

GENERAL LOCATION OF CONTRACT

THE STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY
UNITS



CONSTRUCTION AND RIGHT-OF-WAY PLANS FOR: BR 1-110 ON N239 PYLES FORD ROAD, NE OF MOUNT CUBA

CONTRACT NUMBER: T200907101
FEDERAL AID PROJECT NUMBER: N/A

COUNTY: NEW CASTLE M.R. #: N239

DESIGN DESIGNATION			
MRD #: N239	ROAD NAME: PYLES FORD ROAD		
FUNCTIONAL CLASS: RURAL LOCAL ROAD	D.H.V. PROJECTED: 35	YEAR: 2040	
TYPE OF CONSTRUCTION: BRIDGE REPLACEMENT	DESIGN SPEED: 35 M.P.H.		
A.A.D.T. CURRENT: 487	YEAR: 2023	TRUCKS: 5 %	
A.A.D.T. PROJECTED: 500	YEAR: 2040	DIRECTION OF DISTRIBUTION: 65 %	
APPROVED DESIGN EXCEPTIONS			
DESIGN PARAMETER	REQUIRED	PROVIDED	DATE
OUTSIDE SHOULDER - WIDTH (FT)	3	0	11/15/24
ADDENDA / REVISIONS			
ASSOCIATED CONTRACTS			
CONTRACT NO.	CONTRACT NAME		

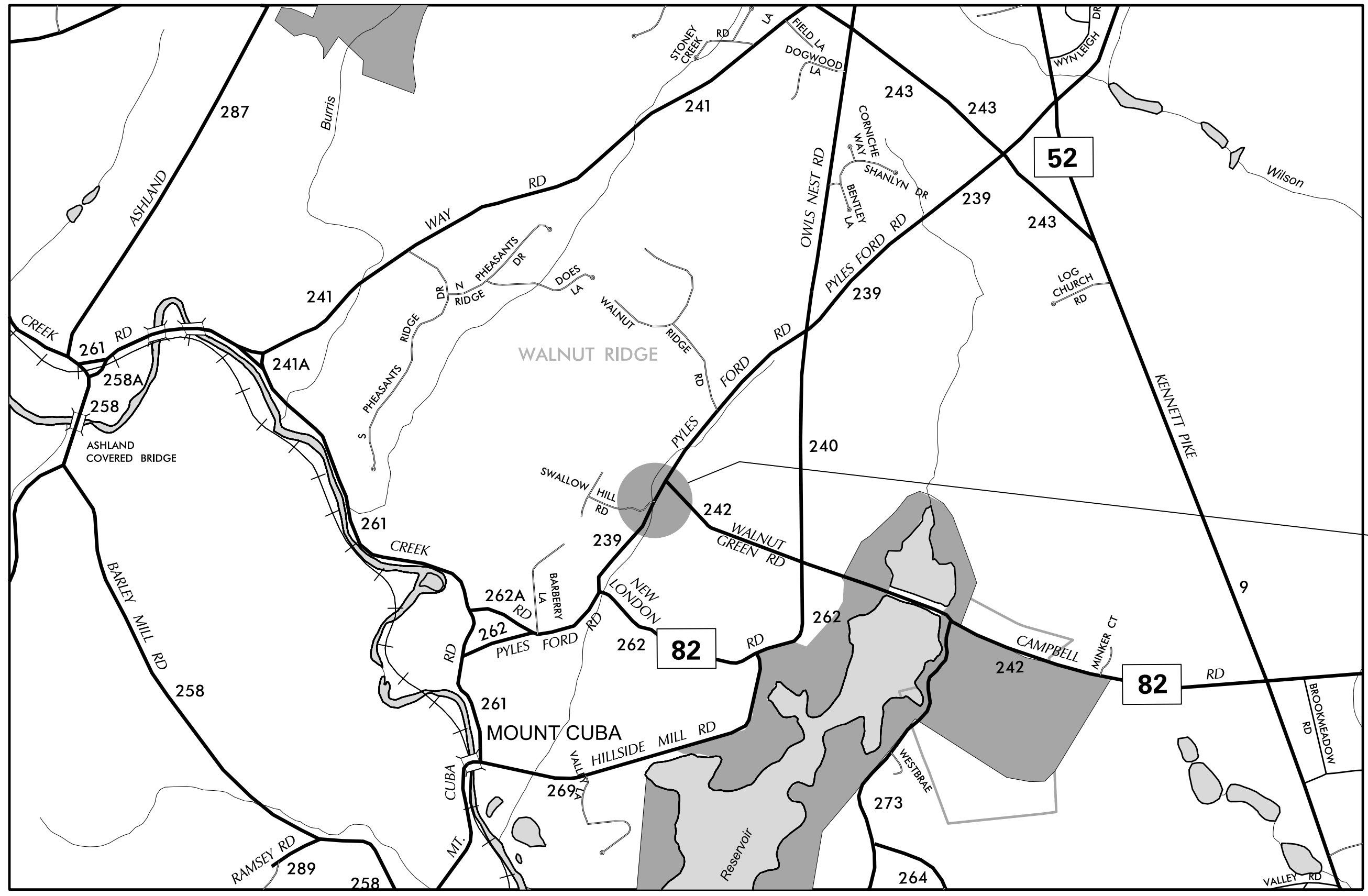
APPROVED FOR ADVERTISEMENT
T. C. Swift
DIRECTOR OF TRANSPORTATION SOLUTIONS
DATE: 07/14/2025

PREPARED BY

Engineering | Design | Planning | Construction Management

12/06/2024
DATE

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



LOCATION MAP

LAST REVISED: 11/26/2018
 6:01:52 PM
 2015
 \\fcsM-delpdpw21\CS_pof_work_dir\1274161070_3\YTC01_BRSF_T200907101_GPI.dgn

INDEX OF SHEETS	
SHEET DESCRIPTION	SHEET NO(S)
TITLE	1
INDEX OF SHEETS AND ADDENDA AND REVISIONS	2
LEGEND	3
NOTES AND TYPICAL SECTION	4
HORIZONTAL AND VERTICAL CONTROL	5
CONSTRUCTION PLAN	6
PROFILES	7
GRADES AND GEOMETRICS	8
BRIDGE PLAN, SECTION AND ELEVATION	9
CULVERT DETAILS	10
BORING LOG	11
ENVIRONMENTAL COMPLIANCE NOTES AND PLAN	12-13
CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLAN	14
DETOUR PLAN	15
UTILITY RELOCATION PLAN	16
RIGHT OF WAY PLAN	17
RIGHT OF WAY DATA SHEET	18

25-NOV-2024
 22:53
 \\fs-m-helocp021\CS_pof_work_dir\1051161070_5\501_BRSF_T200907101_GPI.dgn

ADDENDA / REVISIONS

NOT TO SCALE

**BR 1-110 ON N239
 PYLES FORD ROAD,
 NE OF MOUNT CUBA**

CONTRACT	BRIDGE NO.	1-110
T200907101	DESIGNED BY:	G. LOVELACE III
COUNTY	CHECKED BY:	T. SWIFT
NEW CASTLE		

INDEX OF SHEETS AND ADDENDA AND REVISIONS	SECTION
	GPI
	SHEET NO. 2

MANMADE ROADSIDE FEATURES			
FEATURE DESCRIPTION	EXISTING	PROPOSED	ID
BARRIER - DOUBLE-FACED, PERMANENT			
BARRIER - SINGLE-FACED, PERMANENT, TEST LEVEL 4 / TEST LEVEL 5	BARRIER, TYPE "X"		B XXX
BARRIER - HIGH TENSION CABLE (HTCB)			
BARRIER - HTCB END TERMINAL			
BOLLARD - STEEL POLE			
BOLLARD - WOOD POST			
CURB, TYPE 1 AND TYPE 3			
CURB, TYPE 2	CURB, TYPE "X"		
CURB & GUTTER, TYPE 1			C XXX
CURB & GUTTER, TYPE 2			
CURB & GUTTER, TYPE 3	C&G, TYPE "X"		
CURB OPENING - SUMP / ON GRADE			C O
CURB/SW OPENING - ADJACENT CURB			CO SW
CURB/SW OPENING - NON-ADJACENT CURB			
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			OR XXX
GUARDRAIL - END TREATMENT, TYPE 1			
GUARDRAIL - END TREATMENT, TYPE 2			
GUARDRAIL - END TREATMENT, TYPE 3			
IMPACT ATTENUATOR			
LAMP AND POST - RESIDENTIAL	LAMP		
MAILBOX	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			
DITCH OR STREAM (V-SHAPE / TRAPEZOIDAL)			
DIRECTIONAL STREAM FLOW ARROW			
DRAINAGE INLET	C.B. / D.I.		DI XXX
DRAINAGE JUNCTION BOX	J.B.		JB XXX
DRAINAGE MANHOLE			DM 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 STRUCTURE			SES XXX
UNDERDRAIN			UD XXX
UNDERDRAIN OUTLET			UDO XXX

UTILITY FEATURES			
FEATURE DESCRIPTION	EXISTING	PROPOSED	
COMMUNICATIONS DISTRIBUTION BOX	CD	IV	
COMMUNICATIONS MANHOLE	C	T	C
COMMUNICATIONS TEST POINT	CT	T	
COMMUNICATIONS - UNDERGROUND	COMM(A)	COMM	
ELECTRIC - UNDERGROUND	E(A)	E	
ELECTRIC MANHOLE	E	E	
ELECTRIC METER	EM		
ELECTRIC TRANSFORMER	E		
GAS - UNDERGROUND	G(A)	G	
GAS MANHOLE	G	G	
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	S	S	
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	WV	WV	
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 AND ENTRANCE 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		

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
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 XXX
BUS STOP PAD / TYPE	BSP X
BUS STOP WITH SHELTER PAD / TYPE	BSP X
CONCRETE SAFETY BARRIER	B XXX
CONVERT TO JUNCTION BOX	CB 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 X
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

ADDENDA / REVISIONS

NOT TO SCALE

**BR 1-110 ON N239
PYLES FORD ROAD,
NE OF MOUNT CUBA**

CONTRACT	BRIDGE NO.	1-110
T200907101	DESIGNED BY:	G. LOVELACE III
COUNTY	CHECKED BY:	T. SWIFT
NEW CASTLE		

LEGEND

SECTION	GPI
SHEET NO.	3

GENERAL NOTES

1. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED 2024 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2024.

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

(X)	NONE
()	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
()	DESIGN FILE, IN .DGN FILE FORMAT, THAT CONTAINS 3D TRIANGLES REPRESENTING THE EXISTING SURFACE.
()	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 (WILL BE MADE AVAILABLE TO AWARDED CONTRACTOR)
(X)	RIGHT-OF-WAY PLANS (INCLUDED IN THE PLAN SET)

PROJECT NOTES

SECTION 100

- 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.
- 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.
- 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

- UNLESS OTHERWISE NOTED AS DO NOT DISTURB OR ADJUST BY CONTRACTOR/OTHERS, ALL EXISTING FEATURES, INCLUDING TREES, WITHIN THE PROPOSED LOC SHALL BE REMOVED BY THE CONTRACTOR AND PAID FOR UNDER THE RESPECTIVE BID ITEM. REMOVAL OF EXISTING STORM DRAIN PIPE SHALL BE PAID UNDER ITEM 202000 UNLESS NOTED WITH A FLOWABLE FILL IDENTIFIER; REMOVAL OF TREES, SHRUBS AND STUMPS AND TREE TRIMMING SHALL BE PAID FOR UNDER ITEM 201000; AND REMOVAL OF ADDITIONAL EXISTING FEATURES SHALL BE PAID FOR UNDER ITEM 211000 AS NOTED IN SECTION 200 OF THE PROJECT NOTES.
- INCLUDE THE FOLLOWING ITEMS UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS:
 - REMOVAL OF EXISTING BRIDGE I-110 IN ITS ENTIRETY INCLUDING THE CONCRETE APRONS.
 - WELL TESTING OUTLINED IN PROJECT NOTE 21.
- EXCAVATE ALL EXISTING PAVEMENT FROM STA. 11+05 TO STA. 13+00 AS SHOWN ON THE PLAN IN ITS ENTIRETY.

SECTION 600

- PORTLAND CEMENT CONCRETE: USE PORTLAND CEMENT CONCRETE FOR PRECAST ELEMENTS AS FOLLOWS:
 - f'c = 28-DAY COMPRESSIVE STRENGTH
 - PRECAST BOX CULVERT, WINGWALLS AND APPURTENANCES: f'c = 5.0ksi
- BAR REINFORCEMENT:
 - PROVIDE EPOXY-COATED REINFORCING STEEL FOR ALL PRECAST CONCRETE ELEMENTS NOT SUBJECT TO ASTM C1577.
- THE LIMITS OF DE #57 STONE FOR FOUNDATION STABILIZATION EXTEND 24" OUTSIDE OF THE NEAT LINE PERIMETER OF THE VERTICAL FACES OF ANY FOOTER OR STRUCTURAL UNIT.

SECTION 700

- SAWCUT ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT.
- KEY ALL GEOTEXTILES UNDER ADJACENT SOIL OR RIPRAP A MINIMUM OF 6" IN LENGTH TO PREVENT FREE EDGES.

SECTION 800

- MAINTENANCE OF TRAFFIC: MAINTAIN TRAFFIC AS PER DETOUR PLAN. PAYMENT FOR TRAFFIC CONTROL DEVICES DEPICTED ON THE DETOUR PLAN UNDER ITEM 801500 - MOT, ALL INCLUSIVE. PAYMENT FOR TEMPORARY TRAFFIC CONTROL DEVICES DEPICTED ON THE CONSTRUCTION PHASING PLAN UNDER THEIR RESPECTIVE ITEMS.
- RAISED/RECESSED PAVEMENT MARKERS: WITHIN THE PROJECT LIMITS, PLACE RAISED/RECESSED PAVEMENT MARKERS MATCHING THE SPACING OF EXISTING MARKERS OUTSIDE THE PROJECT LIMITS. PAYMENT UNDER ITEM 817027 - RAISED/RECESSED PAVEMENT MARKERS.

SECTION 800 CONTINUED

- SIGNING AND STRIPING: REMOVE EXISTING STOP AHEAD SIGN AND REPLACE WITH A NEW SIGN AT APPROXIMATELY STATION 11+45, 15' RIGHT. FINAL POSITION TO BE DETERMINED BY THE ENGINEER.

INSTALL PROPOSED STRIPING (DOUBLE YELLOW CENTERLINE) IN ACCORDANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. MATCH LOCATION TO EXISTING STRIPING AT THE PROJECT LIMITS. TRANSITION TO PROPOSED CENTERLINE FROM STA. 10+00 TO 10+50 AND FROM STA. 12+00 TO 13+00. PAYMENT SHALL BE MADE UNDER ITEM 817042 - PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 6".

PERMANENT STRIPING INSTALLATION MAY OCCUR AFTER THE ROAD IS OPEN. IN THIS SCENARIO, INSTALL TEMPORARY STRIPING IN THE INTERIM.

SECTION 900

- 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.
- UTILIZE PUMPS FOR STREAM DIVERSION WITH A DECIBEL LEVEL COMPLIANT WITH THE ALLOWABLE NEW CASTLE COUNTY NOISE REGULATIONS FOR THE CONTRACT WORK AREA.

MISCELLANEOUS

- DESIGN SPECIFICATIONS:
 - (A) DELDOT BRIDGE DESIGN MANUAL, 2024 EDITION
 - (B) AASHTO LRFD BRIDGE SPECIFICATIONS, 2020, 9TH EDITION, CUSTOMARY U.S. UNITS.
 - (C) SUBMIT LOAD RATINGS USING THE LOAD AND RESISTANCE FACTOR RATING METHOD IN CONFORMANCE WITH THE DELDOT BRIDGE LOAD RATING MANUAL, 2023 EDITION, AND THE LATEST EDITION OF THE AASHTO MANUAL FOR BRIDGE EVALUATION. BASE OPERATING AND INVENTORY RATINGS ON THE HL-93 DESIGN LOAD. BASE LEGAL LOAD RATINGS ON DELAWARE LEGAL LOADS.

- LOADING:
 - DEAD LOADS INCLUDE 25 PSF FOR FUTURE WEARING SURFACE.
 - DESIGN LIVE LOADS INCLUDE HL-93 LOADING.

- HYDRAULIC DATA:

DRAINAGE AREA: 0.19 sq. miles DESIGN DISCHARGE: 87 cfs EXISTING (DESIGN STORM) WSE: 110.49 ft EXISTING (DESIGN STORM) VELOCITY: 7.38 fps EXISTING 100-YEAR WSE: 112.38 ft EXISTING 100-YEAR VELOCITY: 8.15 fps EXISTING WATERWAY OPENING: 20.00 sq. ft	DESIGN FREQ.: 25 YEARS 100-YEAR DISCHARGE: 113 cfs PROPOSED (DESIGN STORM) WSE: 109.82 ft PROPOSED (DESIGN STORM) VELOCITY: 6.18 fps PROPOSED 100-YEAR WSE: 112.39 ft PROPOSED 100-YEAR VELOCITY: 6.92 fps PROPOSED WATERWAY OPENING: 21.00 sq. ft
--	--

- SCOUR ANALYSIS:

SCOUR DESIGN FREQUENCY: 500 YEARS SCOUR DESIGN FLOOD DISCHARGE: 233 cfs SCOUR DESIGN FLOOD VELOCITY: 8.24 fps (AT BRIDGE OUTLET) WATER SURFACE ELEVATION: 112.39 ft (IMMEDIATELY UPSTREAM OF BRIDGE)

SCOUR COUNTERMEASURES HAVE BEEN DESIGNED FOR THE SCOUR DESIGN FLOOD IN ACCORDANCE WITH HEC 14 - HYDRAULIC DESIGN OF ENERGY DISSIPATORS FOR CULVERTS AND CHANNELS.

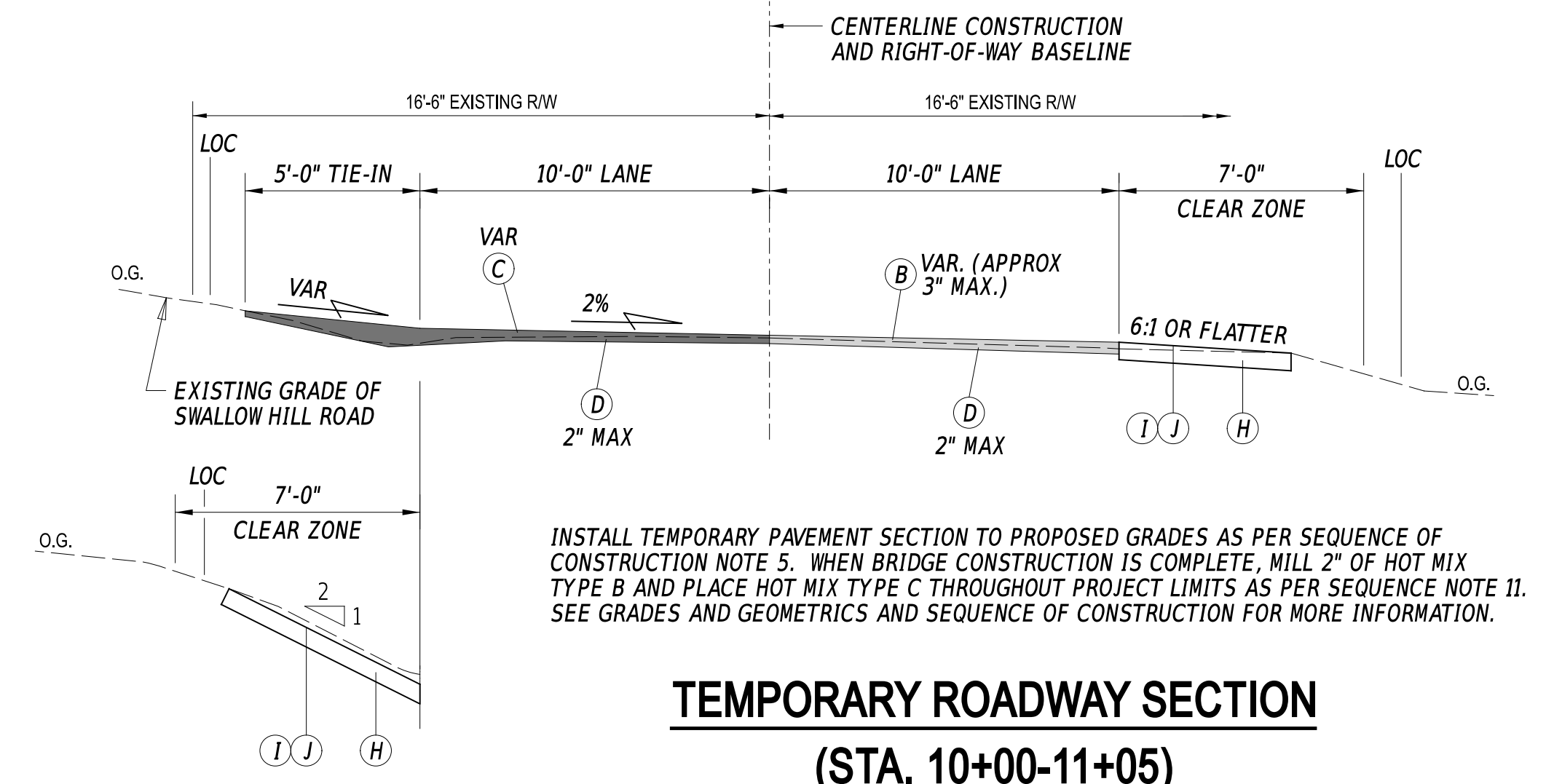
- PARCEL 102 - CAMPBELL
DO NOT DISTURB THE WELLHEAD WITHIN THE PE ON THIS PARCEL. TEST THE WELL AT THE BEGINNING AND END OF CONSTRUCTION TO ASSESS ANY DISTURBANCE OR DAMAGE. PAYMENT INCIDENTAL TO ITEM 211000. REPAIR ANY DAMAGE TO EXISTING CONDITION AT THE CONTRACTOR'S EXPENSE.

THE SMALL BERM BETWEEN THE BRIDGE AND SWALLOW HILL ROAD CAN BE REMOVED AS NECESSARY DURING CONSTRUCTION. AT THE END OF CONSTRUCTION, RECONSTRUCT THE BERM IN THE SAME APPROXIMATE SIZE AND SHAPE. COORDINATE THIS ITEM WITH THE PROPERTY OWNER. PAYMENT UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT.

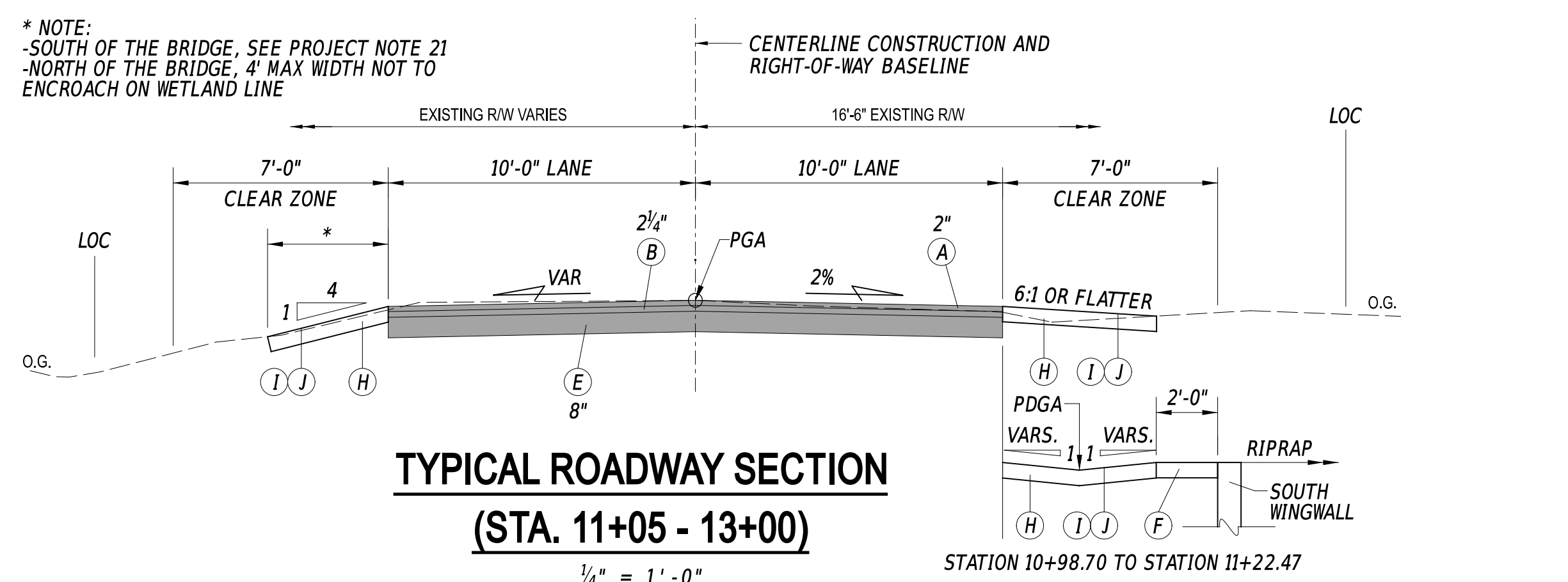
- SWALLOW HILL ROAD
 - MAINTAIN ACCESS TO SWALLOW HILL ROAD DURING CONSTRUCTION. USE FLAGGERS AS NECESSARY, ESPECIALLY TO DIRECT TRUCK TRAFFIC.
 - KEEP THE WORK AREA OPEN FROM STA. 10+00 TO 11+05 TO ALLOW FOR TURNING MOVEMENTS TO/FROM SWALLOW HILL ROAD. MAINTAIN MIN. ONE LANE DURING PAVING OPERATIONS.
 - PLACE TEMPORARY BARRICADES IN THE AREA SHOWN ON THE CONSTRUCTION PHASING SHEET TO SEPARATE THE REMAINDER OF THE WORK AREA FROM SWALLOW HILL ROAD ACCESS. RELOCATE AS NECESSARY FOR CONSTRUCTION OPERATIONS. PLACEMENT TO BE DETERMINED BY THE ENGINEER.
 - PLACE TEMPORARY SIGN (RIGHT ARROW) SUCH THAT IT DOES NOT INTERFERE WITH TURNING MOVEMENTS INTO SWALLOW HILL ROAD. PLACEMENT TO BE DETERMINED BY THE ENGINEER.
 - PERFORM ALL STAGING AND STOCKPILING FROM THE NORTH SIDE OF THE BRIDGE.
 - SEE SEQUENCE OF CONSTRUCTION FOR MORE INFORMATION.

- 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.

LEGEND	
(A)	ITEM 401005 - SUPERPAVE TYPE C, PG 64-22 (CARBONATE STONE)
(B)	ITEM 401014 - SUPERPAVE TYPE B, PG 64-22
(C)	ITEM 401037 - SUPERPAVE TYPE B, PG 64-22, WEDGE
(D)	ITEM 760012 - PAVEMENT MILLING, BIT. CONC. PAVEMENT, VARIABLE DEPTH
(E)	ITEM 301001 - GABC
(F)	ITEM 302002 - DELAWARE NO. 3 STONE
(G)	ITEM 209004 - BORROW, TYPE C
(H)	ITEM 908004 - TOPSOIL, 6" DEPTH
(I)	ITEM 908019 - PERMANENT GRASS SEEDING, STREAMBANK
(J)	ITEM 908020 - EROSION CONTROL BLANKET MULCH

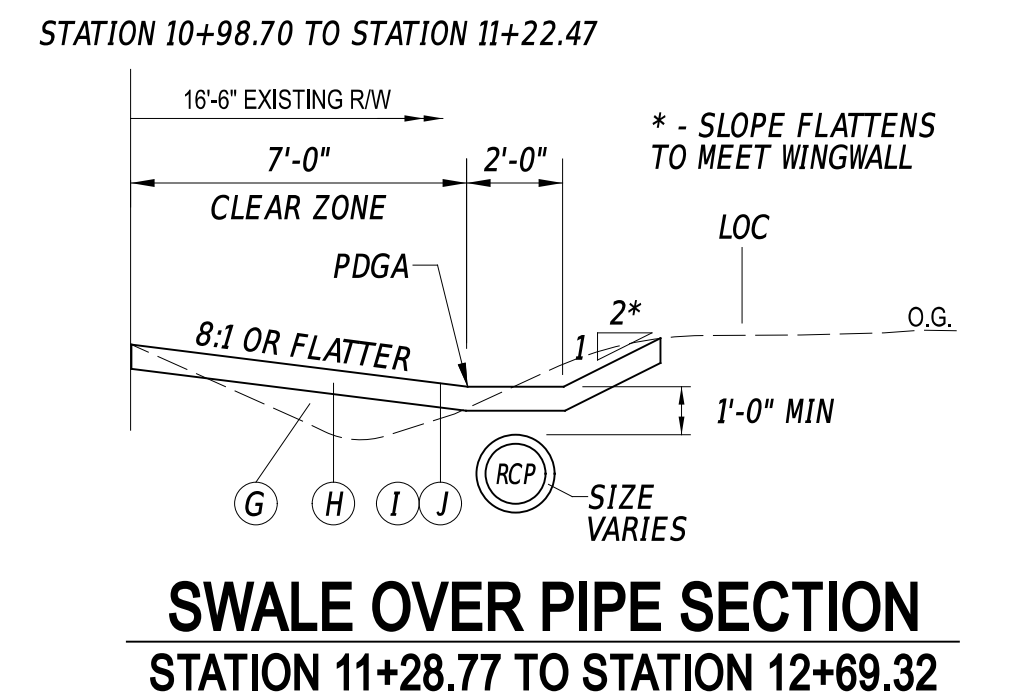


GRADED SLOPE SECTION
STATION 10+00.00 TO STATION 10+69.29



TYPICAL ROADWAY SECTION
(STA. 11+05 - 13+00)

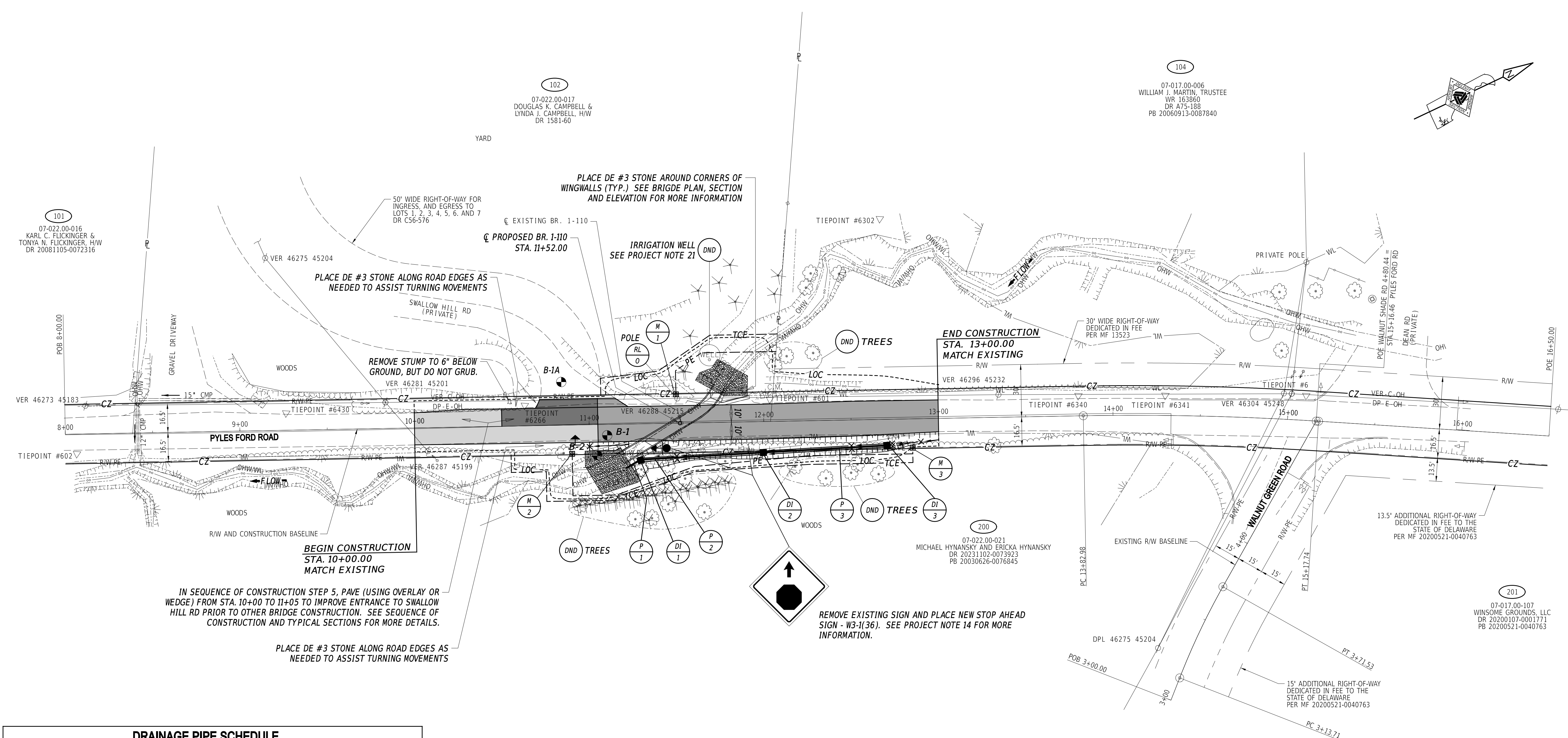
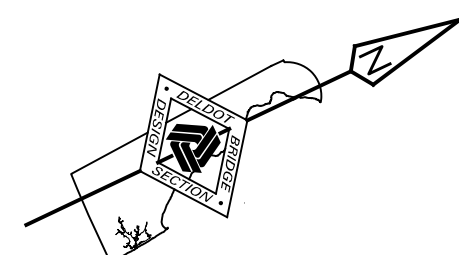
MATERIAL TYPE	BINDER GRADE	LIFT THICKNESS (IN)	
		MINIMUM	MAXIMUM
TYPE C (4.75 MM MIX)	ALL	0.5	1.0
TYPE C (9.5 MM MIX)	ALL	1.25	2.0
TYPE C (12.5 MM MIX)	ALL	1.5	2.0
TYPE B (19 MM MIX)	76-22, 70-22	2.25	4.0
TYPE B (19 MM MIX)	64-22	2.25	6.0
TYPE BCBC (25 MM MIX)	64-22	3.0	6.0
GABC	-	4.0	8.0



SWALE OVER PIPE SECTION
STATION 11+28.77 TO STATION 12+69.32

7-JUL-2025 13:20 pm/\\del-dot-pw-bentley.com\del-dot-pw-01\Documents\01_Active\Projects\DelDOT_Capital\Projects\T200907101_GPI\400_CADD\430_BRIDGE\433_SHEET_DWG\PN01_BRSF_T200907101_CPI

ADDENDA / REVISIONS		SCALE AS NOTED	BR 1-110 ON N239 PYLES FORD ROAD, NE OF MOUNT CUBA	CONTRACT	BRIDGE NO.	1-110	NOTES AND TYPICAL SECTION	SECTION
				T200907101	DESIGNED BY:	G. LOVELACE III		GPI
				COUNTY	CHECKED BY:	T. SWIFT	SHEET NO.	4
				NEW CASTLE				



DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INVERT EL.	DIS. EL.
1	18" RCP	III	8.0'	0.025	106.85	106.65
2	15" RCP	III	68.00'	0.025	108.75	107.05
3	15" RCP	III	68.00'	0.025	110.65	108.95

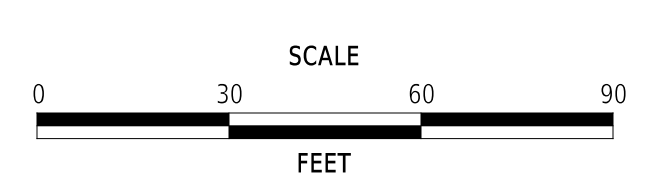
DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
1	11+29.13	20.78'	34" x 24"	2	110.52	106.85
2	11+99.45	17.73'	34" x 24"	2	112.12	108.75
3	12+70.22	14.90'	34" x 24"	2	113.45	110.65

INSTALL TYPE A TOP UNIT ON ALL PROPOSED DRAINAGE INLETS. INSTALL DI-1 AS SHOWN ON THE BRIDGE PLAN. INSTALL DI-2 AND DI-3 WITH THE 34" SIDE PARALLEL TO THE PIPE.

RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
1	CAPPED REBAR	11+50.00	-16.50	654005.7701	595748.9286
2	CAPPED REBAR	10+90.00	16.50	653937.4194	595753.6738
3	CAPPED REBAR	12+85.00	16.50	654113.6569	595836.5325

SOIL BORING SCHEDULE					
NO.	STATION	OFFSET	ELEVATION	NORTHING	EASTING
B-1	11+10.25	6.22	110.30	653960.1200	595752.4500
B-1A	10+84.47	-24.78	111.60	653950.0900	595713.4000
B-2	11+04.41	17.59	110.00	653949.9800	595760.2300

ADDENDA / REVISIONS

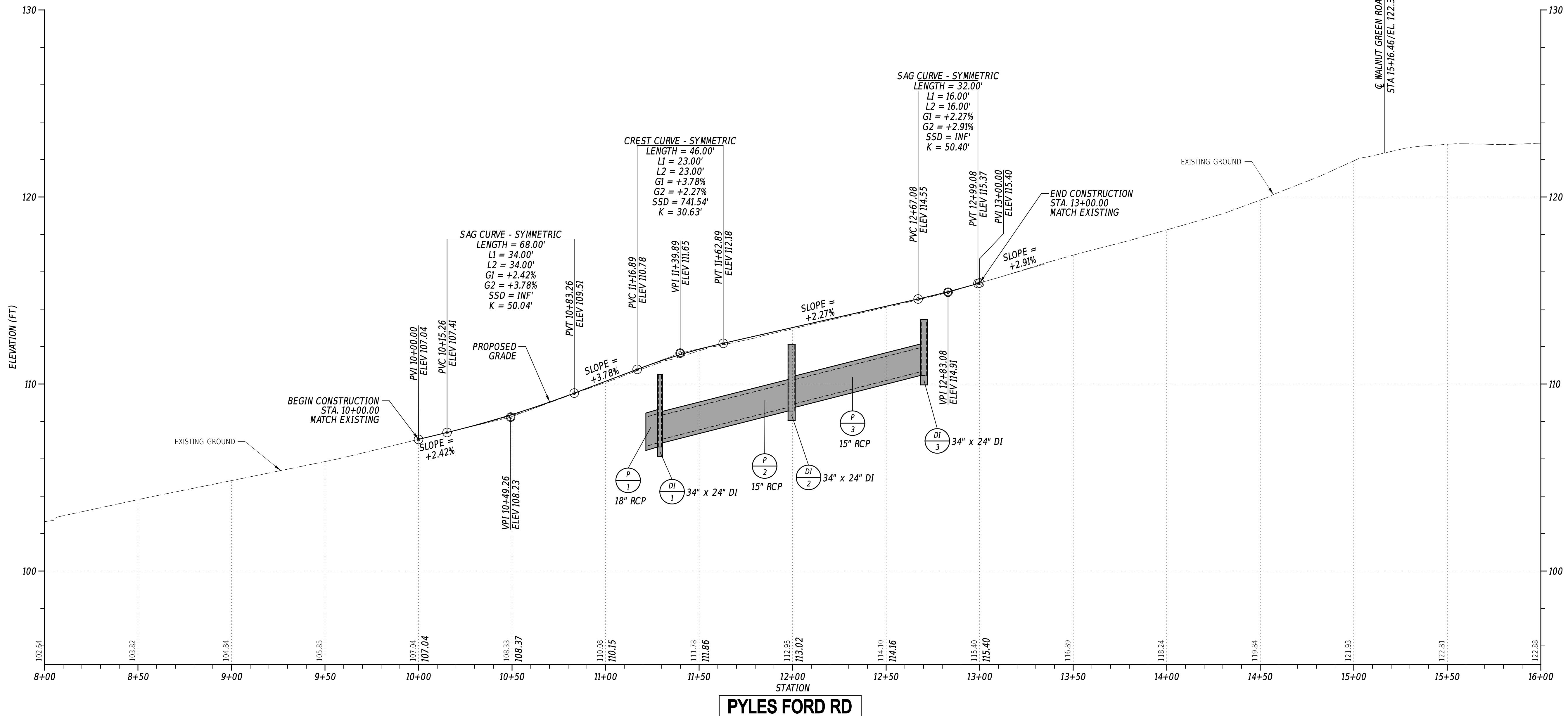


**BR 1-110 ON N239
PYLES FORD ROAD,
NE OF MOUNT CUBA**

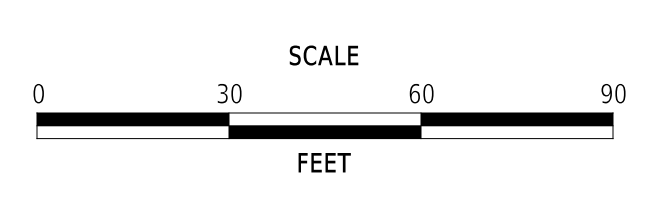
CONTRACT T200907101	BRIDGE NO. 1-110	NEW CASTLE	DESIGNED BY: G. LOVELACE III	CHECKED BY: T. SWIFT	SECTION GPI SHEET NO. 6
COUNTY	1-110				
NEW CASTLE	CONSTRUCTION PLAN				

7-JUL-2025 13:24 p:\delDOT-pw-01\Documents\01_Active_Projects\DelDOT_Capital_Projects\T200907101_GPI\400_CADD\430_BRIDGE\433_SHEET_DWG\CP01_BRSF_T200907101_GPI

1-11-2025
 12:21
 p:\deidoc-pw-bentley.com\deidoc-pw-01\Documents\01_Active_Projects\DeIDOT_Capital_Projects\T200907101_GPI_Pyles Ford Rd\T200907101_GPI_Pyles Ford Rd.dwg



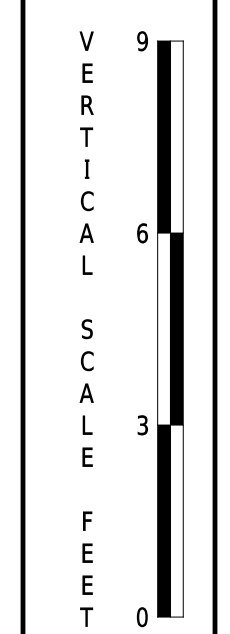
PYLES FORD RD



**BR 1-110 ON N239
 PYLES FORD ROAD,
 NE OF MOUNT CUBA**

CONTRACT	BRIDGE NO.	1-110
T200907101	DESIGNED BY:	G. LOVELACE III
COUNTY	CHECKED BY:	T. SWIFT
NEW CASTLE		

PROFILES

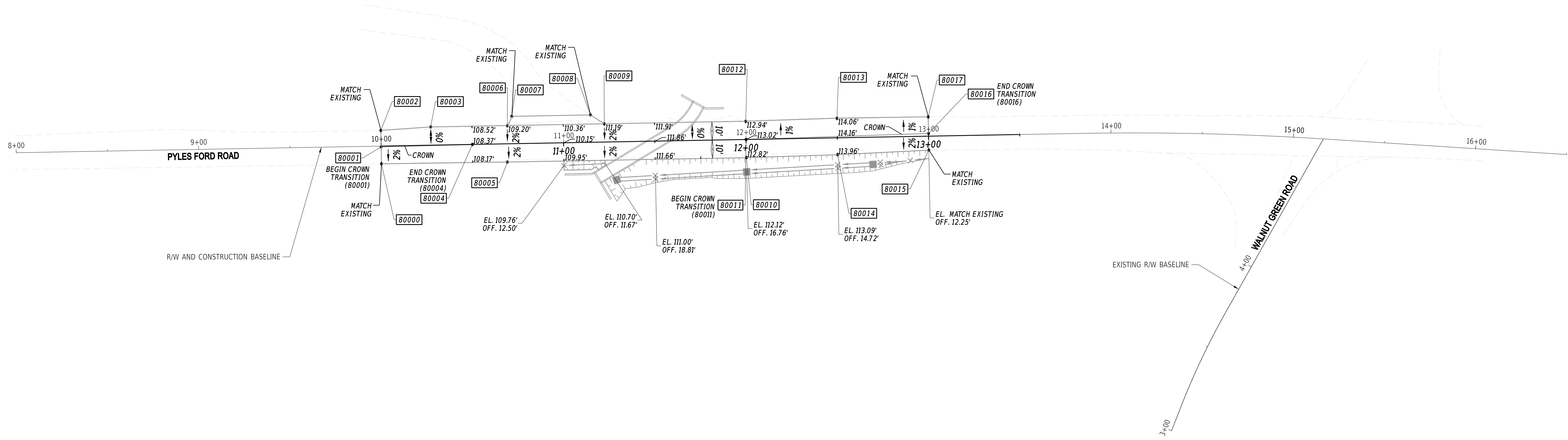
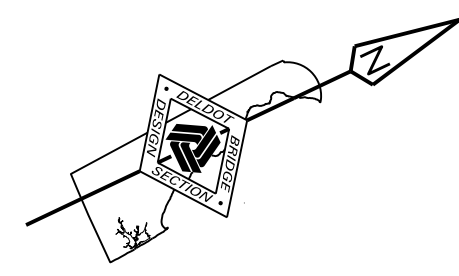


SECTION	GPI
SHEET NO.	7

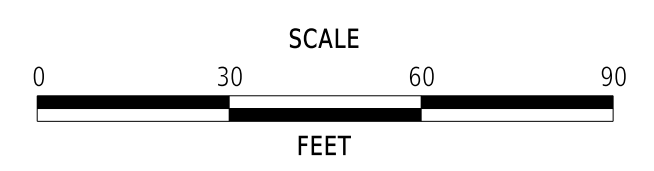
COORDINATE LIST				
NO.	STATION	OFFSET	NORTHING	EASTING
80000	10+00.00	9.72'	653858.9806	595708.4273
80001	10+00.00	0.49'	653862.9323	595700.0826
80002	10+00.00	-8.63'	653866.8345	595691.8424
80003	10+27.32	-10.00'	653892.1128	595702.2973
80004	10+50.00	0.00'	653908.3300	595721.0417
80005	10+69.00	10.00'	653921.2219	595738.2114
80006	10+69.32	-10.00'	653930.0671	595720.2708
80007	10+71.87	-15.00'	653934.5191	595716.8468
80008	11+14.96	-15.00'	653973.4614	595735.2882
80009	11+22.47	-10.00'	653978.1073	595743.0207
80010	12+00.00	10.00'	654039.6174	595794.2785
80011	12+00.00	0.00'	654043.8973	595785.2407
80012	12+00.00	-10.00'	654048.1645	595776.1963
80013	12+50.00	-10.74'	654093.6812	595796.9377
80014	12+50.00	9.27'	654085.1204	595815.0153
80015	13+00.00	7.67'	654130.9943	595834.9687
80016	13+00.00	-1.47'	654134.9043	595826.7123
80017	13+00.00	-10.61'	654138.8167	595818.4506

NOTES:

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



26-NOV-2024
 06:10
 \\fs1-m-deloop\pww\1\CS_pof_work_dir\1054161070_23\G501_BRSF_T200907101_GPI.dgn



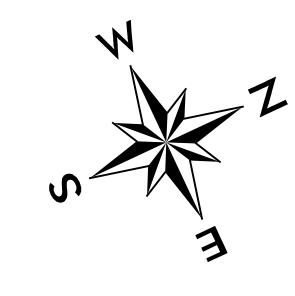
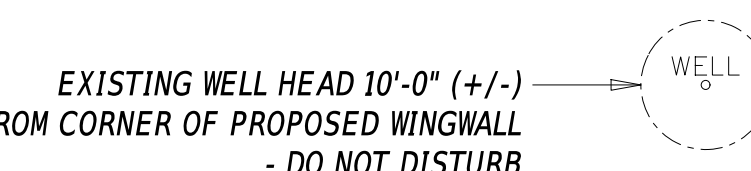
**BR 1-110 ON N239
PYLES FORD ROAD,
NE OF MOUNT CUBA**

CONTRACT	BRIDGE NO.	1-110
T200907101	DESIGNED BY:	G. LOVELACE III
COUNTY	CHECKED BY:	T. SWIFT
NEW CASTLE		

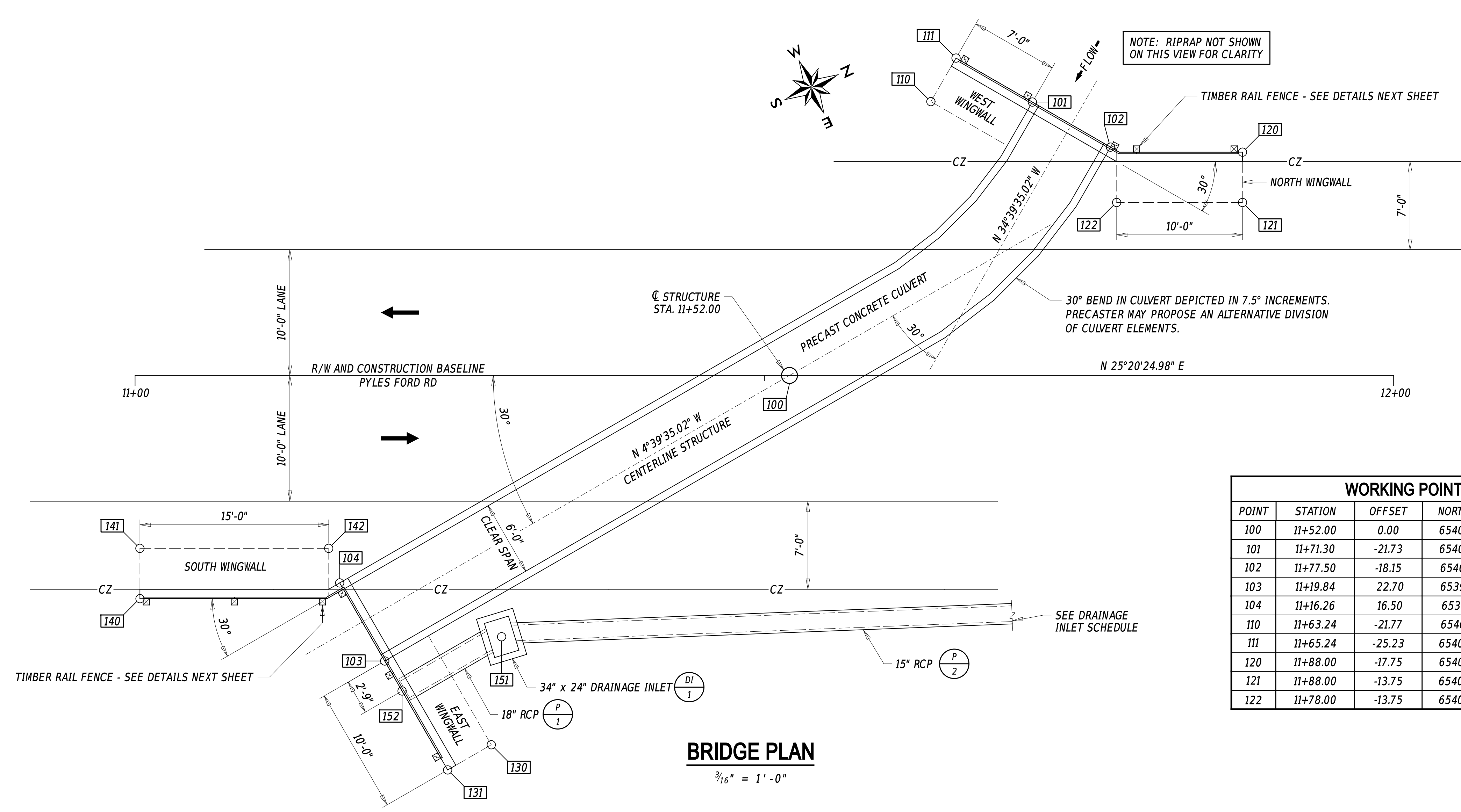
**GRADES AND
GEOMETRICS**

SECTION	GPI
SHEET NO.	8

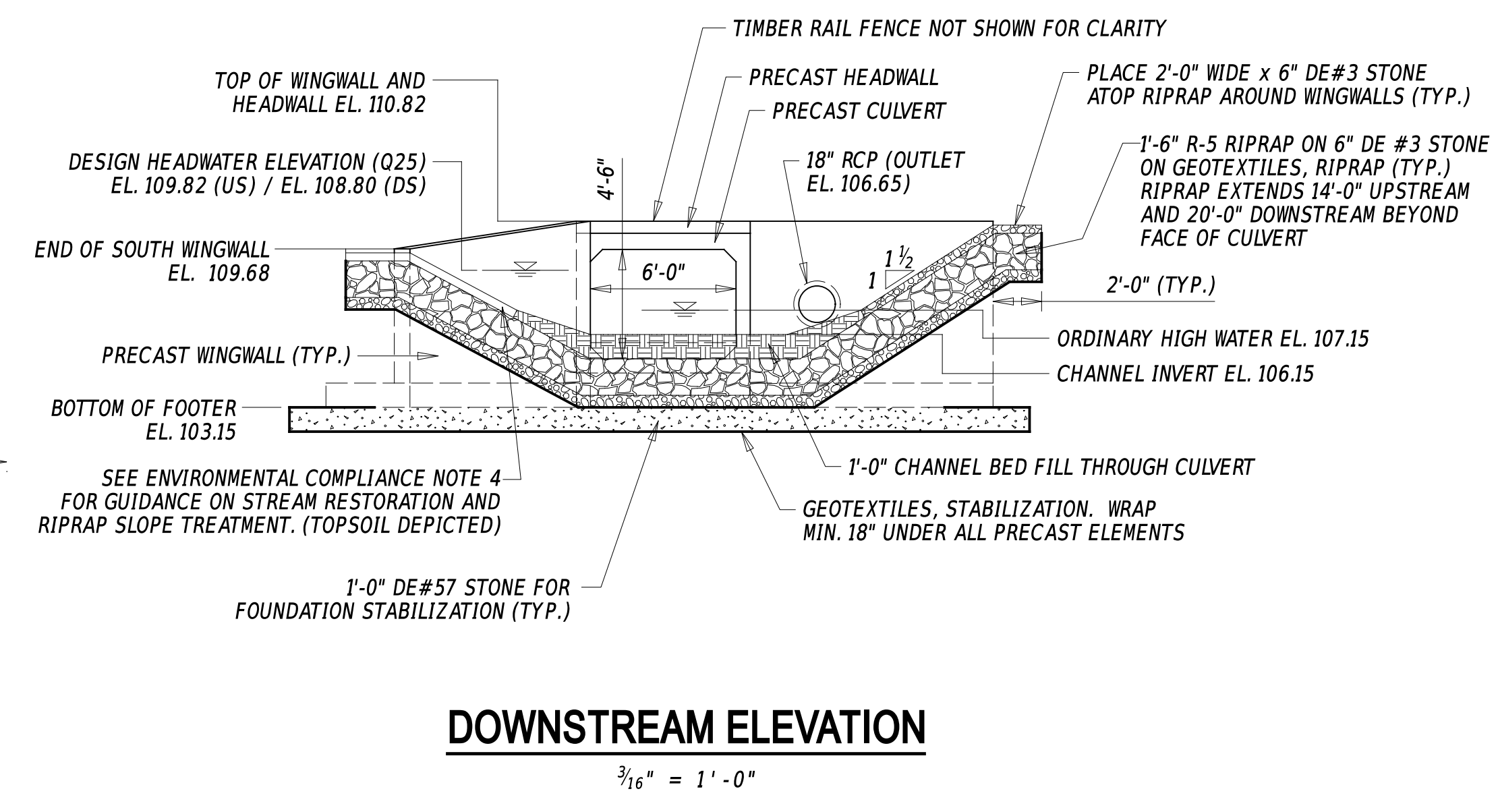
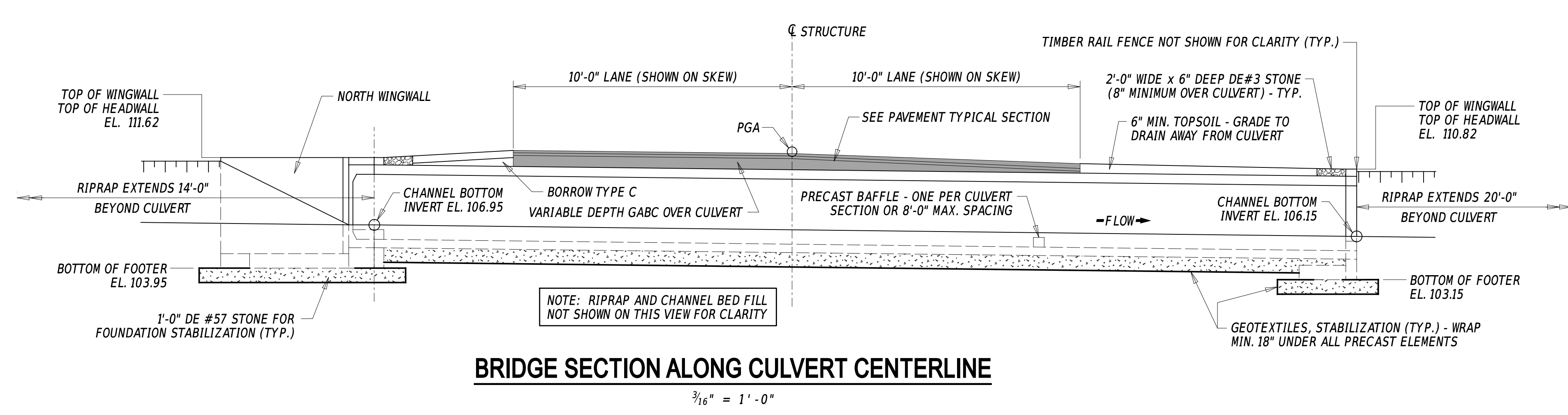
EXISTING WELL HEAD 10'-0" (+/-)
FROM CORNER OF PROPOSED WINGWALL
- DO NOT DISTURB



NOTE: RIPRAP NOT SHOWN
ON THIS VIEW FOR CLARITY



WORKING POINTS					WORKING POINTS				
POINT	STATION	OFFSET	NORTHING	EASTING	POINT	STATION	OFFSET	NORTHING	EASTING
100	11+52.00	0.00	654000.52	595764.70	130	11+28.31	29.36	653966.53	595781.09
101	11+71.30	-21.73	654027.26	595753.31	131	11+24.84	31.36	653962.55	595781.42
102	11+77.50	-18.15	654031.33	595759.21	140	11+00.39	17.75	653946.28	595758.65
103	11+19.84	22.70	653961.74	595771.45	141	11+00.39	13.75	653947.99	595755.03
104	11+16.26	16.50	653961.15	595764.31	142	11+15.39	13.75	653961.54	595761.65
110	11+63.24	-21.77	654019.99	595749.83	151	11+29.13	20.78	653970.95	595773.49
111	11+65.24	-25.23	654023.28	595747.56	152	11+22.34	25.05	653961.96	595774.15
120	11+88.00	-17.75	654040.64	595764.06					
121	11+88.00	-13.75	654038.93	595767.68					
122	11+78.00	-13.75	654029.89	595763.40					



ADDENDA / REVISIONS

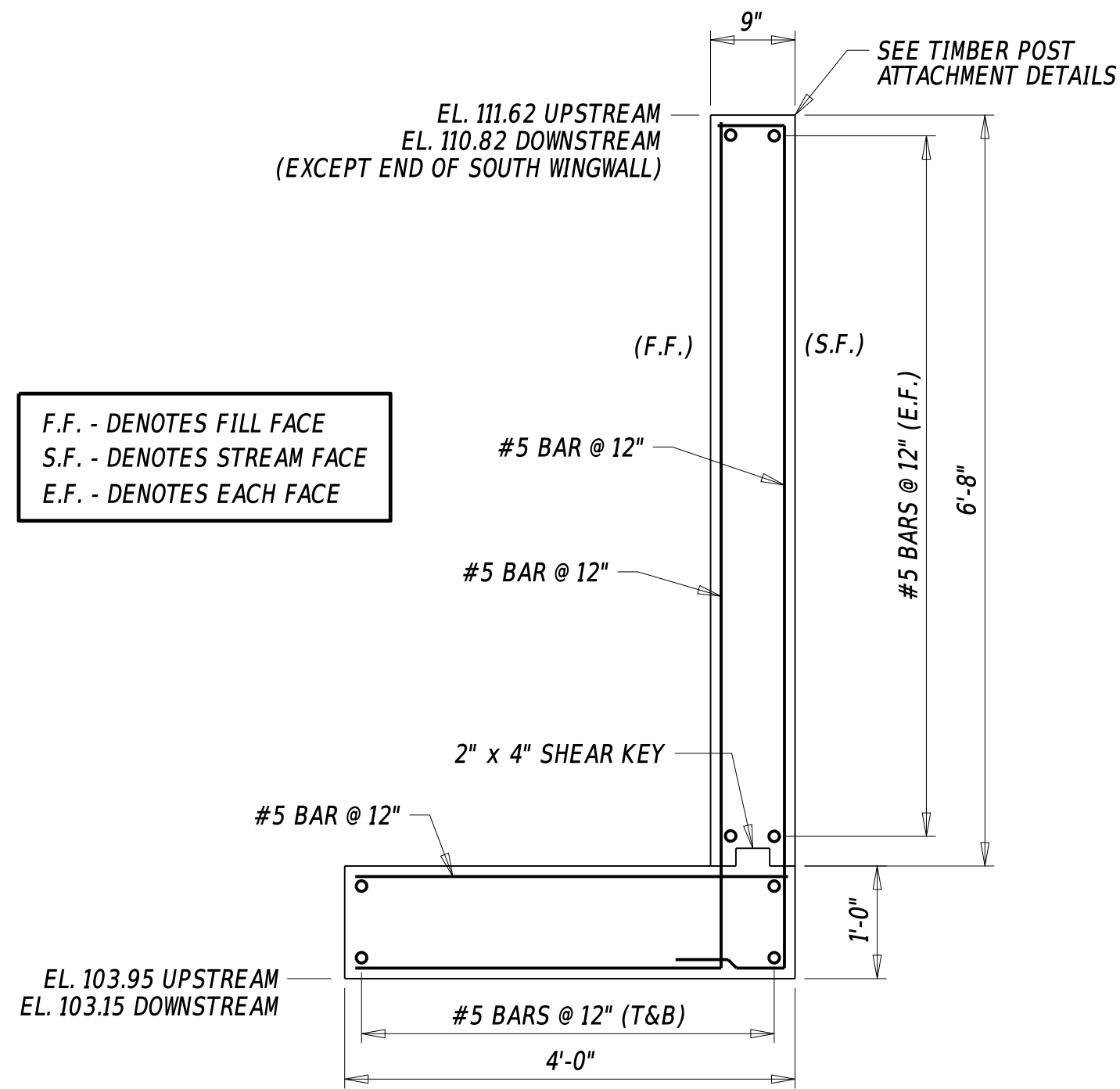
SCALE AS NOTED

**BR 1-110 ON N239
PYLES FORD ROAD,
NE OF MOUNT CUBA**

CONTRACT T200907101	BRIDGE NO. 1-110
COUNTY NEW CASTLE	DESIGNED BY: G. LOVELACE III
	CHECKED BY: T. SWIFT

BRIDGE PLAN, SECTION AND ELEVATION	SECTION GPI
	SHEET NO. 9

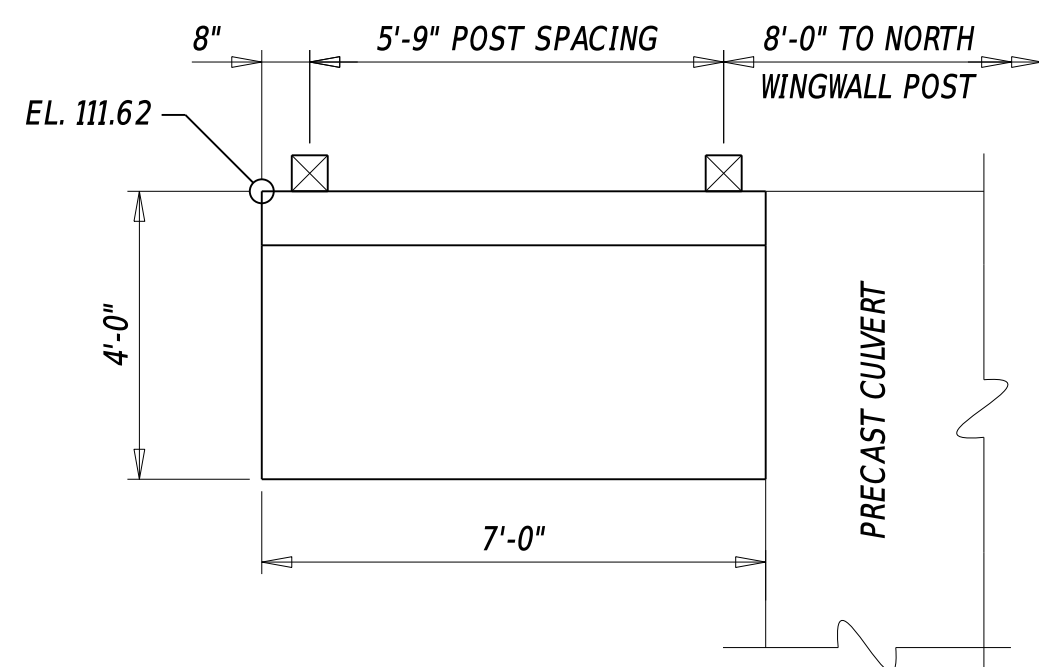
30-JUN-2025 16:05 p:\delldoc-pw-bentley.com\delldoc-pw-01\Documents\01_Active\Projects\DelDOT_Capital\Projects\T200907101_GPI\400_CADD\430_BRIDGE\433_SHEET_DGN\PE01_BRSF_T200907101_GPI



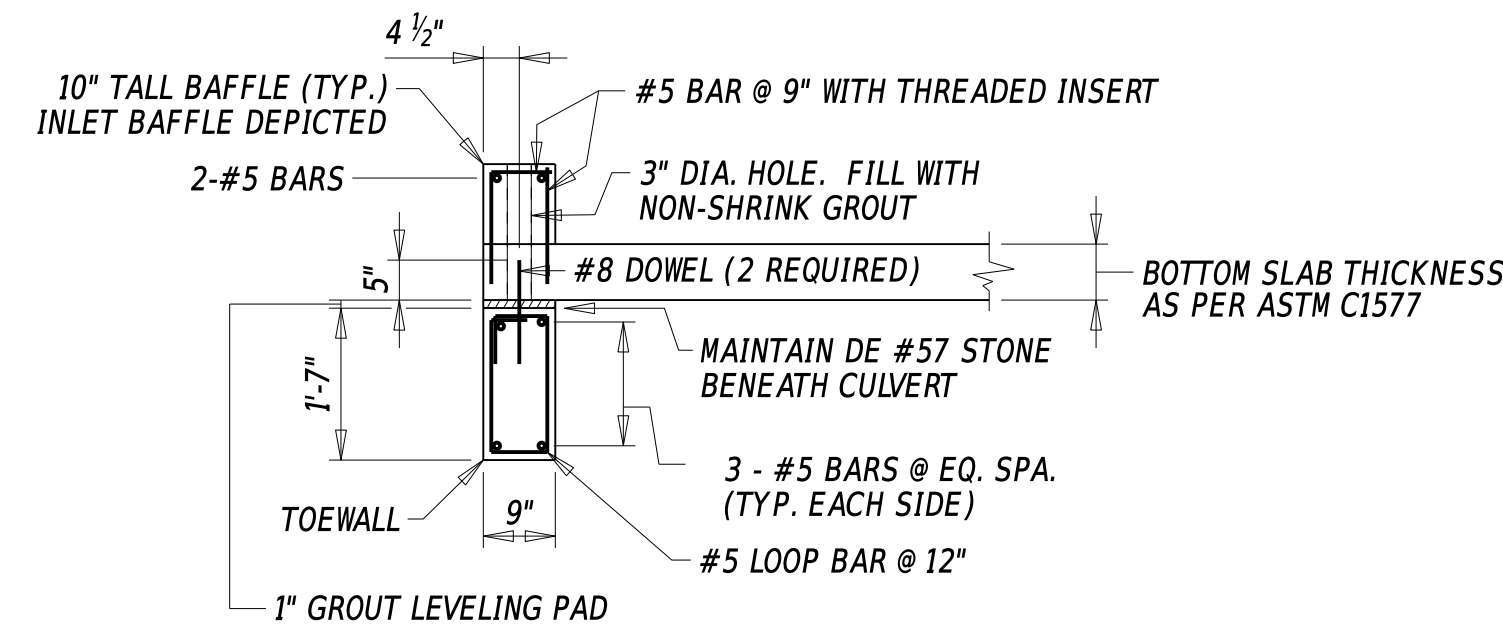
F.F. - DENOTES FILL FACE
S.F. - DENOTES STREAM FACE
E.F. - DENOTES EACH FACE

PRECAST WINGWALL SECTION

3/4" = 1' - 0"

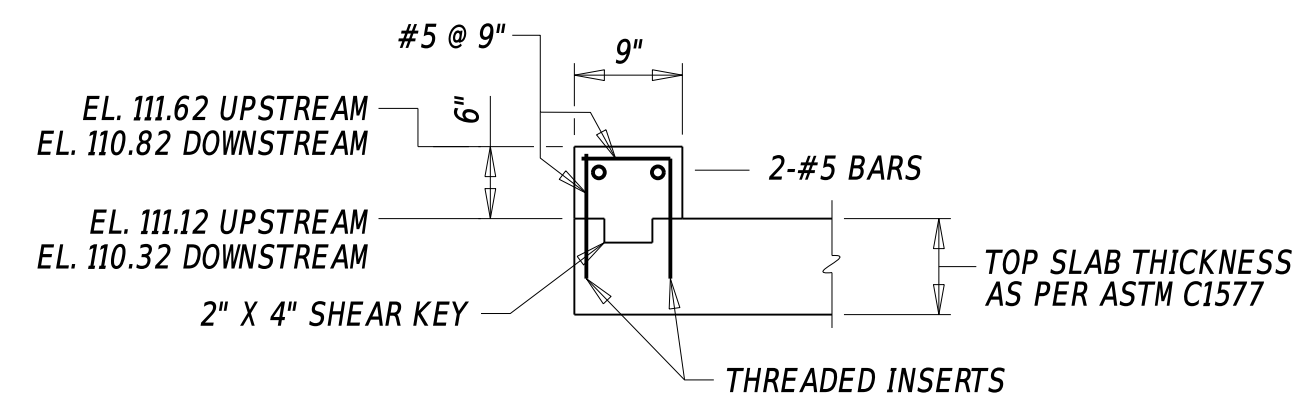


WEST WINGWALL



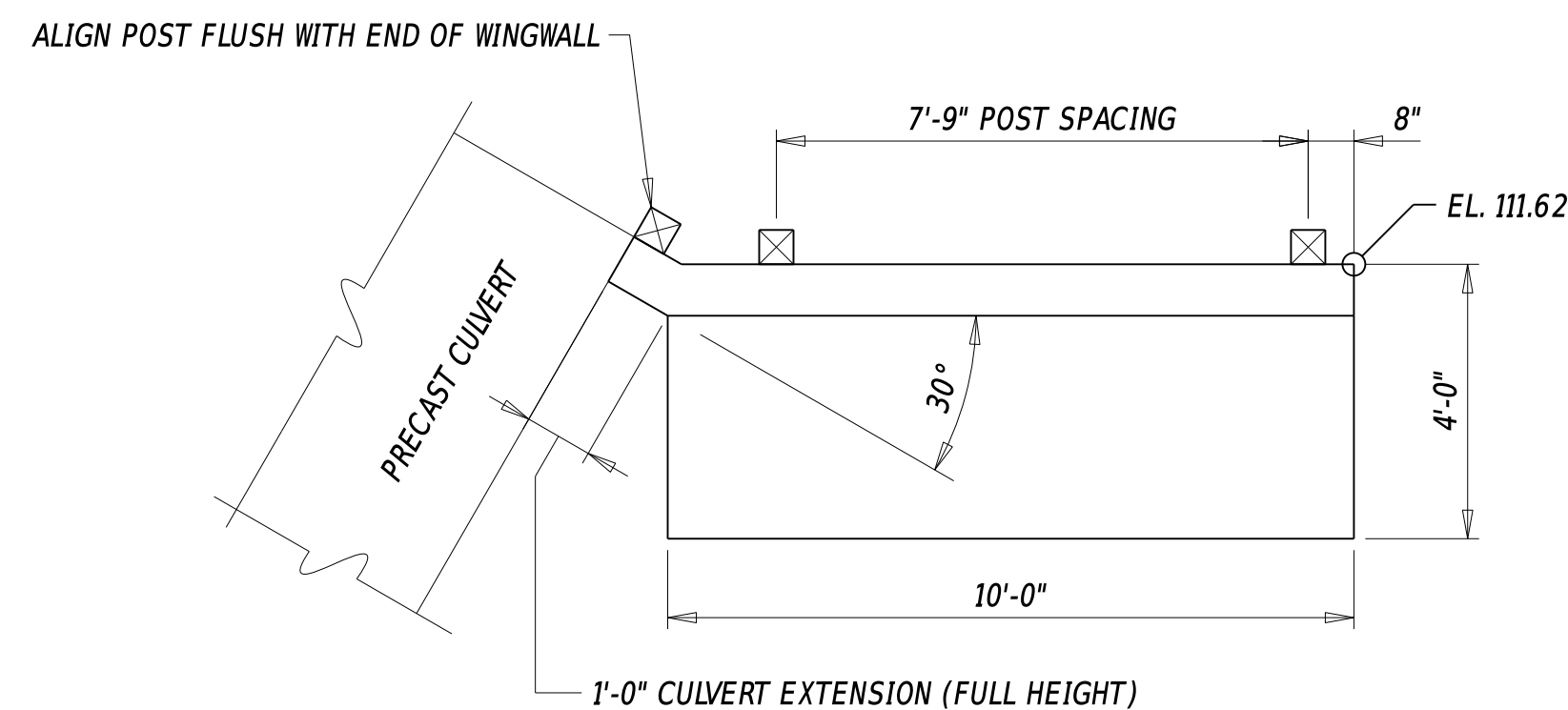
TOEWALL DETAIL

1/2" = 1' - 0"

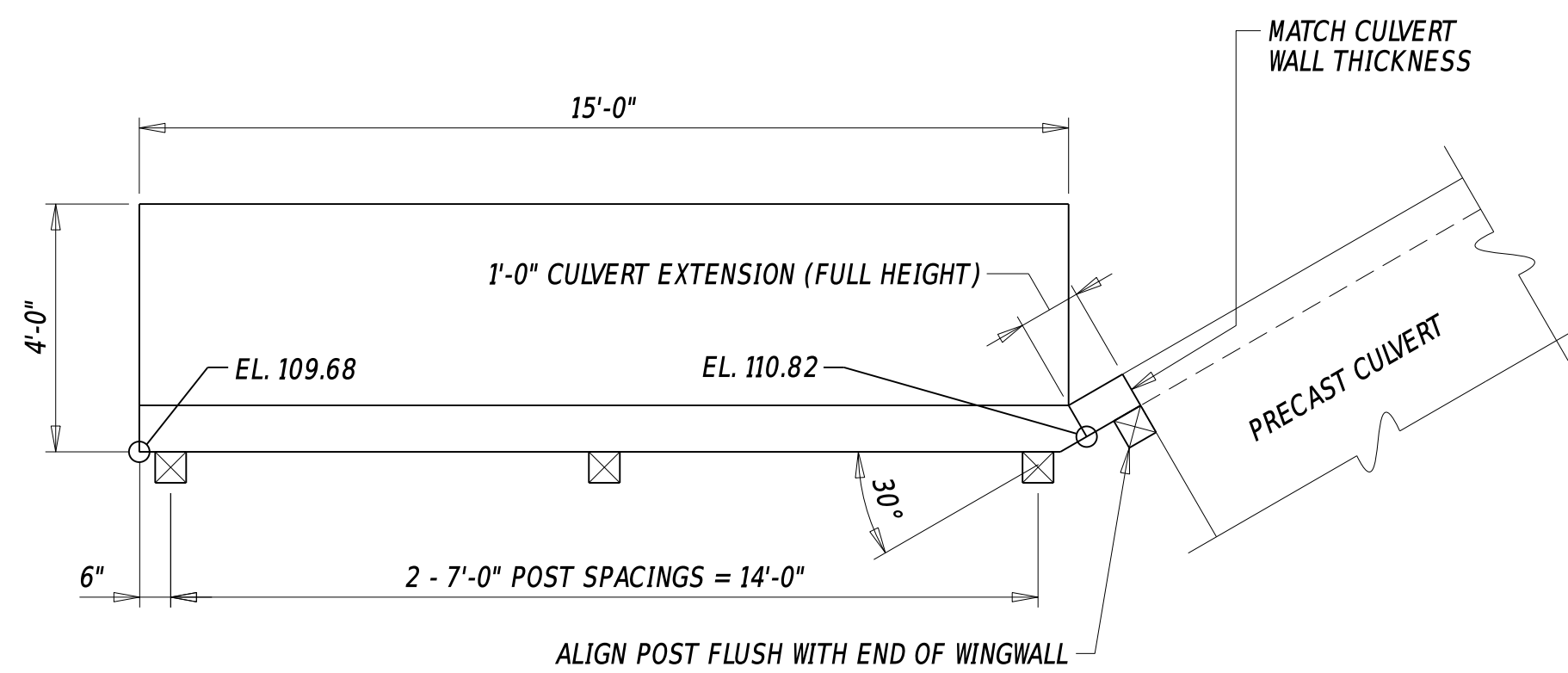


HEADWALL DETAIL

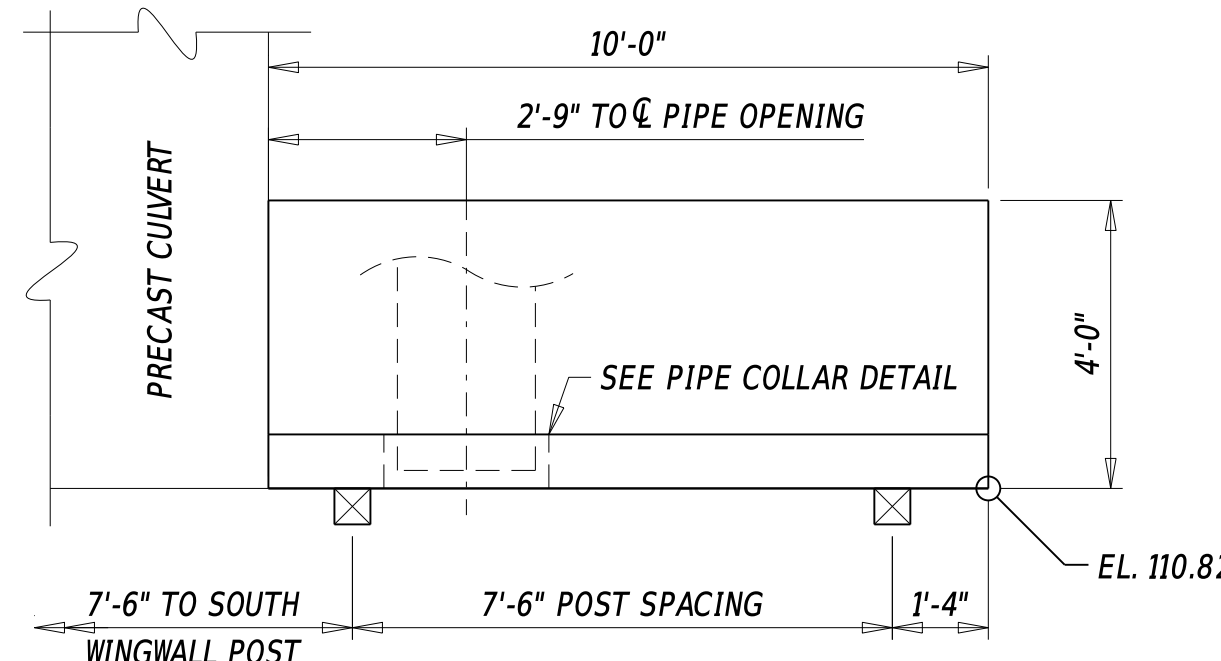
3/4" = 1' - 0"



NORTH WINGWALL



SOUTH WINGWALL



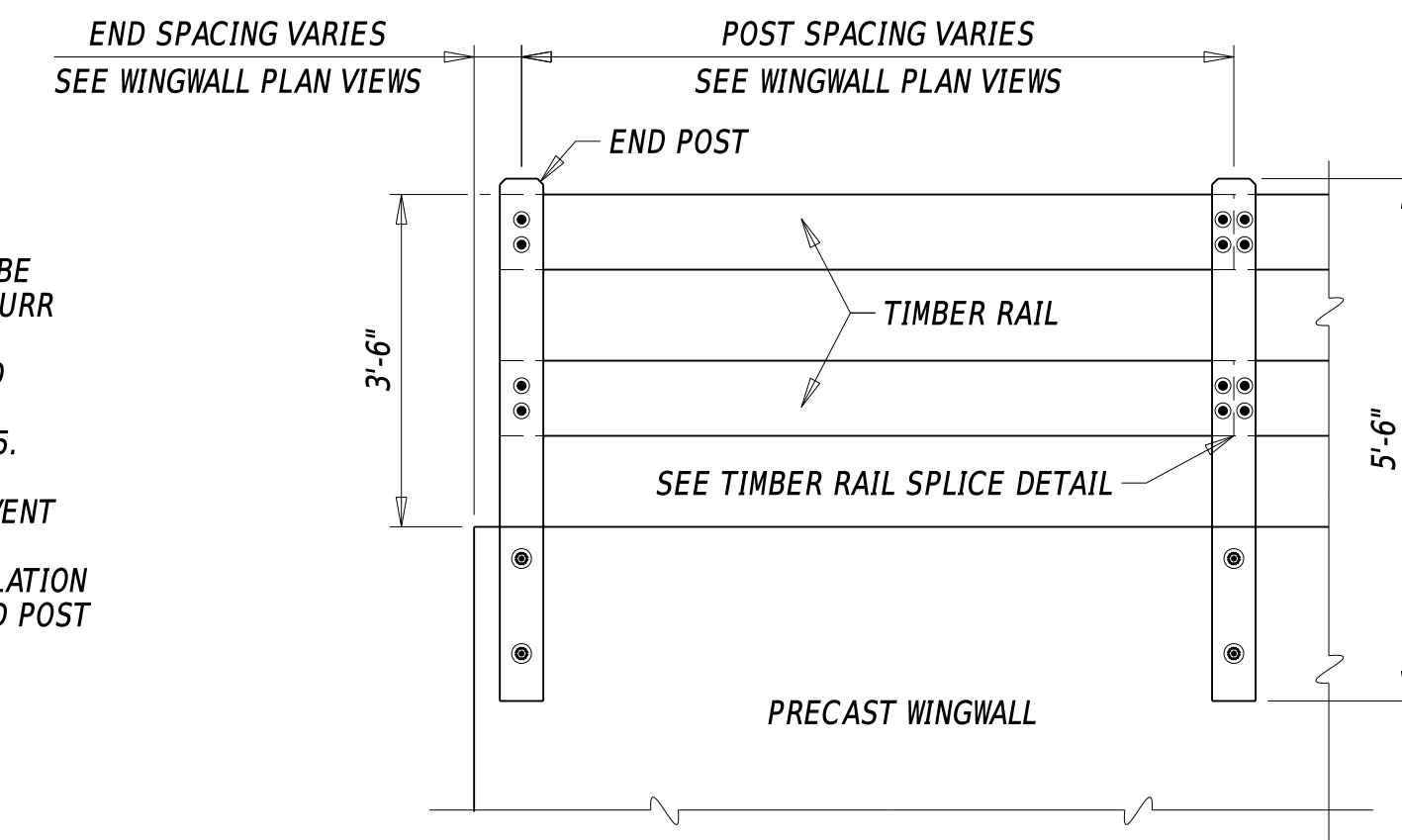
EAST WINGWALL

WINGWALL PLAN VIEWS

3/8" = 1' - 0"

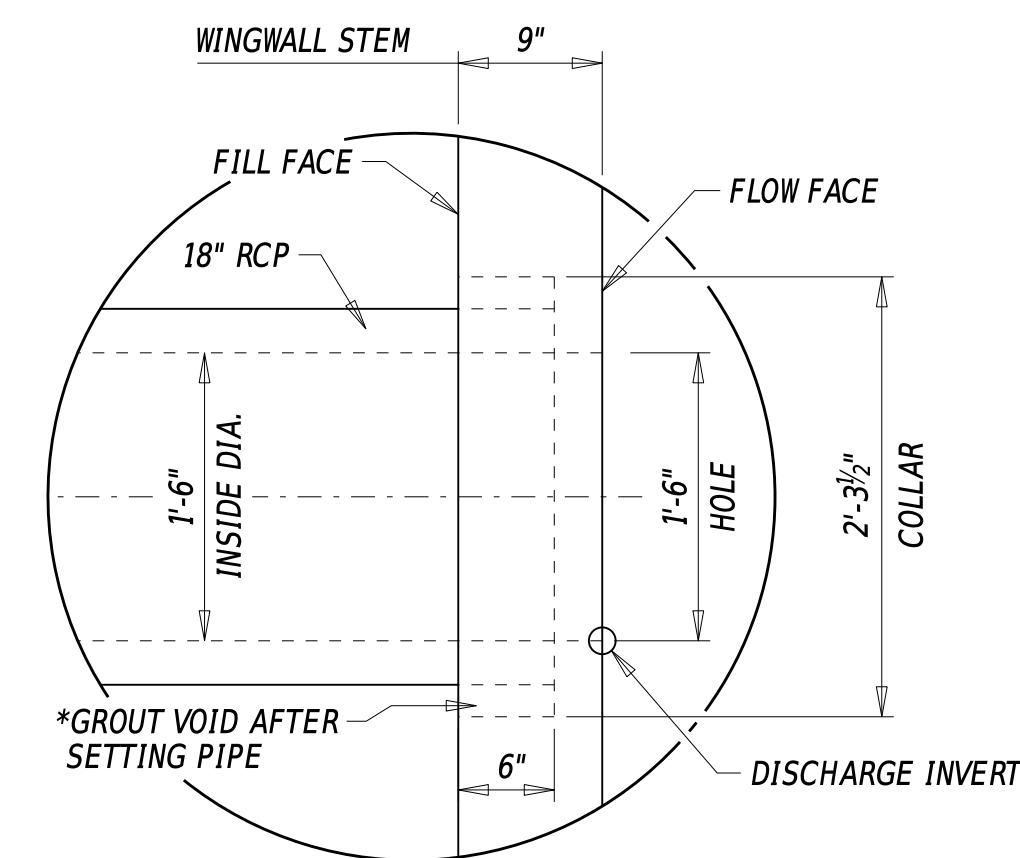
TIMBER RAIL NOTES:

- COUNTERSINK ALL NUTS AS SHOWN IN DETAILS. BOLTS ARE TO BE TRIMMED FLUSH WITH THE EXTERIOR SURFACE OF THE POST. BURR THE ENDS OF ALL BOLTS.
- WHERE WINGWALLS TAPER DOWN, INSTALL ALL POSTS PLUMB AND INSTALL ALL RAILS PARALLEL TO THE TOP OF THE WINGWALL.
- GALVANIZE ALL HARDWARE PER MATERIAL SPECIFICATION 1041.5.
- AT CORNERS AND BENDS IN THE TIMBER RAIL, TOENAIL RAIL ELEMENTS FROM BOTH DIRECTIONS. PRE-DRILL HOLES TO PREVENT SPLITTING.
- PAYMENT FOR MATERIALS, GALVANIZED HARDWARE AND INSTALLATION OF THE TIMBER RAILING IS INCIDENTAL TO ITEM 727002 - WOOD POST AND RAIL FENCE.



TIMBER RAIL ELEVATION

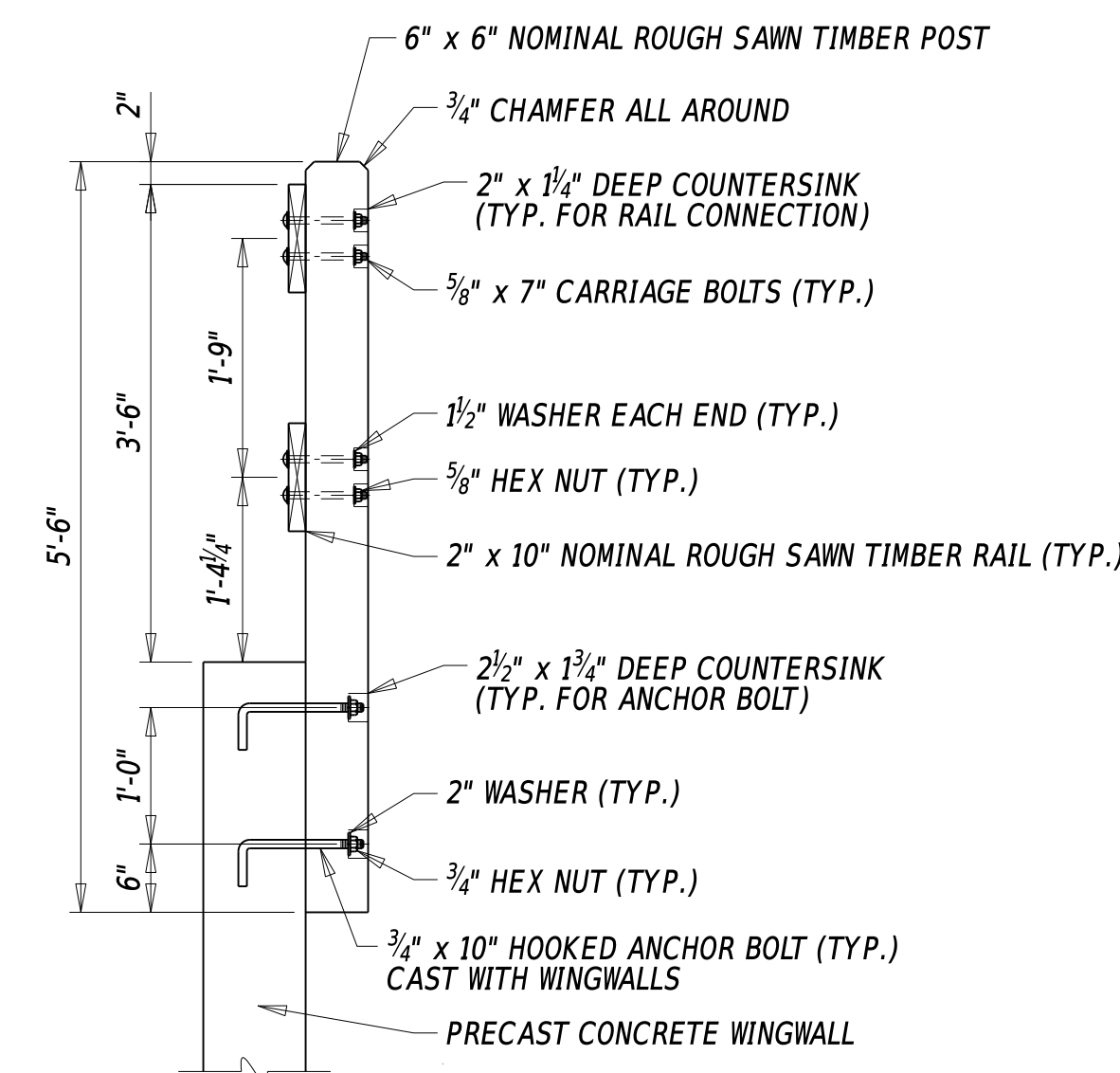
1/2" = 1' - 0"



*NOTE: USE HIGH STRENGTH NON-SHRINK GROUT, PAYMENT INCIDENTAL TO ITEM 612010

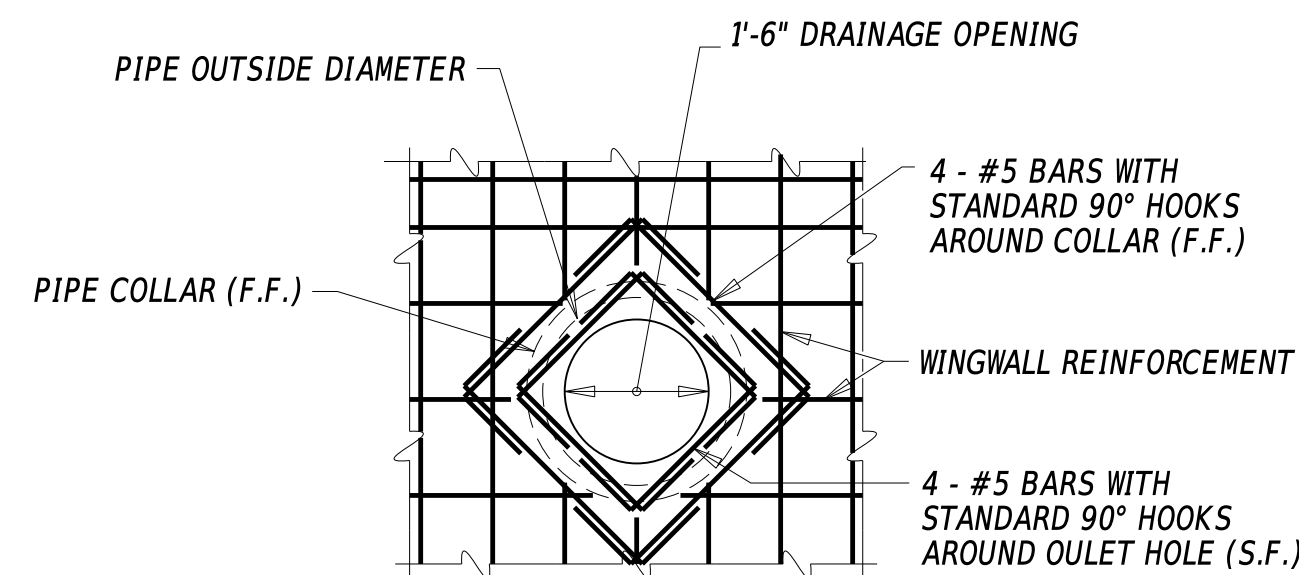
PIPE COLLAR SECTION

1" = 1' - 0"



TIMBER POST DETAIL

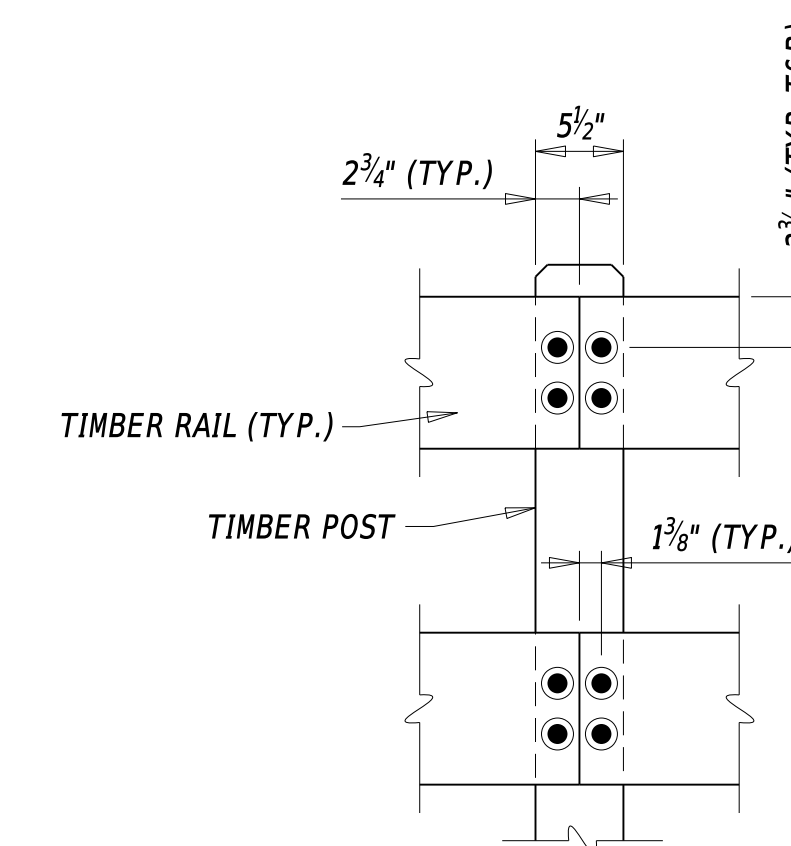
3/4" = 1' - 0"



- ALL VERTICAL AND HORIZONTAL WINGWALL REINFORCEMENT SHALL EXTEND TO WITHIN 2" OF PROPOSED DRAINAGE OPENING.
- REFER TO CONSTRUCTION PLAN AND PROPOSED BRIDGE PLAN, SECTION AND ELEVATION SHEETS FOR ADDITIONAL INFORMATION REGARDING PROPOSED DRAINAGE INLET LOCATIONS AND ELEVATIONS.
- THE EDGE OF THE OPENING FOR PIPE SHALL HAVE BE A MINIMUM 12" FROM ANY JOINT BETWEEN PRECAST SECTIONS.

PIPE COLLAR ELEVATION

1/2" = 1' - 0"



TIMBER RAIL SPLICE DETAIL

1" = 1' - 0"

ADDENDA / REVISIONS

SCALE AS NOTED

**BR 1-110 ON N239
PYLES FORD ROAD,
NE OF MOUNT CUBA**

CONTRACT	BRIDGE NO.	1-110
T200907101	DESIGNED BY:	G. LOVELACE III
COUNTY	CHECKED BY:	T. SWIFT
NEW CASTLE		

CULVERT DETAILS

SECTION
GPI
SHEET NO.
10

BORING: B-1 DATE DRILLED: 1/7/2010
 STATION: 11+10.25 OFFSET: 6.22 R ELEVATION: APPROX 110.30 NORTHING: 653960.116 EASTING: 595752.447
 COMMENTS: N/A

BORING: B-1A DATE DRILLED: 1/18/2010
 STATION: 10+84.47 OFFSET: 24.78 L ELEVATION: APPROX 111.60 NORTHING: 653950.092 EASTING: 595713.395
 COMMENTS: N/A

BORING: B-2 DATE DRILLED: 1/7/2010
 STATION: 11+04.41 OFFSET: 17.59 R ELEVATION: APPROX 110.00 NORTHING: 653949.979 EASTING: 595760.228
 COMMENTS: N/A

SAMPLE INFORMATION					
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0	11	MOIST MEDIUM DENSE GRAY COARSE SANDY FINE GRAVEL W/SOME FINE SAND AND SILT.	A-1-A	
2	1.0	3	NO SAMPLE RECOVERY		
3	2.0	1	SATURATED FIRM BLACK CLAYEY FINE SANDY SILT W/TRACE OF COARSE SAND AND FINE GRAVEL.	A-5(5)	
4	4.0	8	MOIST MEDIUM DENSE BROWN FINE GRAVEL W/SOME FINE TO COARSE SAND AND SILT.	A-1-B	
5	6.0	13	MOIST DENSE BROWN MICACEOUS FINE GRAVEL W/SOME COARSE TO FINE SAND AND SILT, TRACE OF ROCK FRAGMENTS.	A-1-B	
6	8.0	36	MOIST VERY DENSE BROWN MICACEOUS SILTY FINE GRAVELLY COARSE TO FINE SAND W/TRACE OF ROCK FRAGMENTS.	A-1-B	
7	10.0	8	MOIST DENSE BROWN CLAYEY MICACEOUS SILTY COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF ROCK FRAGMENTS.	A-2-4(0)	
8	12.0	9	MOIST VERY STIFF BROWN CLAYEY MICACEOUS FINE TO COARSE SANDY SILT W/TRACE OF FINE GRAVEL AND ROCK FRAGMENTS.	A-4(0)	
9	14.0	50/2"	MOIST DENSE GRAYISH WHITE CLAYEY MICACEOUS COARSE TO FINE SANDY FINE GRAVEL W/TRACE OF SILT.	A-2-4(0)	
10	16.0	16	MOIST VERY DENSE GRAYISH WHITE MICACEOUS COARSE SANDY FINE GRAVEL W/SOME FINE SAND AND SILT.	A-1-B	
11	18.0	19	MOIST VERY DENSE GRAYISH WHITE MICACEOUS SILTY FINE GRAVELLY COARSE TO FINE SAND.	A-1-B	
12	24.0	36	MOIST VERY DENSE GRAYISH WHITE MICACEOUS FINE GRAVELLY COARSE SAND W/SOME FINE SAND AND SILT.	A-1-B	
13	29.0	50/5"	MOIST DENSE GRAYISH WHITE MICACEOUS COARSE TO FINE SAND W/SOME SILT AND FINE GRAVEL.	A-1-B	
R-1	34.0		NO SAMPLE RECOVERY		
	38.0		LOST INNER AND OUTER CORE BARREL IN BORING. BARREL SHEARED OFF AND BROKE.		
	43.0		END OF BORING		

SAMPLE INFORMATION					
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0	6	NO SIEVE ANALYSIS - INDICATION OF MOIST LOOSE BLACK SILTY SAND.		
2	1.0	3	SATURATED FIRM GRAYISH BLACK FINE SANDY SILT W/SOME COARSE SAND AND FINE GRAVEL.	A-4(0)	
3	4.0	50/2"	NO SIEVE ANALYSIS		
R-1	8.8		WISSAHICKON SCHIST, GRAY, WHITE AND ORANGE, SLIGHTLY WEATHERED, HARD.		
	9.0		51" RECOVERY = 85.0%		
			ROD = 26.0 % (POOR)		
R-2	14.0		WISSAHICKON SCHIST, GRAY, WHITE AND ORANGE, SLIGHTLY WEATHERED, HARD.		
	14.0		31" RECOVERY = 51.67%		
			ROD = 10.0% (VERY POOR)		
R-3	19.0		WISSAHICKON SCHIST, GRAY, WHITE AND RED, UNWEATHERED, GARNETT, HARD.		
	19.0		25" RECOVERY = 41.67%		
			ROD = 0.0% (VERY POOR)		
R-4	24.0		WISSAHICKON SCHIST, GRAY, WHITE AND RED, UNWEATHERED, GARNETT, HARD.		
	24.0		60" RECOVERY = 100.0%		
			ROD = 86.0% (GOOD)		
R-5	29.0		WISSAHICKON SCHIST, GRAY, WHITE AND RED, UNWEATHERED, GARNETT, HARD.		
	29.0		60" RECOVERY = 100.0%		
			ROD = 93.0% (EXCELLENT)		
R-6	34.0		WISSAHICKON SCHIST, GRAY, WHITE AND RED, UNWEATHERED, GARNETT, HARD.		
	34.0		58" RECOVERY = 96.67%		
			ROD = 66.0% (FAIR)		
			END OF BORING		
	39.0		END OF BORING		

SAMPLE INFORMATION					
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0	17	MOIST DENSE GRAY FINE GRAVEL W/SOME SILT AND FINE TO COARSE SAND.	A-1-A	
2	1.0	3	WET STIFF GRAYISH BLACK CLAYEY SILT W/SOME FINE SAND, TRACE OF FINE GRAVEL AND COARSE SAND.	A-4(4)	
3	2.0	1	WET SOFT BROWNISH GRAY CLAYEY SILT W/SOME FINE SAND, TRACE OF FINE GRAVEL AND COARSE SAND.	A-4(4)	
4	4.0	4	WET STIFF BROWNISH GRAY CLAYEY FINE SANDY SILT W/SOME FINE GRAVEL AND COARSE SAND, TRACE OF ROCK FRAGMENTS.	A-4(0)	
5	6.0	32	WET VERY DENSE GRAY SILTY FINE SANDY FINE GRAVEL W/SOME COARSE SAND.	A-1-B	BOTTOM OF STONE DEPTH = 7.85' (EL. 102.15)
6	8.0	50/3"	NO SIEVE ANALYSIS - INDICATION OF VERY DENSE GRAY HIGHLY WEATHERED ROCK.		
7	10.0	50/3"	WET DENSE GRAY FINE GRAVEL W/SOME FINE TO COARSE SAND AND SILT.	A-1-B	
8	12.0	50/2"	NO SIEVE ANALYSIS - INDICATION OF DENSE GRAY HIGHLY WEATHERED ROCK.		
9	14.0	50/3"	WET DENSE GRAY FINE GRAVEL W/SOME FINE TO COARSE SAND AND SILT.	A-1-A	
10	16.0	50/3"	WET DENSE GRAY SILTY FINE SANDY FINE GRAVEL W/SOME COARSE SAND.	A-1-B	
R-1	18.0		WISSAHICKON SCHIST, GRAY, WHITE AND RED, SLIGHTLY WEATHERED, GARNETT, HARD.		
	22.5		56" RECOVERY = 93.33%		
			ROD = 72.5% (FAIR)		
R-2	27.5		WISSAHICKON SCHIST, GRAY, WHITE AND RED, UNWEATHERED, GARNETT, HARD.		
	27.5		60" RECOVERY = 100.0%		
			ROD = 70.0% (FAIR)		
R-3	32.5		WISSAHICKON SCHIST, GRAY, WHITE AND RED, UNWEATHERED, GARNETT, HARD.		
	32.5		60" RECOVERY = 100.0%		
			ROD = 55.0% (FAIR)		
	37.5		END OF BORING		

NOTES:
 1. BORING LOGS ARE CREATED BY THE DELAWARE DEPARTMENT OF TRANSPORTATION. SUBSURFACE EXPLORATION COMPLETED BY WALTON CORPORATION AND GEO-TECHNOLOGY ASSOCIATES, INC.
 2. SOIL SAMPLING: 2" OUTSIDE DIA. SPLIT BARREL SAMPLER, DRIVEN WITH A 140 LB HAMMER FALLING 30".
 3. ALL DEPTHS ARE GIVEN IN FEET.
 4. REFER TO CONSTRUCTION PLAN SHEET FOR BORING LOCATIONS.

ADDENDA / REVISIONS

NOT TO SCALE

**BR 1-110 ON N239
 PYLES FORD ROAD,
 NE OF MOUNT CUBA**

CONTRACT	BRIDGE NO.	1-110
T200907101	DESIGNED BY:	G. LOVELACE III
COUNTY	CHECKED BY:	T. SWIFT
NEW CASTLE		

BORING LOG

SECTION	GPI
SHEET NO.	11

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); NWP #3 (A) and (C), NO PCN
 - DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL); PROJECT CONSISTENT WITH DEL. CODE CH. 72, SECTION 7217, SPECIAL EXEMPTION (B)
 - NCC DEPT. OF LAND USE (NCC); NONE
 - * 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.
 - B. CONSTRUCTION RESTRICTIONS:
 - FISHERIES - NO IN-WATER WORK PERMITTED MARCH 1 - JUNE 30.
 - ENDANGERED SPECIES - NONE
 - MIGRATORY BIRDS - NO CONSTRUCTION PERMITTED APRIL 15 - AUGUST 1. IF BRIDGE WORK IS PROPOSED DURING THE BREEDING SEASON, CONTACT DELDOT ENVIRONMENTAL STUDIES STAFF (DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV) NO MORE THAN 14 DAYS PRIOR TO THE START OF WORK FOR A SURVEY TO DETERMINE IF ACTIVE NESTS ARE PRESENT. IF THE SURVEY DETECTS NESTING ACTIVITY, THE FOLLOWING STEPS MUST BE TAKEN TO AVOID NEST DESTRUCTION AND TAKE, WHICH IS A VIOLATION OF STATE LAW:
 1. ONLY PERFORM CONSTRUCTION ACTIVITIES FROM AUGUST 2 TO APRIL 14 OR
 2. IF CONSTRUCTION CANNOT BE PERFORMED FROM AUGUST 2 TO APRIL 14, A DETERRENT SUCH AS MESH NETTING MUST BE USED TO BLOCK ACCESS TO NESTING SITES ON THE UNDERSIDE OF THE BRIDGE(S) IN ACCORDANCE WITH SPECIAL PROVISION 763623 - NETTING MIGRATORY BIRD EXCLUSION. THE MATERIAL WOULD NEED TO BE IN PLACE NO LATER THAN APRIL 14. THE UNDERSIDE OF THE BRIDGE(S) WOULD NEED TO BE FULLY ENCAPSULATED. THE MATERIAL MUST BE LEFT IN PLACE UNTIL CONSTRUCTION BEGINS.

3. CULTURAL RESOURCE ISSUES:

THERE ARE NO CULTURAL RESOURCE CONCERNS WITH THE PROJECT AS CURRENTLY DESIGNED. SHOULD IT BE NECESSARY TO ADD ADDITIONAL ACCESS LOCATIONS OR STAGING/STOCK PILING AREAS OUTSIDE OF THE LIMIT OF CONSTRUCTION (LOC), OR OTHERWISE MODIFY THE LOC OR PROJECT SCOPE FROM WHAT IS DETAILED IN THE APPROVED PLANS, DELDOT ENVIRONMENTAL STUDIES STAFF (DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV OR (302) 760-4887) MUST BE CONTACTED TO REVIEW THESE CHANGES OF POTENTIAL CULTURAL RESOURCES CONCERNS AND COORDINATE WITH THE FEDERAL HIGHWAY ADMINISTRATION AND DE STATE HISTORIC PRESERVATION OFFICE AS NECESSARY.

4. STREAM RESTORATION AND RIPRAP TREATMENT:
 - A. FOLLOW THE SPECIFICATIONS 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 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 TOPSOIL THROUGH THE RIPRAP, AND THEN 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 - PERMANENT GRASS SEEDING, STREAMBANK. 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.
 - E. THE TOPSOIL/SEED/MULCH CAN BE PLACED BEFORE OR AFTER THE REMOVAL OF THE STREAM DIVERSION. IF THE PLACEMENT OCCURS AFTER STREAM DIVERSION REMOVAL, USE A TURBIDITY CURTAIN TO MINIMIZE IN-STREAM SEDIMENTATION. PAYMENT WILL BE INCIDENTAL TO ITEM 909005 - STREAM DIVERSION.

5. 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 604004 - WETLAND ACCESS. 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 908017 - TEMPORARY GRASS SEEDING.
 - 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 (302-760-2264 OR DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV) CAN PROVIDE FURTHER GUIDANCE REGARDING THIS METHOD OF INSTALLATION. CLEARLY MARK ALL TREES TO BE REMOVED WITH PAINT PRIOR TO THE EROSION AND SEDIMENT CONTROL MEETING.
 - D. CLEARLY MARK ALL TREES TO BE REMOVED WITH PAINT PRIOR TO THE EROSION AND SEDIMENT CONTROL MEETING.

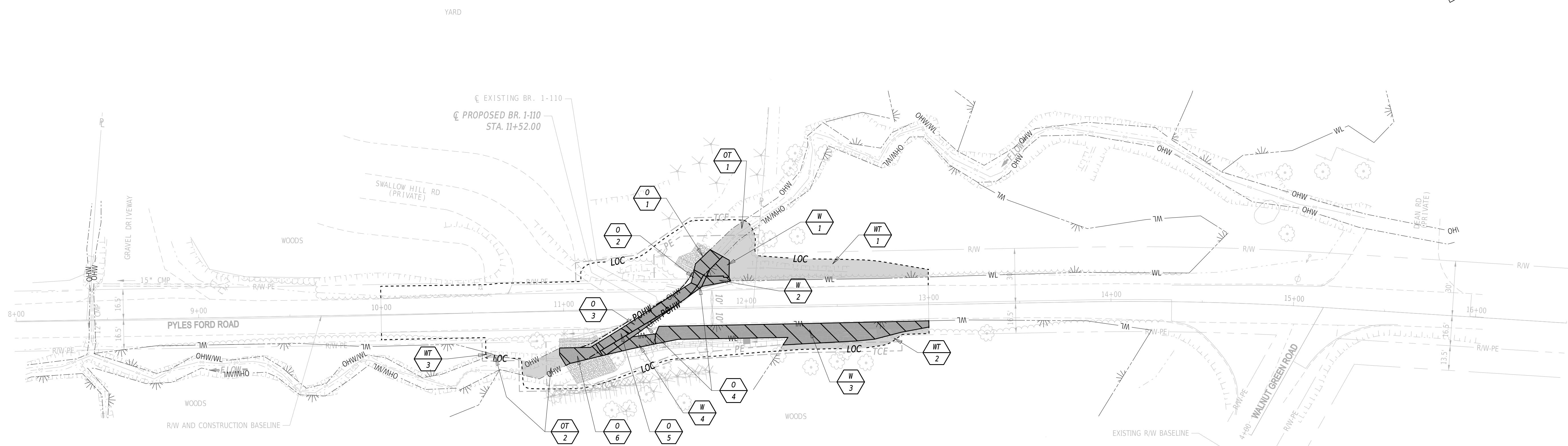
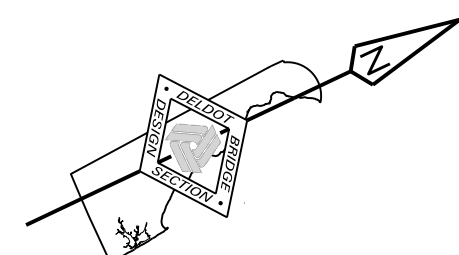
6. ANY STAGING AND/OR STOCKPILE AREA(S) OUTSIDE THE PROJECT'S LIMIT OF CONSTRUCTION (LOC) THAT INDIVIDUALLY OR CUMULATIVELY ARE LARGER THAN 10,000 SQUARE FEET, MUST BE APPROVED BY DELDOT'S ARCHAEOLOGIST. CONTACT THE CONSTRUCTION AREA ENGINEER WHO WILL COORDINATE WITH DELDOT'S ARCHAEOLOGIST.

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.

6-DEC-2024 20:23 \\fcsM-deldotpw21\CS_pdf_work_dir\11277161070_12\EC01_BR5F_T200907101_GPI.dgn

NOT TO SCALE	BR 1-110 ON N239 PYLES FORD ROAD, NE OF MOUNT CUBA	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: small;">CONTRACT</td> <td style="font-size: small;">BRIDGE NO.</td> <td style="text-align: center;">1-110</td> </tr> <tr> <td style="font-size: small;">T200907101</td> <td style="font-size: small;">DESIGNED BY:</td> <td>G. LOVELACE III</td> </tr> <tr> <td style="font-size: small;">COUNTY</td> <td style="font-size: small;">CHECKED BY:</td> <td>T. SWIFT</td> </tr> <tr> <td style="font-size: small;">NEW CASTLE</td> <td></td> <td></td> </tr> </table>	CONTRACT	BRIDGE NO.	1-110	T200907101	DESIGNED BY:	G. LOVELACE III	COUNTY	CHECKED BY:	T. SWIFT	NEW CASTLE			ENVIRONMENTAL COMPLIANCE NOTES	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: small;">SECTION</td> </tr> <tr> <td style="text-align: center;">GPI</td> </tr> <tr> <td style="font-size: small;">SHEET NO.</td> </tr> <tr> <td style="text-align: center;">12</td> </tr> </table>	SECTION	GPI	SHEET NO.	12
CONTRACT	BRIDGE NO.	1-110																		
T200907101	DESIGNED BY:	G. LOVELACE III																		
COUNTY	CHECKED BY:	T. SWIFT																		
NEW CASTLE																				
SECTION																				
GPI																				
SHEET NO.																				
12																				



LEGEND

- PERMANENT IMPACT AREA
- TEMPORARY IMPACT AREA
- OHW - ORDINARY HIGH WATER
- OHW/WL - ORDINARY HIGH WATER / WETLAND
- POHW - PROPOSED ORDINARY HIGH WATER
- WL - WETLAND BOUNDARY
- LOC - LIMIT OF CONSTRUCTION

- IMPACT AREA TYPE ID. (SEE BELOW)
- IMPACT AREA ID. AND/OR NUMBER
- O = OPEN WATER IMPACT W = WETLAND IMPACT
- T = TEMPORARY IMPACT

WETLANDS DELINEATED BY CENTURY ENGINEERING IN JUNE 2023 IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS "CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (1987)" AND APPROPRIATE REGIONAL SUPPLEMENTS.

ORIGINAL SHEET PREPARED BY NAVEED CHAUDHRI ON 5/14/2010. SHEET REVISED FOR UPDATED DESIGN BY GLEN LOVELACE III ON 5/28/2013. LAST UPDATED 11/05/24.

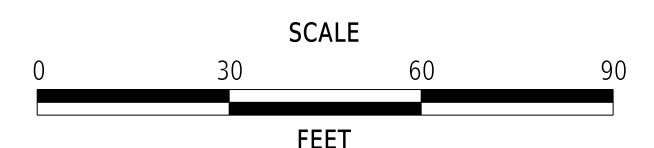
TEMPORARY WETLAND IMPACT AREA SCHEDULE						
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	TYPE OF IMPACT
WT-1	UPSTREAM WORK AREA	1301.92	0.0299	N/A	USACE	N/A
WT-2	SWALE WORK AREA	274.68	0.0063	N/A	USACE	N/A
WT-3	DOWNSTREAM WORK AREA	5.74	0.0001	N/A	USACE	N/A
TOTAL TEMPORARY WETLAND IMPACTS		1582.34	0.0363	N/A	USACE	N/A

PERMANENT WETLAND IMPACT AREA SCHEDULE						
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	TYPE OF IMPACT
W-1	UPSTREAM RIPRAP	91.38	0.0021	10.15	USACE	LOSS
W-2	UPSTREAM FILL / RIPRAP	55.46	0.0013	4.25	USACE	LOSS
W-3	DRAINAGE IMPROVEMENTS	1234.22	0.0283	70.49	USACE	LOSS
W-4	DOWNSTREAM FILL FOR PIPE	120.13	0.0028	20.33	USACE	LOSS
TOTAL PERMANENT WETLAND LOSSES		1501.19	0.0345	105.22	USACE	LOSS

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE						
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	TYPE OF IMPACT
OT-1	UPSTREAM WORK AREA	171.56	0.0039	4.31	USACE / DNREC	N/A
OT-2	DOWNSTREAM WORK AREA	237.37	0.0054	3.99	USACE / DNREC	N/A
TOTAL TEMPORARY OPEN WATER IMPACTS		408.93	0.0093	8.30	USACE / DNREC	N/A

PERMANENT OPEN WATER IMPACT AREA SCHEDULE						
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	TYPE OF IMPACT
O-1	UPSTREAM RIPRAP	111.11	0.0026	8.23	USACE / DNREC	IMPACT
O-2	UPSTREAM CULVERT EXTENSION	32.99	0.0008	0.81	USACE / DNREC	IMPACT
O-3	EX. CULVERT TO PROPOSED CULVERT	239.04	0.0055	5.16	USACE / DNREC	IMPACT
O-4	FILL AROUND PROPOSED CULVERT	115.34	0.0026	4.85	USACE / DNREC	LOSS
O-5	DOWNSTREAM CULVERT EXTENSION	80.85	0.0019	2.00	USACE / DNREC	IMPACT
O-6	DOWNSTREAM RIPRAP	158.67	0.0036	11.75	USACE / DNREC	IMPACT
SUBTOTAL PERMANENT OPEN WATER IMPACTS		622.66	0.0143	27.95	USACE / DNREC	IMPACT
SUBTOTAL PERMANENT OPEN WATER LOSSES		115.34	0.0026	4.85	USACE / DNREC	LOSS
TOTAL PERM. OPEN WATER IMPACTS AND LOSSES		738.00	0.0169	32.80	USACE / DNREC	

ADDENDA / REVISIONS



**BR 1-110 ON N239
PYLES FORD ROAD,
NE OF MOUNT CUBA**

CONTRACT	BRIDGE NO.	1-110
T200907101	DESIGNED BY:	G. LOVELACE III
COUNTY	CHECKED BY:	T. SWIFT
NEW CASTLE		

**ENVIRONMENTAL
COMPLIANCE PLAN**

EC-01
SECTION
GPI
SHEET NO.
13

6-DEC-2024 20:23 \\scm-del00p0w11cs_pdf_work_dir\1277161070_301EC02_BRSF_T200907101_GPI.dgn

EROSION & SEDIMENT CONTROL			
	COMPOST FILTER LOG		REINFORCED SILT FENCE / LENGTH
	COMPOST FILTER LOG / LENGTH		SUPER SILT FENCE / LENGTH
	DEWATERING BAG		SUPER SILT FENCE
	DEWATERING BASIN		SUMP PIT
	EARTH DIKE		SEDIMENT TRAP / NUMBER
	INLET SEDIMENT CONTROL		SEDIMENT TRAP
	PORTABLE SEDIMENT TANK		SEDIMENT TRAP WITH INLET AS OUTLET
	SANDBAG DIKE		SEDIMENT TRAP PIPE OUTLET
	SANDBAG DIVERSION		STILLING WELL
	STONE CHECK DAM		TEMPORARY SWALE
	STABILIZED CONSTRUCTION ENTRANCE		TEMPORARY SLOPE DRAIN
	SILT FENCE / LENGTH		TURBIDITY CURTAIN / LENGTH
	SILT FENCE		TURBIDITY CURTAIN

GENERAL EROSION AND SEDIMENT CONTROL (E&S) NOTES

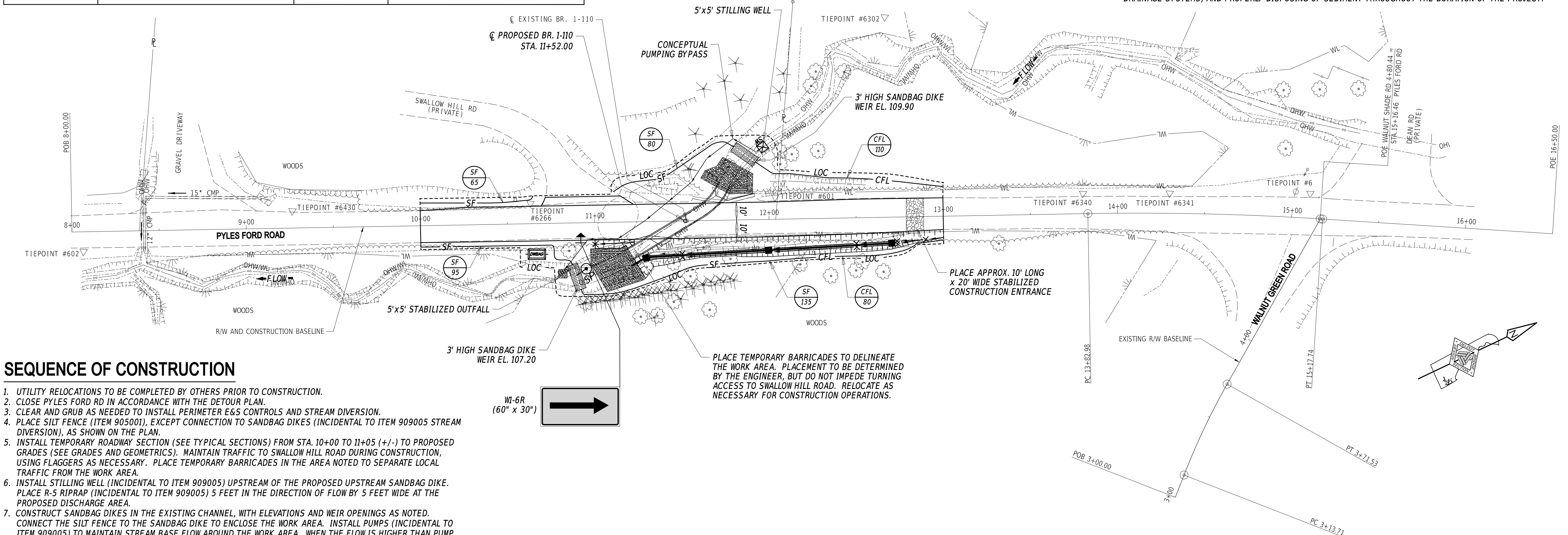
- THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. PLAN APPROVAL IS VALID FOR FIVE-YEAR FOR A STANDARD PLAN. ANY DEVIATIONS TO THE SWPPP NEED APPROVAL FROM THE ENGINEER.

REVIEWED FOR GENERAL CONFORMITY WITH
CURRENT DELAWARE SEDIMENT AND STORMWATER
REGULATIONS.

Sto Swm 07/11/2025

STORMWATER ENGINEER
DELAWARE DEPARTMENT OF TRANSPORTATION
EXPIRES: 7/11/2030

AMOUNT OF DISTURBED AREA FOR THE PROJECT	0.354 AC
ADDED IMPERVIOUS FOR THE PROJECT	298.6 SF
HUC-10 WATERSHED	WHITE CLAY CREEK



SEQUENCE OF CONSTRUCTION

- UTILITY RELOCATIONS TO BE COMPLETED BY OTHERS PRIOR TO CONSTRUCTION.
- CLOSE PYLES FORD RD IN ACCORDANCE WITH THE DETOUR PLAN.
- CLEAR AND GRUB AS NEEDED TO INSTALL PERIMETER E&S CONTROLS AND STREAM DIVERSION.
- PLACE SILT FENCE (ITEM 905001), EXCEPT CONNECTION TO SANDBAG DIKES (INCIDENTAL TO ITEM 909005 STREAM DIVERSION), AS SHOWN ON THE PLAN.
- INSTALL TEMPORARY ROADWAY SECTION (SEE TYPICAL SECTIONS) FROM STA. 10+00 TO 11+05 (+/-) TO PROPOSED GRADES (SEE GRADES AND GEOMETRICS). MAINTAIN TRAFFIC TO SWALLOW HILL ROAD DURING CONSTRUCTION, USING FLAGGERS AS NECESSARY. PLACE TEMPORARY BARRICADES IN THE AREA NOTED TO SEPARATE LOCAL TRAFFIC FROM THE WORK AREA.
- INSTALL STILLING WELL (INCIDENTAL TO ITEM 909005) UPSTREAM OF THE PROPOSED UPSTREAM SANDBAG DIKE. PLACE R-5 RIPRAP (INCIDENTAL TO ITEM 909005) 5 FEET IN THE DIRECTION OF FLOW BY 5 FEET WIDE AT THE PROPOSED DISCHARGE AREA.
- CONSTRUCT SANDBAG DIKES IN THE EXISTING CHANNEL, WITH ELEVATIONS AND WEIR OPENINGS AS NOTED. CONNECT THE SILT FENCE TO THE SANDBAG DIKE TO ENCLOSE THE WORK AREA. INSTALL PUMPS (INCIDENTAL TO ITEM 909005) TO MAINTAIN STREAM BASE FLOW AROUND THE WORK AREA. WHEN THE FLOW IS HIGHER THAN PUMP CAPACITY DURING RAINFALL EVENTS, THE STREAM FLOW IS ALLOWED TO FLOW OVER THE SANDBAG DIKE. THEREFORE, KEEP THE ENCLOSED WORK AREA CLEAR OF DEBRIS AND OBSTRUCTIONS AT THE END OF EACH WORKDAY.
- INSTALL SUMP PIT (ITEM 906003) AND DEWATERING BAG (ITEM 906002) FOR USE IN DEWATERING THE WORK AREA. DEWATER THE WORK AREA IN ACCORDANCE WITH SECTION 902 OF THE STANDARD SPECIFICATIONS.
- REMOVE THE EXISTING STONE MASONRY AND/OR CONCRETE CULVERT IN ITS ENTIRETY. INSTALL THE PROPOSED PRECAST CULVERT AND WINGWALLS. THE CONTRACTOR HAS THE OPTION TO REMOVE THE EXISTING AND INSTALL THE PROPOSED CULVERT IN UPSTREAM AND DOWNSTREAM PHASES OR COMPLETE ALL AT ONCE. USE CAUTION WHEN PLACING THE SOUTH WINGWALL IN PROXIMITY TO LOCAL TRAFFIC. INSTALL P/1 AND D/1 ADJACENT TO BRIDGE.
- INSTALL RIPRAP, CHANNEL BED FILL AND SLOPE STABILIZATION AS NOTED, INCLUDING TRANSITIONS TO THE EXISTING CHANNEL.
- INSTALL REMAINING PROPOSED DRAINAGE. PREPARE THE PROPOSED PAVEMENT BOX FROM STA 11+05 TO 13+00 AND PLACE GABC AND HOT MIX TYPE B. MILL 2" FROM TEMPORARY ROADWAY SECTION BETWEEN STA. 10+00 AND 11+05. COMPLETE PROPOSED PAVEMENT (HOT MIX TYPE C), PAVEMENT STRIPING (SEE PROJECT NOTES) AND ANY OTHER REMAINING WORK.
- REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES (INCLUDING RIPRAP USED AS STILLING WELL AND STABILIZED OUTFALL) AND RESTORE THE STREAM TO EXISTING CONDITIONS AS OUTLINED IN THE ENVIRONMENTAL COMPLIANCE NOTES. REMOVE ALL MAINTENANCE OF TRAFFIC DEVICES AND RE-OPEN PYLES FORD ROAD TO TRAFFIC.

GENERAL E&S SEQUENCE NOTES

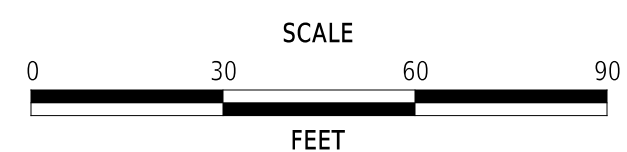
- POST NOI PERMIT COVERAGE SO THAT IT IS VISIBLE IN CLOSE PROXIMITY TO THE CONSTRUCTION SITE AS DIRECTED BY THE ENGINEER. THE NOTICE MUST BE IN ACCORDANCE WITH DELDOT GUIDANCE.
- INSTALL ALL PERIMETER E&S ITEMS AND SENSITIVE AREA PROTECTIONS PRIOR TO ANY LAND DISTURBING ACTIVITIES. THE ONLY LAND DISTURBANCE ALLOWABLE IS WHAT IS NECESSARY TO INSTALL THE PERIMETER E&S ITEMS.
- ESTABLISH CONSTRUCTION STAGING AREAS AND INSTALL E&S CONTROLS.
- ONCE PERIMETER E&S CONTROLS ARE INSTALLED, THEY SHALL BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE ANY OTHER LAND DISTURBING ACTIVITIES CAN BEGIN.
- INTERIOR EROSION AND SEDIMENT CONTROL ITEMS SHALL BE PLACED AS PER PLAN.
- COMPLETE PERMANENT STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS UPON REACHING FINAL GRADE.
- DO NOT REMOVE E&S DEVICES UNLESS DIRECTED BY THE ENGINEER.

GENERAL MOT NOTES

- PYLES FORD ROAD WILL BE CLOSED DURING CONSTRUCTION AT BRIDGE 1-110. SEE DETOUR PLANS.
- 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 AND THAT PERSON'S SOLE RESPONSIBILITY SHALL BE THE MANAGEMENT AND SUPERVISION OF THE PROJECT'S TEMPORARY TRAFFIC CONTROL ACTIVITIES. THIS PERSON SHALL NOT HAVE ANY OTHER ROLE ON THE PROJECT. RESPONSIBILITIES AND REQUIREMENTS OF THE ATSSA SUPERVISOR ARE DEFINED IN SECTION 812 OF THE STANDARD SPECIFICATIONS. PAYMENT FOR ATSSA SUPERVISOR IS INCIDENTAL TO ITEM 801000.

ADDENDA / REVISIONS

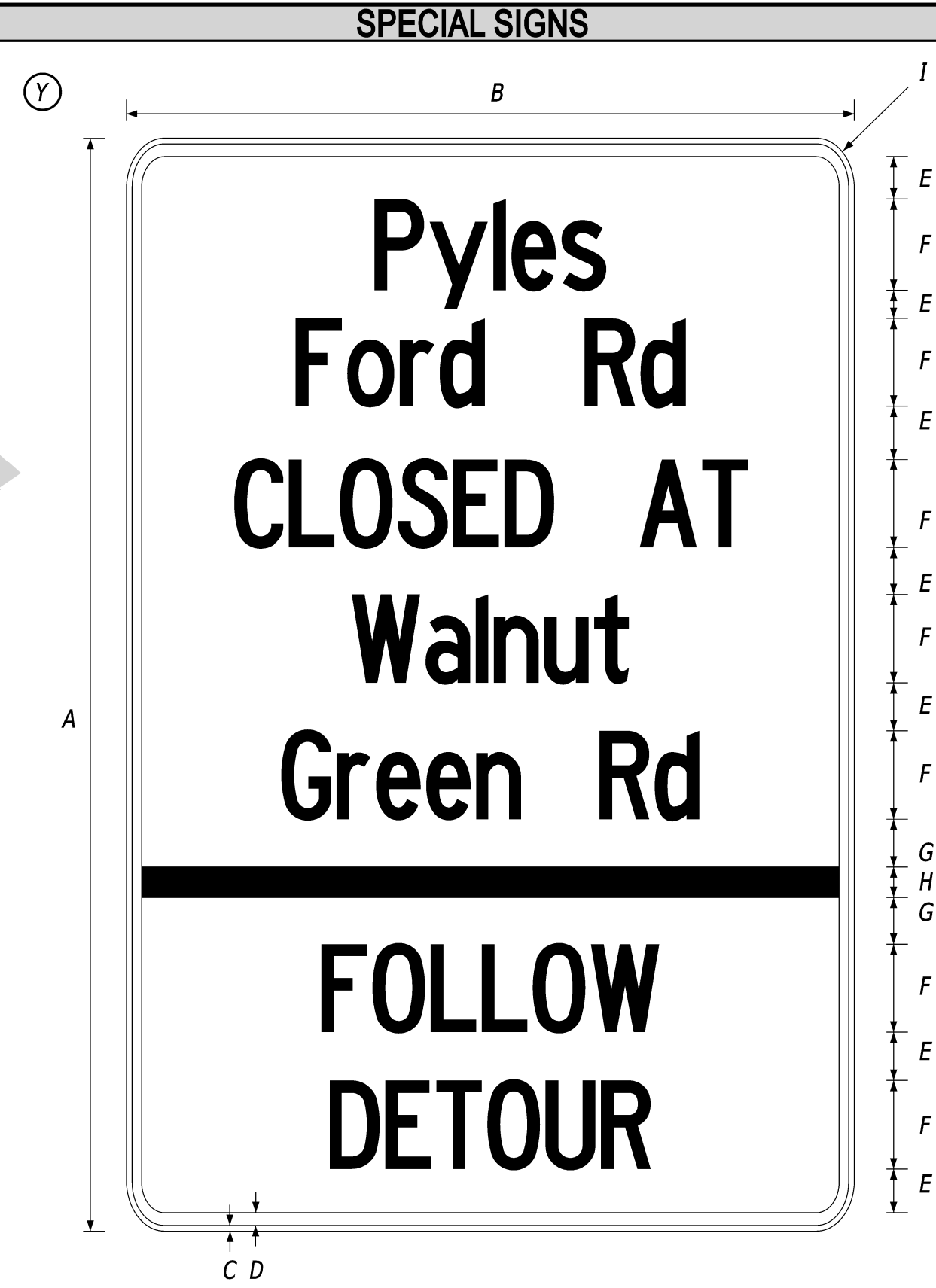


BR 1-110 ON N239
PYLES FORD ROAD,
NE OF MOUNT CUBA

CONTRACT	BRIDGE NO.	1-110
T200907101	DESIGNED BY:	G. LOVELACE III
COUNTY	CHECKED BY:	T. SWIFT
NEW CASTLE		

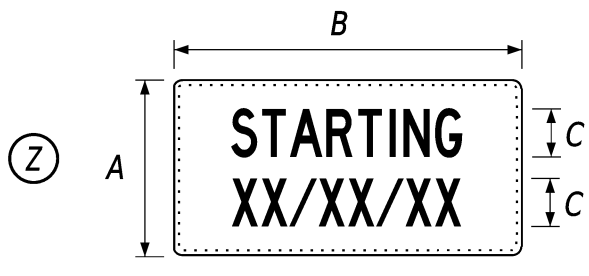
CONSTRUCTION PHASING,
M.O.T., AND EROSION
CONTROL PLAN

SECTION	GPI
	SHEET NO.
	14



SIGN SIZE	DIMENSIONS (INCHES)								
	A	B	C	D	E	F	G	H	I
STD	72"	48"	.625"	.325"	3"	6"	2.5"	2"	2.5"

COLORS - LEGEND, BORDER - BLACK
BACKGROUND - RETROREFLECTIVE PRISMATIC FLUORESCENT ORANGE



SIGN SIZE	DIMENSIONS		
	A	B	C
STD	21"	48"	6"

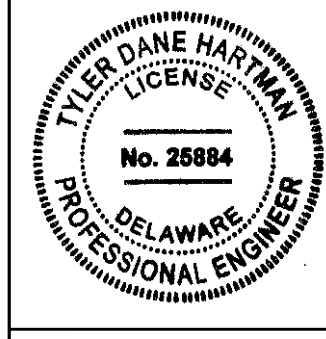
COLORS - LEGEND, BORDER - BLACK
BACKGROUND - RETROREFLECTIVE PRISMATIC FLUORESCENT ORANGE

SPECIAL NOTES

5. DISPLAY SPECIAL SIGN, ALONG WITH "STARTING XX/XX/XX" PLAQUE FOR 10 DAYS PRIOR TO IMPLEMENTATION OF DETOUR. "STARTING XX/XX/XX" PLAQUE TO COMPLETELY COVER "FOLLOW DETOUR" LEGEND ON SPECIAL SIGN. UPON IMPLEMENTATION OF DETOUR, REMOVE PLAQUE FROM THE SPECIAL SIGN AND RELOCATE TO A LOCATION OUTSIDE OF CLOSURE AREA.

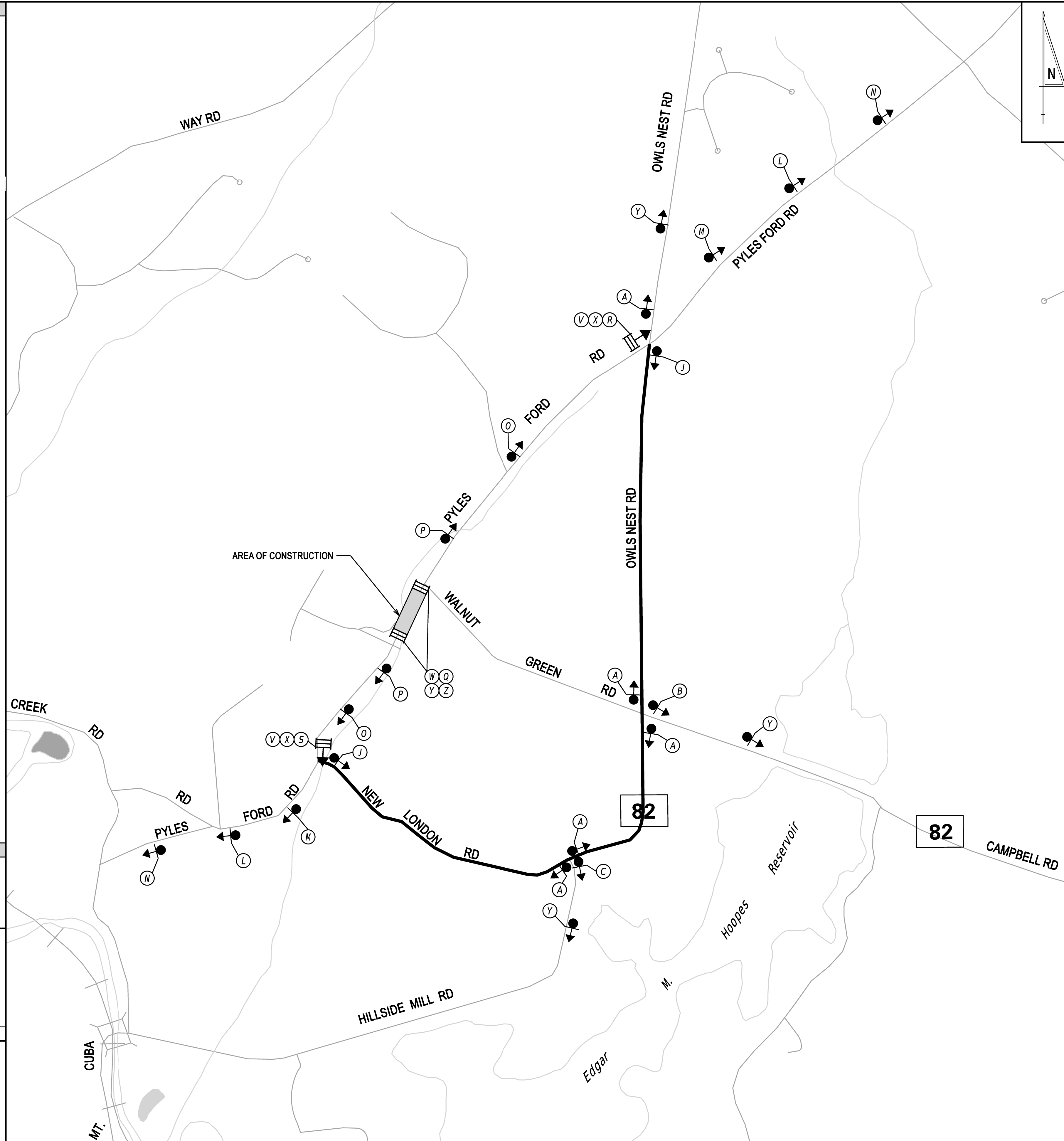
PREPARED BY
CENTURY ENGINEERING
A Kleinfelder Company

Engel Hartman
THIS SEAL APPLIES TO THIS DETOUR SHEET. DATE: 7/5/2023



[Signature]
QA/QC DATE: 07/05/2023

"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

(A) DETOUR M4-9-DE	(B) DETOUR M4-9	(C) DETOUR M4-9	(D) DETOUR M4-9	(E) DETOUR M4-9
(F) DETOUR M4-9	(G) DETOUR M4-9	(H) DETOUR M4-9	(I) DETOUR M4-9	(J) END DETOUR M4-8a
(K) DETOUR AHEAD W20-2	(L) DETOUR 1000 FT W20-2	(M) DETOUR 500 FT W20-2		
(N) ROAD CLOSED AHEAD W20-3	(O) ROAD CLOSED 1000 FT W20-3	(P) ROAD CLOSED 500 FT W20-3		
(Q) ROAD CLOSED R11-2	(R) DETOUR M4-10(L)	(S) DETOUR M4-10(R)		
(T) ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY R11-3a	(U) BRIDGE OUT XX MILES AHEAD LOCAL TRAFFIC ONLY R11-3b	(V) ROAD CLOSED TO THRU TRAFFIC R11-4		
(W) BARRICADE	(X) BARRICADE			

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 "O" 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.

CONCURRENCE FOR IMPLEMENTATION

[Signature] DATE: 7/17/23

LAST REVISED: 9/11/2018
4-JUL-2023
G:\Projects\125055.00_2009F_Bridge_Open_Enc\002A_Task_03_Br_1-110_Pyles\CAD\Drawings\DRPdp_Pyles Ford Rd.dgn



ADDENDA / REVISIONS

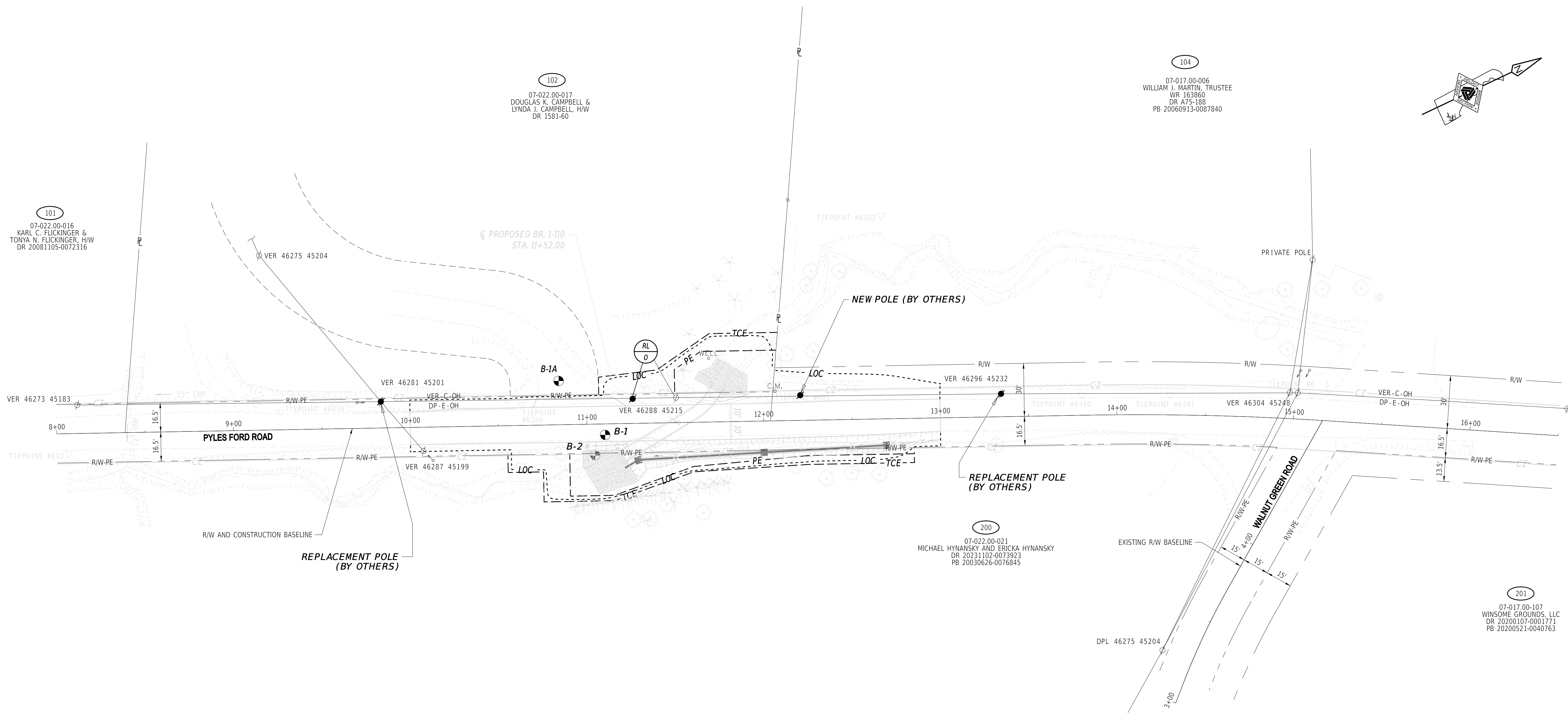
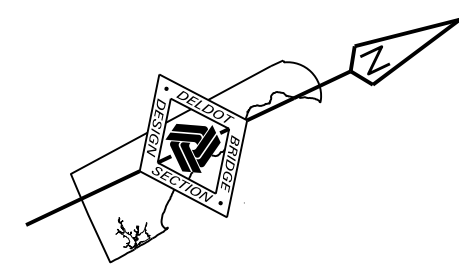
NOT TO SCALE

BRIDGES AND STRUCTURES
DESIGN SERVICES

CONTRACT	T200907101	ROAD NO.	N239
COUNTY	NEW CASTLE	DESIGNED BY:	D.SPENCE
		CHECKED BY:	T.HARTMAN

VEHICULAR DETOUR PLAN
PYLES FORD RD
@ BRIDGE 1-110

SECTION	CENTURY
SHEET NO.	15



101
07-022-00-016
KARL C. FLICKINGER &
TONYA N. FLICKINGER, H/W
DR 20081105-0072316

102
07-022-00-017
DOUGLAS K. CAMPBELL &
LYNDA J. CAMPBELL, H/W
DR 1581-60

104
07-017-00-006
WILLIAM J. MARTIN, TRUSTEE
WR 163860
DR A75-188
PB 20060913-0087840

200
07-022-00-021
MICHAEL HYNANSKY AND ERICKA HYNANSKY
DR 20231102-0073923
PB 20030626-0076845

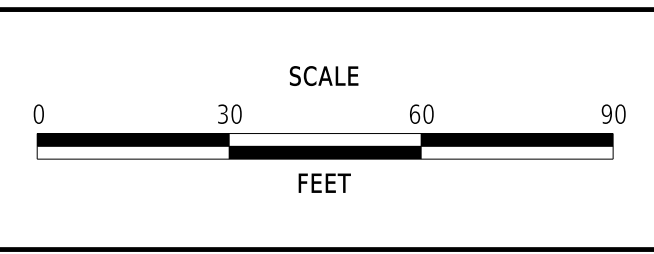
201
07-017-00-107
WINSOME GROUNDS, LLC
DR 20200107-0001771
PB 20200521-0040763

UTILITY NOTES

1. OUTSIDE OF THE PROJECT LIMITS, TWO POLES WILL BE REPLACED WITH TALLER POLES. WITHIN THE PROJECT LIMITS, ONE EXISTING POLE WILL BE REPLACED WITH A TALLER POLE AT AN ADJUSTED LOCATION AND ONE NEW POLE WILL BE ADDED. THE UTILITY LINES WILL BE RAISED BY 10' FROM THE EXISTING POSITION TO PROVIDE ADDITIONAL CLEARANCE OVER THE CULVERT. TRIM TREES AS NEEDED TO COMPLETE THIS WORK. ALL WORK TO BE COMPLETED BY OTHERS PRIOR TO CONSTRUCTION.
2. LINES ABOVE THE CULVERT WILL REMAIN IN PLACE AND ENERGIZED DURING CULVERT AND WINGWALL PLACEMENT. MAINTAIN PROPER CLEARANCE FROM ALL UTILITY LINES DURING INSTALLATION. SEE THE UTILITY STATEMENT FOR MORE INFORMATION.

6-DEC-2024 17:38 \\csM-delopdw21\CS_pof_work_ch\126761070_14\UT01_BRSE_T200907101_GPI.dgn

ADDENDA / REVISIONS	



**BR 1-110 ON N239
PYLES FORD ROAD,
NE OF MOUNT CUBA**

CONTRACT	BRIDGE NO.	1-110
T200907101	DESIGNED BY:	G. LOVELACE III
COUNTY	CHECKED BY:	T. SWIFT
NEW CASTLE		

UTILITY RELOCATION PLAN		SECTION
		GPI
		SHEET NO.
		16

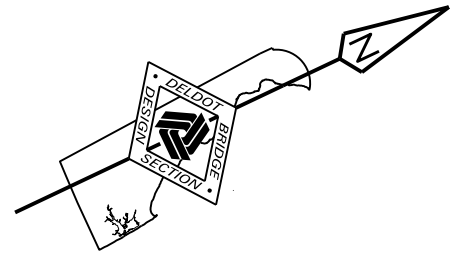
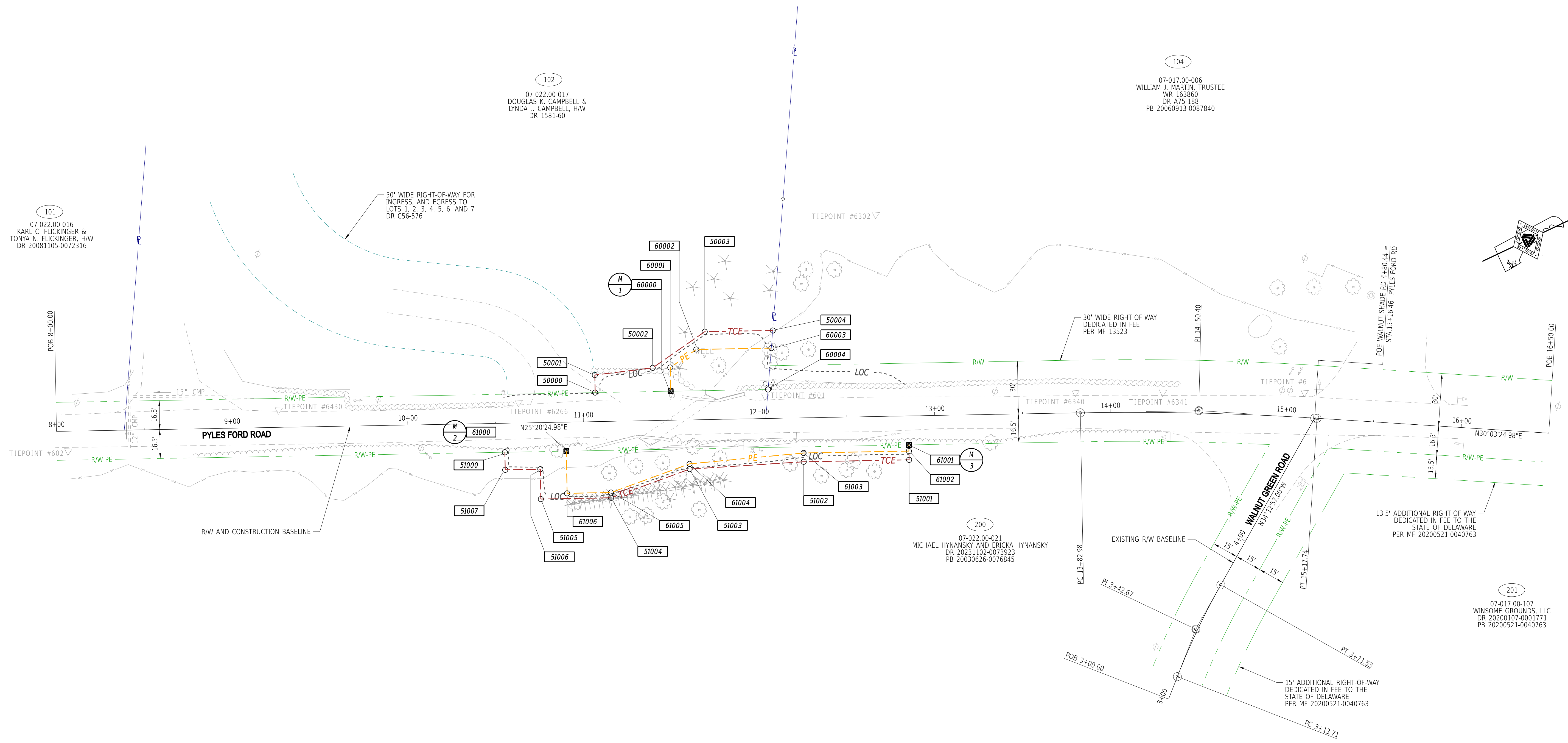
101
07-022.00-016
KARL C. FLICKINGER &
TONYA N. FLICKINGER, H/W
DR 20081105-0072316

102
07-022.00-017
DOUGLAS K. CAMPBELL &
LYNDA J. CAMPBELL, H/W
DR 1581-60

104
07-017.00-006
WILLIAM J. MARTIN, TRUSTEE
WR 163860
DR A75-188
PB 20060913-0087840

200
07-022.00-021
MICHAEL HYNANSKY AND ERICKA HYNANSKY
DR 20231102-0073923
PB 20030626-0076845

201
07-017.00-107
WINSOME GROUNDS, LLC
DR 20200107-0001771
PB 20200521-0040763



PREPARED BY

GPI Engineering | Design | Planning | Construction Management

Sybil Swick

08/02/2024 DATE

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

TYLER C. SWIFT
LICENSE
No. 27344
DELAWARE
PROFESSIONAL ENGINEER

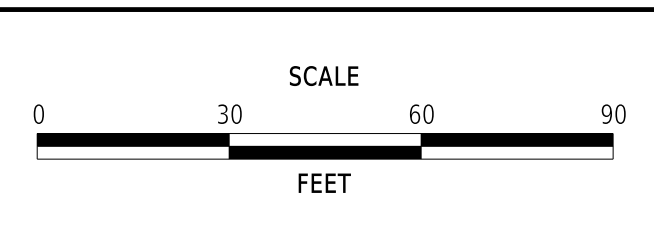
SEAL

RECOMMENDED AS TO PROCESS

Shehnaz Chaudhri 09/11/2024 DATE

GROUP ENGINEER, ROW ENGINEERING

NO.	REVISIONS



**BR. 1-110 ON N239
PYLES FORD ROAD
NE OF MOUNT CUBA**

CONTRACT	BRIDGE NO.	1-110
T200907101	DESIGNED BY:	G. LOVELACE III
COUNTY	CHECKED BY:	B. BENTON
NEW CASTLE		

RIGHT-OF-WAY PLAN

SECTION
GPI
SHEET NO.
17

1-AUG-2024 2:47 \\del-dot-pw-111\cs01\CS_pdf_work_dir\24242161070_15\RW01_BRSF_T200907101_GPI.dgn

ASSESSMENT NUMBER		OWNERSHIP OF RECORD						TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)	PAGE NUMBER
07-022.00-017		(102) DOUGLAS K. CAMPBELL & LYNDIA J. CAMPBELL, H/W						PE	1581-60	A - 3.920	15
PT. NO.	ALIGN. NO.	STATION	OFFSET*	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS**
60000	P_Bl_Pyles Ford Rd	11+50.00	-16.500	654005.7701	595748.9286	N 64°39'35" W	13.500				
60001	P_Bl_Pyles Ford Rd	11+50.00	-30.000	654011.5480	595736.7276	N 8°20'59" E	18.028				
60002	P_Bl_Pyles Ford Rd	11+65.00	-40.000	654029.3847	595734.1096	N 25°20'25" E	42.736				
60003	P_Bl_Pyles Ford Rd	12+07.74	-40.000	654068.0091	595752.4006	S 59°07'06" E	23.610				
60004	P_Bl_Pyles Ford Rd	12+05.46	-16.500	654055.8907	595772.6637	S 25°20'25" W	55.457				
60000	P_Bl_Pyles Ford Rd	11+50.00	-16.500	654005.7701	595748.9286						

FIGURE 60000 AREA = 1255.02 SQ. FT. (0.029 ACRES).

DEED RECORD OF ACQUISITION:

ASSESSMENT NUMBER		OWNERSHIP OF RECORD						TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)	PAGE NUMBER
07-022.00-017		(102) DOUGLAS K. CAMPBELL & LYNDIA J. CAMPBELL, H/W						TCE	1581-60	A - 3.920	15
PT. NO.	ALIGN. NO.	STATION	OFFSET*	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS**
50000	P_Bl_Pyles Ford Rd	11+07.00	-16.500	653966.9075	595730.5249	N 64°39'35" W	10.000				
50001	P_Bl_Pyles Ford Rd	11+07.00	-26.500	653971.1874	595721.4871	N 19°17'10" E	33.185				
50002	P_Bl_Pyles Ford Rd	11+40.00	-30.000	654002.5102	595732.4476	N 8°20'59" W	36.056				
50003	P_Bl_Pyles Ford Rd	11+70.00	-50.000	654038.1835	595727.2118	N 25°20'25" E	38.707				
50004	P_Bl_Pyles Ford Rd	12+08.71	-50.000	654073.1659	595743.7780	S 59°07'06" E	10.047				
60003	P_Bl_Pyles Ford Rd	12+07.74	-40.000	654068.0091	595752.4006	S 25°20'25" W	42.736				
60002	P_Bl_Pyles Ford Rd	11+65.00	-40.000	654029.3847	595734.1096	S 8°20'59" E	18.028				
60001	P_Bl_Pyles Ford Rd	11+50.00	-30.000	654011.5480	595736.7276	S 64°39'35" E	13.500				
60000	P_Bl_Pyles Ford Rd	11+50.00	-16.500	654005.7701	595748.9286	S 25°20'25" W	43.000				
50000	P_Bl_Pyles Ford Rd	11+07.00	-16.500	653966.9075	595730.5249						

FIGURE 50000 AREA = 1079.97 SQ. FT. (0.025 ACRES).

DEED RECORD OF ACQUISITION:

ASSESSMENT NUMBER		OWNERSHIP OF RECORD						TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)	PAGE NUMBER
07-022.00-021		(200) MICHAEL HYNANSKY AND ERICKA HYNANSKY						PE	20231102-0073923	D - 61.310	15
PT. NO.	ALIGN. NO.	STATION	OFFSET*	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS**
61000	P_Bl_Pyles Ford Rd	10+90.00	16.500	653937.4194	595753.0738	N 25°20'25" E	195.000				
61001	P_Bl_Pyles Ford Rd	12+85.00	16.500	654113.6569	595836.5325	S 64°39'35" E	3.500				
61002	P_Bl_Pyles Ford Rd	12+85.00	20.000	654112.1589	595839.8958	S 25°20'25" W	60.000				
61003	P_Bl_Pyles Ford Rd	12+25.00	20.000	654057.9320	595814.0162	S 20°56'30" W	65.192				
61004	P_Bl_Pyles Ford Rd	11+60.00	25.000	653997.0462	595790.7155	S 6°20'03" W	47.595				
61005	P_Bl_Pyles Ford Rd	11+15.00	40.500	653948.7421	595785.4644	S 25°20'25" E	25.000				
61006	P_Bl_Pyles Ford Rd	10+90.00	40.500	653927.1476	595774.7646	N 64°39'35" W	24.000				
61000	P_Bl_Pyles Ford Rd	10+90.00	16.500	653937.4194	595753.0738						

FIGURE 61000 AREA = 1931.25 SQ. FT. (0.044 ACRES).

DEED RECORD OF ACQUISITION:

ASSESSMENT NUMBER		OWNERSHIP OF RECORD						TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)	PAGE NUMBER
07-022.00-021		(200) MICHAEL HYNANSKY AND ERICKA HYNANSKY						TCE	20231102-0073923	D - 61.310	15
PT. NO.	ALIGN. NO.	STATION	OFFSET*	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS**
51000	P_Bl_Pyles Ford Rd	10+55.00	16.500	653905.7870	595738.0941	N 25°20'25" E	35.000				
61000	P_Bl_Pyles Ford Rd	10+90.00	16.500	653937.4194	595753.0738	S 64°39'35" E	24.000				
61006	P_Bl_Pyles Ford Rd	10+90.00	40.500	653927.1476	595774.7646	N 25°20'25" E	25.000				
61005	P_Bl_Pyles Ford Rd	11+15.00	40.500	653948.7421	595785.4644	N 6°20'03" E	47.595				
61004	P_Bl_Pyles Ford Rd	11+60.00	25.000	653997.0462	595790.7155	N 20°56'30" E	65.192				
61003	P_Bl_Pyles Ford Rd	12+25.00	20.000	654057.9320	595814.0162	N 25°20'25" E	60.000				
61002	P_Bl_Pyles Ford Rd	12+85.00	20.000	654112.1589	595839.8958	S 64°39'35" E	5.000				
51001	P_Bl_Pyles Ford Rd	12+85.00	25.000	654110.0189	595844.2147	S 25°20'25" W	60.000				
51002	P_Bl_Pyles Ford Rd	12+25.00	25.000	654055.7920	595818.5351	S 22°41'52" W	65.069				
51003	P_Bl_Pyles Ford Rd	11+60.00	28.000	653995.7622	595793.4269	S 6°20'03" W	47.595				
51004	P_Bl_Pyles Ford Rd	11+15.00	43.500	653948.4581	595788.1758	S 25°20'25" W	40.000				
51005	P_Bl_Pyles Ford Rd	10+75.00	43.500	653912.3069	595771.0561	N 64°39'35" W	17.000				
51006	P_Bl_Pyles Ford Rd	10+75.00	26.500	653919.5827	595755.8918	S 25°20'25" W	20.000				
51007	P_Bl_Pyles Ford Rd	10+55.00	26.500	653901.5071	595747.1319	N 64°39'35" W	10.000				
51000	P_Bl_Pyles Ford Rd	10+55.00	16.500	653905.7870	595738.0941						

FIGURE 51000 AREA = 1374.99 SQ. FT. (0.032 ACRES).

DEED RECORD OF ACQUISITION:

LEGEND	
RW	AREA OF ACQUISITION
PE	PERMANENT EASEMENT
TCE	TEMPORARY CONSTRUCTION EASEMENT
RW/PE	RIGHT-OF-WAY BY PE
*	OFFSET IS LEFT OF BASELINE
**	CURVE TURNS TO THE LEFT

REVISIONS

NOT TO SCALE

BR. 1-110 ON N239
PYLES FORD ROAD
NE OF MOUNT CUBA

CONTRACT	BRIDGE NO.	1-110
T200907101	DESIGNED BY:	M. MCCLINTOCK
COUNTY	CHECKED BY:	B. BENTON
NEW CASTLE		

RIGHT-OF-WAY DATA SHEET	SECTION
	GPI
	SHEET NO.
	18