

Table 13.4. Typical Wet Pond Maintenance Items and Frequency

Frequency	Maintenance Items
During establishment, as needed (first year)	<ul style="list-style-type: none"> Inspect the site after storm event that exceeds 0.5 inches of rainfall. Stabilize any bare or eroding areas in the contributing drainage area including the Wet Pond perimeter area Water trees and shrubs planted in the Wet Pond vegetated perimeter area during the first growing season. In general, water every 3 days for first month, and then weekly during the remainder of the first growing season (April - October), depending on rainfall.
Quarterly or after major storms (>1 inch of rainfall)	<ul style="list-style-type: none"> Remove debris and blockages Repair undercut, eroded, and bare soil areas
Twice a year	<ul style="list-style-type: none"> Mowing of the Wet Pond vegetated perimeter area and embankment
Annually	<ul style="list-style-type: none"> Shoreline cleanup to remove trash, debris and floatables A full maintenance review Open up the riser to access and test the valves Repair broken mechanical components, if needed
One time -during the second year following construction	<ul style="list-style-type: none"> Wet Pond vegetated perimeter and aquatic bench reinforcement plantings
Every 5 to 7 years	<ul style="list-style-type: none"> Forebay sediment removal
From 5 to 25 years	<ul style="list-style-type: none"> Repair pipes, the riser and spillway, as needed Remove sediment from Wet Pond area outside of forebays

STABILIZATION REQUIREMENTS:

- TEMPORARY SEEDING MIX = DE SEED MIX 5
- SWM POND AND FOREBAY SIDE SLOPES = DE SEED MIX 9 OR 10
- ALL OTHER AREAS WITHIN LOD = DE SEED MIX 12

DISTURBED AREA = 2.42 AC

CLAY LINER SPECIFICATIONS:

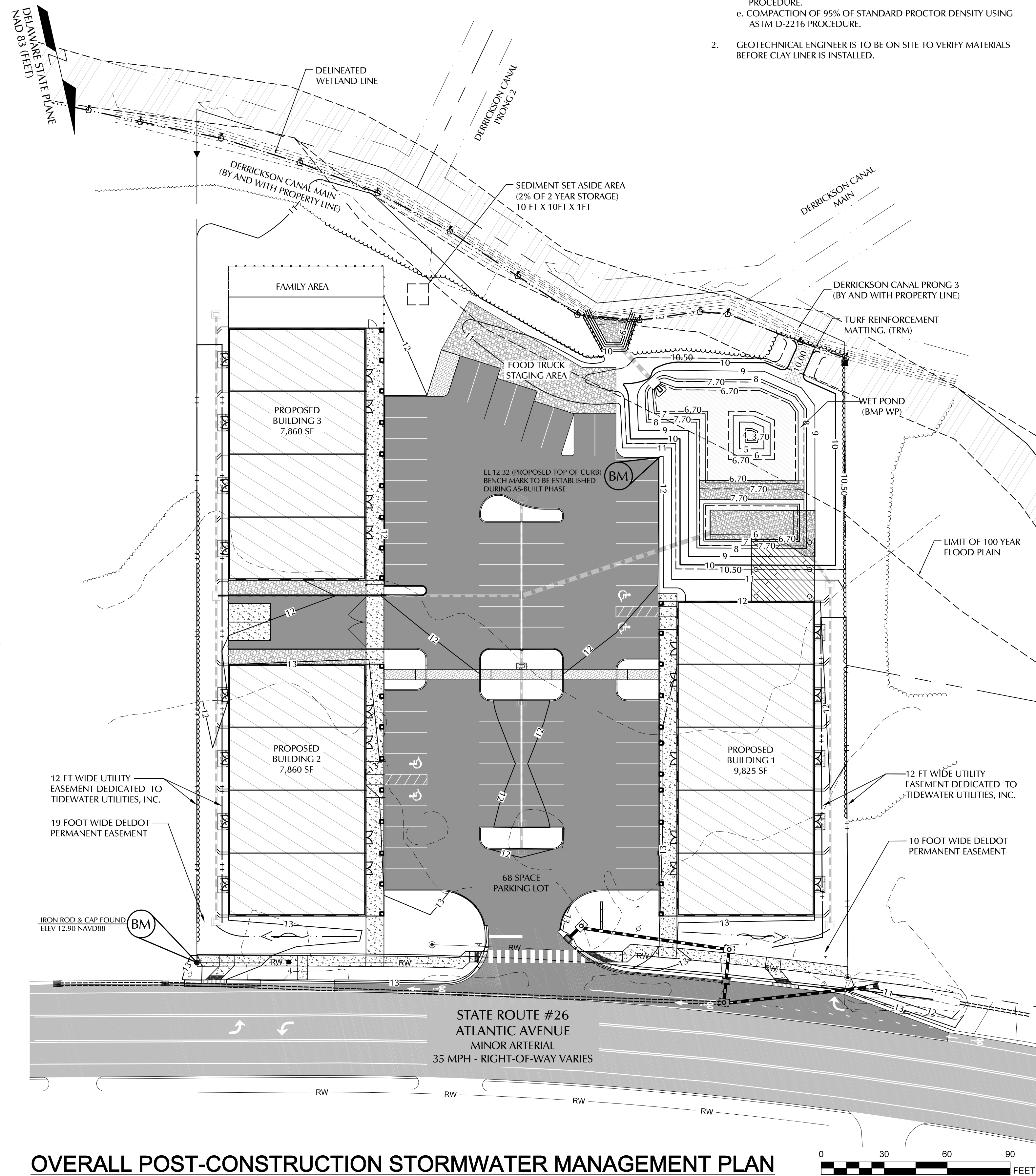
- A CLAY LINER HAVING A MINIMUM COMPACTED THICKNESS OF 12 INCHES WITH AN ADDITIONAL 12 INCH LAYER OF COMPACTED SOIL ABOVE IT. CLAY USED AS POND LINER MUST MEET THE FOLLOWING SPECIFICATIONS:
 - PERMEABILITY OF 1×10^{-9} cm/sec USING ASTM D-2434 PROCEDURE.
 - PLASTICITY INDEX OF NOT LESS THAN 15% USING ASTM D-423/424 PROCEDURES.
 - LIQUID LIMIT OF NOT LESS THAN 30% USING ASTM D-2216 PROCEDURE.
 - CLAY PARTICLES PASSING NOT LESS THAN 30% USING ASTM D-422 PROCEDURE.
 - COMPACTION OF 95% OF STANDARD PROCTOR DENSITY USING ASTM D-2216 PROCEDURE.
- GEOTECHNICAL ENGINEER IS TO BE ON SITE TO VERIFY MATERIALS BEFORE CLAY LINER IS INSTALLED.

WET POND FOREBAY CONSTRUCTION SEQUENCE

- CONTACT DNREC AT (302)739-9944 TO OBTAIN A CONSTRUCTION DEWATERING PERMIT IF DEWATERING IS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS. THE SUSSEX COUNTY CONSERVATION DISTRICT INSPECTOR SHALL INSPECT AND APPROVE ALL DEWATERING OPERATIONS.
- WET PONDS SHOULD ONLY BE CONSTRUCTED AFTER THE CONTRIBUTING DRAINAGE AREA TO THE WET POND IS COMPLETELY STABILIZED.
- CONDUCT PRECONSTRUCTION MEETING WITH AGENCY CONSTRUCTION REVIEWER, CCR, CONTRACTOR, AND OWNERS REP.
- ASSEMBLE CONSTRUCTION MATERIALS ON-SITE, MAKE SURE THEY MEET DESIGN SPECIFICATIONS, AND PREPARE ANY STAGING AREAS. ENSURE THAT APPROPRIATE COMPACTION AND DEWATERING EQUIPMENT IS AVAILABLE. LOCATE THE PROJECT BENCHMARK AND IF NECESSARY, TRANSFER A BENCHMARK NEARER TO THE WET POND LOCATION FOR USE DURING CONSTRUCTION.
- INSTALL EROSION AND SEDIMENT CONTROLS PRIOR TO CONSTRUCTION, INCLUDING TEMPORARY DEWATERING DEVICES AND STORMWATER DIVERSION PRACTICES. ALL AREAS SURROUNDING THE DRY POND THAT ARE GRADED OR DENUDED DURING CONSTRUCTION MUST BE PLANTED WITH TURF GRASS, NATIVE PLANTINGS, OR OTHER APPROVED METHODS OF SOIL STABILIZATION.
- INSTALL PERMANENT OUTLET CONTROL STRUCTURE AND OUTFALL PIPE WORKING FROM DOWNSTREAM TO UPSTREAM DIRECTION.
- INSTALL DEWATERING DEVICE AND PUMPING PIT.
- EXCAVATE SEDIMENT TRAP AS SHOWN ON PLAN AND INSTALL DEWATERING SKIMMER DEVICE AT LOW FLOW ORIFICE.
- DEWATER, DREDGE, AND REGRADE SEDIMENT TRAP AREA TO DESIGN DIMENSIONS AND ELEVATIONS.
- TEMPORARILY BLOCK WEIR OPENING AT INVERT EL 9.01 UP TO EL 10.00 USING PLYWOOD SHEATHING AND 2"x4" BLOCKING. USE CAULKING AS NECESSARY TO SEAL PLYWOOD TO CONCRETE IN WATERTIGHT CONDITION.
- REMOVE ACCUMULATED SEDIMENT AND BORROW MATERIAL TO AN APPROVED OFFSITE LOCATION, OR STOCK PILE ON SITE, STABILIZE STOCK PILE ACCORDING TO THE PERMANENT SEEDING NOTES ON DRAWING T1.2.
- NOTIFY THE PERSON RESPONSIBLE FOR STORMWATER SYSTEM CONSTRUCTION REVIEW AT LEAST 3 DAYS PRIOR TO THE START OF STORMWATER SYSTEM CONSTRUCTION; STORMWATER FACILITIES MUST BE REVIEWED THROUGH OUT THEIR CONSTRUCTION.
- EXCAVATE/GRADE UNTIL APPROPRIATE ELEVATION AND DESIRED CONTOURS ARE ACHIEVED FOR THE BOTTOM AND SIDE SLOPES OF THE WET POND AND FOREBAYS. CONSTRUCT FOREBAYS AT THE PROPOSED INFLOW POINTS.
- INSTALL SPECIFIED INLET PROTECTION AS EACH BASIN IS INSTALLED.
- INSTALL RIP-RAP OUTLET PROTECTION AS SPECIFIED ON ALL POND INLET PIPES.
- TOPSOIL, SEED AND MULCH THE SIDE SLOPES AND DISTURBED AREAS AROUND THE POND. SOIL STABILIZATION MATTING SHALL BE USED ON ANY SLOPES 3:1 OR STEEPER.
- CONTACT SUSSEX CONSERVATION DISTRICT FOR SITE INSPECTION
- CONVERT TEMPORARY SEDIMENT TRAP TO PERMANENT EXTENDED DETENTION WET POND WITH FOREBAY. REFER TO POND CODE 378 CONSTRUCTION SPECIFICATIONS.
- CLEAR AND STRIP THE EMBANKMENT AREA TO THE DESIRED SUB-GRADE.
- CONSTRUCT THE EMBANKMENT AND ANY INTERNAL BERMS USING ACCEPTABLE MATERIAL IN 8 - 12 INCH LIFTS, COMPACT THE LIFTS WITH APPROPRIATE EQUIPMENT. CONSTRUCT THE EMBANKMENT ALLOWING FOR 10% SETTLEMENT OF THE EMBANKMENT.
- EXCAVATE/GRADE UNTIL APPROPRIATE ELEVATION AND DESIRED CONTOURS ARE ACHIEVED FOR THE BOTTOM AND SIDE SLOPES OF THE WET POND AND FOREBAY. CONSTRUCT FOREBAY AT THE PROPOSED INFLOW POINTS. INSTALL GCL PER PROJECT GEO-TECHNICAL ENGINEER.
- STABILIZE EXPOSED SOILS AND THE GCL WITH 12" OF TOPSOIL AND WITH THE APPROVED SEED MIXTURES APPROPRIATE FOR THE WET POND PERIMETER AREA. ALL AREAS ABOVE THE NORMAL POOL ELEVATION MUST BE PERMANENTLY STABILIZED IN ACCORDANCE WITH THE VEGETATIVE STABILIZATION SPECIFICATION ON THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
- CONSTRUCT DECK FOR SEATING AREA. CONTRACTOR SHALL TAKE PRECAUTIONS TO PRESERVE THE INTEGRITY OF THE GCL AND PLACE AN ADDITIONAL 12" WIDE X 12" THICK (24" TOTAL THICKNESS) OF GCL AROUND PERIMETER OF PILE.
- AFTER ALL PLANTED AREAS WITHIN THE WET POND HAVE ACHIEVED A 70% OR GREATER VEGETATIVE COVERAGE, DEWATERING OPERATIONS IN THE WET POND MAY CEASE.
- REMOVE SKIMMER AND CONVERT OUTFALL TO PERMANENT OUTFALL STRUCTURE.
- CONDUCT FINAL INSPECTION WITH OWNER'S REPRESENTATIVE, AGENCY SITE REVIEWER, CCR, AND ADDRESS ALL PUNCH LIST ITEMS.

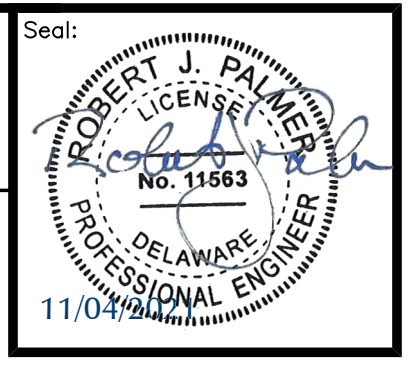
STANDARD OPERATION AND MAINTENANCE NOTES

- THE DNREC SEDIMENT AND STORMWATER PROGRAM AND/OR THE SUSSEX CONSERVATION DISTRICT RESERVE THE RIGHT TO ENTER PRIVATE PROPERTY FOR PURPOSES OF PERIODIC SITE REVIEWS.
- THE SUSSEX CONSERVATION DISTRICT SHALL BE NOTIFIED WITHIN 30 BUSINESS DAYS IF THE PROPERTY OWNERSHIP IS TRANSFERRED TO A NEW PERSON OR ENTITY.
- THE DNREC SEDIMENT AND STORMWATER PROGRAM AND/OR THE SUSSEX CONSERVATION DISTRICT MAY SEEK ENFORCEMENT ACTION AGAINST ANY OWNER DEEMED NEGLIGENT IN FULFILLING THE OPERATION AND MAINTENANCE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
- THE SUSSEX CONSERVATION DISTRICT SHALL BE CONTACTED IF A CONCERN ARISES REGARDING A MANAGEMENT FACILITY, BEFORE ANY NON-ROUTINE MAINTENANCE, OR IF MODIFICATIONS TO THE FACILITY ARE DESIRED.
- ANY DESIGN MODIFICATIONS MADE TO THE STORMWATER SYSTEM SHALL REQUIRE THE CREATION OF A NEW POST CONSTRUCTION STORMWATER MANAGEMENT PLAN AND/OR OPERATIONS AND MAINTENANCE PLAN, WITH APPROVAL OF THE PLAN(S) BY THE SUSSEX CONSERVATION DISTRICT.
- FOR ALL STORMWATER EASEMENT AREAS (I.E., ACCESS, MAINTENANCE, OR OFFSITE) AND THE MINIMUM 15-FOOT WIDE ACCESSWAYS TO ALL STORMWATER FACILITIES AND THEIR STRUCTURAL COMPONENTS, REGULAR MOWING SHALL BE PERFORMED TO KEEP THE GRASS 6" OR LESS; NO TREES OR SHRUBS SHALL BE PLANTED, AND ANY FOUND GROWING SHALL BE REMOVED; AND NO PERMANENT STRUCTURES, SUCH AS FENCES OR SHEDS, SHALL BE LOCATED WITHIN THE EASEMENT OR ACCESSWAY.
- TREES SHALL NOT BE PLANTED, AND SHALL BE REMOVED IF FOUND GROWING, ON AND WITHIN 15 FEET OF ALL POND EMBANKMENTS, ON POND SLOPES OR SAFETY BENCHES, AND WITHIN 10 FEET OF STRUCTURAL COMPONENTS, SUCH AS PIPE INLETS.
- WHEN THE FACILITY IS EXCAVATED TO REMOVE ACCUMULATED SEDIMENT, THE DISPOSAL AREA SHALL BE PERMANENTLY STABILIZED SO THAT IT DOES NOT RECREATE AN EROSION PROBLEM. ANY MATERIAL TAKEN OFFSITE SHALL STILL BE UTILIZED OR DISPOSED OF IN AN APPROVED DNREC MANNER.
- 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.
- THE OWNER / DEVELOPER/ PROPERTY OWNER SHALL BE RESPONSIBLE FOR OPERATION AND MAINTENANCE OF EACH POST CONSTRUCTION STORMWATER MANAGEMENT FACILITY.



OVERALL POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN

1"=30'

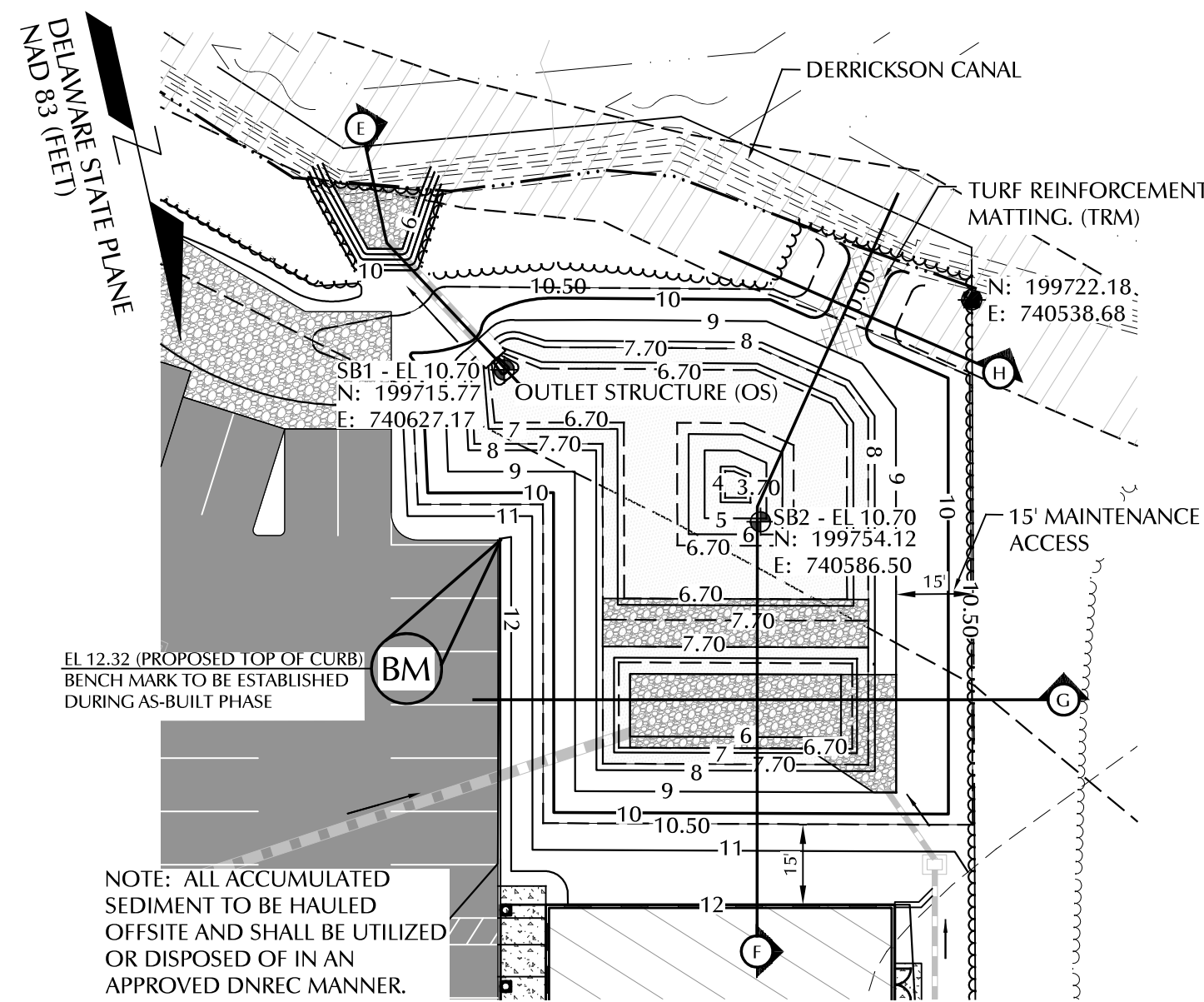


Revision	By	Date
1	SKM	03/29/2019
2	SKM	12/28/2020
3	SKM	04/20/2021
4	SKM	08/31/2021

MILLVILLE SQUARE
 SEDIMENT & STORMWATER MANAGEMENT PLANS
 WHITE CREEK - INDIAN RIVER BAY WATERSHED,
 TOWN OF MILLVILLE, BALTIMORE HUNDRED,
 SUSSEX COUNTY, DELAWARE
 TAX MAP # 134-12.00-350.00 AND # 134-12.00-351.00
POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN

Date:	FEB 08, 2019
Scale:	AS SHOWN
Dwn.By:	SKM
Proj.No.:	TRU01-06

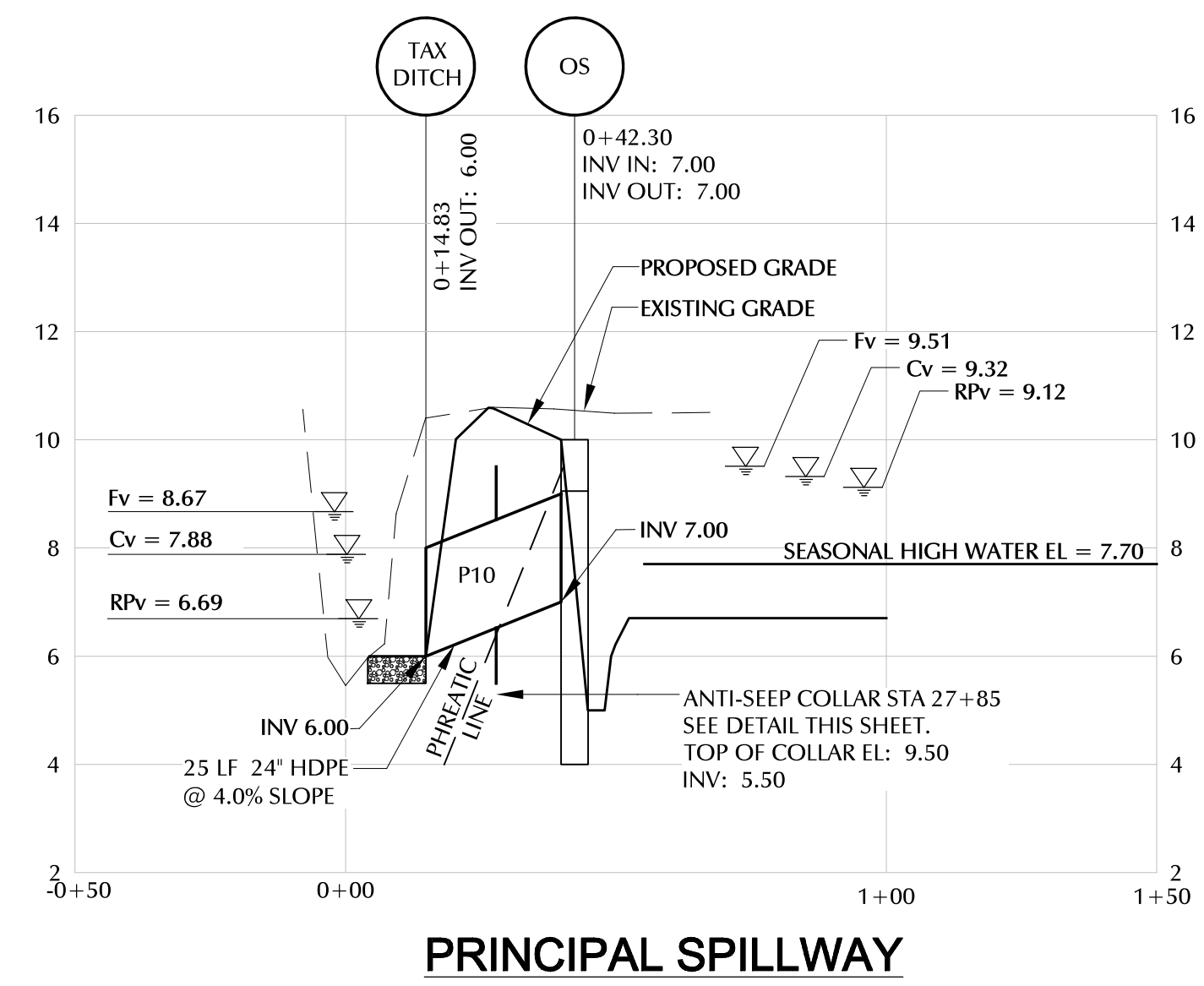
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POST-CONSTRUCTION WET POND PLAN (BMP WP)

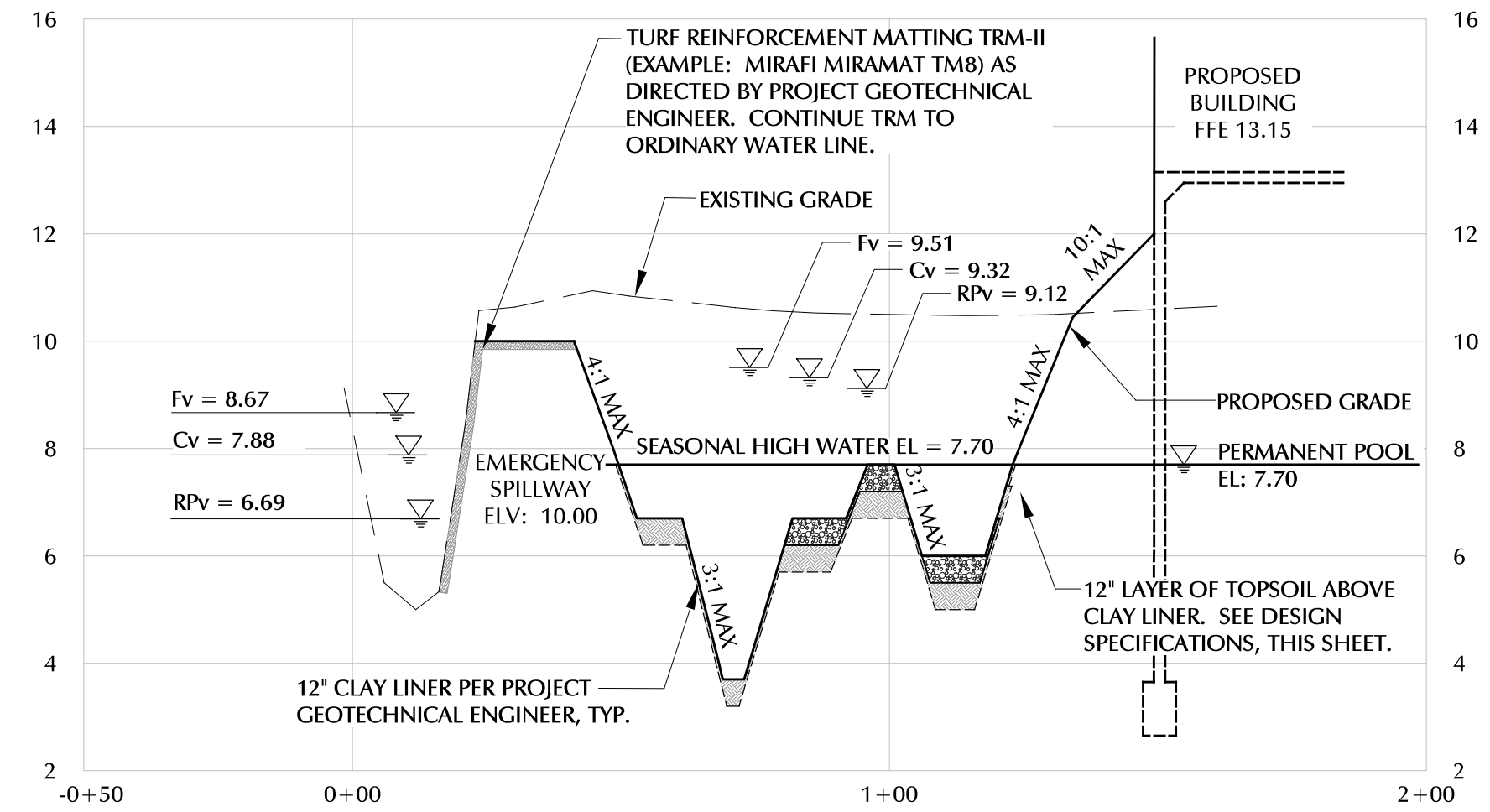
1"=30'
0 30 60 90 FEET

NOTE: ALL ACCUMULATED SEDIMENT TO BE HAULED OFFSITE AND SHALL BE UTILIZED OR DISPOSED OF IN AN APPROVED DNREC MANNER.



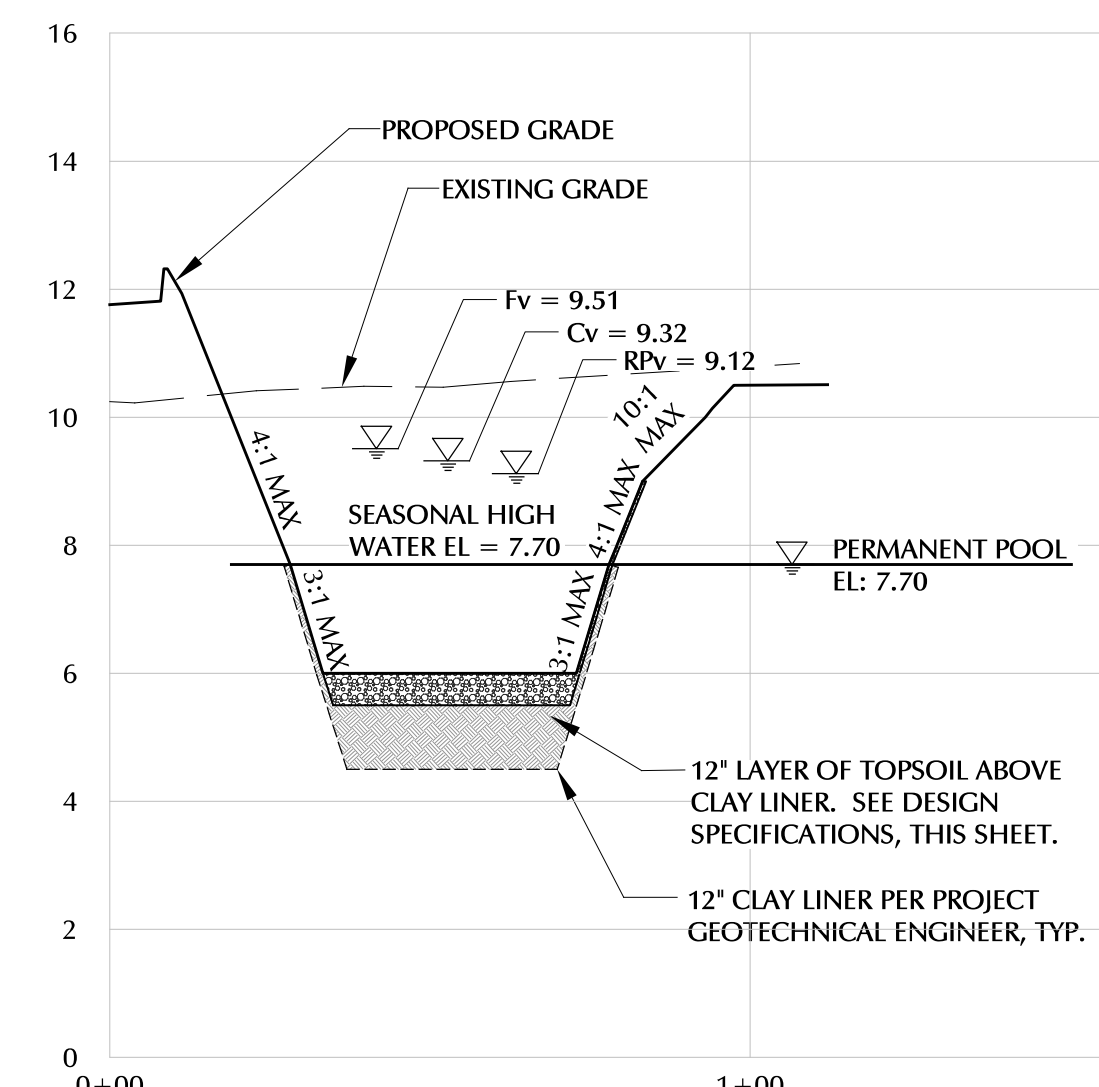
PRINCIPAL SPILLWAY SECTION E
H-1"=30' V-1"=3'

0 30 60 90 FEET



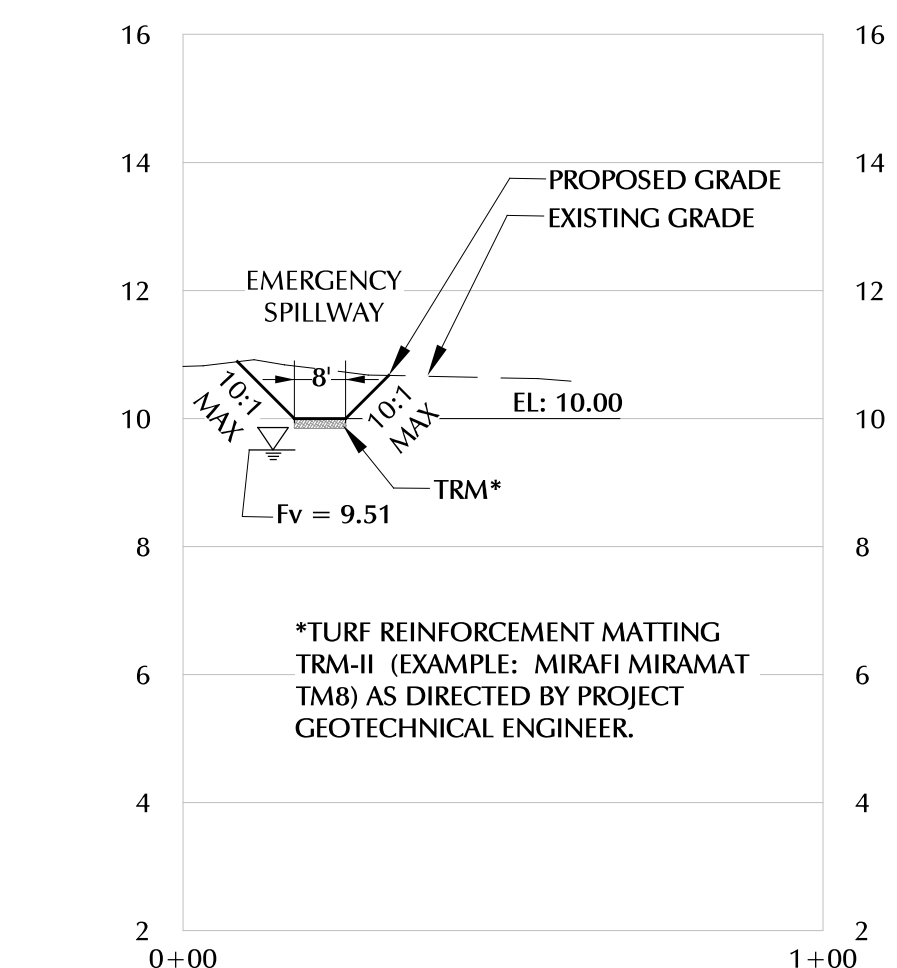
SECTION F
H-1"=30' V-1"=3'

0 30 60 90 FEET



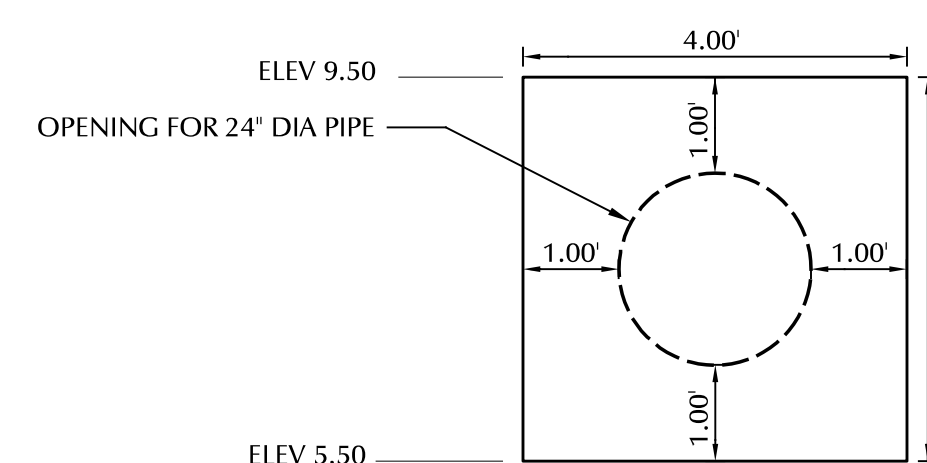
SECTION G
H-1"=30' V-1"=3'

0 30 60 90 FEET



EMERGENCY SPILLWAY SECTION H
H-1"=30' V-1"=3'

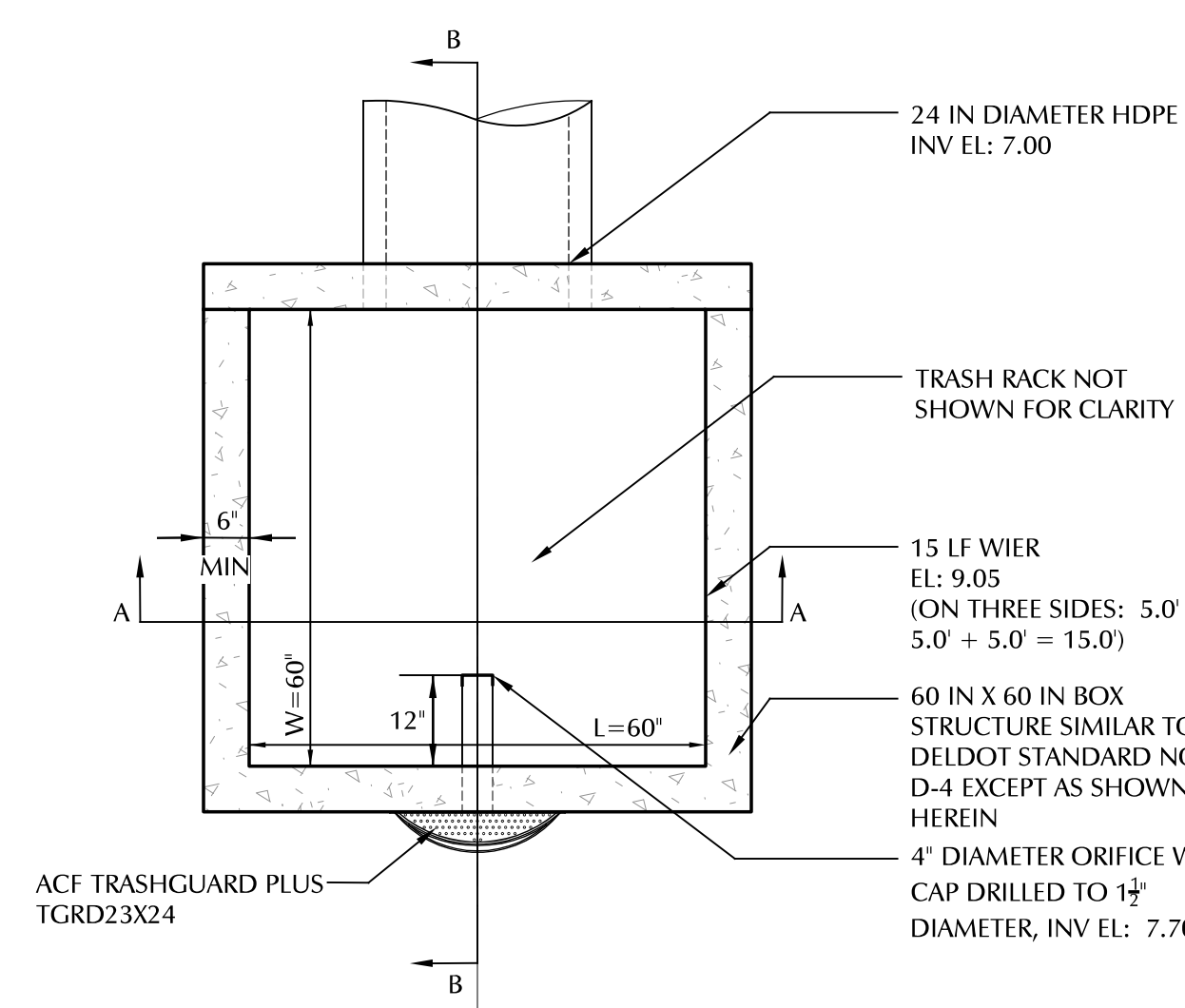
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ANTI-SEEP COLLAR DETAIL

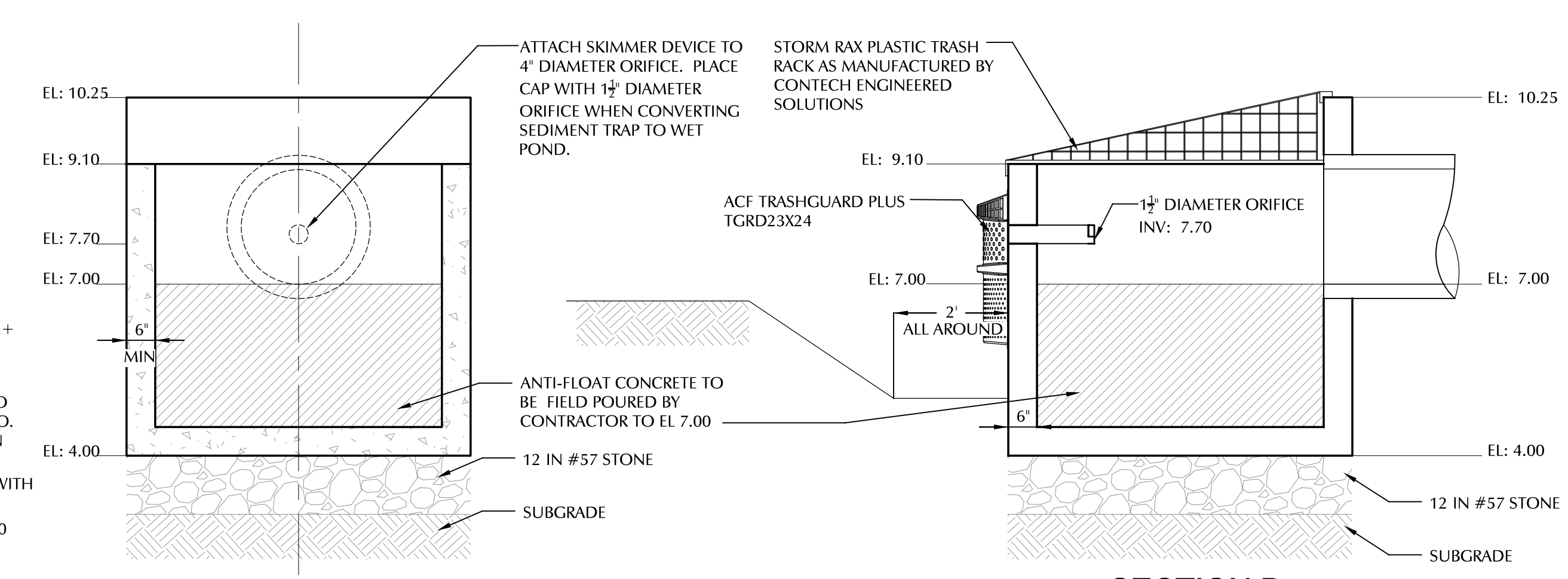
1/2" = 1'-0"
0 2 4 6 FEET

- NOTE:
1. ANTI-SEEP COLLAR SHALL BE HDPE NO-SEEP BRAND OR APPROVED EQUAL.
 2. BOLTS, NUTS, AND WASHERS SHALL BE STAINLESS STEEL.
 3. A SILICONE WATERPROOFING SEALANT SHALL BE USED AROUND ALL BOLTS AND WASHERS.



PLAN

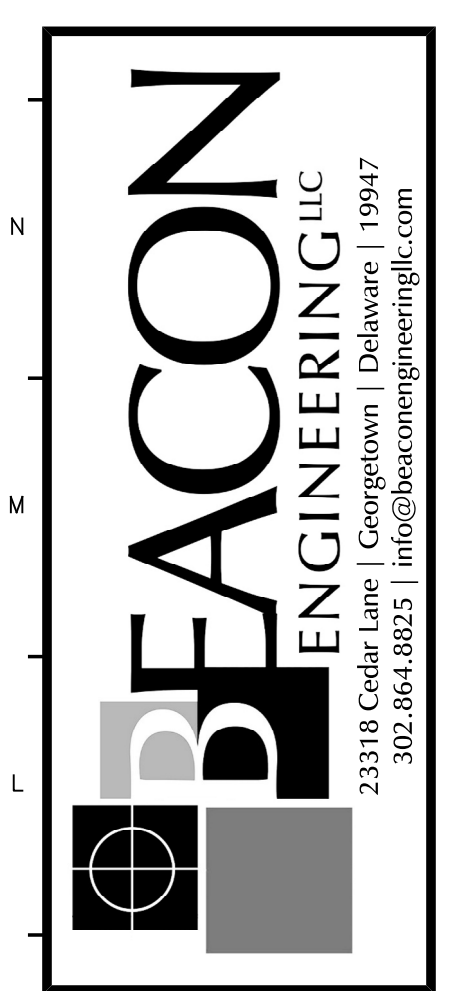
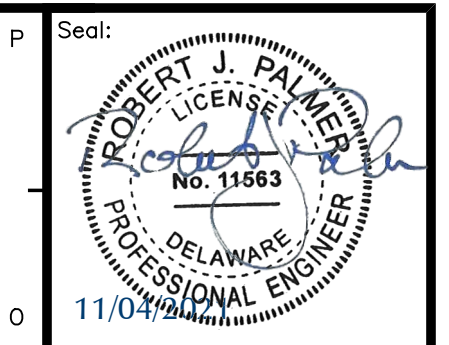
1/2" = 1'-0"
0 2 4 6 FEET



SECTION A

SECTION B

- NOTES:
1. ANTI-FLOAT CONCRETE TO BE FIELD POURED BY CONTRACTOR TO EL 5.40.
 2. WHEN OUTLET STRUCTURE IS PRECAST, PIPE OPENING SHALL BE 3 IN TO 4 IN LARGER THAN OUTSIDE DIAMETER OF PIPE.
 3. REBAR SHALL BE SIMILAR TO DELDOT STANDARD D-4 FOR 72 IN X 72 IN INLET BOX.



Revision	By	Date
1	SKM	03/29/2019
2	SKM	12/28/2020
3	SKM	04/20/2021
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MILLVILLE SQUARE
SEDIMENT & STORMWATER MANAGEMENT PLANS
WHITE CREEK - INDIAN RIVER BAY WATERSHED,
TOWN OF MILLVILLE, BALTIMORE HUNDRED,
SUSSEX COUNTY, DELAWARE
TAX MAP #134-12.00-350.00 AND #134-12.00-351.00
POST-CONSTRUCTION SITE DETAILS AND NOTES

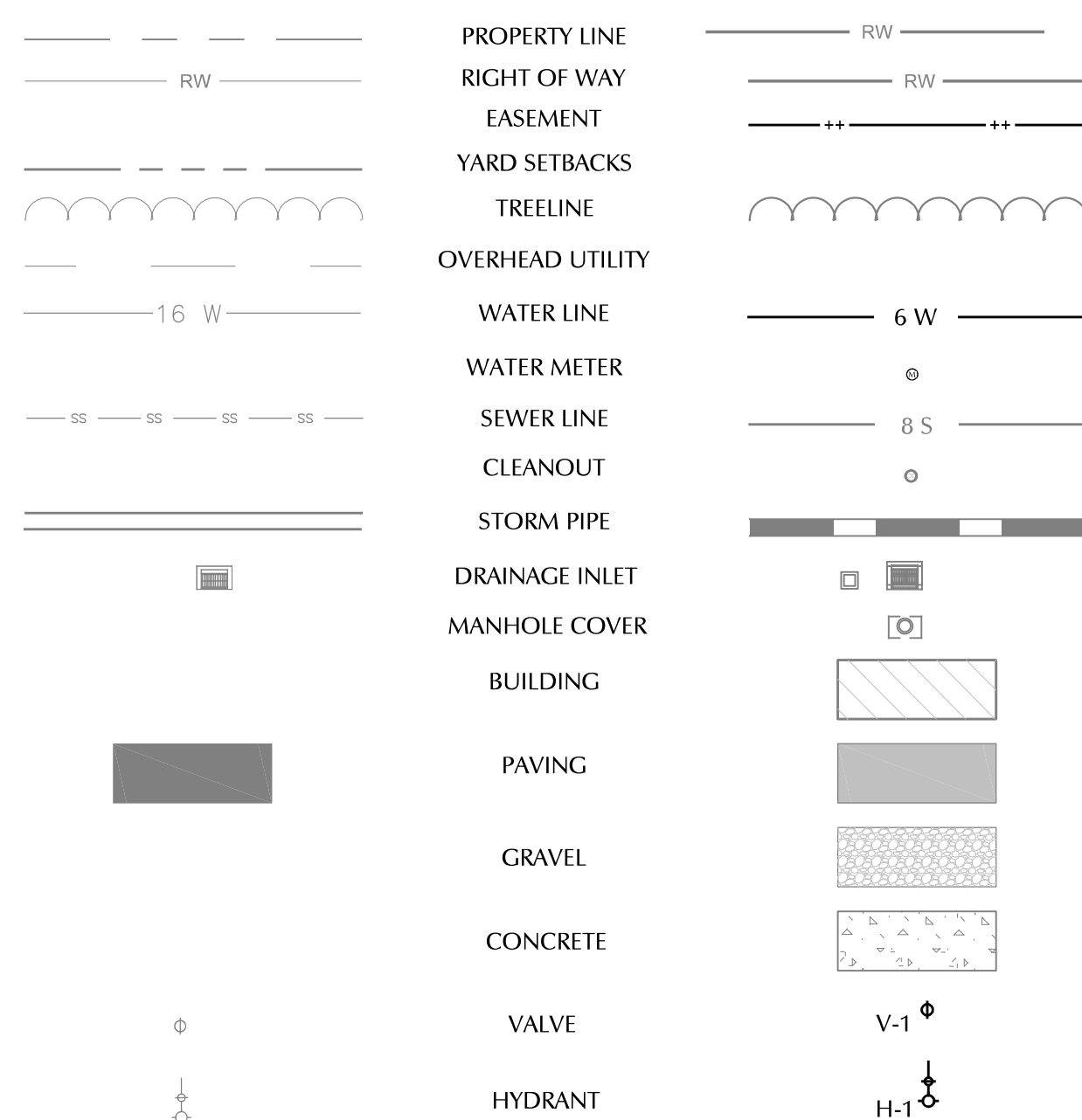
Date: FEB 08, 2019
Scale: AS SHOWN
Dwn.By: SKM
Proj.No.: TRU01-06

Dwg.: **SW4.2**

EXISTING

LEGEND

PROPOSED

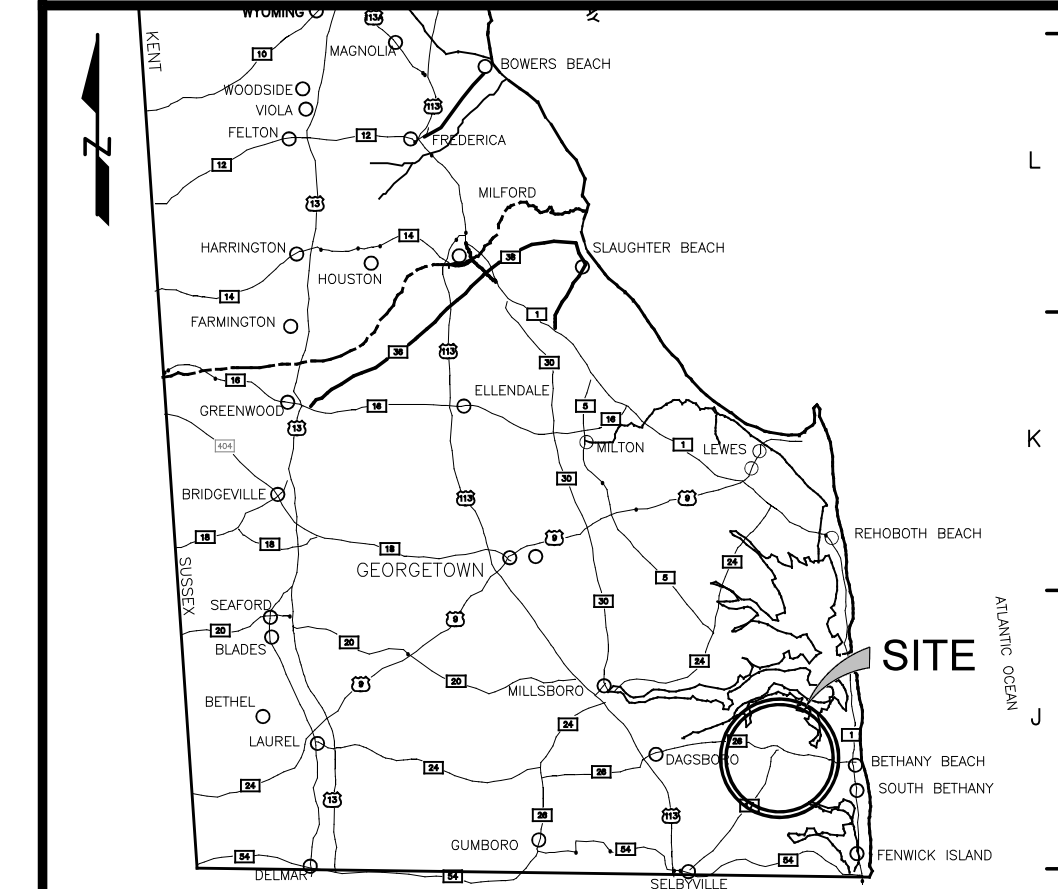


SITE DATA

APPLICANT/OWNER: BRADLEY A. ABSHER, KRYPTON COMMERCIAL, LLC, 118 ATLANTIC AVENUE, SUITE 202, OCEAN VIEW, DE 19970. PHONE: 302-539-2488. EMAIL: BRAD@TRUENORTHLS.COM. PROPERTY & ZONING DATA: TAX MAP: 134-12.00-350.00 & 134-12.00-351.00. SITE ADDRESS: 536 ATLANTIC AVENUE, MILLVILLE, DE 2.45 AC. EXISTING SITE AREA: 2.45 AC. PROPOSED SITE AREA: 2.45 AC. PROPOSED CONDITION: SMALL SCALE SHOPPING CENTER. WATER: TIDEWATER UTILITIES. SEWER: SUSSEX COUNTY. CUT VOLUME: 1,010 CY. FILL VOLUME: 4,375 CY. NUMBER OF EXISTING LOTS: 2. NUMBER OF PROPOSED LOTS: 1. NET DEVELOPMENT AREA: 1.86 AC (AC WITHIN SETBACKS). PROPOSED DISTURBED: 2.31 AC. SITE ACCESS: ATLANTIC AVENUE (SR #26). PROPOSED BUILDING AREA: 1,965 SF (EACH UNIT, 13 UNITS TOTAL) 25,545 SF TOTAL.



LOCATION / ZONING MAP 1" = 500 FEET



VICINITY MAP 1" = 10 MILES

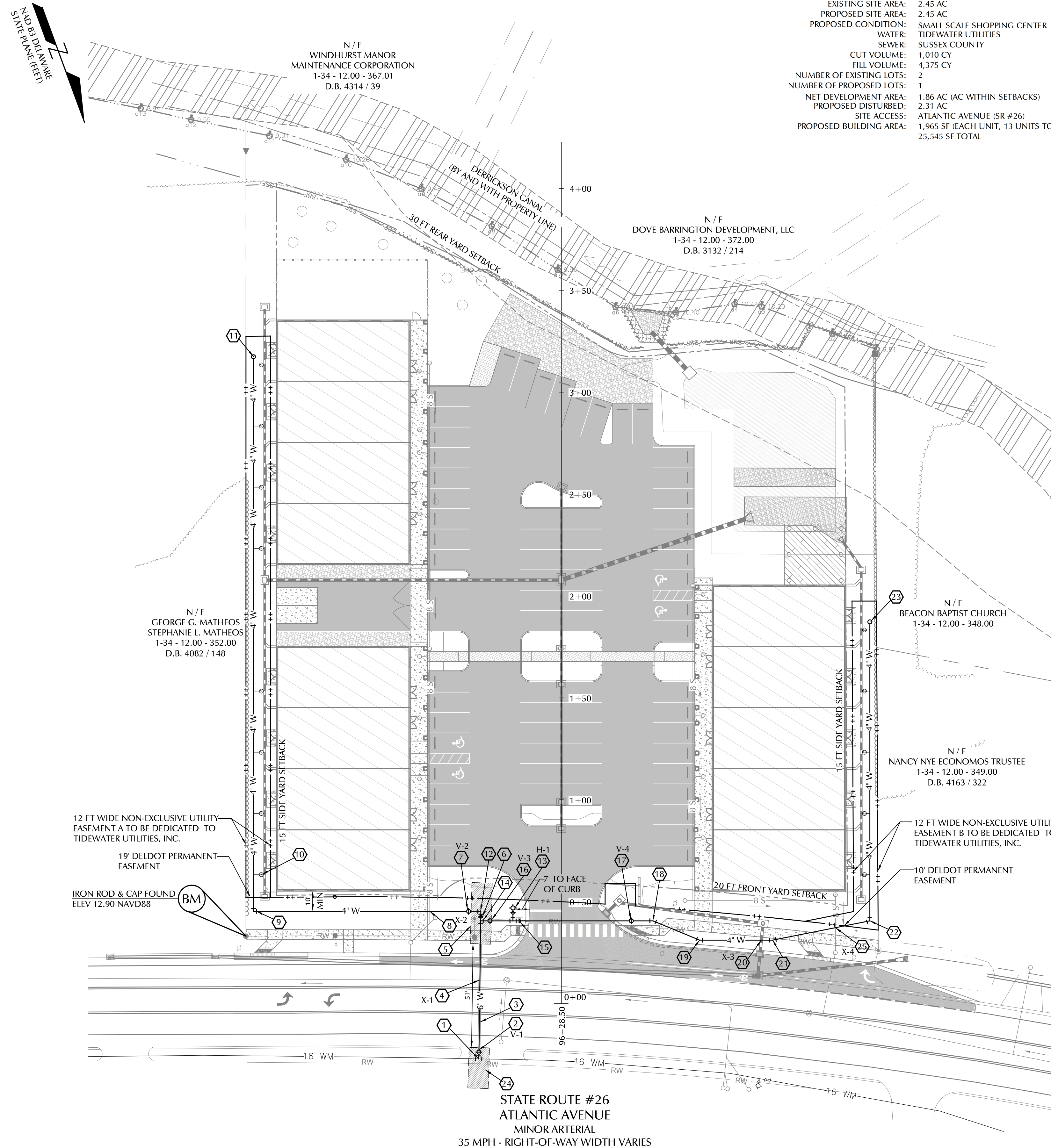
TIDEWATER UTILITIES INC. UTILITY NOTES

- 1. PRESSURE PIPE FOR WATER MAINS 4" AND GREATER SHALL BE IN ACCORDANCE WITH AWWA C900 DR18 FOR PVC PIPE OR AWWA C909 CLASS 235 FOR PVC PIPE.
2. FITTINGS FOR WATER MAINS OF 4" AND GREATER SHALL BE MECHANICAL JOINT DUCTILE IRON PROVIDED BY TYLER UNION OR APPROVED EQUAL. MECHANICAL JOINT RESTRAINT SHALL BE MEGALUG® SERIES 2000PV PRODUCED BY EBAA IRON INC. OR APPROVED EQUAL.
3. DUCTILE IRON PIPE SHALL BE CLASS 150 IN ACCORDANCE WITH AWWA C151; AWWA C111 WITH CEMENT LINING AND BITUMINOUS COATING.
4. PRESSURE PIPE FOR 2" AND LESS SHALL BE HIGH DENSITY POLYETHYLENE PIPE IN ACCORDANCE WITH AWWA C901 FABRICATED FROM MATERIAL WITH A CLASSIFICATION OF ASTM D1248. THE PIPE SHALL BE COPPER TUBE I.D., SDR 9.
5. WATER VALVES FOR MAINS 4" AND GREATER SHALL BE RESILIENT WEDGE GATE VALVES CONFORMING TO AWWA C509. BURIED VALVES TO BE FITTED WITH A 2" OPERATING NUT WITH A NON-RISING STEM. VALVES SHALL BE AMERICAN FLOW CONTROL, SERIES 500 OR APPROVED EQUAL.
6. VALVE BOXES SHALL BE CAST IRON 2 PIECE SCREW TYPE ADJUSTABLE WITH "WATER" CAST IN THE COVER PROVIDED BY TYLER UNION MODEL 564-S OR APPROVED EQUAL.
7. VALVES SHALL BE PLACED A MAXIMUM DISTANCE OF 2 FEET FROM A TEE OR CROSS UNLESS A CONFLICT WITH ANOTHER UTILITY IS PRESENT.
8. SADDLES FOR PRESSURE WATER MAIN SHALL BE FORD STAINLESS STEEL BANDED SADDLES FS202 SERIES.
9. CURB STOPS SHALL BE FORD FB1700 BALLCORP SERIES WITH CC THREADS.
10. ALL WATER MAIN SHALL BE INSTALLED WITH TRACER WIRE FOR LOCATION EQUIPMENT CONNECTION. TRACER WIRE SHALL BE #12 SOLID COPPER CORE, BLUE COLOR, WITH THHN OR EQUAL INSULATION. TRACER WIRE TO BE RAN CONTINUOUSLY ALONG AND DIRECTLY ADHERED TO WATER MAIN ON TOP OF WATER MAIN UTILIZING INDUSTRIAL ADHESIVE DUCT TAPE. TRACER WIRE TO BE ADHERED TO PIPE WITH A MINIMUM OF 3 LOCATIONS ON ANY LENGTH OF PIPE TO INSURE ACCURATE WATER MAIN LOCATION. LOCATION WIRE TO BE PULLED UP THROUGH ALL VALVE BOXES FOR LOCATION EQUIPMENT CONNECTION.
11. BURIAL DEPTH OF WATER MAINS TO BE A MINIMUM OF 48".
12. ALL WATER MAINS TO HAVE METAL CONDUCTOR TYPE DETECTOR TAPE INSTALLED 2' DIRECTLY ABOVE AND CONTINUOUSLY ALONG WATER MAIN. DETECTOR TAPE SHALL BE TERRA-TAPE BY ALLEN SYSTEMS OR APPROVED EQUAL.
13. FIRE HYDRANTS SHALL BE AMERICAN DARLING B-62-B. SEE LOCAL HYDRANT SPECIFICATIONS FOR PUMPER NOZZLE AND HOSE NOZZLE INFORMATION.
14. BACKFLOW PREVENTERS, WHERE REQUIRED, SHALL MEET ALL REQUIREMENTS OF ASSE STANDARD 1013 AND AWWA C506, LATEST REVISION. BACKFLOW PREVENTERS SHALL BE WATTS SERIES 909 HW, CONBRACCO SERIES 40-200 OR APPROVED EQUAL.
15. NEWLY INSTALLED WATER MAIN SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C651 STANDARDS, LATEST REVISION BEFORE ACCEPTANCE CAN BE GRANTED.
16. WATER MAINS SHALL HAVE A MINIMUM 10' HORIZONTAL AND 18" VERTICAL SEPARATION FROM SANITARY SEWER COMPONENTS.
17. TIDEWATER UTILITIES, INC. IS TO BE NOTIFIED 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
18. A PRE-CONSTRUCTION MEETING IS TO BE HELD BEFORE ANY CONSTRUCTION ACTIVITIES CAN COMMENCE.
19. WATER METERS ARE TO BE OBTAINED FROM TIDEWATER UTILITIES, INC.
20. ALL WATER SYSTEM COMPONENTS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST TIDEWATER UTILITIES CONSTRUCTION STANDARDS AND APPLICABLE AWWA STANDARDS.
* - "APPROVED EQUAL" DEFINED AS APPROVED BY TIDEWATER UTILITIES, INC.

ENGINEER'S CERTIFICATION:

I, ROBERT J. PALMER, HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE AND THAT THIS PLAN WAS EITHER PREPARED BY ME OR UNDER MY DIRECTION. TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PLAN COMPLIES WITH THE APPLICABLE STATE AND LOCAL REGULATIONS AND ORDINANCES. MY LICENSE NUMBER IS 11563, AND EXPIRES ON JUNE 30, 2022.

Robert J. Palmer, 11/04/2021, ROBERT J. PALMER, P.E., BEACON ENGINEERING, LLC, 23318 CEDAR LANE, GEORGETOWN, DELAWARE 19947



WATER PLAN NOTES:

- 1 16" X 6" TAPPING TEE (APPROXIMATE LOCATION. SEE PLAN.)
2 (V-1) 6" VALVE
3 BORE AND JACK 51 LF 12" SCH 40 STEEL CASING PIPE. STEEL CASING SHALL HAVE A MINIMUM WALL THICKNESS OF 0.375".
4 (X-1) CROSSING 1 STA: 0+11.60 L 39.88 FT
5 10' X 30' BORING PIT
6 6" X 4" REDUCER STA: 0+43.58 L 39.45 FT
7 (V-2) 4" VALVE
8 (X-2) CROSSING 2 STA: 0+45.32 L 64.49 FT
9 90° BEND
10 1" TAP, METER PIT, AND WATER SERVICE, TYP. REFER TO TIDEWATER STANDARD DETAILS A-1 AND A-3 ON SHEET UT3.2, TYP.
11 2" PERMANENT BLOW OFF STA: 3+17.34 L 150.88 FT. REFER TO TIDEWATER STANDARD DETAIL A-4 ON SHEET UT3.2.
12 4" 90° BEND
13 (H-1) HYDRANT ASSEMBLY. STA: 0+40.68 L 23.68 FT. REFER TO TIDEWATER STANDARD DETAIL A-7 ON SHEET UT3.2. FACE STEAMER NOZZLE TO ADJACENT CURB.
14 6" TEE STA: 0+40.68 L 39.51 FT
15 6" X 4" REDUCER STA: 0+40.68 L 19.81 FT
16 (V-3) 6" VALVE
17 (V-4) 4" VALVE
18 22.5° BEND
19 22.5° BEND
20 (X-3) CROSSING 3 STA: 0+31.21 R 98.07 FT
21 22.5° BEND
22 90° BEND
23 2" PERMANENT BLOW OFF STA: 1+87.34 R 151.31 FT. REFER TO TIDEWATER STANDARD DETAIL A-4 ON SHEET UT3.2.
24 10' X 20' RECEIVING PIT. TEMPORARY CONSTRUCTION EASEMENT IS REQUIRED.
25 (X-4) CROSSING 2 STA: 0+37.32 R 134.42 FT

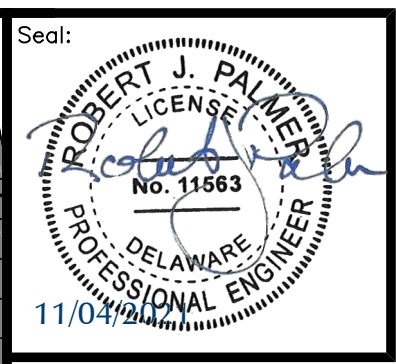


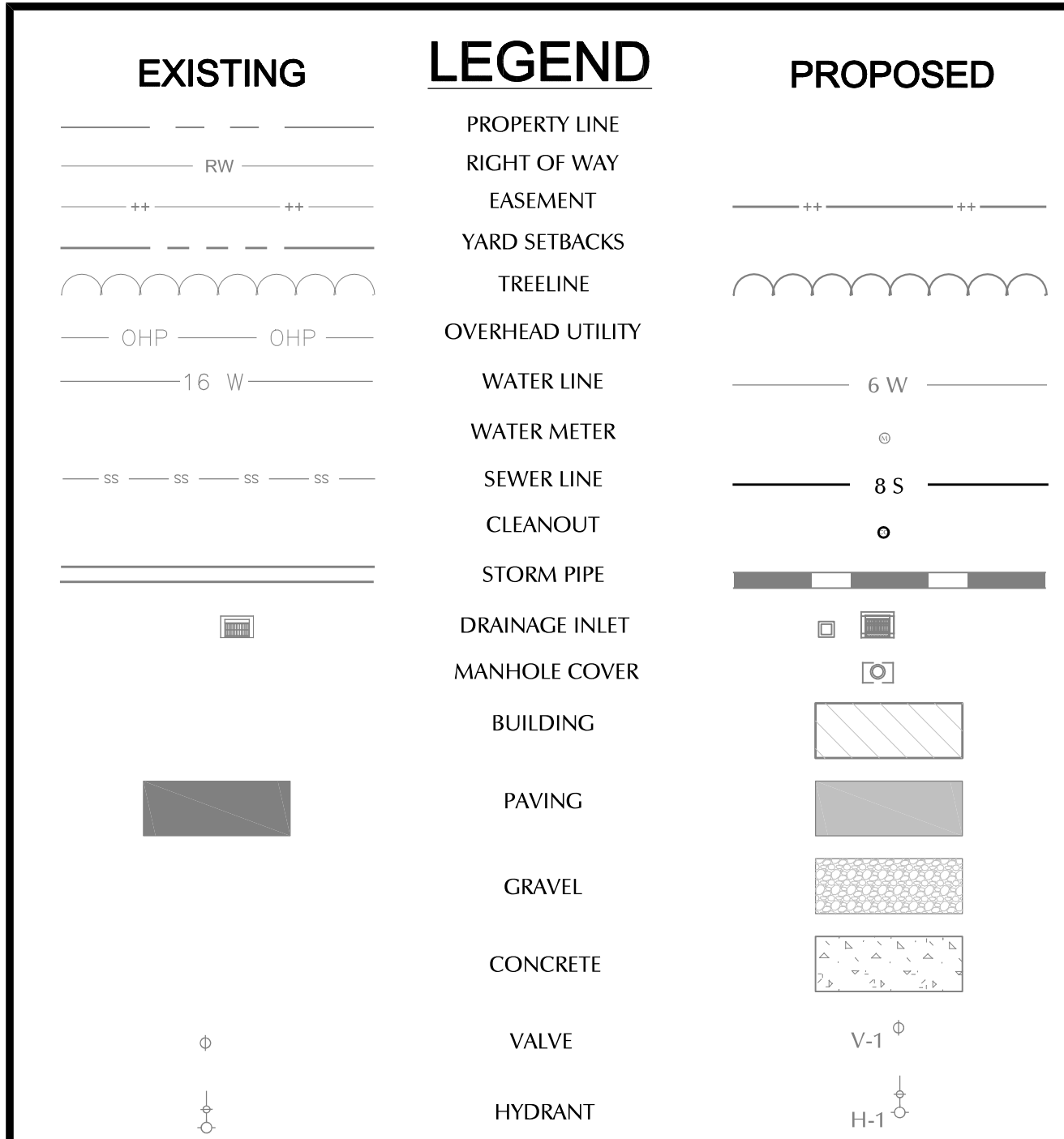
Table with 2 columns: Date, By, and Revision. Contains revision history for TIDEWATER UTILITIES, INC. COMMENTS SKM.

MILLVILLE SQUARE, WHITE CREEK - INDIAN RIVER BAY WATERSHED, TOWN OF MILLVILLE, BALTIMORE HUNDRED, SUSSEX COUNTY, DELAWARE, TAX MAP # 134-12.00-350.00 AND # 134-12.00-351.00, WATER DISTRIBUTION SYSTEM PLAN

Date: JUL 20, 2020, Scale: 1" = 30', Dwn.By: SKM, Proj.No.: TRU01-06

Dwg.: UT1.1





SITE DATA:

APPLICANT/OWNER:
BRADLEY A. ABSHER
KRYPTON COMMERCIAL, LLC
118 ATLANTIC AVENUE
SUITE 202
OCEAN VIEW, DELAWARE 19970
BRAD@TRUENORTHLS.COM

APPROVING AGENCY:
SUSSEX CONSERVATION DISTRICT
JOHN JUSTICE
PLAN REVIEWER
GEORGETOWN, DELAWARE 19947
PHONE: 302-856-2105

CONSULTANT:
BEACON ENGINEERING, LLC
23318 CEDAR LANE
GEORGETOWN, DELAWARE 19947
PHONE: 302-864-8825
RPMLE@BEACONENGINEERINGLLC.COM

PROPERTY & ZONING DATA:

TAX MAP:	134-12.00-350.00	134-12.00-351.00
SITE ADDRESS:	536 ATLANTIC AVENUE, MILLVILLE, DE	
LATITUDE:	38.548222° N	38.548222° N
LONGITUDE:	-75.121225° W	-75.120698° W
CURRENT ZONING:	C-1 TOWN CENTER COMMERCIAL	C-1 TOWN CENTER COMMERCIAL
PROPOSED ZONING:	C-1 TOWN CENTER COMMERCIAL	C-1 TOWN CENTER COMMERCIAL
EXISTING CONDITION:	SINGLE FAMILY HOME (DEMOLISHED)	SINGLE FAMILY HOME
EXISTING SITE AREA:	1.45 AC	1.00 AC
PROPOSED SITE AREA:	1.45 AC	1.00 AC
EXISTING WETLAND AREA:		
PROPOSED CONDITION:	SMALL SCALE SHOPPING CENTER	
PROPOSED DISCHARGE LOCATION:	DERBICKSON CANAL	
WATER:	TIDEWATER UTILITIES	
SEWER:	SUSSEX COUNTY	
CUT VOLUME:	1,010 CY	
FILL VOLUME:	4,375 CY	
NUMBER OF EXISTING LOTS:	2	
NUMBER OF PROPOSED LOTS:	1	
NET DEVELOPMENT AREA:	1.86 AC (AC WITHIN SETBACKS)	
PROPOSED DISTURBED:	2.42 AC	
SITE ACCESS:	ATLANTIC AVENUE (SR #26)	
VERTICAL DATUM:	NAVD 88 (FEET)	
HORIZONTAL DATUM:	DELAWARE STATE PLANE NAD 83 (FEET)	
DEED REFERENCE:	4916/210	4818/282
EXISTING BUILDING AREA:	2,018 SF	1,714 SF
PROPOSED BUILDING AREA:	1,965 SF (EACH UNIT, 13 UNITS TOTAL)	
	25,545 SF TOTAL	
COMMERCIAL:	25,545 SF (24%)	
PARKING:	31,904 SF (29%)	
SIDEWALKS:	7,323 SF (07%)	
FAMILY AREA:	2,250 SF (02%)	
STORMWATER MANAGEMENT:	10,200 SF (10%)	
OPEN SPACE/LANDSCAPING:	29,660 SF (28%)	
STATE STRATEGIC INVESTMENT:	2, 3 AND OUT OF PLAY	
POSTED SPEED LIMIT:	35	
NEAREST TOWN:	MILLVILLE, DELAWARE	
SURVEYOR:	TRUE NORTH LAND SURVEYING, INC	
DATE OF SURVEY:	MAY 9, 2018	

PORTIONS OF THESE PROPERTIES ARE WITHIN THE 100 YR FLOOD PLAIN PER FEMA MAP NUMBERED 1005C0511K DATED MARCH 15, 2015. REFER TO SITE PLAN FOR LOCATION.

THIS PROJECT WILL BE CONSTRUCTED IN 1 PHASE.

HEIGHT, AREA, & BULK REQUIREMENTS

FRONT YARD SETBACK: 20 FT
SIDE YARD SETBACK: 15 FT
REAR YARD SETBACK: 20 FT (30 FT IF ADJACENT TO RESIDENTIAL)
MAXIMUM BUILDING HEIGHT: 42 FT (4 STORIES)
MINIMUM LOT AREA: 2 AC
MAXIMUM LOT AREA: 4 AC
MINIMUM LOT FRONTAGE: 200 FT
MAXIMUM LOT COVERAGE: 60% (CAN BE INCREASED TO 70% BY THE TOWN COUNCIL IF PARKING IS LOCATED TO THE SIDE OR REAR OF THE PRIMARY BUILDING WITH THE ADDITIONS OF STREETScape, PLAZAS, COURTYARDS & PERMANENT SITE

PROPOSED LOT COVERAGE: 52%

PARKING REQUIREMENTS:

RETAIL STORE (25,545 SF): 1 PER 300 SF OF FLOOR AREA (5% REDUCTION FOR EVERY 5000 SF OF GFA ABOVE 5000 SF)

25,545 SF/300 SF = 86 SPACES
20% REDUCTION = 68 SPACES

TOTAL SPACES REQUIRED: 68 SPACES

PARKING PROVIDED:

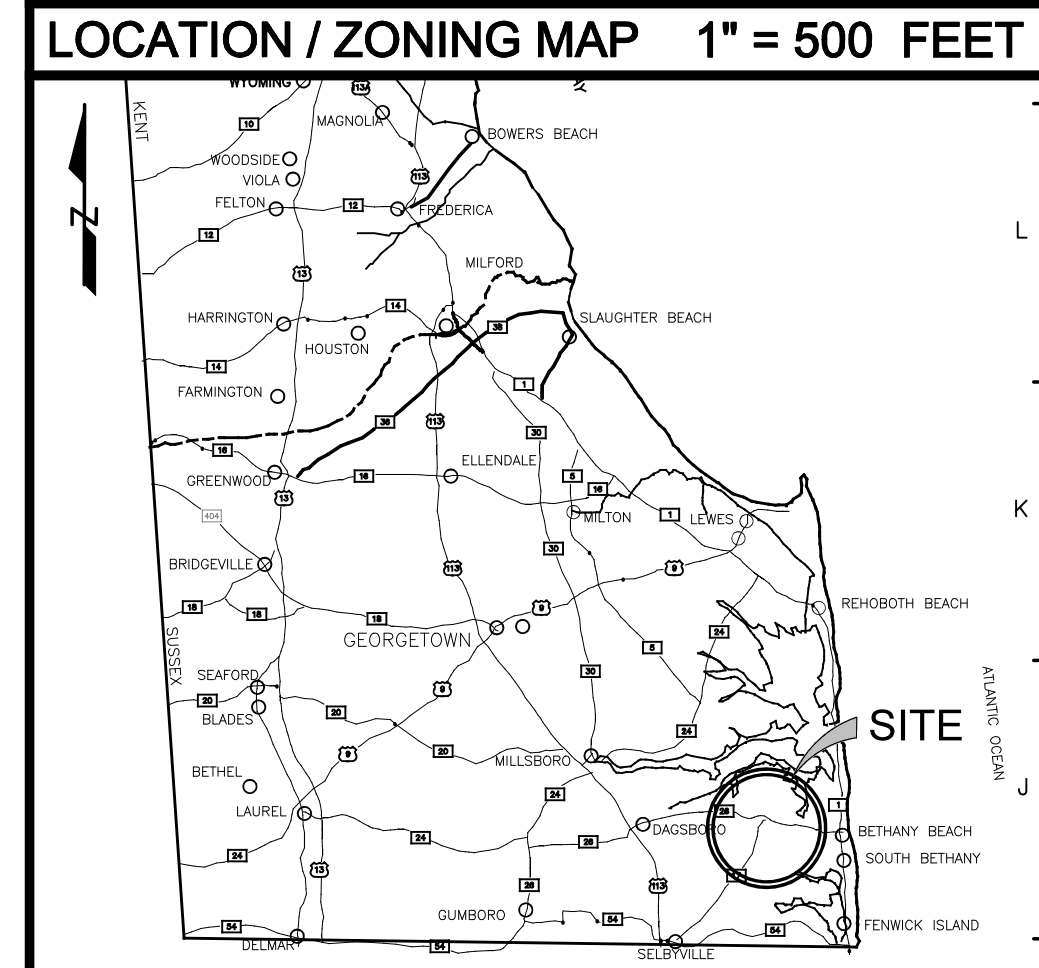
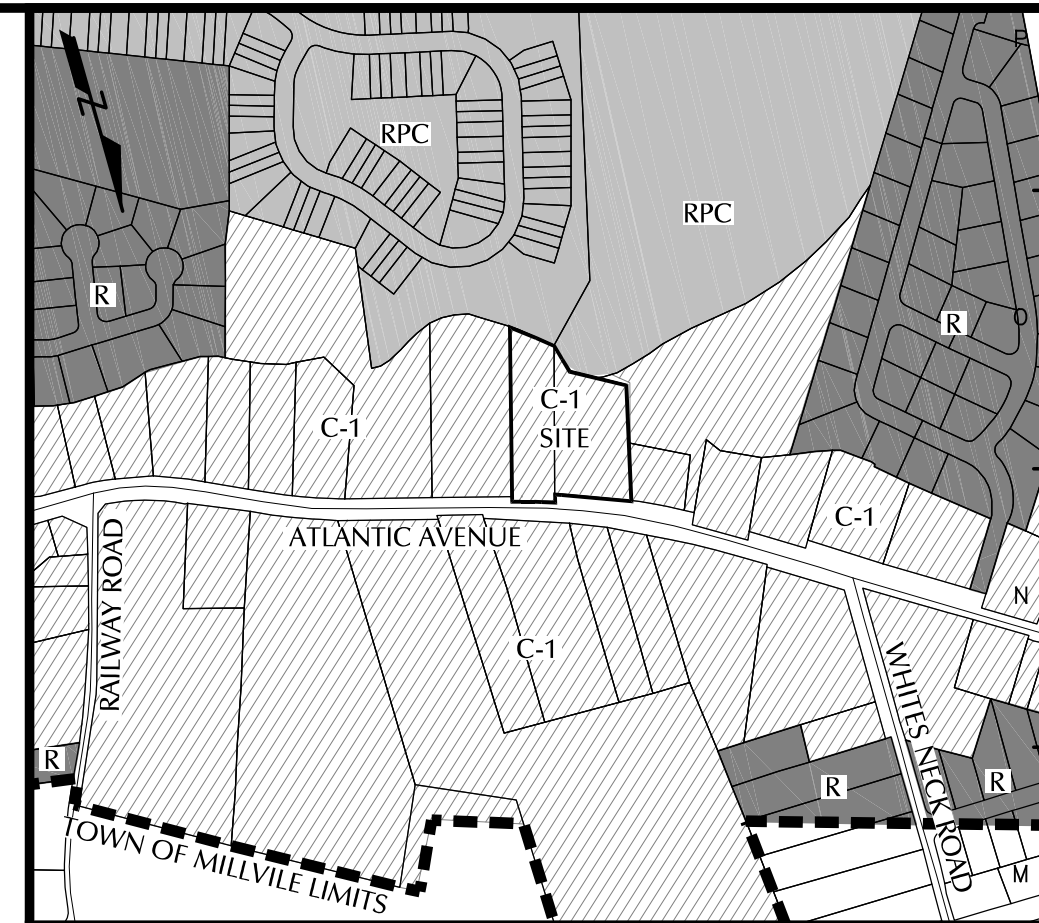
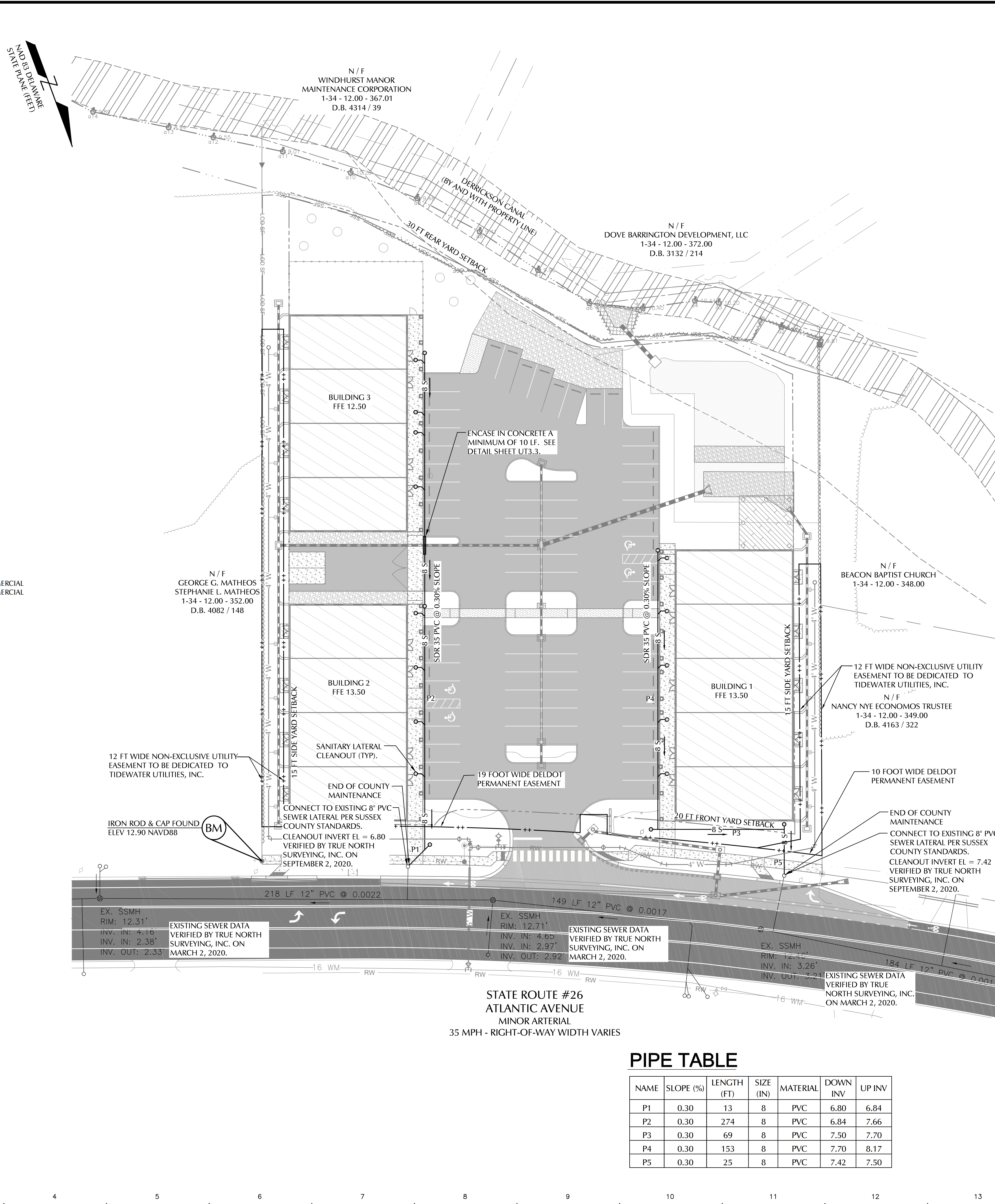
SHOPPING CENTER: 68 SPACES

ACCESSIBLE PARKING REQUIREMENTS:

PARKING (51-75): 3 SPACES (INCLUDES 1 VAN SPACE)

ACCESSIBLE PARKING PROVIDED: 4 SPACES

TOTAL PARKING PROVIDED: 68 SPACES



EDU ALLOCATION TABLE:

BUILDING	ALLOCATION RATE	BUILDING GROSS FLOOR AREA (SF)	TOTAL ALLOCATION (EDUs)
1	1/3000 SF	9,825	3.28
2	1/3000 SF	7,860	2.62
3	1/3000 SF	7,860	2.62
TOTAL EDUs REQUIRED =			8.52
TOTAL EDUs REQUESTED =			9.00

Seal: ROBERT J. PALMER
LICENSED PROFESSIONAL ENGINEER
DELAWARE
No. 11563
11/04/2021

BEACON ENGINEERING LLC
23318 CEDAR LANE | Georgetown | Delaware | 19947
302.864.8825 | info@beaconengineeringllc.com

Revisions:

Date:	By:	Comments
8/03/2020	SKM	

MILLVILLE SQUARE
SEDIMENT & STORMWATER MANAGEMENT PLANS
WHITE CREEK - INDIAN RIVER BAY WATERSHED,
TOWN OF MILLVILLE, BALTIMORE HUNDRED,
SUSSEX COUNTY, DELAWARE
TAX MAP #134-12.00-350.00 AND #134-12.00-351.00
SANITARY SEWER PLAN

ENGINEER'S CERTIFICATION:

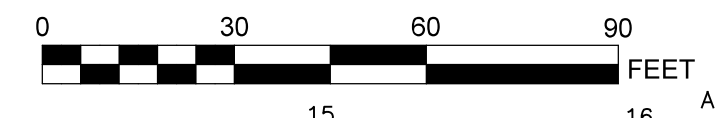
I, ROBERT J. PALMER, HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF DELAWARE AND THAT THIS PLAN WAS EITHER PREPARED BY ME OR UNDER MY DIRECTION. TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PLAN COMPLIES WITH THE APPLICABLE STATE AND LOCAL REGULATIONS AND ORDINANCES. MY LICENSE NUMBER IS 11563, AND EXPIRES ON JUNE 30, 2022.

Robert J. Palmer
ROBERT J. PALMER, P.E.
BEACON ENGINEERING, LLC
23318 CEDAR LANE
GEORGETOWN, DELAWARE 19947

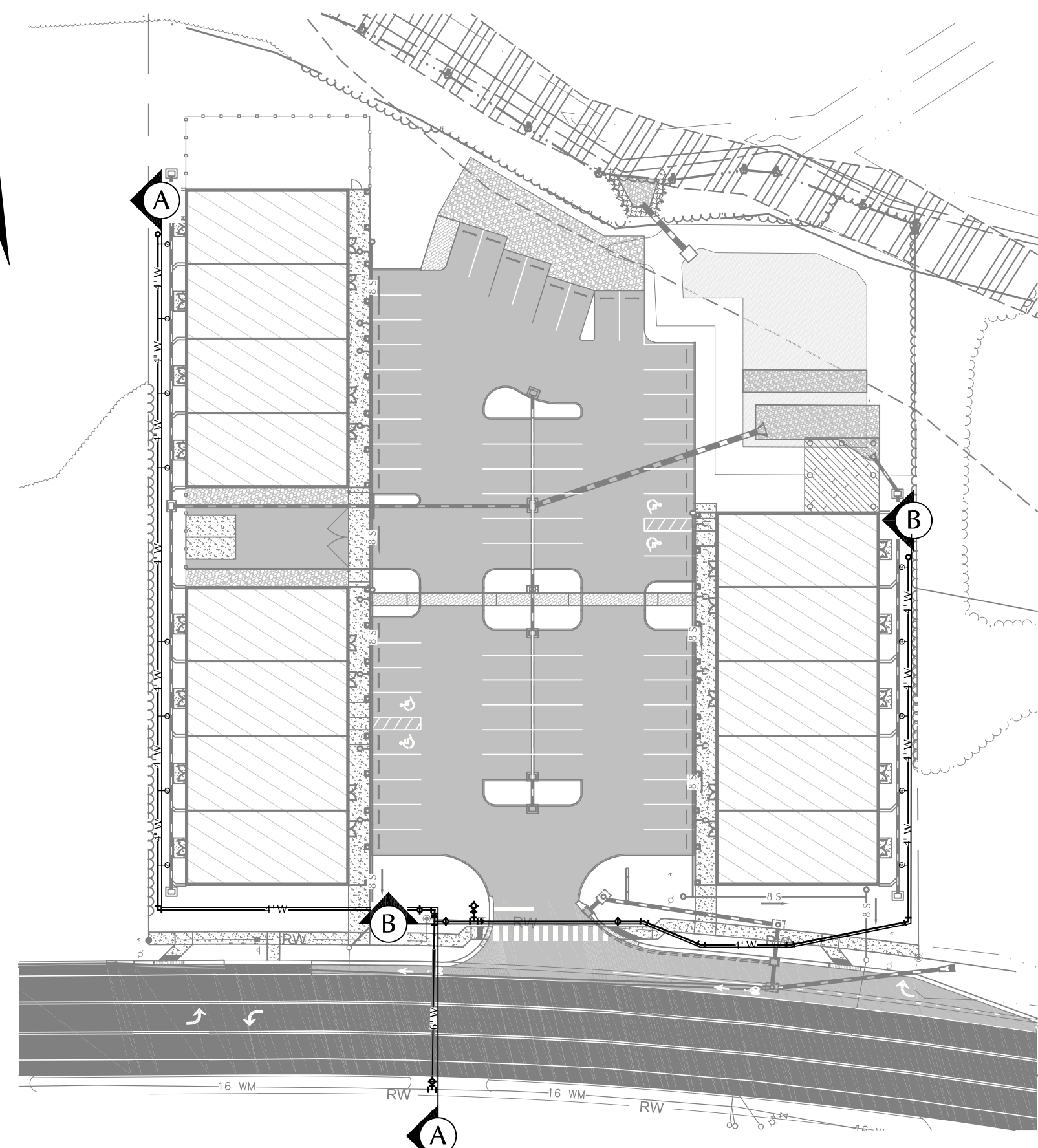
11/04/2021
DATE

PIPE TABLE

NAME	SLOPE (%)	LENGTH (FT)	SIZE (IN)	MATERIAL	DOWN INV	UP INV
P1	0.30	13	8	PVC	6.80	6.84
P2	0.30	274	8	PVC	6.84	7.66
P3	0.30	69	8	PVC	7.50	7.70
P4	0.30	153	8	PVC	7.70	8.17
P5	0.30	25	8	PVC	7.42	7.50

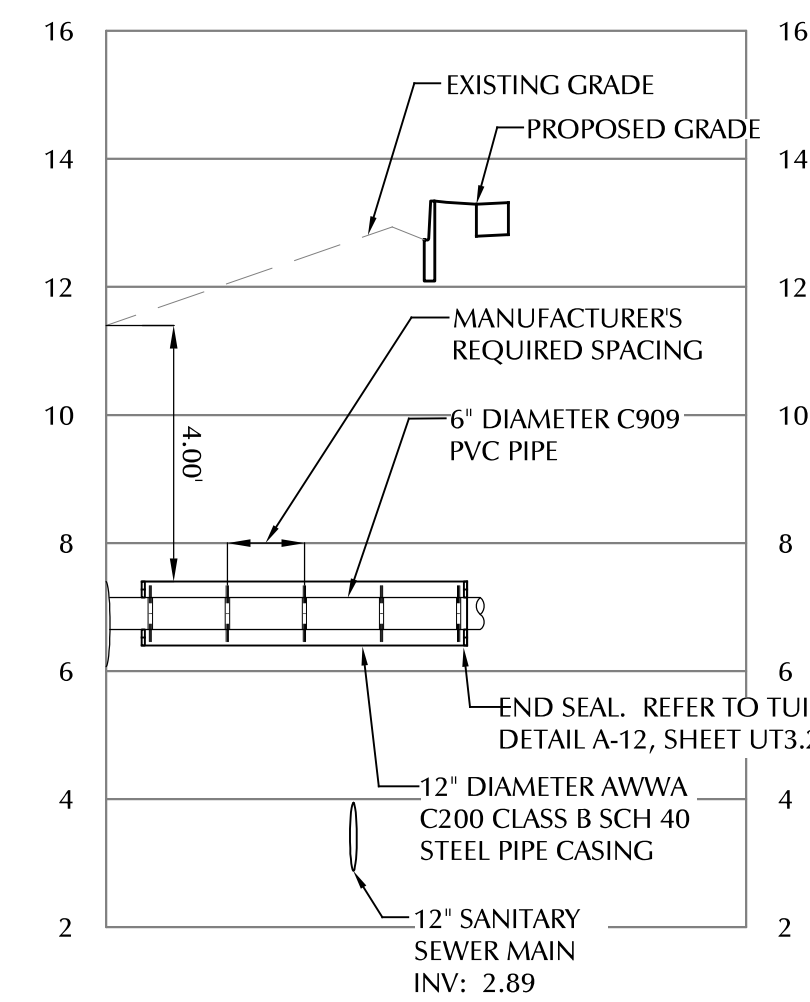


AND 8' 0" ON EITHER
SIDE OF THE MAINLINE (FEET)



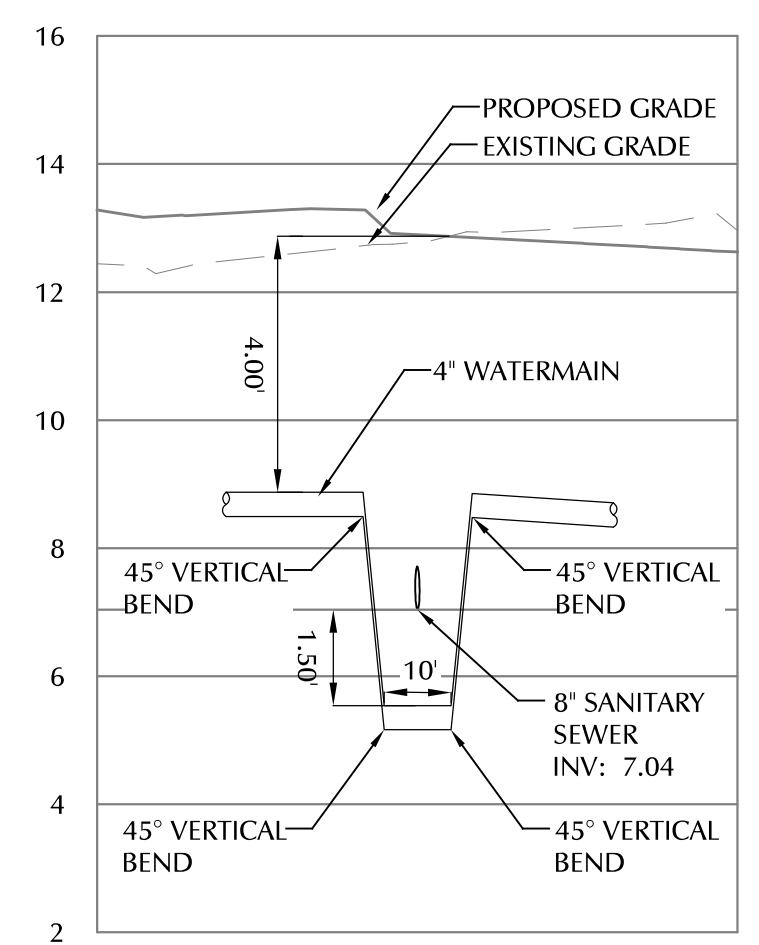
PROFILE LOCATION PLAN

1" = 50'



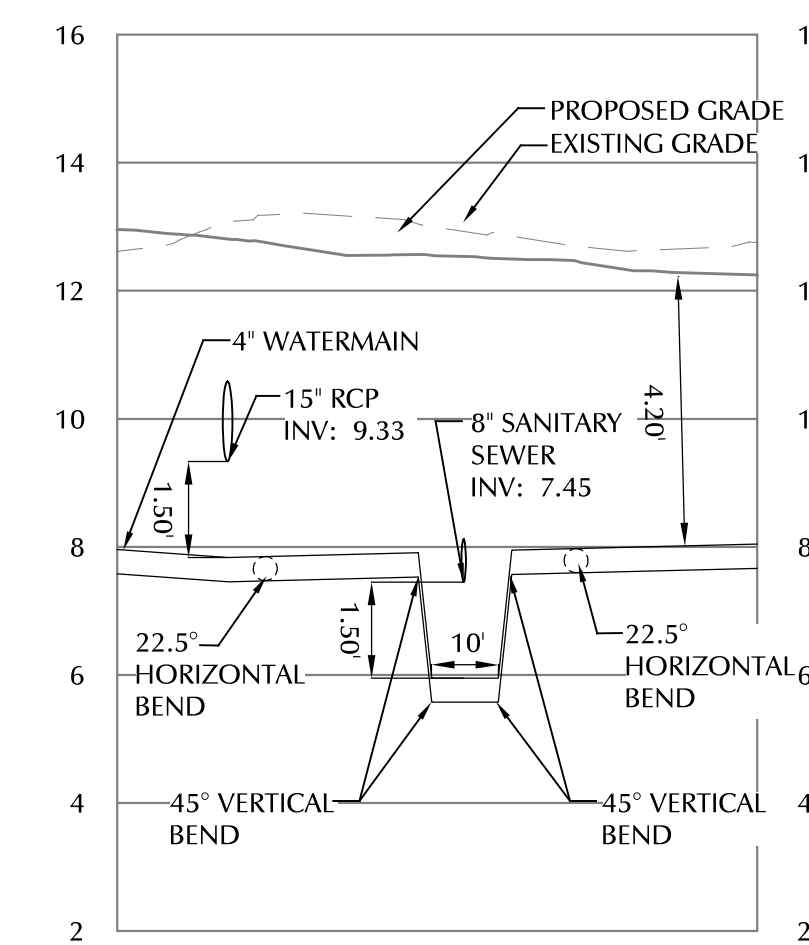
WATER CROSSING (X-1)

H-1"=30' V-1"=3'



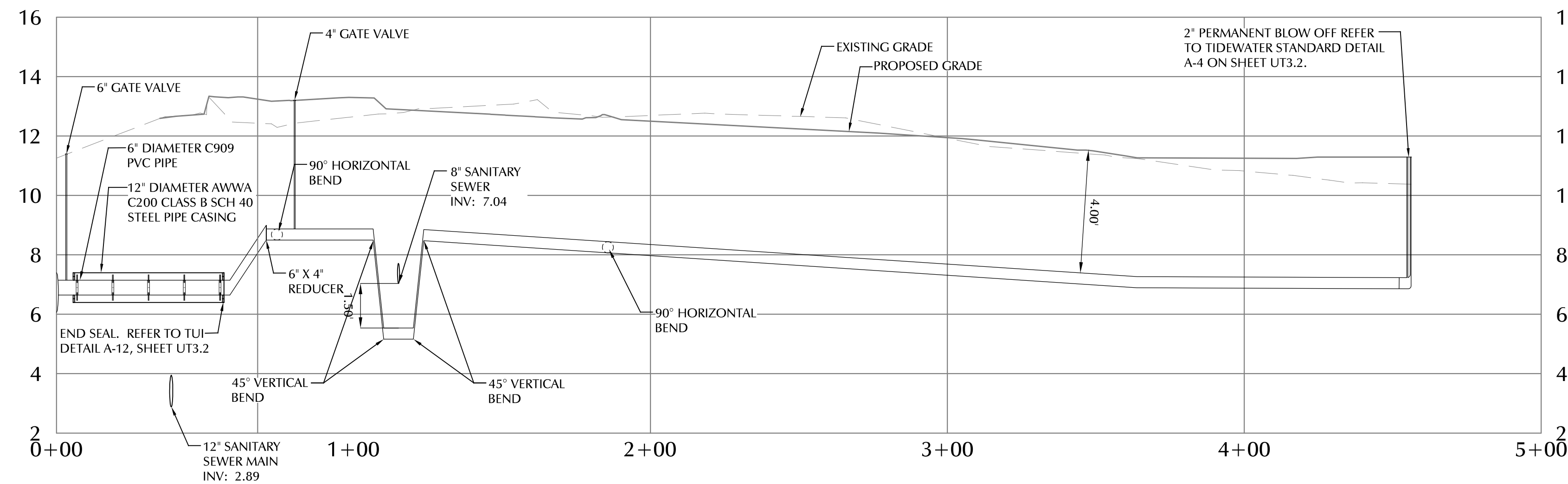
WATER CROSSING (X-2)

H-1"=30' V-1"=3'



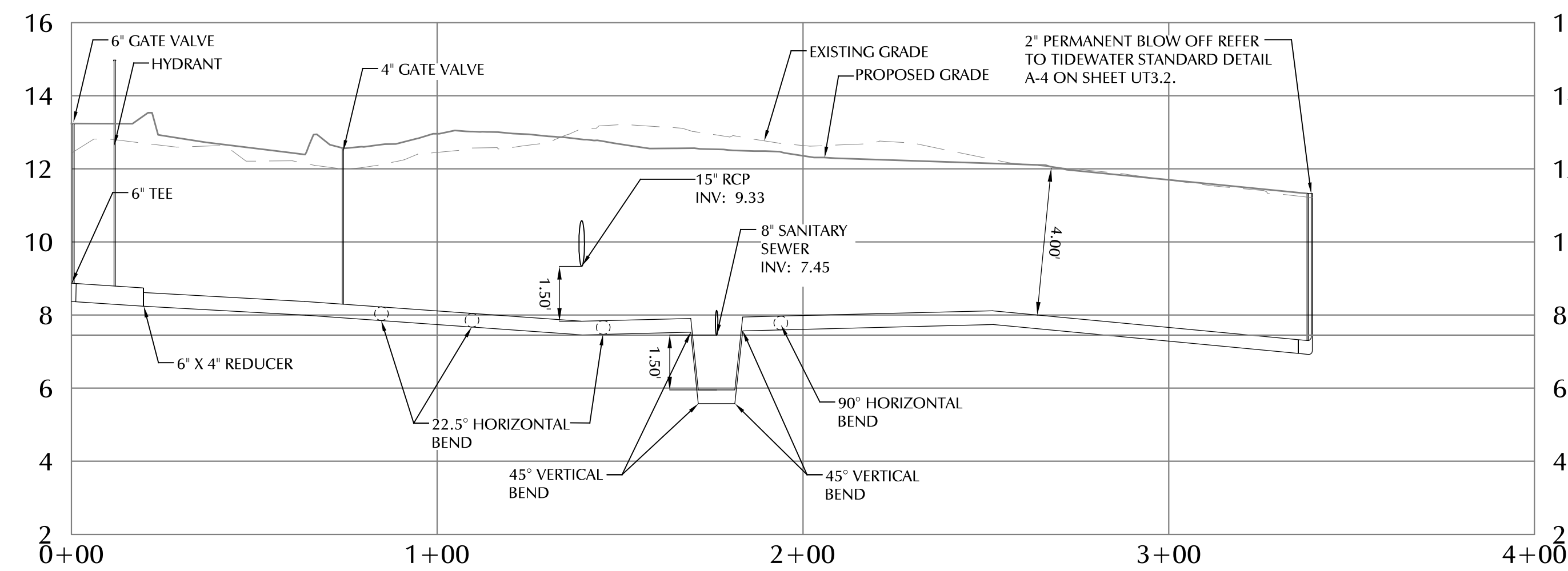
WATER CROSSINGS (X-3 & X-4)

H-1"=30' V-1"=3'



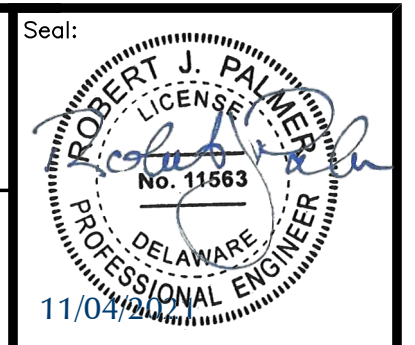
WATER MAIN PROFILE A

H-1"=30' V-1"=3'



WATER MAIN PROFILE B

H-1"=30' V-1"=3'



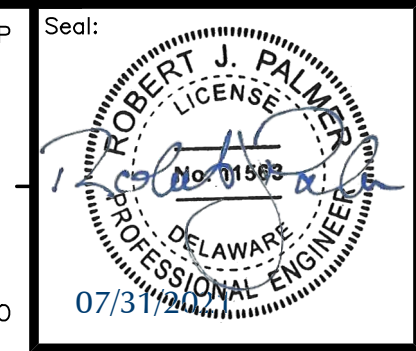
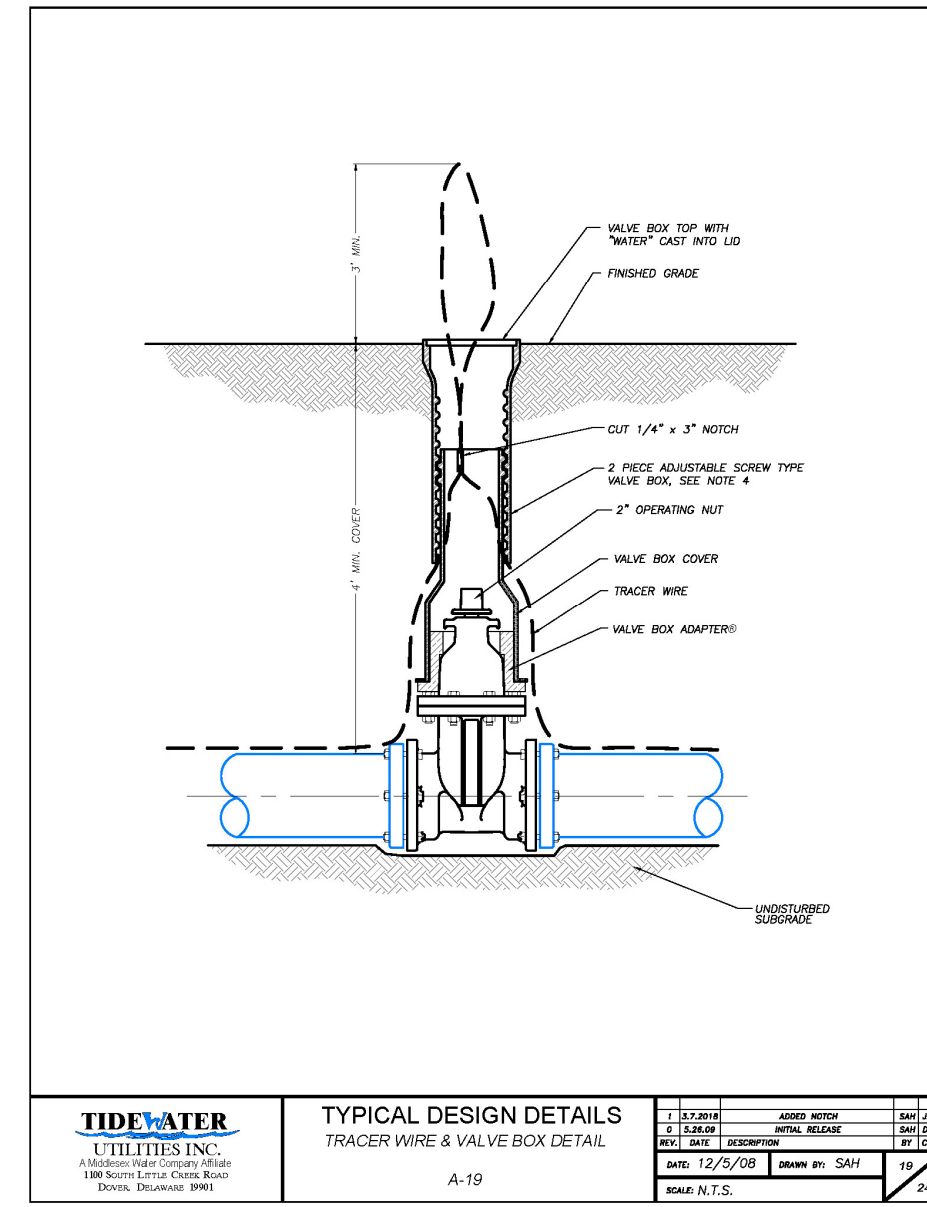
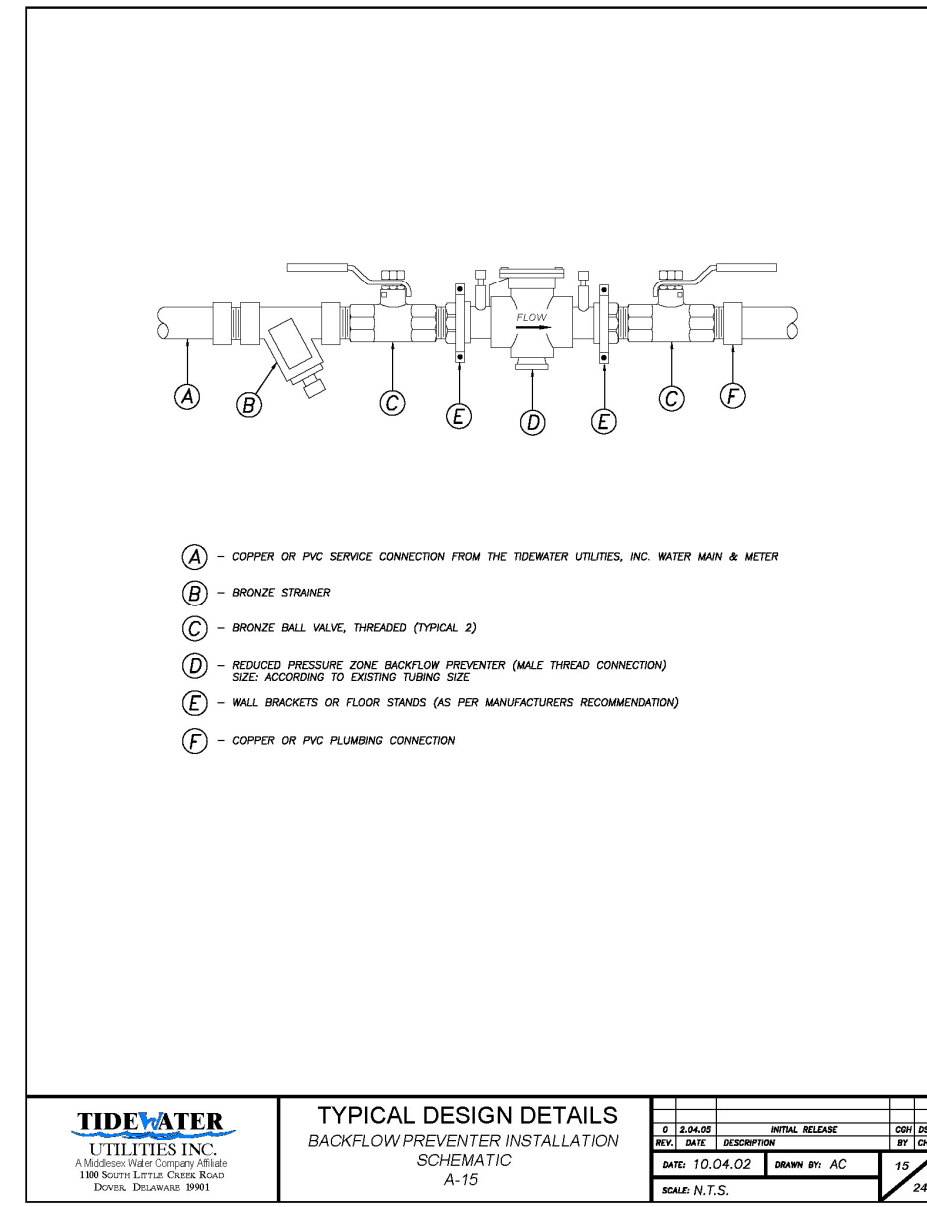
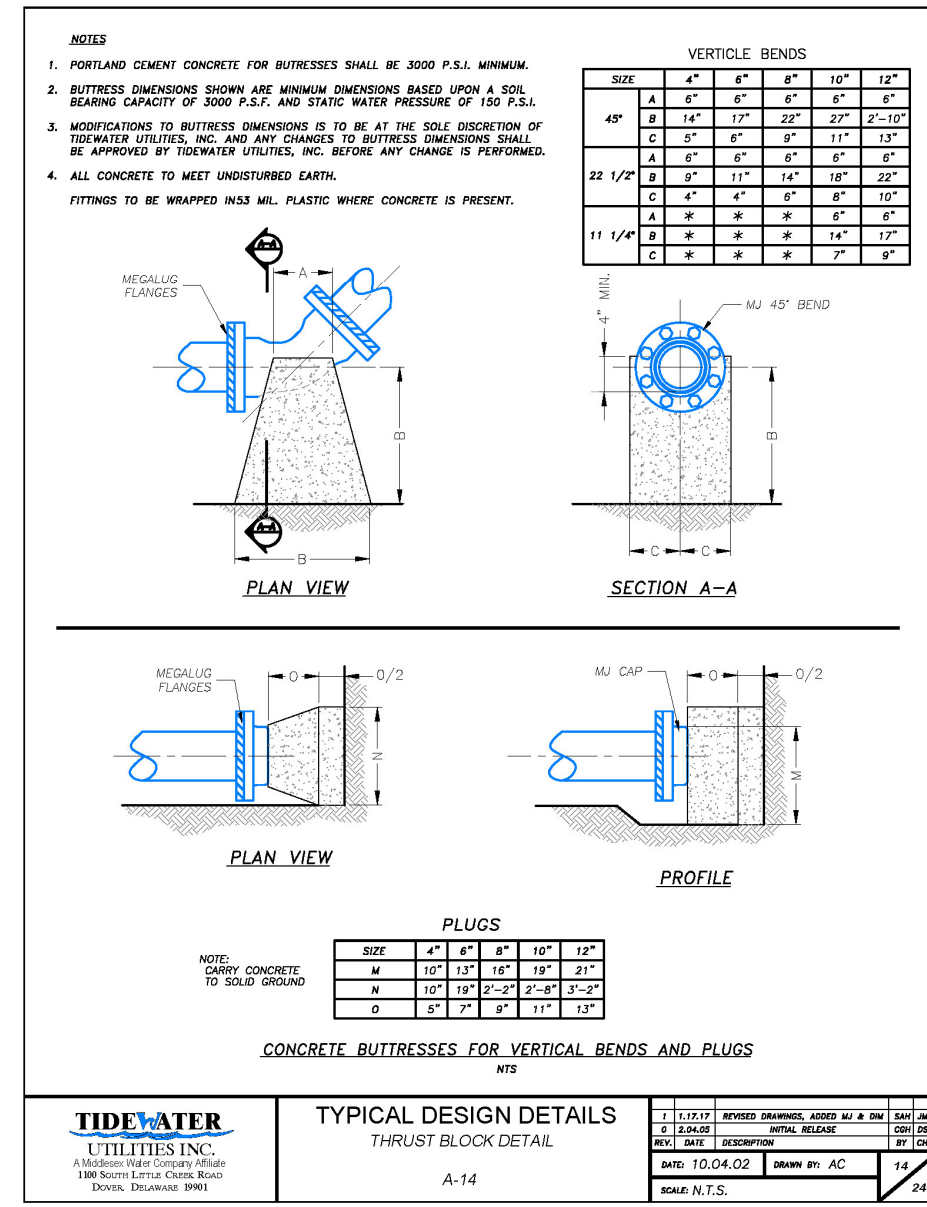
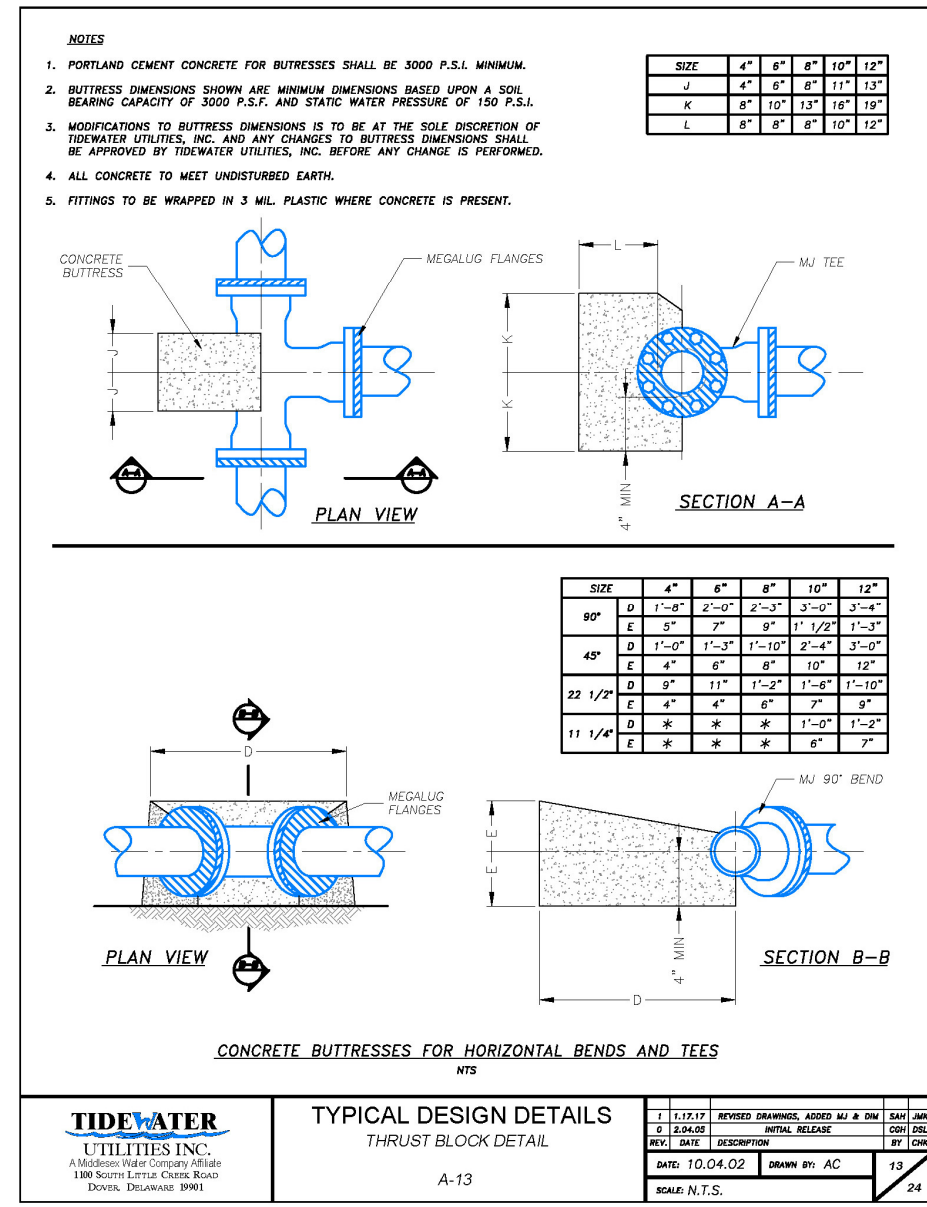
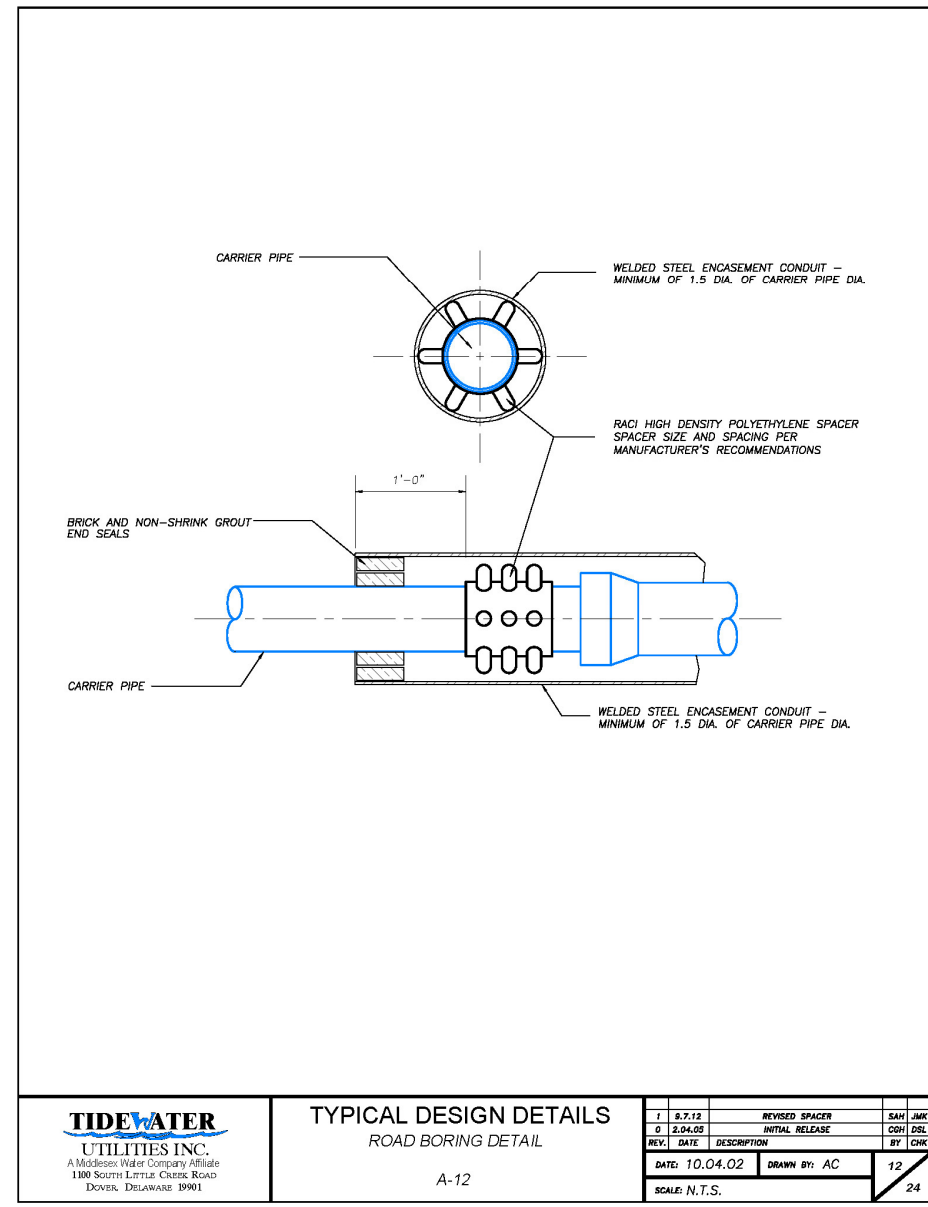
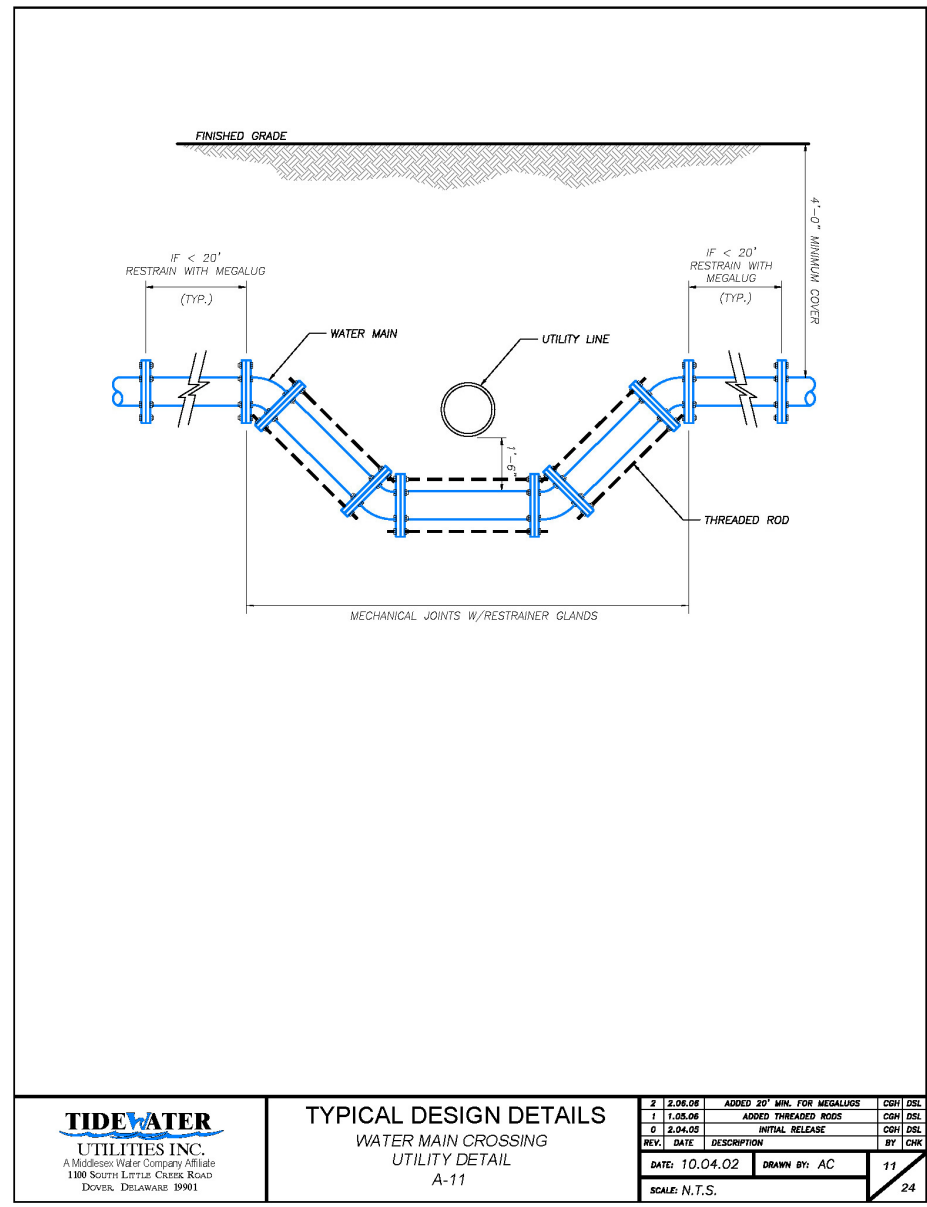
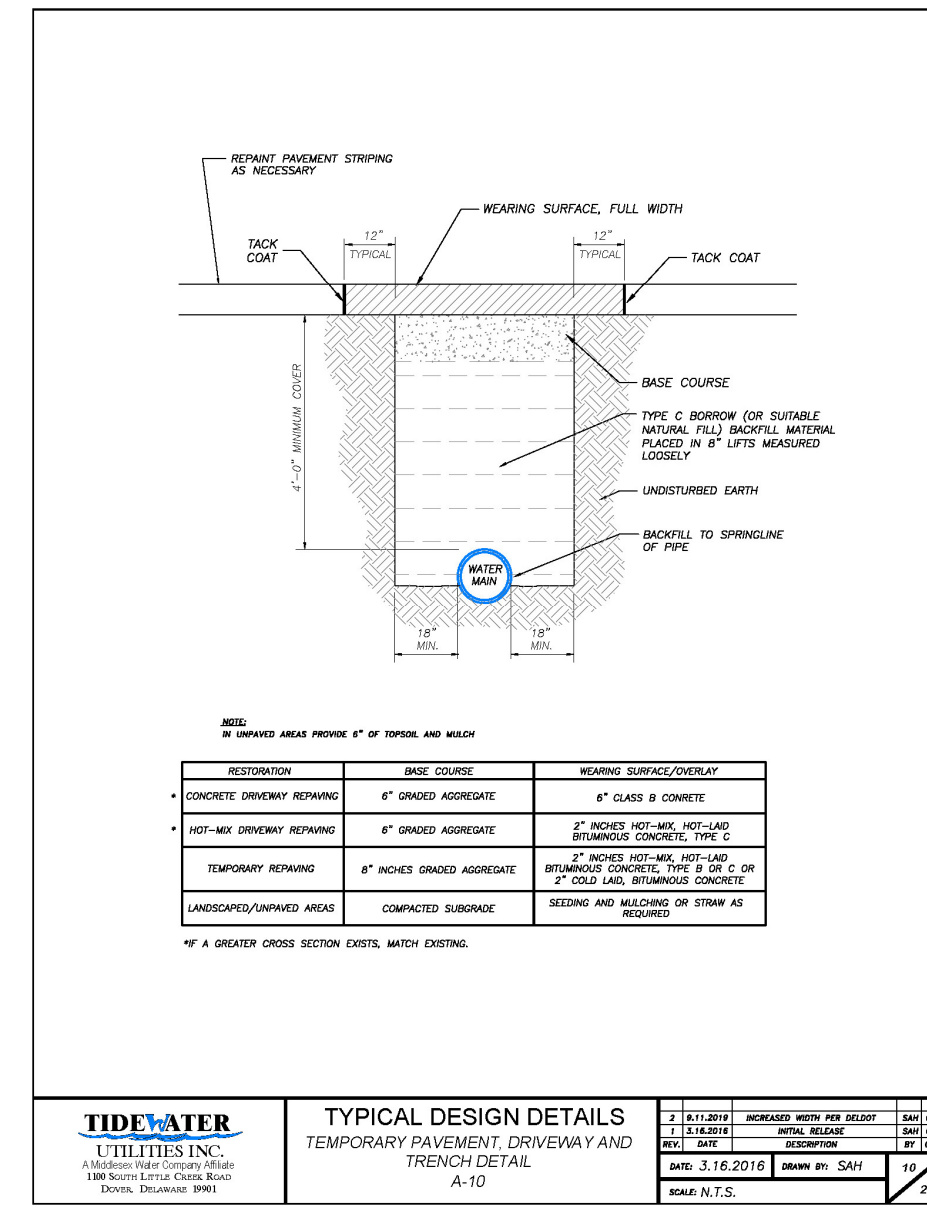
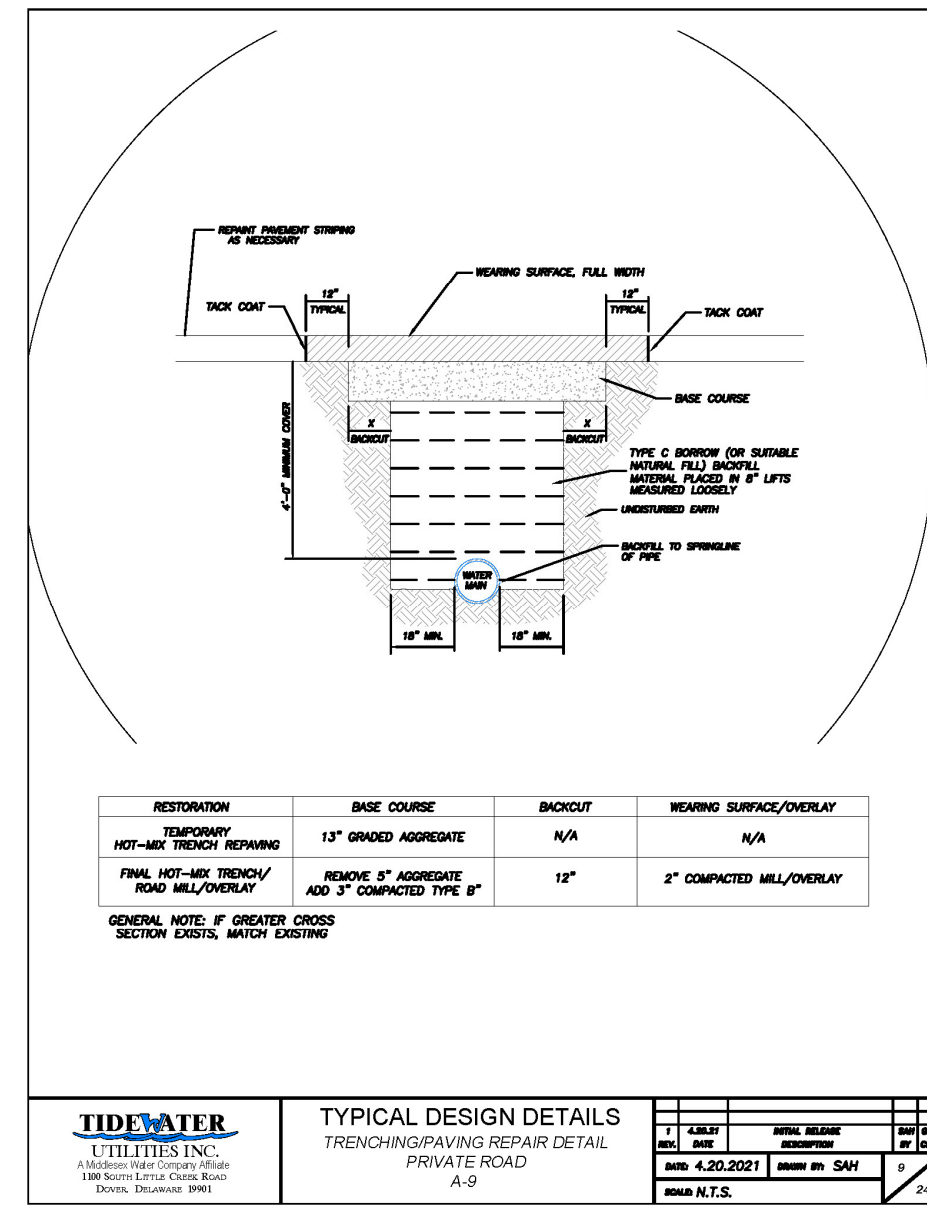
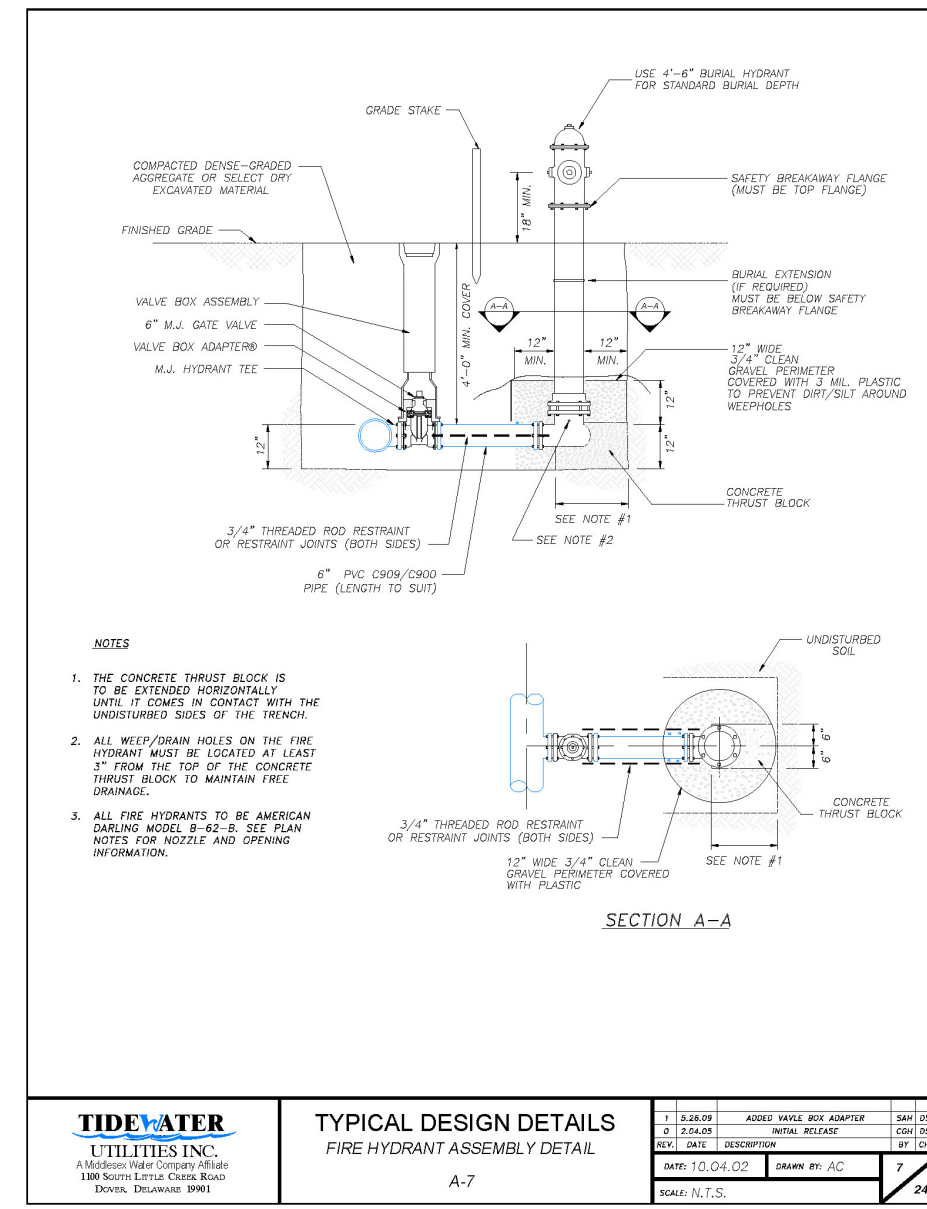
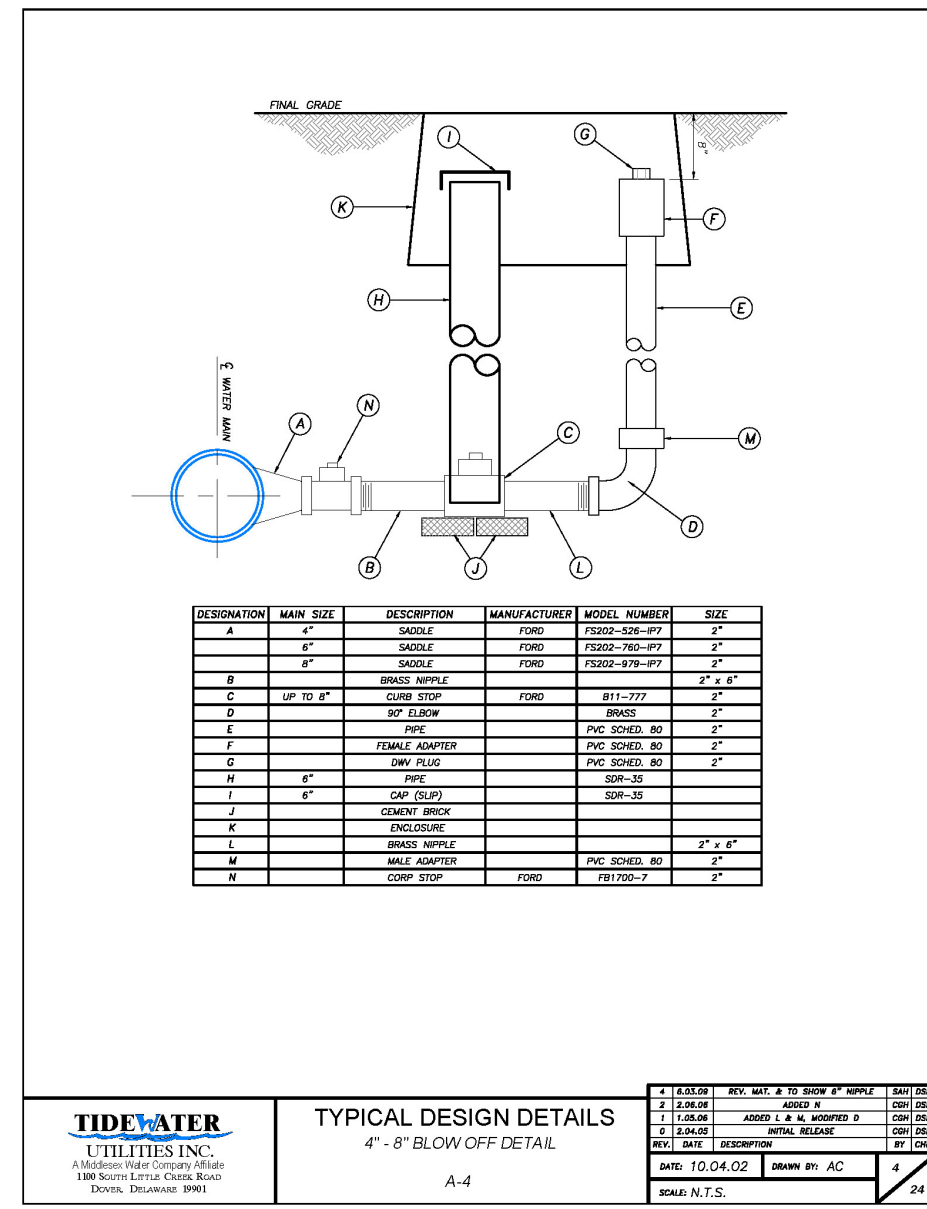
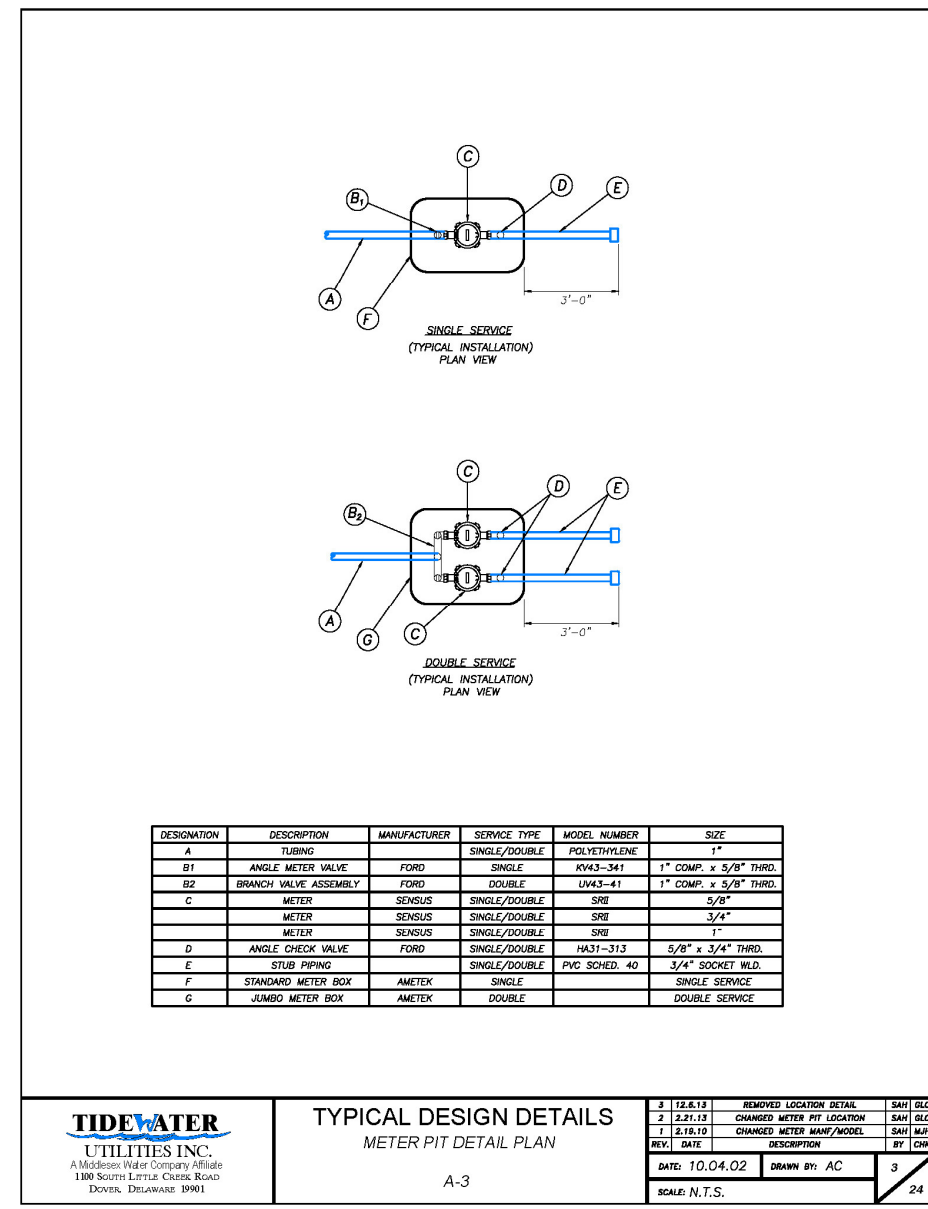
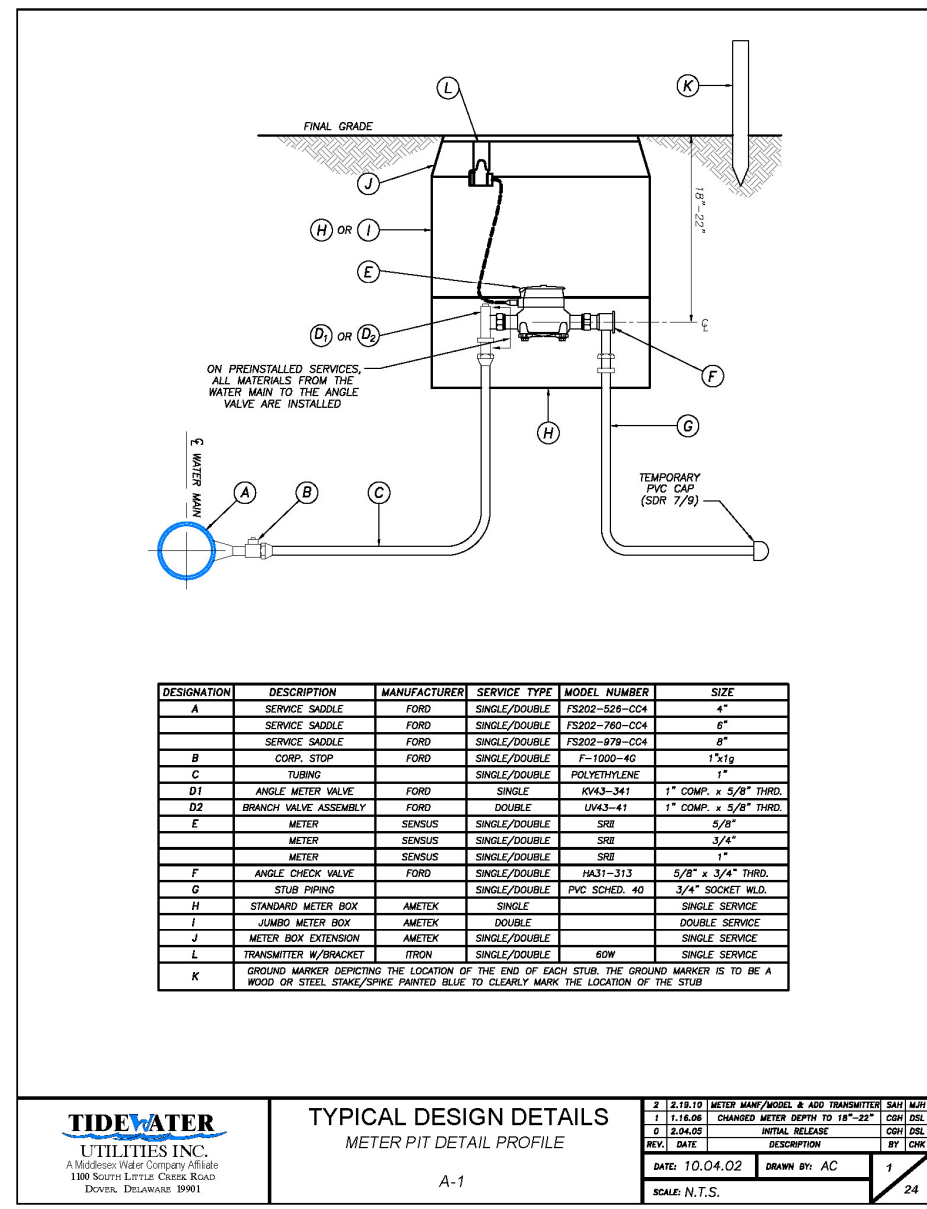
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Revision	By	Date
1	SKM	08/03/20
2	SKM	12/16/20
3	SKM	12/16/20
4	SKM	01/12/21
5	SKM	04/15/21

MILLVILLE SQUARE
 WHITE CREEK - INDIAN RIVER BAY WATERSHED,
 TOWN OF MILLVILLE, BALTIMORE HUNDRED,
 SUSSEX COUNTY, DELAWARE
 TAX MAP # 134-12.00-350.00 AND # 134-12.00-351.00
WATER DISTRIBUTION PROFILES & CROSSINGS

Date:	JUL 20, 2020
Scale:	1" = 30'
Dwn.By:	SKM
Proj.No.:	TRU01-06

Dwg.: **UT3.1**



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Revision	By	Date
1	SKM	08/03/20
2	SKM	12/16/20
3	SKM	12/16/20
4	SKM	01/12/21
5	SKM	04/15/21

MILLVILLE SQUARE
 WHITE CREEK - INDIAN RIVER BAY WATERSHED,
 TOWN OF MILLVILLE, BALTIMORE HUNDRED,
 SUSSEX COUNTY, DELAWARE
 TAX MAP # 13+12.00-350.00 AND # 13+12.00-351.00
WATER DISTRIBUTION DETAILS

Date: JUL 20, 2020
 Scale: NO TO SCALE
 Dwn.By: SKM
 Proj.No.: TRU01-06

Dwg.: **UT3.2**