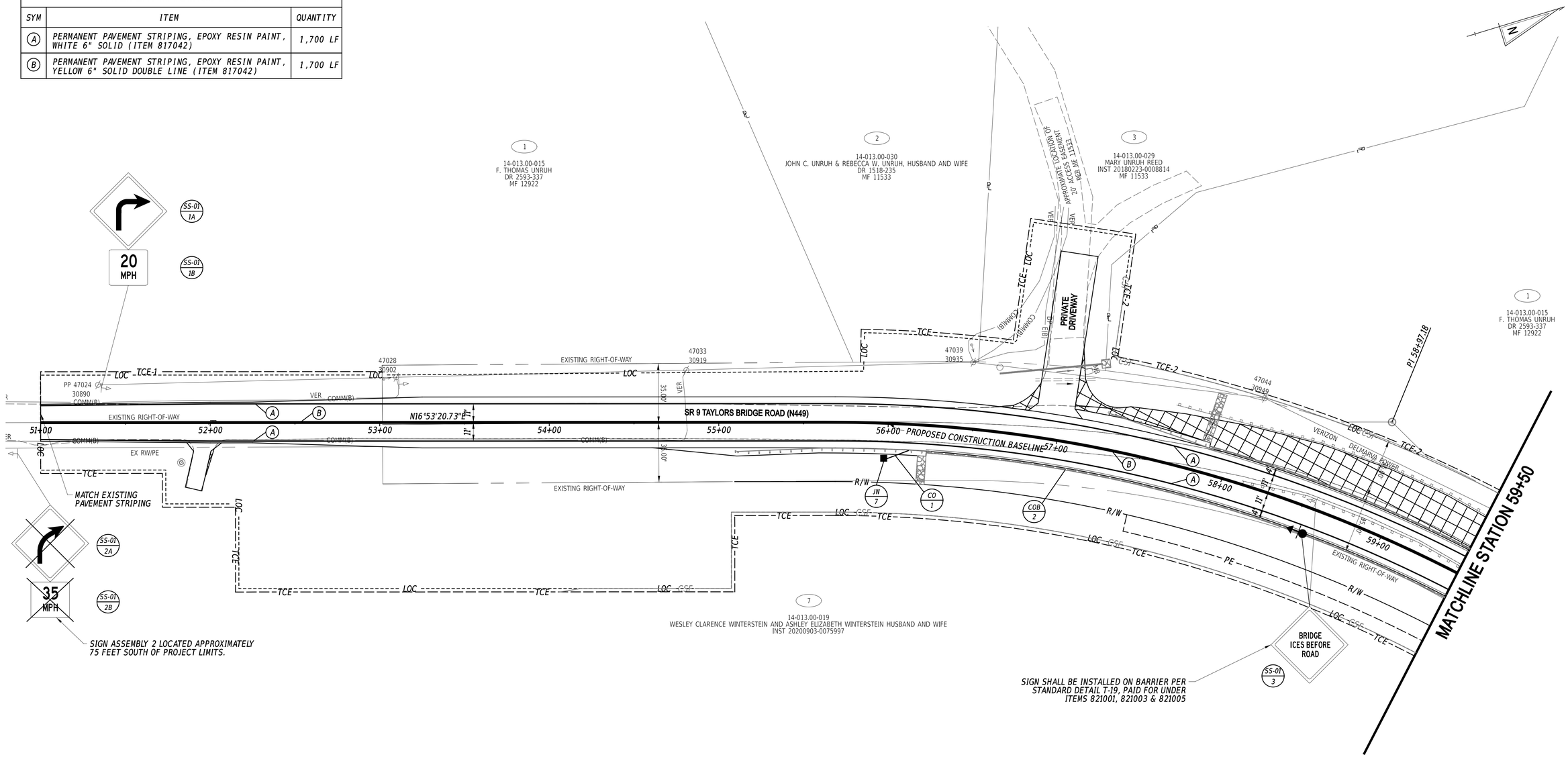
CONCURRENCE FOR IMPLEMENTATION

Dave Wynn — 8/15/2025
TRAFFIC SAFETY — DATE

ADDENDA / REVISIONS	NOT TO SCALE	ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT	CONTRACT T201907102	PERMIT NO. N/A	DETOUR PLAN - VEHICULAR DE 9 @ BR1-447	SECTION PAI
			COUNTY NEW CASTLE	DESIGNED BY: T. SCROCCA		SHEET NO. 72
				CHECKED BY: Z. BRANDER		

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
(A)	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE 6" SOLID (ITEM 817042)	1,700 LF
(B)	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW 6" SOLID DOUBLE LINE (ITEM 817042)	1,700 LF



CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
CO-1	1	4" PVC	14'	T	EMPTY (FOR FUTURE ITMS)
COB-2	1	4" PVC	588'	-	EMPTY (FOR FUTURE ITMS)

* DENOTES EXISTING CONDUIT RUN.
TYPES: HDPE, PVC, RGS
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH

ALL ITMS CONDUITS AND JUNCTION WELLS,BOTH INSIDE AND OUTSIDE OF BARRIER, SHALL BE INCIDENTAL TO ITEM 615504 - BRIDGE ELECTRICAL SYSTEM.

ITMS LEGEND

CO / X	PROPOSED CONDUIT RUN IDENTIFIER (X = CONDUIT RUN NUMBER)
COB / X	PROPOSED CONDUIT IN BARRIER ID (X = CONDUIT RUN NUMBER)
JW / X	PROPOSED JUNCTION WELL IDENTIFIER (X = TYPE OF JUNCTION WELL)
JWB / X	PROPOSED JUNCTION WELL IN BARRIER (X = TYPE OF JUNCTION WELL)

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	T. SCROCCA
COUNTY	CHECKED BY:	Z. BRANDER
NEW CASTLE		

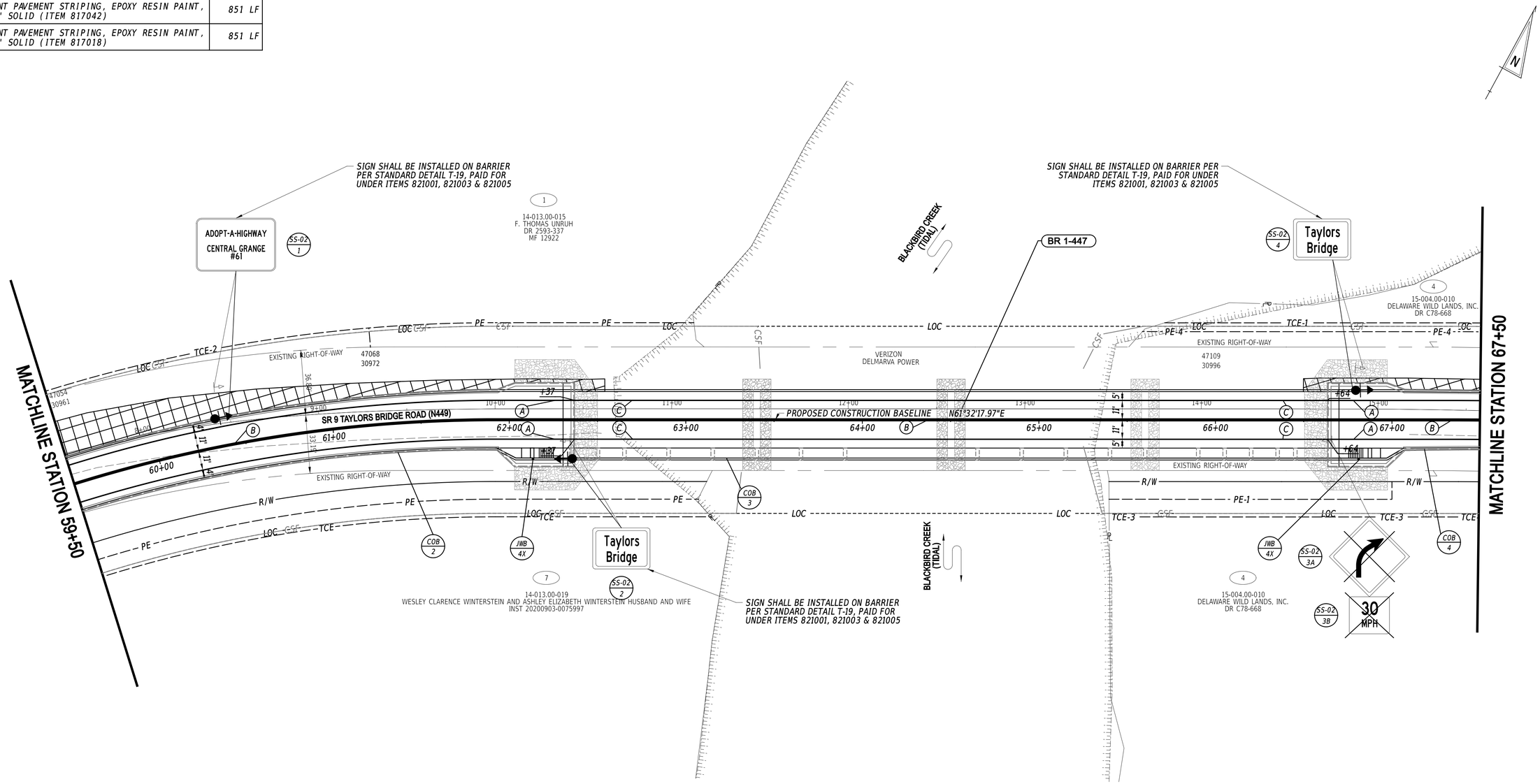
SIGNING, STRIPING AND CONDUIT PLAN

SS-01	
SECTION	PAI
SHEET NO.	73

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRV$
DATE PLOTTED: 16-SEP-2025 @ 14:02
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
A	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE 6" SOLID (ITEM 817042)	746 LF
B	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW 6" SOLID DOUBLE LINE (ITEM 817042)	1,600 LF
C	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE 6" SOLID (ITEM 817042)	851 LF
	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK 3" SOLID (ITEM 817018)	851 LF



CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
COB-2	1	4" PVC	588'	-	EMPTY (FOR FUTURE ITMS)
COB-3	1	4" PVC	482'	-	EMPTY (FOR FUTURE ITMS)
COB-4	1	4" PVC	507'	-	EMPTY (FOR FUTURE ITMS)

* DENOTES EXISTING CONDUIT RUN.
TYPES: HDPE, PVC, RGS
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH

ALL ITMS CONDUITS AND JUNCTION WELLS,BOTH INSIDE AND OUTSIDE OF BARRIER, SHALL BE INCIDENTAL TO ITEM 615504 - BRIDGE ELECTRICAL SYSTEM.

ITMS LEGEND

CO / X	PROPOSED CONDUIT RUN IDENTIFIER (X = CONDUIT RUN NUMBER)
COB / X	PROPOSED CONDUIT IN BARRIER ID (X = CONDUIT RUN NUMBER)
JW / X	PROPOSED JUNCTION WELL IDENTIFIER (X = TYPE OF JUNCTION WELL)
JWB / X	PROPOSED JUNCTION WELL IN BARRIER (X = TYPE OF JUNCTION WELL)

PENNONI ASSOCIATES INC.
FILE NAME: $FILE&$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PTDRV$$
DATE PLOTTED: 16-SEP-2025 @ 14:02
USER NAME: $USER$
OFFICE LOCATION:

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

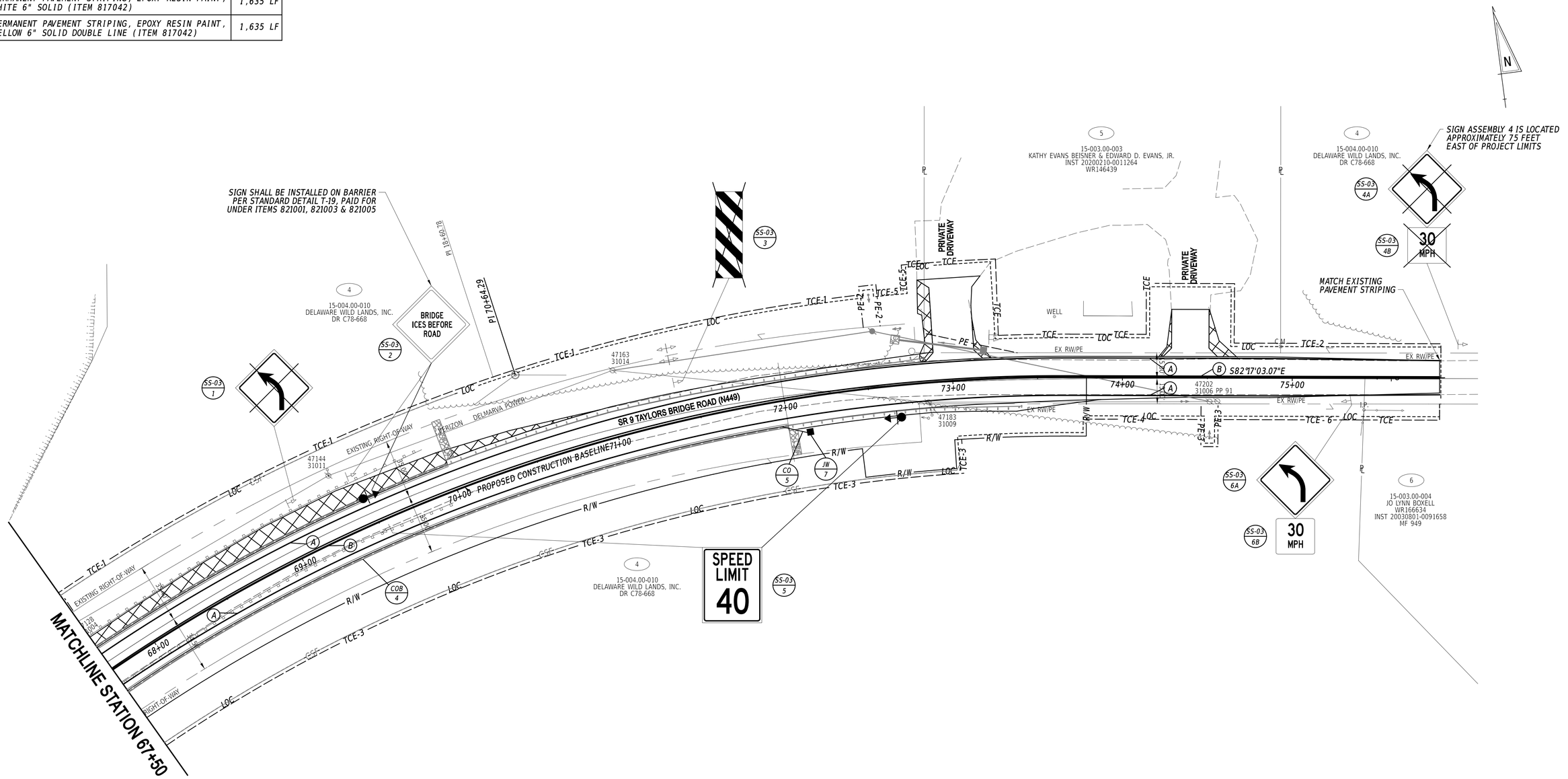
CONTRACT T201907102	BRIDGE NO.	1-447
COUNTY NEW CASTLE	DESIGNED BY:	T. SCROCCA
	CHECKED BY:	Z. BRANDER

SIGNING, STRIPING AND CONDUIT PLAN

SS-02	
SECTION	PAI
SHEET NO.	74

PAVEMENT MARKINGS LEGEND

SYM	ITEM	QUANTITY
A	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE 6" SOLID (ITEM 817042)	1,635 LF
B	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW 6" SOLID DOUBLE LINE (ITEM 817042)	1,635 LF



CONDUIT RUN SCHEDULE

CO NO.	NO. OF CONDUITS	SIZE/TYPE	LENGTH	INSTALL METHOD	AMOUNT AND TYPE OF CABLE / WIRE
COB-4	1	4" PVC	507'	-	EMPTY (FOR FUTURE ITMS)
CO-5	1	4" PVC	15'	T	EMPTY (FOR FUTURE ITMS)

* DENOTES EXISTING CONDUIT RUN.
TYPES: HDPE, PVC, RGS
INSTALL METHODS: B=BORE, OC=OPEN CUT, OS=ON STRUCTURE, T=TRENCH

ALL ITMS CONDUITS AND JUNCTION WELLS,BOTH INSIDE AND OUTSIDE OF BARRIER, SHALL BE INCIDENTAL TO ITEM 615504 - BRIDGE ELECTRICAL SYSTEM.

ITMS LEGEND

CO X	PROPOSED CONDUIT RUN IDENTIFIER (X = CONDUIT RUN NUMBER)
COB X	PROPOSED CONDUIT IN BARRIER ID (X = CONDUIT RUN NUMBER)
JW X	PROPOSED JUNCTION WELL IDENTIFIER (X = TYPE OF JUNCTION WELL)
JWB X	PROPOSED JUNCTION WELL IN BARRIER (X = TYPE OF JUNCTION WELL)

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	T. SCROCCA
COUNTY	CHECKED BY:	Z. BRANDER
NEW CASTLE		

SIGNING, STRIPING AND CONDUIT PLAN

SS-03 | SECTION
PAI | SHEET NO.
75

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRVR$
DATE PLOTTED: 16-SEP-2025 @ 14:02
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

PERMANENT SIGN SCHEDULE - ROADWAY

SHEET NO.	PLAN IDENTIFIER	SIGN DESIGNATION	QTY.	DESCRIPTION	SIGN WIDTH (IN)	SIGN HEIGHT (IN)	X13 / ITEM 818001 SUPPLY OF FLAT SHEET ALUMINUM, TYPE IV, RETROREFLECTIVE SHEETING (SF)	X14 / ITEM 818003 SUPPLY OF FLAT SHEET ALUMINUM, TYPE XI, RETROREFLECTIVE SHEETING (SF)	X15 / ITEM 819512 SIGN POST REFLECTIVE PANEL (EA)	ITEM 819018 INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE POST (EACH)			ITEM 819019 INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON MULTIPLE SIGN POSTS (SF)			POST INSTALLATION TYPE	X16 / ITEM 819011 12' SIGNPOSTS W/ BASEPOSTS & HARDWARE (EACH)	X17 / ITEM 819023 15' SIGNPOSTS W/ BASEPOSTS & HARDWARE (EACH)	ITEM 819016 4" HOLE, 0-6" (EACH)	ITEM 819017 4" HOLE, >6" (EACH)	REMARKS
										SIGN DISPOSITION	REMOVE	INSTALL	SIGN DISPOSITION	REMOVE	INSTALL						
SS-01	1A	W1-1_R_FY(30)	1	TURN (Right) - 30x30 (Fluorescent Yellow)	30	30				REMAIN											
SS-01	1B	W13-1P-20(18)	1	ADVISORY SPEED (20 MPH) 18x18	18	18				REMAIN											
SS-01	2A	W1-2_R_FY(30)	1	CURVE (Right) - 30x30 (Fluorescent Yellow)	30	30				REMOVE	1										
SS-01	2B	W13-1P-30(18)	1	ADVISORY SPEED (30 MPH) 18x18	18	18				REMOVE	1										35 MPH
SS-01	3	W8-13(36)	1	BRIDGES ICES BEFORE ROAD - 36x36	36	36	9.0														To be installed on Barrier, incidental to Items 821001, 821003, & 821005
SS-02	1	D14-3-DE	1	ADOPT A HIGHWAY	24	18	3.0														CENTRAL GRANGE #61 (To be installed on Barrier, incidental to Items 821001, 821003, & 821005)
SS-02	2	I-3(18)	1	GEOGRAPHICAL FEATURES	24	18	3.0														Taylors Bridge (To be installed on Barrier, incidental to Items 821001, 821003, & 821005)
SS-02	3A	W1-2_R_FY(30)	1	CURVE (Right) - 30x30 (Fluorescent Yellow)	30	30				REMOVE	1										
SS-02	3B	W13-1P-30(18)	1	ADVISORY SPEED (30 MPH) 18x18	18	18				REMOVE	1										30 MPH
SS-02	4	I-3(18)	1	GEOGRAPHICAL FEATURES	24	18	3.0														Taylors Bridge (To be installed on Barrier, incidental to Items 821001, 821003, & 821005)
SS-03	1	W1-2_L_FY(30)	1	CURVE (Left) - 30x30 (Fluorescent Yellow)	30	30				REMOVE	1										
SS-03	2	W8-13(36)	1	BRIDGES ICES BEFORE ROAD - 36x36	36	36	9.0														To be installed on Barrier, incidental to Items 821001, 821003, & 821005
SS-03	3	OM3-L	1	TYPE 3 OBJECT MARKER	12	36				REMOVE	1										
SS-03	4A	W1-2_L_FY(30)	1	CURVE (Left) - 30x30 (Fluorescent Yellow)	30	30				REMOVE	1										
SS-03	4B	W13-1P-30(18)	1	ADVISORY SPEED (30 MPH) 18x18	18	18				REMOVE	1										30 MPH
SS-03	5	R2-1-40(24)	1	SPEED LIMIT (40 MPH - 24x30)	24	30	5.0			RENEW	1	1				SOIL	1				
SS-03	6A	W1-2_L_FY(30)	1	CURVE (Left) - 30x30 (Fluorescent Yellow)	30	30				REMAIN											
SS-03	6B	W13-1P-30(18)	1	ADVISORY SPEED (30 MPH) 18x18	18	18				REMAIN											
PAGE TOTALS							32	0	0		9	1		0	0		1	0	0	0	

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRVSS
DATE PLOTTED: 16-SEP-2025 @ 14:02
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

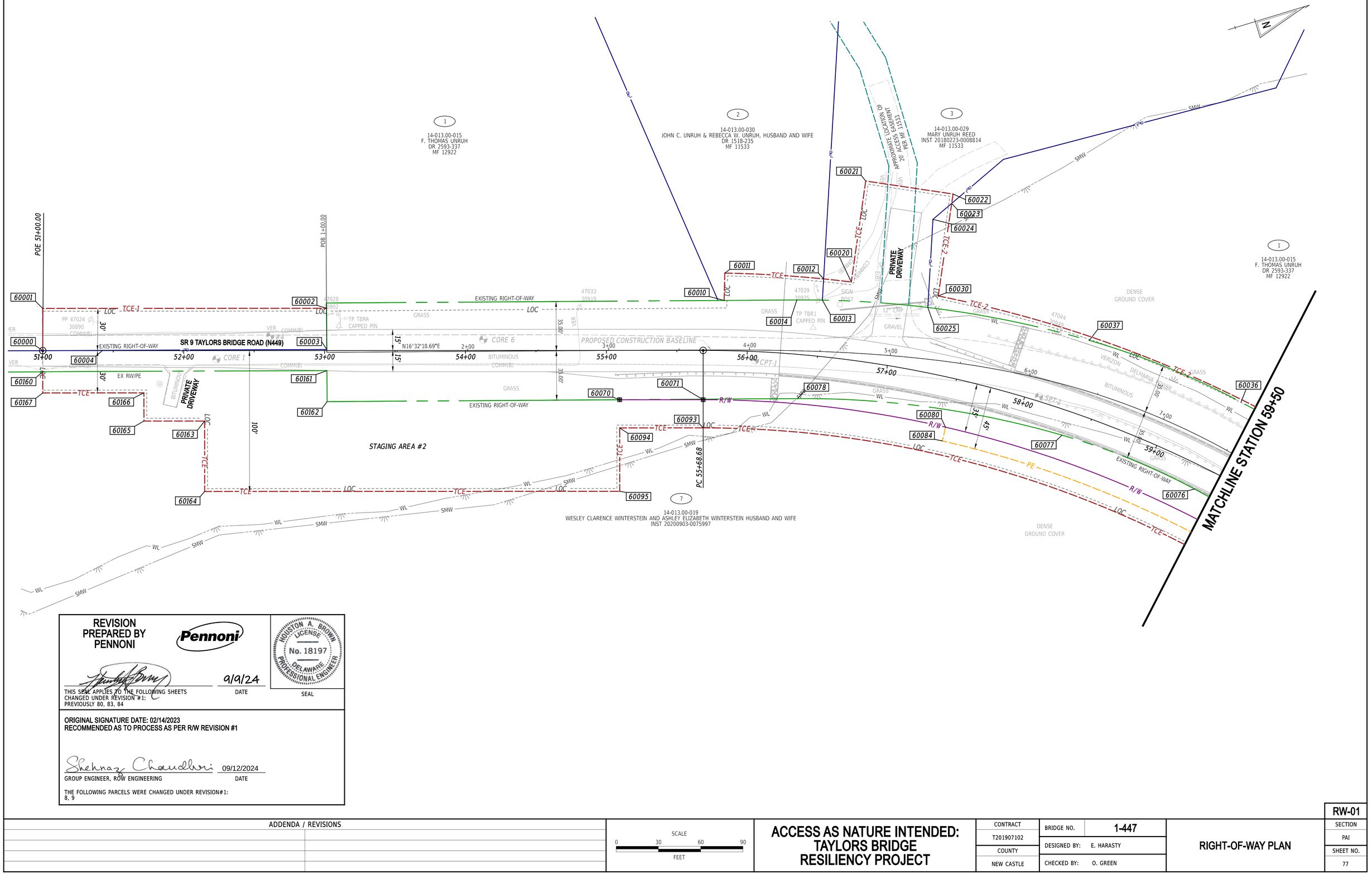
ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

ACCESS AS NATURE INTENDED:
TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447	SECTION
T201907102	DESIGNED BY:	T. SCROCCA	PAI
COUNTY	CHECKED BY:	Z. BRANDER	SHEET NO.
NEW CASTLE			76

PERMANENT SIGN SCHEDULE



REVISION PREPARED BY PENNONI	Pennoni	HOUSTON A. BROWN LICENSE No. 18197 DELAWARE PROFESSIONAL ENGINEER
9/9/24 DATE		SEAL

THIS SEAL APPLIES TO THE FOLLOWING SHEETS
CHANGED UNDER REVISION #1:
PREVIOUSLY 80, 83, 84

ORIGINAL SIGNATURE DATE: 02/14/2023
RECOMMENDED AS TO PROCESS AS PER R/W REVISION #1

Shehnaz Chaudhuri 09/12/2024
GROUP ENGINEER, ROW ENGINEERING — DATE

THE FOLLOWING PARCELS WERE CHANGED UNDER REVISION#1:
8, 9

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRV$
DATE PLOTTED: 9-SEP-2024 @ 10:00
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

ADDENDA / REVISIONS

SCALE 0 30 60 90 FEET

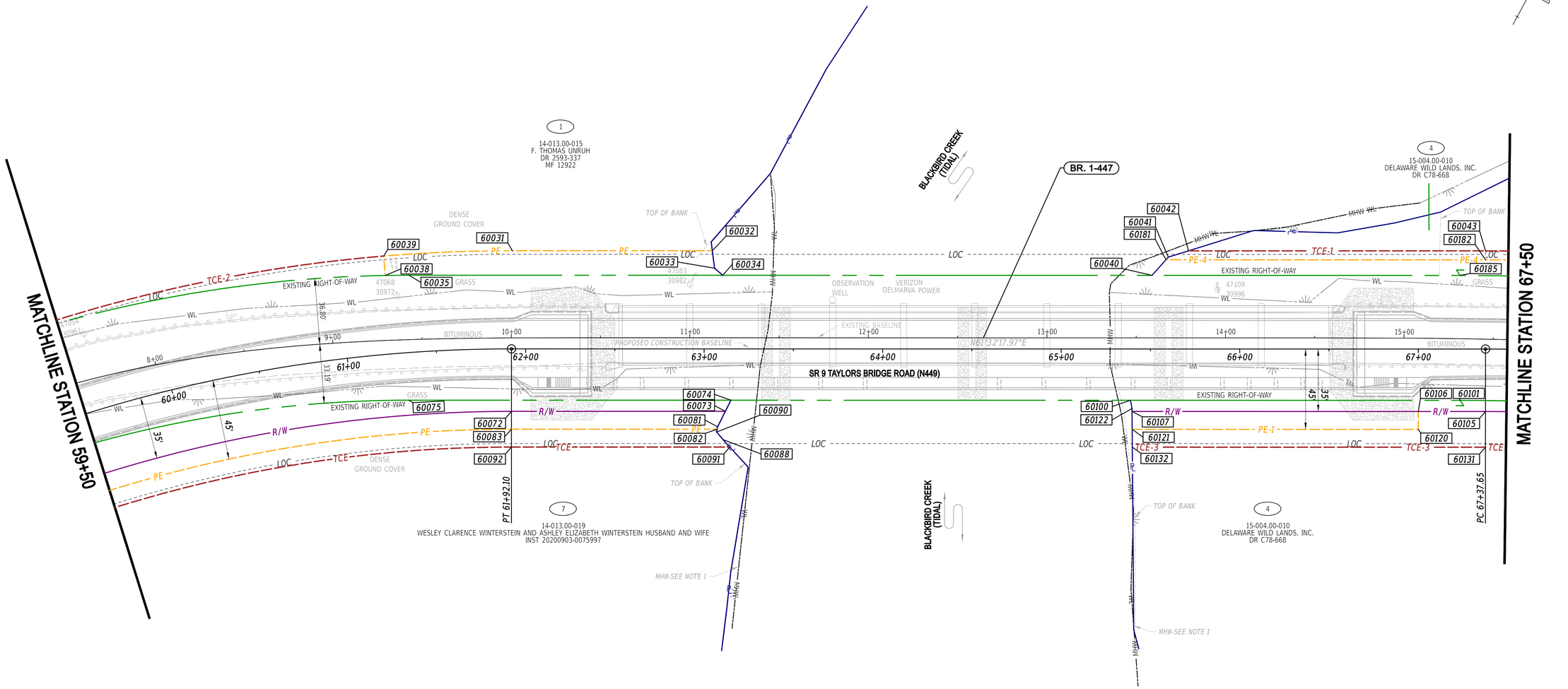
ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	E. HARASTY
COUNTY	CHECKED BY:	O. GREEN
NEW CASTLE		

RIGHT-OF-WAY PLAN

RW-01

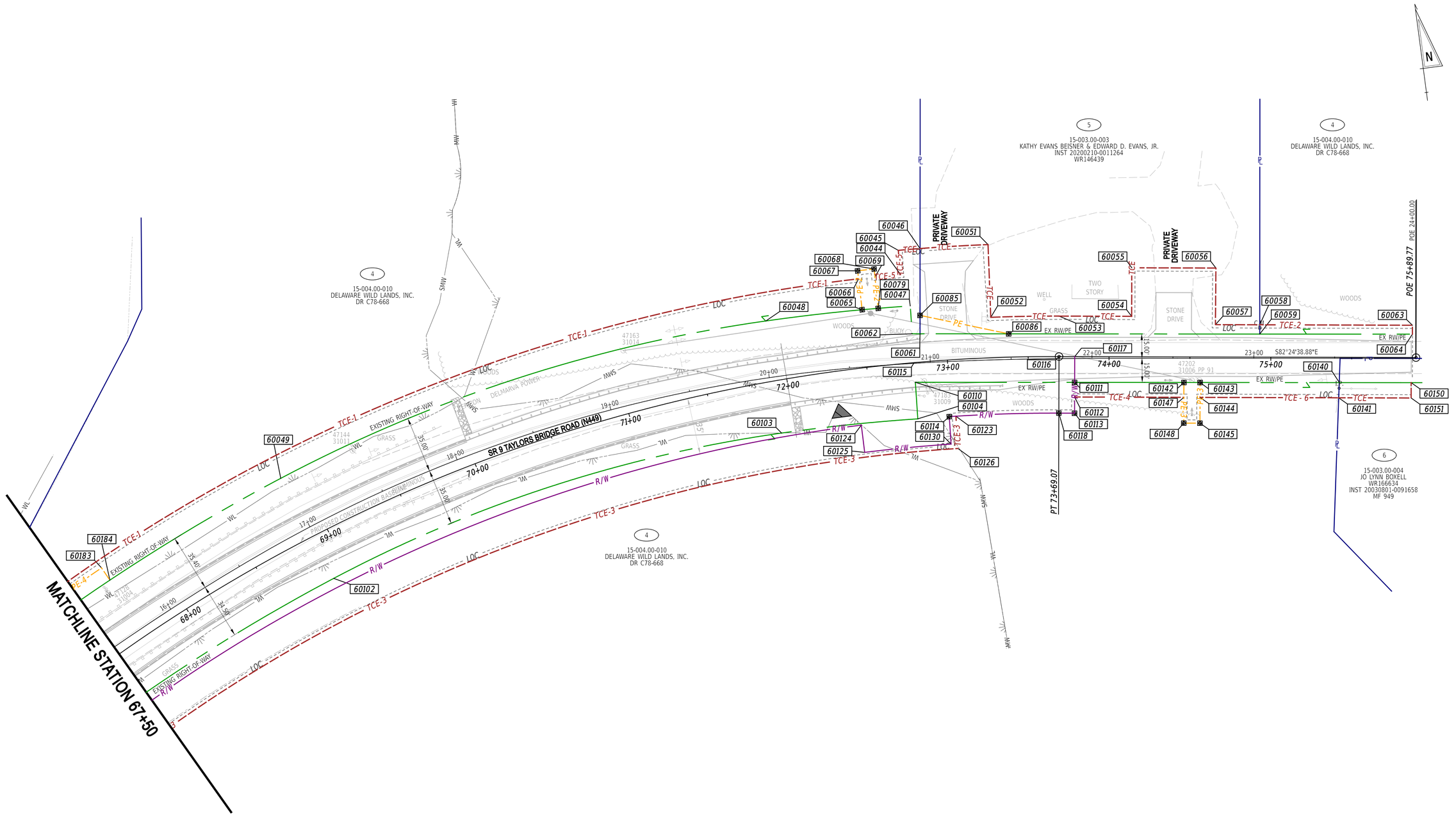
SECTION	PAI
SHEET NO.	77



PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRV$
DATE PLOTTED: 17-MAY-2024 @ 15:56
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

Pennoni

ADDENDA / REVISIONS		SCALE	ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT	CONTRACT	BRIDGE NO. 1-447	RIGHT-OF-WAY PLAN	RW-02
		0 30 60 90		T201907102	DESIGNED BY: E. HARASTY		SECTION PAI
		FEET		COUNTY NEW CASTLE	CHECKED BY: O. GREEN		SHEET NO. 78



PENNONI ASSOCIATES INC.
FILE NAME: $FILEA$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$$
PLOT DRIVER: $PLTDRV$$
DATE PLOTTED: 17-MAY-2024 @ 15:57
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

Pennoni

ADDENDA / REVISIONS	

SCALE
0 30 60 90
FEET

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447	RW-03
T201907102	DESIGNED BY:	E. HARASTY	SECTION
COUNTY			PAI
NEW CASTLE	CHECKED BY:	O. GREEN	SHEET NO.
			79

RIGHT-OF-WAY PLAN

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
14-013.00-015	(1) F. THOMAS UNRUH	P/E	D.B. 2593-337	296.800

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60038	P_BL	61+25.00	-44.10	511603.4324	604240.2782	N 33°16'01.70" W	10.90				
60039	P_BL	61+25.00	-55.00	511612.5458	604234.2993			N 59°09'02.46" E	72.14	72.16	855.00
60031	P_BL	61+92.55	-55.00	511649.5387	604296.2343	N 61°32'17.97" E	112.02				
60032	P_BL	63+04.57	-55.00	511702.9250	604394.7166	S 35°42'11.67" E	9.86				
60033	P_BL	63+05.82	-45.22	511694.9177	604400.4711	S 77°32'42.23" E	6.05				
60034	P_BL	63+10.39	-41.25	511693.6125	604406.3806	S 61°32'18.81" W	175.66				
60035	P_BL	61+37.62	-43.21	511609.8974	604251.9488			S 61°00'54.64" W	13.34	13.34	-730.19
60038	P_BL	61+25.00	-44.10	511603.4324	604240.2782						

FIGURE 1-P/E AREA = 2474.5733 SQ. FT. (0.0568 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
14-013.00-015	(1) F. THOMAS UNRUH	TCE-1	D.B. 2593-337	296.800

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60000	P_BL	51+00.00	0.00	510681.6150	603801.6487	N 73°06'39.27" W	30.00				
60001	P_BL	50+99.78	-30.00	510690.3306	603772.9427	N 16°53'20.73" E	201.42				
60002	P_BL	53+01.42	-30.00	510883.0657	603831.4600	S 73°27'40.99" E	29.28				
60003	P_BL	53+01.60	-0.72	510874.7309	603859.5284	S 16°43'24.88" W	159.00				
60004	P_BL	51+42.61	-0.26	510722.4602	603813.7767	S 16°32'14.94" W	42.61				
60000	P_BL	51+00.00	0.00	510681.6150	603801.6487						

FIGURE 1-TCE-1 AREA = 5961.7752 SQ. FT. (0.1369 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
14-013.00-015	(1) F. THOMAS UNRUH	TCE-2	D.B. 2593-337	296.800

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60025	P_BL	57+20.47	-45.58	511291.5138	603955.0510	N 69°47'26.74" W	62.64				
60024	P_BL	57+13.22	-107.71	511313.1530	603896.2667	N 23°29'46.25" W	17.47				
60023	P_BL	57+22.82	-121.31	511329.1746	603889.3016	S 64°50'09.40" E	66.39				
60030	P_BL	57+25.81	-55.00	511300.9454	603949.3895			N 42°26'16.95" E	422.22	426.63	855.00
60039	P_BL	61+25.00	-55.00	511612.5458	604234.2993	S 33°16'01.70" E	10.90				
60038	P_BL	61+25.00	-44.10	511603.4324	604240.2782			S 52°45'54.74" W	196.34	196.94	-730.19
60036	P_BL	59+39.71	-53.30	511484.6300	604083.9591			S 39°02'18.71" W	116.21	116.42	-555.87
60037	P_BL	58+30.62	-52.25	511394.3684	604010.7661			S 28°26'38.08" W	116.98	117.10	-730.19
60025	P_BL	57+20.47	-45.58	511291.5138	603955.0510						

FIGURE 1-TCE-2 AREA = 2557.8098 SQ. FT. (0.0587 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
14-013.00-030	(2) JOHN C. UNRUH & REBECCA W. UNRUH, HUSBAND AND WIFE	TCE	D.B. 1518-235	1.040

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60010	P_BL	55+82.95	-35.59	511154.6418	603908.2149	N 71°39'02.79" W	19.44				
60011	P_BL	55+83.09	-55.02	511160.7609	603889.7657			N 20°17'50.36" E	70.26	70.28	863.12
60012	P_BL	56+48.84	-55.00	511226.6543	603914.1369	S 69°47'26.74" E	15.08				
60013	P_BL	56+49.45	-39.93	511221.4456	603928.2867			S 17°14'58.18" W	18.13	18.13	-730.19
60014	P_BL	56+32.22	-38.41	511204.1290	603922.9099	S 16°32'18.69" W	51.62				
60010	P_BL	55+82.95	-35.59	511154.6418	603908.2149						

FIGURE 2-TCE AREA = 1234.3189 SQ. FT. (0.0283 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
14-013.00-029	(3) MARY UNRUH REED	TCE	INST. 20180223-0008814	2.090

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60013	P_BL	56+49.45	-39.93	511221.4456	603928.2867	N 69°47'26.74" W	15.08				
60012	P_BL	56+48.84	-55.00	511226.6543	603914.1369			N 23°17'04.98" E	19.73	19.73	863.12
60020	P_BL	56+67.30	-55.00	511244.7772	603921.9361	N 64°57'17.79" W	72.41				
60021	P_BL	56+68.50	-127.40	511275.4324	603856.3306	N 25°23'29.71" E	62.66				
60022	P_BL	57+22.54	-128.04	511332.0410	603883.2001	S 64°50'09.40" E	6.74				
60023	P_BL	57+22.82	-121.31	511329.1746	603889.3016	S 23°29'46.25" E	17.47				
60024	P_BL	57+13.22	-107.71	511313.1530	603896.2667	S 69°47'26.74" E	62.64				
60025	P_BL	57+20.47	-45.58	511291.5138	603955.0510			S 20°54'20.15" W	75.01	75.04	-730.19
60013	P_BL	56+49.45	-39.93	511221.4456	603928.2867						

FIGURE 3-TCE AREA = 4879.7226 SQ. FT. (0.1120 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
15-004.00-010	(4) DELAWARE WILD LANDS, INC.	FEE	D.B. C78-668	759.420

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60100	P_BL	65+38.79	28.75	511740.9202	604640.5341	N 61°32'18.81" E	184.63				
60101	P_BL	67+23.41	28.75	511828.9069	604802.8457			N 65°36'04.14" E	161.60	161.74	1140.58
60102	P_BL	68+89.59	29.01	511895.6632	604950.0171			N 79°33'48.91" E	291.07	292.52	846.47
60103	P_BL	71+91.01	32.53	511948.3881	605236.2677			S 88°24'34.53" E	84.68	84.70	1140.58
60104	P_BL	72+78.64	34.85	511946.0378	605320.9176	N 3°43'04.29" E	22.66				
60110	P_BL	72+79.11	12.20	511968.6459	605322.3866	S 82°24'38.88" E	98.46				
60111	P_BL	73+78.79	15.97	511955.6429	605419.9803	S 7°42'56.69" W	19.03				
60113	P_BL	73+78.79	35.00	511936.7882	605417.4257	N 82°17'03.07" W	9.72				
60118	P_BL	73+69.07	35.00	511938.0929	605407.7959			N 84°17'40.26" W	67.76	67.78	-965.86
60114	P_BL	72+98.83	35.00	511944.8296	605340.3675	S 3°41'29.68" W	17.00				
60130	P_BL	72+98.83	52.00	511927.8628	605339.2728			N 87°55'48.95" W	53.66	53.67	-948.00
60125	P_BL	72+42.22	52.00	511929.8009	605285.6459	N 0°26'52.42" E	17.00				
60124	P_BL	72+42.22	35.00	511946.8003	605285.7788			S 75°59'35.19" W	481.76	486.91	-965.00
60105	P_BL	67+37.65	35.00	511830.1961	604818.3444	S 61°32'17.97" W	197.99				
60107	P_BL	65+39.66	35.00	511735.8400	604644.2844	N 28°55'59.24" W	1.63				
60122	P_BL	65+39.65	33.37	511737.2649	604643.4968	N 39°01'30.81" W	4.71				
60100	P_BL	65+38.79	28.75	511740.9202	604640.5341						

FIGURE 4-R/W-1 AREA = 6628.5473 SQ. FT. (0.1522 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
15-004.00-010	(4) DELAWARE WILD LANDS, INC.	R/W	D.B. C78-668	759.420

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60110	P_BL	72+79.11	12.20	511968.6459	605322.3866	N 3°42'04.55" E	12.20				
60115	P_BL	72+79.36	0.00	511980.8196	605323.1741			S 84°51'15.32" E	89.68	89.71	1000.00
60116	P_BL	73+69.07	0.00	511972.7760	605412.4950	S 82°17'03.07" E	9.72				
60117	P_BL	73+78.79	0.00	511971.4713	605422.1248	S 7°42'57.22" W	15.97				
60111	P_BL	73+78.79	15.97	511955.6429	605419.9803	N 82°24'38.88" W	98.46				
60110	P_BL	72+79.11	12.20	511968.6459	605322.3866						

FIGURE 4-R/W-2 AREA = 1471.9814 SQ. FT. (0.0338 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
15-004.00-010	(4) DELAWARE WILD LANDS, INC.	P/E-1	D.B. C78-668	759.420

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60107	P_BL	65+39.66	35.00	511735.8400	604644.2844	N 61°32'17.97" E	160.34				
60106	P_BL	67+00.00	35.00	511812.2523	604785.2432	S 28°27'42.03" E	10.00				
60120	P_BL	67+00.00	45.00	511803.4609	604790.0089	S 61°32'17.97" W	160.26				
60121	P_BL	65+39.75	45.00	511727.0878	604649.1225	N 28°55'59.24" W	10.00				
60107	P_BL	65+39.66	35.00	511735.8400	604644.2844						

FIGURE 4-P/E-1 AREA = 1602.9663 SQ. FT. (0.0368 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
15-004.00-010	(4) DELAWARE WILD LANDS, INC.	P/E-2	D.B. C78-668	759.420

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60065	P_BL	72+51.22	-35.78	512017.4586	605295.6529	N 0°57'48.71" E	24.22				
60067	P_BL	72+51.22	-60.00	512041.6799	605296.0602			S 88°45'23.70" E	10.23	10.23	1060.00
60068	P_BL	72+60.87	-60.00	512041.4578	605306.2922	S 1°31'00.22" W	24.45				
60079	P_BL	72+60.87	-35.55	512017.0150	605305.6450			N 87°27'28.87" W	10.00	10.00	-1210.58
60065	P_BL	72+51.22	-35.78	512017.4586	605295.6529						

FIGURE 4-P/E-2 AREA = 246.2375 SQ. FT. (0.0057 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
15-004.00-010	(4) DELAWARE WILD LANDS, INC.	P/E-3	D.B. C78-668	759.420

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60142	P_BL	74+46.32	15.82	511946.7231	605486.9267	S 82°24'38.88" E	10.00				
60143	P_BL	74+56.32	15.80	511945.4024	605496.8392	S 7°43'37.13" W	25.14				
60145	P_BL	74+56.32	40.94	511920.4948	605493.4596	N 82°16'22.87" W	10.00				
60148	P_BL	74+46.32	40.94	511921.8394	605483.5504	N 7°43'37.13" E	25.11				
60142	P_BL	74+46.32	15.82	511946.7231	605486.9267						

FIGURE 4-P/E-3 AREA = 251.2380 SQ. FT. (0.0058 ACRES)

LEGEND

FEE	AREA OF ACQUISITION
R/W	AREA OCCUPIED BY EXISTING R/W
P/E	PERMANENT EASEMENT
TCE	TEMPORARY CONSTRUCTION EASEMENT
*	'-' OFFSET IS LEFT OF BASELINE
**	'-' CURVE TURNS TO THE LEFT

ADDENDA / REVISIONS

NOT TO SCALE

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	E. HARASTY
COUNTY	CHECKED BY:	O. GREEN
NEW CASTLE		

RIGHT-OF-WAY DATA SHEET

SECTION: PAI

SHEET NO.: 80

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTABLE$
PLOT DRIVER: $PLTDRVR$
DATE PLOTTED: 16-SEP-2025 @ 14:02
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
15-004.00-010	(4) DELAWARE WILD LANDS, INC.	P/E-4	D.B. C78-668	759.420

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60040	P_BL	65+50.85	-41.25	511808.2088	604617.7798	N 13°20'07.89" E	11.73				
60181	P_BL	65+58.67	-50.00	511819.6249	604620.4859	N 61°32'17.97" E	178.98				
60182	P_BL	67+37.65	-50.00	511904.9227	604777.8359			N 62°29'05.18" E	34.69	34.69	1050.00
60183	P_BL	67+70.69	-50.00	511920.9478	604808.5998	S 26°31'33.15" E	9.16				
60184	P_BL	67+70.68	-40.84	511912.7553	604812.6891			S 62°41'21.70" W	48.63	48.63	-1210.58
60185	P_BL	67+23.41	-41.25	511890.4448	604769.4831	S 61°32'18.81" W	172.56				
60040	P_BL	65+50.85	-41.25	511808.2088	604617.7798						

FIGURE 4-P/E-4 AREA = 1911.2343 SQ. FT. (0.0439 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
15-004.00-010	(4) DELAWARE WILD LANDS, INC.	TCE-1	D.B. C78-668	759.420

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60181	P_BL	65+58.67	-50.00	511819.6249	604620.4859	N 13°20'07.89" E	1.99				
60041	P_BL	65+60.00	-51.48	511821.5613	604620.9450	N 44°16'07.52" E	11.84				
60042	P_BL	65+71.31	-55.00	511830.0431	604629.2129	N 61°32'17.97" E	166.35				
60043	P_BL	67+37.65	-55.00	511909.3184	604775.4531			N 76°15'03.34" E	535.88	541.81	1055.00
60066	P_BL	72+51.22	-55.00	512036.6806	605295.9762	S 0°57'48.71" W	19.22				
60065	P_BL	72+51.22	-35.78	512017.4586	605295.6529			N 89°06'58.54" W	60.05	60.06	-1210.58
60048	P_BL	71+93.30	-37.43	512018.3849	605235.6072			S 79°33'48.39" W	315.13	316.70	-916.47
60049	P_BL	68+88.91	-40.99	511961.2999	604925.6899			S 66°45'06.61" W	122.99	123.04	-1210.58
60184	P_BL	67+70.68	-40.84	511912.7553	604812.6891	N 26°31'33.15" W	9.16				
60183	P_BL	67+70.69	-50.00	511920.9478	604808.5998			S 62°29'05.18" W	34.69	34.69	-1050.00
60182	P_BL	67+37.65	-50.00	511904.9227	604777.8359	S 61°32'17.97" W	178.98				
60181	P_BL	65+58.67	-50.00	511819.6249	604620.4859						

FIGURE 4-TCE-1 AREA = 8615.2072 SQ. FT. (0.1978 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
15-004.00-010	(4) DELAWARE WILD LANDS, INC.	TCE-2	D.B. C78-668	759.420

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60059	P_BL	74+93.09	-14.28	511970.2750	605537.3129	N 7°35'19.95" E	5.72				
60058	P_BL	74+93.08	-20.00	511975.9452	605538.0684	S 82°17'03.07" E	94.38				
60063	P_BL	75+87.46	-20.00	511963.2734	605631.5971	S 7°33'47.19" W	5.51				
60064	P_BL	75+87.48	-14.49	511957.8095	605630.8717	N 82°24'38.88" W	94.39				
60059	P_BL	74+93.09	-14.28	511970.2750	605537.3129						

FIGURE 4-TCE-2 AREA = 530.0722 SQ. FT. (0.0122 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
15-004.00-010	(4) DELAWARE WILD LANDS, INC.	TCE-3	D.B. C78-668	759.420

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60121	P_BL	65+39.75	45.00	511727.0878	604649.1225	N 61°32'17.97" E	160.26				
60120	P_BL	67+00.00	45.00	511803.4609	604790.0089	N 28°27'42.03" W	10.00				
60106	P_BL	67+00.00	35.00	511812.2523	604785.2432	N 61°32'17.97" E	37.65				
60105	P_BL	67+37.65	35.00	511830.1961	604818.3444			N 75°59'35.19" E	481.76	486.91	965.00
60124	P_BL	72+42.22	35.00	511946.8003	605285.7788	S 0°26'52.42" W	17.00				
60125	P_BL	72+42.22	52.00	511929.8009	605285.6459			S 87°55'48.95" E	53.66	53.67	948.00
60130	P_BL	72+98.83	52.00	511927.8628	605339.2728	N 3°41'29.68" E	17.00				
60114	P_BL	72+98.83	35.00	511944.8296	605340.3675	S 86°11'01.32" E	4.08				
60123	P_BL	73+03.07	35.00	511944.5578	605344.4430	S 3°56'02.74" W	19.97				
60126	P_BL	73+03.07	54.97	511924.6306	605343.0726			S 77°43'59.97" W	527.23	534.32	-945.18
60131	P_BL	67+37.65	55.00	511812.6134	604827.8759	S 61°32'17.97" W	197.83				
60132	P_BL	65+39.83	55.00	511718.3357	604653.9605	N 28°55'59.24" W	10.00				
60121	P_BL	65+39.75	45.00	511727.0878	604649.1225						

FIGURE 4-TCE-3 AREA = 12229.0383 SQ. FT. (0.2807 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
15-004.00-010	(4) DELAWARE WILD LANDS, INC.	TCE-4	D.B. C78-668	759.420

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60112	P_BL	73+78.79	25.00	511946.6976	605418.7683	N 7°42'56.42" E	9.03				
60111	P_BL	73+78.79	15.97	511955.6429	605419.9803	S 82°24'38.88" E	67.54				
60142	P_BL	74+46.32	15.82	511946.7231	605486.9267	S 7°43'37.13" W	9.18				
60147	P_BL	74+46.32	25.00	511937.6303	605485.6930	N 82°17'03.07" W	67.54				
60112	P_BL	73+78.79	25.00	511946.6976	605418.7683						

FIGURE 4-TCE-4 AREA = 614.6929 SQ. FT. (0.0141 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
15-004.00-010	(4) DELAWARE WILD LANDS, INC.	TCE-5	D.B. C78-668	759.420

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60079	P_BL	72+60.87	-35.55	512017.0150	605305.6450	N 1°31'00.22" E	19.45				
60069	P_BL	72+60.87	-55.00	512036.4602	605306.1599	S 88°03'09.11" E	15.86				
60044	P_BL	72+75.91	-55.00	512035.9211	605322.0132	N 2°22'41.56" E	15.00				
60045	P_BL	72+75.91	-70.00	512050.9082	605322.6357			S 87°15'37.77" E	13.49	13.49	1070.00
60046	P_BL	72+88.52	-70.00	512050.2632	605336.1147	S 7°35'19.95" W	52.72				
60061	P_BL	72+84.47	-17.45	511998.0095	605329.1529	N 82°24'38.88" W	4.86				
60062	P_BL	72+79.71	-17.87	511998.6512	605324.3364	N 3°43'04.29" E	17.28				
60047	P_BL	72+80.04	-35.14	512015.8906	605325.4566			N 86°45'06.24" W	19.84	19.84	-1210.58
60079	P_BL	72+60.87	-35.55	512017.0150	605305.6450						

FIGURE 4-TCE-5 AREA = 818.2287 SQ. FT. (0.0188 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
15-004.00-010	(4) DELAWARE WILD LANDS, INC.	TCE-6	D.B. C78-668	759.420

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60143	P_BL	74+56.32	15.80	511945.4024	605496.8392	S 82°24'38.88" E	86.04				
60140	P_BL	75+42.36	15.61	511934.0394	605582.1240	S 9°42'49.46" W	9.39				
60141	P_BL	75+42.04	25.00	511924.7799	605580.5389	N 82°17'03.07" W	85.71				
60144	P_BL	74+56.32	25.00	511936.2877	605495.6024	N 7°43'37.13" E	9.20				
60143	P_BL	74+56.32	15.80	511945.4024	605496.8392						

FIGURE 4-TCE-6 AREA = 798.0555 SQ. FT. (0.0183 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
15-003.00-003	(5) KATHY EVANS BEISNER & EDWARD D. EVANS, JR.	P/E	INST. 20200210-0011264	1.010

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60061	P_BL	72+84.47	-17.45	511998.0095	605329.1529	N 7°35'19.95" E	11.39				
60085	P_BL	72+85.38	-28.80	512009.2960	605330.6566	S 70°40'58.02" E	56.02				
60086	P_BL	73+38.38	-14.41	511990.7659	605383.5191	N 82°24'38.88" W	54.85				
60061	P_BL	72+84.47	-17.45	511998.0095	605329.1529						

FIGURE 5-P/E AREA = 312.2471 SQ. FT. (0.0072 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
15-003.00-003	(5) KATHY EVANS BEISNER & EDWARD D. EVANS, JR.	TCE	INST. 20200210-0011264	1.010

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60085	P_BL	72+85.38	-28.80	512009.2960	605330.6566	N 7°35'19.95" E	41.33				
60046	P_BL	72+88.52	-70.00	512050.2632	605336.1147			S 85°46'19.58" E	42.09	42.10	1070.00
60051	P_BL	73+27.86	-70.00	512047.1599	605378.0941	S 5°21'17.93" W	45.00				
60052	P_BL	73+27.86	-25.00	512002.3563	605373.8945			S 83°27'52.57" E	42.23	42.23	1025.00
60053	P_BL	73+69.07	-25.00	511997.5497	605415.8515	S 82°17'03.07" E	44.84				
60054	P_BL	74+13.91	-25.00	511991.5288	605460.2904	N 7°41'07.67" E	30.00				
60055	P_BL	74+13.90	-55.00	512021.2593	605464.3024	S 82°17'03.07" E	52.00				
60056	P_BL	74+65.90	-55.00	512014.2778	605515.8315	S 8°02'28.59" W	35.00				
60057	P_BL	74+65.70	-20.00	511979.6214	605510.9354	S 82°17'03.07" E	27.38				
60058	P_BL	74+93.08	-20.00	511975.9452	605538.0684	S 7°35'19.95" W	5.72				
60059	P_BL	74+93.09	-14.28	511970.2750	605537.3129	N 82°24'38.88" W	155.15				
60086	P_BL	73+38.38	-14.41	511990.7659	605383.5191	N 70°40'58.02" W	56.02				
60085	P_BL	72+85.38	-28.80	512009.2960	605330.6566						

FIGURE 5-TCE AREA = 5238.6360 SQ. FT. (0.1203 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
15-003.00-004	(6) JO LYNN BOXELL	TCE	WR166634	1.140

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60140	P_BL	75+42.36	15.61	511934.0394	605582.1240	S 82°24'38.88" E	44.44				
60150	P_BL	75+86.80	15.51	511928.1701	605626.1751	S 7°42'56.93" W	9.49				
60151	P_BL	75+86.80	25.00	511918.7694	605624.9014	N 82°17'03.07" W	44.77				
60141	P_BL	75+42.04	25.00	511924.7799	605580.5389	N 9°42'49.46" E	9.39				
60140	P_BL	75+42.36	15.61	511934.0394	605582.1240						

FIGURE 6-TCE AREA = 420.9443 SQ. FT. (0.0097 ACRES)

LEGEND

FEE	AREA OF ACQUISITION
R/W	AREA OCCUPIED BY EXISTING R/W
P/E	PERMANENT EASEMENT
TCE	TEMPORARY CONSTRUCTION EASEMENT
*	*-* OFFSET IS LEFT OF BASELINE
**	*-* CURVE TURNS TO THE LEFT

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRV$
DATE PLOTTED: 16-SEP-2025 @ 14:02
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$

Pennoni

ADDENDA / REVISIONS

NOT TO SCALE

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	BRIDGE NO.	1-447
T201907102	DESIGNED BY:	E. HARASTY
COUNTY	CHECKED BY:	O. GREEN
NEW CASTLE		

RIGHT-OF-WAY DATA SHEET

SECTION: PAI

SHEET NO. 81

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
14-013.00-019	(7) WESLEY CLARENCE WINTERSTEIN AND ASHLEY ELIZABETH WINTERSTEIN HUSBAND AND WIFE	FEE	INST. 20200903-0075997	25.000

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60070	P_BL	55+09.43	35.00	511063.2140	603954.0857	N 16°32'20.25" E	126.21				
60078	P_BL	56+38.45	31.31	511184.2028	603990.0137			N 24°47'18.97" E	189.46	190.12	660.19
60077	P_BL	58+33.88	17.67	511356.2070	604069.4493			N 39°02'19.56" E	101.57	101.76	485.87
60076	P_BL	59+37.75	16.67	511435.0996	604133.4236			N 53°17'19.14" E	189.46	190.12	660.19
60075	P_BL	61+32.70	26.61	511548.3580	604285.3086	N 61°32'18.81" E	180.29				
60074	P_BL	63+15.02	28.75	511634.2788	604443.8093	S 1°51'54.86" E	6.99				
60073	P_BL	63+11.89	35.00	511627.2879	604444.0370	S 61°32'17.97" W	119.79				
60072	P_BL	61+92.10	35.00	511570.2005	604338.7272			S 39°12'49.35" W	581.18	596.15	-765.00
60071	P_BL	55+68.68	35.00	511119.9092	603971.2992	S 16°53'20.73" W	59.25				
60070	P_BL	55+09.43	35.00	511063.2140	603954.0857						

FIGURE 7-R/W AREA = 7881.5683 SQ. FT. (0.1809 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
14-013.00-019	(7) WESLEY CLARENCE WINTERSTEIN AND ASHLEY ELIZABETH WINTERSTEIN HUSBAND AND WIFE	P/E	INST. 20200903-0075997	25.000

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60080	P_BL	57+50.09	35.00	511278.7954	604040.0077			N 45°42'36.48" E	417.31	422.67	765.00
60072	P_BL	61+92.10	35.00	511570.2005	604338.7272	N 61°32'17.97" E	119.79				
60073	P_BL	63+11.89	35.00	511627.2879	604444.0370	S 1°51'54.86" E	9.68				
60081	P_BL	63+07.55	43.65	511617.6171	604444.3519	S 17°12'46.44" E	1.37				
60082	P_BL	63+07.29	45.00	511616.3043	604444.7587	S 61°32'17.97" W	115.19				
60083	P_BL	61+92.10	45.00	511561.4091	604343.4929			S 45°42'40.00" W	411.83	417.12	-755.00
60084	P_BL	57+50.12	45.00	511273.8357	604048.6911	N 60°15'57.64" W	10.00				
60080	P_BL	57+50.09	35.00	511278.7954	604040.0077						

FIGURE 7-P/E AREA = 5372.0510 SQ. FT. (0.1233 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
14-013.00-019	(7) WESLEY CLARENCE WINTERSTEIN AND ASHLEY ELIZABETH WINTERSTEIN HUSBAND AND WIFE	TCE	INST. 20200903-0075997	25.000

ALIGNMENT NUMBER & DESCRIPTION: P_BL - PROPOSED BASELINE

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
60160	P_BL	51+00.00	15.00	510677.2585	603816.0006	N 16°41'01.31" E	201.69				
60161	P_BL	53+01.69	14.28	510870.4589	603873.9036	S 73°28'11.06" E	22.00				
60162	P_BL	53+01.83	36.27	510864.2008	603894.9897	N 16°32'18.69" E	207.60				
60070	P_BL	55+09.43	35.00	511063.2140	603954.0857	N 16°53'20.73" E	59.25				
60071	P_BL	55+68.68	35.00	511119.9092	603971.2992			N 23°23'07.86" E	173.11	173.48	765.00
60080	P_BL	57+50.09	35.00	511278.7954	604040.0077	S 60°15'57.64" E	10.00				
60084	P_BL	57+50.12	45.00	511273.8357	604048.6911			N 45°42'40.00" E	411.83	417.12	755.00
60083	P_BL	61+92.10	45.00	511561.4091	604343.4929	N 61°32'17.97" E	115.19				
60082	P_BL	63+07.29	45.00	511616.3043	604444.7587	S 17°16'57.60" E	1.50				
60090	P_BL	63+06.99	46.47	511614.8702	604445.2048	S 67°54'15.38" E	5.64				
60088	P_BL	63+10.58	50.83	511612.7500	604450.4273	S 71°03'12.84" E	5.67				
60091	P_BL	63+14.41	55.00	511610.9092	604455.7897	S 61°32'17.97" W	122.31				
60092	P_BL	61+92.10	55.00	511552.6178	604348.2586			S 39°12'49.35" W	565.98	580.56	-745.00
60093	P_BL	55+68.68	55.00	511114.0988	603990.4366	S 16°53'20.73" W	59.25				
60094	P_BL	55+09.43	55.00	511057.4036	603973.2230	S 73°06'39.27" E	45.00				
60095	P_BL	55+09.43	100.00	511044.3302	604016.2821	S 16°53'20.73" W	294.55				
60164	P_BL	52+14.88	100.00	510762.4889	603930.7108	N 73°06'39.27" W	50.00				
60163	P_BL	52+14.88	50.00	510777.0149	603882.8674	S 16°53'20.73" W	43.07				
60165	P_BL	51+71.81	50.00	510735.8000	603870.3539	N 73°06'39.27" W	20.00				
60166	P_BL	51+71.81	30.00	510741.6104	603851.2165	S 16°53'20.73" W	71.81				
60167	P_BL	51+00.00	30.00	510672.9003	603830.3551	N 73°06'39.27" W	15.00				
60160	P_BL	51+00.00	15.00	510677.2585	603816.0006						

FIGURE 7-TCE AREA = 33342.0770 SQ. FT. (0.7654 ACRES)

1

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRVR$
DATE PLOTTED: 16-SEP-2025 @ 14:02
USER NAME: $USER$
OFFICE LOCATION: $OFFICE$

LEGEND

FEE	AREA OF ACQUISITION
R/W	AREA OCCUPIED BY EXISTING R/W
P/E	PERMANENT EASEMENT
TCE	TEMPORARY CONSTRUCTION EASEMENT
*	*-* OFFSET IS LEFT OF BASELINE
**	*-* CURVE TURNS TO THE LEFT

ADDENDA / REVISIONS

1 PARCEL 8: REMOVED TCE AND REMOVED RIGHT-OF-WAY PLAN SHEET (PREVIOUSLY SHEET 83) S. WALLS, H. BROWN 8/5/2024
PARCEL 9: REMOVED TCE AND REMOVED RIGHT-OF-WAY PLAN SHEET (PREVIOUSLY SHEET 83) S. WALLS, H. BROWN 8/5/2024

NOT TO SCALE

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	T201907102
COUNTY	NEW CASTLE
BRIDGE NO.	1-447
DESIGNED BY:	E. HARASTY
CHECKED BY:	O. GREEN

RIGHT-OF-WAY DATA SHEET

SECTION	PAI
SHEET NO.	82

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 ACQUISTITION	REMARKS
						ACQUISITION (SQ. FEET/ACRES)	AREA OCCUPIED BY EXISTING RIGHT OF WAY (SQ. FEET/ACRES)	EASEMENT				
								PERMANENT (SQ. FEET/ACRES)	TEMPORARY (SQ. FEET/ACRES)			
14-013.00-015	-	(1) F. THOMAS UNRUH	D.B. 2593-337	D - 296.80	P/E			2474.5733 / 0.06				
					TCE-1				5961.7752 / 0.14			
					TCE-2				2557.8098 / 0.06	12928608.00 / 296.80		
14-013.00-030	-	(2) JOHN C. UNRUH & REBECCA W. UNRUH, HUSBAND AND WIFE	D.B. 1518-235	D - 1.04	TCE				1234.3189 / 0.03	45302.40 / 1.04		
14-013.00-029	-	(3) MARY UNRUH REED	INST. 20180223-0008814	D - 2.09	TCE				4879.7226 / 0.11	91040.40 / 2.09		
15-004.00-010	-	(4) DELAWARE WILD LANDS, INC.	D.B. C78-668	D - 759.42	FEE	6628.5473 / 0.15						
					R/W		1471.9814 / 0.03					
					P/E-1			1602.9663 / 0.04				
					P/E-2			246.2375 / 0.01				
					P/E-3			251.238 / 0.01				
					P/E-4			1911.2343 / 0.04				
					TCE-1				8615.2072 / 0.20			
					TCE-2				530.0722 / 0.01			
					TCE-3				12229.0383 / 0.28			
					TCE-4				614.6929 / 0.01			
					TCE-5				818.2287 / 0.02			
					TCE-6				798.0555 / 0.02	33072234.6713 / 759.23		
15-003.00-003	-	(5) KATHY EVANS BEISNER & EDWARD D. EVANS, JR.	INST. 20200210-0011264	D - 1.01	P/E			312.2471 / 0.01				
					TCE				5238.636 / 0.12	43995.60 / 1.01		
15-003.00-004	-	(6) JO LYNN BOXELL	WR166634	D - 1.14	TCE				420.9443 / 0.01	49658.40 / 1.14		
14-013.00-019	-	(7) WESLEY CLARENCE WINTERSTEIN AND ASHLEY ELIZABETH WINTERSTEIN HUSBAND AND WIFE	INST. 20200903-0075997	D - 25.00	FEE	7881.5683 / 0.18						
					P/E			5372.051 / 0.12				
7					TCE				33342.077 / 0.77	1081118.4317 / 24.82		
7												

ACQUISITION CODES

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

ADDENDA / REVISIONS

7	PARCEL 8: REMOVED TCE (PREVIOUSLY SHEET 84);
	S. WALLS, H. BROWN 8/5/2024
	PARCEL 9: REMOVED TCE (PREVIOUSLY SHEET 84);
	S. WALLS, H. BROWN 8/5/2024

NOT TO SCALE

ACCESS AS NATURE INTENDED: TAYLORS BRIDGE RESILIENCY PROJECT

CONTRACT	T201907102
COUNTY	NEW CASTLE
BRIDGE NO.	1-447
DESIGNED BY:	E. HARASTY
CHECKED BY:	O. GREEN

RIGHT-OF-WAY TABULATION SHEET

SECTION: PAI
SHEET NO.: 83

PENNONI ASSOCIATES INC.
FILE NAME: $FILE$
MICROSTATION VERSION: $VERSION$
MICROSTATION WORKSPACE: $WORKSPACE$
PEN TABLE: $PENTBL$
PLOT DRIVER: $PLTDRV$
DATE PLOTTED: 16-SEP-2025 @ 14:02
USER NAME: $USER$
OFFICE LOCATION: $OFFICENAME$