

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
	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
	ARTESIAN WATER COMPANY

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
	MANHOLE
	PAVEMENT PATCH
	PAVEMENT REMOVAL - TOPSOIL, SEED AND MULCH
	PIPE & DIRECTIONAL FLOW ARROW
	RIPRAP
	P.C.C. SIDEWALK @ 4"
	P.C.C. SIDEWALK @ 6"
	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
	MANHOLE
	MONUMENT - RIGHT-OF-WAY
	PIPE
	RELOCATE BY CONTRACTOR
	RELOCATE BY OTHERS
	REMOVE BY CONTRACTOR
	REMOVE BY OTHERS
	UNDERDRAIN / LENGTH
	UNDERDRAIN OUTLET PIPE
	UTILITY BOX
	UTILITY POLE

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)	
	2" WMA SUPERPAVE TYPE 'C' OVER 6" GRADED AGGREGATE BASE COURSE
	2" WMA SUPERPAVE TYPE 'C' OVER 2 1/4" WMA SUPERPAVE TYPE 'B' OVER 3" BITUMINOUS BASE COURSE OVER 8" GRADED AGGREGATE BASE COURSE
	2" MILLING 2" WMA SUPERPAVE TYPE 'C'

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	
	DELAWARE ELECTRIC COOPERATIVE
	VERIZON
	ARTESIAN WATER COMPANY

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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.
- 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 PRIOR TO THE EXECUTION OF THE CONTRACT. 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 PRIOR TO THE EXECUTION OF THE CONTRACT. 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	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 PRIOR TO THE EXECUTION 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 AWARDED CONTRACTOR, INCLUDE:

()	NONE
()	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
(X)	RASTER FILES, IN .PDF 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.

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

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

- 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 1.15 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

- ITEMS TO BE REMOVED UNDER ITEM *211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
 - REMOVAL OF THREE EXISTING CORRUGATED METAL PIPE ARCHES
 - REMOVAL OF EXISTING SACK RIP-RAP
 - REMOVAL OF EXISTING GUARDRAIL WHERE NOTED
 - REMOVAL OF EXISTING CURB WHERE NOTED
 - REMOVAL OF APPROXIMATELY 10 CY OF PCC LOCATED BETWEEN PIPES
- UNDERCUT EXCAVATION
SOIL BORINGS IDENTIFIED A SOIL LAYER DESCRIBED AS A "WET VERY LOOSE BROWN SILTY COARSE TO FINE SAND WITH TRACE OF FINE GRAVEL," AT THE APPROXIMATE ELEVATION OF THE PROPOSED COARSE AGGREGATE. THIS LAYER MAY BE UNACCEPTABLE FOR BEARING OF THE STRUCTURE AND SHALL BE EXCAVATED UNTIL SUITABLE MATERIAL IS REACHED AS DETERMINED BY THE FIELD ENGINEER. UNDERCUT SHALL BE LIMITED TO A MAXIMUM OF 3.0 FT IN DEPTH BELOW THE COARSE AGGREGATE LAYER. UNDERCUT PAYMENT SHALL BE UNDER ITEM *212000 - UNDERCUT EXCAVATION. UNDERCUT AREAS SHALL BE BACKFILLED WITH COARSE AGGREGATE, PAYMENT UNDER ITEM *608000 - COARSE AGGREGATE.
- A SUB-SURFACE EXPLORATION REVEALED EXISTING SOIL CONDITIONS TO INCLUDE SMALL DIAMETER SOIL PARTICLES, LOOSE SANDS AND A HIGH WATER TABLE. THESE CONDITIONS ARE FAVORABLE TO THE ISSUE OF RUNNING SANDS WITHIN THE PROJECT AREA. IF NEEDED, AND WITH APPROVAL OF THE ENGINEER, WELL POINTS SHALL BE USED TO LOWER GROUNDWATER ELEVATION. PAYMENT INCLUDED UNDER ITEM *202574-WELL POINT SYSTEM.
- TEMPORARY SHEET PILE USED FOR STREAM DIVERSION SHALL PAID AND INSTALLED AS PER ITEM *207500-COFFERDAMS.

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'.
 - 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 MADE AVAILABLE WHEN MILLED ON THIS CONTRACT UNDER ITEM 760006.
 - 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 700

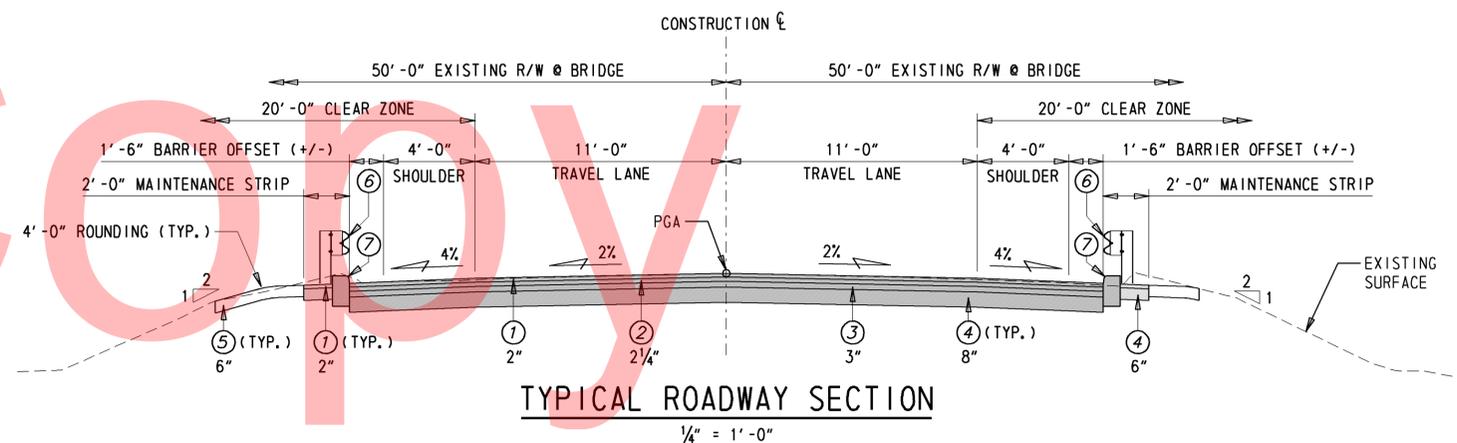
- ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT. ALL HOT-MIX SAW CUTTING SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
- STRIPING
PROPOSED STRIPING SHALL MATCH EXISTING STRIPING PATTERN OF A DOUBLE YELLOW CENTERLINE AND WHITE EDGE LINES. LANE WIDTHS HAVE BEEN MODIFIED AS PER PLANS. PROPOSED EDGE LINE STRIPING SHALL TIE INTO EXISTING EDGE LINE STRIPING OVER A 25 FEET TRANSITION PERIOD. PAYMENT FOR PERMANENT PAVEMENT STRIPING UNDER ITEM *748548 - PERMANENT PAVEMENT STRIPING.
- SIGNING
EXISTING "HIDDEN ENTRANCE" AND "PEDESTRIAN ADVISORY" SIGN SHALL REMAIN AS IS UPON PROJECT COMPLETION. TO AVOID DAMAGE, THE SIGNS MAY BE REMOVED DURING CONSTRUCTION, BUT MUST BE REPLACED TO MATCH EXISTING CONDITIONS BEFORE REOPENING THE ROADWAY. ALL WORK RELATED TO MOVING AND REINSTALLING SIGNS SHALL BE INCIDENTAL TO ITEM *211000-REMOVAL OF STRUCTURES AND OBSTRUCTIONS. IF A SIGN IS DAMAGED, IT MUST BE REPLACED AT THE CONTRACTORS EXPENSE.
- ALL M.O.T. ITEMS WITH THE EXCEPTION OF CHANGEABLE MESSAGE BOARDS AND FLAGGERS WILL BE INCLUDED IN ITEM *763643-MAINTENANCE OF TRAFFIC, ALL INCLUSIVE.

MISCELLANEOUS

- DESIGN CRITERIA
2012 AASHTO LRFD BRIDGE DESIGN, 6TH EDITION. U.S. CUSTOMARY UNITS.
- LOADING
AASHTO HL-93 FOR LIVE LOAD
25 PSF DEAD LOAD HAS BEEN INCLUDED FOR FUTURE OVERLAY.
- HYDRAULIC DATA
-DRAINAGE AREA = 8.98 SQ. MILES
-DESIGN FREQUENCY = 50 YEARS
-DESIGN DISCHARGE = 2623.00 CFS
-50 YEAR FLOOD ELEVATION = 7.78 FT
- SCOUR ANALYSIS
THE PROPOSED STRUCTURE HAS BEEN ANALYZED FOR THE EFFECTS OF SCOUR IN ACCORDANCE WITH HEC-14 - 'HYDRAULIC DESIGN OF ENERGY DISSIPATORS FOR CULVERTS AND CHANNELS', HEC-18 - 'EVALUATING SCOUR AT BRIDGES' AND HEC-23 - 'BRIDGE SCOUR AND STREAM INSTABILITY COUNTERMEASURE'. SCOUR COUNTERMEASURES HAVE BEEN DETERMINED WITH CONSIDERATION OF EXISTING CONDITIONS AND THE USE OF ENGINEERING JUDGEMENT.
-DESIGN EVENT: 500 YEAR
-DESIGN VELOCITY: 10.47 FT/S
-TAILWATER DEPTH: 7.81 FT
- UTILITIES
IT IS THE RESPONSIBILITY OF THE INDIVIDUAL UTILITY COMPANY(IES) WORKING AT THIS PROJECT LOCATION TO OBTAIN ALL THE REQUIRED PERMITS/AUTHORIZATIONS FROM THE APPROPRIATE MUNICIPAL, COUNTY, STATE AND FEDERAL REGULATORY AGENCIES FOR AUTHORIZATION OF THEIR WORK. THE ENVIRONMENTAL PERMITS CITED ON THIS EC SHEET DO NOT AUTHORIZE ANY PART OF THE UTILITY WORK ASSOCIATED WITH THIS PROJECT. SEE THE UTILITY STATEMENT FOR RELOCATION DETAILS.
- ENVIRONMENTAL COMPLIANCE
AT THIS PARTICULAR LOCATION, LIGHT GRADATION CHANNEL BED FILL MAY USED IN LIEU OF MEDIUM GRADATION. REFER TO THE ENVIRONMENTAL COMPLIANCE PLAN FOR ANY RESTRICTIONS AND ADDITIONAL GUIDANCE THAT MAY BE ASSOCIATED TO THIS PROJECT.

LEGEND

- ITEM 401801 - WMA, SUPERPAVE TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE)
- ITEM 401810 - WMA, SUPERPAVE TYPE B, 160 GYRATIONS, PG 64-22
- ITEM 401819 - WMA, SUPERPAVE BCBC, 160 GYRATIONS, PG 64-22
- ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- ITEM 732002 - TOPSOIL, 6" DEPTH
ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
- ITEM 720043 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-27
- ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4



HORIZONTAL / VERTICAL CONTROL DATA					
POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
T. P. #1	2+16.81	16.72	376724.57	636996.85	10.29
T. P. #2	3+24.65	-14.54	376783.18	637092.62	7.21
T. P. #3	4+18.53	21.01	376773.66	637192.56	5.48
T. P. #4	6+18.56	18.77	376828.59	637384.91	7.28

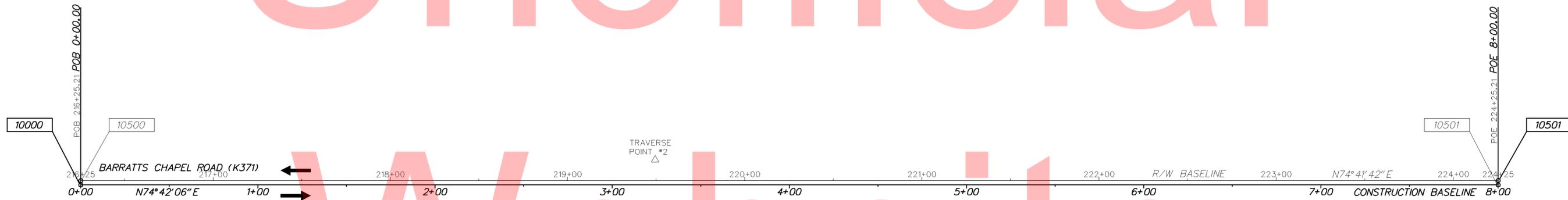
CONSTRUCTION ALIGNMENT CONTROL				
POINT	STATION	OFFSET	NORTHING	EASTING
10000	0+00.00	0.00	376683.49	636783.31
10001	8+00.00	0.00	376894.57	637554.97

RW BASELINE ALIGNMENT CONTROL				
POINT	STATION	OFFSET	NORTHING	EASTING
10500	216+25.21	0.00	376685.82	636782.68
10501	224+25.21	0.00	376896.98	637554.31

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.



Unofficial



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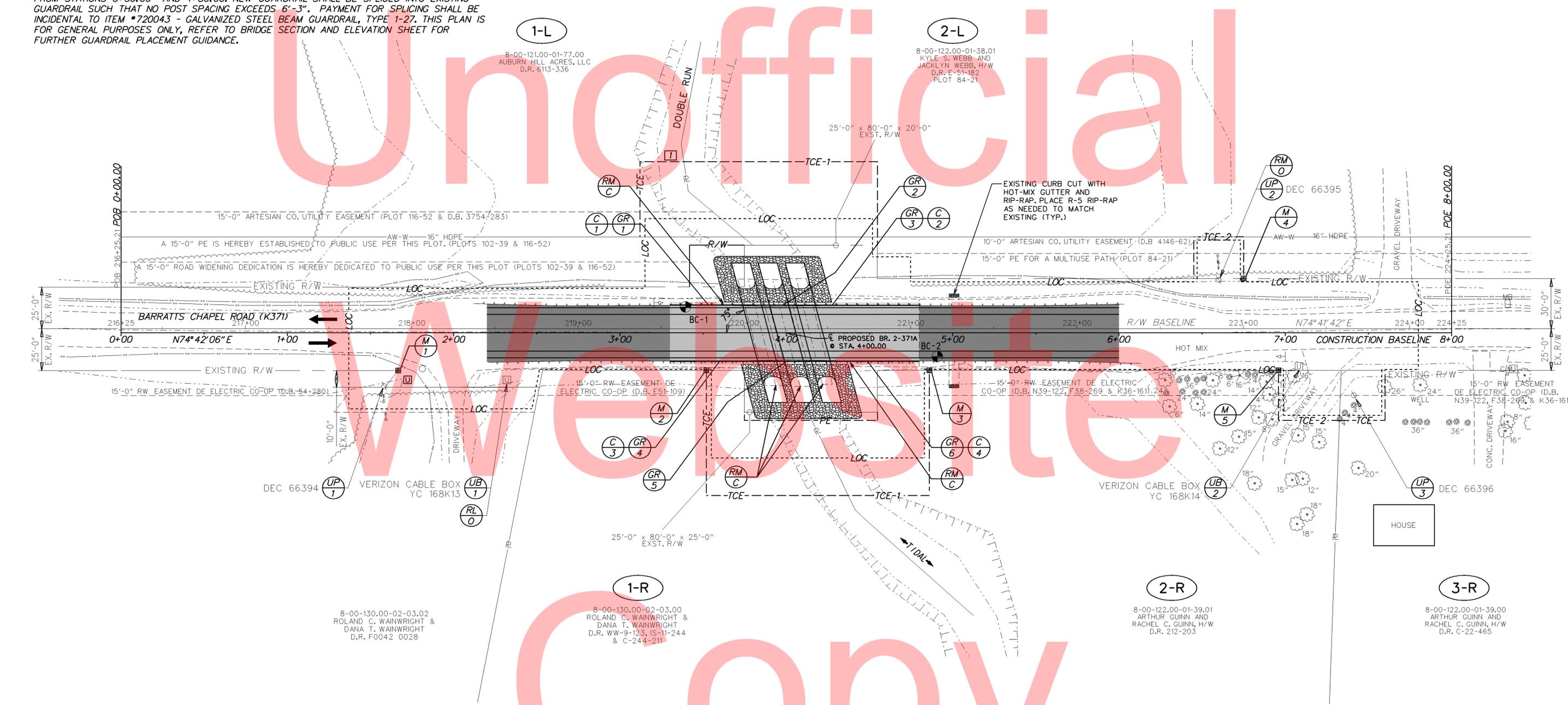
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS 1 MODIFICATION TO PARCEL 1-L DUE TO DEDICATION REVISED DEDICATION TITLE AND R/W AND TCE AREAS	SMW 11/5/13	SCALE 0 30 60 90 FEET	BR 2-371A ON K371 BARRATTS CHAPEL ROAD OVER DOUBLE RUN	CONTRACT T201107210 COUNTY KENT	BRIDGE NO. 2-371A DESIGNED BY: SMW CHECKED BY: EM	HORIZONTAL AND VERTICAL CONTROL	SHEET NO. 4 TOTAL SHTS. 16
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GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
GR-1	STEEL BEAM GUARDRAIL, TYPE 1-27	3+30.00	MATCH	N/A
GR-2	GUARDRAIL OVER CULVERT, TYPE 1-27	N/A	MATCH	88.54
GR-3	STEEL BEAM GUARDRAIL, TYPE 1-27	N/A	MATCH	N/A
GR-4	STEEL BEAM GUARDRAIL, TYPE 1-27	3+30.00	MATCH	N/A
GR-5	GUARDRAIL OVER CULVERT, TYPE 1-27	N/A	MATCH	88.54
GR-6	STEEL BEAM GUARDRAIL, TYPE 1-27	N/A	MATCH	N/A

NOTE: BEGIN GUARDRAIL INSTALLATION WITH PLACEMENT OF GUARDRAIL OVER CULVERT TO ENSURE CONFIGURATION IS MET AS SHOWN ON SHEET *7. CONTINUE PLACING GUARDRAIL WORKING AWAY FROM ENDS OF GUARDRAIL OVER CULVERT UNTIL TIEING INTO EXISTING GUARDRAIL +/- 10 FEET FROM STATIONS 3+30.00 AND 4+80.00. NEW GUARDRAIL SHALL BE SPLICED INTO EXISTING GUARDRAIL SUCH THAT NO POST SPACING EXCEEDS 6'-3". PAYMENT FOR SPLICING SHALL BE INCIDENTAL TO ITEM *720043 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-27. THIS PLAN IS FOR GENERAL PURPOSES ONLY, REFER TO BRIDGE SECTION AND ELEVATION SHEET FOR FURTHER GUARDRAIL PLACEMENT GUIDANCE.

CURB SCHEDULE			
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	LENGTH
C-1	PCC CURB, TYPE 1-4	3+30.00	45.00
C-2	PCC CURB, TYPE 1-4	4+15.00	65.00
C-3	PCC CURB, TYPE 1-4	3+30.00	55.00
C-4	PCC CURB, TYPE 1-4	4+25.00	55.00

NOTE: NEW CURB SHALL TIE INTO EXISTING CURB TO CREATE A CONTINUOUS CURB FEATURE. CURB MUST END SUCH THAT DRAINAGE OCCURS ON RIP-RAP SLOPES.



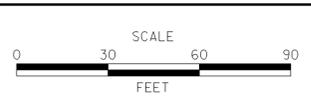
RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
M-1	CAPPED REBAR	1+66.60	22.57	376705.68	636949.97
M-2	CAPPED REBAR	3+51.90	22.55	376754.59	637128.69
M-3	CAPPED REBAR	4+86.00	22.55	376789.99	637258.04
M-4	CAPPED REBAR	6+75.00	-32.48	376892.92	637425.82
M-5	CAPPED REBAR	6+95.89	22.51	376845.39	637460.49

SOIL BORING SCHEDULE					
NO.	STATION	ELEVATION	OFFSET	NORTHING	EASTING
BC-1	3+39.36	6.90	-15.51	376787.99	637106.56
BC-2	4+90.81	6.00	14.23	376799.27	637260.49

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ADDENDUMS / REVISIONS	
1	MODIFICATION TO PARCEL 1-L DUE TO DEDICATION REVISED DEDICATION TITLE AND R/W AND TCE AREAS
	SMW 11/5/13



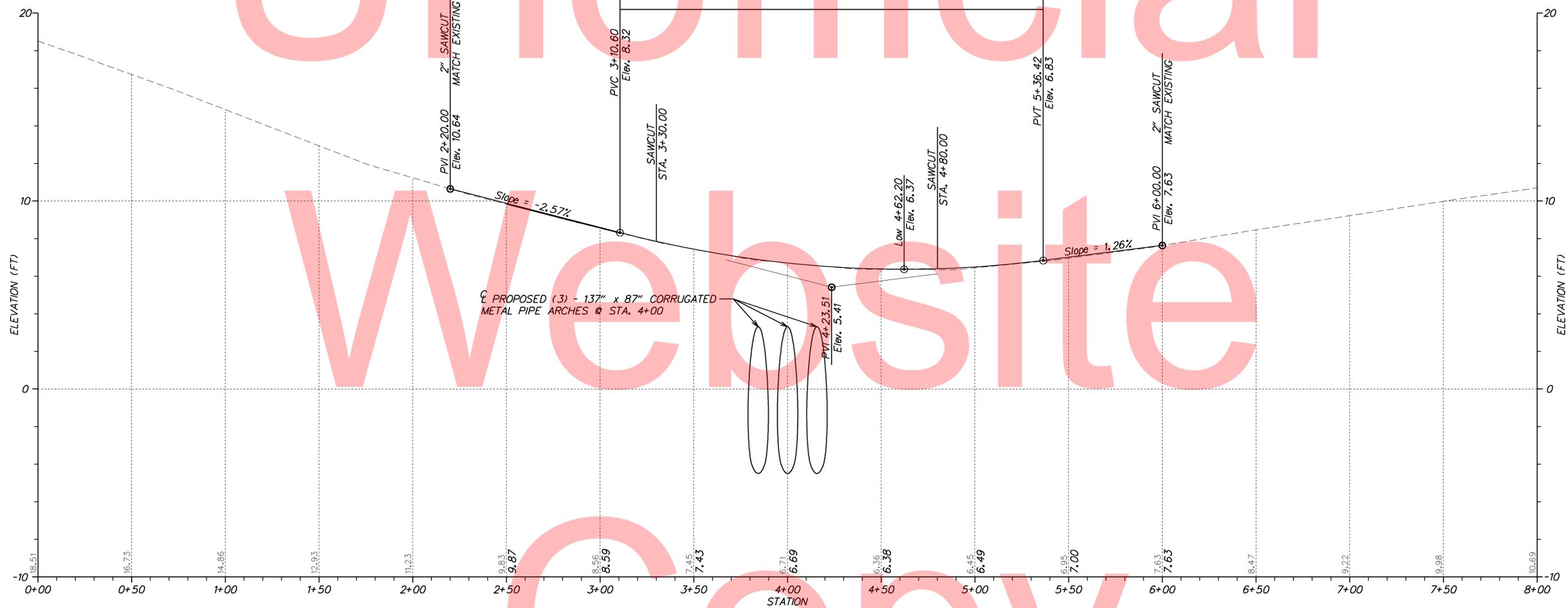
**BR 2-371A ON K371
BARRATTS CHAPEL ROAD
OVER DOUBLE RUN**

CONTRACT	BRIDGE NO.	2-371A
T201107210	DESIGNED BY:	SMW
KENT	CHECKED BY:	EM

CONSTRUCTION PLAN		SHEET NO.	5
		TOTAL SHTS.	16

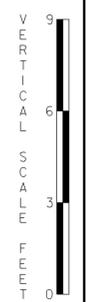
Unofficial

Type of Curve = Symmetric Parabola
 Direction = Sag
 Length = 225.82'
 L1 = 112.91'
 L2 = 112.91'
 G1 = -2.57%
 G2 = 1.26%
 SSD = 304.14'
 K = 58.97

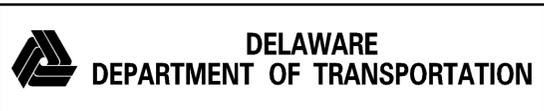


PROPOSED (3) - 137" x 87" CORRUGATED METAL PIPE ARCHES @ STA. 4+00

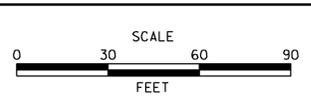
K371 - BARRATTS CHAPEL ROAD



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ADDENDUMS / REVISIONS	

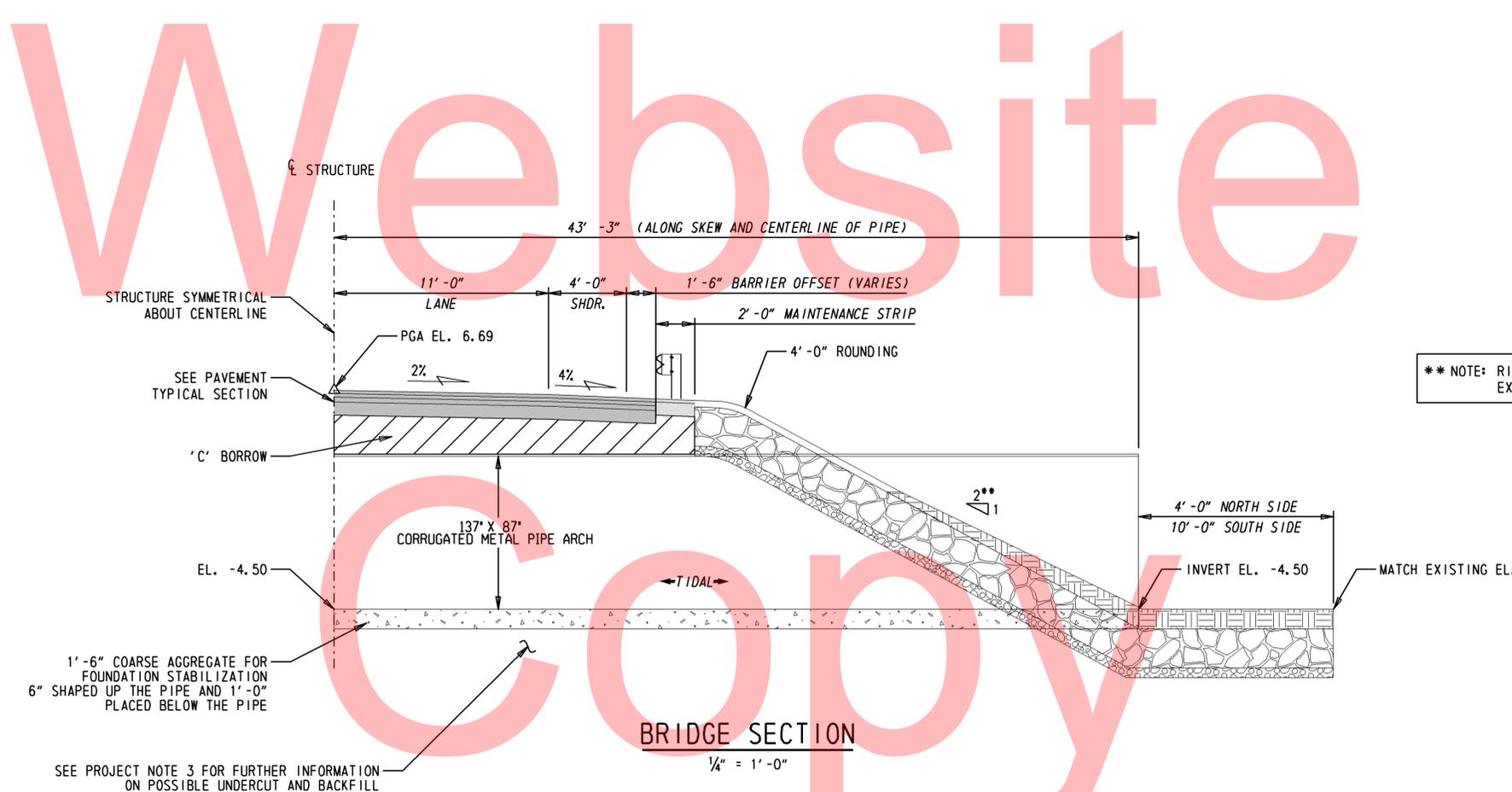
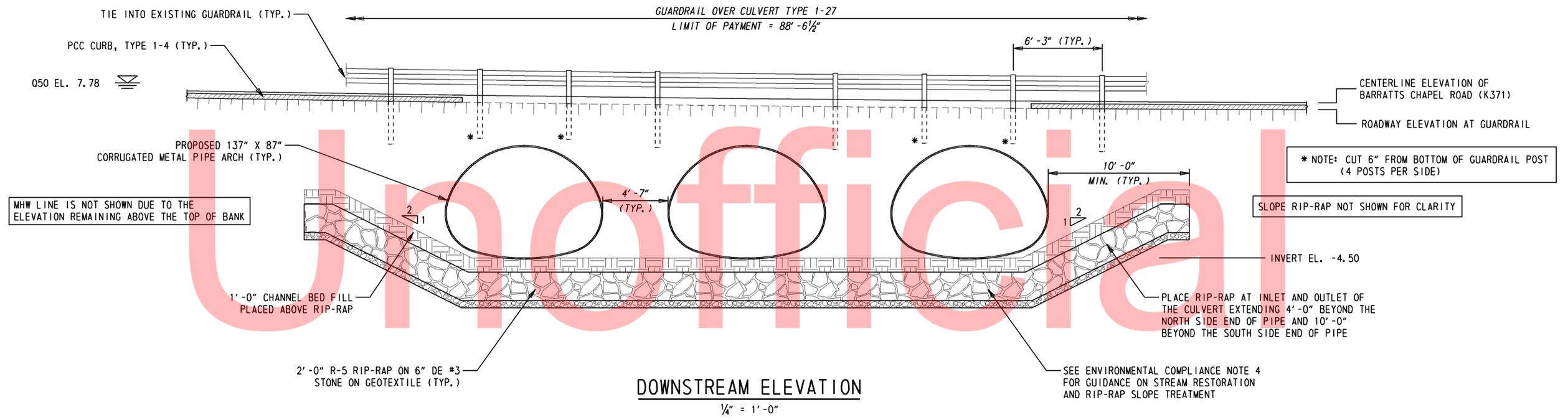


**BR 2-371A ON K371
 BARRATTS CHAPEL ROAD
 OVER DOUBLE RUN**

CONTRACT	BRIDGE NO.	2-371A
T201107210	DESIGNED BY:	SMW
COUNTY	CHECKED BY:	EM
KENT		

PROFILE

SHEET NO.	6
TOTAL SHTS.	16



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	ADDENDUMS / REVISIONS		SCALE: AS NOTED	BR 2-371A ON K371 BARRATTS CHAPEL ROAD OVER DOUBLE RUN	CONTRACT	BRIDGE NO.	2-371A	BRIDGE SECTION AND ELEVATION	SHEET NO.
					T201107210	DESIGNED BY: SMW	7		
					COUNTY	CHECKED BY: EM	TOTAL SHTS.		
					KENT		16		

BORING: BC-1		DATE DRILLED: 8/4/11			
STATION: 3+39.36		OFFSET: -15.51			
ELEVATION: 6.90		NORTHING: 376787.99			
EASTING: 637106.56		COMMENTS: HOT-MIX - 6.25", GRAVEL 3"			
SAMPLE INFORMATION					
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.5	5	MOIST MEDIUM DENSE ORANGE FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	ASPHALT -6 1/4" - GRAVEL -3"
	2.0	7			
		13			
2	2.0	5	MOIST LOOSE WHITE FINE TO COARSE SAND W/SOME SILT AND FINE GRAVEL.	A-2-4(0)	
		5			
		4			
	4.0	3			
3	4.0	2	WET VERY LOOSE LIGHT BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	WATER DEPTH: 4.25'
		1			
		2			
	6.0	3			
4	6.0	1	WET LOOSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	START MUD ROTARY
		2			
		3			
	8.0	4			
5	8.0	1	WET VERY LOOSE LIGHT BROWN COARSE TO FINE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-1-B	
		1			
		2			
	10.0	2			
6	10.0	1	WET VERY LOOSE LIGHT BROWN FINE TO COARSE SAND W/TRACE OF SILT AND FINE GRAVEL.	A-3	
		1			
		3			
	12.0	4			
7	12.0	2	WET LOOSE BROWN FINE TO COARSE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-3	APPROX. BOTTOM OF COARSE AGG. DEPTH FOR FOOTER
		3			
	13.5	3			
7A	13.5	4	NO SIEVE ANALYSIS - INDICATION OF SATURATED LOOSE LIGHT BROWN ORGANIC PEAT.		POSSIBLE UNDERCUT SEE PROJECT NOTES 3 & 4
	14.0				
8	14.0	1	SATURATED SOFT BROWN ORGANIC FINE SANDY SILT W/SOME COARSE SAND.	A-5(11)	
		2			
		1			
	16.0	2			
U-1	16.0		SATURATED BLACK ORGANIC SILTY CLAY W/TRACE OF FINE TO COARSE SAND AND FINE GRAVEL.	A-7-5(23)	PRESS SAMPLE - SHELBY TUBE
	18.0				
9	18.0	1	SATURATED SOFT GRAY ORGANIC CLAY W/TRACE OF FINE SAND, FINE GRAVEL AND SILT.	A-7-5(27)	
		1			
	20.0	1			
10	25.0	1	SATURATED SOFT GRAY ORGANIC CLAY W/SOME FINE SAND, TRACE OF COARSE SAND AND SILT.	A-7-5(25)	
	26.0	1			
10A	26.0	1	NO SIEVE ANALYSIS - INDICATION OF SATURATED FIRM GRAY SILT.		
	27.0	5			
11	30.0	3	SATURATED LOOSE DARK GRAY ORGANIC SILTY FINE SAND W/SOME COARSE SAND.	A-2-4(0)	
	31.0	6			
11A	31.0	10	SATURATED VERY STIFF DARK GRAY CLAYEY FINE SANDY SILT W/TRACE OF COARSE SAND AND ORGANIC MATTER.	A-4(6)	
	32.0	12			
12	35.0	3	SATURATED MEDIUM DENSE DARK GRAY FINE GRAVELLY FINE TO COARSE SAND W/SOME SILT, TRACE OF ORGANIC MATTER.	A-2-4(0)	
		5			
		11			
	37.0	13			
13	40.0	4	SATURATED MEDIUM DENSE GREEN FINE SAND W/SOME COARSE SAND AND SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	
		6			
		10			
	42.0	12			
14	45.0	7	SATURATED MEDIUM DENSE GREEN FINE GRAVELLY FINE TO COARSE SAND W/SOME SILT.	A-1-B	
		13			
		14			
	47.0	19			
15	48.0	7	SATURATED MEDIUM DENSE GREEN FINE GRAVELLY FINE SAND W/SOME COARSE SAND, TRACE OF SILT.	A-3	
		12			
		14			
	50.0	14			
16	55.0	7	SATURATED DENSE GRAY FINE GRAVELLY FINE SAND W/SOME COARSE SAND AND SILT.	A-2-4(0)	
		16			
		18			
	57.0	25			
			END OF BORING		

BORING: BC-2		DATE DRILLED: 8/5/11			
STATION: 4+90.81		OFFSET: 14.23			
ELEVATION: 6.00		NORTHING: 376799.27			
EASTING: 637260.49		COMMENTS: HOT-MIX 6", GRAVEL 3"			
SAMPLE INFORMATION					
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.5	4	MOIST MEDIUM DENSE ORANGE FINE TO COARSE SAND W/SOME SILT AND FINE GRAVEL.	A-2-4(0)	HOT MIX -6" - GRAVEL -3"
	2.0	5			
2	2.0	3	MOIST LOOSE ORANGE COARSE TO FINE SAND W/SOME SILT AND FINE GRAVEL.	A-1-B	
		4			
	4.0	5			
		4			
3	4.0	2	MOIST VERY LOOSE ORANGE SILTY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL.	A-2-4(0)	WATER DEPTH: 5.0'
		2			
		1			
	6.0	1			
4	6.0	1	WET VERY LOOSE ORANGE SILTY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL.	A-2-4(0)	
		1			
		W/H			
	8.0	W/H			
5	8.0	1	WET VERY LOOSE LIGHT BROWN COARSE TO FINE SAND W/TRACE OF SILT AND FINE GRAVEL.	A-1-B	
		W/R			
		3			
	10.0	3			
6	10.0	1	WET VERY LOOSE LIGHT BROWN COARSE TO FINE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-1-B	START MUD ROTARY APPROX. BOTTOM OF COARSE AGG. DEPTH FOR FOOTER
		1			
		2			
	12.0	3			
7	12.0	1	WET VERY LOOSE LIGHT BROWN SILTY FINE TO COARSE SAND W/SOME CLAY, TRACE OF FINE GRAVEL.	A-2-4(0)	POSSIBLE UNDERCUT SEE PROJECT NOTE 3 & 4
		2			
		1			
	14.0	1			
8	14.0	W/H	WET VERY LOOSE BROWN SILTY COARSE TO FINE SAND W/TRACE OF FINE GRAVEL.	A-2-4(0)	
		W/H			
		W/H			
	16.0	W/H			
9	16.0	1	WET LOOSE LIGHT BROWN COARSE SAND W/SOME FINE SAND AND FINE GRAVEL, TRACE OF SILT.	A-1-B	
		2			
		4			
	18.0	3			
10	18.0	1	WET VERY LOOSE BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
	19.0	2			
10A	19.0	1	SATURATED VERY LOOSE DARK BROWN ORGANIC PEAT.		
	20.0	1			
U-1	20.0		SATURATED BLACK ORGANIC SILTY FINE GRAVELLY CLAY W/TRACE OF FINE SAND.	A-7-5(16)	PRESS SAMPLE - SHELBY TUBE
	22.0				
11	25.0	1	SATURATED SOFT GRAY ORGANIC CLAY W/TRACE OF FINE TO COARSE SAND AND SILT.	A-7-5(27)	
		2			
	27.0	3			
12	30.0	10	SATURATED DENSE GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF ORGANIC MATTER.	A-2-4(0)	
		12			
		18			
	32.0	23			
13	35.0	8	SATURATED MEDIUM DENSE GRAY FINE TO COARSE SAND W/TRACE OF SILT.	A-3	
		5			
		7			
	37.0	7			
14	40.0	7	SATURATED MEDIUM DENSE GRAY SILTY FINE SAND W/SOME COARSE SAND, TRACE OF ORGANIC MATTER.	A-2-4(0)	
		11			
		15			
	42.0	18			
15	45.0	9	SATURATED DENSE GREEN SILTY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL AND ORGANIC MATTER.	A-2-4(0)	
		15			
		32			
	47.0	50/4"			
16	50.0	9	SATURATED MEDIUM DENSE GRAY FINE TO COARSE SAND W/TRACE OF SILT AND ORGANIC MATTER.	A-3	
		14			
		16			
	52.0	19			
			END OF BORING		

NOTES:

- BORING LOGS CREATED BY THE DELAWARE DEPARTMENT OF TRANSPORTATION. SUBSURFACE EXPLORATION COMPLETED BY HILLIS-CARNES ENGINEERING ASSOCIATES INC (HCEA).
- REFER TO CONSTRUCTION PLAN SHEET (PAGE 5) FOR APPROXIMATE BORING LOCATIONS. BORING LOGS ARE LABELED AS BC-1 AND BC-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.

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ADDENDUMS / REVISIONS

NOT TO SCALE

BR 2-371A ON K371
BARRATTS CHAPEL ROAD
OVER DOUBLE RUN

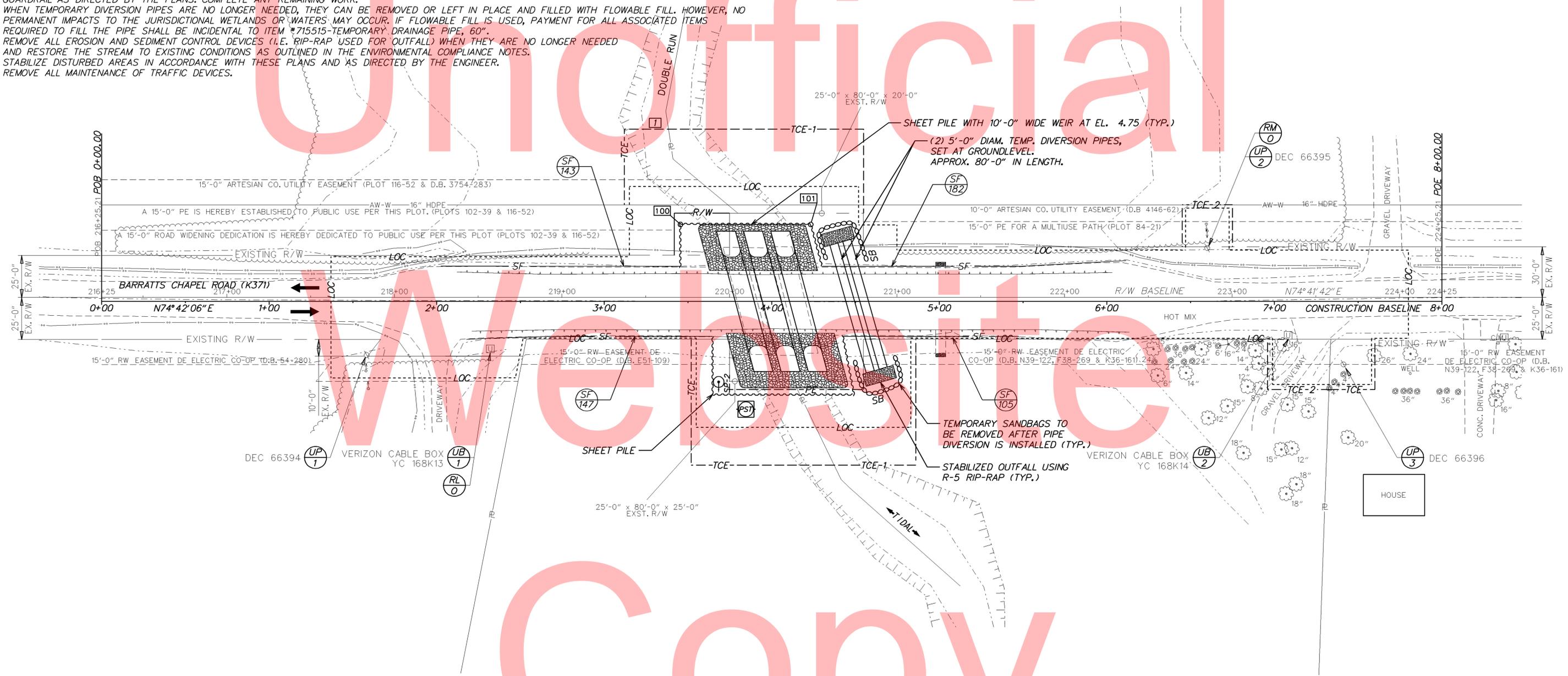
CONTRACT	BRIDGE NO.	2-371A
T201107210	DESIGNED BY:	SMW
COUNTY	CHECKED BY:	EM
KENT		

SOIL BORING LOGS

SHEET NO.	8
TOTAL SHTS.	16

CONSTRUCTION SEQUENCE:

1. CLOSE BARRATTS CHAPEL ROAD IN ACCORDANCE WITH THE DETOUR PLAN.
2. INSTALL SILT FENCE AS SHOWN ON THE PLAN, EXCEPT AT CONNECTIONS TO THE SHEET PILE. DURING LOW TIDE CONDITIONS, PLACE TEMPORARY SANDBAGS AROUND THE NORTH AND SOUTH ENDS OF THE DIVERSION PIPE LOCATIONS. INSTALL TEMPORARY DIVERSION PIPE LOCATIONS, ITEM #715515 - TEMPORARY DRAINAGE PIPE, 60", AND RIP-RAP OUTFALLS AT GROUNDLEVEL. USE CAUTION TO MINIMIZE OPEN WATER AND WETLAND IMPACTS DURING PLACEMENT. TO DIRECT STREAM FLOW, REMOVE TEMPORARY SANDBAGS ALLOWING THE STREAM TO FLOW THROUGH THE DIVERSION PIPES.
3. INSTALL SHEET PILE ON THE NORTH AND SOUTH SIDE OF THE BRIDGE AS PER ITEM #207500-COFFERDAM. CONNECT THE SILT FENCE TO THE SHEET PILE, ENCLOSING THE WORK AREA. INSTALL A SUMP PIT AND PORTABLE SEDIMENT TANK FOR USE IN DEWATERING THE WORK AREA. SEE SECTION 111 OF THE STANDARD SPECIFICATIONS FOR MORE INFORMATION ON DEWATERING OPERATIONS.
4. REMOVE EXISTING GUARDRAIL AND CURB BETWEEN STATION 3+30.00 AND 4+80.00 IN ORDER TO PERFORM THE EXCAVATION. REMOVE EXISTING SLOPE PROTECTION AND SACK CONCRETE RIP-RAP.
5. INSTALL A WELL POINT SYSTEM AS PER ITEM #202574-WELL POINT SYSTEM, WHEN NEEDED TO REMOVE EXISTING C.P.M. ARCHES AND ESTABLISH A STABLE BASE FOR THE PROPOSED STRUCTURE.
6. INSTALL PROPOSED CORRUGATED METAL PIPE ARCHES AS PER PLAN. CLOSE ATTENTION MUST BE USED DURING BACKFILL OPERATIONS TO ENSURE PROPER BACKFILL PROCEDURES FOR C.M.P. ARCHES. INSTALL PROPOSED CHANNEL BED FILL AND SLOPE STABILIZATION AS NOTED.
7. INSTALL PROPOSED PAVEMENT BOX. INSTALL CURB, TIEING INTO EXISTING CURB. INSTALL MAINTENANCE STRIP AND GUARDRAIL, SPLICING INTO EXISTING GUARDRAIL AS DIRECTED BY THE PLANS. COMPLETE ANY REMAINING WORK.
8. WHEN TEMPORARY DIVERSION PIPES ARE NO LONGER NEEDED, THEY CAN BE REMOVED OR LEFT IN PLACE AND FILLED WITH FLOWABLE FILL. HOWEVER, NO PERMANENT IMPACTS TO THE JURISDICTIONAL WETLANDS OR WATERS MAY OCCUR. IF FLOWABLE FILL IS USED, PAYMENT FOR ALL ASSOCIATED ITEMS REQUIRED TO FILL THE PIPE SHALL BE INCIDENTAL TO ITEM #715515-TEMPORARY DRAINAGE PIPE, 60".
9. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES (I.E. RIP-RAP USED FOR OUTFALL) WHEN THEY ARE NO LONGER NEEDED AND RESTORE THE STREAM TO EXISTING CONDITIONS AS OUTLINED IN THE ENVIRONMENTAL COMPLIANCE NOTES.
10. STABILIZE DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER.
11. REMOVE ALL MAINTENANCE OF TRAFFIC DEVICES.



SHEET PILE WORKING POINTS				
PT.	STATION	OFFSET	NORTHING	EASTING
100	3+45.45	-45.75	376818.76	637104.45
101	4+23.27	-45.75	376839.30	637179.51

NOTE: WHEN INSTALLING SHEET PILE FOR USE IN STREAM DIVERSION, CAUTION MUST BE TAKEN TO AVOID DAMAGE TO THE IN SERVICE WATERLINE. THE CONTRACTOR SHALL HOLD TO THE UTILITY LOCATION AS SHOWN ON THE PLAN AND TO THE LOCATIONS THAT ARE MARKED IN THE FIELD THROUGH MISS UTILITY.

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<p>DELAWARE DEPARTMENT OF TRANSPORTATION</p>	ADDENDUMS / REVISIONS [1] MODIFICATION TO PARCEL 1-L DUE TO DEDICATION REVISED DEDICATION TITLE AND R/W AND TCE AREAS SMW 11/5/13	SCALE 0 30 60 90 FEET	BR 2-371A ON K371 BARRATTS CHAPEL ROAD OVER DOUBLE RUN	CONTRACT T201107210 COUNTY KENT	BRIDGE NO. 2-371A DESIGNED BY: SMW CHECKED BY: EM	CONSTRUCTION SEQUENCE AND EROSION AND SEDIMENT CONTROL PLAN	SHEET NO. 9 TOTAL SHTS. 16
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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): NWP *3(a) AND (c) (NO PCN)
 - DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): SUBAQUEOUS LANDS & WETLANDS PERMIT**
 - 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.
 ** THE CONTRACTOR MUST ENSURE THAT THESE PERMITS/APPROVALS ARE IN THEIR POSSESSION PRIOR TO BEGINNING CONSTRUCTION IN THE PERMITTED AREA(S) AND ENSURE IT IS DISPLAYED ON-SITE DURING THE ENTIRE CONSTRUCTION PERIOD.
- B. CONSTRUCTION RESTRICTIONS:
 - FISHERIES - SPAWNING HERRING. NO IN-WATER WORK FROM MARCH 15TH TO JUNE 30TH (INCLUSIVE)
 - ENDANGERED SPECIES - NONE
 - MIGRATORY BIRDS - NONE

3. CULTURAL RESOURCE ISSUES:

- A. THE PROJECT IS CONSISTENT WITH FHWA, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, DELDOT AND THE DE STATE HISTORIC PRESERVATION OFFICER PROGRAMMATIC AGREEMENT REGARDING THE IMPLEMENTATION OF THE FEDERAL HIGHWAY PROGRAM IN THE STATE OF DELAWARE. AS SUCH, THE PROJECT FALLS UNDER STIPULATION II.B. 4. A. OF THAT AGREEMENT. AS SUCH, NO SPECIAL PROVISIONS ARE NECESSARY OTHER THAN KEEPING WITH THE CONFINED LOC AND/OR OTHER GEOGRAPHIC LIMITS AS DEFINED IN DESIGN PLANS OR SPECIAL PROVISIONS. CHANGES IN LOC LIMITS AND SCOPE WILL BE COORDINATED BACK WITH THE ENVIRONMENTAL STUDIES OFFICE TO DETERMINE THE CONSISTENCY WITH THE PROJECT IS STILL FOLLOWING THAT PROGRAMMATIC AGREEMENT.

4. STREAM RESTORATION AND SLOPE RIP-RAP TREATMENTS:

- 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. IF THE SUFFICIENT SOURCES FOR CHANNEL BED FILL DO NOT EXIST ON-SITE, ANY NEW MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF ITEM *712531 - CHANNEL BED FILL. ALL RIP-RAP 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 RIP-RAP ARE FILLED WITH MATERIAL. PAYMENT UNDER ITEM *209002 - BORROW TYPE 'B'. THE RIP-RAP SHALL THEN BE COVERED WITH A MINIMUM OF 12" CHANNEL BED FILL. FINAL CHANNEL ELEVATIONS SHALL MATCH EXISTING ELEVATIONS AT THE UPSTREAM AND DOWNSTREAM PROJECT LIMITS. THROUGH THE STRUCTURE, ELEVATIONS SHALL BE AS NOTED ON THE PLANS. 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 RIP-RAP (I.E. THE FLOW CANNOT BE "LOST" IN THE RIP-RAP 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 RIP-RAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, SHALL BE CHOKED WITH DELAWARE #57 STONE, FILLED WITH TOPSOIL, AND SEEDED. PLACE JUST ENOUGH CHOKE MATERIAL TO PREVENT THE LOSS OF TOPSOIL THROUGH THE RIP-RAP, AND THEN FINISH FILLING THE VOIDS WITH TOPSOIL SO THAT THE RIP-RAP PEAKS ARE BARELY VISIBLE. AN ADDITIONAL 4-INCH TOPSOIL LAYER SHALL BE PLACED ON TOP OF THE RIP-RAP. SLOPE SEEDING SHALL BE AS PER ITEM *734531 - STREAMBANK SEED MIX. 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 SHALL BE COMPLETED PRIOR TO ANY RAIN EVENT. PAYMENT FOR DELAWARE #57 STONE SHALL BE INCIDENTAL TO THE RIP-RAP ITEM. ALL OTHER ITEMS SHALL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.
 - E. A TURBIDITY CURTAIN SHALL BE USED TO MINIMIZE IN-STREAM SEDIMENTATION DURING THE TOPSOIL/SEED/MULCH PLACEMENT. PAYMENT SHALL BE INCIDENTAL TO ITEM *265500 - STREAM DIVERSION.
5. 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 RIP-RAP PROTECTION. VEGETATION SHALL BE CUT FLUSH WITH THE GROUND (I.E. NO DISTURBANCE OF THE ROOT MAT). ACCESS TO RESOURCE AREAS WHICH IS NOT SPECIFICALLY AUTHORIZED BY THE ACOE AND DNREC PERMITS (AS ILLUSTRATED ON THE ENVIRONMENTAL COMPLIANCE SHEETS) IS STRICTLY PROHIBITED. SILT FENCE OR CONSTRUCTION SAFETY FENCE SHALL BE USED ALONG THE LIMITS OF CONSTRUCTION IN ALL AREAS WHERE WATER/WETLANDS EXIST WITHIN 20 FEET OF THE LOC (AS SHOWN ON THE CONSTRUCTION PLANS). CONTRACTOR ACCESS BEYOND THE LOC IS STRICTLY PROHIBITED.

- 6. DO NOT DISTURB TREES WITH 6" OR GREATER DIAMETER. DO NOT GRUB AND/OR GRADE AFTER TREE REMOVAL. IF IT IS NECESSARY TO REMOVE ANY TREES WITH A 6" OR GREATER DBH, THE ENVIRONMENTAL STUDIES SECTION MUST BE CONSULTED WITH PRIOR TO REMOVAL.
- 7. PLANTING GUIDANCE (INFORMATIONAL ONLY, WORK TO BE DONE BY OTHERS. THERE SHALL BE NO PAYMENT FOR PLANTING ON THIS CONTRACT): UPON FINAL ACCEPTANCE OF THE CONTRACT, APPROPRIATE TREES AND/OR SHRUBS SHALL BE PLANTED, IN A NATURALIZED PATTERN (MINIMUM 8', MAXIMUM 12' CENTERS) IN TEMPORARILY DISTURBED WOODED WETLAND AREAS WITHIN THE LOC. FINAL PLANT COUNTS WILL BE BASED ON FIELD CONDITIONS AND DETERMINED BY THE ROADSIDE ENVIRONMENTAL ADMINISTRATOR ON HIS DESIGNEE. SPECIFIC PLANT SELECTION IS ALSO AT HIS DISCRETION BUT SHALL BE A NATIVE SPECIES APPROVED BY THE DELAWARE DEPARTMENT OF NATURAL RESOURCES. ON THIS PROJECT, DNREC WLSL REQUIRES THAT A PLANTING PLAN BE SUBMITTED TO THEM FOR APPROVAL PRIOR TO ACTUAL WORK. 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).
- 8. SILT FENCE INSTALLATION ADJACENT TO WOODED WETLANDS: PROVIDED PROPER EROSION & SEDIMENT CONTROL CAN BE MADE, IT IS RECOMMENDED THAT SANDBAGS BE USED TO SECURE SILT FENCE IN LIEU OF TRENCHING. THE ENVIRONMENTAL STUDIES SECTION (CAROL SULLIVAN, (302)760-2129) CAN PROVIDE FURTHER GUIDANCE REGARDING THIS METHOD OF INSTALLATION.

WETLANDS DELINEATED BY ENVIRONMENTAL RESOURCES, INC. IN OCTOBER 2012 IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS "CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (1987)".
 ORIGINAL SHEET PREPARED BY SCOTT WALLS ON 06-27-2012. SHEET LAST UPDATED ON 04-1-2014.

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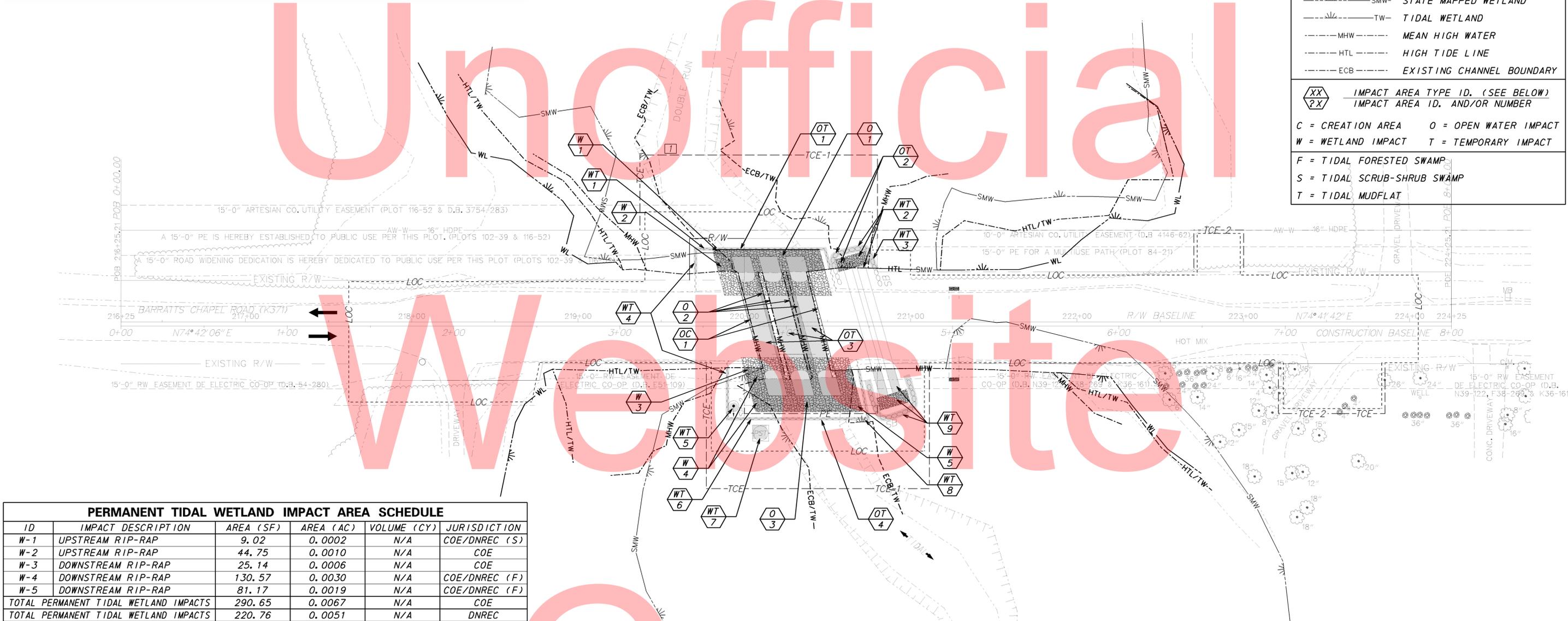
 <p>DELAWARE DEPARTMENT OF TRANSPORTATION</p>	ADDENDUMS / REVISIONS		NOT TO SCALE	BR 2-371A ON K371 BARRATTS CHAPEL ROAD OVER DOUBLE RUN	CONTRACT	BRIDGE NO.	2-371A	ENVIRONMENTAL COMPLIANCE NOTES	SHEET NO.	
	1	MODIFICATION TO PARCEL 1-L DUE TO DEDICATION REVISED DEDICATION TITLE AND R/W AND TCE AREAS			SMW 11/5/13	T201107210	DESIGNED BY: SMW		10	
						COUNTY	CHECKED BY: EM		TOTAL SHTS.	
						KENT			16	

PERMANENT OPEN WATER IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
O-1	UPSTREAM RIP-RAP	756.02	0.0174	56.00	COE/DNREC (S)
O-2	EX. PIPE TO PROPOSED FILL	336.52	0.0077	68.55	COE/DNREC (T)
O-3	DOWNSTREAM RIP-RAP	1168.12	0.0268	86.53	COE/DNREC (T)
TOTAL PERMANENT OPEN WATER IMPACTS		2260.66	0.0519	211.08	COE/DNREC

OPEN WATER CREATION AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OC-1	FILL TO PROPOSED PIPE	187.99	0.0043	34.81	COE/DNREC (T)
TOTAL OPEN WATER CREATION AREAS		187.99	0.0043	34.81	COE/DNREC (T)

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OT-1	UPSTREAM SHEET PILE	115.78	0.0027	23.58	COE/DNREC (S)
OT-2	UPSTR. SB/PIPE/OUTFALL	66.86	0.0015	13.62	COE/DNREC (S)
OT-3	EXIST. TO PROP. PIPES	1972.19	0.0453	401.74	COE/DNREC (T)
OT-4	DOWNSTREAM SHEET PILE	87.02	0.0020	17.73	COE/DNREC (T)
TOTAL TEMPORARY OPEN WATER IMPACTS		2241.85	0.0515	456.67	COE/DNREC

LEGEND	
	TEMPORARY IMPACT AREA
	PERMANENT IMPACT AREA
	CREATION AREA
	WL - NON TIDAL WETLAND BOUNDARY
	SMW - STATE MAPPED WETLAND
	TW - TIDAL WETLAND
	MHW - MEAN HIGH WATER
	HTL - HIGH TIDE LINE
	ECB - EXISTING CHANNEL BOUNDARY
	IMPACT AREA TYPE ID. (SEE BELOW)
	IMPACT AREA ID. AND/OR NUMBER
C	CREATION AREA
O	OPEN WATER IMPACT
W	WETLAND IMPACT
T	TEMPORARY IMPACT
F	TIDAL FORESTED SWAMP
S	TIDAL SCRUB-SHRUB SWAMP
T	TIDAL MUDFLAT



PERMANENT TIDAL WETLAND IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
W-1	UPSTREAM RIP-RAP	9.02	0.0002	N/A	COE/DNREC (S)
W-2	UPSTREAM RIP-RAP	44.75	0.0010	N/A	COE
W-3	DOWNSTREAM RIP-RAP	25.14	0.0006	N/A	COE
W-4	DOWNSTREAM RIP-RAP	130.57	0.0030	N/A	COE/DNREC (F)
W-5	DOWNSTREAM RIP-RAP	81.17	0.0019	N/A	COE/DNREC (F)
TOTAL PERMANENT TIDAL WETLAND IMPACTS		290.65	0.0067	N/A	COE
TOTAL PERMANENT TIDAL WETLAND IMPACTS		220.76	0.0051	N/A	DNREC

TEMPORARY TIDAL WETLAND IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
WT-1	UPSTREAM SHEET PILE	29.92	0.0007	N/A	COE/DNREC (S)
WT-2	UPSTRM. SB/PIPE/OUTFALL	207.34	0.0048	N/A	COE/DNREC (S)
WT-3	UPSTREAM SANDBAG	32.98	0.0008	N/A	DNREC (S)
WT-4	UP/DOWNSTREAM SHEETPILE	39.31	0.0009	N/A	COE
WT-5	SUMP PIT	22.49	0.0005	N/A	COE/DNREC (F)
WT-6	DOWNSTREAM SHEET PILE	104.84	0.0024	N/A	COE/DNREC (F)
WT-7	PORTABLE SEDIMENT TANK	69.44	0.0016	N/A	COE/DNREC (F)
WT-8	DOWNSTREAM SHEET PILE	83.38	0.0019	N/A	COE/DNREC (F)
WT-9	DOWNSTR. SB/PIPE/OUTFALL	553.89	0.0127	N/A	COE/DNREC (F)
TOTAL TEMPORARY TIDAL WETLAND IMPACTS		1110.61	0.0255	N/A	COE
TOTAL TEMPORARY TIDAL WETLAND IMPACTS		1104.26	0.0254	N/A	DNREC

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	DELWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		BR 2-371A ON K371 BARRATTS CHAPEL ROAD OVER DOUBLE RUN	CONTRACT T201107210	BRIDGE NO. 2-371A	ENVIRONMENTAL COMPLIANCE PLAN	SHEET NO. 11
		<table border="1" style="font-size: 8pt;"> <tr> <td>MODIFICATION TO PARCEL 1-L DUE TO DEDICATION REVISED DEDICATION TITLE AND R/W AND TCE AREAS</td> <td>SMW 11/5/13</td> </tr> </table>			MODIFICATION TO PARCEL 1-L DUE TO DEDICATION REVISED DEDICATION TITLE AND R/W AND TCE AREAS	SMW 11/5/13		COUNTY KENT
MODIFICATION TO PARCEL 1-L DUE TO DEDICATION REVISED DEDICATION TITLE AND R/W AND TCE AREAS	SMW 11/5/13							

CHANGEABLE MESSAGE BOARDS

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

BARRATTS CHAPEL ROAD

TO CLOSE STARTING XXXXXX

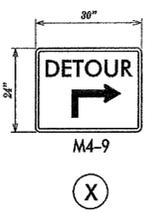
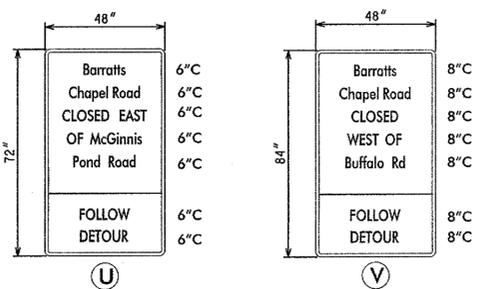
CMS-2
 DURING DETOUR
 (DISPLAY FOR 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

BARRATTS CHAPEL ROAD

CLOSED FOLLOW DETOUR

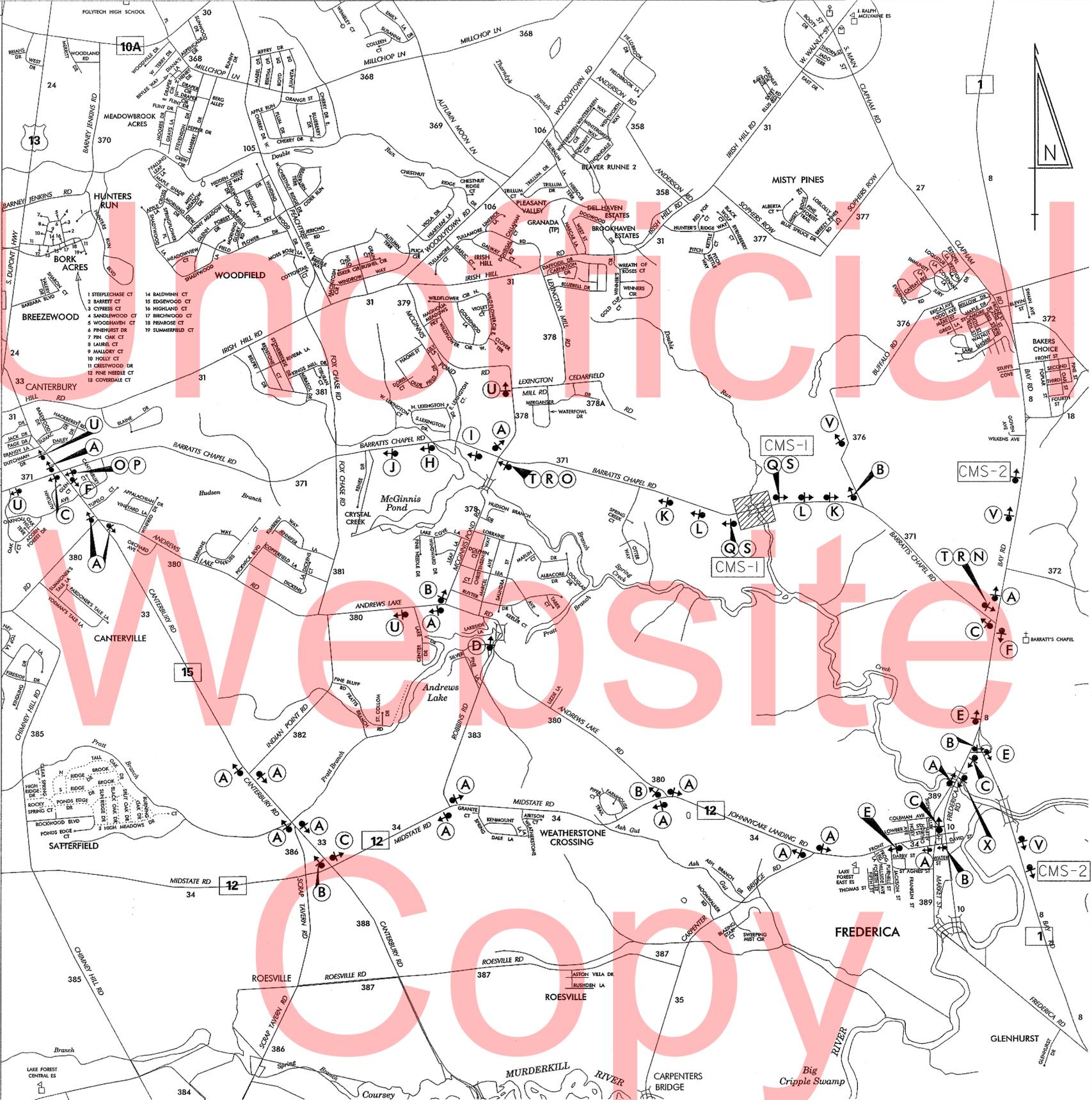
NOTE
 UPON IMPLEMENTATION OF DETOUR, RELOCATE CMS-1 TO CMS-2 LOCATIONS AND DISPLAY FOR 5 DAYS

SPECIAL SIGNS

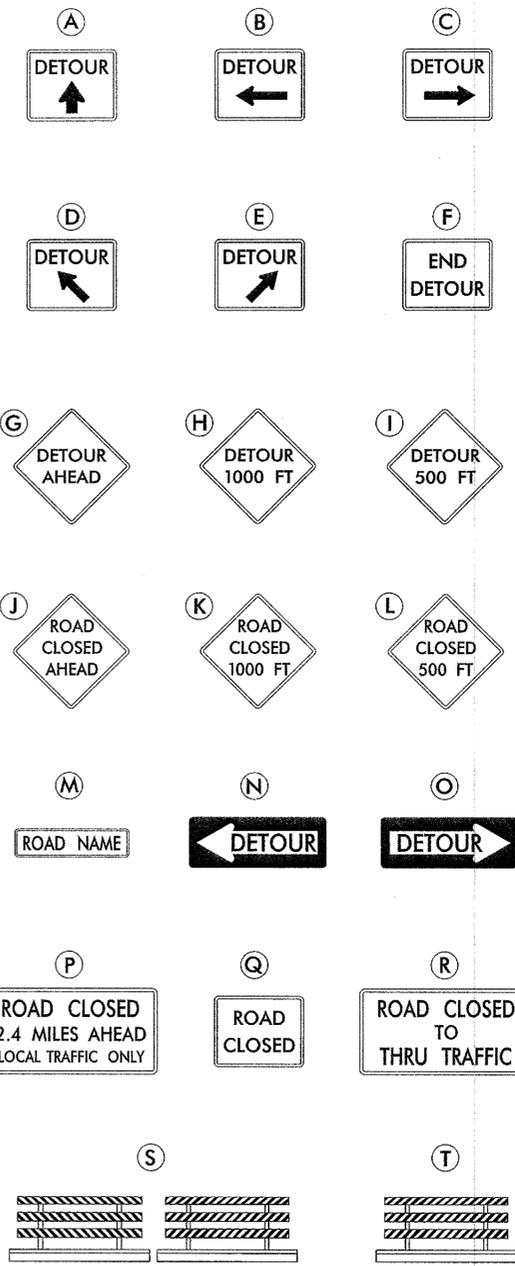


D/G RETORFLECTIVE FLUORESCENT ORANGE BACKGROUND; BLACK LEGEND

NOTE
 SPECIAL SIGNS AND TRAILBLAZERS LOCATED ON MULTI-LANE DIVIDED HIGHWAYS SHALL BE PLACED ON BOTH SIDES OF THE DIRECTIONAL ROADWAY.



LEGEND



GENERAL NOTES

- ALL DETOUR SIGNING INCLUDING, TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE 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 RETORFLECTIVE 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.

RECOMMENDED *Michael F Rivera* DATE: **6-19-12**

RECOMMENDED *John Subda Sr* DATE: **6-19-12**

RECOMMENDED _____ DATE: _____

APPROVED CHIEF SAFETY OFFICER *Shall O'Leary* DATE: **6-19-12**

APPROVED TRAFFIC ENGINEER *Alb's* DATE: **6/21/12**



ADDENDUM / REVISIONS	

NOT TO SCALE

**BR 2-371A ON K371
 BARRATTS CHAPEL ROAD
 OVER DOUBLE RUN**

CONTRACT	ROAD NO.	SHEET NO.
T201107210	371	12
COUNTY	DESIGNED BY: MFR	TOTAL SHTS.
KENT	CHECKED BY: ASW	16

DETOUR PLAN

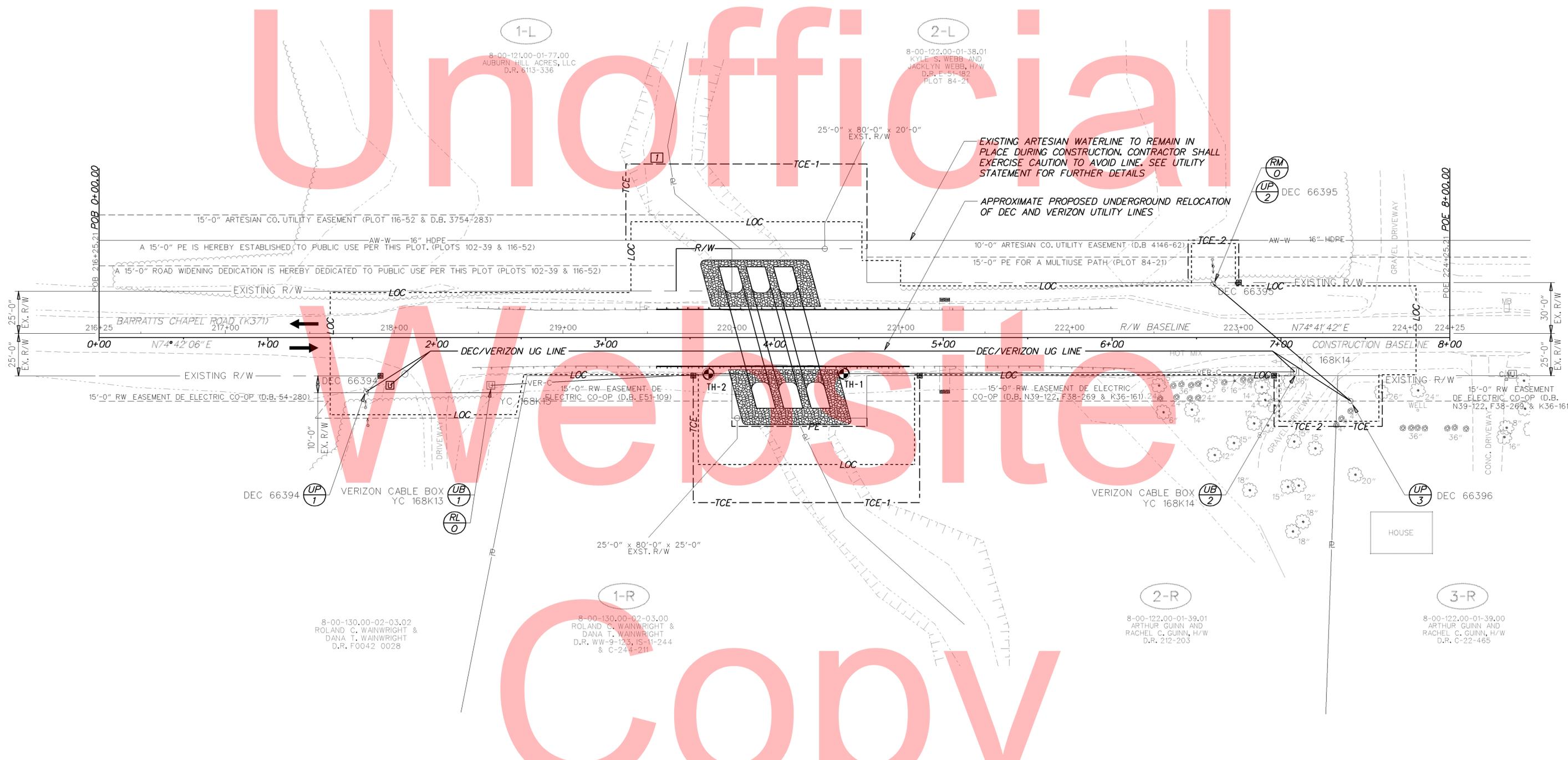
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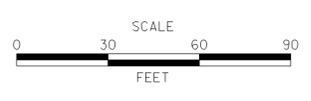
Water Site

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UTILITY TEST HOLE SCHEDULE						
NO.	UTILITY	STATION	OFFSET	GRND EL.	COVER	O. D. & MATERIAL
TH-1	TELEPHONE	4+40.96	21.34	5.29	1.61	1.0" CABLE
TH-2	TELEPHONE	3+60.93	21.56	5.55	1.56	1.0" CABLE

ADDENDUMS / REVISIONS	
1	MODIFICATION TO PARCEL 1-L DUE TO DEDICATION REVISED DEDICATION TITLE AND R/W AND TCE AREAS
	SMW 11/5/13



**BR 2-371A ON K371
BARRATTS CHAPEL ROAD
OVER DOUBLE RUN**

CONTRACT	BRIDGE NO.	2-371A
T201107210	DESIGNED BY:	SMW
KENT	CHECKED BY:	EM

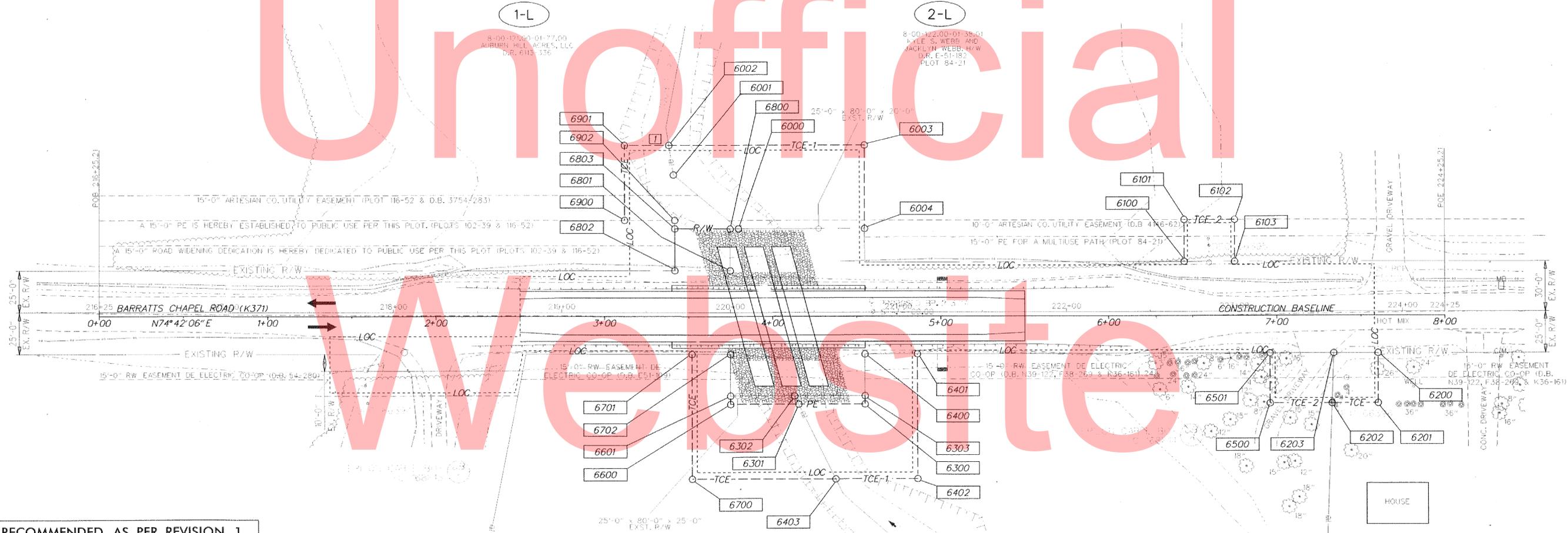
**UTILITY RELOCATION
PLAN**

SHEET NO.	13
TOTAL SHTS.	16

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RECOMMENDED AS PER REVISION 1

Jude Crawford / Sheh Chaudhri 11-19-13
TEAM SUPPORT SQUAD MANAGER DATE

Zig Dull 11-19-13
TEAM SUPPORT ENGINEER DATE

Robert McCleary 11/20/13
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

ORIGINAL SIGNATURE DATE: 8/30/13

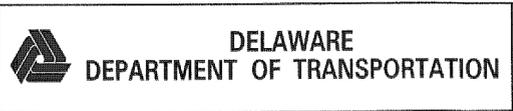
8-00-130.00-02-03.02
ROLAND C. WAINWRIGHT &
DANA T. WAINWRIGHT
D.R. F0042 0028

1-R
8-00-130.00-02-03.02
ROLAND C. WAINWRIGHT &
DANA T. WAINWRIGHT
D.R. WW-9-123, 15-11-244
& C-244-211

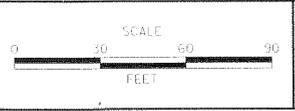
2-R
8-00-122.00-01-39.01
ARTHUR GUNN AND
RACHEL C. GUNN, H/W
D.R. 212-203

3-R
8-00-122.00-01-39.01
ARTHUR GUNN AND
RACHEL C. GUNN, H/W
D.R. C-22-465

PLANET 371N BRIDGE T20107210 PLANS V.P01.DGN



ADDENDUMS / REVISIONS	DATE
1] MODIFICATION TO PARCEL 1-L DUE TO DEDICATION REVISED DEDICATION TITLE AND R/W AND TCE AREAS	SMW 11/5/13 11-19-13



BR 2-371A ON K371
BARRATTS CHAPEL ROAD
OVER DOUBLE RUN

CONTRACT	BRIDGE NO.	2-371A
T20107210	DESIGNED BY:	SMW
COUNTY	CHECKED BY:	EM
KENT		

RIGHT-OF-WAY SHEET 1 OF 3	
RIGHT-OF-WAY PLAN	SHEET NO. 14
	TOTAL SHTS. 16

7

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-121.00-01-77.00	(1-L) AUBURN HILL ACRES, LLC	FEE	D.R. 6113-336	138.700							
ALIGNMENT NUMBER & DESCRIPTION: 20000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6800	20000	220+00.00	-50.00	376832.9706	637130.9784	S 15°18'17.58" E	25.00				
6801	20000	220+00.00	-25.00	376808.8572	637137.5773	S 74°41'42.43" W	33.00				
6802	20000	219+67.00	-25.00	376800.1467	637105.7477	N 15°18'17.57" W	25.00				
6803	20000	219+67.00	-50.00	376824.2601	637099.1488	N 74°41'42.42" E	33.00				
6800	20000	220+00.00	-50.00	376832.9706	637130.9784						

FIGURE 6800 AREA = 825.0000 SQ. FT. (0.0189 ACRES)

7

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-121.00-01-77.00	(1-L) AUBURN HILL ACRES, LLC	TCE	D.R. 6113-336	138.700							
ALIGNMENT NUMBER & DESCRIPTION: 20000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6900	20000	219+37.21	-55.00	376821.2195	637069.0955	N 15°17'31.74" W	45.00				
6901	20000	219+37.22	-100.00	376864.6263	637057.2272	N 74°41'42.42" E	26.37				
6002	20000	219+63.59	-100.00	376871.5868	637082.6620	S 23°51'44.60" E	18.01				
6001	20000	219+66.27	-82.19	376855.1158	637089.9480	S 65°31'21.51" E	50.31				
6000	20000	220+04.93	-50.00	376834.2719	637135.7336	S 74°41'42.43" W	37.93				
6803	20000	219+67.00	-50.00	376824.2601	637099.1488	N 15°18'17.57" W	5.00				
6902	20000	219+67.00	-55.00	376829.0828	637097.8290	S 74°41'42.43" W	29.79				
6900	20000	219+37.21	-55.00	376821.2195	637069.0955						

FIGURE 6900 AREA = 1902.1923 SQ. FT. (0.0437 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-122.00-01-38.01	(2-L) KYLE S. WEBB AND JACKLYN WEBB	TCE	E-51-182	86.900							
ALIGNMENT NUMBER & DESCRIPTION: 20000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6000	20000	220+04.93	-50.00	376834.2719	637135.7336	N 65°31'21.51" W	50.31				
6001	20000	219+66.27	-82.19	376855.1158	637089.9480	N 23°51'44.60" W	18.01				
6002	20000	219+63.59	-100.00	376871.5868	637082.6620	N 74°41'42.42" E	116.40				
6003	20000	220+79.99	-100.00	376902.3111	637194.9338	S 15°18'17.58" E	50.00				
6004	20000	220+79.99	-50.00	376854.0844	637208.1316	S 74°41'42.43" W	75.06				
6000	20000	220+04.93	-50.00	376834.2719	637135.7336						

FIGURE 6000 AREA = 5087.6327 SQ. FT. (0.1168 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-122.00-01-38.01	(2-L) KYLE S. WEBB AND JACKLYN WEBB	TCE	E-51-182	86.900							
ALIGNMENT NUMBER & DESCRIPTION: 20000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6100	20000	222+70.21	-30.00	376885.0033	637396.8845	N 15°18'17.57" W	25.00				
6101	20000	222+70.21	-55.00	376909.1166	637390.2857	N 74°41'42.42" E	30.00				
6102	20000	223+00.21	-55.00	376917.0353	637419.2217	S 15°18'17.58" E	25.00				
6103	20000	223+00.21	-30.00	376892.9219	637425.8206	S 74°41'42.43" W	30.00				
6100	20000	222+70.21	-30.00	376885.0033	637396.8845						

FIGURE 6100 AREA = 750.0000 SQ. FT. (0.0172 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-130.00-02-03.00	(1-R) ROLAND C. WAINWRIGHT AND DANA T. WAINWRIGHT	P/E	D.R. WW-9-123, IS-11-244, & C-244-211	141.400							
ALIGNMENT NUMBER & DESCRIPTION: 20000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6600	20000	220+00.00	55.00	376731.6945	637158.6937	N 15°18'17.57" W	5.00				
6601	20000	220+00.00	50.00	376736.5171	637157.3740	N 74°41'42.42" E	38.17				
6302	20000	220+38.17	50.00	376746.5923	637194.1903	S 41°13'28.68" E	5.56				
6301	20000	220+40.60	55.00	376742.4110	637197.8539	S 74°41'42.43" W	40.60				
6600	20000	220+00.00	55.00	376731.6945	637158.6937						

FIGURE 6600 AREA = 196.9250 SQ. FT. (0.0045 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-130.00-02-03.00	(1-R) ROLAND C. WAINWRIGHT AND DANA T. WAINWRIGHT	TCE	D.R. WW-9-123, IS-11-244, & C-244-211	141.400							
ALIGNMENT NUMBER & DESCRIPTION: 20000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6700	20000	219+77.10	100.00	376682.2458	637148.4839	N 15°17'50.07" W	75.00				
6701	20000	219+77.11	25.00	376754.5886	637128.6969	N 74°41'42.42" E	22.89				
6702	20000	220+00.00	25.00	376760.6305	637150.7751	S 15°18'17.58" E	30.00				
6600	20000	220+00.00	55.00	376731.6945	637158.6937	N 74°41'42.42" E	40.60				
6301	20000	220+40.60	55.00	376742.4110	637197.8539	S 41°12'14.51" E	50.02				
6403	20000	220+62.45	100.00	376704.7744	637230.8069	S 74°41'42.43" W	85.35				
6700	20000	219+77.10	100.00	376682.2458	637148.4839						

FIGURE 6700 AREA = 4035.7500 SQ. FT. (0.0928 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-122.00-01-39.01	(2-R) ARTHUR GUINN AND RACHEL C. GUINN	P/E	D.R. 212-203	4.336							
ALIGNMENT NUMBER & DESCRIPTION: 20000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6300	20000	220+80.00	55.00	376752.8109	637235.8565	S 74°41'42.43" W	39.40				
6301	20000	220+40.60	55.00	376742.4110	637197.8539	N 41°13'28.68" W	5.56				
6302	20000	220+38.17	50.00	376746.5923	637194.1903	N 74°41'42.42" E	41.83				
6303	20000	220+80.00	50.00	376757.6335	637234.5368	S 15°18'17.58" E	5.00				
6300	20000	220+80.00	55.00	376752.8109	637235.8565						

FIGURE 6300 AREA = 203.0750 SQ. FT. (0.0047 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-122.00-01-39.01	(2-R) ARTHUR GUINN AND RACHEL C. GUINN	TCE	D.R. 212-203	4.336							
ALIGNMENT NUMBER & DESCRIPTION: 20000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6400	20000	220+80.00	25.00	376781.7469	637227.9379	N 74°41'42.42" E	31.21				
6401	20000	221+11.21	25.00	376789.9850	637258.0410	S 15°17'50.07" E	75.00				
6402	20000	221+11.20	100.00	376717.6422	637277.8280	S 74°41'42.43" W	48.75				
6403	20000	220+62.45	100.00	376704.7744	637230.8069	N 41°12'14.51" W	50.02				
6301	20000	220+40.60	55.00	376742.4110	637197.8539	N 74°41'42.42" E	39.40				
6300	20000	220+80.00	55.00	376752.8109	637235.8565	N 15°18'17.57" W	30.00				
6400	20000	220+80.00	25.00	376781.7469	637227.9379						

FIGURE 6400 AREA = 3621.7500 SQ. FT. (0.0831 ACRES)

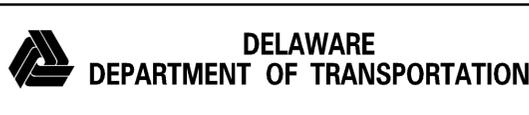
ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-122.00-01-39.01	(2-R) ARTHUR GUINN AND RACHEL C. GUINN	TCE	D.R. 212-203	4.336							
ALIGNMENT NUMBER & DESCRIPTION: 20000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6500	20000	223+21.10	55.00	376816.4505	637468.4059	N 15°18'17.57" W	30.00				
6501	20000	223+21.10	25.00	376845.3865	637460.4873	N 74°41'42.42" E	37.73				
6203	20000	223+58.83	25.00	376855.3456	637496.8792	S 13°16'52.58" E	30.02				
6202	20000	223+57.77	55.00	376826.1297	637503.7754	S 74°41'42.43" W	36.67				
6500	20000	223+21.10	55.00	376816.4505	637468.4059						

FIGURE 6500 AREA = 1116.0000 SQ. FT. (0.0256 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-122.00-01-39.00	(3-R) ARTHUR GUINN AND RACHEL C. GUINN	TCE	D.R. C-22-465	0.460							
ALIGNMENT NUMBER & DESCRIPTION: 20000 - R/W BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6200	20000	223+85.20	25.00	376862.3061	637522.3139	S 15°18'17.58" E	30.00				
6201	20000	223+85.20	55.00	376833.3700	637530.2326	S 74°41'42.43" W	27.43				
6202	20000	223+57.77	55.00	376826.1297	637503.7754	N 13°16'52.58" W	30.02				
6203	20000	223+58.83	25.00	376855.3456	637496.8792	N 74°41'42.42" E	26.37				
6200	20000	223+85.20	25.00	376862.3061	637522.3139						

FIGURE 6200 AREA = 807.0000 SQ. FT. (0.0185 ACRES)

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ADDENDUMS / REVISIONS	
7	MODIFICATION TO PARCEL 1-L DUE TO DEDICATION ADJUSTED R/W AND TCE AREAS
	SMW 11/5/13

NOT TO SCALE

BR 2-371A ON K371
BARRAT

7

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)			
8-00-121.00-01-77.00	13	(1-L) AUBURN HILL ACRES, LLC	D.R. 6113-336	A - 138.70	FEE TCE	825.00 / 0.02			1902.1923 / 0.04	6040947.00 / 138.68		0.0181 ACRES WITHIN ARTESIAN UTILITY EASEMENT
8-00-122.00-01-38.01	13	(2-L) KYLE S. WEBB AND JACKLYN WEBB	E-51-182	A - 86.90	TCE TCE				5087.6327 / 0.12 750.00 / 0.02	3785364.00 / 86.90		0.0090 ACRES WITHIN ARTESIAN UTILITY EASEMENT 0.0069 ACRES WITHIN ARTESIAN UTILITY EASEMENT, 0.0103 ACRES WITHIN DEC EASEMENT
8-00-130.00-02-03.00	13	(1-R) ROLAND C WAINWRIGHT AND DANA T. WAINWRIGHT	D.R. WW-9-123, IS-11-244 & C-244-211	A - 141.40	P/E TCE			196.925 / 0.00	4035.75 / 0.09	6159384.00 / 141.40		0.0079 ACRES WITHIN DEC EASEMENT
8-00-122.00-01-39.01	13	(2-R) ARTHUR GUINN AND RACHEL C. GUINN	D.R. 212-203	A - 4.34	P/E TCE TCE			203.075 / 0.00	3621.75 / 0.08 1116.00 / 0.03	188881.80 / 4.34		0.0107 ACRES WITHIN DEC EASEMENT 0.0129 ACRES WITHIN DEC EASEMENT
8.00-122.00-01-39.00	13	(3-R) ARTHUR GUINN AND RACHEL C. GUINN	D.R. C-22-465	A - 0.46	TCE				807.00 / 0.02	20037.60 / 0.46		0.0092 ACRES WITHIN DEC EASEMENT

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

RIGHT-OF-WAY SHEET 3 OF 3



ADDENDUMS / REVISIONS
 7 MODIFICATION TO PARCEL 1-L DUE TO DEDICATION SMW 11/5/13
 ADJUSTED R/W AND TCE AREAS AND REMARKS

NOT TO SCALE

BR 2-371A ON K371
 BARRATTS CHAPEL ROAD
 OVER DOUBLE RUN

CONTRACT
 T201107210
 COUNTY
 KENT

BRIDGE NO. 2-371A
 DESIGNED BY: SMW
 CHECKED BY: EM

RIGHT-OF-WAY
 TABULATION SHEET

SHEET NO.
 16
 TOTAL SHTS.
 16

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