



## EXISTING SYMBOLS

DRAINAGE	
	DITCH OR STREAM CENTERLINE
	DIRECTIONAL STREAM FLOW ARROW
	DRAINAGE INLET
	DRAINAGE JUNCTION BOX
	DRAINAGE MANHOLE
	DRAINAGE PIPE AND FLOW ARROW
	DRAINAGE PIPE HEADWALL
	RIPRAP - AREA FEATURE
	RIPRAP - LINEAR FEATURE

MANMADE ROADSIDE FEATURES	
	BOLLARD - STEEL POLE
	BOLLARD - WOOD POST
	CURB
	CURB AND GUTTER
	FENCE - CHAINLINK OR STRANDED
	FENCE - STOCKADE OR SPLIT RAIL
	FLAG POLE
	GUARDRAIL - STEEL BEAM
	GUARDRAIL - WIRE ROPE
	LAMP AND POST - RESIDENTIAL
	MAILBOX
	PARKING METER AND POST
	PAVEMENT - FLEXIBLE
	PAVEMENT - RIGID
	PILE - BRIDGE
	PILLAR OR MISCELLANEOUS POST
	TRAFFIC SIGN AND POST
	WALL - BRICK OR BLOCK
	WALL - STONE

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

RIGHT-OF-WAY SYMBOLS	
	PROPERTY MARKER - CONCRETE MON.
	PROPERTY MARKER - IRON PIPE
	HISTORIC RIGHT-OF-WAY BASELINE
	EXISTING RIGHT-OF-WAY
	EXISTING PROPERTY LINE
	EXISTING EASEMENT
	EXISTING DENIAL OF ACCESS
	EXISTING R/W & DENIAL OF ACCESS

SURVEY CONTROL & MONUMENTATION	
	SURVEY BENCHMARK LOCATION
	SURVEY TIE POINT LOCATION
	SURVEY TRAVERSE POINT
	POINT OF CURVATURE OR TANGENCY
	POINT OF INTERSECTING TANGENTS

UTILITY	
	SOIL BORING LOCATION
	UTILITY TEST HOLE LOCATION
	CABLE TV DISTRIBUTION BOX
	ELECTRIC MANHOLE
	ELECTRIC METER
	ELECTRIC TRANSFORMER
	POLE MOUNTED LUMINAIRE
	GAS MANHOLE
	GAS METER
	GAS VALVE
	GAS PUMP - SERVICE STATION
	RAILROAD TRACKS
	SANITARY SEWER MANHOLE
	SANITARY SEWER VALVE
	SANITARY SEWER VENT OR CLEANOUT
	SEPTIC DRAIN FIELD
	TELEPHONE BOOTH
	TELEPHONE MANHOLE
	TELEPHONE TEST POINT
	TRAFFIC - CONDUIT JUNCTION WELL
	TRAFFIC - LIGHT POLE AND BASE
	TRAFFIC - PEDESTRIAN POLE & BASE
	TRAFFIC - SIGNAL CABINET & BASE
	TRAFFIC - SIGNAL POLE AND BASE
	UTILITY BOX
	UTILITY POLE GUY WIRE ANCHOR
	UTILITY POLE
	WATER - FIRE HYDRANT
	WATER METER
	WATER VALVE
	WELL HEAD
	MANHOLE - UNDETERMINED OWNER

UTILITY COMPANY FACILITIES	
	DELAWARE ELECTRIC COOPERATIVE
	VERIZON
	DELMARVA POWER - ELECTRIC
	TIDEWATER UTILITIES - WATER

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

RIGHT-OF-WAY SYMBOLS	
	PROPOSED RIGHT-OF-WAY MONUMENT
	PROPOSED DENIAL OF ACCESS
	PROPOSED PERMANENT EASEMENT
	PROPOSED RIGHT-OF-WAY
	PROPOSED R/W & DENIAL OF ACCESS
	TEMPORARY CONSTRUCTION EASEMENT
	PROPOSED RIGHT-OF-WAY BASELINE

## PROPOSED SYMBOLS

IDENTIFIERS	
	ADJUST BY CONTRACTOR
	ADJUST BY OTHERS
	CONCRETE SAFETY BARRIER
	CURB OR CURB & GUTTER
	CONVERT TO JUNCTION BOX
	CONVERT TO DRAINAGE MANHOLE
	CURB OPENING
	CURB RAMP / TYPE
	CURB RAMP / TYPE - WITHOUT SIDEWALK SURFACE DETECTABLE WARNING SYSTEM
	CONSTRUCTION SAFETY FENCE
	DRAINAGE INLET
	DO NOT DISTURB
	ENERGY DISSIPATOR
	FENCE
	FLARED END SECTION
	FILL WITH FLOWABLE FILL
	FILTRATION STRUCTURE
	GUARDRAIL
	JUNCTION BOX
	LAWN INLET
	MANHOLE
	MONUMENT - RIGHT-OF-WAY
	PIPE
	RELOCATE BY CONTRACTOR
	RELOCATE BY OTHERS
	REMOVE BY CONTRACTOR
	REMOVE BY OTHERS
	UNDERDRAIN / LENGTH
	UNDERDRAIN OUTLET PIPE

LANDSCAPING	
	LANDSCAPE PLANTINGS
	SHRUBBERY
	CONIFEROUS TREE
	DECIDUOUS TREE

TRAFFIC	
	ITMS CONDUIT
	SIGNAL CONDUIT
	CONDUIT JUNCTION WELL
	LUMINAIRE
	PAVEMENT MARKINGS
	PAVEMENT STRIPING
	TRAFFIC SIGN

PAVEMENT SECTION(S)	
	N/A
	2" WMA, SUPERPAVE TYPE C, PG 70-22, 160 GYR.
	3" WMA, SUPERPAVE TYPE B, PG 70-22, 160 GYR.
	3" BCBC, PG 64-22, 160 GYR.
	8" GABC
	2" WMA, SUPERPAVE TYPE C, PG 70-22, 160 GYR.
	8" GABC

EROSION & SEDIMENT CONTROL	
	DEWATERING BAG
	DEWATERING BASIN
	EARTH DIKE
	INLET SEDIMENT CONTROL
	PERIMETER DIKE/SWALE
	PORTABLE SEDIMENT TANK
	SANDBAG DIKE
	SANDBAG DIVERSION
	STONE CHECK DAM
	STABILIZED CONSTRUCTION ENTRANCE
	SILT FENCE / LENGTH
	SILT FENCE
	SILT FENCE - REINFORCED
	SUMP PIT, TYPE 1
	SUMP PIT, TYPE 2
	SEDIMENT TRAP
	SEDIMENT TRAP
	SEDIMENT TRAP WITH INLET AS OUTLET
	SEDIMENT TRAP PIPE OUTLET
	STILLING WELL
	TEMPORARY SWALE
	TEMPORARY SLOPE DRAIN
	TURBIDITY CURTAIN / LENGTH
	TURBIDITY CURTAIN

UTILITY COMPANY FACILITIES	
	TIDEWATER UTILITIES - WATER

LAST REVISED: 01/30/2012

# GENERAL NOTES

- THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2001 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2001, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.
- THE CONTRACTOR SHALL GIVE TWO (2) WEEKS NOTICE TO THE PROPERTY OWNER WHEN ANY FIXTURE, SHRUB OR OTHER OBJECT MUST BE REMOVED FROM THE RIGHT OF WAY OR EASEMENT AREA. IF THE OWNER HAS NOT ATTEMPTED TO SALVAGE THIS PROPERTY, THE CONTRACTOR SHALL REMOVE IT WITHOUT OBLIGATION. COMPENSATION SHALL BE INCIDENTAL TO THE CONTRACT.
- THE ENDS OF ALL CURBS SHALL BE DEPRESSED FLUSH WITH THE PAVEMENT AT A RATIO OF TWELVE TO ONE (12:1) UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL PVC SLEEVES (4" INSIDE MINIMUM DIAMETER, 6" INSIDE MAXIMUM DIAMETER) IN PROPOSED CONCRETE SIDEWALKS, ISLANDS, AND MEDIANS FOR FUTURE TRAFFIC SIGN POSTS AS DIRECTED BY THE ENGINEER. THE LOWER END OF THE SLEEVE SHALL SIT ON THE TOP OF THE SUBBASE MATERIAL. THE COST SHALL BE INCIDENTAL TO THE CONTRACT.
- STAGING AREAS - PROPER EROSION AND SEDIMENT CONTROL MEASURES AS DETERMINED BY THE ENGINEER SHALL BE INSTALLED IN ALL STAGING AREAS. ALL AREAS USED BY THE CONTRACTOR FOR STAGING OPERATIONS SHALL BE FULLY RESTORED BY THE CONTRACTOR UPON COMPLETION OF THE CONTRACT. IF THE STAGING AREA IS PAVED, IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF THE AREA IS UNPAVED, IT SHALL BE RE-GRADED, TOPSOILED, SEEDED AND MULCHED IN ACCORDANCE WITH DELAWARE STANDARD SPECIFICATIONS 732, 734 AND 735, FOR TOPSOIL, SEED AND MULCH RESPECTIVELY, TO THE SATISFACTION OF THE ENGINEER. THE SEED SHALL ADHERE TO THE SPECIFICATIONS OF SECTION 734 FOR PERMANENT GRASS SEEDING - DRY GROUND. ALL COSTS ASSOCIATED WITH RESTORATION OF THE STAGING AREA SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE ENGINEER DETERMINES THAT A SATISFACTORY STAND OF GRASS DOES NOT EXIST AT THE TIME OF FINAL INSPECTION, ALL COSTS ASSOCIATED WITH REESTABLISHING A SATISFACTORY STAND OF GRASS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- SITE REVIEWER - AN EROSION CONTROL SITE REVIEWER SHALL BE A PERSON FROM THE CONTRACTOR'S STAFF ASSIGNED TO EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MAINTENANCE AND SHALL BE REQUIRED ON SPECIFIC PROJECTS. THE NAME AND DNREC CERTIFICATION NUMBER OF EACH SITE REVIEWER SO REQUIRED SHALL BE SUBMITTED TO THE DEPARTMENT. THE NAME OF THE DELAWARE REGISTERED PROFESSIONAL ENGINEER PROVIDING DIRECTION AND SUPERVISION OF THE SITE REVIEWER, AS REQUIRED IN SECTION 12.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, SHALL ALSO BE SUBMITTED TO THE DEPARTMENT. THE SITE REVIEWER REQUIREMENTS IN EFFECT ON THIS PROJECT SHALL BE MARKED WITH AN "X" BELOW:

EROSION POTENTIAL FOR THIS PROJECT	SITE REVIEWER REQUIREMENT
( ) INSIGNIFICANT	NONE
( ) MINOR	CONTRACTOR CERTIFICATION COURSE TRAINING ONLY, AS DEFINED IN SECTION 13 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
(X) MEDIUM	AT THE TIME OF BID OF THE CONTRACT, EITHER THE SUPERINTENDENT OR A SEPARATE INDIVIDUAL FROM THE CONTRACTOR'S STAFF SHALL BE A CERTIFIED CONSTRUCTION REVIEWER (CCR), AS DEFINED IN SECTION 12 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
( ) MAJOR	SUPERINTENDENT AND AN INDIVIDUAL FROM CONTRACTOR'S STAFF SHALL BE CCR. ONE INDIVIDUAL FROM THE CONTRACTOR'S STAFF MUST BE A CCR AT THE TIME OF BID OF THE CONTRACT. THE SUPERINTENDENT MUST BECOME A CCR WITHIN ONE YEAR AFTER THE AWARD OF CONTRACT.

- ELECTRONIC PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE CONTRACTOR INCLUDE:

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

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

- 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 743000.
( )	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE ATSSA SUPERVISOR'S SOLE JOB SHALL BE SUPERVISION OF THE INSTALLATION, OPERATION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES FOR THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT SHALL NOT BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR SHALL BE PAID FOR UNDER ITEM 743031.

- THE DISTURBED AREA FOR THIS PROJECT IS 0.95 ACRES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO THE CONSTRUCTION SITE POLLUTION PREVENTION SPECIFICATIONS AS DETAILED IN SECTION 3.6 OF THE "DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK". ALL COSTS ASSOCIATED WITH ADHERING TO THE STANDARDS SHALL BE INCIDENTAL TO THE OVERALL CONTRACT COSTS.
- THE EROSION AND SEDIMENT CONTROL PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE EROSION AND SEDIMENT CONTROL PLANS ARE VALID FOR A THREE YEAR PERIOD, BEGINNING ON THE DATE THE STORMWATER ENGINEER SIGNED THE CONSTRUCTION TITLE SHEET. IF THE FINAL ACCEPTANCE OF THE PROJECT IS ANTICIPATED TO EXTEND BEYOND THE THREE YEARS, THE CONTRACTOR SHALL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE EROSION AND SEDIMENT CONTROL PLAN APPROVAL. DELDOT WILL REVIEW THE CURRENT EROSION AND SEDIMENT CONTROL PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFICATIONS.

# 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.

## SECTION 200

- 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 CURBED SECTIONS, THE FACE OF THE MAILBOX SHALL BE FLUSH WITH THE BACK EDGE OF CURB. 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 SET 46 INCHES ABOVE THE ROADWAY SURFACE. MAILBOXES LOCATED AT DRIVEWAY ENTRANCES SHALL BE PLACED ON THE FAR SIDE OF THE DRIVEWAY IN THE DIRECTION OF TRAVEL. POSTS BEING RESET IN CONCRETE SIDEWALK SHALL BE PLACED IN AN APPROPRIATE SIZE PVC SLEEVE. COST FOR ALL WORK AND MATERIALS SHALL BE PAID UNDER ITEM 201000 - CLEARING AND GRUBBING.
- THE CONTRACTOR SHALL NOT REMOVE ANY TREES WHICH ARE NOT DESIGNATED FOR THE REMOVAL BY THE PLAN, REGARDLESS OF SIZE, WITHOUT FIRST GAINING APPROVAL OF THE ENGINEER. PAYMENT FOR REMOVAL OF TREES SHALL BE UNDER ITEM \*201000 - CLEARING AND GRUBBING.
- ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
  - EXISTING METAL PIPES.
  - EXISTING SACKED CONCRETE RIPRAP.
  - EXISTING GUARDRAIL.

## SECTION 300

- THE CONTRACTOR MAY ELECT TO USE ANY OF THE FOLLOWING MATERIALS TO MEET THE REQUIREMENTS OF ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B':
  - CRUSHED STONE (PER STANDARD SPECIFICATION 821)
  - CRUSHED CONCRETE (PER STANDARD SPECIFICATION 821)
  - HOT-MIX MILLINGS (PER SPECIAL PROVISION 302514 MILLED HOT-MIX BASE COURSE)

THE CONTRACTOR WILL NOT BE ALLOWED TO MIX DIFFERENT MATERIALS (OR SIMILAR MATERIALS FROM DIFFERENT SOURCES) TO MEET THE REQUIREMENTS OF ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

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

- THE QUANTITY USED FOR BASE OF EACH OF THE ABOVE LISTED MATERIALS WILL BE THE CONTRACTOR'S CHOICE, WITH THE TOTAL BEING EQUAL TO THE ACTUAL QUANTITY USED UNDER ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

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

- HOT-MIX MILLINGS MAY BE GENERATED FROM THE FOLLOWING SOURCES:
  - MATERIAL MILLED ON THIS CONTRACT AT THE CONTRACTOR'S CHOICE UNDER ITEM 202000.
  - MILLED MATERIAL FURNISHED ON THE JOB FROM THE CONTRACTOR'S YARD OR OTHER OUTSIDE SOURCE. ALL MILLED MATERIALS SHALL MEET THE MATERIAL REQUIREMENTS OF ITEM 302514 - MILLED HOT-MIX BASE COURSE.

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

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

- MILLINGS USED FOR BASE COURSE SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIAL PROVISION 302514 - MILLED HOT-MIX BASE COURSE. NO SEPARATE PAYMENT WILL BE MADE TO FURNISH MILLINGS FROM AN OUTSIDE SOURCE OR TRANSPORT MILLINGS WITHIN THE PROJECT LIMITS. MILLINGS USED FOR BASE COURSE WILL BE PAID FOR AT THE UNIT BID PRICE FOR ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

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

- SPECIAL PROVISION 302514 - MILLED HOT-MIX BASE COURSE IS PROVIDED TO SPECIFY THE MEANS OF LAY DOWN AND COMPACTION AS WELL AS THE MATERIAL REQUIREMENTS FOR MILLINGS USED AS BASE COURSE. ALL COSTS TO BRING THE MILLINGS INTO COMPLIANCE WITH THE REQUIREMENTS OF ITEM - 302514 MILLED HOT-MIX BASE COURSE ARE INCIDENTAL TO ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'. NO PAYMENT WILL BE MADE FOR ITEM 302514 - MILLED HOT-MIX BASE COURSE. THE QUANTITY OF MILLINGS USED FOR BASE COURSE WILL BE PAID FOR UNDER ITEM 302007 - GRADED AGGREGATE BASE COURSE.

## SECTION 600

- ALL CONCRETE PROPERTIES SHALL BE IN ACCORDANCE WITH SECTION 812 OF THE STANDARD SPECIFICATIONS. CLASS A - ABUTMENT, PARAPET & WINGWALL CAPS (f 'c = 4,500 PSI). CLASS D - CONCRETE DECK (f 'c = 4,500 PSI) ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4" UNLESS NOTED OTHERWISE.
- REINFORCING STEEL  
ALL REINFORCING STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60 AND UNLESS SPECIFIED OTHERWISE ON THE PLANS SHALL BE PROTECTED WITH FUSION BONDED EPOXY, CONFORMING TO AASHTO M284 (ASTM D3963) AND DENOTED WITH A PREFIX 'E' IN THE BAR MARKS. ALL REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2" UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- ALL EXPOSED CONCRETE SURFACES OF THE WINGWALLS, ABUTMENT, FASCIA BEAMS (STREAM FACE), AND PARAPET SHALL BE COATED WITH A WATER BASED ACRYLIC CONCRETE SEALER. THE COLOR SHALL BE FEDERAL \*37925 (WHITE) OF FED-STD-595C. PAYMENT SHALL BE UNDER ITEM \*602518 - WATER BASED CONCRETE SEALER.

## SECTION 700

- STATION AND ELEVATION DATA GIVEN FOR DRAINAGE STRUCTURES ARE TO APPLIED TO THE CENTER OF THE GRATE FOR INLETS, AND TO THE CENTER OF THE STRUCTURE FOR JUNCTION BOXES AND MANHOLES.
- 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. ALL HOT MIX SAWCUTTING SHALL BE FULL DEPTH.
- ALL GEOTEXTILES SHALL BE KEYED UNDER ADJACENT SOIL OR RIPRAP A MINIMUM OF 6 IN. IN LENGTH TO PREVENT FREE EDGES.
- MAINTENANCE OF TRAFFIC SHALL BE AS PER DETOUR. THE DETOUR SHALL REMAIN IN EFFECT UNTIL THE FINAL HOT-MIX IS PLACED. PAYMENT SHALL BE UNDER ITEM \*763643 - MAINTENANCE OF TRAFFIC- ALL INCLUSIVE.
- PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED 10 DAYS PRIOR TO DETOUR. THE MESSAGE SHALL BE AS SHOWN ON THE DETOUR PLAN. PAYMENT SHALL BE UNDER ITEM 743004 - FURNISH AND MAINTAIN MESSAGE BOARD.
- CENTERLINE OF ROAD AND EDGE OF LANES SHALL BE STRIPED TO MATCH EXISTING STRIPING ON THE ROAD. STRIPING SHALL EXTEND THE LENGTH OF THE PROJECT LIMITS. PAYMENT UNDER ITEM \*748548.

## MISCELLANEOUS BRIDGE NOTES

- THE DESIGN CRITERIA IS THE 2010 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 5TH EDITION 2010, USING AASHTO HL-93 FOR LIVE LOAD, 25 psf FOR FUTURE WEARING SURFACE.
- HYDRAULIC DATA  
DRAINAGE AREA = 4.35 sq. miles      50 yr. FLOOD ELEVATION = 35.48 ft  
DESIGN FREQUENCY = 50 years      PROPOSED OPENING = 208 sf.
- SCOUR ANALYSIS  
THE PROPOSED STRUCTURE HAS BEEN ANALYZED FOR THE EFFECTS OF SCOUR IN ACCORDANCE WITH HEC 18 - 'EVALUATING SCOUR AT BRIDGES' AND HEC 23 - 'BRIDGE SCOUR AND STREAM INSTABILITY COUNTERMEASURES.' SCOUR COUNTERMEASURES HAVE BEEN DESIGNED FOR THE WORST CASE OF THE OVERTOPPING FLOOD OR THE 500-yr FLOOD EVENT.  
DESIGN EVENT = 500-yr      DESIGN HEADWATER ELEVATION = 38.00 ft.  
DESIGN DISCHARGE = 1899 cfs      DESIGN VELOCITY = 9.13 ft/s
- CROSS SECTIONS USED IN THE PREPARATION OF THIS CONTRACT WILL BE MADE AVAILABLE TO THE SUCCESSFUL BIDDER.
- ENVIRONMENTAL COMPLIANCE  
SEE ENVIRONMENTAL COMPLIANCE PLAN FOR FURTHER RESTRICTIONS/GUIDANCE ASSOCIATED WITH THIS PROJECT.



**DELAWARE**  
**DEPARTMENT OF TRANSPORTATION**

ADDENDUMS / REVISIONS

NOT TO SCALE

**BR 2-033B ON SR15, CANTERBURY  
ROAD OVER HUDSON BRANCH**

CONTRACT  
T201107202  
COUNTY  
KENT

BRIDGE NO.      **2-033B**  
DESIGNED BY: TRS  
CHECKED BY: EM

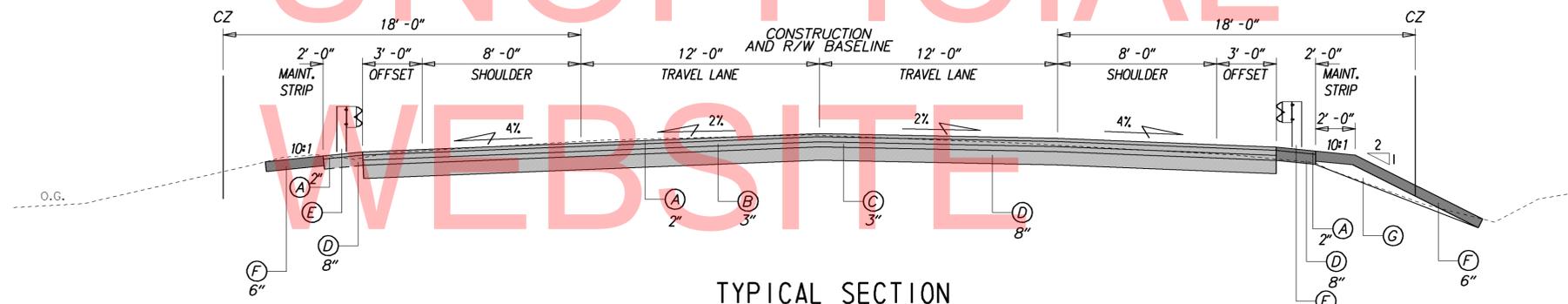
**PROJECT NOTES**

SHEET NO.  
3  
TOTAL SHTS.  
23

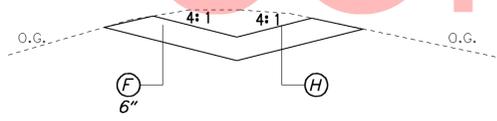
UNOFFICIAL

WEBSITE

COPY

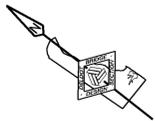


TYPICAL SECTION  
1/4" = 1'-0"



TYPICAL DITCH SECTION  
1/2" = 1'-0"

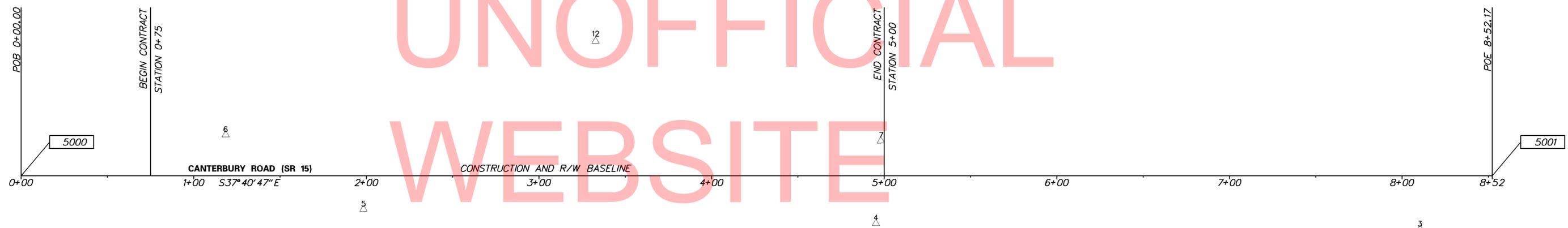
LEGEND	
(A)	ITEM 401804 - WMA, SUPERPAVE TYPE C, PG 70-22, 160 GYRATIONS
(B)	ITEM 401813 - WMA, SUPERPAVE TYPE B, PG 70-22, 160 GYRATIONS
(C)	ITEM 401819 - WMA, SUPERPAVE, BCBC, PG 64-22, 160 GYRATIONS
(D)	ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
(E)	ITEM 720585 - GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1-31 ITEM 720586 - GUARDRAIL END TREATMENT ATTENUATOR, TYPE 2-31 ITEM 725003 - GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 2-31
(F)	ITEM 732004 - TOPSOIL ITEM 734013 - PERM. GRASS SEEDING, DRY GROUND
(G)	ITEM 209006 - BORROW, TYPE F
(H)	ITEM 735535 - SOIL RETENTION BLANKET MULCH, TYPE 5



**DATUM REFERENCE:**

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

VERTICAL - THIS PROJECT IS REFERENCED TO NAVD 88 AND BASED ON THE FOLLOWING STATE OF DELAWARE BENCHMARKS ESTABLISHED BY THE DELAWARE DEPARTMENT OF TRANSPORTATION:  
 GPS \*CTB1/2, ELEVATION 47.7788  
 GPS \*CTBA/2, ELEVATION 50.5675



UNOFFICIAL  
WEBSITE  
COPY

CONSTRUCTION ALIGNMENT CONTROL				
POINT	STATION	OFFSET	NORTHING	EASTING
5000	0+00.00	0.00	378502.5656	617258.7691
5001	8+52.17	0.00	377828.1256	617779.6541

HORIZONTAL / VERTICAL CONTROL DATA					
POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
TP3	8+10.30	31.30	377928.6962	617889.3597	46.34
TP4	4+95.21	27.55	378231.7172	617802.3389	39.30
TP5	1+98.35	19.28	378518.5420	617725.3330	37.80
TP6	1+18.39	-23.44	378607.3526	617743.7497	38.58
TP7	4+98.14	-19.76	378242.7188	617848.9213	39.58
TP11	3+11.33	-142.80	378949.4535	617562.0863	33.62
TP12	3+32.94	-77.84	378286.6436	617523.8889	33.91

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
DI-1	4+88	20.50 R	34" x 24"	A	37.11	35.11
DI-2	3+94	28.00 L	34" x 24"	A	37.50	35.25

CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
1	INTEGRAL P.C.C. CURB & GUTTER, TYPE 2	160.00

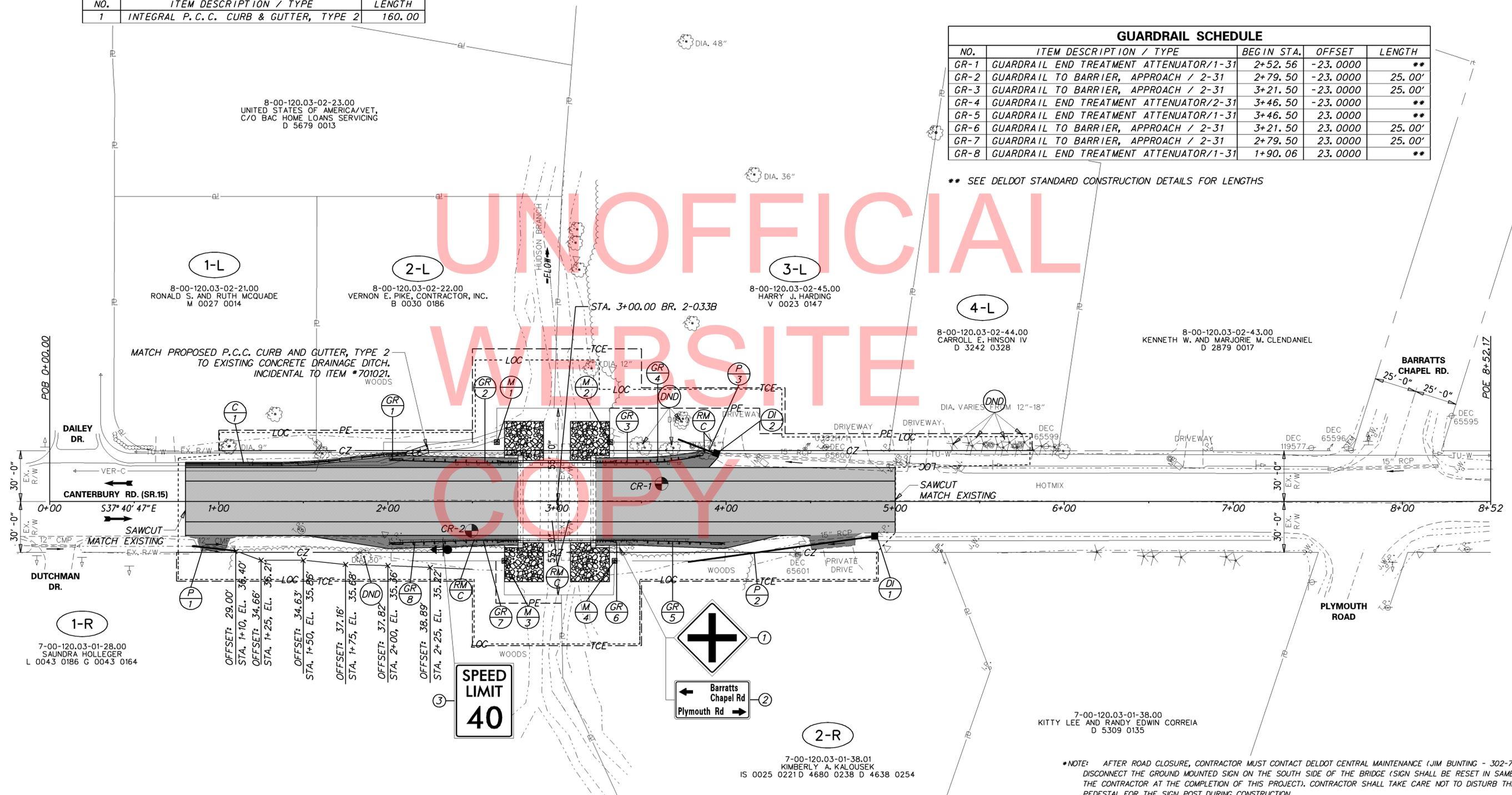
DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
1	15" RCP	111	32'	0.75%	36.55	36.33
2	15" RCP	111	120'	0.52%	35.11	34.49
3	15" RCP	111	24'	1.75%	35.25	35.00

\*\* PIPE 3 TO TIE INTO EXISTING PIPE. PLACE PRIOR TO GUARDRAIL AND BACKSLOPE.

RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
M 1	CAPPED REBAR	2+64.47	35.00 L	378314.6466	617448.1263
M 2	CAPPED REBAR	3+31.36	35.00 L	378261.7055	617489.0139
M 3	CAPPED REBAR	2+68.94	35.00 R	378268.3204	617395.4587
M 4	CAPPED REBAR	3+34.09	35.00 R	378216.7623	617435.2781

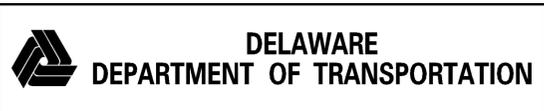
GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
GR-1	GUARDRAIL END TREATMENT ATTENUATOR/1-31	2+52.56	-23.0000	**
GR-2	GUARDRAIL TO BARRIER, APPROACH / 2-31	2+79.50	-23.0000	25.00'
GR-3	GUARDRAIL TO BARRIER, APPROACH / 2-31	3+21.50	-23.0000	25.00'
GR-4	GUARDRAIL END TREATMENT ATTENUATOR/2-31	3+46.50	-23.0000	**
GR-5	GUARDRAIL END TREATMENT ATTENUATOR/1-31	3+46.50	23.0000	**
GR-6	GUARDRAIL TO BARRIER, APPROACH / 2-31	3+21.50	23.0000	25.00'
GR-7	GUARDRAIL TO BARRIER, APPROACH / 2-31	2+79.50	23.0000	25.00'
GR-8	GUARDRAIL END TREATMENT ATTENUATOR/1-31	1+90.06	23.0000	**

\*\* SEE DELDOT STANDARD CONSTRUCTION DETAILS FOR LENGTHS

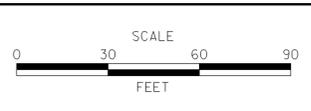


\*NOTE: AFTER ROAD CLOSURE, CONTRACTOR MUST CONTACT DELDOT CENTRAL MAINTENANCE (JIM BUNTING - 302-760-4814) TO DISCONNECT THE GROUND MOUNTED SIGN ON THE SOUTH SIDE OF THE BRIDGE (SIGN SHALL BE RESET IN SAME LOCATION BY THE CONTRACTOR AT THE COMPLETION OF THIS PROJECT). CONTRACTOR SHALL TAKE CARE NOT TO DISTURB THE CONCRETE PEDESTAL FOR THE SIGN POST DURING CONSTRUCTION.

NO.	SHEET NO.	PLAN INDICATOR	CODE (DE-MUTCD)	QTY.	DESCRIPTION	ASSEMBLY NO.	SIGN WIDTH (IN)	SIGN HEIGHT (IN)	SIGN AREA (SF)	ITEM 749687 SINGLE POST (EACH)				ITEM 749690 MULTI POST (SF)				POST INSTALLATION TYPE	Code X11 12' Post (W/ Basepost)	ITEM 749688 4" HOLE, 0-6" (EACH)	ITEM 749689 4" HOLE, >6" (EACH)	REMARKS	
										SIGN DISPOSITION	TOTAL SIGN AREA (SF)	REMOVE	INSTALL	SIGN DISPOSITION	TOTAL SIGN AREA (SF)	REMOVE	INSTALL						
1	6	1	W2-1(30)	1	CROSS ROAD - 30x30	1	30	30	6	REMAIN	6	0	0	REMAIN	0	0	0	0	CONCRETE	0	0	0	Signs on same post
2	6	2	W16-8aP	1	ADVANCE STREET NAME (2-line plaque)	1	18	36	5	REMAIN	5	0	0	REMAIN	0	0	0	0	CONCRETE	0	0	0	Signs on same post
3	6	3	R2-1(18)	1	SPEED LIMIT (Blank - 18x24)	1	18	24	3	REPOSITION	3	1	1	REPOSITION	0	0	0	0	SOIL	0	0	0	



ADDENDUMS / REVISIONS	



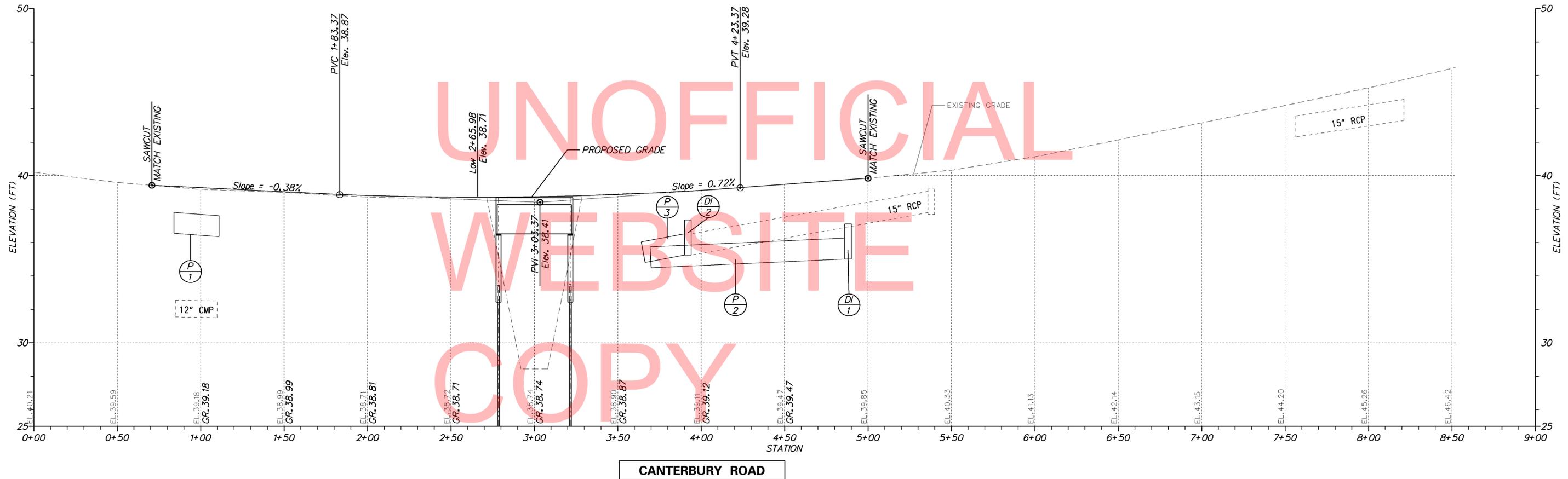
BR. 2-033B ON SR 15, CANTERBURY ROAD OVER HUDSON BRANCH

CONTRACT	BRIDGE NO.	2-033B
T201107202	DESIGNED BY:	TRS
COUNTY	CHECKED BY:	EM
KENT		

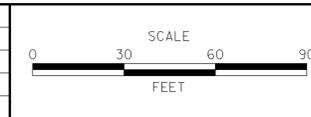
CONSTRUCTION PLAN	SHEET NO.	6
	TOTAL SHTS.	23

Type of Curve = Symmetric Parabola  
 Direction = Sag  
 Length = 240.00'

G1 = -0.38%  
 G2 = 0.72%  
 SSD = 862.97'  
 K = 217.73



ADDENDUMS / REVISIONS	

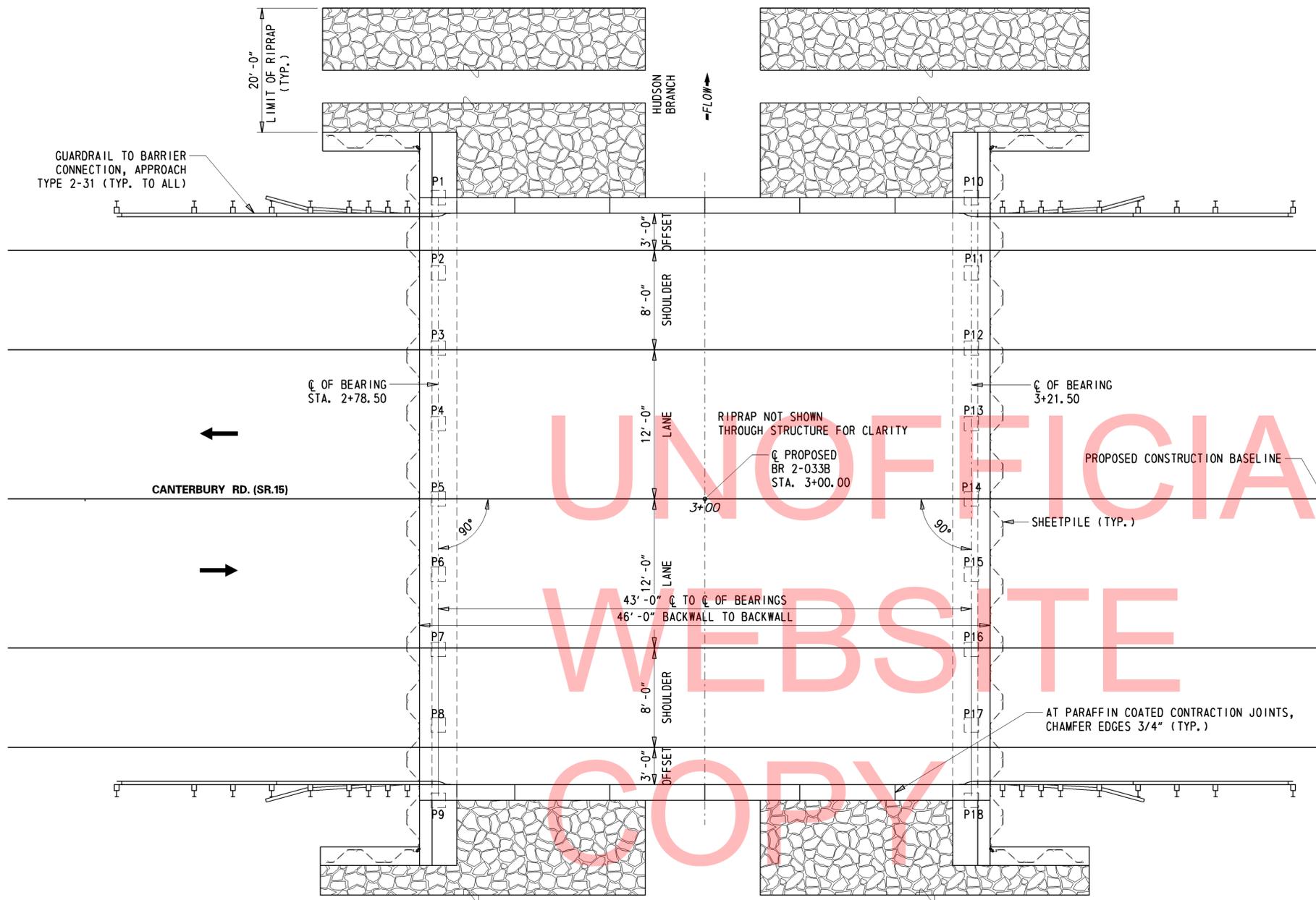
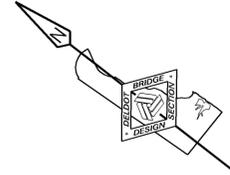


**BR. 2-033B ON SR 15, CANTERBURY ROAD OVER HUDSON BRANCH**

CONTRACT	BRIDGE NO.	<b>2-033B</b>
T201107202	DESIGNED BY:	TRS
COUNTY	CHECKED BY:	EM
KENT		

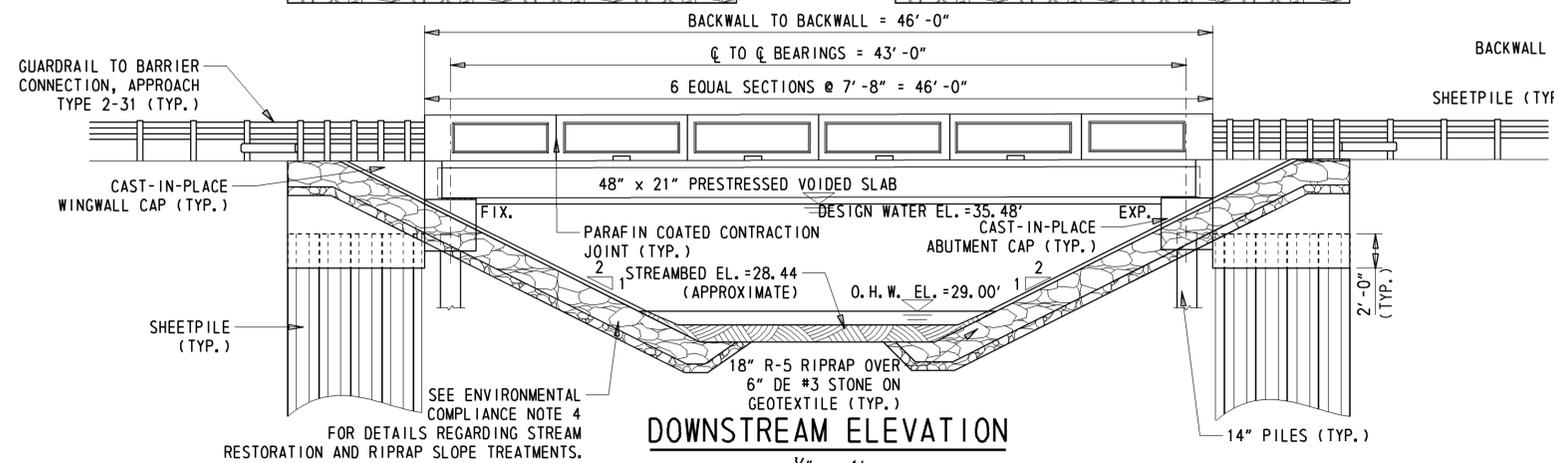
**PROFILE**

VERTICAL SCALE	9
	6
	3
	0
FEET	
SHEET NO.	7
TOTAL SHTS.	23



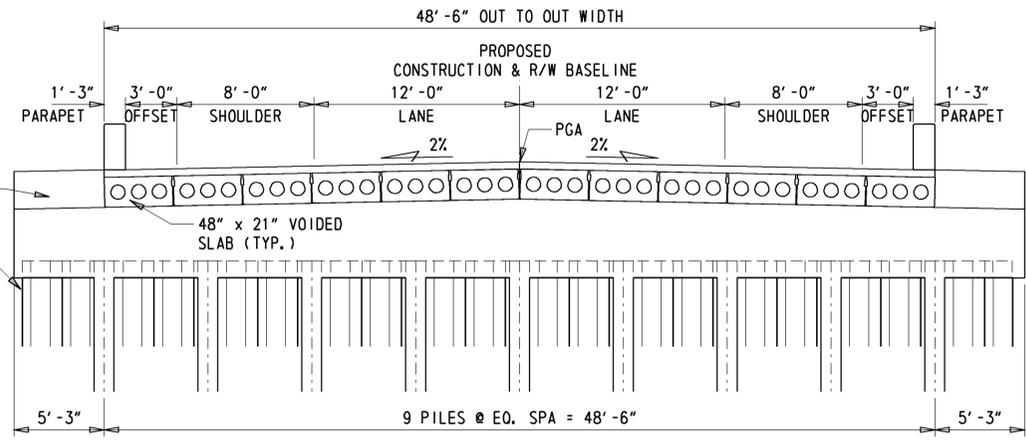
**PLAN**

1/8" = 1'



**DOWNSTREAM ELEVATION**

1/8" = 1'



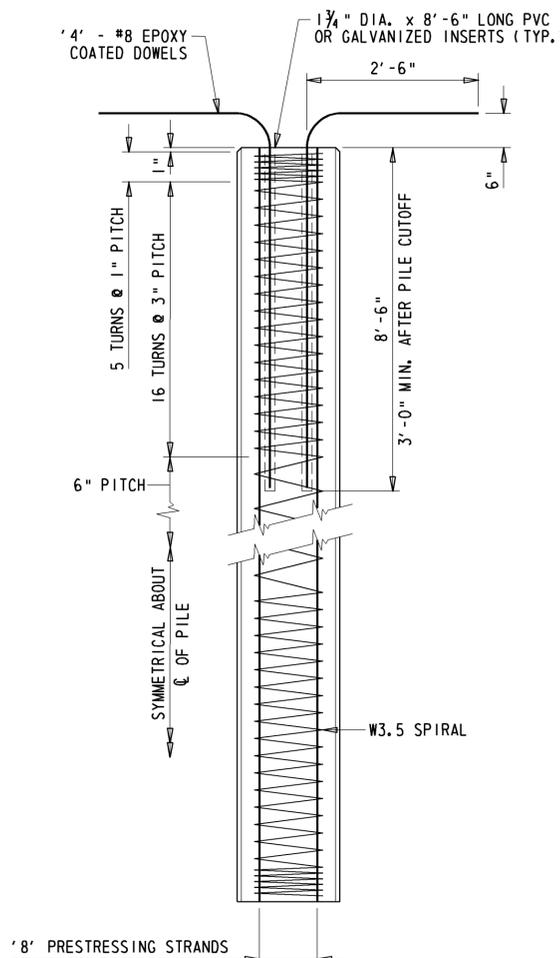
**BRIDGE SECTION**

1/8" = 1'

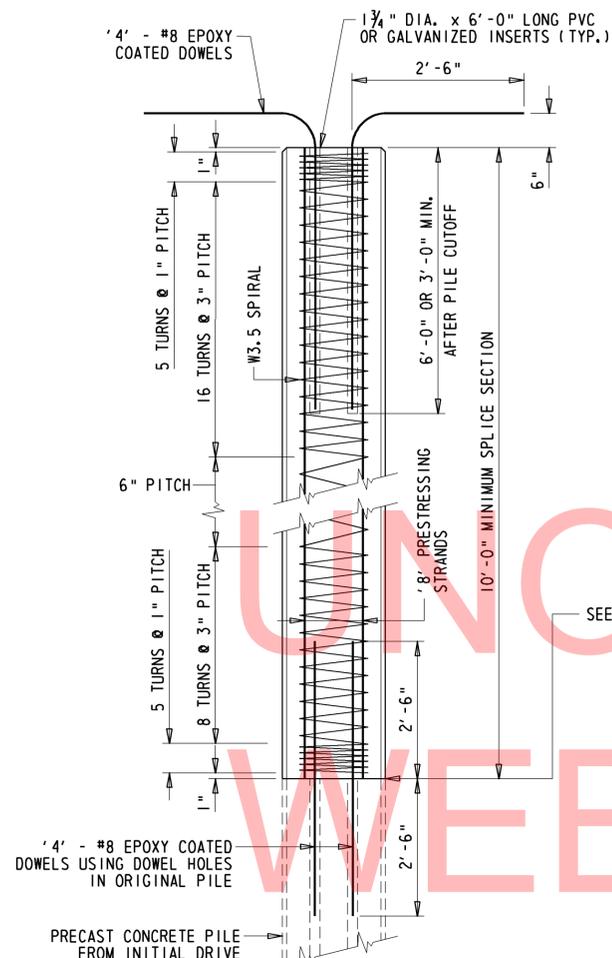
ADDENDUMS / REVISIONS	

CONTRACT	BRIDGE NO.	<b>2-033B</b>
T201107202	DESIGNED BY:	TRS
COUNTY	CHECKED BY:	EM
KENT		

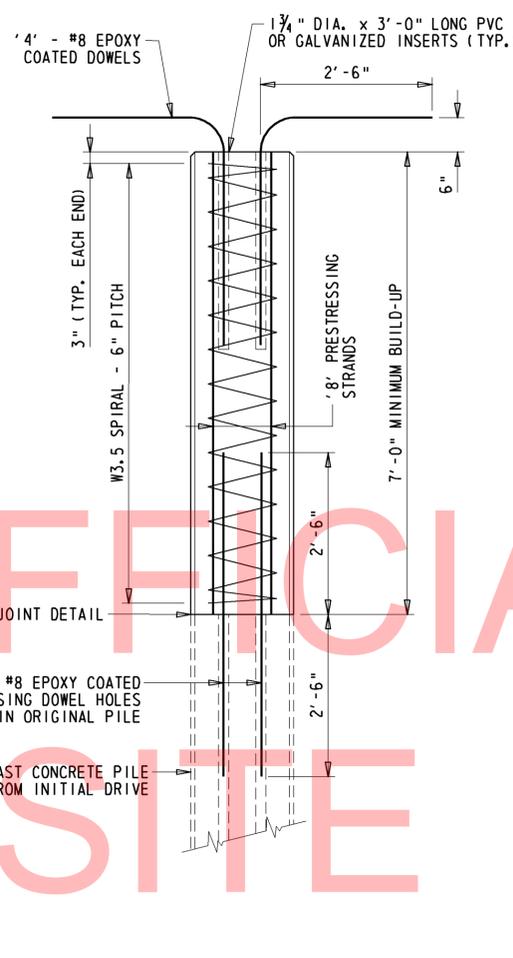
SHEET NO.	8
TOTAL SHTS.	23



PILE ELEVATION

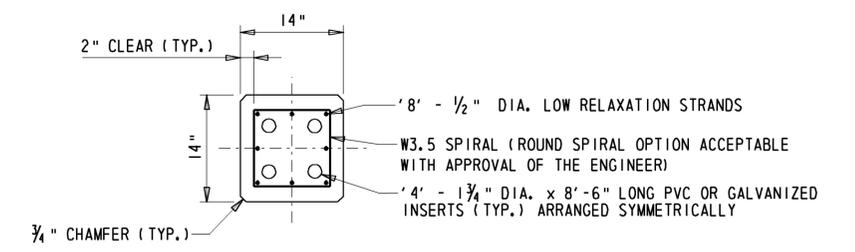


PILE BUILD-UP FOR DRIVING



PILE BUILD-UP WITHOUT DRIVING

PRECAST, PRESTRESSED CONCRETE PILE DETAILS



TYPICAL PILE SECTION

PROJECT SPECIFIC PILE NOTES

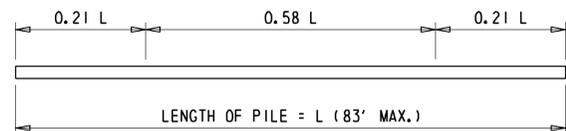
- PILE TYPE  
THIS PROJECT SHALL UTILIZE 14" x 14" PRECAST PRESTRESSED CONCRETE PILES.
- ESTIMATED PRODUCTION PILE LENGTH FOR NORTH ABUTMENT IS 33'. ALL 9 PILES FOR NORTH ABUTMENT TO BE ORDERED 33' LONG.
- ESTIMATED PRODUCTION PILE LENGTH FOR SOUTH ABUTMENT IS 39'. ALL 9 PILES FOR SOUTH ABUTMENT TO BE ORDERED 44' LONG.
- REQUIRED TEST PILE LENGTH IS 33' FOR NORTH ABUTMENT AND 44' FOR SOUTH ABUTMENT.
- THE ESTIMATED STARTING DRIVING ELEVATION IS FROM THE TOP OF THE PROPOSED PILE LOCATIONS.
- PILES SHALL BE DRIVEN TO AN ULTIMATE BEARING CAPACITY OF 236 KIPS.
- MINIMUM TIP ELEVATION SHALL NOT BE REQUIRED FOR THIS PROJECT.
- TOTAL OF 18 PILES ARE REQUIRED FOR THIS PROJECT.

GENERAL PILE NOTES

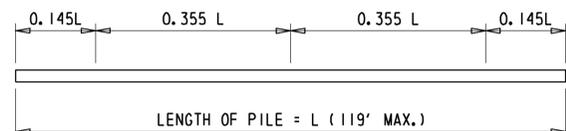
- FOR MORE INFORMATION REGARDING PILE MATERIALS AND FABRICATION, REFER TO SECTION 618 (PILE MATERIALS) OF THE STANDARD SPECIFICATIONS. FOR MORE INFORMATION REGARDING PILE DRIVING AND INSTALLATION, REFER TO SECTION 619 (INSTALLATION OF PILES) OF THE STANDARD SPECIFICATIONS.
- EACH TEST PILE SHALL BE DYNAMICALLY TESTED BY THE CONTRACTOR IN ACCORDANCE WITH ITEM #619519 - DYNAMIC PILE TESTING BY CONTRACTOR. THE QUANTITY FOR DYNAMIC PILE TESTING SHALL INCLUDE ONE FOR THE INITIAL DRIVE AND ONE FOR THE RE-STRIKE OF EACH TEST PILE. THE NEED TO RE-STRIKE EITHER A TEST PILE OR A PRODUCTION PILE SHALL BE THE SOLE DECISION OF THE ENGINEER.
- WAVE EQUATION ANALYSIS SHALL BE SUBMITTED BY THE CONTRACTOR FOR REVIEW BY THE ENGINEER (ELECTRONIC PREFERRED, OTHERWISE 8 COPIES MINIMUM).
- TEST PILES SHALL BE DRIVEN AT EACH LOCATION SHOWN ON THE PLANS. ALL PILES SHALL BE ORDERED THE SAME LENGTH (I.E., WITHOUT A LONGER TEST PILE). TEST PILES, AS NOTED, SHALL BE DRIVEN FIRST TO ESTABLISH DRIVING CRITERIA FOR THE OTHER PILES IN EACH SUBSTRUCTURE ELEMENT. AN ADDITIONAL 5' HAS BEEN ADDED TO THE DESIGN LENGTH OF EACH PILE OF SOUTH ABUTMENT AS A CONTINGENCY.

PRECAST, PRESTRESSED CONCRETE PILE NOTES

- DOWEL HOLES CAST IN THE TOP OF THE PILES SHALL BE CLEANED BY INSERTING A HIGH PRESSURE AIR HOSE TO THE BOTTOM AND BLOWING THE HOLE CLEAN FROM THE BOTTOM UPWARD PRIOR TO SETTING AND GROUTING THE DOWEL BARS. DOWELS SHALL BE SET WITH AN APPROVED NON-SHRINK EPOXY GROUT.
- IF, AFTER A PILE CUTOFF, THE PREFORMED HOLES IN THE TOP OF PRECAST, PRESTRESSED CONCRETE PILES ARE NOT LONG ENOUGH TO PROVIDE SUFFICIENT DOWEL EMBEDMENT, THEY SHALL BE DRILLED TO THE PROPER DEPTH AT NO ADDITIONAL COST TO THE DEPARTMENT. THE MINIMUM LENGTH OF THE DOWEL BAR EMBEDMENT IN THE HOLE SHALL BE 3'-0" FEET.
- EPOXY GROUT FOR GROUTING THE DOWEL BARS IN THE TOP OF THE PRECAST, PRESTRESSED CONCRETE PILE SHALL BE AN APPROVED NON-SHRINK EPOXY GROUT SPECIFICALLY DESIGNED AS A FAST SETTING COMPOUND THAT POURS EASILY TO FILL THE VOIDS. THE COST OF GROUTING THE DOWEL BARS SHALL BE INCIDENTAL TO THE UNIT BID ITEM FOR THAT RESPECTIVE PILE.

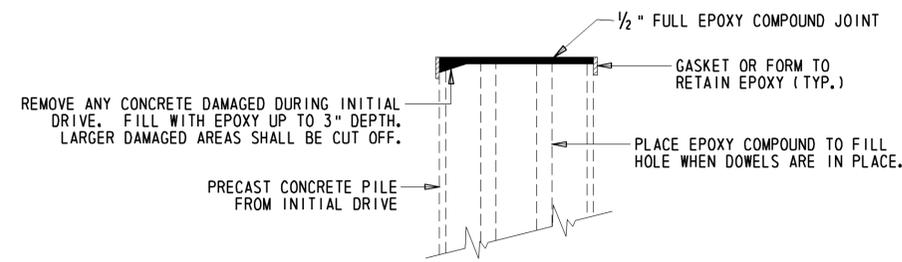
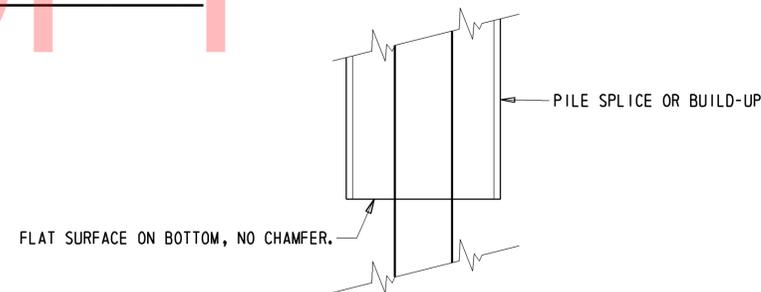


2-POINT

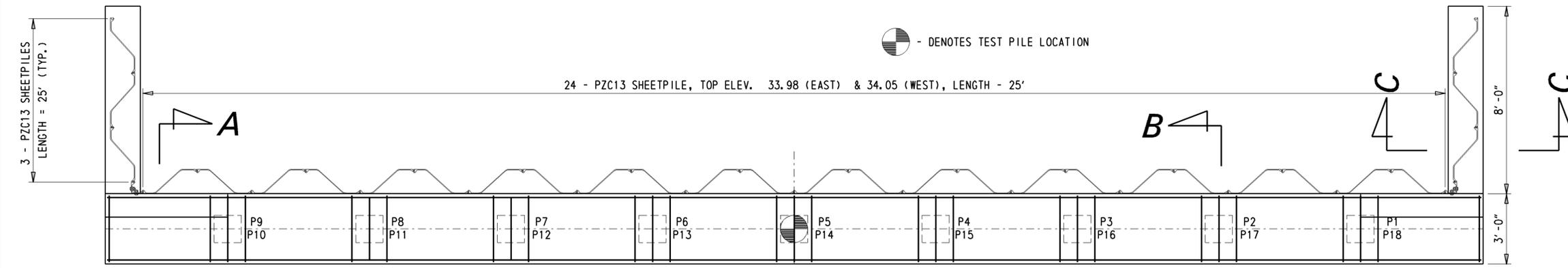


3-POINT

PICK-UP OR SUPPORT DIAGRAMS

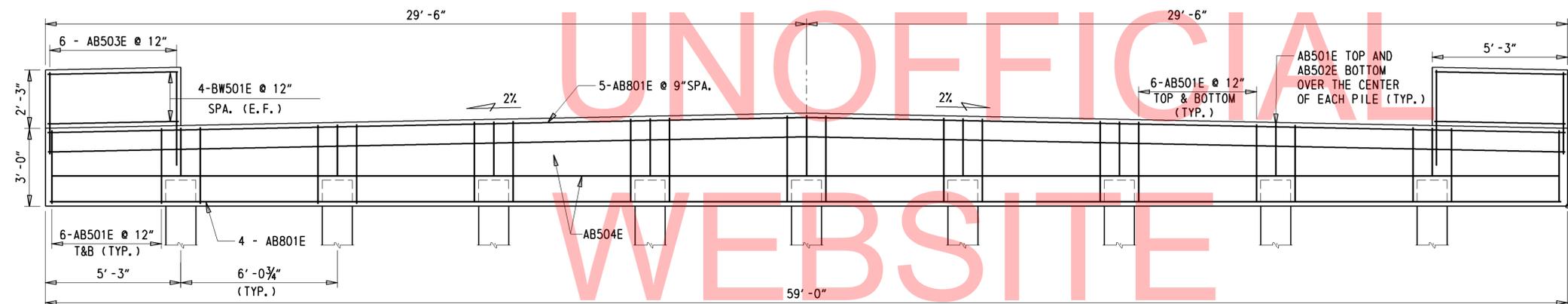


SPLICE JOINT DETAIL



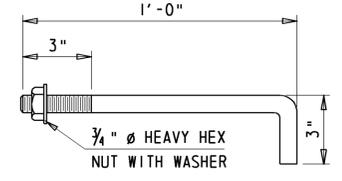
PILE COORDINATES				
PT.	STATION	OFFSET	NORTHING	EASTING
P1	2+78.50	-24.25	378296.972	617448.193
P2	2+78.50	-18.19	378293.266	617443.395
P3	2+78.50	-12.13	378289.560	617438.597
P4	2+78.50	-6.06	378285.855	617433.799
P5	2+78.50	0.00	378282.149	617429.001
P6	2+78.50	6.06	378278.443	617424.203
P7	2+78.50	12.13	378274.738	617419.405
P8	2+78.50	18.19	378271.032	617414.607
P9	2+78.50	24.25	378267.326	617409.808
P10	3+21.50	-24.25	378262.940	617474.477
P11	3+21.50	-18.19	378259.234	617469.679
P12	3+21.50	-12.13	378255.529	617464.881
P13	3+21.50	-6.06	378251.823	617460.083
P14	3+21.50	0.00	378248.117	617455.284
P15	3+21.50	6.06	378244.411	617450.486
P16	3+21.50	12.13	378240.706	617445.688
P17	3+21.50	18.19	378237.000	617440.890
P18	3+21.50	24.25	378233.294	617436.092

PLAN  
3/8" = 1'

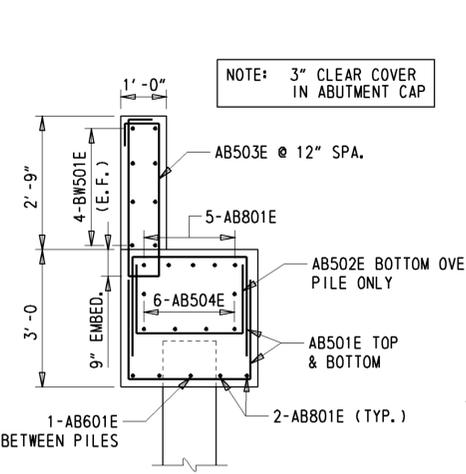


ELEVATION  
3/8" = 1'-0"

- SHEET PILE NOTES:
- PZC SHAPES ARE DEPICTED IN THESE DETAILS.
  - SHEET PILES SHALL BE DRIVEN TO ELEVATIONS SHOWN ON PLANS.
  - PAYMENT FOR ALL MATERIALS AND LABOR USED IN THE CONCRETE CAP EXCEPT FOR PCC MASONRY & REINFORCING BARS (JOINTS, STRUCTURAL L'S, HARDWARE, ETC) SHALL BE INCIDENTAL TO ITEM #622015.
  - ALL STEEL SHEET PILES AND FABRICATED PIECES SHALL CONFORM TO ASTM A572 GRADE 345 (50 KSI).
  - ALL CONNECTION UNITS SHALL BE COMPATIBLE WITH THE UNITS THEY CONNECT, PERTAINING TO THE ASTM DESIGNATIONS. FOR PAYMENT PURPOSES, THE CONNECTIONS UNITS SHALL BE TREATED AS THE ADJACENT UNITS OF SHEET PILING. THE STRUCTURAL L SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M183 (ASTM A36).

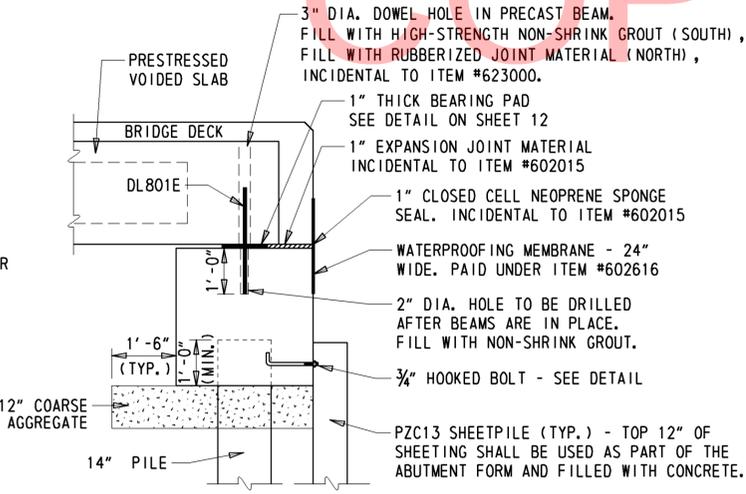


NOTE: INCIDENTAL TO ITEM #62015  
3/4" Ø HOOKED BOLT  
SCALE: N.T.S.



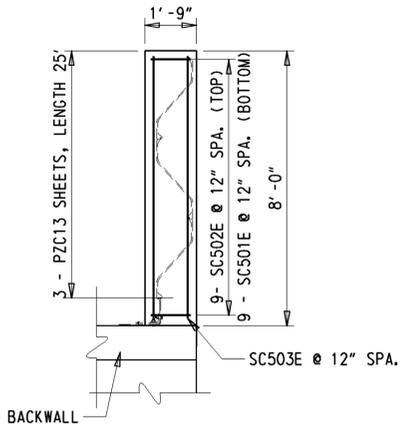
ABUTMENT REINFORCEMENT (A-A)

1/2" = 1'-0"



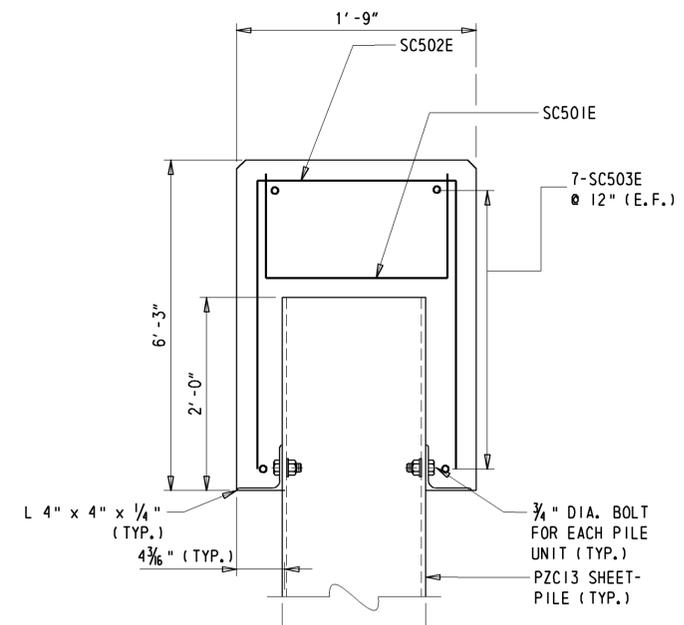
TYPICAL ABUTMENT SECTION (B-B)

1/2" = 1'-0"



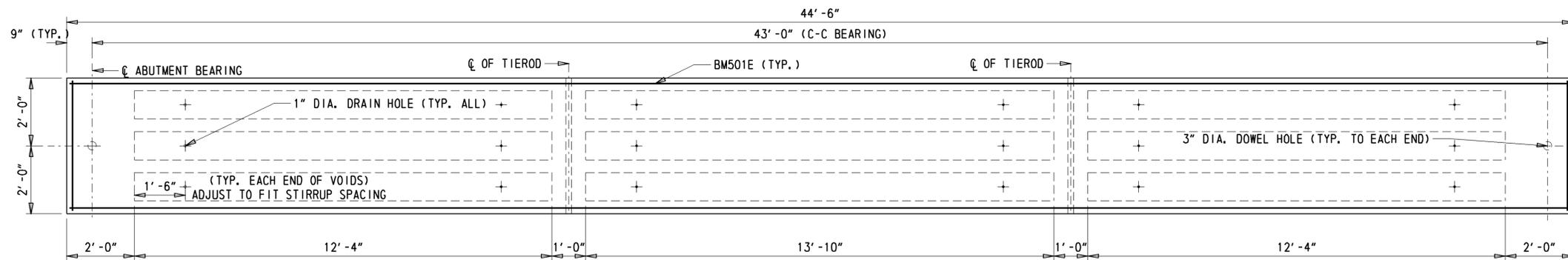
TYPICAL WINGWALL PLAN

3/8" = 1'-0"



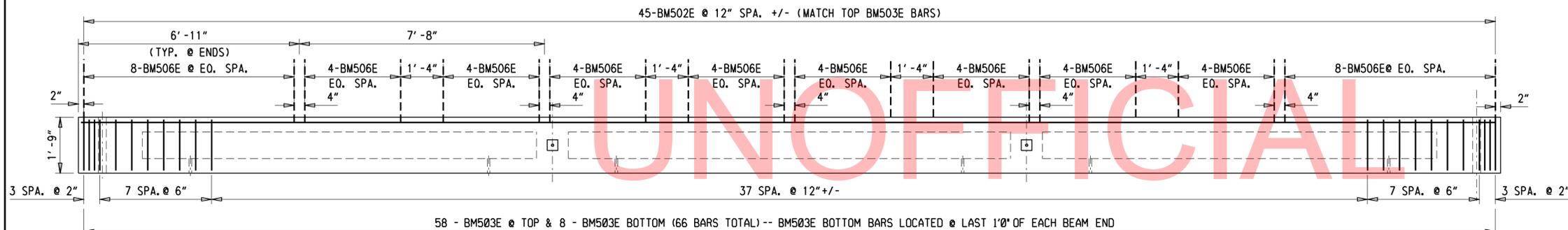
WINGWALL DETAIL (C-C)

N.T.S.

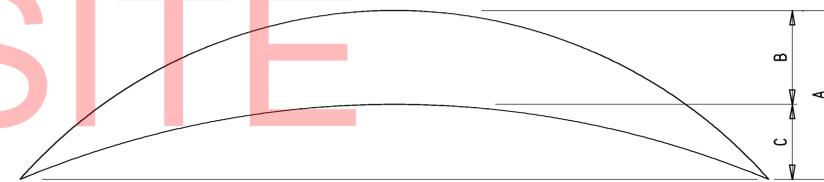


**PLAN**  
1/2" = 1'

NOTE: PROPOSED END BLOCK STEEL IS NOT SHOWN IN THESE DETAILS. REFER TO THE END BLOCK DETAILS BELOW FOR CLARIFICATION.

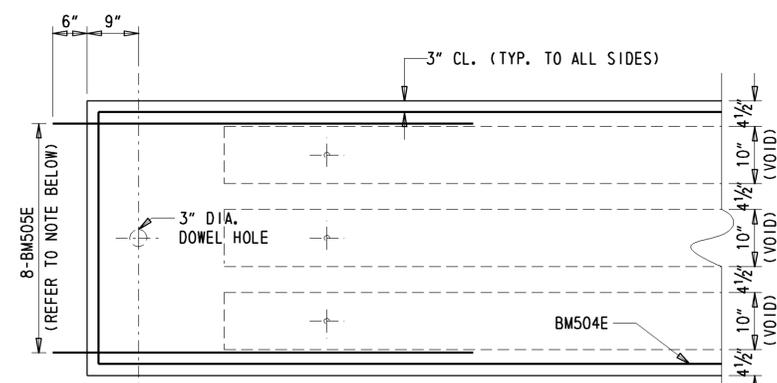


**ELEVATION**  
1/2" = 1'

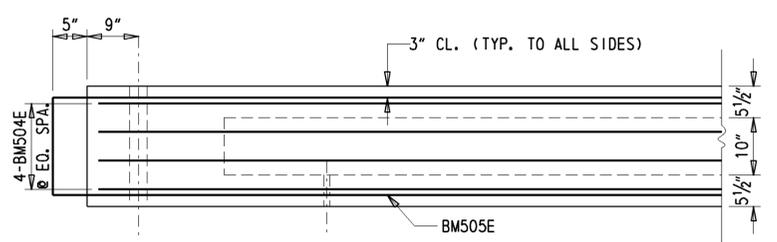


**CAMBER DIAGRAM**

A = ESTIMATED PRESTRESS CAMBER LESS DEFLECTION DUE TO DEAD LOAD OF BEAM AT TIME OF TRANSFER = 0.655"  
 B = DEFLECTION DUE TO DEAD LOAD OF SLAB AND PARAPET = 0.483"  
 C = A - B = NET CAMBER AT TIME OF CONSTRUCTION.

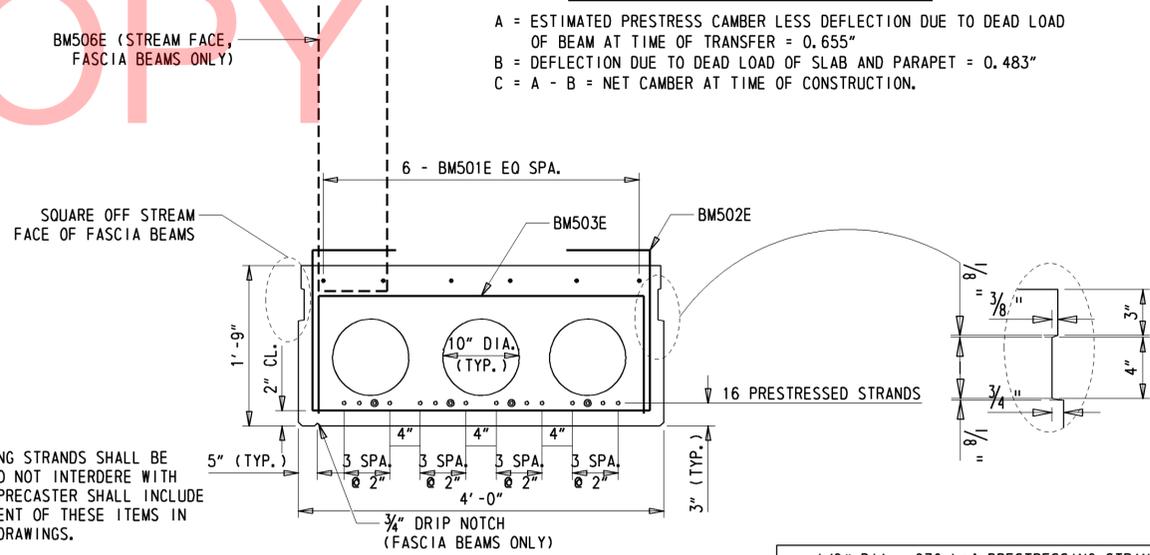


**TYPICAL END BLOCK PLAN**  
3/4" = 1'



**TYPICAL END BLOCK ELEVATION**  
3/4" = 1'

NOTE TO PRECASTER: BM505E BARS AND LIFTING STRANDS SHALL BE SPACED SO THAT THEY DO NOT INTERFERE WITH STRAND SPACING. THE PRECASTER SHALL INCLUDE DETAILS OF THE PLACEMENT OF THESE ITEMS IN THEIR SUBMITTED SHOP DRAWINGS.



**TYPICAL BEAM SECTION**  
1" = 1'

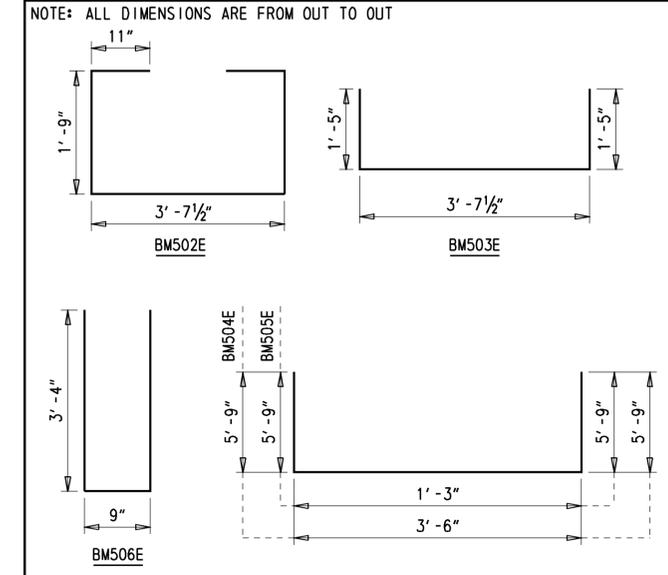
o 1/2" DIA., 270 ksi PRESTRESSING STRANDS  
 o 1/2" DIA., 270 ksi PRESTRESSING STRANDS TO BE DEBONDED FOR 5'-0" @ EACH END

NOTE: 12 BEAMS TOTAL (2 EXTERIOR & 10 INTERIOR)

NOTE: QUANTITIES OF BARS SHOWN ARE FOR EACH INDIVIDUAL BEAM.

REINFORCING BAR LIST							
STRAIGHT BARS				BENT BARS			
MARK	SIZE	QTY.	LENGTH	MARK	SIZE	QTY.	LENGTH
BM501E	5	6	44'-2"	BM502E	5	45	8'-11 1/2"
				BM503E	5	66	6'-5 1/2"
				BM504E	5	8	15'-0"
				BM505E	5	16	12'-9"
				BM506E	5	48	7'-5"

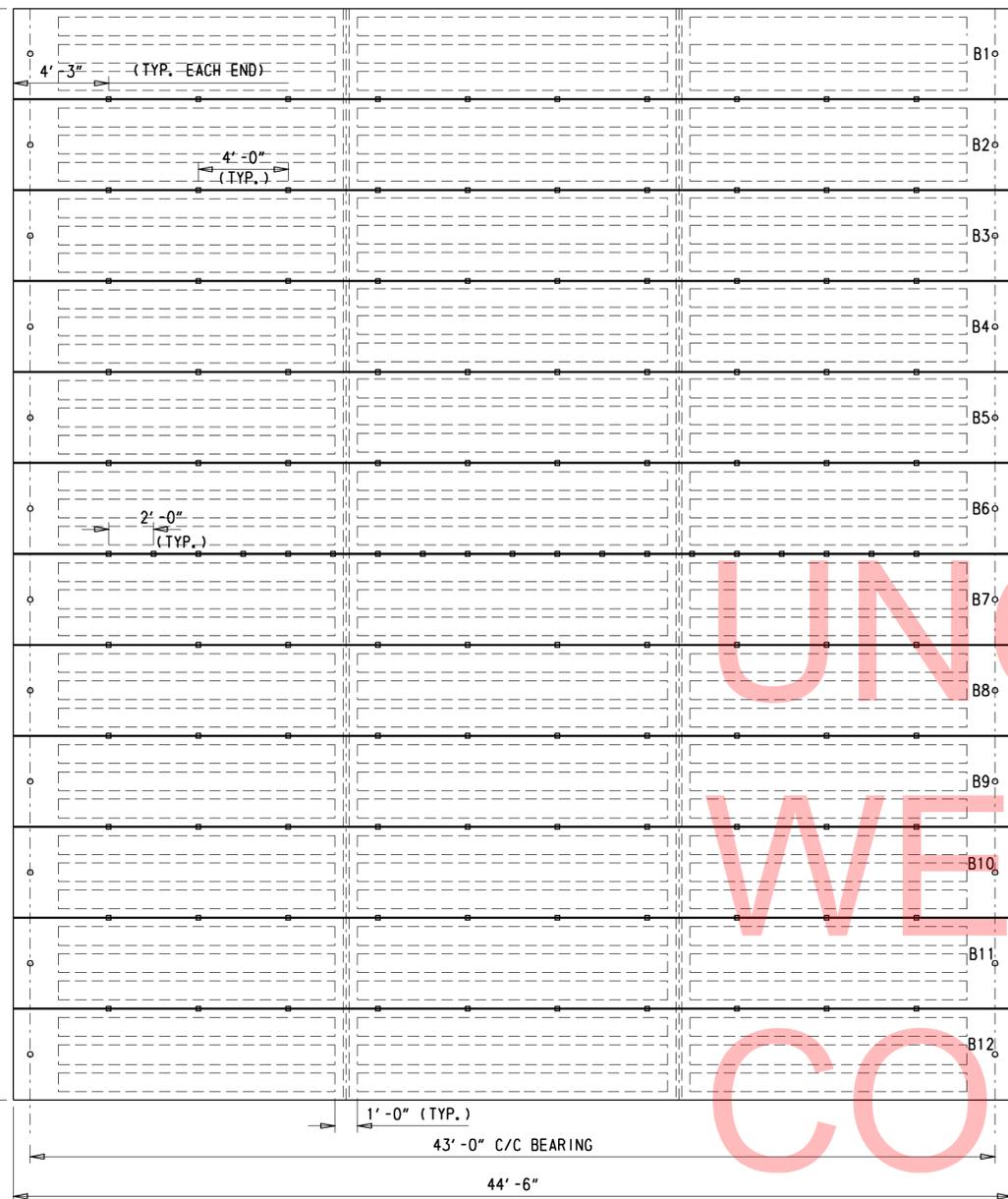
**BENDING DIAGRAMS**



**PRESTRESSED BEAM NOTES (48" x 21")**

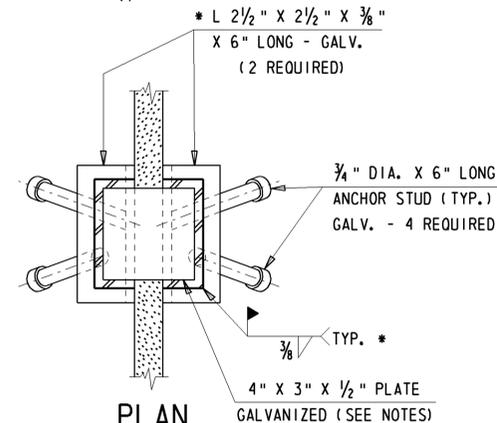
- DESIGN PLANS - WORKING DRAWINGS  
 INFORMATION PERTAINING TO THE PRECAST PRESTRESSED REINFORCED CONCRETE VOIDED SLABS IS INTENDED TO SERVE AS AN INDICATION OF THE TYPE OF CONSTRUCTION ACCEPTABLE FOR USE. THE CONTRACTOR WILL BE REQUIRED TO PREPARE AND SUBMIT, FOR APPROVAL, A COMPLETE SET OF DETAILED SHOP PLANS FOR THE PRESTRESSED PRECAST CONCRETE UNITS THEY PROPOSE TO FURNISH.
- HANDLING  
 PRESTRESSED BEAMS SHALL BE HANDLED ONLY BY LIFTING STRANDS PROVIDED ESPECIALLY FOR THIS PURPOSE. THE APPROXIMATE DEAD WEIGHT OF EACH UNIT IS 16.29 TONS.
- CONCRETE STRENGTH  
 THE MINIMUM COMPRESSIVE STRENGTH AT THE TIME OF INITIAL PRESTRESS EQUALS 6400 PSI. THE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS EQUALS 8000 PSI.
- BAR REINFORCEMENT  
 MATERIALS REQUIREMENT: AASHTO M31 - GRADE 60  
 ALL BAR REINFORCEMENT TO HAVE 2" MINIMUM COVER EXCEPT AS NOTED OR DETAILED. ALL BAR REINFORCEMENT AND CHAIR SUPPORTS SHALL BE PROTECTED WITH FUSION BONDED EPOXY.  
 PAYMENT FOR REINFORCING BARS IS INCIDENTAL TO ITEM #623000 - PRESTRESSED REINFORCED CONCRETE MEMBERS.
- STRAND  
 INITIAL PRESTRESSES ON EACH 1/2" DIA. 270 ksi LOW RELAXATION STRAND EQUALS 30975 lbs MINIMUM. ULTIMATE STRENGTH EQUALS 41310 lbs PER STRAND.
- CONCRETE FINISH  
 TOP OF BEAMS ARE TO HAVE A HEAVY SCORED FINISH. PAYMENT INCIDENTAL TO ITEM #623000 - PRESTRESSED REINFORCED CONCRETE MEMBERS.

12 - 4'-0" PRESTRESSED CONCRETE BEAMS + 11 - 1/2" JOINTS = 48'-5 1/2"



**FRAMING PLAN**

1/4" = 1'

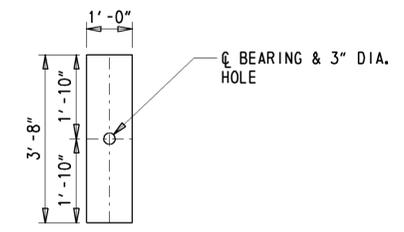


**PLAN SHEAR CONNECTION**

SCALE : N. T. S.

**FRAMING PLAN NOTES:**

- 119 SHEAR CONNECTORS ARE REQUIRED. SEE FRAMING PLAN FOR SPACING AND LOCATION.
  - ANGLES AND PLATES ARE TO BE STRUCTURAL STEEL CONFORMING TO M270 GRADE AND SHALL BE GALVANIZED. ANCHOR STUDS ARE TO BE AUTOMATIC END-WELDED (TYP.)
  - FIELD WELD ANGLE TO SHEAR CONNECTOR ANGLES AND GALVANIZE. FILL ALL KEYWAYS AND CAVITIES WITH APPROVED HIGH-STRENGTH, NON-SHRINK, NON-STAIN GROUT \*\*.
  - GROUTING BETWEEN BEAMS SHALL BE DONE WHEN AMBIENT TEMPERATURE IS ABOVE 40° F. NO TRAFFIC OR EQUIPMENT SHALL BE PERMITTED ON THE BRIDGE UNTIL THE GROUT HAS CURED FOR AT LEAST 72 HOURS.
  - ADJUST BAR SPACING TO CLEAR SHEAR CONNECTORS.
- \* PAYMENT FOR MATERIAL AND LABOR SHALL BE INCIDENTAL TO ITEM #623000 - PRESTRESSED REINFORCED CONCRETE MEMBERS  
 \*\* GROUT SHALL BE NON-EXPANSIVE/NON-SHRINK/NON-STAINING.

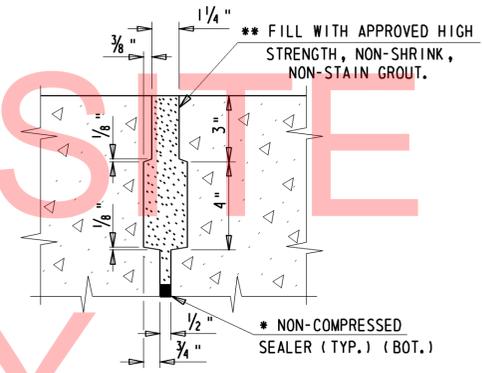


**NOTE:**

- 24 TOTAL BEARING PADS REQUIRED.
- ALL BEARING PADS SHALL BE 50 DUROMETER ELASTOMERIC.
- PADS SHALL BE GLUED TO ABUTMENTS WITH RUBBER BONDING CEMENT IN SUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED.
- PAYMENT FOR BEARING PADS SHALL BE INCIDENTAL TO ITEM #623000 - PRESTRESSED REINFORCED CONCRETE MEMBERS.

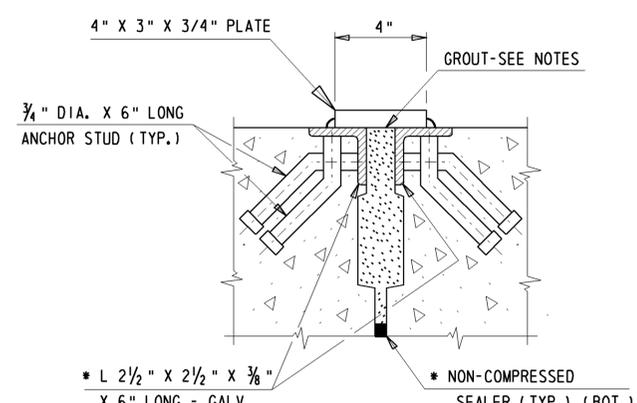
**1" THICK NEOPRENE BEARING PAD DETAILS**

1" = 1'



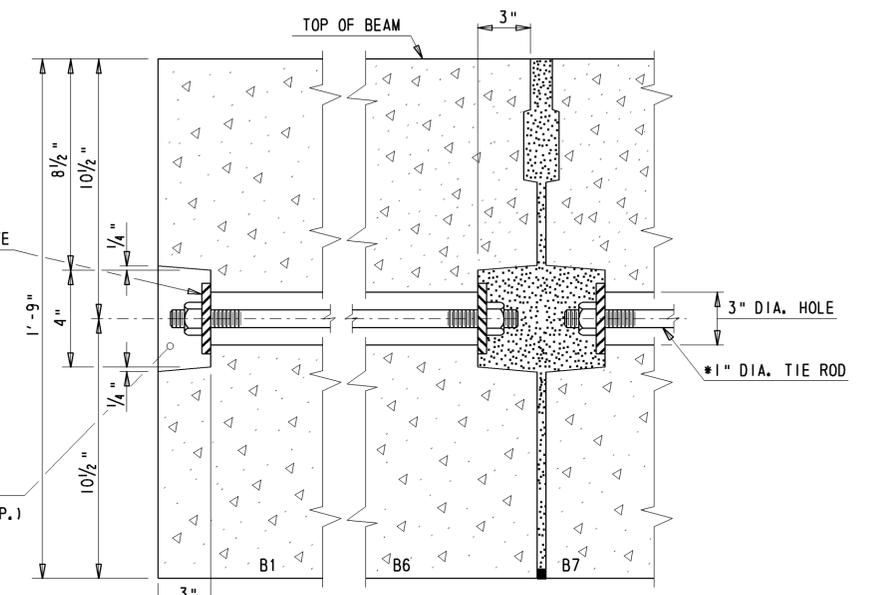
**SHEAR KEY DETAIL**

SCALE : N. T. S.



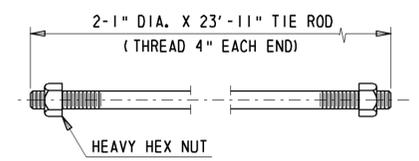
**ELEVATION SHEAR CONNECTION**

SCALE : N. T. S.



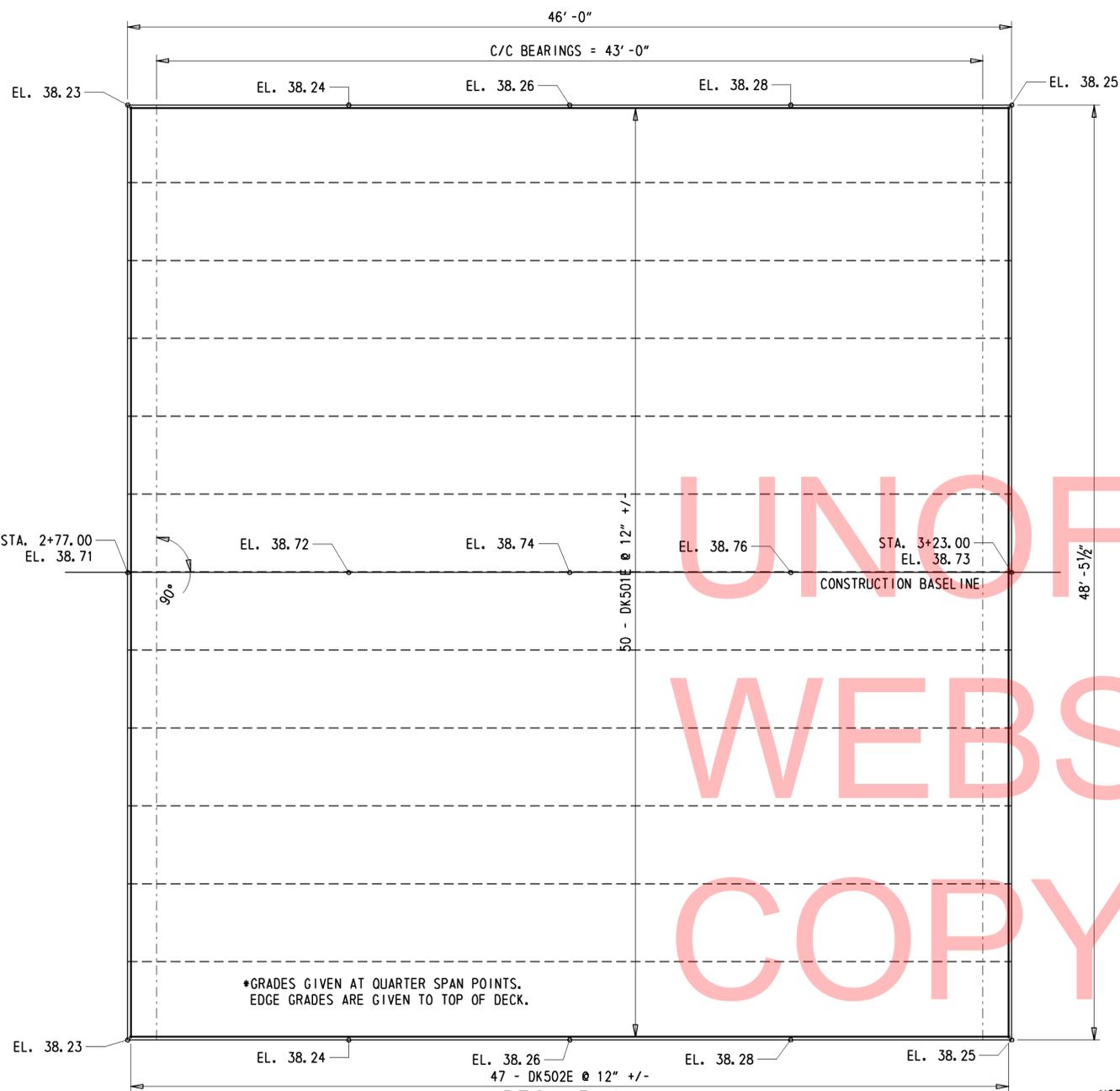
**TIE ROD END DETAIL**

SCALE : N. T. S.



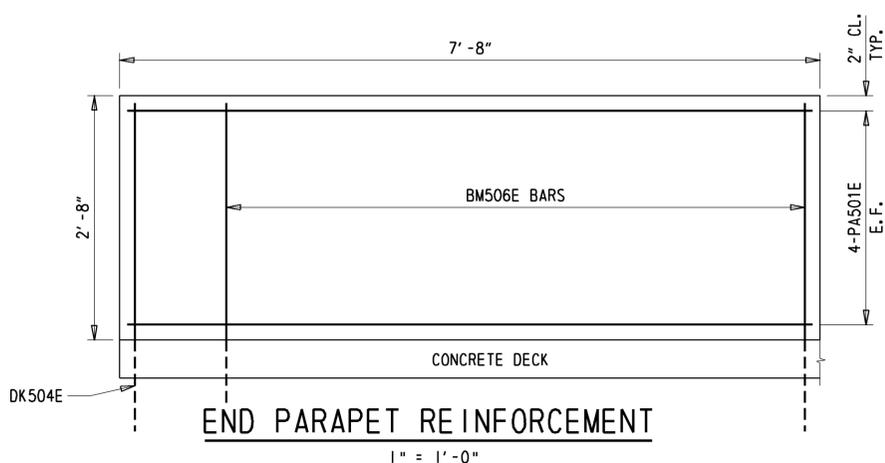
**\* 1" DIA. TIE ROD**

TIE RODS TO BE A.S.T.M. A572 STEEL AND PROTECTED WITH FUSION BONDED EPOXY.  
 SCALE : N. T. S.

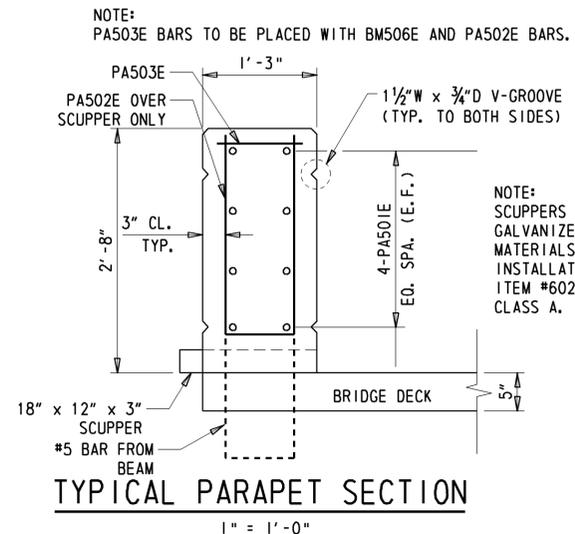


\*GRADES GIVEN AT QUARTER SPAN POINTS. EDGE GRADES ARE GIVEN TO TOP OF DECK.

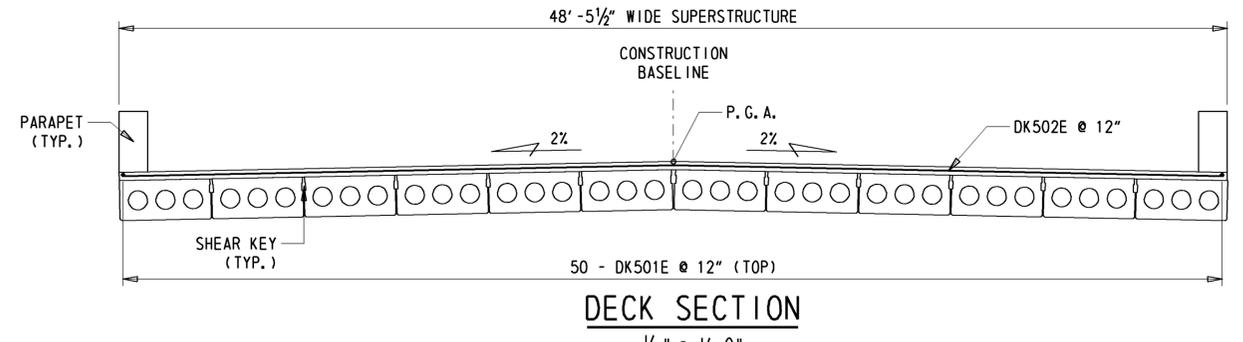
**DECK PLAN**  
1/4" = 1'-0"



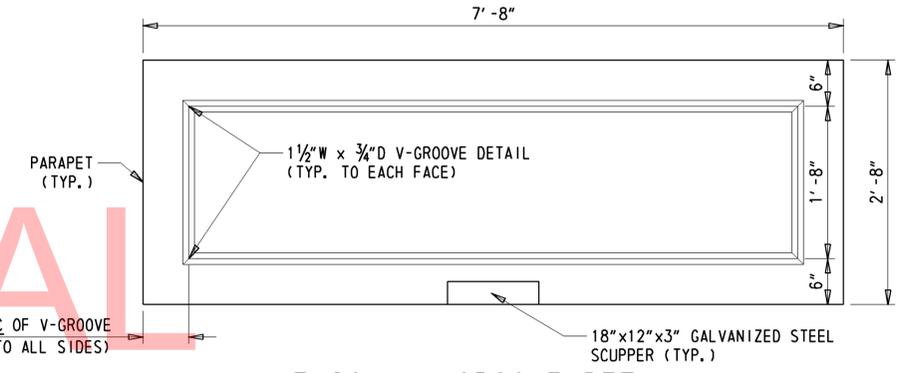
**END PARAPET REINFORCEMENT**  
1" = 1'-0"



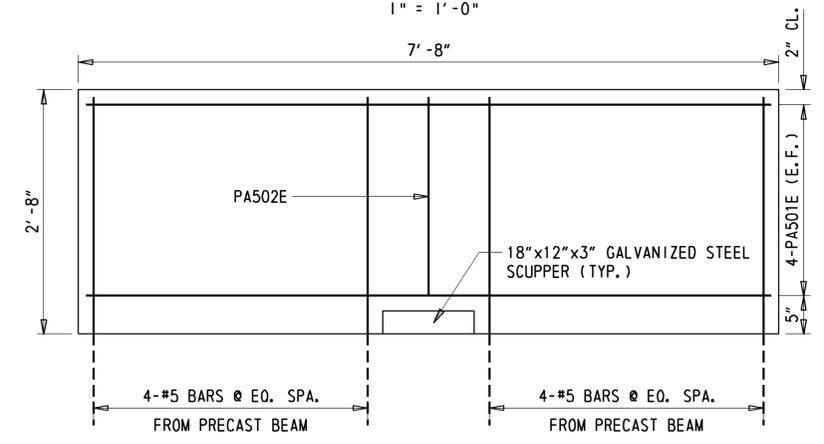
**TYPICAL PARAPET SECTION**  
1" = 1'-0"



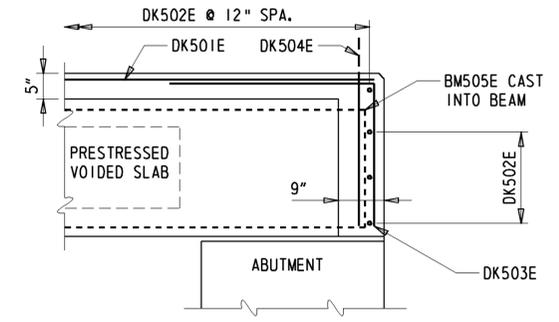
**DECK SECTION**  
1/4" = 1'-0"



**FASCIA V-GROOVE DETAIL**  
1" = 1'-0"



**PARAPET REINFORCEMENT**  
1" = 1'-0"



**DECK OVERHANG DETAIL**  
3/8" = 1'-0"



BORING: CR-1		DATE DRILLED: 9/10/12			
STATION: 3+61.93		ELEVATION: 38.73			
OFFSET: 10.5 L		NORTHING: 378176.13			
		EASTING: 617406.97			
COMMENTS: N/A					
SAMPLE INFORMATION					
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0	5	MOIST MEDIUM DENSE ORANGE SILTY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL.	A-2-4(0)	
		6			
		6			
	3.0	6			
2	3.0	7	WET MEDIUM DENSE TAN FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	
		10			
		11			
	8.0	11			
3	8.0	2	WET LOOSE TAN COARSE SAND W/TRACE OF FINE SAND, FINE GRAVEL AND SILT.	A-1-B	WATER TABLE @ 10.7 FT DEPTH
		3			
		4			
	13.0	4			
4	13.0	1	WET LOOSE TAN COARSE TO FINE SAND W/TRACE OF SILT AND FINE GRAVEL.	A-1-B	
		3			
		4			
	18.0	4			
5	18.0	6	WET MEDIUM DENSE TAN COARSE SAND W/SOME FINE GRAVEL, TRACE OF FINE SAND AND SILT.	A-1-B	
		6			
		8			
	23.0	8			
6	23.0	10	WET MEDIUM DENSE ORANGE COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF SILT.	A-1-B	
		12			
		12			
	28.0	14			
7	28.0	7	SATURATED HARD GRAY FINE SANDY SILT W/SOME COARSE SAND.	A-4(0)	
		17			
		18			
		25			
8	33.0	3	SATURATED STIFF GRAY FINE SANDY SILT W/TRACE OF COARSE SAND AND ORGANIC MATTER.	A-4(0)	
		5			
		7			
	38.0	10			
9	38.0	6	SATURATED VERY STIFF GRAY FINE SANDY SILT W/SOME ORGANIC MATTER, TRACE OF COARSE SAND.	A-4(0)	
		7			
		10			
	43.0	11			
10	43.0	5	SATURATED VERY STIFF GRAY FINE SANDY SILT W/TRACE OF COARSE SAND AND ORGANIC MATTER.	A-4(0)	EPT
		9			
		10			
	48.0	12			
11	48.0	10	SATURATED VERY STIFF GRAY FINE SANDY CLAY W/SOME SILT, TRACE OF COARSE SAND.	A-7-5(12)	
		11			
		13			
	53.0	21			
12	53.0	15	SATURATED VERY STIFF GRAY FINE SANDY CLAY W/SOME SILT, TRACE OF COARSE SAND.	A-7-5(13)	
		10			
		13			
	58.0	13			
13	58.0	7	SATURATED VERY STIFF GRAY ORGANIC FINE SANDY CLAY W/SOME SILT, TRACE OF COARSE SAND.	A-7-5(57)	
		10			
		11			
	63.0	16			
14	63.0	8	SATURATED VERY STIFF GRAY ORGANIC CLAYEY FINE SANDY SILT W/TRACE OF COARSE SAND.	A-5(6)	
		10			
		11			
	68.0	8			
15	68.0	7	SATURATED VERY STIFF GRAY ORGANIC FINE SANDY SILT W/SOME CLAY, TRACE OF COARSE SAND.	A-5(7)	
		11			
		11			
	73.0	12			
16	73.0	5	SATURATED STIFF GRAY ORGANIC CLAY W/SOME FINE SAND AND SILT, TRACE OF COARSE SAND.	A-7-5(17)	
		6			
		9			
	78.0	10			
17	78.0	5	SATURATED VERY STIFF GRAY ORGANIC FINE SANDY CLAY W/SOME SILT, TRACE OF COARSE SAND.	A-7-5(12)	
		8			
		11			
	83.0	11			
18	83.0	6	SATURATED VERY STIFF GRAY ORGANIC FINE SANDY CLAY W/SOME SILT, TRACE OF COARSE SAND.	A-7-5(14)	
		8			
		10			
	88.0	14			
19	88.0	5	SATURATED VERY STIFF GRAY ORGANIC FINE SANDY CLAY W/SOME SILT, TRACE OF COARSE SAND.	A-7-5(7)	
		9			
		9			
	93.0	9			
20	93.0	7	SATURATED MEDIUM DENSE GRAY SILTY FINE SAND W/SOME ORGANIC MATTER, TRACE OF COARSE SAND.	A-2-4(0)	
		8			
		12			
	98.0	14			
	98.0		END BORING.		
	100.0				

BORING: CR-2		DATE DRILLED: 9/10/12			
STATION: 2+49.57		ELEVATION: 38.40			
OFFSET: 17.25 R		NORTHING: 378201.54			
		EASTING: 617235.74			
COMMENTS: N/A					
SAMPLE INFORMATION					
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0	8	MOIST MEDIUM DENSE BROWN COARSE TO FINE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-1-B	
		11			
	0.5	9			
2	0.5	4	MOIST LOOSE BROWN SILTY COARSE TO FINE SAND W/TRACE OF FINE GRAVEL.	A-2-4	
		4			
	4.0	8			
3	4.0	5	WET LOOSE TANNISH GRAY COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
		5			
		6			
	9.0	10			
4	9.0	5	WET MEDIUM DENSE GRAY COARSE SAND W/SOME FINE SAND, FINE GRAVEL AND SILT.	A-1-B	WATER TABLE @ 11.0 FT DEPTH
		6			
		5			
	14.0	4			
	19.0	2			
6	19.0	7	WET MEDIUM DENSE BROWN COARSE SAND W/SOME FINE GRAVEL, TRACE OF COARSE SAND AND SILT.	A-1-B	
		8			
		13			
	23.0	12			
7	23.0	9	SATURATED MEDIUM DENSE GRAY SILTY COARSE SAND W/SOME FINE SAND.	A-1-B	
		8			
		11			
	28.0	14			
8	28.0	11	SATURATED VERY DENSE GRAY COARSE TO FINE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-2-4	
		24			
	33.0	50			EPT
9	33.0	4	SATURATED VERY STIFF GRAY FINE SANDY SILT W/TRACE OF COARSE SAND.	A-4	
		12			
		15			
	38.0	17			
10	38.0	6	SATURATED VERY STIFF GRAY FINE SANDY SILT W/SOME COARSE SAND.	A-4	
		9			
		12			
	43.0	15			
11	43.0	9	SATURATED HARD GRAY FINE SANDY SILT W/TRACE OF COARSE SAND.	A-4	
		16			
		26			
	48.0	37			
12	48.0	8	SATURATED DENSE GRAY CLAYEY COARSE TO FINE SAND W/SOME SILT.	A-2-4	
		14			
		18			
	53.0	27			
13	53.0	7	SATURATED MEDIUM DENSE GRAY CLAYEY COARSE TO FINE SAND W/SOME SILT.	A-2-4	
		10			
		16			
	58.0	26			
14	58.0	9	SATURATED HARD GRAY COARSE TO FINE SANDY CLAY W/SOME SILT.	A-7-6	
		15			
		20			
	63.0	15			
15	63.0	7	SATURATED VERY STIFF GRAY ORGANIC COARSE TO FINE SANDY CLAY W/SOME SILT.	A-7-6	
		11			
		14			
	68.0	18			
16	68.0	7	SATURATED VERY STIFF GRAY ORGANIC COARSE SANDY CLAY W/SOME FINE SAND AND SILT.	A-7-6	
		9			
		11			
	73.0	17			
17	73.0	8	SATURATED VERY STIFF GRAY ORGANIC FINE SANDY CLAY W/SOME COARSE SAND AND SILT.	A-7-6	
		11			
		16			
	78.0	17			
18	78.0	7	SATURATED VERY STIFF GRAY ORGANIC CLAY W/SOME FINE TO COARSE SAND AND SILT.	A-7-6	
		11			
		15			
	83.0	20			
19	83.0	9	SATURATED VERY STIFF GRAY ORGANIC COARSE TO FINE SANDY CLAY W/SOME SILT.	A-7-6	
		10			
		18			
	88.0	19			
20	88.0	15	SATURATED MEDIUM DENSE GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF ORGANIC MATTER.	A-2-4	
		10			
		14			
	93.0	17			
21	93.0	11	SATURATED DENSE GRAY SILTY FINE SAND W/SOME COARSE SAND, TRACE OF ORGANIC MATTER.	A-2-4	
		15			
		24			
	98.0	28			
	98.0		END BORING		
	100.0				

NOTES:

- BORING LOGS CREATED BY THE DELAWARE DEPARTMENT OF TRANSPORTATION. SUBSURFACE EXPLORATION COMPLETED BY THE WALTON CORPORATION.
- REFER TO CONSTRUCTION PLAN SHEET (PAGE 6) FOR APPROXIMATE BORING LOCATIONS. BORING LOGS ARE LABELED AS CR-1 AND CR-2.
- SOIL SAMPLING: 2 IN. OUTSIDE DIA. SPLIT BARREL SAMPLER, DRIVEN WITH A 140 LB. HAMMER FALLING 30 IN.
- ALL DEPTHS GIVEN ARE IN FEET.



ADDENDUMS / REVISIONS

BR 2-033B ON SR 15, CANTERBURY ROAD OVER HUDSON BRANCH

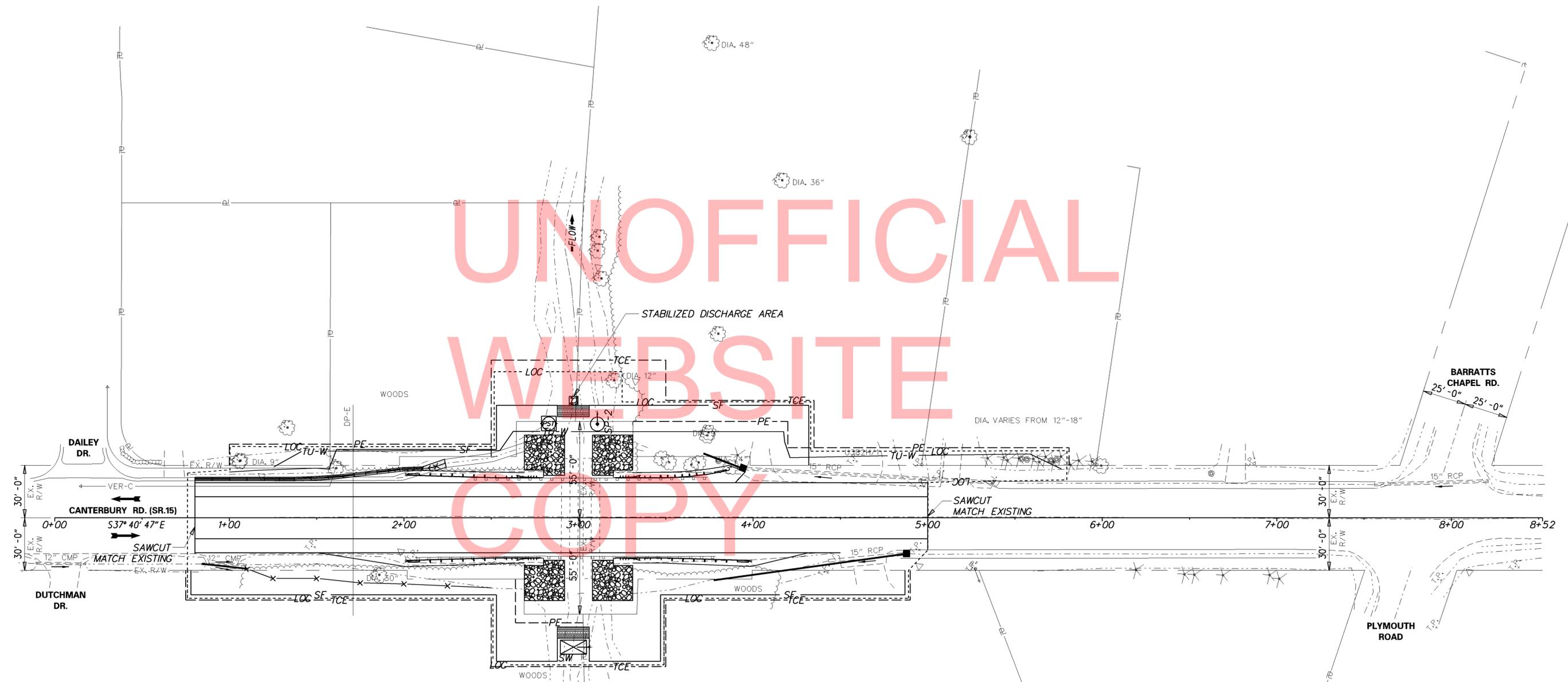
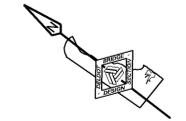
CONTRACT  
T201107202  
COUNTY  
KENT

BRIDGE NO.  
DESIGNED BY: TRS  
CHECKED BY: EM

2-033B

BORING LOG

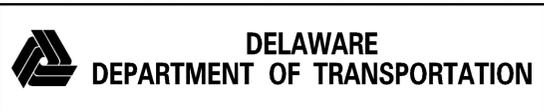
SHEET NO.  
15  
TOTAL SHTS.  
23



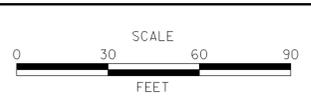
UNOFFICIAL  
WEBSITE  
COPY

**SEQUENCE OF CONSTRUCTION:**

1. INSTALL MAINTENANCE OF TRAFFIC DEVICES AS PER THE DETOUR PLAN.
2. PLACE SILT FENCE, EXCEPT CONNECTION TO SANDBAG DIKES, AS SHOWN ON THE PLAN.
3. REMOVE ALL EXISTING GUARDRAIL.
4. INSTALL PILES AND SHEET PILES AND CONSTRUCT THE ABUTMENTS AND WINGWALLS.
5. CONSTRUCT THE SANDBAG DIKES IN THE EXISTING CHANNEL TO ELEVATION 33.00 AND CONNECT THE SILT FENCE TO THE SANDBAG DIKE TO ENCLOSE THE WORK AREA. PROVIDE A 1'x4' WEIR IN TOP OF SANDBAG DIKE.
6. INSTALL STABILIZED OUTFALL USING R-5 RIPRAP. INSTALL SUMP PIT AND PORTABLE SEDIMENT TANK FOR USE IN DEWATERING THE WORK AREA. DEWATER WORK AREA IN ACCORDANCE WITH SECTION 111 OF DELDOT STANDARD SPECIFICATIONS.
7. INSTALL WATER PUMP SYSTEM TO MAINTAIN THE STREAM FLOW AROUND THE WORK AREA. THE STREAM DIVERSION SHALL BE INSTALLED AS PER ITEM 265500 - STREAM DIVERSIONS.
8. REMOVE ALL EXISTING PIPES. PAYMENT UNDER 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
9. PERFORM STREAM RESTORATION AND SLOPE TREATMENT AS OUTLINED IN THE ENVIRONMENTAL COMPLIANCE NOTES.
10. REMOVE SUMP PIT AND COMPLETE STREAM CHANNEL WORK AS OUTLINED IN THE ENVIRONMENTAL COMPLIANCE NOTES. REMOVE SANDBAGS AND RIPRAP USED FOR STABILIZED OUTFALL. CHANGE CONFIGURATION OF THE SILT FENCE TO ENCLOSE THE WORK AREA IF NECESSARY.
11. INSTALL BEAMS AND CONSTRUCT PROPOSED DECK AND PARAPETS.
12. CONSTRUCT ROADWAY APPROACHES AND INSTALL GUARDRAIL IN ACCORDANCE WITH THE PLANS. COMPLETE ANY OTHER MISCELLANEOUS ITEMS.
13. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES AND ALL MAINTENANCE OF TRAFFIC DEVICES.



ADDENDUMS / REVISIONS



**BR. 2-033B ON SR 15, CANTERBURY ROAD OVER HUDSON BRANCH**

CONTRACT T201107202	BRIDGE NO. 2-033B
COUNTY KENT	DESIGNED BY: TRS CHECKED BY: EM

**CONSTRUCTION SEQUENCE AND EROSION CONTROL PLAN**

SHEET NO.	16
TOTAL SHTS.	23

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, THE ENVIRONMENTAL STUDIES SECTION SHALL BE CONTACTED AT (302)760-2264 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): \*3(a) AND (c) (NO PCN)  
 DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): PROJECT CONSISTENT WITH DEL. CODE CH. 72, SECTION 7217 (b), AS AMENDED BY SB 186  
 DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): ISSUED (PROJECT IS NOT LOCATED IN CRW).

\* THE PERMITS/APPROVALS LISTED ARE THOSE REQUIRED FOR THIS PROJECT. THE ENVIRONMENTAL STUDIES SECTION IS RESPONSIBLE FOR COORDINATING AND/OR OBTAINING THIS APPROVAL.

NOTE: THE ABSENCE OF ASTERISKS AFTER A PERMIT (COE, WLSL, WQC, CZM) INDICATES THAT COORDINATION HAS BEEN DONE WITH THAT AGENCY BUT NO WRITTEN AUTHORIZATION WAS REQUIRED. AS SUCH, NO PAPERWORK FROM THAT AGENCY SHOULD BE ANTICIPATED.

- B. CONSTRUCTION RESTRICTIONS:  
 FISHERIES - IRONCOLOR SHINER, NO IN-WATER WORK FROM APRIL 15 TO JULY 1 (INCLUSIVE).  
 ENDANGERED SPECIES - NONE  
 MIGRATORY BIRDS - NONE

3. CULTURAL RESOURCE ISSUES:

- A. NONE

4. STREAM RESTORATION AND SLOPE RIPRAP TREATMENT

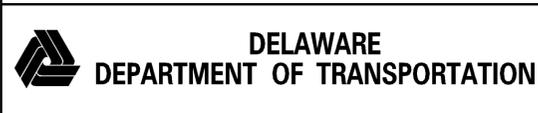
- A. THE CONTRACTOR SHALL FOLLOW THE SPECIAL PROVISIONS OF ITEM \*712531 - CHANNEL BED FILL IN REGARDS TO THE SALVAGING OF ON-SITE NATURAL STREAM BOTTOM MATERIAL OR THE FURNISHING OF OFF-SITE MATERIAL. ALL RIPRAP IN THE CHANNEL BOTTOM (I.E. BELOW THE WATER LINE) SHALL BE RECESSED ONE FOOT BELOW STREAM BED ELEVATION AND CHOKED WITH BORROW TYPE 'B' SO THAT ALL OF THE VOIDS IN THE RIPRAP ARE FILLED WITH MATERIAL. PAYMENT UNDER ITEM \*209002 - BORROW TYPE 'B'. THE RIPRAP SHALL THEN BE COVERED WITH 12" CHANNEL BED FILL TO MATCH EXISTING ELEVATIONS. PAYMENT UNDER ITEM \*712531 - CHANNEL BED FILL.
- B. 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) SHALL BE RESTORED TO EXISTING CONDITIONS. ANY CAVITIES OR SCOUR HOLES RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE FILLED WITH CHANNEL BED FILL. PAYMENT UNDER ITEM \*712531 - 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. ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, SHALL BE CHOKED WITH DELAWARE \*57 STONE, FILLED WITH TOPSOIL, SEEDED AND MULCHED WITH SOIL RETENTION BLANKET MULCH, TYPE 5. 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. AN ADDITIONAL 4" TOPSOIL LAYER SHALL BE PLACED ON TOP OF THE RIPRAP. SEEDING SHALL BE STREAMBANK SEED MIX (ITEM NO. 734531) FROM STREAM BASE FLOW ELEVATION (EL. 29.00) TO TOP OF RIPRAP AND PERMANENT GRASS SEEDING DRY GROUND (ITEM NO. 734013) EVERYWHERE ELSE, EXCEPT WETLANDS. FOLLOWING THE SEEDING OPERATION, ITEM \*735535 SOIL RETENTION BLANKET MULCH, TYPE 5, OR OTHER BLANKET AS SHOWN ON THE PLANS SHALL BE INSTALLED. ALL WORK, STARTING WITH THE INITIAL CHOKING WITH TOPSOIL THROUGH THE SEEDING AND MULCHING, SHALL BE COMPLETED PRIOR TO ANY RAIN EVENT. PAYMENT FOR DELAWARE \*57 STONE IS INCIDENTAL TO THE RIPRAP ITEM.

5. CONTRACTOR SHALL ACCESS STREAM FROM PARCELS 2-L AND 1-R ONLY.

6. CLEARING IN WETLAND AREAS SHALL BE KEPT TO A MINIMUM ABSOLUTELY NECESSARY FOR CONSTRUCTION ACCESS. IN WETLAND AREAS THAT ARE CLEARED, THERE SHALL BE NO GRUBBING EXCEPT WHERE NECESSARY TO CONSTRUCT PROJECT COMPONENTS SUCH AS FOUNDATIONS AND RIPRAP PROTECTION. VEGETATION SHALL BE CUT FLUSH WITH THE GROUND (I.E. NO DISTURBANCE OF THE ROOT MAT).

7. NATURALIZE PLANTING OF RED MAPLES (1-1/2 to 1-3/4" CAL., BB OR CONT.) ON 10' CENTER-SPACING (8' MIN. AND 12' MAX.) WITHIN DISTURBED WETLAND AREAS (ALL WETLAND AREAS WITHIN LOC, EXCLUDING AREA WITHIN THE EXISTING RIGHT OF WAY AND PERMANENT EASEMENT AREAS). 3 RED MAPLE TREES (TOTAL) SHALL BE PLANTED IN DISTURBED WETLAND AREAS (PAYMENT UNDER ITEM \*737523 - PLANTINGS). WET GROUND EROSION CONTROL GRASS SEEDING - FLATS, SHALL BE PLACED IN DISTURBED WETLAND AREAS (PAYMENT UNDER ITEM \*734552 - WET GROUND EROSION CONTROL GRASS SEEDING - FLATS). FOLLOWING THE PLANTING OPERATION, ITEM \*735535 SOIL RETENTION BLANKET MULCH, TYPE 5, OR OTHER BLANKET AS SHOWN ON THE PLANS SHALL BE INSTALLED. CONTRACTOR SHALL BE REQUIRED TO WATER ALL MAJOR AND MINOR TREES, SHRUBS AND ALL HERBACEOUS BEDS BI-WEEKLY DURING THE PERIOD FROM JUNE 15 THROUGH OCTOBER 1. OVER THE COURSE OF THIS PERIOD, THERE ARE NINE DISTINCT WATERINGS. WATERING, ONCE INITIATED, SHALL CONTINUE WITHOUT INTERRUPTION UNTIL ALL PLANTS ON THE PROJECT HAVE BEEN WATERED. PAYMENT SHALL BE PER 1,000 GALS OF WATER APPLIED AND SHALL BE BASED ON APPLYING FIFTEEN (15) GALLONS OF WATER TO EACH PLANT EACH OF THE NINE WATERINGS. PAYMENT SHALL BE MADE UNDER ITEM \*737523 - PLANTINGS. NO BREAKOUT SHEET IS INCLUDED FOR ITEM \*737523 - PLANTINGS.

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ADDENDUMS / REVISIONS

NOT TO SCALE

BR 2-033B ON SR15, CANTERBURY ROAD OVER HUDSON BRANCH

CONTRACT	BRIDGE NO.	2-033B
T201107202	DESIGNED BY: TRS	
COUNTY	CHECKED BY: EM	
KENT		

ENVIRONMENTAL NOTES
SHEET NO.
17
TOTAL SHTS.
23



**CHANGEABLE MESSAGE BOARDS:**

**CMS-1** PRIOR TO DETOUR (10 DAYS PRIOR TO BEGINNING OF DETOUR)

SR 15 AT IRISH HILL RD TO CLOSE STARTING XXXXXX

**CMS-1** DURING DETOUR (DISPLAYED UP TO 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

SR 15 AT IRISH HILL RD CLOSED FOLLOW DETOUR

**CMS-2** PRIOR TO DETOUR (10 DAYS PRIOR TO BEGINNING OF DETOUR)

SR 15 AT PLYMOUTH TO CLOSE STARTING XXXXXX

**CMS-2** DURING DETOUR (DISPLAYED UP TO 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

SR 15 AT PLYMOUTH CLOSED FOLLOW DETOUR

**SPECIAL SIGNS:**

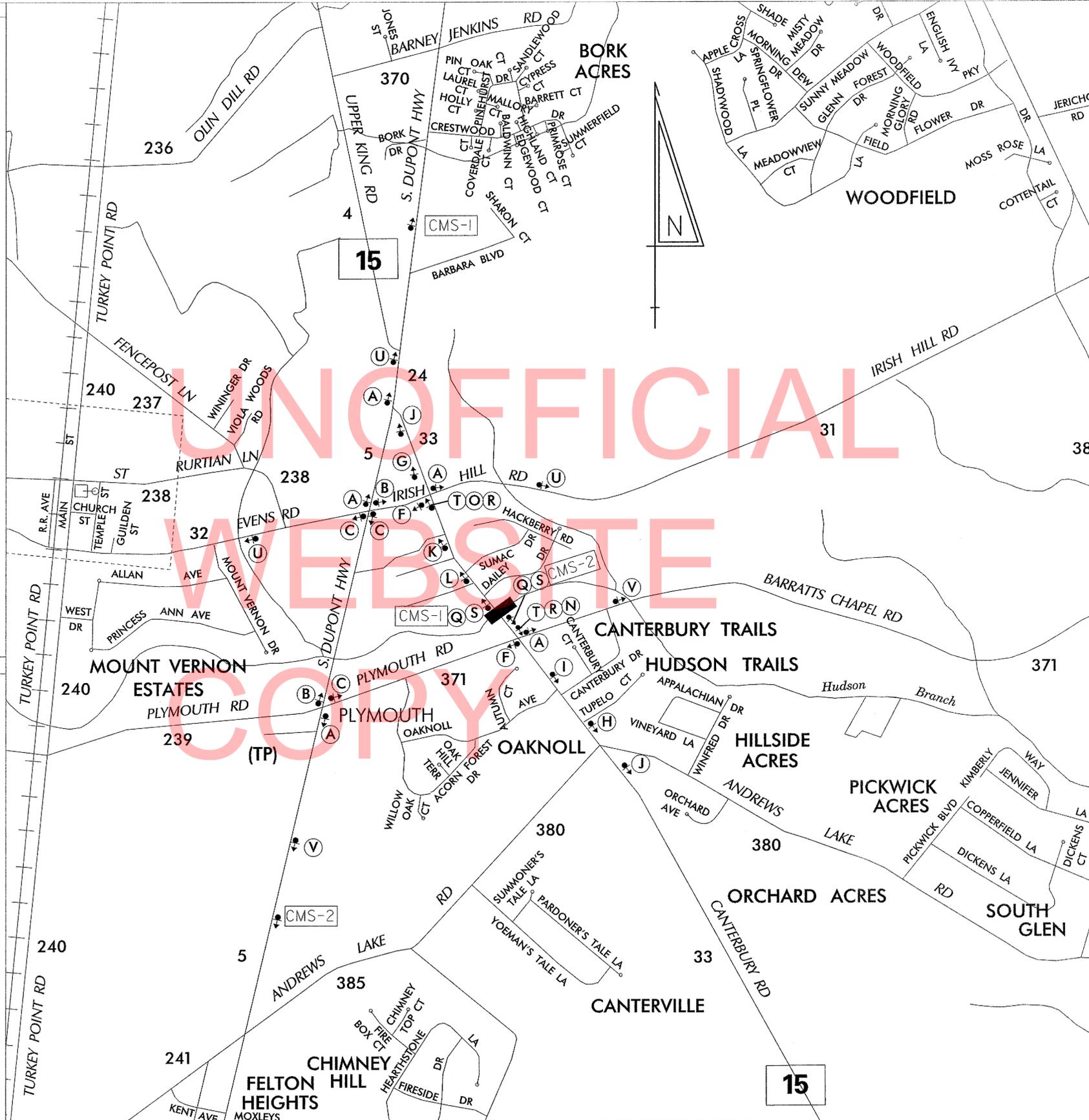
48" x 96" sign: 15 CLOSED SOUTH OF Irish Hill Rd FOLLOW DETOUR

24" x 6" sign: C

48" x 96" sign: 15 CLOSED NORTH OF Plymouth Rd FOLLOW DETOUR

24" x 6" sign: C

D/G FLOURESCENT ORANGE; BLACK LEGEND



**LEGEND:**

Legend items A through T, including signs for detour directions, road closures, and road names.

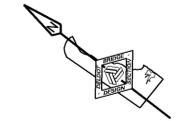
**GENERAL NOTES:**

- ALL DETOUR SIGNING INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE TO THE DE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE-MUTCD PART 6) FOR LIGHTS, BARRICADES AND SIGNS (AS PER LATEST REVISION)
- FIELD CONDITIONS MAY DICTATE CHANGES AT SOME TIME DURING THE LIFE OF THE CONTRACT. IN THE EVENT OF OMISSIONS OR CORRECTIONS, THE SIGNING PROVISIONS OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES WILL PREVAIL.
- SIGNS J THROUGH L AND P THROUGH R, THE WORD (ROAD) SHOULD BE CHANGED TO RAMP, R/R OR BRIDGE WHERE APPLICABLE.
- WARNING SIGNS SHOULD BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT SHEETING.
- \*S\* BARRICADES SHALL COMPLETELY RUN THE FULL WIDTH OF ROADWAY.
- BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.

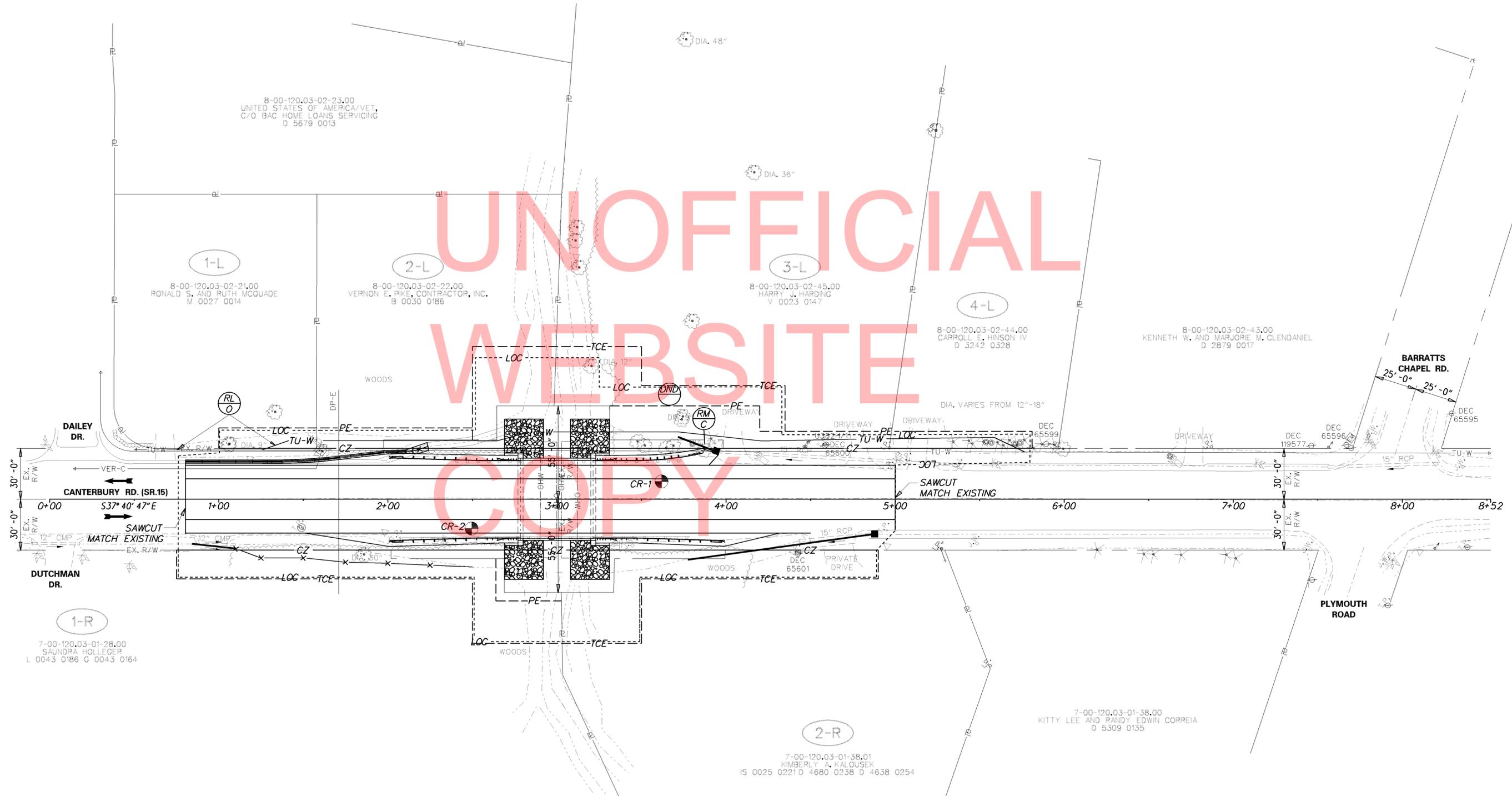
W:\MSV8\CELLS\PROJDEV\SR.CEL

RECOMMENDED *[Signature]* DATE: 9-7-11 | RECOMMENDED *[Signature]* DATE: 0908 11 | RECOMMENDED \_\_\_\_\_ DATE: \_\_\_\_\_ | APPROVED CHIEF SAFETY OFFICER *[Signature]* DATE: 9-21-11 | APPROVED TRAFFIC ENGINEER *[Signature]* DATE: 9/21/11

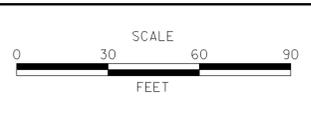
<p><b>DELAWARE DEPARTMENT OF TRANSPORTATION</b></p>	ADDENDUM / REVISIONS		<p>NOT TO SCALE</p>	<p>BR 2-033B on SR 15, CANTERBURY ROAD OVER HUDSON BRANCH</p>	CONTRACT	ROAD NO.	<p><b>DETOUR PLAN</b> CANTERBURY RD-SR 15 AT IRISH HILL RD &amp; PLYMOUTH RD</p>	SHEET NO.
	T201107202	K33			DESIGNED BY: MFR	19		
	COUNTY	CHECKED BY: ASW			TOTAL SHTS.	23		



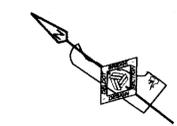
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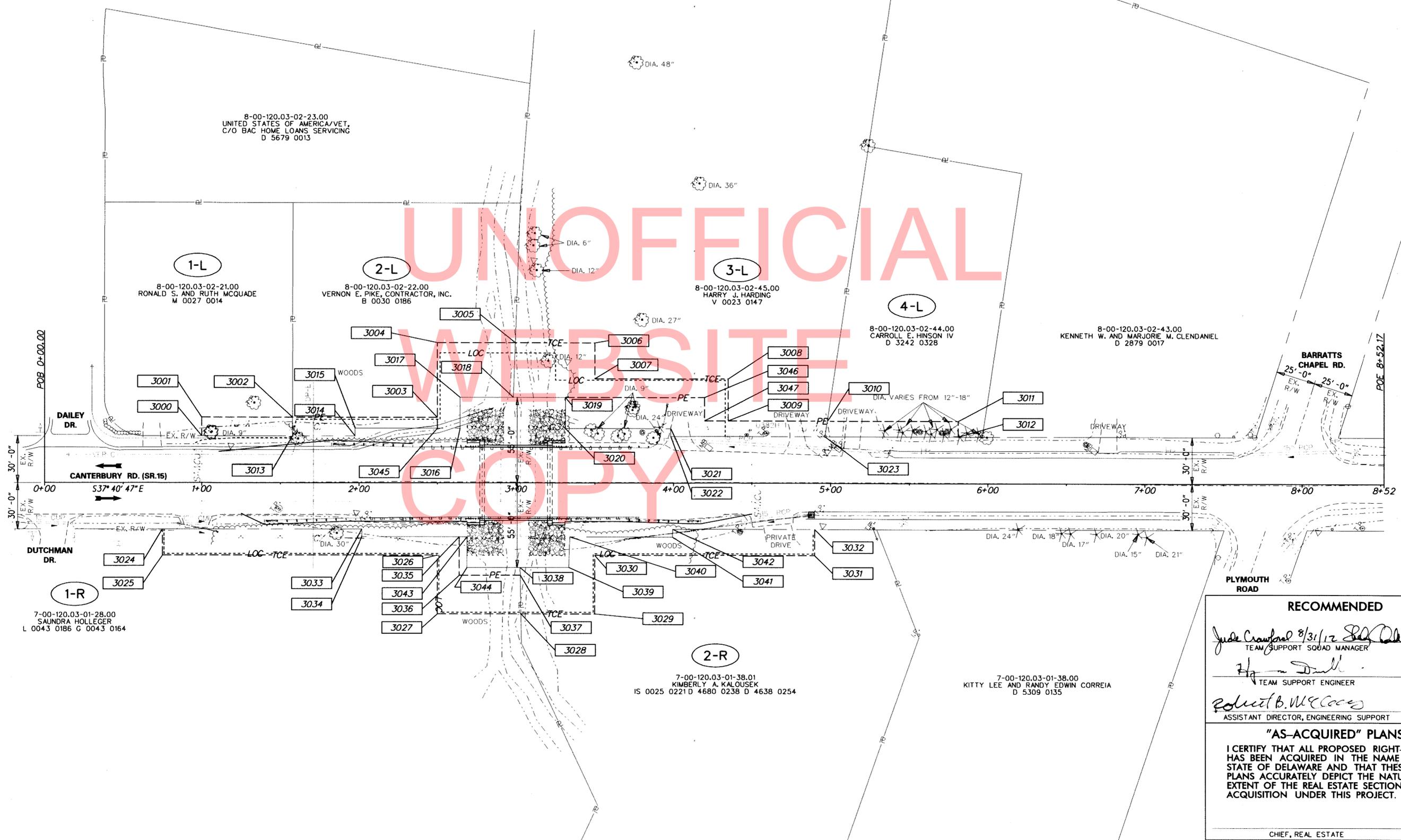
ADDENDUMS / REVISIONS	



CONTRACT	BRIDGE NO.	<b>2-033B</b>
T201107202	DESIGNED BY:	TRS
COUNTY	CHECKED BY:	EM
KENT		



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COPY



**RECOMMENDED**

*Jude Crawford* 8/31/12 *Shelley Cole* 8/31/12  
 TEAM SUPPORT SQUAD MANAGER DATE

*Heather Daulton* 8-31-12  
 TEAM SUPPORT ENGINEER DATE

*Robert B. McCrossin* 8/31/12  
 ASSISTANT DIRECTOR, ENGINEERING SUPPORT DATE

**"AS-ACQUIRED" PLANS**

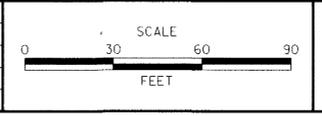
I CERTIFY THAT ALL PROPOSED RIGHT-OF-WAY HAS BEEN ACQUIRED IN THE NAME OF THE STATE OF DELAWARE AND THAT THESE PLANS ACCURATELY DEPICT THE NATURE AND EXTENT OF THE REAL ESTATE SECTION ACQUISITION UNDER THIS PROJECT.

CHIEF, REAL ESTATE DATE

Y:\KENT\033\BRIDGE\T201107202\PLANS\CP.DGN

**DELAWARE DEPARTMENT OF TRANSPORTATION**

ADDENDUMS / REVISIONS



**BR. 2-033B ON SR 15, CANTERBURY ROAD OVER HUDSON BRANCH**

CONTRACT	BRIDGE NO.	<b>2-033B</b>
T201107202	DESIGNED BY:	NC
COUNTY	CHECKED BY:	JM
KENT		

**RIGHT-OF-WAY PLAN  
SHEET 1 OF 3**

SHEET NO.	21
TOTAL SHTS.	23

ASSESSMENT NUMBER	OWNERSHIP OF RECORD				TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)				
8-00-120.03-02-21.00	(1-L) RONALD S. AND RUTH MCOUADE				P/E	M00270014	0.409				
<b>ALIGNMENT NUMBER &amp; DESCRIPTION:</b> 5000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
3000	5000	1+00.00	-30.00	378441.7590	617343.6370	N 52°19' 13.05" E	12.0000				
3001	5000	1+00.00	-42.00	378449.0940	617353.1342	S 37°40' 46.95" E	57.7900				
3002	5000	1+57.79	-42.00	378403.3566	617388.4582	S 52°27' 48.72" W	12.0000				
3013	5000	1+57.76	-30.00	378396.0454	617378.9426	N 37°40' 46.95" W	57.7600				
3000	5000	1+00.00	-30.00	378441.7590	617343.6370						
FIGURE 4000 AREA = 693.3000 SQ. FT. (0.0159 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD				TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)				
8-00-120.03-02-22.00	(2-L) VERNON E. PIKE, CONTRACTOR, INC.				TCE	B00300186	0.462				
<b>ALIGNMENT NUMBER &amp; DESCRIPTION:</b> 5000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
3003	5000	2+50.00	-42.00	378330.3779	617444.8213	N 52°19' 13.05" E	48.0000				
3004	5000	2+50.00	-90.00	378359.7178	617482.8104	S 37°40' 46.95" E	49.6100				
3005	5000	2+99.61	-90.00	378320.4544	617513.1343	S 54°21' 56.53" W	35.0223				
3018	5000	2+98.36	-55.00	378300.0501	617484.6699	N 37°40' 46.95" W	33.8900				
3017	5000	2+64.47	-55.00	378326.8720	617463.9547	S 52°19' 13.05" W	20.0000				
3016	5000	2+64.47	-35.00	378314.6471	617448.1259	N 37°40' 46.95" W	14.4700				
3045	5000	2+50.00	-35.00	378326.0992	617439.2812	N 52°19' 13.05" E	7.0000				
3003	5000	2+50.00	-42.00	378330.3779	617444.8213						
FIGURE 4001 AREA = 2003.8750 SQ. FT. (0.0460 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD				TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)				
8-00-120.03-02-22.00	(2-L) VERNON E. PIKE, CONTRACTOR, INC.				P/E	B00300186	0.462				
<b>ALIGNMENT NUMBER &amp; DESCRIPTION:</b> 5000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
3013	5000	1+57.76	-30.00	378396.0454	617378.9426	N 52°27' 48.72" E	12.0000				
3002	5000	1+57.79	-42.00	378403.3566	617388.4582	S 37°40' 46.95" E	92.2100				
3003	5000	2+50.00	-42.00	378330.3779	617444.8213	S 52°19' 13.05" W	7.0000				
3045	5000	2+50.00	-35.00	378326.0992	617439.2812	N 37°40' 46.95" W	52.5300				
3015	5000	1+97.47	-35.00	378367.6736	617407.1724	S 52°19' 13.05" W	5.0000				
3014	5000	1+97.47	-30.00	378364.6173	617403.2152	N 37°40' 46.95" W	39.7100				
3013	5000	1+57.76	-30.00	378396.0454	617378.9426						
FIGURE 4002 AREA = 844.0500 SQ. FT. (0.0194 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD				TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)				
8-00-120.03-02-45.00	(3-L) HARRY J. HARDING				TCE	V00230147	1.616				
<b>ALIGNMENT NUMBER &amp; DESCRIPTION:</b> 5000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
3018	5000	2+98.36	-55.00	378300.0501	617484.6699	N 54°21' 56.53" E	35.0223				
3005	5000	2+99.61	-90.00	378320.4544	617513.1343	S 37°40' 46.95" E	50.3900				
3006	5000	3+50.00	-90.00	378280.5738	617543.9351	S 52°19' 13.05" W	23.0000				
3007	5000	3+50.00	-67.00	378266.5151	617525.7319	S 37°40' 46.95" E	84.8900				
3008	5000	4+34.89	-67.00	378199.3298	617577.6207	S 52°19' 13.05" W	27.0000				
3009	5000	4+34.89	-40.00	378182.8261	617556.2518	N 37°40' 46.95" W	14.9800				
3047	5000	4+19.91	-40.00	378194.6819	617547.0953	N 52°19' 13.05" E	15.0000				
3046	5000	4+19.91	-55.00	378203.8506	617558.9669	N 37°40' 46.95" W	121.5500				
3018	5000	2+98.36	-55.00	378300.0501	617484.6699						
FIGURE 4003 AREA = 3028.9050 SQ. FT. (0.0695 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD				TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)				
8-00-120.03-02-45.00	(3-L) HARRY J. HARDING				P/E	V00230147	1.616				
<b>ALIGNMENT NUMBER &amp; DESCRIPTION:</b> 5000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
3020	5000	3+31.36	-35.00	378261.7076	617489.0122	N 52°19' 13.05" E	20.0000				
3019	5000	3+31.36	-55.00	378273.9326	617504.8410	S 37°40' 46.95" E	88.5500				
3046	5000	4+19.91	-55.00	378203.8506	617558.9669	S 52°19' 13.05" W	15.0000				
3047	5000	4+19.91	-40.00	378194.6819	617547.0953	S 37°40' 46.95" E	78.1100				
3010	5000	4+98.02	-40.00	378132.8625	617594.8398	S 60°44' 20.24" W	10.1089				
3023	5000	4+96.54	-30.00	378127.9213	617586.0207	N 37°40' 46.95" W	98.1800				
3022	5000	3+98.36	-30.00	378205.6249	617526.0085	N 52°19' 13.05" E	5.0000				
3021	5000	3+98.36	-35.00	378208.6812	617529.9657	N 37°40' 46.95" W	67.0000				
3020	5000	3+31.36	-35.00	378261.7076	617489.0122						
FIGURE 4004 AREA = 2652.4500 SQ. FT. (0.0609 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD				TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)				
8-00-120.03-02-44.00	(4-L) CARROLL E. HINSON IV				P/E	D32420328	0.386				
<b>ALIGNMENT NUMBER &amp; DESCRIPTION:</b> 5000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
3023	5000	4+96.54	-30.00	378127.9213	617586.0207	N 60°44' 20.24" E	10.1089				
3010	5000	4+98.02	-40.00	378132.8625	617594.8398	S 37°40' 46.95" E	82.9800				
3011	5000	5+81.00	-40.00	378067.1888	617645.5610	S 52°19' 13.05" W	10.0000				
3012	5000	5+81.00	-30.00	378061.0763	617637.6466	N 37°40' 46.95" W	84.4600				
3023	5000	4+96.54	-30.00	378127.9213	617586.0207						
FIGURE 4005 AREA = 837.2000 SQ. FT. (0.0192 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD				TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)				
7-00-120.03-01-28.00	(1-R) DONALD W. & SAUNDRA L. HOLLEGER				TCE	L00430186	26.154				
<b>ALIGNMENT NUMBER &amp; DESCRIPTION:</b> 5000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
3024	5000	0+75.00	30.00	378424.8702	617280.8694	S 37°40' 46.95" E	126.9400				
3033	5000	2+01.94	30.00	378324.4048	617358.4610	S 52°19' 13.05" W	5.0000				
3034	5000	2+01.94	35.00	378321.3485	617354.5038	S 37°40' 46.95" E	62.0000				
3035	5000	2+63.94	35.00	378272.2793	617392.4011	S 52°19' 13.05" W	25.0000				
3036	5000	2+63.94	60.00	378256.9981	617372.6151	S 37°40' 46.95" E	38.7400				
3037	5000	3+02.68	60.00	378226.3377	617396.2948	S 51°10' 28.31" W	25.0050				
3028	5000	3+03.18	85.00	378210.6608	617376.8145	N 37°40' 46.95" W	53.1800				
3027	5000	2+50.00	85.00	378252.7496	617344.3084	N 52°19' 13.05" E	38.0000				
3026	5000	2+50.00	47.00	378275.9770	617374.3831	N 37°40' 46.95" W	175.0000				
3025	5000	0+75.00	47.00	378414.4790	617267.4149	N 52°19' 13.05" E	17.0000				
3024	5000	0+75.00	30.00	378424.8702	617280.8694						
FIGURE 4006 AREA = 4406.4500 SQ. FT. (0.1012 ACRES)											

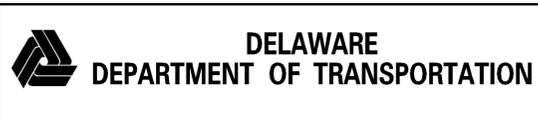
ASSESSMENT NUMBER	OWNERSHIP OF RECORD				TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)				
7-00-120.03-01-28.00	(1-R) DONALD W. & SAUNDRA L. HOLLEGER				P/E	L00430186	26.154				
<b>ALIGNMENT NUMBER &amp; DESCRIPTION:</b> 5000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
3035	5000	2+63.94	35.00	378272.2793	617392.4011	S 37°40' 46.95" E	5.0000				
3043	5000	2+68.94	35.00	378268.3221	617395.4574	S 52°19' 13.05" W	20.0000				
3044	5000	2+68.94	55.00	378256.0971	617379.6286	S 37°40' 46.95" E	33.6400				
3038	5000	3+02.58	55.00	378229.4731	617400.1909	S 51°10' 28.31" W	5.0010				
3037	5000	3+02.68	60.00	378226.3377	617396.2948	N 37°40' 46.95" W	38.7400				
3036	5000	2+63.94	60.00	378256.9981	617372.6151	N 52°19' 13.05" E	25.0000				
3035	5000	2+63.94	35.00	378272.2793	617392.4011						
FIGURE 4007 AREA = 293.4500 SQ. FT. (0.0067 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD				TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)				
7-00-120.03-01-28.01	(2-R) KIMBERLY A. KALOUSEK AND JOHN R. KALOUSEK				TCE	4638254	1.000				
<b>ALIGNMENT NUMBER &amp; DESCRIPTION:</b> 5000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
3038	5000	3+02.58	55.00	378229.4731	617400.1909	S 37°40' 46.95" E	30.9200				
3039	5000	3+33.50	55.00	378205.0018	617419.0907	N 54°00' 36.10" E	20.0087				
3040	5000	3+34.09	35.00	378216.7597	617435.2801	S 37°40' 46.95" E	65.3000				
3041	5000	3+99.39	35.00	378165.0787	617475.1945	N 53°55' 26.96" E	5.0020				
3042	5000	3+99.53	30.0								

COUNTY ASSESSMENT PARCEL NUMBER	PLAN SHEET NUMBER	OWNERSHIP OF RECORD	TITLE SOURCE	PROPERTY AREA BEFORE ACQUISITION (ACRE) D=DEED C=CALCULATED A=ASSESSMENT	ACQUISITION CODE FEE, R/W, P/E, TCE	AREA TO BE ACQUIRED				PROPERTY AREA REMAINING (SQ. FEET /ACRES)	DEED RECORD OF ACQUISITION	REMARKS
						ACQUISITION (SQ. FEET /ACRES)	AREA OCCUPIED BY EXISTING RIGHT OF WAY (SQ. FEET /ACRES)	EASEMENT				
								PERMANENT (SQ. FEET /ACRES)	TEMPORARY (SQ. FEET /ACRES)			
8-00-120.03-02-21.00	19	(1-L) RONALD S. AND RUTH MCQUADE	M00270014	C - 0.41	P/E			693.30 / 0.02		17122.74 / 0.39		
8-00-120.03-02-22.00	19	(2-L) VERNON E. PIKE, CONTRACTOR, INC.	B00300186	C - 0.46	TCE P/E			844.05 / 0.02	2003.875 / 0.05	19280.67 / 0.44		
8-00-120.03-02-45.00	19	(3-L) HARRY J. HARDING	V00230147	D - 1.62	TCE P/E			2652.45 / 0.06	3028.905 / 0.07	70379.892 / 1.62		
8-00-120.03-02-44.00	19	(4-L) CARROLL E. HINSON IV	D32420328	D - 0.39	P/E			837.20 / 0.02		16796.736 / 0.39		
7-00-120.03-01-28.00	19	(1-R) DONALD W. & SAUNDRA L. HOLLEGER	L00430186	D - 26.15	TCE P/E			293.45 / 0.01	4406.45 / 0.10	1139281.308 / 26.15		
7-00-120.03-01-38.01	19	(2-R) KIMBERLY A. KALOUSEK AND JOHN R. KALOUSEK	4638254	D - 1.00	TCE				3870.40 / 0.09	43560.00 / 1.00		

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COPY

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



ADDENDUMS / REVISIONS

**BR 2-033B ON SR15, CANTERBURY  
ROAD OVER HUDSON BRANCH**

CONTRACT T201107202	BRIDGE NO. <b>2-033B</b>
COUNTY KENT	DESIGNED BY: TRS
	CHECKED BY: EM

**RIGHT-OF-WAY  
TABULATION SHEET  
SHEET 3 OF 3**

SHEET NO. 23
TOTAL SHTS. 23