



LOCATION MAP
Scale 1" = 2000'

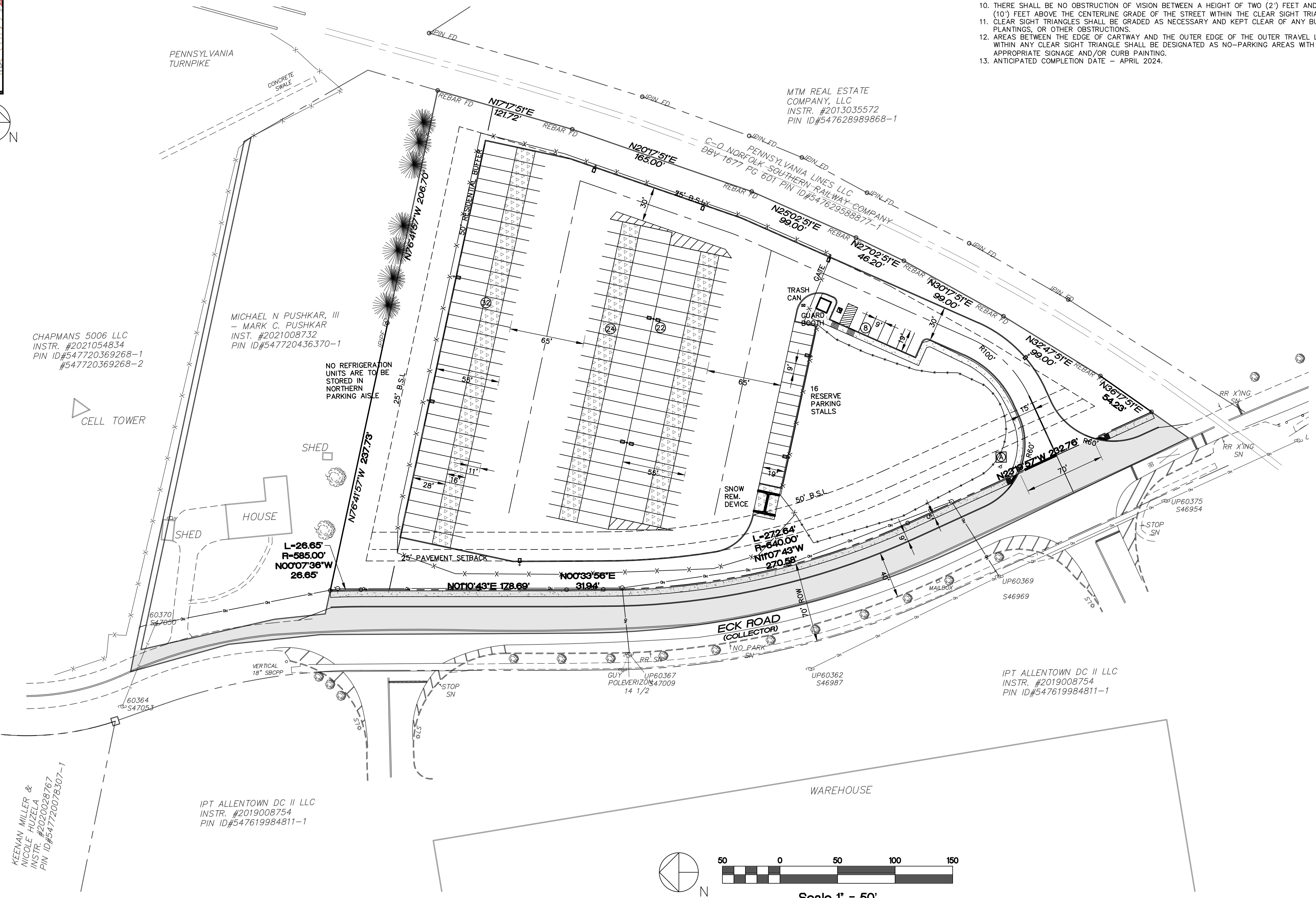
PROPOSED SIGN TABULATION				
SYMBOL	SERIES	SIZE	QUANTITY	MESSAGE
(A)	R1-1	36" x 36"	1	STOP

** SIGNS TO BE BY APPROVED PENNDOT SUPPLIER

- GENERAL DEVELOPMENT NOTES:**
- STORMWATER BMPs ARE FIXTURES THAT CANNOT BE ALTERED OR REMOVED WITHOUT APPROVAL BY THE TOWNSHIP AND/OR COUNTY CONSERVATION DISTRICT.
 - ANY PROPOSED SIGNS SHALL BE PERMITTED IN ACCORDANCE WITH COMPLY WITH ZONING ORDINANCE.
 - THE OWNER AGREES TO COMPLY WITH THE APPLICABLE REQUIREMENTS FOR PROPOSED USE(S) AS DETAILED IN ZONING ORDINANCE.
 - THE APPLICANT IS RESPONSIBLE FOR JOINING THE PA ONE CALL SYSTEM. THE APPLICANT IS RESPONSIBLE FOR MARKING ALL NEWLY CONSTRUCTED UNDERGROUND UTILITIES PRIOR TO THE UTILITIES BEING FORMALLY ACCEPTED AND DEDICATED TO THE TOWNSHIP.
 - ALL ON SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.
 - THE PROPOSED BUILDING IS TO BE SERVED WITH PUBLIC WATER AND PUBLIC SEWER PROVIDED BY SOUTH WHITEHALL TOWNSHIP AUTHORITY.
 - THE UNDERGROUND UTILITIES SHOWN ON THIS MAP WERE LOCATED FROM VISIBLE EVIDENCE AND FIELD MARKINGS AT THE TIME OF THE SURVEY. THE EXTENT AND DEPTHS OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE ONLY AND SHALL BE VERIFIED PRIOR TO ANY EXCAVATION.
 - ALL REQUIRED PUBLIC IMPROVEMENTS DEPICTED ON THIS PLAN SHALL BE COMPLETED WITHIN ONE YEAR OF THE SIGNING OF THE DEVELOPER'S AGREEMENT.
 - THE PROPERTY OWNER SHALL SIGN AN OPERATIONS AND MAINTENANCE AGREEMENT WITH THE TOWNSHIP COVERING ALL STORMWATER BMP'S THAT ARE TO BE PRIVATELY OWNED. THE AGREEMENT SHALL INCLUDE THE TERMS OF THE FORMAT AGREEMENT REFERENCED IN THE SOUTH WHITEHALL TOWNSHIP'S STORMWATER MANAGEMENT ORDINANCE CHAPTER 13, APPENDIX E.
 - THERE SHALL BE NO OBSTRUCTION OF VISION BETWEEN A HEIGHT OF TWO (2') FEET AND TEN (10') FEET ABOVE THE CENTERLINE GRADE OF THE STREET WITHIN THE CLEAR SIGHT TRIANGLE.
 - CLEAR SIGHT TRIANGLES SHALL BE GRADED AS NECESSARY AND KEPT CLEAR OF ANY BUILDINGS, PLANTINGS, OR OTHER OBSTRUCTIONS.
 - AREAS BETWEEN THE EDGE OF CARTWAY AND THE OUTER EDGE OF THE OUTER TRAVEL LANE WITHIN ANY CLEAR SIGHT TRIANGLE SHALL BE DESIGNATED AS NO-PARKING AREAS WITH APPROPRIATE SIGNAGE AND/OR CURB PAINTING.
 - ANTICIPATED COMPLETION DATE - APRIL 2024.

LEGEND

EXISTING FEATURES	
CONCRETE CURB	=====
EDGE OF PAVEMENT	-----
CONCRETE WALK OR PAD	=====
EASEMENT LINE	-----
SETBACK LINE	-----
PAINT LINES	-----
PROPERTY LINES	-----
SIGN POST	□ SIGN
FENCE	X X
DECIDUOUS/PINE TREE	○ ○
UTILITY POLE	□ UP
PROPOSED FEATURES	
CONCRETE CURB	=====
EDGE OF PAVEMENT	-----
CONCRETE WALK OR PAD	=====
PROPOSED SIGN	□ SIGN
R.O.W TO BE DEDICATED	=====
AREA TO BE CONVEYED	=====



SITE DATA:
PROPERTY ADDRESS: 1429 ECK ROAD ALLENTOWN, PA 18104
PARCEL ID: 54772042074-1
DOCUMENT ID: 2012024283
TOTAL LOT AREA: 5.112 ACRES
ROW TO BE DEDICATED: 0.711 ACRES
AREA TO BE CONVEYED: 0.053 ACRES
ADJ. TOTAL LOT AREA: 4.348 ACRES

EQUITABLE OWNER:
TRIPLE NET INVESTMENTS CO, LLC
171 ROUTE 173 - SUITE 201
ASBURY, NEW JERSEY 08802-1365

OWNER OF RECORD:
DARYL R. & CHERYL L. LONG
3742 EAGLE ROAD
SLATINGTON, PENNSYLVANIA 18080

DEVELOPER:
J.G. PETRUCCI CO.
171 ROUTE 173 - SUITE 201
ASBURY, NEW JERSEY 08802-1365

ZONING DATA
ZONING DISTRICT: IC-1 INDUSTRIAL COMMERCIAL - 1
OVERLAY DISTRICT: TND - INDUSTRIAL RETROFIT AND INFILL

EXISTING USE: VACANT LAND
PROPOSED USE: OUTDOOR STORAGE (SPECIAL EXCEPTION USE)

LF OF NEW STREET: 0 FT.

MINIMUM YARD REQUIREMENTS:
FRONT YARD - 50'
SIDE YARD - 25'
REAR YARD - 25'

	REQUIRED	EXISTING	PROPOSED
MIN. LOT AREA	1 ACRE	5.11 ACRES	4.35 ACRES
MIN. LOT WIDTH	150 FT	625 FT	625 FT
MAX HEIGHT OF BUILDING	35 FT	N/A	<35 FT
			1 STORY
MAX. IMPERVIOUS COVERAGE:	75%	0.0%	NO BASEMENT 59.6%* (112,811 SF)
MAX. BUILDING COVERAGE:	N/A	0.0%	<0.1% (100 SF)

*NOTE: IMPERVIOUS COVERAGE INCLUDES RESERVE PARKING AREA.

UTILITIES
SEWER LCA
WATER LCA
ELECTRIC PPL
TELEPHONE VERIZON, PA
GAS UGI UTILITIES, INC.

PARKING TABULATION:
REQUIRED PARKING - OUTDOOR STORAGE.
ONE (1) SPACE FOR EVERY 5,000 SQUARE FEET OF ENCLOSED OUTDOOR STORAGE AREA. NOT APPLICABLE IF AN ACCESSORY USE.

114,650 SF AREA * (1 SPACE/5,000 SF) = 23 SPACES REQUIRED

SPACES PROPOSED = 8 SPACES
SPACES IN RESERVE = 16 SPACES
TOTAL PARKING SPACES = 24 SPACES

TRAILER STORAGE SPACES = 178 SPACES

WAIVER NOTE:
THE FOLLOWING WAIVERS FROM SECTIONS OF THE SOUTH WHITEHALL TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE ARE REQUESTED FOR THIS APPLICATION:

- SECTION 312-36(c)(5)(A) - TO ALLOW A DRIVEWAY WIDTH AT THE RIGHT-OF-WAY LINE TO BE LARGER THAN 40 FEET.

PRELIMINARY/FINAL RECORD PLAN

PANY & LENTZ ENGINEERING COMPANY
CONSULTING ENGINEERS
CIVIL • STRUCTURAL • MECHANICAL • MACHINEERY
609 Hamilton Street • Allentown, PA 18101
Office: 610/433-1634 • Fax: 610/433-1636

1429 ECK ROAD
OUTDOOR STORAGE
SOUTH WHITEHALL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

J.G. PETRUCCI CO. INC.
171 ROUTE 173
SUITE 201
ASBURY, NEW JERSEY 08802

DESIGNED	MAP
DRAWN	BMW
CHECKED	MFS
JOB. NO.	2022258
SCALE	1" = 50' U.N.O.
DATE	MAY 15, 2023
DWG. NO.	LD-2
SHEET NO.	2
REV.	
OF	32 SHEETS

ENGINEER'S STATEMENT
I, STEPHEN A. PANY, A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE ACCOMPANYING APPLICATION, PLANS AND SUPPORTING DOCUMENTATION ARE TRUE AND CORRECT, TO THE BEST OF MY KNOWLEDGE.

DATE _____ PLAN PREPARER'S SIGNATURE _____



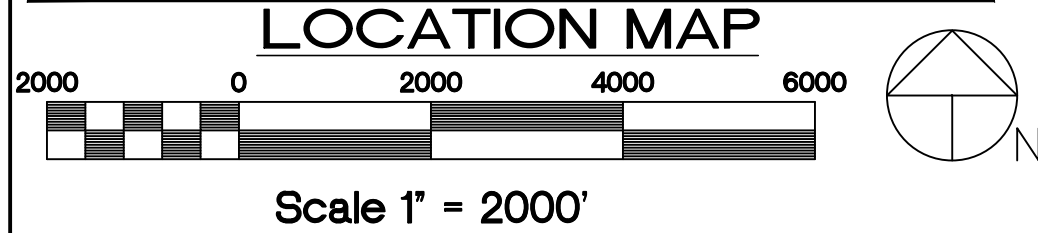
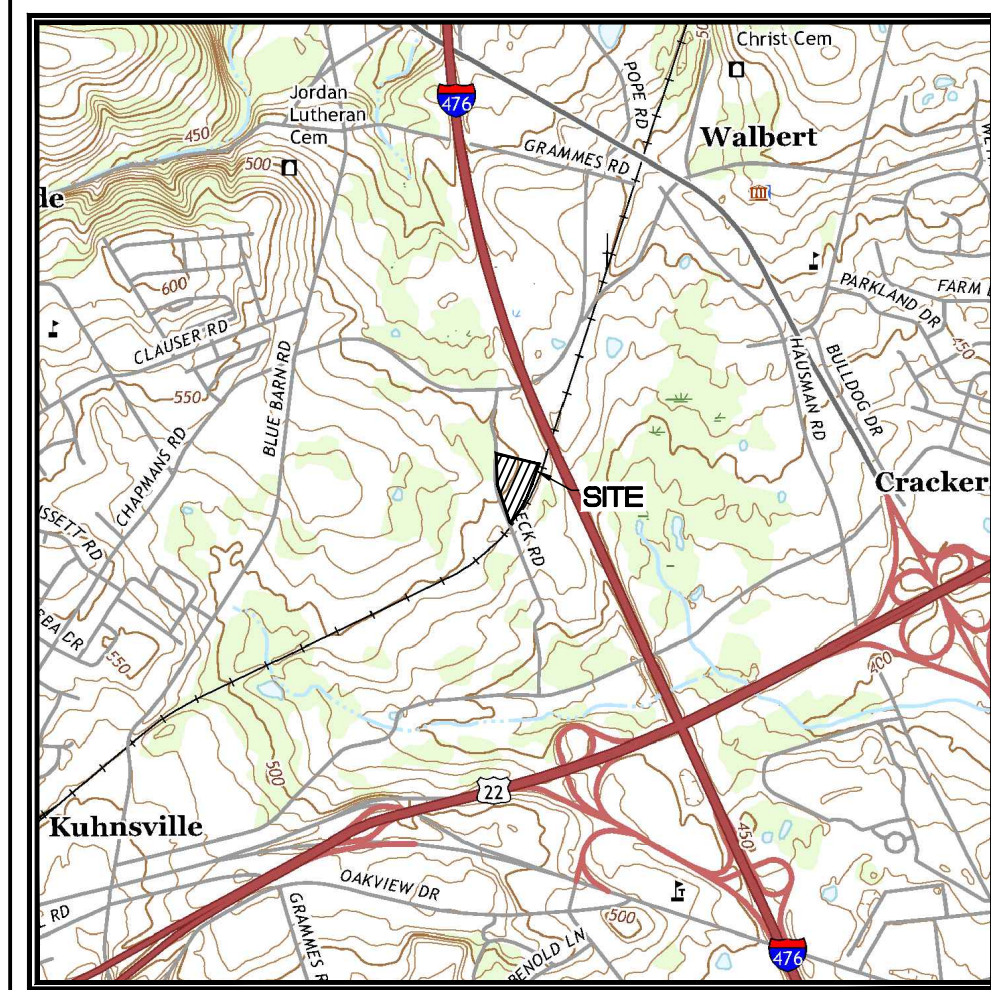
PA ACT 287, AS AMENDED
IN ACCORDANCE WITH PA ACT 287, AS AMENDED, THE SURVEYOR CONTACTED PA ONE CALL, INC., FOR A DESIGN PHASE LOCATION REQUEST. THE SERIAL NUMBER FOR THAT REQUEST IS 2022283634. THE SURVEYOR HAS MADE NO INDEPENDENT VERIFICATION OF THE INFORMATION PROVIDED OTHER THAN AS MAY BE READILY EVIDENT FROM THE SURFACE OF THE GROUND.

THE CONTRACTOR SHALL COMPLY WITH PA ACT 287, AS AMENDED REQUIREMENTS AND VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE START OF WORK.

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\\s:\s\destop\ [Extop] [xref-TB 24x36] [Location Map]
G:\ACAD\Acad\DWG\2022258\1429 Eck Rd - JGP\Landex\Current\Rev\02 - Record Plan.dwg - Record Plan
Date: May 17, 2023 - 5:35pm
User: Chris
Pany & Lentz Engineering Company

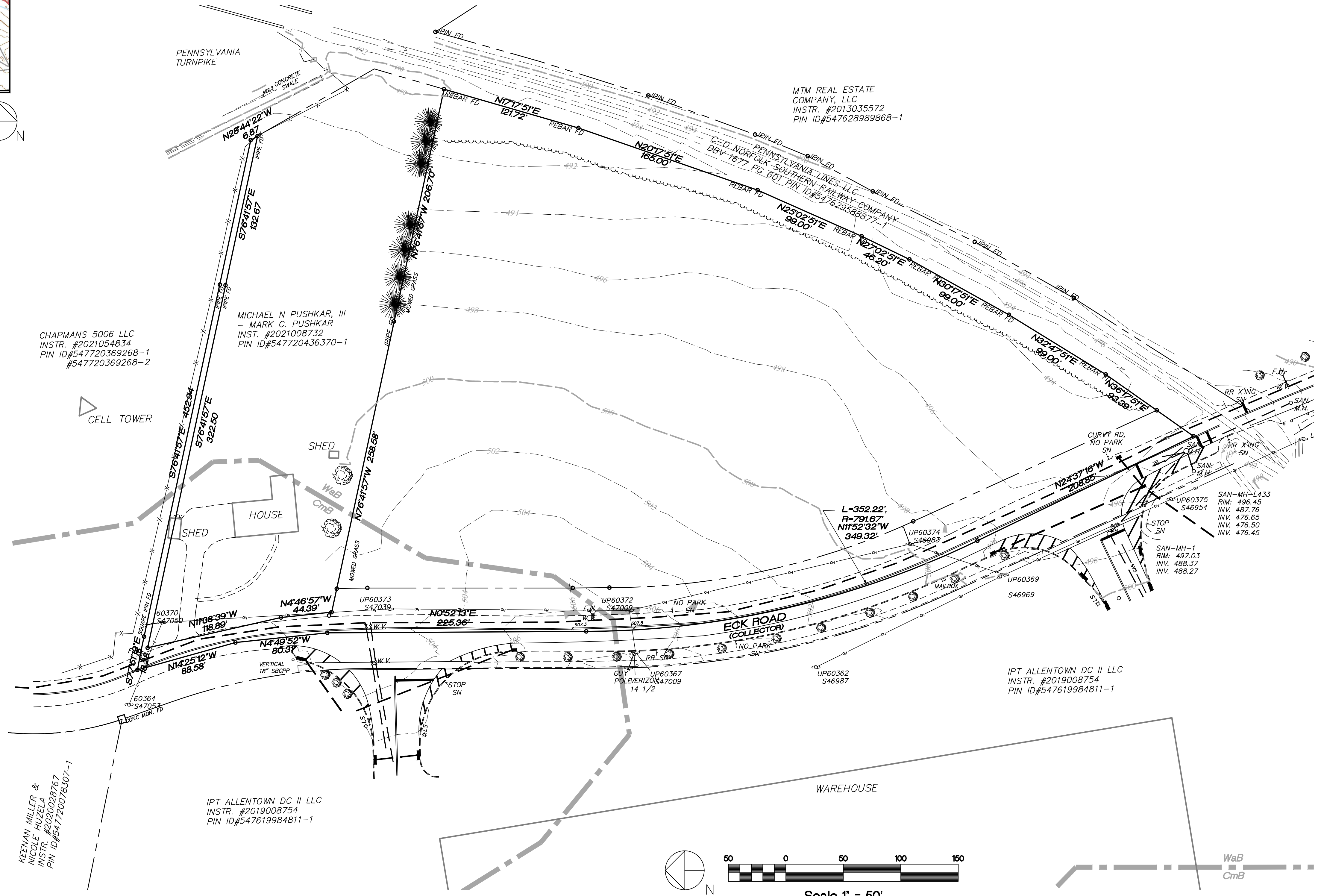


SOIL DESCRIPTION TABLE						
SYMBOL	NAME	SLOPE RANGE	CHARACTERISTICS	HYDROLOGIC SOIL GROUP	LIMITATIONS TO USE	RESOLUTIONS TO LIMITATIONS
CmB	CLARKSBURG SILT LOAM	3 TO 8%	MODERATE HAZARD OF EROSION SLOW PERMEABILITY; HIGH AVAILABLE MOISTURE CAPACITY.	C	POSS. SINKHOLE FORMATION; PIPING	SINKHOLE REPAIR; ANTI-SEEP COLLAR
WaB	WASHINGTON SILT LOAM	3 TO 8%	MODERATE HAZARD OF EROSION MODERATE PERMEABILITY; HIGH AVAILABLE MOISTURE CAPACITY.	B	POSS. SINKHOLE FORMATION; PIPING	SINKHOLE REPAIR; ANTI-SEEP COLLAR

EXISTING FEATURES

- 2 FT. CONTOUR
- 10 FT. CONTOUR
- SPOT ELEVATION
- CONCRETE CURB
- EDGE OF PAVEMENT
- CONCRETE WALK OR PAD
- WOOD GUIDERAIL
- DIRT/GRAVEL ROAD
- STORM SEWER & INLETS
- SANITARY SEWER & MANHOLE
- WATER LINE & VALVE
- OVERHEAD ELECTRIC
- EASEMENT LINE
- PAINT LINES
- PROPERTY LINES
- ADJONERS' PROPERTY LINES
- RIGHT-OF-WAY
- SIGN POST
- TREE LINE
- DECIDUOUS TREE
- UTILITY POLE

Slopes Table				
Number	Minimum Slope	Maximum Slope	Area	Color
1	15.00%	100.00%	245.86	



SURVEYOR'S STATEMENT
 I, SCOT A. DIETRICH, A REGISTERED SURVEYOR OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE PLAN, PREPARED FROM A FIELD SURVEY ON AUGUST 1, 2022, CORRECTLY REPRESENTS THE PROPERTY BOUNDARY OF THE PROPOSED SUBDIVISION OR LAND DEVELOPMENT.

SIGNED: _____
 DATE: _____
 COMMONWEALTH OF PENNSYLVANIA
 REGISTERED LAND SURVEYOR NUMBER: SU-053116
 SURVEYOR'S NAME: SCOT DIETRICH
 SURVEYOR'S COMPANY: PANY & LENTZ ENGINEERING COMPANY
 SURVEYOR'S TELEPHONE NO.: 610-433-1634

PRELIMINARY/FINAL EXISTING FEATURES PLAN

PANY & LENTZ ENGINEERING COMPANY
 CONSULTING ENGINEERS
 CIVIL • STRUCTURAL • MECHANICAL • MACHINEERY
 609 Hamilton Street • Allentown, PA 18101
 Office: 610/433-1634 • Fax: 610/433-1636

DESIGNED	SNP
DRAWN	BMW
CHECKED	MFS
JOB. NO.	2022258
SCALE	1" = 50' U.N.O.
DATE	MAY 15, 2023
DWG. NO.	LD-3
SHEET NO.	3
REV.	0
OF	32 SHEETS

PETRUCCI J.G. PETRUCCI CO. INC.
 771 ROUTE 173 SUITE 201
 ASBURY, NEW JERSEY 08802

PA ACT 287, AS AMENDED
 IN ACCORDANCE WITH PA ACT 287, AS AMENDED, THE SURVEYOR CONTACTED PA ONE CALL, INC., FOR A DESIGN PHASE LOCATION REQUEST. THE SERIAL NUMBER FOR THAT REQUEST IS 2022283634. THE SURVEYOR HAS MADE NO INDEPENDENT VERIFICATION OF THE INFORMATION PROVIDED OTHER THAN AS MAY BE READILY EVIDENT FROM THE SURFACE OF THE GROUND.
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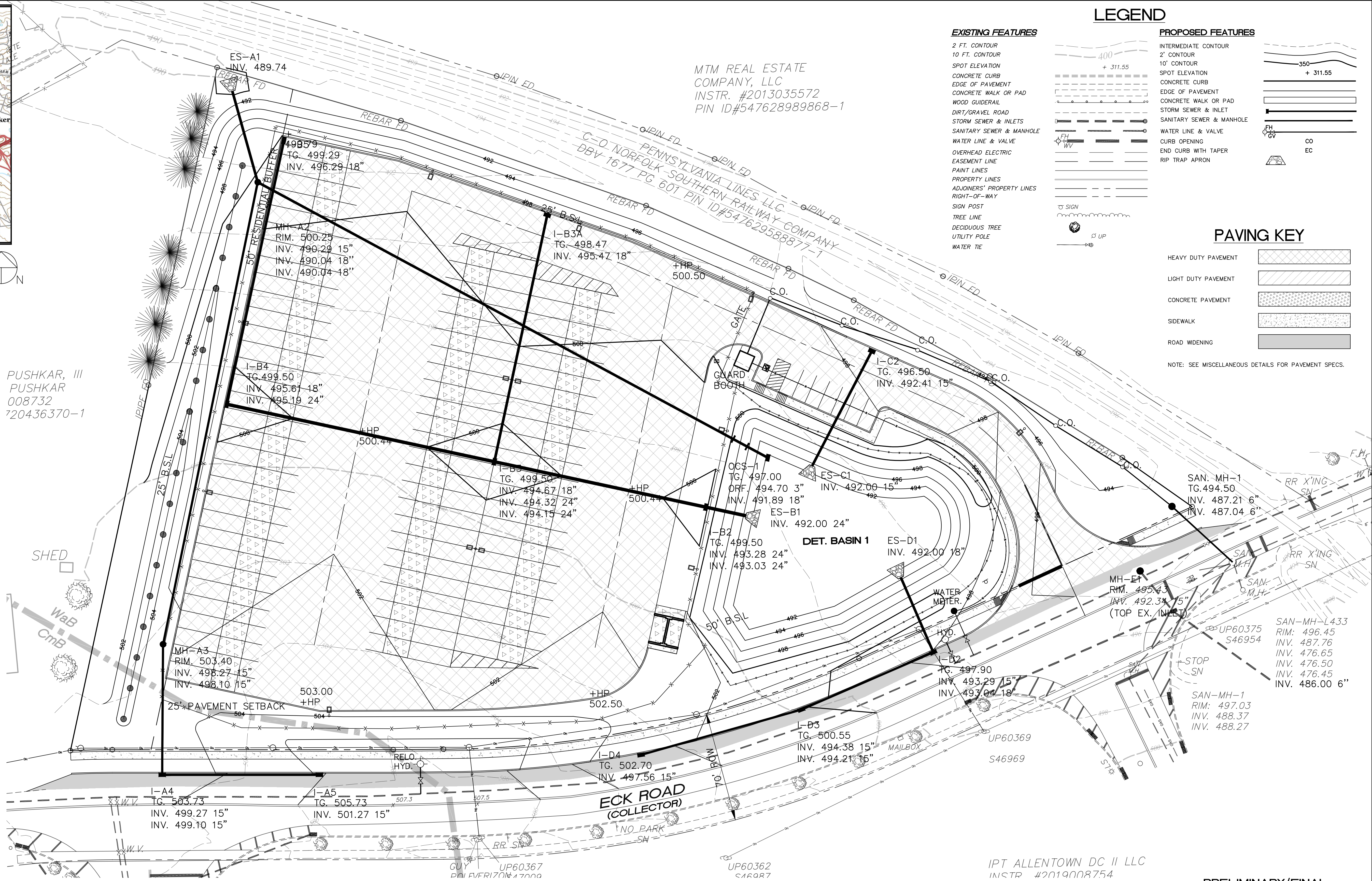
ENGINEER'S STATEMENT
 I, STEPHEN A. PANY, A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE ACCOMPANYING APPLICATION, PLANS AND SUPPORTING DOCUMENTATION ARE TRUE AND CORRECT, TO THE BEST OF MY KNOWLEDGE.
 DATE: _____ PLAN PREPARER'S SIGNATURE: _____

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ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SOUTH WHITEHALL TOWNSHIP STANDARD SPECIFICATIONS.

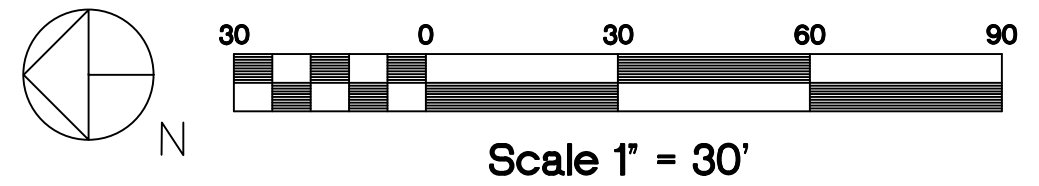
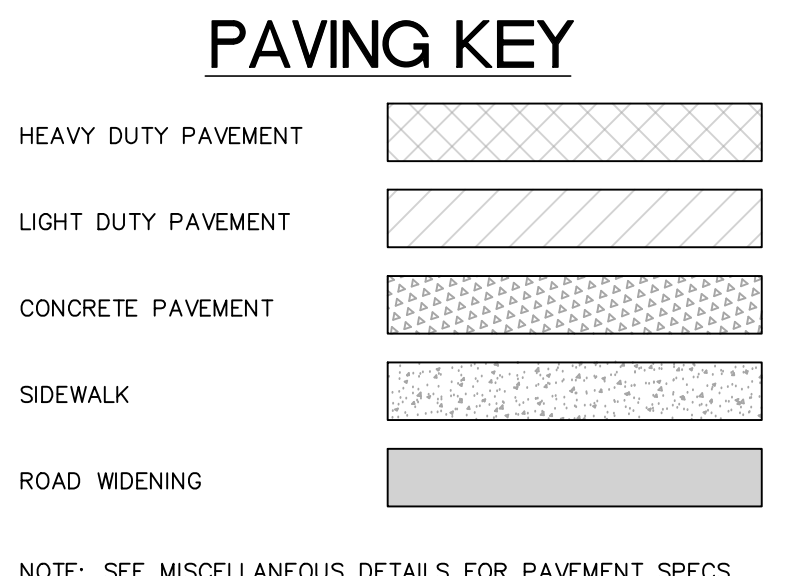
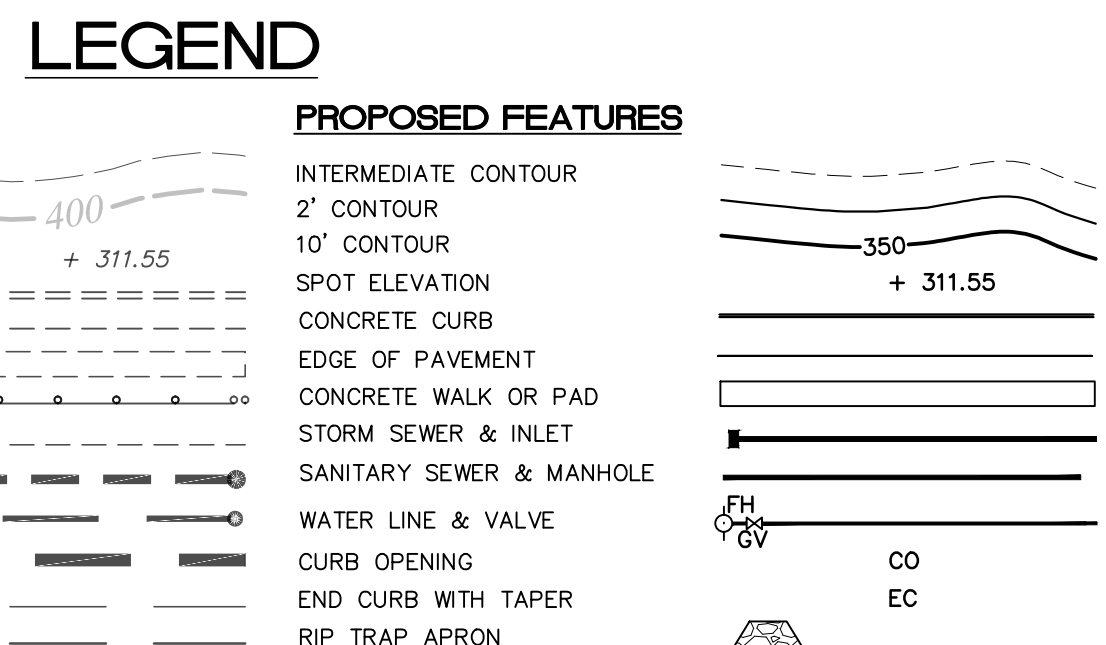


LOCATION MAP
Scale 1" = 2000'



PUSHKAR, III
PUSHKAR
008732
720436370-1

MTM REAL ESTATE
COMPANY, LLC
INSTR. #2013035572
PIN ID#547628989868-1



ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SOUTH WHITEHALL TOWNSHIP STANDARD SPECIFICATIONS.

IPT ALLENTOWN DC II LLC
INSTR #2019008754

Date: May 17, 2023 - 5:35pm *Pony & Lentz Engineering Company* - USER: Chris

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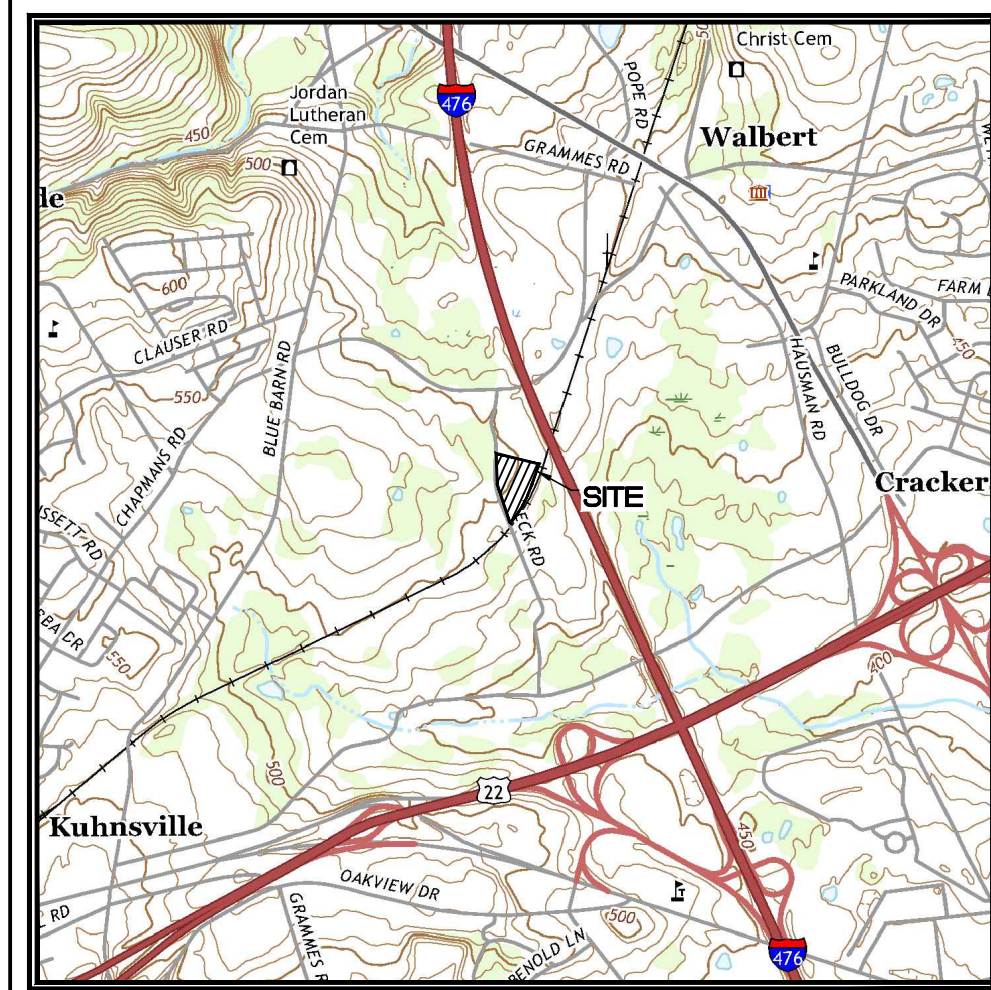
PRELIMINARY/FINAL GRADING + UTILITY PLAN

PANY & LENTZ ENGINEERING COMPANY
CONSULTING ENGINEERS
CIVIL • STRUCTURAL • MECHANICAL • MACHINEERY
609 Hamilton Street • Allentown, PA 18101
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1429 ECK ROAD
OUTDOOR STORAGE
SOUTH WHITEHALL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

J.G. PETRUCCI CO., INC.
771 ROUTE 173
SUITE 201
ASBURY, NEW JERSEY 08802

DESIGNED: JAP
DRAWN: BMW
CHECKED: MFS
JOB NO.: 2022283634
SCALE: 1" = 50' U.N.O.
DATE: MAY 15, 2023
DWG. NO.: LD-4
SHEET NO.: 4
REV. NO.: 0
OF 32 SHEETS



LOCATION MAP

Scale 1" = 2000'

GENERAL PLANTING NOTES:

1. THE CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO BEGINNING CONSTRUCTION, AS PER ACT 187. CALL 1-800-242-1776.
2. ALL NEW PLANT MATERIAL SHALL BE WARRANTED FOR A PERIOD OF EIGHTEEN MONTHS FROM DATE OF FINAL ACCEPTANCE.
3. THE CONTRACTOR SHALL STAKE OUT THE LOCATIONS OF ALL NEW PLANT MATERIAL FOR REVIEW BY THE LANDSCAPE ARCHITECT PRIOR TO DELIVERY OF PLANT MATERIAL.
4. THE CONTRACTOR SHALL NOT DEVIATE FROM THE PLANT SCHEDULE WITHOUT PRIOR APPROVAL OF THE LANDSCAPE ARCHITECT / OWNER, AND SOUTH WHITEHALL TWP.
5. ALL NON-PAVED AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE SEEDED FOR TURF, AS DESCRIBED BELOW, UNLESS OTHERWISE NOTED ON THE PLAN.
6. TURF SEEDING SHALL OCCUR DURING THE SPECIFIED PERIODS. DURING OTHER PERIODS, SEED WITH FORMULA E, RAKE AND RESEED WITH FORMULA B DURING THE NEXT RECOMMENDED PERIOD.
7. PREPARE TURF AREAS PER THE REQUIREMENTS AND DURING THE TIME PERIODS DESCRIBED IN SECTIONS 804 (SEEDING AND SOIL SUPPLEMENTS) AND 805 (MULCHING) OF PennDOT SPECIFICATIONS PUBLICATION 408M IN THE LATEST REVISION. (SEE SPECS BELOW)
8. PLANT MATERIAL LOCATED IN THE VICINITY OF UTILITY ZONES SHALL BE REVIEWED IN THE FIELD PRIOR TO PLANT INSTALLATION.
9. ALL PLANTINGS SHALL BE LOCATED TO AVOID PLACEMENT WITHIN SWALE CENTER LINES.
10. THE CONTRACTOR SHALL SUBMIT PROOF OF PLANT MATERIAL PATENTS WHERE SPECIFIED.

QUANTITY	ALIAS	SCIENTIFIC NAME	COMMON NAME	PLANTING SIZE (MIN.)	COMMENTS
DECIDUOUS TREES					
18	AR	ACER RUBRUM	RED MAPLE	2" CAL	B & B, SINGLE LEADER
12	ZS	ZELKOVA SERRATA	JAPANESE ZELKOVA	2" CAL	B & B, SINGLE LEADER
30	TOTAL				DECIDUOUS TREES SHALL HAVE CLEAR BRACING HEIGHT TO 6' ABOVE GRADE
EVERGREEN TREES					
39	JV	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	6" HEIGHT	B & B, SHEARED
39	TOTAL				
SHRUBS					
21	VP	CORNUS ALBA SIBERICA	RED TWIG DOGWOOD	24" HEIGHT	B & B
21	TOTAL				

NOTE: ANY EXISTING STREET TREES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED WITH ANY EQUIVALENT TREE.

PROPOSED TREE REQUIREMENTS TABULATION

AUTHORITY	REQUIREMENT	CALCULATION	MINIMUM	PROVIDED	
SOUTH WHITEHALL TWP.	OFF STREET PARKING	1 TREE MINIMUM FOR 10 OFF STREET PARKING SPACES	24 CAR PARKING SPACES / 10 = 2.4 TREES 78 TRAILER PARKING SPACES / 10 = 7.3 TREES = 9.7 TREES	10	77
	STREET TREES	1 TREE MINIMUM FOR 100 FEET OF STREET RIGHT-OF-WAY	ECK ROAD: 806 LINEAR FEET OF STREET R.O.W. / 100 = 8.1 TREES = 9.0 TREES	9	15

LEGEND

EXISTING FEATURES

- 2 FT. CONTOUR
- 10 FT. CONTOUR
- SPOT ELEVATION
- CONCRETE CURB
- EDGE OF PAVEMENT
- CONCRETE WALK OR PAD
- WOOD GUDDERAIL
- DIRT/GRAVEL ROAD
- STORM SEWER & INLETS
- SANITARY SEWER & MANHOLE
- WATER LINE & VALVE
- OVERHEAD ELECTRIC
- EASEMENT LINE
- PAINT LINES
- PROPERTY LINES
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- RIGHT-OF-WAY
- SIGN POST
- TREE LINE
- DECIDUOUS TREE
- UTILITY POLE

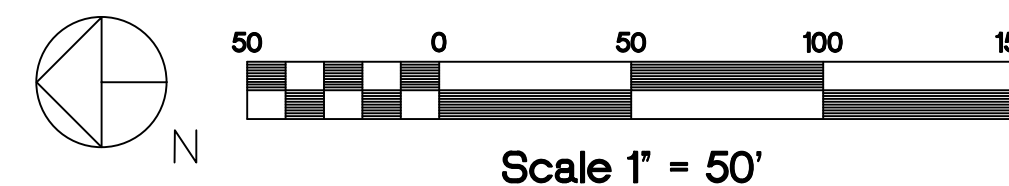
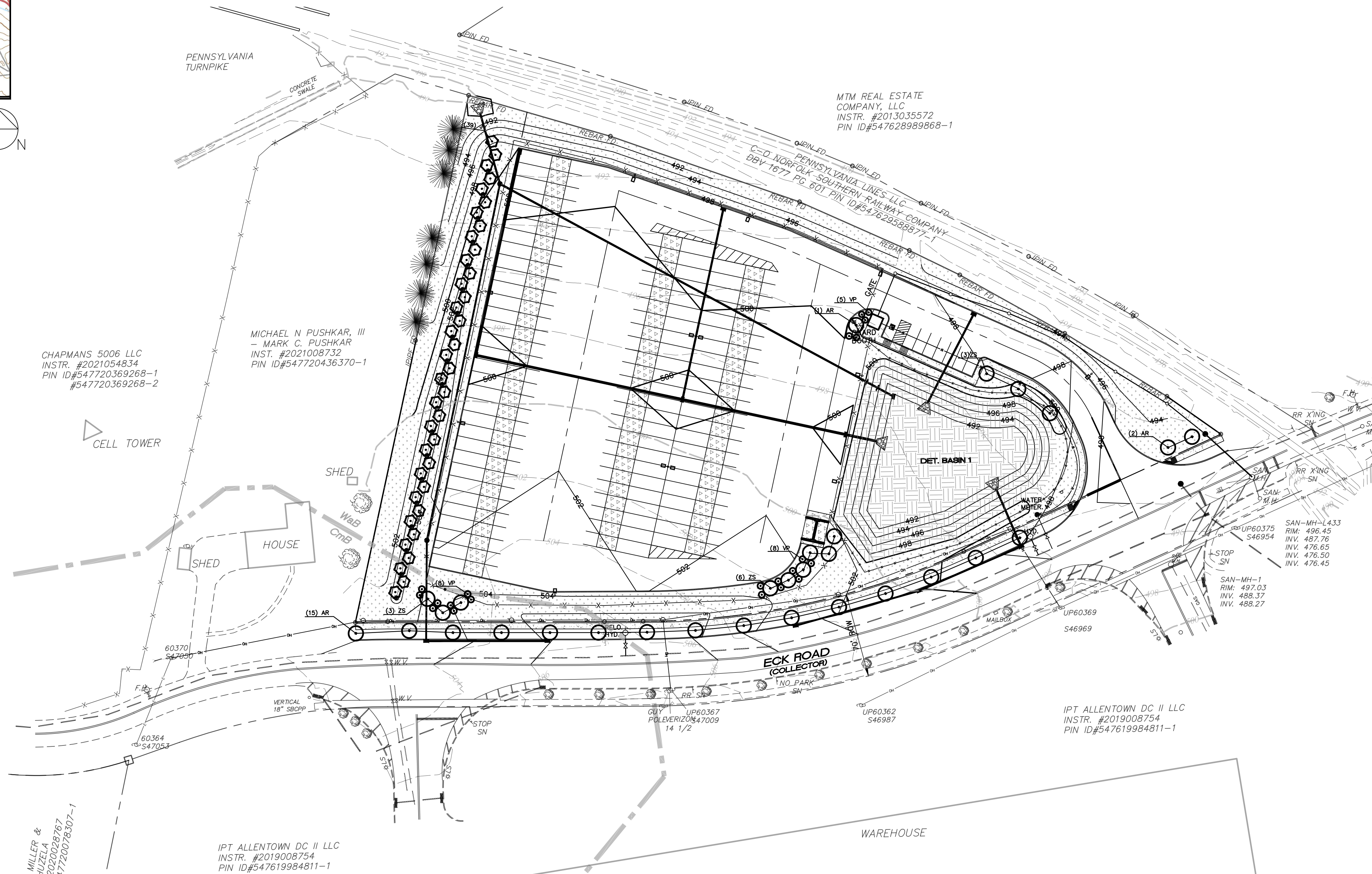
PROPOSED FEATURES

- INTERMEDIATE CONTOUR
- 2' CONTOUR
- 10' CONTOUR
- SPOT ELEVATION
- CONCRETE CURB
- EDGE OF PAVEMENT
- CONCRETE WALK OR PAD
- STORM SEWER & INLET
- SANITARY SEWER & MANHOLE
- WATER LINE & VALVE
- CURB OPENING
- END CURB WITH TAPER
- TRIP TRAP APRON
- DECIDUOUS/EVERGREEN TREE
- SHRUB
- EXISTING TREE TO BE REMOVED, AND REPLACED AT SAME LOCATION
- EXISTING TREE TO BE REMOVED AND RELOCATED

SEEDING LEGEND

- MEADOW/LOW MAINTENANCE SEED MIX
- BASIN/WATER TOLERANT SEED MIX

NOTE: SEE LANDSCAPING DETAILS SHEET FOR SEED MIX INFORMATION. STANDARD LAWN SEED MIX TO BE UTILIZED IN AREAS NOT SPECIFIED.



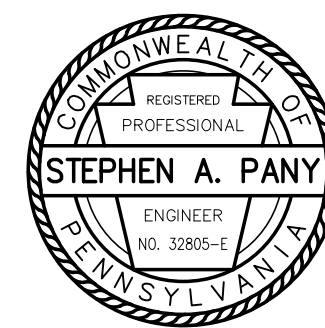
Scale 1" = 50'

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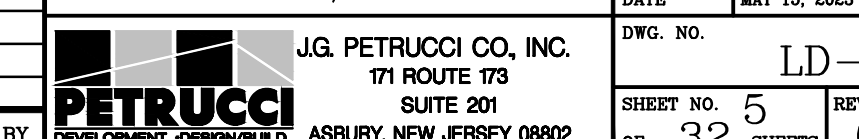
PRELIMINARY/FINAL LANDSCAPING PLAN



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SOUTH WHITEHALL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

DESIGNED	DRAWN	CHECKED	JOB. NO.	SCALE	DATE	DWG. NO.	SHEET NO.	REV.
			2022258	1" = 50' U.N.O.	MAY 15, 2023	LD-5	5	0





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Scale 1" = 2000'

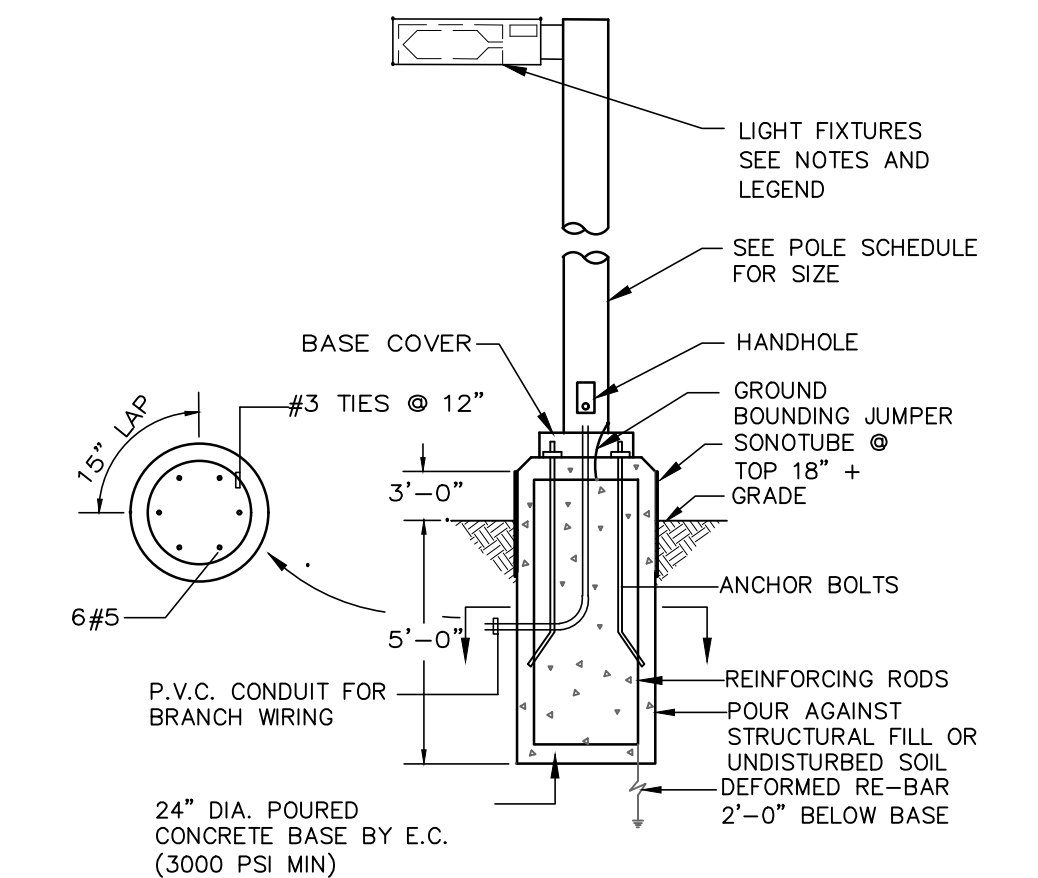
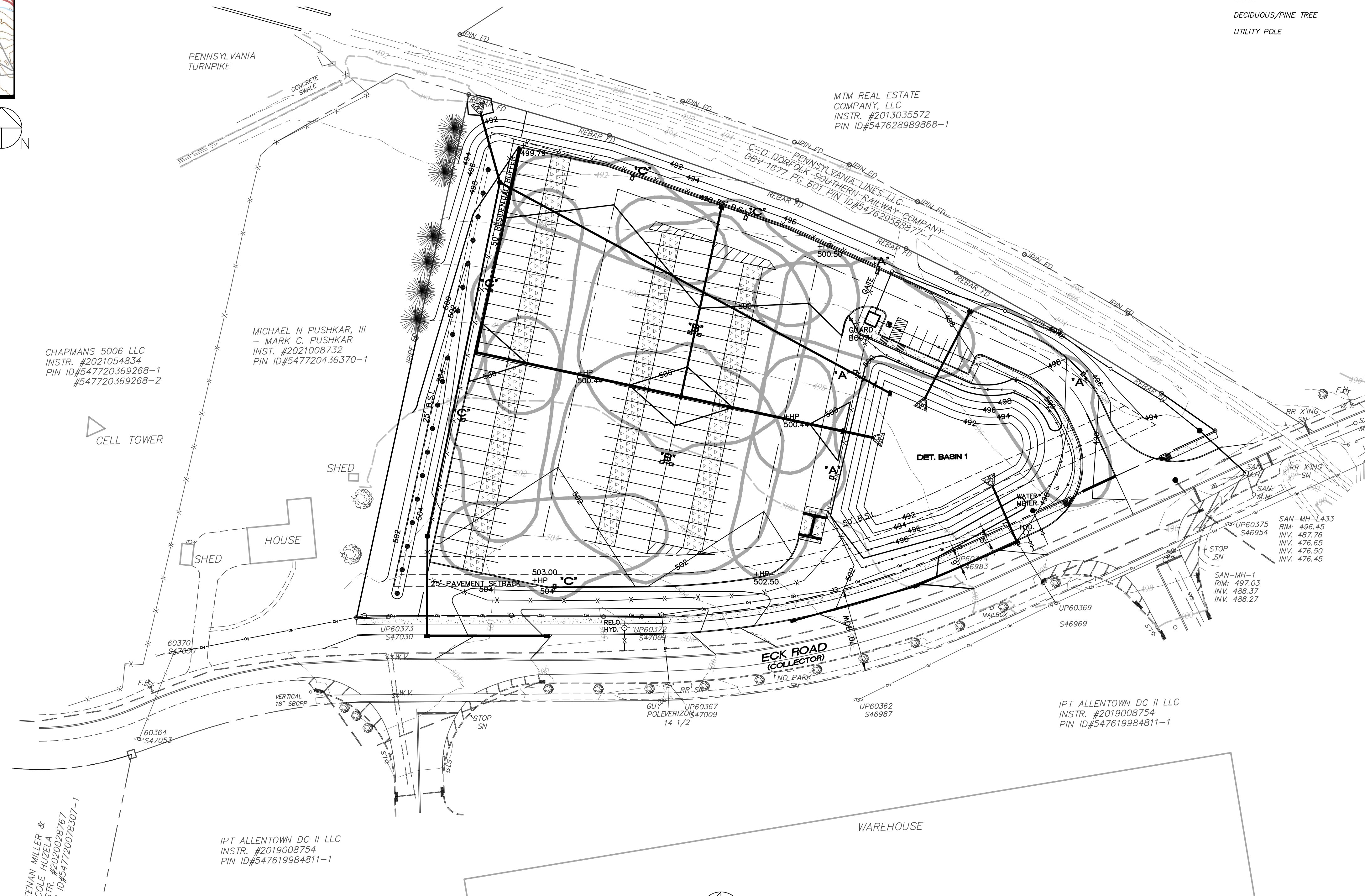
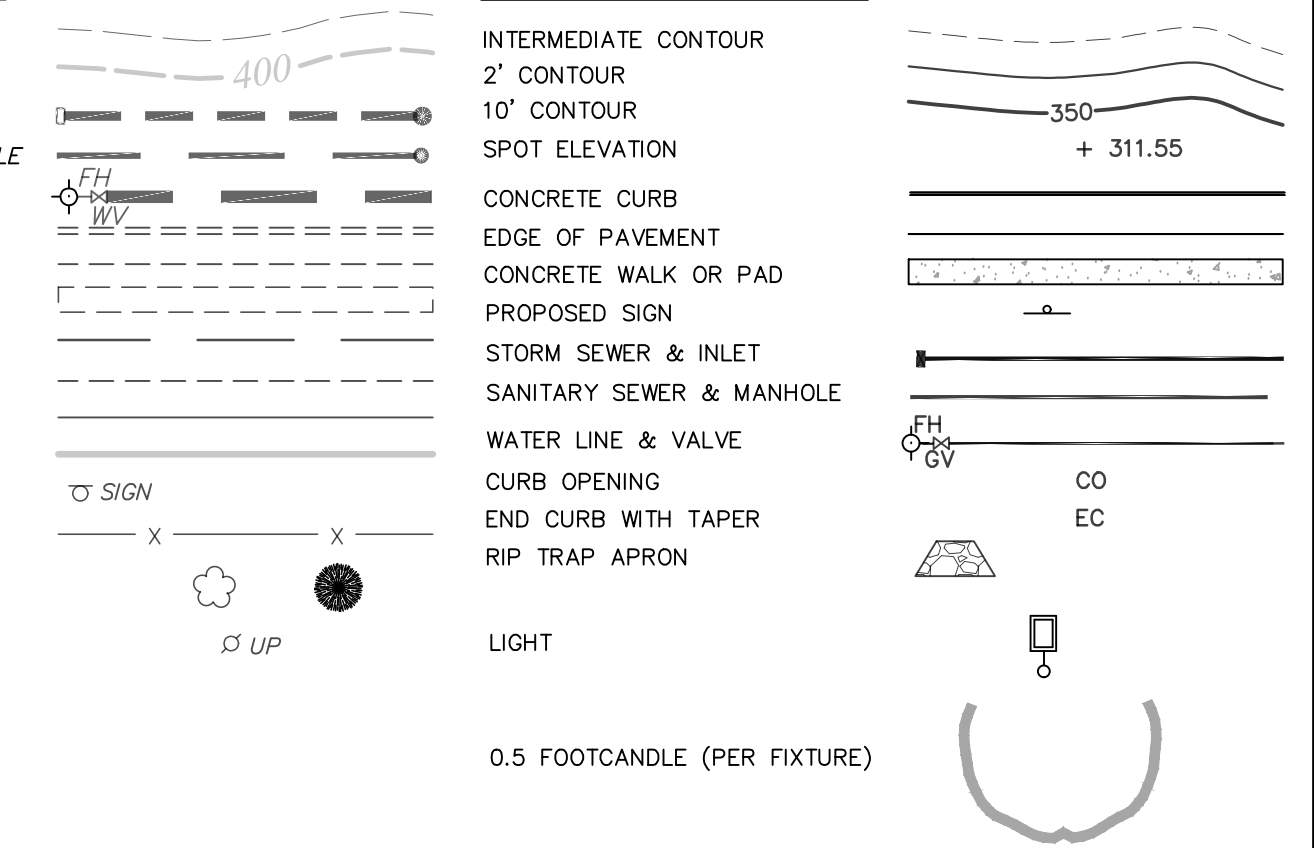
SITE LIGHTING SCHEDULE

Label	QTY	Catalog Number	Description	Number Lamps	Lumens per Lamp	LLF	Wattage	Mounting Height
A	4	RSX2 LED P5 40K R4 HS	RSX LED AREA LUMINAIRE SIZE 2 P5 LUMEN PACKAGE 4000K CCT TYPE R4 DISTRIBUTION WITH HS SHIELD	1	28,994	0.90	210	28'
B	2	RSX2 LED P5 40K R4	RSX AREA FIXTURE SIZE 2 P5 LUMEN PACKAGE 4000K CCT TYPE R4 DISTRIBUTION WITH HS SHIELD	1	28,994	0.90	420	28'
C	5	RSX2 LED P5 40K R3 HS	RSX LED AREA LUMINAIRE SIZE 2 P5 LUMEN PACKAGE 4000K CCT TYPE R3 DISTRIBUTION WITH HS SHIELD	1	28,620	0.90	210	28'
POLE	11	-	STEEL, 25'-0", 4"x4" SQUARE POLE, 3/4" BOLT	-	-	-	-	28' (25'+3" BASE)

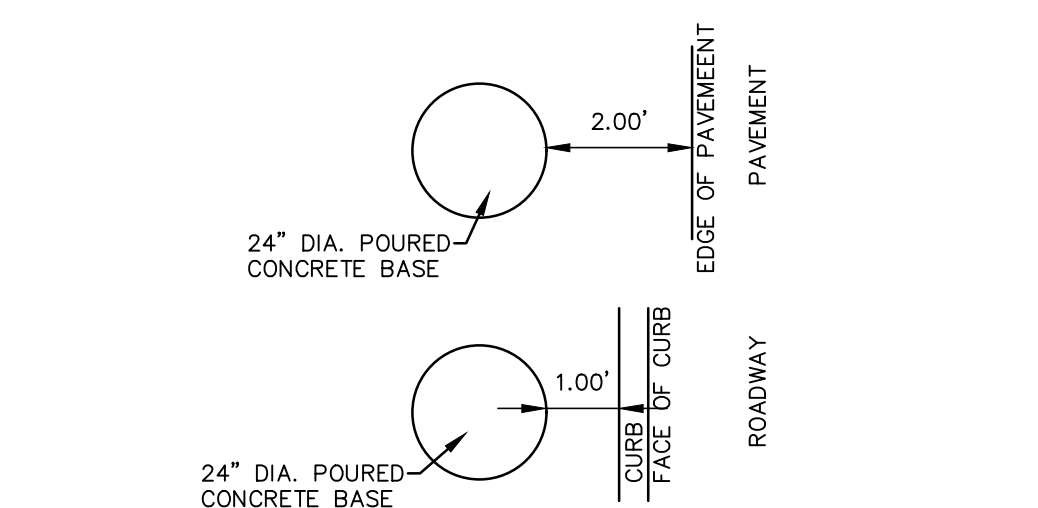
EXISTING FEATURES

- 2 FT. CONTOUR
- 10 FT. CONTOUR
- STORM SEWER & INLETS
- SANITARY SEWER & MANHOLE
- WATER LINE & VALVE
- CONCRETE CURB
- EDGE OF PAVEMENT
- CONCRETE WALK OR PAD
- EASEMENT LINE
- SETBACK LINE
- PAINT LINES
- PROPERTY LINES
- SIGN POST
- FENCE
- DECIDUOUS/PINE TREE
- UTILITY POLE

LEGEND



SITE LIGHT BASE DETAIL
NOT TO SCALE



SITE LIGHT BASE PLACEMENT DETAIL
NOT TO SCALE

Scale 1" = 50'

Date: May 17, 2023 - 5:35pm *Pony & Lentz Engineering Company* USER: Chris

PA ACT 287, AS AMENDED
IN ACCORDANCE WITH PA ACT 287, AS AMENDED, THE SURVEYOR CONTACTED PA ONE CALL, INC., FOR A DESIGN PHASE LOCATION REQUEST. THE SERIAL NUMBER FOR THAT REQUEST IS 2022283634. THE SURVEYOR HAS MADE NO INDEPENDENT VERIFICATION OF THE INFORMATION PROVIDED OTHER THAN AS MAY BE READILY EVIDENT FROM THE SURFACE OF THE GROUND.
THE CONTRACTOR SHALL COMPLY WITH PA ACT 287, AS AMENDED REQUIREMENTS AND VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE START OF WORK.



ENGINEER'S STATEMENT
I, STEPHEN A. PANY, A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE ACCOMPANYING APPLICATION, PLANS AND SUPPORTING DOCUMENTATION ARE TRUE AND CORRECT, TO THE BEST OF MY KNOWLEDGE.
DATE _____ PLAN PREPARER'S SIGNATURE _____

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ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SOUTH WHITEHALL TOWNSHIP STANDARD SPECIFICATIONS.

#	DATE	REVISION	BY

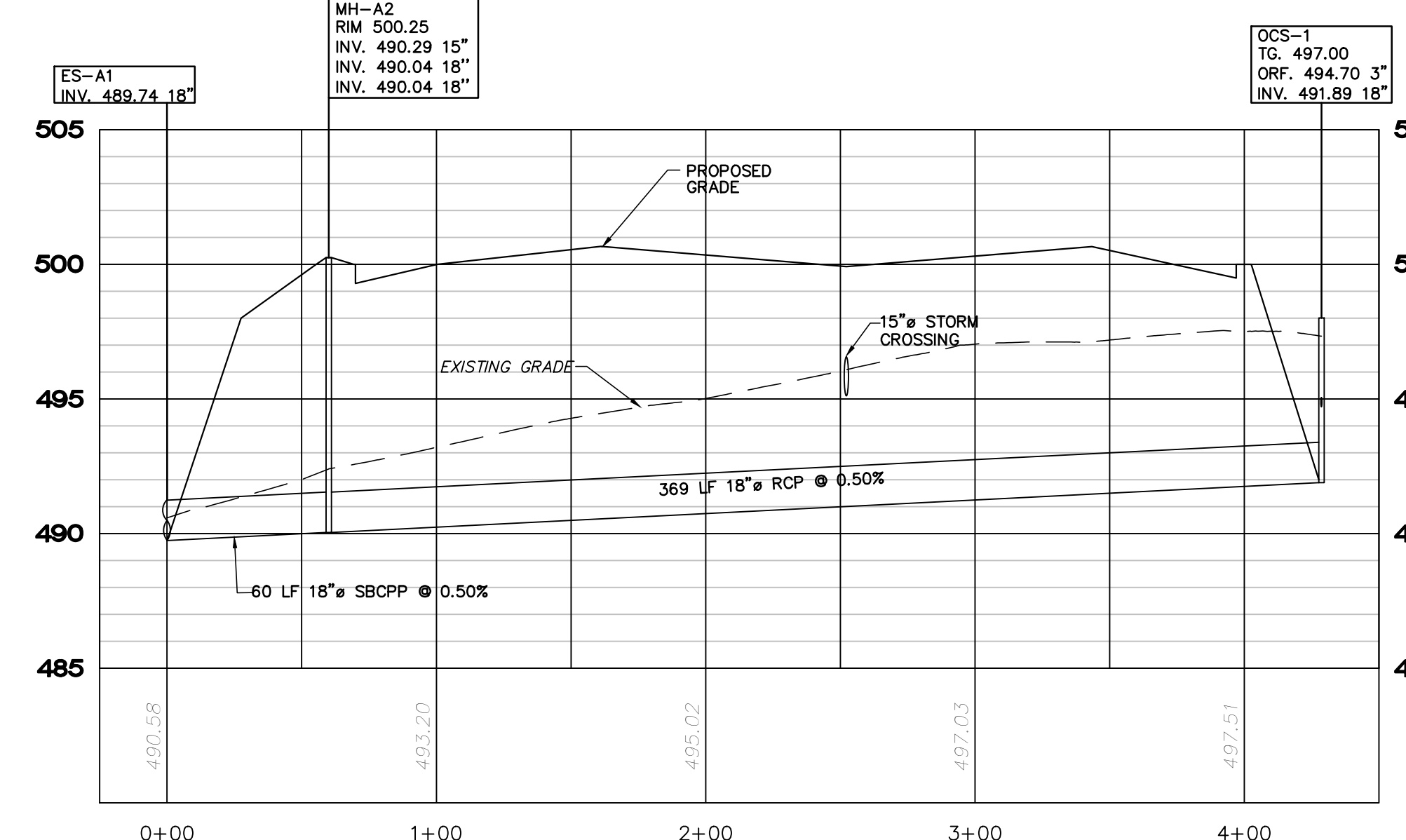
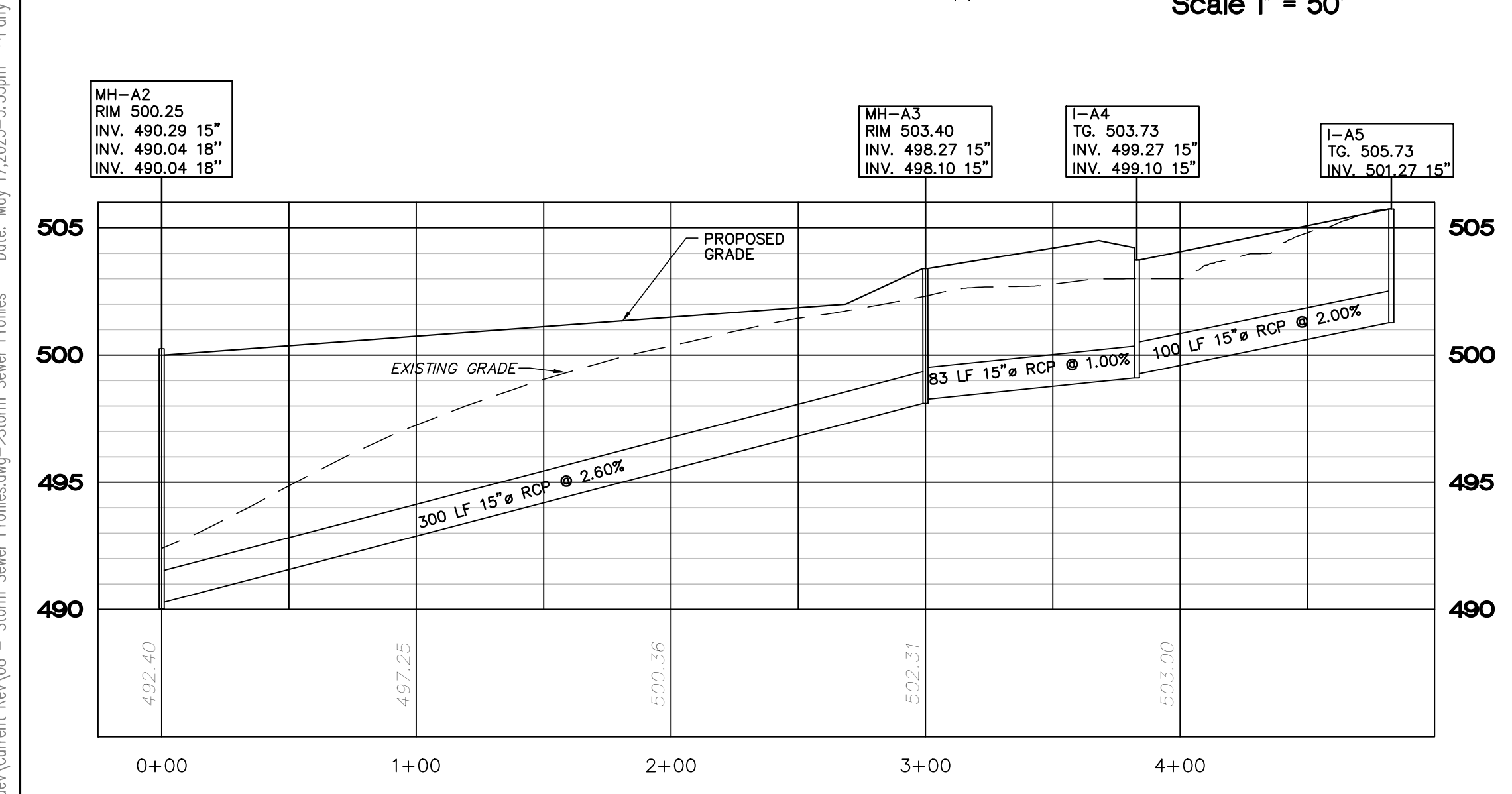
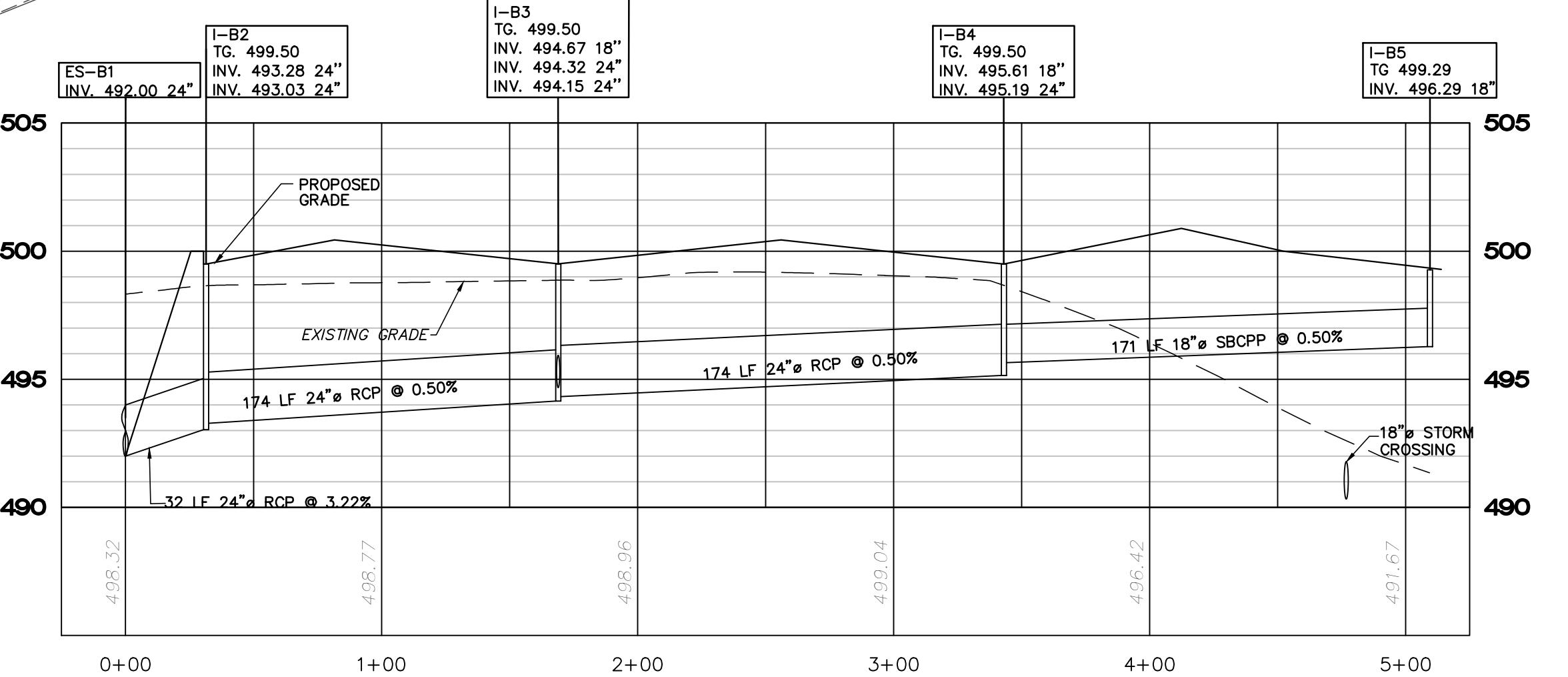
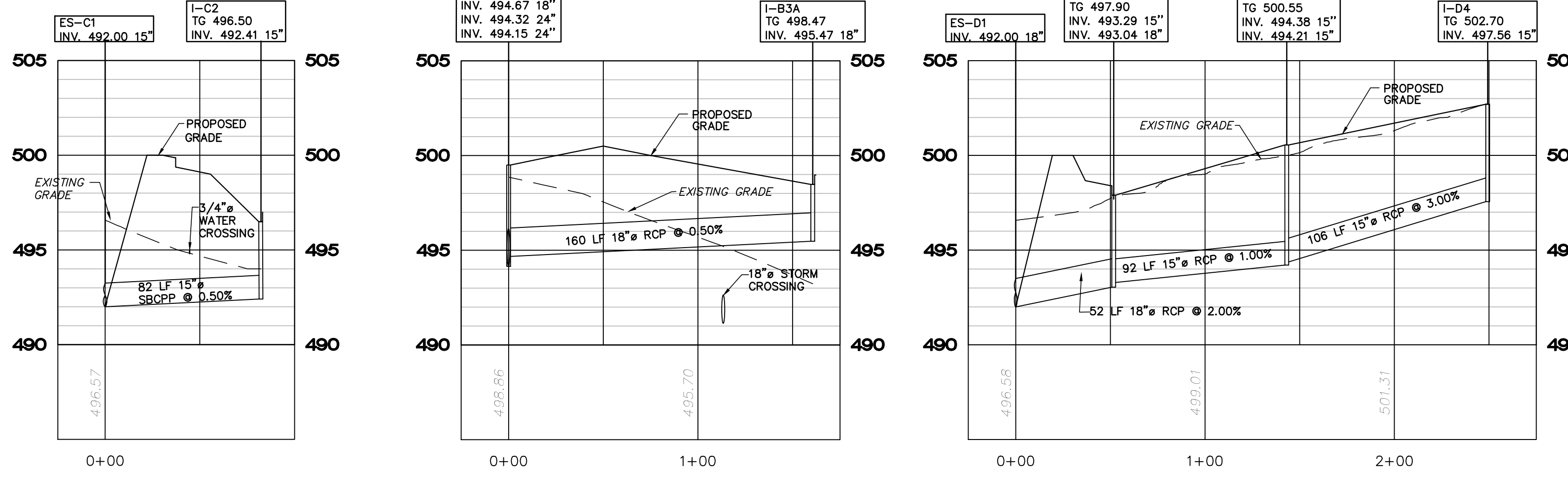
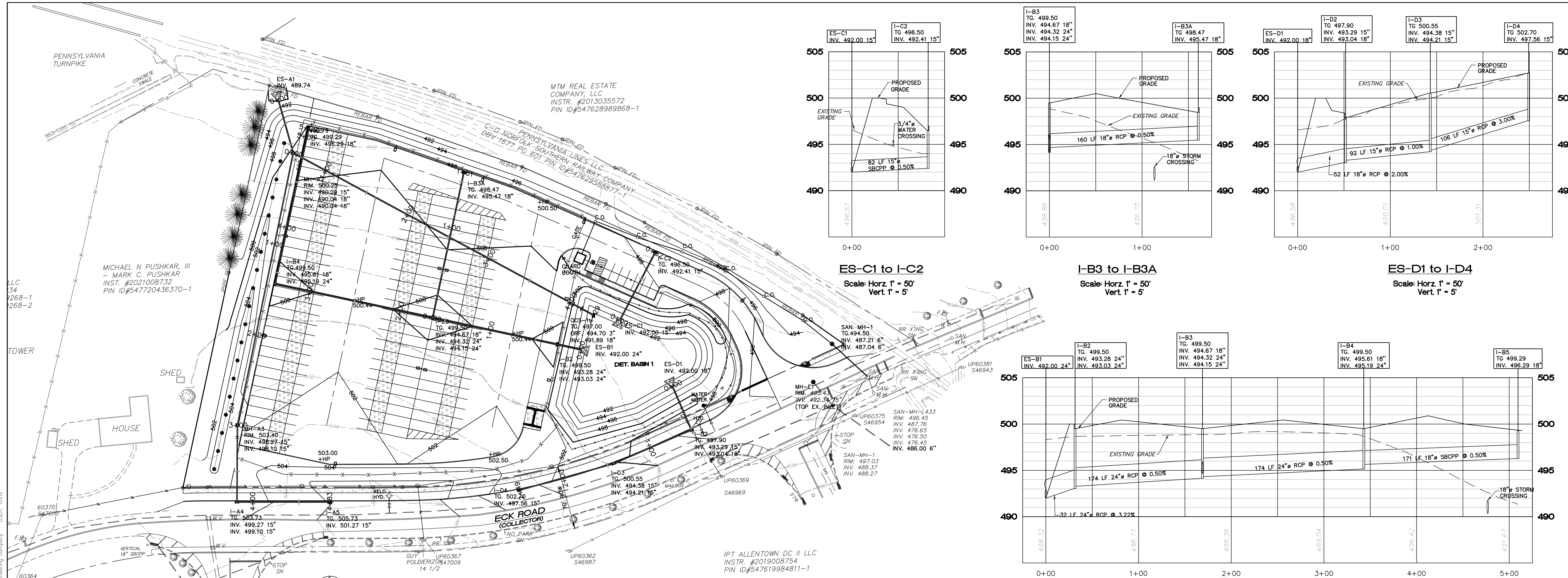
PRELIMINARY/FINAL LIGHTING PLAN

PANY & LENTZ ENGINEERING COMPANY
CONSULTING ENGINEERS
CIVIL • STRUCTURAL • MECHANICAL • MACHINERY
609 Hamilton Street • Allentown, PA 18101
Office: 610/433-1634 • Fax: 610/433-1636

1429 ECK ROAD
OUTDOOR STORAGE
SOUTH WHITEHALL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

J.G. PETRUCCI CO. INC.
771 ROUTE 773
SUITE 201
ASBURY, NEW JERSEY 08802

DESIGNED	SNP
DRAWN	BMW
CHECKED	MFS
JOB. NO.	2022258
SCALE	1" = 50' U.N.O.
DATE	MAY 15, 2023
DWG. NO.	LD-7
SHEET NO.	7
OF	32
REV.	0



LEGEND

EXISTING FEATURES		PROPOSED FEATURES	
2 FT. CONTOUR		INTERMEDIATE CONTOUR	
10 FT. CONTOUR		2' CONTOUR	
SPOT ELEVATION		10' CONTOUR	
CONCRETE CURB		SPOT ELEVATION	
EDGE OF PAVEMENT		CONCRETE CURB	
WOOD GUIDERAIL		EDGE OF PAVEMENT	
DIRT/GRAVEL ROAD		CONCRETE WALK OR PAD	
STORM SEWER & INLETS		STORM SEWER & INLET	
SANITARY SEWER & MANHOLE		SANITARY SEWER & MANHOLE	
WATER LINE & VALVE		WATER LINE & VALVE	
OVERHEAD ELECTRIC		CURB OPENING	
EASEMENT LINE		END CURB WITH TAPER	
PAINT LINES		RIP TRAP APRON	
PROPERTY LINES			
ADJOINERS' PROPERTY LINES			
RIGHT-OF-WAY			
SIGN POST			
TREE LINE			
DECIDUOUS TREE			
UTILITY POLE			
WATER TIE			

PRELIMINARY/FINAL STORM SEWER PROFILES

PANY & LENTZ ENGINEERING COMPANY
 CONSULTING ENGINEERS
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 609 Hamilton Street • Allentown, PA 18101
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1429 ECK ROAD
OUTDOOR STORAGE
 SOUTH WHITEHALL TOWNSHIP
 LEHIGH COUNTY, PENNSYLVANIA

J.G. PETRUCCI CO. INC.
 71 ROUTE 173
 SUITE 201
 ASBURY, NEW JERSEY 08802

DESIGNED: JAP
 DRAWN: BMW
 CHECKED: MFS
 JOB NO.: 2022258
 SCALE: 1" = 50' U.N.O.
 DATE: MAY 15, 2023
 DWG. NO.: LD-8
 SHEET NO.: 8
 REV. 0
 OF 32 SHEETS

PA ACT 287, AS AMENDED
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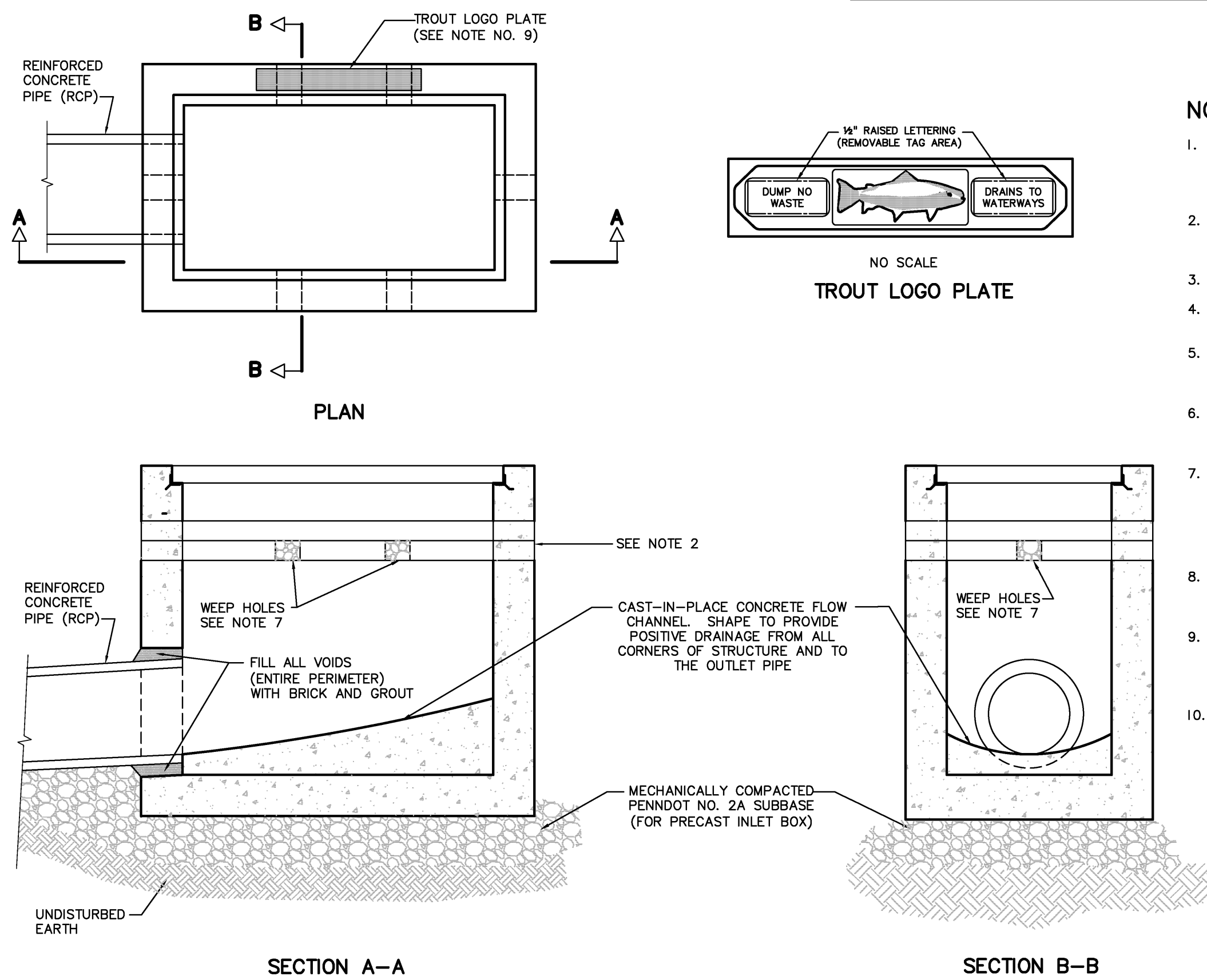


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 DATE: _____
 PLAN PREPARER'S SIGNATURE: _____

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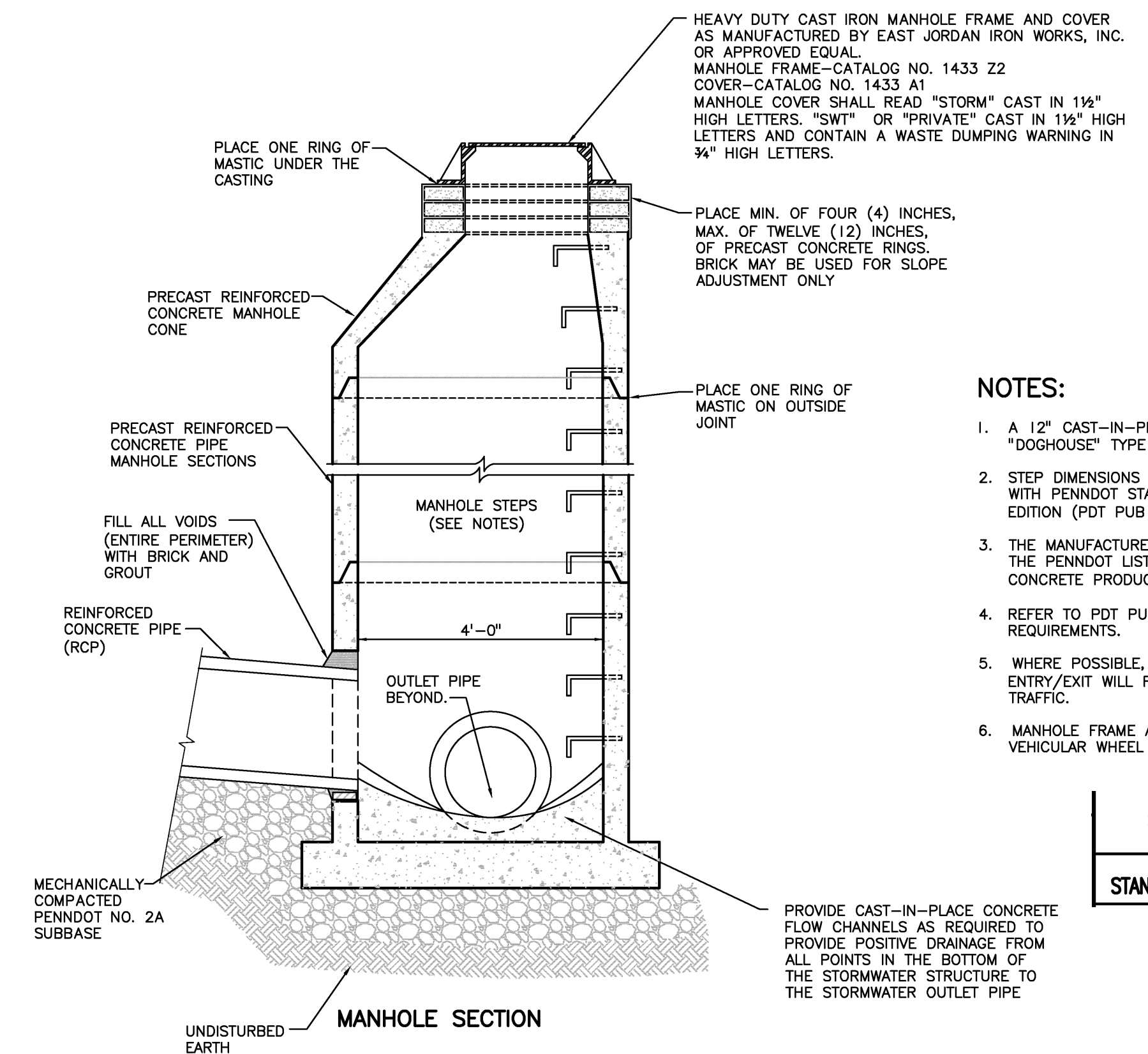
#	DATE	REVISION	BY

w:\s-\destop\ [Extop] [xref-10-24-36] [profiles - utilities]
 G:\ACAD\Acad\DWG\2022258 1429 Eck Rd - 1429\Land\Current\Rev\08 - Storm Sewer Profiles.dwg->Storm Sewer Profiles
 Date: May 17, 2023 - 5:35pm *Pany & Lentz Engineering Company* - USER: Chris



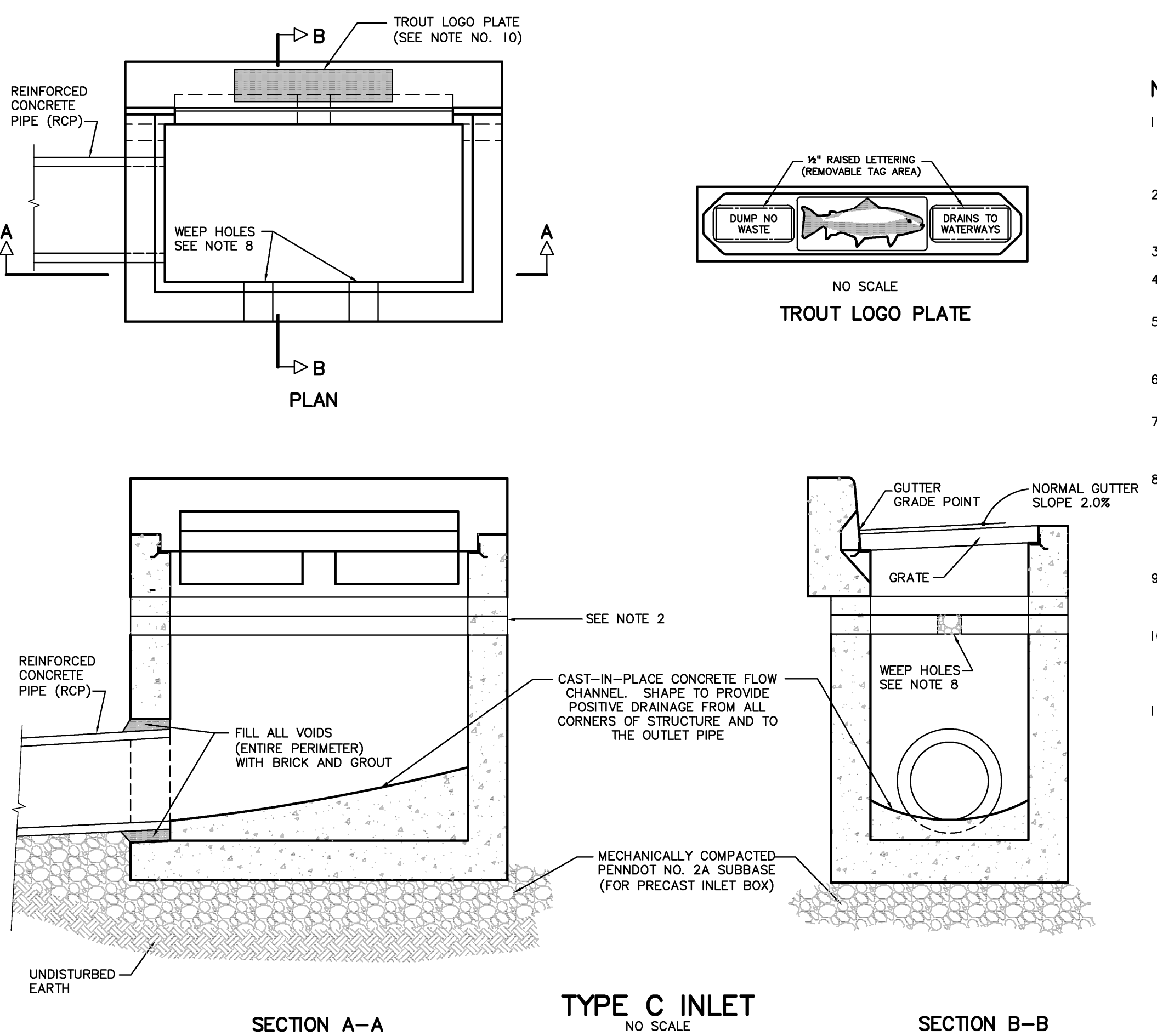
- NOTES:**
- CONCRETE INLET AND TOP UNITS SHALL BE AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB #72M) RC-45M, "INLETS, CONCRETE TOP UNITS CAST-IN-PLACE AND PRECAST".
 - PROVIDE A MINIMUM OF 4 INCHES AND MAXIMUM OF 8 INCHES VERTICALLY OF PRECAST CONCRETE COLLARS WITH THROUGH-WALL OPENINGS ADJACENT TO SUBGRADE TO SERVE AS WEEP HOLES.
 - ALL EXPOSED EDGES SHALL BE CHAMFERED 1"x1".
 - STEPS SHALL BE PROVIDED WHENEVER STRUCTURE EXCEEDS 4 FEET IN DEPTH.
 - STEP DIMENSIONS AND CONFIGURATION SHALL BE IN ACCORDANCE WITH PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB #72M), RC-39M.
 - PROVIDE STRUCTURAL STEEL GRATE - BICYCLE SAFE, AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB #72M) RC-45M, "INLET GRATES".
 - THE BACKFILL AROUND THE WEEPHOLES SHALL NOT CONTAIN SCREENINGS; I.E., PLACE PENNDOT NO. 3 OR LARGER STONES AS REQUIRED BY ENGINEER, WITHOUT SCREENINGS TO ALLOW WATER TO ENTER WEEPHOLES. PLACE GEOTEXTILE FABRIC AROUND BACKFILL TO PREVENT MIGRATION OF SURROUNDING MATERIAL INTO VOIDS OF BACKFILL.
 - THE MANUFACTURER OF THE INLETS SHALL BE INCLUDED ON THE PENNDOT LIST OF APPROVED MANUFACTURERS OF PRECAST CONCRETE PRODUCTS (BULLETIN 15).
 - TOP UNITS MUST CONTAIN THE 24-INCH BY 3-INCH TROUT LOGO PLATE AND TAGS DISPLAYING A DUMPING WARNING AS MANUFACTURED BY EAST JORDAN IRON WORKS INC. (CATALOG NO. 7003PL1) TO BE READ FROM ROADWAY SIDE OF INLET.
 - REFER TO CURRENT EDITION, (PDT PUB #72M), RC-46M FOR ADDITIONAL INLET BOX REQUIREMENTS.

SOUTH WHITEHALL TOWNSHIP
STANDARD CONSTRUCTION DETAILS
 LEHIGH COUNTY, PENNSYLVANIA
 STORM DRAINAGE
PRECAST CONCRETE TYPE M INLET



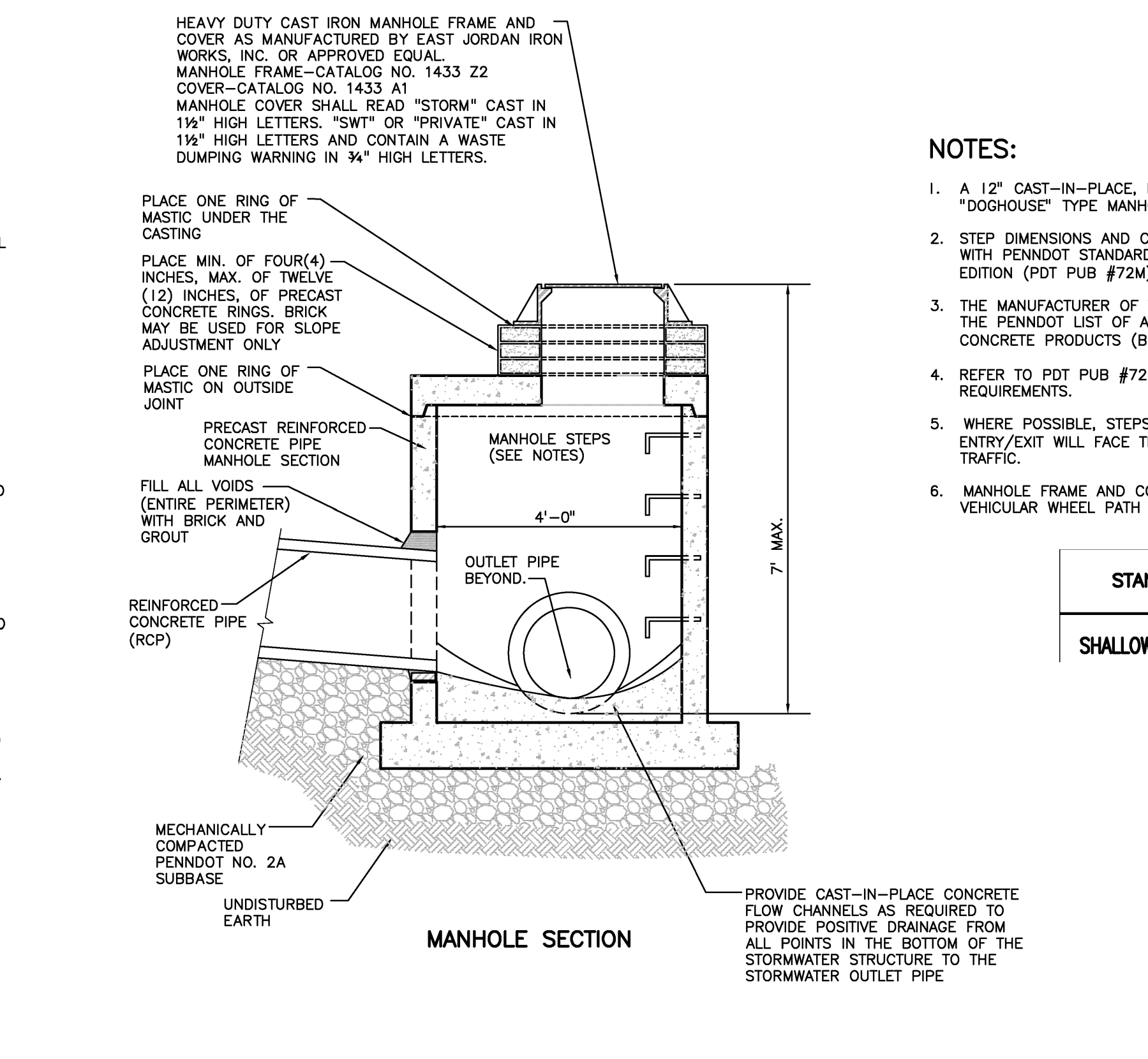
- NOTES:**
- A 12" CAST-IN-PLACE, REINFORCED BASE MAY BE USED FOR A "DOGHOUSE" TYPE MANHOLE.
 - STEP DIMENSIONS AND CONFIGURATION SHALL BE IN ACCORDANCE WITH PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB #72M), RC-39M.
 - THE MANUFACTURER OF THE MANHOLES SHALL BE INCLUDED ON THE PENNDOT LIST OF APPROVED MANUFACTURERS OF PRECAST CONCRETE PRODUCTS (BULLETIN 15).
 - REFER TO PDT PUB #72M, RC-39M FOR ADDITIONAL REQUIREMENTS.
 - WHERE POSSIBLE, STEPS SHALL BE ORIENTED SUCH THAT ENTRY/EXIT WILL FACE THE GENERAL DIRECTION OF ONCOMING TRAFFIC.
 - MANHOLE FRAME AND COVER SHALL BE PLACED OUT OF VEHICULAR WHEEL PATH AS MUCH AS PRACTICAL.

SOUTH WHITEHALL TOWNSHIP
STANDARD CONSTRUCTION DETAILS
 LEHIGH COUNTY, PENNSYLVANIA
 STORM DRAINAGE
STANDARD PRECAST CONCRETE PIPE MANHOLE



- NOTES:**
- CONCRETE INLET AND TOP UNITS SHALL BE AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB #72M) RC-45M, "INLETS, CONCRETE TOP UNITS CAST-IN-PLACE AND PRECAST".
 - PROVIDE A MINIMUM OF 4 INCHES AND MAXIMUM OF 8 INCHES VERTICALLY OF PRECAST CONCRETE COLLARS WITH THROUGH-WALL OPENINGS ADJACENT TO SUBGRADE TO SERVE AS WEEP HOLES.
 - ALL EXPOSED EDGES SHALL BE CHAMFERED 1"x1".
 - STEPS SHALL BE PROVIDED WHENEVER STRUCTURE EXCEEDS 4 FEET IN DEPTH.
 - STEP DIMENSIONS AND CONFIGURATION SHALL BE IN ACCORDANCE WITH PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB #72M), RC-39M.
 - THE CENTERLINE OF AN INLET SHALL BE NO CLOSER THAN 8 FEET TO THE EDGE OF A DRIVEWAY.
 - PROVIDE STRUCTURAL STEEL GRATE - BICYCLE SAFE, AS DETAILED IN PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB #72M), RC-45M, "INLET GRATES".
 - THE BACKFILL AROUND THE WEEPHOLES SHALL NOT CONTAIN SCREENINGS; I.E., PLACE PENNDOT NO. 3 OR LARGER STONES AS REQUIRED BY ENGINEER, WITHOUT SCREENINGS TO ALLOW WATER TO ENTER WEEPHOLES. PLACE GEOTEXTILE FABRIC AROUND BACKFILL TO PREVENT MIGRATION OF SURROUNDING MATERIAL INTO VOIDS OF BACKFILL.
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 - TOP UNITS MUST CONTAIN THE 24-INCH BY 5-INCH TROUT LOGO PLATE AND TAGS DISPLAYING A DUMPING WARNING AS MANUFACTURED BY EAST JORDAN IRON WORKS INC. (CATALOG NO. 7001PL1) TO BE READ FROM ROADWAY SIDE OF INLET.
 - REFER TO PDT PUB #72M, RC-46M FOR ADDITIONAL REQUIREMENTS.

SOUTH WHITEHALL TOWNSHIP
STANDARD CONSTRUCTION DETAILS
 LEHIGH COUNTY, PENNSYLVANIA
 STORM DRAINAGE
PRECAST CONCRETE TYPE C INLET



- NOTES:**
- A 12" CAST-IN-PLACE, REINFORCED BASE MAY BE USED FOR A "DOGHOUSE" TYPE MANHOLE.
 - STEP DIMENSIONS AND CONFIGURATION SHALL BE IN ACCORDANCE WITH PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (PDT PUB #72M), RC-39M.
 - THE MANUFACTURER OF THE MANHOLES SHALL BE INCLUDED ON THE PENNDOT LIST OF APPROVED MANUFACTURERS OF PRECAST CONCRETE PRODUCTS (BULLETIN 15).
 - REFER TO PDT PUB #72M, RC-39M FOR ADDITIONAL REQUIREMENTS.
 - WHERE POSSIBLE, STEPS SHALL BE ORIENTED SUCH THAT ENTRY/EXIT WILL FACE THE GENERAL DIRECTION OF ONCOMING TRAFFIC.
 - MANHOLE FRAME AND COVER SHALL BE PLACED OUT OF VEHICULAR WHEEL PATH AS MUCH AS PRACTICAL.

SOUTH WHITEHALL TOWNSHIP
STANDARD CONSTRUCTION DETAILS
 LEHIGH COUNTY, PENNSYLVANIA
 STORM DRAINAGE
SHALLOW PRECAST CONCRETE PIPE MANHOLE

Date: May 17, 2023 - 5:35pm
 Pany & Lentz Engineering Company* - USEE: Chris
 Basin liner details [basin liner details] [prep details] [oca detail] [anti-seep collar detail]
 G:\ACAD\Acad\DWG\20222558_1429 Eck Rd - JGP\London\Current Rev\09 - Storm Sewer Details.dwg - Storm Sewer Details

PA ACT 287, AS AMENDED
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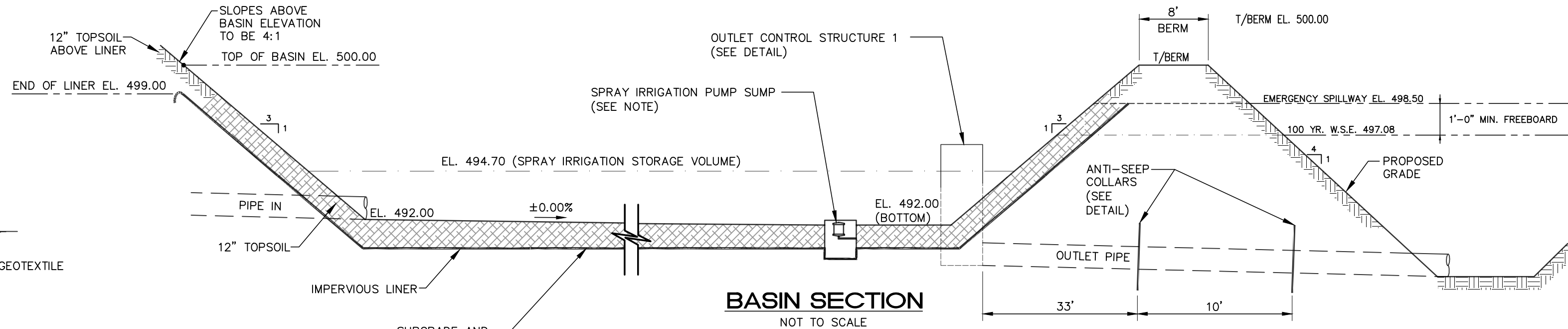
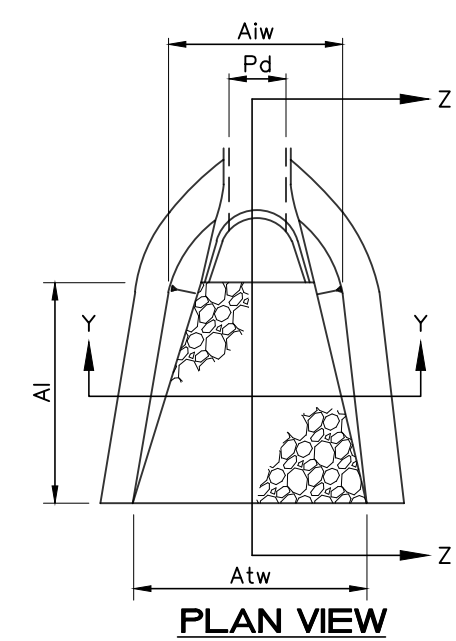
PRELIMINARY/FINAL STORM SEWER DETAILS

PANY & LENTZ ENGINEERING COMPANY
 CONSULTING ENGINEERS
 CIVIL • STRUCTURAL • MECHANICAL • MACHINERY
 609 Hamilton Street • Allentown, PA 18101
 Office: 610/433-1634 • Fax: 610/433-1636

1429 ECK ROAD
OUTDOOR STORAGE
 SOUTH WHITEHALL TOWNSHIP
 LEHIGH COUNTY, PENNSYLVANIA

J.G. PETRUCCI CO. INC.
 771 ROUTE 773
 SUITE 201
 ASBURY, NEW JERSEY 08802

DESIGNED	SNP
DRAWN	BMW
CHECKED	MFS
JOB NO.	20222558
SCALE	1" = 50' U.N.O
DATE	MAY 15, 2023
DWG. NO.	LD-9
SHEET NO.	9
OF	32
REV.	0

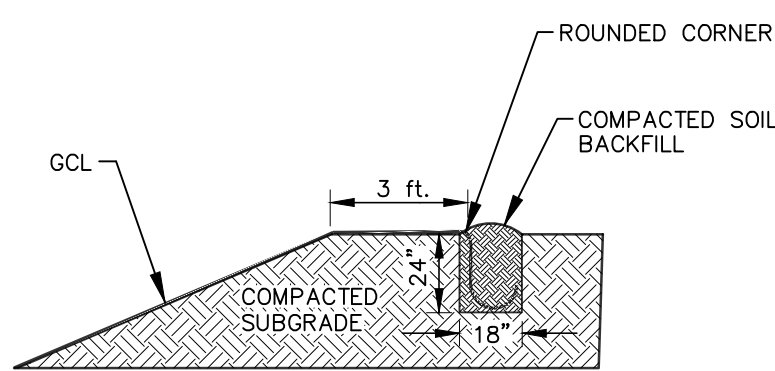


RIPRAP APRON TABLE

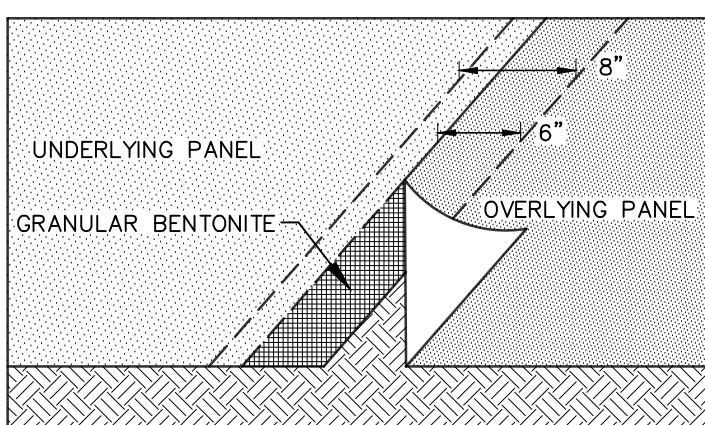
OUTLET NO.	OUTLET		RIPRAP				APRON		TERMINAL WIDTH Atw (FT)
	PIPE DIA Pd (IN)	TAILWATER CONDITION (Max or Min)	Q (CFS)	V (FPS)	SIZE (R-)	THICK. Rt (IN)	LENGTH Ai (FT)	INITIAL WIDTH Aiw (FT)	
ES-A1	18	MIN.	13.97	7.96	4	18	12	4.50	16.50
ES-B1	24	MIN.	9.68	4.54	3	9	12	6.00	18.00
ES-C1	15	MIN.	1.26	2.33	3	9	8	3.75	11.75
ES-D1	18	MIN.	1.18	2.03	3	9	8	4.50	12.50

NOTES:
 ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.
 ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

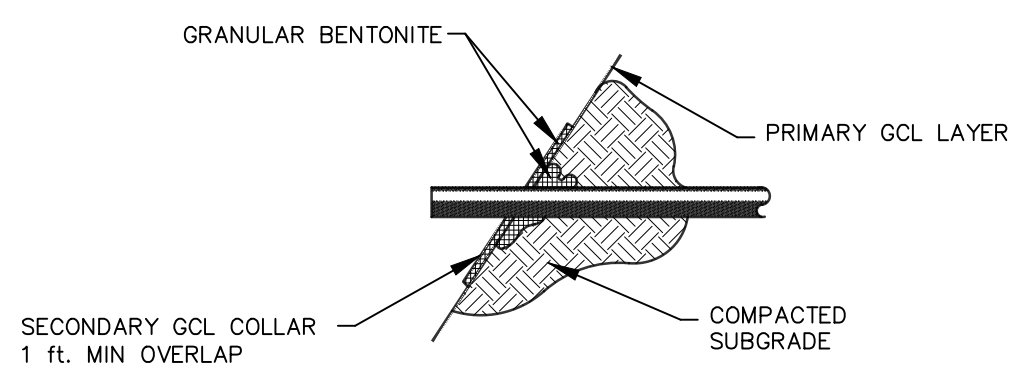
**STANDARD CONSTRUCTION DETAIL #9-1
 RIPRAP APRON AT PIPE OUTLET
 WITH FLARED END SECTION OR ENDWALL**
 NOT TO SCALE



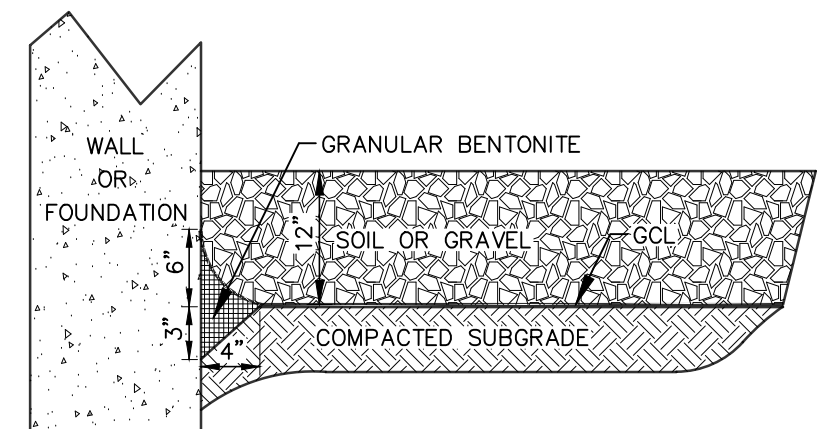
TYPICAL ANCHOR TRENCH DESIGN
 NOT TO SCALE



BENTONITE-ENHANCED OVERLAPPED SEAM
 NOT TO SCALE



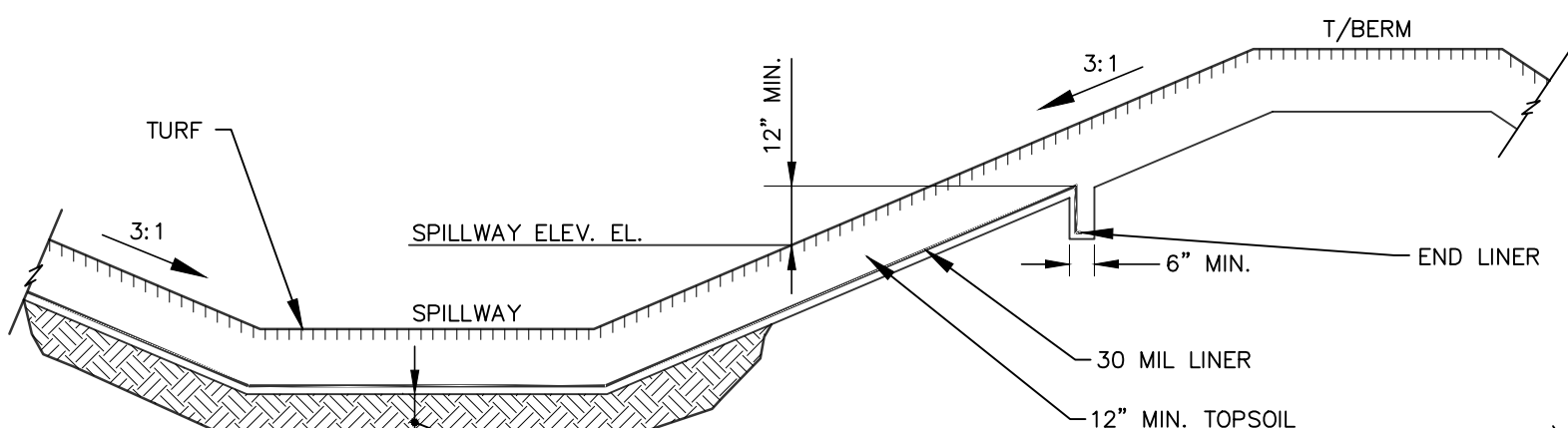
CROSS-SECTION OF A HORIZONTAL PIPE PENETRATION
 NOT TO SCALE



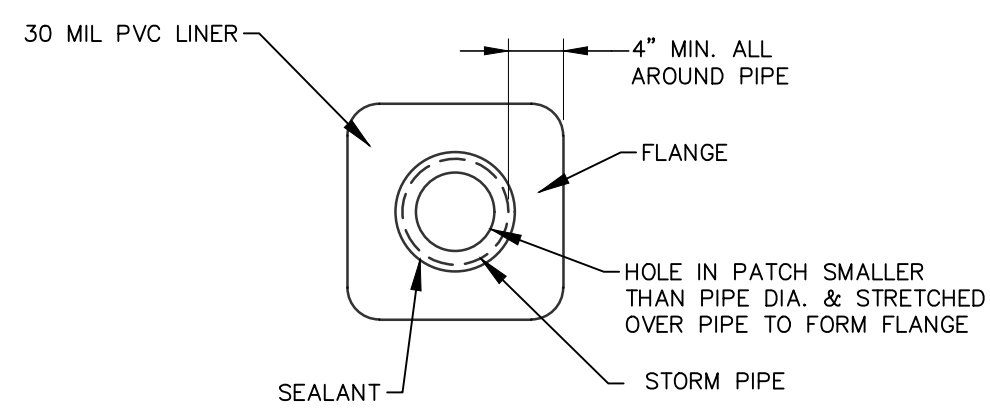
CROSS-SECTION OF GCL SEAL AGAINST AN EMBEDDED STRUCTURE OR WALL
 NOT TO SCALE

DETENTION BASIN LINER DETAILS
 NOT TO SCALE

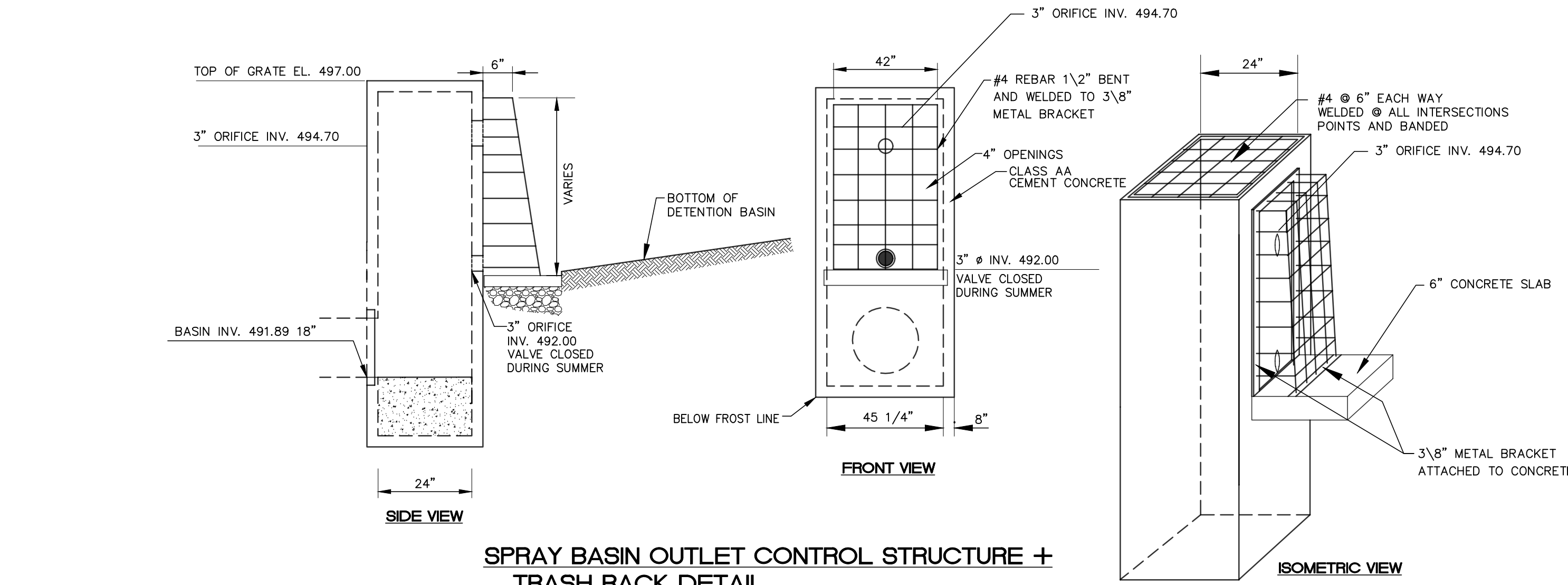
NOTE: CONTRACTOR SHALL SUBMIT FOR APPROVAL MANUFACTURER'S LINER LAYOUT PLAN AND INSTALLATION REQUIREMENTS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL INSTALL LINER PER MANUFACTURER'S SPECIFICATIONS.



SPILLWAY LINER INSTALLATION
 NOT TO SCALE

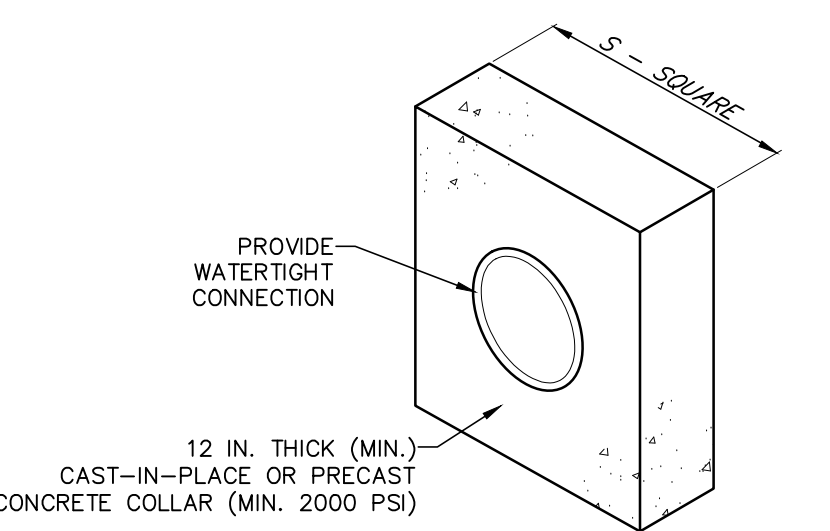


STORM PIPE LINER SEAL
 NOT TO SCALE



SPRAY BASIN OUTLET CONTROL STRUCTURE + TRASH RACK DETAIL
 NO SCALE

NOTE: 3" ORIFICE TO BE PLUGGED DURING SUMMER MONTHS TO ALLOW STORAGE FOR SPRAY IRRIGATION, THEN UNPLUGGED DURING WINTER MONTHS TO ALLOW BASIN TO DRAIN.

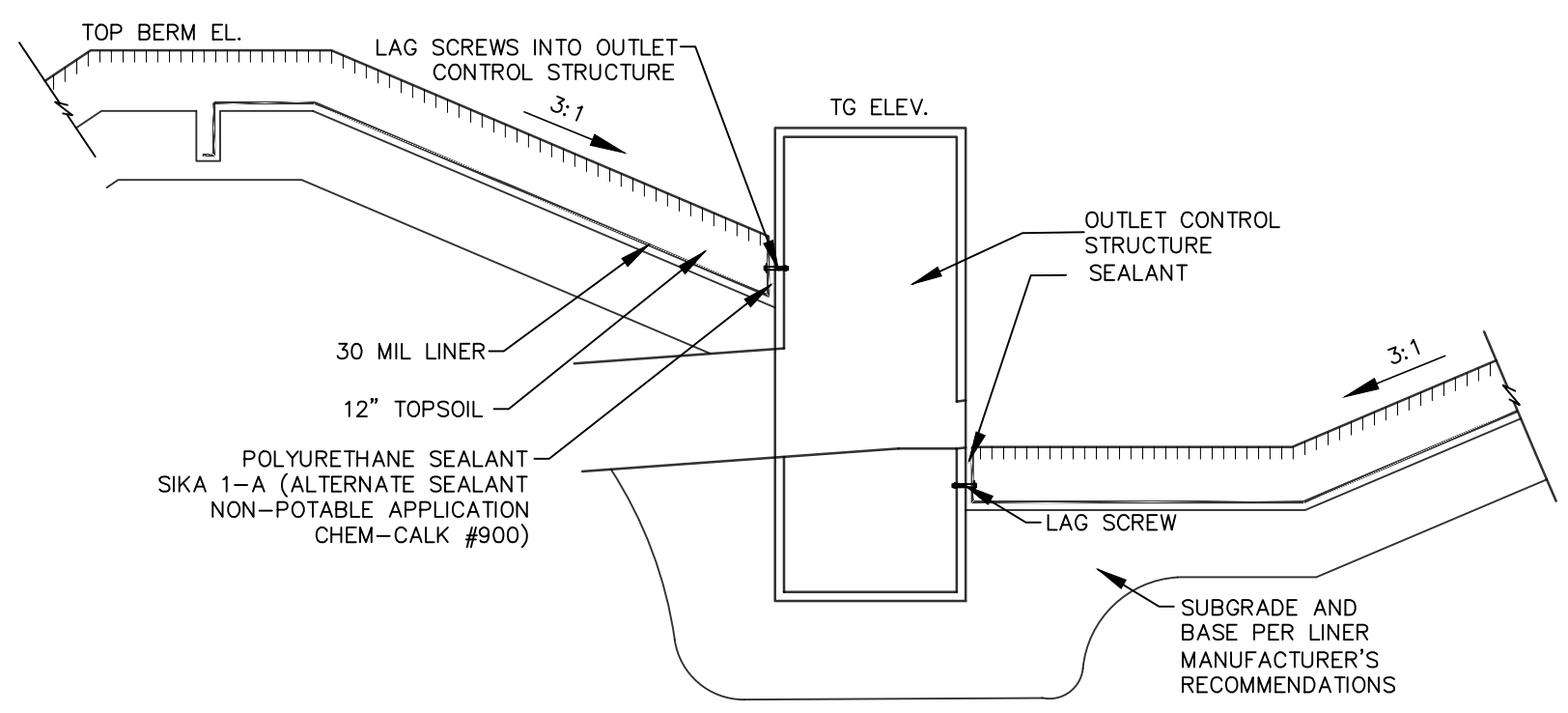


BASIN 1:

NO.	PIPE SIZE (IN)	S (IN)	NO. OF COLLARS	RISER TO FIRST COLLAR (FT)	COLLAR SPACING (FT)
OCS 1	18	50	2	15	10

NOTES:
 ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT.
 COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.

**STANDARD CONSTRUCTION DETAIL #7-16
 CONCRETE ANTI-SEEP COLLAR FOR PERMANENT BASINS OR TRAPS**
 NOT TO SCALE



OUTLET CONTROL STRUCTURE LINER SEAL
 NOT TO SCALE

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#	DATE	REVISION	BY

**PRELIMINARY/FINAL
 STORM SEWER DETAILS**

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 CONSULTING ENGINEERS
 CIVIL • STRUCTURAL • MECHANICAL • MACHINERY
 609 Hamilton Street • Allentown, PA 18101
 Office: 610/433-1634 • Fax: 610/433-1636

**1429 ECK ROAD
 OUTDOOR STORAGE
 SOUTH WHITEHALL TOWNSHIP
 LEHIGH COUNTY, PENNSYLVANIA**

J.G. PETRUCCI CO. INC.
 771 ROUTE 173
 SUITE 201
 ASBURY, NEW JERSEY 08802

DESIGNED	SNP
DRAWN	BMW
CHECKED	MFS
JOB NO.	2022256
SCALE	1" = 50' U.N.O.
DATE	MAY 15, 2023
DWG. NO.	LD-10
SHEET NO.	10
REV.	
OF	32
SHEETS	0

Date: May 17, 2023 - 5:36pm **Pany & Lentz Engineering Company** USER: Chris
 G:\ACAD\Acad\DWG\2022\256 - Storm Sewer Details.dwg - Storm Sewer Details.dwg - Storm Sewer Details (2)
 [basin liner details] [basin liner details] [basin liner details] [rip rap details] [anti-seep collar detail]
 G:\ACAD\Acad\DWG\2022\256 - Storm Sewer Details.dwg - Storm Sewer Details.dwg - Storm Sewer Details (2)

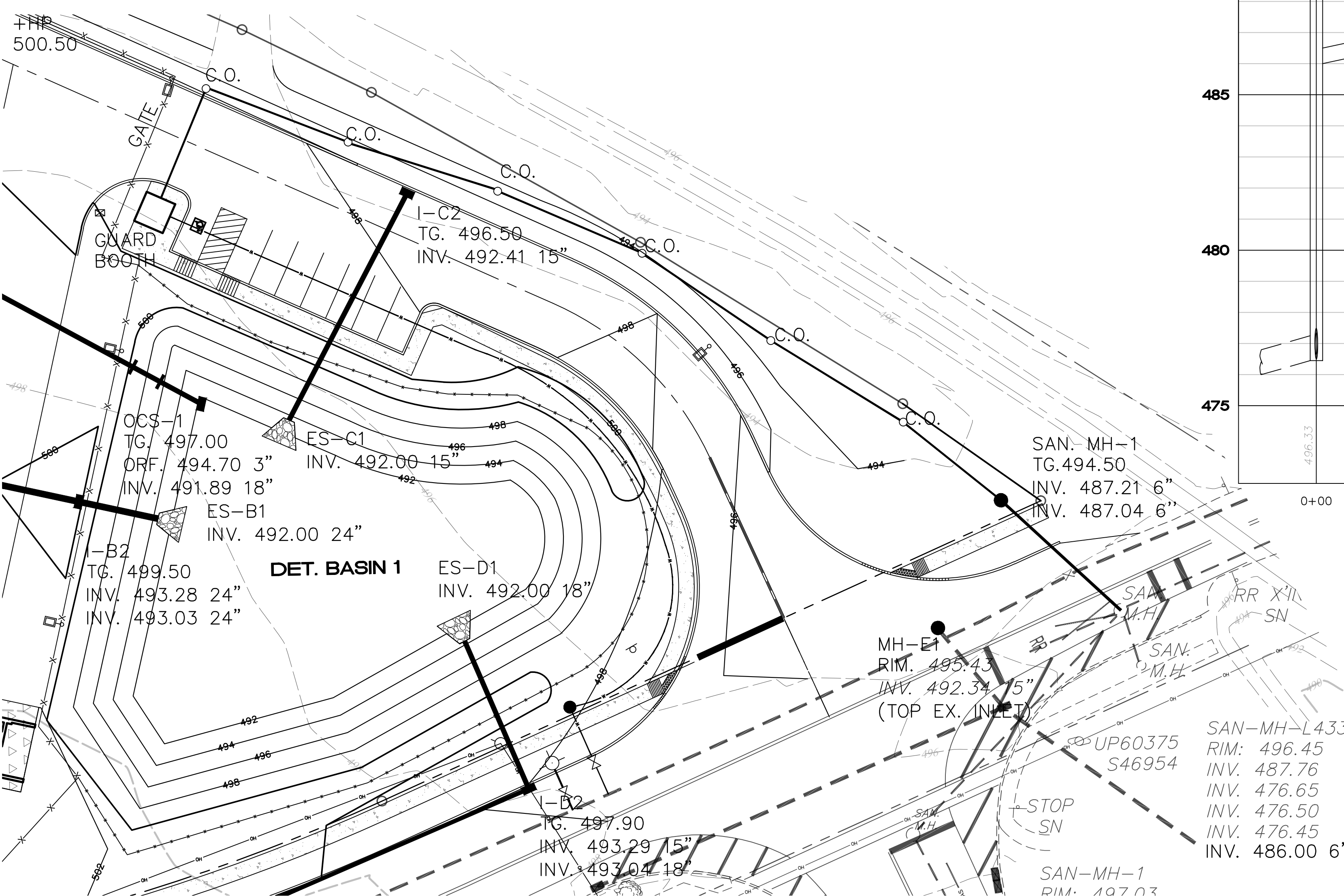
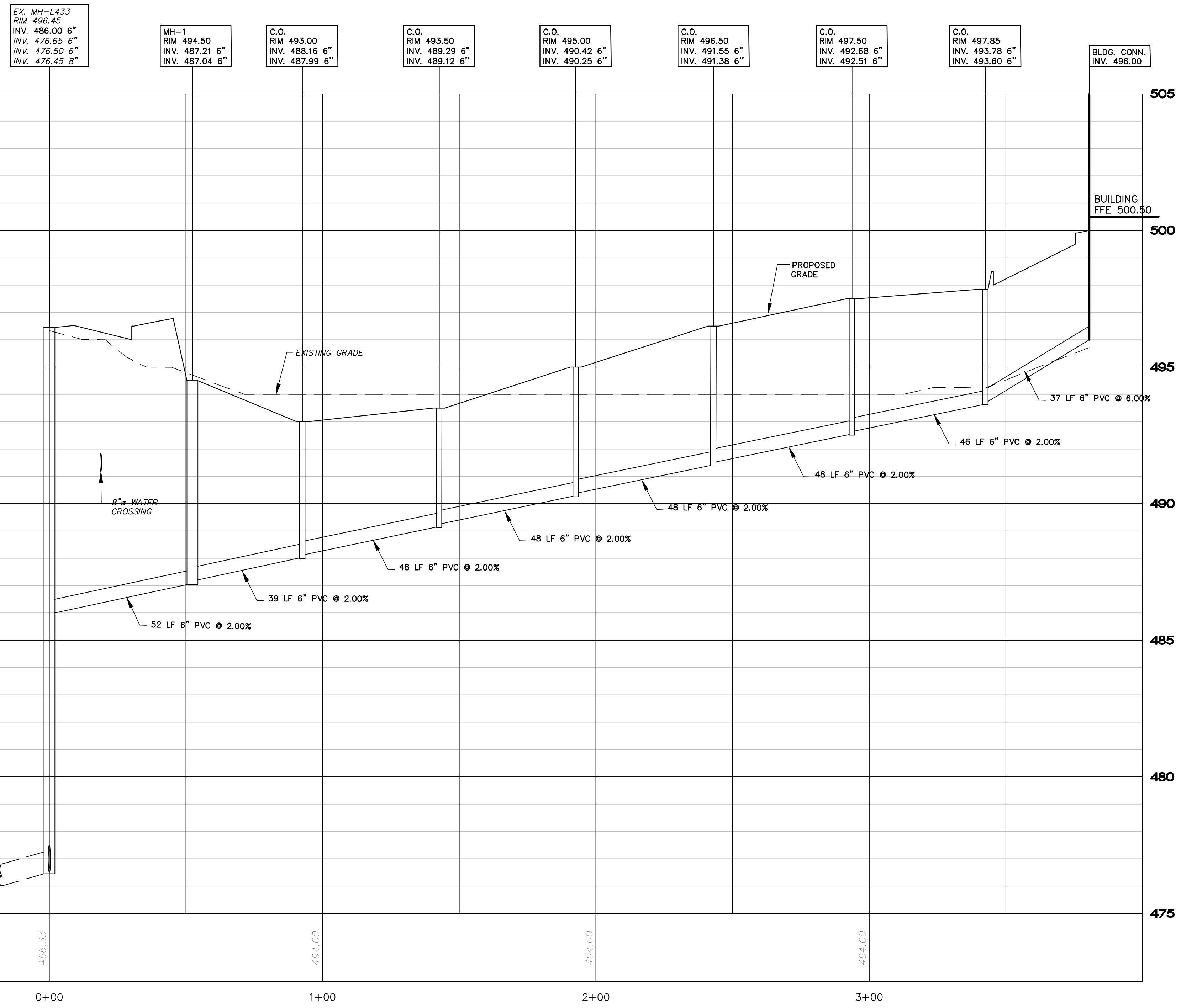
LEGEND

EXISTING FEATURES

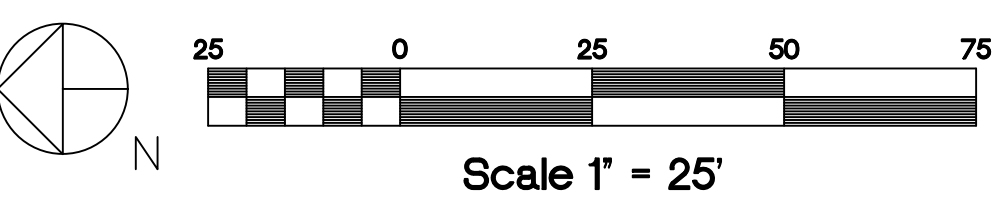
- 2 FT. CONTOUR
- 10 FT. CONTOUR
- SPOT ELEVATION
- CONCRETE CURB
- EDGE OF PAVEMENT
- CONCRETE WALK OR PAD
- WOOD GUIDERAIL
- DIRT/GRAVEL ROAD
- STORM SEWER & INLETS
- SANITARY SEWER & MANHOLE
- WATER LINE & VALVE
- OVERHEAD ELECTRIC
- EASEMENT LINE
- PAINT LINES
- PROPERTY LINES
- ADJOINERS' PROPERTY LINES
- RIGHT-OF-WAY
- SIGN POST
- TREE LINE
- DECIDUOUS TREE
- UTILITY POLE
- WATER TIE

PROPOSED FEATURES

- INTERMEDIATE CONTOUR
- 2' CONTOUR
- 10' CONTOUR
- SPOT ELEVATION
- CONCRETE CURB
- EDGE OF PAVEMENT
- CONCRETE WALK OR PAD
- STORM SEWER & INLET
- SANITARY SEWER & MANHOLE
- WATER LINE & VALVE
- CURB OPENING
- END CURB WITH TAPER
- RIP TRAP APRON



SANITARY LATERAL
Scale: Horz. 1" = 25'
Vert. 1" = 25'



Scale 1" = 25'

PA ACT 287, AS AMENDED

IN ACCORDANCE WITH PA ACT 287, AS AMENDED, THE SURVEYOR CONTACTED PA ONE CALL, INC., FOR A DESIGN PHASE LOCATION REQUEST. THE SERIAL NUMBER FOR THAT REQUEST IS 2022283634. THE SURVEYOR HAS MADE NO INDEPENDENT VERIFICATION OF THE INFORMATION PROVIDED OTHER THAN AS MAY BE READILY EVIDENT FROM THE SURFACE OF THE GROUND.

THE CONTRACTOR SHALL COMPLY WITH PA ACT 287, AS AMENDED REQUIREMENTS AND VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE START OF WORK.



ENGINEER'S STATEMENT

I, STEPHEN A. PANY, A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE ACCOMPANYING APPLICATION, PLANS AND SUPPORTING DOCUMENTATION ARE TRUE AND CORRECT, TO THE BEST OF MY KNOWLEDGE.

DATE _____ PLAN PREPARER'S SIGNATURE _____

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ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SOUTH WHITEHALL TOWNSHIP STANDARD SPECIFICATIONS.

#	DATE	REVISION	BY

**PRELIMINARY/FINAL
SANITARY SEWER PROFILES**

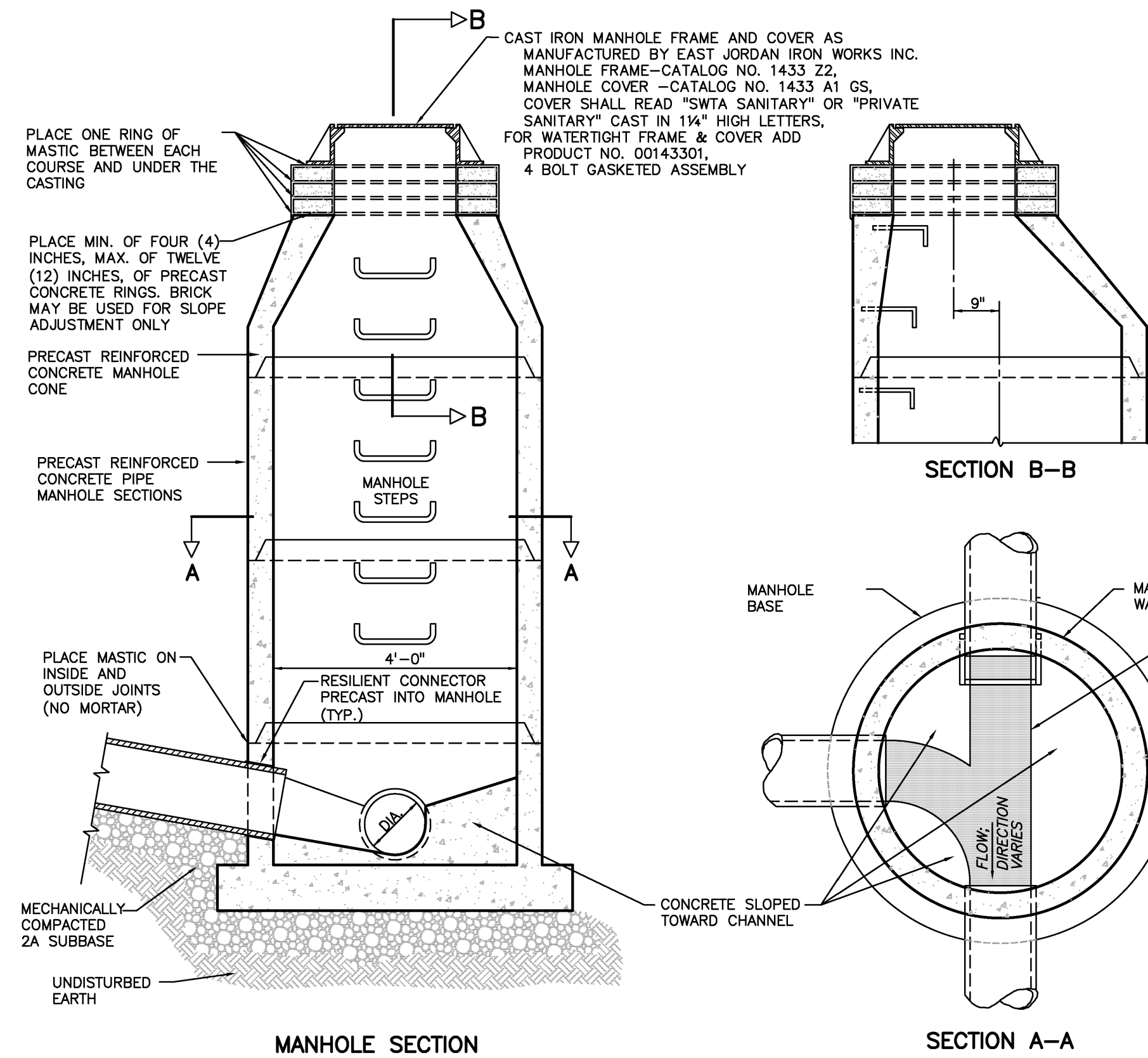
PANY & LENTZ ENGINEERING COMPANY
CONSULTING ENGINEERS
CIVIL • STRUCTURAL • MECHANICAL • MACHINERY
609 Hamilton Street • Allentown, PA 18101
Office: 610/433-1634 • Fax: 610/433-1636

**1429 ECK ROAD
OUTDOOR STORAGE**
SOUTH WHITEHALL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

J.G. PETRUCCI CO. INC.
771 ROUTE 173
SUITE 201
ASBURY, NEW JERSEY 08802

DESIGNED	MAP
DRAWN	BMW
CHECKED	MFS
JOB. NO.	2022258
SCALE	1" = 50' U.N.O.
DATE	MAY 15, 2023
DWG. NO.	LD-11
SHEET NO.	11
REV.	
OF	32
SHEETS	0

Date: May 17, 2023 - 5:36pm
 User: Chris
 Profile: Sanitary Sewer Profiles.dwg
 Project: 1429 Eck Rd - ASP
 Location: Current Rev11
 Profile: Sanitary Sewer Profiles.dwg
 User: Chris
 Date: May 17, 2023 - 5:36pm
 User: Chris
 Profile: Sanitary Sewer Profiles.dwg
 Project: 1429 Eck Rd - ASP
 Location: Current Rev11
 Profile: Sanitary Sewer Profiles.dwg
 User: Chris



- NOTES:**
1. A 12" CAST-IN-PLACE, REINFORCED BASE MAY BE USED FOR A "DOOGHOUSE" TYPE MANHOLE.
 2. PROVIDE FLEXIBLE GASKET IN MACHINED GROOVE IN LID.
 3. PAINT ENTIRE OUTER SURFACE OF MANHOLE WITH ONE (1) COAT OF AN APPROVED BITUMASTIC MATERIAL.
 4. THE INTERIOR SHALL BE COATED WITH FLEX-SEAL UTILITY SEALANT AS MANUFACTURED BY SEALING SYSTEMS, INC. TO COVER THE CASTING JOINT TO CONCRETE AND ANY PLASTERED AREA, FOLLOWING THE MANUFACTURER'S SPECIFICATIONS.
 5. STEP DIMENSIONS AND CONFIGURATION SHALL BE IN ACCORDANCE WITH PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, CURRENT EDITION (POT PUB #72M), RC-39M.
 6. THE MANUFACTURER OF THE MANHOLES SHALL BE INCLUDED ON THE PENNDOT LIST OF APPROVED MANUFACTURERS OF PRECAST CONCRETE PRODUCTS (BULLETIN 15).
 7. REFER TO POT PUB #72M, RC-39M FOR ADDITIONAL REQUIREMENTS.

CAUTION:

WHEN PIPING SYSTEMS ARE PRESSURE TESTED, IT IS EXTREMELY IMPORTANT AND ESSENTIAL THAT ALL PLUGS INCLUDING TEST PLUGS AND ALL PIPE JOINTS ARE INSTALLED AND RESTRAINED IN SUCH A WAY THAT BLOWOUTS ARE PREVENTED. IT MUST BE REALIZED THAT SUDDEN EXPULSION OF A POORLY INSTALLED PLUG OR SECTION OF PIPE OR OF A TEST PLUG WHICH IS PARTIALLY DEFLATED BEFORE THE PIPE PRESSURE IS RELEASED CAN BE VERY DANGEROUS. FOR THIS REASON IT IS RECOMMENDED THAT EVERY PLUG AND PIPE JOINT BE POSITIVELY BRACED OR OTHERWISE RESTRAINED DURING PRESSURE TESTING AND THAT NO ONE BE ALLOWED IN A MANHOLE ADJOINING A LINE BEING TESTED OR IN THE VICINITY OF AN EXPOSED PLUG OR PIPE SO LONG AS PRESSURE IS MAINTAINED IN THE LINE.

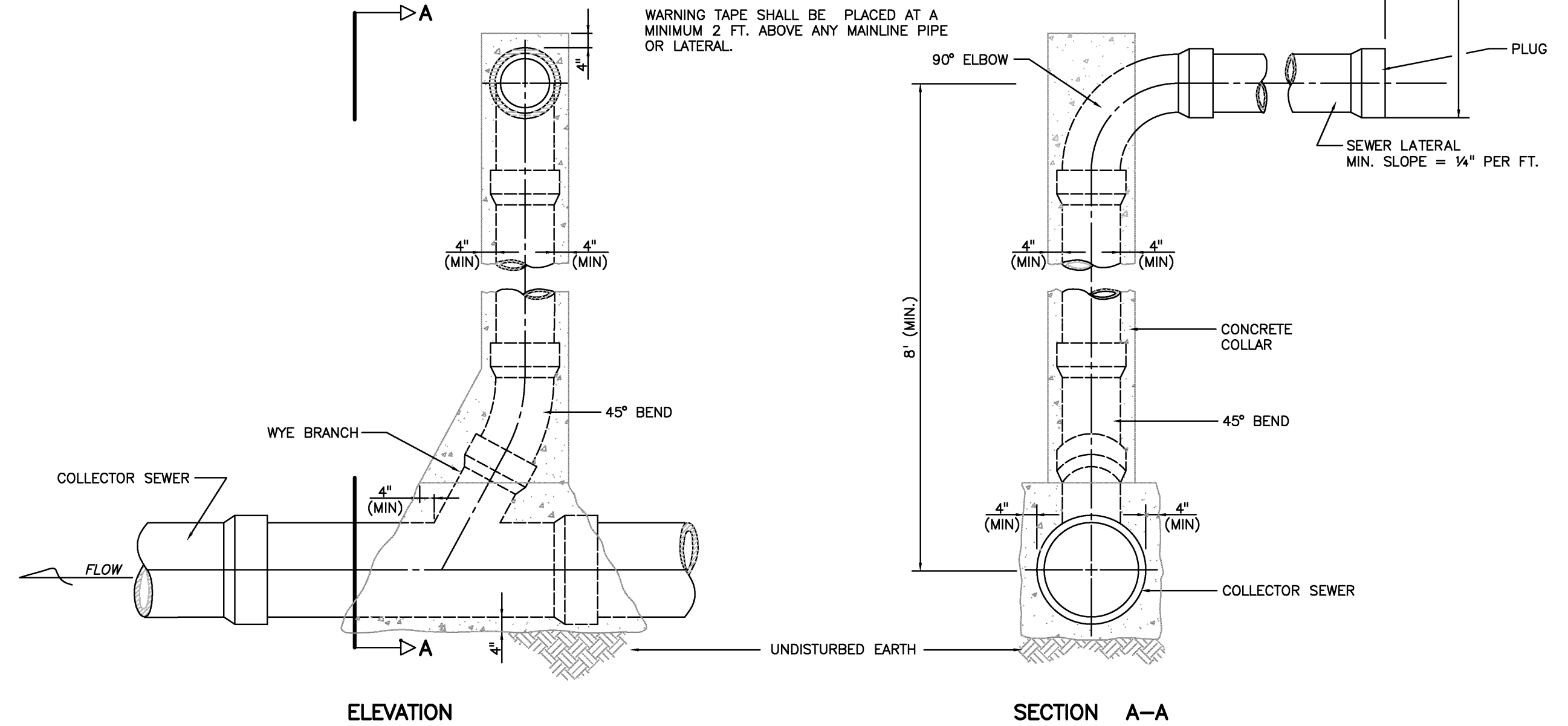
SOUTH WHITEHALL TOWNSHIP AUTHORITY
STANDARD CONSTRUCTION DETAILS
 LEHIGH COUNTY, PENNSYLVANIA
 SANITARY SEWER
STANDARD PRECAST CONCRETE PIPE MANHOLE

CAUTION:

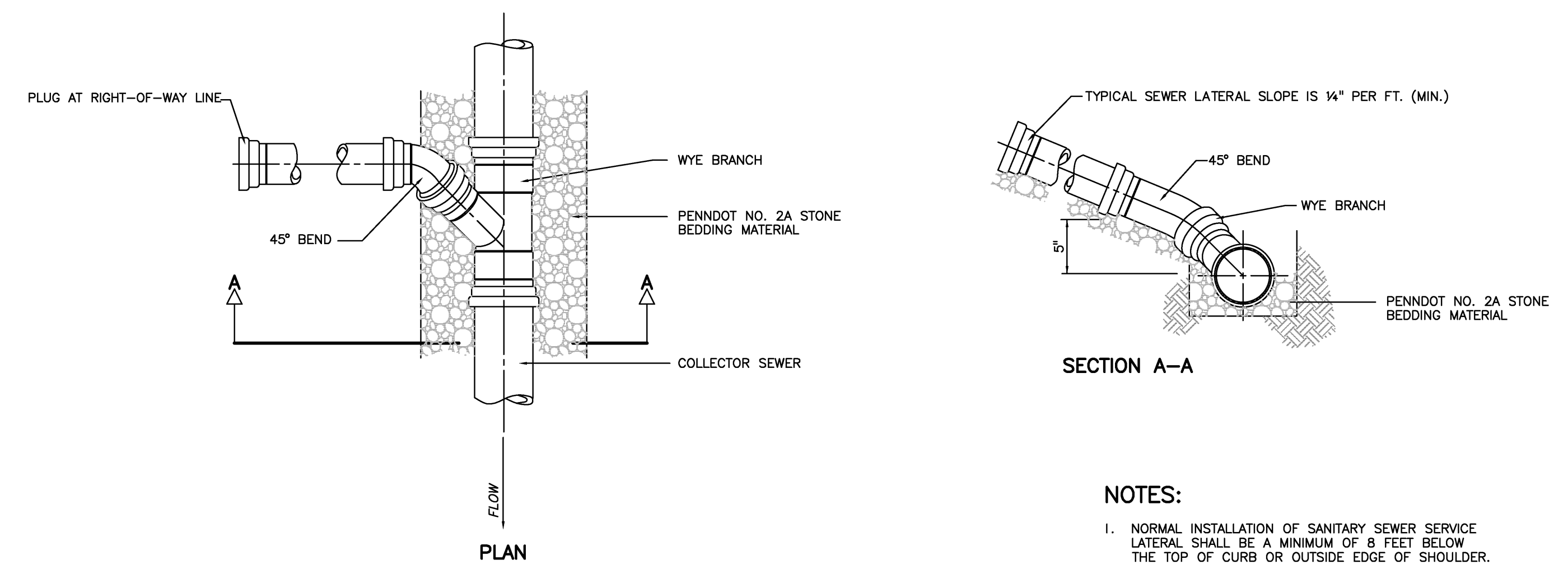
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NOTE:

WARNING TAPE SHALL BE PLACED AT A MINIMUM 2 FT. ABOVE ANY MAINLINE PIPE OR LATERAL.



SOUTH WHITEHALL TOWNSHIP AUTHORITY
STANDARD CONSTRUCTION DETAILS
 LEHIGH COUNTY, PENNSYLVANIA
 SANITARY SEWER
TYPICAL SERVICE CONNECTION DEEP SEWER



CAUTION:

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- NOTES:**
1. NORMAL INSTALLATION OF SANITARY SEWER SERVICE LATERAL SHALL BE A MINIMUM OF 8 FEET BELOW THE TOP OF CURB OR OUTSIDE EDGE OF SHOULDER.
 2. WARNING TAPE SHALL BE PLACED AT A MINIMUM OF 2 FT. ABOVE ANY MAINLINE PIPE OR LATERAL.

SOUTH WHITEHALL TOWNSHIP AUTHORITY
STANDARD CONSTRUCTION DETAILS
 LEHIGH COUNTY, PENNSYLVANIA
 SANITARY SEWER
TYPICAL SANITARY SERVICE CONNECTION

Date: May 17, 2023 - 5:36pm
 Pany & Lentz Engineering Company - USER: Chris
 C:\ACAD\Acad\DWG\2022558_1429 Eck Rd - JGP\Landex\Current Rev\12 - Sanitary Sewer Details.dwg - Sanitary Sewer Details

PA ACT 287, AS AMENDED

IN ACCORDANCE WITH PA ACT 287, AS AMENDED, THE SURVEYOR CONTACTED PA ONE CALL, INC., FOR A DESIGN PHASE LOCATION REQUEST. THE SERIAL NUMBER FOR THAT REQUEST IS 2022283634. THE SURVEYOR HAS MADE NO INDEPENDENT VERIFICATION OF THE INFORMATION PROVIDED OTHER THAN AS MAY BE READILY EVIDENT FROM THE SURFACE OF THE GROUND.

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DATE _____ PLAN PREPARER'S SIGNATURE _____

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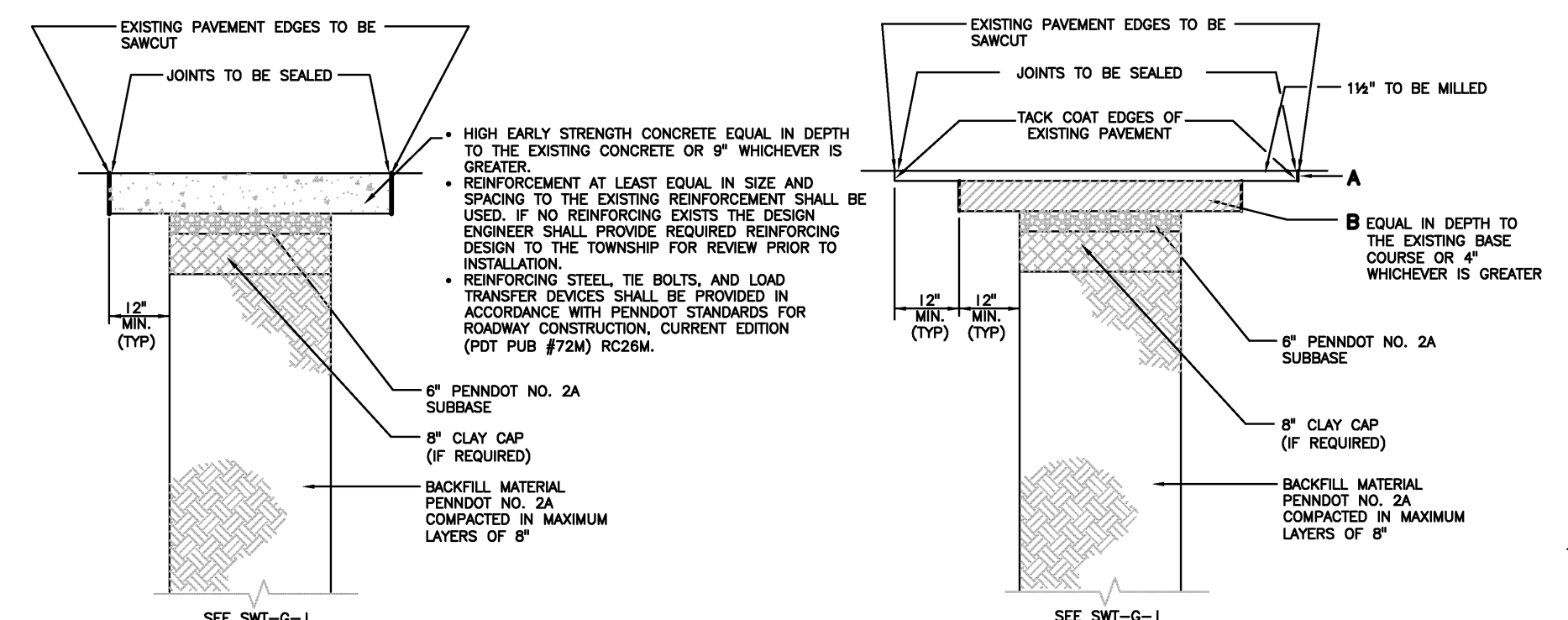
#	DATE	REVISION	BY

**PRELIMINARY/FINAL
 SANITARY SEWER DETAILS**

PANY & LENTZ ENGINEERING COMPANY
 CONSULTING ENGINEERS
 CIVIL • STRUCTURAL • MECHANICAL • MACHINEERY
 609 Hamilton Street • Allentown, PA 18101
 Office: 610/433-1634 • Fax: 610/433-1636

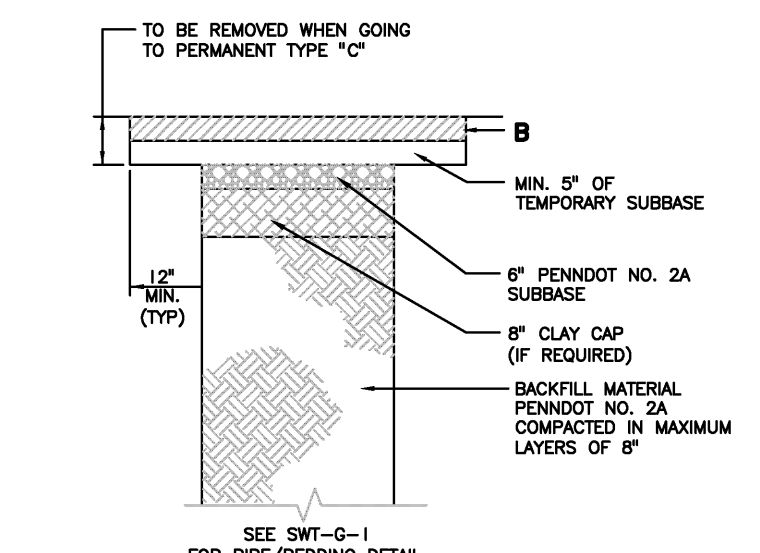
DESIGNED	SNP
DRAWN	BMW
CHECKED	MFS
JOB NO.	20222558
SCALE	1" = 50' U.N.O.
DATE	MAY 15, 2023
DWG. NO.	LD-12
SHEET NO.	12
REV.	0
OF	32

PETRUCCI
 J.G. PETRUCCI CO. INC.
 771 ROUTE 773
 SUITE 201
 ASBURY, NEW JERSEY 08802

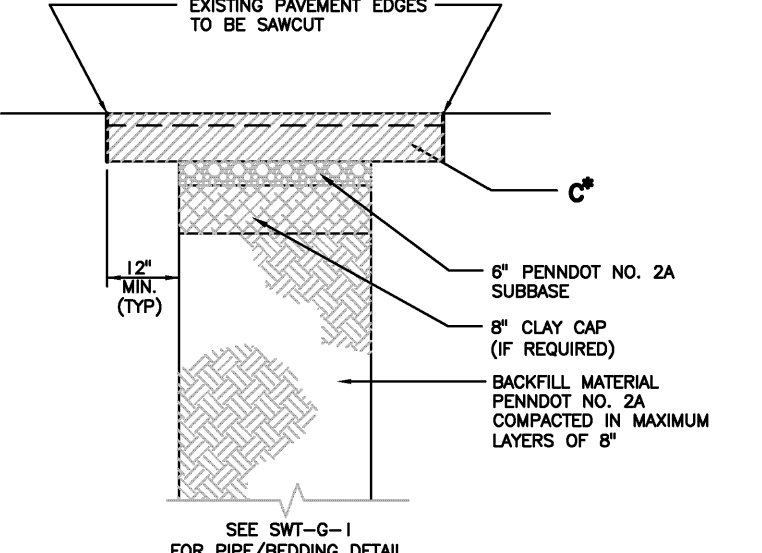


PERMANENT TYPE "C"
REINFORCED CEMENT CONCRETE PAVEMENT

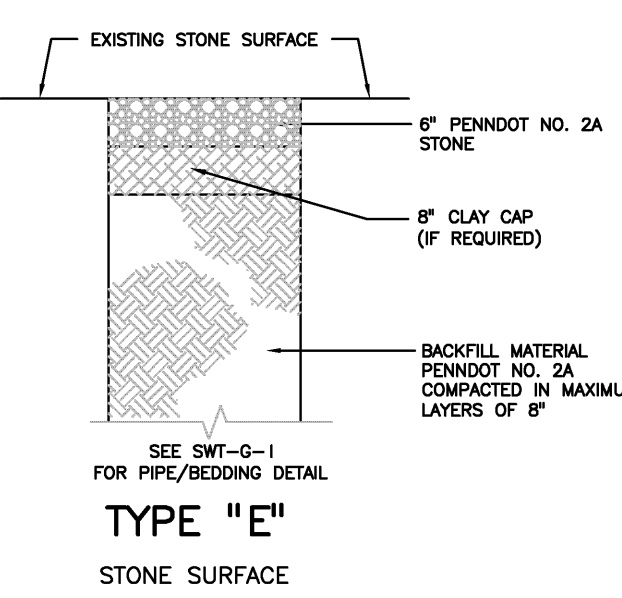
PERMANENT TYPE "D"
BITUMINOUS PAVEMENT



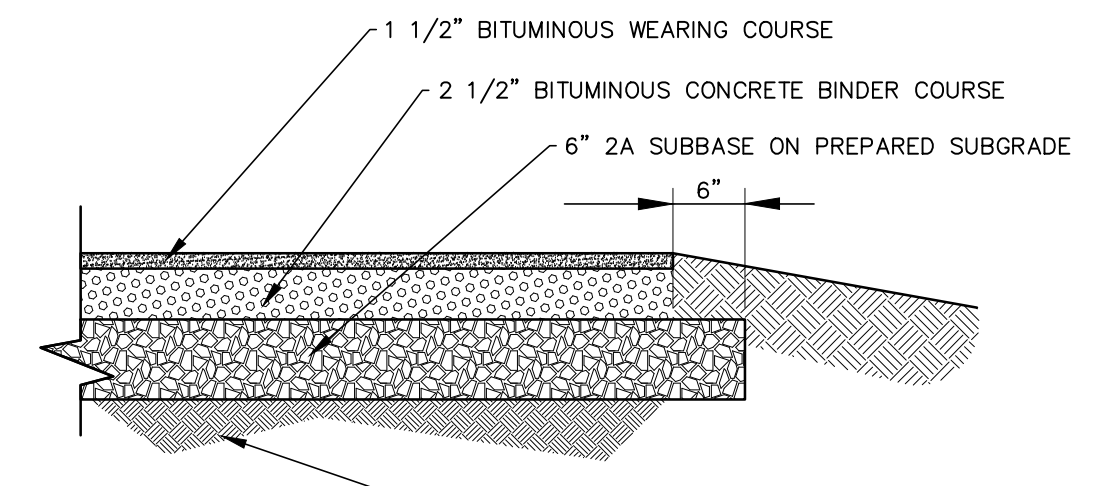
TEMPORARY FOR TYPE "C"
REINFORCED CEMENT CONCRETE PAVEMENT



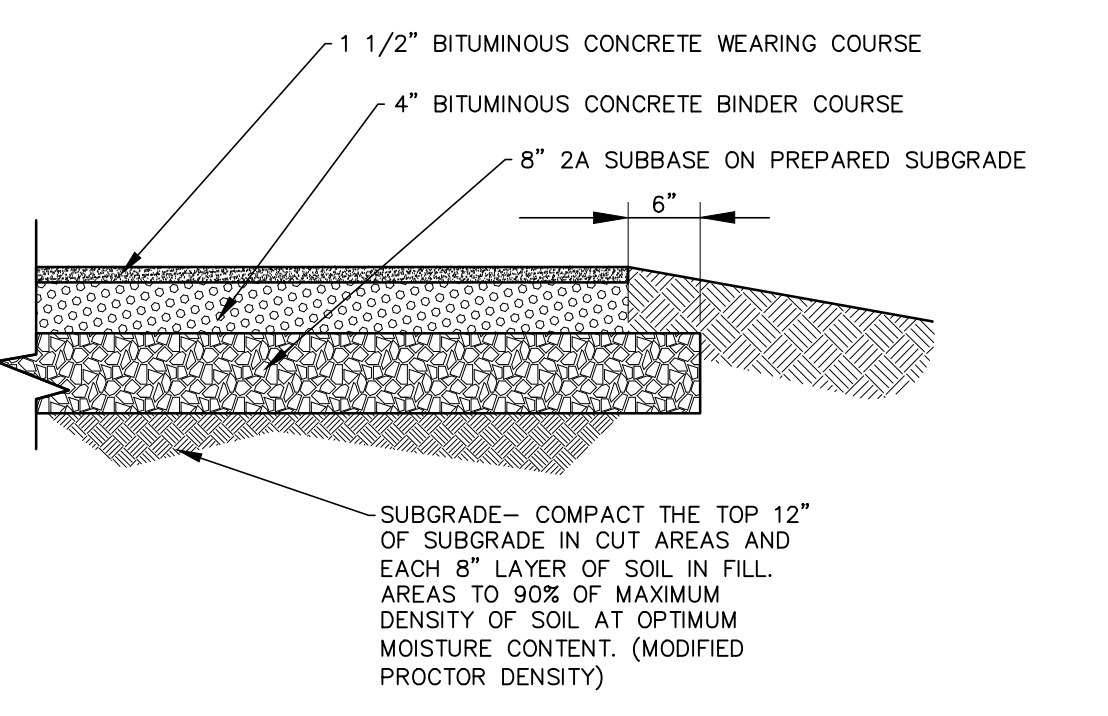
TEMPORARY FOR TYPE "D"
BITUMINOUS PAVEMENT



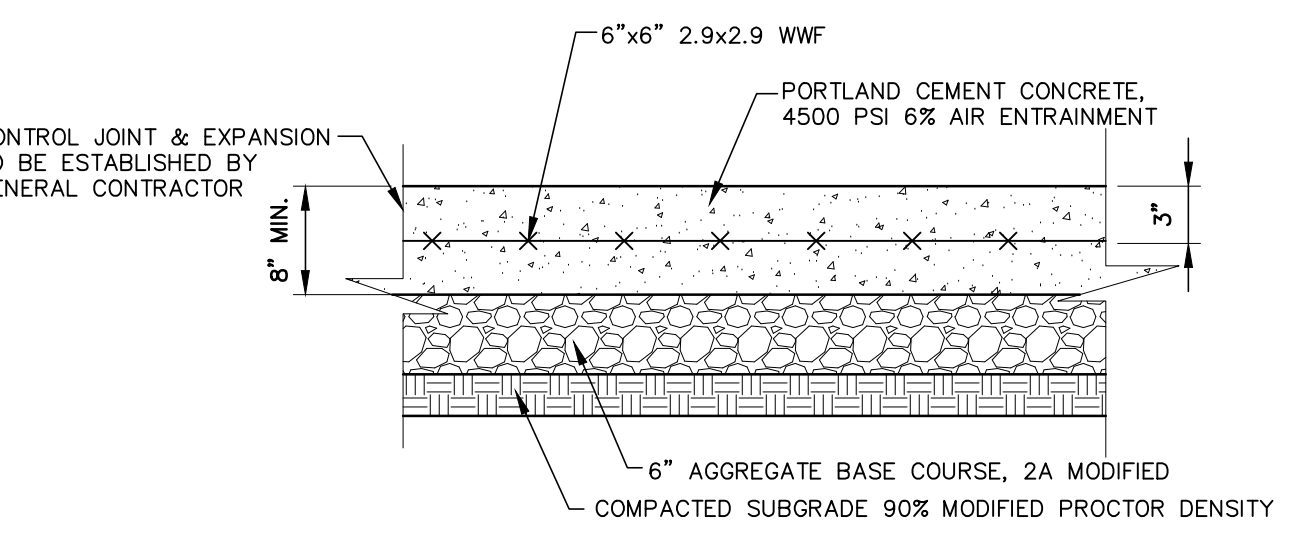
TYPE "E"
STONE SURFACE



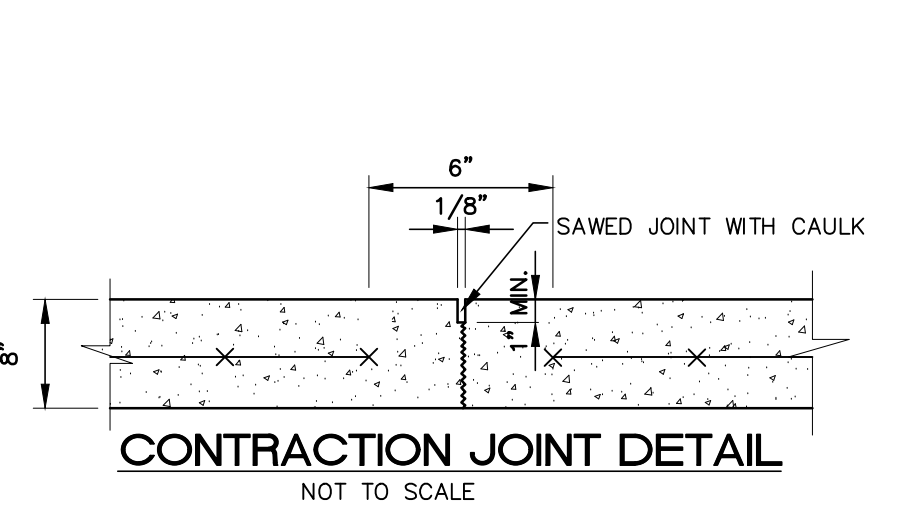
LIGHT DUTY PAVING DETAIL
NOT TO SCALE



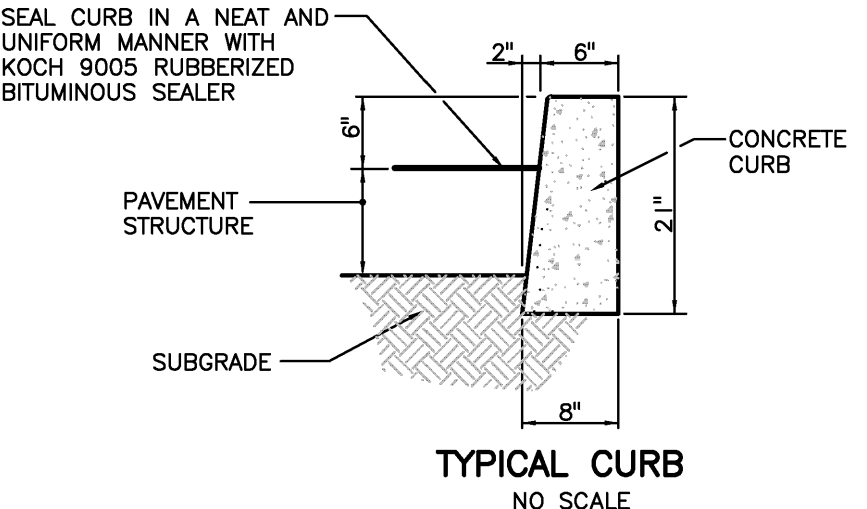
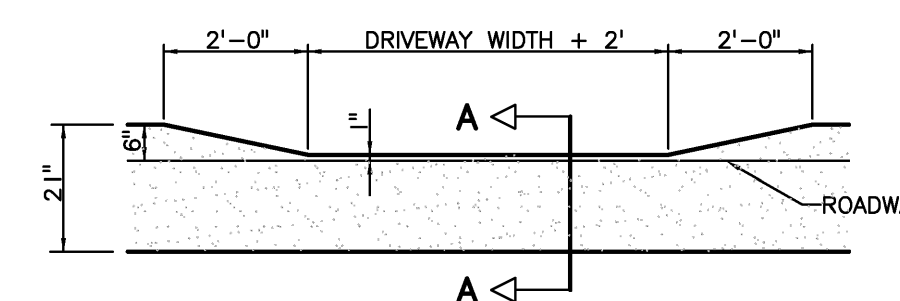
HEAVY DUTY PAVING DETAIL
NOT TO SCALE



CONCRETE PAVEMENT
NOT TO SCALE



CONTRACTION JOINT DETAIL
NOT TO SCALE



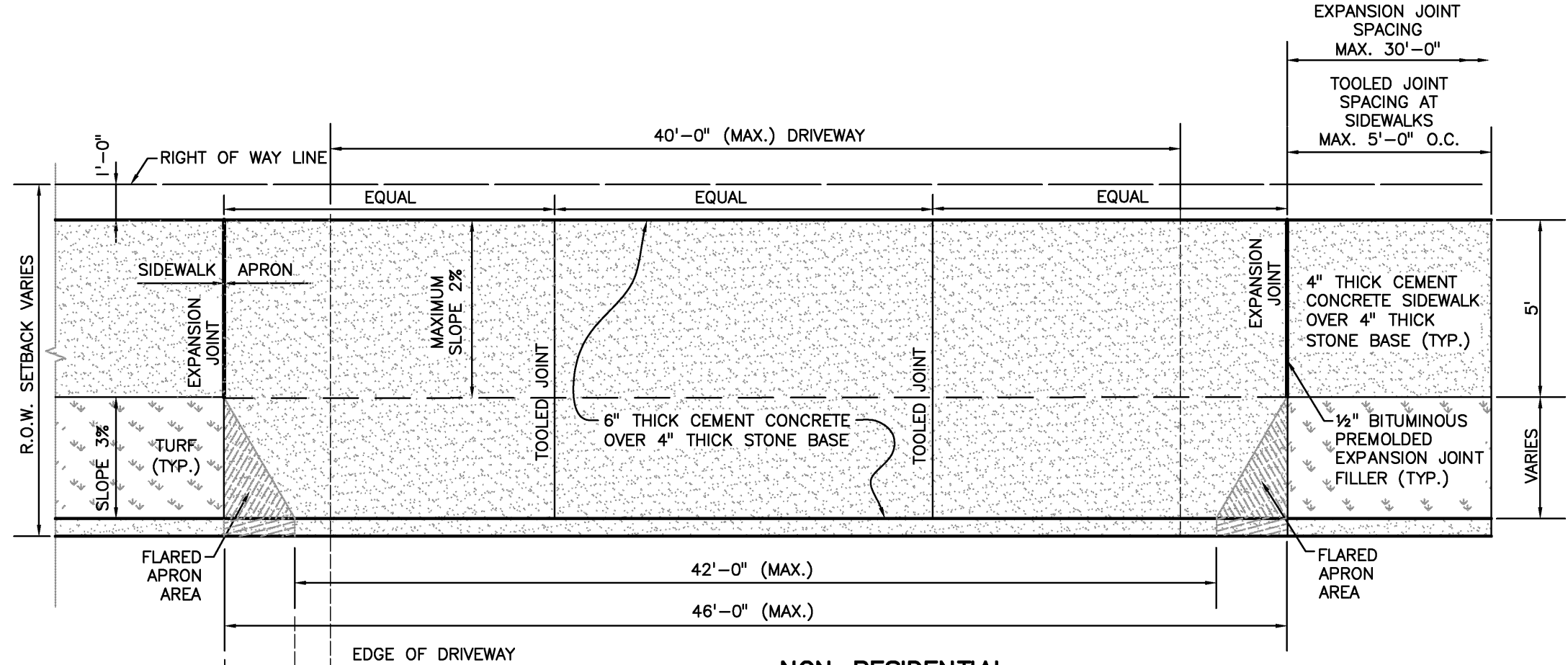
- NOTES:**
- EXISTING CURB REMOVAL SHALL BE IN COMPLETE SECTIONS (JOINT TO JOINT), NOT PARTIAL SECTIONS.
 - PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PENNDOT SPECIFICATIONS, PUBLICATION 408, CURRENT EDITION, SECTION 630.
 - SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS, 10'-0" MAX. TO 4'-0" MIN.
 - PLACE 1/2 INCH BITUMINOUS PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY. CUT MATERIAL TO CONFORM TO AREA ADJACENT TO CURB OR TO CONFORM TO CROSS SECTIONAL AREA OF CURB.
 - EXPANSION JOINTS SHALL BE SPACED AS REQUIRED BY THE TOWNSHIP - TYPICALLY 30' O. C.

PA ACT 287, AS AMENDED
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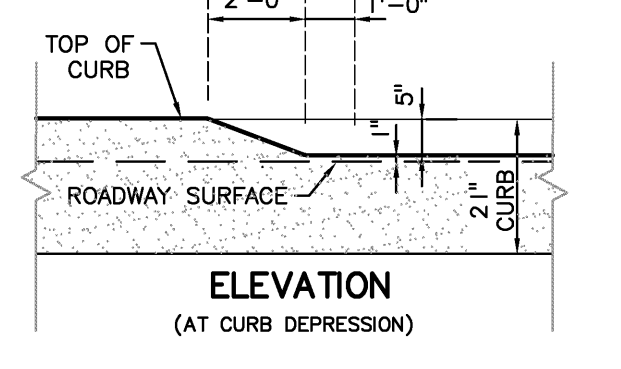


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DATE _____ PLAN PREPARER'S SIGNATURE _____

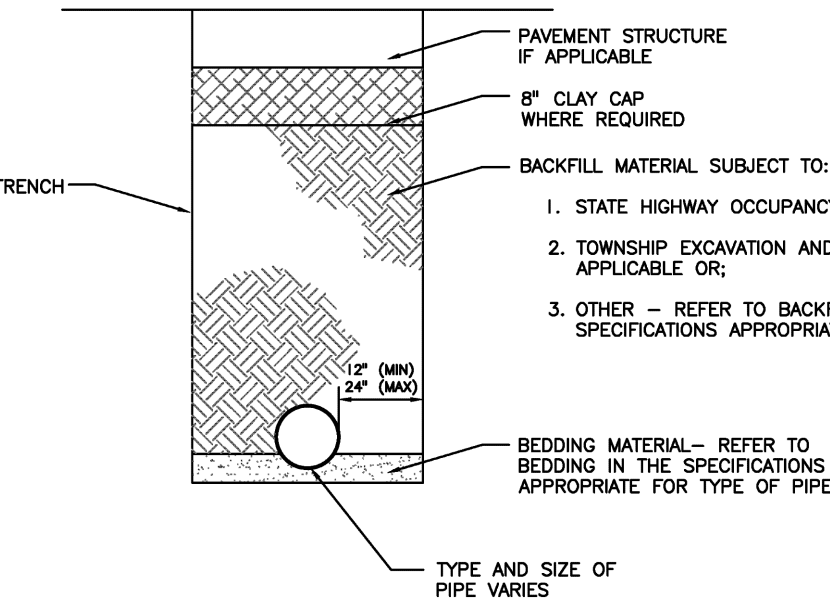
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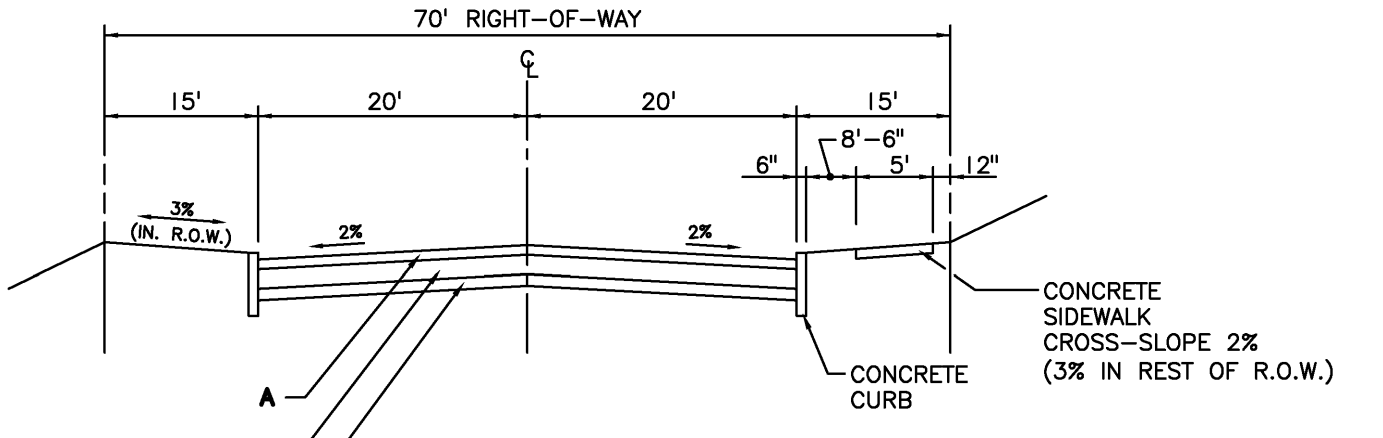
NON-RESIDENTIAL
SIDEWALK AND DRIVEWAY APRON PLAN
NO SCALE



ELEVATION
(AT CURB DEPRESSION)



STANDARD TRENCH
NO SCALE



TYPICAL CROSS SECTION
(COLLECTOR STREETS)
NO SCALE

- NOTES:**
- PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PENNDOT SPECIFICATIONS, PUBLICATION 408, CURRENT EDITION, SECTIONS 203, 204, 205, 206, 210, 350, 309, 409, 630 AND 676.
 - SEAL CURB IN ACCORDANCE WITH CONCRETE CURB DETAILS SWT-R-5.
 - THE FOLLOWING ABBREVIATIONS APPEAR ON THIS SHEET:
a. ESAL - EQUIVALENT SINGLE AXLE LOAD
b. SRL - SKID RESISTANCE LEVEL
c. HMA - HOT MIXED ASPHALT
d. PG - PERFORMANCE GRADE
- PAVEMENT MATERIALS:**
- A - 1 1/4" SUPERPAVE ASPHALT 9.5mm, PG 64-22, 0.0 TO 0.3 MILLION ESAL, SRL-L, HMA WEARING COURSE.
B - 4" SUPERPAVE ASPHALT 25.0mm, PG 64-22, 0.0 TO 0.3 MILLION ESAL, HMA BASE COURSE.
C - 5 1/2" SUPERPAVE ASPHALT AS DEFINED IN B.

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DESIGNED	SNP
DRAWN	BMW
CHECKED	MFS
JOB NO.	20222558
SCALE	1" = 50' U.N.O.
DATE	MAY 15, 2023
DWG. NO.	LD-14
SHEET NO.	14
REV.	0
OF	32

**PRELIMINARY/FINAL
MISCELLANEOUS DETAILS**

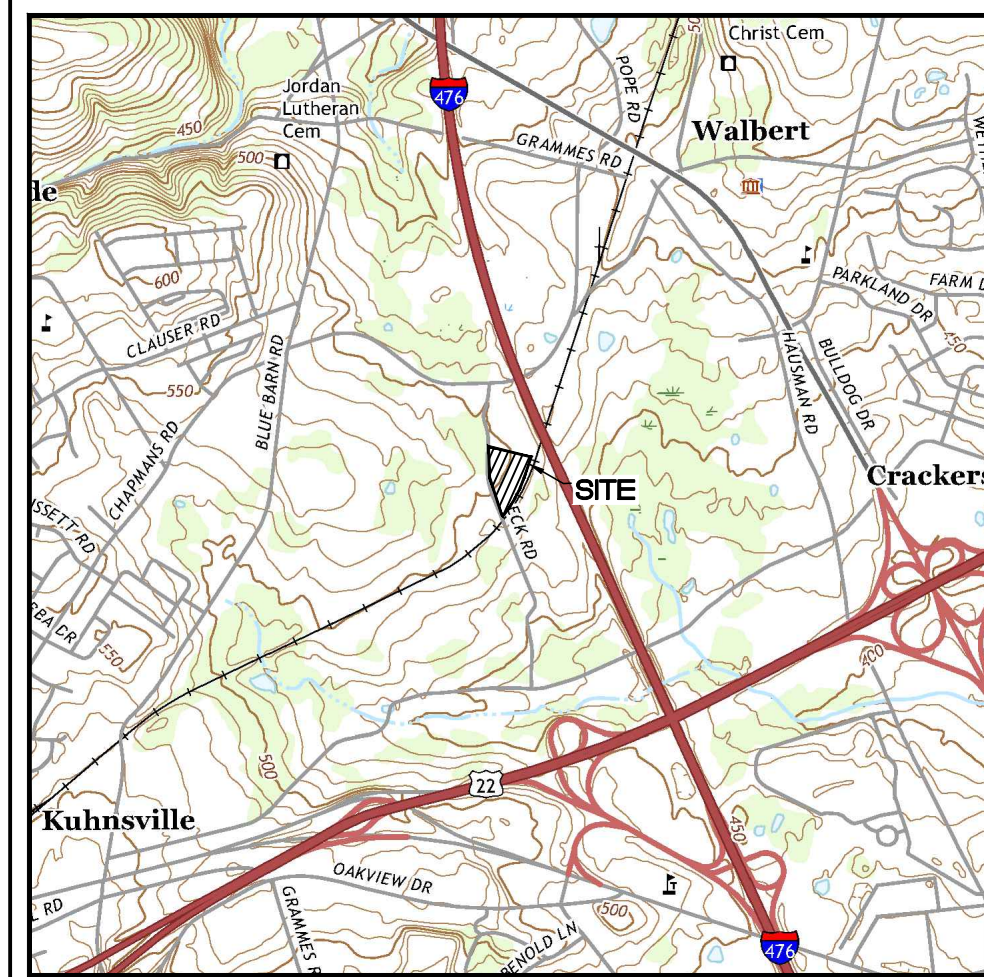


609 Hamilton Street • Allentown, PA 18101
Office: 610/433-1634 • Fax: 610/433-1636

1429 ECK ROAD
OUTDOOR STORAGE
SOUTH WHITEHALL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA



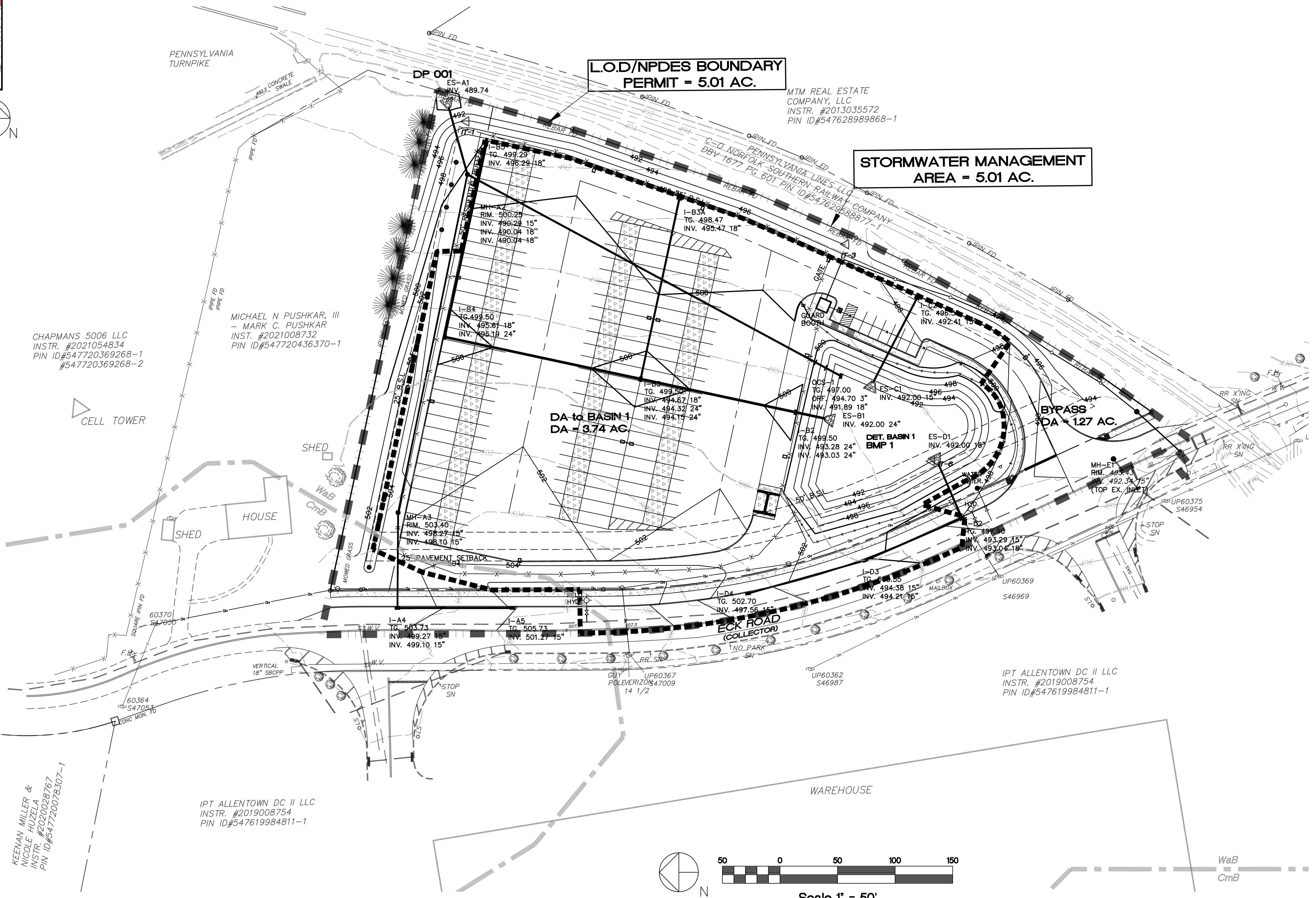
Date: May 17, 2023 - 5:36pm *Pany & Lentz Engineering Company* - USER: Chris
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LOCATION MAP
Scale 1" = 2000'

LEGEND

- EXISTING FEATURES**
- 2 FT. CONTOUR
 - 10 FT. CONTOUR
 - CONCRETE CURB
 - EDGE OF PAVEMENT
 - CONCRETE WALK OR PAD
 - WOOD GUIDERAIL
 - DIRT/GRAVEL ROAD
 - STORM SEWER & INLETS
 - SANITARY SEWER & MANHOLE
 - WATER LINE & VALVE
 - OVERHEAD ELECTRIC
 - EASEMENT LINE
 - PAINT LINES
 - PROPERTY LINES
 - ADJOINERS' PROPERTY LINES
 - RIGHT-OF-WAY
 - SIGN POST
 - TREE LINE
 - DECIDUOUS TREE
 - UTILITY POLE
 - WATER TIE
- PROPOSED FEATURES**
- INTERMEDIATE CONTOUR
 - 2' CONTOUR
 - 10' CONTOUR
 - SPOT ELEVATION
 - CONCRETE CURB
 - EDGE OF PAVEMENT
 - CONCRETE WALK OR PAD
 - STORM SEWER & INLET
 - SANITARY SEWER & MANHOLE
 - WATER LINE & VALVE
 - CURB OPENING
 - END CURB WITH TAPER
 - RIP TRAP APRON
- STORMWATER FEATURES**
- LIMIT OF DISTURBANCE/
STORMWATER MANAGEMENT/
NPDES BOUNDARY
 - SWM DRAINAGE AREA BOUNDARY



Scale 1" = 50'

ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SOUTH WHITEHALL TOWNSHIP STANDARD SPECIFICATIONS.

**PRELIMINARY/FINAL
STORMWATER MANAGEMENT
POST-DEVELOPMENT PLAN**

PANY & LENTZ ENGINEERING COMPANY
CONSULTING ENGINEERS
609 Hamilton Street • Allentown, PA 18101
Office: 610/433-1634 • Fax: 610/433-1636

1429 ECK ROAD
OUTDOOR STORAGE
SOUTH WHITEHALL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

J.G. PETRUCCI CO. INC.
771 ROUTE 173
SUITE 201
ASBURY, NEW JERSEY 08802

DESIGNED	MAP
DRAWN	BMW
CHECKED	MFS
JOB. NO.	2022258
SCALE	1" = 50' U.N.O.
DATE	MAY 15, 2023
DWG. NO.	SWM-2
SHEET NO.	17
REV.	
OF	32
SHEETS	0

PA ACT 287, AS AMENDED
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DATE _____ PLAN PREPARER'S SIGNATURE _____

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Date: May 17, 2023-5:36pm **Pany & Lentz Engineering Company** - USER: Chris
w:\s\j\destop\ [Extop] [Xref-TB 24x36] [boundaries] [Location Map]
G:\ACAD\Acad\DWG\2022258_1429 Eck Rd - JGP\Landm\Current\Rev\18 - SWM.dwg->SWM - PostUser

KEENAN MILLER &
NICOLE PUZELA
INSTR. #2020028767
PIN ID#547720078307-1

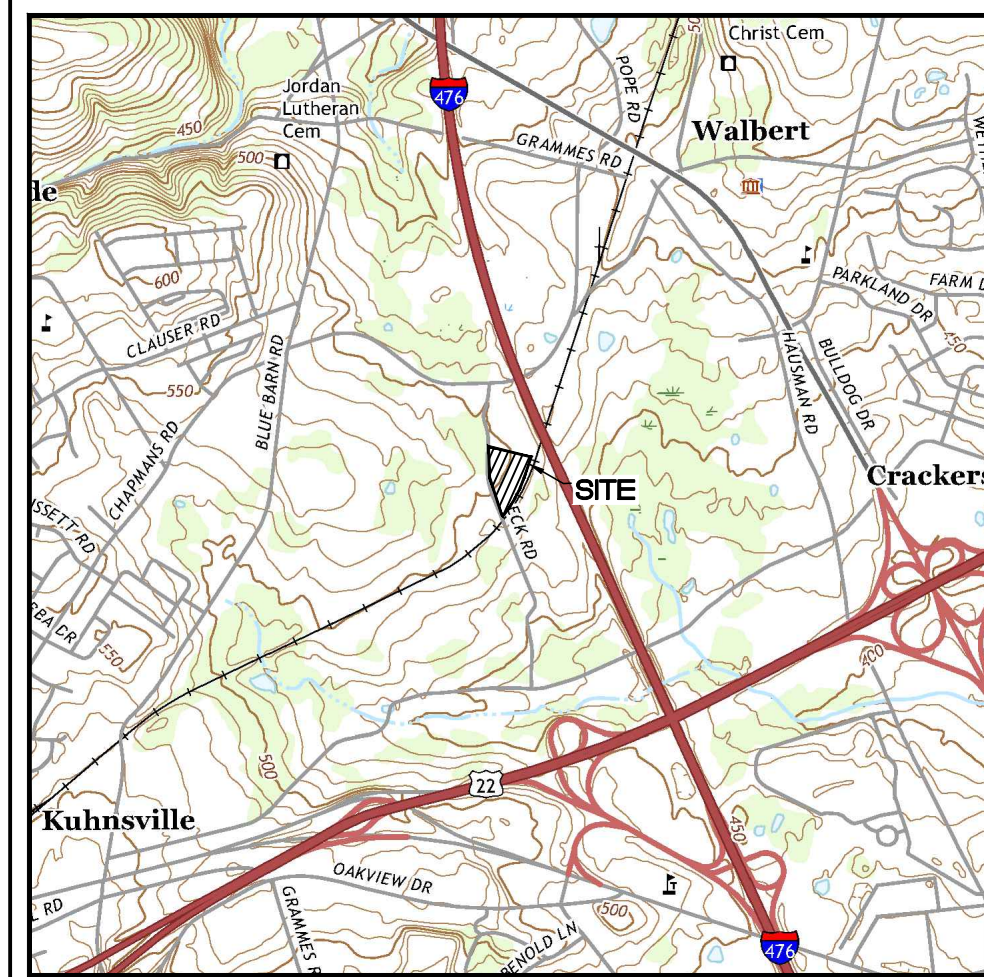
CHAPMANS 5006 LLC
INSTR. #2021054834
PIN ID#547720369268-1
#547720369268-2

MICHAEL N PUSHKAR, III
- MARK C. PUSHKAR
INSTR. #2021008732
PIN ID#547720436370-1

IPT ALLENTOWN DC II LLC
INSTR. #2019008754
PIN ID#547619984811-1

MTM REAL ESTATE
COMPANY, LLC
INSTR. #2013035572
PIN ID#54762898968-1

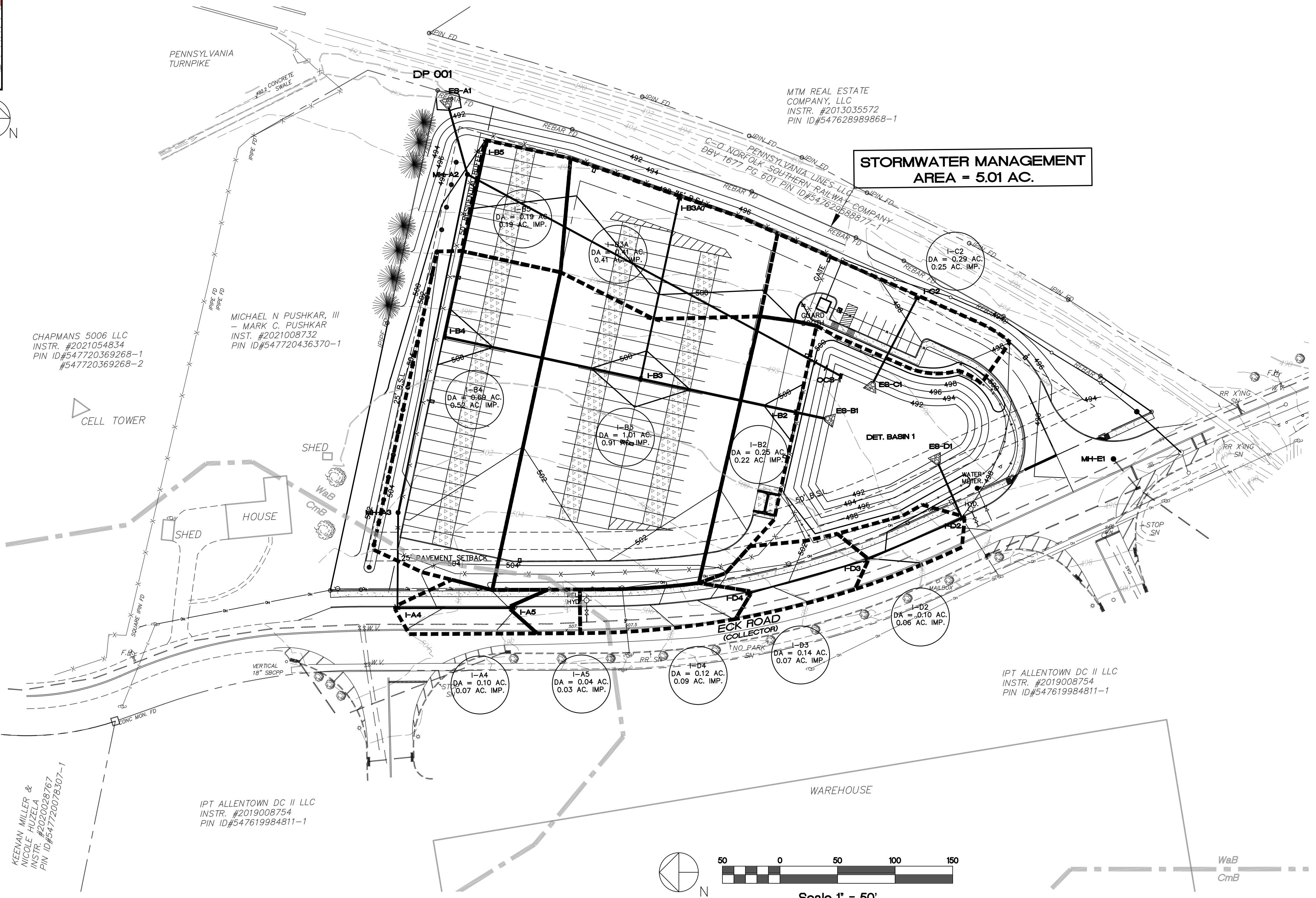
IPT ALLENTOWN DC II LLC
INSTR. #2019008754
PIN ID#547619984811-1



LOCATION MAP
Scale 1" = 2000'

LEGEND

- EXISTING FEATURES**
- 2 FT. CONTOUR
 - 10 FT. CONTOUR
 - SPOT ELEVATION
 - CONCRETE CURB
 - EDGE OF PAVEMENT
 - CONCRETE WALK OR PAD
 - WOOD GUIDERAIL
 - DIRT/GRAVEL ROAD
 - STORM SEWER & INLETS
 - SANITARY SEWER & MANHOLE
 - WATER LINE & VALVE
 - OVERHEAD ELECTRIC
 - EASEMENT LINE
 - PAINT LINES
 - PROPERTY LINES
 - ADJOINERS' PROPERTY LINES
 - RIGHT-OF-WAY
 - SIGN POST
 - TREE LINE
 - DECIDUOUS TREE
 - UTILITY POLE
 - WATER TIE
- PROPOSED FEATURES**
- INTERMEDIATE CONTOUR
 - 2' CONTOUR
 - 10' CONTOUR
 - SPOT ELEVATION
 - CONCRETE CURB
 - EDGE OF PAVEMENT
 - CONCRETE WALK OR PAD
 - STORM SEWER & INLET
 - SANITARY SEWER & MANHOLE
 - WATER LINE & VALVE
 - CURB OPENING
 - END CURB WITH TAPER
 - RIP TRAP APRON
- STORMWATER FEATURES**
- INLET DRAINAGE AREA



STORMWATER MANAGEMENT AREA = 5.01 AC.

CHAPMANS 5006 LLC
INSTR. #2021054834
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#547720369268-2

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IPT ALLENTOWN DC II LLC
INSTR. #2019008754
PIN ID#547619984811-1

KEENEY MILLER & NICOLE RIZZELA
INSTR. #2020028767
PIN ID#547720078307-1

PRELIMINARY/FINAL STORM SEWER DRAINAGE AREAS PLAN

PANY & LENTZ ENGINEERING COMPANY
CONSULTING ENGINEERS
CIVIL • STRUCTURAL • MECHANICAL • MACHINERY
609 Hamilton Street • Allentown, PA 18101
Office: 610/433-1634 • Fax: 610/433-1636

1429 ECK ROAD
OUTDOOR STORAGE
SOUTH WHITEHALL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

J.G. PETRUCCI CO. INC.
771 ROUTE 173
SUITE 201
ASBURY, NEW JERSEY 08802

DESIGNED	SWP
DRAWN	BMW
CHECKED	MFS
JOB. NO.	2022258
SCALE	1" = 50' U.N.O.
DATE	MAY 15, 2023
DWG. NO.	SWM-3
SHEET NO.	18
REV.	
OF	32
SHEETS	0

PA ACT 287, AS AMENDED
IN ACCORDANCE WITH PA ACT 287, AS AMENDED, THE SURVEYOR CONTACTED PA ONE CALL, INC., FOR A DESIGN PHASE LOCATION REQUEST. THE SERIAL NUMBER FOR THAT REQUEST IS 2022283634. THE SURVEYOR HAS MADE NO INDEPENDENT VERIFICATION OF THE INFORMATION PROVIDED OTHER THAN AS MAY BE READILY EVIDENT FROM THE SURFACE OF THE GROUND.
THE CONTRACTOR SHALL COMPLY WITH PA ACT 287, AS AMENDED REQUIREMENTS AND VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE START OF WORK.



ENGINEER'S STATEMENT
I, STEPHEN A. PANY, A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE ACCOMPANYING APPLICATION, PLANS AND SUPPORTING DOCUMENTATION ARE TRUE AND CORRECT, TO THE BEST OF MY KNOWLEDGE.
DATE _____ PLAN PREPARER'S SIGNATURE _____

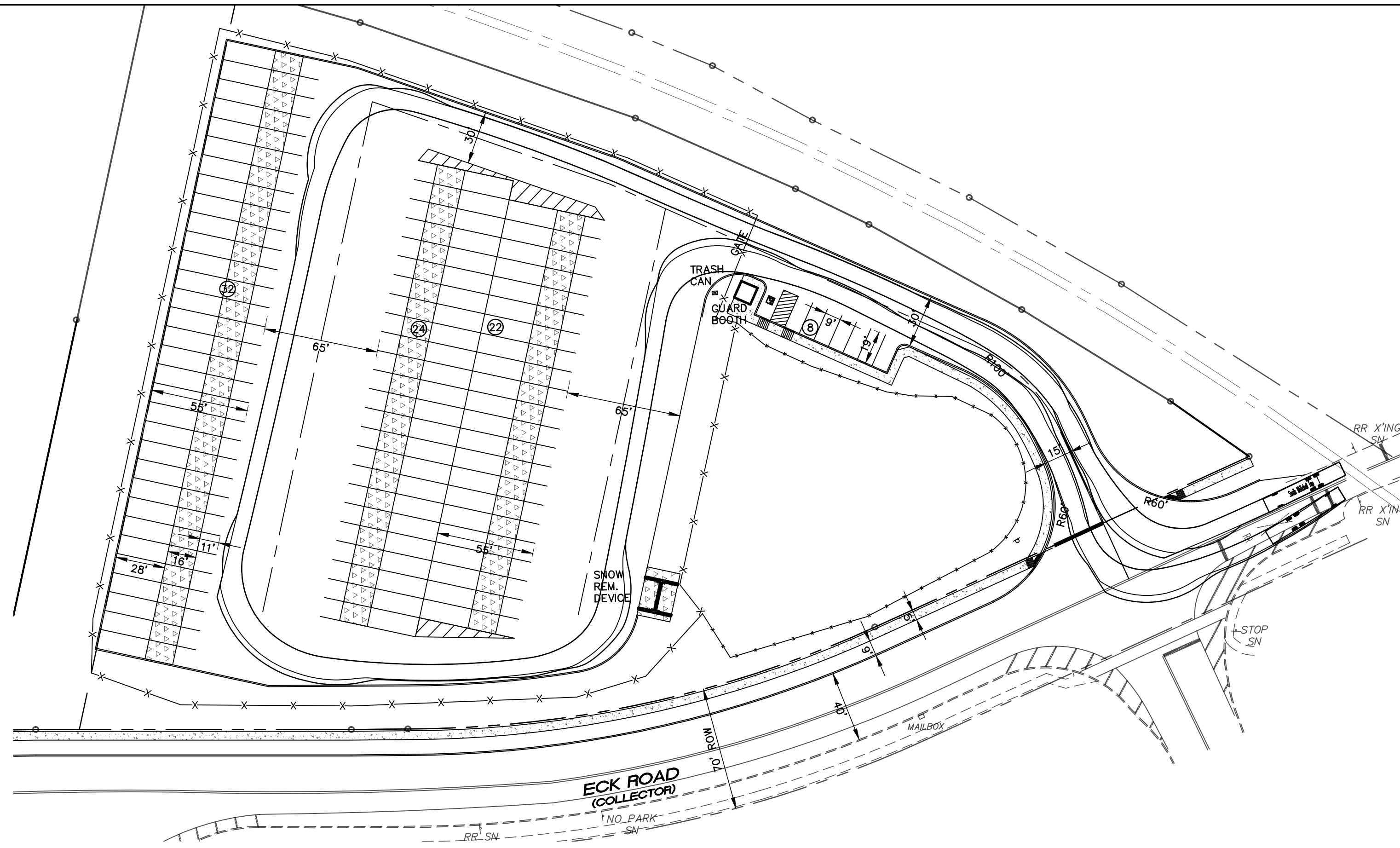
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ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SOUTH WHITEHALL TOWNSHIP STANDARD SPECIFICATIONS.

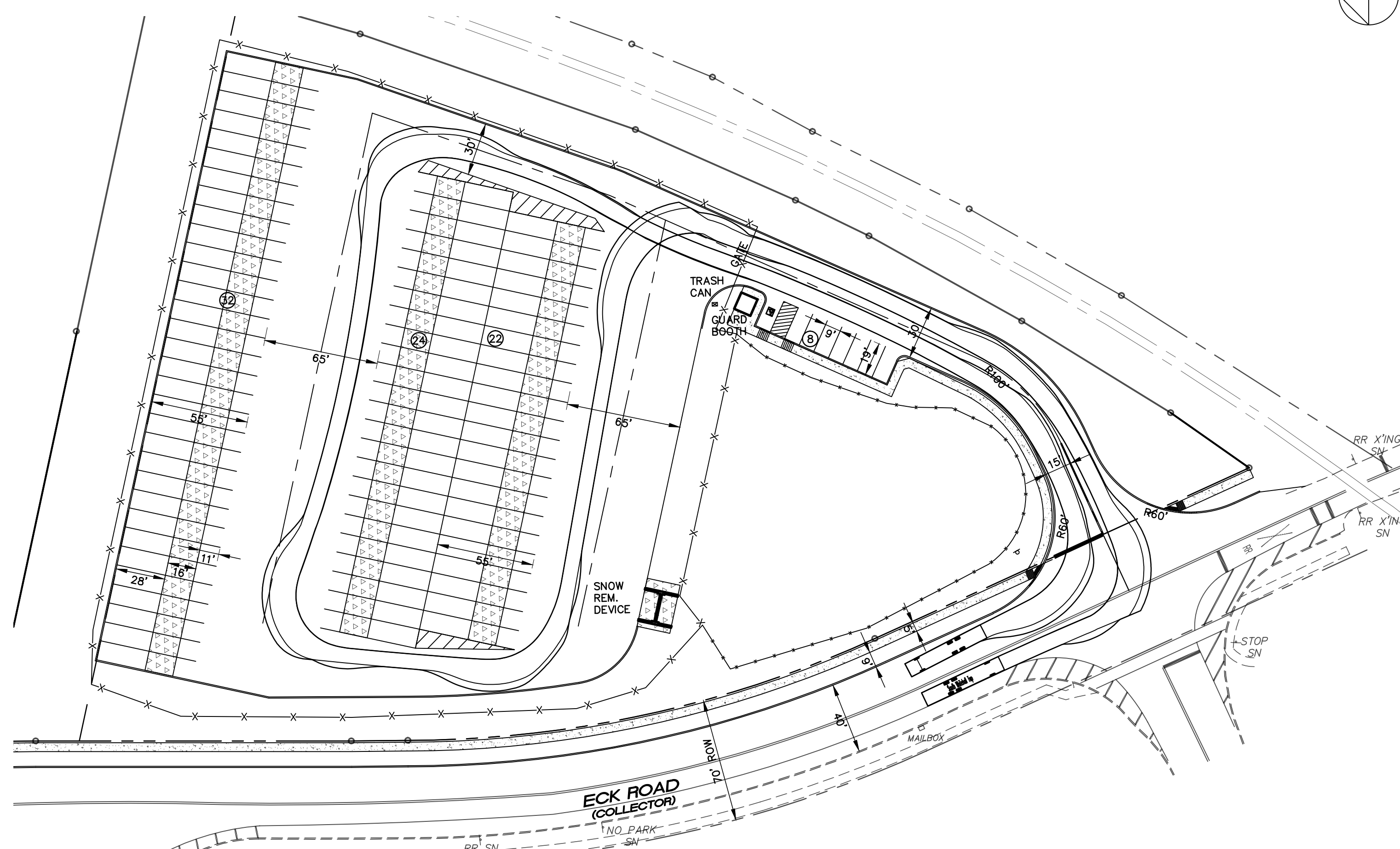
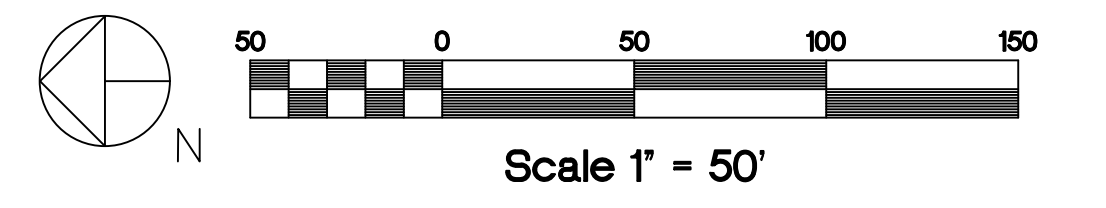
w:\s\j\destop\ [Extop] [Xref- TB 24x36] [boundaries] [Location Map] [Location Map]
 G:\ACAD\Acad\DWG\202258 1429 Eck Rd - JGP\Land\Current\Rev\18 - SWM.dwg->SWM - SS DA Date: May 17, 2023 - 5:36pm *Pany & Lentz Engineering Company*- USER: Chris

LEGEND

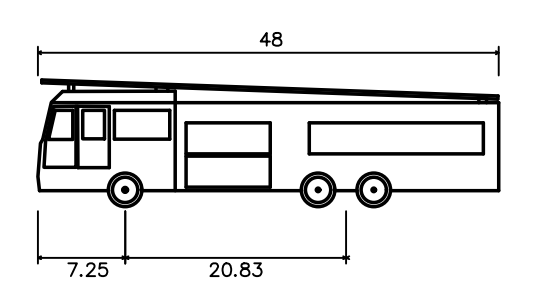
- EXISTING FEATURES**
- CONCRETE CURB
 - EDGE OF PAVEMENT
 - CONCRETE WALK OR PAD
 - OVERHEAD ELECTRIC
 - EASEMENT LINE
 - PAINT LINES
 - PROPERTY LINES
 - ADJOINERS' PROPERTY LINES
 - RIGHT-OF-WAY
 - SIGN POST
 - TREE LINE
 - DECIDUOUS TREE
 - UTILITY POLE
- PROPOSED FEATURES**
- CONCRETE CURB
 - EDGE OF PAVEMENT
 - CONCRETE WALK OR PAD
 - STORM SEWER & INLET
 - SANITARY SEWER & MANHOLE
 - WATER LINE & VALVE
 - CURB OPENING
 - END CURB WITH TAPER
 - RIP TRAP APRON



EMERGENCY VEHICLE - GENERAL SITE MANEUVERS



EMERGENCY VEHICLE - GENERAL SITE MANEUVERS



SWT Fire Truck

Overall Length	48.0 ft
Overall Width	8.33 ft
Overall Body Height	11.0 ft
Min Body Ground Clearance	1.4 ft
Track Width	8.33 ft
Lock-to-lock time	6 sec.
Max Wheel Angle	44 deg.

**PRELIMINARY/FINAL
TRUCK TURNING MANEUVERS
EMERGENCY VEHICLE**

PANY & LENTZ ENGINEERING COMPANY
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**1429 ECK ROAD
OUTDOOR STORAGE**
SOUTH WHITEHALL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

J.G. PETRUCCI CO. INC.
771 ROUTE 173
SUITE 201
ASBURY, NEW JERSEY 08802

#	DATE	REVISION	BY

DESIGNED	DRAWN	CHECKED	DATE	DWG. NO.	SHEET NO.	OF
SNP	BMW	MFS	MAY 15, 2023	TT-2	20	32

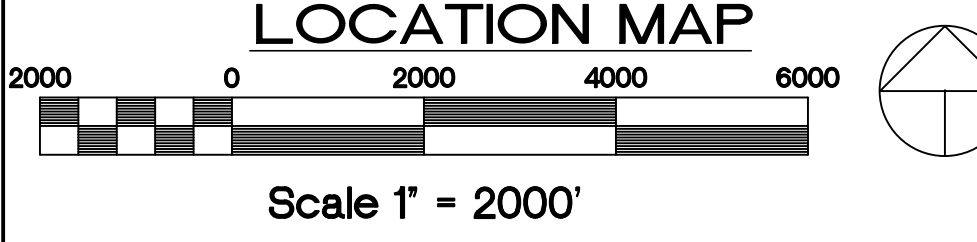
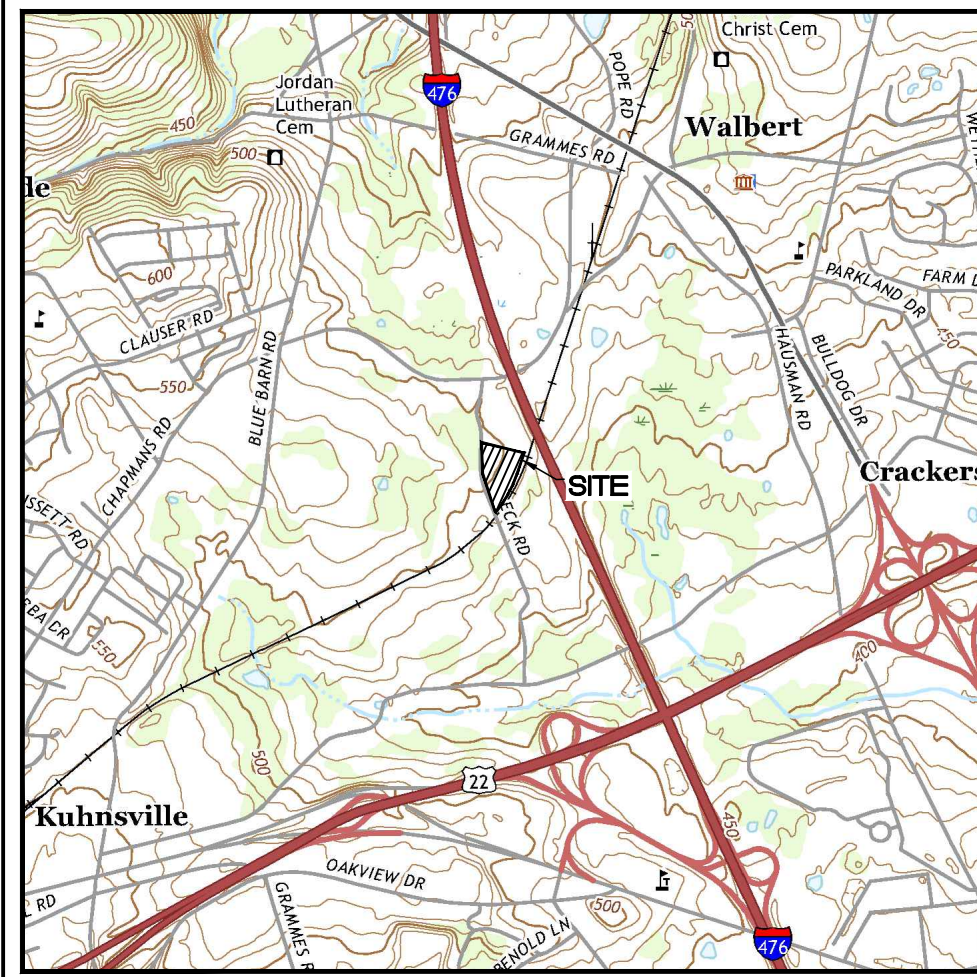
PA ACT 287, AS AMENDED
IN ACCORDANCE WITH PA ACT 287, AS AMENDED, THE SURVEYOR CONTACTED PA ONE CALL, INC., FOR A DESIGN PHASE LOCATION REQUEST. THE SERIAL NUMBER FOR THAT REQUEST IS 20222283634. THE SURVEYOR HAS MADE NO INDEPENDENT VERIFICATION OF THE INFORMATION PROVIDED OTHER THAN AS MAY BE READILY EVIDENT FROM THE SURFACE OF THE GROUND.
THE CONTRACTOR SHALL COMPLY WITH PA ACT 287, AS AMENDED REQUIREMENTS AND VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE START OF WORK.



ENGINEER'S STATEMENT
I, STEPHEN A. PANY, A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE ACCOMPANYING APPLICATION, PLANS AND SUPPORTING DOCUMENTATION ARE TRUE AND CORRECT, TO THE BEST OF MY KNOWLEDGE.
DATE _____ PLAN PREPARER'S SIGNATURE _____

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xref:--(desktop) [Extopo] [xref=TB 24x36] C:\ACAD\Acad\JWC\2022258 1429 Eck Rd - JGP\Landex\Current\Rev\19 - Truck Turning.dwg--JT-2 Emergency Vehicle Date: May 17, 2023 - 5:36pm **Pany & Lentz Engineering Company** USER: Chris



LEGEND

EXISTING FEATURES

INDEX CONTOUR
 CONTOUR
 SPOT ELEVATION
 CONCRETE CURB
 EDGE OF PAVEMENT
 CONCRETE WALK OR PAD
 PROPERTY LINE
 STORM SEWER & INLETS
 SANITARY SEWER & MANHOLE
 WATER LINE & VALVE
 FENCE
 ELECTRIC
 GAS
 LIGHT STANDARD
 SIGN POST
 TREE LINE
 DECIDUOUS TREE
 UTILITY POLE
 SOILS BOUNDARY
 RIP RAP APRON & SPILLWAY

ESPC SYMBOLS

ORANGE CONSTRUCTION FENCE
 12" COMPOST FILTER SOCK
 18" COMPOST FILTER SOCK
 24" COMPOST FILTER SOCK
 32" COMPOST FILTER SOCK
 ROCK CONSTRUCTION ENTRANCE WITH WASH RACK
 EROSION CONTROL BLANKET S75BN
 EROSION CONTROL BLANKET P300
 RIPRAP APRON
 TOPSOIL/SOIL STOCKPILE
 LIMIT OF DISTURBANCE/NPDES BOUNDARY
 STAGING AREA
 FILTER BAG
 STONE INLET PROTECTION
 CONCRETE WASHOUT FACILITY

SOIL DESCRIPTION TABLE

SYMBOL	NAME	SLOPE RANGE	CHARACTERISTICS	HYDROLOGIC SOIL GROUP	LIMITATIONS TO USE	RESOLUTIONS TO LIMITATIONS
CmB	CLARKSBURG SILT LOAM	3 TO 8%	MODERATE HAZARD OF EROSION SLOW PERMEABILITY, HIGH AVAILABLE MOISTURE CAPACITY.	C	POSS. SINKHOLE FORMATION; PIPING	SINKHOLE REPAIR; ANTI-SLEEP COLLAR
WaB	WASHINGTON SILT LOAM	3 TO 8%	MODERATE HAZARD OF EROSION MODERATE PERMEABILITY, HIGH AVAILABLE MOISTURE CAPACITY.	B	POSS. SINKHOLE FORMATION; PIPING	SINKHOLE REPAIR; ANTI-SLEEP COLLAR

RECEIVING WATERCOURSE TABLE

NAME	CLASSIFICATION
LITTLE CEDAR CREEK*	HIGH QUALITY, COLD WATER FISHERY

* DENOTES SPECIAL PROTECTION WATERSHED



CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

PA1 PCS SERIAL NUMBER 20222283634

- EROSION AND SEDIMENT CONTROL PLAN NOTES:**
- THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
 - AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP'S MUST BE REMOVED, AREAS DISTURBED DURING REMOVAL OF THE BMP'S MUST BE STABILIZED IMMEDIATELY.
 - UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED.
 - THERE ARE NO WETLANDS LOCATED ON OR ADJACENT TO THE AREA OF PROPOSED WORK.
 - THE INCREASE IN IMPERVIOUS AREA AND THE RESULTING THERMAL IMPACT WILL BE MITIGATED BY THE PROPOSED VEGETATED SWALES, INFILTRATION BEDS AND DIRECTING RUNOFF TO OTHER VEGETATED AREAS. AS A RESULT OF THE USE OF THESE CONTROLS, ANY THERMAL IMPACT CAUSED BY THIS PROJECT WILL BE NEGLIGIBLE. THE EAS PLAN HAS BEEN PLANNED, DESIGNED AND IMPLEMENTED TO BE CONSISTENT WITH THE PCSM PLAN.
 - THERE ARE NO EXISTING OR PROPOSED RIPARIAN FOREST BUFFERS AS PART OF THIS PROJECT.
 - THERE IS THE POTENTIAL FOR KARST SOIL CONDITIONS LOCATED ON SITE THAT COULD RESULT IN STORM WATER RUNOFF FROM THE SITE THAT DO NOT MEET WATER QUALITY STANDARDS FOR THE RECEIVING WATER COURSE. A SINK HOLE REPAIR DETAIL IS INCLUDED.
 - ANY SEDIMENT REMOVED FROM BMP'S OR ROADWAY SHALL BE DISPOSED OF IN PROPOSED LANDSCAPED AREA ON SITE OUTSIDE OF INFILTRATION BASINS AND SWALES. DISTURBED AREAS SHALL BE STABILIZED IMMEDIATELY.
 - ANTICIPATED CONSTRUCTION WASTES INCLUDE BUT ARE NOT LIMITED TO LUMBER, SHEET ROCK, ASPHALT, CONCRETE AND OTHER NON-BUILDING MATERIALS. ANY WASTES GENERATED SHALL BE DISPOSED OF AS NOTED ABOVE.

ENVIRONMENTAL DUE DILIGENCE

ENVIRONMENTAL DUE DILIGENCE: THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECT TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY MANAGEMENT OF FILL.

DEFINITION OF CLEAN FILL

CLEAN FILL IS DEFINED AS: UNCONTAMINATED NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESS FOR RE-USE).

CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENTS POLICY MANAGEMENT OF FILL.

ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL. A COPY OF FORM FP-001 CAN BE FOUND AT THE END OF THESE INSTRUCTIONS.

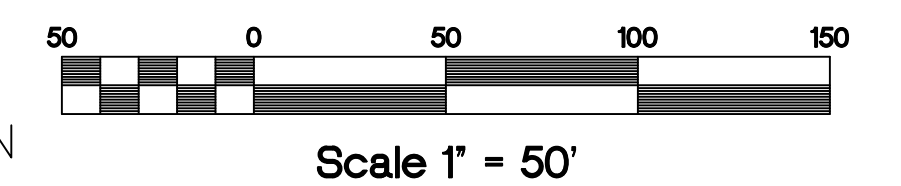
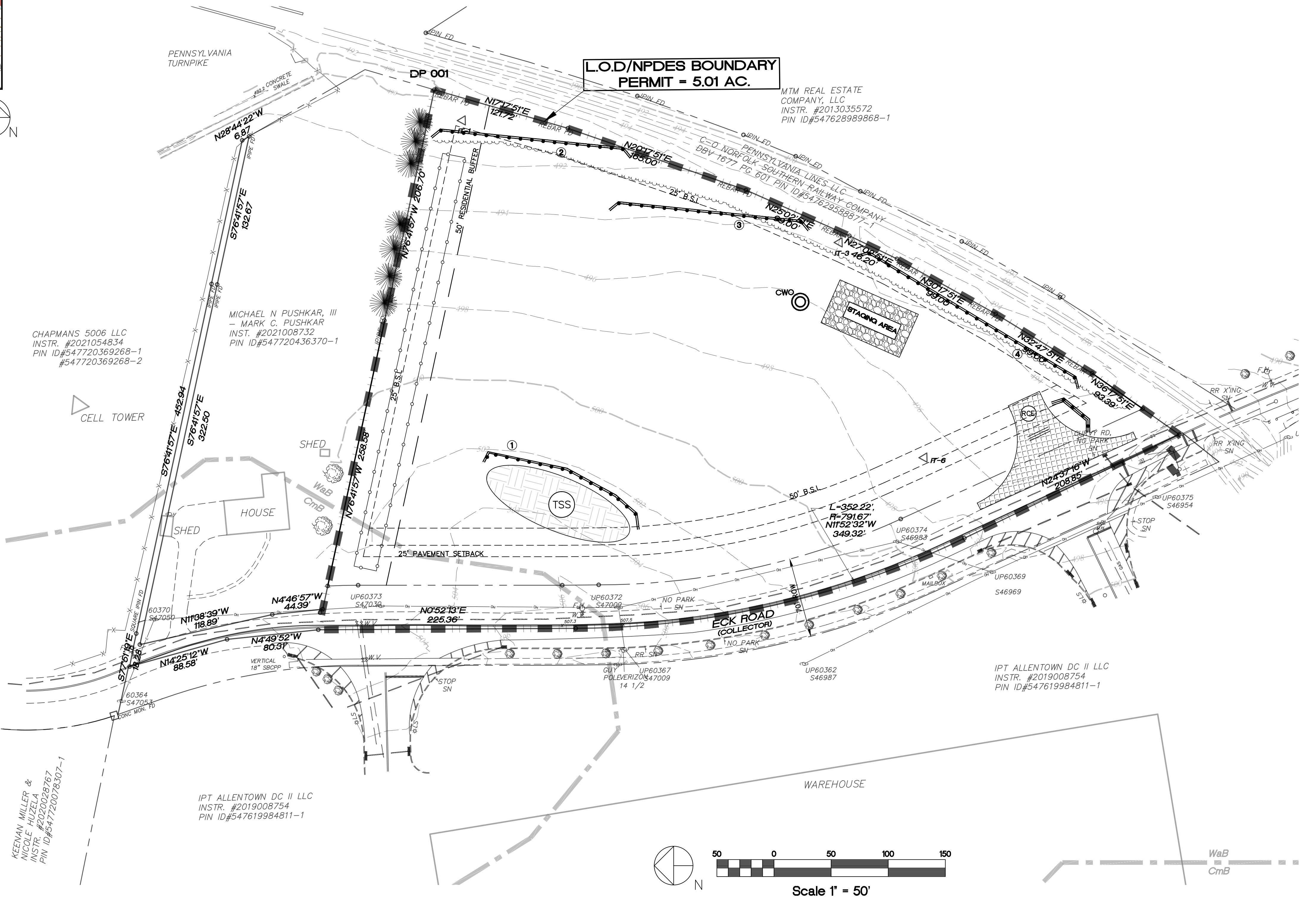
CRITICAL STAGING NOTE:

SEE POST CONSTRUCTION STORM WATER MANAGEMENT PLAN FOR CONSTRUCTION NOTES AND DETAILS FOR PCSM BMP'S REFERENCED ON THIS PLAN.

CRITICAL STAGES OF IMPLEMENTATION FOR WHICH A LICENSED PROFESSIONAL OR DESIGNER MUST BE PRESENT ON SITE TO PERFORM REQUIRED OBSERVATIONS INCLUDE:

- MARKING OF LIMITS OF DISTURBANCE FOR SPRAY IRRIGATION AREA AND OVERALL LIMITS.
- INSTALLATION OF DETENTION BASIN OUTLET CONTROL STRUCTURE.
- INSTALLATION OF SPRAY IRRIGATION SYSTEM.
- OVERSIGHT FOR THE SPRAY IRRIGATION SYSTEM ACTIVATION.

SEE STAGING OF EARTH MOVING ACTIVITIES.



FINAL EROSION + SEDIMENT POLLUTION CONTROL PLAN STAGE 1

PANY & LENTZ ENGINEERING COMPANY

CONSULTING ENGINEERS
 CIVIL • STRUCTURAL • MECHANICAL • MACHINERY

609 Hamilton Street • Allentown, PA 18101
 Office: 610/433-1634 • Fax: 610/433-1636

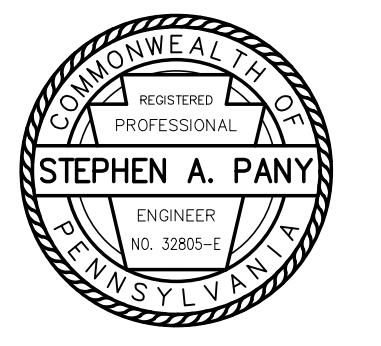
DESIGNED	SLP
DRAWN	BMW
CHECKED	MFS
JOB NO.	2022258
SCALE	1" = 50' U.N.O.
DATE	MAY 15, 2023
DWG. NO.	ES-1
SHEET NO.	21
OF	32
REV.	0

THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART I, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.

PA ACT 287, AS AMENDED

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ENGINEER'S STATEMENT

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DATE _____ PLAN PREPARER'S SIGNATURE _____

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ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SOUTH WHITEHALL TOWNSHIP STANDARD SPECIFICATIONS.

Vertical Text: Date: May 17, 2023 - 5:36pm Pany & Lentz Engineering Company - User: Chris

ENVIRONMENTAL DUE DILIGENCE

ENVIRONMENTAL DUE DILIGENCE - THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECT TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY MANAGEMENT OF FILL.

DEFINITION OF CLEAN FILL

CLEAN FILL IS DEFINED AS: UNCONTAMINATED NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM USED ASPHALT DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE).

CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENTS POLICY MANAGEMENT OF FILL.

ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL. A COPY OF FORM FP-001 CAN BE FOUND AT THE END OF THESE INSTRUCTIONS.

INLET PROTECTION DRAINAGE AREA TABLE

Table with 3 columns: PROPOSED INLET, DRAINAGE AREA, PROTECTION TYPES. Lists various inlet types and their corresponding drainage areas and protection methods like Filter Bag, Stone, or Filter Bag.

EROSION AND SEDIMENT CONTROL PLAN NOTES:

- 1. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
2. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMPs MUST BE STABILIZED IMMEDIATELY.
3. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED.
4. THERE ARE NO WETLANDS LOCATED ON OR ADJACENT TO THE AREA OF PROPOSED WORK.
5. THE INCREASE IN IMPERVIOUS AREA AND THE RESULTING THERMAL IMPACT WILL BE MITIGATED BY THE PROPOSED VEGETATED SWALES, DETENTION BASIN AND DIRECTING RUNOFF TO OTHER VEGETATED AREAS AS A RESULT OF THE USE OF THESE CONTROLS, ANY THERMAL IMPACT CAUSED BY THIS PROJECT WILL BE NEGLIGIBLE.
6. THE E&S PLAN HAS BEEN PLANNED, DESIGNED AND IMPLEMENTED TO BE CONSISTENT WITH THE PCSM PLAN.
7. THERE ARE NO EXISTING OR PROPOSED RIPARIAN FOREST BUFFERS AS PART OF THIS PROJECT.
8. THERE IS THE POTENTIAL FOR KARST SOIL CONDITIONS LOCATED ON SITE THAT COULD RESULT IN STORM WATER RUNOFF FROM THE SITE THAT DO NOT MEET WATER QUALITY STANDARDS FOR THE RECEIVING WATER COURSE. A SINK HOLE REPAIR DETAIL IS INCLUDED.
9. ANY SEDIMENT REMOVED FROM BMPs OR ROADWAY SHALL BE DISPOSED OF IN PROPOSED LANDSCAPED AREA ON SITE OUTSIDE OF INFILTRATION AREAS AND SWALES. DISTURBED AREAS SHALL BE STABILIZED IMMEDIATELY.
10. ANTI-CIPICATED CONSTRUCTION WASTES INCLUDE BUT ARE NOT LIMITED TO LUMBER, SHEET ROCK, ASPHALT, CONCRETE AND OTHER TYPICAL BUILDING MATERIALS. ANY WASTES GENERATED SHALL BE DISPOSED OF AS NOTED ABOVE.

NOTE:

SEE POST CONSTRUCTION STORM WATER MANAGEMENT PLAN FOR CONSTRUCTION NOTES AND DETAILS FOR PCSM BMPs REFERENCED ON THIS PLAN.

CRITICAL STAGES OF IMPLEMENTATION FOR WHICH A LICENSED PROFESSIONAL OR DESIGNER SHALL BE PRESENT ON SITE TO PERFORM REQUIRED OBSERVATIONS INCLUDE:

- 1. MARKING OF LIMITS OF DISTURBANCE FOR SPRAY IRRIGATION AREA AND OVERALL LIMITS.
2. INSTALLATION OF DETENTION BASIN OUTLET CONTROL STRUCTURE.
3. INSTALLATION OF SPRAY IRRIGATION SYSTEM.
4. CONVERSION OF SEDIMENT BASIN TO DETENTION BASIN.
5. OVERSIGHT FOR THE SPRAY IRRIGATION SYSTEM ACTIVATION.

SEE STAGING OF EARTH MOVING ACTIVITIES.

STAGING OF EARTH MOVING ACTIVITIES

NOTE: AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER, AND THE NORTHAMPTON COUNTY CONSERVATION DISTRICT TO AN ON-SITE MEETING.

AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR BURIED UTILITIES LOCATIONS.

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.

THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT SOLID WASTE REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.

FOR ALL STAGES:

- a. SEDIMENT AND EROSION CONTROL BEST MANAGEMENT PRACTICES (BMPs) MAY BE REMOVED WHEN THE TRIBUTARY AREA TO A PARTICULAR BMP IS STABILIZED. FOR PERMANENT STABILIZATION, A DISTURBED AREA SHALL BE COVERED WITH EITHER A MINIMUM UNIFORM 70 PERCENT PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENT.
b. DISPOSAL OF ACCUMULATED SEDIMENT FROM THE REMOVAL OF THESE FACILITIES SHALL BE IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES ON SITE.
c. ANY DISTURBED AREAS CAUSED BY THE REMOVAL OF THESE FACILITIES AND ANY DISPLACED SEDIMENT SHALL BE IMMEDIATELY FERTILIZED, SEEDED AND MULCHED. RE-SPREAD TOPSOIL AND IMMEDIATELY FERTILIZE, SEED WITH A PERMANENT SEED MIXTURE AND MULCH.
d. INSPECT AND MAINTAIN EXISTING SEDIMENT AND EROSION CONTROL BMPs ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. PERFORM REPAIRS/REPLACE IMMEDIATELY.
e. CONTRACTOR SHALL PROVIDE WATER SOURCE FOR USE AT WASH RACK IN ROCK CONSTRUCTION ENTRANCE.
f. CONTRACTOR SHALL COORDINATE WITH LICENSED PROFESSIONAL OR DESIGNER FOR NECESSARY OBSERVATION OF CRITICAL STAGES OF PCSM BMP IMPLEMENTATION AS NOTED IN STAGING.

STAGE 1 - INSTALL PERIMETER CONTROLS

- a. MARK LIMITS OF DISTURBANCE IN FIELD INCLUDING LIMITS AROUND SPRAY IRRIGATION AREAS AT EXISTING GRADE SO THAT NO CONSTRUCTION TRAFFIC OCCURS IN AREAS AS SHOWN ON THE POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM) PLAN. INSTALL PROTECTIVE FENCING AROUND BMP AREAS AS SHOWN. THIS IS A CRITICAL STAGE PER THE PCSM.
b. INSTALL ROCK CONSTRUCTION ENTRANCE WITH WASH RACK FROM ECK ROAD AS SHOWN ON PLANS. INSTALLATION INCLUDES REMOVING TOPSOIL FROM AREA OF ENTRANCE AS NECESSARY. PLACE ANY TOPSOIL REMOVED IN STOCKPILES AND STABILIZE IN ACCORDANCE WITH DETAILS. STABILIZE ENTRANCE. INSTALL COMPOST FILTER SOCK #1 ASSOCIATED WITH STOCKPILE AT LOCATIONS SHOWN ON PLANS. INSTALL 24" COMPOST FILTER SOCKS AT DISCHARGE POINT FROM WASH RACKS.
c. INSTALL AND STABILIZE ROCK STAGING AREA AT LOCATION SHOWN ON PLAN. PLACE ANY TOPSOIL REMOVED IN STOCKPILE AND STABILIZE.
d. ESTABLISH AND UTILIZE CONCRETE WASHOUT FACILITIES AS NEEDED DURING DRAINAGE AND SITE CONSTRUCTION.
e. INSTALL COMPOST FILTER SOCK #2, #3, AND #4 AT LOCATION SHOWN ON PLANS.

STAGE 2 - BASIN CONSTRUCTION AND SITE IMPROVEMENTS

- a. PERFORM EARTHMOVING ACTIVITIES TO PREPARE DRIVEWAY AND PARKING LOT SUBGRADE. UPON COMPLETION OF GRADING, IMMEDIATELY SPREAD AMENDED TOPSOIL, SEED, FERTILIZER AND INSTALL EROSION CONTROL BLANKETS.
b. RELOCATE COMPOST FILTER SOCK #2, #3, AND #4 AS NECESSARY.
c. PERFORM EARTHMOVING ACTIVITIES TO CONSTRUCT DETENTION BASIN 1 BERM. INSTALL PROPOSED BASIN 1 OUTLET PIPE AND STRUCTURE IN ACCORDANCE WITH DETAILS ON THE PLANS WITH ANTI-SLOPE COLLAR. GRADE BOTTOM OF BERM TO SUPPLY COVER OVER OUTLET PIPE. INSTALLATION OF OUTLET STRUCTURE IS A PCSM CRITICAL STAGE REQUIRING OBSERVATION. BASIN BERM SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS ON THE PLAN. INSTALL ES-D1 AND STUB OUT PIPE FOR FUTURE CONNECTION. INSTALL RIPRAP AT ES-D1 IN ACCORDANCE WITH DETAILS ON PLANS. IMMEDIATELY TOPSOIL, SEED AND FERTILIZE AREAS OF FINISHED GRADES OUTSIDE OF BERM. INSTALL EROSION CONTROL BLANKETS IN LOCATIONS SHOWN ON PLANS. INSTALL SPILLWAY IN ACCORDANCE WITH DETAILS ON PLANS.
d. MEANWHILE, INSTALL STORM SEWER FROM ES-A1 TO MH-A3, ES-B1 TO I-B5, AND ES-C1 TO I-C2. INSTALL INLET PROTECTION DEVICES AROUND EACH NEW INLET. STUB OUT PIPE FROM MH-A3 FOR FUTURE CONNECTION. INSTALL RIPRAP APRON AT ES-A1, ES-B1, AND ES-C1 IN ACCORDANCE WITH DETAILS ON PLANS.
e. SIMULTANEOUSLY, COMPLETE INSTALLATION OF DETENTION BASIN 1. INSTALL THE SPRAY BASIN INTAKE STRUCTURE AND BASIN LINER. INSTALL SPRAY PUMP STATION AND PIPING THROUGH THE BASIN BERM.
f. CONTINUE ON-SITE MASS GRADING, PROTECT AREAS OF SPRAY IRRIGATION FROM CONSTRUCTION TRAFFIC AND COMPACTION.
g. BEGIN INSTALLATION OF OTHER UNDERGROUND UTILITIES INCLUDING SANITARY SEWER AND WATER.
h. PERFORM MAINTENANCE ON EXISTING EROSION AND SEDIMENT CONTROL MEASURES ON A WEEKLY BASIS, AFTER EACH RUNOFF EVENT OR IF DAMAGED BY CONSTRUCTION ACTIVITIES. REPAIR/REPLACE BMPs IMMEDIATELY. IF A COMPOST FILTER SOCK FAILS AT ANY POINT DURING CONSTRUCTION, THEN IT MUST BE REPAIRED/REPLACED BY THE CONTRACTOR IMMEDIATELY, BEING SURE TO NOT PUNCTURE BASIN LINER IN THE PROCESS.

STAGE 3 - ROAD WIDENING, PCSM BMP INSTALLATION AND PROJECT COMPLETION

- a. BEGIN EARTH MOVING ACTIVITIES TO ESTABLISH SUBGRADE IN AREA OF ECK ROAD WIDENING. INSTALL SUBBASE AND STONE BASE COURSE.
b. PERFORM ROAD WIDENING ON ECK ROAD ACROSS SITE FRONTAGE.
c. IMMEDIATELY APPLY TOPSOIL, PERMANENT SEED MIXTURE, FERTILIZER, MULCH AND EROSION CONTROL BLANKETS AS SHOWN ON THE PLANS UPON REACHING FINAL GRADES AS SHOWN ON PLANS.
d. COMPLETE UNDERGROUND UTILITY INSTALLATION.
e. MEANWHILE, INSTALL CURB, SUBBASE AND BASE COURSES IN PROPOSED DRIVEWAY AND PARKING AREA UPON COMPLETION OF UTILITY WORK TO MINIMIZE AREA OF POTENTIAL EROSION.
f. INSTALL FINAL PAVING WEARING COURSE.
g. COMPLETE BUILDING CONSTRUCTION.
h. INSTALL SPRAY IRRIGATION SYSTEM IN AREAS OUTSIDE OF THE BASIN. THIS IS A PCSM CRITICAL STAGE.
i. COMPLETE INSTALLATION OF SPRAY IRRIGATION SYSTEM.
j. ON LOT SEDIMENT CONTROL BMPs MAY BE REMOVED ONCE TRIBUTARY AREA IS STABILIZED. FOR PERMANENT STABILIZATION, A DISTURBED AREA SHALL BE COVERED WITH EITHER A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENT. DISPOSE OF ANY ACCUMULATED SEDIMENT AS NOTED. IMMEDIATELY STABILIZE AREAS DISTURBED BY THE REMOVAL OF SEDIMENT CONTROL BMPs.
k. UPON PERMANENT STABILIZATION OF EARTH DISTURBANCE ACTIVITY UNDER 25 PA. CODE § 102.22(A)(2) AND INSTALLATION OF BMPs IN ACCORDANCE WITH THE APPROVED PLAN PREPARED AND IMPLEMENTED IN ACCORDANCE WITH 25 PA. CODE § 102.4 AND 102.8, THE PERMITTEE AND/OR CO-PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION (NOT) TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT.

STANDARD EROSION AND SEDIMENT CONTROL PLAN NOTES:

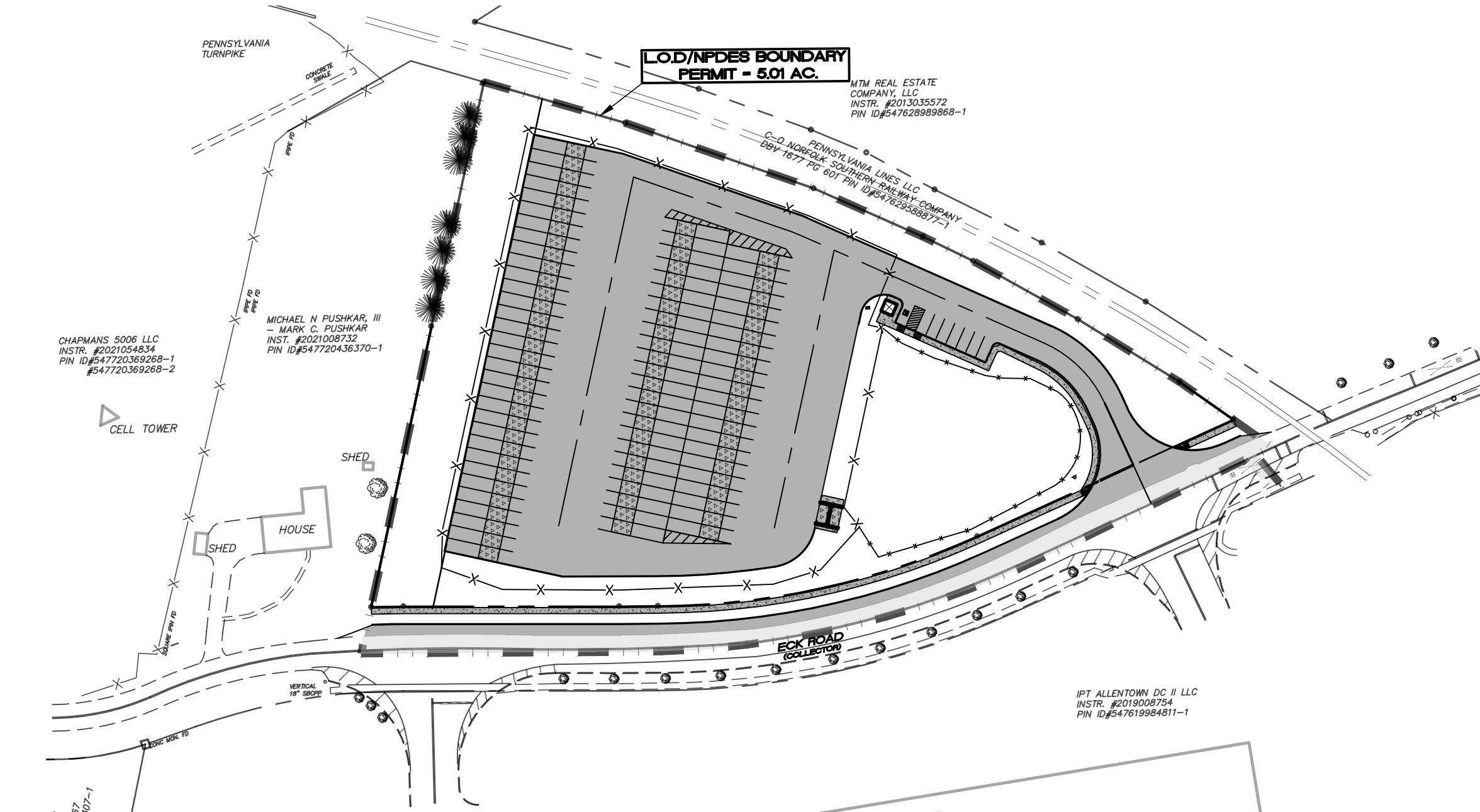
- 1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE THROUGHOUT THE PROJECT AND FOR THE DURATION OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
2. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL NOTIFY ALL CONTRACTORS, LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
3. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTABLE MATERIAL.
6. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPs SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
7. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS UNLESS AREAS OUTSIDE OF THE LIMITS ARE ALSO WITHIN THE LIMITS OF AN APPROVED EROSION AND SEDIMENT CONTROL PLAN. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
9. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
10. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
11. ALL OFF-SITE EROSION AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON THE SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL UNDER LOCAL TESTING.
13. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, UNDER UNDISTURBED VEGETATED AREAS. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING INTO A DRAINAGE SWALE.
14. VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM THE SITE ONTO KESSLERSVILLE ROAD. VEHICLES MAY ONLY ENTER AND EXIT THE CONSTRUCTION SITE VIA A STABILIZED ROCK CONSTRUCTION ENTRANCE.
15. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED MUST BE REQUIRED.
16. A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
17. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELLED, OR SWEEP INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
18. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
19. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
20. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
21. ALL FILLS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
22. FROZEN MATERIALS OR SOFT, MUDDY, OR COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
23. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
24. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
25. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDING AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
26. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
27. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
28. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
29. EROSION AND SEDIMENT BMPs MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPs. E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THE SITE IS REPLACED BY ANOTHER APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
30. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPs.
31. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPs. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPs SHALL BE STABILIZED IMMEDIATELY IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS. SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
32. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
33. FAILURE TO CORRECTLY INSTALL E&S BMPs, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPs MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 PER DAY IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.
34. IN THE EVENT OF SINKHOLE DISCOVERY A PROFESSIONAL GEOLOGIST OR ENGINEER WILL BE CONTACTED CONCERNING MITIGATION. ADDITIONALLY, THE LEHIGH COUNTY CONSERVATION DISTRICT WILL BE MADE AWARE OF THE SINKHOLE DISCOVERY IMMEDIATELY.
35. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
36. CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.
37. ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIAL/WASTES.
38. EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.

STANDARD INSPECTION AND MAINTENANCE NOTES:

- 1. PERFORM MAINTENANCE ON EXISTING EROSION AND SEDIMENT CONTROL MEASURES ON A WEEKLY BASIS, AFTER EACH RUNOFF EVENT OR IF DAMAGED BY CONSTRUCTION ACTIVITIES. REPAIR/REPLACE BMPs IMMEDIATELY. IF A COMPOST FILTER SOCK FAILS AT ANY POINT DURING CONSTRUCTION, THEN IT MUST BE REPAIRED/REPLACED BY THE CONTRACTOR IMMEDIATELY.
2. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED MUST BE REQUIRED.
3. A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
4. SEE SPECIFIC BMP INSPECTION AND MAINTENANCE NOTES ASSOCIATED WITH EACH DETAIL.

FINAL EROSION + SEDIMENT POLLUTION CONTROL PLAN NOTES

PANY & LENTZ ENGINEERING COMPANY
CONSULTING ENGINEERS
1429 ECK ROAD
OUTDOOR STORAGE
SOUTH WHITEHALL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA
J.G. PETRUCCI CO. INC.
71 ROUTE 73
SUITE 201
ASBURY, NEW JERSEY 08802
DESIGNED: JAP
DRAWN: BMW
CHECKED: MFS
JOB NO.: 2022256
SCALE: 1" = 50' U.N.O.
DATE: MAY 15, 2023
DWG. NO.: ES-3
SHEET NO.: 23
REV.: 0
OF 32 SHEETS



NOTE: EXISTING COVER CONSISTS OF ROW CROPS

Cover Type Legend - Proposed. Legend includes: VEGETATED AREAS (stippled), BUILDING ROOF AREA (cross-hatched), NEW PAVEMENT/SIDEWALK (solid grey), and EXISTING PAVEMENT/SIDEWALK (dotted).

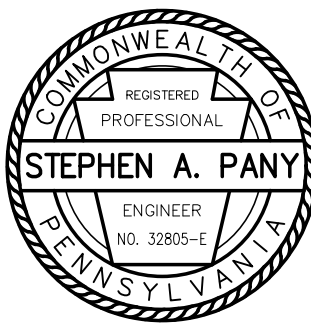
COVER TYPE LEGEND - PROPOSED

SCALE: 1"=100'

PA ACT 287, AS AMENDED

IN ACCORDANCE WITH PA ACT 287, AS AMENDED, THE SURVEYOR CONTACTED PA ONE CALL, INC., FOR A DESIGN PHASE LOCATION REQUEST. THE SERIAL NUMBER FOR THAT REQUEST IS 2022283634. THE SURVEYOR HAS MADE NO INDEPENDENT VERIFICATION OF THE INFORMATION PROVIDED OTHER THAN AS MAY BE READILY EVIDENT FROM THE SURFACE OF THE GROUND.

THE CONTRACTOR SHALL COMPLY WITH PA ACT 287, AS AMENDED REQUIREMENTS AND VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE START OF WORK.



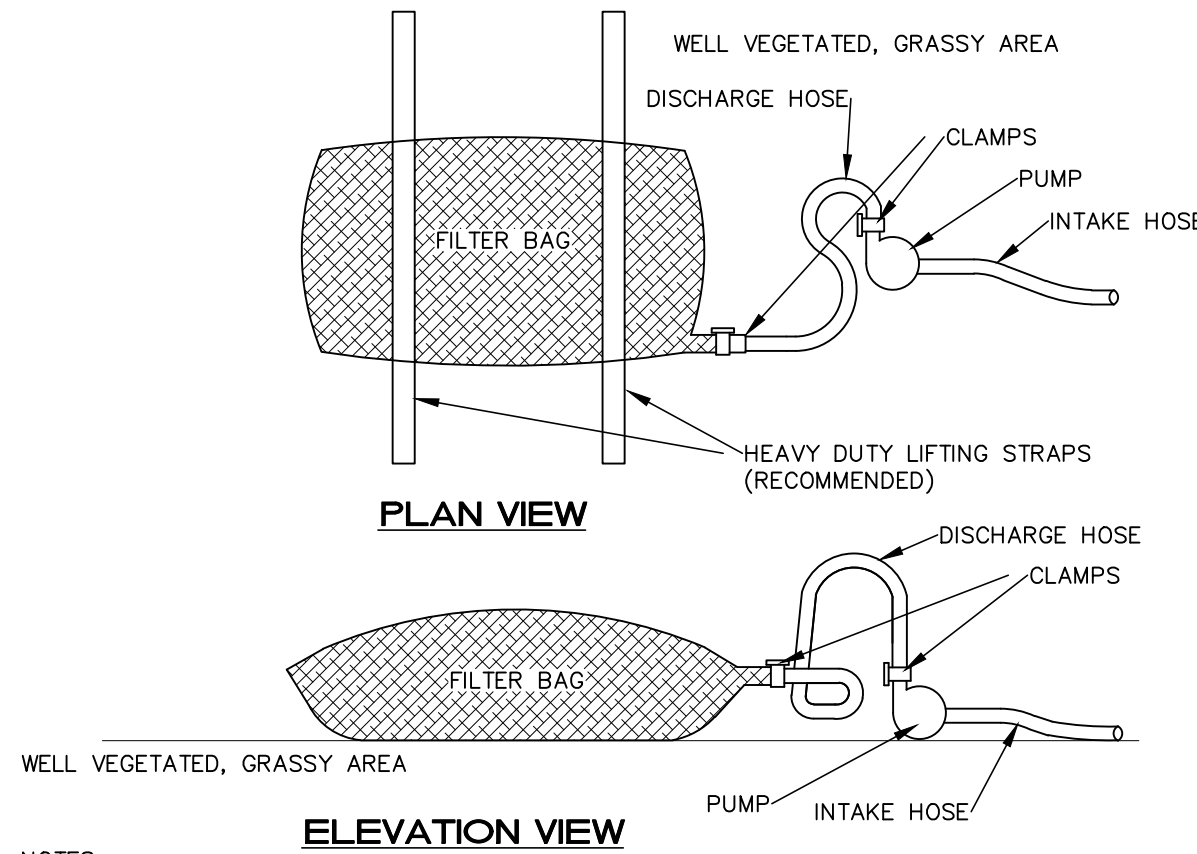
ENGINEER'S STATEMENT

I, STEPHEN A. PANY, A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE ACCOMPANYING APPLICATION, PLANS AND SUPPORTING DOCUMENTATION ARE TRUE AND CORRECT, TO THE BEST OF MY KNOWLEDGE.

DATE: _____ PLAN PREPARER'S SIGNATURE: _____

Pany & Lentz Engineering Company accepts no responsibility for unauthorized use of this document. Reproduction of this drawing or any portion thereof is prohibited without the written consent of Pany & Lentz Engineering Company. Only final construction documents signed and sealed by the Engineer of Record are valid. All written dimensions shall take priority over scaled dimensions. The contractor shall be responsible for verifying all locations, elevations, dimensions and conditions prior to construction. The contractor shall notify Pany & Lentz Engineering Company of any discrepancies with the information shown on the drawings.

ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SOUTH WHITEHALL TOWNSHIP STANDARD SPECIFICATIONS.



NOTES:
LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "I" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5% FOR SLOPES EXCEEDING 5% CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HO OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

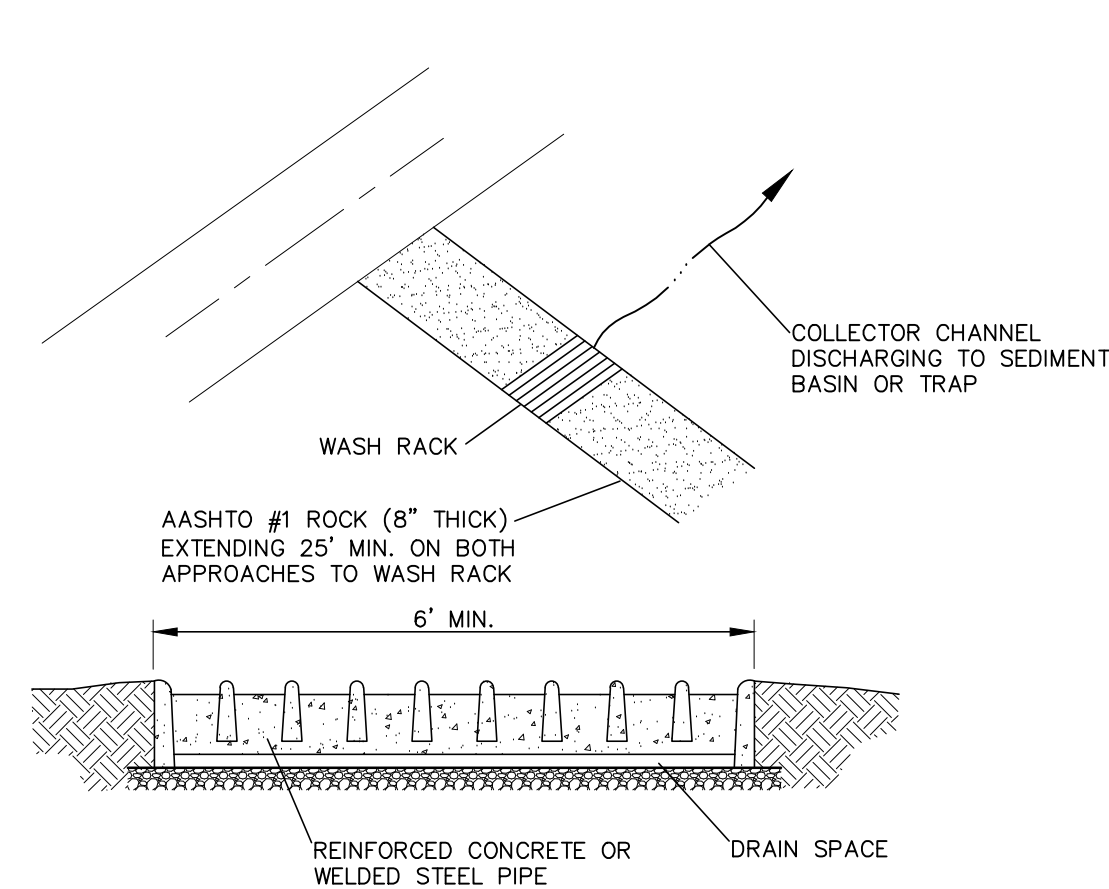
THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG

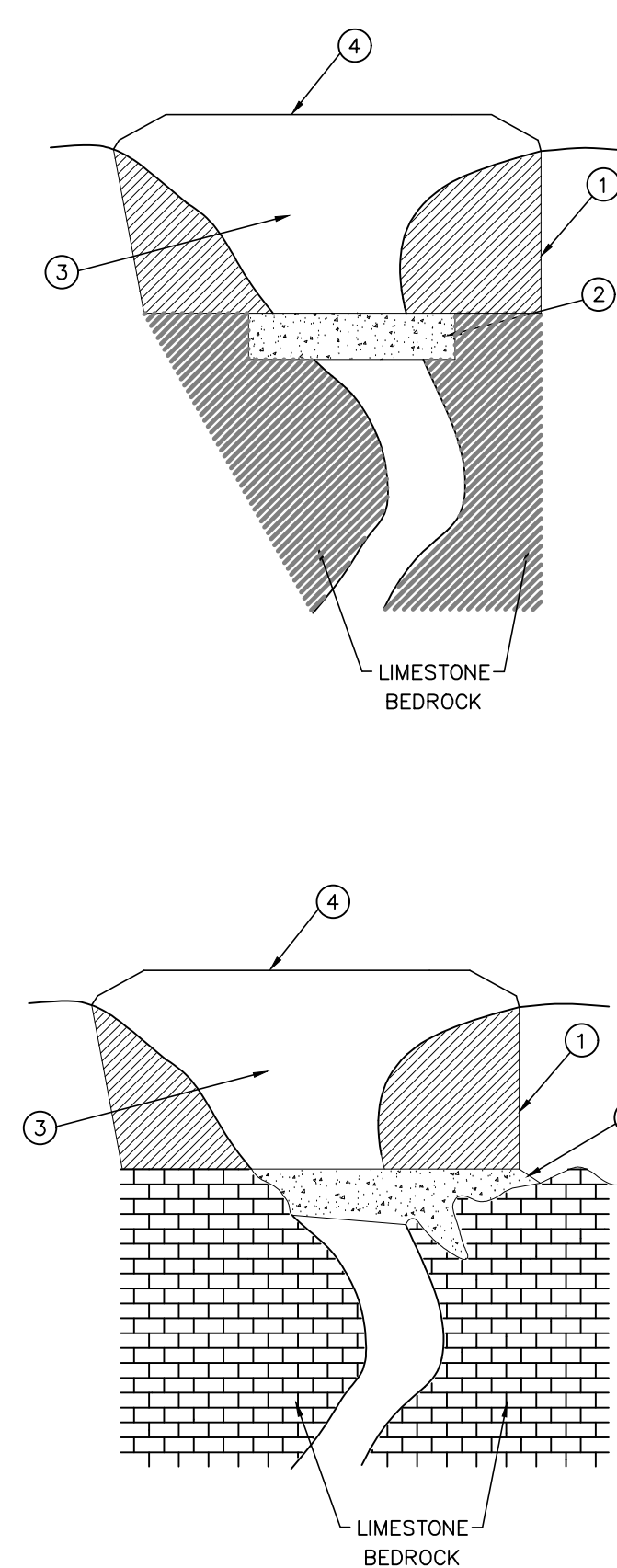
NOT TO SCALE



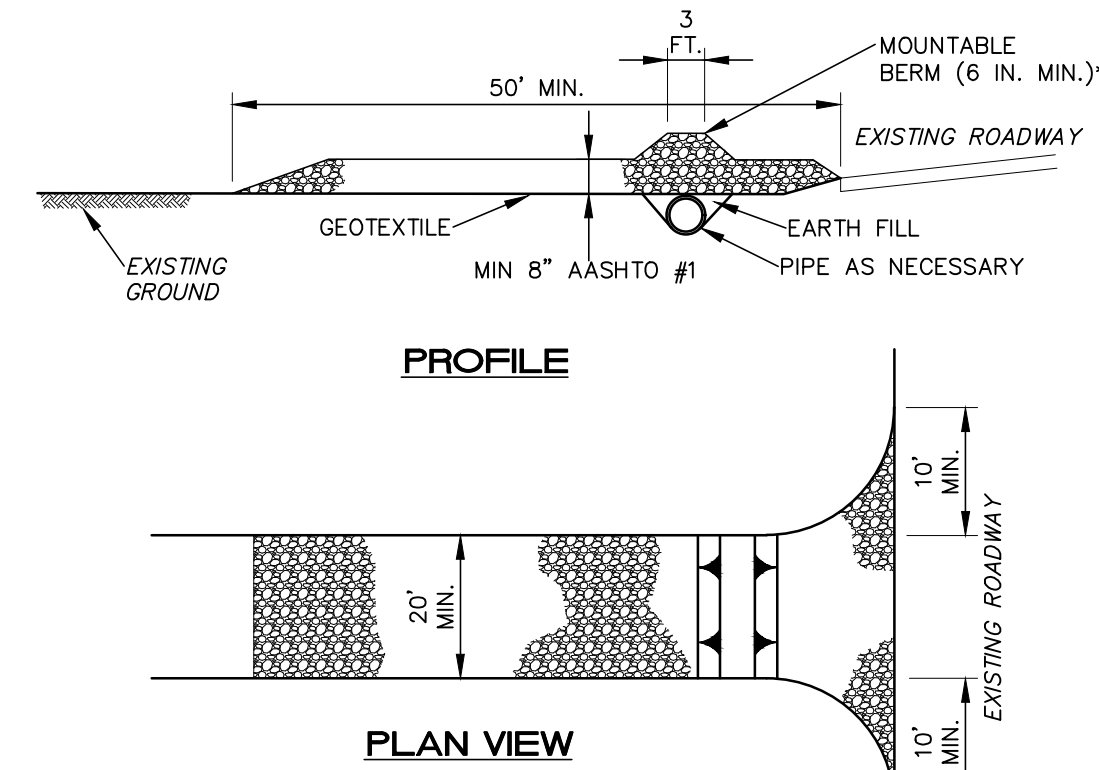
NOTES:
WASH RACK SHALL BE 20 FEET (MIN.) WIDE OR TOTAL WIDTH OF ACCESS.
WASH RACK SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE ANTICIPATED CONSTRUCTION VEHICULAR TRAFFIC.
A WATER SUPPLY SHALL BE MADE AVAILABLE TO WASH THE WHEELS OF ALL VEHICLES EXITING THE SITE.
MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. DRAIN SPACE UNDER WASH RACK SHALL BE KEPT OPEN AT ALL TIMES. DAMAGE TO THE WASH RACK SHALL BE REPAIRED PRIOR TO FURTHER USE OF THE RACK. ALL SEDIMENT DEPOSITED ON ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STANDARD CONSTRUCTION DETAIL #3-2 ROCK CONSTRUCTION ACCESS WITH WASH RACK

NOT TO SCALE



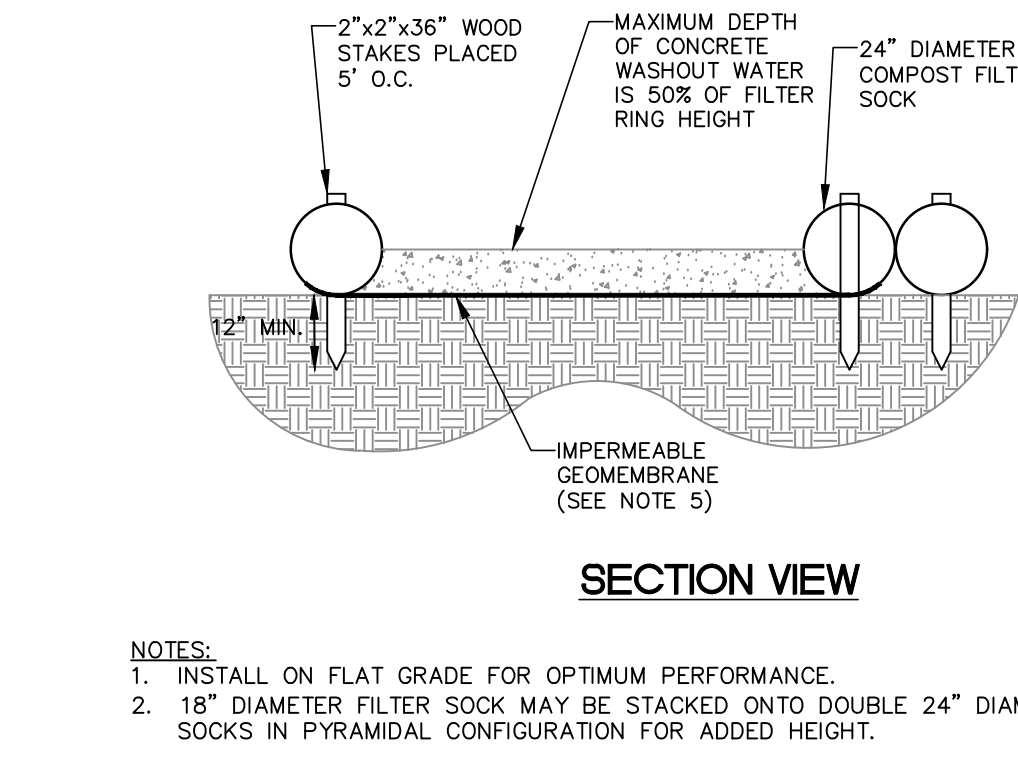
NOTES:
MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. DRAIN SPACE UNDER WASH RACK SHALL BE KEPT OPEN AT ALL TIMES. DAMAGE TO THE WASH RACK SHALL BE REPAIRED PRIOR TO FURTHER USE OF THE RACK. ALL SEDIMENT DEPOSITED ON ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.



NOTES:
REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.
MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STANDARD CONSTRUCTION DETAIL #3-1 ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE



NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
2. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.

COMPOST FILTER SOCK CONCRETE WASH OUT DETAIL

NOT TO SCALE

NOTES:
1. SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL.
2. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.
3. COMPOST FILTER SOCK SHALL BE PLACED, MAINTAINED AND REMOVED PER SCD 4-1.
4. WASH OUT SHALL BE LOCATED AS NEEDED. LOCATION SHALL BE MINIMUM 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS WITHOUT INLET PROTECTION, WETLANDS, BUFFERS, WATER COURSES AND MAIN CONSTRUCTION TRAFFIC PATHS.
5. A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.

COMPOST FILTER SOCK CONCRETE WASH OUT DETAIL

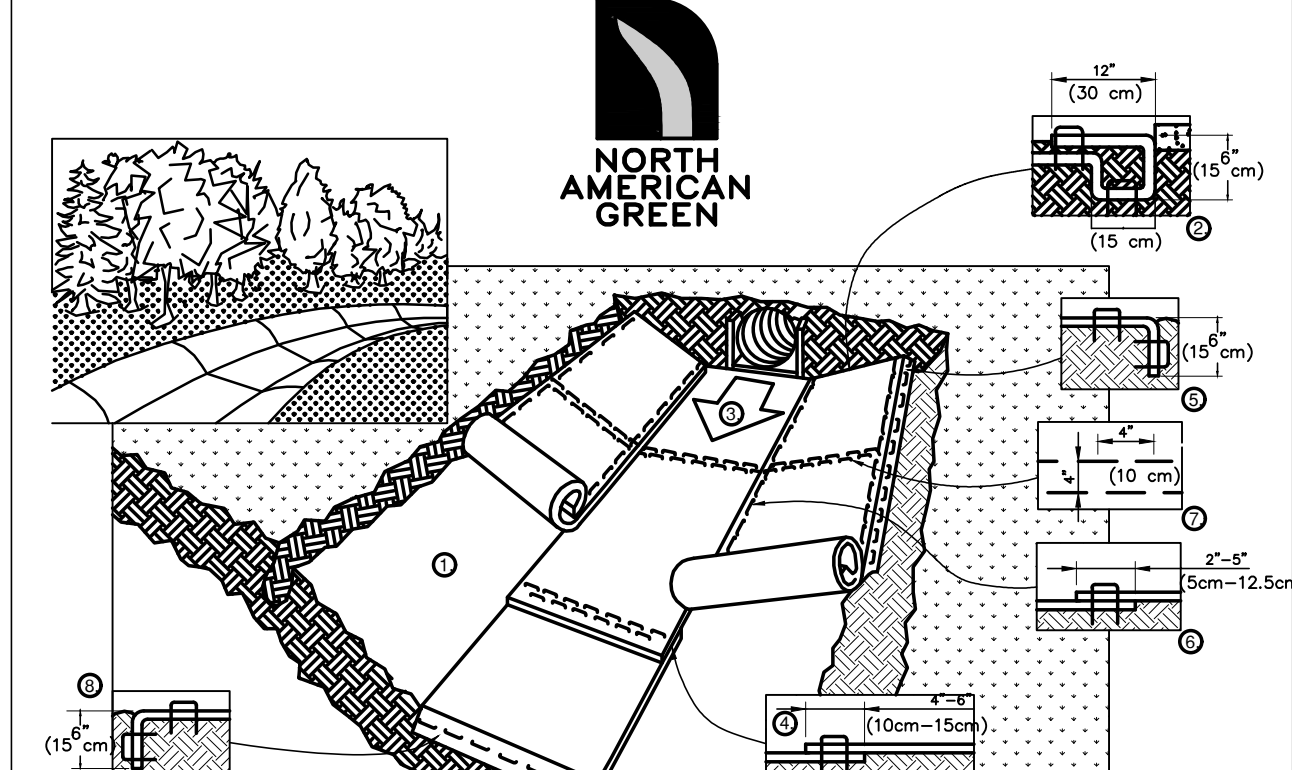
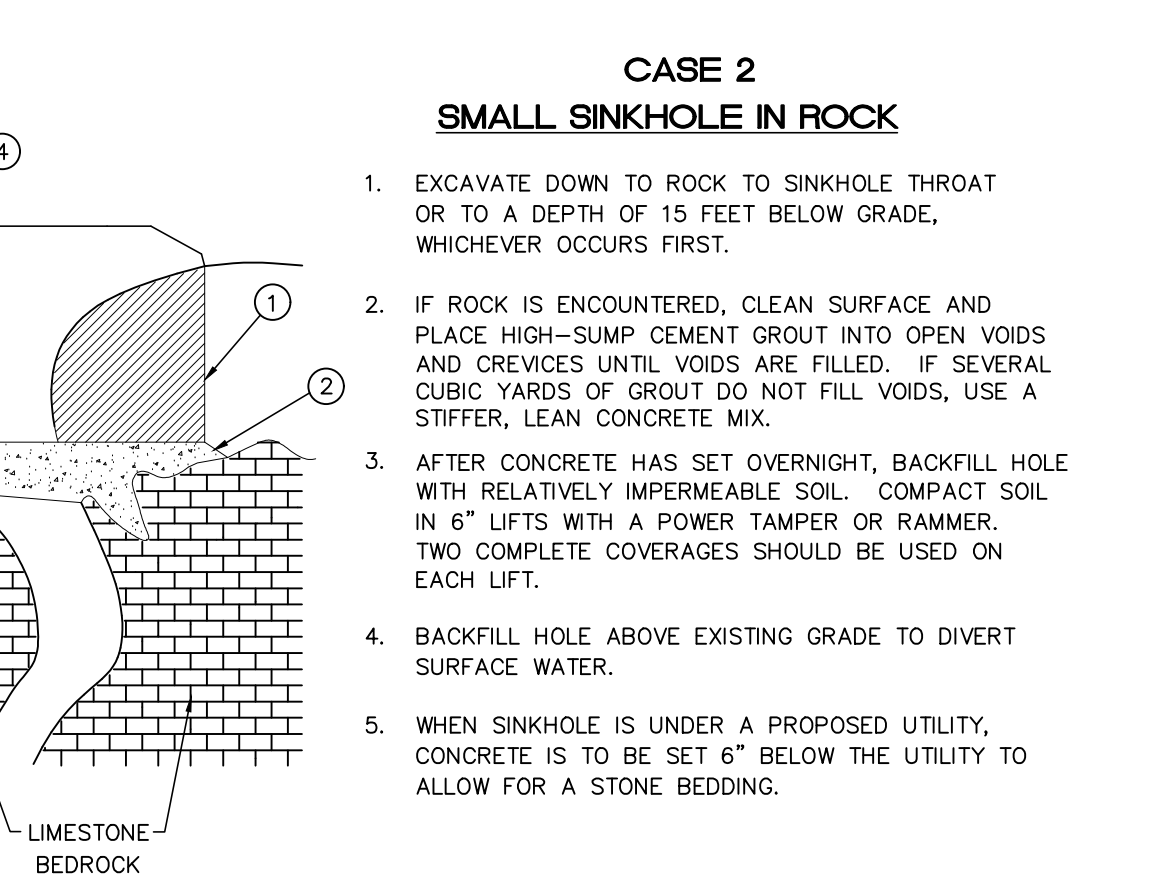
NOT TO SCALE

**CASE 1
SMALL SINKHOLE IN SOIL**

- EXCAVATE DOWN TO ROCK TO SINKHOLE THROAT OR TO A DEPTH OF 15 FEET BELOW GRADE, WHICHEVER OCCURS FIRST.
- IF NO ROCK IS ENCOUNTERED, PLUG SOIL THROAT WITH GROUT OR CONCRETE. IF A CLEARLY DEFINED THROAT IS NOT ENCOUNTERED AFTER 10 FEET, STOP EXCAVATION. GENERALLY, A ZONE OF SOFT, IN-FILL MATERIAL WILL BE FOUND WHICH COVERS MOST OF THE BOTTOM OF THE EXCAVATION. COVER THIS AREA WITH 4 FEET OF CONCRETE EXTENDING AT LEAST 1 FOOT INTO FIRM SOIL. IF THE SOFT ZONE IS LARGE, (>3 FT), REINFORCING STEEL SHOULD BE INCLUDED WITHIN THE CONCRETE CAP.
- AFTER CONCRETE HAS SET OVERNIGHT, BACKFILL HOLE WITH RELATIVELY IMPERVIOUS SOIL. COMPACT SOIL IN 6" LIFTS WITH A POWER TAMPER OR RAMMER. TWO COMPLETE COVERAGES SHOULD BE USED ON EACH LIFT.
- BACKFILL HOLE ABOVE EXISTING GRADE TO DIVERT SURFACE WATER.
- WHEN SINKHOLE IS UNDER A PROPOSED UTILITY, CONCRETE IS TO BE SET 6" BELOW THE UTILITY TO ALLOW FOR A STONE BEDDING.

**CASE 2
SMALL SINKHOLE IN ROCK**

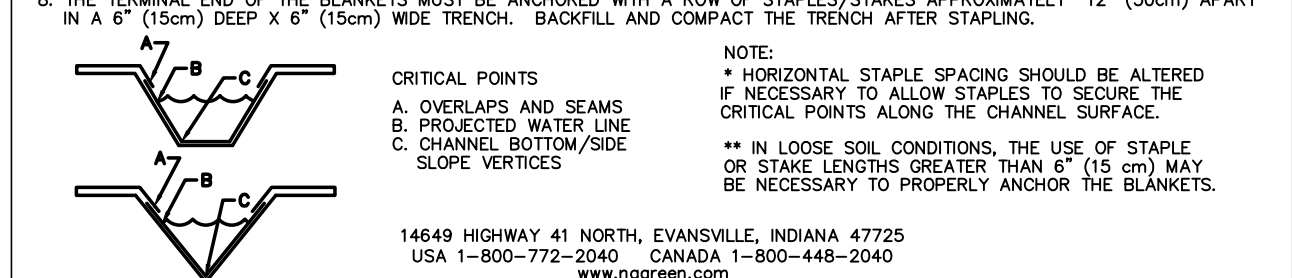
- EXCAVATE DOWN TO ROCK TO SINKHOLE THROAT OR TO A DEPTH OF 15 FEET BELOW GRADE, WHICHEVER OCCURS FIRST.
- IF ROCK IS ENCOUNTERED, CLEAN SURFACE AND PLACE HIGH-SUMP CEMENT GROUT INTO OPEN VOIDS AND CREVICES UNTIL VOIDS ARE FILLED. IF SEVERAL CUBIC YARDS OF GROUT DO NOT FILL VOIDS, USE A STIFFER, LEAN CONCRETE MIX.
- AFTER CONCRETE HAS SET OVERNIGHT, BACKFILL HOLE WITH RELATIVELY IMPERVIOUS SOIL. COMPACT SOIL IN 6" LIFTS WITH A POWER TAMPER OR RAMMER. TWO COMPLETE COVERAGES SHOULD BE USED ON EACH LIFT.
- BACKFILL HOLE ABOVE EXISTING GRADE TO DIVERT SURFACE WATER.
- WHEN SINKHOLE IS UNDER A PROPOSED UTILITY, CONCRETE IS TO BE SET 6" BELOW THE UTILITY TO ALLOW FOR A STONE BEDDING.



NOTES:
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CONSECUTIVE BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE BLANKETS END OVER END WITH A 4"-6" (10cm-15cm) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"-5" (5cm-12.5cm) (DEPENDING ON BLANKET TYPE) AND STAPLED. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE BLANKET BEING OVERLAPPED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9m-12m) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

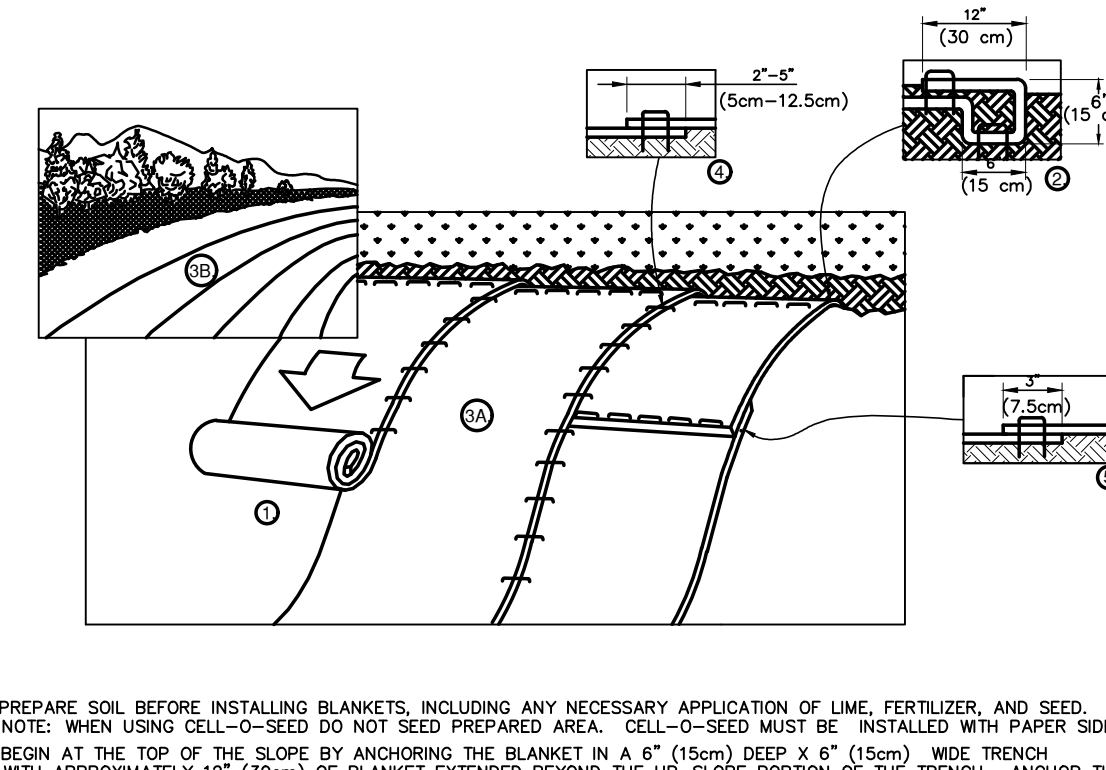
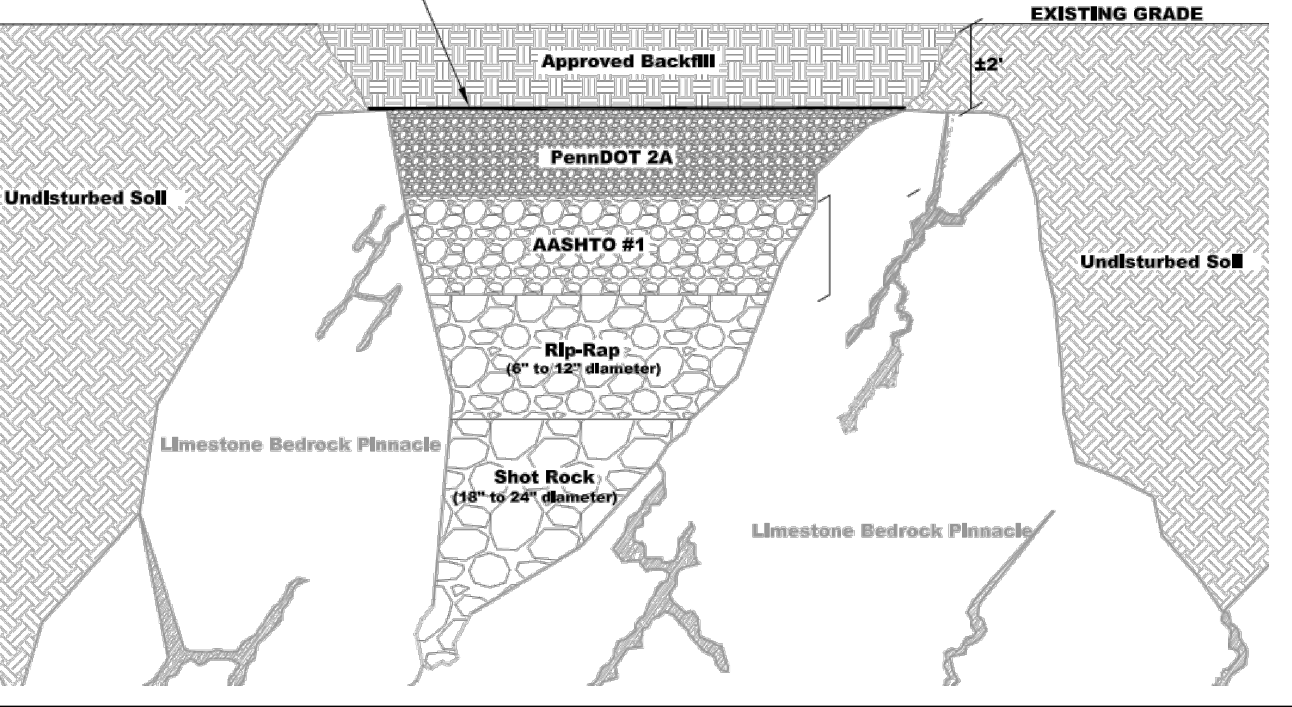
CHANNEL INSTALLATION

NOT TO SCALE



NOTES:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

INVERTED ROCK FILTER SINKHOLE REPAIR DETAIL



NOTES:
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPICED DOWN THE OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.

SLOPE INSTALLATION

NOT TO SCALE

EROSION CONTROL BLANKET DETAILS

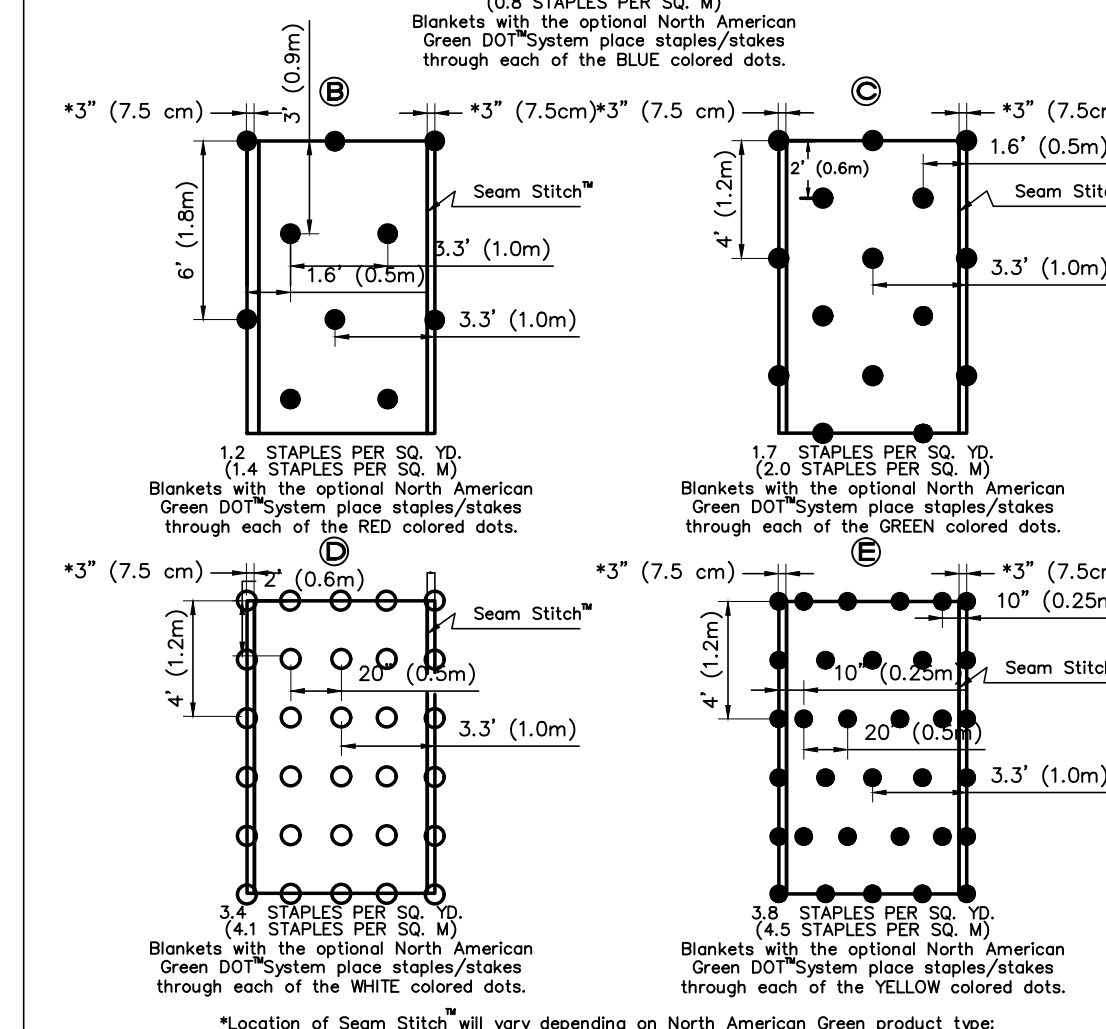
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NOTES:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

STAPLE PATTERN GUIDE

NOT TO SCALE



STAPLE PATTERNS

NOT TO SCALE

EROSION CONTROL BLANKET INSTALLATION TABLE

LOCATION	TYPE	STAPLE PATTERN
3:1 SLOPES	NAG S75BN	C
4:1 SLOPES	NAG S75BN	C

ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SOUTH WHITEHALL TOWNSHIP STANDARD SPECIFICATIONS.

FINAL EROSION AND SEDIMENT POLLUTION CONTROL DETAILS

PANY & LENTZ ENGINEERING COMPANY
CONSULTING ENGINEERS
CIVIL • STRUCTURAL • MECHANICAL • LABORATORY
609 Hamilton Street • Allentown, PA 18101
Office: 610/433-1634 • Fax: 610/433-1636

DESIGNED	SNP
DRAWN	BMW
CHECKED	MFS
JOB. NO.	2022256
SCALE	1" = 50' U.N.O.
DATE	MAY 15, 2023
DWG. NO.	ES-5
SHEET NO.	25
REV.	0
SHEETS	32

J.G. PETRUCCI CO. INC.
71 ROUTE 773
SUITE 201
ASBURY, NEW JERSEY 08802

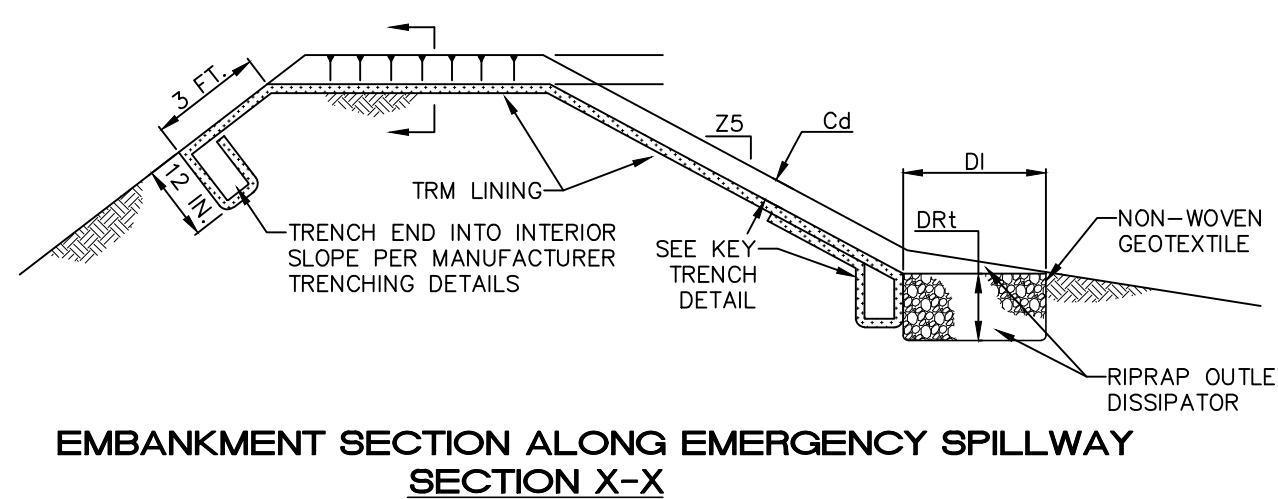
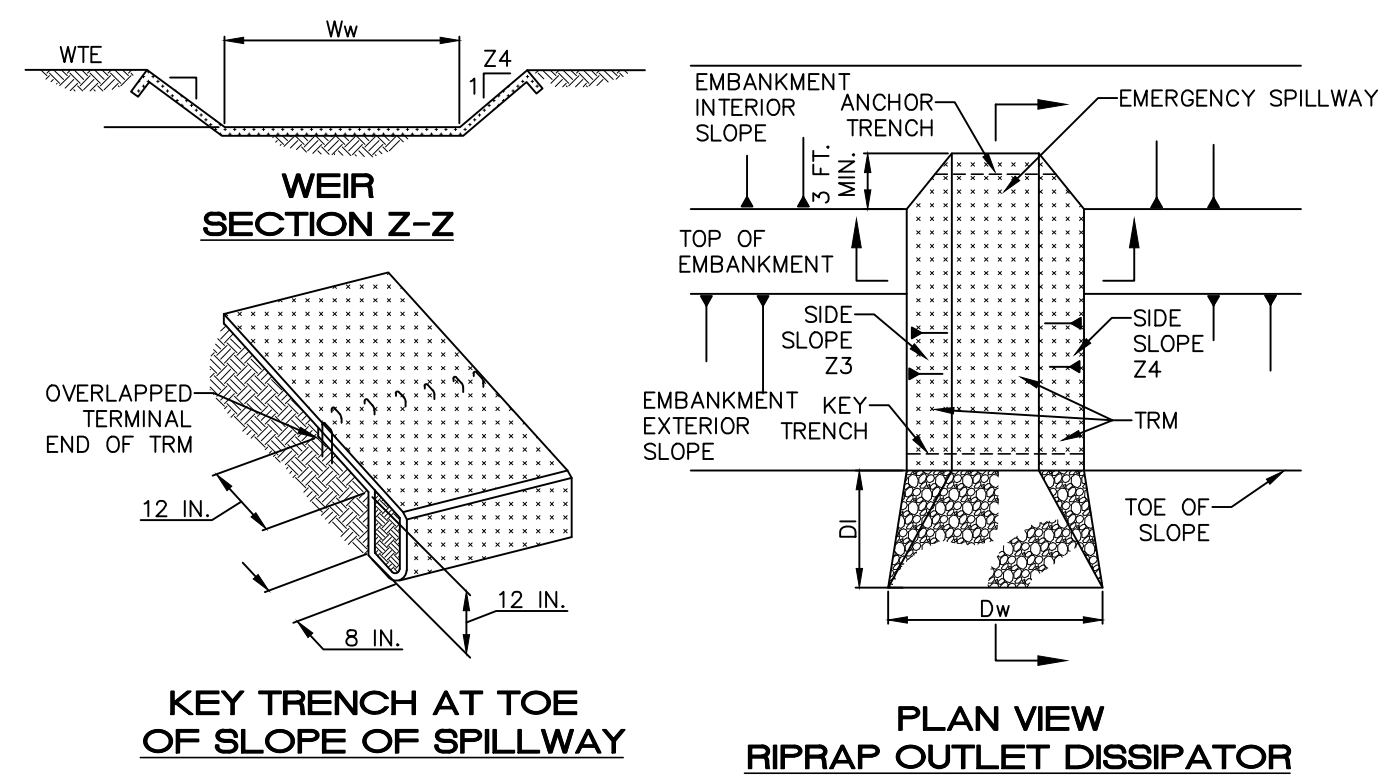
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[Project Name] [Location] [Scale] [Date] [User]

PA ACT 287, AS AMENDED
IN ACCORDANCE WITH PA ACT 287, AS AMENDED, THE SURVEYOR CONTACTED PA ONE CALL, INC., FOR A DESIGN PHASE LOCATION REQUEST. THE SERIAL NUMBER FOR THAT REQUEST IS 2022283634. THE SURVEYOR HAS MADE NO INDEPENDENT VERIFICATION OF THE INFORMATION PROVIDED OTHER THAN AS MAY BE READILY EVIDENT FROM THE SURFACE OF THE GROUND.
THE CONTRACTOR SHALL COMPLY WITH PA ACT 287, AS AMENDED REQUIREMENTS AND VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE START OF WORK.



ENGINEER'S STATEMENT
I, STEPHEN A. PANY, A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE ACCOMPANYING APPLICATION, PLANS AND SUPPORTING DOCUMENTATION ARE TRUE AND CORRECT, TO THE BEST OF MY KNOWLEDGE.
DATE: _____ PLAN PREPARER'S SIGNATURE: _____

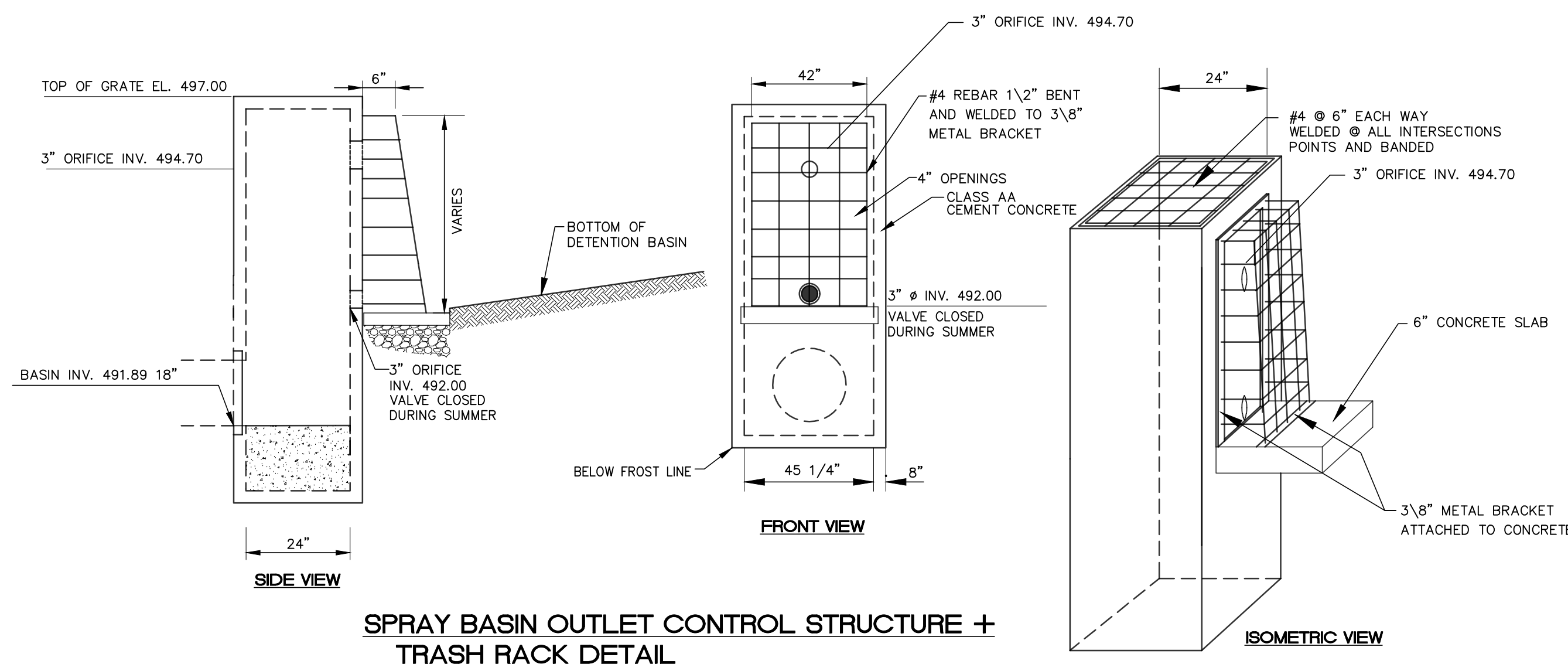
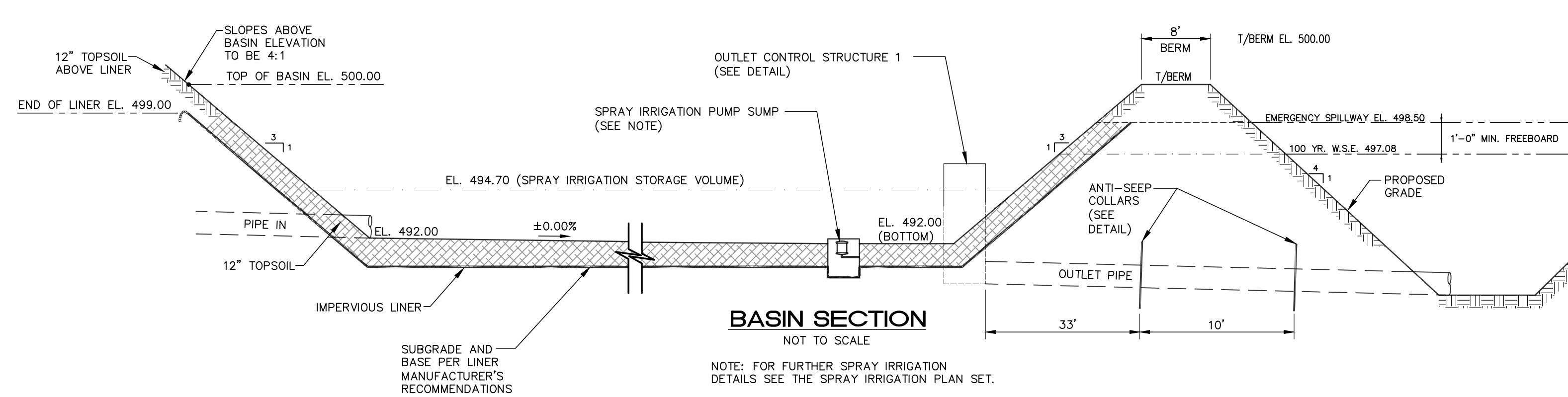
Pany & Lentz Engineering Company accepts no responsibility for unauthorized use of this document. Reproduction of this drawing or any portion thereof is prohibited without the written consent of Pany & Lentz Engineering Company. Only final construction documents signed and sealed by the Engineer of Record are valid. All written dimensions shall take priority over scaled dimensions. The contractor shall be responsible for verifying all locations, elevations, dimensions and conditions prior to construction. The contractor shall notify Pany & Lentz Engineering Company of any discrepancies with the information shown on the drawings.



BASIN NO.	WEIR		CREST ELEV WCE (FT)	WIDTH Ww (FT)	TRM TYPE	STAPLE PATTERN	CHANNEL		DISSIPATOR		RIPRAP THICK. DR1 (IN)	
	Z3 (FT)	Z4 (FT)					DEPTH Cd (FT)	LENGTH DI (FT)	RIPRAP SIZE (R--)	RIPRAP THICK. DR1 (IN)		
1	3	3	500.00	498.50	60	P300	E	50	1.50	N/A	N/A	N/A

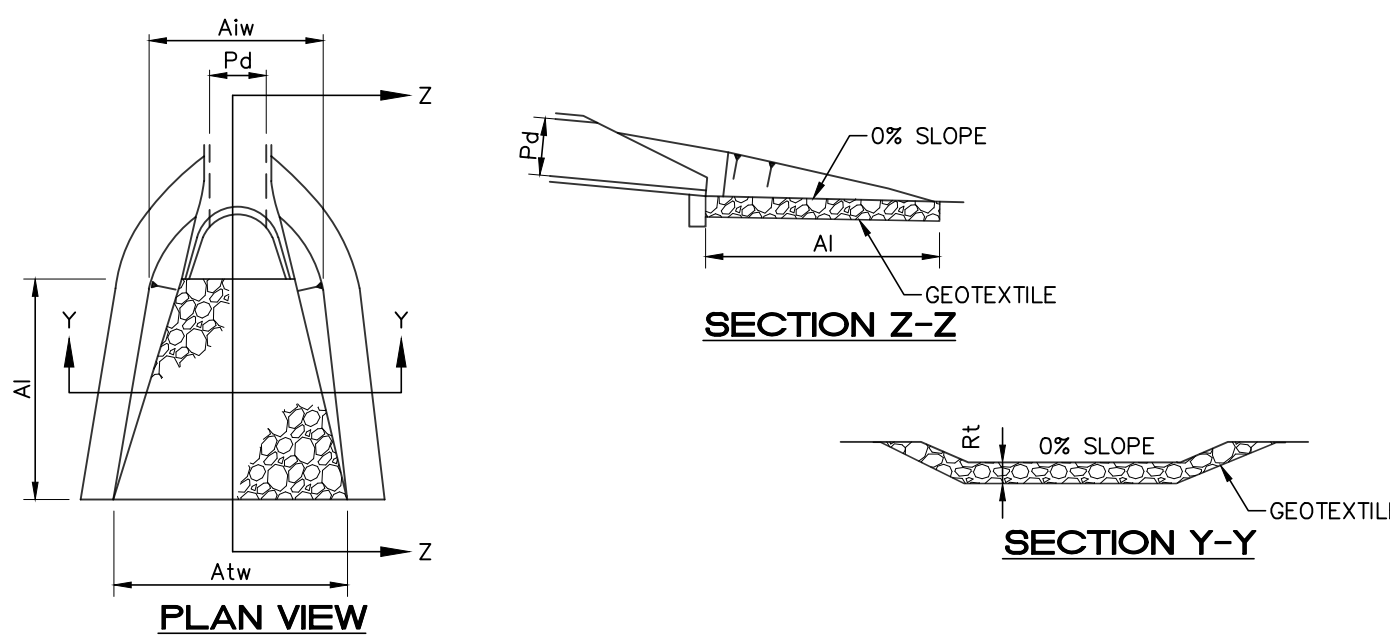
NOTES:
 HEAVY EQUIPMENT SHALL NOT CROSS OVER SPILLWAY WITHOUT PRECAUTIONS TAKEN TO PROTECT TRM LINING.
 DISPLACED LINER WITHIN THE SPILLWAY AND/OR OUTLET CHANNEL SHALL BE REPLACED IMMEDIATELY.
 RIPRAP AT TOE OF EMBANKMENT SHALL BE EXTENDED A SUFFICIENT LENGTH IN BOTH DIRECTIONS TO PREVENT SCOUR.
 THE USE OF BAFFLES THAT REQUIRE SUPPORT POSTS ARE RESTRICTED FROM USE IN BASINS REQUIRING IMPERVIOUS LINERS.

**STANDARD CONSTRUCTION DETAIL #7-13
 DETENTION BASIN EMERGENCY SPILLWAY
 WITH TRM LINING**
 NOT TO SCALE



SPRAY BASIN OUTLET CONTROL STRUCTURE + TRASH RACK DETAIL
 NO SCALE

NOTE: 3" ORIFICE TO BE PLUGGED DURING SUMMER MONTHS TO ALLOW STORAGE FOR SPRAY IRRIGATION, THEN UNPLUGGED DURING WINTER MONTHS TO ALLOW BASIN TO DRAIN.

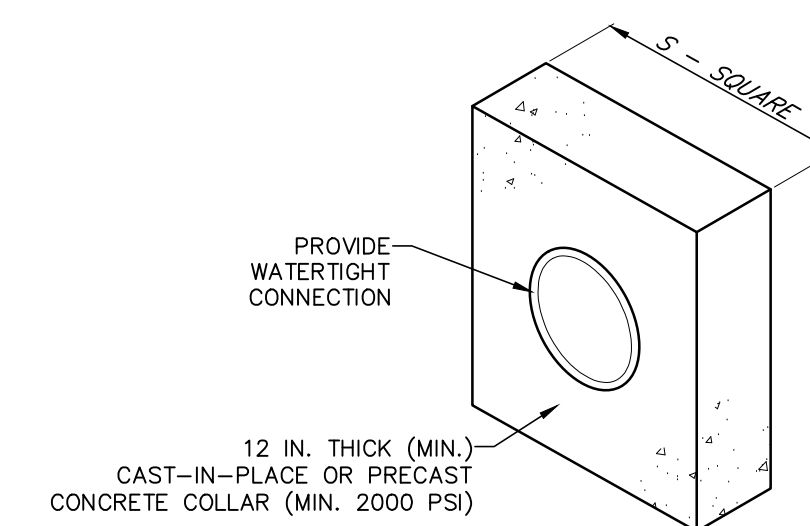


RIPRAP APRON TABLE

OUTLET NO.	PIPE DIA Pd (IN)	TAILWATER CONDITION (Max or Min)	Q (CFS)	V (FPS)	RIPRAP		APRON		
					SIZE (R--)	THICK. Rt (IN)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)	
ES-A1	18	MIN.	13.97	7.96	4	18	12	4.50	16.50
ES-B1	24	MIN.	9.68	4.54	3	9	12	6.00	18.00
ES-C1	15	MIN.	1.26	2.33	3	9	8	3.75	11.75
ES-D1	18	MIN.	1.18	2.03	3	9	8	4.50	12.50

NOTES:
 ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.
 ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

**STANDARD CONSTRUCTION DETAIL #9-1
 RIPRAP APRON AT PIPE OUTLET
 WITH FLARED END SECTION OR ENDWALL**
 NOT TO SCALE



BASIN 1:

NO.	PIPE SIZE (IN)	S (IN)	NO. OF COLLARS	RISER TO FIRST COLLAR (FT)	COLLAR SPACING (FT)
OCS 1	18	50	2	15	10

NOTES:
 ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATER TIGHT.
 COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.

**STANDARD CONSTRUCTION DETAIL #7-16
 CONCRETE ANTI-SEEP COLLAR FOR
 PERMANENT BASINS OR TRAPS**
 NOT TO SCALE

ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SOUTH WHITEHALL TOWNSHIP STANDARD SPECIFICATIONS.

**FINAL
 EROSION AND SEDIMENT
 POLLUTION CONTROL DETAILS**

PANY & LENTZ ENGINEERING COMPANY
 CONSULTING ENGINEERS
 CIVIL • STRUCTURAL • MECHANICAL • MACHINEERY

609 Hamilton Street • Allentown, PA 18101
 Office: 610/433-1634 • Fax: 610/433-1636

1429 ECK ROAD
 OUTDOOR STORAGE
 SOUTH WHITEHALL TOWNSHIP
 LEHIGH COUNTY, PENNSYLVANIA

J.G. PETRUCCI CO. INC.
 771 ROUTE 173
 SUITE 201
 ASBURY, NEW JERSEY 08802

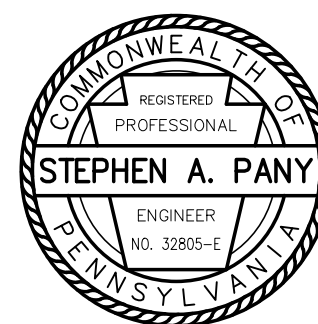
DESIGNED	MAP
DRAWN	BMW
CHECKED	MFS
JOB NO.	2022258
SCALE	1" = 50' U.N.O.
DATE	MAY 15, 2023
DWG. NO.	ES-6
SHEET NO.	26
REV.	0
OF	32 SHEETS

\\s:\p\ref-18_24236 [riprap details] [anti-seep collar detail] [ocs detail] [basin details] [7-13 det. basin emergency spillway with trm lining] G:\ACAD\Acad\DWG\2022258_1429 Eck Rd - JGP\Lenden\Current\Rev\24 - E&S Details.dwg-X&S Details (3) Date: May 17, 2023 - 5:36pm **Pany & Lentz Engineering Company** USER: Chris

PA ACT 287, AS AMENDED

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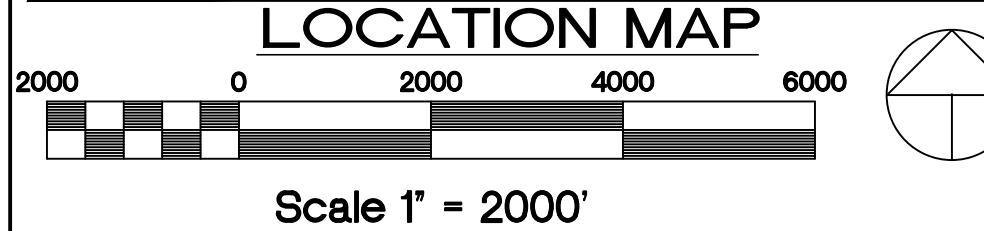
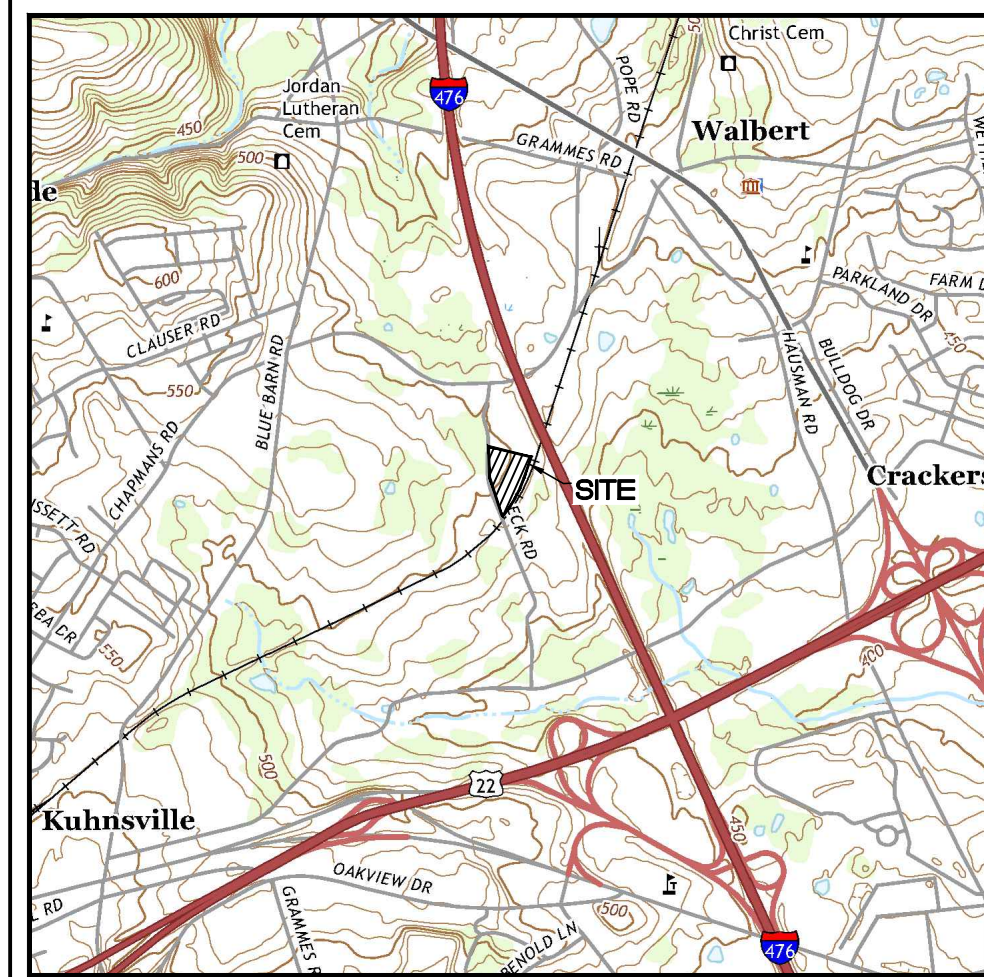
ENGINEER'S STATEMENT

I, STEPHEN A. PANY, A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE ACCOMPANYING APPLICATION, PLANS AND SUPPORTING DOCUMENTATION ARE TRUE AND CORRECT, TO THE BEST OF MY KNOWLEDGE.

DATE _____ PLAN PREPARER'S SIGNATURE _____

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DESIGNED	MAP
DRAWN	BMW
CHECKED	MFS
JOB NO.	2022258
SCALE	1" = 50' U.N.O.
DATE	MAY 15, 2023
DWG. NO.	ES-6
SHEET NO.	26
REV.	0
OF	32 SHEETS



LEGEND

EXISTING FEATURES

- 2 FT. CONTOUR
- 10 FT. CONTOUR
- SPOT ELEVATION
- CONCRETE CURB
- EDGE OF PAVEMENT
- CONCRETE WALK OR PAD
- WOOD GUIDERAIL
- DIRT/GRAVEL ROAD
- STORM SEWER & INLETS
- SANITARY SEWER & MANHOLE
- WATER LINE & VALVE
- OVERHEAD ELECTRIC
- EASEMENT LINE
- PAINT LINES
- PROPERTY LINES
- ADJOINERS' PROPERTY LINES
- RIGHT-OF-WAY
- SIGN POST
- TREE LINE
- DECIDUOUS TREE
- UTILITY POLE
- WATER TIE

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- CURB OPENING
- END CURB WITH TAPER
- RIP TRAP APRON

STORMWATER FEATURES

- LIMIT OF DISTURBANCE/STORMWATER MANAGEMENT/NPDES BOUNDARY

SOIL DESCRIPTION TABLE						
SYMBOL	NAME	SLOPE RANGE	CHARACTERISTICS	HYDROLOGIC SOIL GROUP	LIMITATIONS TO USE	RESOLUTIONS TO LIMITATIONS
CmB	CLARKSBURG SILT LOAM	3 TO 8%	MODERATE HAZARD OF EROSION SLOW PERMEABILITY, HIGH AVAILABLE MOISTURE CAPACITY.	C	POSS. SINKHOLE FORMATION; PIPING	SINKHOLE REPAIR; ANTI-SEEP COLLAR
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RECEIVING WATERCOURSE TABLE	
NAME	CLASSIFICATION
LITTLE CEDAR CREEK*	HIGH QUALITY, COLD WATER FISHERY

* DENOTES SPECIAL PROTECTION WATERSHED

PCSM STRUCTURAL BMP INSTALLATION SEQUENCE:

THE FOLLOWING OUTLINES AN OVERALL SEQUENCE FOR ORDER OF STRUCTURAL BMP INSTALLATION. REFER TO INDIVIDUAL BMP CONSTRUCTION NOTES AND SEQUENCES ON DETAIL SHEET FOR SPECIFIC INFORMATION ON EACH BMP.

THE SEQUENCE OF IMPLEMENTATION AND INSTALLATION WILL FOLLOW THE STAGING OF EARTHMOVING ACTIVITIES PRESENTED IN THE EROSION AND SEDIMENT CONTROL PLANS AND NARRATIVE. THIS WILL MINIMIZE SEDIMENT ACCUMULATION IN THE AREAS NOT DISTURBED.

THE LIMITS OF DISTURBANCE SHALL BE MARKED PRIOR TO START OF CONSTRUCTION TO PROTECT INFILTRATION AREAS FROM COMPACTION THROUGHOUT CONSTRUCTION.

THE DETENTION BASIN IS TO BE CONSTRUCTED TOWARDS THE START OF THE PROJECT SO THAT DISTURBED AREAS IN THE BASIN ARE STABILIZED PRIOR TO USE.

REVEGETATE/RESTORATION IS ALSO TO BE IMPLEMENTED AS A FINAL STEP IN CONSTRUCTION AND SITE STABILIZATION.

CRITICAL STAGES OF IMPLEMENTATION FOR WHICH A LICENSED PROFESSIONAL OR DESIGNER SHALL BE PRESENT ON SITE TO PERFORM REQUIRED OBSERVATIONS INCLUDE:

1. MARKING OF LIMITS OF DISTURBANCE FOR SPRAY IRRIGATION AREA AND OVERALL LIMITS.
2. INSTALLATION OF DETENTION BASIN OUTLET CONTROL STRUCTURE.
3. INSTALLATION OF SPRAY IRRIGATION SYSTEM.
4. OVERSIGHT FOR THE SPRAY IRRIGATION SYSTEM ACTIVATION.

SEE STAGING OF EARTH MOVING ACTIVITIES.

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN NOTES:

1. THERE ARE NO WETLANDS LOCATED ON OR ADJACENT TO THE AREA OF PROPOSED WORK. THE INCREASE IN IMPERVIOUS AREA AND THE RESULTING THERMAL IMPACT WILL BE MITIGATED BY THE PROPOSED INFILTRATION BEDS, RE-VEGETATING DISTURBED AREAS, AND DIRECTING RUNOFF TO OTHER VEGETATED AREAS, AS A RESULT OF THE USE OF THESE CONTROLS, ANY THERMAL IMPACT CAUSED BY THIS PROJECT WILL BE NEGLIGIBLE.
2. THE PCSM PLAN HAS BEEN PLANNED, DESIGNED AND IMPLEMENTED TO BE CONSISTENT WITH THE EROSION AND SEDIMENT CONTROL PLAN.
3. THERE ARE NO EXISTING OR PROPOSED RIPARIAN FOREST BUFFERS AS PART OF THIS CURRENT PROJECT.
4. A LICENSED PROFESSIONAL OR QUALIFIED DESIGNER SHOULD BE ON SITE FOR THE MARKING OF INSTALLATION AND COMPLETION OF THE DETENTION BASIN AND SPRAY IRRIGATION SYSTEMS TO ENSURE CONSISTENCY WITH THE PLAN. OBSERVATION OF THE MARKING FOR PROTECTION OF THE AREAS OF MINIMIZED SOIL COMPACTION IS ALSO REQUIRED. SEE LIST OF CRITICAL STAGES UNDER PCSM BMP INSTALLATION SEQUENCE.
5. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET. SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
6. SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.
7. ANTICIPATED CONSTRUCTION WASTES INCLUDE BUT ARE NOT LIMITED TO LUMBER, SHEET ROCK, ASPHALT, CONCRETE AND OTHER TYPICAL BUILDING MATERIALS. ANY WASTES GENERATED SHALL BE DISPOSED OF AS NOTED ABOVE.
8. THERE IS THE POTENTIAL FOR KARST SOIL CONDITIONS LOCATED ON SITE THAT COULD RESULT IN STORM WATER RUNOFF FROM THE SITE THAT DO NOT MEET WATER QUALITY STANDARDS FOR THE RECEIVING WATER COURSE. A SINK HOLE REPAIR DETAIL IS INCLUDED.
9. SEE ADDITIONAL STANDARD PCSM NOTES ON DETAIL SHEETS.

ENVIRONMENTAL DUE DILIGENCE

ENVIRONMENTAL DUE DILIGENCE: THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANDBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY 'MANAGEMENT OF FILL'.

DEFINITION OF CLEAN FILL

CLEAN FILL IS DEFINED AS: UNCONTAMINATED NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREGGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM 'USED ASPHALT' DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESS FOR RE-USE).

CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENT'S POLICY 'MANAGEMENT OF FILL'.

ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL. A COPY OF FORM FP-001 CAN BE FOUND AT THE END OF THESE INSTRUCTIONS.

DURING CONSTRUCTION: TRIPLE NET INVESTMENTS LXXV, LLC
171 STATE ROUTE 173, SUITE 201
ASBURY, NEW JERSEY 08802

POST CONSTRUCTION: LOT OWNER

PCSM STRUCTURAL BMPs

1. RUNOFF CAPTURE AND REUSE (BMP 6.5.2) - SPRAY IRRIGATION

1. RE-VEGETATE AND REFOREST DISTURBED AREAS USING NATIVE SPECIES (BMP 5.6.3)

NOTE: SEE REVEGETATE AND REFOREST CHECKLIST ON SHEET 6.

	VEGETATED AREAS		NEW PAVEMENT/SIDEWALK
	BUILDING ROOF AREA		EX. IMPERVIOUS AREA

COVER TYPE LEGEND - PROPOSED

FINAL POST-CONSTRUCTION STORMWATER MANAGEMENT POST-DEVELOPMENT PLAN

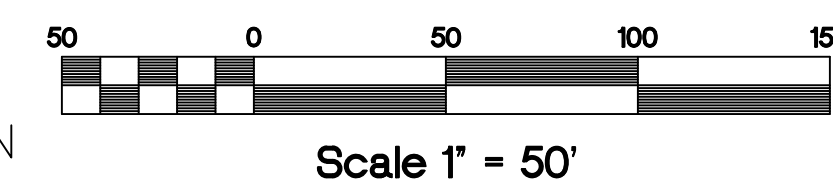
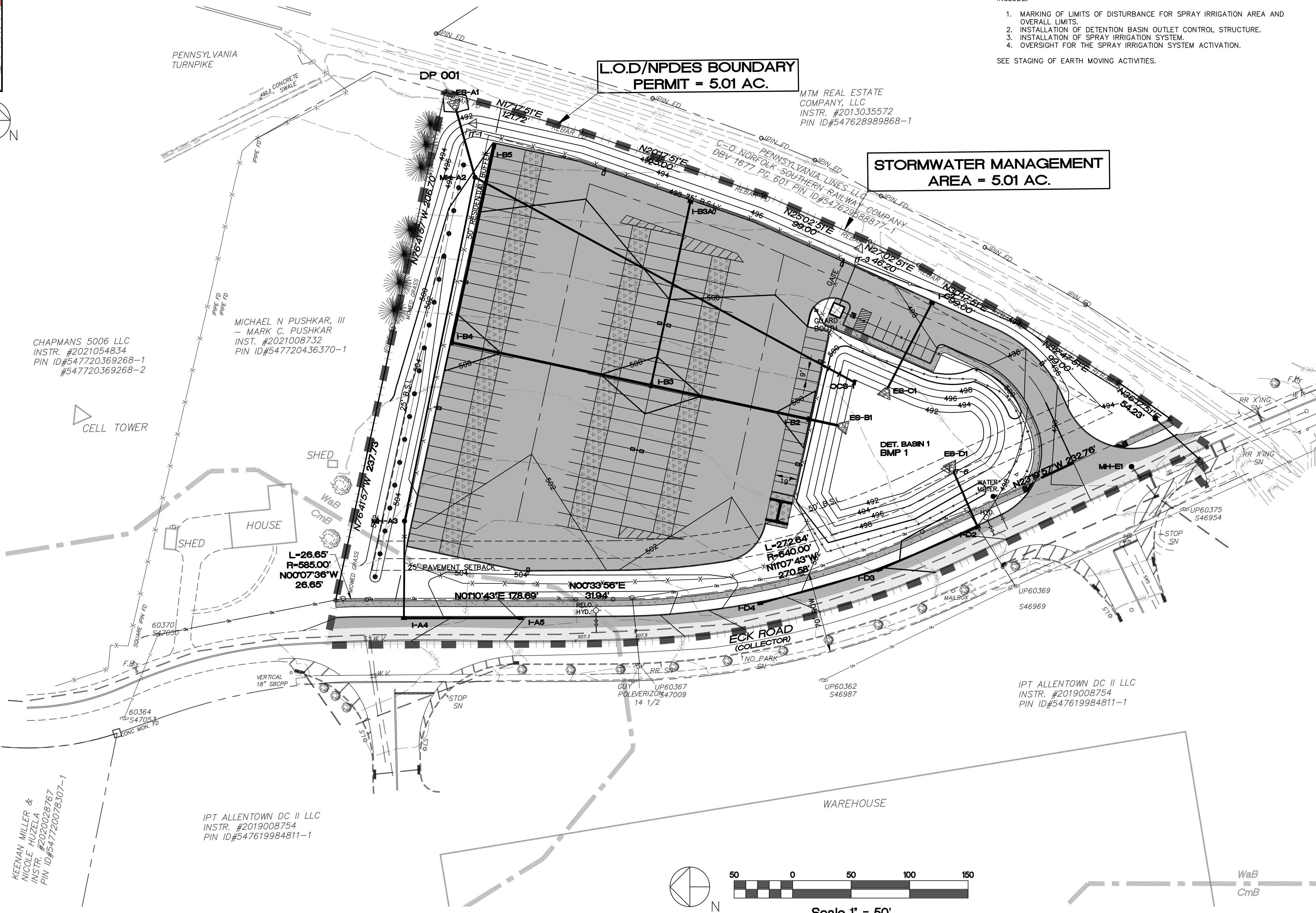
PANY & LENTZ ENGINEERING COMPANY
CONSULTING ENGINEERS
CIVIL • STRUCTURAL • MECHANICAL • LANDSCAPE

609 Hamilton Street • Allentown, PA 18101
Office: 610/433-1634 • Fax: 610/433-1636

1429 ECK ROAD
OUTDOOR STORAGE
SOUTH WHITEHALL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

J.G. PETRUCCI CO. INC.
71 ROUTE 778
SUITE 201
ASBURY, NEW JERSEY 08802

DESIGNED	SLAP
DRAWN	BMW
CHECKED	MFS
JOB. NO.	2022258
SCALE	1" = 50' U.N.O.
DATE	MAY 15, 2023
DWG. NO.	PCSM-2
SHEET NO.	28
REV.	0
OF	32



CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

PA1
1-800-242-1776

PCS SERIAL NUMBER
2022283634

PA ACT 287, AS AMENDED

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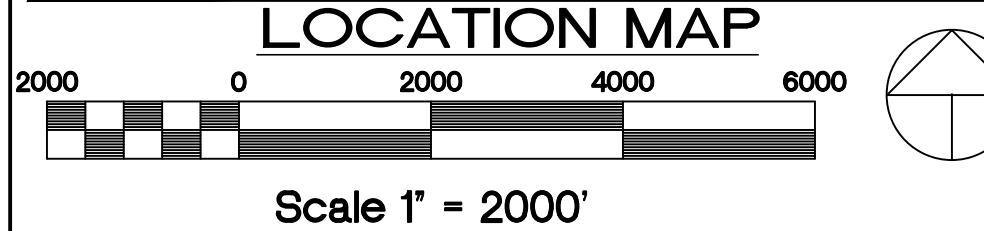
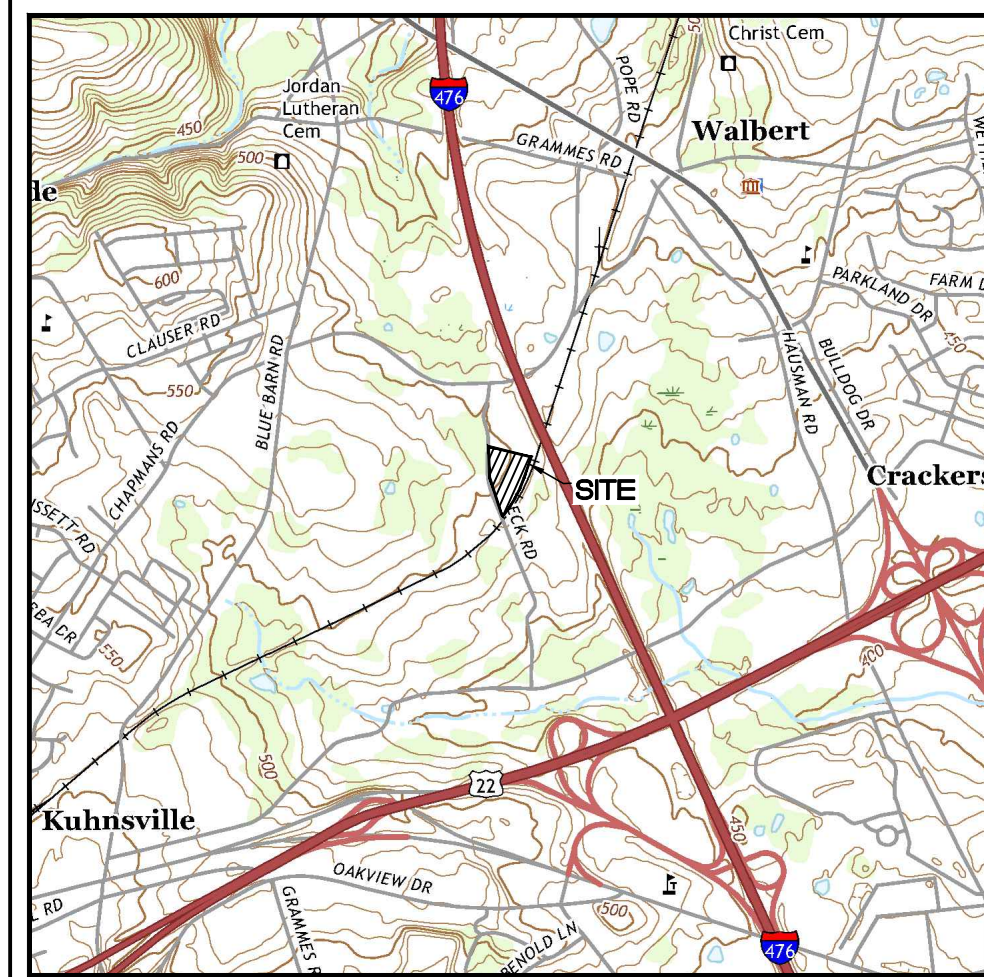
DATE _____ PLAN PREPARER'S SIGNATURE _____

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LEGEND

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STORMWATER FEATURES

- LIMIT OF DISTURBANCE/STORMWATER MANAGEMENT/NPDES BOUNDARY
- SWM DRAINAGE AREA BOUNDARY

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ENVIRONMENTAL DUE DILIGENCE

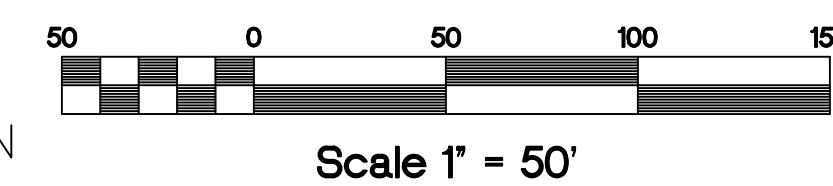
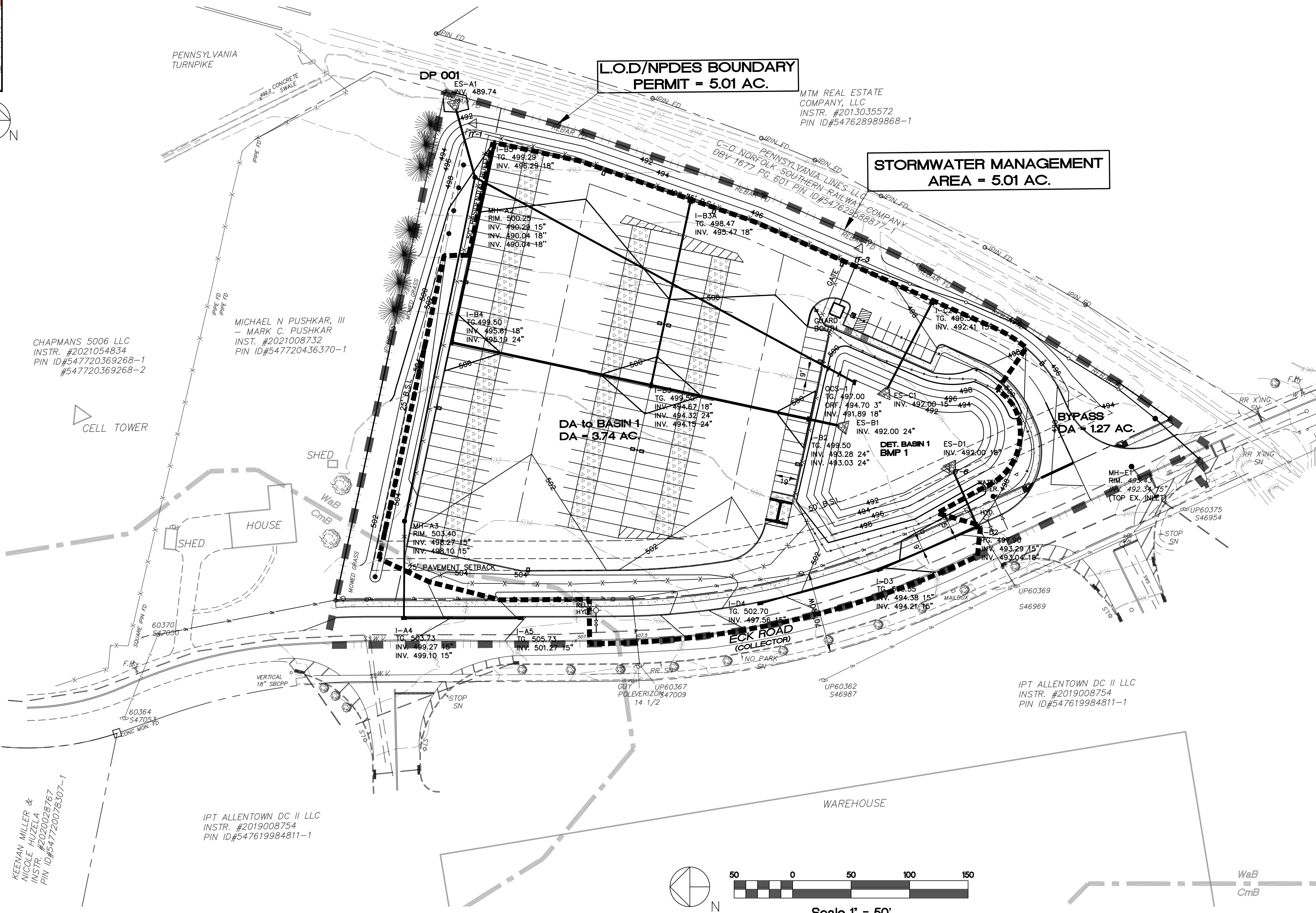
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CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL
POCS SERIAL NUMBER
20222283634

PA ACT 287, AS AMENDED
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#	DATE	REVISION	BY

FINAL POST-CONSTRUCTION STORMWATER MANAGEMENT DRAINAGE AREAS PLAN

PANY & LENTZ ENGINEERING COMPANY
CONSULTING ENGINEERS
CIVIL • STRUCTURAL • MECHANICAL • LANDSCAPE
609 Hamilton Street • Allentown, PA 18101
Office: 610/433-1634 • Fax: 610/433-1636

1429 ECK ROAD
OUTDOOR STORAGE
SOUTH WHITEHALL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

J.G. PETRUCCI CO. INC.
71 ROUTE 778
SUITE 201
ASBURY, NEW JERSEY 08802

DESIGNED	DRAWN	CHECKED	SCALE	DATE	DWG. NO.	SHEET NO.	REV.

SPRAY IRRIGATION CONSTRUCTION NOTE:

AREAS RESERVED FOR SPRAY IRRIGATION SHALL BE PROTECTED FROM HEAVY CONSTRUCTION TRAFFIC DURING SITE DEVELOPMENT TO PREVENT COMPACTION OF THE UNDERLYING SOILS. DURING SUBGRADE PREPARATION, THE NATURAL SOIL AT THE BOTTOM OF EACH BMP EXCAVATION SHALL BE ROUGHED WITH A CHISEL PLOW, OR SIMILAR IMPLEMENT, TO A DEPTH OF FOUR TO SIX INCHES RATHER THAN GRADED SMOOTH. THE DESIGN ENGINEER, A CERTIFIED SOIL SCIENTIST, OR A PROFESSIONAL GEOLOGIST SHALL INSPECT AND CERTIFY THE SUBGRADE PREPARATION AT THE TIME OF CONSTRUCTION. THE INSPECTION AND CERTIFICATION DOCUMENTS FOR SUCH SYSTEMS SHALL BE SUBMITTED TO THE TOWNSHIP AND TOWNSHIP ENGINEER FOR DOCUMENTATION PURPOSES AND THE TOWNSHIP ENGINEER SHALL BE NOTIFIED 48-HOUR PRIOR TO SUBGRADE PREPARATION SO IT CAN HAVE A REPRESENTATIVE PRESENT. THE TOWNSHIP REQUIRES THAT CONFIRMATION INFILTRATION TESTING BE PERFORMED IN THE FACILITIES AFTER CONSTRUCTION TO CONFIRM THAT THEY MEET OR EXCEED THE DESIGN INFILTRATION RATES. THE SITE TESTING SHALL BE WITNESSED BY THE TOWNSHIP ENGINEER'S OFFICE.

SPRAY IRRIGATION INSPECTION AND MAINTENANCE:

GENERAL REQUIREMENTS: THE CONTRACTOR SHALL PROVIDE IRRIGATION MAINTENANCE FOR ONE CALENDAR YEAR. AFTER THE FIRST YEAR THE CONTRACTOR CAN PROVIDE SERVICE CONTRACT WITH THE OWNER OR THE OWNER SHALL CONTINUE IRRIGATION MAINTENANCE ON THEIR OWN.

- ANNUAL START UP (ONCE TEMPERATURE IS REGULARLY ABOVE FREEZING):
1. INSPECT WET WELL PUMP, FLOAT SWITCHES, INTAKE SCREEN, AND VERIFY OPERATIONS FOR CURRENT YEAR. REPAIR AS REQUIRED.
2. POWER UP CONTROLLER VERIFY OPERATIONS REPAIR AND AS REQUIRED. CLEAR OUT OLD VOLUME AND PREPARE FOR CURRENT YEAR VOLUMES.
3. INSPECT ELECTRIC VALVES, CHECK AND VERIFY CORRECT ELECTRIC CONNECTIONS TO CONTROLLER DEVICES AND SOLENOIDS.
4. INSPECT SPRINKLERS TO VERIFY POP UP OPERATIONS ROTATION, AND SPRAY CORRECT SPRAY PATTERN ARCS.
5. INSPECT FLOW METER AND VERIFY CORRECT FLOW DATA.
6. INSPECT RAIN SWITCH CHECK BATTERIES AND CORRECT OPERATIONS.
7. INSPECT AND TEST HIGH PRESSURE BLOW OFF VALVE.
8. INSPECT AND VERIFY OPERATION OF AUTO DRAIN VALVE.
9. INSPECT AND CLEAN OUT VALVE BOXES FROM SOIL OR CRITTERS.
10. INSPECT AND CHECK GROUNDING TO CONTROLLER.
11. CHECK THE PRESSURE OF THE SYSTEM.
12. REPLACE BROKEN VALVE BOX LIDS.

MONTHLY MAINTENANCE: CONFIRM CONTROLLER OPERATION AND PROGRAMMING. INSPECT ELECTRIC VALVES, MANUAL VALVES QUICK COUPLER VALVES, SPRINKLERS FOR OPERATIONAL VEGETATION AROUND VALVE BOXES AND SPRINKLERS. INSPECT AND CHECK SCREEN AT PUMP INTAKE. VEGETATION AND POND BOTTOM TO BE NO LESS THAN 18 INCHES FROM THE INTAKE SCREEN AT ALL TIMES. COLLECT MONTHLY FLOW TOTALS. PERFORM AN ANNUAL IRRIGATION AUDIT TO DETERMINE EFFICIENCY OF THE SYSTEM. SELECT A SAMPLE AREA AND ROTATE LOCATION ANNUALLY. ANY SYSTEM COMPONENTS WHICH ARE IN NEED OF REPAIR OR REPLACEMENT SHALL BE ATTENDED TO IMMEDIATELY. BRUSH WITHIN TEN FEET OF THE SPRAY HEADS SHALL BE CLEARED ON AT LEAST YEARLY BASIS.

INSTALLER: COMPANY SPECIALIZING IN PERFORMING WORK OF THIS SECTION WITH MINIMUM FIVE YEARS DOCUMENTED EXPERIENCE. ONE CYCLE IS ENOUGH PER ZONE. STOP WHEN MAJORITY OF THE MIST IS COMPLETE. COLLECT TOTAL FLOWS FOR EACH MONTH.

PCSM/IRRIGATION SPRAY CONSTRUCTION SEQUENCE:

CONTRACTOR SHALL MAKE THEMSELVES FAMILIAR WITH ALL ASPECTS OF THE CONSTRUCTION OF THE PCSM SYSTEM. PRIOR TO ANY TRENCHING CONSTRUCTION OR INSTALLATION, THE CONTRACTOR SHALL FLAG OUT AREA TO ENSURE THE BEST LOCATION OF PIPE, SPRINKLER HEADS, VALVES, ETC. ANY DEVIATIONS IN LAYOUT SHALL BE BROUGHT TO THE OWNERS REPRESENTATIVE BEFORE PROCEEDING. THE CONTRACTOR IS EXPECTED TO MAKE MINOR ADJUSTMENTS OF WIRE, PIPE AND VALVE LOCATIONS AS TO NOT CONFLICT WITH EXISTING OR FUTURE UTILITIES. SPRINKLER MANUFACTURER TO CONFIRM ORIFICE SIZE FOR SPRINKLER HEAD BASED ON SPECIFIED GPM AND SPRAY RADII.

IRRIGATION SEQUENCE:

- 1. INSTALLATION OF WET WELL AND INTAKE PIPE AND SCREEN
2. INSTALLATION OF GAS EASEMENT SLEEVE
3. INSTALLATION OF MAIN LINE, VALVES AND COMMUNICATION CABLE
4. INSTALLATION OF LATERAL LINES
5. INSTALLATION OF SPRINKLER HEADS
6. INSTALLATION OF SUBMERSIBLE PUMP
7. DEODER TEST
8. TESTING OF SYSTEM
9. ADJUSTMENT OF ALL SPRINKLER HEADS
10. FLOW SENSOR TEST
11. COMPLETION OF AS-BUILT DRAWINGS

CONTACT THE NORTHAMPTON COUNTY CONSERVATION DISTRICT AS TO ANY CHANGES IN THE SPRAY SYSTEM AND SUPPLY THE NOOD WITH AS-BUILT AND IMPACT OF CHANGES.

GENERAL PCSM/IRRIGATION:

SYSTEM WILL BE ACTIVE FROM APRIL 15TH TO OCTOBER 15TH

SPRING START UP:

- 1. CLOSE WINTER BYPASS VALVE
2. OPEN SPRING GATE VALVES
3. CHECK POND LEVEL SENSORS
4. SLOWLY FILL MAIN LINE
5. CHECK FOR LEAKS AND PROPER ALIGNMENT OF HEADS
6. REPAIR AND ADJUST SYSTEM AS REQUIRED FOR PROPER OPERATION

WARRANTY + MAINTENANCE:

CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM IN GOOD OPERATING CONDITION AND COORDINATE THE OPERATION OF THE SYSTEM WITH THE ON SITE MANAGER THROUGH MONTHLY INSPECTIONS OF SYSTEM COMPONENTS AND MAKE REPAIRS OR REPLACEMENTS OF PARTS AS NECESSARY. THIS INCLUDES CHECKING AND VERIFYING OPERATION IN EACH STATION, ALIGNMENT OF HEADS, RAIN SENSORS, FREEZE SENSOR AND CENTRAL CONTROL.

WINTERIZATION:

WHEN COLD WEATHER APPROACHES AND CHANCE FOR FREEZING CONDITIONS EXIST, THE IRRIGATION SYSTEM SHALL BE DRAINED AFTER EACH USE.

WINTERIZATION PROCEDURE SHALL INCLUDE THE FOLLOWING:

- 1. OPERATE SYSTEM TO DRAIN BASINS TO LOWEST POSSIBLE LEVEL
2. CLOSE INTAKE PIPE VALVE
3. OPEN WINTER BYPASS VALVE IN OUTLET STRUCTURE
4. BLOW OUT EACH STATION TWICE WITH COMPRESSED AIR
5. WINTERIZE AND TURN OFF PUMP
6. CLOSE DISCHARGE VALVE AT PUMP
7. OPEN WINTER BYPASS VALVE TO OUTFLOW STRUCTURE
8. FOLLOWING DRAINING OF SYSTEM, TURN THE CONTROLLER TO "SYSTEM/OFF" OR "AUTO/OFF" AS APPROPRIATE.

THE APPLICANT/OWNER IS RESPONSIBLE TO MONITOR AND RECORD THE FLOW THROUGH THE SPRAY IRRIGATION SYSTEM TO ENSURE THE REQUIRED VOLUME IS BEING APPLIED.

THE ENTIRE VOLUME OF 87,892 CUBIC FEET SHALL BE UTILIZED WITHIN 7 DAYS OF THE BEGINNING OF EACH STORM EVENT.

THE SPRAY IRRIGATION SYSTEM SHALL NOT BE ACTIVATED UNTIL APPROXIMATELY 24 HOURS AFTER ANY SIGNIFICANT PRECIPITATION STORM EVENT. THIS SHALL BE ACCOMPLISHED VIA SPECIFIED RAIN SENSOR AND CONTROLLER WITH APPROPRIATE PROGRAMMING.

THE SPRAY IRRIGATION SYSTEM SHOULD BE DESIGNED TO COMPLETELY DRAIN WHEN IT IS SHUT OFF.

BASIN/WATER TOLERANT SEED MIXTURES

Table with 3 columns: Botanical Name, Root, Notes. Lists various seed mixtures like Uniform Cover (Mechanical Broadcast), Swath/Group Cover (Hand Spread), and Meadow Seed Mixture.

MEADOW SEED MIXTURE

SEEDING RATE: 20#/ACRE

Table with 3 columns: % of Mix, Common Name, Botanical Name. Lists seed mixtures like Big Bluestem, Virginia Wildrye, Panicum Virgatum, etc.

NOTE: SEED MIX IS THE "NATIVE UPLAND WILDLIFE FORAGE & COVER MEADOW" MIX BY ERNST CONSERVATION SEEDS (WWW.ERNSTSEEDS.COM). SUBSTITUTE EQUIVALENT MAY BE PROVIDED UPON REVIEW AND APPROVAL OF MIX BY DESIGN ENGINEER OR LANDSCAPE ARCHITECT.

PA ACT 287, AS AMENDED

IN ACCORDANCE WITH PA ACT 287, AS AMENDED, THE SURVEYOR CONTACTED PA ONE CALL, INC., FOR A DESIGN PHASE LOCATION REQUEST. THE SERIAL NUMBER FOR THAT REQUEST IS 20222283634. THE SURVEYOR HAS MADE NO INDEPENDENT VERIFICATION OF THE INFORMATION PROVIDED OTHER THAN AS MAY BE READILY EVIDENT FROM THE SURFACE OF THE GROUND.

THE CONTRACTOR SHALL COMPLY WITH PA ACT 287, AS AMENDED REQUIREMENTS AND VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE START OF WORK.

EXTENDED DRY DETENTION BASIN CONSTRUCTION NOTE:

AREAS RESERVED FOR EXTENDED DRY DETENTION BASIN SHALL BE PROTECTED FROM HEAVY CONSTRUCTION TRAFFIC DURING SITE DEVELOPMENT TO PREVENT COMPACTION OF THE UNDERLYING SOILS. DURING SUBGRADE PREPARATION, THE NATURAL SOIL AT THE BOTTOM OF EACH BMP EXCAVATION SHALL BE ROUGHED WITH A CHISEL PLOW, OR SIMILAR IMPLEMENT, TO A DEPTH OF FOUR TO SIX INCHES RATHER THAN GRADED SMOOTH. THE DESIGN ENGINEER, A CERTIFIED SOIL SCIENTIST, OR A PROFESSIONAL GEOLOGIST SHALL INSPECT AND CERTIFY THE SUBGRADE PREPARATION AT THE TIME OF CONSTRUCTION. THE INSPECTION AND CERTIFICATION DOCUMENTS FOR SUCH SYSTEMS SHALL BE SUBMITTED TO THE TOWNSHIP AND TOWNSHIP ENGINEER FOR DOCUMENTATION PURPOSES AND THE TOWNSHIP ENGINEER SHALL BE NOTIFIED 48-HOUR PRIOR TO SUBGRADE PREPARATION SO IT CAN HAVE A REPRESENTATIVE PRESENT.

EXTENDED DRY DETENTION BASIN CONSTRUCTION SEQUENCE:

- 1. INSTALL TEMPORARY SEDIMENT CONTROL BMP'S AS SHOWN ON THE PLANS.
2. EXCAVATE DETENTION BASIN TO PROPOSED INVERT DEPTH.
3. INSTALL SURROUNDING EMBANKMENTS AND INLET AND OUTLET CONTROL STRUCTURES.
4. GRADE SUBSOIL IN BOTTOM OF BASIN AS SHOWN ON PLANS AND SPECIFICATION, OVERFILLING IS RECOMMENDED TO ACCOUNT FOR SETTLEMENT. LIGHT HAND TAMPING IS ACCEPTABLE IF NECESSARY.
5. COMPACT SURROUNDING EMBANKMENT AREAS AND AROUND INLET AND OUTLET STRUCTURES.
6. COMPLETE FINAL GRADING TO ACHIEVE PROPOSED DESIGN ELEVATIONS, LEAVING SPACE FOR UPPER LAYER OF COMPOST, MULCH OR TOPSOIL AS SPECIFIED ON PLANS.
7. SEED AND APPLY GEO-TEXTILES, EROSION CONTROL BLANKETS AND OTHER EROSION CONTROL MEASURES.

NOTE: ONCE COMPLETE, PROTECT DETENTION BASIN FROM SEDIMENT AT ALL TIMES DURING CONSTRUCTION. COMPOST FILTER SOCKS, DIVERSION BERMS, AND/OR OTHER APPROPRIATE MEASURES SHALL BE USED AT THE TOE OF SLOPES THAT ARE ADJACENT TO DETENTION BASIN TO PREVENT SEDIMENT FROM WASHING INTO THESE AREAS DURING SITE DEVELOPMENT.

EXTENDED DRY DETENTION BASIN INSPECTION AND MAINTENANCE NOTES:

- 1. WHILE VEGETATION IS BEING ESTABLISHED, ADDITIONAL SEEDING, WATERING AND WEEDING MAY BE REQUIRED.
2. DETRIUSUS MAY ALSO NEED TO BE REMOVED EVERY YEAR. PERENNIAL PLANTINGS MAY BE CUT DOWN AT THE END OF THE GROWING SEASON.
3. SEDIMENT REMOVAL SHOULD BE CONDUCTED WHEN BASIN IS COMPLETELY DRY. SEDIMENT SHOULD BE DISPOSED OF PROPERLY AND ONCE SEDIMENT IS REMOVED, DISTURBED AREAS NEED TO BE IMMEDIATELY STABILIZED AND VEGETATED.
4. BASIN AREAS SHOULD BE INSPECTED AT LEAST FOUR TIMES PER YEAR AND AFTER EVERY STORM GREATER THAN 1 INCH FOR SEDIMENT BUILD-UP, EROSION, VEGETATIVE CONDITIONS, ETC.
5. STRUCTURES TO INSPECT INCLUDE BASIN BOTTOMS, TRASH RACKS, OUTLET STRUCTURES, RIPRAP OR GABION STRUCTURES AND INLETS.
6. VEGETATIVE COVER SHOULD BE MAINTAINED AT A MINIMUM OF 95%. IF VEGETATIVE COVER HAS BEEN REDUCED BY 10%, VEGETATION SHOULD BE REESTABLISHED.

EXTENDED DRY DETENTION BASIN MAINTENANCE SCHEDULE

Table with 2 columns: Task, Frequency. Lists maintenance tasks like inspect for sediment accumulation, remove accumulated sediment, inspect for debris, etc.

OUTLET PROTECTION CONSTRUCTION SEQUENCE:

- 1. INSTALL OUTLET PIPE.
2. PREPARE SUBGRADE.
3. INSTALL OUTLET PROTECTION DEVICE IN ACCORDANCE WITH STANDARD CONSTRUCTION DETAILS #9-1 AND #9-2 INCLUDED IN THESE PCSM PLANS.
4. FOLLOW MAINTENANCE GUIDELINES AS SHOWN BELOW.

OUTLET PROTECTION MAINTENANCE SCHEDULE

Table with 2 columns: Task, Frequency. Lists maintenance tasks like inspect for debris, clear debris/repair erosion, inspect for sediment accumulation, etc.

OUTLET PROTECTION INSPECTION AND MAINTENANCE NOTES:

- 1. OUTLET CONTROL DEVICES SHOULD BE INSPECTED AFTER SEVERE STORMS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY AND THAT THERE ARE NO EROSION PROBLEMS DEVELOPING.
2. INSPECT FOR DEBRIS AND SEDIMENT BUILDUP, AND RIPRAP DISPLACEMENT.
3. CLEAN OUT LEAVES, TRASH, DEBRIS, ETC.
4. REMOVE SEDIMENT BUILDUP EXCEEDING 2" IN DEPTH OR WHEN IT BEGINS TO CONSTRICT THE FLOW PATH.
5. THE SOURCE OF SEDIMENT CONTAMINATION SHOULD BE IDENTIFIED AND CONTROLLED WHEN NATIVE SOIL IS EXPOSED OR EROSION CHANNELS ARE PRESENT.
6. REPLACE DISPLACED RIPRAP WITHIN THE OUTLET ENERGY DISSIPATOR IMMEDIATELY AFTER IT IS DISPLACED AND ESPECIALLY AFTER MAJOR STORM DISCHARGE EVENTS.
7. MAINTAIN RECORDS OF ALL INSPECTIONS AND MAINTENANCE ACTIVITY.

REVEGETATE AND REFOREST CONSTRUCTION NOTES:

APPROPRIATE NATIVE TREE SPECIES WITH ASSOCIATED GROUND COVER THAT HAS QUICK ESTABLISHMENT SHALL BE SELECTED. SELECTIONS SHALL MIMIC SURROUNDING NATIVE VEGETATION.

DECIDUOUS TREES SHALL BE 2" CALIPER MINIMUM. EVERGREEN SHALL BE 6' HEIGHT MINIMUM.

TREES AND SHRUBS SHOULD BE PLANTED ON APPROXIMATELY 8-FOOT CENTERS.

REVEGETATE AND REFOREST CONSTRUCTION SEQUENCE:

- 1. INSTALL TEMPORARY SEDIMENT CONTROL BMP'S AS SHOWN ON THE ESPC PLANS.
2. PERFORM ALL OTHER EARTH MOVING ACTIVITIES TO THE GREATEST EXTENT POSSIBLE.
3. STABILIZE AREAS UPGRADIENT FROM THE REVEGETATE/REFOREST AREA. ANY TREES AND SHRUBS SHOULD BE INSTALLED AT TIME OF YEAR WHEN SUCCESSFUL ESTABLISHMENT OF PLANTS WITHOUT IRRIGATION IS MOST LIKELY. TEMPORARY IRRIGATION MAY BE NEEDED IN PERIODS OF LITTLE RAIN OR DROUGHT.
4. CLEAR AND GRUB SITE AND/OR PREPARE SOILS AS NEEDED. ELIMINATE UNSURVIVABLE SPECIES AHEAD OF PLANTING DATE. MARK PLANTING LAYOUT AT SITE. PURCHASE PLANTS AND PLANTING MATERIALS.
5. CONCURRENT WITH #4, STABILIZE REVEGETATE/REFOREST AREA WITH APPROPRIATE PERMANENT SOIL STABILIZATION METHODS, INCLUDING QUICK ESTABLISHING GROUND COVER. UTILIZE EROSION CONTROL MATTING OR BLANKETS PER PLAN IF NECESSARY.
6. BEGIN MAINTENANCE OF NEW PLANTINGS.

REVEGETATE AND REFOREST INSPECTION AND MAINTENANCE NOTES:

- 1. MONITOR FOR BROWSING DAMAGE BY DEER, INVASION BY EXOTIC SPECIES AND OTHER DISTURBANCES.
2. WATER AS NEEDED FOR PROPER PLANT ESTABLISHMENT.
3. UTILIZE MULCH TO MAINTAIN MOISTURE IN ROOT ZONE. PLACE 2-4 INCH LAYER, LEAVING SPACE AROUND TRUNKS.
4. CONTROL WEED GROWTH.
5. MAINTAIN RECORDS OF ALL INSPECTIONS AND MAINTENANCE ACTIVITY.
6. DEAD TREES TO BE REPLACED WITHIN 6 MONTHS.

REVEGETATE AND REFOREST MAINTENANCE SCHEDULE

THE MOST CRITICAL PERIOD DURING REVEGETATE/REFOREST AREA ESTABLISHMENT IS MAINTENANCE OF THE NEWLY PLANTED TREES DURING CANOPY CLOSURE, TYPICALLY THE FIRST 3 TO 5 YEARS. ONGOING MAINTENANCE PRACTICES ARE NECESSARY. MAINTENANCE AND MONITORING PLANS SHOULD BE PREPARED FOR THE SPECIFIC SITE AND CARETAKERS NEED TO BE ADVISED OF REQUIRED DUTIES DURING THE REGULAR MAINTENANCE PERIOD.

MAINTENANCE MEASURES THAT SHOULD BE PERFORMED REGULARLY:

WATERING

PLANTINGS NEED DEEP REGULAR WATERING DURING THE FIRST GROWING SEASON, EITHER NATURAL WATERING VIA RAINFALL OR CARETAKER WATERING. WATERING VIA CARETAKER PLANTING IN THE FALL INCREASES THE LIKELIHOOD OF SUFFICIENT RAIN DURING PLANTING ESTABLISHMENT.

MULCHING

MULCH WILL ASSIST IN MOISTURE RETENTION IN THE ROOT ZONE OF PLANTINGS, MODERATE SOIL TEMPERATURE, PROVIDE SOME WEED SUPPRESSION, AND RETARD EVAPORATION. USE COARSE, ORGANIC MULCH THAT IS SLOW TO DECOMPOSE IN ORDER MINIMIZE REPEAT APPLICATION. APPLY 2-4 INCH LAYER, LEAVING AIR SPACE AROUND TREE TRUNK TO PREVENT FUNGUS GROWTH. USE COMBINATION OF WOODCHIPS, LEAVES, AND TWIGS THAT ARE STOCKPILED FOR SIX MONTHS TO A YEAR.

WEED CONTROL

WEED COMPETITION LIMITS BUFFER GROWTH AND SURVIVAL, THEREFORE WEEDS SHOULD BE CONTROLLED BY EITHER HERBICIDES, MOWING, OR WEED MATS:

HERBICIDES

THIS IS A SHORT-TERM MAINTENANCE TECHNIQUE (2-3 YEARS) THAT IS GENERALLY CONSIDERED LESS EXPENSIVE AND MORE FLEXIBLE THAN MOWING, AND WILL RESULT IN A QUICKER ESTABLISHMENT OF THE BUFFER. HERBICIDE USE IS REGULATED BY THE PA DEPARTMENT OF AGRICULTURE. PROPER CARE SHOULD BE TAKEN TO ENSURE THAT PROXIMITY TO WATER FEATURES IS CONSIDERED.

MOWING

MOWING CONTROLS THE HEIGHT OF THE EXISTING GRASSES, YET INCREASES NUTRIENT UPTAKE, THEREFORE COMPETITION FOR NUTRIENTS WILL PERSIST UNTIL THE CANOPY CLOSURE SHADES OUT LOWER LAYERS. A PLANTING LAYOUT SIMILAR TO A GRID FORMAT WILL FACILITATE EASE OF MOWING YET YIELD AN UNNATURALLY SPACED COMMUNITY. MOWING MAY RESULT IN STRIKES ON THE TRUNK UNLESS PROTECTIVE MEASURES ARE UTILIZED. MOWING SHOULD OCCUR TWICE EACH GROWING SEASON. MOWER HEIGHT SHOULD BE SET BETWEEN 8 - 12 INCHES.

WEED MATS

WEED MATS ARE GEO-TEXTILE FABRICS THAT ARE USED TO SUPPRESS WEED GROWTH AROUND NEWLY PLANTED VEGETATION BY PROVIDING SHADE AND PREVENTING SEED DEPOSITION. WEED MATS ARE INSTALLED AFTER PLANTING, AND SHOULD BE REMOVED ONCE THE TREES HAVE DEVELOPED A CANOPY THAT WILL NATURALLY SHADE OUT WEEDS.

DEER DAMAGE

DEER WILL BROWSE ALL VEGETATION WITHIN REACH, GENERALLY BETWEEN 5-6 FEET ABOVE THE GROUND. APPROACHES TO MINIMIZE DAMAGE INCLUDE: 1) SELECTING PLANTS THAT DEER DO NOT PREFER (EX. PAPER BIRCH, BEECH, ASH, COMMON ELDERBERRY) 2) HOMEMADE DEER REPELLANTS 3) TREE SHELTERS

TREE SHELTERS

- REPAIR BROKEN STAKES
TIGHTEN STAKE LINES
STRAIGHTEN LEANING TUBES
CLEAN DEBRIS FROM TUBE
REMOVE NETTING AS TREE GROWS
REMOVE WHEN TREE IS APPROXIMATELY 2 INCHES WIDE

INVASIVE PLANTS

MONITOR RESTORATION SIGHT REGULARLY FOR ANY SIGNS OF INVASIVE PLANTS. APPENDIX B CONTAINS COMMON INVASIVE PLANTS FOUND IN PENNSYLVANIA. CHOICE OF CONTROL METHOD IS BASED ON A VARIETY OF CONSIDERATIONS, BUT FALLS INTO THREE GENERAL CATEGORIES: MECHANICAL, MECHANICAL WITH APPLICATION OF HERBICIDE, HERBICIDE.

POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM) STANDARD NOTES:

PERMIT TERMINATION

UPON PERMANENT STABILIZATION OF THE EARTH DISTURBANCE ACTIVITY UNDER §102.22(a)(2) (RELATING TO PERMANENT STABILIZATION), AND INSTALLATION OF BMPs IN ACCORDANCE WITH AN APPROVED PLAN PREPARED AND IMPLEMENTED IN ACCORDANCE WITH 102.4 AND 102.8 (RELATING TO EROSION AND SEDIMENT CONTROL REQUIREMENTS), AND PCSM REQUIREMENTS), THE PERMITTEE OR CO-PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION TO THE DEPARTMENT OR CONSERVATION DISTRICT. THE NOTICE OF TERMINATION MUST INCLUDE: (1) THE FACILITY NAME, ADDRESS AND LOCATION. (2) THE OPERATOR NAME AND ADDRESS. (3) THE PERMIT NUMBER. (4) THE REASON FOR PERMIT TERMINATION. (5) IDENTIFICATION OF THE PERSONS WHO HAVE AGREED TO AND WILL BE RESPONSIBLE FOR PERMANENT OPERATION AND MAINTENANCE OF THE PCSM BMPs IN ACCORDANCE WITH §102.8(M) AND PROOF OF COMPLIANCE WITH §102.8(M)(2).

PCSM REQUIREMENTS

PCSM REPORTING AND RECORD KEEPING, THE PCSM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE DEPARTMENT OR THE CONSERVATION DISTRICT.

LICENSED PROFESSIONAL OVERTSIGHT OF CRITICAL STAGES

A LICENSED PROFESSIONAL ENGINEER OR DESIGNER SHALL BE PRESENT ON-SITE AND BE RESPONSIBLE DURING CRITICAL STAGES OF IMPLEMENTATION OF THE APPROVED PCSM PLAN. THE CRITICAL STAGES MAY INCLUDE THE INSTALLATION OF THE PERMANENT TREATMENT OR STORAGE BMPs, STRUCTURALLY ENGINEERED BMPs, OR OTHER BMPs AS DEEMED APPROPRIATE BY THE DEPARTMENT OR THE CONSERVATION DISTRICT.

FINAL CERTIFICATION

THE PERMITTEE SHALL INCLUDE WITH THE NOTICE OF TERMINATION "RECORD DRAWINGS" WITH A FINAL CERTIFICATION STATEMENT FROM A LICENSED PROFESSIONAL, WHICH READS AS FOLLOWS: "(NAME) DO HEREBY CERTIFY PURSUANT TO THE PENALTIES OF 18 PA.C.S.A. §4904 TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE ACCOMPANYING RECORD DRAWINGS ACCURATELY REFLECT THE AS-BUILT CONDITIONS, ARE TRUE AND CORRECT, AND ARE IN CONFORMANCE WITH CHAPTER 102 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE PROJECT SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN, ALL APPROVED PLAN CHANGES AND ACCEPTED CONSTRUCTION PRACTICES." (1) THE PERMITTEE SHALL RETAIN A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN. (2) THE PERMITTEE SHALL PROVIDE A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN TO THE PERSON IDENTIFIED IN THIS SECTION AS BEING RESPONSIBLE FOR THE LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPs.

PCSM LONG TERM OPERATIONS AND MAINTENANCE REQUIREMENTS

UNTIL THE PERMITTEE OR CO-PERMITTEE HAS RECEIVED WRITTEN APPROVAL OF A NOTICE OF TERMINATION, THE PERMITTEE OR CO-PERMITTEE WILL REMAIN RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT TERMS AND CONDITIONS INCLUDING LONG-TERM OPERATION AND MAINTENANCE OF ALL PCSM BMPs ON THE PROJECT SITE AND IS RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE. THE DEPARTMENT OR CONSERVATION DISTRICT WILL CONDUCT A FINAL INSPECTION AND APPROVE OR DENY THE NOTICE OF TERMINATION WITHIN 30 DAYS.

THE PERMITTEE OR CO-PERMITTEE SHALL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPs UNLESS A DIFFERENT PERSON IS IDENTIFIED IN THE NOTICE OF TERMINATION AND HAS AGREED TO LONG-TERM OPERATION MAINTENANCE OF PCSM BMPs.

FOR ANY PROPERTY CONTAINING A PCSM BMP, THE PERMITTEE OR CO-PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE PCSM BMP AND THE RELATED OBLIGATIONS IN THE ORDINARY COURSE OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDED INSTRUMENT MUST IDENTIFY THE PCSM BMP, PROVIDE FOR NECESSARY ACCESS RELATED TO LONG-TERM OPERATION AND MAINTENANCE FOR PCSM BMPs AND PROVIDE NOTICE THAT THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP IS A CONVEYANT THAT RUNS WITH THE LAND THAT IS BINDING UPON AN ENFORCEABLE BY SUBSEQUENT GRANTEE, AND PROVIDE PROOF OF FILING WITH THE NOTICE OF TERMINATION UNDER §102.7(b)(5) RELATING TO PERMIT TERMINATION.

THE PERSON RESPONSIBLE FOR PERFORMING LONG-TERM OPERATION AND MAINTENANCE MAY ENTER INTO AN AGREEMENT WITH ANOTHER PERSON INCLUDING A CONSERVATION DISTRICT, NONPROFIT ORGANIZATION, MUNICIPALITY, AUTHORITY, PRIVATE CORPORATION OR OTHER PERSON, TO TRANSFER THE RESPONSIBILITY FOR PCSM BMPs OR TO PERFORM LONG-TERM OPERATION AND MAINTENANCE AND PROVIDE NOTICE THEREOF TO THE DEPARTMENT.

A PERMITTEE OR CO-PERMITTEE THAT FAILS TO TRANSFER LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP OR OTHERWISE FAILS TO COMPLY WITH THIS REQUIREMENT SHALL REMAIN JOINTLY AND SEVERALLY RESPONSIBLE WITH THE LANDOWNER FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPs LOCATED ON THE PROPERTY.

FINAL POST-CONSTRUCTION STORMWATER MANAGEMENT NOTES



CONSULTING ENGINEERS
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1429 ECK ROAD
OUTDOOR STORAGE
SOUTH WHITEHALL TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA



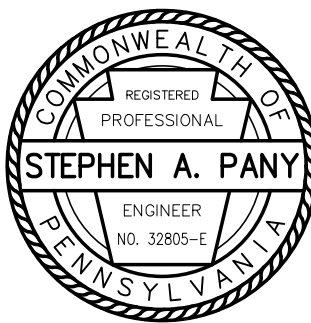
ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SOUTH WHITEHALL TOWNSHIP STANDARD SPECIFICATIONS.

Table with columns for DESIGNED, DRAWN, CHECKED, JOB NO., SCALE, DATE, DWG. NO., SHEET NO., REV., OF. Includes project details like JG. PETRUCCI CO. INC. and SHEET 30 OF 32.

ENGINEER'S STATEMENT

I, STEPHEN A. PANY, A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THE ACCOMPANYING APPLICATION, PLANS AND SUPPORTING DOCUMENTATION ARE TRUE AND CORRECT, TO THE BEST OF MY KNOWLEDGE.

DATE _____ PLAN PREPARER'S SIGNATURE _____



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All written dimensions shall take priority over scaled dimensions. The contractor shall be responsible for verifying all locations, elevations, dimensions and conditions prior to construction. The contractor shall notify Pany & Lentz Engineering Company of any discrepancies with the information shown on the drawings.

