NORTH DUCK CREEK UTILITY EXTENSION PHASE 2 - WATER, SANITARY, ELECTRIC TO OMB PARCEL **CONSTRUCTION PLANS**

NEW CASTLE COUNTY, DELAWARE JUNE 15, 2023 REVISED JUNE 25, 2024

PREPARED FOR:

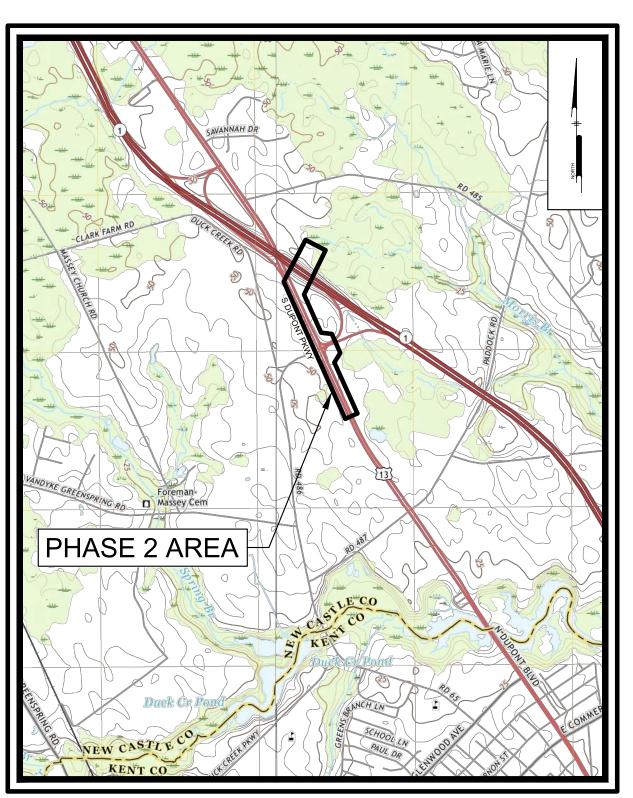
TOWN OF SMYRNA

27 SOUTH MARKET STREET SMYRNA, **DE** 19977

(302) 653-9231

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SHEETS C1704, C1705, AND C1706 ARE INFORMATIONAL PLANS TO SHOW PROPOSED FUTURE-PHASE IMPROVEMENTS, AND ARE SHOWN FOR REFERENCE AND EASEMENT ACQUISITION ONLY. FUTURE IMPROVEMENTS ARE NOT APPLICABLE TO CURRENT AGENCY PLAN AND PERMITTING REVIEW AND ARE NOT PART OF THE CONTRACT FOR CONSTRUCTION



USGS LOCATION MAP Scale: 1" = 2000'

PREPARED BY:

PENNONI ASSOCIATES INC.



Christiana Executive Campus 121 Continental Drive, Suite 207 Newark, DE 19713-4310 **T** 302.655.4451 **F** 302.654.2895

SITE DATA:

FACILITY OWNER

0.0 AC

SITE ADDRESS (POINT OF EXTENSION 5500 DUPONT PARKWAY CONNECTION TO EXISTING UTILITIES): SMYRNA, DE 19977

TAX MAP (POINT OF CONNECTION): 28-002.00-033

LIMIT OF DISTURBANCE: 0.9 AC

EXISTING IMPERVIOUS AREA: 0.0 AC

PROPOSED IMPERVIOUS AREA: (NONE PROPOSED)

ENGINEER CERTIFICATION

I, BRIAN MILLER, HEREBY CERTIFY THAT I AM A REGISTERED ENGINEER IN THE STATE OF DELAWARE, THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE SATE AND LOCAL REGULATIONS AND ORDINANCES.

PENNONI ASSOCIATES INC LICENSE NUMBER 18876

SMYRNA, DE 19977

OWNER CERTIFICATION

. THE UNDERSIGNED, CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION, AND DEVELOPMENT SHALL BE DONE PURSUANT TO THE APPROVED PLAN AND THAT RESPONSIBLE PERSONNEL (I.E., BLUE CARD HOLDER) INVOLVED IN THE LAND DISTURBANCE WILL HAVE A CERTIFICATION OF TRAINING PRIOR TO INITIATION OF THE PROJECT, AT A DNREC SPONSORED OR APPROVED TRAINING COURSE FOR THE CONTROL OF EROSION AND SEDIMENT DURING CONSTRUCTION. IN ADDITION, I GRANT THE KENT CONSERVATION DISTRICT THE RIGHT TO CONDUCT ON-SITE REVIEWS, AND I UNDERSTAND MY RESPONSIBILITIES UNDER THE NPDES CONSTRUCTION GENERAL PERMIT, AS REFERENCED ON THIS COVER SHEET

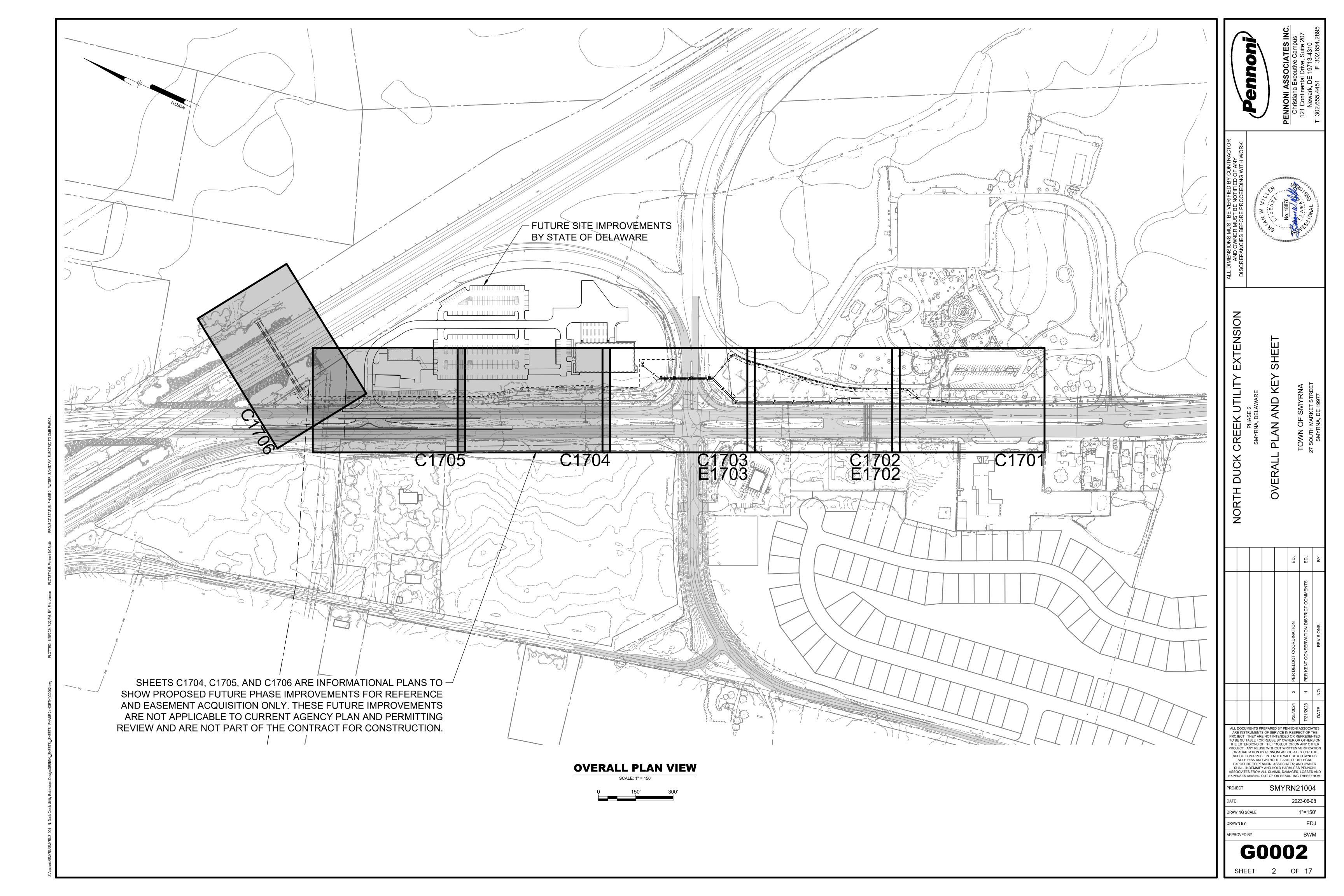
TOWN OF SMYRNA 27 S. MARKET STREET PLAZA,

KENT CONSERVATION DISTRICT

ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESEN TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS O THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATI OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL IDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATI

ARISING OUT OF OR RESULTING THEREFROM. **SMYRN21004**

CALL BEFORE YOU DIG Call Miss Utility of Delmarva 800-282-8555 Ticket Number(s): 220390459 220390483



UTILITY EXTENSION CONSTRUCTION NOTES

- SURVEY NOTES

 1. PARCEL BOUNDARIES AND BUILDING FOOTPRINTS ARE BASED UPON NEW CASTLE COUNTY GIS DATA, DATED OCTOBER 1, 2021.

 1. PARCEL BOUNDARIES AND BUILDING FOOTPRINTS ARE BASED UPON NEW CASTLE COUNTY GIS DATA, DATED OCTOBER 1, 2021. TOPOGRAPHIC INFORMATION SHOWN IS BASED UPON AERIAL SURVEY PERFORMED BY KEYSTONE AERIAL SURVEYS. INC. ON OCTOBER 17. 2021, WITH SUPPLEMENTAL FIELD SURVEY PERFORMED BY PENNONI ASSOCIATES INC. ON VARIOUS DATES BETWEEN DECEMBER 2021 AD FEBRUARY 2022 REFERENCING THE FOLLOWING DATUMS.
- 2.1. HORIZONTAL: DELAWARE STATE PLANE COORDINATE SYSTEM, SOUTH; NAD 83
- 2.2. VERTICAL: NORTH AMERICAN VERTICAL DATUM OF 1988; NAVD 88
- 3. PARCEL LINES AND MONUMENTATION HAVE NOT BEEN VERIFIED FOR THE PARCELS BORDERING THE PROJECT AND ADDITIONAL BOUNDARY SURVEY AND INVESTIGATION MAY BE REQUIRED TO CONFIRM LOCATIONS OF PARCEL LINES AND EASEMENTS.

UTILITY NOTES

- 1. LOCATIONS OF UTILITIES AS SHOWN ARE APPROXIMATE AND MAY OR MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION THROUGH MISS UTILITY OF DELMARVA (800-282-8555) A MINIMUM OF 3 WORKING DAYS BEFORE THE START OF
- 2. THE NATURE AND EXACT LOCATION OF EXISTING UTILITIES MUST BE VERIFIED PRIOR TO INITIATING ANY ACTIVITY THAT MAY AFFECT THEIR USE OR LOCATION.
- 2.1. THE LOCATION OF THE EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON VISIBLY APPARENT SURFACE UTILITY FEATURES AND EXISTING UTILITY RECORDS AVAILABLE AT THE TIME THESE PLANS WERE PREPARED.
- 2.2. COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES AND STRUCTURES IS NOT GUARANTEED. 2.3. THE CONTRACTOR SHALL VERIFY LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES AND STRUCTURES BEFORE THE START

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY AGENCY AUTHORIZATIONS NOT PROVIDED BY THE TOWN UNDER THE CONTRACT AND SHALL MAINTAIN COMPLIANCE WITH ALL APPLICABLE CODES.
- 2. THESE CONSTRUCTION DRAWINGS ARE PREPARED FOR THE CONSTRUCTION OF NEW UNDERGROUND ELECTRIC TRANSMISSION LINES AND TIE-IN TO EXISTING TOWN OF SMYRNA UNDERGROUND ELECTRIC.
- 3. ALL DISTURBED RIGHT-OF-WAY AND PROPERTY CORNER MONUMENTATION SHALL BE REPLACED AND VERIFIED BY A REGISTERED / PROFESSIONAL LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
- 4. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO LOCATE PROPERTY LINES AND RIGHT-OF-WAY LINES PRIOR TO CONSTRUCTION AND AVOID CONSTRUCTION ACTIVITIES ON PRIVATE PROPERTY AND/OR RIGHTS-OF-WAYS WHERE SAID CONSTRUCTION IS PROHIBITED. THE CONTRACTOR MAY CONDUCT CONSTRUCTION ACTIVITIES ON PRIVATE PROPERTY PROVIDED WRITTEN PERMISSION FROM THE PROPERTY OWNER HAS BEEN OBTAINED PRIOR TO ACTIVITY AND THE CONTRACTOR HAS SUBMITTED A COPY OF SAID WRITTEN PERMISSION TO THE
- 5. A FINAL SET OF APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS SHALL BE MAINTAINED ON THE PROJECT SITE AT ALL TIMES. FAILURE TO COMPLY WITH THIS PROVISION SHALL BE CONSIDERED CAUSE TO STOP THE WORK.
- THE CONTRACTOR SHALL MAINTAIN ONE COMPLETE SET OF CONTRACT DRAWINGS ON WHICH HE SHALL NOTE, IN RED, THE ALIGNMENTS AND INVERTS OF ALL UNDERGROUND UTILITIES INSTALLED OR ENCOUNTERED DURING THE PROSECUTION OF THE WORK. ALL DISCREPANCIES BETWEEN THE PLAN LOCATIONS AND ELEVATIONS OF BOTH THE EXISTING AND PROPOSED UTILITIES SHALL BE SHOWN ON THE AS-BUILT DRAWINGS TO BE MAINTAINED BY THE CONTRACTOR IN THE FIELD.
- THE CONTRACTOR SHALL OPEN ONLY THAT SECTION OF TRENCH OR ACCESS PITS WHICH CAN BE BACKFILLED AND STABILIZED AT THE END OF EACH WORKING DAY. STEEL PLATES SHALL BE USED ON ANY TRENCH OR ACCESS PITS WHICH MUST REMAIN OPEN OVERNIGHT. THIS REQUIREMENT DOES NOT APPLY TO AREAS COMPLETELY CLOSED AND SECURE FROM VEHICULAR OR PEDESTRIAN TRAFFIC.
- 8. THE CONTRACTOR SHALL USE ONLY NEW MATERIALS, PARTS, AND PRODUCTS. ALL MATERIALS SHALL BE STORED SO AS TO ASSURE THE PRESERVATION OF THEIR QUALITY AND FITNESS FOR THE INTENDED WORK.
- 9. ROUTINE PERIODIC INSPECTIONS DURING CONSTRUCTION WILL BE PERFORMED BY THE OWNER/ENGINEER. THESE INSPECTIONS DO NOT RELIEVE THE CONTRACTOR FROM HIS OBLIGATION AND RESPONSIBILITY FOR CONSTRUCTING ALL WORK IN STRICT ACCORDANCE WITH ALL STANDARDS AND SPECIFICATIONS AND CONSTRUCTION DOCUMENTS.
- 10. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK,
- ALL NECESSARY SAFEGUARDS FOR SAFETY AND PROTECTION. 11. THE CONTRACTOR SHALL SOLICIT SPECIFIC REQUIREMENTS FROM DELMARVA POWER COMPANY RELATIVE TO THE REQUIREMENTS FOR WORKING AROUND AND UNDER THEIR OVERHEAD FACILITIES. IT IS LIKELY THAT CERTAIN ELECTRIC POLES ALONG THE PROJECT LIMITS MAY REQUIRE HOLDING AND BRACING DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH DELMARVA POWER COMPANY TO SCHEDULE THE REQUIRED HOLDING AND BRACING AS THE WORK PROGRESSES.
- 12. THE CONTRACTOR SHALL PROVIDE SEDIMENT CONTROL MEASURES TO PROTECT STOCKPILE AREAS AND STORAGE AREAS. ALL AREAS USED BY THE CONTRACTOR FOR STAGING OPERATIONS SHALL BE FULLY RESTORED BY THE CONTRACTOR UPON COMPLETION OF THE PROJECT. IF THE STAGING AREA IS PAVED, IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF THE STAGING AREA IS UNPAVED, IT SHALL BE RE-GRADED, TOPSOILED, SEEDED, AND MULCHED TO THE SATISFACTION OF THE ENGINEER. ALL COSTS ASSOCIATED WITH RESTORATION OF THE STAGING AREA SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE ENGINEER DETERMINES THAT A SATISFACTORY STAND OF GRASS DOES NOT EXIST AT THE TIME OF FINAL INSPECTION, ALL COSTS ASSOCIATED WITH RE-ESTABLISHING A SATISFACTORY STAND OF GRASS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 13. EQUIPMENT AND/OR STOCKPILE MATERIAL SHALL NOT BE STORED WITHIN THE DRIPLINE OF ANY TREE CANOPY.
- 14. THE CONTRACTOR SHALL PROVIDE TEMPORARY SEED AND MULCH FOR ALL AREAS WHERE SOIL IS EXPOSED AND SILT FENCE IS NOT SPECIFIED, BY THE CLOSE OF EACH BUSINESS DAY.
- 15. THE CONTRACTOR SHALL MAINTAIN PUBLIC ROADS AND STREETS IN A BROOM SWEPT CONDITION AT ALL TIMES.
- 16. STATE OF DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING THE EXCAVATION FOR STRUCTURES AND UTILITY LINES ON AND OFF SITE MUST BE REMOVED AND PROPERLY DISCARDED. ANY REMEDIAL ACTION REQUIRED IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 17. THE CONTRACTOR SHALL REMOVE AND IMMEDIATELY REPLACE, RELOCATE, RESET OR RECONSTRUCT ALL OBSTRUCTIONS IN THE WORK AREA, INCLUDING, BUT NOT LIMITED TO, MAILBOXES, SIGNS, LANDSCAPING, LIGHTING, PLANTERS, CULVERTS, DRIVEWAYS, PARKING AREAS CURBS, GUTTERS, FENCES, OR OTHER NATURAL OR MAN-MADE OBSTRUCTIONS, TRAFFIC CONTROL REGULATORY, WARNING AND INFORMATION SIGNS SHALL REMAIN FUNCTIONAL AND VISIBLE TO THE APPROPRIATE LANES OF TRAFFIC AT ALL TIMES, WITH THEIR RELOCATION KEPT TO A MINIMUM DISTANCE.
- 18. ALL DISTURBED AREAS NOT IN THE PAVEMENT SHALL BE TOP-SOILED (6" MINIMUM), FERTILIZED, SEEDED AND MULCHED. IF SOD IS USED CONTRACTOR SHALL GRADE TOPSOIL PRIOR TO PLACEMENT OF SOD TO ENSURE THAT SOD IS PLACED EVENLY WITHIN THE DISTURBED AREA TO RESTORE EXISTING GRADE UNLESS OTHERWISE INDICATED.
- 19. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REPLANTING IN-KIND OF ALL TREES NECESSARY TO PERFORM THE WORK ON THIS PROJECT. CLEARING OF TREES MUST BE APPROVED BY THE OWNER/ENGINEER.

- DELDOT CONSTRUCTION NOTES 1. WORK WITHIN THE DELDOT RIGHTS-OF-WAY SHALL COMPLY WITH THE PERMIT AUTHORIZATION AND REQUIREMENTS OF DELDOT.
- 2. ALL SIGNING, STRIPING AND MAINTENANCE OF TRAFFIC IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL FOLLOW THE GUIDELINES SHOWN IN THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE MUTCD) FOR STREETS AND HIGHWAYS (LATEST EDITION).
- 3. DESIGN AND INSTALLATION OF ALL PAVEMENT MARKINGS AND STRIPING SHALL BE AS OUTLINED IN THE LATEST VERSION OF THE DE MUTCD. FOR FINAL PERMANENT PAVEMENT MARKINGS:
- 3.1. EPOXY RESIN PAINT SHALL BE REQUIRED FOR LONG LINE STRIPING.

FOR FACILITIES IN THE RIGHTS-OF-WAY AND DELDOT STANDARD CONSTRUCTION DETAILS.

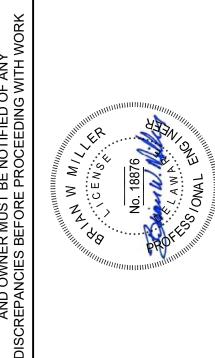
- 3.2. THERMO PLASTIC (EXTRUDED OR PREFORMED MATERIAL) WILL BE REQUIRED ON ASPHALT SURFACES, FOR SHORT LINE STRIPING, I.E. SYMBOLS/LEGENDS.
- 3.3. PERMANENT PAVEMENT MARKING TAPE (PER DELDOT APPROVED MATERIALS LIST) WILL BE REQUIRED ON CONCRETE SURFACES, FOR SHORT LINE STRIPING, I.E. SYMBOLS/LEGENDS.
- 4. ALL MATERIALS AND WORKMANSHIP WITHIN THE STATE OF DELAWARE RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH CURRENT STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SUPPLEMENTAL
- SPECIFICATIONS, STANDARD CONSTRUCTION DETAILS, SPECIAL PROVISIONS AND DESIGN GUIDANCE MEMORANDUMS. 5. ALL DISTURBED PEDESTRIAN FACILITIES ARE TO BE CONSTRUCTED TO THE CURRENT EDITION OF PEDESTRIAN ACCESSIBILITY STANDARDS

- 1. E.C. SHALL PROVIDE COMPLETE INSTALLATION OF MEDIUM VOLTAGE EXTENSION AS SHOWN ON PLAN DRAWINGS AND AS PER SPECIFICATIONS. THIS INCLUDES THE INSTALLATION OF NEW MEDIUM VOLTAGE CONDUIT DUCTBANKS, (3) HAND HOLES, (1) NEW MEDIUM VOLTAGE SECTIONALIZER & (1) NEW MEDIUM VOLTAGE THREE-PHASE PAD MOUNTED TRANSFORMER . THE INSTALLATION OF THE TRANSFORMER SECONDARY SERVICE TO THE NEW DELAWARE STATE BUILDING SHALL BE BY OTHERS.
- 2. THE TOWN OF SMYRNA WILL PROVIDE THE FOLLOWING, TO BE INSTALLED BY THE E.C., AND WILL LOAD ON THE CONTRACTOR'S TRUCK AT THE TOWN YARD: SECTIONALIZER, THREE-PHASE PAD-MOUNTED TRANSFORMER, ALL MV CABLES & ALL MV CABLE TERMINATIONS. REQUIRED FUSING SHALL BE PROVIDED & INSTALLED BY THE E.C. PER COORDINATION STUDY. E.C. SHALL PROVIDE A COORDINATION STUDY, ARC-FLASH HAZARD ANALYSIS & SHORT-CIRCUIT STUDY AS REQUIRED FOR THIS PROJECT WITH ALL REQUIRED LABELING.

I ECEND

	LEGEND	
EXISTING	PROPOSED	DESCRIPTION
TV		CABLE TV, JUNCTION BOX
①) 		CABLE TV, MANHOLE CABLE TV, UNDERGROUND
		CHANNEL
		COMMUNICATION, HANDHOLE
		COMMUNICATION, JUNCTION BOX COMMUNICATION, MANHOLE
ococ		COMMUNICATION, OVERHEAD
UCUC		COMMUNICATION, UNDERGROUND
-□- ♦		COMMUNICATION, WITNESS POST CONTROL, BENCHMARK
Δ		CONTROL, GPS
۵		CONTROL, MAPPING
Δ Δ		CONTROL, REFERENCE CONTROL, TRAVERSE
		CURB
		CURB DEPRESSION
		EDGE OF PAVEMENT
		EDGE OF GRAVEL
		EASEMENT
		FENCE FIBER OPTIC, HANDHOLE
		FIBER OPTIC, JUNCTION BOX
FO		FIBER OPTIC, MANHOLE
F0		FIBER OPTIC, UNDERGROUND FLOODPLAIN
<u>EL</u>		FUEL, MANHOLE
PUMP		FUEL, PUMP FUEL, UNDERGROUND
I I I		GUIDE RAIL
		NATURAL GAS, METER
(g) M		NATURAL GAS, MANHOLE NATURAL GAS,VALVE
		NATURAL GAS, UNDERGROUND
-0-		NATURAL GAS, WITNESS POST
-		POWER, GUY POLE POWER, GUY WIRE
		POWER, HANDHOLE
E.B.		POWER, JUNCTION BOX
Ö		POWER, LIGHT POWER, MANHOLE
OE		POWER, OVERHEAD
FB		POWER, PANEL BOX
E 7		POWER, PEDESTAL POWER, STUB OUT
7	团	POWER, TRANSFORMER
UE UE	— Е — Е —	— POWER, UNDERGROUND
Q		POWER, UTILITY POLE POWER, YARD LIGHT
· · · · · · · · · · · · · · · · · · ·		PROPERTY, LINE
		LEGAL RIGHT-OF-WAY
•		PROPERTY, CORNER FOUND PROPERTY, CORNER FOUND (OTHERS)
•		PROPERTY, CONCRETE MONUMENT
		PROPERTY, ADJOINING LINED
0		SITE, BOLLARD
		BUILDING SITE, POST
• •		SITE, POST SITE, SIGN POST AND BOARD
-0-		SITE, TRAFFIC SIGN
WaC		SOIL BOUNDARY SOIL LABEL
0	0	SANITARY SEWER, CLEAN-OUT
		SANITARY SEWER, FORCE MAIN
— s — s — s — ·	FM)	SANITARY SEWER, FORCE MAIN MANHO. SANITARY SEWER, LATERAL
<u> </u>	<u>S</u>	SANITARY SEWER, MANHOLE
s s	s s	SANITARY SEWER, UNDERGROUND
	y-4	SANITARY SEWER, VALVE STREAM
		STORM SEWER, INLET
		STORM SEWER, HEADWALL
		STORM SEWER, MANHOLE STORM SEWER, UNDERGROUND
		MINOR CONTOUR
100.5		MAJOR CONTOUR
(a) 100.5		SPOT ELEVATION TRAFFIC, JUNCTION BOX
TC		TRAFFIC, MANHOLE
		TRAFFIC, PEDESTAL
		TRAFFIC, PEDESTRIAN SIGNAL TRAFFIC, SIGNAL POLE
Y		UNIDENTIFIED, HANDHOLE
		UNIDENTIFIED, JUNCTION BOX
		UNIDENTIFIED, MANHOLE UNIDENTIFIED, OVERHEAD
UNID ——— UNID ———		UNIDENTIFIED, PANEL BOX
\bigcirc		UNIDENTIFIED, PEDESTAL
—— <i>UNID</i> ———— <i>UNID</i> ———		UNIDENTIFIED, UNDERGROUND UNIDENTIFIED, VALVE
Q		VEGETATION, SHRUB
. Modified		VEGETATION, DECIDUOUS
o market		VEGETATION, CONIFEROUS VEGETATION, TREE LINE
ά 		VEGETATION, TREE LINE WATER, HOSE BIB
-6-		WATER, FIRE HYDRANT
(W)		WATER, MANHOLE
		WATER, METER WATER, POST INDICATOR VALVE
⊗ ♦		WATER, SIAMESE CONNECTION
w		WATER, UNDERGROUND
		WATER, UNDERGROUND FIRE
F		WATER, VALVE
F — F — F — — — — — — — — — — — — — — —		WATER, VALVE WETLAND





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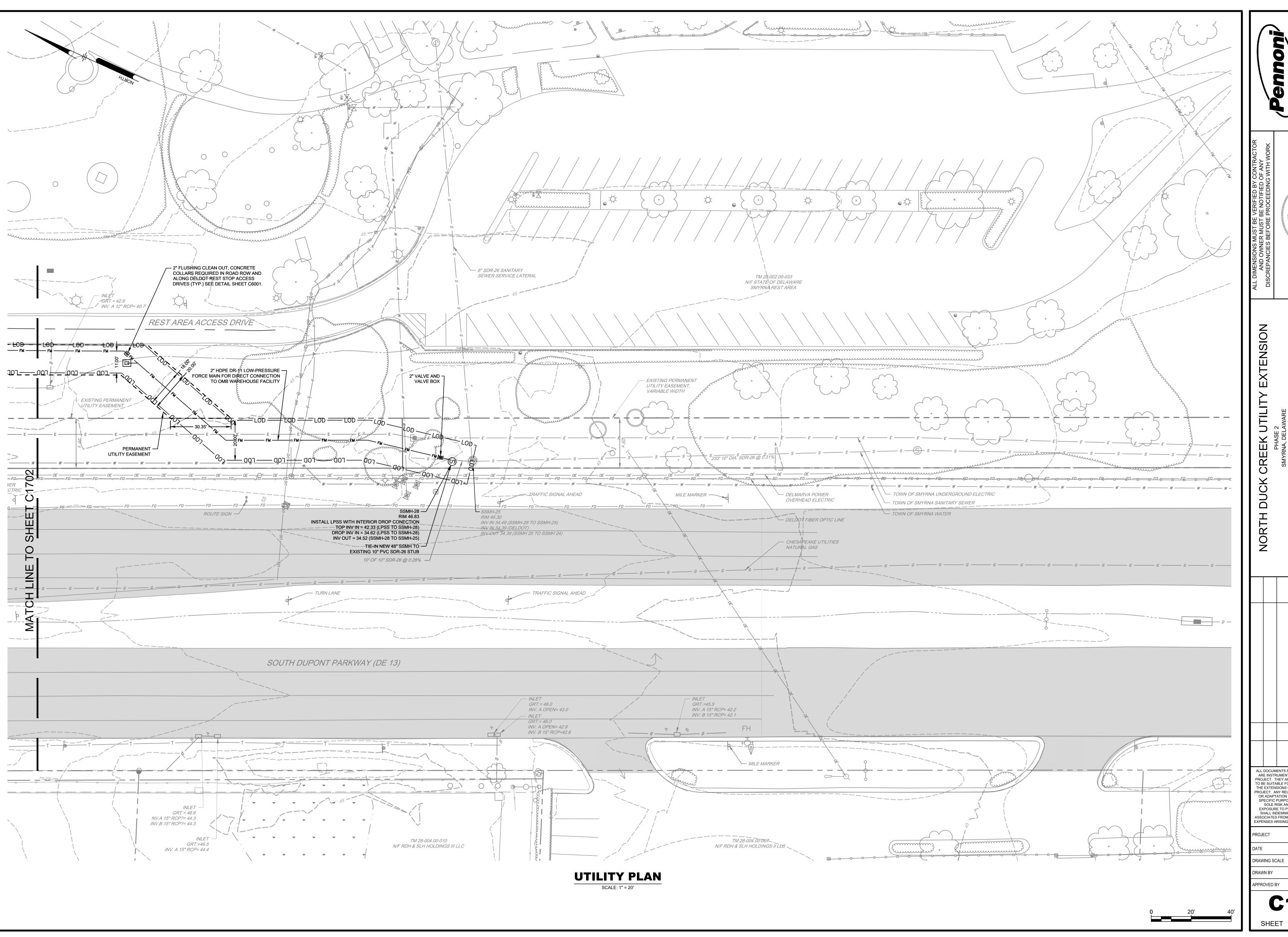
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				6/25/2024	7/21/2023	DATE
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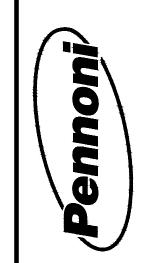
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PROJECT **SMYRN21004**

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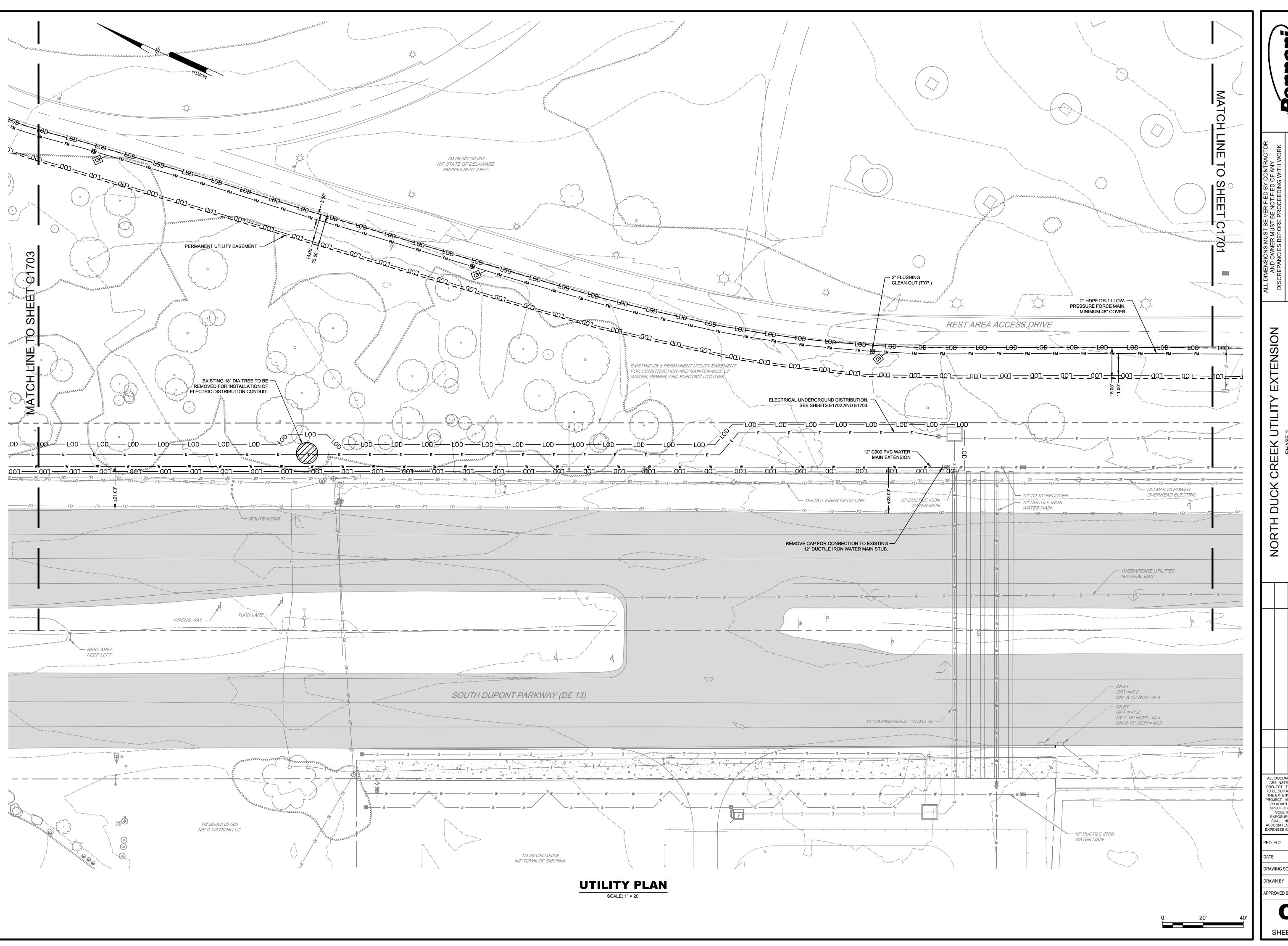
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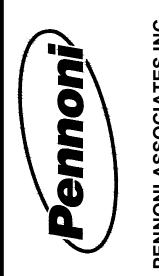




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SMYRN21004 2023-06-08 1"=20'





PENNONI ASSO
Christiana Execut
121 Continental Dr

No. 18876

PHASE 2
SMYRNA, DELAWARE

UTILITY PLAN

 5/25/2024
 2
 PER DELDOT COORDINATION
 EDJ

 7/21/2023
 1
 PER KENT CONSERVATION DISTRICT COMMENTS
 EDJ

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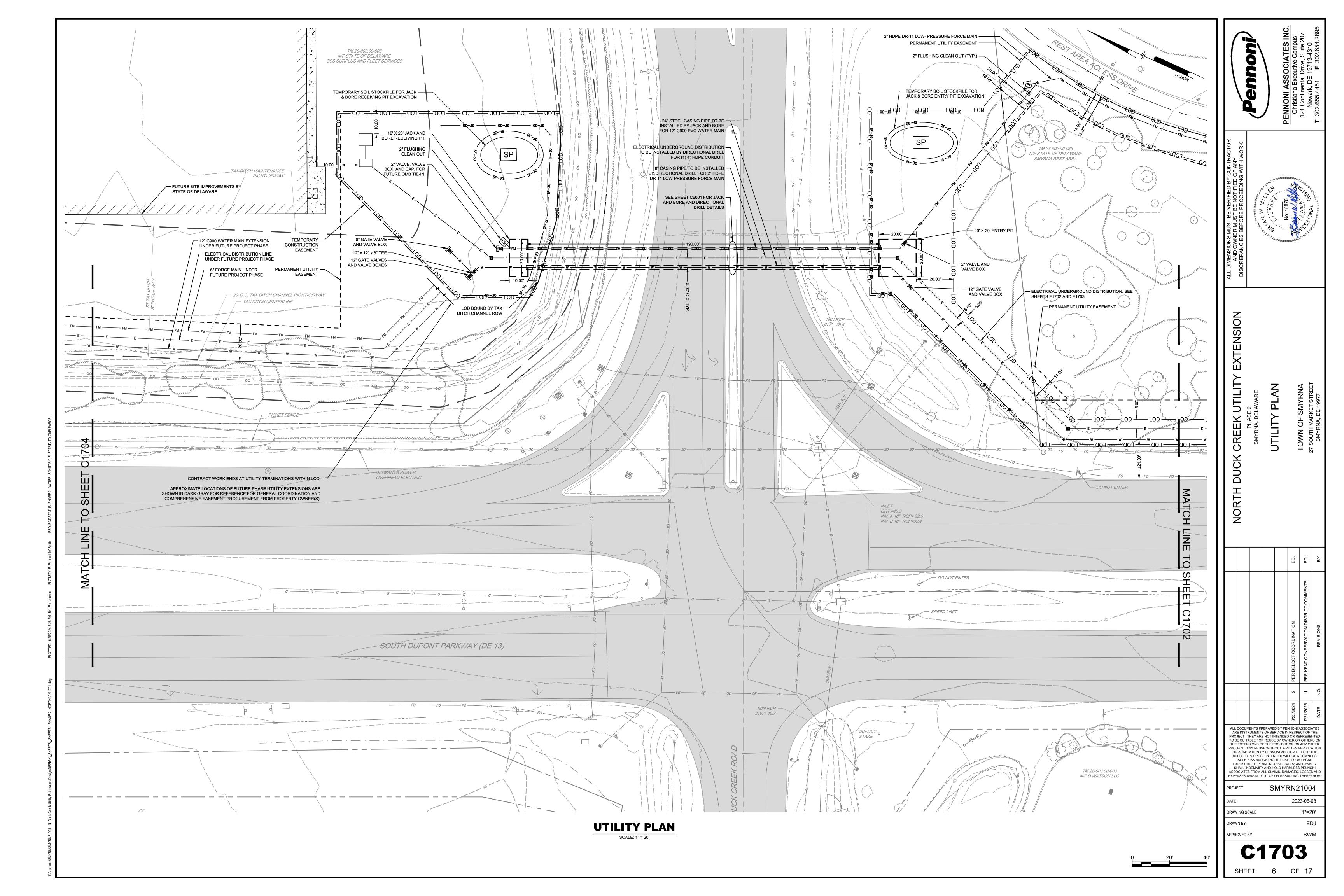
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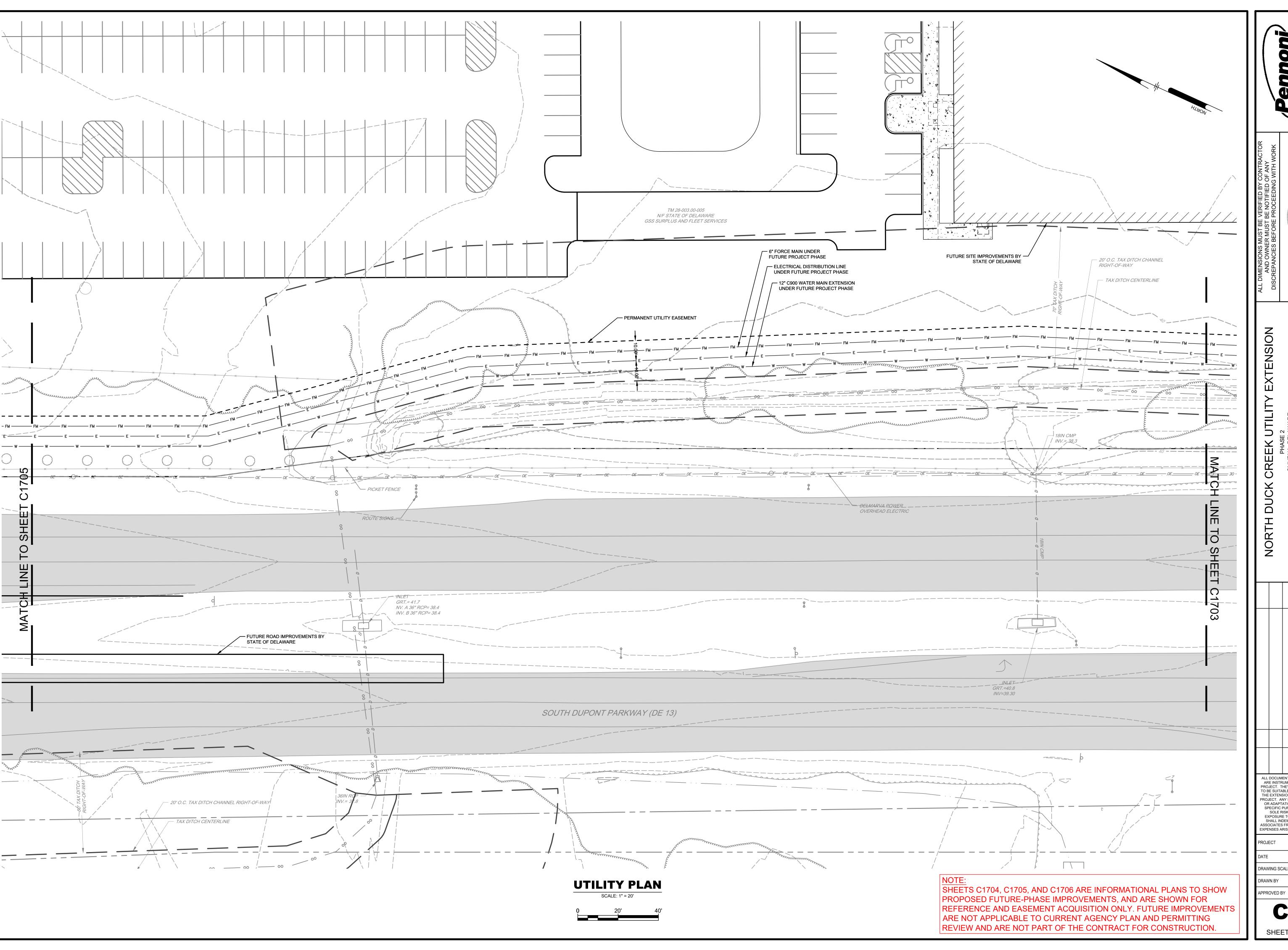
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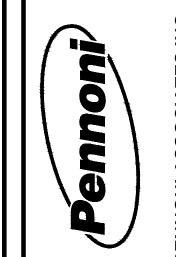
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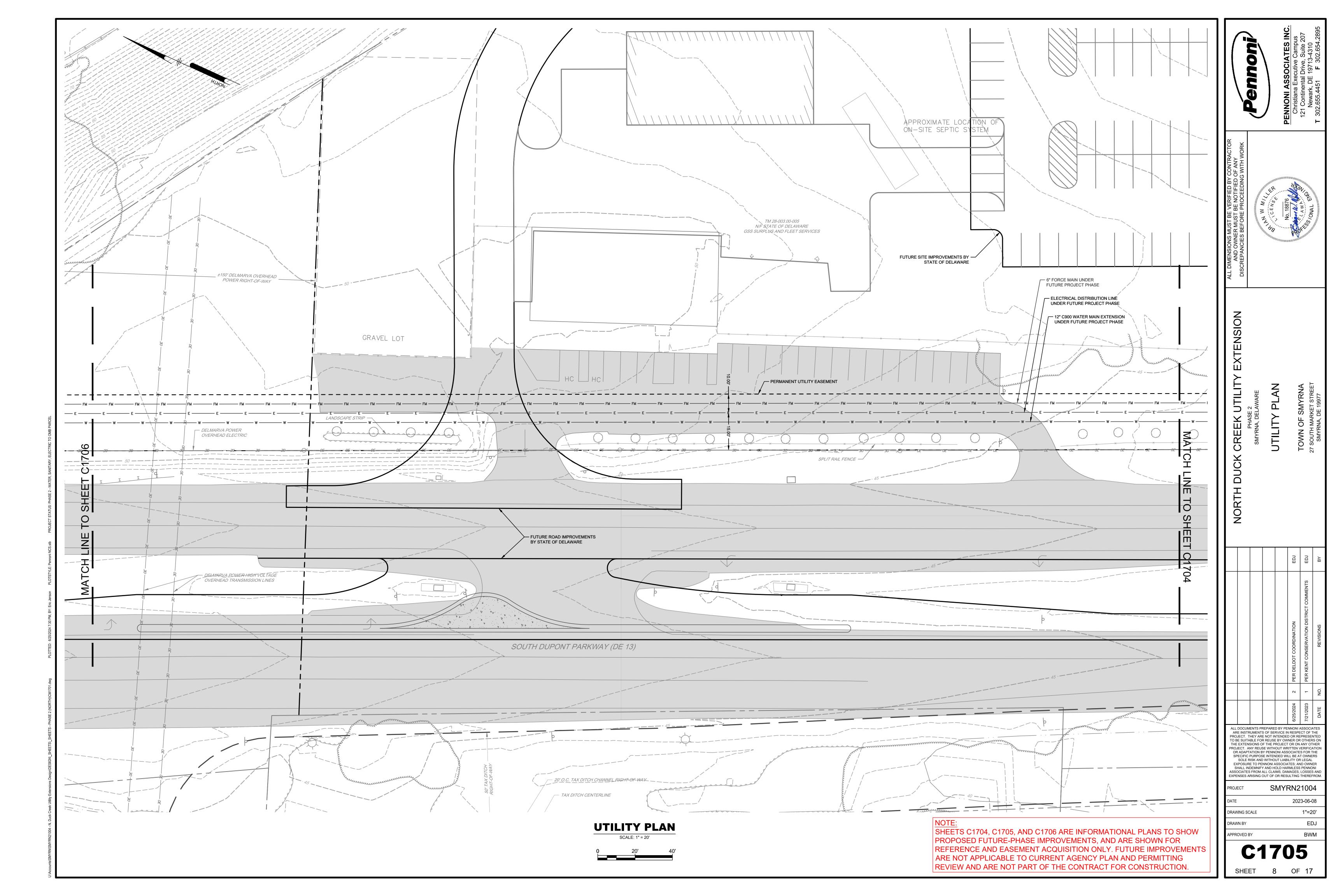


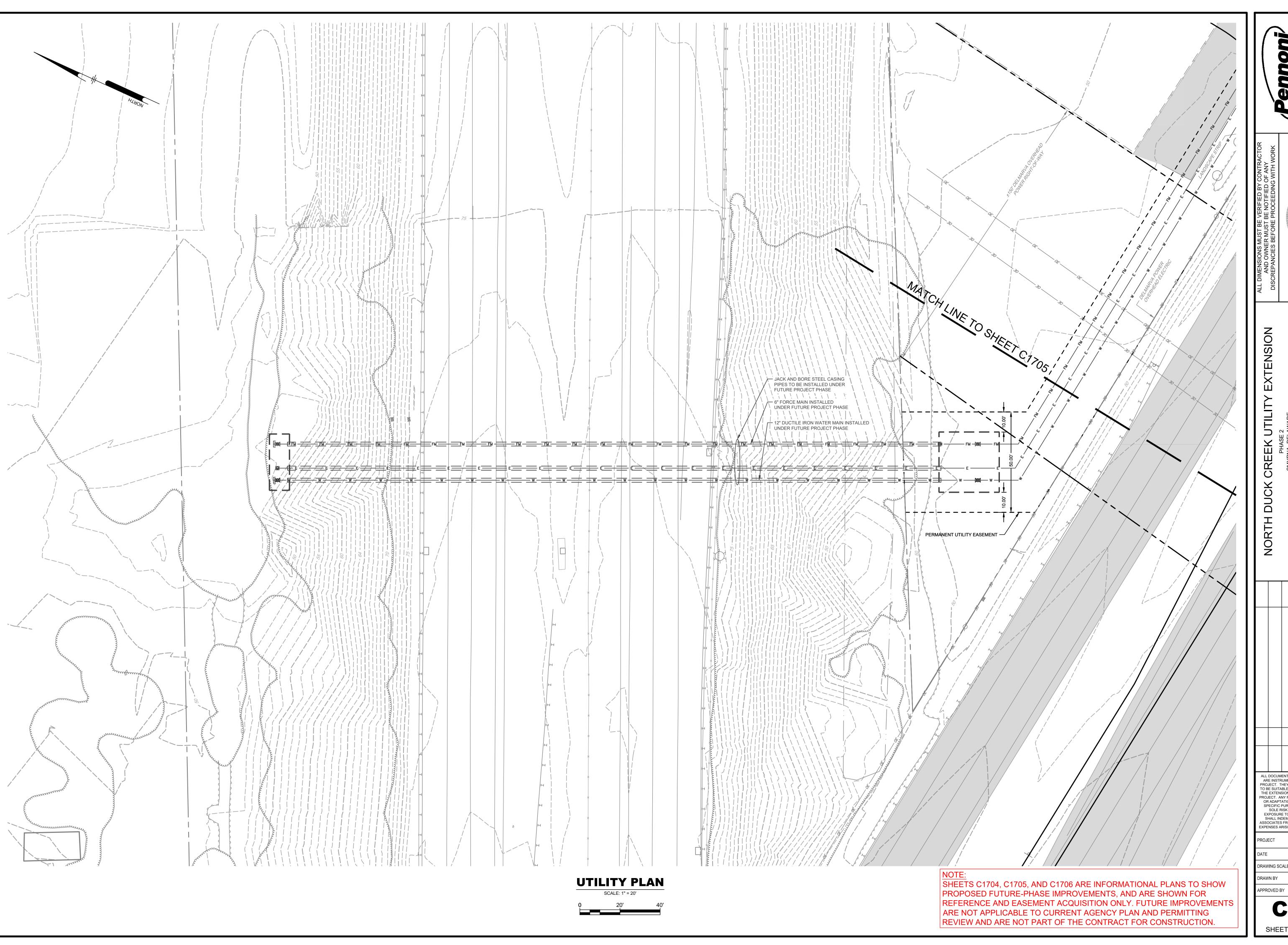


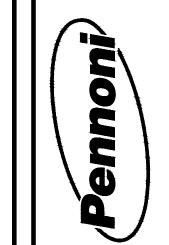


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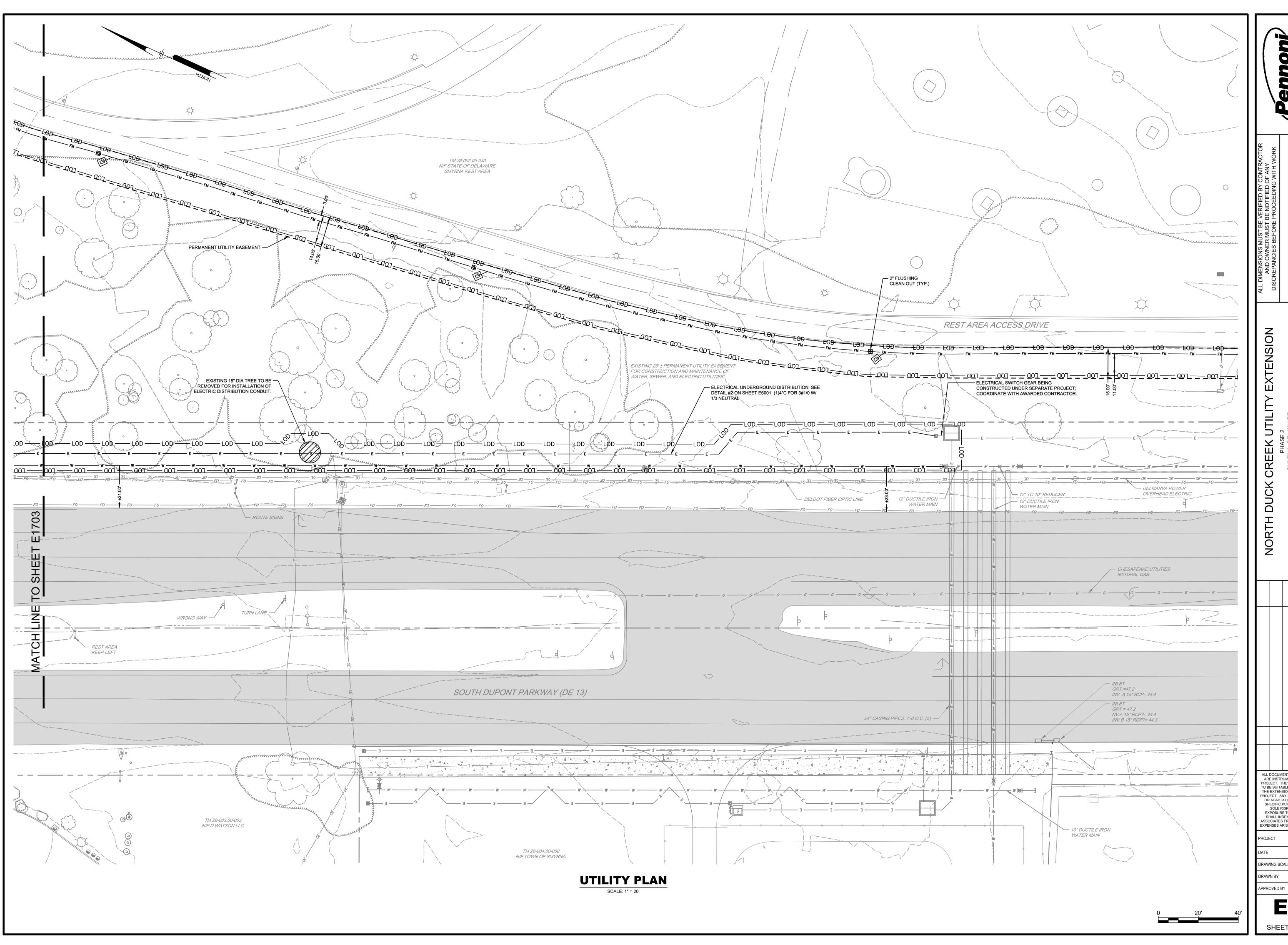




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C1706



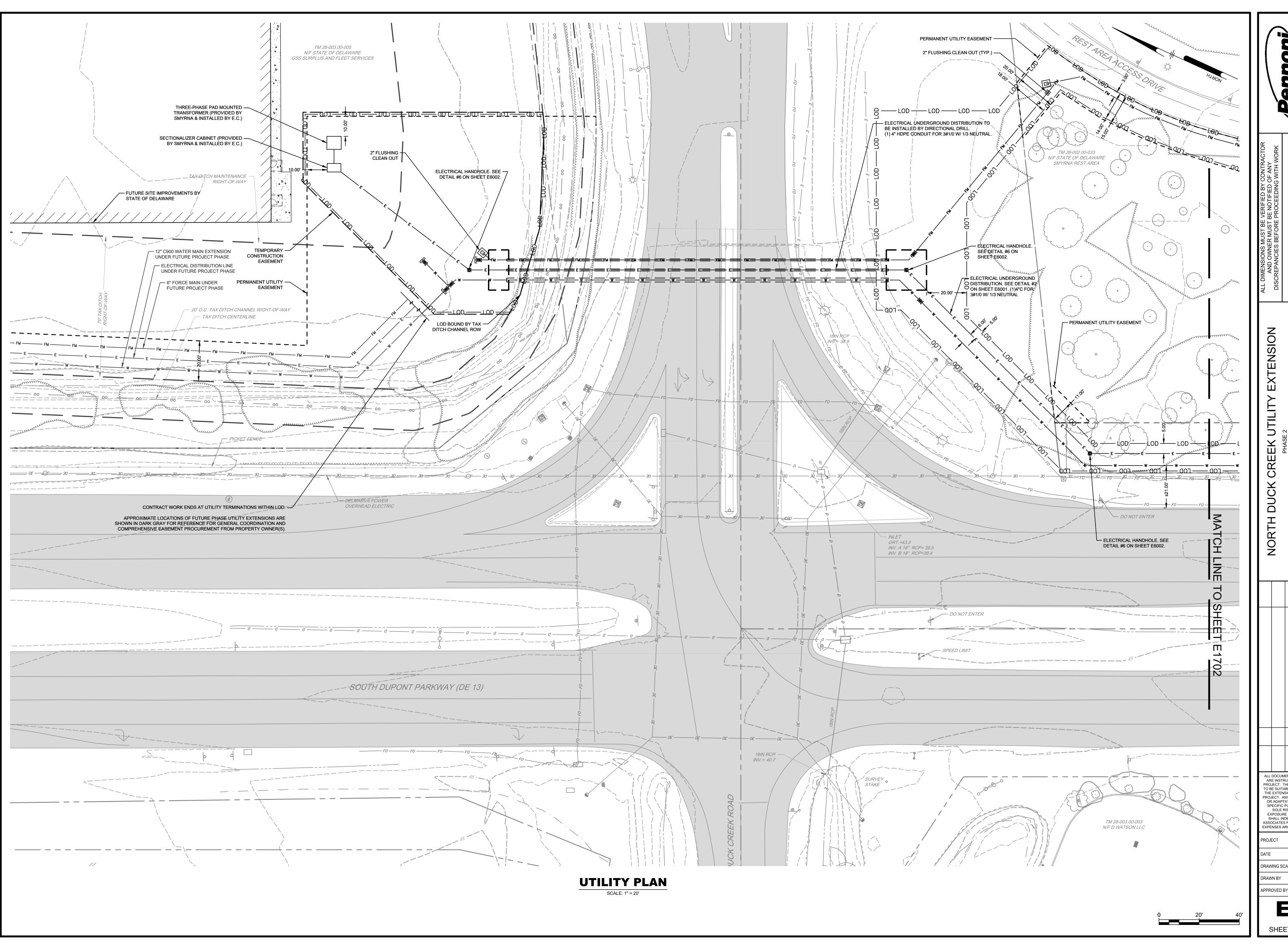
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SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM

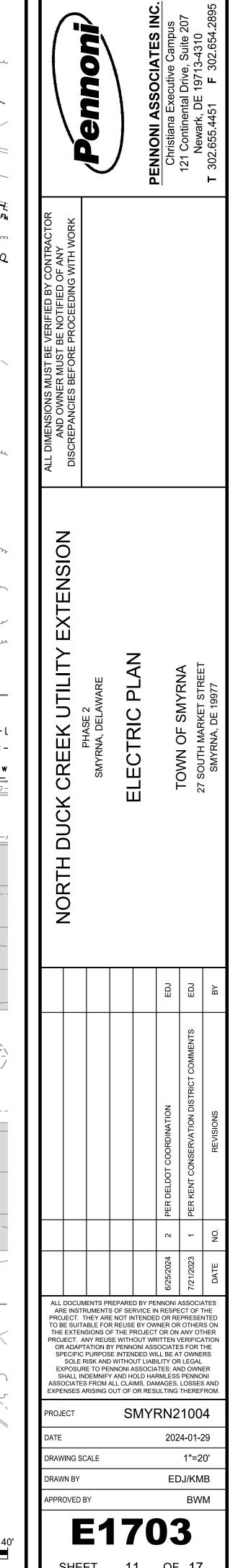
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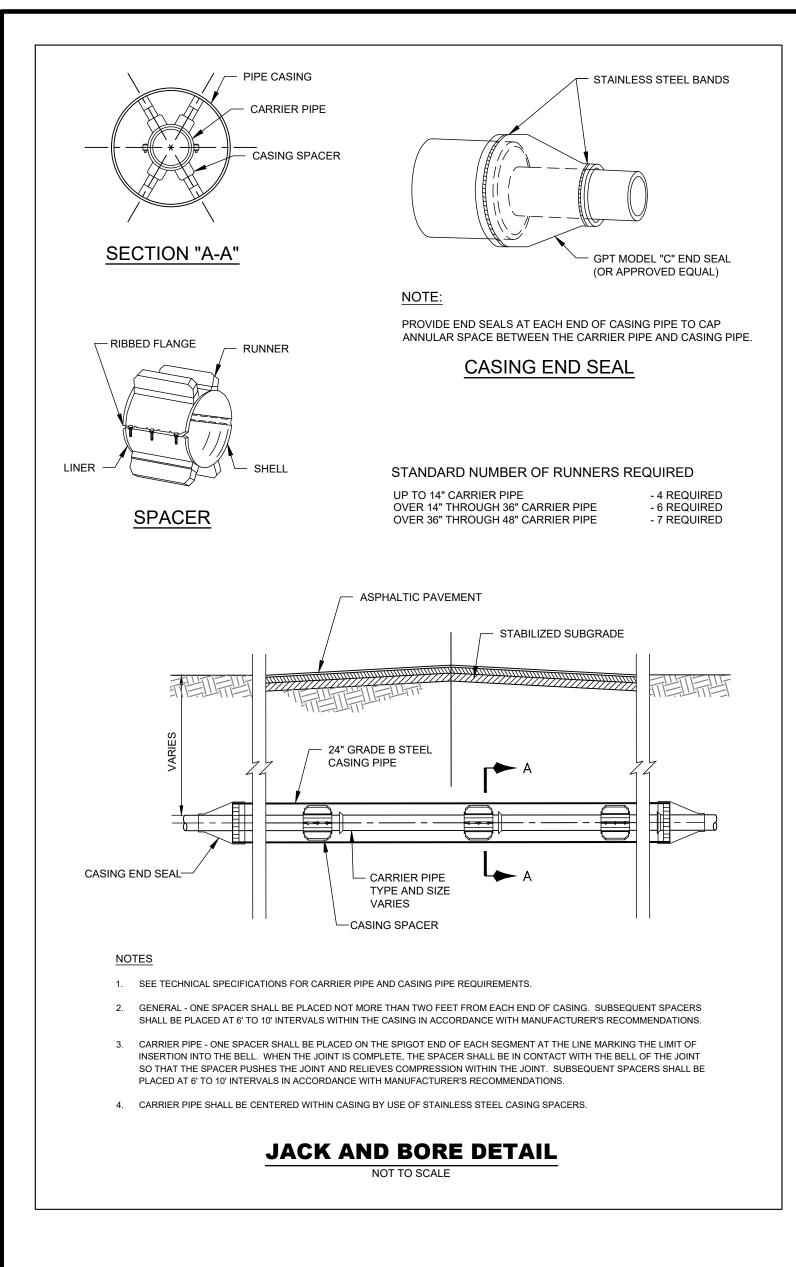
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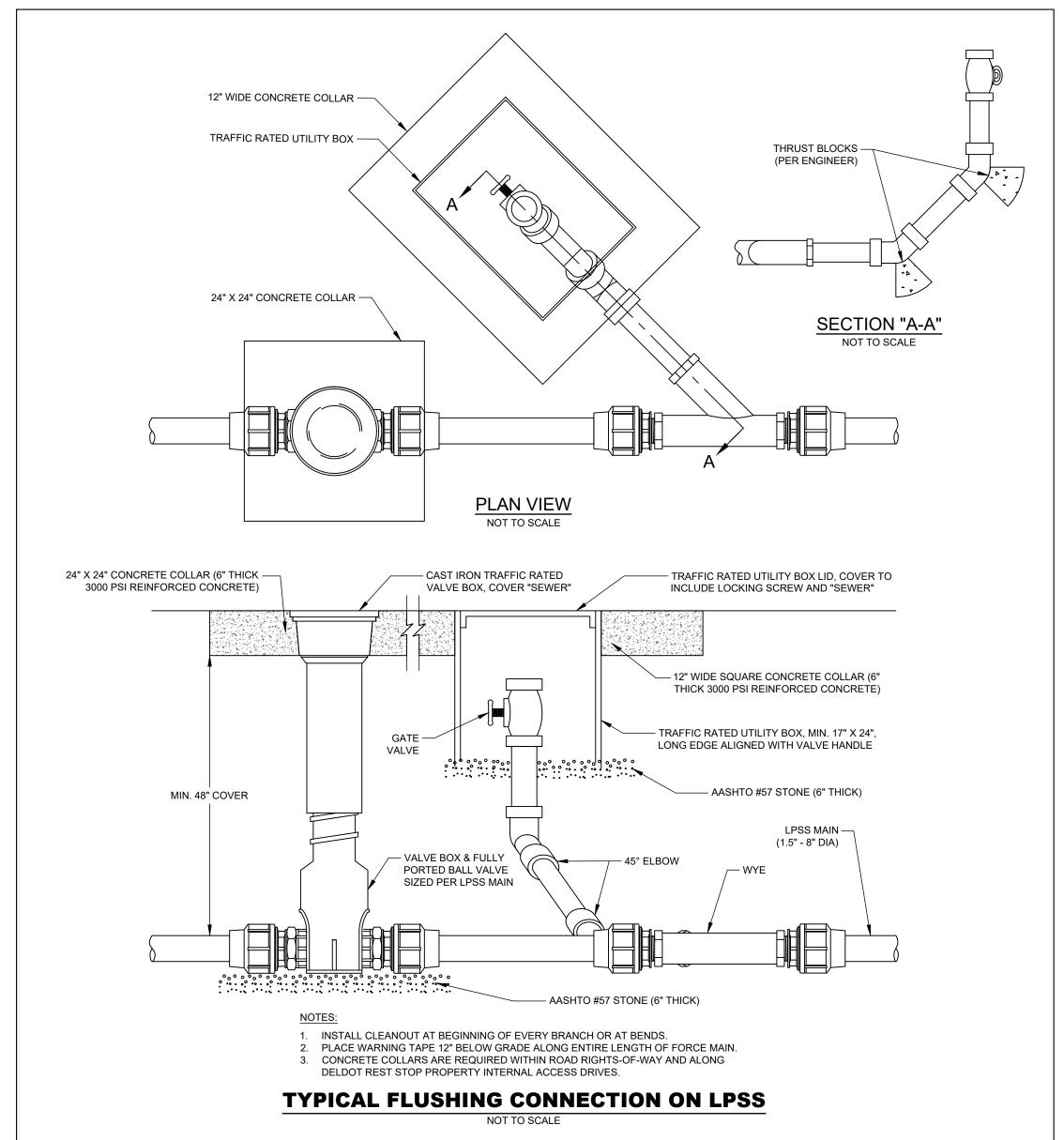
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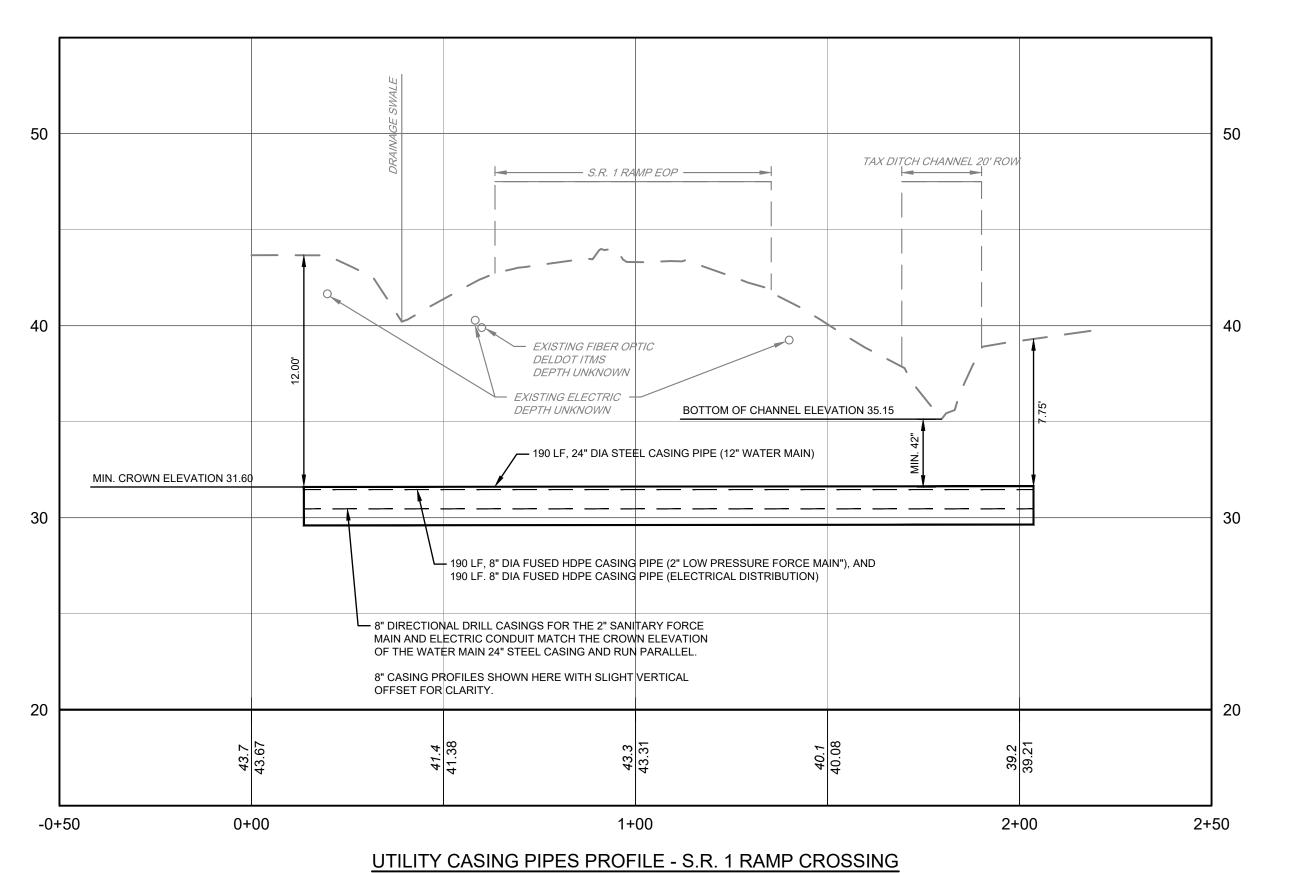
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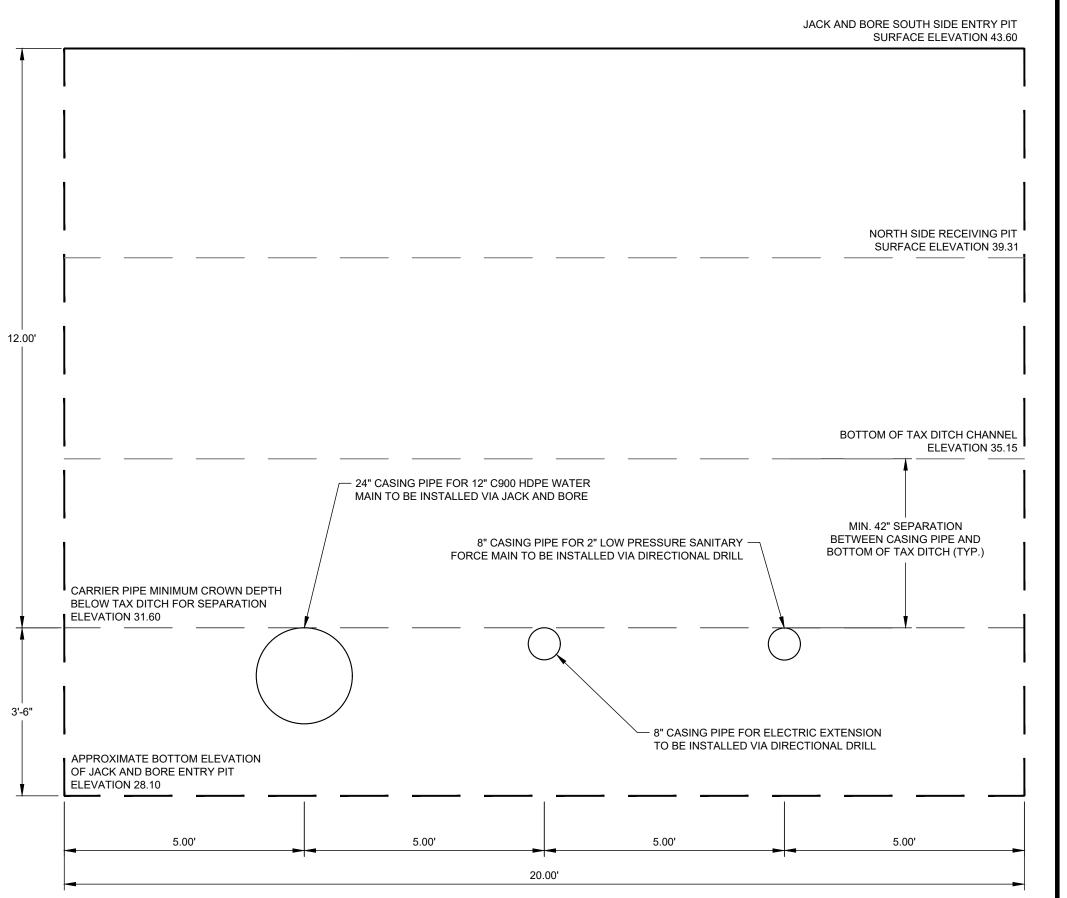
HORIZONTAL SCALE: 1" = 25' VERTICAL SCALE: 1" = 5'

CASING PIPE SIZE SCHEDULE CASING PIPE MATERIAL SIZE (IN) LENGTH (FT) CARRIER PIPE DESCRIPTION 0.375" WALL, GRADE-50 STEEL 24 190 12" FUSED HDPE C900 WATER MAIN 0.375" WALL, GRADE-50 STEEL 8 190 (1) 4" FUSED HDPE SDR-11 ELECTRIC DISTRIBUTION CONDUIT 0.375" WALL, GRADE-50 STEEL 8 190 2" FUSED HDPE SDR-11 LOW PRESSURE FORCE MAIN

CONSTRUCTION DETAILS FOR WATER AND SANITARY

OF SMYRNA STANDARD SPECIFICATIONS AND DETAILS.

SEWER WORK SHALL BE IN ACCORDANCE WITH THE TOWN



JACK AND BORE AND DIRECTIONAL DRILL PIT SECTION VIEW SOUTH SIDE ENTRY PIT STATE ROUTE 1 RAMP CROSSING

NOT TO SCALE

 CARRIER PIPES MAY REQUIRE 90 DEGREE OR DOUBLE 45 DEGREE TURN-UPS AT EACH SIDE OF JACK AND BORE CASING PIPES TO CONNECT TO UTILITY MAIN INSTALLATION DEPTHS. Pennoni

PENNONI ASSOCIATES
1900 Market Street, Suite 3
Philadelphia, PA 19103

AND OWNER MUST BE NOTIFIED OF ANY
SCREPANCIES BEFORE PROCEEDING WITH WORK

MILLIAM W M / CENST AND CENSTREE OF ANY

No. 18876

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ENSION

ONSTRUCTION DETAILS

2 PER DELDOT COORDINATION EDJ
1 PER KENT CONSERVATION DISTRICT COMMENTS EDJ
NO. REVISIONS BY

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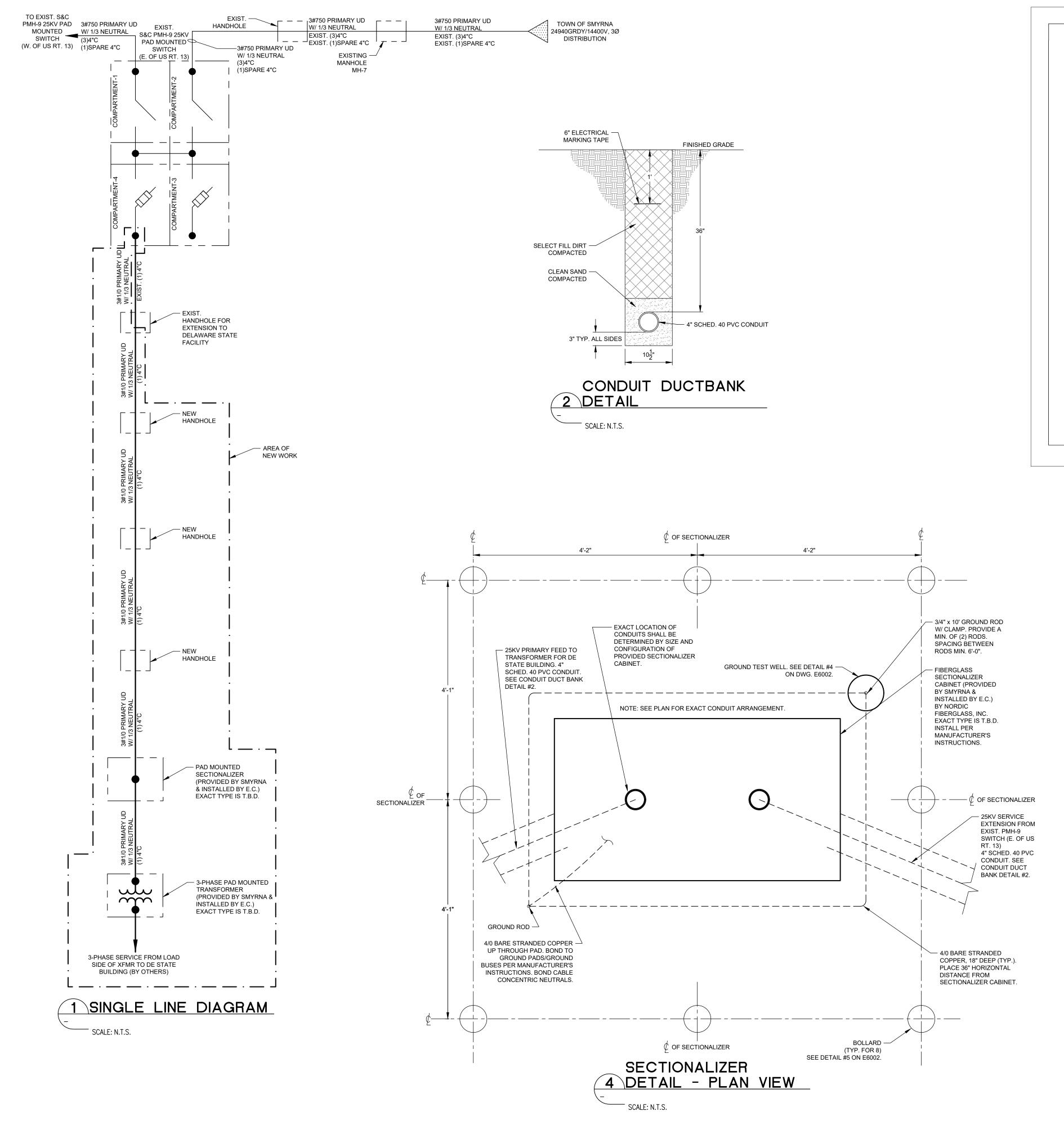
EXPENSES ARISING OUT OF OR RESULTING THEREFROM
ROJECT SMYRN21004

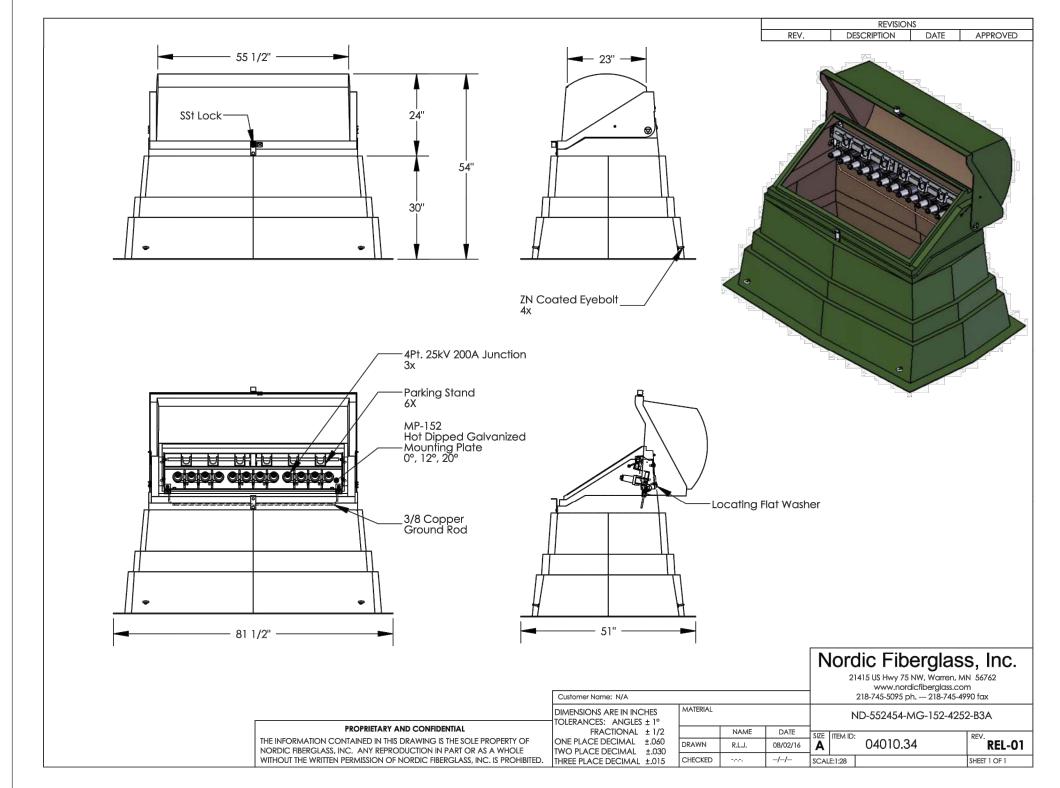
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DRAWING SCALE ---
DRAWN BY EDJ

C6001

SHEET 12 OF 1





NOTE:
THIS VENDOR DRAWING OF TYPICALLY USED NORDIC FIBERGLASS, INC. SECTIONALIZER IS PROVIDED FOR REFERENCE ONLY. E.C. SHALL REFER TO DRAWINGS FURNISHED WITH

NORDIC FIBERGLASS SECTIONALIZER 5 (FOR REFERENCE ONLY)

SCALE: N.T.S.

Nordic Cabinet Installation Instructions

Single & Three Phase Sectionalizing Cabinet Installation Instructions:

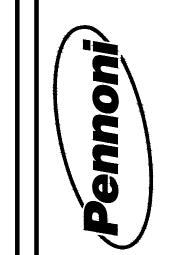
- Measure the bottom width and depth of the cabinet's flances
- 2. Measure 10" down from the top of the locking system, mark that spot.
- 3. Then measure from that spot to the bottom of the cabinet, that's the maximum burial depth.
- Dig a hole approximately 6" deeper than the maximum burial depth and 12" wider than the bottom flange dimensions of the cabinet.
- 5. Add 6" of gravel to the bottom of the hole, machine tamp and level it.
- 6. Close the cabinet lid and tighten the penta-head bolt(s).
- 7. Hook-up lifting slings to the cabinet's 4 eyebolts.
- 8. Lower the cabinet into the hole.
- 9. Using a level, ensure that the cabinet is level. If not level, add or remove gravel, re-tamp and level again.
- 10. Backfill with loose dirt, no chunks of dirt or rocks, no machine tamping.
- 11. Finish grade approximately 6" below locking system.
- 12. Unscrew the penta-head bolts and open the lid.



P.O. Box 27 Warren, MN 56762 Tel: 218-745-5095 Fax: 218-745-4990 www.nordicfiberglass.com

NORDIC FIBERGLASS SECTIONALIZER
6 INSTALLATION INSTRUCTIONS

SCALE: N.T.S.



MENSIONS MUST BE VERIFIED BY CONTRACTOR
AND OWNER MUST BE NOTIFIED OF ANY
REPANCIES BEFORE PROCEEDING WITH WORK

AILS

ELECTRIC DETAIL

NORTH

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PROJECT

SMYRN21004

DATE

2024-01-29

DRAWING SCALE

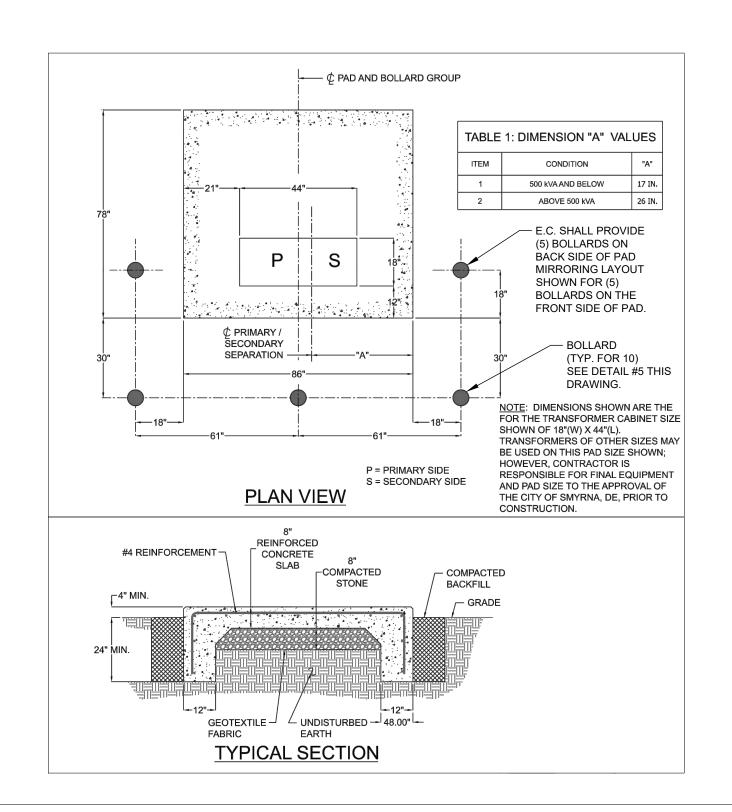
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APPROVED BY

BV

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SHEET 13 OF 17



GENERAL NOTES: NO WORK IS TO BEGIN UNTIL GRADING OF THE PROPERTY IS WITHIN 6 INCHES OF PREPARATION OF THIS STANDARD. FINAL GRADE AND THE PROPER EASEMENTS ARE SECURED.

- INSPECTION BY THE TOWN OF SMYRNA ELECTRIC DEPARTMENT, (302-653-3493) SHALL BE REQUIRED PRIOR TO PLACEMENT OF CONCRETE FOR THE TRANSFORMER FOUNDATION PAD.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR: 3.1. PLACEMENT OF THE PRIMARY CONDUIT, METERING CONDUIT AND GROUNDING
- REQUIREMENTS. 3.2. THE FORMING AND PLACEMENT OF THE PAD.
- 3.3. THE PLACEMENT OF SECONDARY CONDUIT 3.4. THE PLACEMENT OF PROTECTIVE BOLLARDS
- 3.5. THE VERIFICATION OF NO EXISTING 3.6. UNDERGROUND UTILITIES OR FACILITIES.
- TRANSFORMER FOUNDATION PAD SHALL 4.1. BE PLACED ON WELL COMPACTED AND NON-ORGANIC MATERIAL 4.2. HAVE A MINIMUM CONCRETE COMPRESSIVE STRENGTH OF 3,000 PSI, AT 28 DAYS.
- 4.3. HAVE CONCRETE AIR ENTRAINED, RANGING BETWEEN 3% AND 6% AIR BY VOLUME, AND A SLUMP TO NOT EXCEED 4 INCHES. 4. HAVE DOCUMENTA SMYRNA CERTIFYING THE CONCRETE COMPRESSIVE STRENGTH, AIR
- ENTRAINMENT, AND SLUMP. 4.5. BE PLACED WITHIN A TOLERANCE OF 1/8 INCH FROM LEVEL AND NOT ALLOW

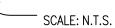
PAD SHALL CONTAIN #4 REBAR, GRADE 60, PLACED AT 12 INCHES ON CENTERS IN

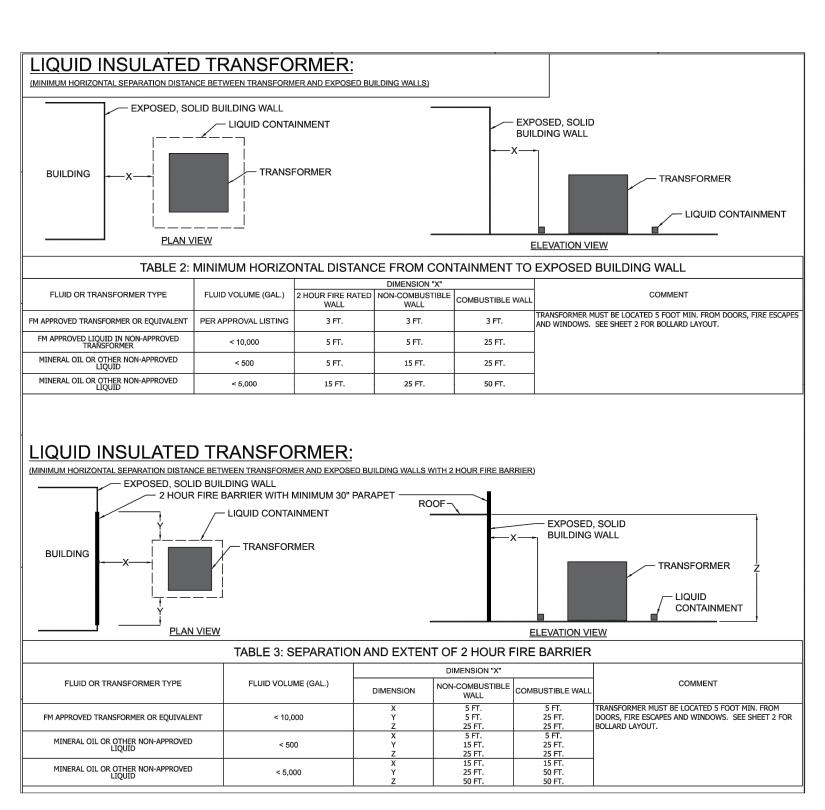
- 4.6. HAVE A 3/4 INCH CHAMFER ON ALL EXPOSED EDGES.
- BOTH DIRECTIONS. REINFORCEMENT SHALL HAVE THE FOLLOWING CLEARANCES: 2 INCHES FROM TOP FACE OF SLAB. 2 INCHES FROM FACE OF EXPOSED FACE OF SLAF
- 3 INCHES FROM ALL FACES BELOW GRADE, EXPOSED TO EARTH. SECONDARY CONDUIT(S) SHALL BE SIZED IN ACCORDANCE WITH NEC FOR THE INTENDED CONDUCTORS AND SHALL EXTEND 2 INCHES ABOVE THE SURFACE OF
- THE PAD. SECONDARY SIDE OF THE PAD SHALL BE THE RIGHT SIDE OF THE OPENING, FACING THE FRONT (DOOR SIDE) OF THE ENCLOSURE. BOLLARDS SHALL BE:
- 7.1. A MINIMUM OF 6 INCH DIAMETER, FILLED WITH CONCRETE. 7.2. EMBEDDED IN A CONCRETE FOUNDATION, 12 INCH DIAMETER. 7.3. A MINIMUM OF 36 INCHES BELOW FINISHED GRADE.

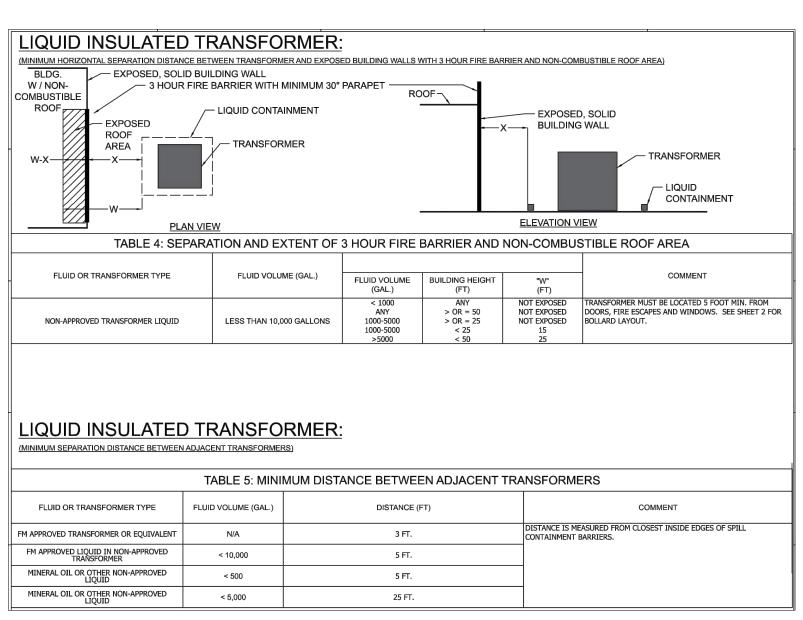
7.4. A MINIMUM HEIGHT OF 48 INCHES ABOVE FINISHED GRADE.

- REFERENCE DOCUMENTS:
 THE FOLLOWING DOCUMENTS AND NOTES ARE USED AS REFERENCE IN THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 1.1. NFPA 70 - NATIONAL ELECTRIC CODE 2020: SECTION 450.22 DRY-TYPE TRANSFORMERS INSTALLED OUTDOORS:
 - DRY-TYPE TRANSFORMERS INSTALLED OUTDOORS SHALL HAVE A WEATHERPROOF ENCLOSURE. TRANSFORMERS EXCEEDING 112 12 KVA SHALL NOT BE LOCATED WITHIN 300 MM (12 IN.) OF COMBUSTIBLE MATERIALS OF BUILDINGS UNLESS THE TRANSFORMER HAS CLASS 155 INSULATION SYSTEMS OR HIGHER AND IS COMPLETELY ENCLOSED EXCEPT
 - <u>SECTION 450.23 LESS-FLAMMABLE LIQUID-INSULATED TRANSFORMERS.</u> TRANSFORMERS INSULATED WITH LISTED LESS-FLAMMABLE LIQUIDS THAT HAVE A FIRE POINT OF NOT LESS THAN 300°C SHALL BE PERMITTED TO BE
 - INSTALLED IN ACCORDANCE WITH 450.23(A) OR 450.23(B).
 - SECTION 450.23 (B) OUTDOOR INSTALLATIONS:
 - LESS-FLAMMABLE LIQUID-FILLED TRANSFORMERS SHALL BE PERMITTED TO E INSTALLED OUTDOORS, ATTACHED TO, ADJACENT TO, OR ON THE ROOF OF BUILDINGS, IF INSTALLED IN ACCORDANCE WITH (1) OR (2)
 - (1) FOR TYPE I AND TYPE II BUILDINGS, THE INSTALLATION SHALL COMPLY WITH ALL RESTRICTIONS PROVIDED FOR IN THE LISTING OF THE LIQUID.
 - INFORMATIONAL NOTE: INSTALLATIONS ADJACENT TO COMBUSTIBLE MATERIAL, FIRE ESCAPES, OR DOOR AND WINDOW OPENINGS MAY REQUIRE ADDITIONAL SAFEGUARDS SUCH AS THOSE LISTED IN 450.27. (2) IN ACCORDANCE WITH 450.27:
- INFORMATIONAL NOTE NO. 1: AS USED IN THIS SECTION, TYPE I AND TYPE II BUILDINGS REFERS TO TYPE I AND TYPE II BUILDING CONSTRUCTION AS DEFINED IN NFPA 220-2018, STANDARD ON TYPES OF BUILDING CONSTRUCTION. COMBUSTIBLE MATERIALS REFERS TO THOSE MATERIALS NOT CLASSIFIED AS NONCOMBUSTIBLE OR LIMITED-COMBUSTIBLE AS
- INFORMATIONAL NOTE NO. 2: SEE DEFINITION OF LISTED IN ARTICLE 100. 450.27 OIL-INSULATED TRANSFORMERS INSTALLED OUTDOORS:
- COMBUSTIBLE MATERIAL, COMBUSTIBLE BUILDINGS, AND PARTS OF BUILDINGS, FIRE ESCAPES, AND DOOR AND WINDOW OPENINGS SHALL BE SAFEGUARDED FROM FIRES ORIGINATING IN OIL-INSULATED TRANSFORMERS INSTALLED ON ROOFS, ATTACHED TO OR ADJACENT TO A BUILDING OR COMBUSTIBLE MATERIAL.
- IN CASES WHERE THE TRANSFORMER INSTALLATION PRESENTS A FIRE HAZARD, ONE OR MORE OF THE FOLLOWING SAFEGUARDS SHALL BE APPLIED ACCORDING TO THE DEGREE OF HAZARD INVOLVED:
- 1). SPACE SEPARATIONS 2.) FIRE-RESISTANT BARRIERS
- 3.) AUTOMATIC FIRE SUPPRESSION SYSTEMS 4.) ENCLOSURES THAT CONFINE THE OIL OF A RUPTURED TRANSFORMER
- DIKES, CURBED AREAS OR BASINS, OR TRENCHES FILLED WITH COARSE, CRUSHED STONE. OIL ENCLOSURES SHALL BE PROVIDED WITH TRAPPED DRAINS WHERE THE EXPOSURE AND THE QUANTITY OF OIL INVOLVED ARE SUCH THAT REMOVAL OF OIL IS IMPORTANT.
- 2. 2020 NEC REQUIREMENT GUIDELINES REFERENCE DATA TD900001EN, EFFECTIVE OCTOBER 2021; 2020 NEC REQUIREMENT GUIDELINES FOR THE INSTALLATION OF LISTED LESS-FLAMMABLE LIQUID-FILLED TRANSFORMERS.

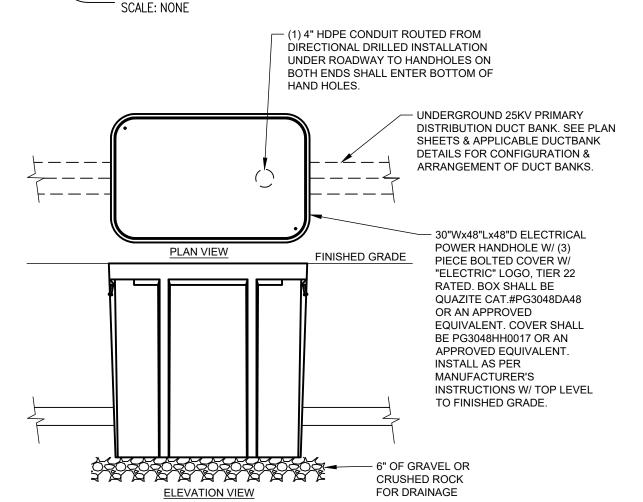
PAD MTD. TRANSFORMER 1 DETAIL & NOTES





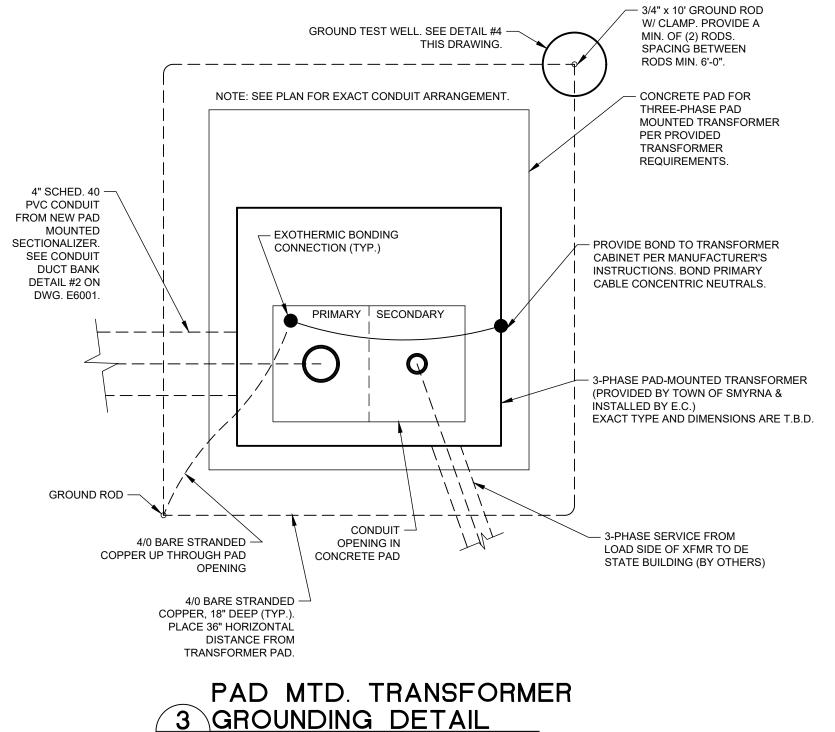


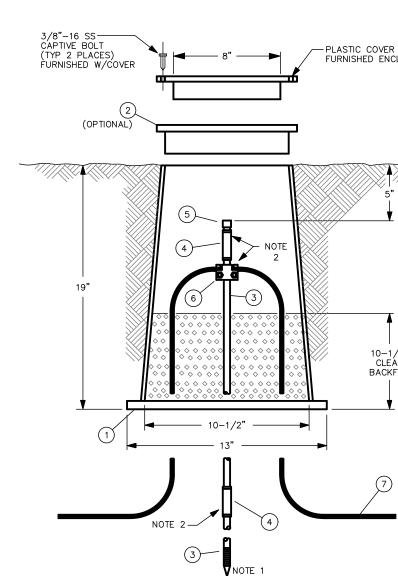




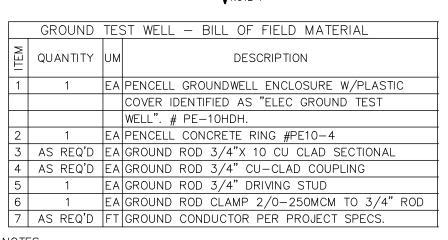


SCALE: N.T.S.

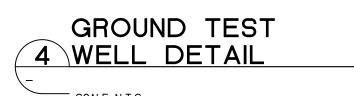


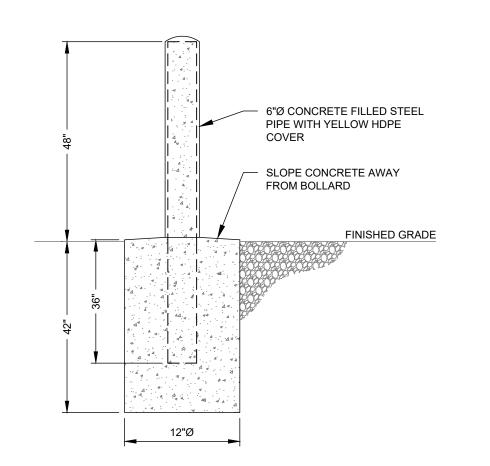


SCALE: N.T.S.



1 DEPTH OF GROUND ROD SHALL BE AS REQUIRED TO MEET PROJECT GROUND RESISTANCE SPECIFICATIONS. 2 CLEAN SURFACES AND APPLY COPPER/STEEL JOINT COMPOUND.





COVERED CONCRETE 5 BOLLARD DETAIL

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SCALE: N.T.S.

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SHEET 14 OF 17

SEDIMENT AND STORMWATER CONSTRUCTION NOTES:

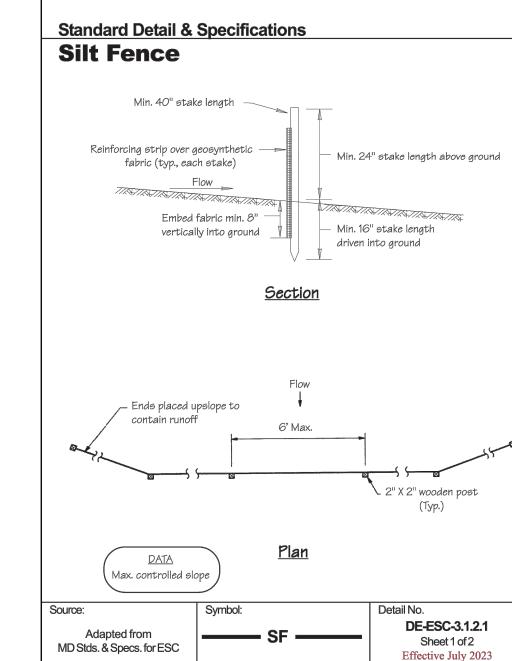
- THE KENT CONSERVATION DISTRICT MUST BE NOTIFIED IN WRITING FIVE (5) DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER PLAN.
- REVIEW AND OR APPROVAL OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS. NOR SHALL IT RELIEVE THE CONTRACTOR FOR ERRORS OR OMISSIONS IN THE APPROVED PLAN.
- IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY THE KENT CONSERVATION DISTRICT
- FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT
- ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST
- AT ANY TIME A DEWATERING OPERATION IS USED, IT SHALL BE PREVIOUSLY APPROVED BY THE AGENCY CONSTRUCTION SITE REVIEWER FOR A NON-EROSIVE POINT OF DISCHARGE, AND A DEWATERING PERMIT SHALL BE APPROVED BY THE DNREC WELL PERMITTING BRANCH.
- APPROVED PLANS REMAIN VALID FOR 5 YEARS FROM THE DATE OF APPROVAL.
- POST CONSTRUCTION VERIFICATION DOCUMENTS ARE TO BE SUBMITTED TO THE KENT CONSERVATION DISTRICT WITHIN 60-DAYS OF STORMWATER
- APPROVAL OF A SEDIMENT AND STORMWATER PLAN DOES NOT GRANT OR IMPLY A RIGHT TO DISCHARGE STORMWATER RUNOFF. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ACQUIRING ANY AND ALL AGREEMENTS, EASEMENTS, ETC.. NECESSARY TO COMPLY WITH THE STATE DRAINAGE AND OTHER APPLICABLE LAWS.
- 10. THE NOTICE OF INTENT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER A NPDES GENERAL PERMIT FOR THIS PROJECT IS #_____. AT ANY TIME THE OWNERSHIP FOR THIS PROJECT CHANGES, A TRANSFER OF AUTHORIZATION OR A CO-PERMITTEE APPLICATION MUST BE SUBMITTED TO DNREC. THE PERMITTEE OF RECORD SHALL NOT BE RELIEVED OF THEIR RESPONSIBILITIES UNTIL A NOTICE OF TERMINATION HAS BE PROCESSED BY DNCREC.
- THE OWNER SHALL BE FAMILIAR WITH AND COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION GENERAL PERMIT ASSOCIATED WITH THE PROJECT, INCLUDING, BUT NOT LIMITED TO, PERFORMING WEEKLY SITE INSPECTIONS DURING CONSTRUCTION AND AFTER RAIN EVENTS, AND MAINTAINING WRITTEN LOGS OF THESE INSPECTIONS.
- 12. BEFORE ANY EARTHWORK OR EXCAVATION TAKES PLACE, THE CONTRACTOR SHALL CALL MISS UTILITY AT 811 OR 1-800-282-8555 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. TO HAVE ALL EXISTING UTILITIES MARKED ONSITE.
- 13. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHALL BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL THE SEDIMENT FROM LEAVING THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION. THE CONTRACTOR MAY NEED TO ADJUST OR ALTER MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE INSPECTOR.
- 14. BEST AVAILABLE TECHNOLOGY (BAT) SHALL BE EMPLOYED TO MANAGE TURBID DISCHARGES IN ACCORDANCE WITH REQUIREMENTS OF 7. DEL C. CH 60, REGULATIONS GOVERNING THE CONTROL OF WATER POLLUTION, SECTION 9.1.02, KNOWN AS SPECIAL CONDITIONS FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES, AND DEPARTMENT POLICIES, PROCEDURES, AND GUIDANCE.
- 15. DOCUMENTATION OF SOIL TESTING AND MATERIALS USED FOR TEMPORARY OR PERMANENT STABILIZATION INCLUDING BUT NOT LIMITED TO SOIL TEST RESULTS, SEED TAGS, SOIL AMENDMENT TAGS, ETC. SHALL BE PROVIDED TO THE CONSERVATION DISTRICT TO VERIFY THAT THE PERMANENT OR TEMPORARY STABILIZATION HAS BEN COMPETED IN ACCORDANCE WITH THE APPROVED PLAN. THE KENT CONSERVATION DISTRICT MAY REQUIRE ADDITIONAL SOIL TESTING AND REAPPLICATION OF PERMANENT OR TEMPORARY TABULATION.
- 16. DNREC AND THE KENT CONSERVATION DISTRICT SHALL HAVE THE RIGHT TO ENTER PRIVATE PROPERTY FOR THE PURPOSES OF PERIOD SITE
- 17. A PRE-CONSTRUCTION MEETING MUST BE HELD BEFORE ANY EARTH DISTURBING ACTIVITY BEGINS. THE MEETING MUST BE ATTENDED BY THE OWNER'S REPRESENTATIVE, CONTRACTOR, CCR (IF REQUIRED FOR THE SITE), AND KENT CONSERVATION DISTRICT INSPECTOR.
- 18. IT SHALL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR TO MAINTAIN AND REPAIR ALL EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT PRACTICES DURING UTILITY INSTALLATION.
- 19. ALL CONSTRUCTION WITHIN DELDOT RIGHTS-OF-WAY SHALL BE COMPLETED IN ACCORDANCE WITH THE MOST RECENT DELDOT SPECIFICATIONS AND
- DETAILS UNLESS SPECIFIED OTHERWISE ON THESE PLANS.
- 20. THE LIMIT OF DISTURBANCE LINE, AS DELINEATED ON THE PLAN, IS TO BE STAKED IN THE FIELD AND MARKED WITH SILT FENCE AS SHOWN ON THESE PLANS PRIOR TO STARTING ANY DISTURBANCE.
- 21. THE LIMITS OF DISTURBANCE DELINEATION, STABILIZED CONSTRUCTION ENTRANCE AND ALL PERIMETER CONTROLS FOR EROSION AND SEDIMENT SHALL BE IN PLACE PRIOR TO ANY OTHER LAND DISTURBING ACTIVITIES. PRIOR TO THE SATISFACTORY INSPECTION OF THE PERIMETER EROSION AND SEDIMENT CONTROLS BY THE KCD INSPECTOR; SITE DISTURBANCE SHALL BE LIMITED TO THOSE AREAS NECESSARY TO ESTABLISH PERIMETER AND SEDIMENT CONTROLS.
- 22. ACREAGE OF DISTURBED AREA FOR THIS SUBMISSION:

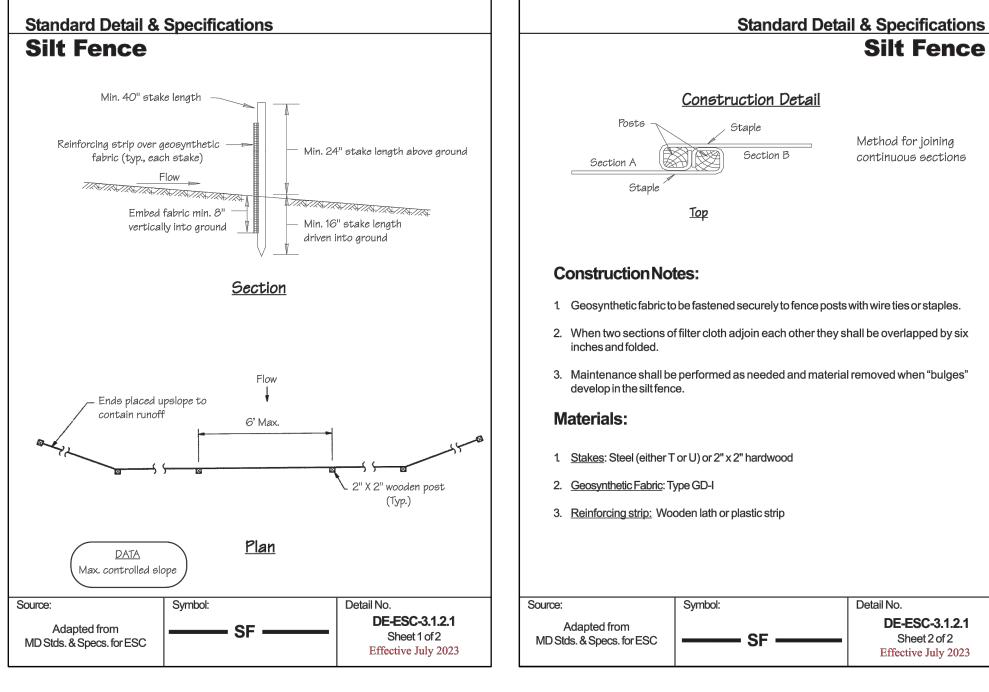
TOTAL: 1.3 (UTILITY CONSTRUCTION)

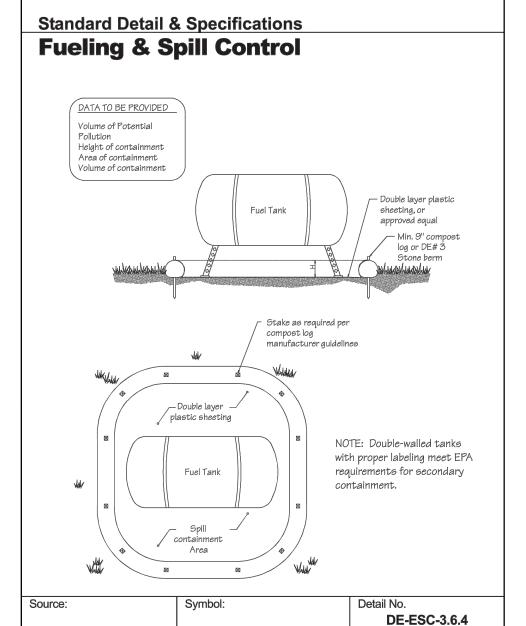
- PERIODIC MAINTENANCE OF ALL SEDIMENT CONTROL MEASURES IS REQUIRED TO INSURE EFFECTIVE SEDIMENT CONTROL. INSPECTION OF ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MADE AT LEAST WEEKLY AND AFTER EACH RAINFALL EVENT. REPAIRS SHALL BE MADE WITHIN 24 HOURS OF THE RAIN
- 24. SOIL STOCKPILES AREAS MUST BE DELINEATED. LOCATE STOCKPILES ON AREAS WITH LITTLE OR NO SLOPE. STOCKPILES MUST BE SURROUNDED WITH SILT FENCE OR A STABILIZED EARTHEN BERM. STOCKPILE AREAS MUST BE SEEDED WITH TEMPORARY SEEDING MIXTURE AND MULCHE
- 23. IF BLOWING AND MOVEMENT OF DUST INDUCED BY EXTENDED PERIODS OF DRY WEATHER IS DETERMINED TO BE A PROBLEM, CONTROL SHALL BE ESTABLISHED BY VEGETATIVE COVER AS SPECIFIED BY TEMPORARY SEEDING IN CONJUNCTION WITH SPRINKLING IN LOT AREAS AND IN ROAD
- 24. STORM DRAIN INLET PROTECTION SHALL BE PROVIDED AT ALL STORM DRAIN INLETS, WHICH RECEIVE RUNOFF FROM DISTURBED AREAS.
- 25. APPROVAL OF A SEDIMENT AND STORM WATER PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE SEDIMENT AND STORMWATER REGULATIONS.
- 26. THE SEQUENCE OF CONSTRUCTION ON THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN MUST BE STRICTLY ADHERED. ANY DIVERGENCE FROM THE APPROVED CONSTRUCTION SEQUENCE REQUIRES A WRITTEN REQUEST TO MODIFY AND THE WRITTEN APPROVAL OF THE KENT CONSERVATION DISTRICT.
- 27. A COPY OF THE APPROVED SEDIMENT & STORMWATER MANAGEMENT PLAN MUST BE MAINTAINED ON-SITE AT ALL TIME DURING CONSTRUCTION.
- 28. ALL SITE DEWATERING SHALL BE DONE THROUGH AN APPROVED FILTRATION DEVICE. THE SEDIMENT FILTER MUST BE PLACED SO AS NOT TO CAUSE EROSIONS OF THE DOWNSTREAM AREA. KCD INSPECTOR MUST APPROVE DEWATERING FILTER PLACEMENT AND USE PRIOR TO COMMENCEMENT OF DEWATERING ACTIVITIES.
- 29. ALL AREAS OF 3:1 OR STEEPER SLOPES SHALL BE STABILIZED USING AN EROSION CONTROL BLANKET, NORTH AMERICAN GREEN \$150 OR APPROVED

SEQUENCE OF CONSTRUCTION:

- 1. THE KENT CONSERVATION DISTRICT, DELDOT, THE DELAWARE OFFICE OF MANAGEMENT AND BUDGET (OMB), AND THE ENGINEER MUST BE NOTIFIED IN WRITING FIVE (5) DAYS PRIOR TO COMMENCING WITH CONSTRUCTION.
- 2. ARRANGE A PRE-CONSTRUCTION MEETING.
- 3. SITE LAYOUT SHALL BE CHECKED AGAINST THE PLAN. IDENTIFY PHYSICAL LAYOUT OF PROPERTY LINES, LIMITS OF DISTURBANCE, AND OTHER AREAS
- 4. INSTALL TRAFFIC CONTROLS IN ACCORDANCE WITH DELDOT REQUIREMENTS.
- 5. TEMPORARY MATERIAL STOCKPILE AREAS SHALL BE ESTABLISHED AS NEEDED AS THE WORK PROGRESSES, AND AS APPROVED BY THE OWNER AND
- 6. MARK LIMITS OF DISTURBANCE IN THE FIELD PRIOR TO ANY OTHER ANY OTHER CONSTRUCTION ACTIVITIES WITH TREE PROTECTION FENCING OR
- WOODEN STAKES TO ESTABLISH A VISUAL BARRIER. INSTALL EROSION AND SEDIMENT CONTROLS AROUND JACK AND BORE LOCATIONS AS SHOWN. 7. BEGIN INSTALLATION OF CASING PIPES ACROSS THE STATE ROUTE 1 RAMP VIA JACK AND BORE INSTALLATION. BACKFILL AND STABILIZE EXCAVATION
- 8. BEGIN INSTALLATION OF SANITARY SEWER AND WATER MAIN WORKING FROM THE EXISTING TOWN OF SMYRNA TIE-IN LOCATIONS LOCATIONS UP TO S.R. 1 RAMP CROSSING. INSTALL WATER AND SEWER UTILITIES THROUGH CASING PIPES CONCURRENTLY. ANY DISTURBED AREAS WILL NEED TO BE STABILIZED IMMEDIATELY AFTER THE CESSATION OF EARTH DISTURBANCE.
- 9. TEST SANITARY SEWER. COORDINATE CONNECTION OF SANITARY SEWER 3" FORCE MAIN WITH OMB FACILITY OWNER.
- 10. CONTINUE INSTALLATION OF WATER MAIN ALONG ROUTE 13 TO COMPLETION. DISTURBED AREAS SHALL BE STABILIZED IMMEDIATELY.
- 11. PERFORM WATER MAIN PRESSURE TESTING AND DISINFECTION, AND BRING WATER MAIN INTO SERVICE.
- 12. COMPLETE FINAL SITE STABILIZATION AND RESTORATION. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS AND STABILIZE ANY RESULTING DISTURBANCE IMMEDIATELY.







Delaware ESC Handbook

Fueling & Spill Control

Pollution Prevention – Fueling & Spill Control

- 1. Fueling should only take place in signed designated areas, away from downstream drainage
- 2. Fueling must be with nozzles equipped with automatic shut-off to control drips. Do not top off
- parked from storm water run-on and runoff.
- 5. Place a "Fueling Area" sign next to each fueling area.
- 8. Absorbent spill clean-up materials and spill kits must be available in fueling areas and on fuel
- 9. If fueling is to take place at night, make sure the fueling area is sufficiently illuminated.
- 10. Properly dispose of used oil, fluids, lubricants and spill clean-up materials.
- . If it is safe to do so, immediately contain and clean up any chemical and/or hazardous materia
- 2. Properly dispose of used oil, fluids, lubricants and spill clean-up materials.

- 1. Use drip pans or absorbent pads at all times. Place under and around leaky equipment.
- 2. Do not allow oil, grease, fuel or chemicals to drip onto the ground.
- 3. Have spill kits and clean up material on-site.
- Clean up contaminated soil immediately.
- containers properly.

DE-ESC-3.6.4

Standard Detail & Specifications

- facilities and watercourses.
- 3. Protect the areas where equipment or vehicles are being repaired, maintained, fueled or
- 4. Use barriers such as berms to prevent storm water run-on and runoff, and to contain spills
- 6. Store hazardous materials such as fuel, solvents, oil and chemicals in secondary containment
- 7. Inspect vehicles and equipment for leaks on each day of use. Repair fluid and oil leaks

- CLEAN UP SPILLS
- 3. Do not bury spills or wash them down with water.

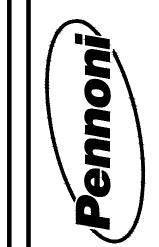
LEAKS AND DRIPS

Sheet 1 of 2

Effective July 2023

- 4. Repair leaky equipment promptly or remove problem vehicles and equipment from the site.
- 5. Store contaminated waste in sealed containers constructed of suitable material. Label these
- 6. Clean up all spills and leaks. Promptly dispose of waste and spent clean up materials.

Delaware ESC Handbook Sheet 2 of 2 Effective July 2023





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SMYRN21004 PROJECT 2023-06-08 RAWING SCALE DRAWN BY

EXPENSES ARISING OUT OF OR RESULTING THEREFRO

PPROVED BY

Dust Control

Temporary Methods:

Permanent Methods:

Standard Detail & Specifications

Certified Seed

3. Applicable on slopes 3:1 or less.

Delaware ESC Handbook

((Project Name))

1. Minimum sign size 2' x 2'

2. Minimum text size 1"

Delaware ESC Handbook

((NOI Permit Number))

((Agency Plan Approval ID))

Vegetative Stabilization

. Winter seeding requires 3 tons per acre of straw mulch for proper stabilization.

Standard Detail & Specifications

2. May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.

4. Use varieties currently recommended for Delaware. Contact a County Extension Office for information.

5. Warm season grasses such as Millet may be used between 5/1 and 9/1 if desired. Seed at 3-5 lbs.

per acre. Good on low fertility and acid areas. Seed after frost through summer at a depth of 0.5".

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Construction Site Pollution Prevention

Delaware NPDES Discharge Permit

General Permit for Discharge of Stormwater from Construction Activities

((Contact Name & Number for Additional Site Information))

((Contact Name & Number to Obtain Copy of Approved Plan))

If you observe indicators of stormwater pollutants

in the discharge or in the receiving waterbody, call the

DNREC Spill Notification 24 HR Hotline at

1-800-662-8802

Example Construction General Permit (CGP) Signage

3. Sign must be posted at a safe, publicly accessible location close to construction site

with all local and/or State requirements in regards to safety, location, orientation, etc.

5. Signs posted within a DelDOT or other public road right-of-way (ROW) must be in accordance

4. Sian must be visible from the public road nearest the active construction site

DE-ESC-3.4.3

Sheet 1 of 4

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DE-ESC-3.6.1

Sheet 1 of 4

Effective July 2023

- 1. Mulches See **DE-ESC-3.4.5**, Standard Detail and Specifications for Mulching. . Vegetative cover - See DE-ESC-3.4.3, Std. Detail and Specifications for Vegetative
- 3. Adhesives Use on mineral soils only (not effective on muck soils). Keep traffic off these areas. The following table may be used for general guidance.

Type of Emulsion	Water <u>Dilution</u>	Type of <u>Nozzle</u>	Apply <u>Gal/Ac.</u>
Latex emulsion	12.5:1	Fine spray	235
Resin-in-water emulsion	4.1	Fine spray	300
Acrylic emulsion (non-traffic)	7:1	Coarse spray	450
Acrylic emulsion (traffic)	3.5:1	Coarse spray	350

- 4. Tillage For emergency temporary treatment, scarify the soil surface to prevent or reduce the amount of blowing dust until a more appropriate solution can be implemented. Begin the tillage operation on the windward side of the site using a chisel-type plow for best results.
- 5. Sprinkling Sprinkle site with water until the surface is moist . Repeat as needed.
- 6. Calcium Chloride Apply as flakes or granular material with a spreader at a rate that will keep the soil surface moist. Re-apply as necessary.
- 7. Barriers-Place barriers such as solid board fences, snow fences, hay bales, etc. at right angles to the prevailing air currents at intervals of approx. 10X their height.
- Vegetative cover See DE-ESC-3.4.3, Std. Detail and Specifications for Vegetative

Stone - Apply layer of crushed stone or coarse gravel to protect soil surface.					
Source:	Symbol:	Detail No.			
Adapted from		DE-ESC-3.4.8			
VA ESC Handbook		Sheet 1 of 1			
		Effective July 2023			

TEMPORARY SEEDING BY RATES, DEPTHS AND DATES

Optimum Seeding Dates

Standard Detail & Specifications **Vegetative Stabilization**

DE-ESC-3.7.2

Sheet 1 of 3

Effective July 2023

			MANENT	SEE	DING	A10 (10 0			
	Seeding Mixtures	Seedir	Seeding Rate 1 Optimum Seeding Dates 2 O = Optimum Flanting Period A = Acceptable Planting Period					Remarks			
Mix No.	Certified Seed ³			Coa	astal P	lain	Р	iedmo	nt	All⁴	
	Well Drained Soils	lb/Ac	lb/1000 sq.ft.	2/1- 4/30	5/1- 8/14	8/15- 10/31	3/1- 4/30	5/1- 7/31	8/1- 10/31	10/31-2/1	
1	Tall Fescue Canada Wild Rye	140	3.2 0.23	Α	0	A	Α	0	Α	Add 100 lbs./ac Winter	Good erosion control mix Tolerant of low fertility soils Good for droughty sites
										Rye	•
2	Deertongue Sheep Fescue White Clover	30 30 10	0.69 0.69 0.35	Α	0	A	Α	0	A	Add 100 lbs./ac Winter Rye	Good erosion control mix Tolerant of low fertility soil Legume that fixes atmospho N into soil
3	Tall Fescue (Turf-type) or Strong Creeping Red Fescue or Perennial Ryegrass	50 50 50	1.15 1.15 1.15	0	A ⁴	0	0	A ⁴	0	Add 100 lbs./ac. Winter Rye	Good erosion control mix Tall Fescue for droughty conditions. Creeping Rec Fescue for heavy shade. Flat
	plus Flatpea ⁵	15	0.34							, .	to suppress woody vegetati
4	Strong Creeping Red Fescue Kentucky Bluegrass Perennial Ryegrass or Redtop	100 70 15 5	2.3 1.61 0.35 0.11	0	A ⁴	0	0	A ⁴	0	Add 100 lbs./ac. Winter Rye	Suitable waterway mix. Canada Bluegrass more drought tolerant. Use Redtop for increased drought tolerance.
5	Switchgrass ^{8,7} or Coastal Panicgrass Big Bluestem Little Bluestem Indian Grass	10 10 5 5	0.23 0.23 0.11 0.11 0.1		0			0			Native warm-season mixtur Tolerant of low fertility soil: Drought tolerant. Poor shade tolerance. N fertilizer discouraged - we
6	Tall Fescue (turf-type) (Blend of 3 cultivars)	150	3.5	0	A ⁴	0	0	A ⁴	0		Managed filter strip for nutrient uptake.
7	Tall Fescue Ky. Bluegrass (Blend) Perennial Ryegrass	150 20 20	3.5 0.46 0.46	0	A ⁴	0	0	A ⁴	0		Three cultivars of Kentuck Bluegrass. Traffic tolerant
8	Big Bluestem ⁷ Indian Grass ⁷ Little Bluestem ⁷ Creeping Red Fescue	10 10 8 30	0.23 0.23 0.18 0.69	0	A ⁴		0	A ⁴			All species are native. Indian Grass and Bluestem fluffy seeds. Plant with a specialized native seed dr
	plus one of: Partridge Pea Bush Clover Wild Indigo Showy Tick-Trefoil	5 3 3	0.11 0.07 0.07 0.05								Creeping Red Fescue wi provide erosion protection w the warm season grasse get established.

Standard Detail & Specifications

Sensitive Area Protection

*5' min. setback applies to all sensitve areas covered by this specification.

Location of Sensitive Area Protection

Methods of Sensitive Area Protection

Adapted from

VA ESC Handbook

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		DE-ESC-3.4.3
		Sheet 2 of 4
		Effective July 2023

Standard Detail & Specifications

The Construction Site Pollution Prevention Plan includes the following elements:

Construction Site Pollution Prevention

1. Material Inventory

- Document the storage and use of the following materials:
- a. Concrete
- b. Detergents c. Paints (enamel and latex)
- d. Cleaning solvents
- e. Pesticides f. Wood scraps
- g. Fertilizers
- h. Petroleum based products 2. Good housekeeping practices
- a. Store only enough product required to do the job.
- b. Store all materials in a neat, orderly manner in their original labeled containers and
- c. Do not mix different substances.
- d. When possible, use all of a product prior to disposal of the container.
- e. Manufacturers' instructions for disposal should be strictly adhered to. f. Designate someone to inspect all BMPs daily.
- 3. Waste management practices
- a. Collect and store all waste materials in securely lidded dumpsters in a location that does
- not drain to a waterbody.
- b. Salvage and/or recycle waste materials whenever possible.
- c. The dumpsters shall be emptied a minimum of twice per week, or more if necessary. The licensed trash hauler is responsible for cleaning out dumpsters.

Source:	Symbol:	Detail No.
Adapted from USEPA		DE-ESC-3.6.1
Pub. 840-B-92-002		Sheet 2 of 4
		Effective July 2023

are not intended to exclude the use of other devices which will protect the trees to be retained. If silt fence is to be used for demarcation purposes, appropriate signage shall be provided a minimum of every 20 feet denoting the area as a sensitive area protection zone.

Standard Detail & Specifications

Sensitive Area Protection

Materials:

Construction Notes:

. Snow Fence - Standard 40-inch high snow fence shall be placed at the limits of clearing or construction on standard steel posts set 6 feet apart.

Fencing shall be installed at the extents of all sensitive areas. For trees, the fencing shall be

installed outside the dripline (mature canopy) and at no time within 5 feet of the trunk. Personnel

must be instructed to honor protective devices. The devices described are suggested only, and

- 2. Board Fence Board fencing consisting of 4-inch square posts set securely in the ground and protruding at least 4 feet above the ground shall be placed at the limits of clearing with a minimum of two horizontal boards between posts. For tree protection, if it is not practical to erect a fence at the drip line, construct a triangular fence nearer the trunk. The limits of clearing will still be located at the drip line, since the root zone within the drip line will still require protection.
- Plastic Fencing 40-inch high "international orange" plastic (polyethylene) web fencing secured to conventional metal "T" or "U" posts driven to a minimum depth of 18 inches on 6-foot minimum centers shall be installed at the limits of clearing. The fence should have the following

minimum physical qualities: Average 2,000 lbs. per 4-foot width (ASTM D638) Tensile yield:

Average 2,900 lbs. per 4-foot width (ASTM D638) Ultimate tensile vield: Elongation at break (%): Greater than 1000% (ASTM D638)

Inert to most chemicals and acids

Standard Detail & Specifications

Poorly Drained Soils

Residential Lawns

Perennial Ryegrass

Delaware ESC Handbook

Notes (cont.)

Vegetative Stabilization

Source:	Symbol:	Detail No.
Adapted from VA ESC Handbook	SAP	DE-ESC-3.7.2 Sheet 2 of 3 Effective July 2023

PERMANENT SEEDING AND SEEDING DATES (cont.)

When hydroseeding is the chosen method of application, the total rate of seed should be increased by 25%.
 Winter seeding requires 3 tons per acre of straw mulch. Planting dates listed above are average for Delaware. These dates may require

A. Turf-type species may be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.

5. It is recommended that all leguminous seed be inoculated.

6. Warm season grass mix and Switchgrass cannot be mowed more than 4 times per year.

7. Warm season grasses require a soil temperature of at least 50 degrees in order to germinate and will remain domant until then.

maximum % of weed seeds shall be in accordance with Chapter 15, Title 3 of the Delaware Code.

Standard Detail & Specifications

adjustment to reflect local conditions.

3. All seed shall meet the minimum purity and minimum germination percentages recommended by the Delaware Department of Agriculture. The

NOTE: Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.

Construction Site Pollution Prevention

e. Littering is strictly prohibited. Trash cans should be placed at all lunch spots and recycle

f. If fertilizer bags can not be stored in a weather-proof location, they should be kept on a

a. If possible, equipment should be taken to off-site commercial facilities for washing and

b. If performed on-site, wash vehicles with high-pressure water spray without detergents

e. Direct washout from concrete trucks into a temporary pit for hardening and proper

g. Dispose of all used products such as oil, antifreeze, solvents and tires in accordance with

a. Identify potential spill areas and contain them in covered areas with no connection to the

c. Perform preventive maintenance on all tanks, valves, pumps, pipes and other equipment

manufacturers' recommendations and local, state and federal laws and regulations.

pallet and covered with plastic sheeting which is overlapped and anchored.

d. Dispose of all trash in accordance with all applicable Delaware laws.

bins should be placed near the construction trailer.

in an area contained by an impervious berm.

f. Equip fuel nozzles with automatic shut-off valves.

b. Post warning signs in hazardous material storage areas.

d. Prioritize low or non-toxic substances for use.

c. Use drip pans for all equipment maintenance.

d. Inspect equipment for leaks on a daily basis.

4. Equipment maintenance practices

maintenance.

5. Spill prevention practices

storm drain system.

as necessary.

Adapted from USEPA

Pub. 840-B-92-002

cover and wetland revegetation

nt traffic, irrigation necessa Well drained soils, full sun.

Moderate value,

noderate traffic tolerance

DE-ESC-3.4.3

Sheet 3 of 4

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DE-ESC-3.6.1

Sheet 3 of 4

Effective July 2023

Standard Detail & Specifications Vegetative Stabilization

DE-ESC-3.7.2

Sheet 3 of 3

Effective July 2023

Construction Notes:

Adapted from

VA ESC Handbook

Standard Detail & Specifications

with drainage patterns.

Maintenance:

Sensitive Area Protection

protection. Nothing should ever be nailed to a tree.

during the final cleanup after the completion of the project.

4. Cord Fence - Posts with a minimum size of 2 inches square or 2 inches in diameter set securely

in the ground and protruding at least 4 feet above the ground shall be placed at the limits of

clearing with two rows of cord 1/4-inch or thicker at least 2 feet apart running between posts

with strips of colored surveyor's flagging tied securely to the string at intervals no greater than

5. Earth Berms - Temporary earth berms shall be constructed according to specifications for a

6. Trunk Armoring (Tree Protection Only)-As a last resort, a tree trunk can be armored with burlap

Fencing and armoring devices shall be in place before any excavation or grading is begun, shall

be kept in good repair for the duration of construction activities, and shall be the last items removed

wrapping and 2-inch studs wired vertically no more than 2 inches apart to a height of 5 feet encircling the trunk. If this alternative is used, the root zone within the drip line will still require

Temporary Earth Dike with the base of the berm on the sensitive area side located along the limits of clearing. Earth berms may not be used for this purpose if their presence will conflict

- a. Prior to seeding, install needed erosion and sediment control practices such as diversions, grade stabilization structures, berms, dikes, grassed waterways, and sediment basins.
- b. Final grading and shaping is not necessary for temporary seedings.

2. Seedbed Preparation

It is important to prepare a good seedbed to ensure the success of establishing vegetation. The seedbed should be well prepared, loose, uniform, and free of large clods, rocks, and other objectionable material. The soil surface should not be compacted or crusted.

Soil Amendments

- a. Lime Apply liming materials based on the recommendations of a soil test in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply dolomitic limestone at the rate of 1 to 2 tons per acre. Apply limestone uniformly and incorporate
- into the top 4 to 6 inches of soil. b. Fertilizer - Apply fertilizer based on the recommendations of a soil test in accordance with the approved nutrient management plan. If a nutrient management plan is not required, apply a formulation of 10-10-10 at the rate of 600 pounds per acre. Apply fertilizer uniformly and

incorporate into the top 4 to 6 inches of soils.

- a. For temporary stabilization, select a mixture from Sheet 1. For a permanent stabilization, select a mixture from **Sheet 2** or **Sheet 3** depending on the conditions. Alternative seed mixes may be used with prior approval from the Department or Delegated Agency.
- b. Apply seed uniformly with a broadcast seeder, drill, cultipacker seeder or hydroseeder. All seed will be applied at the recommended rate and planting depth.
- c. Seed that has been broadcast should be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used and the seed and fertilizer is mixed, they will be mixed on site and the seeding shall be done immediately and without

5. Mulching

All mulching shall be done in accordance with detail **DE-ESC-3.4.5**.

Source:	Symbol:	Detail No.
Delaware ESC Handbook		DE-ESC-3.4.3
		Sheet 4 of 4 Effective July 2023
		Effective July 2023

Standard Detail & Specifications Construction Site Pollution Prevention

Notes (cont.)

- e. Prominently post contact information for reporting spills through the DNREC 24-Hour Toll

- 6. Education
- a. Include Best Management Practices (BMPs) for construction site pollution control as part
- of regular progress meetings.
- b. Information regarding waste management, equipment maintenance and spill prevention should be prominently posted in the construction trailer.

CONTACT INFORMATION

800-662-8802 **DNREC 24-Hour Toll Free Number** DNREC Solid & Hazardous Waste Management Section 302-739-9403

DE-ESC-3.6.1 Adapted from USEPA Sheet 4 of 4 Pub. 840-B-92-002

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solid surface compacted earth liner overtop with a Note: Prefabricated concrete block anchor washout option not shown. — Sandbaa or Alternate Liner Option **DE-ESC-3.6.2** Adapted from CW Colorado Urban Storm Drain-Sheet 1 of 2

Standard Detail & Specifications **Concrete Washout**

Construction Notes:

age Criteria Manual, Vol 3

Standard Detail & Specifications

Plan View

Berm required on all

access drive location

Compacted Berm with liner

keyed underneath (or see

Concrete Washout Sign

Access drive to be paved or

meet material specifications

of a Stabilized Construction Entrance (DE-ESC-3.4.7)

connect to

Effective July 2023

or aravel surface

Concrete Washout

DATA TO BE PROVIDED

- Locate washout area a minimum of 50 feet from open channels, stormdrain inlets, wetlands or
- 2. Locate washout area so that it is accessible to concrete equipment (service with a minimum 10 foot wide gravel accessway), but so it is not in a highly active construction area causing accidental damage.
- Minimum dimensions for prefabricated units are 4 feet by 4 feet by 1 foot deep with a minimum 4mil polyethylene plastic liner. Minimum dimensions for constructed concrete washout areas are 6 feet by 6 feet by 3 feet deep, with a minimum 10mil polyethylene liner, 2:1 side slopes, and a 1 foot high by 1 foot wide compacted fill berm.
- The liner must be free of tears or holes and placed over smooth surfaces to prevent puncturing. For excavated washouts, anchor the liner underneath the berm or overtop with sandbags or concrete blocks to hold in place.
- 6. Allow washed out concrete mixture to harden through evaporation of the wastewater. Once the acility has reached 75 percent of its capacity, remove the hardened concrete by reusing the broken aggregate onsite, recycling, or disposing of offsite. The hardened material can be buried
- Apply a new liner before reusing the station for additional washouts after maintenance has

- Provide a sign designating the washout area, and for large construction sites, provide signs throughout directing traffic to its location.
- on site with minimum of 1 foot of clean, compacted fill.
- occurred.

Source:	Symbol:	Detail No.
Adapted from Colorado Urban Storm Drain- age Criteria Manual, Vol 3	CW	DE-ESC-3.6.2 Sheet 2 of 2 Effective July 2023



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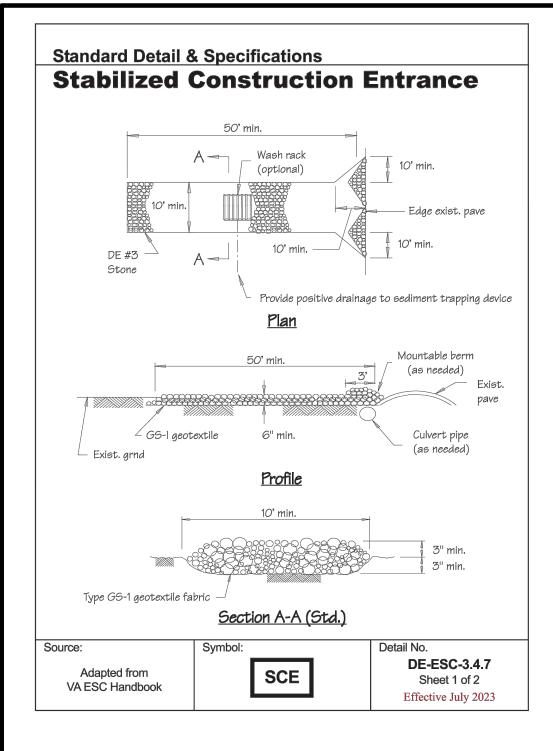
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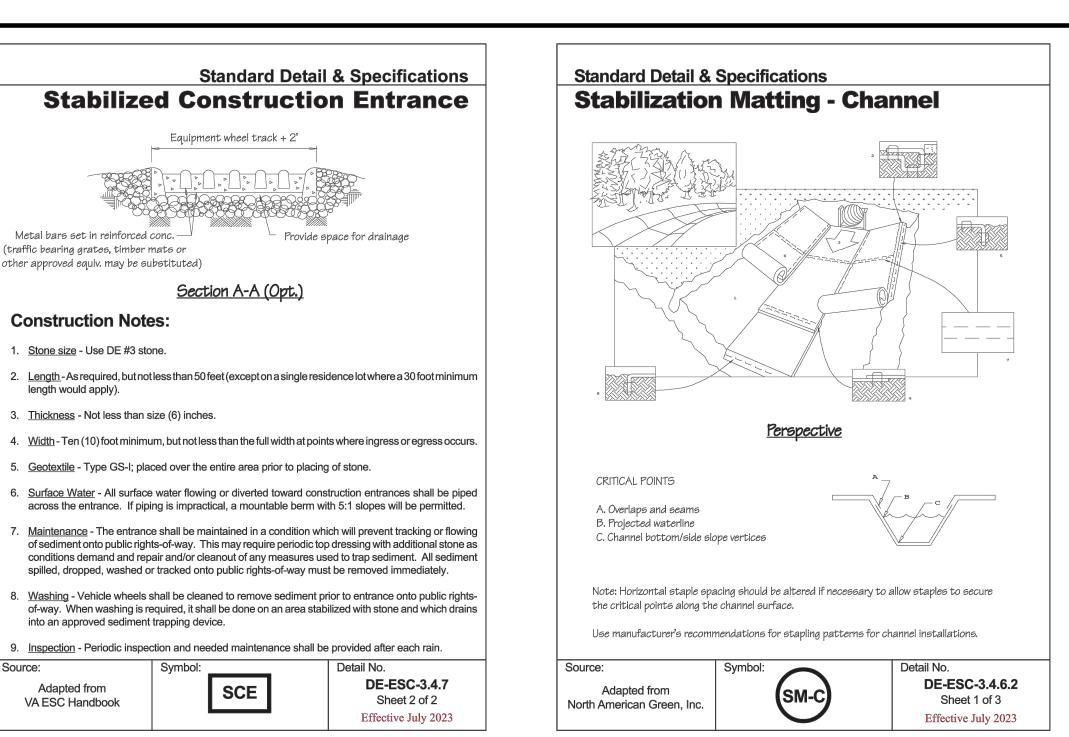
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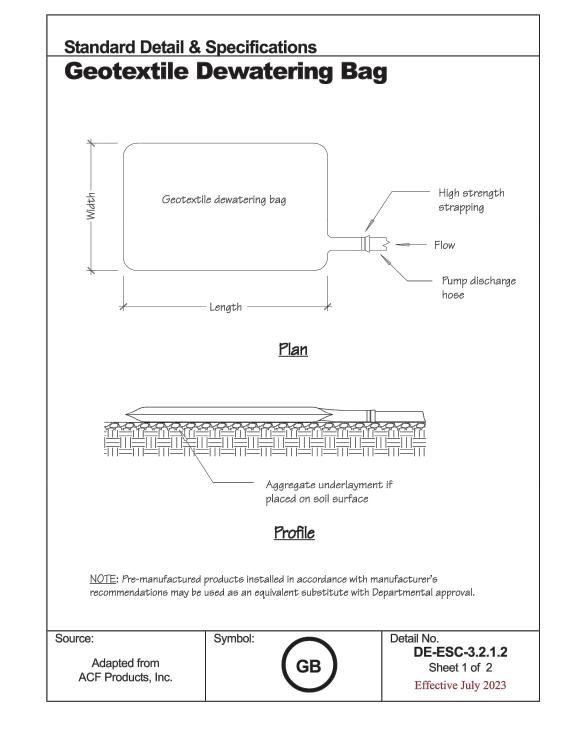
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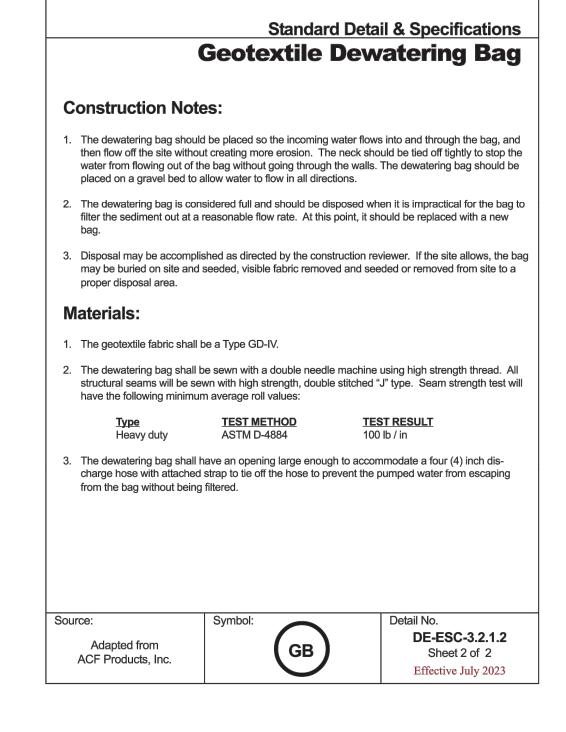
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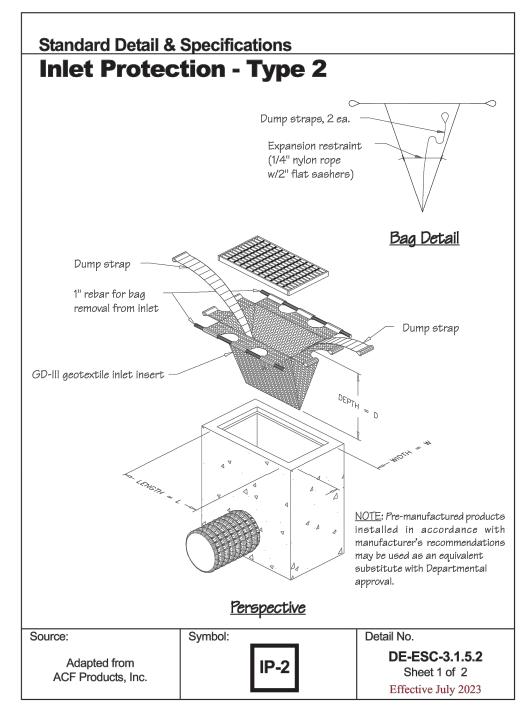
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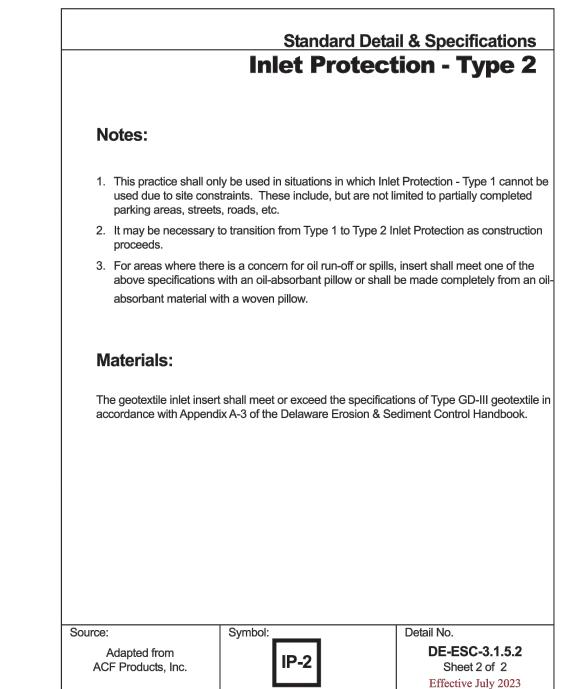


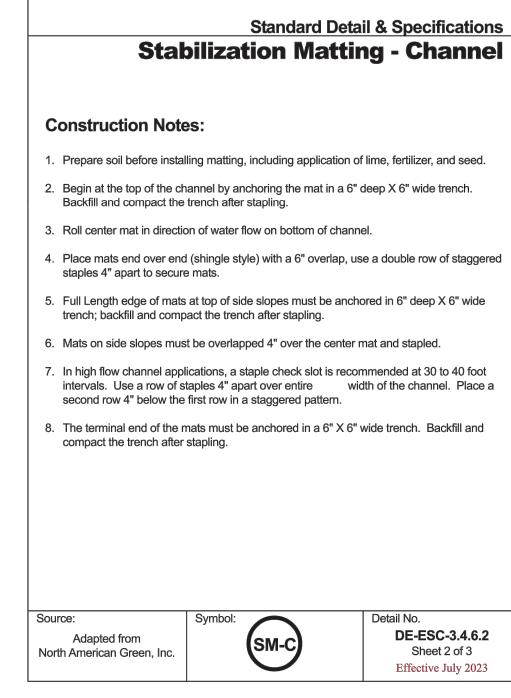


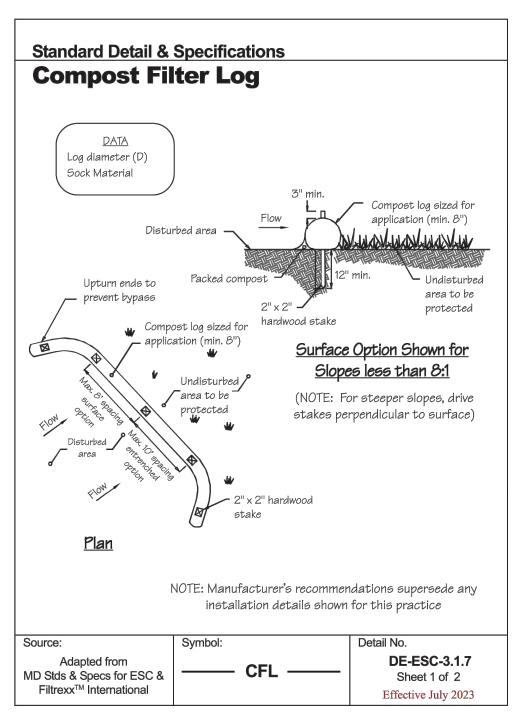


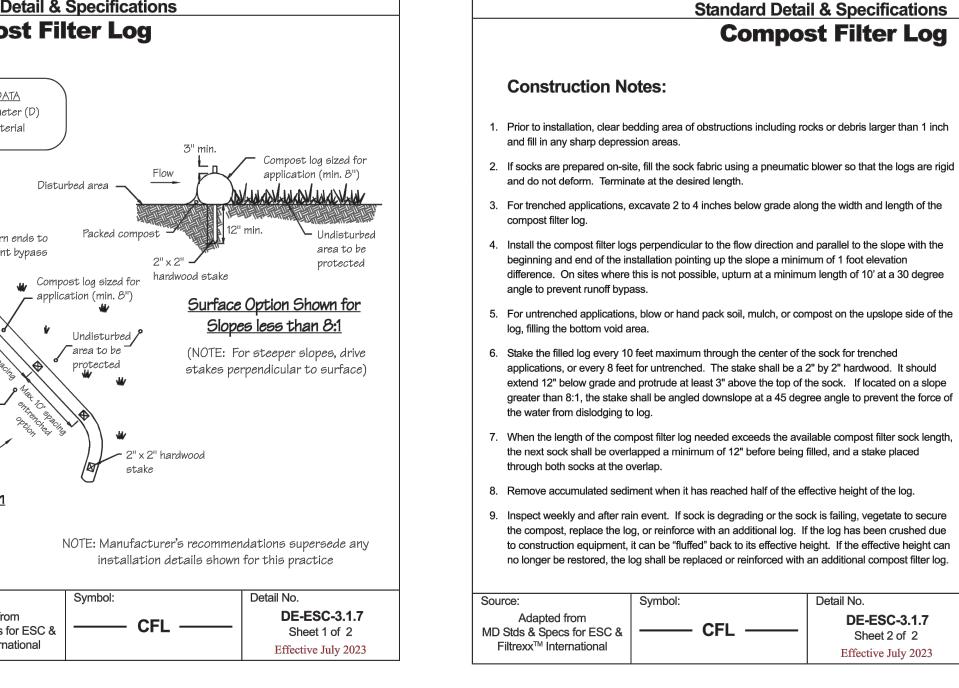


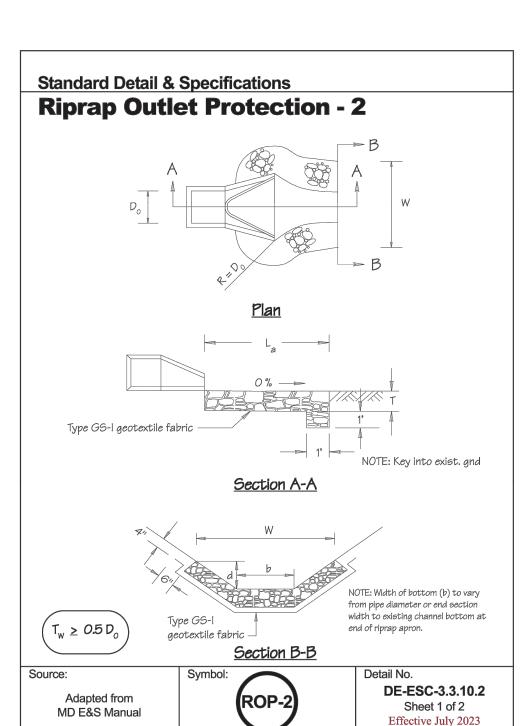


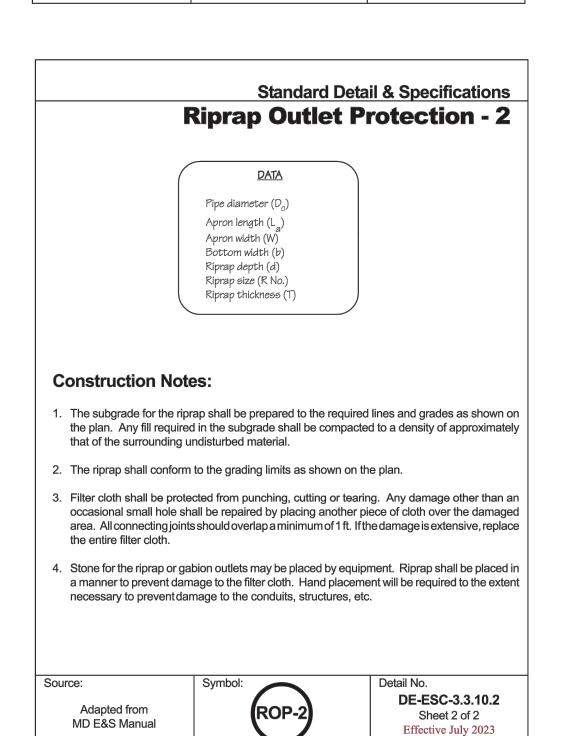


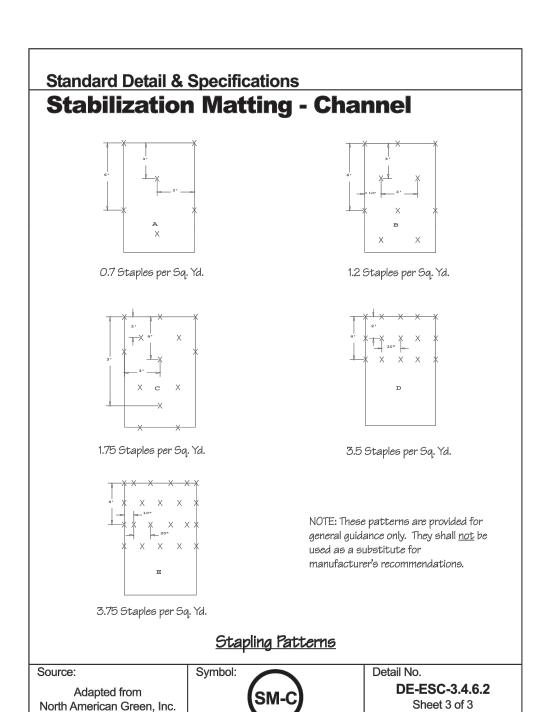




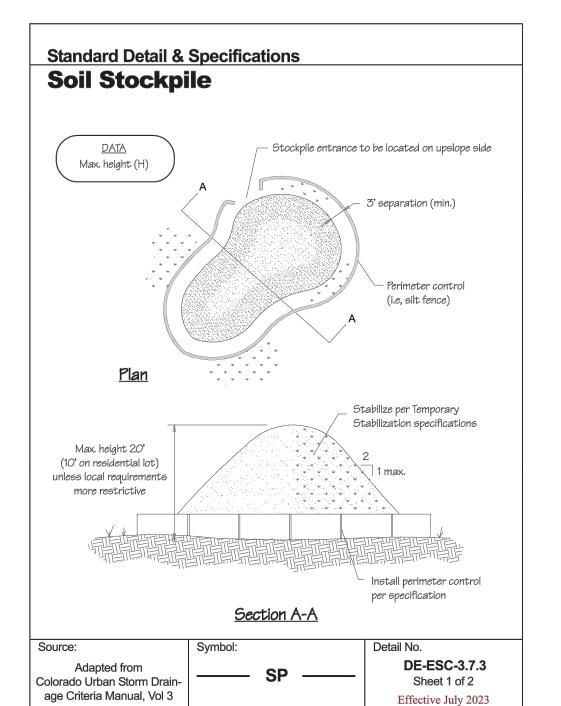


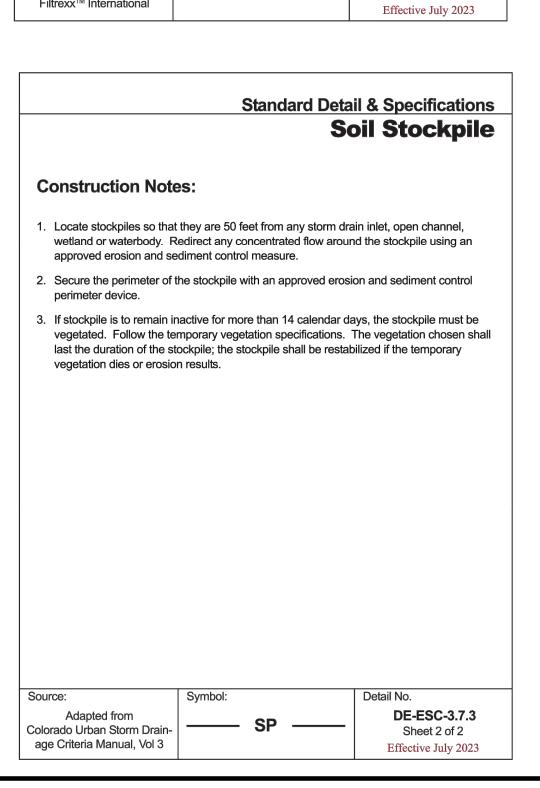


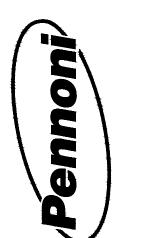




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