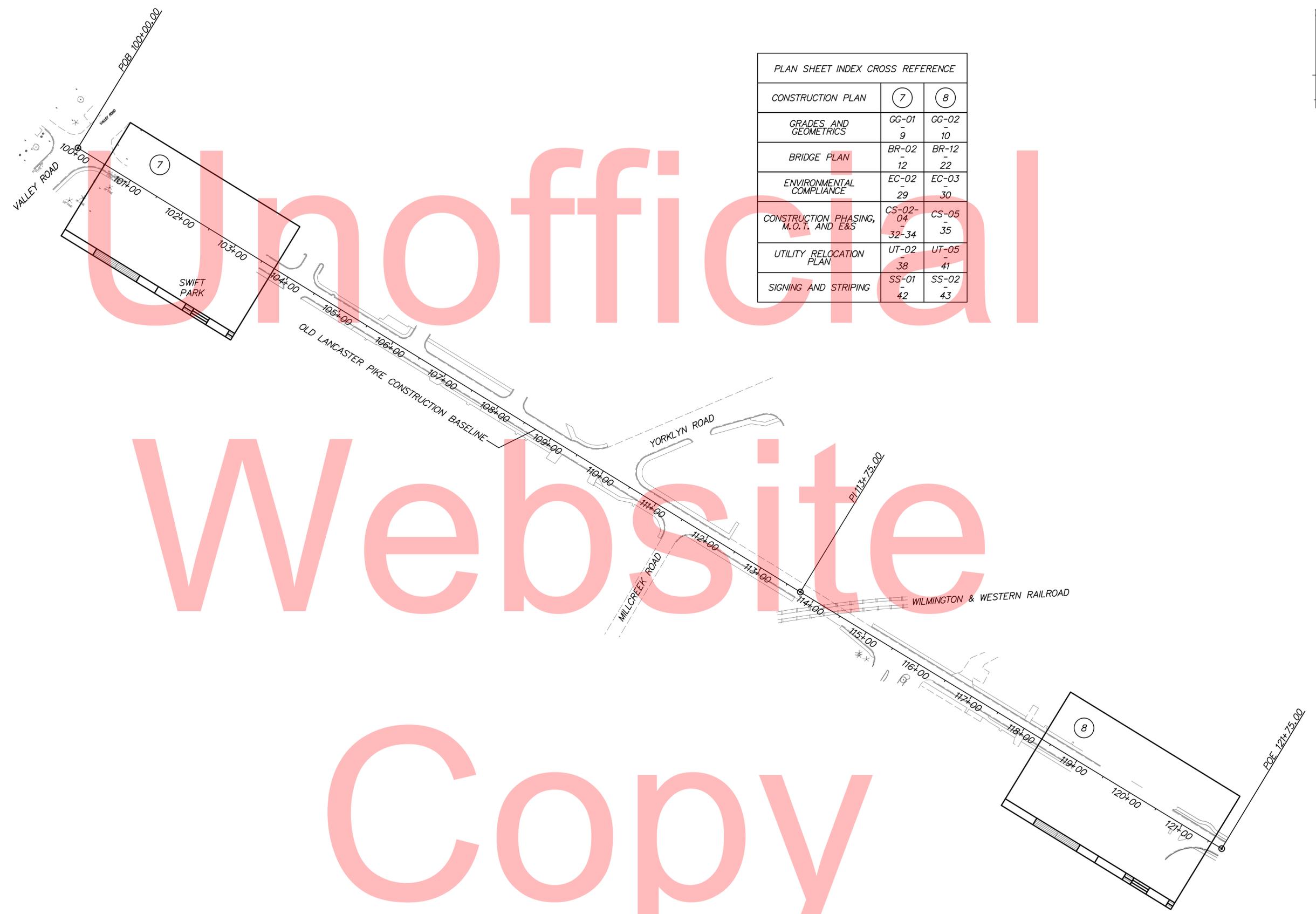


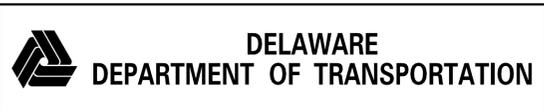


| PLAN SHEET INDEX CROSS REFERENCE | | |
|--------------------------------------|------------------------|------------------|
| CONSTRUCTION PLAN | 7 | 8 |
| GRADES AND GEOMETRICS | GG-01 - 9 | GG-02 - 10 |
| BRIDGE PLAN | BR-02 - 12 | BR-12 - 22 |
| ENVIRONMENTAL COMPLIANCE | EC-02 - 29 | EC-03 - 30 |
| CONSTRUCTION PHASING, M.O.T. AND E&S | CS-02-04 - 32-34 | CS-05 - 35 |
| UTILITY RELOCATION PLAN | UT-02 - 38 | UT-05 - 41 |
| SIGNING AND STRIPING | SS-01 - 42 | SS-02 - 43 |

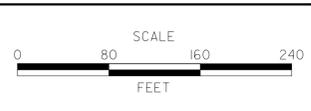


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| ADDENDUMS / REVISIONS | |
|-----------------------|--|
| | |
| | |
| | |



**OLD LANCASTER PIKE
 PEDESTRIAN BRIDGE PLACEMENT**

| | | |
|------------|--------------|-----------|
| CONTRACT | BRIDGE NO. | NA |
| T201220004 | DESIGNED BY: | KMS |
| COUNTY | CHECKED BY: | MAA |
| NEW CASTLE | | |

PLAN SHEET INDEX

| |
|-------------|
| IS-01 |
| SHEET NO. |
| 2 |
| TOTAL SHTS. |
| 44 |

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 | |
|----------------------------|--|
| | VERIZON TELEPHONE (UNDERGROUND) |
| | VERIZON TELEPHONE (OVERHEAD) |
| | DELMARVA POWER (GAS) |
| | DELMARVA POWER (ELECTRIC, UNDERGROUND) |
| | DELMARVA POWER (ELECTRIC, OVERHEAD) |
| | ARTESIAN WATER COMPANY |
| | NEW CASTLE COUNTY SEWER |
| | COMCAST CABLE (UNDERGROUND) |
| | COMCAST CABLE (OVERHEAD) |
| | LIGHTING CONDUIT |

PROPOSED SYMBOLS

| 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 |

| 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 |

| LANDSCAPING | |
|-------------|---------------------|
| | LANDSCAPE PLANTINGS |
| | SHRUBBERY |
| | CONIFEROUS TREE |
| | DECIDUOUS TREE |

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

| UTILITY COMPANY FACILITIES | |
|----------------------------|-------------------------|
| | DELMARVA POWER (GAS) |
| | NEW CASTLE COUNTY SEWER |

| PAVEMENT SECTION(S) | |
|---------------------|--|
| | PAVEMENT PATCHING - SEE TYPICAL SECTIONS |

| 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 |

| CONSTRUCTION PHASING & M.O.T | |
|------------------------------|------------------------------------|
| | BARRICADE, TYPE 3 |
| | CONCRETE SAFETY BARRIER - PORTABLE |
| | CONSTRUCTION SAFETY FENCE / LENGTH |
| | CONSTRUCTION SAFETY FENCE |
| | CONSTRUCTION WARNING SIGN LOCATION |
| | CONSTRUCTION WARNING SIGN |
| | CRASH CUSHION ARRAY |
| | DRUM - TRAFFIC CONTROL |
| | FLAGGER LOCATION |
| | PHASING TRAFFIC FLOW ARROW |
| | TEMPORARY CONSTRUCTION |
| | TEMPORARY PAVEMENT MARKING ARROW |
| | TRUCK WITH MOUNTED ATTENUATOR |
| | WORK AREA - ACTIVE PHASE |
| | IMPACT ATTENUATOR |

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) | ALL PLAN SHEETS, IN PDF FORMAT. |
| () | EXISTING DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT. |
| () | PROPOSED DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT. |
| () | DESIGN FILE, IN .DGN FILE FORMAT, CONTAINING ONLY THE PROPOSED 3D TRIANGLES OF THE PROPOSED DIGITAL TERRAIN MODEL (DTM). |

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

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

| | |
|-------|---|
| (X) | CROSS SECTIONS (WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR) |
| () | RIGHT-OF-WAY PLANS (WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR) |

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

| | |
|-------|--|
| () | THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. |
| (X) | THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR IS INCIDENTAL TO ITEM 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 0.1415 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

- IN AREAS WHERE TREES OR SHRUBS WILL BE OVERHANGING THE PROPOSED SIDEWALK, PRUNING MAY BE NECESSARY TO ACHIEVE A VERTICAL CLEAR SPACE OF 10 FEET ABOVE THE PROPOSED SIDEWALK ELEVATION. THE CONTRACTOR SHALL PRUNE EXISTING TREE AND SHRUB BRANCHES, WHICH OVERHANG THE SIDEWALK, IN ACCORDANCE WITH I.S.A. STANDARDS. THE CONTRACTOR SHALL NOTIFY DELDOT'S ROADSIDE ENVIRONMENTALIST ADMINISTRATOR, EUGENE "CHIP" ROSAN, JR. AT (302) 760-2185 AND/OR HIS DESIGNEE, AT LEAST TWO (2) DAYS PRIOR TO THE PRUNING OPERATION. ALL COSTS ASSOCIATED WITH THE ABOVE WORK TO BE PAID UNDER ITEM 201000 - CLEARING AND GRUBBING.

PROJECT NOTES (CONTIN.)

SECTION 200 (CONTIN.)

- THE ENGINEER MAY REQUIRE THE CONTRACTOR TO EXCAVATE TEST PITS ALONG PROPOSED DRAINAGE RUNS, AT POINTS OF POSSIBLE UTILITY CONFLICTS, TO DETERMINE IF A CONFLICT EXISTS. ANY CONFLICTS SHALL BE COORDINATED BY THE CONTRACTOR, WITH THE ENGINEER AND THE UTILITY COMPANY INVOLVED. THE ENGINEER SHALL ULTIMATELY DETERMINE THE SOLUTION TO THE UTILITY CONFLICT. TEST HOLES SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM 208000 - EXCAVATION AND BACKFILL FOR PIPE TRENCHES, BUT ONLY TO THE ACTUAL DEPTH EXCAVATED.

- ITEMS TO BE REMOVED UNDER ITEM 21000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

- REMOVAL OF EXISTING SANITARY SEWER MANHOLE
- PARTIAL DEMOLITION OF EXISTING BRIDGE WINGWALLS
- PARTIAL REMOVAL OF EXISTING CULVERT FOOTING
- PARTIAL REMOVAL OF EXISTING 24" RCP
- REMOVAL AND DISPOSAL OF EXISTING 8" VCP SANITARY SEWER

SECTION 400

- THE PAVEMENT SECTION FOR FLEXIBLE PAVEMENT RESIDENTIAL DRIVEWAYS SHALL BE 2" WARM-MIX, TYPE 'C' (ITEM 401821) OVER 8" GRADED AGGREGATE BASE COURSE, TYPE 'B', (ITEM 302007) UNLESS OTHERWISE NOTED ON THE PLANS.

SECTION 600

- THE DEPARTMENT AND THE CONTRACTOR SHALL INSPECT ALL EXISTING PIPES AND DRAINAGE STRUCTURES TO BE USED IN THE FINAL DRAINAGE SYSTEM AND AGREE ON THE CONDITION PRIOR TO THE START OF CONSTRUCTION. EXISTING PIPES AND DRAINAGE STRUCTURES DAMAGED DUE TO CONTRACTOR OPERATIONS SHALL BE REPAIRED OR REPLACED IN-KIND AT THE CONTRACTOR'S EXPENSE. THE DEPARTMENT WILL VIDEO INSPECT NEW PIPE RUNS TO CONFIRM CONDITION PRIOR TO ACCEPTANCE. PIPE CLEANING PRIOR TO VIDEO INSPECTION AND MAINTENANCE OF TRAFFIC DURING THE VIDEO INSPECTION ARE THE RESPONSIBILITY OF THE CONTRACTOR AND INCIDENTAL TO THE PIPE ITEM THAT IS BEING VIDEO INSPECTED.

SECTION 700

- IN AREAS WHERE PROPOSED CURB MEETS EXISTING CURB AND THE TWO CURB TYPES ARE NOT SIMILAR, THE PROPOSED CURB SHALL BE TRANSITIONED IN 10 LINEAR FEET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK, INCLUDING SAW CUTTING EXISTING CURB SHALL BE INCIDENTAL TO THE PROPOSED CURB ITEM.

- WHERE PROPOSED CONCRETE SIDEWALK IS CONSTRUCTED TO MEET EXISTING SIDEWALK, THE EXISTING SIDEWALK SHALL BE SAWCUT AT THE TIE-IN POINT OR MEET THE NEAREST EXISTING SIDEWALK JOINT. ALL SAW CUTTING SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER AND SHALL BE PAID FOR UNDER ITEM 762002 - SAWCUTTING, CONCRETE, FULL DEPTH.

- STATION AND ELEVATION DATA GIVEN FOR DRAINAGE STRUCTURES ARE TO BE APPLIED TO THE CENTER OF THE GRATE FOR INLETS, AND TO THE CENTER OF THE STRUCTURE FOR JUNCTION BOXES AND MANHOLES.

- THE NEW CASTLE COUNTY DEPARTMENT OF PUBLIC WORKS SHALL SUPPLY AND THE STATE'S CONTRACTOR SHALL INSTALL NEW SELF SEALING MANHOLE FRAMES AND COVERS ON ALL COUNTY SEWER MANHOLES THAT ARE NOT BEING RELOCATED, WITHIN THE PROJECT LIMITS IN ACCORDANCE WITH THE COUNTY'S STANDARD SPECIFICATIONS. THE EXISTING MANHOLE FRAMES AND COVERS THAT ARE REMOVED SHALL BECOME THE PROPERTY OF THE STATE'S CONTRACTOR. PAYMENT SHALL BE INCIDENTAL TO ITEM 710506 - ADJUST AND REPAIR EXISTING SANITARY SEWER MANHOLE.

- ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT.

SECTION 900

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

MISCELLANEOUS

- THE CONTRACTOR SHALL CONTACT MICHAEL ELLER, THE CHIEF OF SCHEDULING FOR DART FIRST STATE, 14 DAYS PRIOR TO THE START OF CONSTRUCTION AT 302-576-6061.

- THE PEDESTRIAN BRIDGE ABUTMENT A (LOCATED AT BRIDGE 1-169) WILL IMPACT AN EXISTING 24" RCP. FIELD CONDITIONS IDENTIFY THE EXISTING PIPE AS ABANDONED AND FILLED WITH SEDIMENT. IN THIS CASE, A SECTION OF THE 24" RCP SHALL BE REMOVED AND PLUGGED PRIOR TO ABUTMENT A CONSTRUCTION, SO THAT THERE IS NO CONFLICT WITH ABUTMENT A CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THESE CONDITIONS IN THE FIELD WITH THE ENGINEER PRIOR TO BEGINNING ANY WORK ON THE 24" RCP. ALL ASSOCIATED WORK SHALL BE INCIDENTAL TO ITEM 21000.

- THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO ALL RESIDENTS AND BUSINESSES WHERE CONSTRUCTION WILL IMPACT ACCESS TO THEIR PROPERTY AT LEAST TWO (2) WEEKS PRIOR TO THE BEGINNING OF THE CONSTRUCTION PHASE.

- FOR SIDEWALK CONSTRUCTION, NO BARE SOIL SHALL BE PERMITTED TO SHOW AT THE END OF THE WORK DAY. ALL BARE SOIL SHALL BE COVERED WITH GRADED AGGREGATE BASE COURSE OR A METHOD APPROVED BY THE ENGINEER.

- SEE ENVIRONMENTAL COMPLIANCE PLAN FOR FURTHER RESTRICTIONS/GUIDANCE ASSOCIATED WITH THIS PROJECT.

- PERMITTING FOR UTILITIES: AS OUTLINED IN CHAPTER 3 OF THE DELDOT UTILITIES MANUAL, THE INDIVIDUAL UTILITY COMPANIES ARE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FROM MUNICIPAL, STATE AND FEDERAL GOVERNMENT AGENCIES AND RAILROADS. THIS INCLUDES BUT IS NOT LIMITED TO WATER QUALITY PERMIT / DNREC WATER QUALITY CERTIFICATION, DNREC SUBAQUEOUS LANDS / WETLANDS PERMITS, DNREC COASTAL ZONE CONSISTENCY CERTIFICATION, COUNTY FLOODPLAIN PERMITS (NEW CASTLE COUNTY ONLY), U.S. COAST GUARD PERMITS, U.S. ARMY CORPS 404 PERMITS, SEDIMENT AND EROSION PERMITS, AND RAILROAD CROSSING PERMITS. THE ENVIRONMENTAL PERMITS CITED ON THE EC SHEET(S) ONLY AUTHORIZE WORK FOR THE NCC SEWER LINE RELOCATION FOR BRIDGE 1-169 AND DO NOT AUTHORIZE ANY OTHER UTILITY WORK ASSOCIATED WITH THIS PROJECT. ANY WORK ON THE 24" RCP. ALL ASSOCIATED WORK SHALL BE INCIDENTAL TO ITEM 21000.

| EARTHWORK SUMMARY | |
|------------------------------------|----|
| EXCAVATION - ITEM 202000 (CY) | |
| FROM CROSS-SECTIONS (+) | 28 |
| TOPSOIL STRIPPING (+) | 41 |
| TOTAL EXCAVATION (+) [ITEM 202000] | 69 |

| EXCAVATION AVAILABLE FOR EMBANKMENT (CY) | |
|---|------|
| TOTAL EXCAVATION (+) [ITEM 202000] | 69 |
| EXCAVATION AND BACKFILL FOR STRUCTURES (+) [ITEM 207000] | 265 |
| EXCAVATION AND BACKFILL FOR PIPE TRENCHES (+) [ITEM 208000] | 71 |
| UNSUITABLE MATERIALS (-) | -405 |
| TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT | 0 |

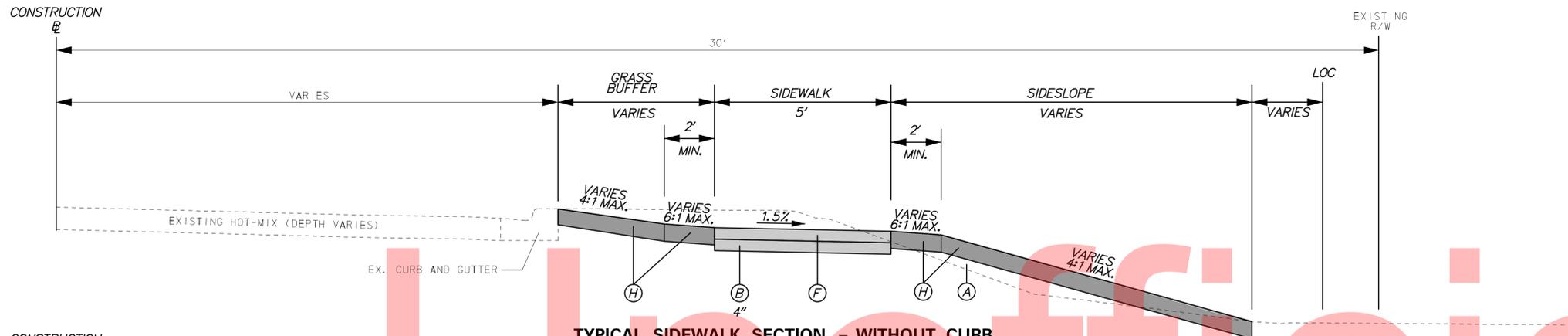
| EMBANKMENT AND BORROW, TYPE 'F' REQUIRED (CY) | |
|---|---|
| FROM CROSS SECTIONS / MODEL (+) | 6 |
| COMPACTION FACTOR APPLIED TO THE SUBTOTAL (20%) (+) | 2 |
| TOTAL EMBANKMENT AND BORROW, TYPE 'F' REQUIRED | 8 |

| TOPSOIL SUMMARY (CY) [NEED = '-' / EXCESS = '+'] | |
|--|-----|
| TOPSOIL REQUIRED (-) | -84 |
| TOPSOIL BALANCE | -84 |

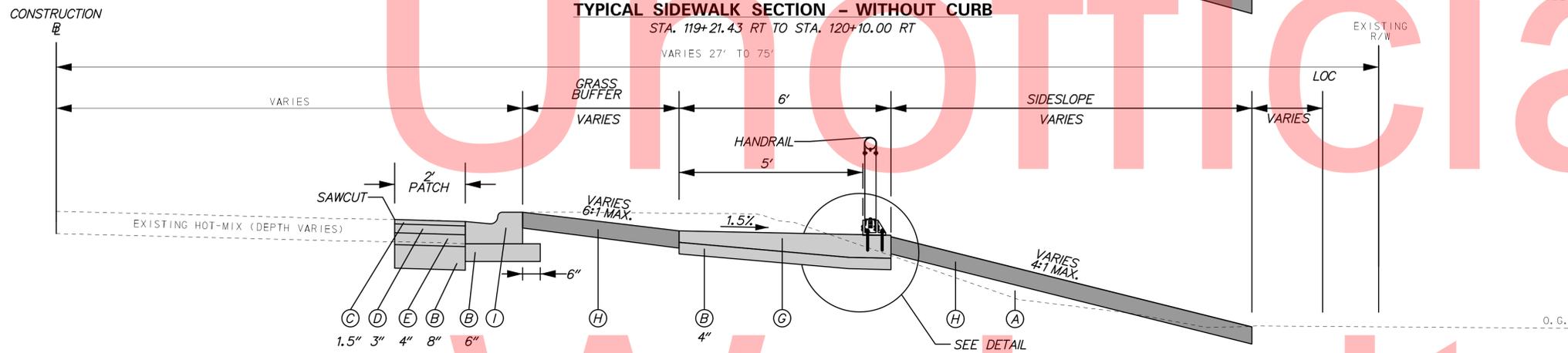
| MATERIAL BALANCE (CY) [NEED = '-' / EXCESS = '+'] | |
|---|------|
| BORROW, TYPE 'B' | -14 |
| BORROW, TYPE 'C' [ITEM 210000] | -103 |
| BORROW, TYPE 'F' | -8 |
| TOPSOIL | -84 |
| UNSUITABLE MATERIAL | 405 |

NOTES:

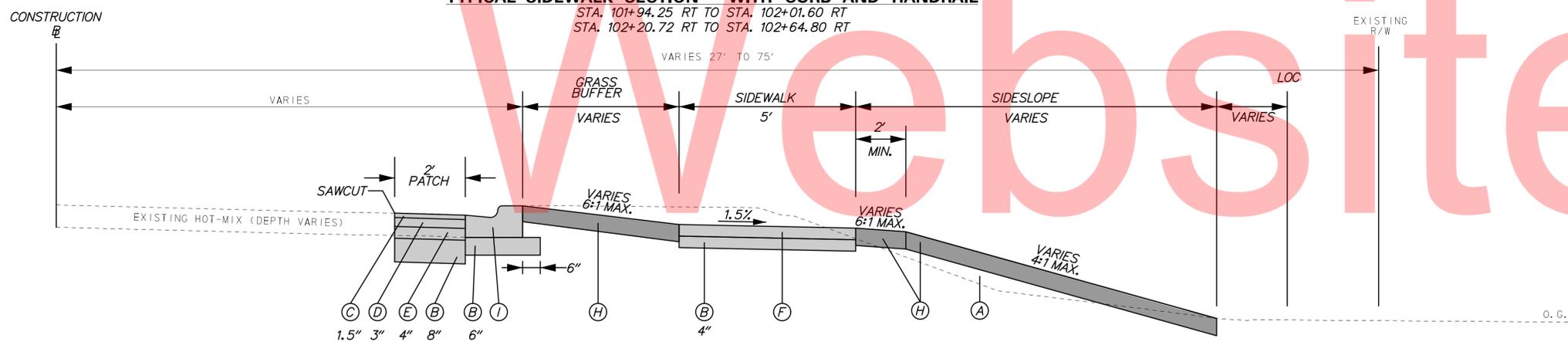
- THE VALUES LISTED IN THE EARTHWORK SUMMARY ARE APPROXIMATE AND ARE NOT TO BE USED AS A BASIS OF PAYMENT. THE EARTHWORK SUMMARY IS CONSIDERED FOR INFORMATIONAL PURPOSES ONLY.
- UNSUITABLE MATERIALS INCLUDE UNDERCUT SOILS, BITUMINOUS PAVEMENT, ETC.



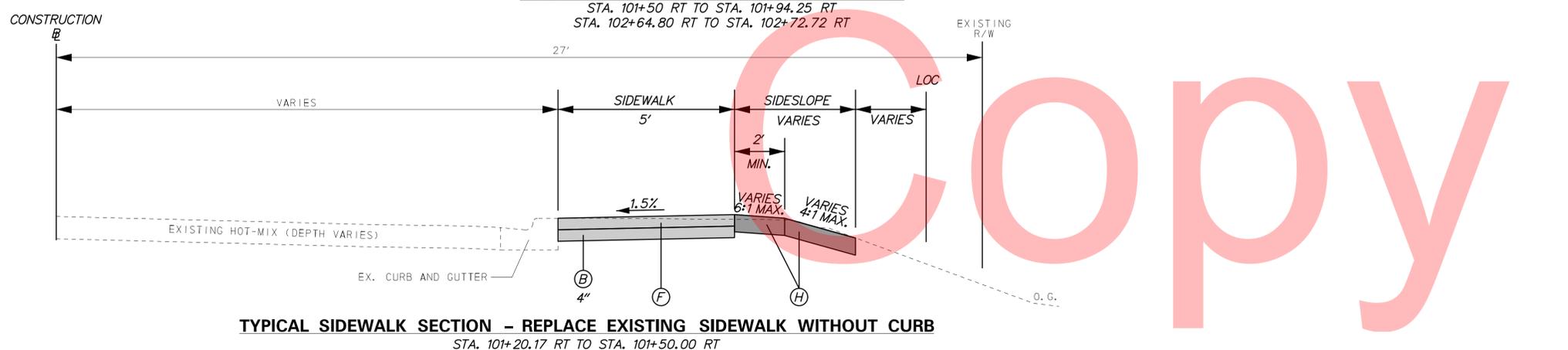
TYPICAL SIDEWALK SECTION - WITHOUT CURB
 STA. 119+21.43 RT TO STA. 120+10.00 RT



TYPICAL SIDEWALK SECTION - WITH CURB AND HANDRAIL
 STA. 101+94.25 RT TO STA. 102+01.60 RT
 STA. 102+20.72 RT TO STA. 102+64.80 RT



TYPICAL SIDEWALK SECTION - WITH CURB
 STA. 101+50 RT TO STA. 101+94.25 RT
 STA. 102+64.80 RT TO STA. 102+72.72 RT

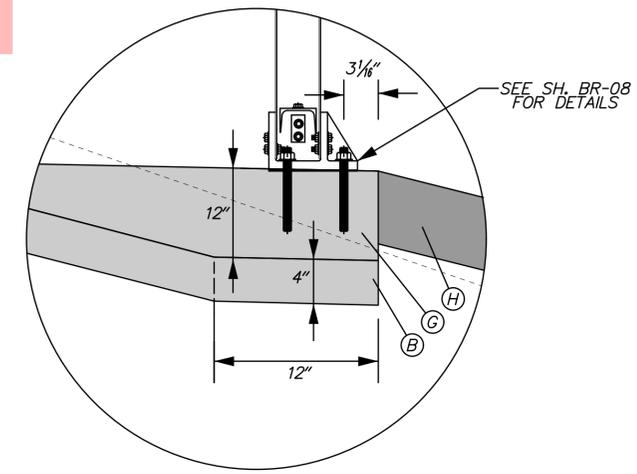


TYPICAL SIDEWALK SECTION - REPLACE EXISTING SIDEWALK WITHOUT CURB
 STA. 101+20.17 RT TO STA. 101+50.00 RT

LEGEND

- (A) ITEM 209006 - BORROW, TYPE F
- (B) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (C) ITEM 401821 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22, PATCHING
- (D) ITEM 401822 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, PATCHING
- (E) ITEM 401823 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING
- (F) ITEM 705001 - P.C.C. SIDEWALK, 4"
- (G) ITEM 705006 - P.C.C. SIDEWALK, VARIABLE DEPTH
- (H) ITEM 908004 - TOPSOIL, 6" AND ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
- (I) ITEM 701019 - INTEGRAL P.C.C. CURB AND GUTTER, TYPE 3-4

NOTES:
 1. CLEAR ZONE AND LATERAL OFFSETS (1.5' FROM FACE OF CURB). LINES HAVE BEEN OMITTED FOR CLARITY.



SIDEWALK DETAIL AT HANDRAIL

Wednesday, June 17, 2015 AT 02:59 PM
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| |
|-----------------------|
| ADDENDUMS / REVISIONS |
| |
| |
| |

NOT TO SCALE

OLD LANCASTER PIKE PEDESTRIAN BRIDGE PLACEMENT

| | |
|------------------------|------------------|
| CONTRACT T201220004 | BRIDGE NO. NA |
| COUNTY NEW CASTLE | DESIGNED BY: KMS |
| | CHECKED BY: MAA |

| | |
|-------------------------|-------------------|
| TYPICAL SECTIONS | SHEET NO. 5 |
| | TOTAL SHTS. 44 |
| | TS-01 |



Unofficial
 Website
 Copy

| CONSTRUCTION ALIGNMENT CONTROL | | | | |
|--------------------------------|-----------|--------|-------------|-------------|
| POINT | STATION | OFFSET | NORTHING | EASTING |
| •10000 | 100+00.00 | 0.00 | 651884.5955 | 576438.3533 |
| •10001 | 105+00.00 | 0.00 | 651623.2749 | 576864.6297 |
| •10002 | 110+00.00 | 0.00 | 651361.9543 | 577290.9061 |
| •10003 | 113+75.00 | 0.00 | 651165.9639 | 577610.6133 |
| •10004 | 118+00.00 | 0.00 | 650945.3443 | 577973.8653 |
| •10005 | 121+75.00 | 0.00 | 650750.6800 | 578294.3818 |

| HORIZONTAL / VERTICAL CONTROL DATA | | | | | |
|------------------------------------|-----------|--------|-------------|-------------|-----------|
| POINT | STATION | OFFSET | NORTHING | EASTING | ELEVATION |
| • TP1X | 104+03.96 | -28.31 | 651697.6055 | 576797.5452 | 255.48 |
| • TP2X | 111+78.50 | 21.54 | 651250.2960 | 577431.8263 | 258.32 |
| • TP150 | 119+29.50 | -15.65 | 650891.4945 | 578092.6704 | 255.36 |

NOTE: NEGATIVE OFFSET IS LEFT OF BASELINE

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 JU4141, ELEVATION 197.46

Wednesday, June 17, 2015 AT 02:59 PM
\\V01_OLP_EadBridges.dgn



**DELAWARE
DEPARTMENT OF TRANSPORTATION**

ADDENDUMS / REVISIONS



**OLD LANCASTER PIKE
PEDESTRIAN BRIDGE PLACEMENT**

| | | |
|------------|--------------|-----------|
| CONTRACT | BRIDGE NO. | NA |
| T201220004 | DESIGNED BY: | KMS |
| COUNTY | CHECKED BY: | MAA |
| NEW CASTLE | | |

**HORIZONTAL AND
VERTICAL CONTROL**

| |
|--------------|
| HV-01 |
| SHEET NO. |
| 6 |
| TOTAL SHTS. |
| 44 |

| DRAINAGE PIPE SCHEDULE | | | | | | |
|------------------------|-------------|-------|--------|-------|----------|----------|
| NO. | SIZE / TYPE | CLASS | LENGTH | SLOPE | INV. EL. | DIS. EL. |
| 1 | 36" RCP | 111 | 25' | 0.005 | 248.74 | 248.62 |
| 4 | 36" RCP | 111 | 24' | * | * | * |

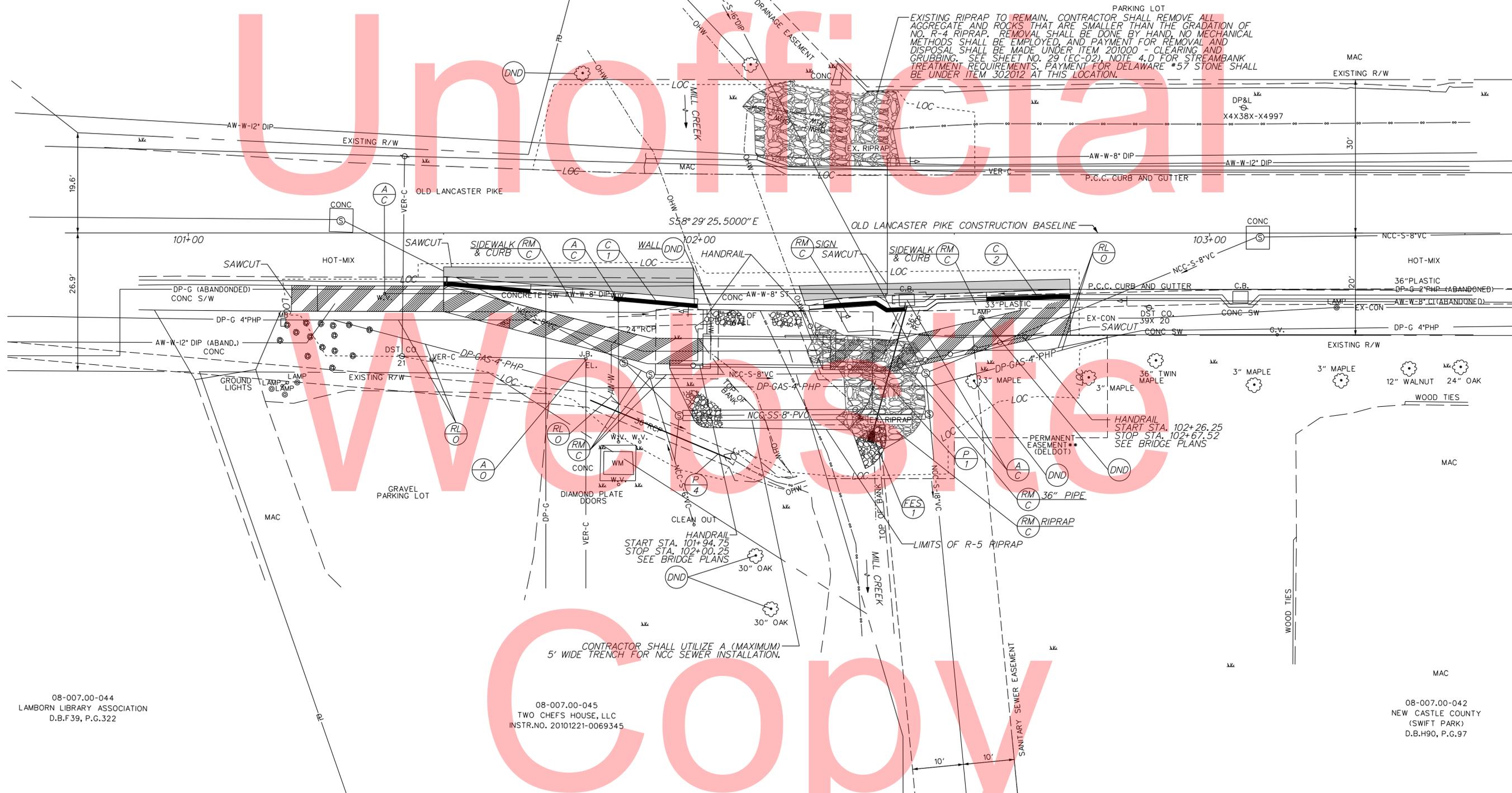
*CONTRACTOR TO FIELD VERIFY EXISTING INVERT ELEVATIONS, REMOVE PIPE TO INSTALL PROPOSED SANITARY LATERAL, AND REPLACE 36" RCP IN KIND ONCE SANITARY SEWER SYSTEM IS IN PLACE

| CURB SCHEDULE | | |
|---------------|--------------------------------|--------|
| NO. | ITEM DESCRIPTION / TYPE | LENGTH |
| 1 | P.C.C. CURB & GUTTER, TYPE 3-4 | 49' |
| 2 | P.C.C. CURB & GUTTER, TYPE 3-4 | 52' |

| FLARED END SECTION SCHEDULE | | | |
|-----------------------------|-------------|-------|--------------|
| NO. | SIZE / TYPE | SLOPE | SAFETY GRATE |
| 1 | 36" RCP | 0.005 | NO |

08-007.40-032
STATE OF DELAWARE
(DEPARTMENT OF TRANSPORTATION)
D.B.K44, P.G.402

08-007.40-034
KIO ASSOCIATES
D.B.189, P.G.206



CONTRACTOR SHALL UTILIZE A (MAXIMUM) 5' WIDE TRENCH FOR NCC SEWER INSTALLATION.

08-007.00-044
LAMBORN LIBRARY ASSOCIATION
D.B.F39, P.G.322

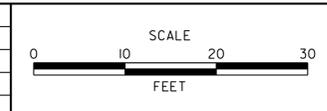
08-007.00-045
TWO CHEFS HOUSE, LLC
INSTR.NO. 20101221-0069345

08-007.00-042
NEW CASTLE COUNTY
(SWIFT PARK)
D.B.H90, P.G.97

••PE ACQUIRED BY DELDOT IN CONTRACT 29-200-18



| ADDENDUMS / REVISIONS | |
|-----------------------|--|
| | |
| | |



**OLD LANCASTER PIKE
PEDESTRIAN BRIDGE PLACEMENT**

| | |
|------------------------|-------------------------------------|
| CONTRACT T201220004 | BRIDGE NO. BR 1-169 |
| COUNTY NEW CASTLE | DESIGNED BY: KMS CHECKED BY: MAA |

CONSTRUCTION PLAN

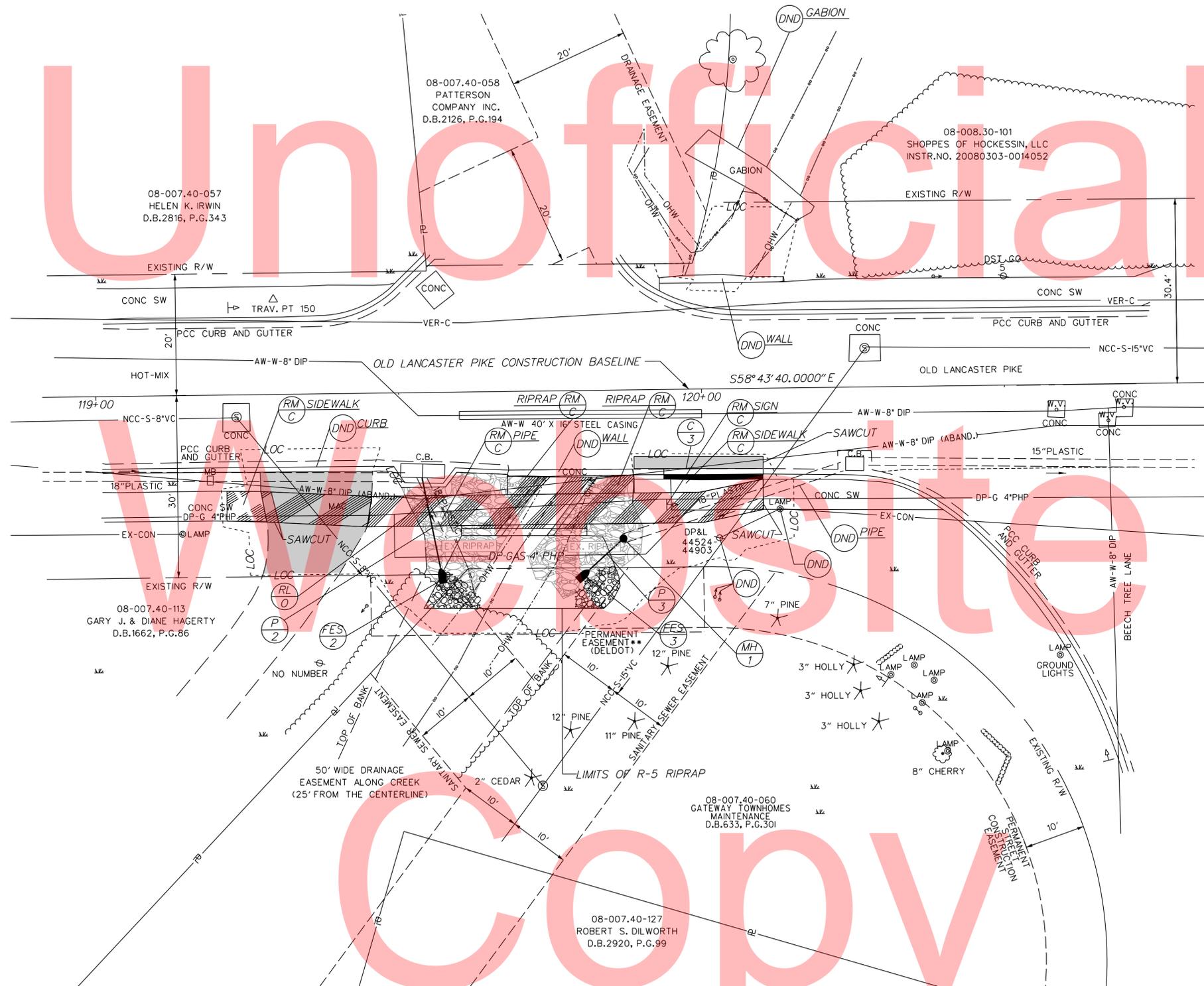
| |
|-------------------|
| CP-01 |
| SHEET NO. 7 |
| TOTAL SHTS. 44 |

| DRAINAGE PIPE SCHEDULE | | | | | | |
|------------------------|-------------|-------|--------|-------|----------|----------|
| NO. | SIZE / TYPE | CLASS | LENGTH | SLOPE | INV. EL. | DIS. EL. |
| 2 | 18" RCP | 111 | 12' | 0.005 | 251.01 | 250.95 |
| 3 | 18" RCP | 111 | 6' | 0.008 | 251.05 | 251.00 |

| FLARED END SECTION SCHEDULE | | | |
|-----------------------------|-------------|-------|--------------|
| NO. | SIZE / TYPE | SLOPE | SAFETY GRATE |
| 2 | 18" RCFE | 0.005 | NO |
| 3 | 18" RCFE | 0.008 | NO |

| MANHOLE SCHEDULE | | | | | |
|------------------|---------|--------|-----------|-----------|----------|
| NO. | STATION | OFFSET | TYPE/SIZE | T. G. EL. | INV. EL. |
| 1 | 119+87 | 24.50 | 48" X 48" | 254.51 | 251.05 |

| CURB SCHEDULE | | |
|---------------|----------------------------------|--------|
| NO. | ITEM DESCRIPTION / TYPE | LENGTH |
| 3 | P. C. C. CURB & GUTTER, TYPE 3-4 | 22' |



**PE ACQUIRED BY DELDOT IN CONTRACT 29-200-18

ADDENDUMS / REVISIONS



**OLD LANCASTER PIKE
PEDESTRIAN BRIDGE PLACEMENT**

| | | |
|------------|------------------|--------------------|
| CONTRACT | BRIDGE NO. | BOX CULVERT |
| T201220004 | DESIGNED BY: KMS | |
| COUNTY | CHECKED BY: MAA | |
| NEW CASTLE | | |

CONSTRUCTION PLAN

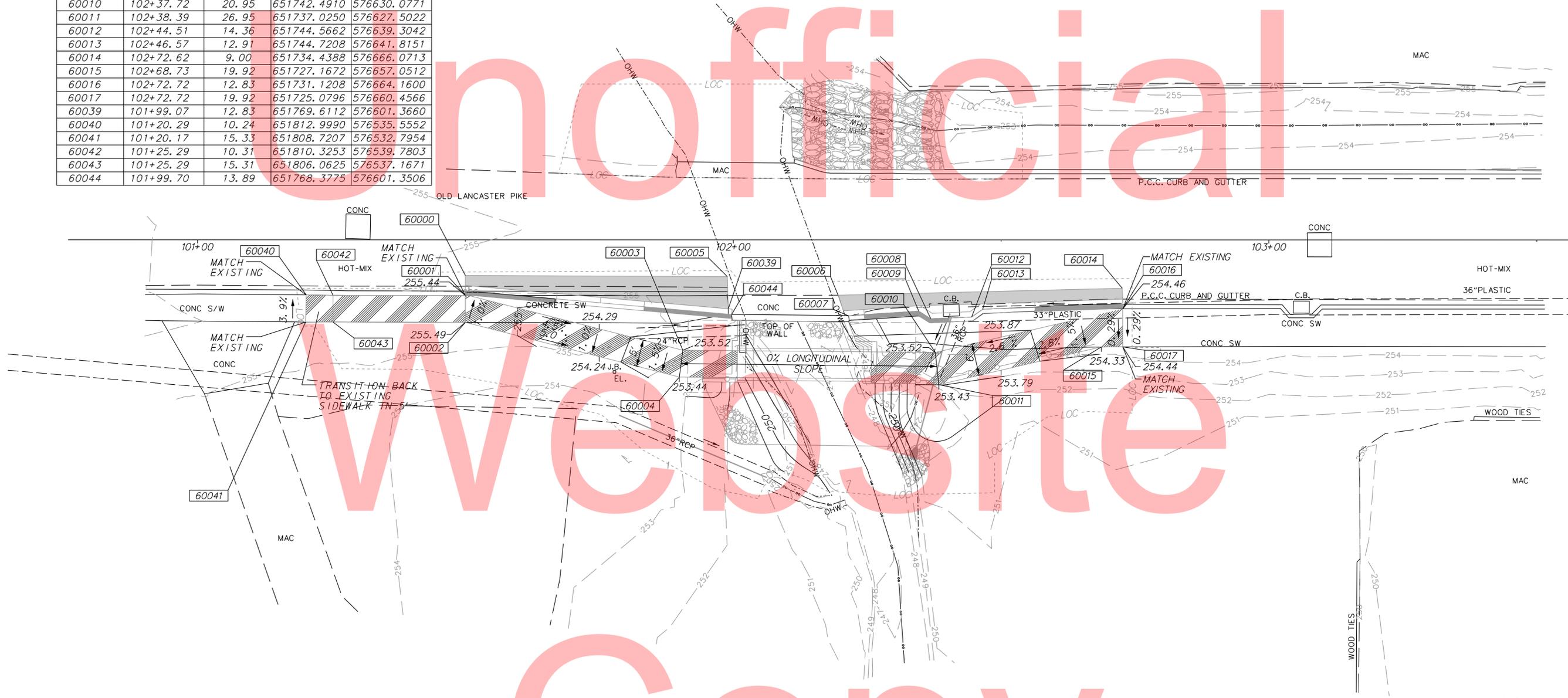
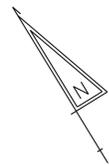
CP-02

| | |
|-------------|----|
| SHEET NO. | 8 |
| TOTAL SHTS. | 44 |

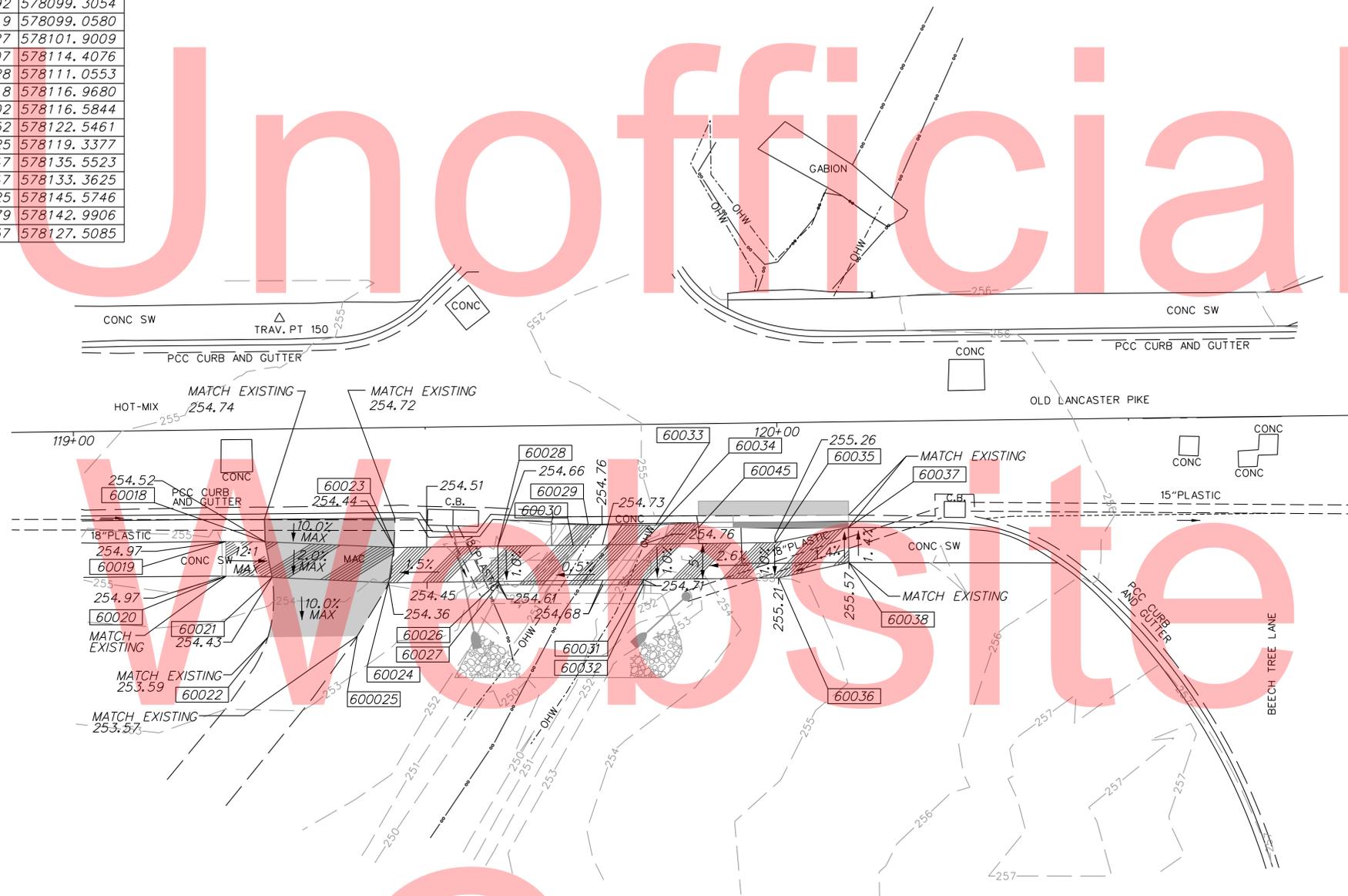
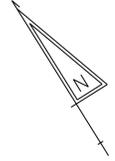
SDATES
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| COORDINATE LIST | | | | |
|-----------------|-----------|--------|-------------|-------------|
| POINT NO. | STATION | OFFSET | NORTHING | EASTING |
| 60000 | 101+50.00 | 6.64 | 651800.5373 | 576562.7652 |
| 60001 | 101+50.00 | 10.31 | 651797.4112 | 576560.8488 |
| 60002 | 101+50.00 | 15.36 | 651793.1036 | 576558.2081 |
| 60003 | 101+90.59 | 20.55 | 651767.4701 | 576590.1022 |
| 60004 | 101+89.94 | 25.54 | 651763.5507 | 576586.9392 |
| 60005 | 101+98.89 | 6.82 | 651774.8265 | 576604.3474 |
| 60006 | 102+19.59 | 10.30 | 651761.0476 | 576620.1796 |
| 60007 | 102+21.56 | 14.15 | 651756.7344 | 576619.8445 |
| 60008 | 102+36.87 | 14.68 | 651748.2818 | 576632.6249 |
| 60009 | 102+34.62 | 13.26 | 651750.6718 | 576631.4499 |
| 60010 | 102+37.72 | 20.95 | 651742.4910 | 576630.0771 |
| 60011 | 102+38.39 | 26.95 | 651737.0250 | 576627.5022 |
| 60012 | 102+44.51 | 14.36 | 651744.5662 | 576639.3042 |
| 60013 | 102+46.57 | 12.91 | 651744.7208 | 576641.8151 |
| 60014 | 102+72.62 | 9.00 | 651734.4388 | 576666.0713 |
| 60015 | 102+68.73 | 19.92 | 651727.1672 | 576657.0512 |
| 60016 | 102+72.72 | 12.83 | 651731.1208 | 576664.1600 |
| 60017 | 102+72.72 | 19.92 | 651725.0796 | 576660.4566 |
| 60039 | 101+99.07 | 12.83 | 651769.6112 | 576601.3660 |
| 60040 | 101+20.29 | 10.24 | 651812.9990 | 576535.5552 |
| 60041 | 101+20.17 | 15.33 | 651808.7207 | 576532.7954 |
| 60042 | 101+25.29 | 10.31 | 651810.3253 | 576539.7803 |
| 60043 | 101+25.29 | 15.31 | 651806.0625 | 576537.1671 |
| 60044 | 101+99.70 | 13.89 | 651768.3775 | 576601.3506 |

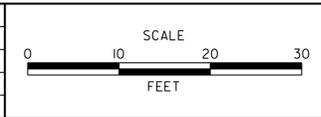


| COORDINATE LIST | | | | |
|-----------------|-----------|--------|-------------|-------------|
| POINT NO. | STATION | OFFSET | NORTHING | EASTING |
| 60018 | 119+27.05 | 15.97 | 650865.7431 | 578074.1692 |
| 60019 | 119+21.47 | 15.86 | 650868.7325 | 578069.4491 |
| 60020 | 119+21.43 | 20.77 | 650864.5557 | 578066.8712 |
| 60021 | 119+27.98 | 21.03 | 650860.9349 | 578072.3376 |
| 60022 | 119+27.28 | 29.50 | 650854.0606 | 578067.3362 |
| 60023 | 119+45.36 | 17.00 | 650855.3565 | 578089.2825 |
| 60024 | 119+44.54 | 22.00 | 650851.5117 | 578085.9810 |
| 60025 | 119+39.98 | 29.50 | 650847.4655 | 578078.1952 |
| 60026 | 119+60.12 | 22.00 | 650843.4192 | 578099.3054 |
| 60027 | 119+60.12 | 22.48 | 650843.0119 | 578099.0580 |
| 60028 | 119+60.12 | 17.00 | 650847.6927 | 578101.9009 |
| 60029 | 119+73.03 | 14.16 | 650843.4207 | 578114.4076 |
| 60030 | 119+70.84 | 17.00 | 650842.1328 | 578111.0553 |
| 60031 | 119+80.79 | 22.00 | 650832.6918 | 578116.9680 |
| 60032 | 119+80.79 | 22.74 | 650832.0602 | 578116.5844 |
| 60033 | 119+82.63 | 14.28 | 650838.3352 | 578122.5461 |
| 60034 | 119+80.53 | 17.00 | 650837.1025 | 578119.3377 |
| 60035 | 119+99.50 | 17.00 | 650827.2547 | 578135.5523 |
| 60036 | 119+99.97 | 22.00 | 650822.7347 | 578133.3625 |
| 60037 | 120+10.00 | 14.99 | 650823.5225 | 578145.5746 |
| 60038 | 120+10.00 | 19.97 | 650819.2679 | 578142.9906 |
| 60045 | 119+88.70 | 14.72 | 650834.8057 | 578127.5085 |



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| ADDENDUMS / REVISIONS |
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OLD LANCASTER PIKE
PEDESTRIAN BRIDGE PLACEMENT

| | | |
|------------------------|--------------------------------|--------------------|
| CONTRACT T201220004 | BRIDGE NO. DESIGNED BY: KMS | BOX CULVERT |
| COUNTY NEW CASTLE | CHECKED BY: MAA | |

GRADES AND
GEOMETRICS

BRIDGE PROJECT NOTES

1. LOCATION: CONSTRUCTION OF A PREFABRICATED PEDESTRIAN BRIDGE CARRYING PEDESTRIAN TRAFFIC PARALLEL TO OLD LANCASTER PIKE AND OVER MILL CREEK.

2. ELEVATION: VERTICAL DATUM AS PER ROADWAY PLANS.

3. SUPERSTRUCTURE DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 68 DEGREES FAHRENHEIT.

4. ALL DIMENSIONS ARE HORIZONTAL EXCEPT AS NOTED.

5. DESIGN CRITERIA: DESIGN IS IN ACCORDANCE WITH THE LFD METHOD.

AASHTO GUIDE SPECIFICATIONS FOR DESIGN OF PEDESTRIAN BRIDGES, 1ST EDITION, 1997 AND AS SUPPLEMENTED BY THE STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL, 2005

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION.

6. ANALYSIS CRITERIA: ANALYSIS IS IN ACCORDANCE WITH THE LRFD METHOD.

AASHTO BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION, 2007, AND AS SUPPLEMENTED BY THE STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL, 2005.

7. LOADING: DESIGN LIVE LOAD: 85 PSF SEISMIC PERFORMANCE ZONE = ZONE 2.

8. FOUNDATIONS: FOUNDATION DESIGN AND QUANTITIES ARE BASED ON A STUDY OF THE SUB-SOIL BORINGS MADE AT THE SITE. THIS BORING INFORMATION, THE ACCURACY OF WHICH THE STATE DOES NOT GUARANTEE, IS PRESENTED ON THESE PLANS TO THE CONTRACTOR FOR HIS INFORMATION ONLY. THE CONTRACTOR MUST HAVE HIS OWN DETERMINATION OF SUB-SOIL CONDITIONS, WHICH MAY AFFECT METHOD OR COST OF CONSTRUCTION. SOIL BORING LOCATIONS ARE DENOTED THUS:

MAX. ALLOWABLE FOUNDATION BEARING PRESSURE: 4.0 KSF

BORINGS ARE LOCATED WHERE SHOWN ON THE PLAN. ACCURACY OF BEARING STRATA ELEVATION IS NOT GUARANTEED AT FOUNDATIONS LOCATED AWAY FROM THE BORING. PRIOR TO BID IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUBSURFACE CONDITIONS TO DETERMINE ANY EFFECT ON CONSTRUCTION METHODS IN THE EVENT OF A REVISION TO FOOTING ELEVATIONS.

FINAL ELEVATION OF BOTTOM OF FOOTING AND ACCEPTABILITY OF BEARING STRATA WILL BE DETERMINED BY THE ENGINEER

9. PORTLAND CEMENT CONCRETE: STRUCTURAL ELEMENTS OF PORTLAND CEMENT CONCRETE SHALL BE AS NOTED: (F'C = 28 DAY COMPRESSIVE STRENGTH)

CLASS A - ABUTMENTS, WINGWALL STEMS (F'C = 4500 P.S.I.)

CLASS B - FOOTINGS (F'C = 3000 P.S.I.)

MIX REQUIREMENTS SHALL CONFORM TO SECTION 812 OF THE SPECIFICATIONS. SILICONE ACRYLIC CONCRETE SEALER, ITEM 602646, SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES (EXISTING AND PROPOSED).

ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.

10. STEEL BRIDGE MATERIALS: BRIDGE STEEL SHALL CONFORM TO AASHTO M270 (ASTM A709) GRADE 50W STEEL FOR STRUCTURAL SHAPES, ASTM A847 STEEL FOR STRUCTURAL TUBING.

BRIDGE ANCHOR BOLTS SHALL CONFORM TO AASHTO M164 (ASTM A325) TYPE III. ANCHOR BOLTS SHALL BE INSTALLED AND SPACED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.

HIGH STRENGTH BOLTS SHALL CONFORM TO AASHTO M164 (ASTM A325) OR AASHTO M253 (ASTM A490) TYPE III.

DECKING SHALL BE COMPOSITE TIMBER AS SPECIFIED IN SPECIAL PROVISION 605579.

11. STEEL TRUSS BRIDGE DESIGN/CONSTRUCTION: THE PEDESTRIAN BRIDGE SHALL BE CONTECH BRIDGE (PRATT TRUSS SYSTEM, ONE DIAGONAL PER PANEL), ECHO BRIDGE, INC. (STEEL PRATT TRUSS SYSTEM), EXCEL BRIDGE MANUFACTURING COMPANY (STEEL PRATT TRUSS SYSTEM), OR AN APPROVED EQUAL.

DESIGN AND MANUFACTURE OF THE BRIDGE SHALL BE IN ACCORDANCE WITH SPECIAL PROVISION ITEM 605579. THE CONTRACTOR SHALL SUBMIT AN ERECTION PLAN TO THE ENGINEER FOR REVIEW A MINIMUM OF 30 CALENDAR DAYS PRIOR TO ANY SCHEDULED TRUSS PLACEMENT. NECESSARY REVISIONS AND ADDITIONS TO THE ERECTION PLAN AS DEEMED NECESSARY BY THE ENGINEER SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED FOR REVIEW. THE ENGINEER MUST APPROVE AN ERECTION PLAN BEFORE ANY TRUSS PLACEMENT WORK SHALL BE PERMITTED. THE SUBMITTAL MUST CONTAIN, BUT IS NOT LIMITED TO, THE FOLLOWING:

1. CALCULATIONS SHOWING THE WEIGHT OF MATERIALS AND LIFTING EQUIPMENT.
 2. TYPE AND POSITIONING OF EQUIPMENT, INCLUDING MOVEMENTS.
 3. LOCATION OF STAGING AREA.
 4. CRANE CHARTS SHOWING MAXIMUM PICK CAPACITIES, TURNING RADIUS, AND OUTRIGGER REACTIONS.
- NO ERECTION SHALL BE PERFORMED IF THE WIND VELOCITY IS, OR IS FORECASTED TO BE, 15 MPH OR GREATER.

BRIDGE SPLICE SHALL NOT BE PERMITTED. ALL PLANS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF DELAWARE.

12. BAR REINFORCEMENT: ALL REINFORCEMENT STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60. ALL REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2" UNLESS OTHERWISE SPECIFIED ON THE PLANS. EPOXY COATED REINFORCING STEEL SHALL CONFORM TO AASHTO M284 (ASTM D3963), AND IS DENOTED WITH A SUFFIX "E" IN THE BAR MARKS.

13. CONSTRUCTION JOINTS: KEYED CONSTRUCTION JOINTS SHALL BE 2" X 4" OR AS NOTED. ALL EXPOSED CONSTRUCTION JOINT EDGES SHALL HAVE A 3/4" V-NOTCH.

14. UTILITIES: UTILITIES ARE SHOWN ON THE PLANS FOR INFORMATION ONLY. THE PRESENCE, SIZE AND LOCATION OF ALL UTILITIES SHALL BE VERIFIED IN THE FIELD.

15. DEMOLITION: SAWCUT EXISTING STONE MASONRY AT INTERFACE OF EXISTING STONE MASONRY ABUTMENT AND PROPOSED PCC MASONRY ABUTMENTS. PAYMENT FOR SAWCUTTING EXISTING STONE MASONRY AND REMOVAL OF EXISTING STONEWALL SHALL BE UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST AND REPAIRING OF ANY DAMAGES TO EXISTING BRIDGE 1-169 AS A RESULT OF SAW CUTTING THE EXISTING STONE MASONRY.

| INDEX OF BRIDGE SHEETS | | |
|------------------------|-------------|--|
| SHEET NO. | DRAWING NO. | TITLE |
| 11 | BR-01 | BRIDGE 1-169 - PEDESTRIAN BRIDGE PROJECT NOTES |
| 12 | BR-02 | BRIDGE 1-169 - PEDESTRIAN BRIDGE PLAN, ELEVATION AND TYPICAL SECTION |
| 13 | BR-03 | BRIDGE 1-169 - PEDESTRIAN BRIDGE STAKE-OUT PLAN |
| 14 | BR-04 | BRIDGE 1-169 - PEDESTRIAN BRIDGE ABUTMENT A REINFORCEMENT DETAILS |
| 15 | BR-05 | BRIDGE 1-169 - PEDESTRIAN BRIDGE ABUTMENT B REINFORCEMENT DETAILS-1 |
| 16 | BR-06 | BRIDGE 1-169 - PEDESTRIAN BRIDGE ABUTMENT B REINFORCEMENT DETAILS-2 |
| 17 | BR-07 | BRIDGE 1-169 - PEDESTRIAN BRIDGE MISCELLANEOUS DETAILS |
| 18 | BR-08 | BRIDGE 1-169 - PEDESTRIAN BRIDGE RAILING DETAILS |
| 19 | BR-09 | BRIDGE 1-169 - PEDESTRIAN BRIDGE REINFORCEMENT BAR SCHEDULE |
| 20 | BR-10 | BRIDGE 1-169 - STRUCTURE BORINGS SB-1 AND SB-2 |
| 21 | BR-11 | BOX CULVERT - PROJECT NOTES |
| 22 | BR-12 | BOX CULVERT - PLAN, ELEVATION AND TYPICAL SECTION |
| 23 | BR-13 | BOX CULVERT - STAKE-OUT AND HEADWALL DETAILS |
| 24 | BR-14 | BOX CULVERT - REINFORCEMENT DETAILS |
| 25 | BR-15 | BOX CULVERT - MISCELLANEOUS DETAILS |
| 26 | BR-16 | BOX CULVERT - REINFORCEMENT BAR SCHEDULE |
| 27 | BR-17 | BOX CULVERT - STRUCTURE BORINGS SB-7 AND SB-8 |

LEGEND

- ABUT. = ABUTMENT
- B. F. E. = BOTTOM OF FOOTING ELEVATION
- @ = BASELINE
- BOT. = BOTTOM
- BRG. = BEARING
- C. I. P. = CAST-IN-PLACE
- C/C = CENTERLINE TO CENTERLINE
- CL = CENTERLINE
- CLR. = CLEAR
- CONSTR. = CONSTRUCTION
- E. F. = EACH FACE
- EL/ELEV. = ELEVATION
- EQU. = EQUAL
- E. S. = EQUAL SPACING
- EXP. = EXPANSION
- F. F. = FRONT FACE
- FIX. = FIXED
- JT. = JOINT
- MAX. = MAXIMUM
- MIN. = MINIMUM
- P. C. C. = PORTLAND CEMENT CONCRETE
- PED. = PEDESTRIAN
- P. G. = PROFILE GRADE
- P/S = PRESTRESSED
- REQ'D. = REQUIRED
- SDWLK. = SIDEWALK
- SHLDR. = SHOULDER
- SPA. = SPACES (SPACED)
- STA. = STATION
- TYP. = TYPICAL
- VERT. = VERTICAL
- W. P. = WORK POINT



ADDENDUMS / REVISIONS

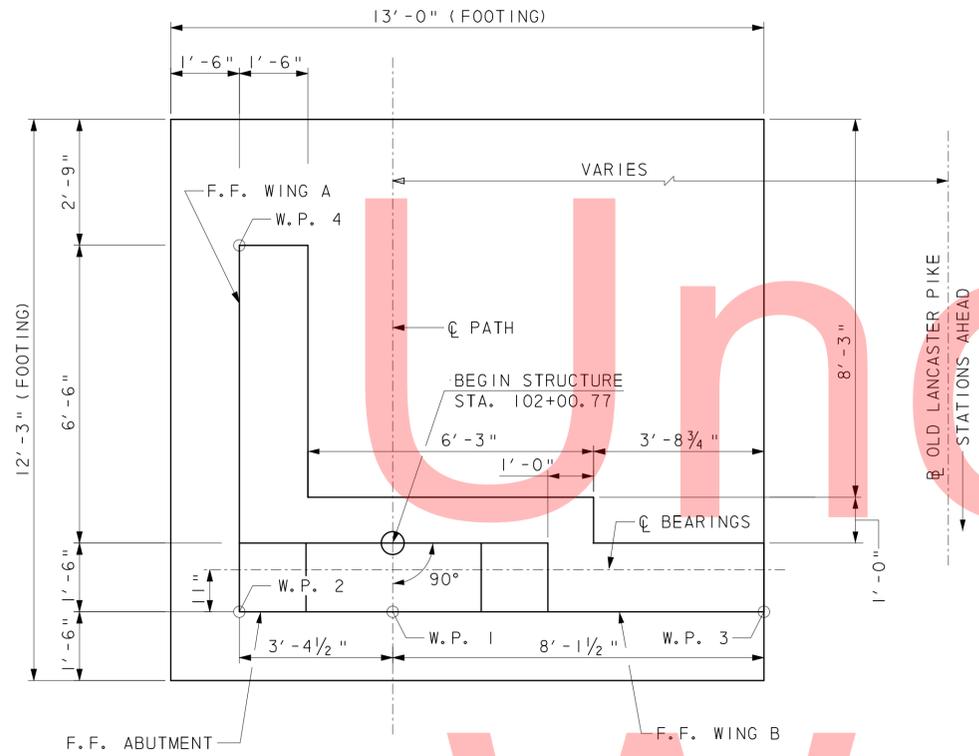
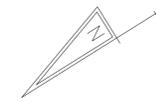
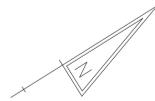
NOT TO SCALE

OLD LANCASTER PIKE
PEDESTRIAN BRIDGE PLACEMENT

| | | |
|------------|--------------------|-----------------|
| CONTRACT | BRIDGE NO. | BR 1-169 |
| T201220004 | DESIGNED BY: HM | |
| COUNTY | CHECKED BY: AF/MAA | |
| NEW CASTLE | | |

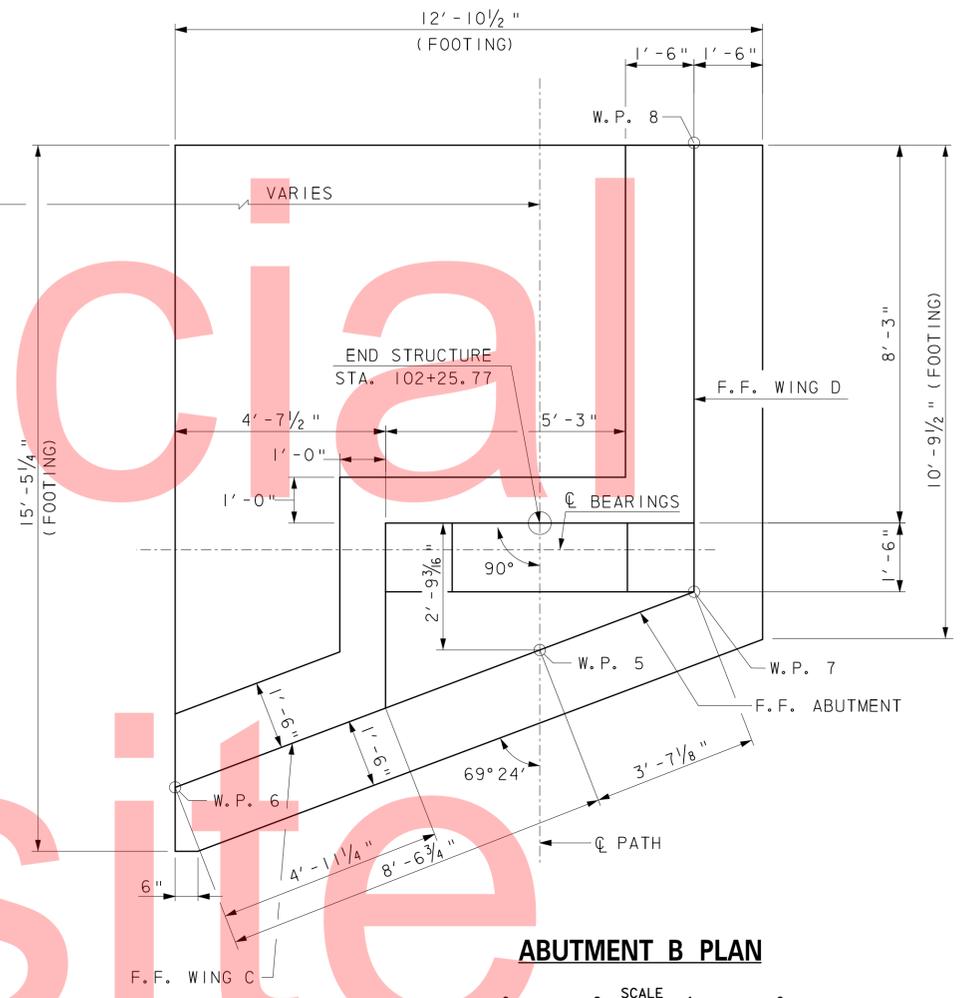
PEDESTRIAN BRIDGE
PROJECT NOTES

| |
|--------------|
| BR-01 |
| SHEET NO. |
| 11 |
| TOTAL SHTS. |
| 44 |



ABUTMENT A PLAN

NOTE: ALL ANGLES 90°.



ABUTMENT B PLAN

| WORKPOINTS - BRIDGE | | | | |
|---------------------|-----------|---------|-------------|-------------|
| WP | STATION* | OFFSET* | NORTHING | EASTING |
| 1 | 102+02.27 | 23.15 | 651759.1465 | 576598.7052 |
| 2 | 102+02.24 | 26.52 | 651756.2843 | 576596.9167 |
| 3 | 101+94.24 | 26.45 | 651760.5237 | 576590.1324 |
| 4 | 102+02.34 | 15.02 | 651766.0364 | 576603.0105 |
| 5 | 102+23.00 | 23.32 | 651748.1620 | 576616.2839 |
| 6 | 102+20.06 | 15.30 | 651756.5435 | 576617.9673 |
| 7 | 102+24.24 | 26.71 | 651744.6261 | 576615.5738 |
| 8 | 102+33.99 | 26.79 | 651739.4593 | 576623.8422 |

*ALL STATIONS ARE FROM OLD LANCASTER PIKE BASELINE.
ALL OFFSETS ARE RIGHT OF BASELINE.

- NOTES
1. FOR BRIDGE NOTES, SEE SHEET BR-01.
 2. FOR GENERAL PLAN AND ELEVATION, SEE SHEET BR-02.
 3. FOR REINFORCEMENT DETAILS, SEE SHEETS BR-04, BR-05 AND BR-06.
 4. FOR MISCELLANEOUS DETAILS, SEE SHEET BR-07.
 5. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET BR-09.

Wednesday, June 17, 2015 AT 03:00 PM
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| ADDENDUMS / REVISIONS | |
|-----------------------|--|
| | |
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| | |

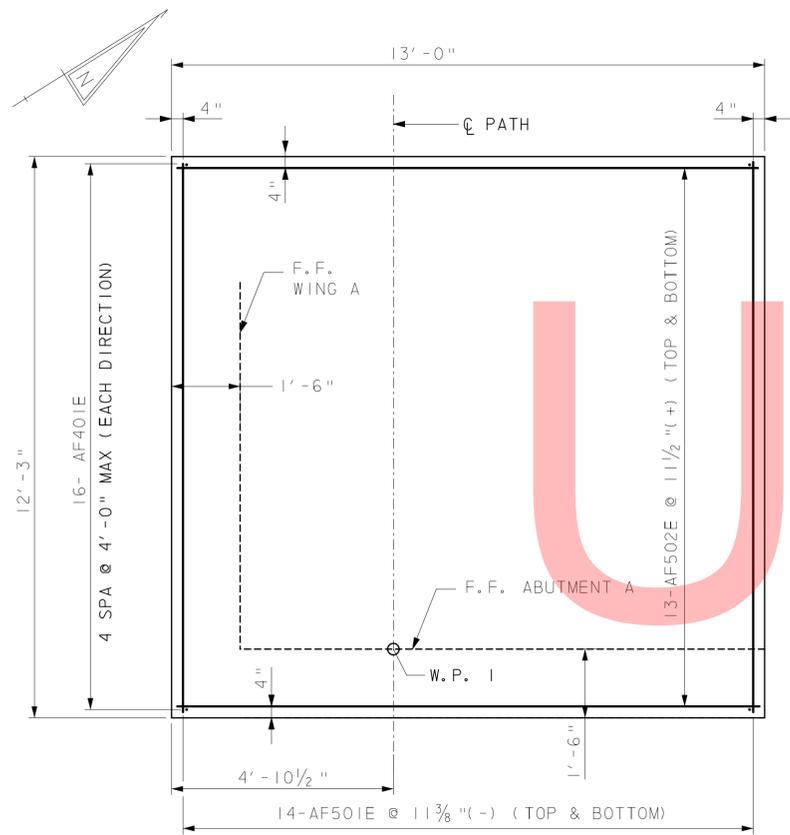
SCALE AS NOTED

**OLD LANCASTER PIKE
PEDESTRIAN BRIDGE PLACEMENT**

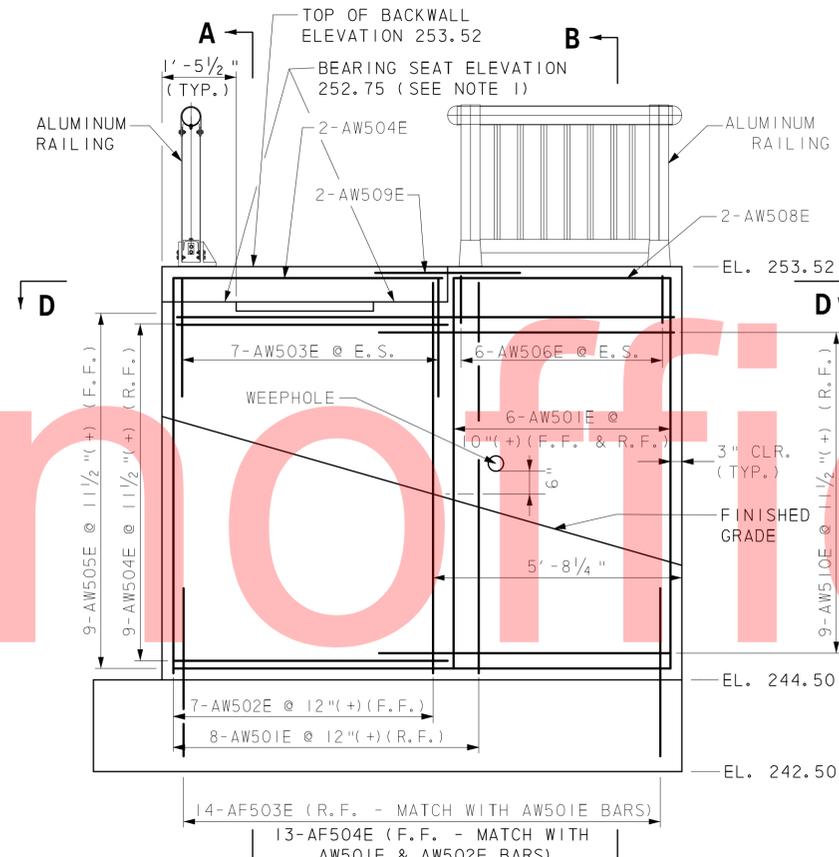
| | |
|------------------------|------------------------|
| CONTRACT T201220004 | BRIDGE NO. BR 1-169 |
| COUNTY NEW CASTLE | DESIGNED BY: HM |
| | CHECKED BY: AF/MAA |

**PEDESTRIAN BRIDGE
STAKE-OUT PLAN**

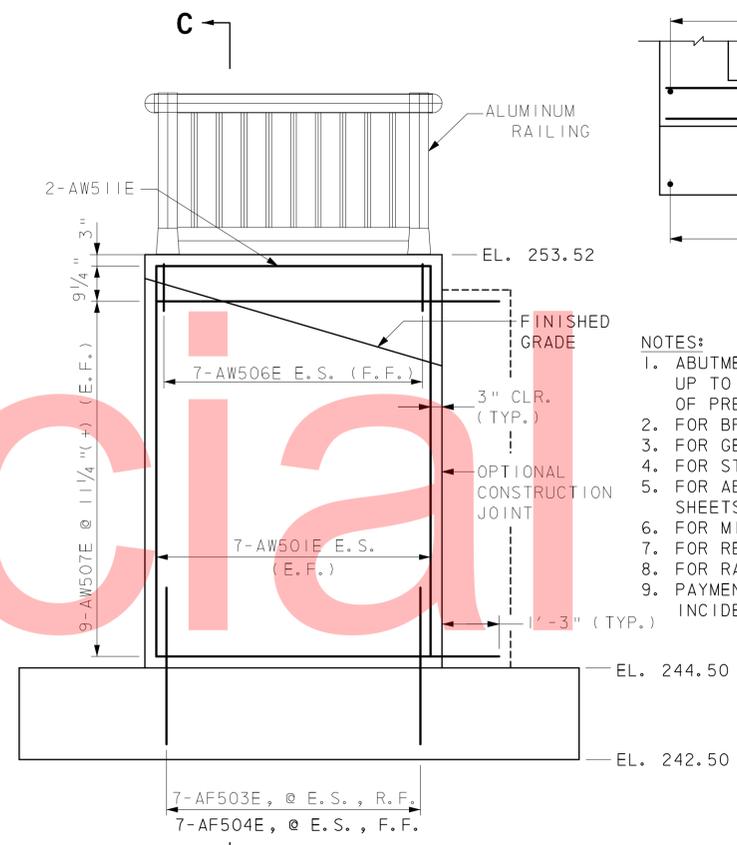
| |
|-------------------|
| BR-03 |
| SHEET NO. 13 |
| TOTAL SHTS. 44 |



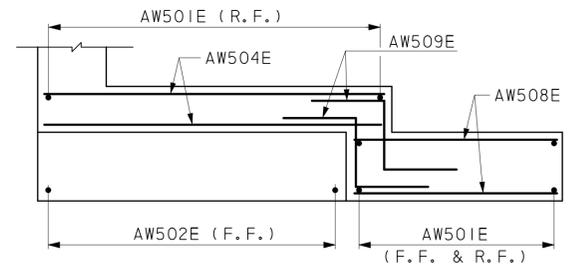
ABUTMENT A FOOTING PLAN



ABUTMENT A ELEVATION

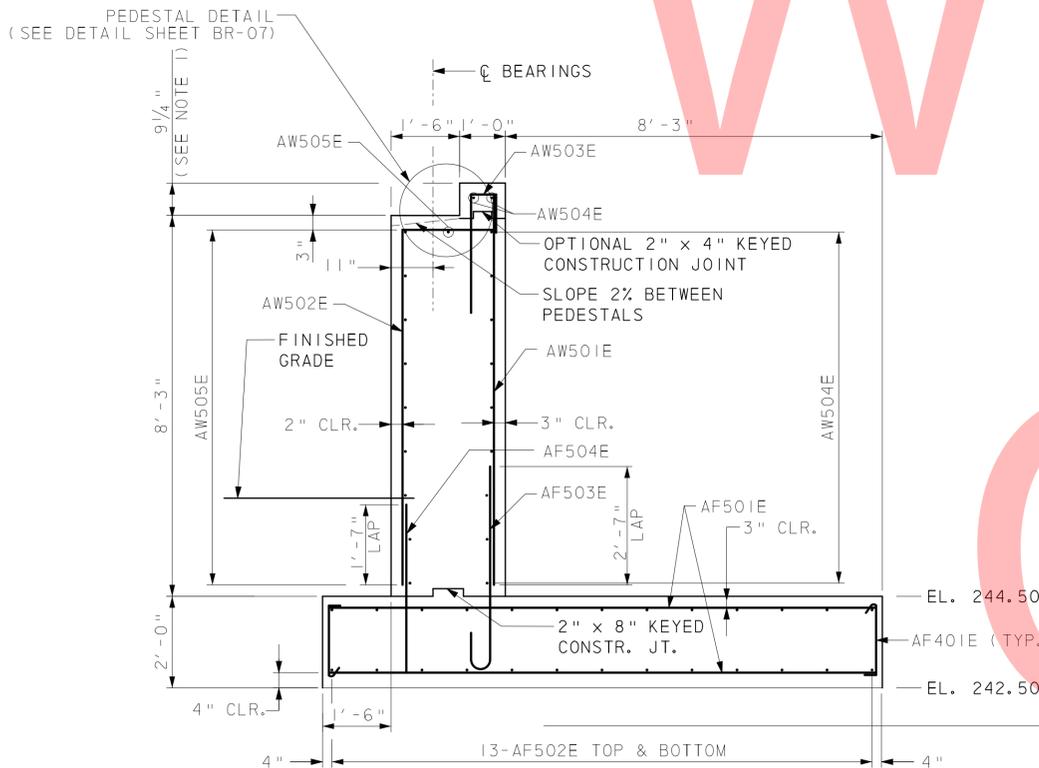


WINGWALL A ELEVATION

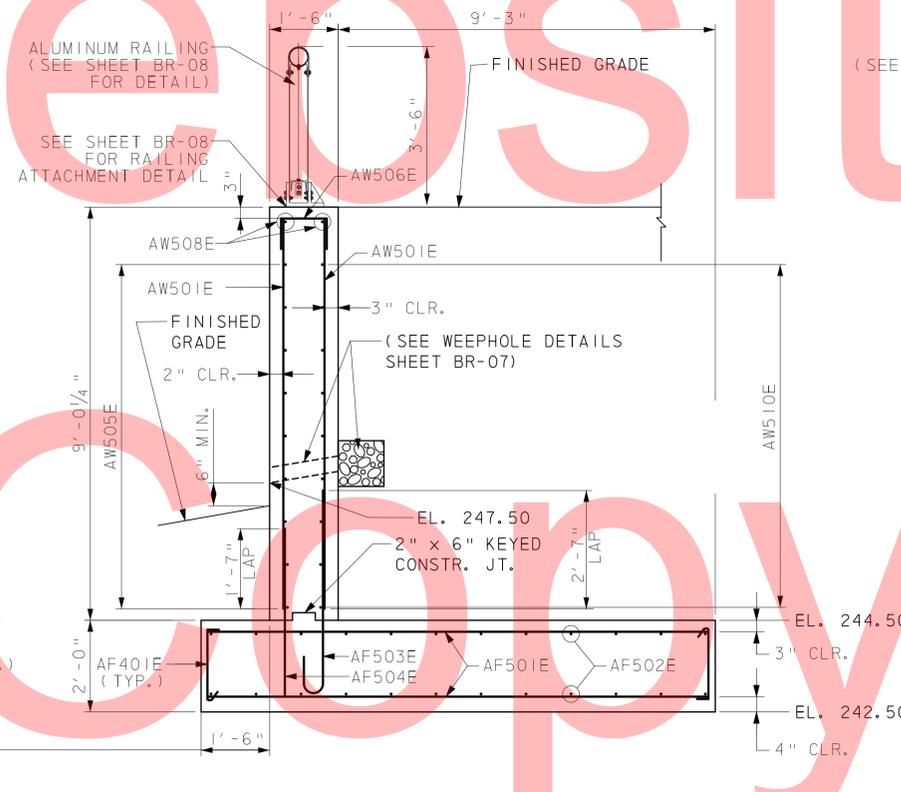


SECTION D-D

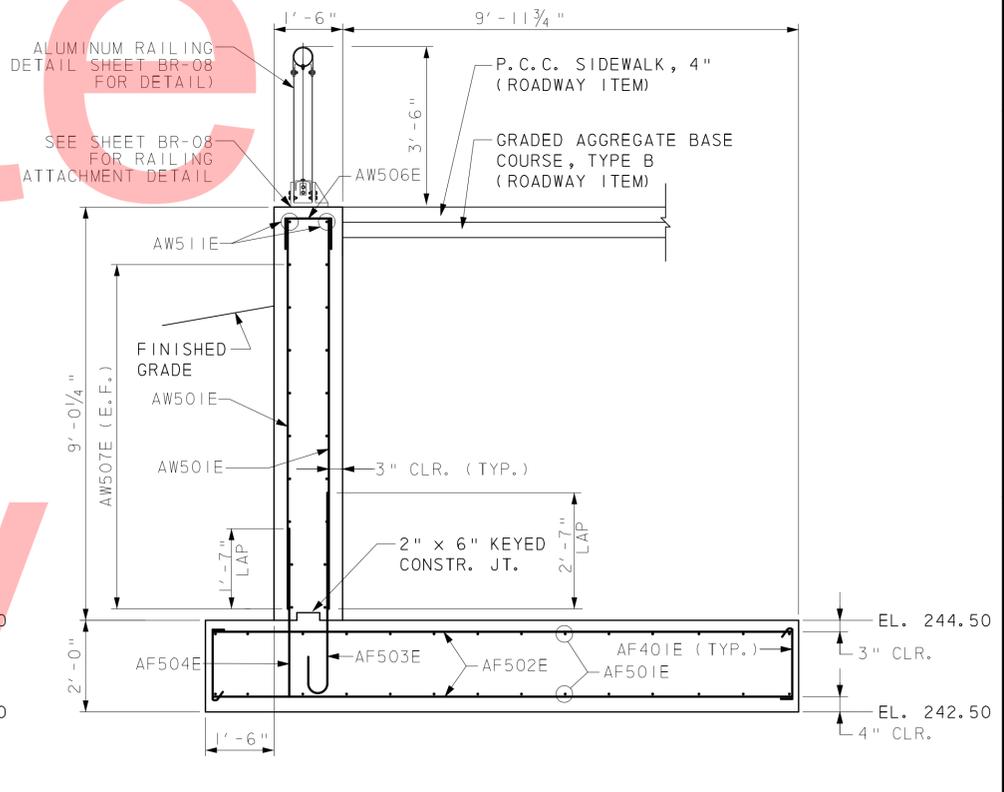
- NOTES:**
1. ABUTMENT SEAT ELEVATION MAY BE ADJUSTED UP TO 3" (AS NECESSARY) TO ACCOMMODATE DEPTH OF PREFABRICATED STEEL TRUSS.
 2. FOR BRIDGE NOTES, SEE SHEET BR-01.
 3. FOR GENERAL PLAN AND ELEVATION, SEE SHEET BR-02.
 4. FOR STAKE-OUT PLAN, SEE SHEET BR-03.
 5. FOR ABUTMENT B REINFORCEMENT DETAILS, SEE SHEETS BR-05 AND BR-06.
 6. FOR MISCELLANEOUS DETAILS, SEE SHEET BR-07.
 7. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET BR-09.
 8. FOR RAILING DETAILS, SEE SHEET BR-08.
 9. PAYMENT FOR WEEPHOLE INSTALLATION SHALL BE INCIDENTAL TO ITEM 602011.



SECTION A-A



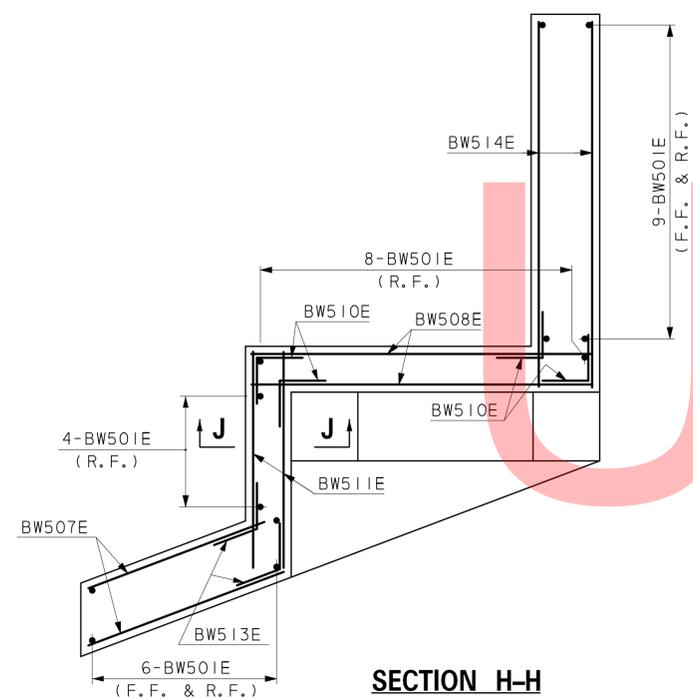
SECTION B-B



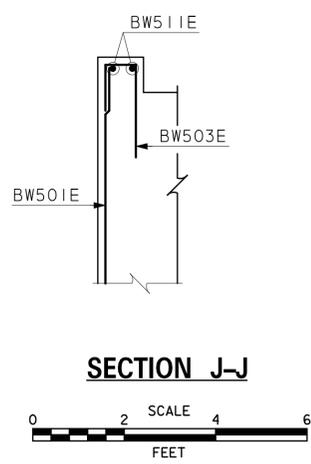
SECTION C-C

Wednesday, June 17, 2015 AT 03:00 PM
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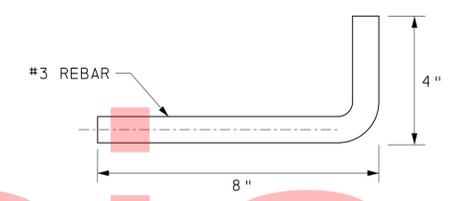
- NOTES:
- FOR BRIDGE NOTES, SEE SHEET BR-01.
 - FOR GENERAL PLAN AND ELEVATION, SEE SHEET BR-02.
 - FOR STAKE-OUT PLAN, SEE SHEET BR-03.
 - FOR ABUTMENT A REINFORCEMENT DETAILS, SEE SHEET BR-04.
 - FOR MISCELLANEOUS DETAILS, SEE SHEET BR-07.
 - FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET BR-09.



SECTION H-H
SCALE 0 2 4 6 FEET

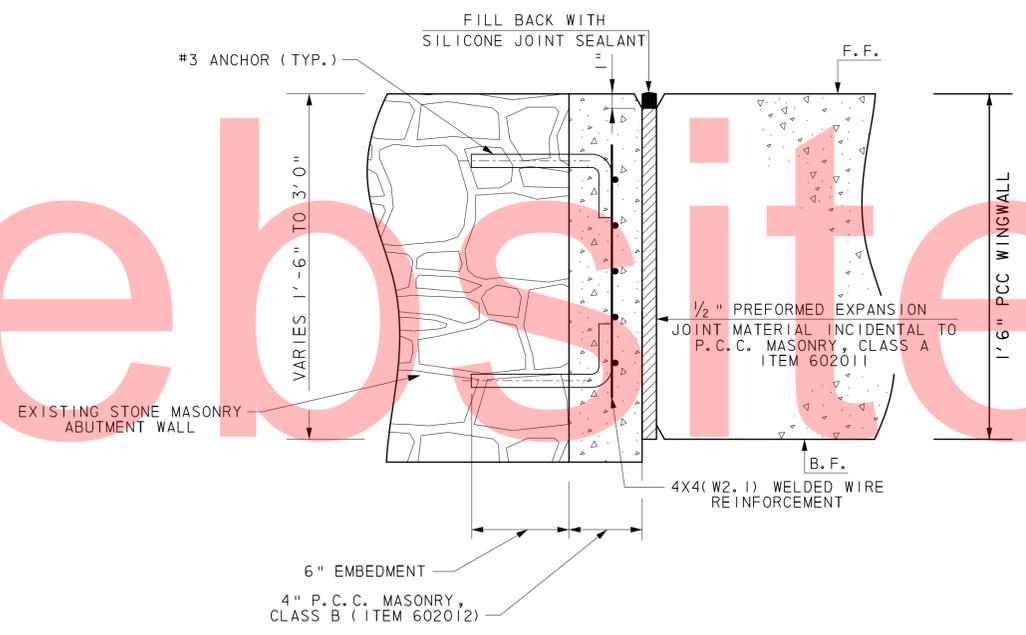


SECTION J-J
SCALE 0 2 4 6 FEET



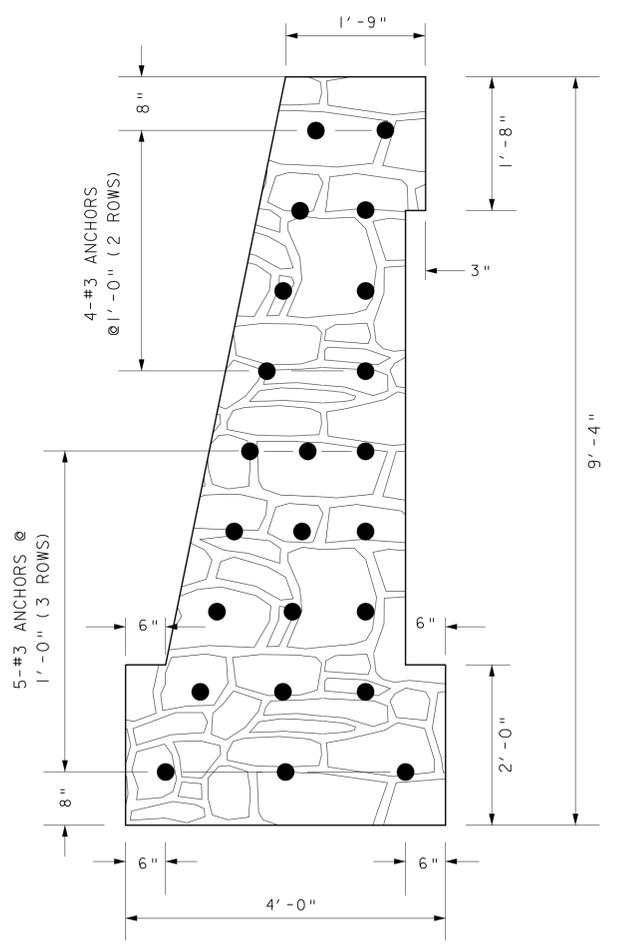
#3 ANCHOR
N. T. S.

- #3 ANCHORS SHALL BE EPOXY COATED.
- #3 ANCHORS INCIDENTAL TO ITEM 602579.



EXPANSION JOINT DETAIL
N. T. S.

- NOTES:
- PCC MASONRY SUBSTRUCTURE SEALER SHALL BE PLACED ON EITHER SIDE OF EXPANSION JOINT (ON EXISTING AND PROPOSED STRUCTURE) IN ACCORDANCE WITH SPECIAL PROVISION ITEM 602782.
 - REINFORCING SHALL NOT PASS THROUGH EXPANSION JOINT.
 - CONTRACTOR SHALL REPOINT SIDE FACE OF EXISTING ABUTMENT PER ITEM 610502.
 - WELDED WIRE REINFORCEMENT INCIDENTAL TO ITEM 602012.
 - WELDED WIRE REINFORCEMENT SHALL MEET THE REQUIREMENTS OF AASHTO M55 AND SHALL BE EPOXY COATED.

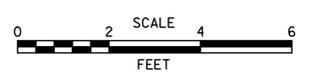


EXISTING ABUTMENT SECTION
N. T. S.

TREATMENT AT EXISTING ABUTMENT
N. T. S.

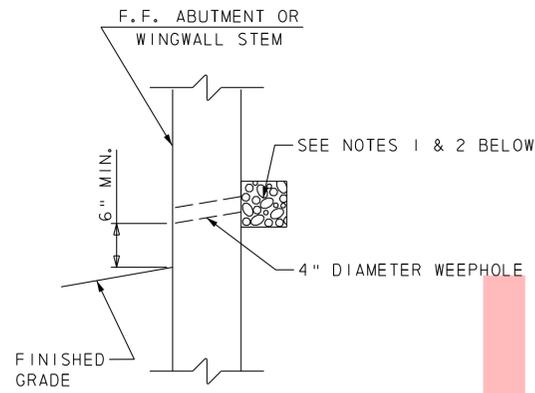
Wednesday, June 17, 2015 AT 03:00 PM
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| ADDENDUMS / REVISIONS |
|-----------------------|
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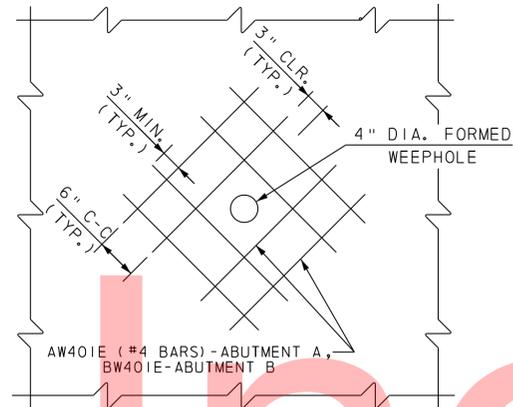


| | |
|------------------------|------------------------|
| CONTRACT T201220004 | BRIDGE NO. BR 1-169 |
| COUNTY NEW CASTLE | DESIGNED BY: HM |
| | CHECKED BY: AF/MAA |

| |
|-------------------|
| BR-06 |
| SHEET NO. 16 |
| TOTAL SHTS. 44 |



SECTION



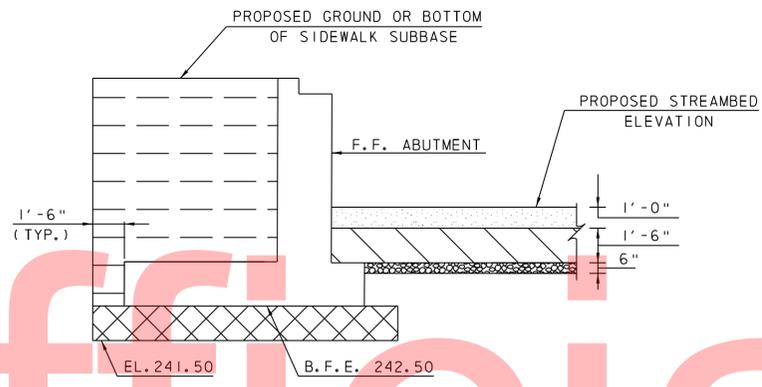
WEEPHOLE REINFORCEMENT

WEEPHOLE DETAILS

N. T. S.

NOTES:

- 1/2 C.Y. DELAWARE NO. 57 STONE ENCASED IN GEOTEXTILE. (TYP. AT ALL WEEPHOLES)
- PAYMENT FOR WEEPHOLE INSTALLATION SHALL BE INCIDENTAL TO ITEM 602011. PAYMENT FOR DELAWARE NO. 57 STONE SHALL BE UNDER ITEM 302012. PAYMENT FOR GEOTEXTILE SHALL BE UNDER ITEM 713003.

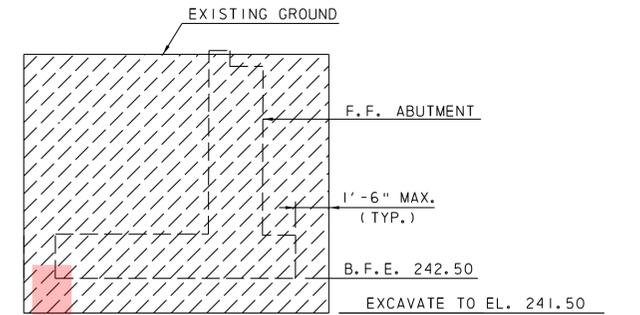


BORROW

PAY LIMITS - TYPICAL SECTION FOR ABUTMENT AND WINGWALL

N. T. S.

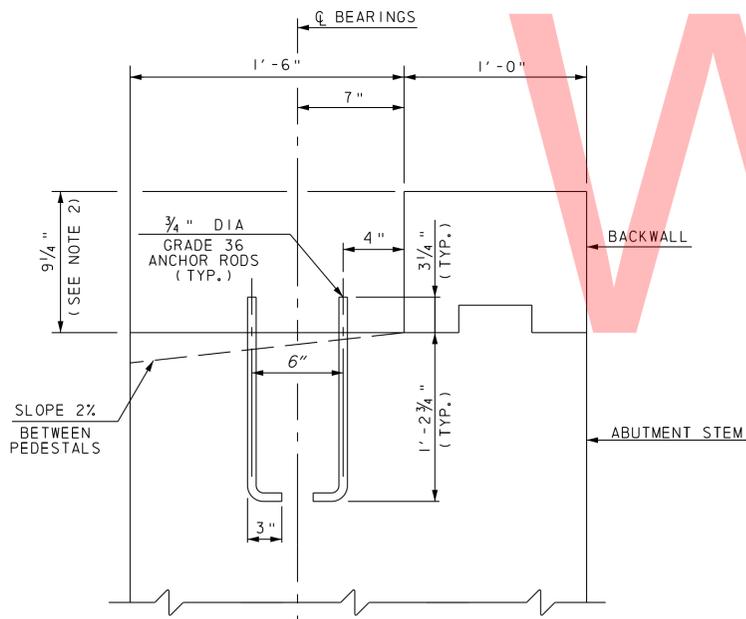
- BORROW TYPE C FOR STRUCTURE BACKFILL - ITEM 210000
- RIPRAP, R-5 ITEM 712006 (SEE PLAN FOR LIMITS)
- COARSE AGGREGATE FOR FOUNDATION STABILIZATION AND SUBFOUNDATION BACKFILL ITEM 608000 (1'-0" MIN. DEPTH)
- CHANNEL BED FILL ITEM 712531 (1'-0" DEPTH)
- DELAWARE NO. 3 STONE - ITEM 302011



EXCAVATION AND BACKFILLING

NOTE:

1. FOR GUIDANCE ON EXCAVATIONS, SEE NOTE 14 ON SHEET BR-01.
2. THE PAYMENT FOR THE EXCAVATION FOR THE 6" OF DELAWARE NO. 3 STONE IS INCIDENTAL TO RIP RAP EXCAVATION.

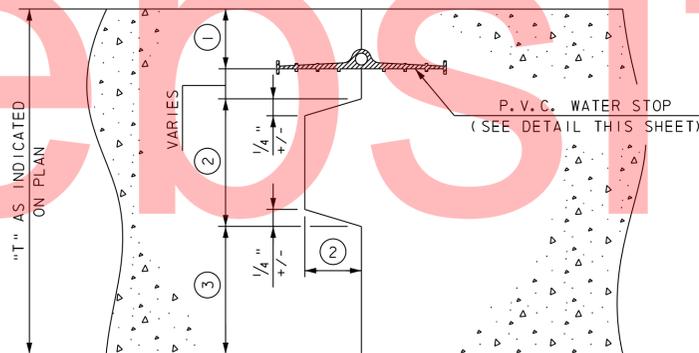


PEDESTAL DETAIL

N. T. S.

NOTE:

1. ABUTMENT SEAT ELEVATION MAY BE ADJUSTED UP TO 3" (AS NECESSARY) TO ACCOMMODATE DEPTH OF PREFABRICATED STEEL TRUSS.



NOTE:

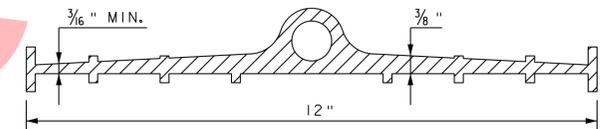
REINFORCING SHALL PASS THROUGH CONSTRUCTION JOINT.

CONSTRUCTION JOINT DETAIL

N. T. S.

NOTE:

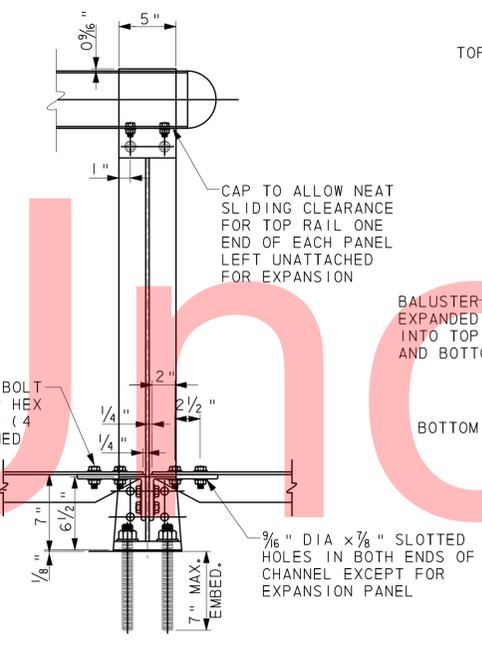
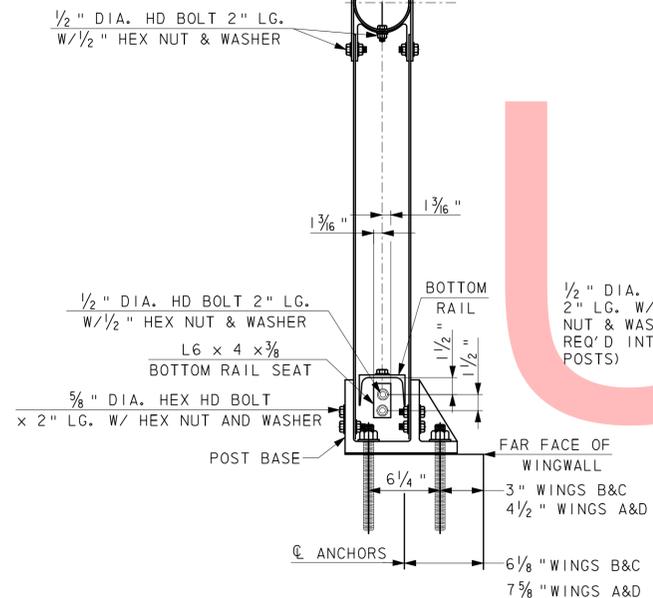
- 1 4" FOR "T" ≥ 18", 2" FOR "T" < 18" OR AS REQ'D. TO PLACE WATERSTOP INSIDE OF REINFORCEMENT.
- 2 6" X 3" KEY FOR "T" > 18", 4" X 2" KEY FOR "T" < 18"
- 3 6" MIN. FOR "T" ≥ 18", 3" MIN. FOR "T" < 18"



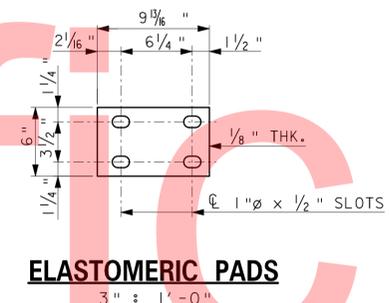
P.V.C. WATER STOP

N. T. S.

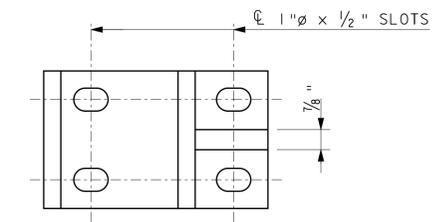
- PROVIDE HOLES OR SLOTS IN WATERSTOP, AS REQUIRED, WHEN NECESSARY TO ACCOMMODATE REINFORCEMENT, BUT DO NOT COMPROMISE SEAL.
- WATERSTOP IS INCIDENTAL TO P.C.C. MASONRY.



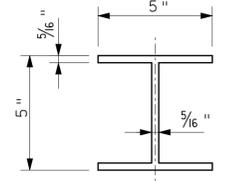
TYPICAL POST DETAIL
1/2" : 1'-0"



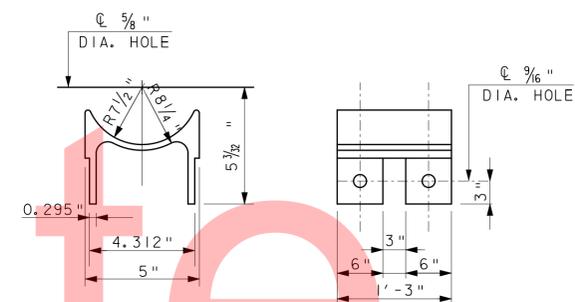
ELASTOMERIC PADS
3" : 1'-0"



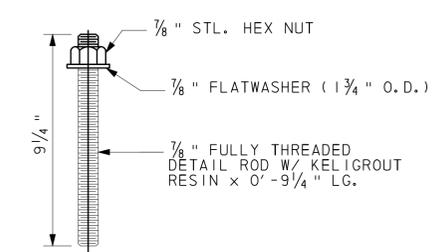
POST BASE DETAIL
3" : 1'-0"



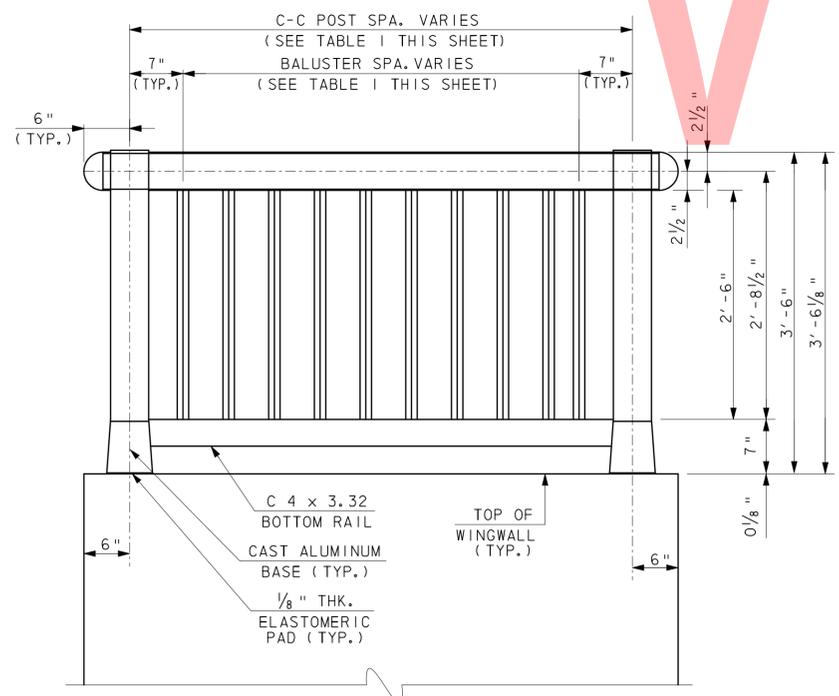
TYPICAL SECTION THRU POST
3" : 1'-0"



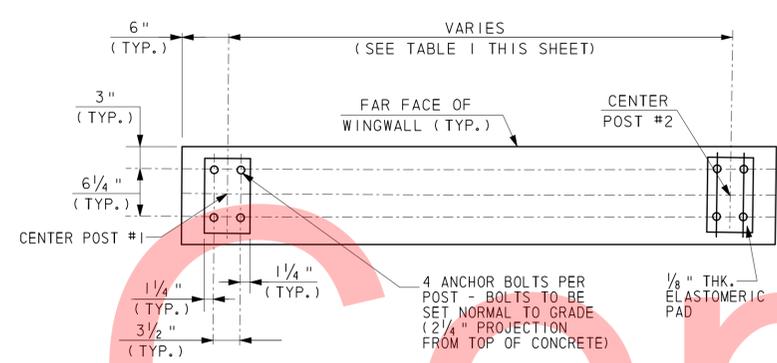
TOP RAIL SEAT DETAIL
3" : 1'-0"



ANCHOR BOLT
N. T. S.



HANDRAIL PROFILE
1" : 1'-0"



ANCHOR BOLT PLAN
1" : 1'-0"

- NOTES:
- MATERIAL FOR ALUMINUM PEDESTRIAL RAIL AND NUTS SHALL CONFORM TO A. S. T. M. B-221 ALLOY 60601-T6.
 - ANCHOR BOLTS SHALL CONFORM TO A. S. T. M. A-276, TYPE 430 (THREADS TO BE ROLLED NOT CUT).
 - BOLTS SHALL CONFORM TO ASTM B-211, ALUMINUM ALLOY 2024-T4 ALUMINUM WASHERS SHALL CONFORM TO A. S. T. M. B-209, ALLOY ALCLAD 2024-T3.
 - APPROVED SIMILAR ALUMINUM RAILINGS MAY BE SUBSTITUTED FOR THE ABOVE RAILINGS.
 - HILTI HVA ADHESIVE ANCHOR ROD SYSTEM WITH 7/8" HAS ANCHOR ROD OR APPROVED EQUAL SHALL BE USED. PAYMENT FOR ANCHOR ROD SYSTEM IS INCIDENTAL TO ITEM 606002 - METAL BRIDGE RAILING (ALUMINUM).

| WINGWALL | C-C POST SPA. | BALUSTER SPA. |
|----------|---------------|------------------------------|
| A | 5'-6" | 8 SPA. @ 6 1/2" = 4'-4" |
| B | 3'-9" | 5 SPA. @ 6 1/8" = 2'-6 5/8" |
| C | 3'-10" | 5 SPA. @ 6 7/8" = 2'-7 7/8" |
| D | 7'-3 3/8" | 11 SPA. @ 6 3/4" = 6'-2 1/4" |

| WINGWALL | POST # | STATION | OFFSET |
|----------|--------|-----------|--------|
| A | 1 | 101+94.75 | 25.83 |
| | 2 | 102+00.25 | 25.88 |
| B | 3 | 102+01.56 | 19.24 |
| | 4 | 102+01.59 | 15.49 |
| C | 5 | 102+20.94 | 15.87 |
| | 6 | 102+22.30 | 19.45 |
| D | 7 | 102+26.25 | 26.10 |
| | 8 | 102+33.55 | 26.16 |

STATIONS AND OFFSETS ARE AT CENTER OF POST REFERENCED TO OLD LANCASTER PIKE. OFFSETS ARE TO RIGHT OF @ (IN FEET).

Wednesday, June 17, 2015 AT 03:00 PM
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SB-1

STATION : 102+00.00
 OFFSET : 22.0' RT.
 DATE : 8-2-2007
 GROUND ELEV. : 252.33

SB-2

STATION : 102+45.00
 OFFSET : 17.4' RT.
 DATE : 8-2-2007
 GROUND ELEV. : 252.61

| SAMPLE NO. | DEPTH | BLOWS/6" | SAMPLE DESCRIPTION | REMARKS | CLASS/G. I. |
|------------|-------|----------|---|---------|-------------|
| 1 | 0.0' | 6 | WET VERY STIFF BROWN CLAYEY GRAVELLY SILT WITH SOME FINE SAND, TRACE OF COARSE SAND AND MICA. | | A-4(0) |
| | 2.0' | 9 | | | |
| | | 11 | 21" RECOVERY | | |
| | | 14 | | | |
| 2 | 2.0' | 11 | WET VERY STIFF BROWN CLAYEY SILT WITH SOME FINE TO COARSE SAND AND GRAVEL, TRACE OF MICA. | | A-4(1) |
| | 4.0' | 12 | | | |
| | | 14 | 18" RECOVERY | | |
| | | 16 | | | |
| 3 | 4.0' | 4 | SATURATED SOFT BROWN GRAVELLY SILT WITH SOME FINE SAND, TRACE OF COARSE SAND. | | A-4(0) |
| | 6.0' | 4 | | | |
| | | 3 | 12" RECOVERY | | |
| | | 2 | | | |
| 4 | 6.0' | 5 | SATURATED STIFF BROWN FINE SANDY SILT WITH SOME COARSE SAND, TRACE OF GRAVEL AND MICA. | | A-5(0) |
| | 8.0' | 6 | | | |
| | | 5 | 22" RECOVERY | | |
| | | 4 | | | |
| 5 | 8.0' | 2 | SATURATED LOOSE BROWN SILTY FINE SAND WITH SOME COARSE SAND, TRACE OF GRAVEL. | | A-2-5(0) |
| | 10.0' | 3 | | | |
| | | 4 | 21" RECOVERY | | |
| | | 4 | | | |
| 6 | 14.0' | 1 | SATURATED VERY LOOSE BROWN SILTY FINE SAND WITH SOME COARSE SAND, TRACE OF GRAVEL. | | A-2-4(0) |
| | 16.0' | 1 | | | |
| | | 3 | 23" RECOVERY | | |
| | | 4 | | | |
| 7 | 19.0' | 2 | SATURATED LOOSE BROWN FINE TO COARSE SAND WITH SOME SILT, TRACE OF GRAVEL. | | A-2-4(0) |
| | 21.0' | 5 | | | |
| | | 5 | 21" RECOVERY | | |
| | | 7 | | | |
| 8 | 24.0' | 3 | SATURATED MEDIUM DENSE BROWN SILTY FINE SAND WITH SOME COARSE SAND, TRACE OF GRAVEL AND MICA. | | A-2-4(0) |
| | 26.0' | 5 | | | |
| | | 8 | 22" RECOVERY | | |
| | | 8 | | | |
| 9 | 28.0' | 5 | SATURATED MEDIUM DENSE BROWN SILTY FINE SAND WITH SOME COARSE SAND, TRACE OF MICA. | | A-2-4(0) |
| | 30.0' | 8 | | | |
| | | 12 | 23" RECOVERY | | |
| | | 12 | | | |

B.F.E.
 WINGS A & B
 (ELEV. 242.50)

| SAMPLE NO. | DEPTH | BLOWS/6" | SAMPLE DESCRIPTION | REMARKS | CLASS/G. I. |
|------------|-------|----------|---|---------|-------------|
| 1 | 0.0' | 2 | SATURATED FIRM DARK BROWN GRAVELLY FINE SANDY SILT WITH SOME COARSE SAND AND MICA. | | A-4(0) |
| | 2.0' | 3 | | | |
| | | 3 | 12" RECOVERY | | |
| | | 4 | | | |
| 2 | 2.0' | 2 | SATURATED FIRM BROWN GRAVELLY FINE SANDY SILT WITH SOME COARSE SAND AND MICA. | | A-5(0) |
| | 4.0' | 2 | | | |
| | | 3 | 12" RECOVERY | | |
| | | 3 | | | |
| 3 | 4.0' | 1 | SATURATED SOFT GRAY CLAYEY FINE SANDY SILT WITH SOME GRAVEL AND COARSE SAND. | | A-4(0) |
| | 6.0' | 1 | | | |
| | | 2 | 5" RECOVERY | | |
| | | 3 | | | |
| 4 | 6.0' | 3 | SATURATED FIRM GRAY FINE SANDY SILT WITH SOME COARSE SAND AND GRAVEL, TRACE OF ORGANIC MATTER AND MICA. | | A-4(0) |
| | 8.0' | 2 | | | |
| | | 3 | 15" RECOVERY | | |
| | | 5 | | | |
| 5 | 8.0' | 2 | SATURATED SOFT GRAY FINE SANDY SILT WITH SOME GRAVEL AND COARSE SAND. | | A-5(0) |
| | 10.0' | 2 | | | |
| | | 2 | 18" RECOVERY | | |
| | | 3 | | | |
| 6 | 14.0' | 2 | SATURATED MEDIUM DENSE GRAY SILTY FINE SAND WITH SOME COARSE SAND, TRACE OF GRAVEL. | | A-2-4(0) |
| | 16.0' | 4 | | | |
| | | 7 | 22" RECOVERY | | |
| | | 7 | | | |
| 7 | 19.0' | 2 | SATURATED STIFF BROWN FINE SANDY CLAY WITH SOME COARSE SAND, TRACE OF GRAVEL. | | A-7-5(10) |
| | 21.0' | 5 | | | |
| | | 6 | 24" RECOVERY | | |
| | | 8 | | | |
| 8 | 24.0' | 4 | SATURATED LOOSE BROWN SILTY FINE SAND WITH SOME COARSE SAND, TRACE OF GRAVEL. | | A-2-4(0) |
| | 26.0' | 5 | | | |
| | | 5 | 22" RECOVERY | | |
| | | 7 | | | |
| 9 | 28.0' | 2 | SATURATED MEDIUM DENSE BROWN SILTY FINE SAND WITH SOME COARSE SAND, TRACE OF GRAVEL. | | A-2-4(0) |
| | 30.0' | 6 | | | |
| | | 10 | 23" RECOVERY | | |
| | | 11 | | | |

NOTE:

- BORING LOGS MADE BY MCCORMICK TAYLOR AS A RESULT OF THE DELAWARE DEPARTMENT OF TRANSPORTATION'S SUBSURFACE EXPLORATIONS DURING MARCH 2007.
- LOCATIONS OF BORINGS REFERENCED TO OLD LANCASTER PIKE BASELINE, UNLESS OTHERWISE NOTED.
- CASING: 3/4" DIA. HOLLOW AUGER.
- SOIL SAMPLING: 2 1/2" DIA. SPLIT BARREL SAMPLER, DRIVEN WITH 140 LB. HAMMER FALLING 30".
- REFERENCE: FOR LOCATION OF THE STRUCTURAL BORINGS, REFER TO PLAN. STRUCTURAL BORINGS ARE DENOTED THUS: EXISTING
- IF ADDITIONAL POOR SOUNDS ARE FOUND UNDER THE FOUNDATIONS CONTRACTOR SHALL BACKFILL WITH ADDITIONAL COARSE AGGREGATE FOR FOUNDATION STABILIZATION AND SUBFOUNDATION BACKFILL PER ITEM 608000.

Wednesday, June 17, 2015 AT 03:00 PM
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ADDENDUMS / REVISIONS

SCALE AS NOTED

OLD LANCASTER PIKE
 PEDESTRIAN BRIDGE PLACEMENT

| | | |
|------------|-------------------|-----------------|
| CONTRACT | BRIDGE NO. | BR 1-169 |
| T201220004 | DESIGNED BY: HM | |
| COUNTY | CHECKED BY: AF/MF | |
| NEW CASTLE | | |

STRUCTURE BORINGS
 SB-1 AND SB-2

| |
|--------------|
| BR-10 |
| SHEET NO. |
| 20 |
| TOTAL SHTS. |
| 44 |

BOX CULVERT PROJECT NOTES

1. LOCATION:
CONSTRUCTION OF A CULVERT EXTENSION CARRYING PEDESTRIAN PATH ALONG OLD LANCASTER PIKE OVER MILL CREEK TRIBUTARY.
2. ELEVATION:
VERTICAL DATUM AS PER ROADWAY PLANS.
3. CULVERT DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 68 DEGREES FAHRENHEIT.
4. ALL DIMENSIONS ARE HORIZONTAL EXCEPT AS NOTED.
5. DESIGN CRITERIA:
DESIGN IS IN ACCORDANCE WITH THE LFD METHOD.

AASHTO GUIDE SPECIFICATIONS FOR DESIGN OF PEDESTRIAN BRIDGES, 1ST EDITION, 1997 AND AS SUPPLEMENTED BY THE STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL, 2005

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION.
6. ANALYSIS CRITERIA:
ANALYSIS IS IN ACCORDANCE WITH THE LRFD METHOD.

AASHTO BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION, 2007, AND AS SUPPLEMENTED BY THE STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL, 2005.
7. LOADING:
DESIGN LIVE LOAD: 85 PSF
8. FOUNDATIONS:
FOUNDATION DESIGN AND QUANTITIES ARE BASED ON A STUDY OF THE SUB-SOIL BORINGS MADE AT THE SITE. THIS BORING INFORMATION, THE ACCURACY OF WHICH THE STATE DOES NOT GUARANTEE, IS PRESENTED ON THESE PLANS TO THE CONTRACTOR FOR HIS INFORMATION ONLY. THE CONTRACTOR MUST HAVE HIS OWN DETERMINATION OF SUB-SOIL CONDITIONS, WHICH MAY AFFECT METHOD OR COST OF CONSTRUCTION. SOIL BORING LOCATIONS ARE DENOTED THUS: 

MAX. ALLOWABLE FOUNDATION BEARING PRESSURE: 4.0 KSF

BORINGS ARE LOCATED WHERE SHOWN ON THE PLAN. ACCURACY OF BEARING STRATA ELEVATION IS NOT GUARANTEED AT FOUNDATIONS LOCATED AWAY FROM THE BORING. PRIOR TO BID IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUBSURFACE CONDITIONS TO DETERMINE ANY EFFECT ON CONSTRUCTION METHODS IN THE EVENT OF A REVISION TO FOOTING ELEVATIONS.

FINAL ELEVATION OF BOTTOM OF FOOTING AND ACCEPTABILITY OF BEARING STRATA WILL BE DETERMINED BY THE ENGINEER
9. PORTLAND CEMENT CONCRETE:
STRUCTURAL ELEMENTS OF PORTLAND CEMENT CONCRETE SHALL BE AS NOTED:
(F'C = 28 DAY COMPRESSIVE STRENGTH)

CLASS A - CULVERT, HEADWALL STEMS (F'C = 4500 P.S.I.)

CLASS B - FOOTINGS (F'C = 3000 P.S.I.)

MIX REQUIREMENTS SHALL CONFORM TO SECTION 812 OF THE SPECIFICATIONS. SILICONE ACRYLIC CONCRETE SEALER, ITEM 602646, SHALL BE APPLIED TO ANY CONCRETE SURFACE (EXISTING AND PROPOSED) THAT IS ABOVE FINAL GRADE.

ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.

10. BAR REINFORCEMENT:
ALL REINFORCEMENT STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60. ALL REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2" UNLESS OTHERWISE SPECIFIED ON THE PLANS. EPOXY COATED REINFORCING STEEL SHALL CONFORM TO AASHTO M284 (ASTM D3963), AND IS DENOTED WITH A SUFFIX "E" IN THE BAR MARKS.
11. CONSTRUCTION JOINTS:
KEYED CONSTRUCTION JOINTS SHALL BE 2" X 4" OR AS NOTED. ALL EXPOSED CONSTRUCTION JOINT EDGES SHALL HAVE A 3/4" V-NOTCH.
12. STABILIZING STRUCTURAL EXCAVATIONS:
THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES AND THE DESIGN OF ANY TEMPORARY SHORING AND BRACING THAT MAY BE USED. ALL SURFACE RUNOFF SHOULD BE DIVERTED AWAY FROM EXCAVATIONS. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.

SHORING IS REQUIRED FOR ANY EXCAVATION EXCEEDING 5 FEET IN HEIGHT. PAYMENT FOR DESIGN AND CONSTRUCTION OF SHORING OR COFFERDAM SHALL BE MADE UNDER ITEM 207000. IN LIEU OF SHORING, THE CONTRACTOR MAY USE 2:1 CUT SLOPE IF PERMITTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR ADDITIONAL EXCAVATION OR FILL OUTSIDE THE PAY LIMITS DEFINED IN SECTION 207 OF THE STANDARD SPECIFICATIONS.

BACKFILL AND GRADE ALL EXCAVATIONS AS SOON AS POSSIBLE TO PREVENT SURFACE WATER PONDING AND CONCENTRATING FLOW FROM ENTERING THE EXCAVATION. KEEP THE EXCAVATION DRY WITH PUMPS AS REQUIRED. DEWATERING OF THE EXCAVATION IS ANTICIPATED SINCE THE BOTTOM OF THE FOOTING IS BELOW THE WATER TABLE.
13. UTILITIES:
UTILITIES ARE SHOWN ON THE PLANS FOR INFORMATION ONLY. THE PRESENCE, SIZE AND LOCATION OF ALL UTILITIES SHALL BE VERIFIED IN THE FIELD.
14. FORMWORK:
NEW CULVERT HEADWALL RECESS PATTERN TO MATCH EXISTING HEADWALL RECESS PATTERN. PATTERN TO BE CREATED BY MODIFYING HEADWALL FORMWORK. MAXIMUM RECESS DEPTH SHALL BE 1/2". SUBMIT HEADWALL FORMWORK FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

LEGEND

- ABUT. = ABUTMENT
- B. F. E. = BOTTOM OF FOOTING ELEVATION
- @ = BASELINE
- BOT. = BOTTOM
- BRG. = BEARING
- C. I. P. = CAST-IN-PLACE
- C/C = CENTERLINE TO CENTERLINE
- CL. = CENTERLINE
- CLR. = CLEAR
- CONSTR. = CONSTRUCTION
- E. F. = EACH FACE
- EL/ELEV. = ELEVATION
- EQU. = EQUAL
- E. S. = EQUAL SPACING
- EXP. = EXPANSION
- F. F. = FRONT FACE
- FIX. = FIXED
- JT. = JOINT
- MAX. = MAXIMUM
- MIN. = MINIMUM
- P. C. C. = PORTLAND CEMENT CONCRETE
- PED. = PEDESTRIAN
- P. G. = PROFILE GRADE
- P/S. = PRESTRESSED
- REQ'D. = REQUIRED
- SDWLK. = SIDEWALK
- SHLDR. = SHOULDER
- SPA. = SPACES (SPACED)
- STA. = STATION
- TYP. = TYPICAL
- VERT. = VERTICAL
- W. P. = WORK POINT

Wednesday, June 17, 2015 AT 03:00 PM
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ADDENDUMS / REVISIONS

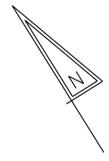
NOT TO SCALE

OLD LANCASTER PIKE
PEDESTRIAN BRIDGE PLACEMENT

| | | |
|------------|--------------------|--------------------|
| CONTRACT | BRIDGE NO. | BOX CULVERT |
| T201220004 | DESIGNED BY: HM | |
| COUNTY | CHECKED BY: AF/MAA | |
| NEW CASTLE | | |

**BOX CULVERT
PROJECT NOTES**

| |
|--------------|
| BR-11 |
| SHEET NO. |
| 21 |
| TOTAL SHTS. |
| 44 |



| SOIL BORING DATA | | | | |
|------------------|-----------|----------|-------------|-------------|
| POINT | STATION | OFFSET | NORTHING | EASTING |
| SB#7 | 119+49.94 | 19.80 RT | 650867.4779 | 578102.0732 |
| SB#8 | 119+89.99 | 10.19 RT | 650846.6960 | 578136.2672 |

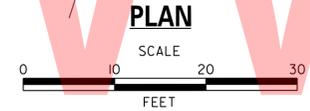
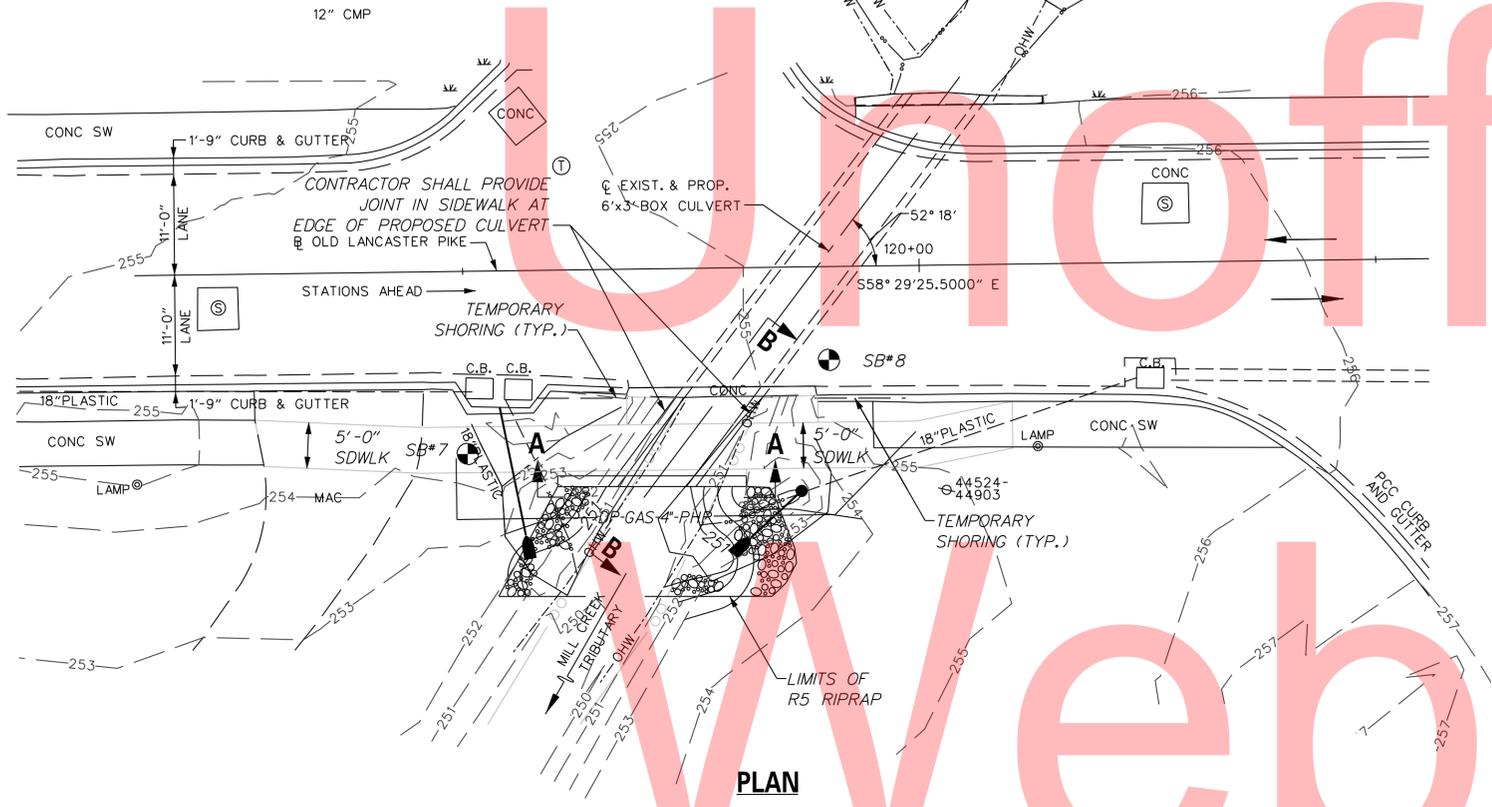
- NOTES:
- FOR CULVERT NOTES, SEE SHEET BR-11.
 - FOR STAKEOUT PLAN, SEE SHEET BR-13.
 - FOR REINFORCEMENT DETAILS, SEE SHEET BR-14.
 - FOR MISCELLANEOUS DETAILS, SEE SHEET BR-15.
 - FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET BR-16.

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 OVERTOPPING FLOOD OR THE 500-YR FLOOD EVENT.

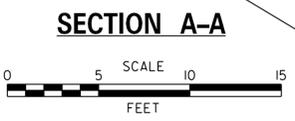
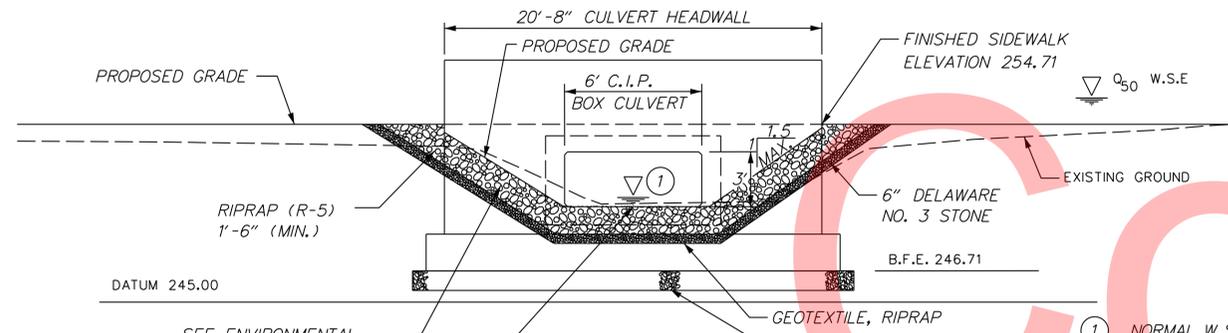
DESIGN EVENT
OVERTOPPING
DESIGN VELOCITY: 9.15 FT/S
DESIGN DISCHARGE: 137 CFS
DESIGN DEPTH OF FLOW: 5.0 FT

HYDRAULIC DATA
DRAINAGE AREA: 0.32 SQ. MILES
DESIGN FREQUENCY: 50 YEAR
DESIGN FLOOD EL.: 256.13
DESIGN DISCHARGE: 551 CFS
EXISTING OPENING: 18 SQ. FT.

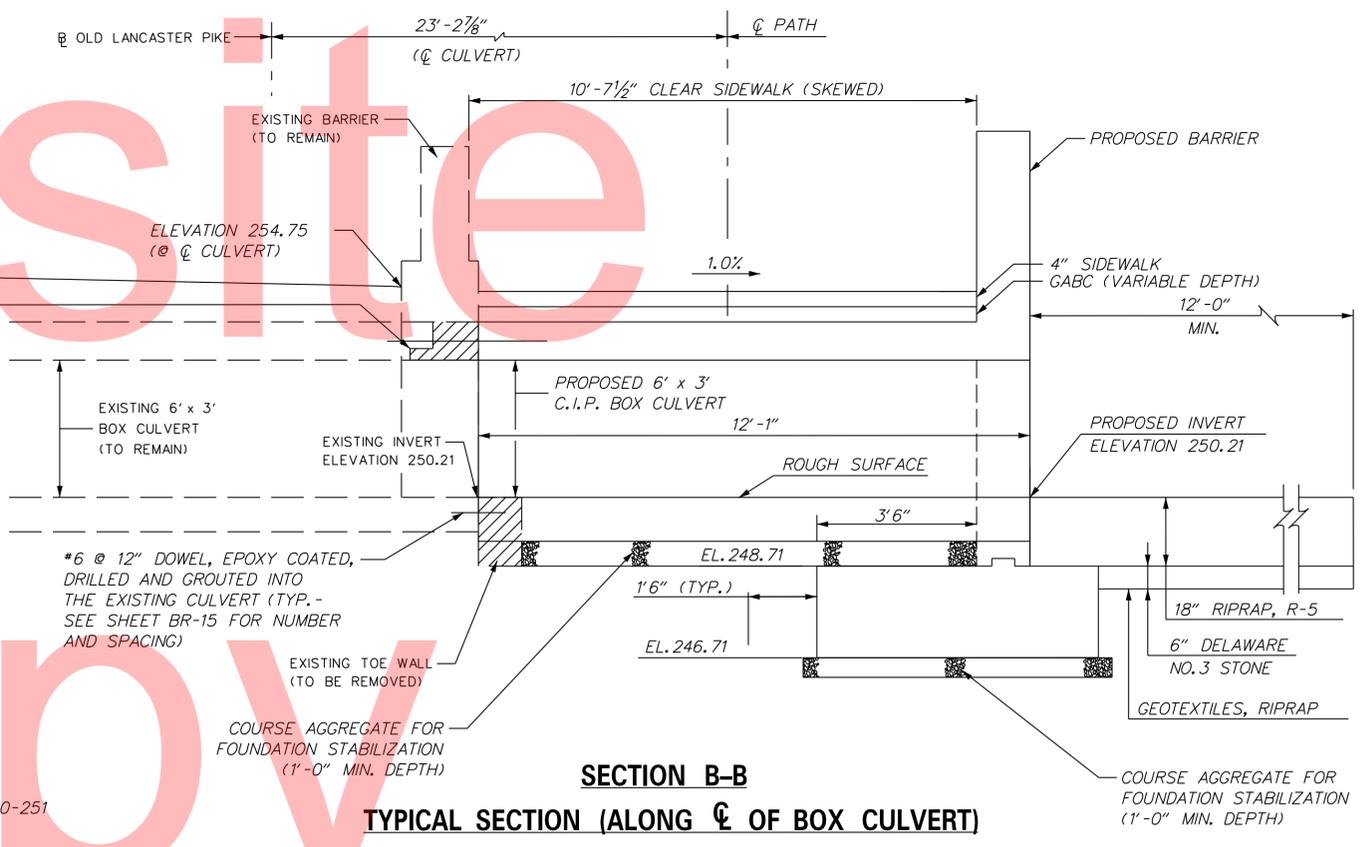
- LEGEND
- 250 — EXISTING 1' CONTOURS
 - 250 — PROPOSED 1' CONTOURS
 - (R) EXISTING UTILITY TO BE RELOCATED
 - W. S. E. WATER SURFACE ELEVATION
 - ⊙ STRUCTURE BORING
 - ▲ ROADWAY PAY ITEM
 - ▨ LIMITS OF R-5, RIPRAP



REPAIR EXISTING CULVERT TOP SLAB; REMOVE AND REPLACE SPALLED, LOOSE & DETERIORATED CONCRETE AT DOWNSTREAM FACE ONLY; APPLY EPOXY BONDING COMPOUND BETWEEN EXISTING AND NEW CONCRETE; REPAIR INCIDENTAL TO 602586.



SEE ENVIRONMENTAL COMPLIANCE NOTE 4 FOR GUIDANCE ON STREAM RESTORATION AND RIPRAP TREATMENT. CHANNEL BED FILL (12") SHALL BE PLACED BEYOND BOX CULVERT LIMITS.



SECTION B-B
TYPICAL SECTION (ALONG C OF BOX CULVERT)

| ADDENDUMS / REVISIONS | |
|-----------------------|--|
| | |
| | |

SCALE AS NOTED

OLD LANCASTER PIKE
PEDESTRIAN BRIDGE PLACEMENT

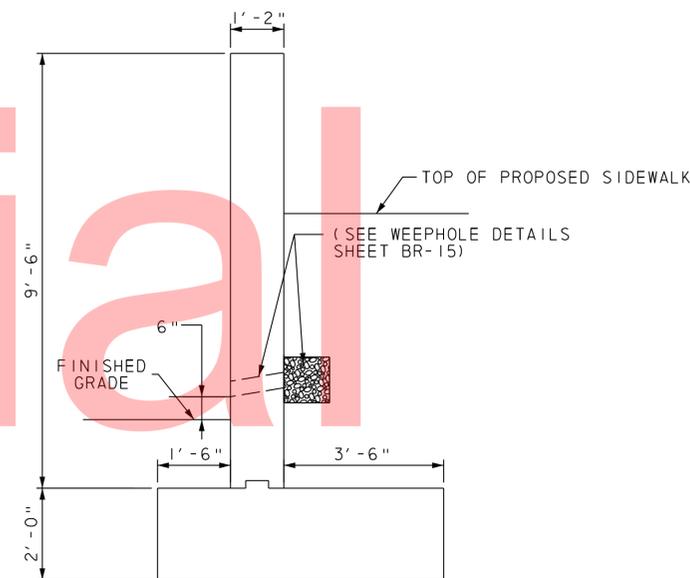
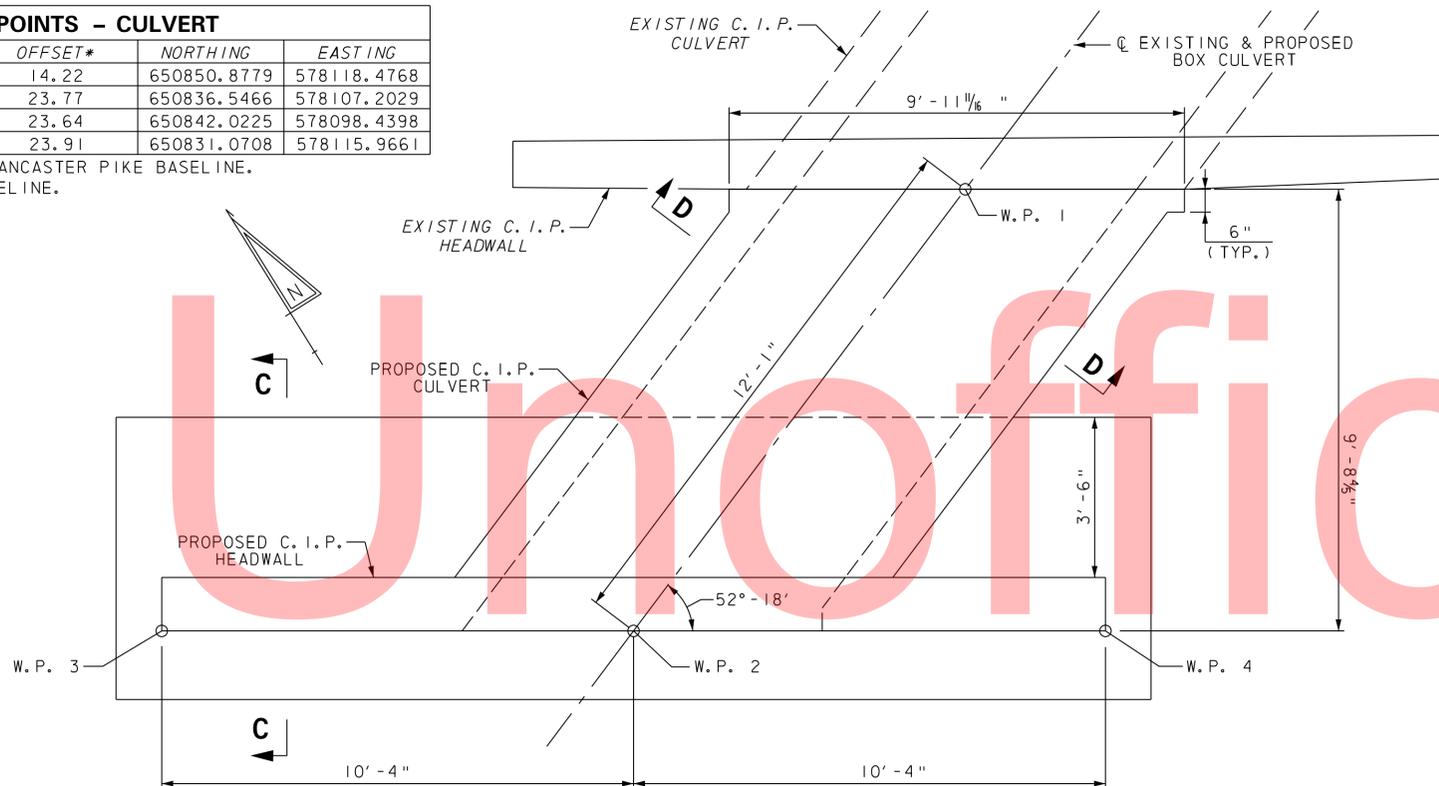
| | | |
|------------------------|--------------------|-------------|
| CONTRACT T201220004 | BRIDGE NO. | BOX CULVERT |
| COUNTY NEW CASTLE | DESIGNED BY: HM | |
| | CHECKED BY: AF/MAA | |

BOX CULVERT
PLAN, ELEVATION &
TYPICAL SECTION

| WORKPOINTS - CULVERT | | | | |
|----------------------|-----------|---------|-------------|-------------|
| WP | STATION* | OFFSET* | NORTHING | EASTING |
| 1 | 119+77.83 | 14.22 | 650850.8779 | 578118.4768 |
| 2 | 119+70.44 | 23.77 | 650836.5466 | 578107.2029 |
| 3 | 119+60.11 | 23.64 | 650842.0225 | 578098.4398 |
| 4 | 119+80.78 | 23.91 | 650831.0708 | 578115.9661 |

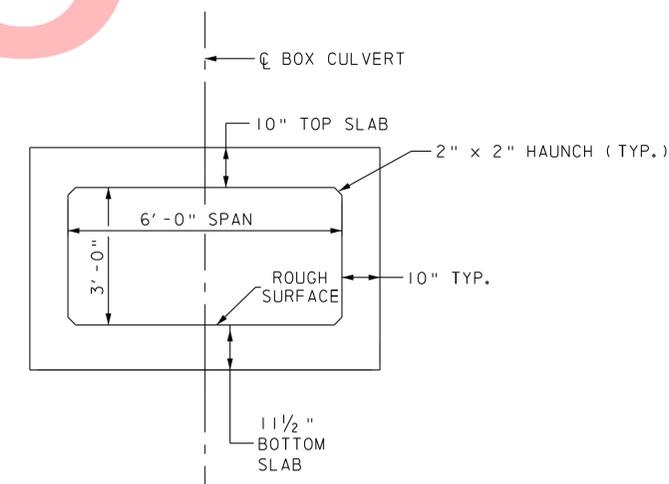
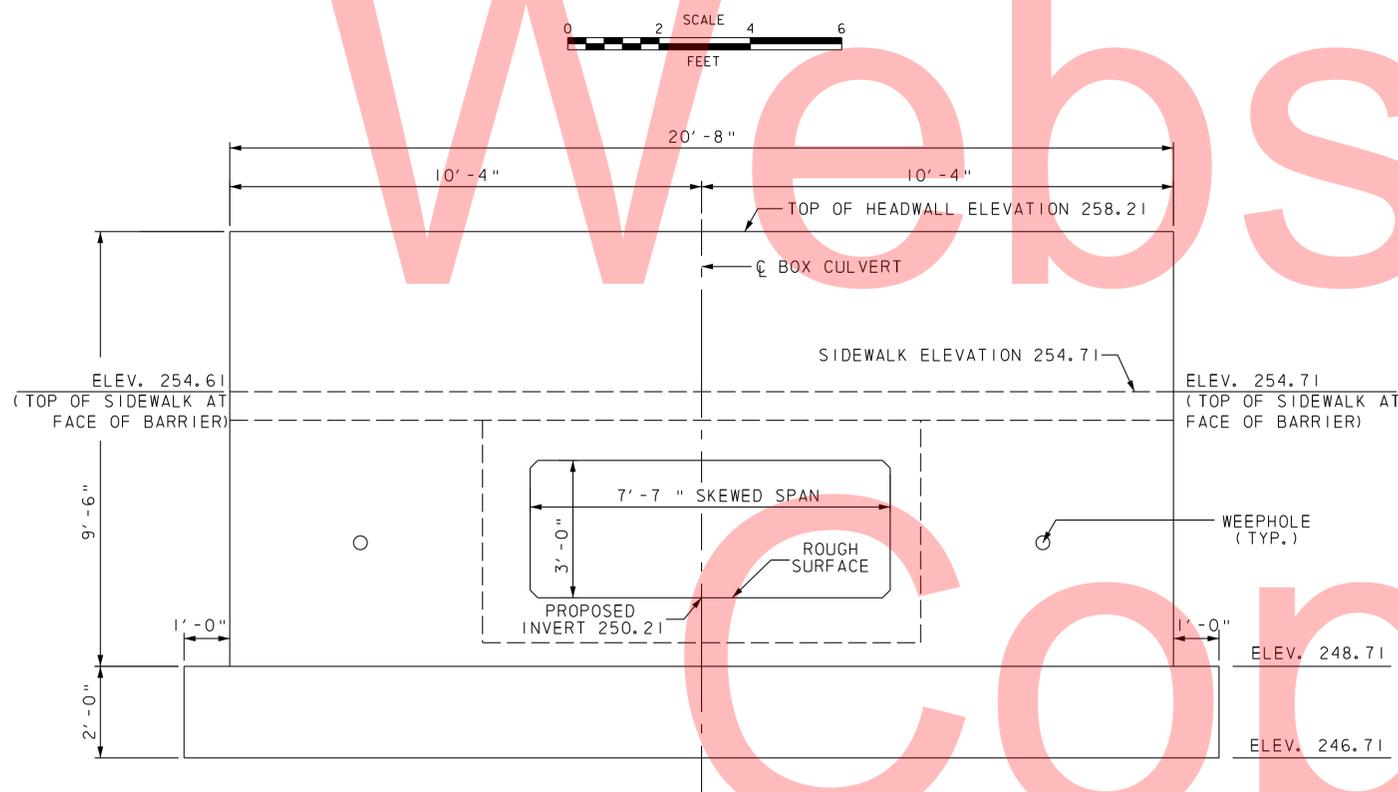
*ALL STATIONS ARE FROM OLD LANCASTER PIKE BASELINE.
ALL OFFSETS ARE RIGHT OF BASELINE.

- NOTES:
1. FOR CULVERT NOTES, SEE SHEET BR-11.
 2. FOR GENERAL PLAN AND ELEVATION, SEE SHEET BR-12.
 3. FOR REINFORCEMENT DETAILS, SEE SHEET BR-14.
 4. FOR MISCELLANEOUS DETAILS, SEE SHEET BR-15.
 5. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET BR-16.
 6. PAYMENT FOR WEEPHOLE INSTALLATION SHALL BE INCIDENTAL TO ITEM 602011.



BOX CULVERT & HEADWALL PLAN

SECTION C-C



HEADWALL ELEVATION

SECTION D-D

ADDENDUMS / REVISIONS

SCALE AS NOTED

OLD LANCASTER PIKE
PEDESTRIAN BRIDGE PLACEMENT

| | | |
|------------|--------------------|-------------|
| CONTRACT | BRIDGE NO. | BOX CULVERT |
| T201220004 | DESIGNED BY: HM | |
| COUNTY | CHECKED BY: AF/MAA | |
| NEW CASTLE | | |

BOX CULVERT STAKE-OUT
AND HEADWALL DETAILS

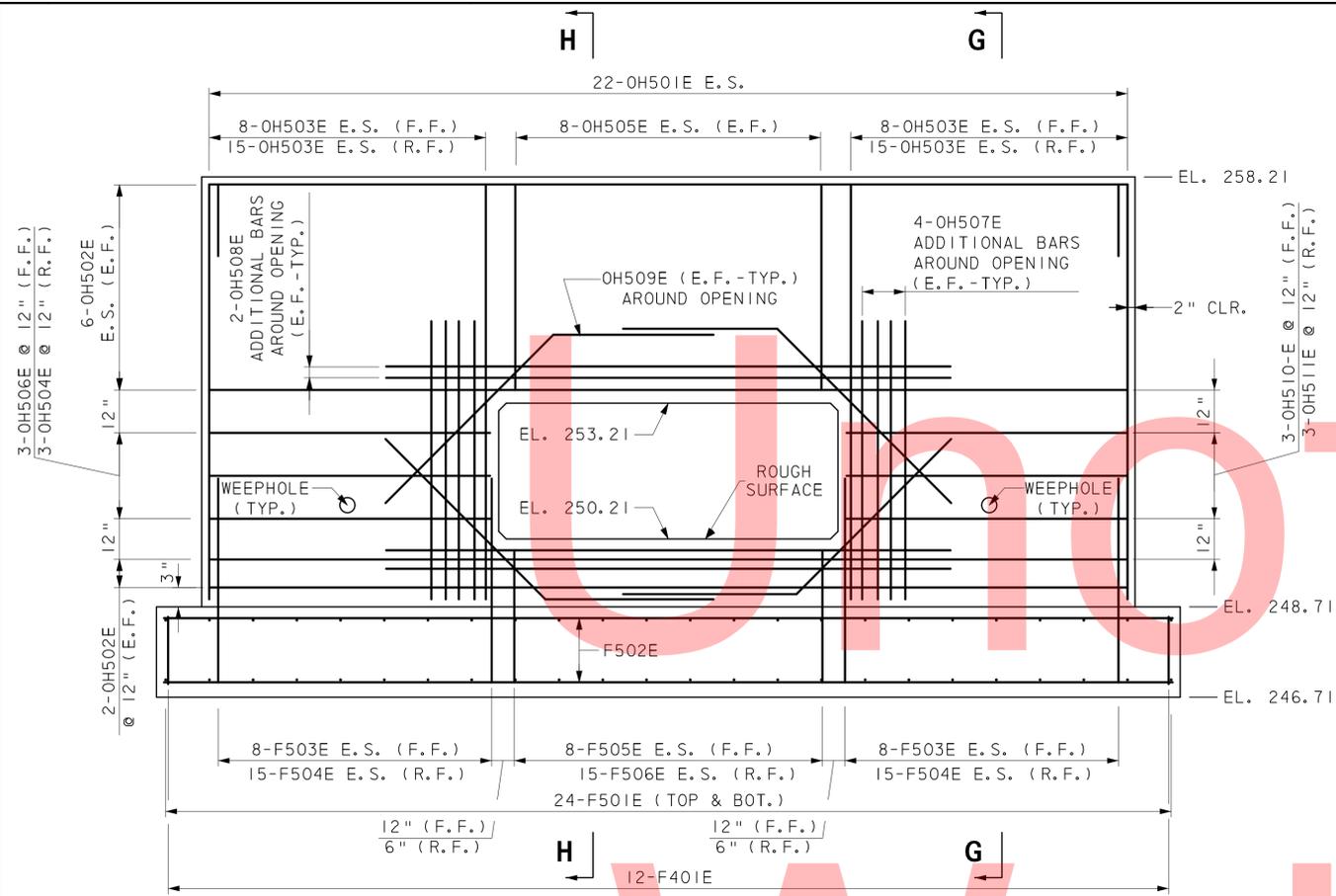
BR-13

SHEET NO.

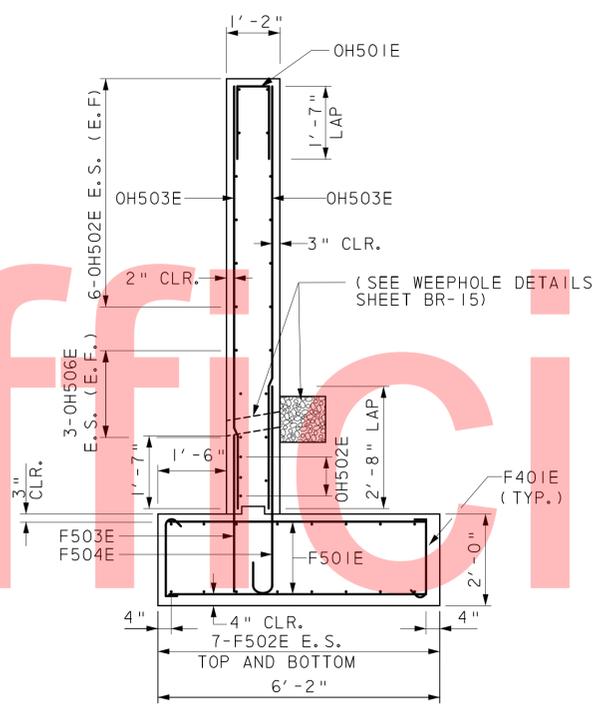
23

TOTAL SHTS.

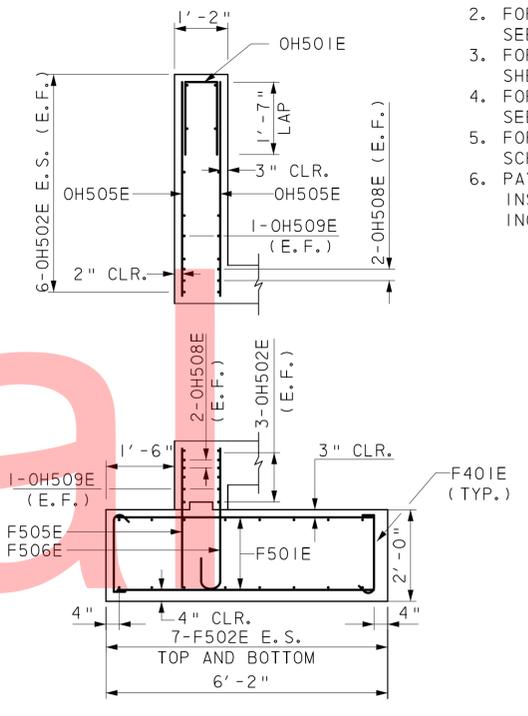
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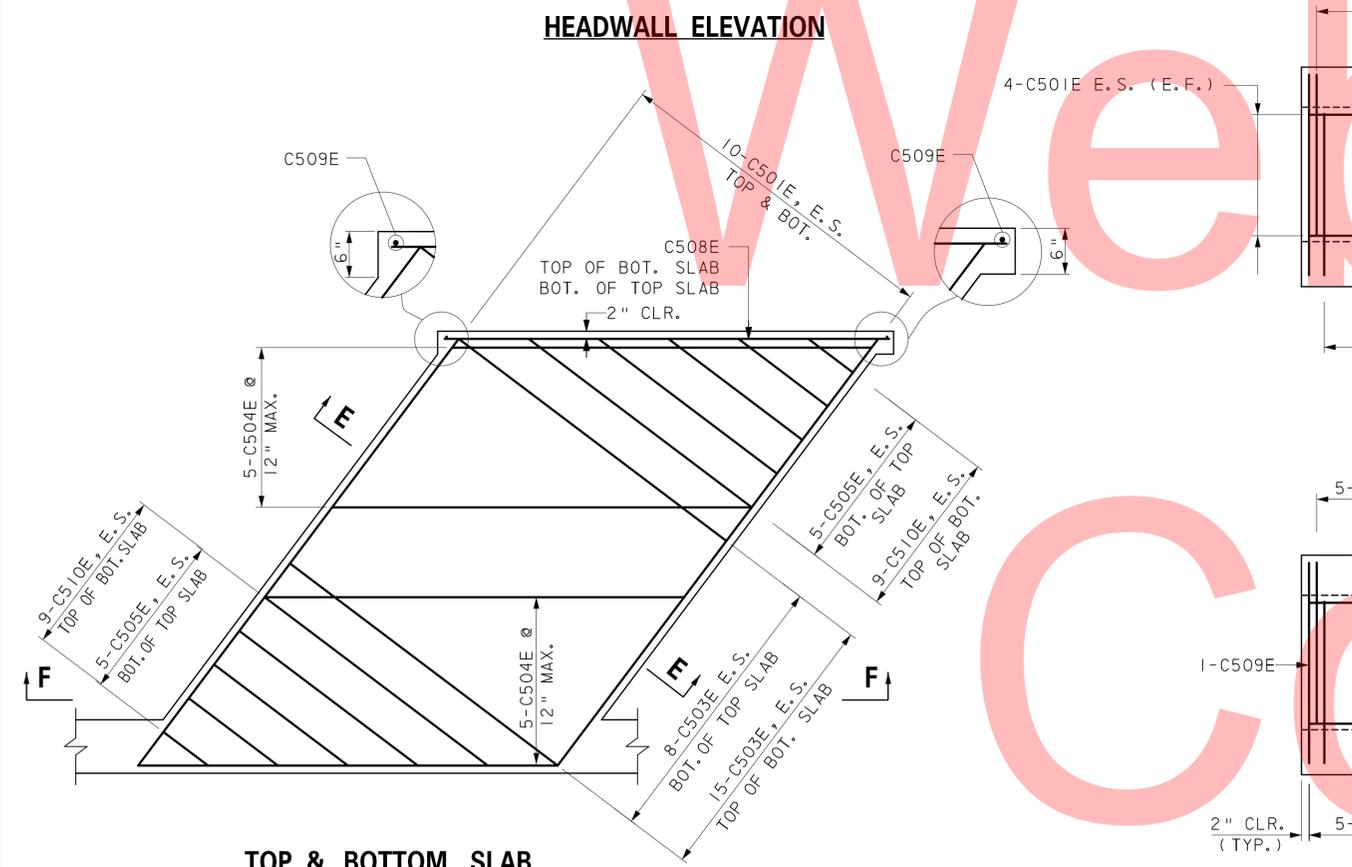
HEADWALL ELEVATION



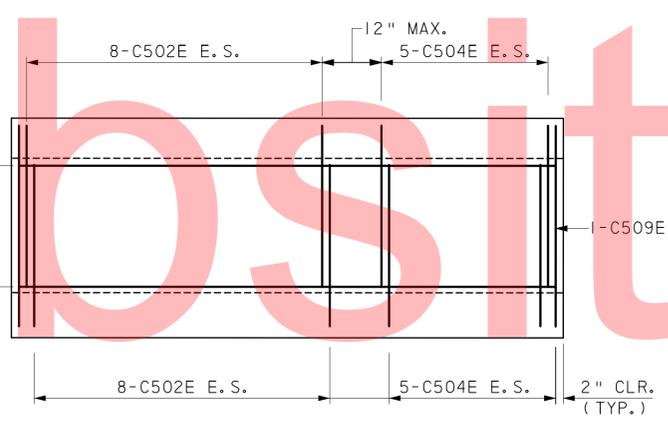
HEADWALL SECTION G-G



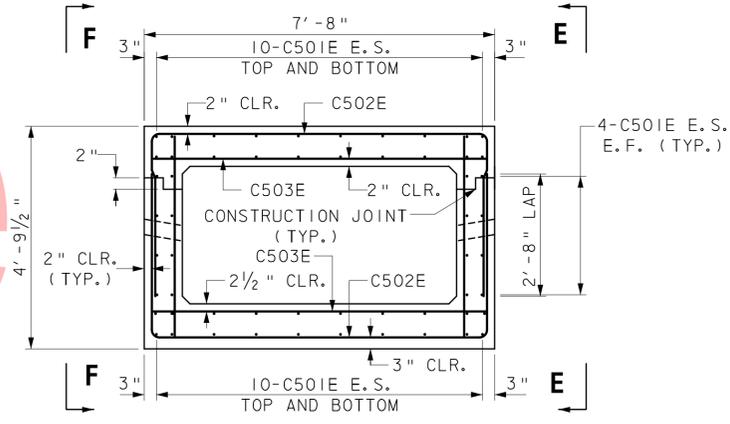
HEADWALL SECTION H-H



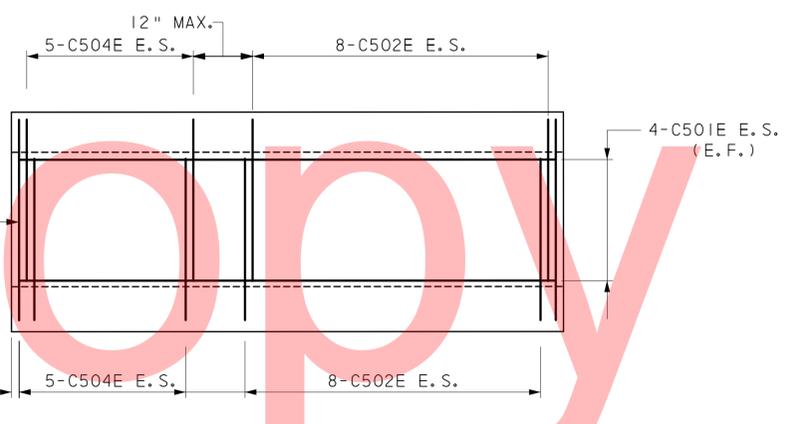
TOP & BOTTOM SLAB



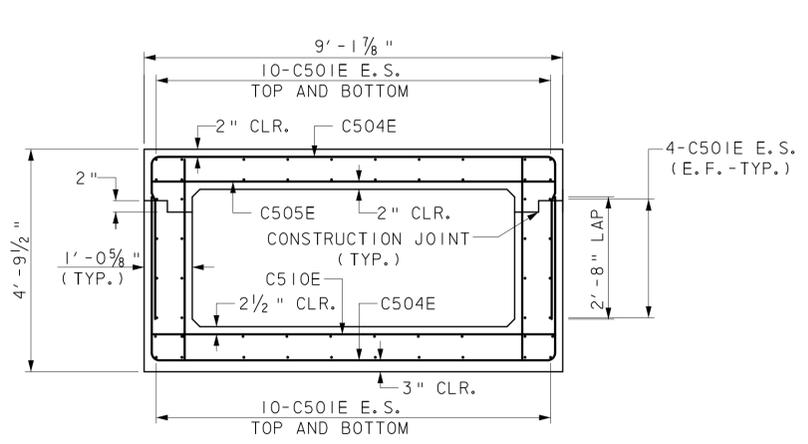
BOX CULVERT ELEVATION E-E



BOX CULVERT SECTION E-E



BOX CULVERT ELEVATION F-F

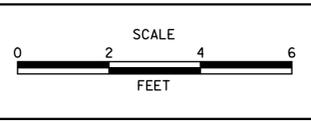


BOX CULVERT SECTION F-F

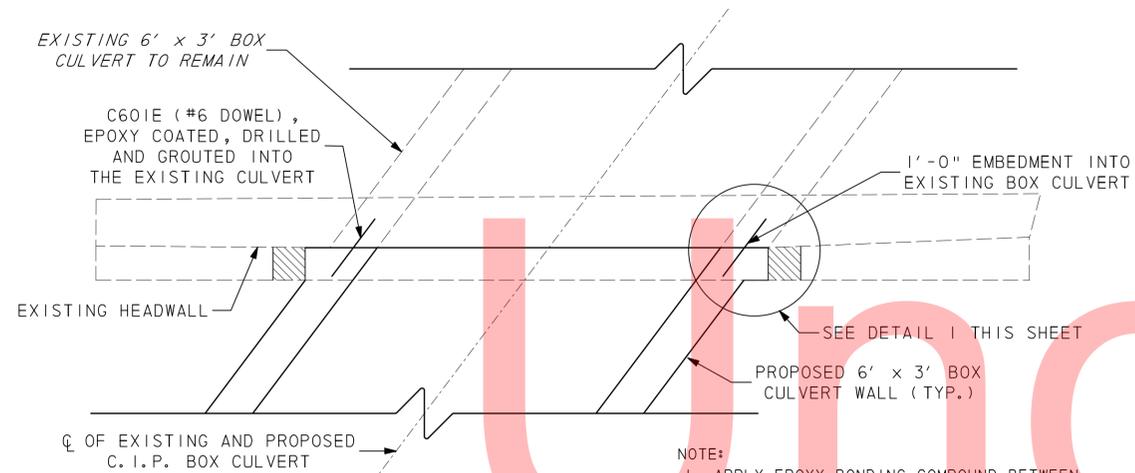
- NOTES:**
1. FOR CULVERT NOTES, SEE SHEET BR-11.
 2. FOR GENERAL PLAN AND ELEVATION, SEE SHEET BR-12.
 3. FOR STAKE-OUT PLAN, SEE SHEET BR-13.
 4. FOR MISCELLANEOUS DETAILS, SEE SHEET BR-15.
 5. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET BR-16.
 6. PAYMENT FOR WEEPHOLE INSTALLATION SHALL BE INCIDENTAL TO ITEM 602011.

Wednesday, June 17, 2015 AT 03:01 PM
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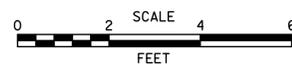
| ADDENDUMS / REVISIONS | |
|-----------------------|--|
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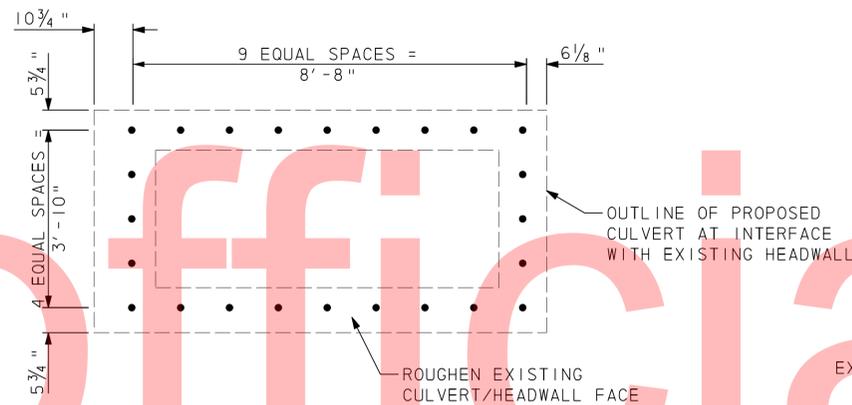
| | | |
|------------------------|-----------------|--------------------|
| CONTRACT T201220004 | BRIDGE NO. | BOX CULVERT |
| COUNTY NEW CASTLE | DESIGNED BY: HM | CHECKED BY: AF/MAA |



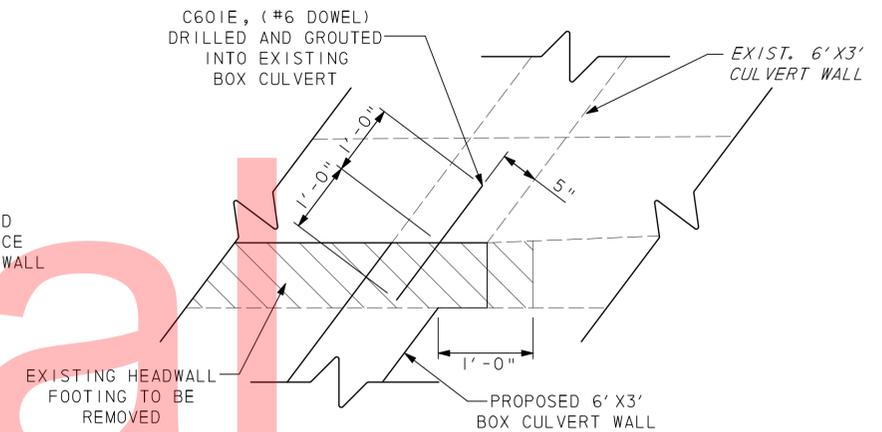
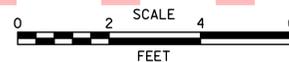
CULVERT TIE-IN DETAIL



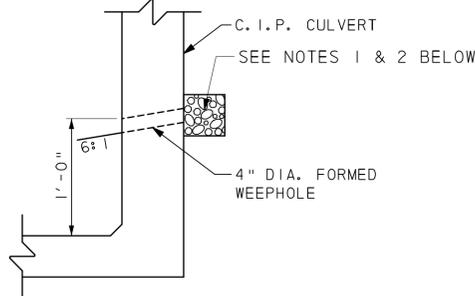
- NOTE:**
1. APPLY EPOXY BONDING COMPOUND BETWEEN EXISTING HEADWALL AND PROPOSED CULVERT.
 2. PAYMENT FOR C601E (#6 DOWEL), INCLUDING DRILLING AND GROUT, SHALL BE INCLUDED UNDER ITEM 602579.
 3. CONTRACTOR SHALL AVOID CONTACT WITH THE EXISTING REBAR DURING CULVERT TIE-IN.



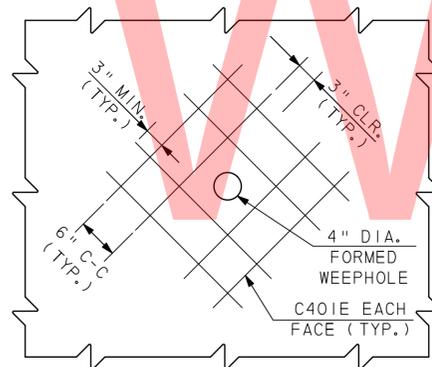
CULVERT TIE-IN ELEVATION



DETAIL #1



SECTION



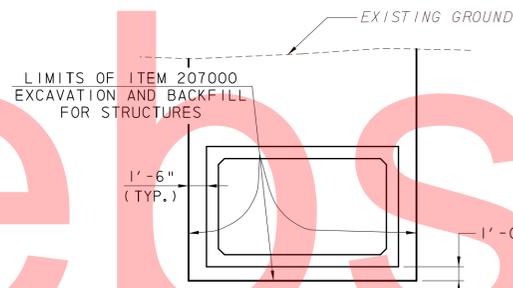
WEEPHOLE REINFORCEMENT

WEEPHOLE DETAILS

N. T. S.

NOTES:

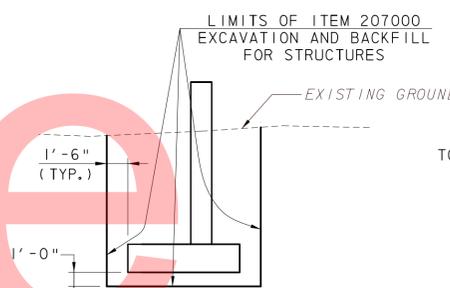
1. 1/2 C.Y. DELAWARE NO. 57 STONE ENCASED IN GEOTEXTILE. (TYP. AT ALL WEEPHOLES). PROVIDE ONE WEEPHOLE ON EACH WALL OF THE C. I. P. BOX CULVERT.
2. PAYMENT FOR WEEPHOLE INSTALLATION SHALL BE INCIDENTAL TO ITEM 602011. PAYMENT FOR DELAWARE NO. 57 STONE SHALL BE UNDER ITEM 302012. PAYMENT FOR GEOTEXTILE SHALL BE UNDER ITEM 713003.



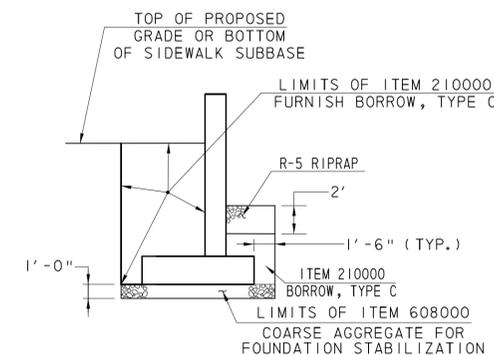
EXCAVATION



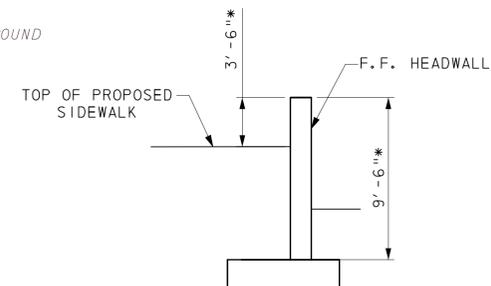
BACKFILL BOX CULVERT



EXCAVATION



BACKFILL HEADWALL



FORMLINER HEADWALL

*LIMITS OF FORMLINER (ITEM 602549)

PAY LIMIT DETAILS

N. T. S.

Wednesday, June 17, 2015 AT 03:01 PM
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SB-7

STATION : 119+53.91
 OFFSET : 15.8' RT.
 DATE : 8-2-2007
 GROUND ELEV. : 253.90

SB-8

STATION : 119+90.30
 OFFSET : 8.5' RT.
 DATE : 8-2-2007
 GROUND ELEV. : 254.86

| SAMPLE NO. | DEPTH | | SAMPLE DESCRIPTION | REMARKS | CLASS/G. I. |
|------------|---------|---------|--|---------|-------------|
| | BLWS/6" | BLWS/6" | | | |
| 1 | 0.0' | 5 | SATURATED FIRM BROWN CLAYEY ORGANIC SILT WITH SOME FINE SAND, TRACE OF COARSE SAND AND GRAVEL. 16" RECOVERY | | A-4(7) |
| | 2.0' | 4 | | | |
| | | 4 | | | |
| | | 5 | | | |
| 2 | 2.0' | 6 | SATURATED STIFF LIGHT BROWN CLAYEY SILT WITH SOME FINE SAND, TRACE OF GRAVEL, AND FINE SAND. 18" RECOVERY | | A-4(2) |
| | 4.0' | 5 | | | |
| | | 5 | | | |
| | | 20 | | | |
| 3 | 4.0' | 23 | SATURATED DENSE BROWN CLAYEY COARSE SANDY GRAVEL WITH SOME SILT AND FINE SAND. 16" RECOVERY | | A-2-4(0) |
| | 6.0' | 15 | | | |
| | | 17 | | | |
| | | 12 | | | |
| 4 | 6.0' | 8 | SATURATED MEDIUM DENSE LIGHT BROWN CLAYEY GRAVEL AND COARSE TO FINE SAND. 24" RECOVERY | | A-2-6(0) |
| | 8.0' | 13 | | | |
| | | 14 | | | |
| | | 16 | | | |
| 5 | 8.0' | 5 | SATURATED MEDIUM DENSE BROWN GRAVEL AND COARSE TO FINE SAND WITH SOME SILT. 16" RECOVERY | | A-1-b |
| | 10.0' | 7 | | | |
| | | 6 | | | |
| | | 7 | | | |
| 6 | 14.0' | 2 | SATURATED LOOSE BROWN SILTY FINE TO COARSE SAND WITH SOME MICA. 22" RECOVERY | | A-2-5(0) |
| | 16.0' | 3 | | | |
| | | 5 | | | |
| | | 8 | | | |
| 7 | 19.0' | 3 | SATURATED LOOSE BROWN SILTY FINE TO COARSE SAND WITH TRACE OF GRAVEL AND MICA. 8" RECOVERY | | A-2-4(0) |
| | 19.7' | 13 | | | |
| 7A | 19.7' | 13 | SATURATED VERY DENSE LIGHT BROWN FINE TO COARSE SAND WITH SOME SILT. 8" RECOVERY | | A-2-4(0) |
| | 20.4' | 50/5" | | | |
| 8 | 24.0' | 34 | SATURATED VERY DENSE LIGHT BROWN FINE TO COARSE SAND WITH SOME SILT. 12" RECOVERY | | A-2-4(0) |
| | 25.0' | 50 | | | |
| 9 | 28.0' | 10 | SATURATED MEDIUM DENSE LIGHT BROWN COARSE TO FINE SAND WITH TRACE OF SILT AND GRAVEL. 15" RECOVERY | | A-1-b |
| | 30.0' | 8 | | | |
| | | 6 | | | |
| | | 2 | | | |

B. F. E.
246.71

| SAMPLE NO. | DEPTH | | SAMPLE DESCRIPTION | REMARKS | CLASS/G. I. |
|------------|---------|---------|--|---------|-------------|
| | BLWS/6" | BLWS/6" | | | |
| 1 | 1.0' | 12 | NO SIEVE ANALYSIS - INDICATION OF BROWN SILTY ORGANIC FINE TO COARSE SAND AND GRAVEL WITH TRACE OF CLAY 6" RECOVERY | | |
| | 2.0' | 14 | | | |
| 2 | 2.0' | 10 | WET MEDIUM DENSE BROWN SILTY GRAVEL AND COARSE SAND WITH SOME FINE SAND, TRACE OF CLAY. 16" RECOVERY | | A-2-4(0) |
| | 4.0' | 7 | | | |
| | | 14 | | | |
| | | 10 | | | |
| 3 | 4.0' | 6 | WET MEDIUM DENSE BROWN GRAVEL WITH SOME COARSE TO FINE SAND AND SILT. 8" RECOVERY | | A-1-a |
| | 6.0' | 7 | | | |
| | | 11 | | | |
| | | 14 | | | |
| 4 | 6.0' | 13 | SATURATED STIFF GRAY CLAYEY SILT WITH SOME FINE TO COARSE SAND AND GRAVEL. AND MICA. 15" RECOVERY | | A-4(2) |
| | 8.0' | 8 | | | |
| | | 5 | | | |
| | | 7 | | | |
| 5 | 8.0' | 8 | SATURATED STIFF BROWN GRAVELLY CLAY WITH SOME FINE TO COARSE SAND. 12" RECOVERY | | A-6(1) |
| | 10.0' | 7 | | | |
| | | 6 | | | |
| | | 6 | | | |
| 6 | 14.0' | 10 | SATURATED MEDIUM DENSE LIGHT BROWN SILTY GRAVEL WITH SOME FINE TO COARSE SAND. 12" RECOVERY | | A-1-b |
| | 16.0' | 14 | | | |
| | | 14 | | | |
| | | 12 | | | |
| 7 | 19.0' | 2 | SATURATED LIGHT BROWN FINE SANDY SILT WITH TRACE OF COARSE SAND AND GRAVEL. 20" RECOVERY | | A-5(4) |
| | 21.0' | 3 | | | |
| | | 5 | | | |
| | | 5 | | | |
| 8 | 24.0' | 3 | SATURATED FIRM LIGHT BROWN FINE SANDY SILT WITH SOME COARSE SAND. 24" RECOVERY | | A-5(1) |
| | 26.0' | 3 | | | |
| | | 4 | | | |
| | | 5 | | | |
| 9 | 28.0' | 2 | SATURATED FIRM LIGHT BROWN CLAYEY FINE TO COARSE SANDY SILT, WITH TRACE OF GRAVEL. 16" RECOVERY | | A-5(0) |
| | 29.5' | 3 | | | |
| | | 4 | | | |
| | | 4 | | | |
| 9A | 29.5' | 12 | SATURATED MEDIUM DENSE LIGHT BROWN COARSE TO FINE SAND WITH TRACE OF SILT AND GRAVEL. 6" RECOVERY | | A-1-b |
| | 30.0' | | | | |

B. F. E.
246.71

NOTE:

- BORING LOGS MADE BY MCCORMICK TAYLOR AS A RESULT OF THE DELAWARE DEPARTMENT OF TRANSPORTATION'S SUBSURFACE EXPLORATIONS DURING MARCH 2007.
- LOCATIONS OF BORINGS REFERENCED TO OLD LANCASTER PIKE BASELINE, UNLESS OTHERWISE NOTED.
- CASING: 3/4" DIA. HOLLOW AUGER.
- SOIL SAMPLING: 2 1/2" DIA. SPLIT BARREL SAMPLER, DRIVEN WITH 140 LB. HAMMER FALLING 30".
- REFERENCE: FOR LOCATION OF THE STRUCTURAL BORINGS, REFER TO PLAN. STRUCTURAL BORINGS ARE DENOTED THUS:  EXISTING

Wednesday, June 17, 2015 AT 03:01 PM
 \\Bridge\BR207_OLP_SF.dgn



ADDENDUMS / REVISIONS

SCALE AS NOTED

OLD LANCASTER PIKE
PEDESTRIAN BRIDGE PLACEMENT

| | | |
|------------|--------------------|-------------|
| CONTRACT | BRIDGE NO. | BOX CULVERT |
| T201220004 | | |
| COUNTY | DESIGNED BY: HM | |
| NEW CASTLE | CHECKED BY: AF/MAA | |

STRUCTURE BORINGS
SB-7 AND SB-8

BR-17

| | |
|-------------|----|
| SHEET NO. | 27 |
| TOTAL SHTS. | 44 |

1. GENERAL NOTES:

A. THE PURPOSE OF THESE SHEETS IS TO IDENTIFY THOSE ITEMS ASSOCIATED WITH ENVIRONMENTAL COMPLIANCE. IMPACT CALCULATIONS ARE FOR 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 OF THE NATURAL AND/OR CULTURAL RESOURCE ISSUES) IS NECESSARY, THE ENVIRONMENTAL STUDIES SECTION SHALL BE CONTACTED AT (302) 760-2264 TO ALLOW THE DEPARTMENT TO COORDINATE WITH THE APPROPRIATE RESOURCE AGENCIES FOR APPROVAL.

C. USE OF THESE SHEETS 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): BRIDGE 1-169 NWP #23 WITH PCN**
BOX CULVERT NWP #3 (a) and (c) (NO PCN)
- DNREC WETLANDS & SUBAQUEOUS LANDS (WLSL): BRIDGE 1-169 SUBAQUEOUS LANDS PERMIT**
BOX CULVERT WORK IS CONSISTENT WITH DEL. CODE CH. 72, SECTION 7217, SPECIAL EXEMPTION (b)
- DNREC WATER QUALITY CERTIFICATION (WQC) & COASTAL ZONE CONSISTENCY (CZM):
BRIDGE 1-169 AND BOX CULVERT ISSUED (PROJECT IS NOT LOCATED IN CRW)
- NATIONAL PARK SERVICE (NPS): BRIDGE 1-169 AND BOX CULVERT APPROVED
- NCC DEPARTMENT OF LAND USE: BRIDGE 1-169 AND BOX CULVERT COORDINATION ONGOING**

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

**THE CONTRACTOR MUST ENSURE THAT THEY ARE IN POSSESSION OF THESE PERMITS (COE, DNREC, NCC) PRIOR TO THE BEGINNING OF CONSTRUCTION IN THE PERMITTED AREA(S). THESE PERMITS/APPROVALS SHALL BE DISPLAYED ON-SITE DURING THE ENTIRE CONSTRUCTION PERIOD.

NOTE: THE ABSENCE OF ASTERISKS AFTER A PERMIT 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 : NONE
 - MIGRATORY BIRDS : NONE
 - ENDANGERED SPECIES : NONE

3. CULTURAL RESOURCES ISSUES:

THE PROJECT HAS A FINDING OF NO ADVERSE EFFECT FOR HISTORIC PRESERVATION COMPLIANCE. IN ORDER TO SUSTAIN THE FINDING, NO FURTHER WORK EFFORTS ARE NEEDED UPON ADJACENT PROPERTIES. SHOULD THIS OCCUR, DELDOT'S ENVIRONMENTAL STUDIES SECTION SHALL FIRST BE CONTACTED TO REVIEW AND AUTHORIZE SUCH CHANGES OR ADDITIONS AND INVOLVE FHWA AND STATE HISTORIC PRESERVATION OFFICE AS NECESSARY.

4. STREAM RESTORATION AND RIPRAP 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 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 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 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 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. PLEASE SEE EC SHEET EC-02 FOR STREAMBANK TREATMENT FOR BRIDGE 1-169 AND EC-03 FOR STREAMBANK TREATMENT FOR THE BOX CULVERT.

E. THE TOPSOIL / SEED / MULCH CAN BE PLACED BEFORE OR AFTER THE REMOVAL OF THE STREAM DIVERSION. IF IT OCCURS AFTER STREAM DIVERSION REMOVAL, A TURBIDITY CURTAIN SHALL BE USED TO MINIMIZE IN-STREAM SEDIMENTATION. PAYMENT SHALL BE INCIDENTAL TO ITEM #909005 STREAM DIVERSION.

5. SWIFT PARK (NEW CASTLE COUNTY PARK PROPERTY) IS LOCATED IN THE SOUTHEAST QUADRANT OF BRIDGE 1-169 (STA 102+15 TO 105+15 RT). CONTRACTOR'S ACCESS BEYOND THE LOC IS PROHIBITED.

6. PROTECTION OF RESOURCES

A. SILT FENCE INSTALLATION: SANDBAGS SHALL BE USED TO SECURE SILT FENCE IN LIEU OF TRENCHING UNLESS PROPER EROSION & SEDIMENT CONTROL CANNOT BE MAINTAINED. SANDBAGS USED TO SECURE SILT FENCE SHALL BE INCIDENTAL TO ITEM NUMBER 905001 SILT FENCE. THE ENVIRONMENTAL STUDIES SECTION (CAROL SULLIVAN, 302-760-2129) CAN PROVIDE FURTHER GUIDANCE REGARDING THIS METHOD OF INSTALLATION.

B. TREE REMOVAL: THE USE OF SHEET PILE IS NOT AUTHORIZED BETWEEN STA. 101+75 TO 102+25 LEFT AND RIGHT IN ORDER TO PROTECT THE TREE ROOT SYSTEMS. FURTHERMORE, ENSURE THAT CAROL SULLIVAN, DELDOT ENVIRONMENTAL STUDIES SECTION, IS INVITED TO ATTEND THE E&S PRECONSTRUCTION / ENVIRONMENTAL COMPLIANCE MEETING.

C. IF A DEPARTURE FROM THE APPROVED PLANS IS NECESSARY AND FOR ALL SUBMITTALS THAT MUST BE APPROVED BY A RESOURCE AGENCY (E.G. USACE, DNREC, NCC), THE CONTRACTOR SHALL CONTACT THE ENGINEER, WHO WILL THEN NOTIFY THE ENVIRONMENTAL STUDIES OFFICE (ESO). THE ESO WILL COORDINATE WITH THE APPROPRIATE RESOURCE AGENCIES. WORK SHALL NOT PROCEED UNTIL ALL THE NECESSARY APPROVALS, PERMITS OR MODIFICATIONS ARE OBTAINED. THIS RESOURCE AGENCY APPROVAL IS IN ADDITION TO ANY APPROVAL THAT NEEDS TO BE DERIVED FROM THE ENGINEER. APPROVAL MAY TAKE A SIGNIFICANT AMOUNT OF TIME TO COMPLETE AND ALL CHANGES MAY NOT BE APPROVED. THE CONTRACTOR SHALL HAVE NO CLAIM AGAINST THE DEPARTMENT FOR COSTS OR DELAYS ASSOCIATED WITH RESOURCE AGENCY APPROVAL OR REJECTION OF CHANGES OR DEVIATIONS FROM THESE PLANS.

PROJECT AREA DELINEATED BY:
MCCORMICK TAYLOR, INC. IN MARCH 2007 IN ACCORDANCE WITH THE 1987 CORPS OF ENGINEERS WETLAND DELINEATION MANUAL.

THERE ARE NO WETLANDS IN THE PROJECT AREA.

SHEET PREPARED BY: MCCORMICK TAYLOR, INC.
DATE: JUNE 2015

PERMANENT OPEN WATER IMPACT AREA SCHEDULE

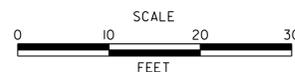
| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
|------------------------------------|--------------------|-----------|-----------|-------------|--------------|
| 2-01 | RIPRAP | 442.33 | 0.0102 | 32.77 | USACE/DNREC |
| 2-02 | STRUCTURE | 13.85 | 0.0003 | 1.03 | USACE/DNREC |
| 2-03 | RIPRAP | 35.82 | 0.0008 | 2.65 | USACE/DNREC |
| 3-01 | CULVERT | 98.27 | 0.0023 | 6.21 | USACE/DNREC |
| 3-02 | RIPRAP | 110.41 | 0.0025 | 0.53 | USACE/DNREC |
| TOTAL PERMANENT OPEN WATER IMPACTS | | 700.68 | 0.0161 | 43.19 | USACE |
| TOTAL PERMANENT OPEN WATER IMPACTS | | 700.68 | 0.0161 | 43.19 | DNREC |

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE

| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
|------------------------------------|--------------------------|-----------|-----------|-------------|--------------|
| 2-0T1 | E&S AREA - SANDBAGS | 854.80 | 0.0196 | 63.31 | USACE/DNREC |
| 2-0T2 | E&S AREA - SANDBAGS, RR* | 146.00 | 0.0034 | 10.81 | USACE/DNREC |
| 3-0T1 | E&S AREA - SANDBAGS | 135.94 | 0.0031 | 10.06 | USACE/DNREC |
| 3-0T2 | E&S AREA | 46.47 | 0.0011 | 3.44 | USACE/DNREC |
| TOTAL TEMPORARY OPEN WATER IMPACTS | | 1183.21 | 0.0272 | 87.62 | USACE |
| TOTAL TEMPORARY OPEN WATER IMPACTS | | 1183.21 | 0.0272 | 87.62 | DNREC |

*RR- RIPRAP

ADDENDUMS / REVISIONS



OLD LANCASTER PIKE
PEDESTRIAN BRIDGE PLACEMENT

| | | |
|------------|--------------------|-----------------|
| CONTRACT | BRIDGE NO. | BR 1-169 |
| T201220004 | DESIGNED BY: KMS | |
| COUNTY | CHECKED BY: MAA/RL | |
| NEW CASTLE | | |

ENVIRONMENTAL
COMPLIANCE PLAN

EC-01

SHEET NO.

28

TOTAL SHTS.

44

| PERMANENT OPEN WATER IMPACT AREA SCHEDULE | | | | | |
|---|--------------------|-----------|-----------|-------------|--------------|
| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
| 2-01 | RIPRAP | 442.33 | 0.0102 | 32.77 | USACE/DNREC |
| 2-02 | STRUCTURE | 13.85 | 0.0003 | 1.03 | USACE/DNREC |
| 2-03 | RIPRAP | 35.82 | 0.0008 | 2.65 | USACE/DNREC |
| TOTAL PERMANENT OPEN WATER IMPACTS | | 492.00 | 0.0113 | 36.45 | USACE |
| TOTAL PERMANENT OPEN WATER IMPACTS | | 492.00 | 0.0113 | 36.45 | DNREC |

| TEMPORARY OPEN WATER IMPACT AREA SCHEDULE | | | | | |
|---|--------------------------|-----------|-----------|-------------|--------------|
| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
| 2-0T1 | E&S AREA - SANDBAGS | 854.80 | 0.0196 | 63.31 | USACE/DNREC |
| 2-0T2 | E&S AREA - SANDBAGS, RR* | 146.00 | 0.0034 | 10.81 | USACE/DNREC |
| TOTAL TEMPORARY OPEN WATER IMPACTS | | 1000.80 | 0.0238 | 74.12 | USACE |
| TOTAL TEMPORARY OPEN WATER IMPACTS | | 1000.80 | 0.0238 | 74.12 | DNREC |

NOTE 4.D:
 ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, SHALL BE CHOKED WITH DELAWARE #57 STONE. PLACE JUST ENOUGH CHOKE MATERIAL TO PREVENT THE LOSS OF CHANNEL BED FILL OR TOPSOIL AND SEEDING (DEPENDING ON LOCATION AS INDICATED BELOW) THROUGH THE RIPRAP.
 - BENEATH THE BRIDGE: AFTER PLACING THE DELAWARE #57 STONE, DO A FINAL CHOKE OF CHANNEL BED FILL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. PAYMENT UNDER ITEM #712531 CHANNEL BED FILL. DELAWARE #57 STONE SHALL BE INCIDENTAL TO THE RIPRAP ITEM.
 - ALL OTHER LOCATIONS: FINISH FILLING THE VOIDS WITH TOPSOIL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. AN ADDITIONAL 4-INCH TOPSOIL LAYER SHALL BE PLACED ON TOP OF THE RIPRAP. SLOPE SEEDING SHALL BE WITH ITEM #908019 STREAMBANK SEED MIX, SEEDING. FOLLOWING THE SEEDING OPERATION, ITEM #908020 EROSION CONTROL BLANKET MULCH, 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. DELAWARE #57 STONE SHALL BE INCIDENTAL TO THE RIPRAP ITEM. ALL OTHER ITEMS SHALL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

08-007.40-034
 KIO ASSOCIATES
 D.B.189, P.G.206
 PARKING LOT



08-007.00-044
 LAMBORN LIBRARY ASSOCIATION
 D.B.F.39, P.G.322

08-007.00-045
 TWO CHEFS HOUSE, LLC
 INSTR.NO. 20101221-0069345

08-007.00-042
 NEW CASTLE COUNTY
 (SWIFT PARK)
 D.B.H90, P.G.97

LEGEND

- PERMANENT IMPACT AREA
- TEMPORARY IMPACT AREA
- OHW --- ORDINARY HIGH WATER
- LOC --- LIMIT OF CONSTRUCTION

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

O = OPEN WATER IMPACT
 T = TEMPORARY IMPACT

ADDENDUMS / REVISIONS



**OLD LANCASTER PIKE
 PEDESTRIAN BRIDGE PLACEMENT**

| | | |
|------------|--------------|-----------------|
| CONTRACT | BRIDGE NO. | BR 1-169 |
| T201220004 | DESIGNED BY: | KMS |
| COUNTY | CHECKED BY: | MAA/RL |
| NEW CASTLE | | |

**ENVIRONMENTAL
 COMPLIANCE PLAN**

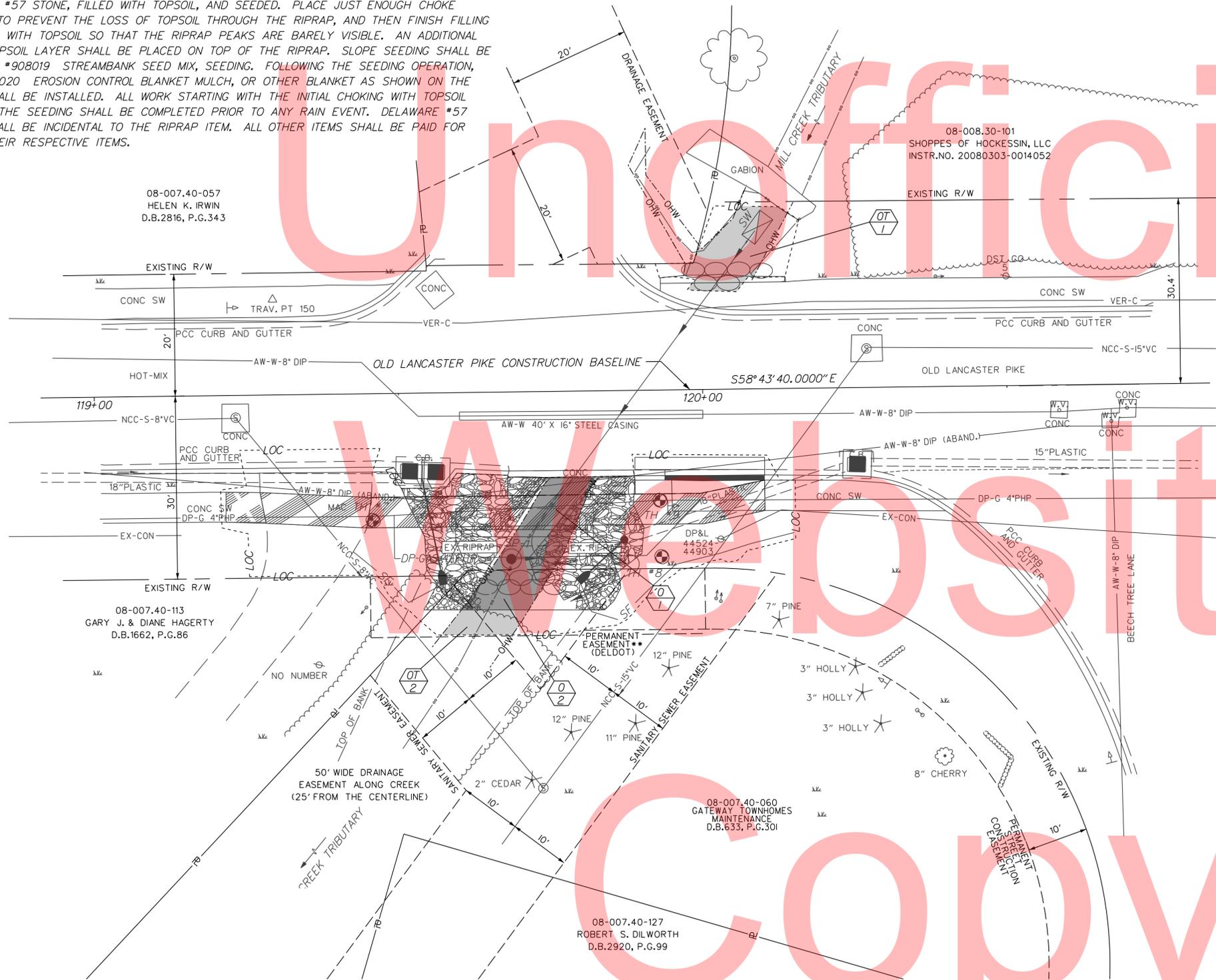
| |
|--------------|
| EC-02 |
| SHEET NO. |
| 29 |
| TOTAL SHTS. |
| 44 |

| PERMANENT OPEN WATER IMPACT AREA SCHEDULE | | | | | |
|---|--------------------|-----------|-----------|-------------|--------------|
| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
| 3-01 | CULVERT | 98.27 | 0.0023 | 6.21 | USACE/DNREC |
| 3-02 | RIPRAP | 110.41 | 0.0025 | 0.53 | USACE/DNREC |
| TOTAL PERMANENT OPEN WATER IMPACTS | | 208.68 | 0.0048 | 6.74 | USACE |
| TOTAL PERMANENT OPEN WATER IMPACTS | | 208.68 | 0.0048 | 6.74 | DNREC |

| TEMPORARY OPEN WATER IMPACT AREA SCHEDULE | | | | | |
|---|---------------------|-----------|-----------|-------------|--------------|
| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
| 3-OT1 | E&S AREA - SANDBAGS | 135.94 | 0.0031 | 10.06 | USACE/DNREC |
| 3-OT2 | E&S AREA | 46.47 | 0.0011 | 3.44 | USACE/DNREC |
| TOTAL TEMPORARY OPEN WATER IMPACTS | | 182.41 | 0.0042 | 13.50 | USACE |
| TOTAL TEMPORARY OPEN WATER IMPACTS | | 182.41 | 0.0042 | 13.50 | DNREC |

NOTE 4.D:

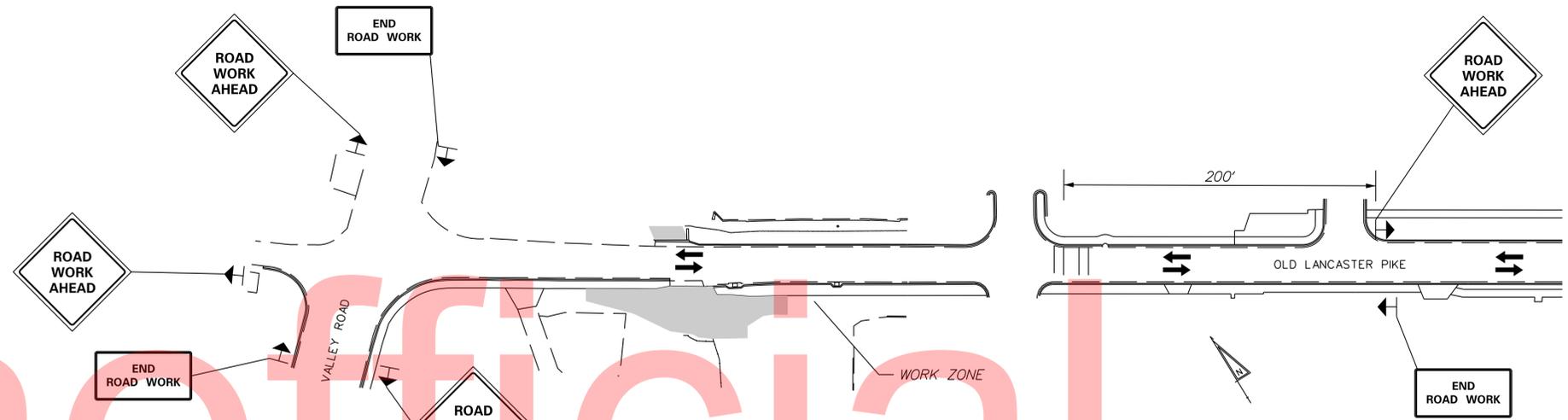
ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, SHALL BE CHOKED WITH DELAWARE #57 STONE, FILLED WITH TOPSOIL, AND SEEDED. PLACE JUST ENOUGH CHOKING MATERIAL TO PREVENT THE LOSS OF TOPSOIL THROUGH THE RIPRAP, AND THEN FINISH FILLING THE VOIDS WITH TOPSOIL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. AN ADDITIONAL 4-INCH TOPSOIL LAYER SHALL BE PLACED ON TOP OF THE RIPRAP. SLOPE SEEDING SHALL BE WITH ITEM #908019 STREAMBANK SEED MIX, SEEDING. FOLLOWING THE SEEDING OPERATION, ITEM #908020 EROSION CONTROL BLANKET MULCH, 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. DELAWARE #57 STONE SHALL BE INCIDENTAL TO THE RIPRAP ITEM. ALL OTHER ITEMS SHALL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.



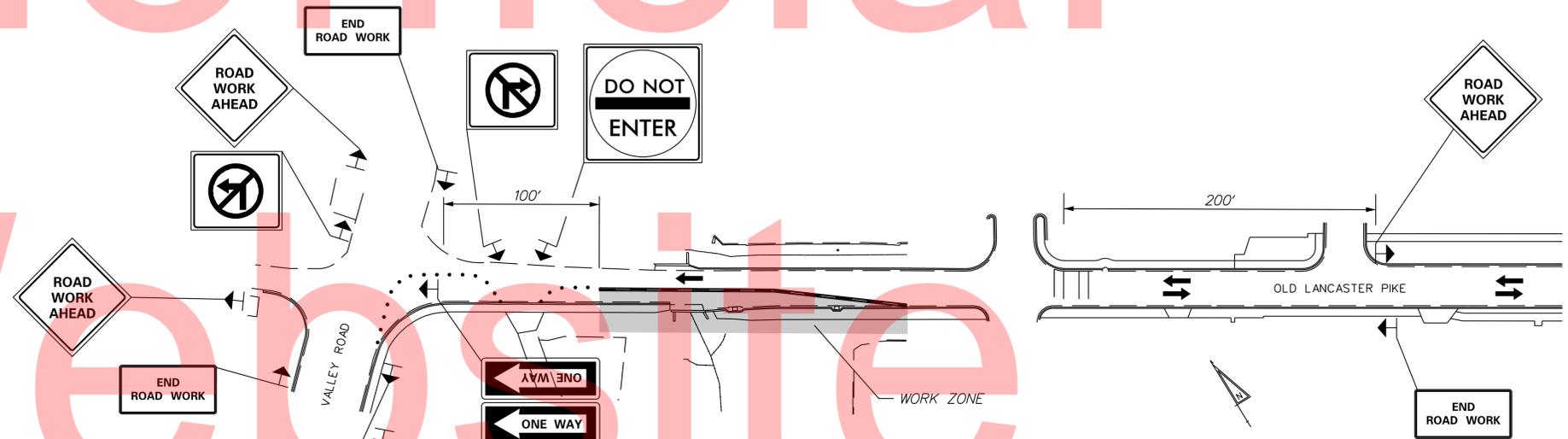
| LEGEND | |
|--------|---|
| | PERMANENT IMPACT AREA |
| | TEMPORARY IMPACT AREA |
| | ORDINARY HIGH WATER |
| | LIMIT OF CONSTRUCTION |
| | IMPACT AREA TYPE ID. (SEE BELOW) IMPACT AREA ID. AND/OR NUMBER |
| O | OPEN WATER IMPACT |
| T | TEMPORARY IMPACT |

MOT GENERAL NOTES

1. MAINTENANCE OF TRAFFIC DURING LANE CLOSURES SHALL CONFORM TO TA-10 (TYPICAL APPLICATION TO LANE CLOSURE ON A TWO-LANE ROAD USING FLAGGERS) OF THE DELAWARE MUTCD.
2. THERE SHALL BE NO LANE CLOSURES DURING PHASE 2 BETWEEN THE HOURS OF 7 A.M. TO 9 A.M. AND 4 P.M. TO 6 P.M. OR AS DIRECTED BY THE ENGINEER. DURING SUMMER (JUNE 15-AUGUST 15) THERE SHALL BE NO LANE CLOSURES DURING PHASE 2 BETWEEN FRIDAY 3 P.M. AND MONDAY 9 A.M.
3. CONTRACTOR SHALL COORDINATE DRIVEWAY CLOSURES WITH IMPACTED PROPERTY OWNERS PRIOR TO CLOSING DRIVEWAYS FOR CONSTRUCTION.
4. ACCEPTABLE MATERIALS FOR TEMPORARY PEDESTRIAN PATHS SHALL INCLUDE CONCRETE, HOT-MIX, COMPACTED MILLINGS OR PLYWOOD WALKWAY STRUCTURES. PLYWOOD WALKWAY STRUCTURES SHALL ALSO INCLUDE DETECTABLE EDGING AND RAILINGS IN ACCORDANCE WITH ADA GUIDELINES AND THE DELAWARE MUTCD. TEMPORARY PEDESTRIAN PATHS SHALL BE INCIDENTAL TO ITEM 743000 UNLESS OTHERWISE SPECIFIED IN THE PLANS. STONE OR GRADED AGGREGATE BASE COURSE SHALL NOT BE USED FOR TEMPORARY PEDESTRIAN PATHS.
5. PHASE 1 AND PHASE 2 SHALL OCCUR CONCURRENTLY.

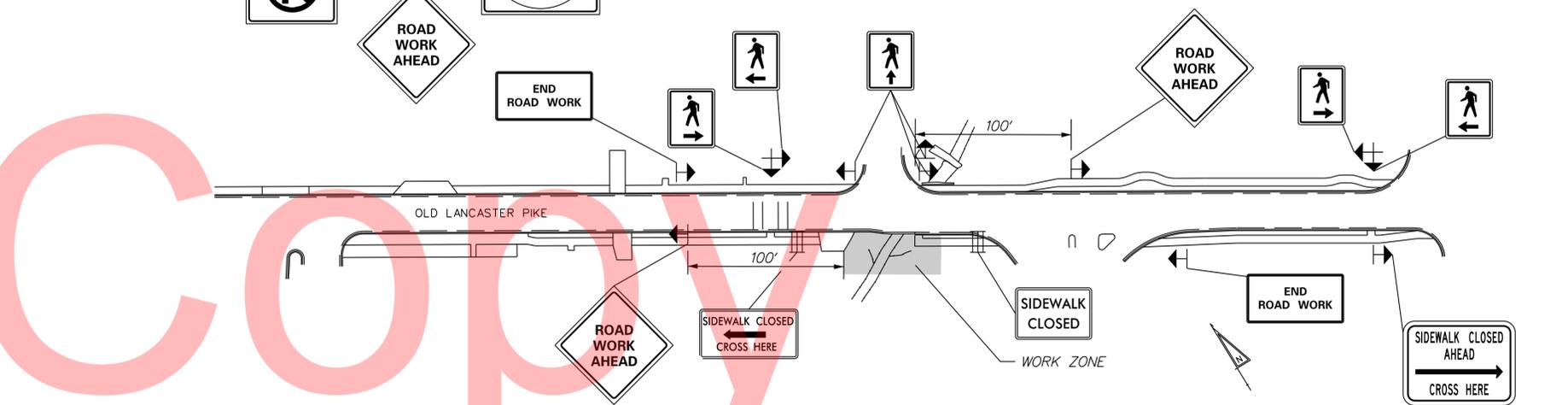


PHASE 1, STAGE 1 ADVANCED SIGNING



PHASE 1, STAGE 2 AND STAGE 3, ADVANCED SIGNING

SEE DETOUR PLAN FOR ONE-WAY DETOUR SIGNAGE
SEE CS-03 THROUGH CS-04 FOR PEDESTRIAN ACCOMMODATIONS FOR THIS PHASE



PHASE 2 ADVANCED SIGNING

SIGNS TO BE COVERED AS NECESSARY DURING CONSTRUCTION-RELATED LANE CLOSURES TO AVOID SIGNING CONFLICTS.

SEQUENCE OF CONSTRUCTION

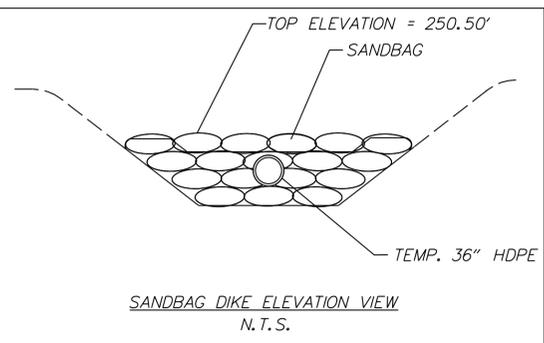
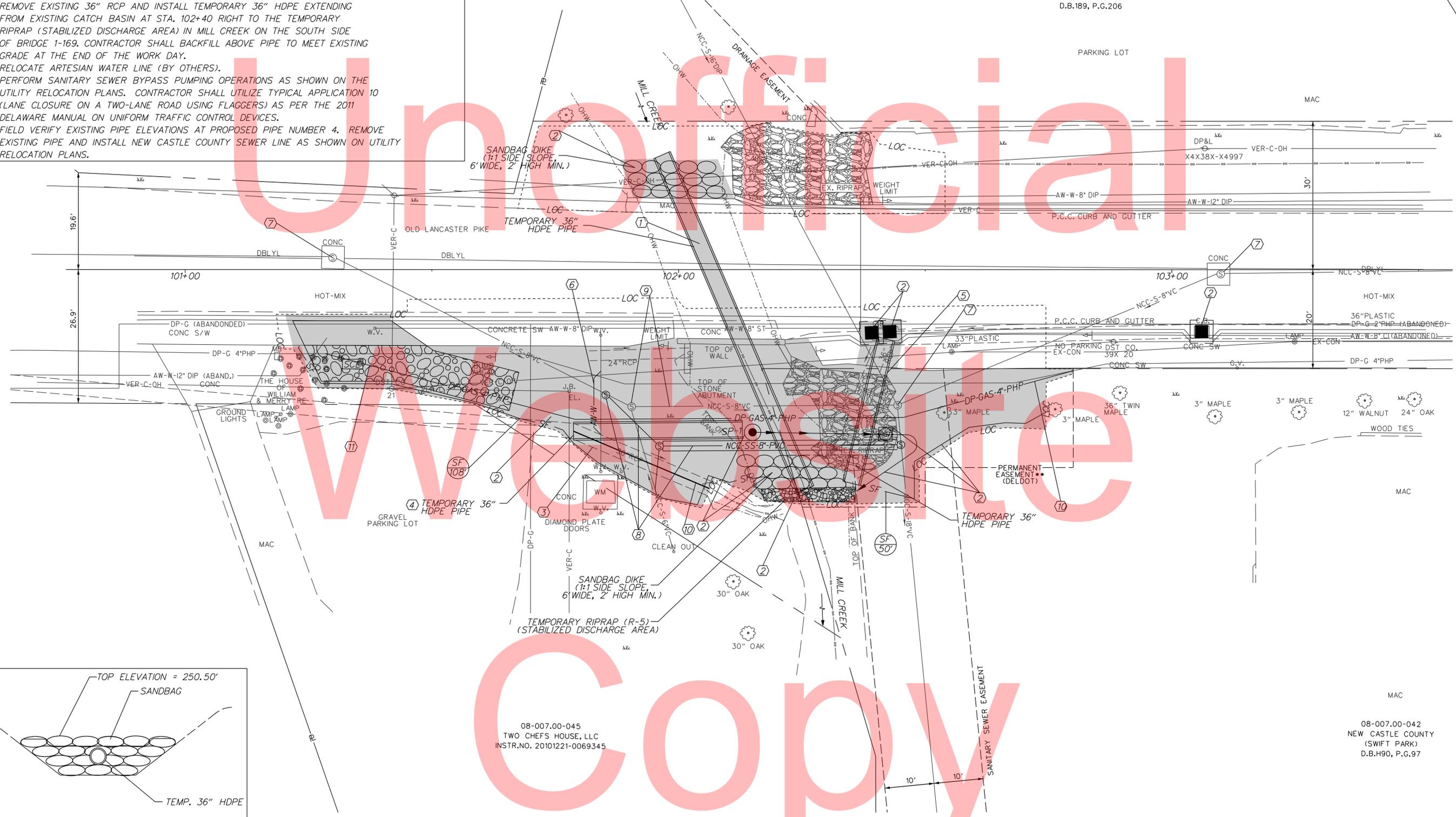
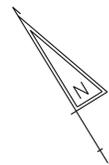
PHASE 1, STAGE 1: BRIDGE 1-169 SANITARY SEWER BYPASS PUMPING

- ① INSTALL TEMPORARY 36" HDPE PIPE AND SANDBAG DIKES UNDER BRIDGE 1-169.
- ② INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING SILT FENCE, INLET SEDIMENT CONTROL, SUMP PIT, PORTABLE SEDIMENT TANK AND STABILIZED DISCHARGE AREA AS SHOWN.
- ③ REMOVE EXISTING 36" RCP EXTENDING FROM STA. 101+78 TO STA. 102+07 RT.
- ④ INSTALL TEMPORARY 36" HDPE EXTENDING FROM STA. 101+78 RT TO SP-1.
- ⑤ REMOVE EXISTING 36" RCP AND INSTALL TEMPORARY 36" HDPE EXTENDING FROM EXISTING CATCH BASIN AT STA. 102+40 RIGHT TO THE TEMPORARY RIPRAP (STABILIZED DISCHARGE AREA) IN MILL CREEK ON THE SOUTH SIDE OF BRIDGE 1-169. CONTRACTOR SHALL BACKFILL ABOVE PIPE TO MEET EXISTING GRADE AT THE END OF THE WORK DAY.
- ⑥ RELOCATE ARTESIAN WATER LINE (BY OTHERS).
- ⑦ PERFORM SANITARY SEWER BYPASS PUMPING OPERATIONS AS SHOWN ON THE UTILITY RELOCATION PLANS. CONTRACTOR SHALL UTILIZE TYPICAL APPLICATION 10 (LANE CLOSURE ON A TWO-LANE ROAD USING FLAGGERS) AS PER THE 2011 DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ⑧ FIELD VERIFY EXISTING PIPE ELEVATIONS AT PROPOSED PIPE NUMBER 4. REMOVE EXISTING PIPE AND INSTALL NEW CASTLE COUNTY SEWER LINE AS SHOWN ON UTILITY RELOCATION PLANS.

PHASE 1, STAGE 1: CONTINUED...

- ⑨ REMOVE EXISTING OUT-OF-SERVICE NEW CASTLE COUNTY SEWER PIPES AND MANHOLES AS SPECIFIED ON THE UTILITY RELOCATION PLANS FOR PEDESTRIAN BRIDGE CONSTRUCTION.
- ⑩ REMOVE TEMPORARY 36" HDPE PIPE EXTENDING FROM STA. 101+78 TO SP-1 AND INSTALL 36" RCP PIPE (P-4) AS SHOWN ON CP-01.
- ⑪ RELOCATE DELMARVA GAS LINE (BY OTHERS).

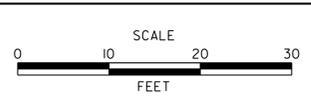
08-007.40-034
KIO ASSOCIATES
D.B.189, P.G.206



08-007.00-045
TWO CHEFS HOUSE, LLC
INSTR.NO. 20101221-0069345

08-007.00-042
NEW CASTLE COUNTY
(SWIFT PARK)
D.B.H90, P.G.97

| ADDENDUMS / REVISIONS | |
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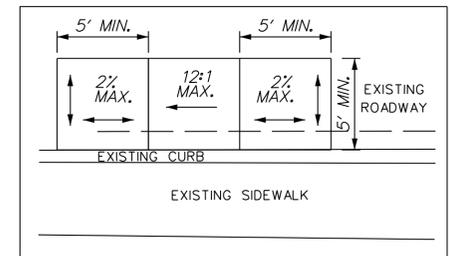
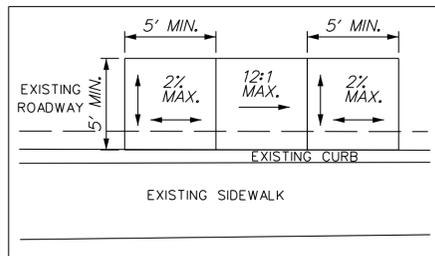


| | |
|------------------------|-------------------------------------|
| CONTRACT T201220004 | BRIDGE NO. BR 1-169 |
| COUNTY NEW CASTLE | DESIGNED BY: KMS CHECKED BY: MAA |

SEQUENCE OF CONSTRUCTION

PHASE 1, STAGE 2: BRIDGE 1-169 ABUTMENTS

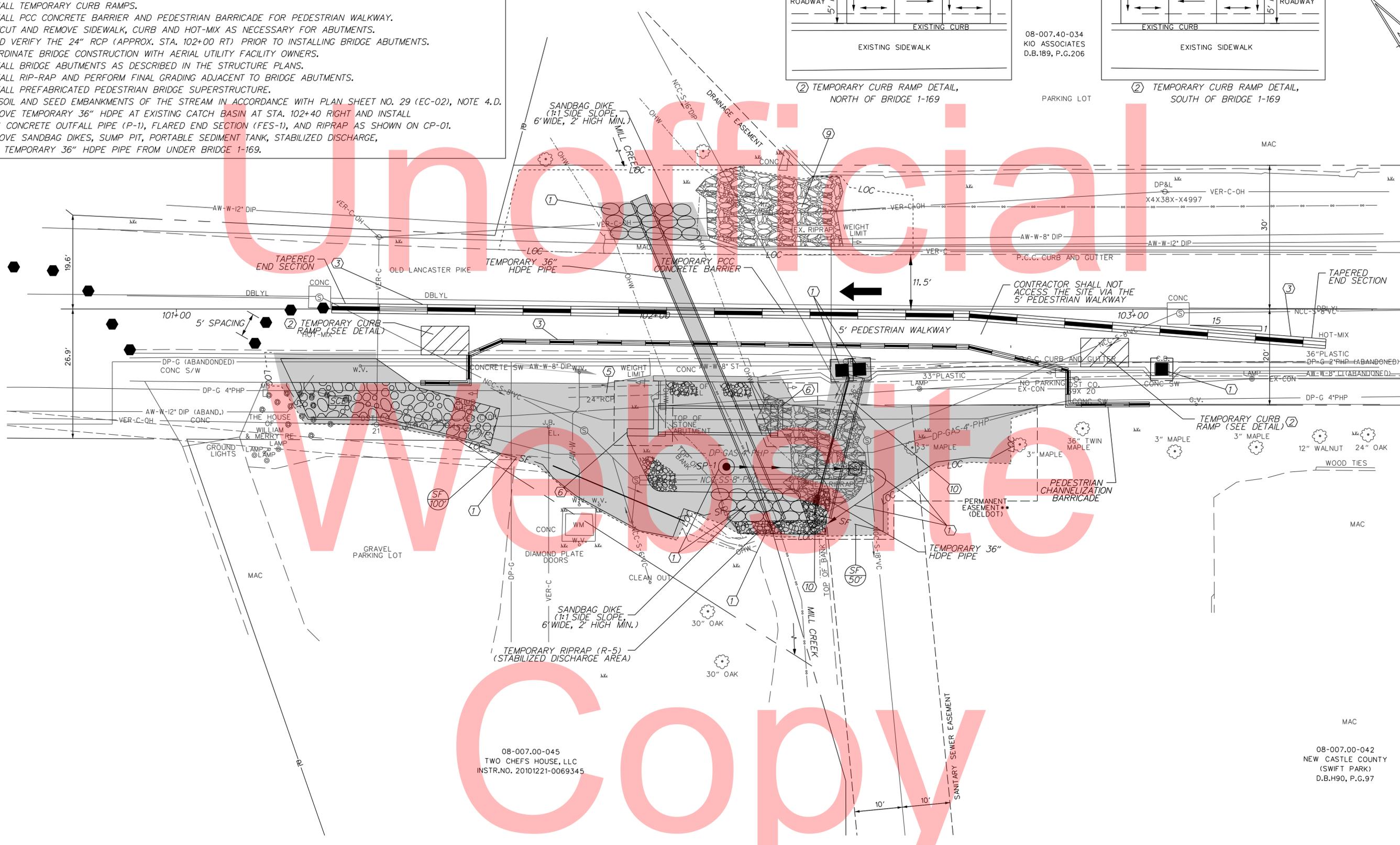
1. INSTALL PHASE 1, STAGE 2 DETOUR.
2. MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES FROM PHASE 1, STAGE 1.
3. INSTALL TEMPORARY CURB RAMPS.
4. INSTALL PCC CONCRETE BARRIER AND PEDESTRIAN BARRICADE FOR PEDESTRIAN WALKWAY.
5. SAWCUT AND REMOVE SIDEWALK, CURB AND HOT-MIX AS NECESSARY FOR ABUTMENTS.
6. FIELD VERIFY THE 24" RCP (APPROX. STA. 102+00 RT) PRIOR TO INSTALLING BRIDGE ABUTMENTS. COORDINATE BRIDGE CONSTRUCTION WITH AERIAL UTILITY FACILITY OWNERS.
7. INSTALL BRIDGE ABUTMENTS AS DESCRIBED IN THE STRUCTURE PLANS.
8. INSTALL RIP-RAP AND PERFORM FINAL GRADING ADJACENT TO BRIDGE ABUTMENTS.
9. INSTALL PREFABRICATED PEDESTRIAN BRIDGE SUPERSTRUCTURE.
10. TOPSOIL AND SEED EMBANKMENTS OF THE STREAM IN ACCORDANCE WITH PLAN SHEET NO. 29 (EC-02), NOTE 4.D. REMOVE TEMPORARY 36" HDPE AT EXISTING CATCH BASIN AT STA. 102+40 RIGHT AND INSTALL NEW CONCRETE OUTFALL PIPE (P-1), FLARED END SECTION (FES-1), AND RIPRAP AS SHOWN ON CP-01.
11. REMOVE SANDBAG DIKES, SUMP PIT, PORTABLE SEDIMENT TANK, STABILIZED DISCHARGE, AND TEMPORARY 36" HDPE PIPE FROM UNDER BRIDGE 1-169.



2 TEMPORARY CURB RAMP DETAIL, NORTH OF BRIDGE 1-169

2 TEMPORARY CURB RAMP DETAIL, SOUTH OF BRIDGE 1-169

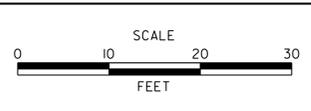
08-007.40-034
KIO ASSOCIATES
D.B.189, P.G.206



08-007.00-045
TWO CHEFS HOUSE, LLC
INSTR.NO. 20101221-0069345

08-007.00-042
NEW CASTLE COUNTY
(SWIFT PARK)
D.B.H90, P.G.97

| ADDENDUMS / REVISIONS |
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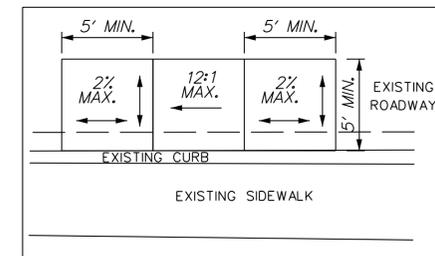
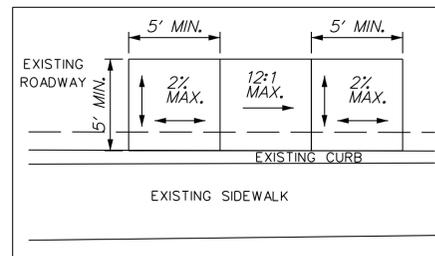


| | | |
|--------------------------------------|---|-----------------|
| CONTRACT T201220004 NEW CASTLE | BRIDGE NO. DESIGNED BY: KMS CHECKED BY: MAA | BR 1-169 |
|--------------------------------------|---|-----------------|

SEQUENCE OF CONSTRUCTION

PHASE 1, STAGE 3: BRIDGE 1-169 FINAL APPURTENANCES

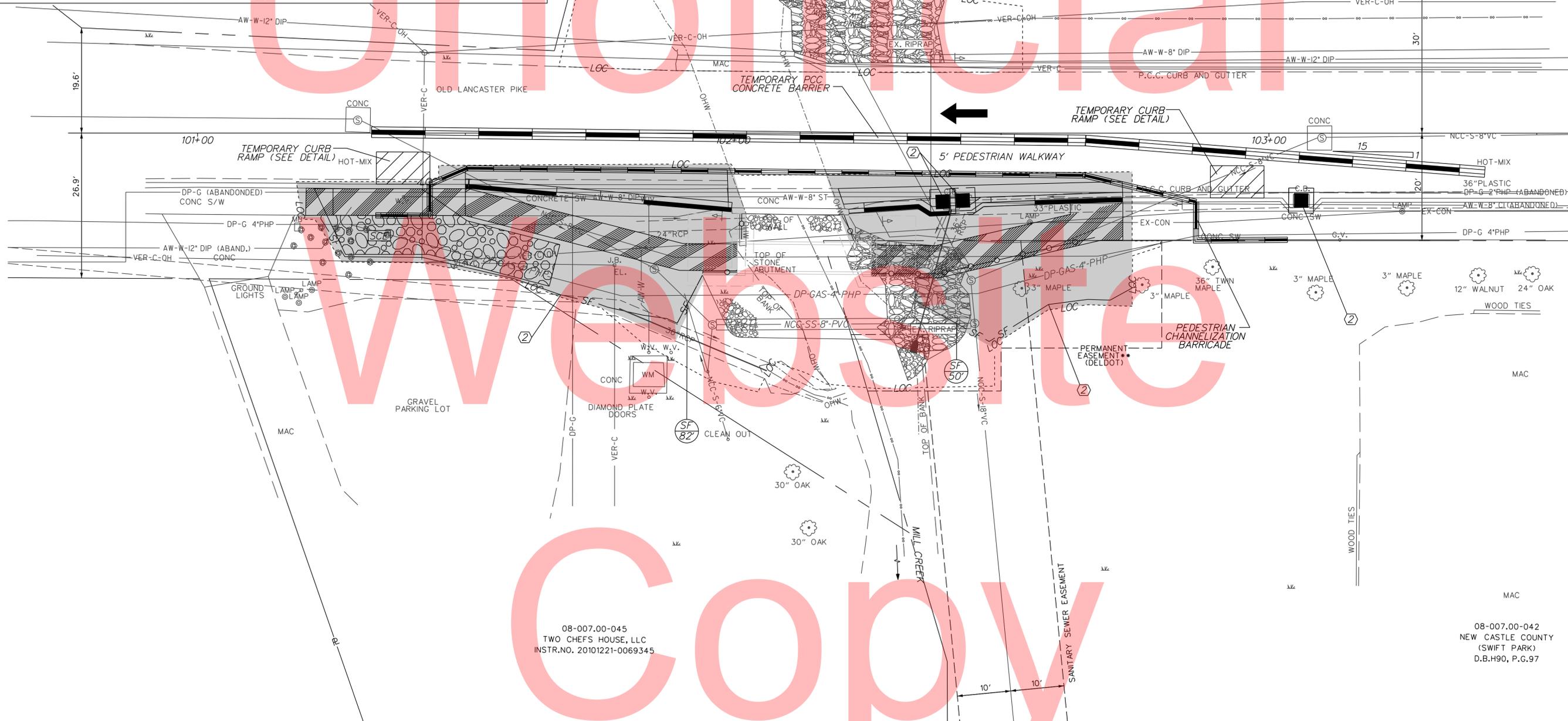
- ① MAINTAIN PHASE 1 STAGE 2 DETOUR.
- ② INSTALL, RELOCATE, OR MAINTAIN EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN.
- ③ SAWCUT AND REMOVE REMAINDER OF SIDEWALK AND ADJACENT CURB AS NECESSARY.
- ④ COORDINATE CONSTRUCTION ACTIVITIES WITH OVERHEAD UTILITY FACILITY OWNERS.
- ⑤ PERFORM FINAL GRADING ADJACENT TO BRIDGE ABUTMENTS.
- ⑥ CONSTRUCT ROADWAY CURB AND WARM-MIX PATCHING AS SHOWN ON PLANS.
- ⑦ INSTALL SIDEWALK APPROACHES, INSTALL HANDRAIL AS SHOWN ON THE PLANS.
- ⑧ TRANSFER PEDESTRIAN TRAFFIC TO NEWLY CONSTRUCTED SIDEWALK AND BRIDGE, REMOVE TEMPORARY CURB RAMPS AND PEDESTRIAN CHANNELIZATION DEVICES.
- ⑨ PERFORM ALL FINAL GRADING.
- ⑩ TOPSOIL AND SEED.
- ⑪ REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES AFTER ALL DISTURBED AREAS HAVE BEEN FULLY STABILIZED AND RESTORE STREAM TO EXISTING CONDITIONS AS OUTLINED IN THE ENVIRONMENTAL COMPLIANCE NOTES AND AS DIRECTED BY THE ENGINEER. REMOVE ALL MAINTENANCE OF TRAFFIC DEVICES.
- ⑫ RESTORE EXISTING SIDEWALK FROM STA. 101+20 TO STA. 101+50 AFTER STABILIZED CONSTRUCTION ENTRANCE IS REMOVED. CONTRACTOR SHALL UTILIZE TYPICAL APPLICATION 10 (LANE CLOSURE ON A TWO-LANE ROAD USING FLAGGERS) AS PER THE 2011 DELAWARE MANUAL ON UNIFORM TRAFFIC DEVICES. PEDESTRIANS SHALL BE MANUEVERED AROUND WORK AREA USING FLAGGERS AND TEMPORARY CURB RAMPS.



08-007.40-034
KIO ASSOCIATES
D.B.189, P.G.206

PARKING LOT

TEMPORARY CURB RAMP DETAIL,
SOUTH OF BRIDGE 1-169



08-007.00-045
TWO CHEFS HOUSE, LLC
INSTR.NO. 20101221-0069345

08-007.00-042
NEW CASTLE COUNTY
(SWIFT PARK)
D.B.H90, P.G.97

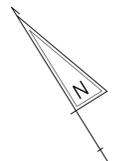
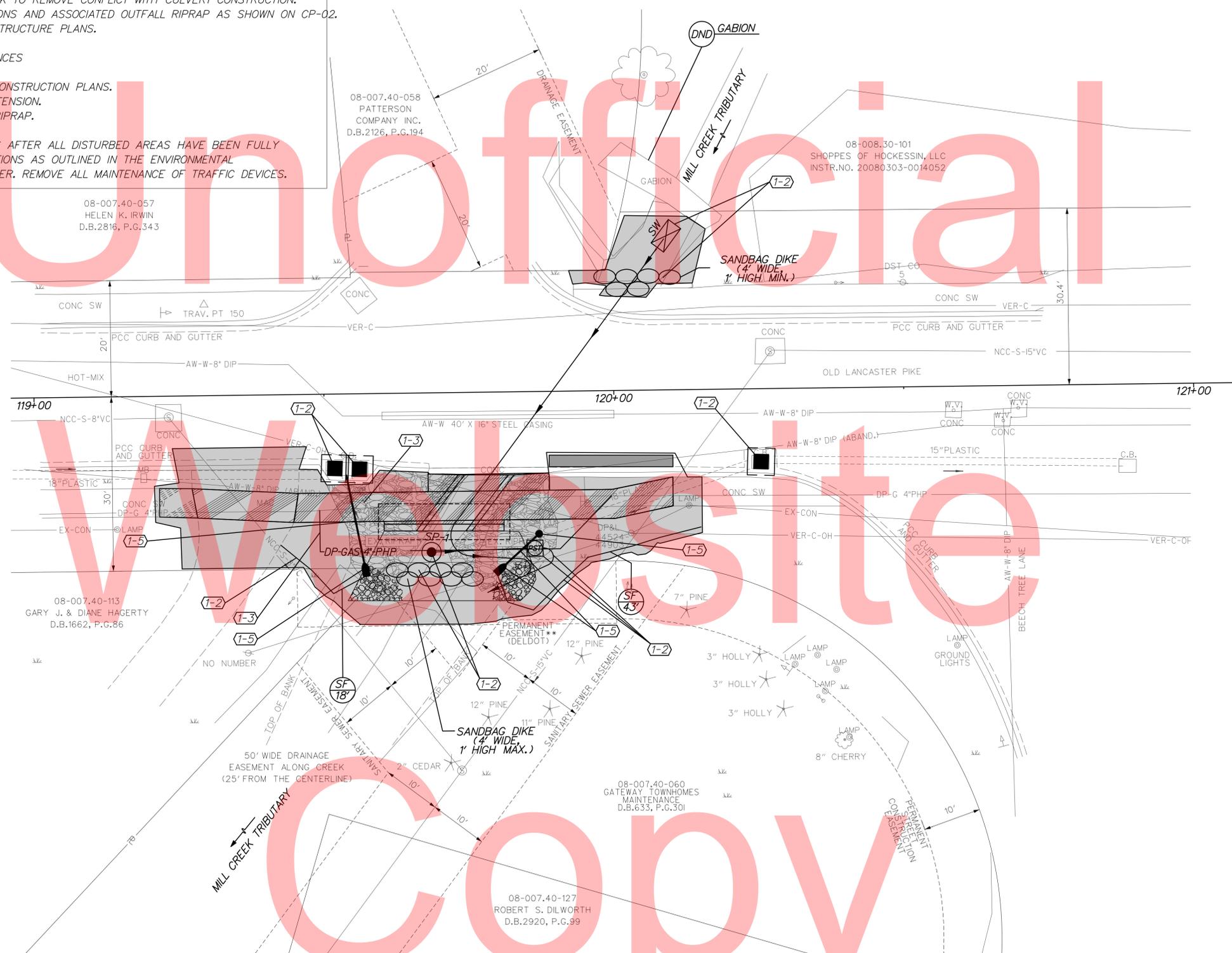
SEQUENCE OF CONSTRUCTION

PHASE 2, STAGE 1: CONSTRUCT CULVERT EXTENSION

- (1-1) UTILIZE TA-10 WITH FLAGGER SETUP AS TRAFFIC CONTROL DURING BOX CULVERT CONSTRUCTION.
- (1-2) INSTALL EROSION AND SEDIMENT CONTROL AS SHOWN, INCLUDING SANDBAG DIVERSION, STILLING WELL, PORTABLE SEDIMENT TANK, INLET SEDIMENT CONTROL, AND STABILIZED OUTFALL AS SHOWN.
- (1-3) PERFORM GAS RELOCATION WORK AS SHOWN ON UTILITY RELOCATION PLANS (BY OTHERS).
- (1-4) REMOVE EXISTING 18" PLASTIC PIPE ON WESTERN BANK TO REMOVE CONFLICT WITH CULVERT CONSTRUCTION.
- (1-5) INSTALL MANHOLE, OUTFALL PIPES, FLARED END SECTIONS AND ASSOCIATED OUTFALL RIPRAP AS SHOWN ON CP-02.
- (1-6) CONSTRUCT CULVERT EXTENSION AS SHOWN ON THE STRUCTURE PLANS.

PHASE 2, STAGE 2: CULVERT EXTENSION FINAL APPURTENANCES

- (2-1) SAWCUT AND REMOVE SIDEWALK AS SHOWN ON THE CONSTRUCTION PLANS.
- (2-2) INSTALL CURB AND NEW SIDEWALK OVER CULVERT EXTENSION.
- (2-3) PERFORM ALL FINAL GRADING AND PLACE REMAINING RIPRAP.
- (2-4) TOPSOIL AND SEED.
- (2-5) REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES AFTER ALL DISTURBED AREAS HAVE BEEN FULLY STABILIZED AND RESTORE STREAM TO EXISTING CONDITIONS AS OUTLINED IN THE ENVIRONMENTAL COMPLIANCE NOTES AND AS DIRECTED BY THE ENGINEER. REMOVE ALL MAINTENANCE OF TRAFFIC DEVICES.

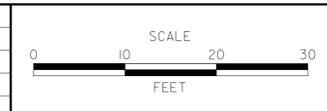


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Wednesday, June 17, 2015 AT 03:02 PM
\\CS05_OLP_PedBridges.dgn

| ADDENDUMS / REVISIONS |
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| | | |
|------------------------|------------------|--------------------|
| CONTRACT T201220004 | BRIDGE NO. | BOX CULVERT |
| COUNTY NEW CASTLE | DESIGNED BY: KMS | CHECKED BY: MAA |

| |
|-------------------|
| CS-05 |
| SHEET NO. 35 |
| TOTAL SHTS. 44 |

CHANGEABLE MESSAGE BOARDS

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

SB OLD LANC PK CLOSING

STARTING "DATE"

CMS-1 **DURING DETOUR**
REMOVE 5 DAYS AFTER IMPLEMENTATION OF DETOUR

SB OLD LANC PK CLOSED

FOLLOW DETOUR

SPECIAL SIGNS

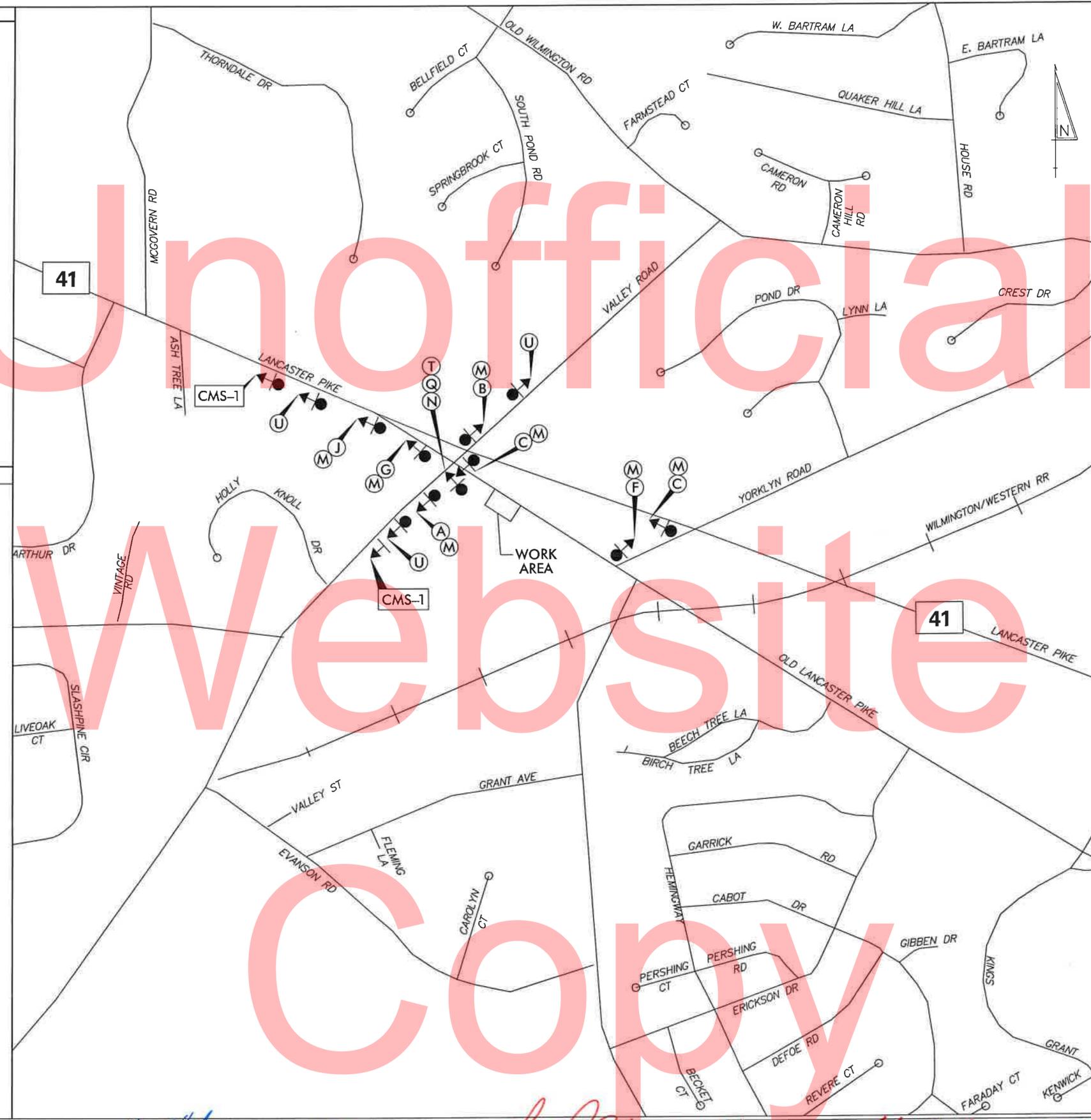
48" x 36" sign: Old Lancaster Pike (M)

54" x 84" sign: Old Lancaster Pike SOUTHBOUND CLOSED AT Valley Rd FOLLOW DETOUR (U)

STARTING XX/XX/XX (6" C)

RETROREFLECTIVE FLUORESCENT PRISMATIC ORANGE; BLACK LEGEND

ADD SEPARATE PLAQUE TO BE OVERLAYED ON (U) SIGN 10 DAYS PRIOR TO DETOUR AND THEN REMOVED UPON IMPLEMENTATION OF DETOUR.



LEGEND

(A) DETOUR M4-9-DE (up arrow)

(B) DETOUR M4-9L (left arrow)

(C) DETOUR M4-9R (right arrow)

(F) END DETOUR M4-8A

(G) DETOUR AHEAD

(H) DETOUR 1000 FT

(I) DETOUR 500 FT

(J) ROAD CLOSED AHEAD

(K) ROAD CLOSED 1000 FT

(L) ROAD CLOSED 500 FT

(M) Old Lancaster Pike

(N) DETOUR (left arrow)

(O) DETOUR (right arrow)

(P) ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY

(Q) ROAD CLOSED

(R) ROAD CLOSED TO THRU TRAFFIC

(S) Barricade symbols

(T) Barricade symbols

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-MUTCO 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
 - SIGNS J THROUGH L AND P THROUGH R, THE WORD (ROAD) SHOULD BE CHANGED
 - 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.
- TO RAMP, R/R OR BRIDGE WHERE APPLICABLE, DEVICES WILL PREVAIL.

RECOMMENDED *[Signature]* DATE: 12/11/14 RECOMMENDED *[Signature]* DATE: 12-22-2014 RECOMMENDED *[Signature]* DATE: 12/22/14 APPROVED CHIEF SAFETY OFFICER *[Signature]* DATE: 12-27-14 APPROVED TRAFFIC ENGINEER *[Signature]* DATE: 12/31/2014

NOT TO SCALE

OLD LANCASTER PIKE PEDESTRIAN BRIDGE PLACEMENT

| | | | | |
|------------|------------------|-----|-------------|-------------|
| CONTRACT | PERMIT NO. | N/A | DETOUR PLAN | SHEET NO. |
| T201220004 | DESIGNED BY: WJD | | | 36 |
| COUNTY | CHECKED BY: MAA | | | TOTAL SHTS. |
| NEW CASTLE | | | | 44 |

PRIVATE AGR 1471N TO 28 DLP PED BRIDGES\PS&E\01-OLP_PEDBRIDGES.DGN

SANITARY SEWER NOTES:

1. SANITARY SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MOST RECENT NEW CASTLE COUNTY STANDARD SPECIFICATIONS FOR CONSTRUCTION, SPECIAL PROVISIONS, SUPPLEMENTAL SPECIFICATIONS, STANDARD DETAILS, AND THE RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES OR STRICTER STANDARDS IDENTIFIED BY THE ENGINEER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN APPROVAL AND ACCEPTANCE OF THE SANITARY SEWER SYSTEM BY NEW CASTLE COUNTY UPON COMPLETION OF CONSTRUCTION. AS-BUILT PLANS, SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR OR PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF DELAWARE MUST BE SUBMITTED TO NEW CASTLE COUNTY BEFORE ACCEPTANCE.
3. DURING CONSTRUCTION, THE CONTRACTOR MUST HAVE IN HIS POSSESSION ON SITE, A SET OF CONSTRUCTION PLANS BEARING NEW CASTLE COUNTY'S STAMP OF APPROVAL.
4. THE CONTRACTOR SHALL NOT PLACE, PLANT, PUT OR SET ANY STRUCTURE WITHIN THE SANITARY SEWER EASEMENT.
5. A CONSTRUCTION PERMIT ISSUED BY THE STATE OF DELAWARE, DEPARTMENT OF TRANSPORTATION (DELDOT) IS REQUIRED BEFORE ANY WORK IS PERFORMED WITHIN A DELDOT RIGHT-OF-WAY. ALL WORK PERFORMED WITHIN DELDOT S RIGHT-OF-WAY OR PROPERTY OWNED BY THE STATE OF DELAWARE SHALL BE PERFORMED IN ACCORDANCE WITH THE MOST RECENT DELDOT STANDARD SPECIFICATIONS AND UTILITY MANUAL.
6. SANITARY SEWER IS TO BE PUBLICLY OWNED AND MAINTAINED.
7. CONSTRUCTION SHALL NOT DEVIATE FROM THE PLANS AND SPECIFICATIONS APPROVED BY NEW CASTLE COUNTY WITHOUT WRITTEN PERMISSION FROM NEW CASTLE COUNTY'S DEPARTMENT OF SPECIAL SERVICES.
8. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK AND THE NEW CASTLE COUNTY DRAINAGE CODE, AS AMENDED.
9. TYPICAL SEQUENCE OF CONSTRUCTION:
 - A. CONTACT NEW CASTLE COUNTY DEPARTMENT OF SPECIAL SERVICES (48 HOURS NOTICE AT 395-5756) PRIOR TO ANY EXCAVATION OR ACTIVITY INVOLVING SANITARY SEWER CONSTRUCTION, PUMP STATION CONSTRUCTION OR LATERAL TIE-INS TO EXISTING LINES.
 - B. CONSTRUCT PROPOSED SANITARY SEWER SYSTEM AS APPROVED BY NEW CASTLE COUNTY.
 - C. BACKFILL AND RE-GRADE AS REQUIRED.
 - D. PERFORM AIR TEST, IF REQUIRED, IN ACCORDANCE WITH SECTION 32.01-3 OF THE NEW CASTLE COUNTY STANDARD SPECIFICATIONS FOR CONSTRUCTION, IN THE PRESENCE OF A NEW CASTLE COUNTY INSPECTOR.
 - E. FOLLOWING A PASSING AIR TEST (IF APPLICABLE), A FINAL VISUAL INSPECTION (LAMP TEST) MUST BE PERFORMED PRIOR TO ACCEPTANCE BY NEW CASTLE COUNTY.
 - F. BASED UPON THE RESULTS OF THE VISUAL INSPECTION, A MANDRAL TEST MAY BE REQUIRED FOLLOWING THE VISUAL INSPECTION.
 - G. LATERAL CONNECTIONS FROM NEW HOMES/OFFICE BUILDINGS INTO THE SEWER LINE WILL NOT BE PERMITTED UNTIL AFTER FINAL ACCEPTANCE.
 - H. PRIOR TO NEW CASTLE COUNTY MAKING A FINAL INSPECTION, THE FOLLOWING ITEMS MUST BE COMPLETED:
 - I. ALL MANHOLES MUST BE BROUGHT TO GRADE AND HAVE CONCRETE COLLARS INSTALLED.
 - II. CHANNELS MUST BE COMPLETED IN ALL MANHOLES.
 - III. ALL MANHOLES AND SEWER PIPES MUST BE CLEANED AND FLUSHED.
 - IV. AS-BUILT DRAWINGS (SIGNED AND SEALED BY A REGISTERED LAND SURVEYOR OR PROFESSIONAL ENGINEER IN DELAWARE) WITH ONE (1) MYLAR AND THREE (3) SETS OF PRINTS MUST BE SUBMITTED TO NEW CASTLE COUNTY.
 - V. TURF TRAIL IS CONSTRUCTED IN ACCORDANCE WITH NCC DETAIL SS-MSC-2, OR IF PIPE AND MANHOLES ARE WITHIN A PROPOSED ROADWAY, STABILIZED ROADWAY ACCESS IS CONSTRUCTED FOR THE PURPOSE OF MAINTAINING THE CONSTRUCTED SANITARY SEWER SYSTEM UNTIL FINAL PAVING IS COMPLETED.
 - I. CERTIFICATES OF OCCUPANCY WILL NOT BE ISSUED UNTIL THE AS-BUILT DRAWINGS HAVE BEEN RECEIVED, REVIEWED, AND APPROVED AND THE SANITARY SEWER CONSTRUCTION (INCLUDING ALL APPURTENANCES) HAS BEEN ACCEPTED BY NEW CASTLE COUNTY.

10. MANHOLE COVER(S) ON PRIVATELY OWNED AND MAINTAINED SEWER SYSTEMS SHALL NOT BE LABELED "NEW CASTLE COUNTY".

PROFESSIONAL ENGINEER / LAND SURVEYOR CERTIFICATION:

I, MICHAEL A. ANGELO, HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL [ENGINEER / LAND SURVEYOR] IN THE STATE OF DELAWARE WITH A BACKGROUND IN CIVIL ENGINEERING AND TO THE BEST OF MY KNOWLEDGE AND BELIEF, I CERTIFY THAT ALL OF THE INFORMATION ON THESE SANITARY SEWER DRAWINGS IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY ACCEPTED SURVEYING AND ENGINEERING STANDARDS AND PRACTICES AND BY THE NEW CASTLE COUNTY UNIFIED DEVELOPMENT CODE. ADDITIONALLY, THE SANITARY SEWER DESIGN HAS BEEN PREPARED IN ACCORDANCE WITH AND COMPLIES WITH ALL APPLICABLE REGULATIONS, CODES, STANDARDS, GUIDELINES, LAWS AND POLICIES, INCLUDING BUT NOT LIMITED TO CHAPTER 38 OF THE NEW CASTLE COUNTY CODE, THE DEPARTMENT OF SPECIAL SERVICES POLICIES *6 AND *7, THE NEW CASTLE COUNTY STANDARD SPECIFICATIONS FOR CONSTRUCTION AND AMENDMENTS AND THE RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES.



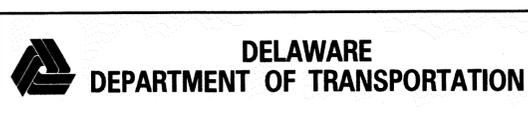
Michael Angelo
2/13/15

Unofficial Website Copy

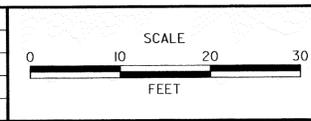
The sanitary sewer design concept has been reviewed and approved for compliance with the New Castle County Standard Specifications and the Ten State Standards. This review and approval is limited solely to the issue of compliance with the aforementioned standards and specifications, and New Castle County shall not be responsible for any other aspect or matter related to the design or installation of the proposed sanitary sewer.

[Signature] 2/13/15

1/26/2015 11:02:01 P. Ref: Bridges.dgn



| ADDENDUMS / REVISIONS |
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**OLD LANCASTER PIKE
PEDESTRIAN BRIDGE PLACEMENT**

| | | |
|------------|--------------|-----------------|
| CONTRACT | BRIDGE NO. | BR 1-169 |
| T201220004 | DESIGNED BY: | KMS |
| COUNTY | CHECKED BY: | MAA/SSMG |
| NEW CASTLE | | |

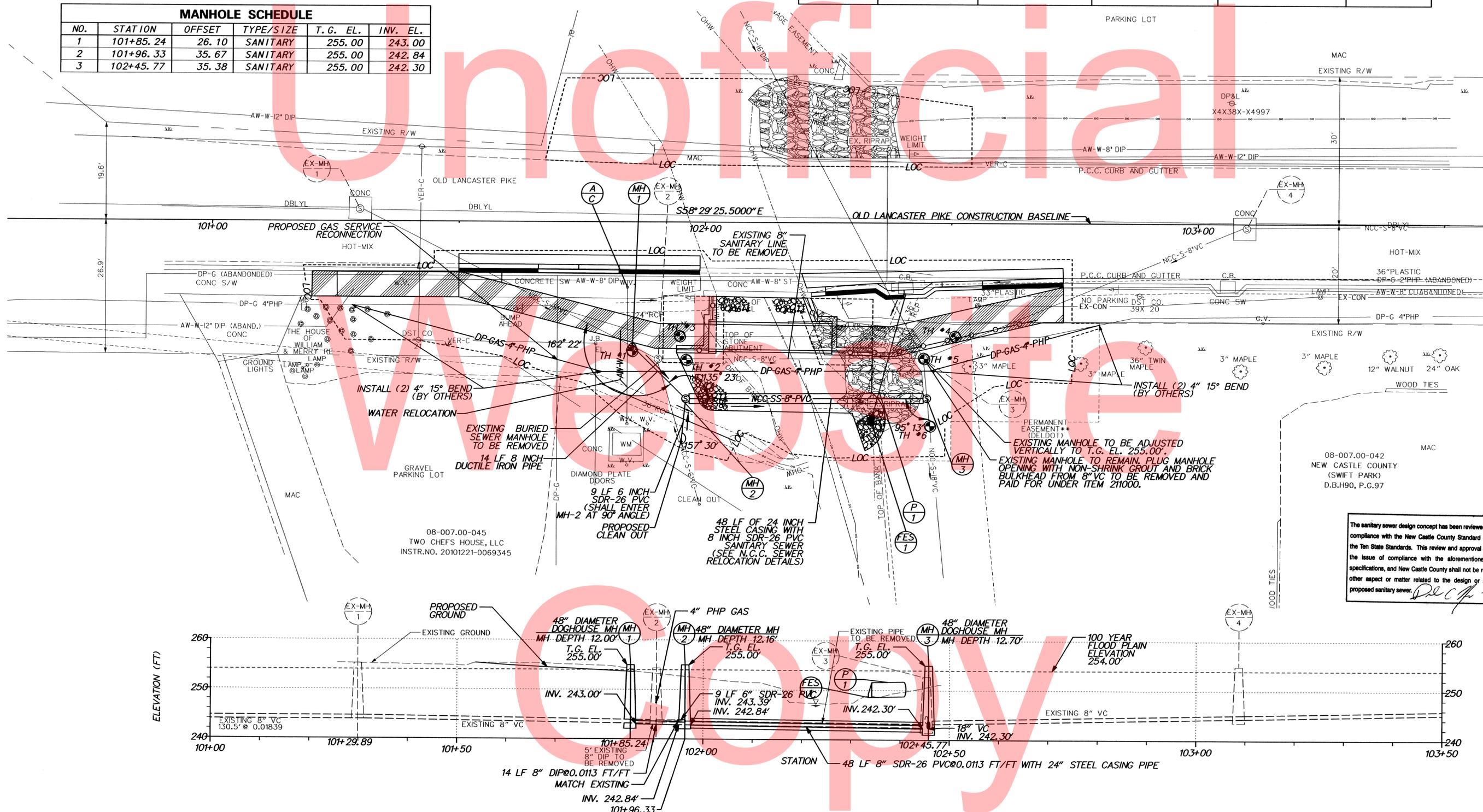
UTILITY RELOCATION PLAN

| |
|--------------|
| UT-01 |
| SHEET NO. |
| 37 |
| TOTAL SHTS. |
| 44 |

| TEST HOLE SCHEDULE | | | | | | |
|--------------------|-------------------------------|-----------|---------|---------------------|-------|---|
| NO. | UTILITY | STATION | OFFSET | EL. EXISTING GROUND | COVER | O. D. AND MATERIAL |
| 1 | NEW CASTLE CO. SANITARY SEWER | 101+85.24 | 26.0994 | 253.79' | 9.97' | 8" VITRIFIED CLAY PIPE |
| 2 | NEW CASTLE CO. SANITARY SEWER | 101+96.29 | 27.8996 | 252.50' | 9.21' | UNABLE TO EXPOSE PIPE, ROUGH POUR CONCRETE COVER OVER PIPE |
| 3 | DELMARVA POWER GAS | 101+94.91 | 23.0952 | 253.33' | 8.29' | 4" PHP PIPE |
| 4 | DELMARVA POWER GAS | 102+50.83 | 22.9431 | - | - | DUG 13.55' - UTILITY NOT FOUND. DELMARVA LOCATOR STATED DEPTH IS GREATER THAN 15' |
| 5 | NEW CASTLE CO. SANITARY SEWER | 102+44.49 | 27.4061 | 252.73' | 9.31' | OPENED MANHOLE TO DETERMINE ELEVATION |
| 6 | NEW CASTLE CO. SANITARY SEWER | 102+45.77 | 41.0270 | 250.86' | 6.91' | 18" VITRIFIED CLAY PIPE |

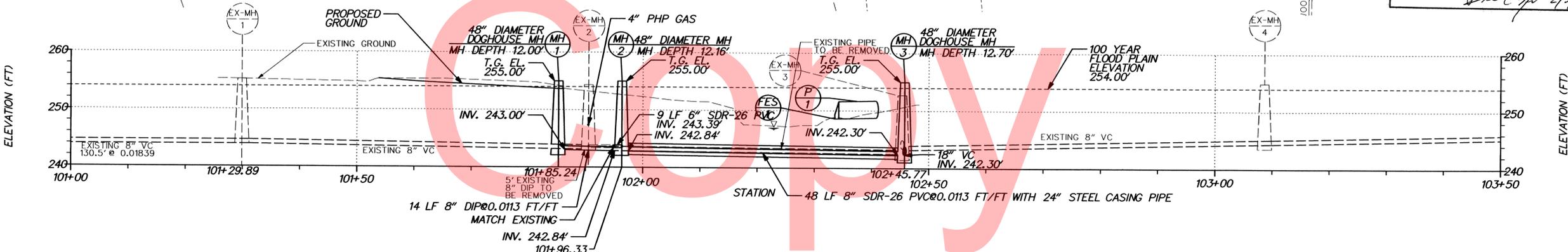
| SEWER DETAIL TABLE | | | | | |
|--------------------|--------------------------|---|--|---------------------------------|---------------|
| STREET NAME | TOTAL NUMBER OF MANHOLES | NOMINAL DIAMETER OF SANITARY SEWER PIPE (IN INCHES) | TOTAL LINEAR FEET OF GRAVITY SANITARY SEWER PIPE | TOTAL LINEAR FEET OF FORCE MAIN | PIPE MATERIAL |
| OLD LANCASTER PIKE | 1 | 8 | 14 | 0 | DIP |
| OLD LANCASTER PIKE | 0 | 6 | 9 | 0 | PVC SDR-26 |
| OLD LANCASTER PIKE | 2 | 8 | 48 | 0 | PVC SDR-26 |

| MANHOLE SCHEDULE | | | | | |
|------------------|-----------|--------|-----------|-----------|----------|
| NO. | STATION | OFFSET | TYPE/SIZE | T. G. EL. | INV. EL. |
| 1 | 101+85.24 | 26.10 | SANITARY | 255.00 | 243.00 |
| 2 | 101+96.33 | 35.67 | SANITARY | 255.00 | 242.84 |
| 3 | 102+45.77 | 35.38 | SANITARY | 255.00 | 242.30 |



The sanitary sewer design concept has been reviewed and approved for compliance with the New Castle County Standard Specifications and the Ten State Standards. This review and approval is limited solely to the issue of compliance with the aforementioned standards and specifications, and New Castle County shall not be responsible for any other aspect or matter related to the design or installation of the proposed sanitary sewer.

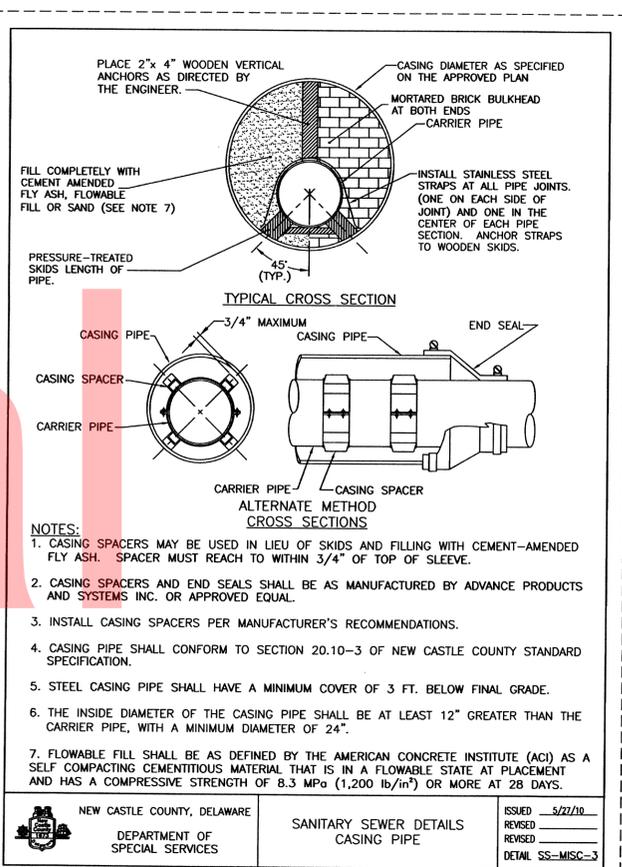
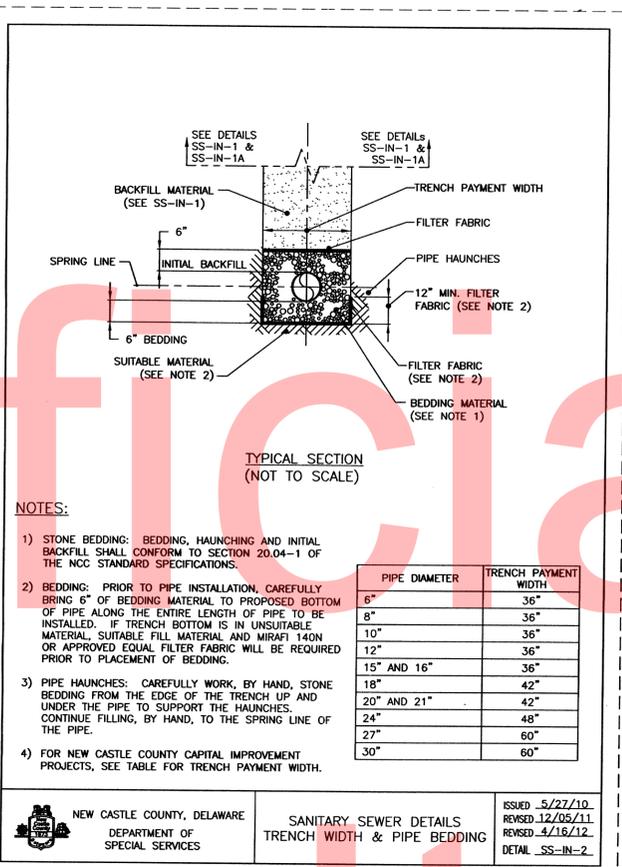
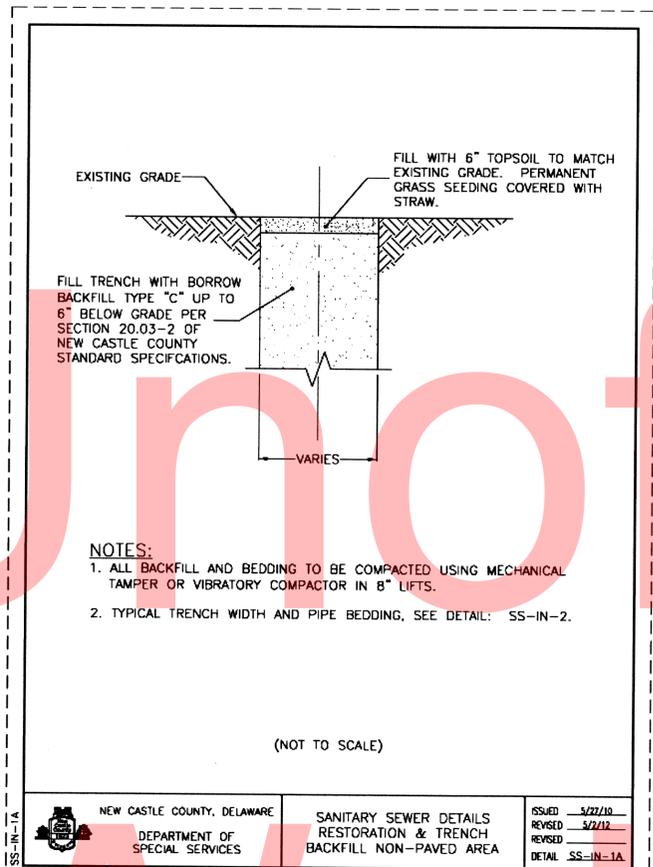
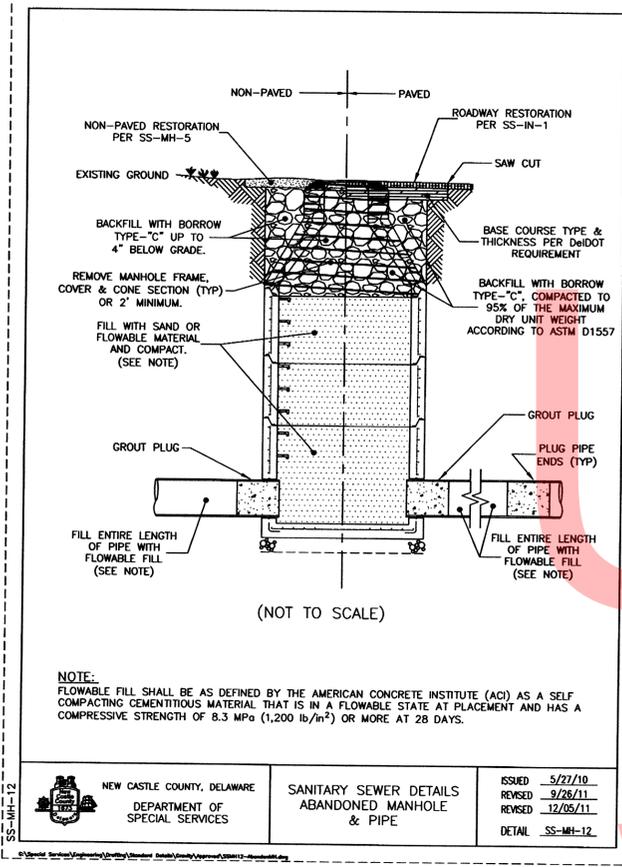
DEC 2/5/15



NOTE: OVERHEAD UTILITIES ARE SHOWN ON CONSTRUCTION PHASING, M.O.T., AND EROSION AND CONTROL PLANS.

1/26/2015
\\NUT01\OLP_PedBridges.dgn

| | | | | | | | |
|--|-----------------------|-----------------------------|---|------------------------|-------------------------------|--------------------------------|-------------------|
| DELAWARE DEPARTMENT OF TRANSPORTATION | ADDENDUMS / REVISIONS | SCALE 0 10 20 30 FEET | OLD LANCASTER PIKE PEDESTRIAN BRIDGE PLACEMENT | CONTRACT T201220004 | BRIDGE NO. BR 1-169 | UTILITY RELOCATION PLAN | SHEET NO. 38 |
| | | | | COUNTY NEW CASTLE | DESIGNED BY: KMS | | TOTAL SHTS. 44 |
| | | | | | CHECKED BY: MAA/SSMG | | |



NEW CASTLE COUNTY, DELAWARE
DEPARTMENT OF SPECIAL SERVICES

SANITARY SEWER DETAILS
ABANDONED MANHOLE & PIPE

ISSUED 5/27/10
REVISED 9/26/11
REVISED 12/09/11
DETAIL SS-MH-12

SUPPLEMENTAL UTILITY SEWER NOTES:

- SEE BYPASS PUMPING NOTES, THIS SHEET AND ITEM 614902 - BYPASS PUMPING OPERATION. PAYMENT FOR BYPASS PUMPING SHALL BE PAID FOR UNDER ITEM 614902 - BYPASS PUMPING OPERATION.
- WHERE PROPOSED DIP SEWER PIPE CROSSES EXISTING STREAM, CONTRACTOR SHALL ENCASE PROPOSED SEWER IN ACCORDANCE WITH NCC STANDARD DETAIL SS-MSC-3. PAYMENT FOR PROPOSED SEWER ENCASEMENT SHALL BE INCIDENTAL TO ITEM 753501 - INSTALLING SANITARY SEWER, PVC 8\".
- ANY DAMAGE TO EXISTING UTILITIES DURING EXCAVATION ACTIVITIES IS THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIRS SHOULD BE MADE IMMEDIATELY.
- REMOVE EXISTING 8\" VITRIFIED CLAY PIPE FROM EXISTING MH-2 TO EXISTING MH-3. PAYMENT FOR THE PROPER REMOVAL AND DISPOSAL OF THE EXISTING 8\" VITRIFIED CLAY PIPE SHALL BE UNDER ITEM 21000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
- THE CONTRACTOR SHALL LOCATE AND MAINTAIN UNINTERRUPTED SERVICE FROM ALL SANITARY SERVICE CONNECTIONS (IF PRESENT) DISTURBED BY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL LOCATE ALL SANITARY SERVICE CONNECTIONS PRIOR TO CONSTRUCTION AND BYPASS PUMPING OPERATIONS. SERVICE SHALL BE MAINTAINED BY MEANS OF TEMPORARY RECEPTACLE WITH PUMPS OR PIPING POSITIONED TO COLLECT FLOW FROM THE DISTURBED SANITARY SERVICE CONNECTIONS. THE TEMPORARY SYSTEM SHALL AT ALL TIMES BE POSITIONED IN A MANNER TO PROTECT THE PUBLIC FROM ACCIDENTAL OR CASUAL EXPOSURE TO WASTEWATER. CONTRACTOR SHALL PROVIDE MEANS OF CONVEYING THE SANITARY FLOWS TO A CONFIRMED SANITARY SEWER MANHOLE. MANHOLES SHALL BE MADE SECURE BY SAFETY ROPES, BARRICADES, DEDICATED PERSONNEL, OR OTHER MEANS TO PREVENT THE PUBLIC FROM ACCIDENTAL OR CASUAL ENTRY, OR ARE TO BE TRANSPORTED VIA A TANKER TRUCK THAT IS LICENSED AND APPROVED BY LOCAL AUTHORITIES FOR THE TRANSPORT OF WASTEWATER TO A SANITARY WASTEWATER DISPOSAL FACILITY. ALL FEES, SURCHARGES, FINES, TAXES, AND OTHER RELATED COSTS NECESSARY FOR THE WORK, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IN ACCORDANCE WITH ITEM 614902 - BYPASS PUMPING OPERATIONS. PAYMENT SHALL BE INCIDENTAL TO ITEM 753520 - INSTALLING SANITARY SEWER, DIP, 8\".
- DETAILS SHOWN ON THIS SHEET PERTAIN TO THE RELOCATION OF THE N.C.C. SEWER ONLY.

NEW CASTLE COUNTY, DELAWARE
DEPARTMENT OF SPECIAL SERVICES

SANITARY SEWER DETAILS
RESTORATION & TRENCH BACKFILL NON-PAVED AREA

ISSUED 5/27/10
REVISED 9/27/11
REVISED 4/16/12
DETAIL SS-IN-1A

NOTES:

- ALL BACKFILL AND BEDDING TO BE COMPACTED USING MECHANICAL TAMPER OR VIBRATORY COMPACTOR IN 8\" LIFTS.
- TYPICAL TRENCH WIDTH AND PIPE BEDDING, SEE DETAIL: SS-IN-2.

NEW CASTLE COUNTY, DELAWARE
DEPARTMENT OF SPECIAL SERVICES

SANITARY SEWER DETAILS
TRENCH WIDTH & PIPE BEDDING

ISSUED 5/27/10
REVISED 12/05/11
REVISED 4/16/12
DETAIL SS-IN-2

NOTES:

- STONE BEDDING: BEDDING, HAUNCHING AND INITIAL BACKFILL SHALL CONFORM TO SECTION 20.04-1 OF THE NCC STANDARD SPECIFICATIONS.
- BEDDING: PRIOR TO PIPE INSTALLATION, CAREFULLY BRING 6\" OF BEDDING MATERIAL TO PROPOSED BOTTOM OF PIPE ALONG THE ENTIRE LENGTH OF PIPE TO BE INSTALLED. IF TRENCH BOTTOM IS IN UNSUITABLE MATERIAL, SUITABLE FILL MATERIAL AND MIRAFI 140N OR APPROVED EQUAL FILTER FABRIC WILL BE REQUIRED PRIOR TO PLACEMENT OF BEDDING.
- PIPE HAUNCHES: CAREFULLY WORK, BY HAND, STONE BEDDING FROM THE EDGE OF THE TRENCH UP AND UNDER THE PIPE TO SUPPORT THE HAUNCHES. CONTINUE FILLING, BY HAND, TO THE SPRING LINE OF THE PIPE.
- FOR NEW CASTLE COUNTY CAPITAL IMPROVEMENT PROJECTS, SEE TABLE FOR TRENCH PAYMENT WIDTH.

| PIPE DIAMETER | TRENCH PAYMENT WIDTH |
|---------------|----------------------|
| 6" | 36" |
| 8" | 36" |
| 10" | 36" |
| 12" | 36" |
| 15" AND 16" | 36" |
| 18" | 42" |
| 20" AND 21" | 42" |
| 24" | 48" |
| 27" | 60" |
| 30" | 60" |

NEW CASTLE COUNTY, DELAWARE
DEPARTMENT OF SPECIAL SERVICES

SANITARY SEWER DETAILS
CASING PIPE

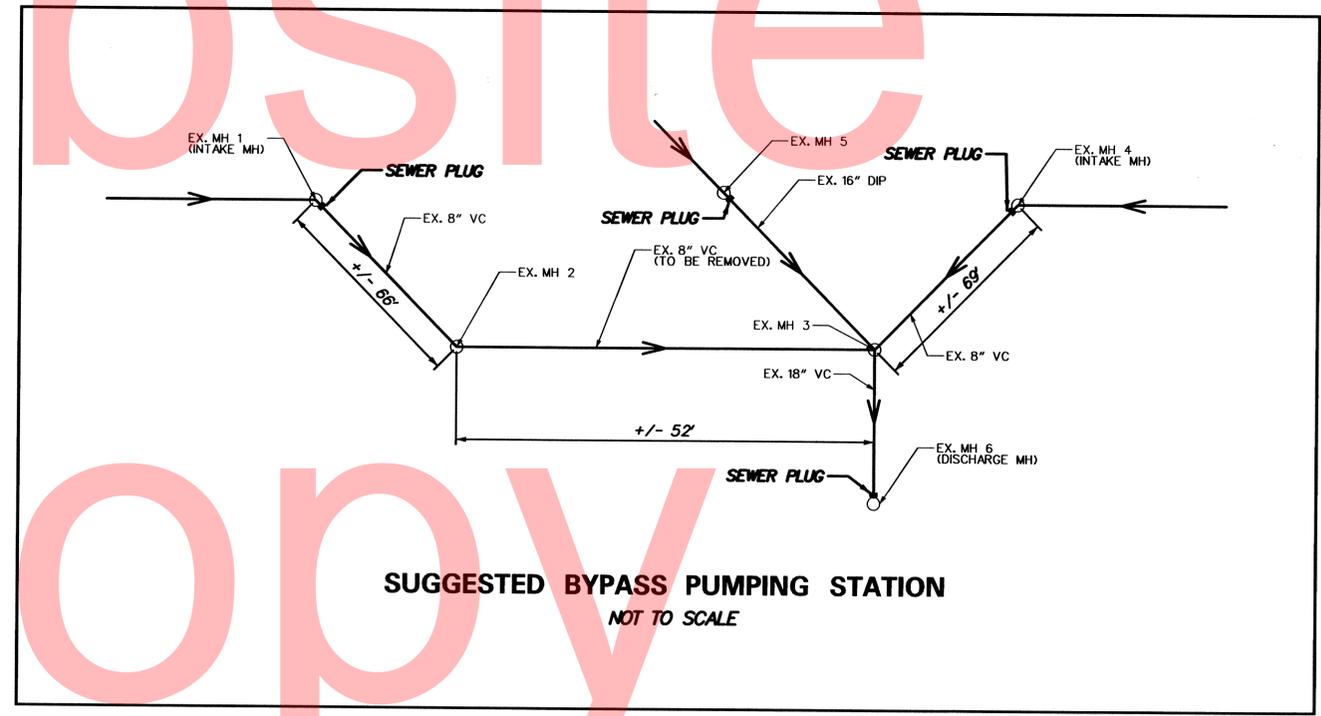
ISSUED 5/27/10
REVISED 12/05/11
REVISED 4/16/12
DETAIL SS-MISC-3

NOTES:

- CASING SPACERS MAY BE USED IN LIEU OF SKIDS AND FILLING WITH CEMENT-AMENDED FLY ASH. SPACER MUST REACH TO WITHIN 3/4" OF TOP OF SLEEVE.
- CASING SPACERS AND END SEALS SHALL BE AS MANUFACTURED BY ADVANCE PRODUCTS AND SYSTEMS INC. OR APPROVED EQUAL.
- INSTALL CASING SPACERS PER MANUFACTURER'S RECOMMENDATIONS.
- CASING PIPE SHALL CONFORM TO SECTION 20.10-3 OF NEW CASTLE COUNTY STANDARD SPECIFICATION.
- STEEL CASING PIPE SHALL HAVE A MINIMUM COVER OF 3 FT. BELOW FINAL GRADE.
- THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE AT LEAST 12" GREATER THAN THE CARRIER PIPE, WITH A MINIMUM DIAMETER OF 24".
- FLOWABLE FILL SHALL BE AS DEFINED BY THE AMERICAN CONCRETE INSTITUTE (ACI) AS A SELF COMPACTING CEMENTITIOUS MATERIAL THAT IS IN A FLOWABLE STATE AT PLACEMENT AND HAS A COMPRESSIVE STRENGTH OF 8.3 MPa (1,200 lb/in²) OR MORE AT 28 DAYS.

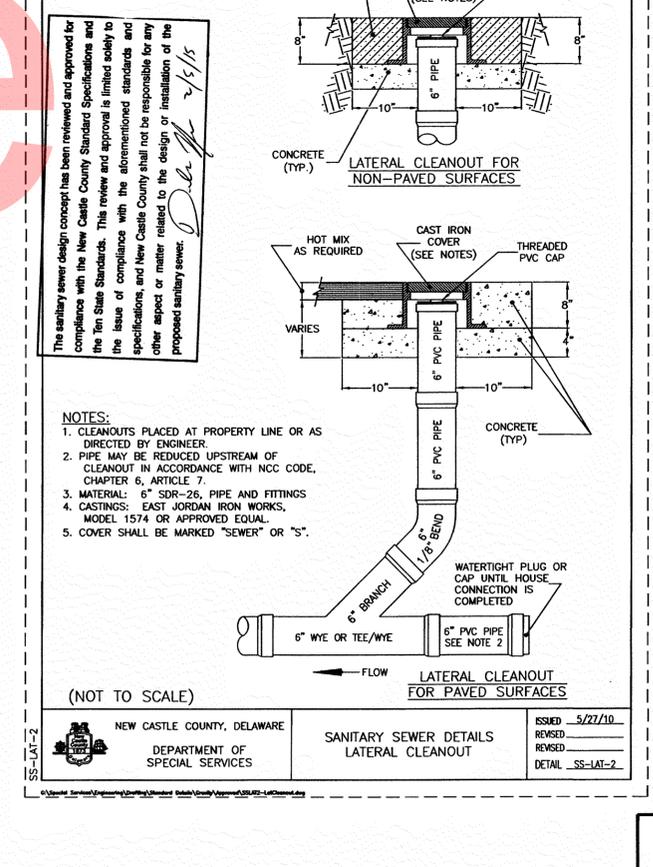
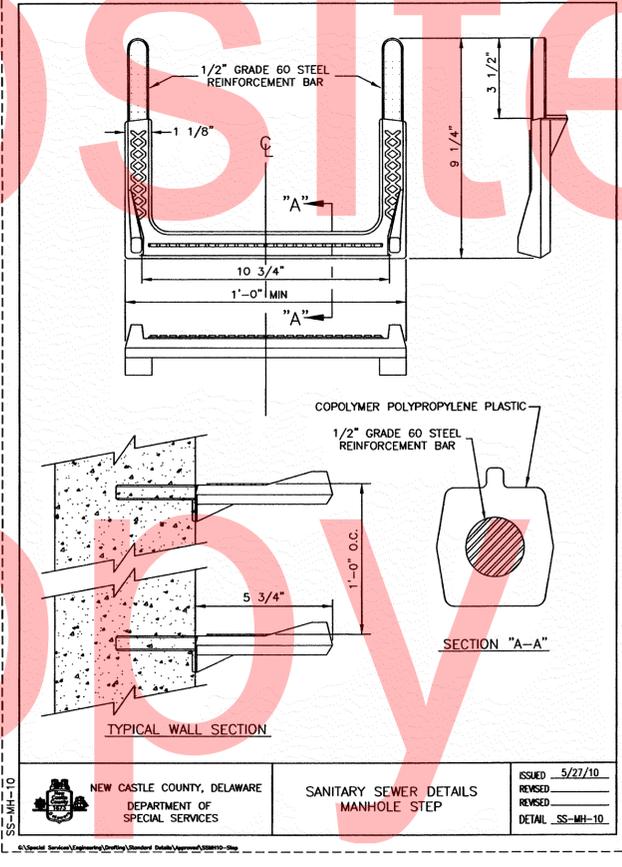
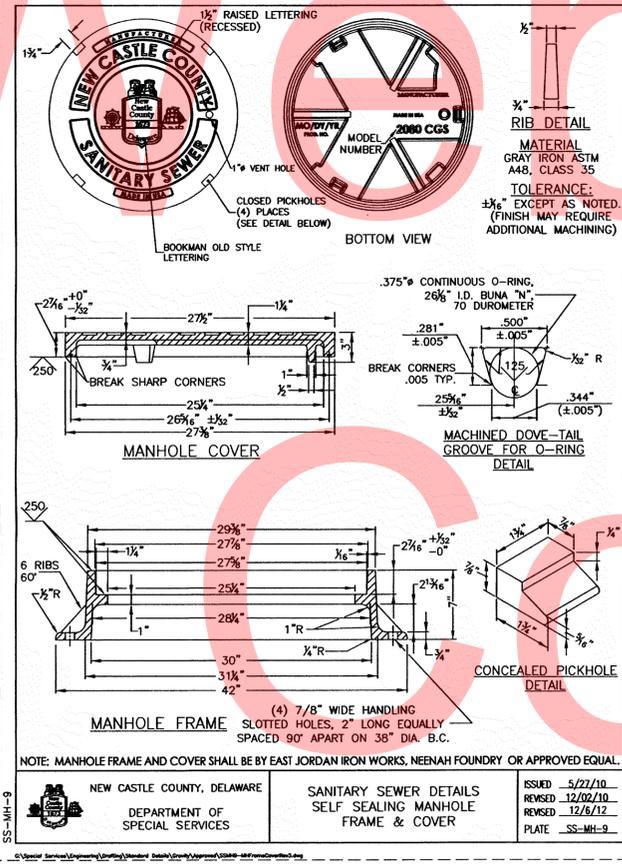
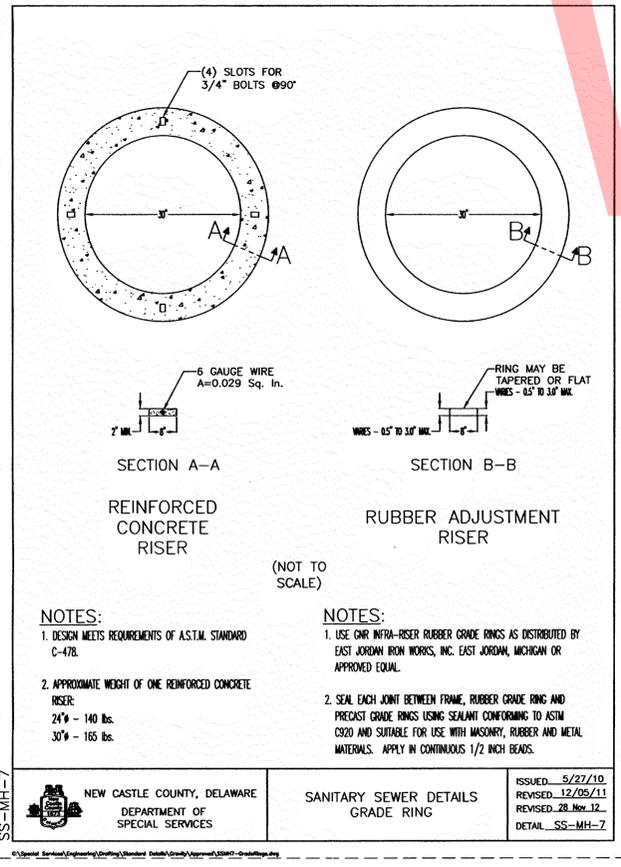
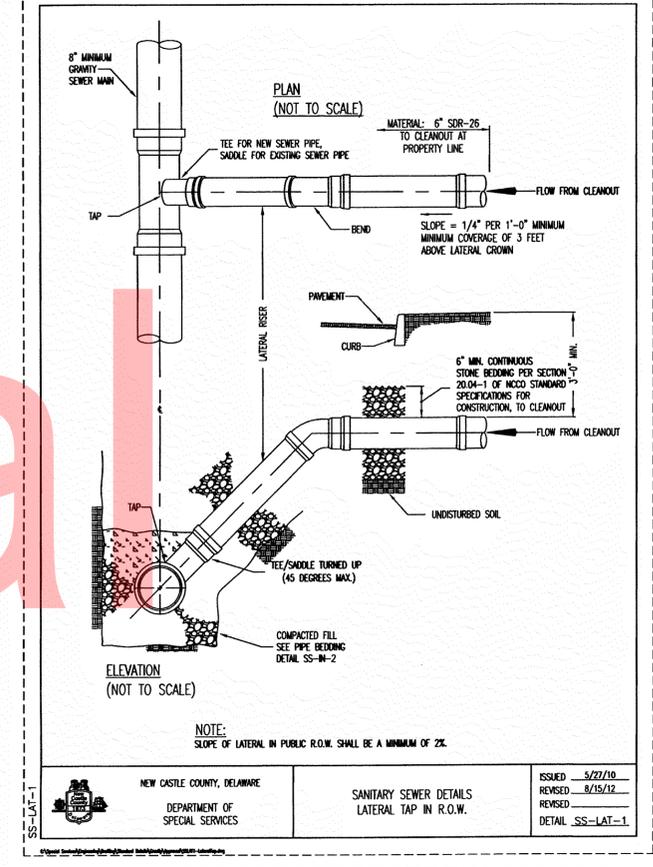
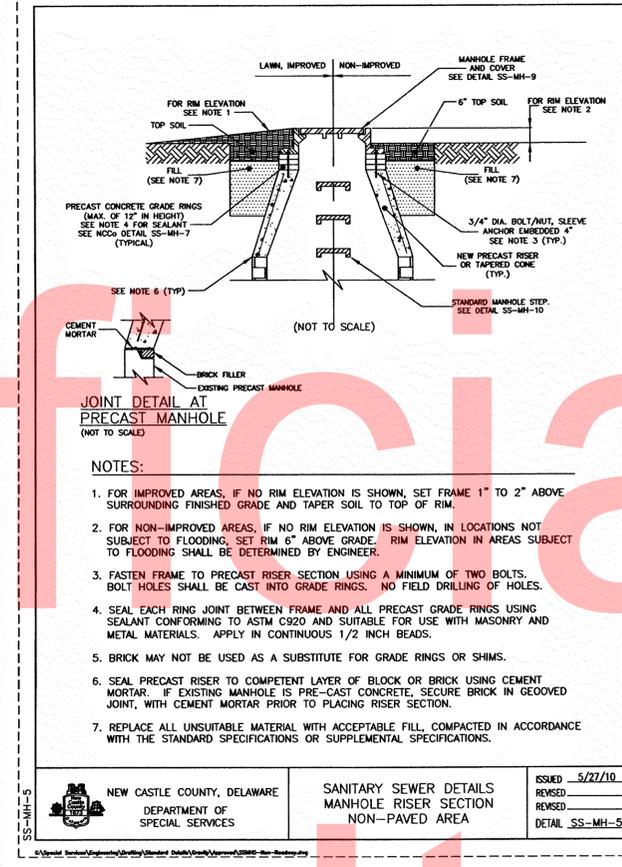
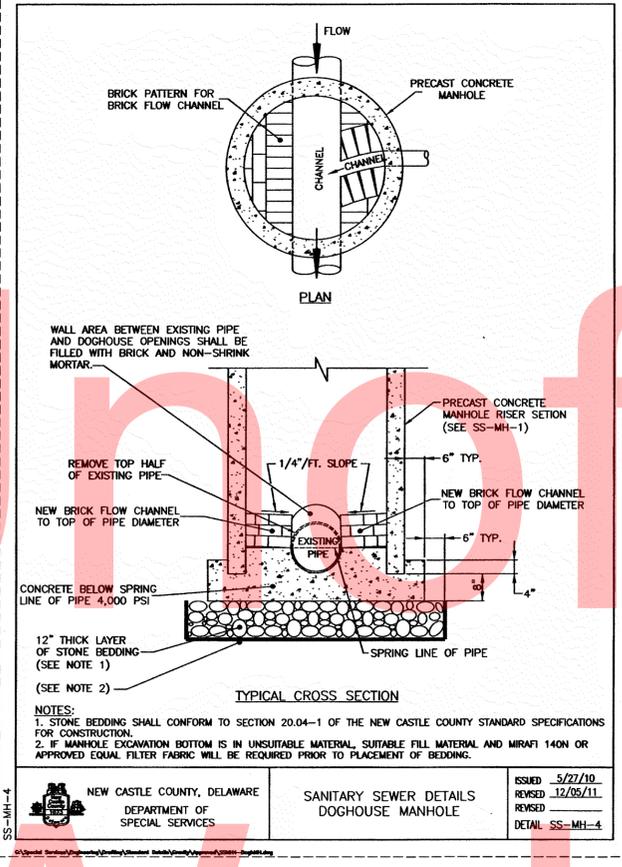
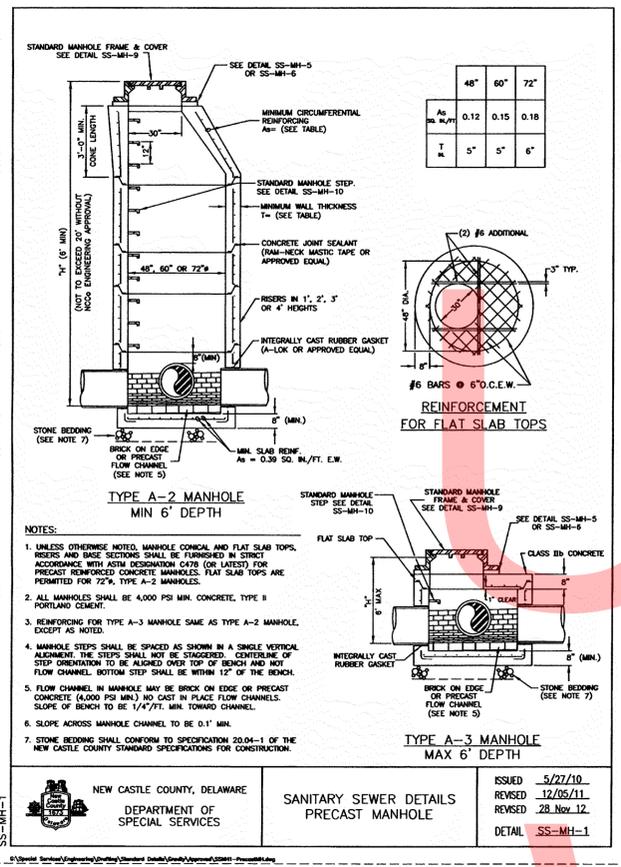
BYPASS PUMPING NOTES:

- CONTRACTOR TO NOTIFY NEW CASTLE COUNTY SEWER OF PROPOSED PUMP-AROUND METHOD AND SCHEDULE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AN EMERGENCY CONTACT NAME AND PHONE NUMBER. CONTACT CHUCK RUTTER AT (302) 395-5756.
- SEWAGE FLOW IN EXISTING SEWER IS TO BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. AT NO TIME WILL IT BE PERMITTED FOR SEWAGE TO BE DISCHARGED ONTO THE GROUND OR INTO ANY STREAMS. ALL COSTS TO MAINTAIN FLOW SHALL BE INCIDENTAL TO ITEM 753520 - INSTALLING SANITARY SEWER, DIP, 8\".
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY FLOODING OR DAMAGE THAT MAY RESULT FROM THIS OPERATION.
- THE CONTRACTOR SHALL NOTIFY MR. CHUCK RUTTER OF NEW CASTLE COUNTY SEWER AT (302) 395-5756 AT LEAST 48 HOURS IN ADVANCE OF THE INTENDED START OF CONSTRUCTION AND COORDINATE ALL WORK WITH MR. RUTTER.
- THE CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY PUMPS, SUCTION AND DISCHARGE PIPING, PLUGS, AND APPURTENANCES TO DIVERT THE FLOW OF SEWAGE AROUND THE PIPE SECTION. THE BYPASS PUMPING SYSTEM SHALL BE OF SUFFICIENT CAPACITY TO TRANSPORT THE DESIGN FLOW NOTED ON THESE CONTRACT DRAWINGS. THE CONTRACTOR WILL BE RESPONSIBLE FOR FURNISHING THE NECESSARY LABOR AND SUPERVISION TO SET UP AND OPERATE THE BYPASS PUMPING SYSTEM. STATIONARY EQUIPMENT (PUMPS, COMPRESSORS, ELECTRIC GENERATOR, ETC.) ENGINES SHALL BE CRITICALLY SILENCED WITH EXHAUST SILENCERS AND INSULATED ENCLOSURES. THE BYPASS PUMPING SYSTEM SHALL BE FURNISHED AND INSTALLED AS TO PREVENT SPILLS FROM THE PUMPS AND PIPING. ANY SPILLAGE THAT OCCURS SHALL BE IMMEDIATELY CLEANED UP, AND THE SPILL AREA RETURNED TO A CLEAN AND SANITARY CONDITION. THE LOCATION OF THE BYPASS PUMPING DISCHARGE MUST BE REVIEWED IN ADVANCE BY NEW CASTLE COUNTY SEWER.
- FLOW CONTROL PRECAUTIONS: WHEN FLOW IN A SANITARY SEWER LINE IS PLUGGED, SUFFICIENT PRECAUTIONS MUST BE TAKEN TO PROTECT THE SANITARY SEWER LINE AND ADJACENT PROPERTY OWNERS FROM OVERFLOW DAMAGE THAT MIGHT RESULT FROM THE SANITARY SEWER DISCHARGE.
- DESIGN FLOW FOR PUMPING AROUND SYSTEMS BASED ON FLOW DATA PROVIDED BY NEW CASTLE COUNTY. SUGGESTED BYPASS PUMPING PLAN (THIS SHEET).
- PUMPING SYSTEM FROM EX. MH 1 TO EX. MH 6 SHALL BE DESIGNED FOR 3 MGD WITH A FACTOR OF SAFETY OF 2 = 6 MGD.
- PUMPING SYSTEM FROM EX. MH 5 TO EX. MH 6 SHALL BE DESIGNED FOR 3 MGD WITH A FACTOR OF SAFETY OF 2 = 6 MGD.
- PUMPING SYSTEM FROM EX. MH 4 TO EX. MH 6 SHALL BE DESIGNED FOR 3 MGD WITH A FACTOR OF SAFETY OF 2 = 6 MGD.
- EXISTING SEWER SYSTEM MAY BE SUBJECT TO HIGHER FLOWS DURING STORM EVENTS. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO AVOID SEWAGE OVERFLOWS DURING INCLEMENT WEATHER.
- PUMP AROUND SYSTEM COMPONENTS AND INSTALLATION AND OPERATION SHALL CONFORM TO THE SPECIFICATIONS AND GUIDELINES OF THE MANUFACTURER.
- PUMP DISCHARGING PIPING SHALL BE SUPPORTED OVER STREAM AS REQUIRED DURING CONSTRUCTION ACTIVITIES.
- ALL PRIVATE PROPERTY OWNERS SHALL BE NOTIFIED OF BYPASS PUMPING OPERATION - SEE SPECIAL PROVISION FOR ITEM 614902 - BYPASS PUMPING OPERATION.

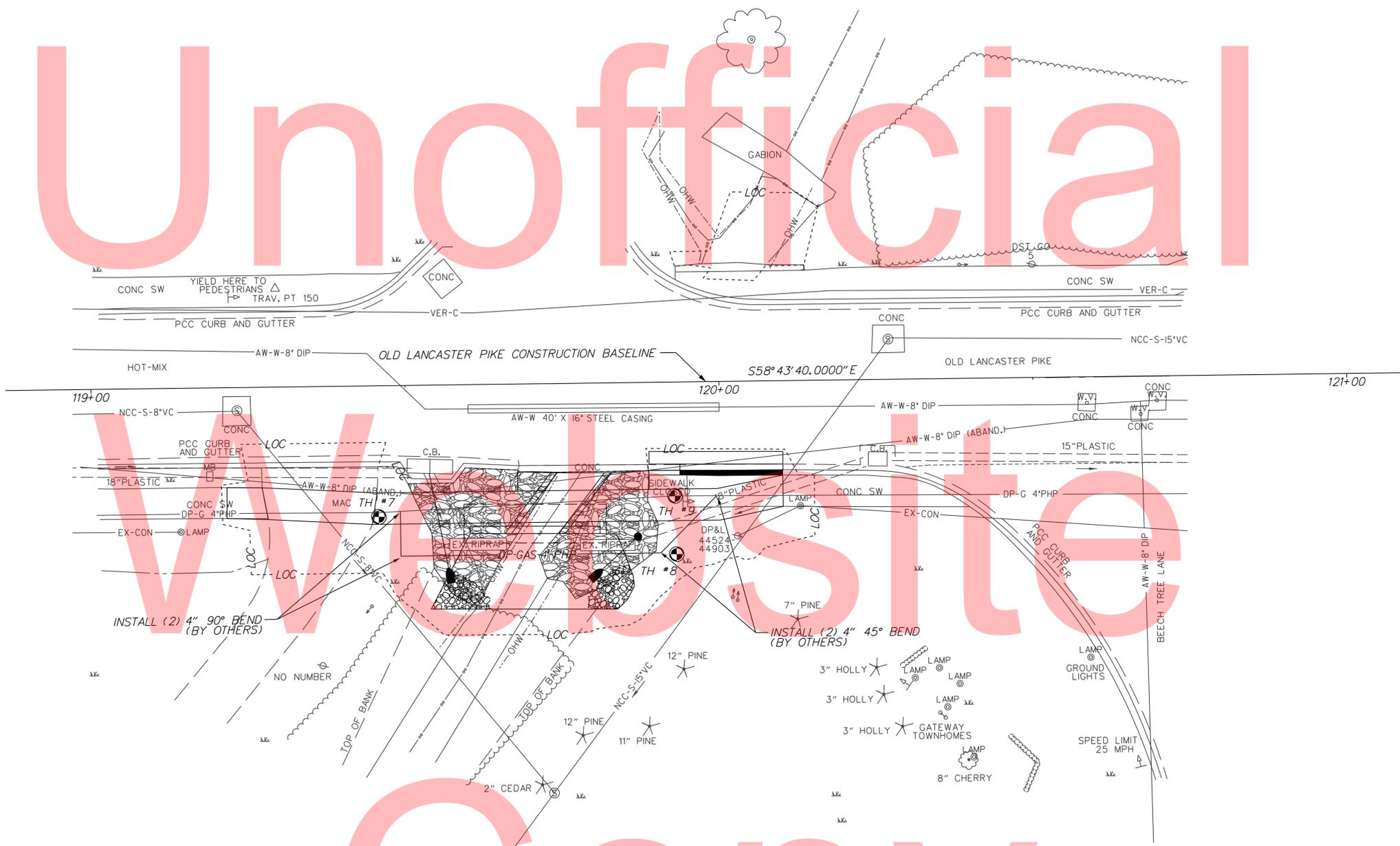
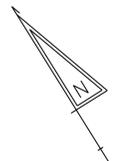


The sanitary sewer design concept has been reviewed and approved for compliance with the New Castle County Standard Specifications and the Ten State Standards. This review and approval is limited solely to the issue of compliance with the aforementioned standards and specifications, and New Castle County shall not be responsible for any other aspect or matter related to the design or installation of the proposed sanitary sewer.

D. L. [Signature] 7/15/15



Unofficial



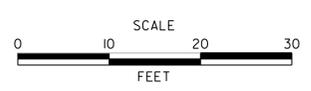
TEST HOLE SCHEDULE

| NO. | UTILITY | STATION | OFFSET | EL. EXISTING GROUND | COVER | O. D. AND MATERIAL |
|-----|--------------------|-----------|---------|---------------------|-------|---|
| 7 | DELMARVA POWER GAS | 119+45.59 | 20.8112 | 254.28 | 5.62' | 4" PHP PIPE |
| 8 | DELMARVA POWER GAS | 119+92.96 | 27.3305 | - | - | UTILITY NOT FOUND. LOST SIGNAL AT WEST EDGE OF DITCH. PROJECTED LINE AND DUG 6.21'. |
| 9 | DELMARVA POWER GAS | 119+92.78 | 18.0790 | - | 6.91' | UTILITY NOT FOUND. HOLE HAD ISSUES WITH CAVING. DUG 4.72' AT LOCATION MARKED BY DELMARVA POWER LOCATOR. |

NOTE: OVERHEAD UTILITIES ARE SHOWN ON CONSTRUCTION PHASING, M.O.T., AND EROSION AND CONTROL PLANS.



| ADDENDUMS / REVISIONS |
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**OLD LANCASTER PIKE
PEDESTRIAN BRIDGE PLACEMENT**

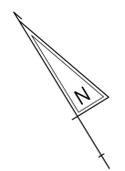
| | |
|------------------------|---------------------------|
| CONTRACT T201220004 | BRIDGE NO. BOX CULVERT |
| COUNTY NEW CASTLE | DESIGNED BY: KMS |
| | CHECKED BY: MAA/SSMG |

UTILITY RELOCATION PLAN

| |
|-------------------|
| UT-05 |
| SHEET NO. 41 |
| TOTAL SHTS. 44 |

08-007.40-032
STATE OF DELAWARE
(DEPARTMENT OF TRANSPORTATION)
D.B.K44, P.G.402

08-007.40-034
KIO ASSOCIATES
D.B.189, P.G.206



3

WEIGHT LIMIT

25 T

26 T

5

WEIGHT LIMIT

25 T

26 T

8a

8b

8c

SIDEWALK CLOSED

9a

9b

9c

NO STOPPING OR PARKING BEGIN

4a

4b

BUMP AHEAD

6

ATTACHED TO WALL

7

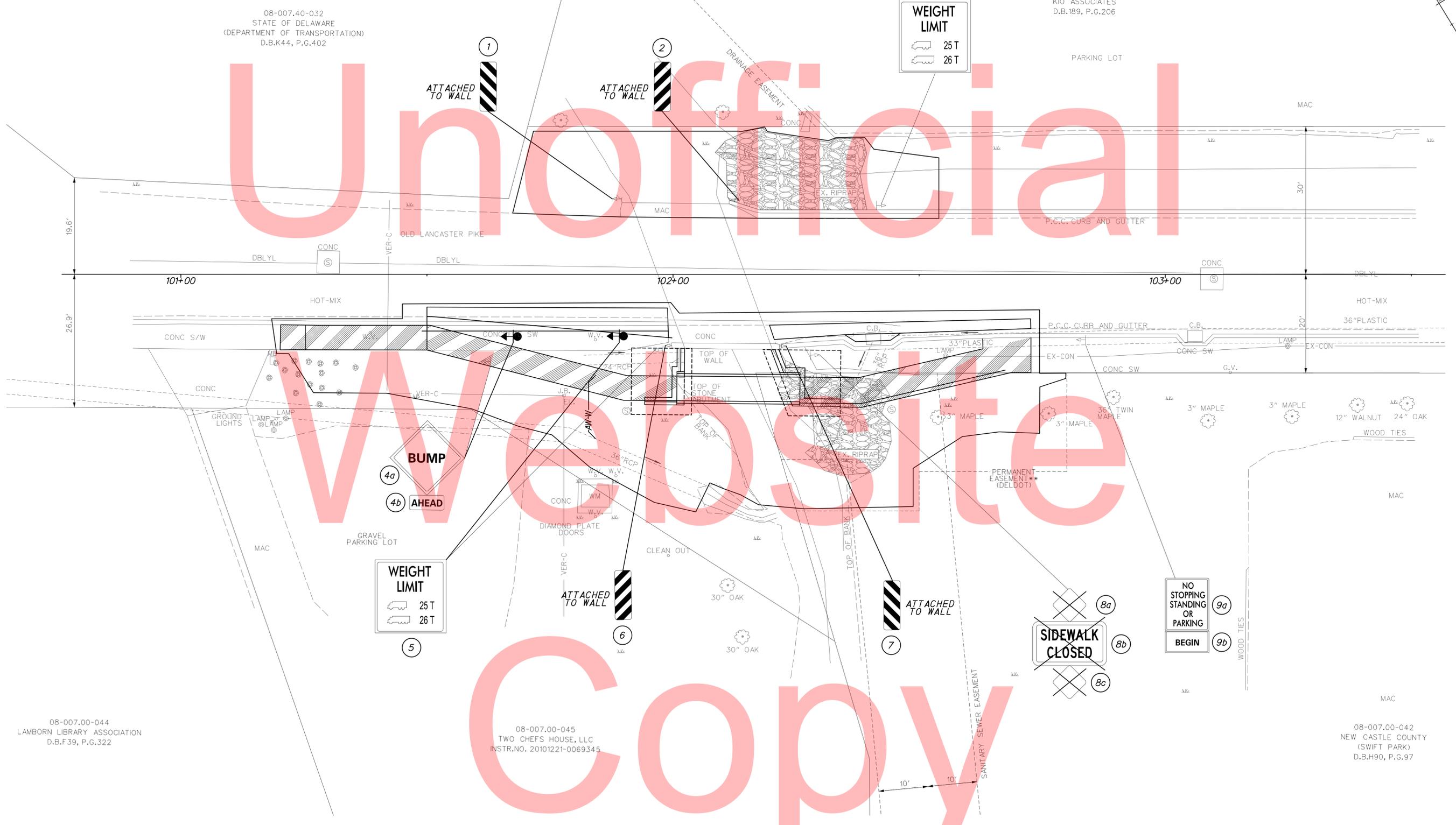
ATTACHED TO WALL

1

ATTACHED TO WALL

2

ATTACHED TO WALL

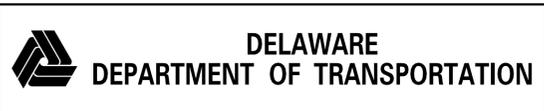


08-007.00-044
LAMBORN LIBRARY ASSOCIATION
D.B.F39, P.G.322

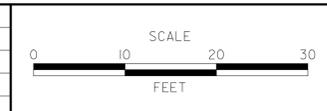
08-007.00-045
TWO CHEFS HOUSE, LLC
INSTR.NO. 20101221-0069345

08-007.00-042
NEW CASTLE COUNTY
(SWIFT PARK)
D.B.H90, P.G.97

Wednesday, June 17, 2015 AT 03:02 PM
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| ADDENDUMS / REVISIONS | |
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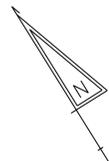
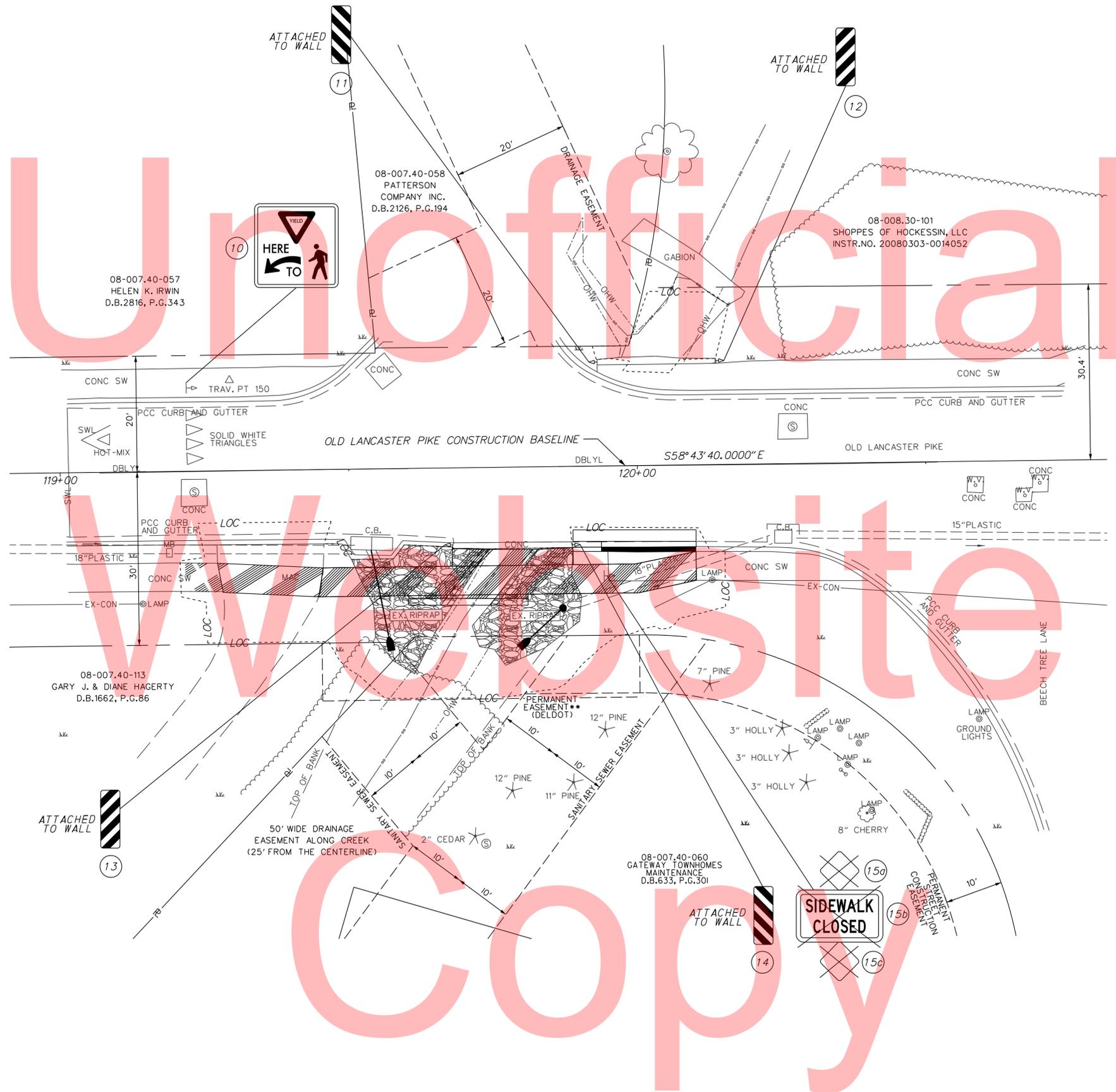


**OLD LANCASTER PIKE
PEDESTRIAN BRIDGE PLACEMENT**

| | |
|------------------------|-------------------------------|
| CONTRACT T201220004 | BRIDGE NO. BR 1-169 |
| COUNTY NEW CASTLE | DESIGNED BY: KMS |
| | CHECKED BY: MAA |

**SIGNING, STRIPING
AND CONDUIT PLAN**

| |
|-------------------|
| SS-01 |
| SHEET NO. 42 |
| TOTAL SHTS. 44 |



| | | | | | | | | |
|---|-----------------------|--------------------------|---|------------------------------|--------------------------------|--------------------------------------|---|-------------------------|
| <p>DELAWARE DEPARTMENT OF TRANSPORTATION</p> | ADDENDUMS / REVISIONS | <p>SCALE</p> <p>FEET</p> | <p>OLD LANCASTER PIKE PEDESTRIAN BRIDGE PLACEMENT</p> | | <p>CONTRACT T201220004</p> | <p>BRIDGE NO. BOX CULVERT</p> | <p>SIGNING, STRIPING AND CONDUIT PLAN</p> | <p>SHEET NO. 43</p> |
| | | | | <p>COUNTY NEW CASTLE</p> | <p>DESIGNED BY: KMS</p> | <p>TOTAL SHTS. 44</p> | | |
| | | | | | <p>CHECKED BY: MAA</p> | | | |
| | | | | | | | | |

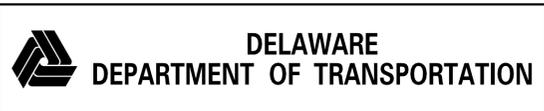
SDATES
SFILES

PERMANENT SIGN SCHEDULE

| SHEET NO. | NO. | CODE | DESCRIPTION | ASSEMBLY NO. | SIGN HEIGHT (IN) | SIGN WIDTH (IN) | SIGN AREA (SF) | SIGN DISPOSITION | ITEM 749687 SINGLE POST EACH | | ITEM 749690 MULTI-POST (SF) | | POST INSTALLATION TYPE | CODE X11 12' POST W/ BASEPOST (EACH) | ITEM 749688 4" HOLE, 0-6" (EACH) | ITEM 749689 4" HOLE, >6" (EACH) | REMARKS | |
|-----------|-----|-------------|----------------------------------|--------------|------------------|-----------------|----------------|------------------|------------------------------|---------|-----------------------------|---------|------------------------|--------------------------------------|----------------------------------|---------------------------------|-------------------|---|
| | | | | | | | | | REMOVE | INSTALL | REMOVE | INSTALL | | | | | | |
| SS-01 | 1 | OM-3L | TYPE 3 OBJECT MARKER (LEFT) | 1 | 36 | 12 | 3.00 | RENEW | 1 | 1 | | | | | | | STRUCTURE-MOUNTED | |
| | 2 | OM-3R | TYPE 3 OBJECT MARKER (RIGHT) | 2 | 36 | 12 | 3.00 | RENEW | 1 | 1 | | | | | | | STRUCTURE-MOUNTED | |
| | 3 | R12-5 | TRUCK WEIGHT LIMITS | 3 | | | | REMAIN | | | | | | | | | | |
| | 4a | W8-1 | BUMP | 4 | | | | REPOSITION | 1 | 1 | | | SOIL | | | | | |
| | 4b | R3-17A | AHEAD (PLAQUE) | 4 | | | | REPOSITION | 1 | 1 | | | | | | | | |
| | 5 | R12-5 | TRUCK WEIGHT LIMITS | 5 | | | | REPOSITION | 1 | 1 | | | SOIL | | | | | |
| | 6 | OM-3R | TYPE 3 OBJECT MARKER (RIGHT) | 6 | 36 | 12 | 3.00 | RENEW | 1 | 1 | | | | | | | STRUCTURE-MOUNTED | |
| | 7 | OM-3L | TYPE 3 OBJECT MARKER (LEFT) | 7 | 36 | 12 | 3.00 | RENEW | 1 | 1 | | | | | | | STRUCTURE-MOUNTED | |
| | 8a | OM4-3 | END OF ROAD OBJECT MARKER | 8 | | | | REMOVE | 1 | | | | | | | | | |
| | 8b | R9-9 | SIDEWALK CLOSED | 8 | | | | REMOVE | 1 | | | | | | | | | |
| | 8c | OM4-3 | END OF ROAD OBJECT MARKER | 8 | | | | REMOVE | 1 | | | | | | | | | |
| | 9a | R7-4-DE | NO STOPPING, STANDING OR PARKING | 9 | | | | REMAIN | | | | | | | | | | |
| | 9b | R7-202aP-de | BEGIN (PLAQUE) | 9 | | | | REMAIN | | | | | | | | | | |
| SS-02 | 10 | R1-5L | YIELD HERE TO PEDESTRIANS, LEFT | 10 | | | | REMAIN | | | | | | | | | | |
| | 11 | OM-3L | TYPE 3 OBJECT MARKER (LEFT) | 11 | 36 | 12 | 3.00 | RENEW | 1 | 1 | | | | | | | STRUCTURE-MOUNTED | |
| | 12 | OM-3R | TYPE 3 OBJECT MARKER (RIGHT) | 12 | 36 | 12 | 3.00 | RENEW | 1 | 1 | | | | | | | STRUCTURE-MOUNTED | |
| | 13 | OM-3R | TYPE 3 OBJECT MARKER (RIGHT) | 13 | 36 | 12 | 3.00 | RENEW | 1 | 1 | | | | | | | STRUCTURE-MOUNTED | |
| | 14 | OM-3L | TYPE 3 OBJECT MARKER (LEFT) | 14 | 36 | 12 | 3.00 | RENEW | 1 | 1 | | | | | | | STRUCTURE-MOUNTED | |
| | 15a | OM4-3 | END OF ROAD OBJECT MARKER | 15 | | | | REMOVE | 1 | | | | | | | | | |
| | 15b | R9-9 | SIDEWALK CLOSED | 15 | | | | REMOVE | 1 | | | | | | | | | |
| | 15c | OM4-3 | END OF ROAD OBJECT MARKER | 15 | | | | REMOVE | 1 | | | | | | | | | |
| | | | | | | | TOTALS | 24.00 | | | 17 | 11 | 0 | 0 | - | 0 | 0 | 0 |

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Website
Copy

Wednesday, June 17, 2015 AT 03:02 PM
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| | |
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| ADDENDUMS / REVISIONS | |
| | |
| | |

NOT TO SCALE

**OLD LANCASTER PIKE
PEDESTRIAN BRIDGE PLACEMENT**

| | |
|------------------------|-------------------------|
| CONTRACT T201220004 | BRIDGE NO. NA |
| COUNTY NEW CASTLE | DESIGNED BY: KMS |
| | CHECKED BY: MAA |

**SIGNING, STRIPING
AND CONDUIT PLAN**

| |
|-------------------|
| SS-03 |
| SHEET NO. 44 |
| TOTAL SHTS. 44 |