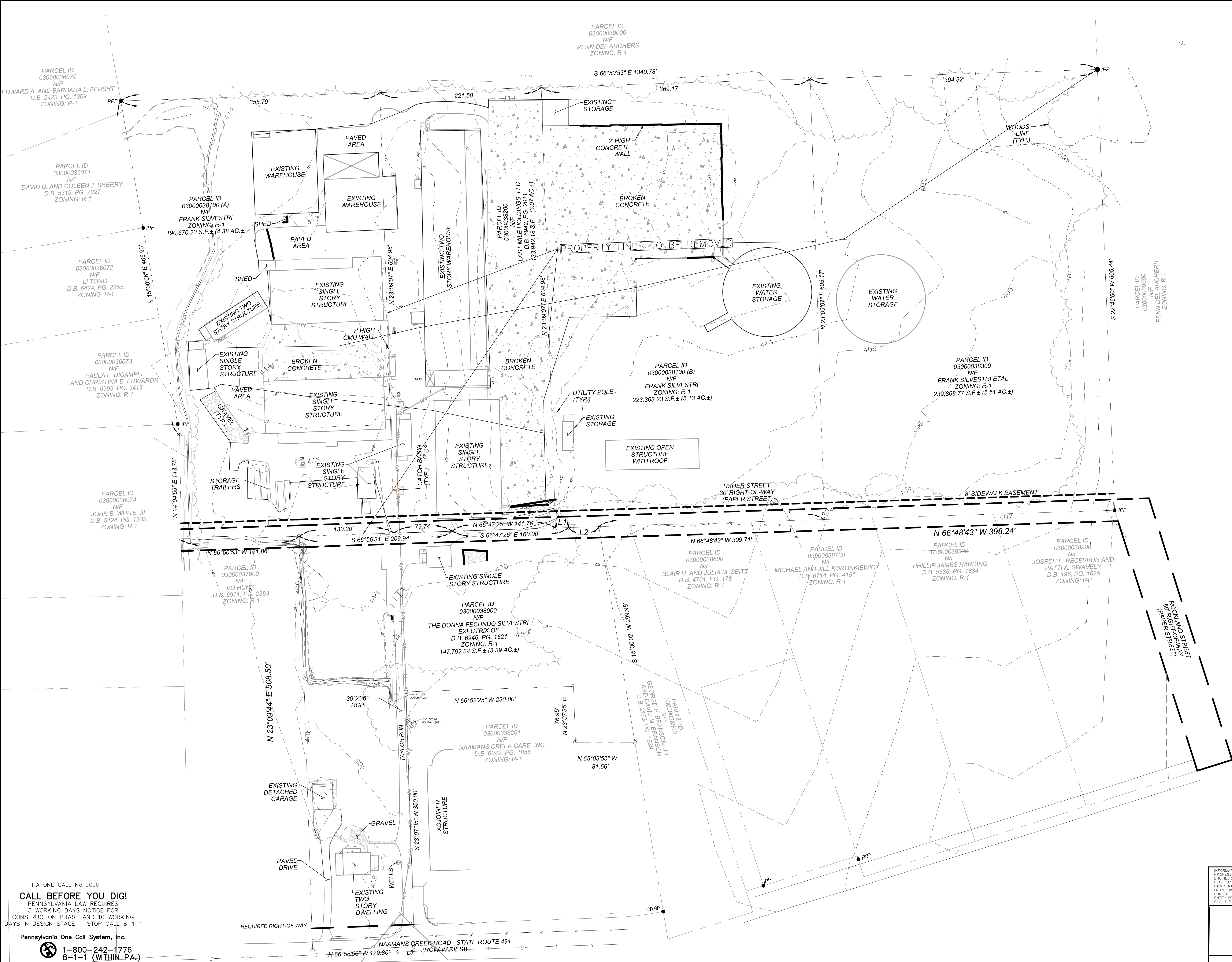




PA ONE CALL No. 2026
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS IN DESIGN STAGE - STOP CALL 8-1-1
Pennsylvania One Call System, Inc.
 1-800-242-1776
8-1-1 (WITHIN PA.)

THE LOCATIONS OF ALL UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE
VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR
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PLAN INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO TAKE ALL PREVENTIVE
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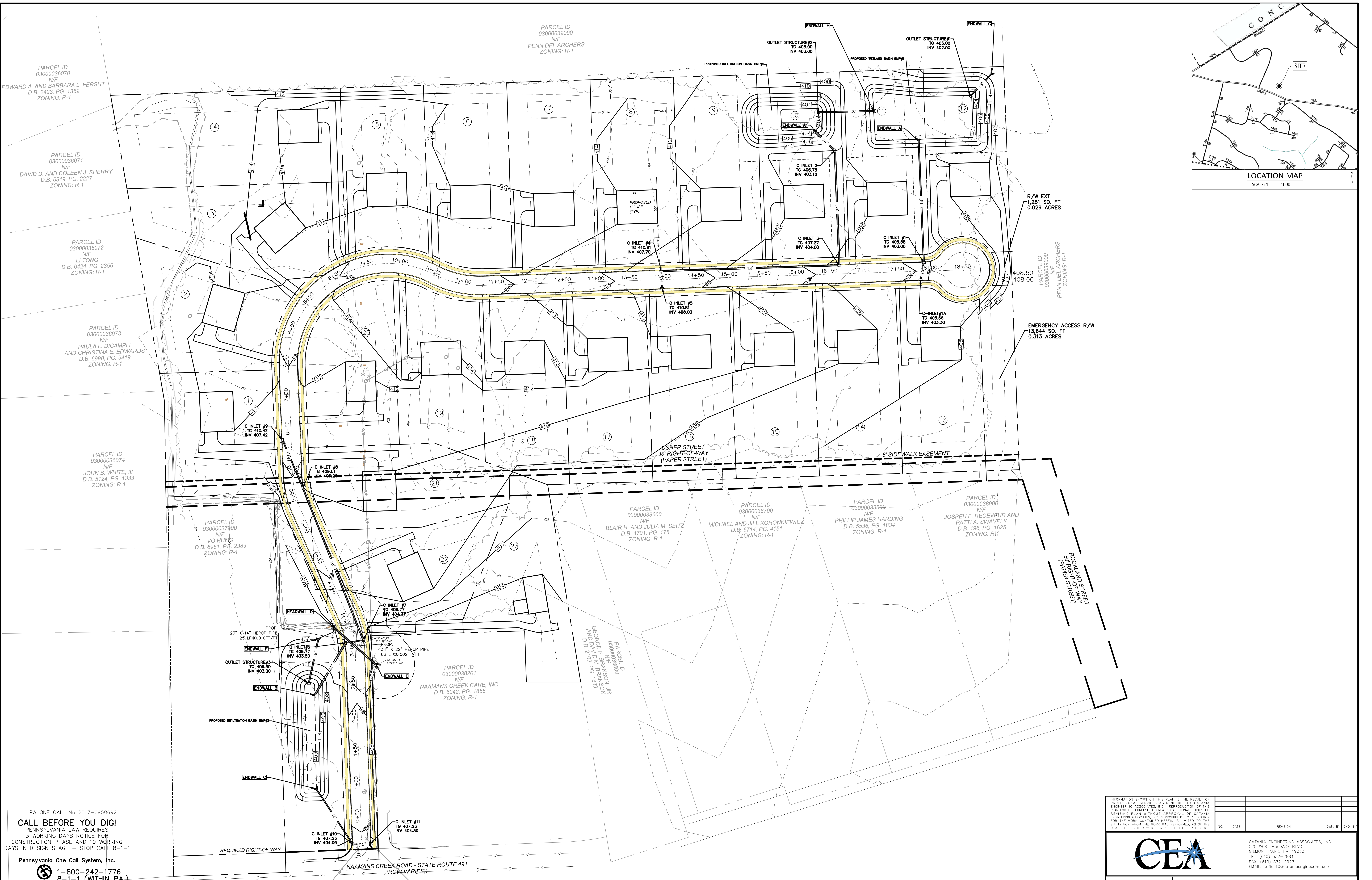
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CATANIA ENGINEERING ASSOCIATES, INC.
520 WEST MADDADE BLVD.
MILMONT PARK, PA. 19033
TEL: (610) 532-2884
FAX: (610) 532-2923
EMAIL: office10@cataniaengineering.com

**PRELIMINARY
EXISTING CONDITIONS/REVERSE
SUBDIVISION/DEMOLITION PLAN
FOR
GARNET VALLEY ESTATES
1168 NAAMANS CREEK ROAD**

TOWNSHIP OF BETHEL		DELAWARE COUNTY, PA	
DWN. BY: M.J.C.	ISS. BY: CEA-DE	SCALE: 1" = 50'	DRAWING NO. 22478
CHK. BY: M.J.C.	DATE: 6/18/2025	FIELD BOOK/PAGE	SHEET 2 OF 10 SHEETS



PA ONE CALL No. 2017-0950692
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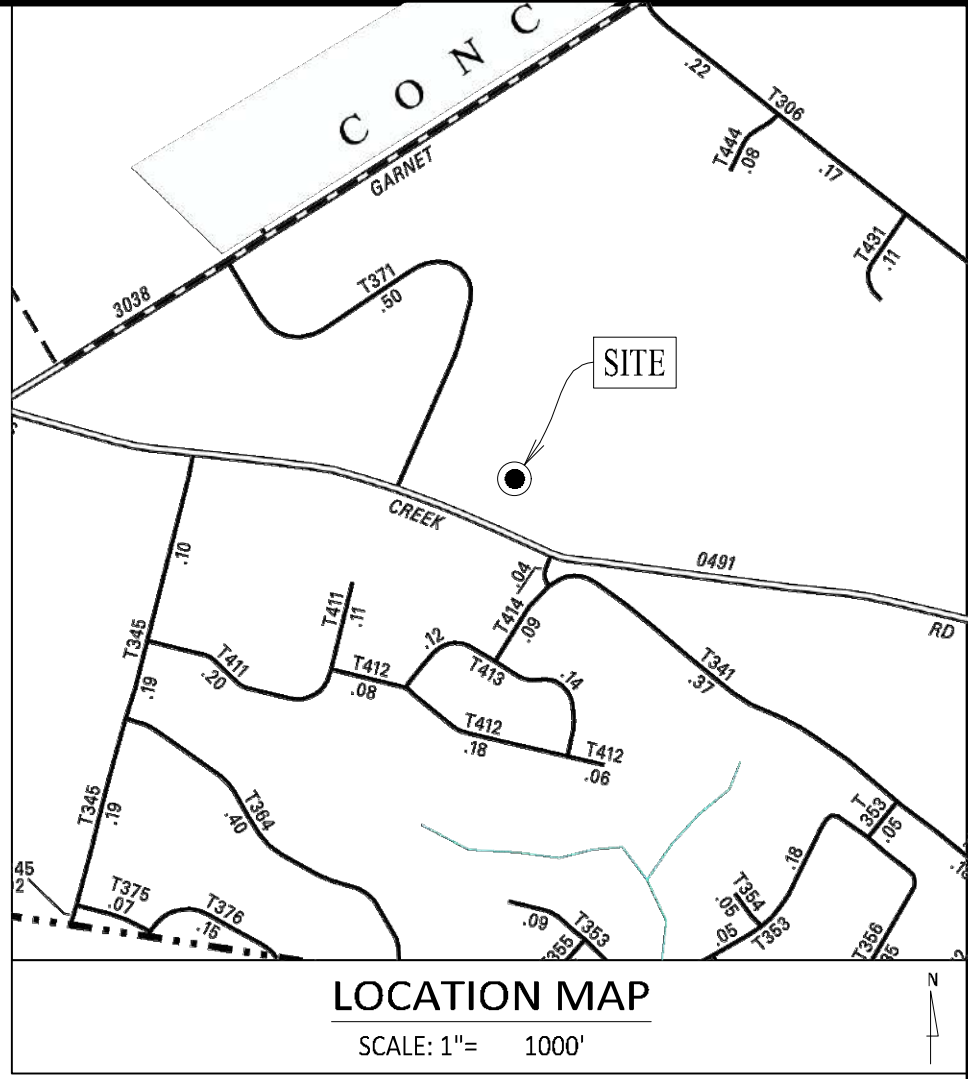
CATANIA ENGINEERING ASSOCIATES, INC.
520 WEST MADDADE BLVD.
MILFORD PARK, PA 19033
TEL: (610) 532-2884
FAX: (610) 532-2923
EMAIL: office10@cataniaengineering.com

**PRELIMINARY
POST CONSTRUCTION
STORMWATER MANAGEMENT/
GRADING PLAN
GARNET VALLEY ESTATES
1168 NAAMANS CREEK ROAD**

TOWNSHIP OF BETHEL
DELAWARE COUNTY, PA

CAUTION: TO INSURE VALIDITY OF PLAN
REGISTRATION SEAL MUST BE IN RED INK.

OWN. BY	DES. BY	SCALE	DATE	SHEET	OF	SHEETS
CEA-DE	CEA-DE	1" = 50'	6/18/2025	3	10	



PA ONE CALL No. 2026

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GRAPHIC SCALE 1 inch = 50 feet

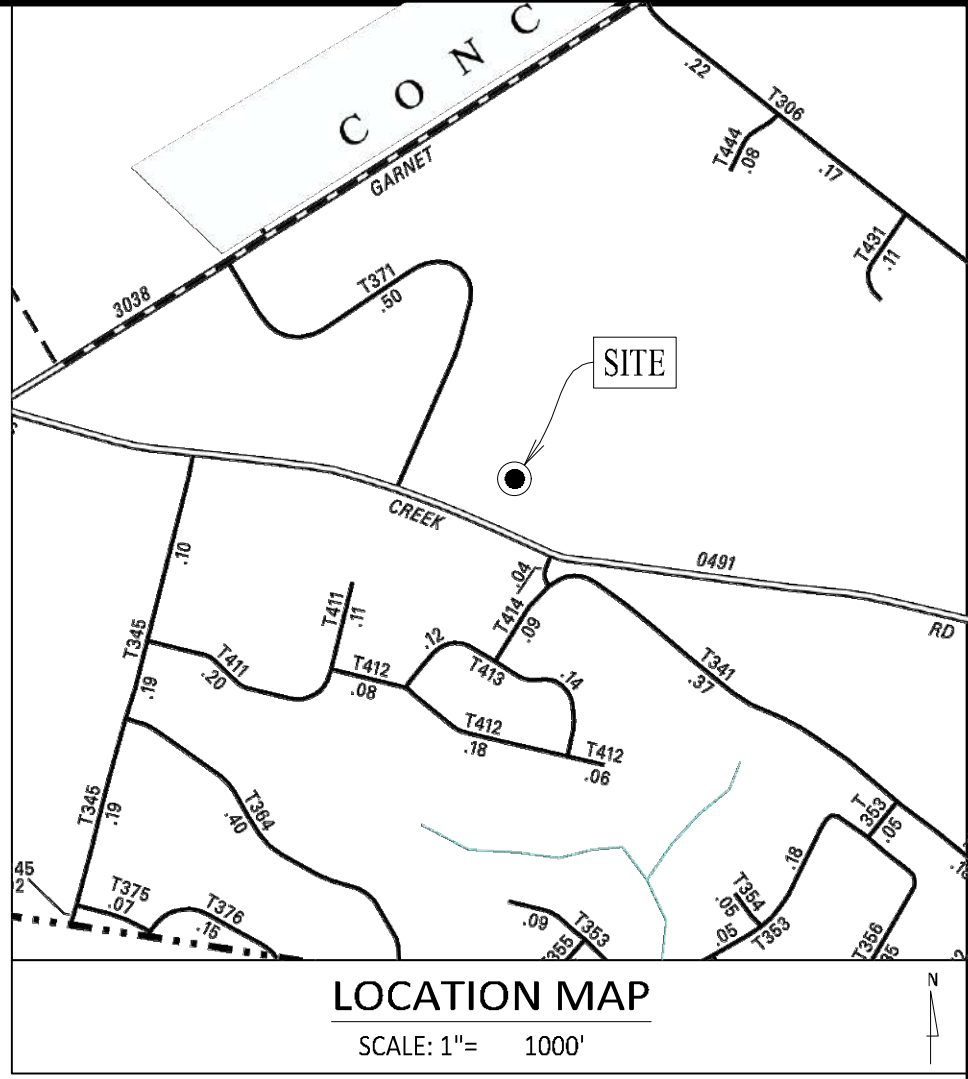
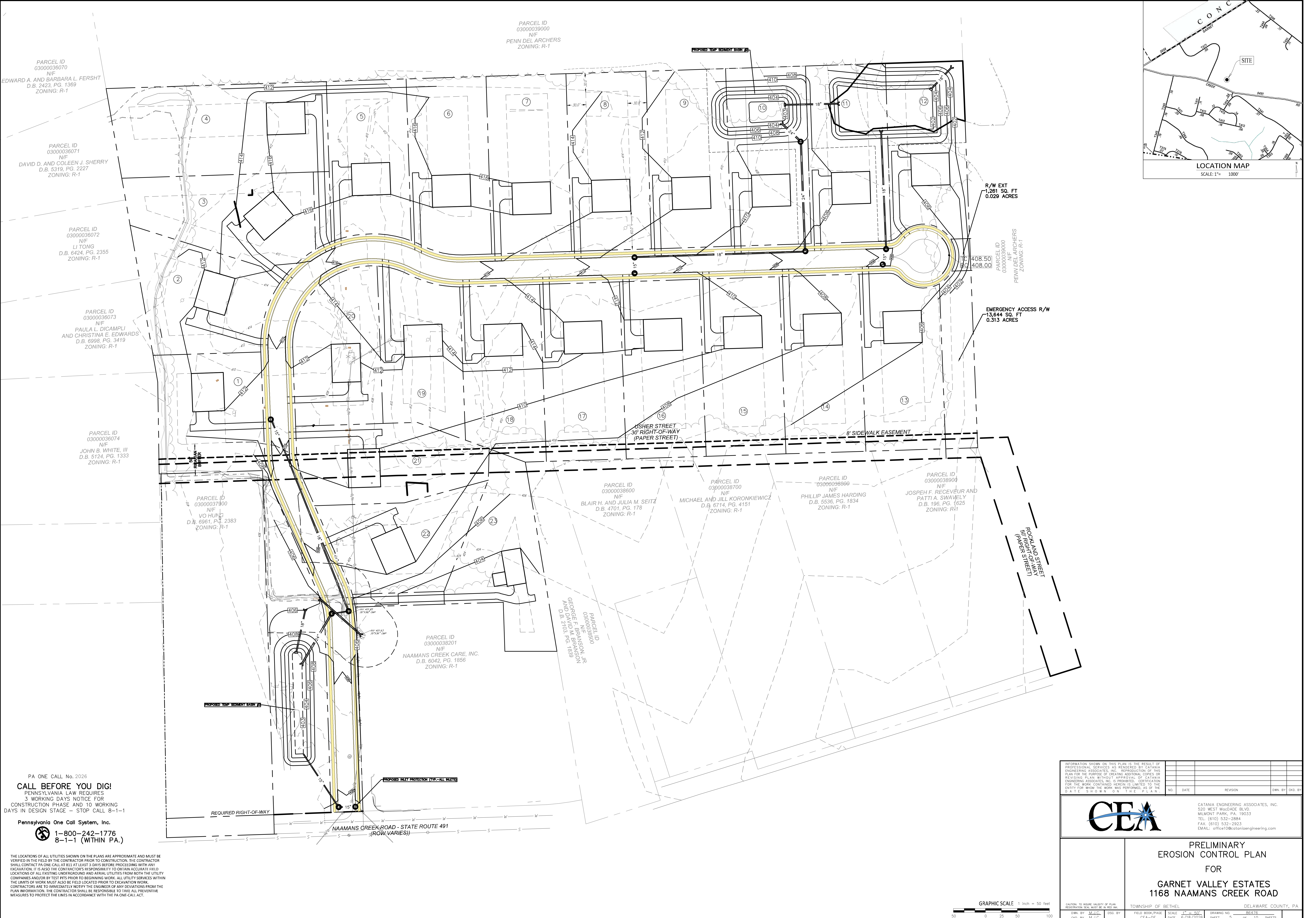
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DWN BY: M.J.C. CHK BY: M.J.C.		DGN BY: M.J.C. CHK BY: M.J.C.	
FIELD BOOK/PAGE: CEA-DE		DATE: 6/18/2025	
SCALE: 1" = 50'		SHEET: 4 OF 10 SHEETS	

TOWNSHIP OF BETHEL DELAWARE COUNTY, PA

PRELIMINARY
UTILITY PLAN

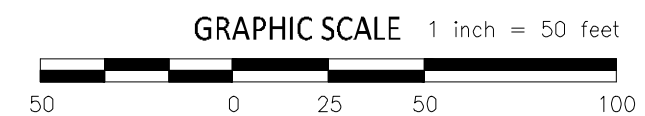
FOR
GARNET VALLEY ESTATES
1168 NAAMANS CREEK ROAD



PA ONE CALL No. 2026
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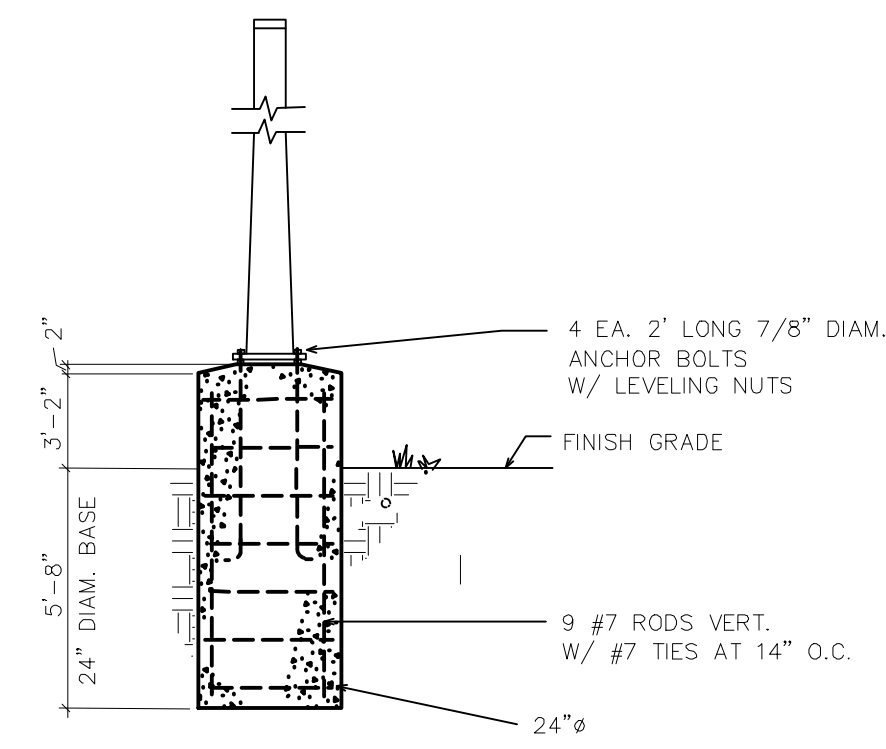
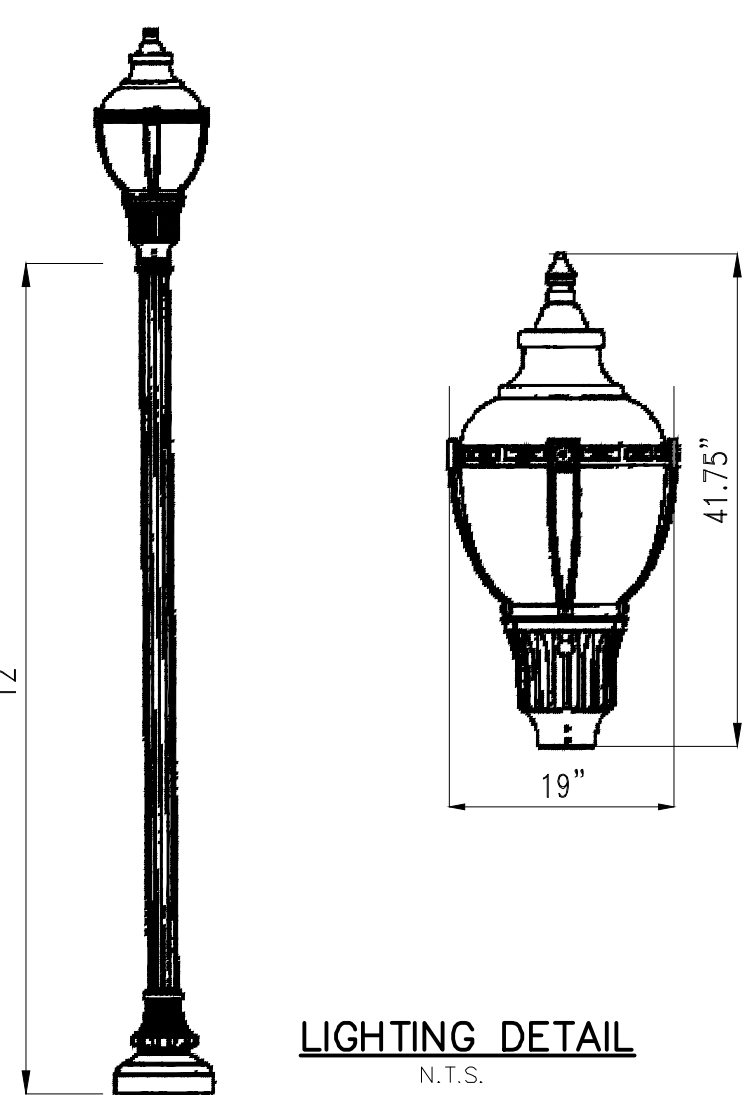
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CAUTION: TO INSURE VALIDITY OF PLAN REGISTRATION SEAL MUST BE IN RED INK.		DWN BY: M.J.C. CHK BY: M.J.C.	
TOWNSHIP OF BETHEL DELAWARE COUNTY, PA		DRAWING NO. 202478	
PRELIMINARY EROSION CONTROL PLAN FOR GARNET VALLEY ESTATES 1168 NAAMANS CREEK ROAD		SHEET 1 OF 10 SHEETS	





PLANTING SCHEDULE					
CODE	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
DECIDUOUS TREES					
AR	ACER RUBRUM	RED MAPLE	•	2.5" CAL.	B&B
TC	TILIA CORDATA	LITTLE LEAF LINDEN	•	2"-2.5" CAL.	B&B
GT	GLEDITSIA TRIACANTHOS VAR. INERMIS 'SHADEMASTER'	THORNLESS HONEYLOCUST	•	2.5"-3" CAL.	B&B
PI	PRUNUS X INCAM 'OKAME'	OKAME CHERRY	•	2"-2.5" CAL.	B&B
QR	QUERCUS RUBRA	RED OAK	•	2.5"-3" CAL.	B&B

* APPLICANT TO PROVIDE A SELECTION OF STREET TREES FROM THE LIST AS APPROVED BY THE TOWNSHIP



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NO.	DATE	REVISION	DWN. BY	CHK. BY

CATANIA ENGINEERING ASSOCIATES, INC.
520 WEST MADDADE BLVD.
MILMONT PARK, PA. 19033
TEL: (610) 532-2884
FAX: (610) 532-2923
EMAIL: office10@cataniaengineering.com

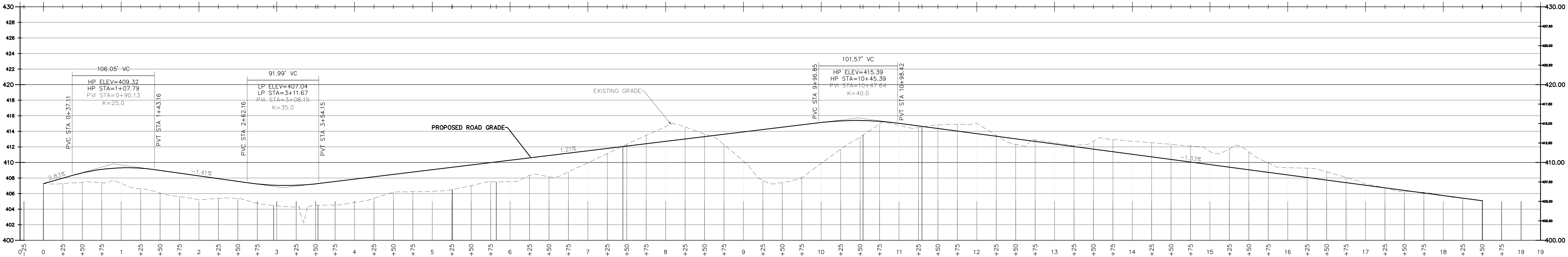
**PRELIMINARY
LANDSCAPING/LIGHTING PLAN
FOR
GARNET VALLEY ESTATES
1168 NAAMANS CREEK ROAD**

CAUTION: TO INSURE VALIDITY OF PLAN
REGISTRATION SEAL MUST BE IN RED INK.

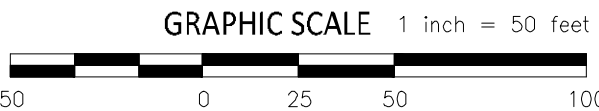
DWN. BY	CHK. BY	FIELD BOOK/PAGE	SCALE	DATE	SHEET	OF	SHEETS
M.J.C.	M.J.C.	CEA-DE	1" = 50'	6/18/2025	6	10	

TOWNSHIP OF BETHEL
DELAWARE COUNTY, PA

Station



PROPOSED ROAD PROFILE
SCALE
HORZ: 1" = 50'
VERT: 1"=5'



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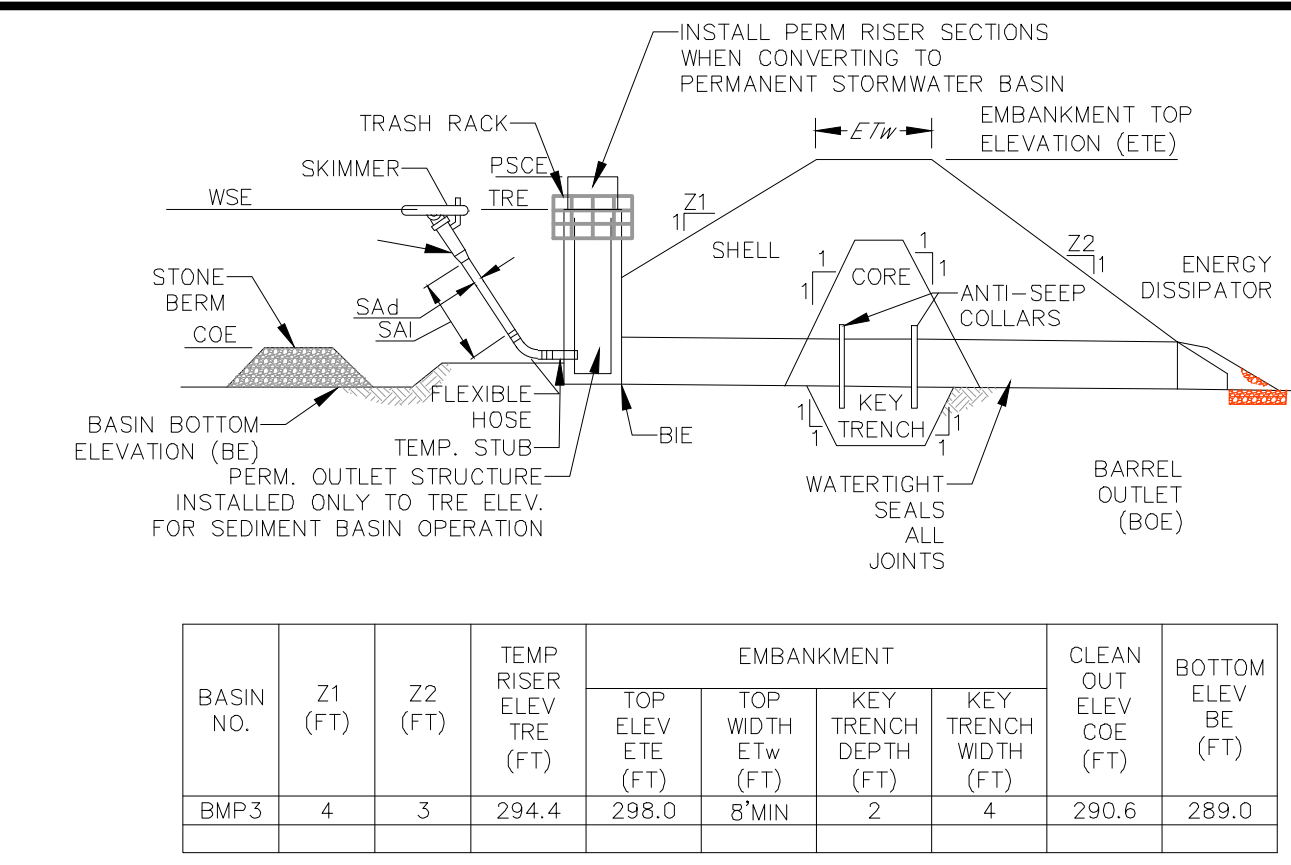
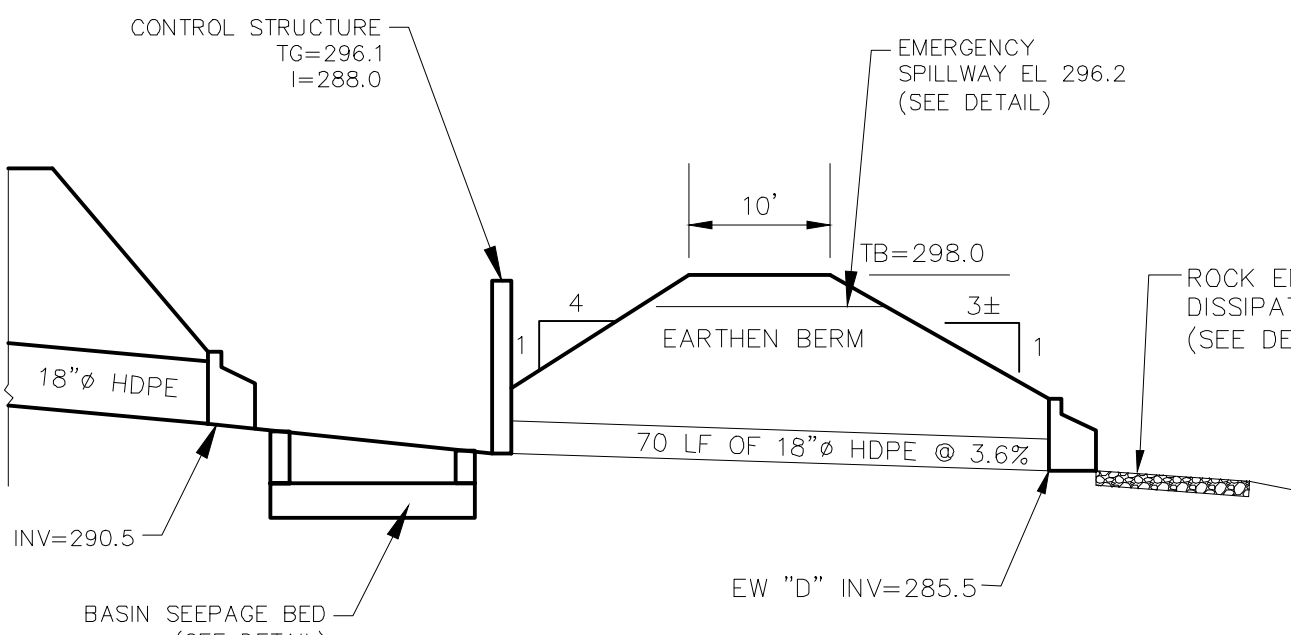
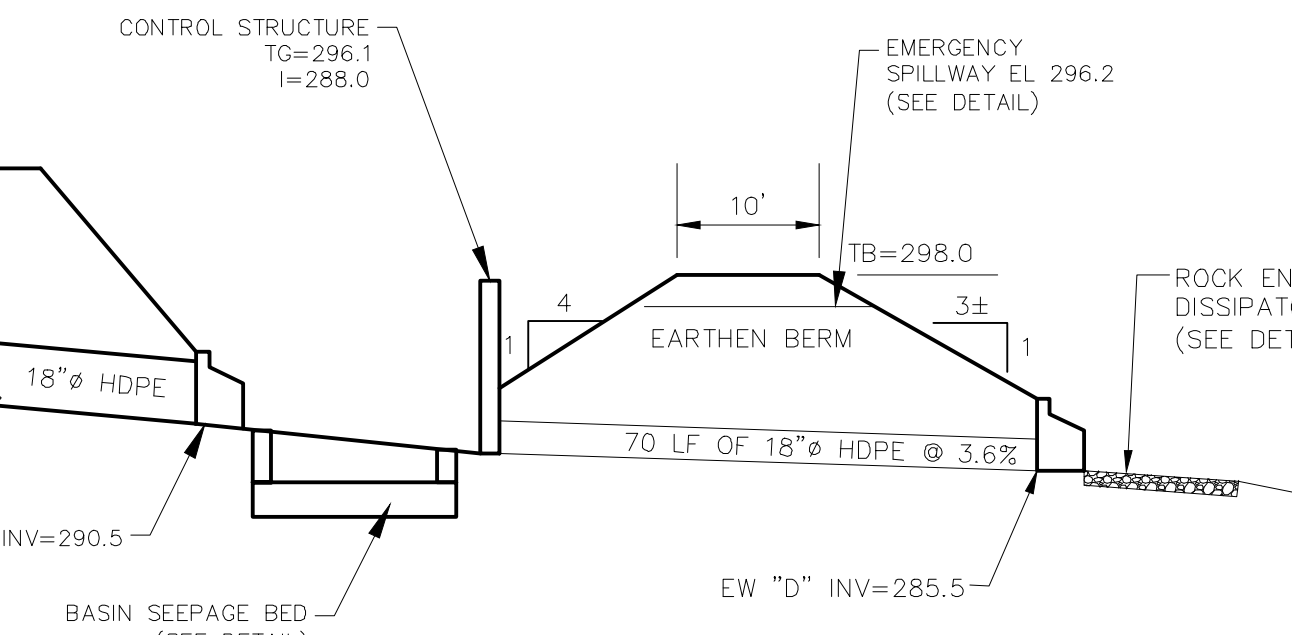
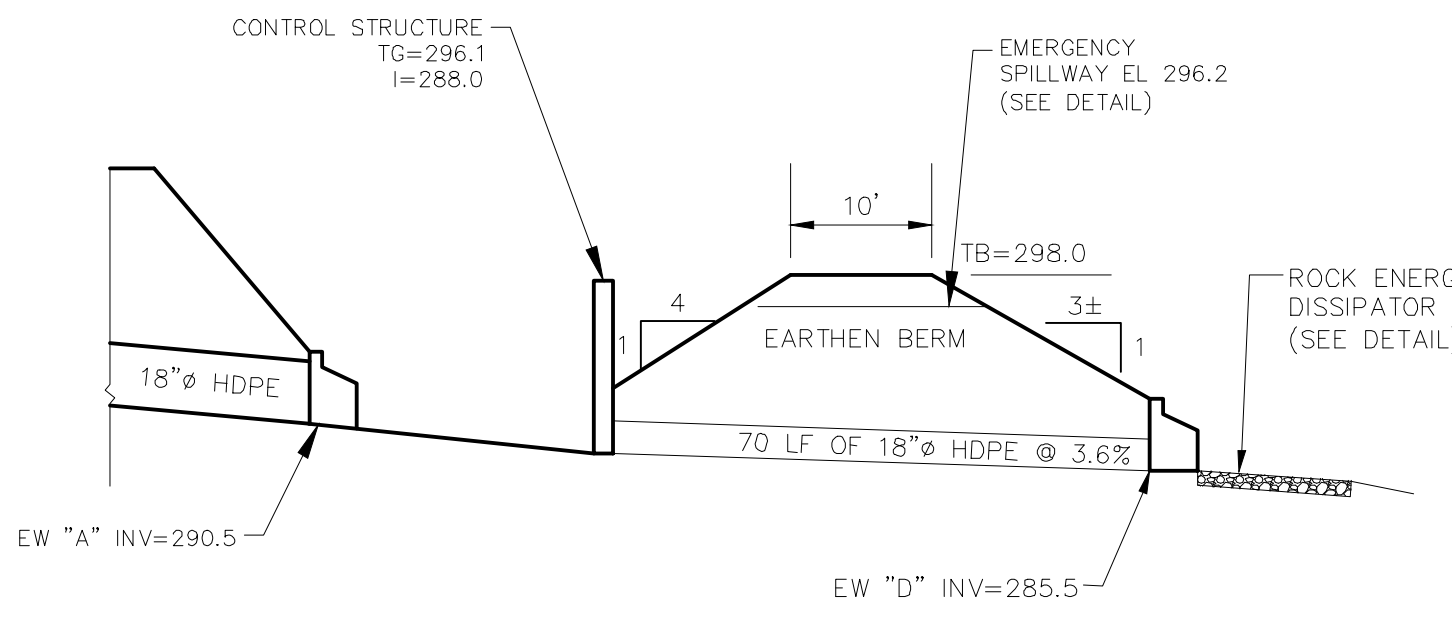
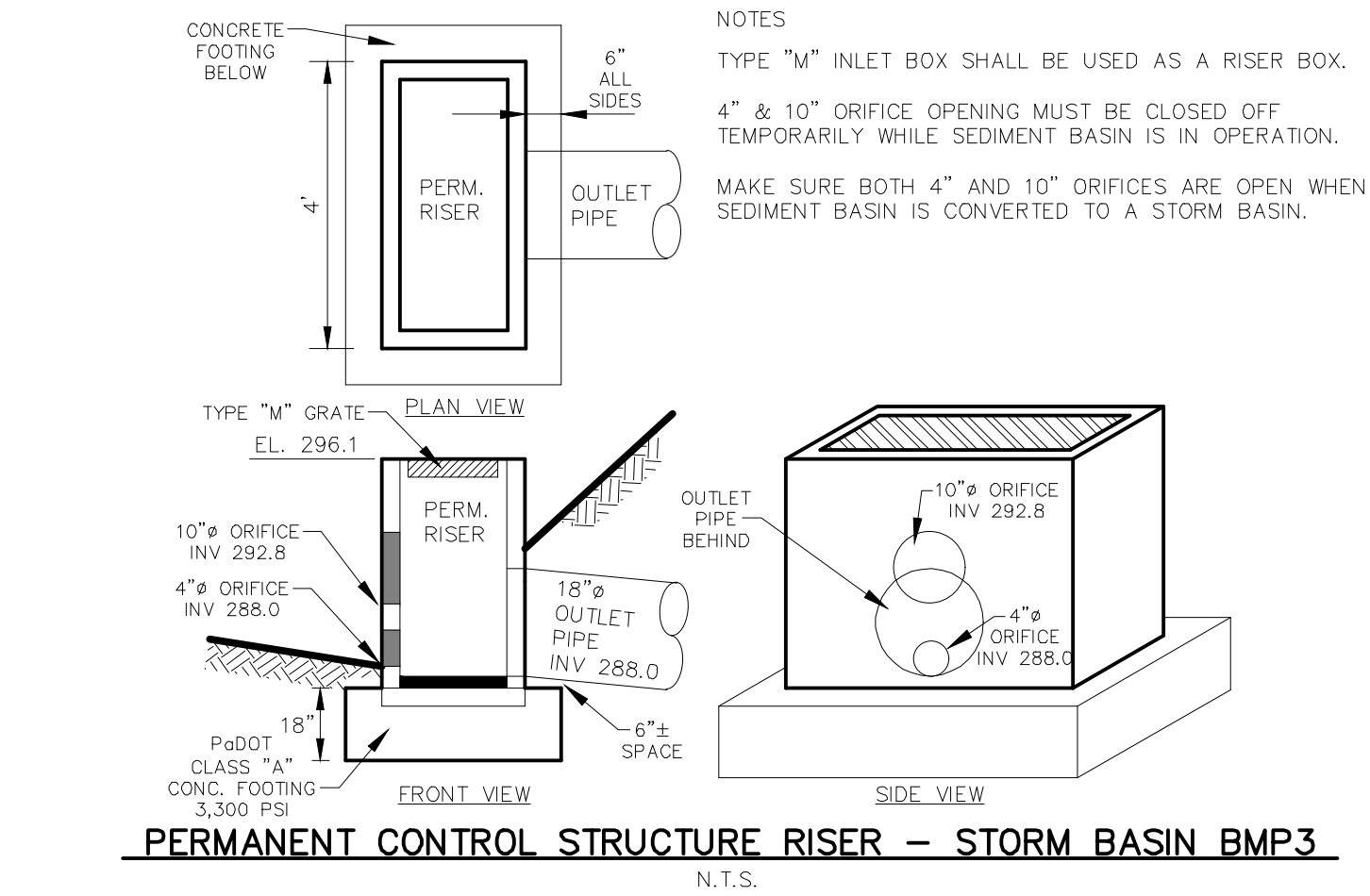
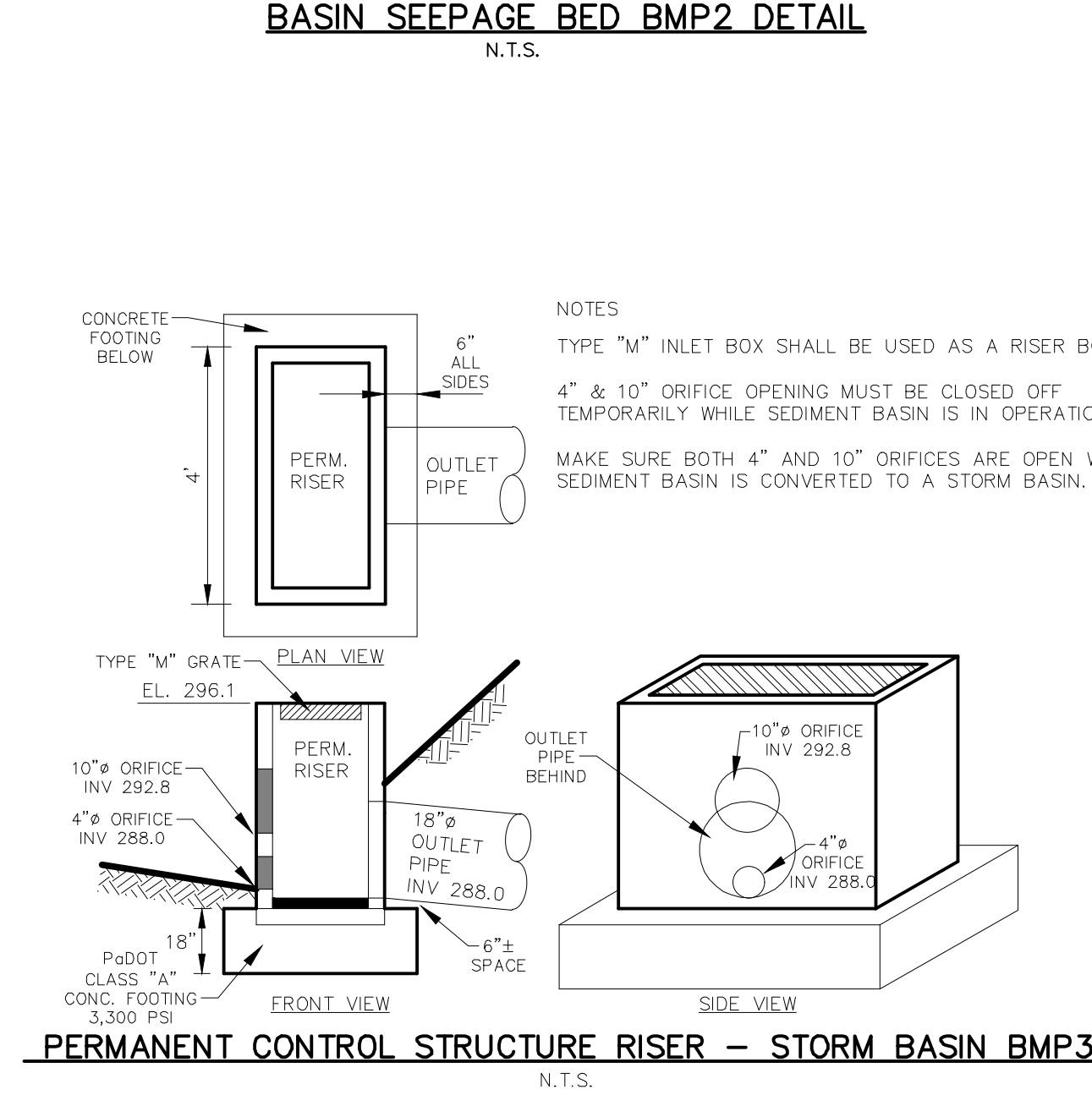
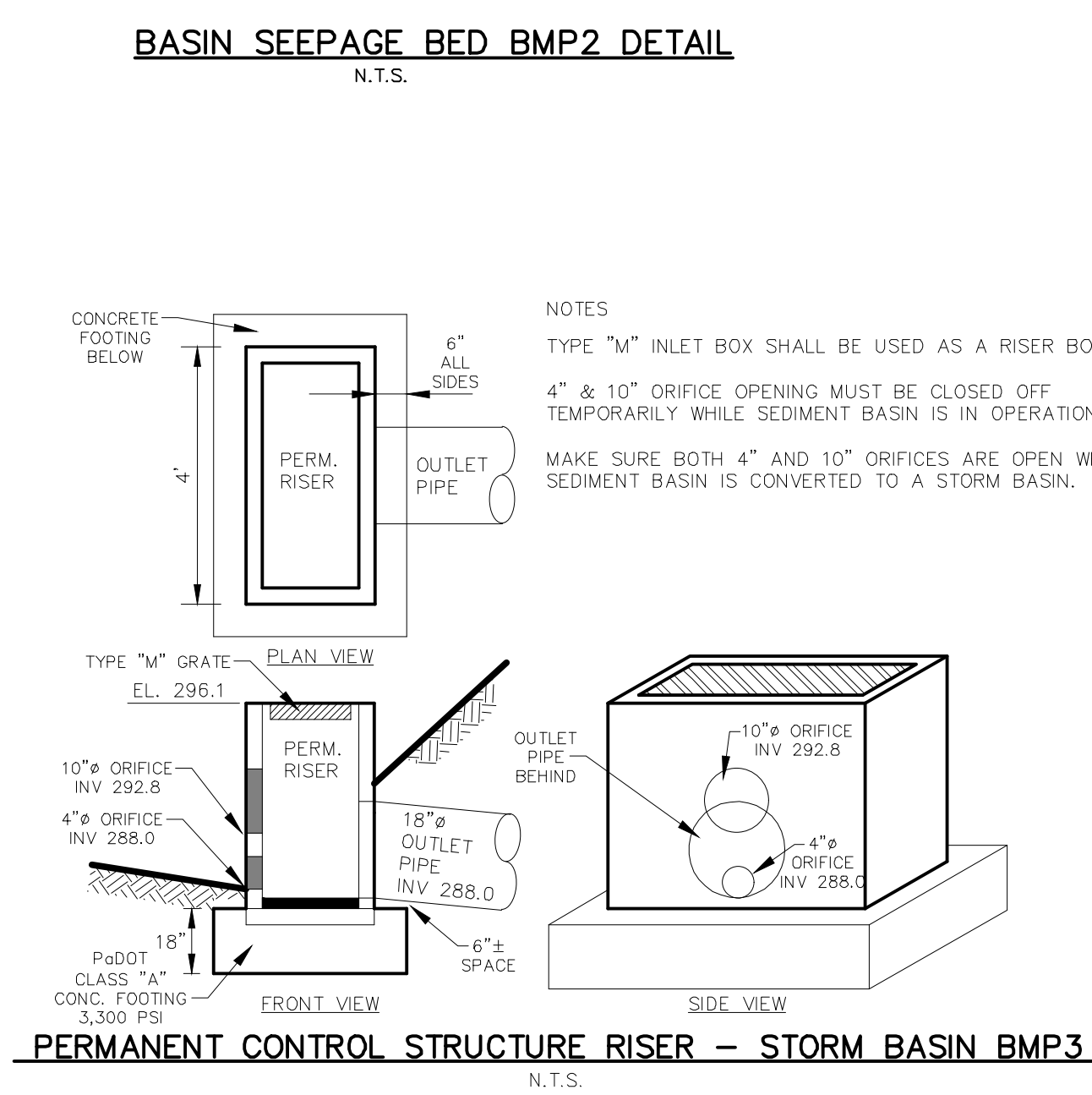
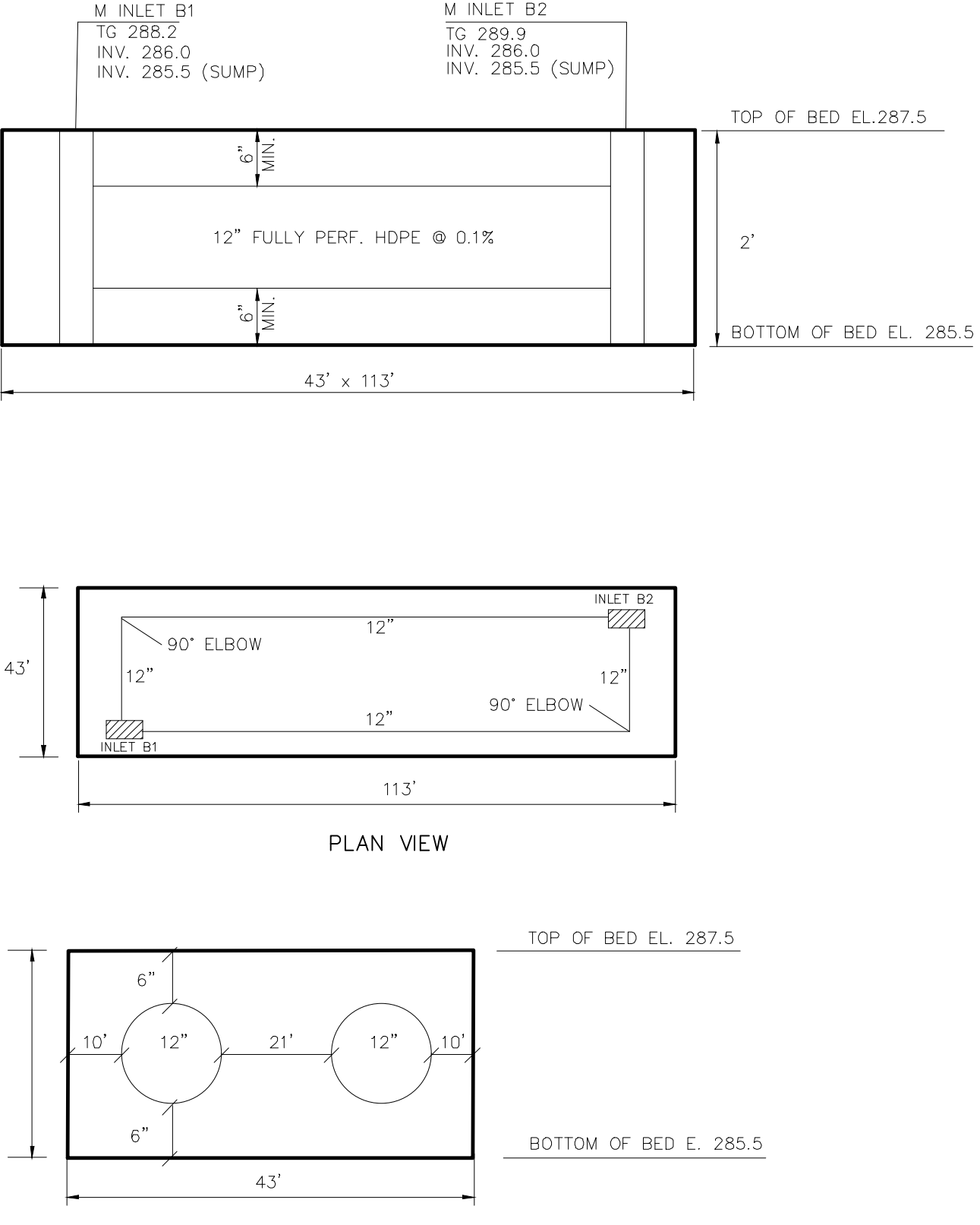
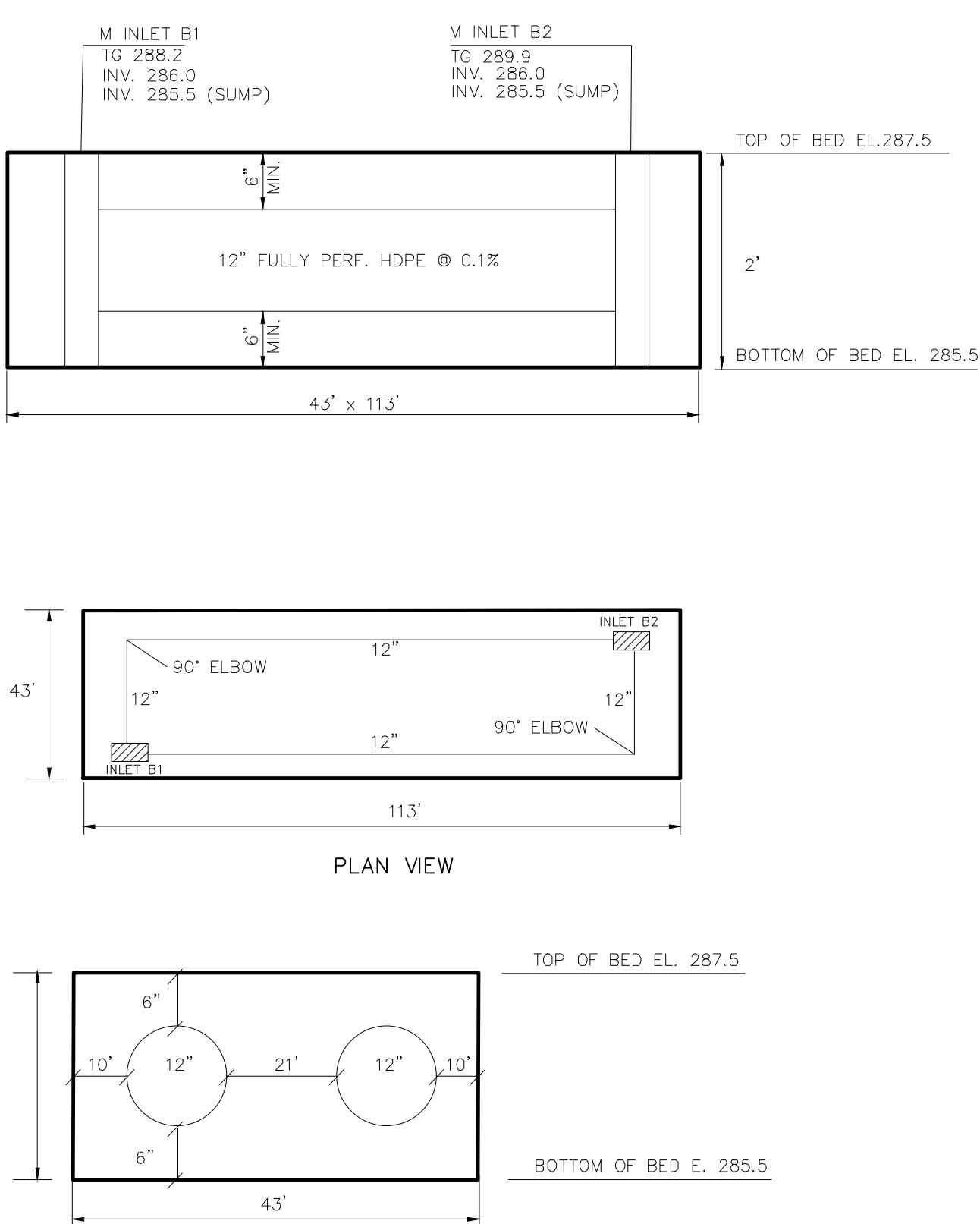
CATANIA ENGINEERING ASSOCIATES, INC.
520 WEST MCDONALD BLVD.
MILMONT PARK, PA. 19033
TEL: (610) 532-2884
FAX: (610) 532-2923
EMAIL: office10@cataniaengineering.com

PRELIMINARY
PROFILE PLAN
FOR

GARNET VALLEY ESTATES
1168 NAAMANS CREEK ROAD

CAUTION: TO INSURE VALIDITY OF PLAN, REPRODUCTION SEAL MUST BE IN RED INK.		TOWNSHIP OF BETHEL		DELAWARE COUNTY, PA	
DWN BY: M.J.C.	ISS. BY:	FIELD BOOK/PAGE: CEA-DE	SCALE: 1" = 50'	DRAWING NO. 80478	
CHK. BY: M.J.C.		DATE: 6/18/2025		SHEET 7	OF 10 SHEETS

[illegible]



NOTES:

SEDIMENT BASINS, INCLUDING ALL APPURTENANT WORKS, SHALL BE CONSTRUCTED TO THE DETAIL AND DIMENSIONS SHOWN ON THE E&S PLAN DRAWINGS.

AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. IN ORDER TO FACILITATE MAINTENANCE AND RESTORATION, THE POOL AREA SHALL BE CLEARED OF ALL BRUSH, TREES, AND OBJECTIONABLE MATERIAL. FILL MATERIALS FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS.

UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED, MULCHED, BLANKETED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT.

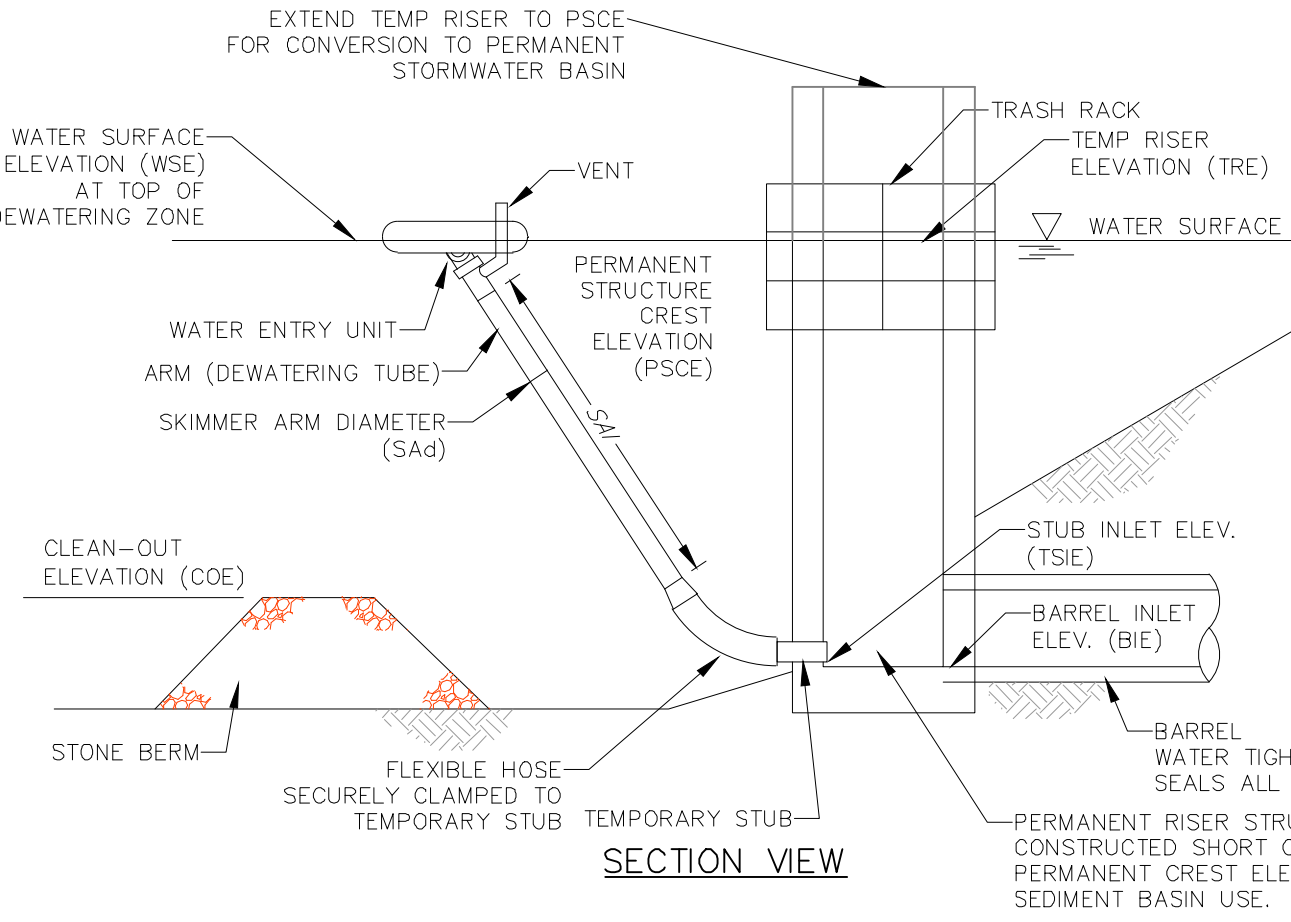
INSPECT ALL SEDIMENT BASINS ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. PROVIDE ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES. A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH BASIN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE BASIN RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE BASIN IN THE MANNER DESCRIBED IN THE E&S PLAN.

BASIN EMBANKMENTS, SPILLWAYS, AND OUTLETS SHALL BE INSPECTED FOR EROSION, PIPING AND SETTLEMENT. NECESSARY REPAIRS SHALL BE IMMEDIATELY DISPLACED RIPRAP WITHIN THE OUTLET ENERGY DISSIPATER SHALL BE REPLACED IMMEDIATELY.

ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS SHALL BE STABILIZED INSIDE THE BASIN BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. THE DEVICE SHOWN IN STANDARD CONSTRUCTION DETAIL #7-16 MAY BE USED TO DEWATER SATURATED SEDIMENT PRIOR TO ITS REMOVAL. ROCK FILTERS SHALL BE ADDED AS NECESSARY.

STANDARD CONSTRUCTION DETAIL #7-4
SEDIMENT BASIN EMBANKMENT AND SPILLWAY DETAILS — SKIMMER

NOT TO SCALE



BASIN NO.	WATER SURFACE ELEV. (FT)	SKIMMER							
		ORIFICE		ARM		FLEXIBLE HOSE			
		DIA. (IN)	HEAD (FT)	DIA. (IN)	LENGTH (FT)	MAT'L	DIA. (IN)	LENGTH (IN)	MAT'L
BMP3	294.4	2.5	2.5	3	7.6	PVC	3	36	RUBBER

TEMPORARY STUB			TEMPORARY RISER			PERM RISER EXTENSION			BARREL
INSIDE DIA. (IN)	INVERT ELEV. (FT)	MAT'L	CREST ELEV. (FT)	HORIZ. OPENING LENGTH (IN)	WIDTH (IN)	CREST ELEV. (FT)	HORIZ. OPENING LENGTH (IN)	WIDTH (IN)	INLET ELEV. (FT)
3	289.0	PVC	294.4	24	48	296.1	48	24	286.0

NOTES:

ALL ORIFICES ON PERMANENT RISER BELOW TEMPORARY RISER EXTENSION SHALL HAVE WATER-TIGHT TEMPORARY SEALS PROVIDED. TEMPORARY STUB INVERT ELEVATION SHALL BE SET AT OR BELOW SEDIMENT CLEAN-OUT ELEVATION.

A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED.

SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.

ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.

SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN-OUT STAKE OR THE TOP OF THE STONE BERM. SEE STANDARD CONSTRUCTION DETAIL #7-3 FOR CONFIGURATION OF STONE BERM.

STANDARD CONSTRUCTION DETAIL #7-2
SKIMMER ATTACHED TO PERMANENT RISER

NOT TO SCALE
(TO BE UPDATED)

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MILFORD PARK, PA. 19033
TEL. (610) 532-2884
FAX. (610) 532-2923
EMAIL: office10@cataniengineering.com

PRELIMINARY DETAIL SHEET

FOR

GARNET VALLEY ESTATES
1168 NAAMANS CREEK ROAD

CAUTION: TO INSURE VALIDITY OF PLAN, REPRODUCTION SEAL MUST BE IN RED INK.	TOWNSHIP OF BETHEL	DELAWARE COUNTY, PA.
DWN. BY: _____	SCALE: AS SHOWN	DRAWING NO. 28478
CHK. BY: _____	DATE: 6/18/2025	SHEET 10 OF 10 SHEETS