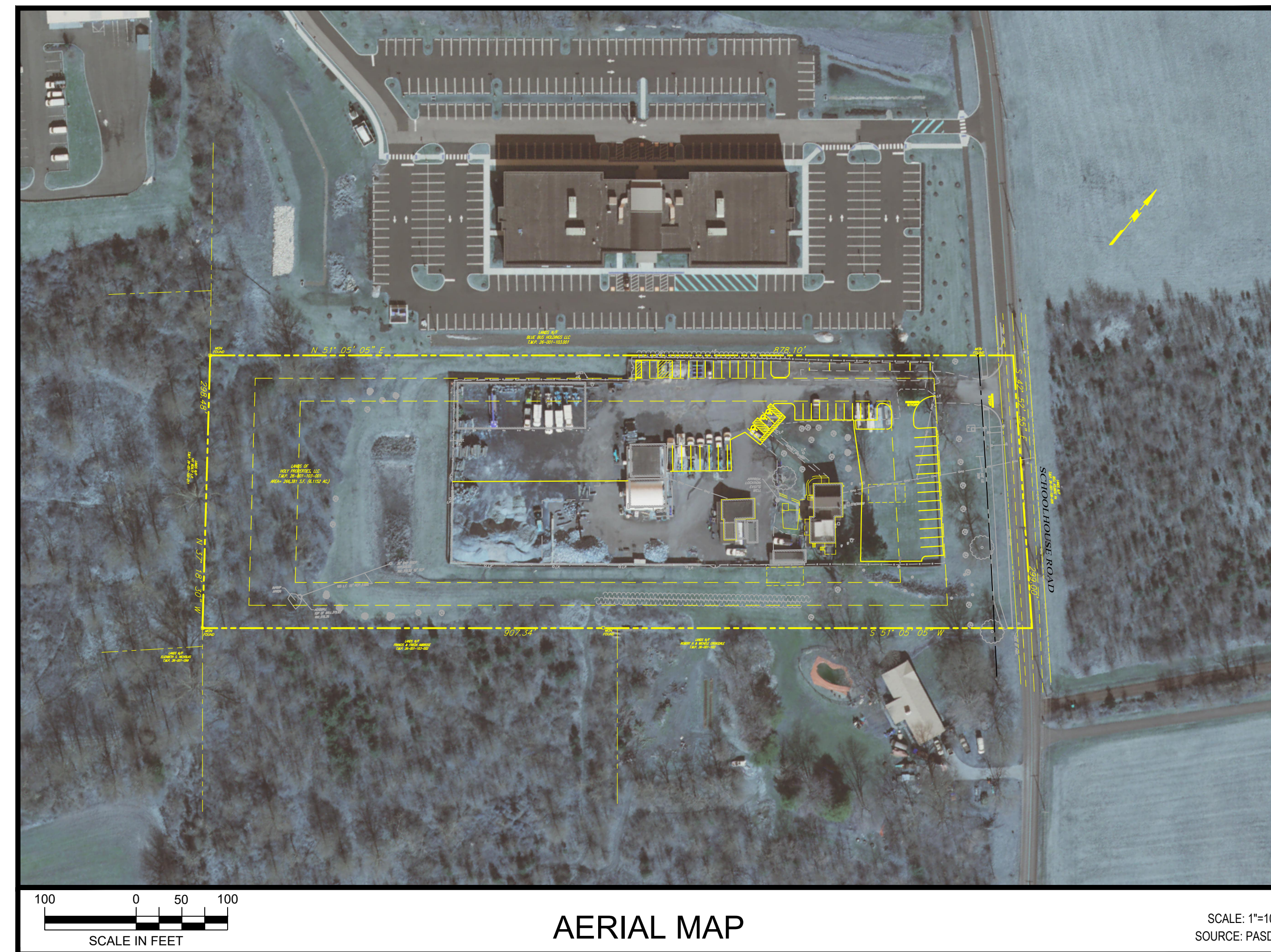
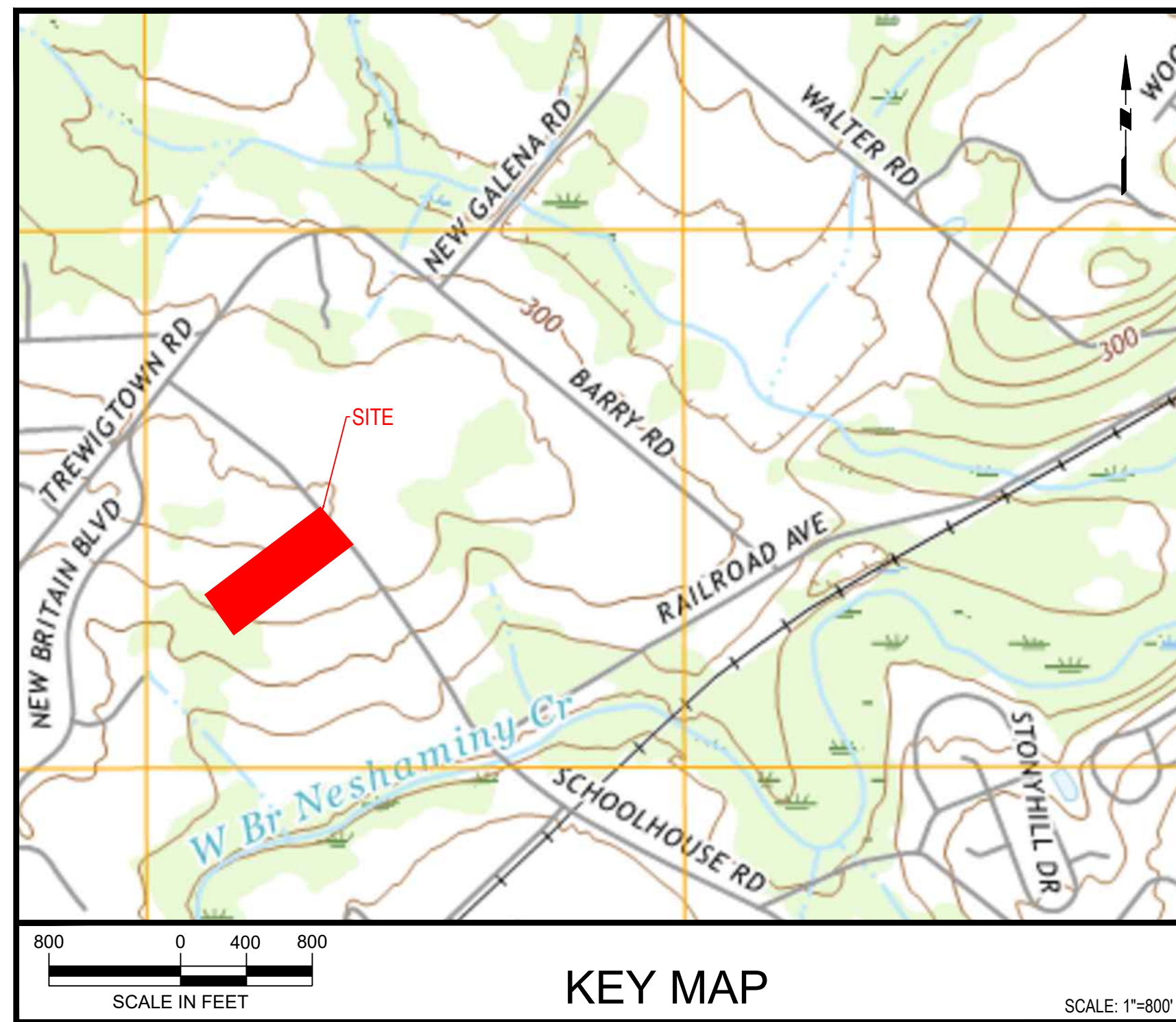


CLAUSER FACILITY EXPANSION

AMENDED LAND DEVELOPMENT PLANS

TMP # 26-001-103-001

NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA



Drawing Index			
Drawing No.	Drawing No.	Drawing Title	Last Revised
1	GI-001	Cover Sheet	1/12/2024
2	GI-101	Aerial Photograph Plan	1/12/2024
3	EX-101	Existing Conditions and Natural Resources Plan	1/12/2024
4	CS-101	Site (Record) Plan	1/12/2024
5	CS-501	Site Construction Details	1/12/2024
6	CG-1011	Grading, Drainage and Utility Plan	1/12/2024
7	CG-201	Post-Construction Stormwater Management (PCSM) Plan	1/12/2024
8	CG-501	Post-Construction Stormwater Management (PCSM) Details	1/12/2024
9	CE-101	Soil Erosion and Sediment Control Plan	1/12/2024
10	CE-501	Soil Erosion and Sediment Control Notes & Details	1/12/2024
11	LP-101	Landscape Plan	1/12/2024
12	LP-501	Landscape Details	1/12/2024

Supplemental Drawings:

- Boundary and Topographic survey for Clauser Tree Service, prepared by Kelly Engineers, dated June 22, 2023.
- Photometric Plan for Schoolhouse Road - New Britain Township, prepared by Current, last revised January 3, 2024.

CONTACT LIST

<p>NEW BRITAIN TOWNSHIP ASSISTANT MANAGER MICHAEL WALSH 207 PARK AVENUE CHALFONT, PA 18914 215-822-1391</p>	<p>SEWER CHALFONT-NEW BRITAIN TOWNSHIP JOINT SEWER AUTHORITY 1645 UPPER STATE ROAD DOYLESTOWN, PA 18901 215-345-1225</p>
<p>POLICE SERVICE NEW BRITAIN TOWNSHIP POLICE DEPARTMENT Mr. RICHARD CLOWSER - CHIEF OF POLICE 207 PARK AVENUE CHALFONT, PA 18914 215-822-1910</p>	<p>WATER NORTH PENN WATER AUTHORITY 300 FORTY FOOT ROAD LANSDALE, PA 19446 215-855-3617</p>
<p>NEW BRITAIN TOWNSHIP PLANNING COMMISSION STEPHANIE SHORTALL - SUPERVISOR 207 PARK AVENUE CHALFONT, PA 18914 215-822-1391</p>	<p>TELEPHONE & CABLE COMCAST 114 RIDGE ROAD SELLERSVILLE, PA 18960 215-257-8046</p>
<p>ELECTRIC PECO 400 PARK AVENUE WARMINISTER, PA 18974 800-454-4100</p>	<p>VERIZON 1717 ARCH STREER, 3RD FLOOR PHILADELPHIA, PA 19103 215-362-1900</p>
	<p>BUCKS COUNTY CONSERVATION DISTRICT Ms. GRETCHEN SHATSCHNEIDER, DISTRICT MANAGER 1456 FERRY ROAD SUITE 704 DOYLESTOWN, PA 18901</p>

CIVIL ENGINEER:

arna Engineering Inc.
 1456 Ferry Road, Suite 603
 Doylestown, PA 18901
 Phone: 215.766.8280
 Fax: 215.434.5280
 ATTN: Chirag V. Thakkar, P.E.

SURVEYOR:

Kelly Engineers
 30 LaCrue Avenue, Suite 201
 Glen Mills, Pennsylvania 19342
 Phone: 610.358.9363
 ATTN: Robert Snyder, P.L.S.

RECORD OWNER & APPLICANT:

Holy Properties, LLC
 324 Schoolhouse Road
 Chalfont, Pennsylvania 18914
 ATTN: Steve Clauser

ACT 187

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA ACT 187 TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION.

TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG !!
 (800) 242-1776
 OR VISIT OUR WEBSITE
 WWW.CALLBEFOREYODIG.PA.GOV
 --- STOP & CALL ---

Pennsylvania One Call System, Inc.
 1-800-242-1776

PRELIMINARY DESIGN SERIAL NUMBER: 2022433625

2.	January 12, 2024
1.	September 22, 2023

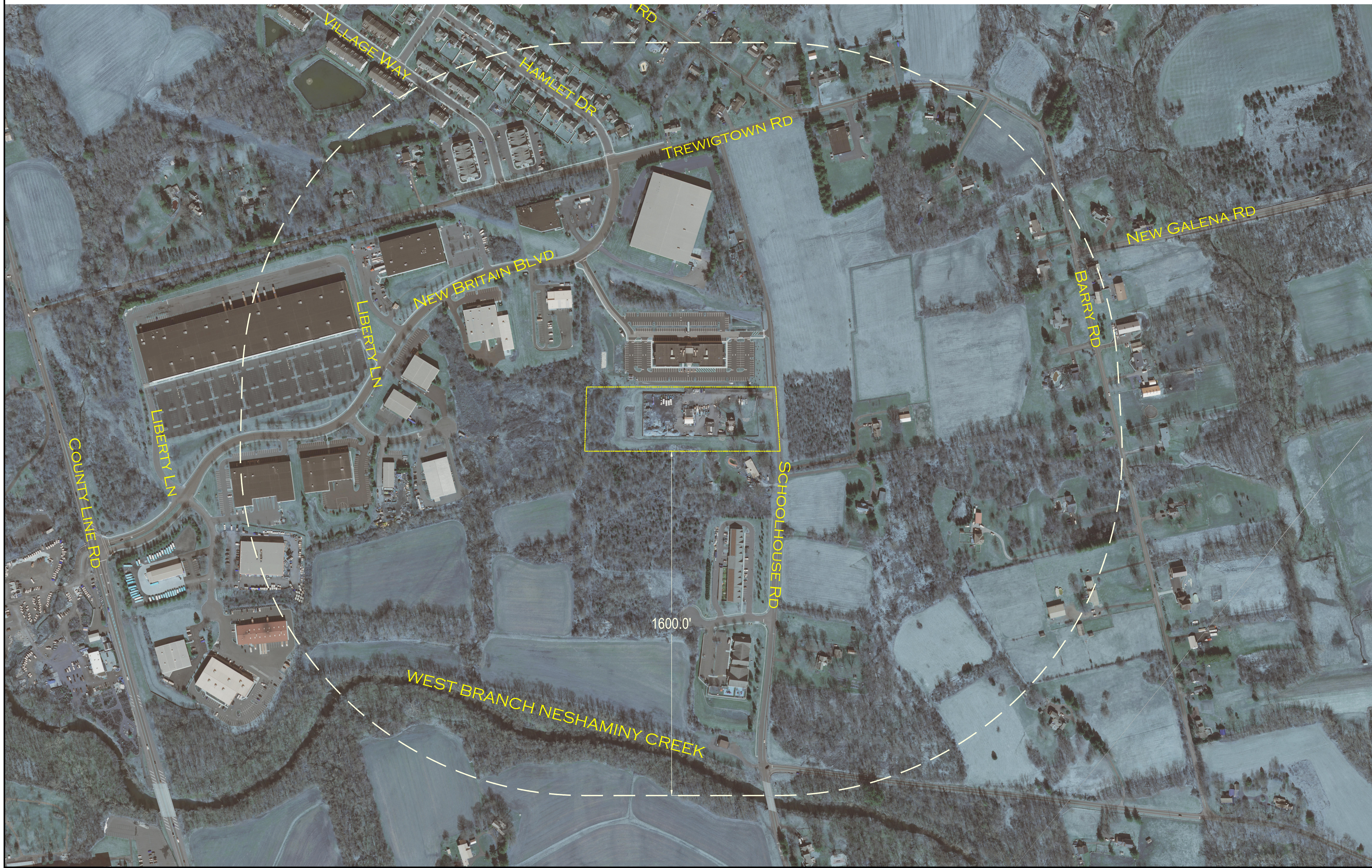
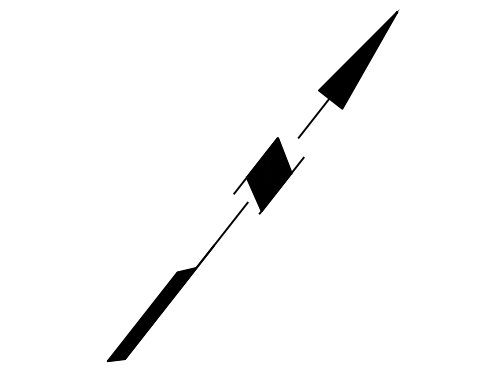
Drawing Title	
GI-001	
1 OF 12	

NOTES:

1. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN IS BASED ON A SURVEY PERFORMED BY KELLY ENGINEERS ON JUNE 12, 2023.
2. AERIAL PHOTO SOURCE: PASDA, 2021.

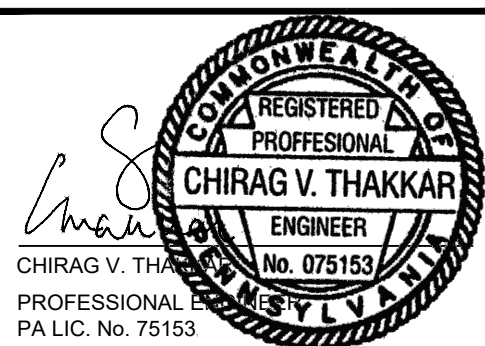


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Project
CLAUSER FACILITY EXPANSION
 TMP # 26-001-103-001
 NEW BRITAIN TOWNSHIP
 BUCKS COUNTY PENNSYLVANIA

Drawing Title
AERIAL PHOTOGRAPH PLAN



DATE	COMMENTS	NO.
01-12-24	REVISED PER TOWNSHIP AND BCCD COMMENTS	1.

REVISIONS

Project No.	230020201
Date	09-22-2023
Scale	1" = 200'
Drawn By	KGP
Checked By	AB

Drawing No.
GI-101

PROJECT: 230020201 CLAUSER FACILITY EXPANSION

NOTES:

- THIS PLAN IS NOT VALID UNLESS EMBOSSED WITH THE SEAL OF THE UNDERSIGNED PROFESSIONAL(S).
- BOUNDARY, TOPOGRAPHIC INFORMATION AND EXISTING FEATURES SHOWN ARE BASED ON A SURVEY PERFORMED BY KELLY ENGINEERS ON JUNE 22, 2023.
- THE SUBJECT SITE CONSIST OF TMP # 26-001-10-001 AND IS LOCATED IN THE 10-INDUSTRIAL/OFFICE DISTRICT OF NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA.
- THE SITE IS OUTSIDE THE 100-YR FLOODPLAIN BASED ON THE MAP ENTITLED 'NATIONAL FLOOD INSURANCE PROGRAM', FIRM, FLOOD INSURANCE RATE MAP, BUCKS COUNTY, PENNSYLVANIA, MAP NUMBER 42017C0286K, EFFECTIVE DATE 3/21/2017.

SITE CAPACITY CALCULATIONS

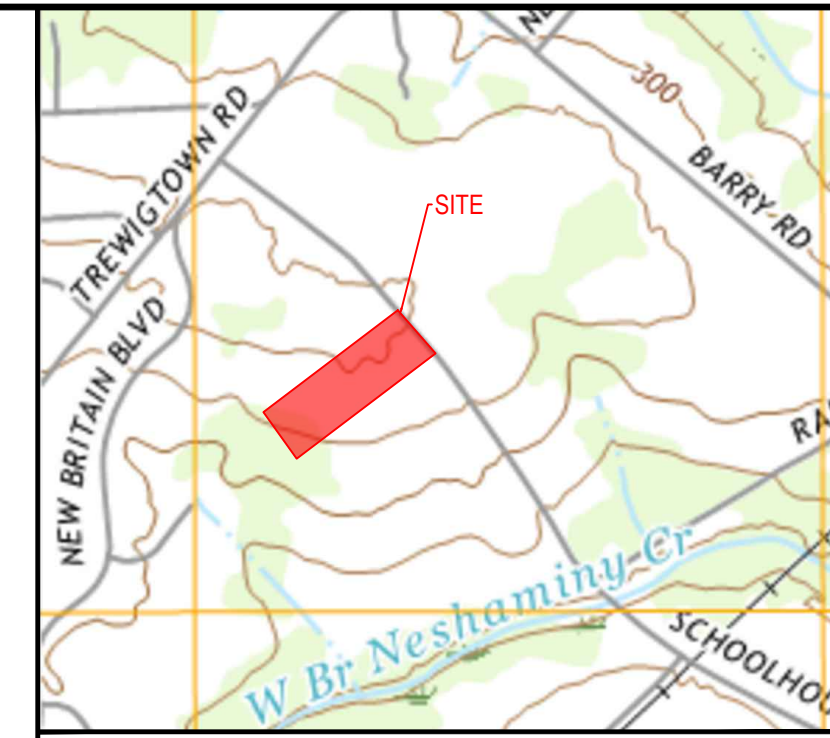
GROSS SITE AREA:	6.12 AC
BASE SITE AREA:	6.01 AC
(GROSS SITE AREA)-(EXISTING R.O.W) =	6.12 AC - 0.11 AC =
REQUIRED OPEN SPACE:	6.01 AC
(TOTAL OF RESOURCE PROTECTION LAND) =	0.875 AC
NET BUILDABLE AREA:	0.875 AC
(BASE SITE AREA) - (REQUIRED OPEN SPACE)=	5.14 AC
6.01 AC - 0.875 AC=	5.14 AC
MAXIMUM PERMITTED IMPERVIOUS SURFACE:	5.14 AC
(NET BUILDABLE AREA) * (MAXIMUM IMPERVIOUS SURFACE RATIO)=	3.34 AC
5.14 AC * 0.65 =	3.34 AC

LAND WITH RESOURCE RESTRICTIONS AND RESOURCE PROTECTION LAND

RESOURCE	AGRES. OF LANDS IN RESOURCE	PROTECTION RATIO	AREA (AC)
WOODLANDS	0.22	0.80	0.18
STEEP SLOPES 8-15%	1.08	0.60	0.65
STEEP SLOPES 15-25%	0.06	0.70	0.04
STEEP SLOPES >25%	0.01	0.85	0.01
			0.88

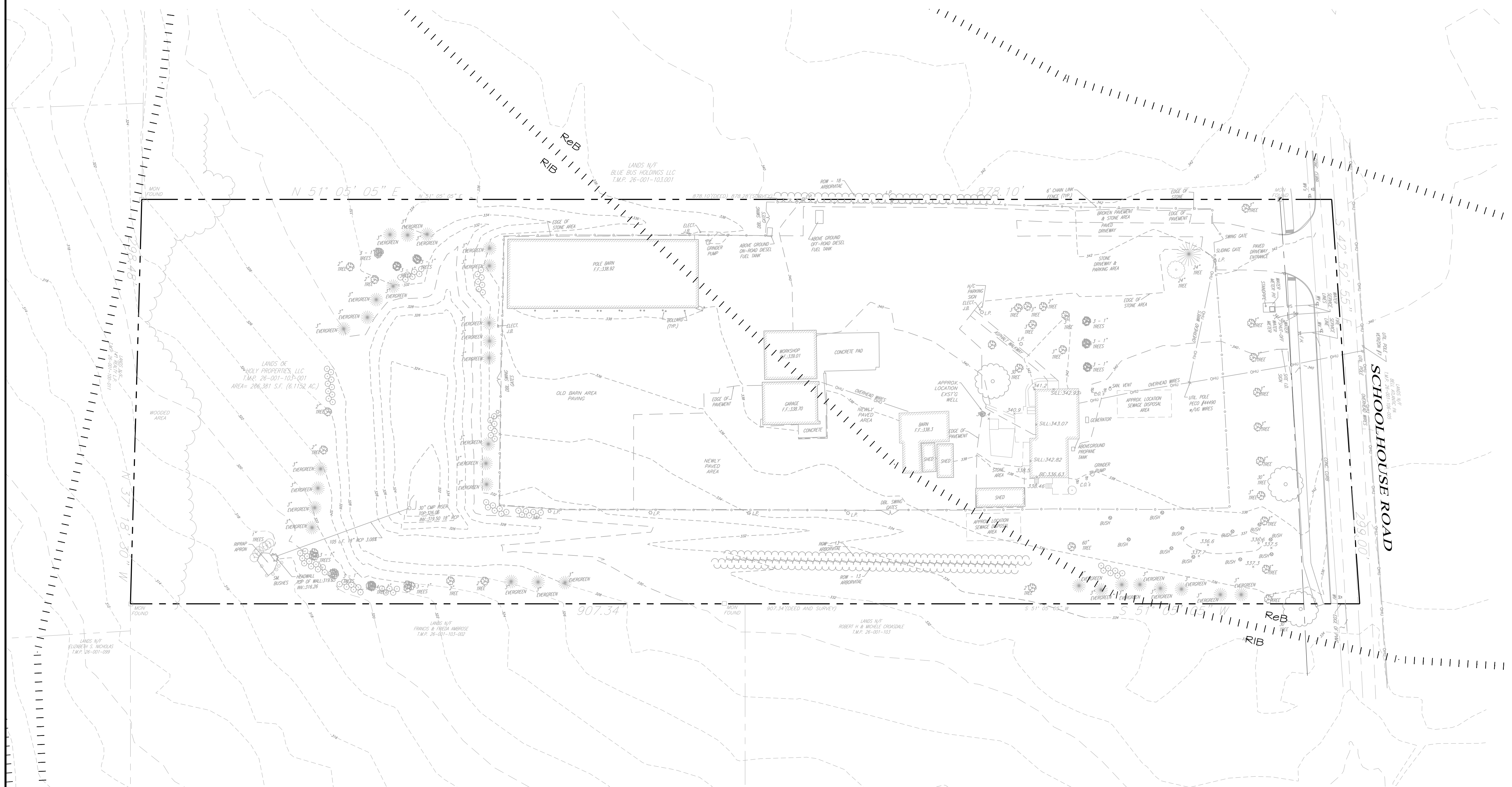
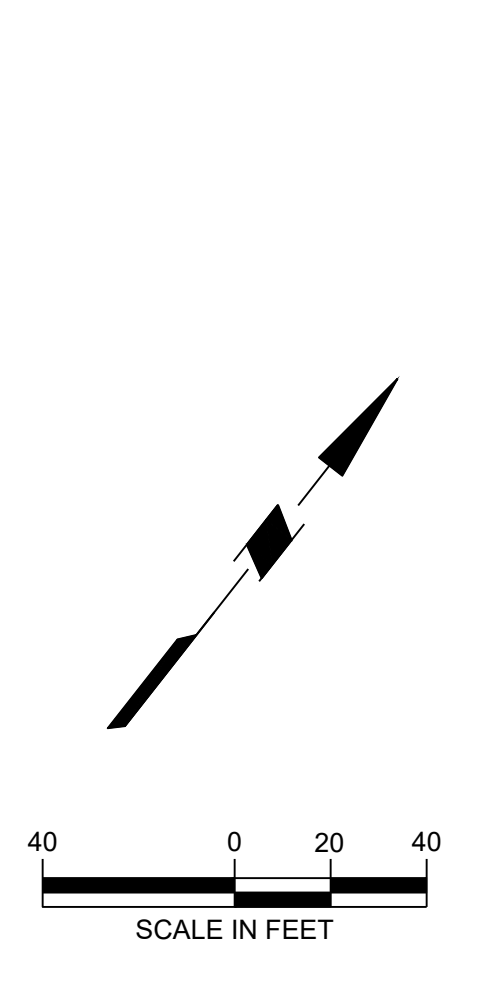
TOTAL LAND WITH RESOURCE RESTRICTIONS= 1.37 AC
 TOTAL RESOURCE PROTECTION LAND = 0.88 AC

NOTE: Site capacity calculations are based on "Record Plan" prepared by Boucher & James, last revised 5/24/2021.



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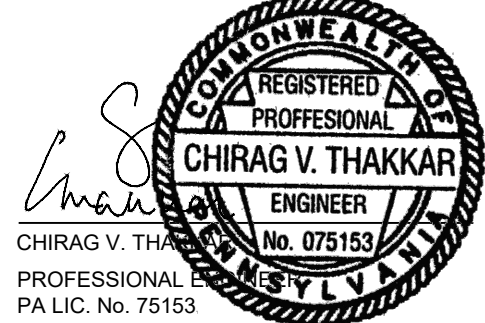


LEGEND
 EXISTING SYMBOLS & LINES

---	PROPERTY/ROW LINE
---	EASEMENT
---	CONTOUR LINE
---	EDGE OF PAVEMENT
---	CURBSIDE
---	FENCE LINE
---	GUIDE RAIL
---	SANITARY SEWER LINE
---	STORM SEWER LINE
---	GAS LINE UNDERGROUND
---	TELEPHONE UNDERGROUND
---	ELECTRIC
---	OVERHEAD LINES
---	WATER LINE
---	BUILDING
---	IRON PIN
---	CONCRETE MONUMENT
---	UTILITY POLE
---	GAS VALVE
---	WATER VALVE
---	WATER METER
---	FIRE HYDRANT
---	SANITARY CLEANOUT
---	SANITARY MANHOLE/STORM MANHOLE
---	STORM INLET
---	HEADWALL
---	LIGHT POLE
---	TREE
---	SIGNAL POLE

Project
CLAUSER FACILITY EXPANSION
 TMP # 26-001-103-001
 NEW BRITAIN TOWNSHIP
 BUCKS COUNTY PENNSYLVANIA

EXISTING FEATURES AND NATURAL RESOURCES PLAN



DATE	COMMENTS	NO.
01-12-24	REVISED PER TOWNSHIP AND BCCD COMMENTS	1.

REVISIONS

Project No.	230020201
Date	09-22-2023
Scale	1" = 40'
Drawn By	KGP
Checked By	AB
Drawing No.	EX-101

PROJECT: 230020201 CLAUSER FACILITY EXPANSION

- SITE PLAN NOTES:**
- THIS PLAN IS NOT VALID UNLESS EMBOSSED WITH THE SEAL OF THE UNDERSIGNED PROFESSIONAL(S).
 - BOUNDARY, TOPOGRAPHIC INFORMATION AND EXISTING FEATURES SHOWN ARE BASED ON A SURVEY PERFORMED BY KELLY ENGINEERS ON JUNE 22, 2023.
 - HORIZONTAL DATUM BEARINGS OF LINES ARE BASED ON DEED OF RECORD. VERTICAL DATUM/ELEVATIONS ARE BASED ON NGVD 85 DATUM.
 - THE SUBJECT SITE CONSISTS OF TMP # 26-001-103-001 AND IS LOCATED IN THE INDUSTRIAL/OFFICE DISTRICT OF NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA.
 - THE SITE IS OUTSIDE THE 100-YR FLOODPLAIN BASED ON THE MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM", FIRM FLOOD INSURANCE RATE MAP, BUCKS COUNTY, PENNSYLVANIA, MAP NUMBER 42017C0228K - EFFECTIVE DATE 3/21/2017.
 - ALL STORMWATER STRUCTURES ARE TO BE PRE-CAST CONCRETE EXCEPT AS NOTED OTHERWISE.
 - THE PROJECT SITE IS SERVICED BY PUBLIC WATER AND PUBLIC SANITARY SEWER SERVICES.
 - ALL TRAFFIC CONTROL SIGNS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND SHALL BE DESIGNED IN ACCORDANCE WITH THE "PENNDOT GUIDELINES", LATEST EDITION.
 - THE CONTRACTOR SHALL PROVIDE ALL APPLICABLE JURISDICTIONAL AUTHORITIES/AGENCIES REQUIRED NOTICE BEFORE BEGINNING ANY ON-SITE OR OFF-SITE WORK.
 - THE CONTRACTOR IS FULLY RESPONSIBLE FOR ADHERING TO ALL REGULATIONS RELATED TO HEALTH AND SAFETY AS WELL AS ALL APPLICABLE STATE, FEDERAL AND LOCAL RULES AND REGULATIONS.
 - ALL DEMOLITION MUST BE PERFORMED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.
 - CONTRACTOR SHALL REFER TO THE LATEST ADA ACCESSIBILITY GUIDELINES AND ANSI A117-2003 FOR BUILDINGS AND FACILITIES (ADAAG) TO ENSURE THAT ADA DETAILS ARE CURRENT AT THE TIME OF CONSTRUCTION. CONTRACTOR SHALL CONSTRUCT AREAS DESIGNATED FOR ACCESSIBLE ROUTES INCLUDING CURB RAIMS, SIDEWALKS, HANDICAP PARKING STALLS, CROSSLANDINGS AND INLETS) BY FOLLOWING THE MOST CURRENT ADA ACCESSIBILITY GUIDELINES AND ANSI A117-2003.
 - CONTRACTOR SHALL PROVIDE WRITTEN REQUESTS FOR INFORMATION TO THE OWNER AND OWNER'S ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITEWORK. ITEM IF ANY SPECIFIC SITEWORK ITEM DEPICTED ON THE PLANS WARRANTS ADDITIONAL INFORMATION REQUIRED FOR CONSTRUCTION AND IS NOT RELATED TO MEANS AND METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SPECIFIC SITE WORK ITEMS INSTALLED DIFFERENTLY THAN INTENDED AS DEPICTED ON THE PLANS IN THE ABSENCE OF SUBMITTING AND ADDRESSING WRITTEN REQUESTS FOR INFORMATION.
 - ALL CONTRACTORS WORKING ON THIS PROJECT SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES/FACILITIES PRIOR TO THE START OF WORK AND SHALL COMPLY WITH THE REQUIREMENTS OF P.L. 852, NO. 287 DECEMBER 10, 1974 AS LAST AMENDED ON OCTOBER 9, 2006, PENNSYLVANIA ACT 121.
 - PRELIMINARY/FINAL PLAN APPROVAL WAS GRANTED ON JANUARY 3, 2017 BY THE NEW BRITAIN TOWNSHIP BOARD OF SUPERVISORS.
 - LAND WITHIN RIGHT-OF-WAY IS HEREBY OFFERED TO NEW BRITAIN TOWNSHIP AS AN EASEMENT.
 - CONSERVATION EASEMENT INFORMATION IS BASED ON PLAN TITLED "CONSERVATION EASEMENT EXHIBIT" PREPARED BY BOUCHER & JAMES, INC., DATED AUGUST 25, 2021.

- GRANTED VARIANCES:**
- SECTION 27-305.L2.B.2: VARIANCE APPROVED FOR THE SIZE OF THE OUTDOOR STORAGE AREA AS HEARD AT THE AUGUST 18, 2016, ZONING HEARING BOARD.
- GRANTED WAIVERS:**
- SECTION 22-403 AND 22-404: RELIEF APPROVED FROM PROVIDING SEPARATE PRELIMINARY AND FINAL PLAN SUBMISSIONS.
 - SECTION 22-706.1.B: RELIEF APPROVED FROM PROVIDING CONCRETE SIDEWALK ALONG SCHOOL HOUSE ROAD. A 6-FOOT BITUMINOUS TRAIL TO BE PROVIDED INSTEAD OF THE CONCRETE SIDEWALK.
 - SECTION 22-713.5.B(4): RELIEF APPROVED FROM PROVIDING SHADOWBOX FENCING TO SCREEN OUTDOOR STORAGE AREAS. A CHAIN LINK FENCE WITH PRIVACY FABRIC AND EVERGREEN TREES PLANTED AT 10-FOOT INTERVALS ARE PROVIDED IN PLACE OF THE SHADOWBOX FENCE.
 - SECTION 22-706.1.C: RELIEF PROVIDED FROM CURBS FOR ALL PARKING AREAS.
 - SECTION 22-708.2.A AND 2.B: RELIEF APPROVED FROM PROVIDING MINIMUM PARKING STALL DIMENSIONS IN THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE. 9 BY 18' STALL ARE PROVIDED.
 - SECTION 22-APPENDIX E: RELIEF REQUESTED FROM PROVIDING 4" ± 25 MM BITUMINOUS BASE LAYER FOR DRIVEWAYS AND PARKING AREAS. THE TOWNSHIP ENGINEER MAY GRANT A REQUEST FOR THE REDUCED BASE COURSE THICKNESS AS A FIELD CHANGE ON-SITE SUBGRADE CONDITIONS CAN BE OBSERVED.

NEW BRITAIN TOWNSHIP			
ZONING DISTRICT: IO - INDUSTRIAL/OFFICE DISTRICT			
ITEM	REQUIRED/PERMITTED	APPROVED	PROPOSED
Permitted Use:	K5-Contracting	K5-Contracting; L2-Outdoor Storage Accessory Use (Conditional Use)	L2-Outdoor Storage Accessory Use (Conditional Use)
Area and Dimensional Requirements			
Minimum Lot Area	3.00 AC	6.1 AC	6.1 AC
Minimum Lot Width (for other public road)	200 FT	249 FT	249 FT
Minimum Lot Depth	200 FT		
Maximum Building Coverage	50%	7.7%	5.5%
Maximum Impervious Surface Ratio	65%	34.1%	40.2%
Minimum Yards			
Front	50 FT	158.8 FT	158.8 FT
Side	25 FT	25.5 FT	29.3 FT
Rear	50 FT	264.2 FT	270.9 FT
L2. Outside Storage or Display Requirements			
Maximum area for outside storage and display	0.5 of Existing Building Coverage (4,573.8 SF)	40,390 SF*	31,920 SF*
Outside storage areas shielded from view from all public streets	Required	Proposed	Proposed
Maximum lot area used for outside storage and display	25%	15.9%	12.5% (31,920 SF)
Parking Requirements			
1 space per 500 sq ft of total floor space	7 spaces (3,042 SF)	22 spaces	45 spaces
1 space for each business vehicle normally stored on premises	14 spaces	16 spaces	16 spaces
Minimum number of total spaces	21 spaces	38 spaces	61 spaces
Minimum number of ADA spaces	3 spaces	1 space	3 spaces
Minimum parking stall dimensions (80')	10 FT x 18 FT	9 FT x 18 FT**	9 FT x 18 FT**
Minimum parking stall dimensions (parallel)	8 FT x 22 FT	8 FT x 22 FT	8 FT x 22 FT
Minimum aisle width (two-way)	24 FT	24 FT	24 FT

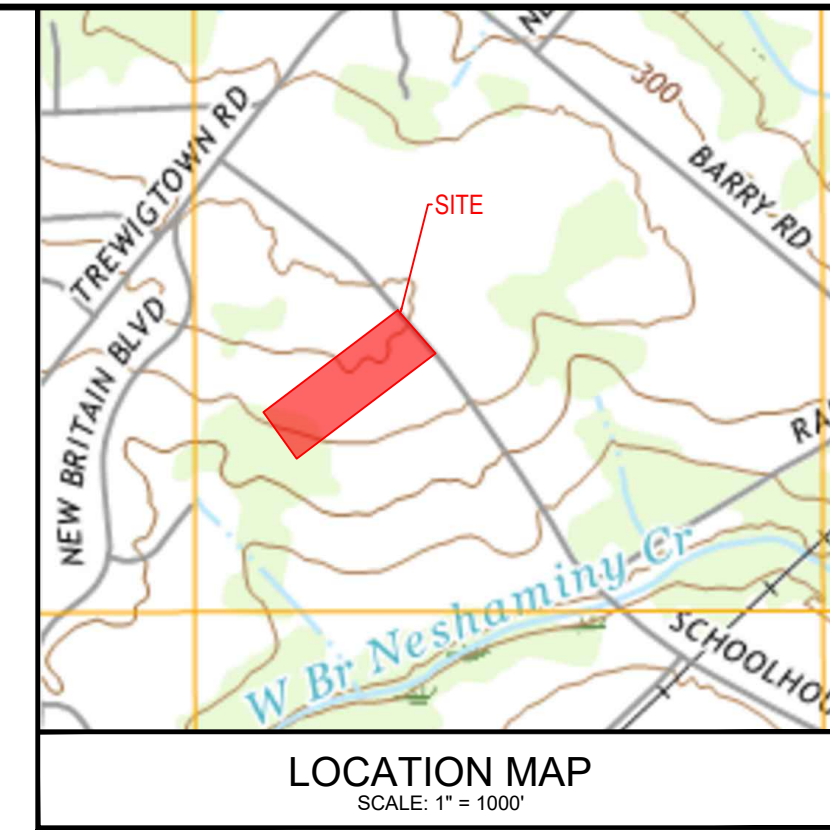
REQUESTED WAIVERS:

- SECTION 22-713.5.B(1) THIS SECTION REQUIRES ONE DECIDUOUS OR EVERGREEN SHRUB TO BE PLANTED EVERY FIVE FEET ALONG THE PERIMETER OF THE PARKING AREA (462 FT). THE APPLICANT IS REQUESTING A WAIVER FROM THIS REQUIREMENT TO PROVIDE 21 SHRUBS OF THE 92 SHRUBS REQUIRED.

IMPERVIOUS SURFACE RATIO TABULATION:

Lot Area (Gross) (sf)	Proposed
266,381	266,381
Site Area (Base) (sf)	254,685
Site Area (Base) (ac)	5.85
Total Building area (sf)	14,011
Pavement, Stone and Walk Area (sf)	88,400
Total Impervious area (sf)	102,411
Impervious Surface Ratio	40.2%

1. As specified in Section 27-201, Base Site Area excludes area within ultimate right-of-way (11,696 sf).



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CERTIFICATE OF OWNERSHIP AND ACKNOWLEDGEMENT OF PLAN
COMMONWEALTH OF PENNSYLVANIA
COUNTY OF BUCKS
ON THIS, THE _____ DAY OF _____, 20____, BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED _____ WHO BEING DULY SWORN ACCORDING TO LAW, DOETH DEPOSE AND SAY THAT HOLY PROPERTIES, LLC IS THE OWNER OF THE PROPERTY SHOWN AND DEPICTED ON THIS PLAN, THAT THIS LAND DEVELOPMENT PLAN WAS MADE AT THEIR DIRECTION, AND THAT THEY ACKNOWLEDGE THE SAME AND DESIRE THE SAME TO BE RECORDED ACCORDING TO LAW.

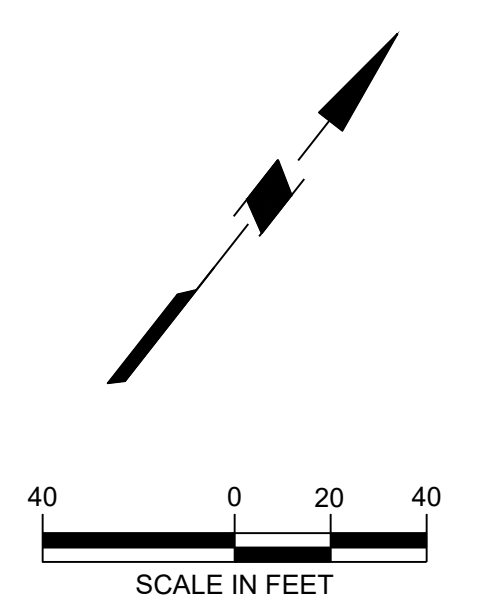
BY _____ TITLE _____
(OWNER SIGNATURE)
(NOTARY PUBLIC) _____ (MY COMMISSION EXPIRES) _____

BOARD OF SUPERVISORS APPROVAL
THE LAND DEVELOPMENT PLAN WAS APPROVED BY THE BOARD OF SUPERVISORS OF NEW BRITAIN TOWNSHIP, THIS _____ DAY OF _____, 20____.

BUCKS COUNTY PLANNING COMMISSION REVIEW
BCPC NO. 12142-A
PROCESSED AND REVIEWED. REPORT PREPARED BY THE BUCKS COUNTY PLANNING COMMISSION IN ACCORDANCE WITH THE PA MUNICIPALITIES CODE.
CERTIFIED THIS DATE _____

CHAIRMAN, BUCKS COUNTY PLANNING COMMISSION _____
EXECUTIVE DIRECTOR, BUCKS COUNTY PLANNING COMMISSION _____

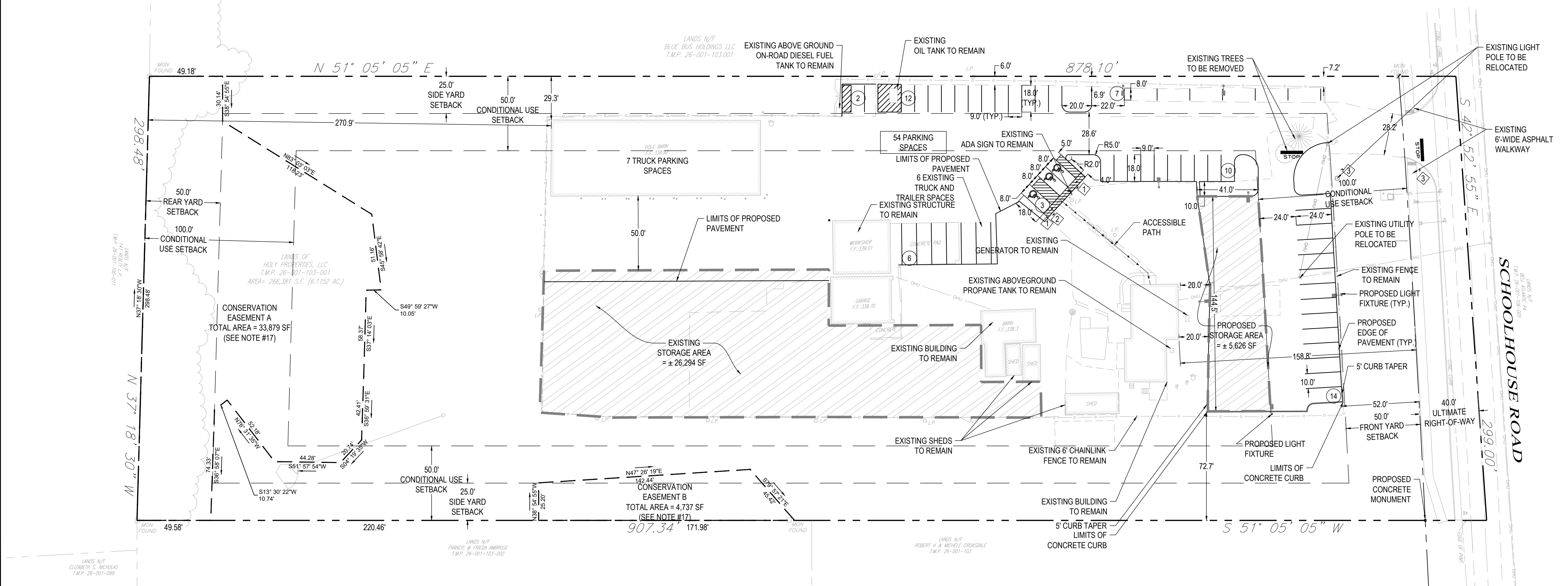
TOWNSHIP ENGINEER _____
REVIEWED BY THE NEW BRITAIN TOWNSHIP ENGINEER THIS _____ DAY OF _____, 20____.



Project
CLAUSER FACILITY EXPANSION
TMP # 26-001-103-001
NEW BRITAIN TOWNSHIP
BUCKS COUNTY PENNSYLVANIA

Drawing Title
SITE (RECORD) PLAN

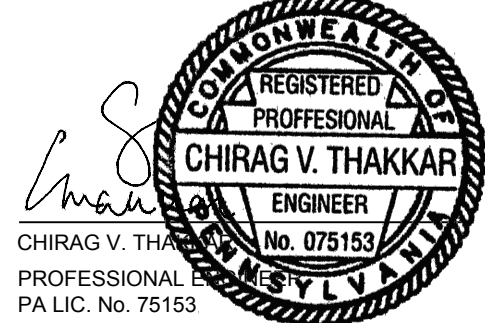
REGISTERED PROFESSIONAL ENGINEER
CHIRAG V. THAKKAR
No. 075153
PA LIC. No. 75153



arna Engineering Inc.
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Doyletstown, PA 18901
T: 215.766.8280
F: 215.434.5280
NJ Certificate of Authorization: 24GA28242200

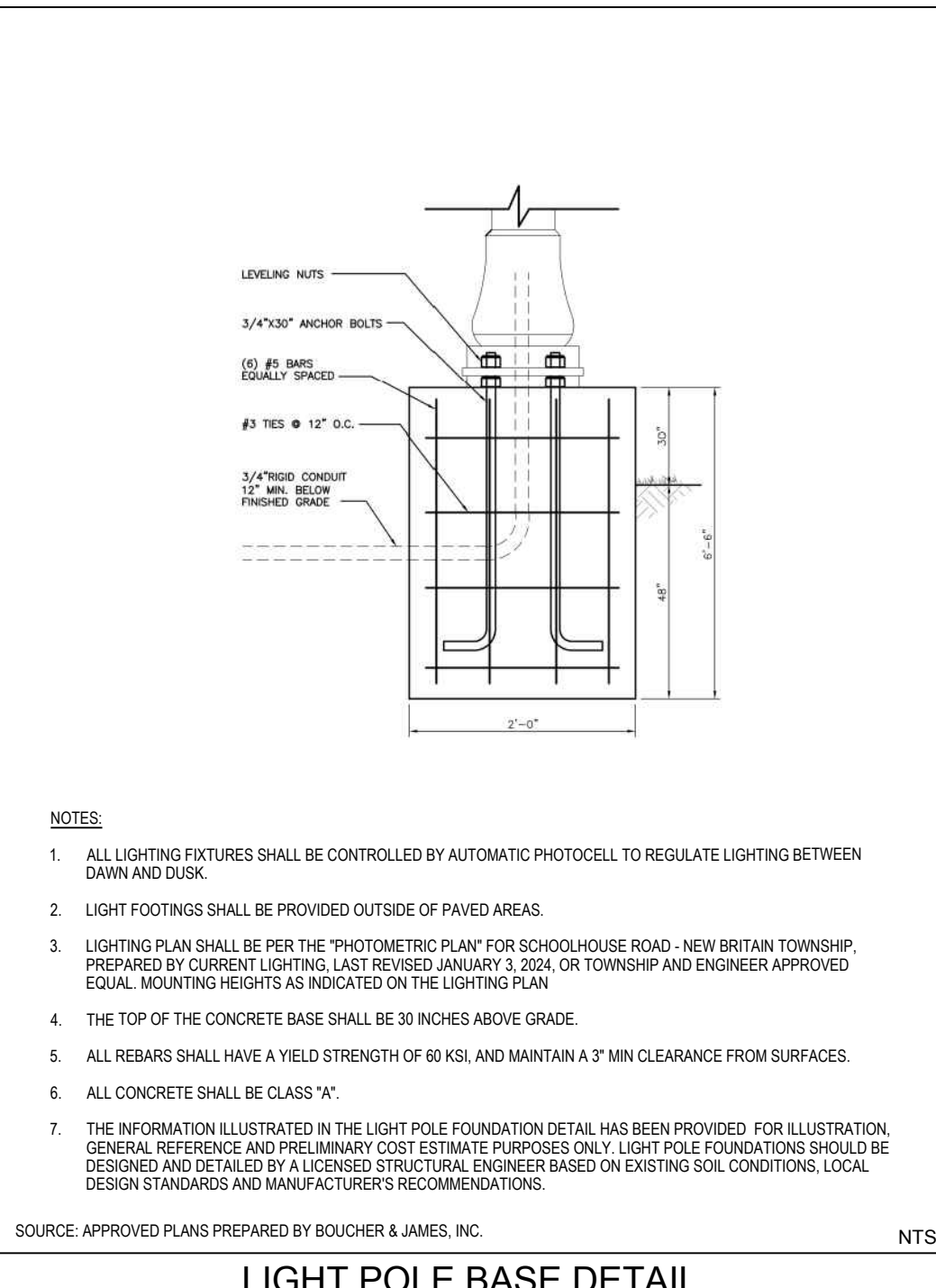
Project
CLAUSER FACILITY EXPANSION
NEW BRITAIN TOWNSHIP
BUCKS COUNTY PENNSYLVANIA

Drawing Title
SITE CONSTRUCTION DETAILS



DATE	REVISIONS	NO.
01-12-24	REVISED PER TOWNSHIP AND BCCD COMMENTS	1.

Project No.	230020201
Date	09-22-2023
Scale	NOT TO SCALE
Drawn By	KGP
Checked By	AB
Drawing No.	CS-501

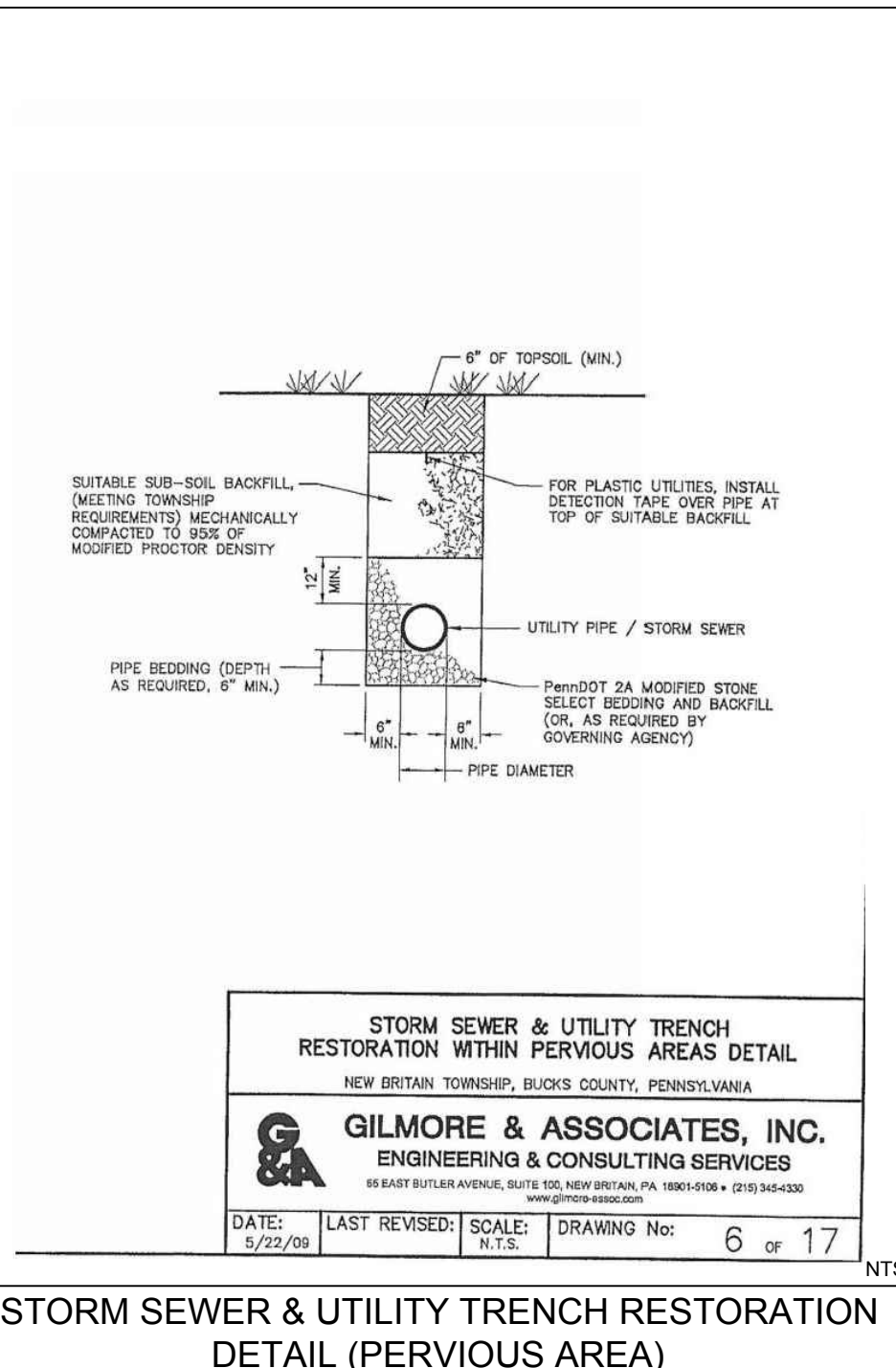


LIGHT POLE BASE DETAIL

- NOTES:
- ALL LIGHTING FIXTURES SHALL BE CONTROLLED BY AUTOMATIC PHOTOCELL TO REGULATE LIGHTING BETWEEN DAWN AND DUSK.
 - LIGHT FOOTINGS SHALL BE PROVIDED OUTSIDE OF PAVED AREAS.
 - LIGHTING PLAN SHALL BE PER THE PHOTOMETRIC PLAN FOR SCHOOLHOUSE ROAD - NEW BRITAIN TOWNSHIP, PREPARED BY CURRENT LIGHTING, LAST REVISED JANUARY 5, 2024, OR TOWNSHIP AND ENGINEER APPROVED EQUAL MOUNTING HEIGHTS AS INDICATED ON THE LIGHTING PLAN.
 - THE TOP OF THE CONCRETE BASE SHALL BE 30 INCHES ABOVE GRADE.
 - ALL REBARS SHALL HAVE A YIELD STRENGTH OF 60 KSI AND MAINTAIN A 3" MIN CLEARANCE FROM SURFACES.
 - ALL CONCRETE SHALL BE CLASS "A".

NOTE: INFORMATION ILLUSTRATED IN THE LIGHT POLE FOUNDATION DETAIL HAS BEEN PROVIDED FOR ILLUSTRATION GENERAL REFERENCE AND PRELIMINARY COST ESTIMATE PURPOSES ONLY. LIGHT POLE FOUNDATIONS SHOULD BE DESIGNED AND DETAIL BY A LICENSED STRUCTURAL ENGINEER BASED ON EXISTING SOIL CONDITIONS, LOCAL DESIGN STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

SOURCE: APPROVED PLANS PREPARED BY BOUCHER & JAMES, INC.

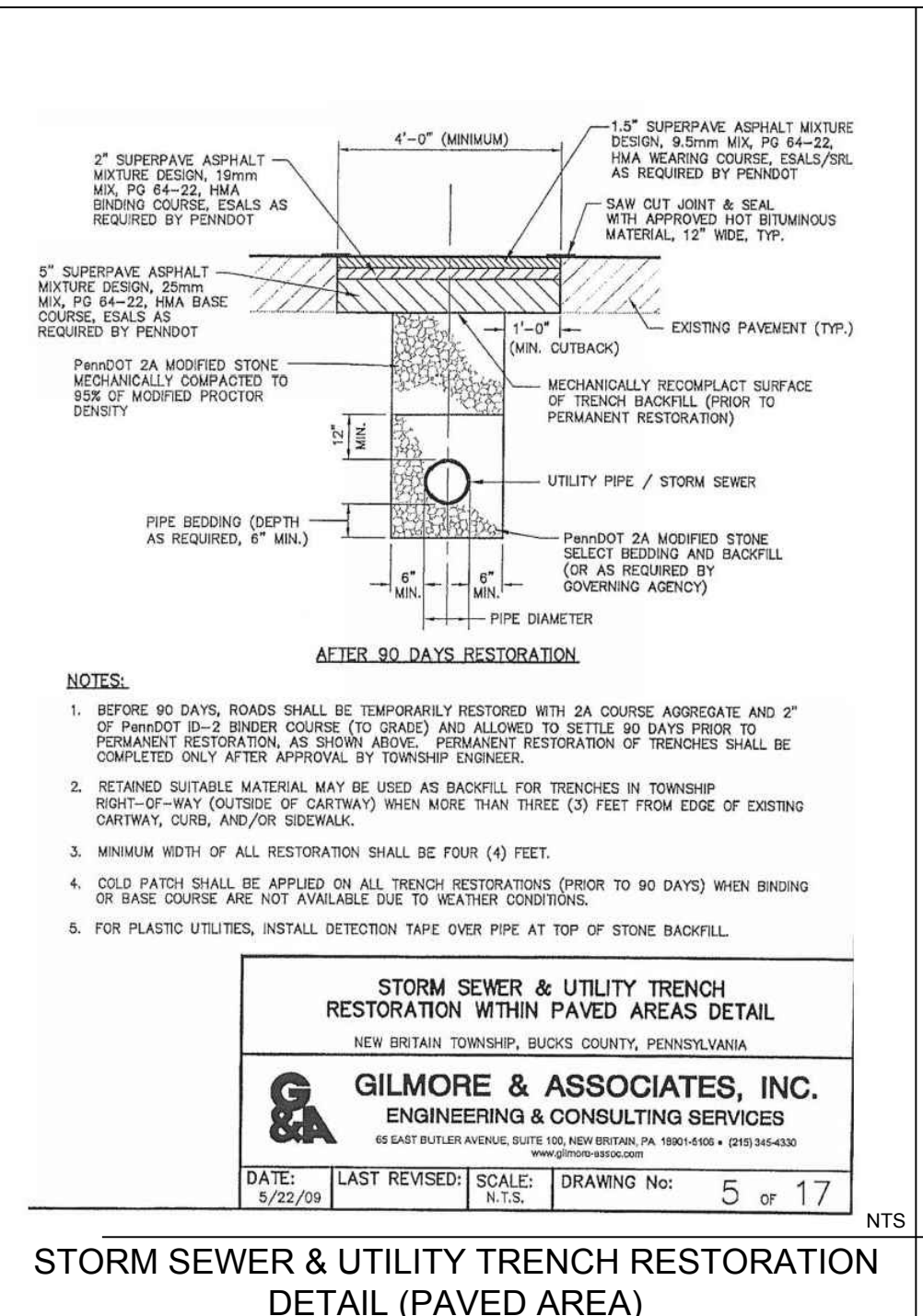


STORM SEWER & UTILITY TRENCH RESTORATION DETAIL (PERVIOUS AREA)

- NOTES:
- BEFORE 90 DAYS, ROADS SHALL BE TEMPORARILY RESTORED WITH 2\"/>

NOTE: INFORMATION ILLUSTRATED IN THE LIGHT POLE FOUNDATION DETAIL HAS BEEN PROVIDED FOR ILLUSTRATION GENERAL REFERENCE AND PRELIMINARY COST ESTIMATE PURPOSES ONLY. LIGHT POLE FOUNDATIONS SHOULD BE DESIGNED AND DETAIL BY A LICENSED STRUCTURAL ENGINEER BASED ON EXISTING SOIL CONDITIONS, LOCAL DESIGN STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

SOURCE: APPROVED PLANS PREPARED BY BOUCHER & JAMES, INC.

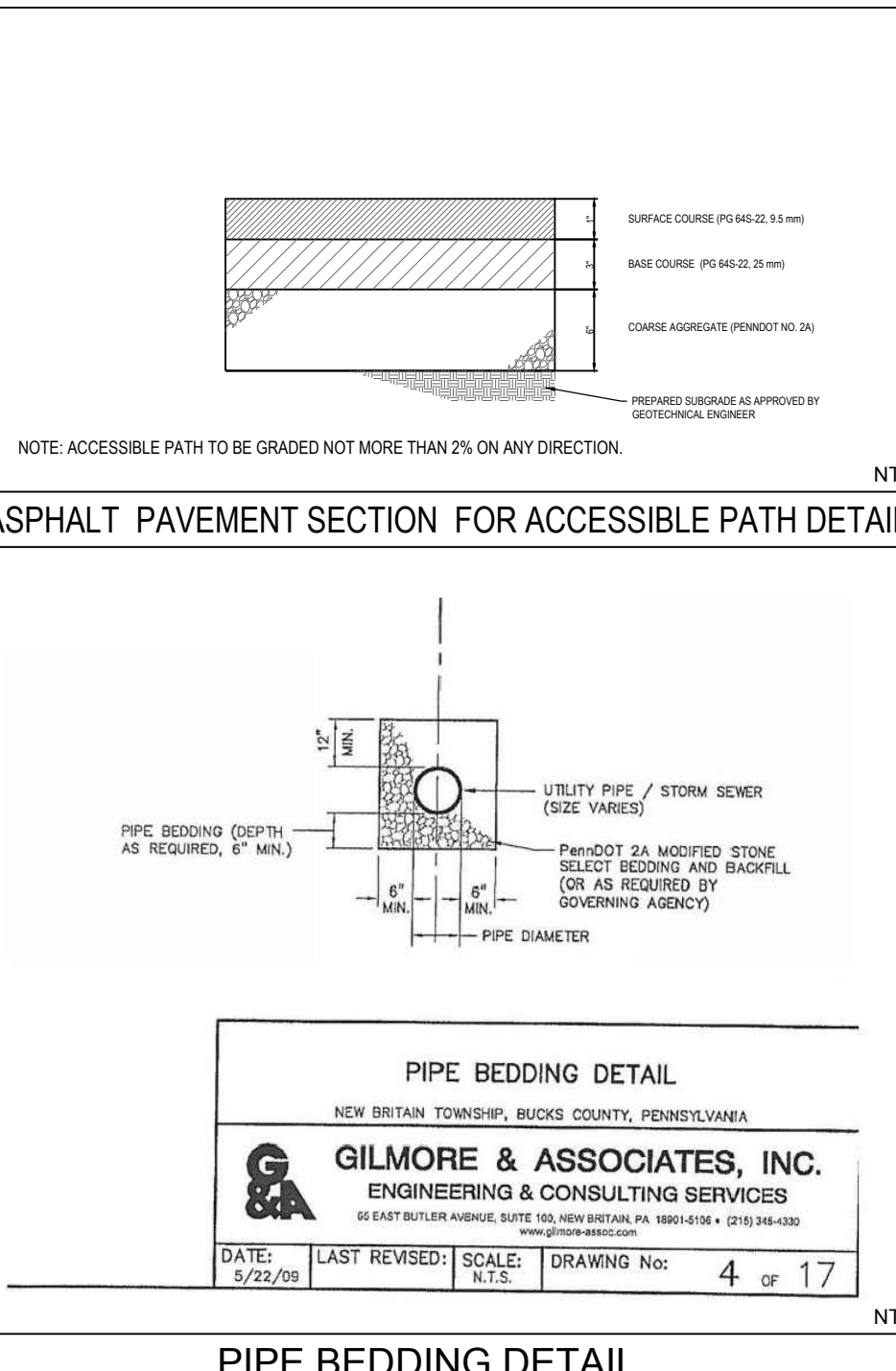


STORM SEWER & UTILITY TRENCH RESTORATION DETAIL (PAVED AREA)

- NOTES:
- BEFORE 90 DAYS, ROADS SHALL BE TEMPORARILY RESTORED WITH 2\"/>

NOTE: INFORMATION ILLUSTRATED IN THE LIGHT POLE FOUNDATION DETAIL HAS BEEN PROVIDED FOR ILLUSTRATION GENERAL REFERENCE AND PRELIMINARY COST ESTIMATE PURPOSES ONLY. LIGHT POLE FOUNDATIONS SHOULD BE DESIGNED AND DETAIL BY A LICENSED STRUCTURAL ENGINEER BASED ON EXISTING SOIL CONDITIONS, LOCAL DESIGN STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

SOURCE: APPROVED PLANS PREPARED BY BOUCHER & JAMES, INC.

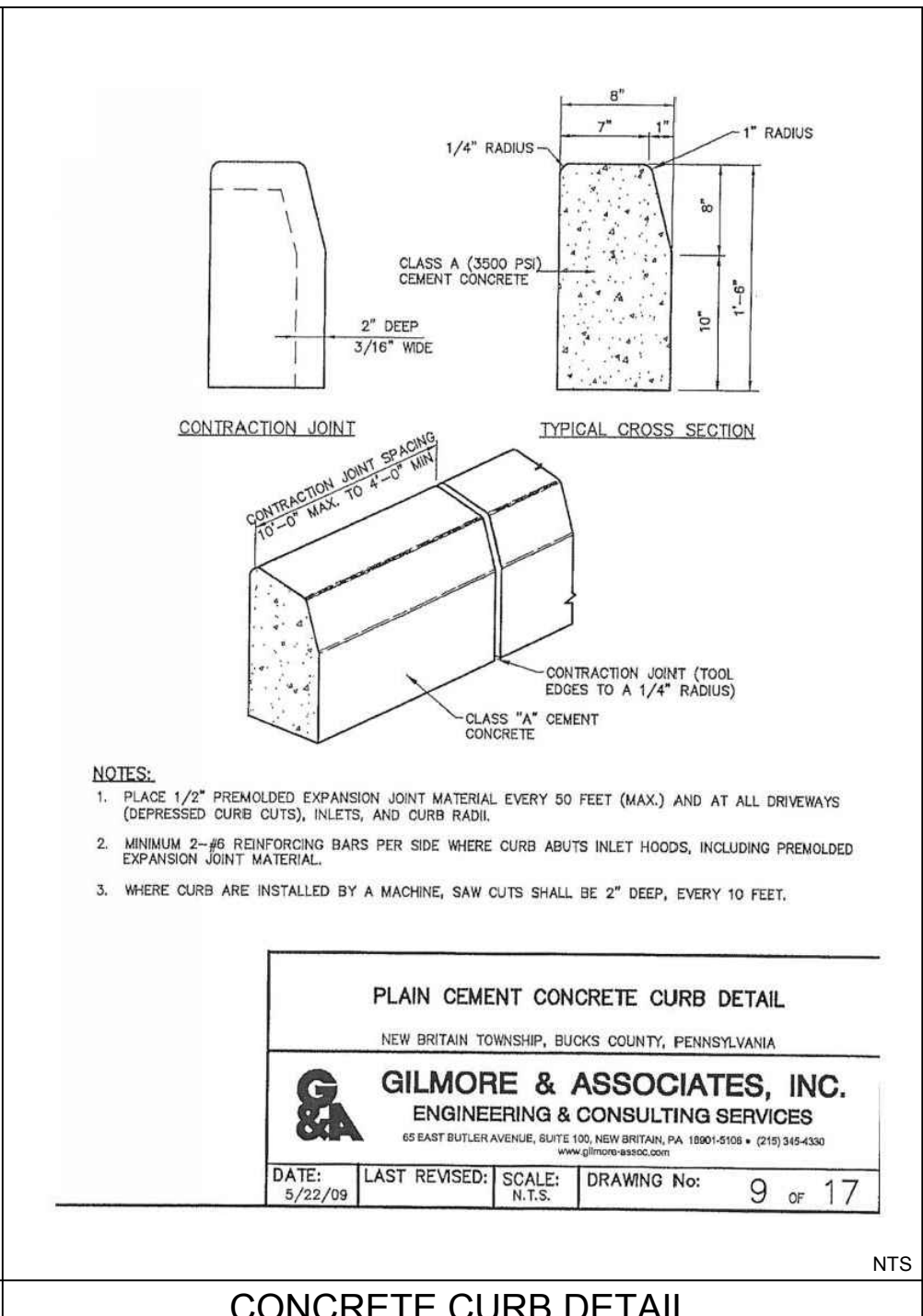


ASPHALT PAVEMENT SECTION FOR ACCESSIBLE PATH DETAIL

- NOTES:
- ACCESSIBLE PATH TO BE GRADED NOT MORE THAN 2% ON ANY DIRECTION.

NOTE: INFORMATION ILLUSTRATED IN THE LIGHT POLE FOUNDATION DETAIL HAS BEEN PROVIDED FOR ILLUSTRATION GENERAL REFERENCE AND PRELIMINARY COST ESTIMATE PURPOSES ONLY. LIGHT POLE FOUNDATIONS SHOULD BE DESIGNED AND DETAIL BY A LICENSED STRUCTURAL ENGINEER BASED ON EXISTING SOIL CONDITIONS, LOCAL DESIGN STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

SOURCE: APPROVED PLANS PREPARED BY BOUCHER & JAMES, INC.

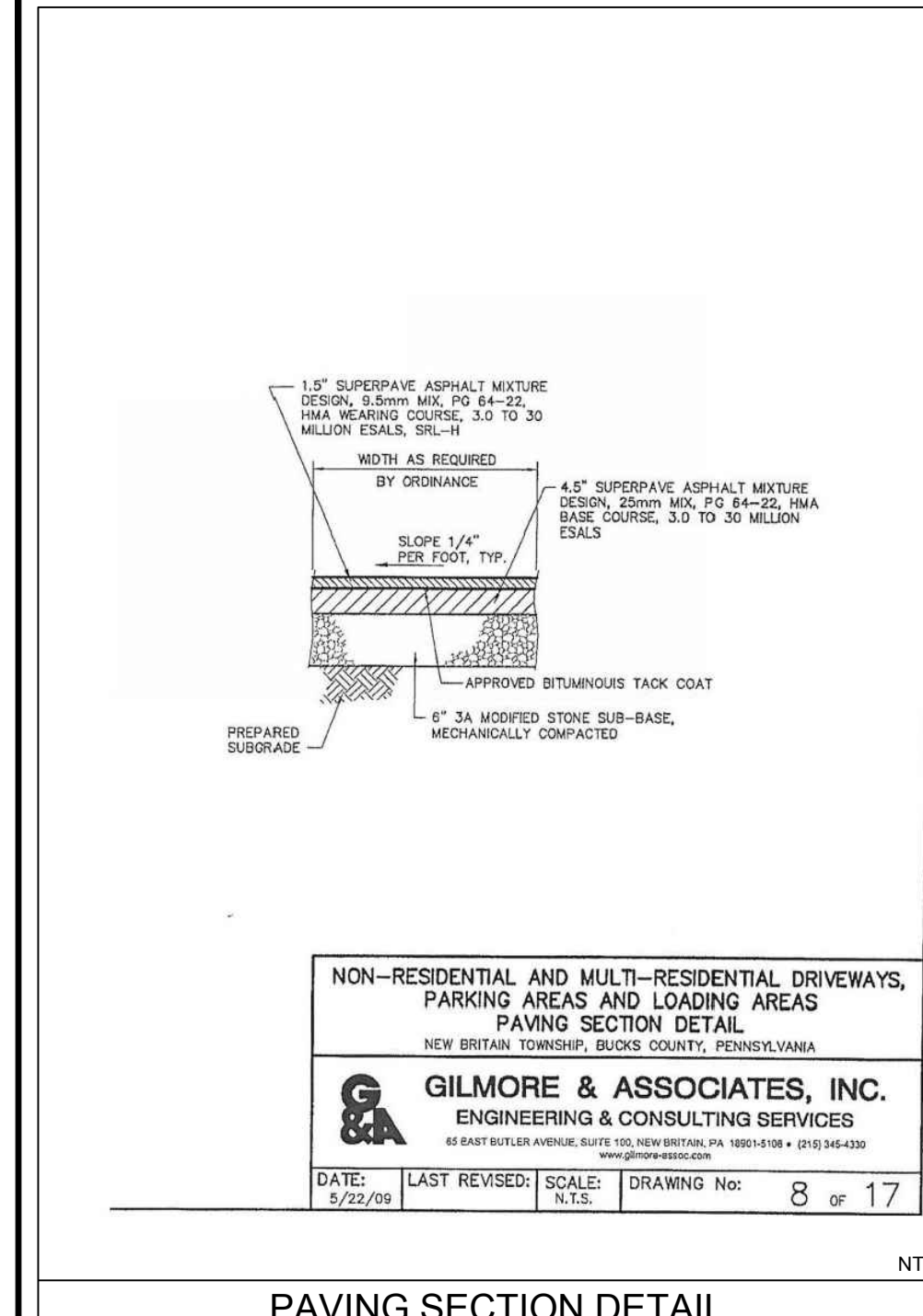


PLAIN CEMENT CONCRETE CURB DETAIL

- NOTES:
- PLACE 1/4\"/>

NOTE: INFORMATION ILLUSTRATED IN THE LIGHT POLE FOUNDATION DETAIL HAS BEEN PROVIDED FOR ILLUSTRATION GENERAL REFERENCE AND PRELIMINARY COST ESTIMATE PURPOSES ONLY. LIGHT POLE FOUNDATIONS SHOULD BE DESIGNED AND DETAIL BY A LICENSED STRUCTURAL ENGINEER BASED ON EXISTING SOIL CONDITIONS, LOCAL DESIGN STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

SOURCE: APPROVED PLANS PREPARED BY BOUCHER & JAMES, INC.



PAVING SECTION DETAIL

- NOTES:
- PLACE 1/4\"/>

NOTE: INFORMATION ILLUSTRATED IN THE LIGHT POLE FOUNDATION DETAIL HAS BEEN PROVIDED FOR ILLUSTRATION GENERAL REFERENCE AND PRELIMINARY COST ESTIMATE PURPOSES ONLY. LIGHT POLE FOUNDATIONS SHOULD BE DESIGNED AND DETAIL BY A LICENSED STRUCTURAL ENGINEER BASED ON EXISTING SOIL CONDITIONS, LOCAL DESIGN STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

SOURCE: APPROVED PLANS PREPARED BY BOUCHER & JAMES, INC.

BEACON VIPER Area/Site ORDERING GUIDE

Example: VP-1-30L-MS-3K7-2-R-UNV-A3-BLT

Model	Color	Mounting	Height	Notes
VP-150-000-00	Black	Standard	150	
VP-150-000-01	White	Standard	150	
VP-150-000-02	Black	High	150	
VP-150-000-03	White	High	150	

BEACON VIPER Area/Site ORDERING GUIDE

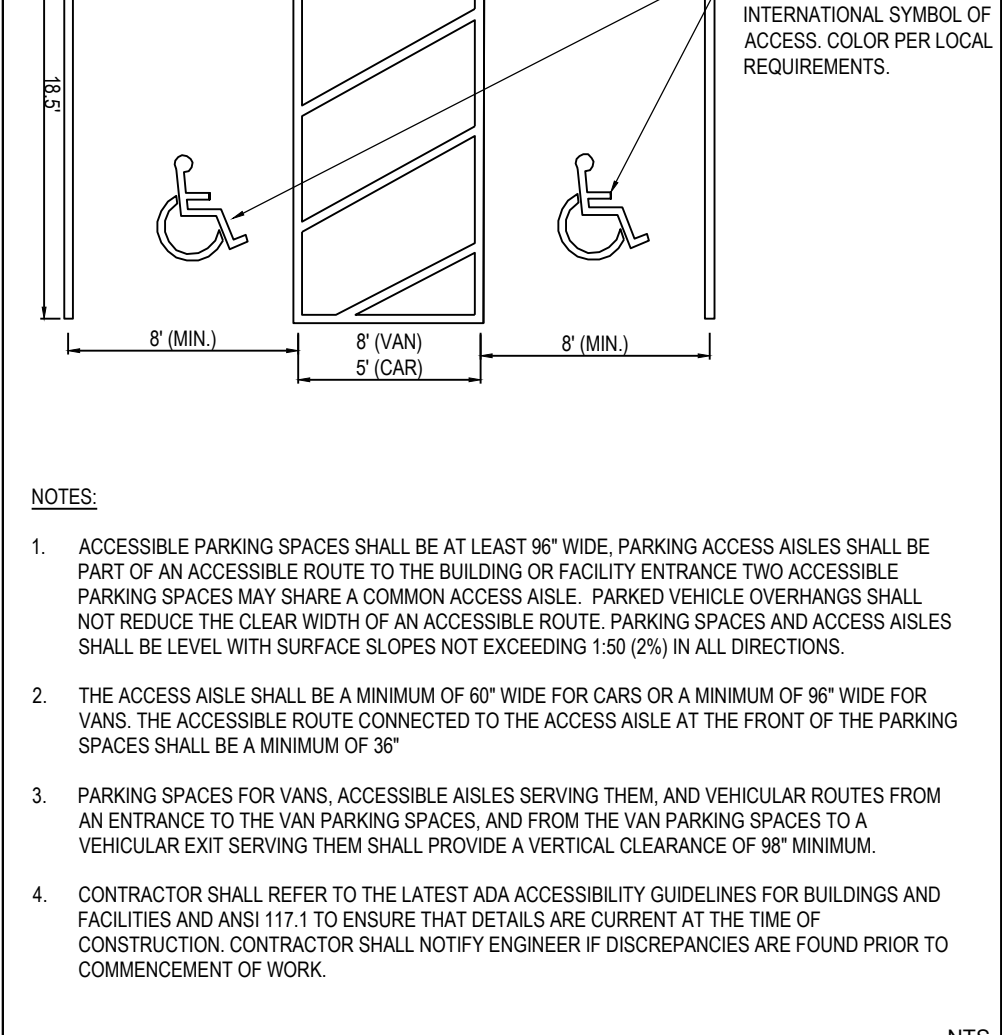
Example: VP-1-30L-MS-3K7-2-R-UNV-A3-BLT

Model	Color	Mounting	Height	Notes
VP-150-000-00	Black	Standard	150	
VP-150-000-01	White	Standard	150	
VP-150-000-02	Black	High	150	
VP-150-000-03	White	High	150	

BEACON VIPER Area/Site ORDERING GUIDE

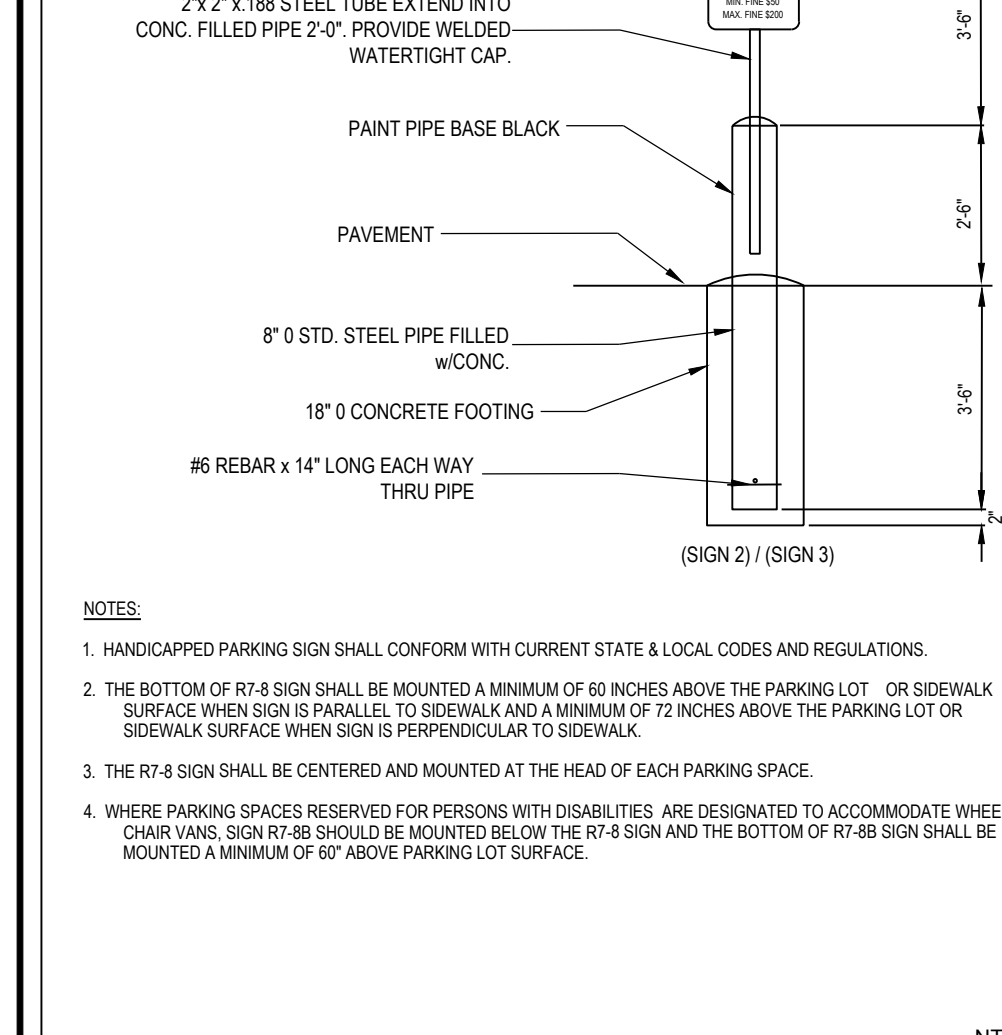
Example: VP-1-30L-MS-3K7-2-R-UNV-A3-BLT

Model	Color	Mounting	Height	Notes
VP-150-000-00	Black	Standard	150	
VP-150-000-01	White	Standard	150	
VP-150-000-02	Black	High	150	
VP-150-000-03	White	High	150	



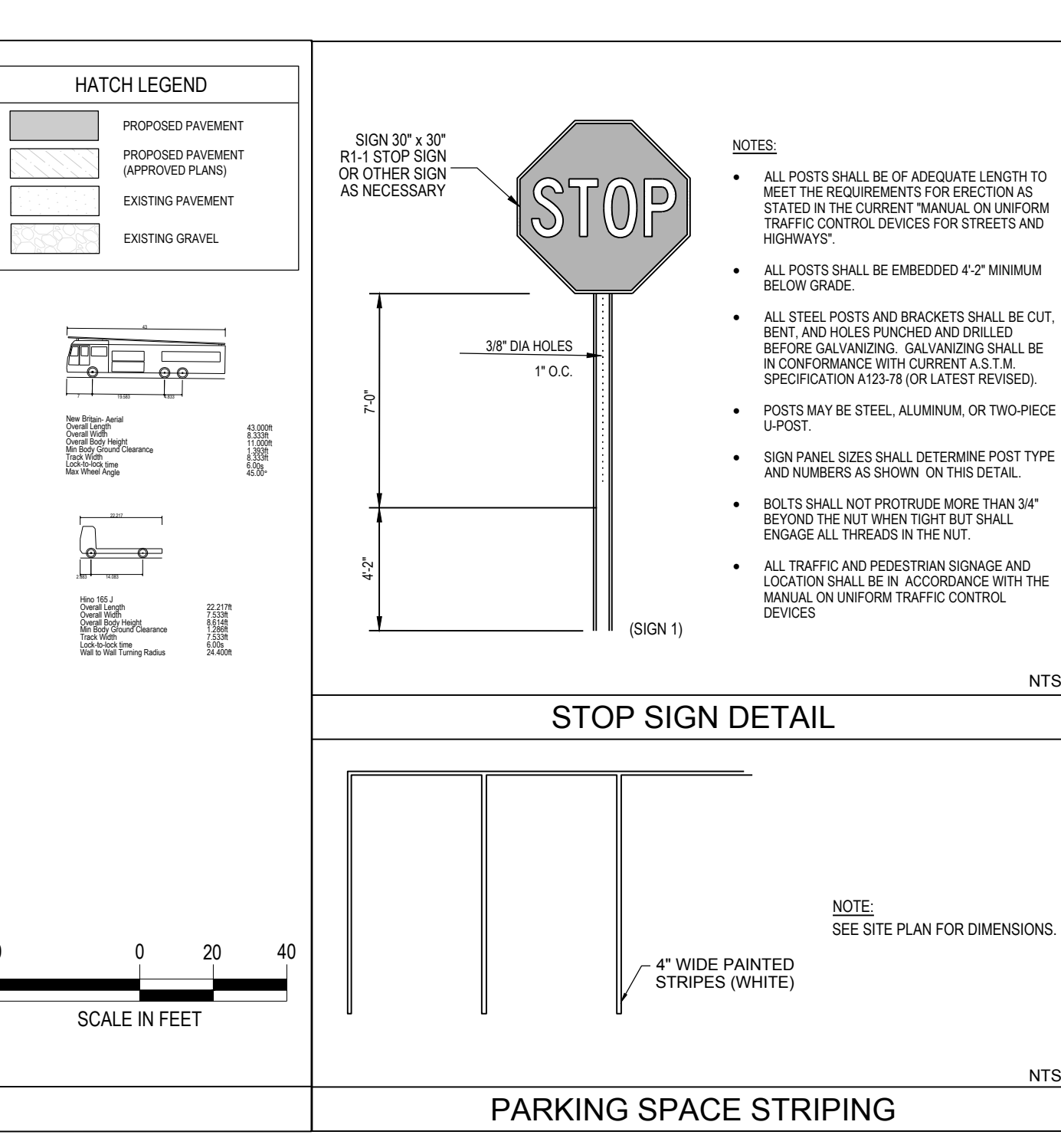
ACCESSIBLE PARKING STALL

- NOTES:
- ACCESSIBLE PARKING SPACES SHALL BE AT LEAST 96" WIDE. PARKING ACCESS AISLES SHALL BE PART OF AN ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE TWO ACCESSIBLE PARKING SPACES MAY SHARE A COMMON ACCESS AISLE. PARKED VEHICLE OVERHANGS SHALL NOT REDUCE THE CLEAR WIDTH OF AN ACCESSIBLE ROUTE. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1/50 (2%) IN ALL DIRECTIONS.
 - THE ACCESS AISLE SHALL BE A MINIMUM OF 60" WIDE FOR CARS OR A MINIMUM OF 96" WIDE FOR VANS. THE ACCESSIBLE ROUTE CONNECTED TO THE ACCESS AISLE AT THE FRONT OF THE PARKING SPACES SHALL BE A MINIMUM OF 36".
 - PARKING SPACES FOR VANS, ACCESSIBLE AISLES SERVING THEM, AND VEHICULAR ROUTES FROM AN ENTRANCE TO THE VAN PARKING SPACES, AND FROM THE VAN PARKING SPACES TO A VEHICULAR EXIT SERVING THEM SHALL PROVIDE A VERTICAL CLEARANCE OF 98" MINIMUM.
 - CONTRACTOR SHALL REFER TO THE LATEST ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES AND ANSI 111.1 TO ENSURE THAT DETAILS ARE CURRENT AT THE TIME OF CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IF DISCREPANCIES ARE FOUND PRIOR TO COMMENCEMENT OF WORK.

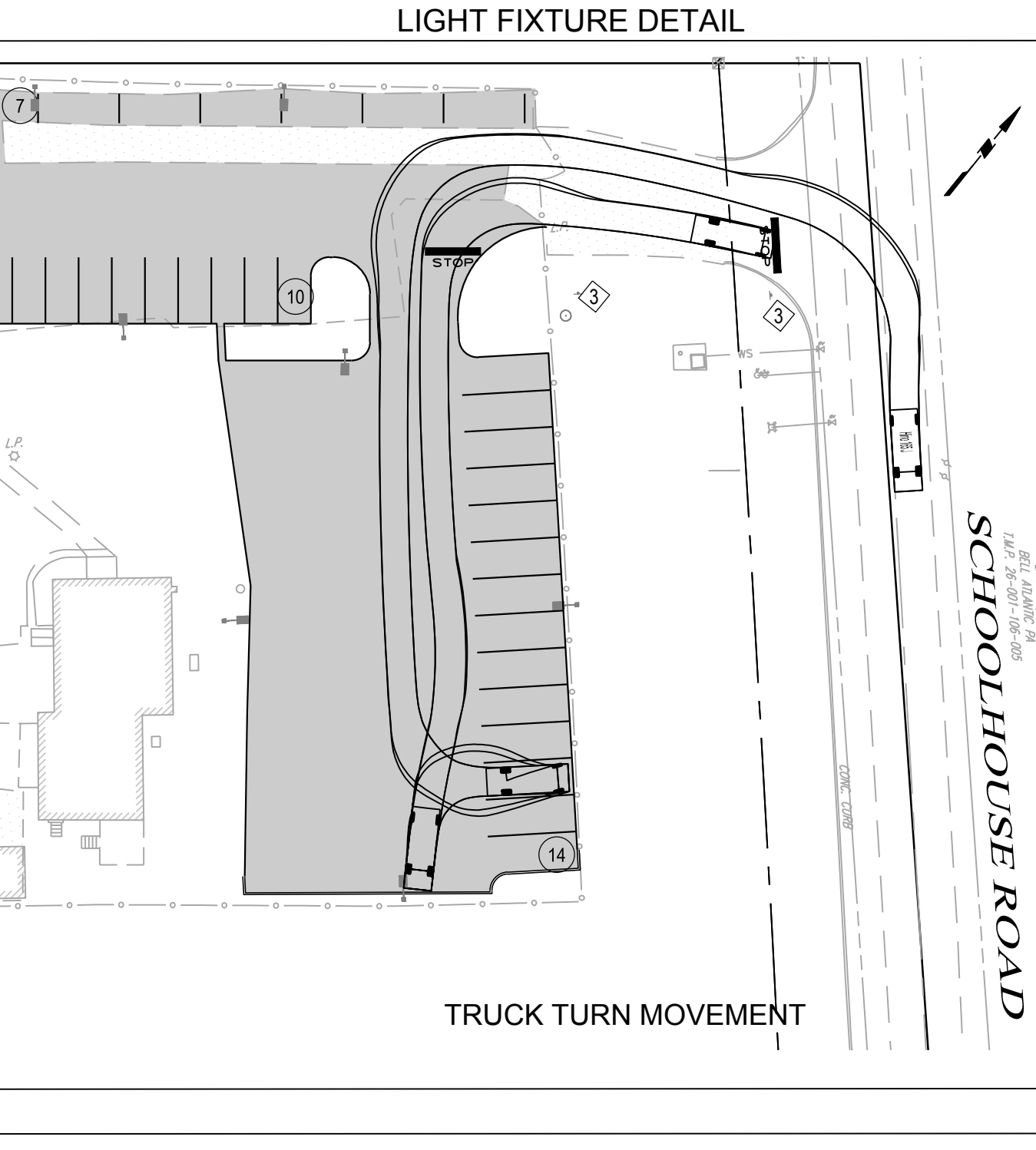


ACCESSIBLE SIGN DETAIL

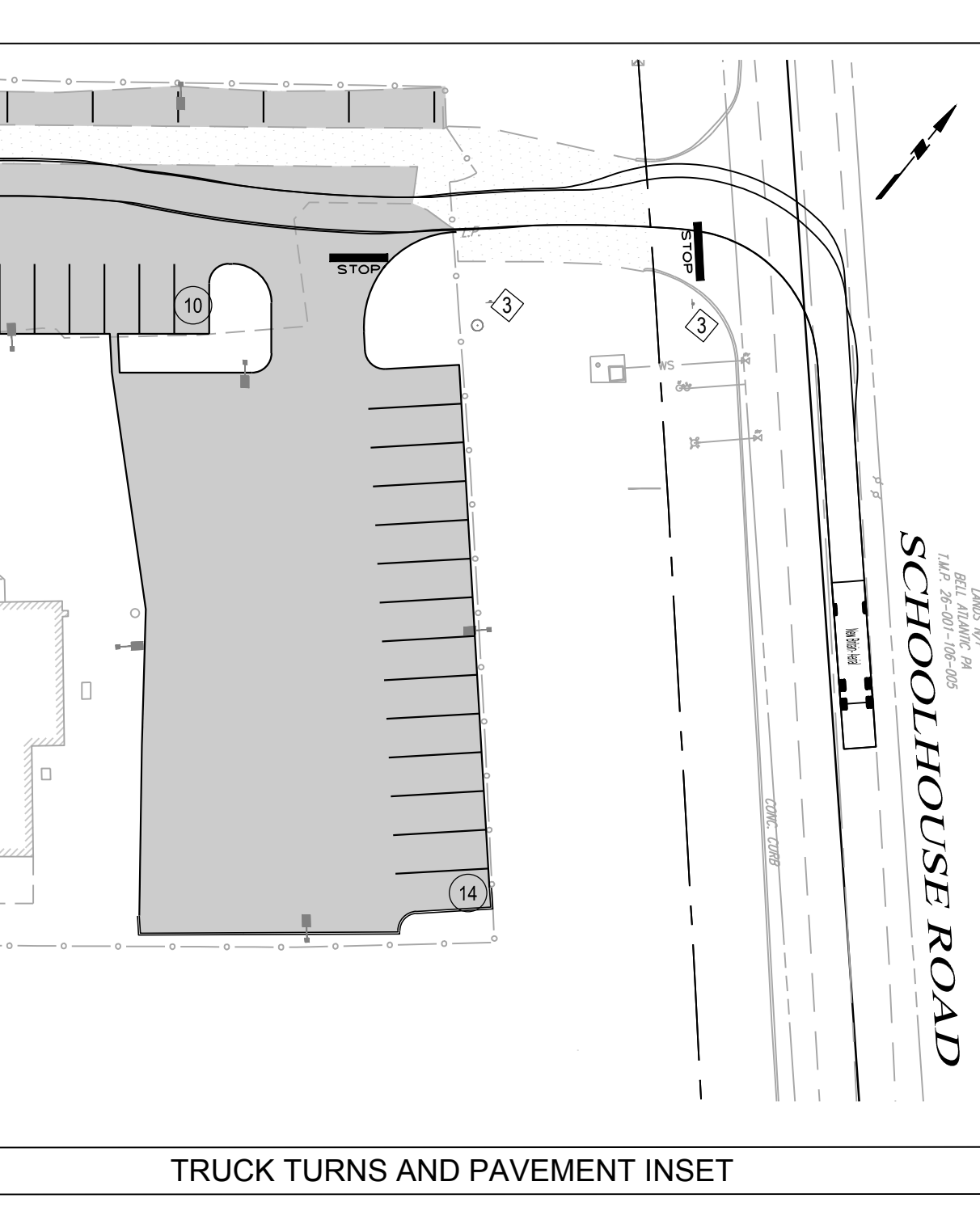
- NOTES:
- HANDICAPPED PARKING SIGN SHALL CONFORM WITH CURRENT STATE & LOCAL CODES AND REGULATIONS.
 - THE BOTTOM OF R7-8 SIGN SHALL BE MOUNTED A MINIMUM OF 60 INCHES ABOVE THE PARKING LOT OR SIDEWALK SURFACE WHEN SIGN IS PARALLEL TO SIDEWALK AND A MINIMUM OF 72 INCHES ABOVE THE PARKING LOT OR SIDEWALK SURFACE WHEN SIGN IS PERPENDICULAR TO SIDEWALK.
 - THE R7-8 SIGN SHALL BE CENTERED AND MOUNTED AT THE HEAD OF EACH PARKING SPACE.
 - WHERE PARKING SPACES RESERVED FOR PERSONS WITH DISABILITIES ARE DESIGNATED TO ACCOMMODATE WHEEL CHAIR VANS, SIGN R7-8B SHOULD BE MOUNTED BELOW THE R7-8 SIGN AND THE BOTTOM OF R7-8B SIGN SHALL BE MOUNTED A MINIMUM OF 60" ABOVE PARKING LOT SURFACE.



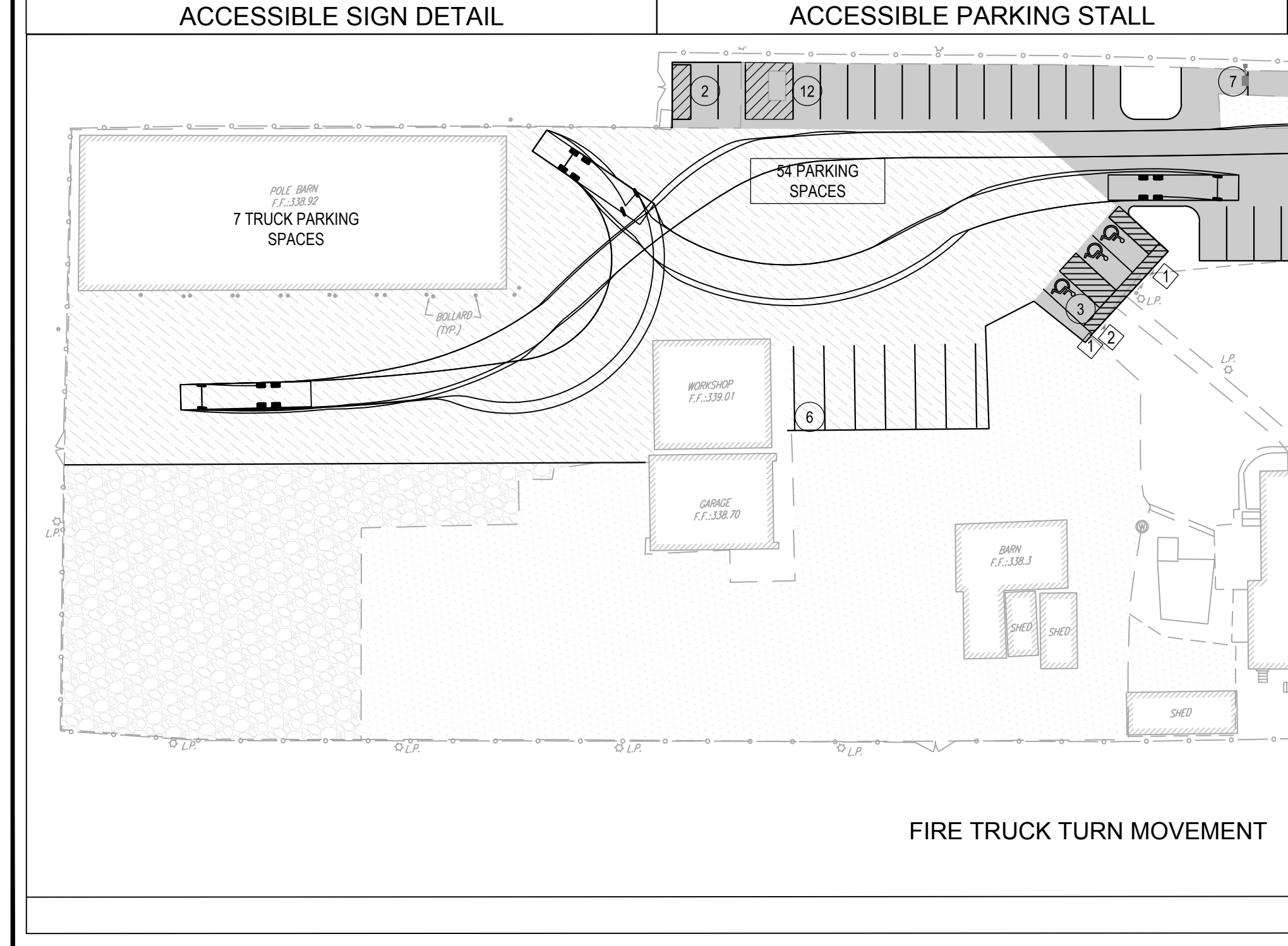
LIGHT FIXTURE DETAIL



TRUCK TURN MOVEMENT



FIRE TRUCK TURN MOVEMENT



TRUCK TURNS AND PAVEMENT INSET

GRADING AND DRAINAGE NOTES

- BOUNDARY, TOPOGRAPHIC INFORMATION AND EXISTING FEATURES SHOWN ARE BASED ON A SURVEY PERFORMED BY KELLY ENGINEERS ON JUNE 22, 2023.
- CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT, ACCURATE OR COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD LOCATE ALL UTILITIES PRIOR TO COMMENCEMENT OF ANY WORK. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES LOCATED WITHIN THE LIMITS OF IMPROVEMENTS DURING ENTIRE CONSTRUCTION PERIOD. IF NECESSARY, CONTRACTOR SHALL RELOCATE AND/OR MODIFY ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS IN A MANNER WHICH WILL NOT NEGATIVELY AFFECT ANY EXISTING USERS OF THESE UTILITIES.
- SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. THE EROSION AND SEDIMENTATION CONTROL PLAN IS AN INTEGRAL PART OF THE STORMWATER MANAGEMENT SYSTEM DURING CONSTRUCTION OF CERTAIN PHASES. THE EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE REFERRED AND USED IN CONJUNCTION WITH THIS DRAWING TO COMPLETE CONSTRUCTION PHASING.
- THE SITE IS TO BE GRADED SMOOTHLY AND EVENLY IN ACCORDANCE WITH THE PROPOSED CONTOURS AND SPOT ELEVATIONS. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING A POSITIVE DRAINAGE AWAY FROM THE BUILDINGS WITHOUT CREATING ANY LOW SPOTS THAT WILL RESULT IN STANDING WATER (PONDING).
- ALL PERVIOUS AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE A MINIMUM OF TEN (10) INCHES OF TOPSOIL OR TO THE DEPTH ENCOUNTERED WITHIN THE SITE OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL GRASS DISTURBED AREAS IN ACCORDANCE WITH COUNTY SPECIFICATIONS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
- THE EARTHWORK FOR ALL BUILDING FOUNDATIONS AND SLABS SHALL BE IN ACCORDANCE WITH ARCHITECTURAL BUILDING PLANS AND SPECIFICATIONS.
- CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO THE SAME.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, UTILITY LOCATIONS AND INVERTS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER'S ENGINEER.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS / SUBMITTALS TO OWNER AND OWNER'S ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PROCURING ANY MATERIAL OR CONSTRUCTION OF ANY IMPROVEMENTS SHOWN HEREON.
- ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA Code 260.1 et seq., 271.1 et seq., and 287.1 et seq.) AND/OR ANY ADDITIONAL LOCAL STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

- STORMWATER MANAGEMENT BMP'S WILL BE CERTIFIED UPON COMPLETION PER TOWNSHIP ORDINANCE.
- TOWNSHIP, ITS EMPLOYEES AND ITS REPRESENTATIVES HAVE THE RIGHT TO ENTER THE PROPERTY FOR BMP INSPECTIONS AS NEEDED.
- NO FENCES ARE PERMITTED TO BE CONSTRUCTED OVER STORMWATER MANAGEMENT FACILITIES.

ACCESSIBLE PLAN NOTES:

- CONTRACTOR SHALL REFER TO THE LATEST ADA ACCESSIBILITY GUIDELINES AND ANSI A117.1-2003 FOR BUILDINGS AND FACILITIES (ADAAG) TO ENSURE THAT ADA DETAILS ARE CURRENT AT THE TIME OF CONSTRUCTION. CONTRACTOR SHALL CONSTRUCT AREAS DESIGNATED FOR ACCESSIBLE ROUTES (INCLUDING CURB RAMPS, SIDEWALKS, HANDICAP PARKING STALLS, CROSSWALKS AND INLETS) BY FOLLOWING THE MOST CURRENT ADA ACCESSIBILITY GUIDELINES AND ANSI A117.1-2003.
- ALL ACCESSIBLE PARKING SPACES AREA SHALL NOT EXCEED 2% IN ALL DIRECTIONS.
- ALL ACCESSIBLE ROUTE AND RAMP CROSS SLOPES SHALL NOT EXCEED 2%.
- ALL ACCESSIBLE ROUTES SHALL HAVE A MAXIMUM RUNNING SLOPE OF 5%, IF ANY PART OF THE ACCESSIBLE ROUTE HAS A RUNNING SLOPE EXCEEDING 5%, IT IS CONSIDERED A RAMP.
- RAMPS SHALL HAVE A MAXIMUM RUNNING SLOPE OF 8.33% (1:12 SLOPE) AND A MAXIMUM CROSS SLOPE OF 2%. SEE SHEET CONSTRUCTION DETAIL SHEET FOR RAMP DETAILS.
- CONTRACTOR SHALL FIELD VERIFY THAT THE EXISTING LONGITUDINAL SLOPE (ALONG THE DIRECTION OF TRAVEL) DOES NOT EXCEED 5% AND CROSS SLOPE DOES NOT EXCEED 2% FOR ACCESSIBLE ROUTES (TYP). CONTRACTOR SHALL NOTIFY THE OWNER AND OWNER'S ENGINEER IF ANY ACCESSIBLE ROUTES (I.E. SIDEWALK, PAVED AREAS, ETC.) DOES NOT COMPLY WITH THE ABOVE ADA REQUIREMENTS.

ACT 187

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA. ACT 187 TO CONTACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION. TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-243-1176. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG!
PENNSYLVANIA ONE CALL SYSTEM, INC.
1-800-243-1176
WWW.PAONECALL.COM

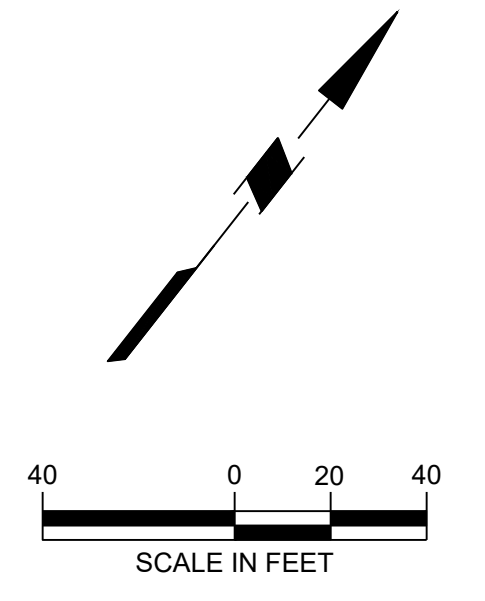
Pennsylvania One Call System, Inc.
1-800-243-1176



PRELIMINARY DESIGN SERIAL NUMBER: 2023043085

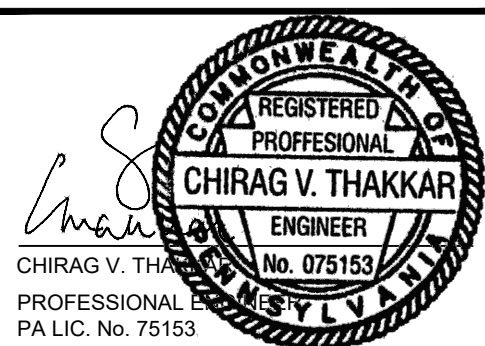


arna Engineering Inc.
1456 Ferry Road, Suite 603
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F: 215.434.5280



Project
CLAUSER FACILITY EXPANSION
TMP # 26-001-103-001
NEW BRITAIN TOWNSHIP
BUCKS COUNTY PENNSYLVANIA

Drawing Title
GRADING, DRAINAGE AND UTILITY PLAN



CHIRAG V. THAKKAR
PROFESSIONAL P.A.L.I.C. No. 75153

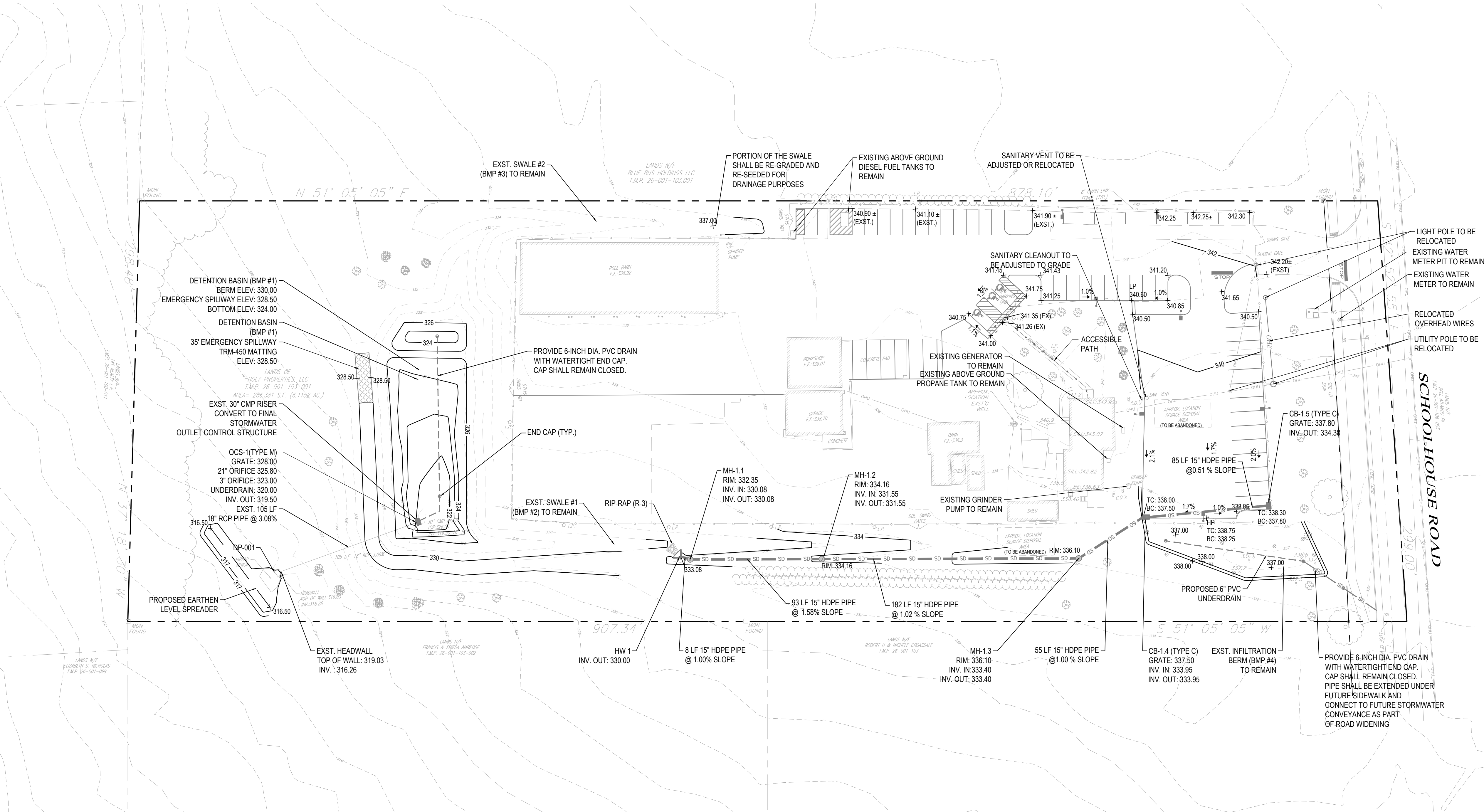
DATE	COMMENTS	NO.
01-12-24	REVISED PER TOWNSHIP AND BCCD COMMENTS	1.

REVISIONS

Project No.	230020201
Date	09-22-2023
Scale	1" = 40'
Drawn By	KGP
Checked By	AB

Drawing No.

CG-101



LEGEND	
EXISTING SYMBOLS & LINES	PROPOSED SYMBOLS & LINES
<ul style="list-style-type: none"> PROPERTY/ROW LINE EASEMENT CONTOUR LINE EDGE OF PAVEMENT CURBING FENCE LINE GUIDE RAIL SANITARY SEWER LINE STORM SEWER LINE GAS LINE UNDERGROUND TELEPHONE UNDERGROUND ELECTRIC OVERHEAD LINES WATER LINE BUILDING IRON PIN CONCRETE MONUMENT UTILITY POLE GAS VALVE WATER VALVE WATER METER FIRE HYDRANT SANITARY CLEANOUT SANITARY MANHOLE STORM MANHOLE STORM INLET HEADWALL LIGHT POLE TREE TREE LINE BUSH/SHRUBS 	<ul style="list-style-type: none"> PROPERTY LINE SETBACK LINE BUILDING CURB LINE DEPRESSED CURB LINE TRAFFIC SIGN CURB RAMP PARKING ROW COUNT BUILDING DOOR BUFFER FENCE BASIN
	GRADING AND DRAINAGE
	<ul style="list-style-type: none"> SD - STORM PIPE CB - CATCH BASIN SM - STORM MANHOLE CONTOUR SPOT GRADE X 101180 - TOP OF CURB ELEVATION X 10211740 - BOTTOM OF CURB ELEVATION FLOW ARROW HEADWALL - FLARED END SECTION RIP-RAP DRAINAGE AREA LIMITS
	UTILITY
	<ul style="list-style-type: none"> WATER LINE GAS LINE TELEPHONE & ELECTRIC LINE HYDRANT VALVE CLEANOUT SANITARY MANHOLE PROPOSED SANITARY PIPE PROPOSED ELECTRIC TRANSFORMER PROPOSED ELECTRIC JUNCTION BOX

PCSM PLAN NOTES:

1. PRESERVES THE INTEGRITY OF STREAM CHANNELS AND MAINTAINS AND PROTECTS THE PHYSICAL, BIOLOGICAL AND CHEMICAL QUALITIES OF THE RECEIVING STREAM. THE PROJECT COMPLIES WITH ALL APPLICABLE NPDES REQUIREMENTS.
2. PREVENTS AN INCREASE IN THE RATE OF STORMWATER RUNOFF. THE PROJECT WILL COMPLY WITH LOWER MAKEFIELD TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.
3. MINIMIZES ANY INCREASE IN STORMWATER RUNOFF VOLUME. THE PROJECT WILL COMPLY WITH LOWER MAKEFIELD TOWNSHIP STORMWATER MANAGEMENT ORDINANCE.
4. MINIMIZES IMPERVIOUS AREAS THROUGH PRESERVATION OF A LARGE PORTION OF THE SITE.
5. MAXIMIZES THE PROTECTION OF EXISTING DRAINAGE FEATURES AND EXISTING VEGETATION. THE PROJECT DOES NOT PROPOSE IMPACTS TO EXISTING NATURAL DRAINAGE FEATURES.
6. MINIMIZES LAND CLEARING AND GRADING. PROJECT IS DESIGNED TO MINIMIZE LAND CLEARING AND GRADING. ADDITIONALLY, PROJECT WILL COMPLY WITH APPLICABLE REQUIREMENTS OF NPDES PERMIT.
7. MINIMIZES SOIL COMPACTION. PROJECT IS DESIGNED TO NOTIFY CONTRACTOR "TO MINIMIZE SOIL COMPACTION OF THE BMP'S AREA DURING CONSTRUCTION."
8. UTILIZES OTHER STRUCTURAL OR NONSTRUCTURAL BMP'S THAT PREVENT OR MINIMIZE CHANGES IN STORMWATER RUNOFF. PROJECT IS DESIGNED TO COMPLY WITH LOWER MAKEFIELD TOWNSHIP STORMWATER MANAGEMENT ORDINANCE AND APPLICABLE REQUIREMENTS OF THE NPDES PERMIT.
9. CONTRACTOR SHALL MINIMIZE THE EXTENT AND DURATION OF EARTH DISTURBANCE AT ANY GIVEN TIME. THE PROJECT AS A WHOLE MINIMIZES EXTENT OF EARTH DISTURBANCE THROUGH THE PRESERVATION OF A LARGE PORTION OF THE SITE.
10. NO PERSON SHALL MODIFY, REMOVE, FILL, LANDSCAPE OR ALTER ANY STORMWATER MANAGEMENT (SWM) BEST MANAGEMENT PRACTICES (BMP'S), FACILITIES, AREAS, OR STRUCTURES UNLESS IT IS PART OF AN APPROVED MAINTENANCE PROGRAM AND WRITTEN APPROVAL OF THE TOWNSHIP HAS BEEN OBTAINED.
11. NO PERSON SHALL PLACE ANY STRUCTURE, FILL, LANDSCAPING, OR VEGETATION INTO A STORMWATER FACILITY OR BMP OR WITHIN A DRAINAGE EASEMENT WHICH WOULD LIMIT OR ALTER THE FUNCTIONING OF THE STORMWATER FACILITY OR BMP WITHOUT THE WRITTEN APPROVAL OF THE TOWNSHIP.

THERMAL IMPACT ANALYSIS NOTE:

THERMAL IMPACTS WILL BE MINIMIZED AND MITIGATED IN THE POST CONSTRUCTION CONDITION BY PROPOSED TREES THAT WILL SHADE THE PROPOSED IMPERVIOUS SURFACES. DISCHARGING RUNOFF THROUGH BASIN. ALL OF THESE MEASURES WILL PROVIDE COOLING OF STORMWATER IN THE POST CONSTRUCTION CONDITION.

MANAGEMENT OF WASTE FOR PCSM BMP'S

ALL BMP'S SHALL BE INSPECTED BASED ON THE MAINTENANCE SCHEDULE PROVIDED ON THIS PLAN. ANY SOLID WASTE ENCOUNTERED IN ANY BMP DURING THE INSPECTION SHALL BE REMOVED AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS. CONTRACTOR MUST RESTORE ANY DISTURBED AREAS FOLLOWING THE WASTE REMOVAL.

MAINTENANCE FOR BEST MANAGEMENT PRACTICES NOTES:

MAINTENANCE ROUTINE INSPECTION AND ANY REPAIRS OF THE PROPOSED STORMWATER MANAGEMENT BMP'S SHALL REST WITH THE OWNER OF PROPERTY. THE TOWNSHIP HAS THE RIGHT, BUT NOT THE RESPONSIBILITY, TO INSPECT AND MAINTAIN ALL BMP'S.

1) STORMWATER CONVEYANCE SYSTEM

- CATCH BASINS, MANHOLES AND PIPES TO BE INSPECTED FOR CLOGGING AND EXCESSIVE DEBRIS AND SEDIMENT ACCUMULATION AT LEAST ANNUALLY AS WELL AS AFTER EVERY STORM EXCEEDING 1 INCH OF RAINFALL.
- ALL STRUCTURAL COMPONENTS MUST BE INSPECTED FOR CRACKING, SUBSISTENCE, BREAKING, WEARING, AND DETEIORATION AT LEAST ANNUALLY.

2) VEGETATED SWALE

MAINTENANCE ACTIVITIES TO BE DONE ANNUALLY AND WITHIN 48 HOURS AFTER EVERY MAJOR STORM EVENT (≥ 1 INCH RAINFALL DEPTH):

- INSPECT AND CORRECT EROSION PROBLEMS, DAMAGE TO VEGETATION, AND SEDIMENT AND DEBRIS ACCUMULATION (WHEN ≥ 3 INCHES AT ANY SPOT COVERS VEGETATION).
- INSPECT VEGETATION ON SIDE SLOPES FOR EROSION AND FORMATION OF RILLS AND GULLIES, CORRECT AS NEEDED.
- INSPECT FOR POOLS OF STANDING WATER, DEBRIS AND DISCHARGE TO A STORM SEWER AT AN APPROVED LOCATION AND RESTORE TO DESIGN GRADE.
- MOW AND TRIM VEGETATION TO ENSURE SAFETY, AESTHETICS, PROPER SWALE OPERATION, OR TO SUPPRESS WEEDS AND INVASIVE VEGETATION. DISPOSE OF CUTTINGS IN LOCAL COMPOSTING FACILITY. MOW ONLY WHEN SWALE IS DRY TO AVOID RUTTING.
- INSPECT FOR LITTER, REMOVE PRIOR TO MOWING.
- INSPECT FOR UNIFORMITY IN CROSS-SECTION AND LONGITUDINAL SLOPE, CORRECT AS NEEDED.
- INSPECT SWALE INLET (CURB CUTS, PIPES, ETC.) AND OUTLET FOR SIGNS OF EROSION OR BLOCKAGE, CORRECT AS NEEDED.
- MAINTENANCE ACTIVITIES TO BE DONE AS NEEDED:
- PLANT ALTERNATE GRASS SPECIES IN THE EVENT OF UNSUCCESSFUL ESTABLISHMENT.
- RESEED BARE AREAS. INSTALL APPROPRIATE EROSION CONTROL MEASURES WHEN NATIVE SOIL IS EXPOSED OR EROSION CHANNELS ARE FORMING.
- ROTOTILL AND REPLANT SWALE IF DRAIN DOWN TIME IS LESS THAN 48 HOURS.
- WATER DURING DRY PERIODS, FERTILIZE, AND APPLY PESTICIDE ONLY WHEN ABSOLUTELY NECESSARY.

MAINTENANCE DURING WINTER CONDITIONS:

- INSPECT SWALE IMMEDIATELY AFTER THE SPRING MELT. REMOVE RESIDUALS (E.G. SAND) AND REPLACE DAMAGED VEGETATION WITHOUT DISTURBING REMAINING VEGETATION.
- IF PARKING LOT RUNOFF IS DIRECTED TO THE SWALE, MULCHING AND/OR SOIL AERATION/MANIPULATION MAY BE REQUIRED IN THE SPRING TO RESTORE SOIL STRUCTURE AND MOISTURE CAPACITY AND TO REDUCE THE IMPACTS OF DEICING AGENTS.
- USE NON-TOXIC, ORGANIC DEICING AGENTS, APPLIED EITHER AS BLENDED, MAGNESIUM CHLORIDE-BASED LIQUID PRODUCTS OR AS PRETREATED SALT.
- USE SALT-TOLERANT VEGETATION IN SWALES.

3) DRY EXTENDED DETENTION BASIN

- ALL BASIN STRUCTURES TO RECEIVE AND/OR TRAP DEBRIS AND SEDIMENT SHOULD BE INSPECTED FOR CLOGGING AND EXCESSIVE DEBRIS AND SEDIMENT ACCUMULATION AT LEAST FOUR TIMES PER YEAR, AS WELL AS AFTER EVERY STORM GREATER THAN 1 INCH.
- SEDIMENT REMOVAL SHOULD BE CONDUCTED WHEN THE BASIN IS COMPLETELY DRY. SEDIMENT SHOULD BE DISPOSED OF PROPERLY AND UNCS. SEDIMENT IS REMOVED, DISTURBED AREAS NEED TO BE IMMEDIATELY STABILIZED AND REVEGETATED.
- MOWING AND/OR TRIMMING OF VEGETATION SHOULD BE PERFORMED AS NECESSARY TO SUSTAIN THE SYSTEM, BUT ALL DETRITUS SHOULD BE REMOVED FROM THE BASIN.
- VEGETATED AREAS SHOULD BE INSPECTED ANNUALLY FOR UNWANTED GROWTH OF EXOTIC/INVASIVE SPECIES.
- VEGETATIVE COVER SHOULD BE MAINTAINED AT A MINIMUM OF 95 PERCENT.
- IF VEGETATIVE COVER HAS BEEN REDUCED BY 10%, VEGETATION SHOULD BE REESTABLISHED.

CRITICAL STAGES OF CONSTRUCTION:

THE STORMWATER MANAGEMENT SYSTEM SHALL BE INSPECTED DURING CRITICAL STAGES OF CONSTRUCTION:

1. PRIOR TO COMMENCEMENT OF CONSTRUCTION AT THE PRE-CONSTRUCTION MEETING.
2. DURING THE INSTALLATION OF THE UNDERGROUND STORMWATER CONVEYANCE SYSTEM.
3. FOLLOWING THE COMPLETION OF ALL SITE IMPROVEMENTS.

THE MUNICIPALITY SHOULD INSPECT ALL PHASES OF INSTALLATION OF STORMWATER FACILITIES. SHALL PERFORM A FINAL INSPECTION AND AS-BUILT PLANS SHALL BE SUBMITTED OF THE INSTALLED FACILITIES INCLUDING CERTIFICATION OF COMPLETION BY A QUALIFIED PROFESSIONAL, VERIFYING THAT ALL SWM BMP'S HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

- REMOVE WEEDS AS NECESSARY.
- ROUTINELY REMOVE ACCUMULATED TRASH AND DEBRIS.
- REMOVE WEEDS AS NECESSARY.
- INSPECT FOR SIGNS OF FLOW CHANNELIZATION. RESTORE LEVEL GRADIENT IMMEDIATELY AFTER.
- DEFICIENCIES ARE OBSERVED.

REPLACEMENT OF FAILED BMP'S

IN THE EVENT THAT A COMPLETE FAILURE OF ANY ON-SITE BMP OCCURS, THE RESPONSIBLE PARTY FOR OPERATION AND MAINTENANCE SHALL HAVE THE BMP REMOVED COMPLETELY AND HAVE THE BMP RECONSTRUCTED PER THE BMP SEQUENCE OF CONSTRUCTION ON THE APPROVED THIS PLAN. TEMPORARY EROSION AND SEDIMENT CONTROLS WILL BE REQUIRED IN RECONSTRUCTION/REPLACEMENT OF THE BMP REQUIRES EARTH DISTURBANCE.

GEOGRAPHIC MAPPING FEATURES:

NOTE THAT THROUGH SOIL INVESTIGATION TESTING, AS WELL AS THE PAST AND PRESENT USES OF THE LAND, THE SITE IS NOT INTENDED TO BE CONTAMINATED WITH POLLUTANTS OR HAVE SINKHOLES. THE FOLLOWING GUIDELINES ARE PROVIDED IN THE CASE THAT UNANTICIPATED POLLUTANTS AND/OR SINKHOLES ARISE DURING CONSTRUCTION:

FOR CONTAMINATION:

1. IF HAZARDOUS MATERIAL IS IDENTIFIED DURING CONSTRUCTION, EARTH MOVING SHALL IMMEDIATELY CEASE UNTIL CONTAMINATED AREA IS REMEDIATED.
2. CONTRACTOR SHALL IDENTIFY AND PHYSICALLY MARK LIMITS OF HAZARDOUS MATERIAL WITHIN THE AREA OF CONSTRUCTION.
3. EXCAVATE HAZARDOUS MATERIAL AND STOCK PILE IN AREA SHOWN ON THIS PLAN.
4. HAUL TO A PENNSYLVANIA DEP APPROVED HAZARDOUS WASTE FACILITY.
5. VERIFY THAT ALL HAZARDOUS MATERIAL IDENTIFIED HAS BEEN REMOVED FROM SITE PRIOR TO COMMENCING CONSTRUCTION AND EARTH MOVING PRACTICES.

SINKHOLE:

1. IF A SINKHOLE IS IDENTIFIED DURING CONSTRUCTION, EARTH MOVING SHALL IMMEDIATELY CEASE UNTIL THE SINKHOLE IS REPAIRED.
2. CONTRACTOR SHALL IDENTIFY AND PHYSICALLY MARK LIMITS OF SINKHOLE REPAIR NECESSARY.
3. SINK HOLE SHALL BE REPAIRED PER DETAILS) PROVIDED ON CE-502 (EITHER FOR PERVIOUS OR IMPERVIOUS COVER).
4. CONSTRUCTION AND EARTH MOVING PRACTICES MAY RESUME ONLY AFTER THE REPAIR OF THE SINKHOLE AREA IS COMPLETED.

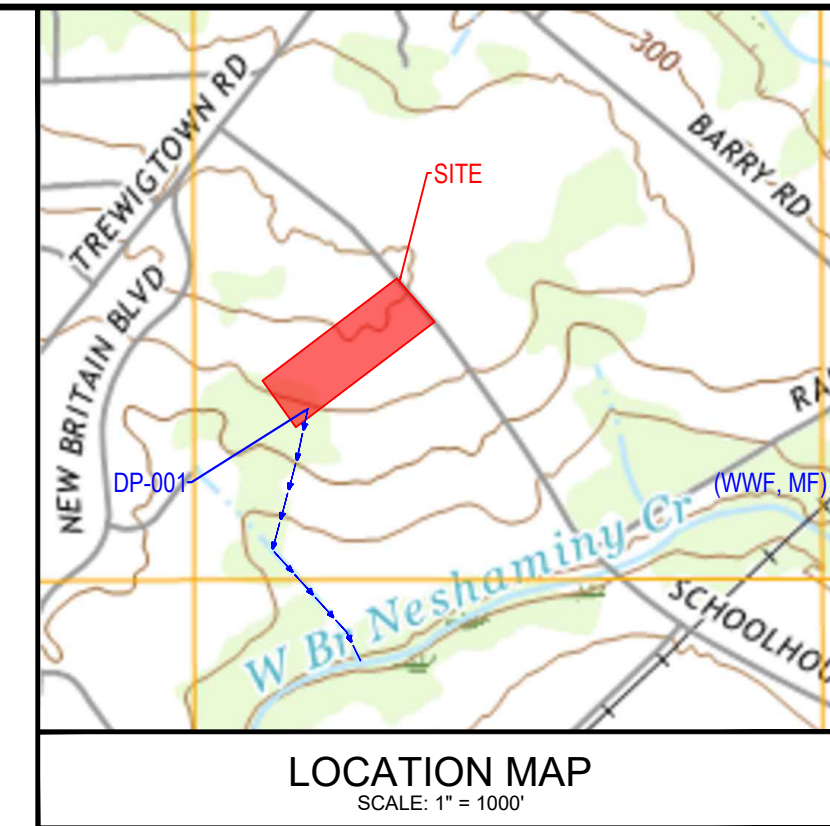
ACT 187

UTILITY LOCATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR, PER PA ACT 187 TO CONTRACT THE UTILITY COMPANIES FOR MORE ACCURATE LOCATION PRIOR TO ANY EXCAVATION. TO OBTAIN ADDITIONAL UTILITY INFORMATION OR TO ARRANGE FOR FIELD LOCATION OF EXISTING UTILITIES BEFORE EXCAVATION, CALL THE PENNSYLVANIA ONE CALL SYSTEM AT 1-800-342-1176. THE UTILITY COMPANIES SHOWN MAY OR MAY NOT HAVE UTILITY LINES IN THE AREA.

CALL BEFORE YOU DIG!
PENNSYLVANIA ONE CALL SYSTEM
FOR MORE INFORMATION VISIT
WWW.PAONECALL.COM
OR CALL 1-800-342-1176
PENNSYLVANIA ONE CALL SYSTEM, INC.
1-800-242-1176



PRELIMINARY DESIGN SERIAL NUMBER: 20230423025



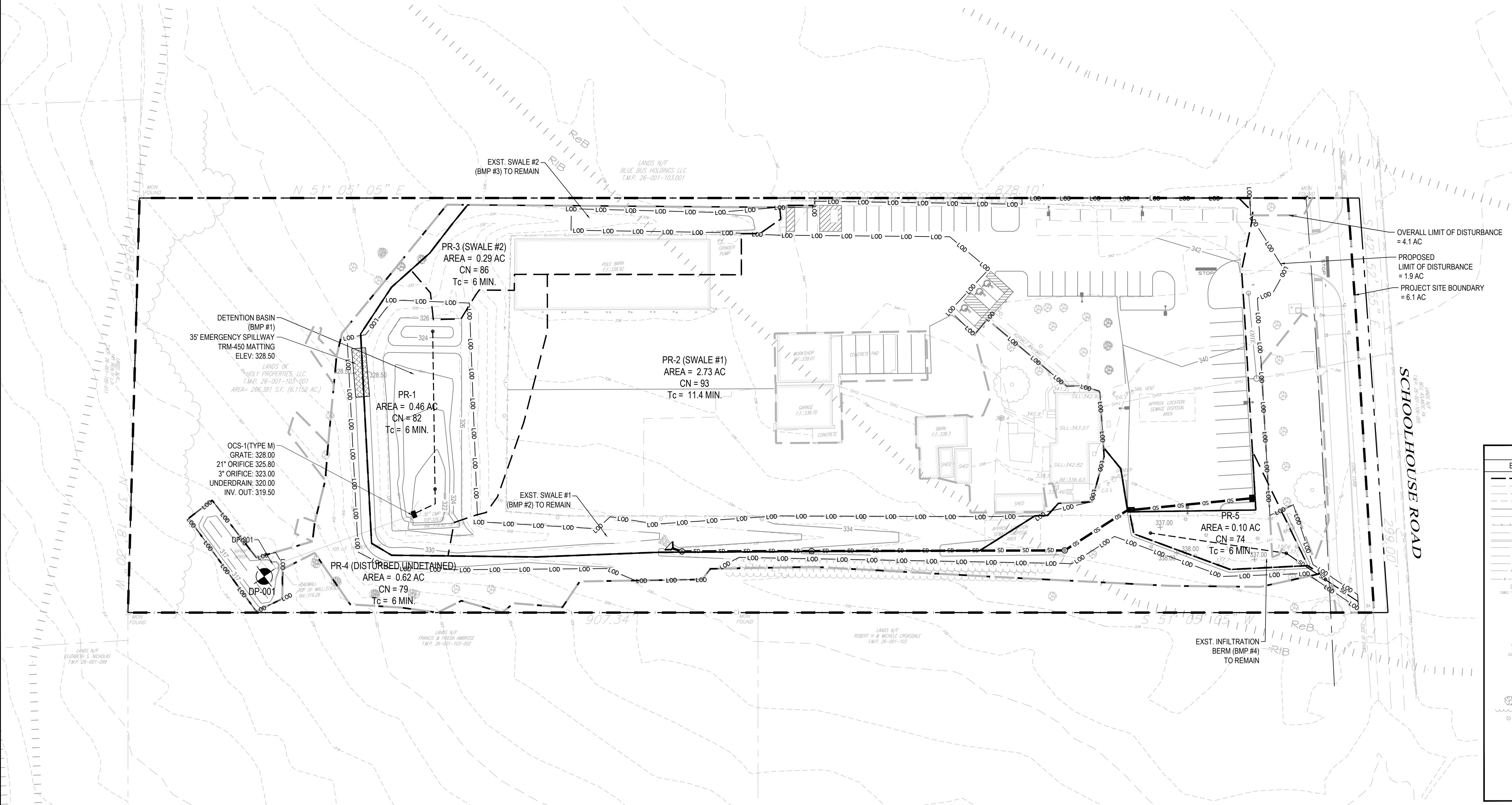
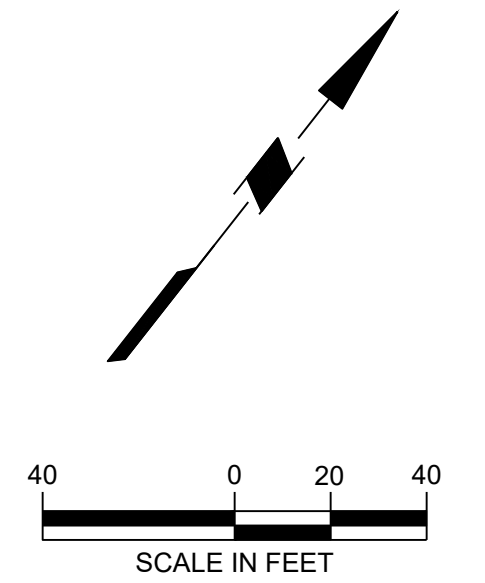
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arna Engineering Inc.
1456 Ferry Road, Suite 603
Doyletown, PA 18901
T: 215.766.8280
F: 215.434.5280

RECEIVING WATER: WEST BRANCH OF NESHAMINY CREEK,
PART OF THE NESHAMINY CREEK WATERSHED

CH 93 CLASSIFICATION: WWF, MF

PROPOSED LIMIT OF DISTURBANCE = 1.9 AC
OVERALL LIMIT OF DISTURBANCE = 4.1 AC
PROJECT SITE BOUNDARY = 6.1 AC



PCSM LEGEND

PROJECT SITE BOUNDARY	---
OVERALL LIMIT OF DISTURBANCE	---
LIMIT OF DISTURBANCE	---
DRAINAGE AREA	---
SOIL LIMITS	---
SOIL TYPE	---

LEGEND

EXISTING SYMBOLS & LINES	PROPOSED SYMBOLS & LINES
PROPERTY LINE	PROPERTY LINE
EASEMENT	SETBACK LINE
CONTOUR LINE	BUILDING
EDGE OF PAVEMENT	CURB LINE
CURSING	DEPRESSED CURB LINE
FENCE LINE	TRAFFIC SIGN
GUIDE RAIL	CURB RAMP
SANITARY SEWER LINE	PARKING ROW COUNT
STORM SEWER LINE	BUILDING DOOR
GAS LINE UNDERGROUND	BUFFER
TELEPHONE UNDERGROUND	FENCE
ELECTRIC	BASIN
OVERHEAD LINES	
WATER LINE	
BUILDING	
SOIL	
IRON PIN	
CONCRETE MONUMENT	
UTILITY POLE	
GAS VALVE	
WATER METER	
FIRE HYDRANT	
SANITARY CLEANOUT	
SANITARY MANHOLE STORM	
MANHOLE	
STORM INLET	
HEADWALL	
LIGHT POLE	
TREE	
TREE LINE	
BUSH/SHRUBS	

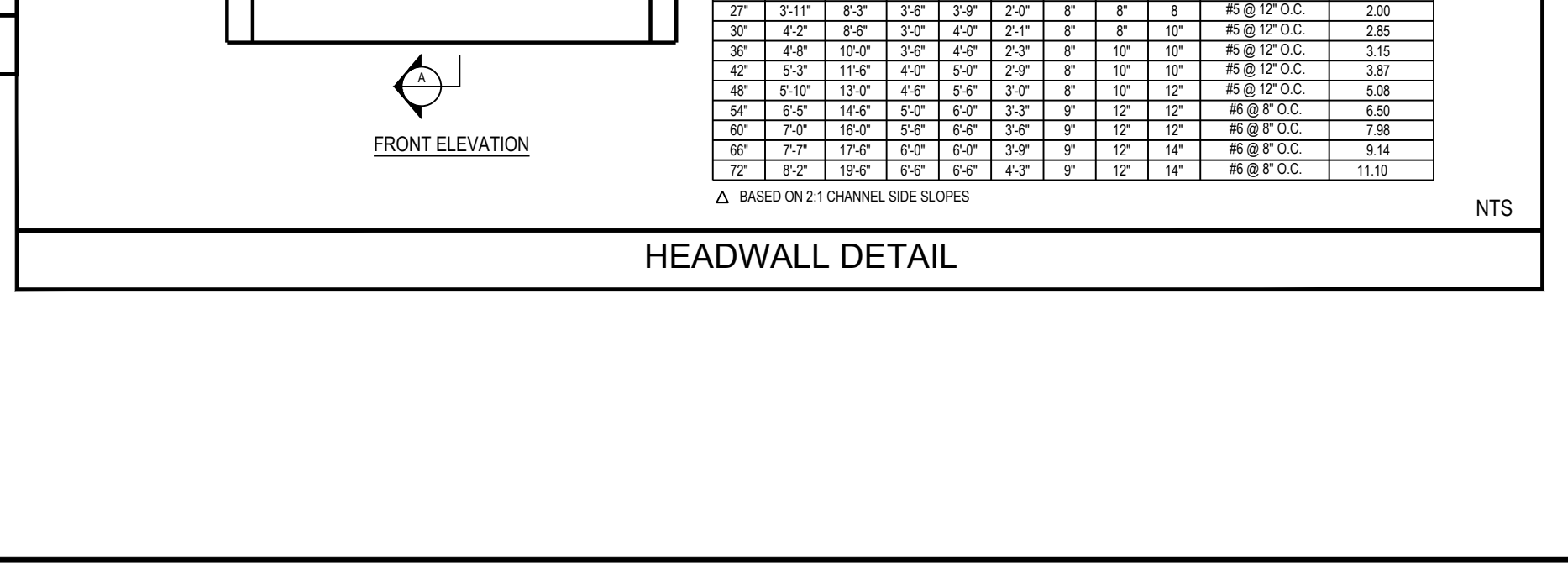
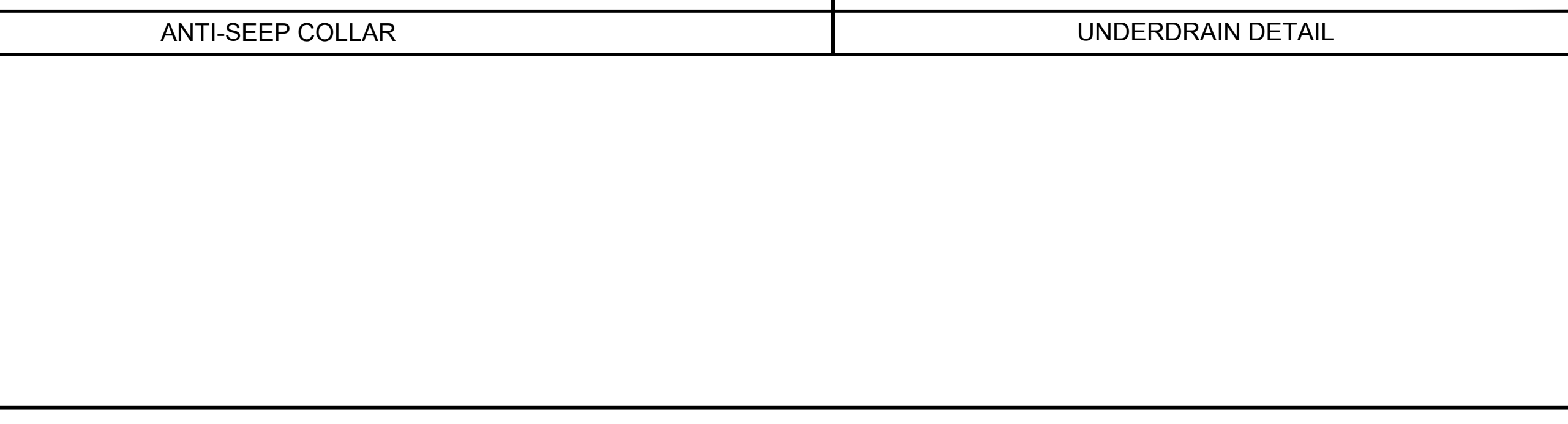
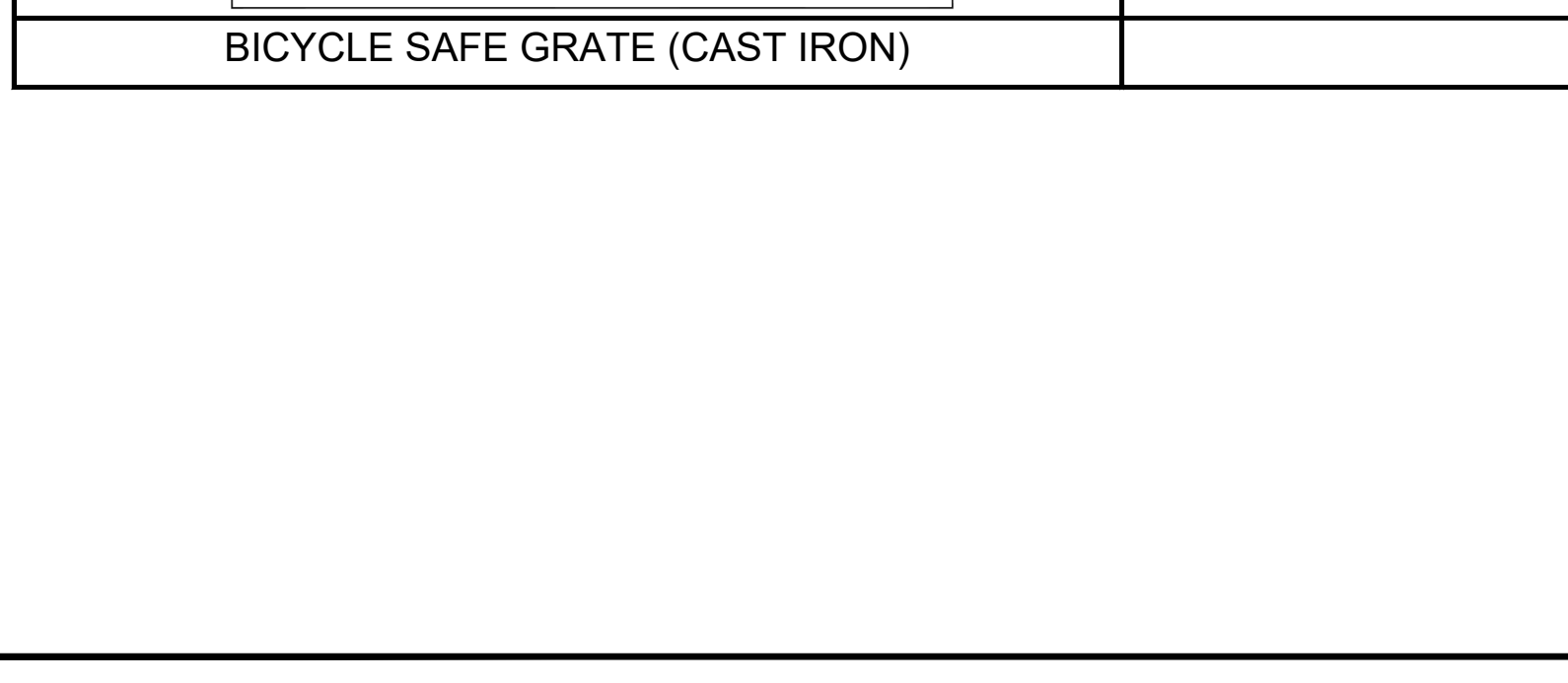
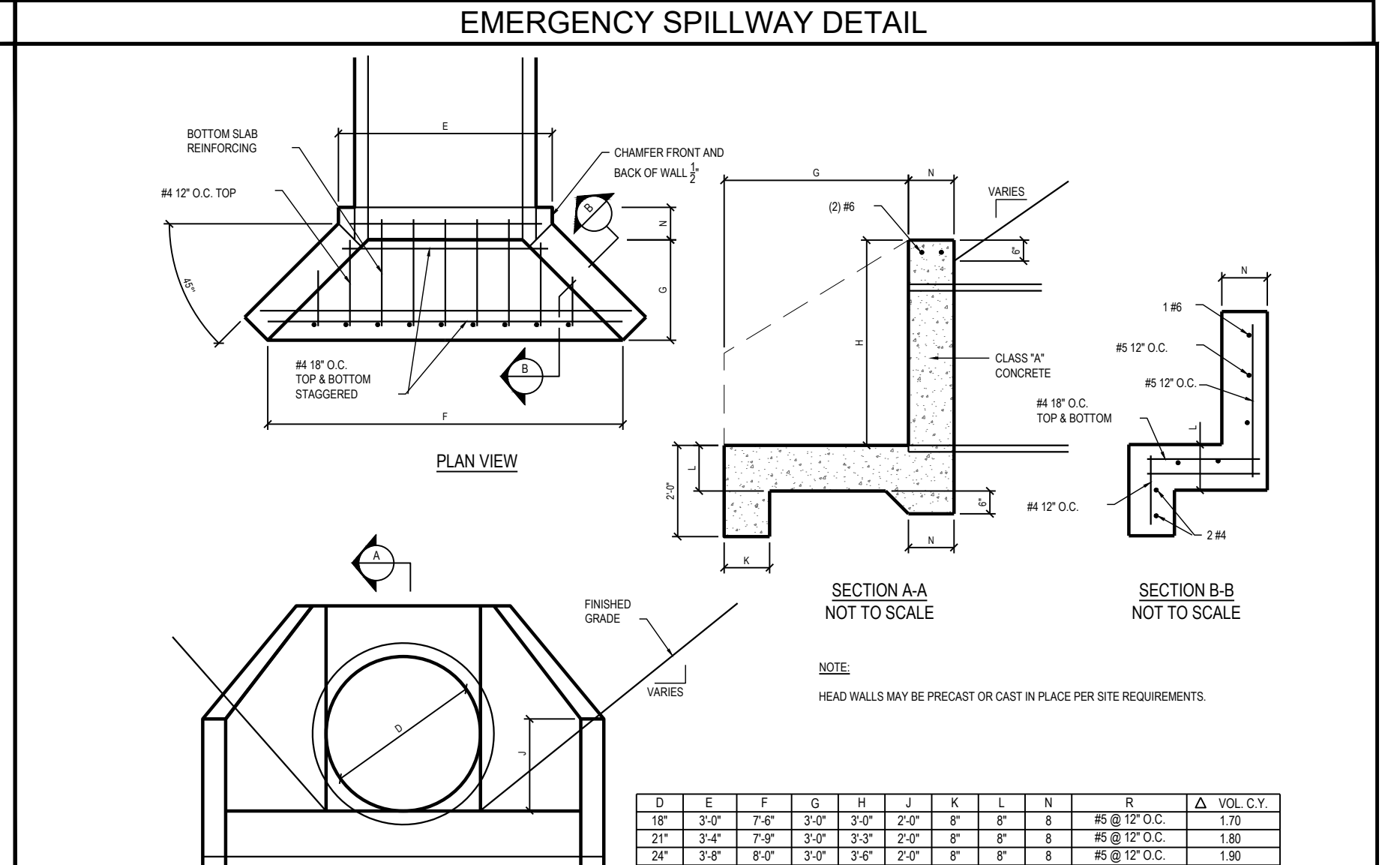
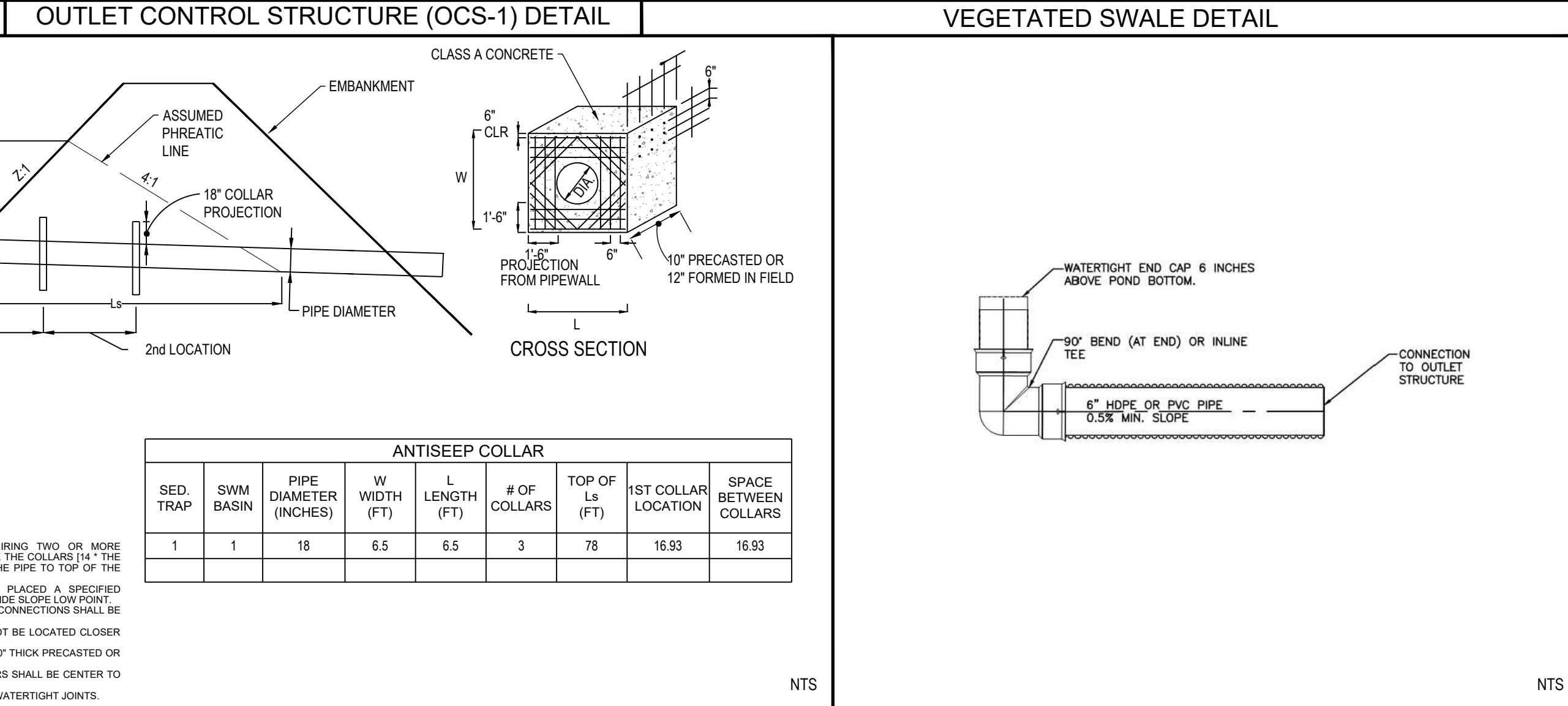
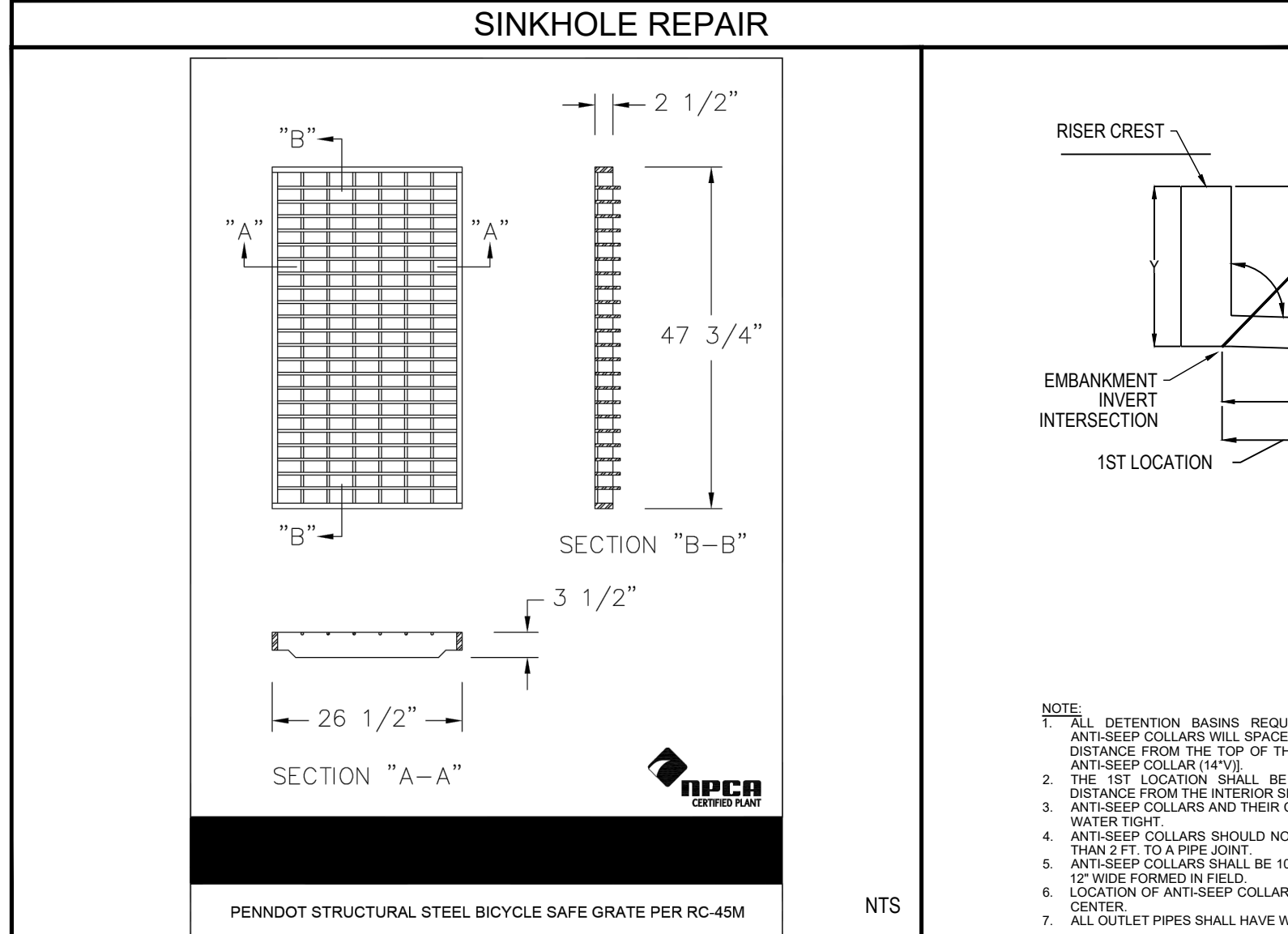
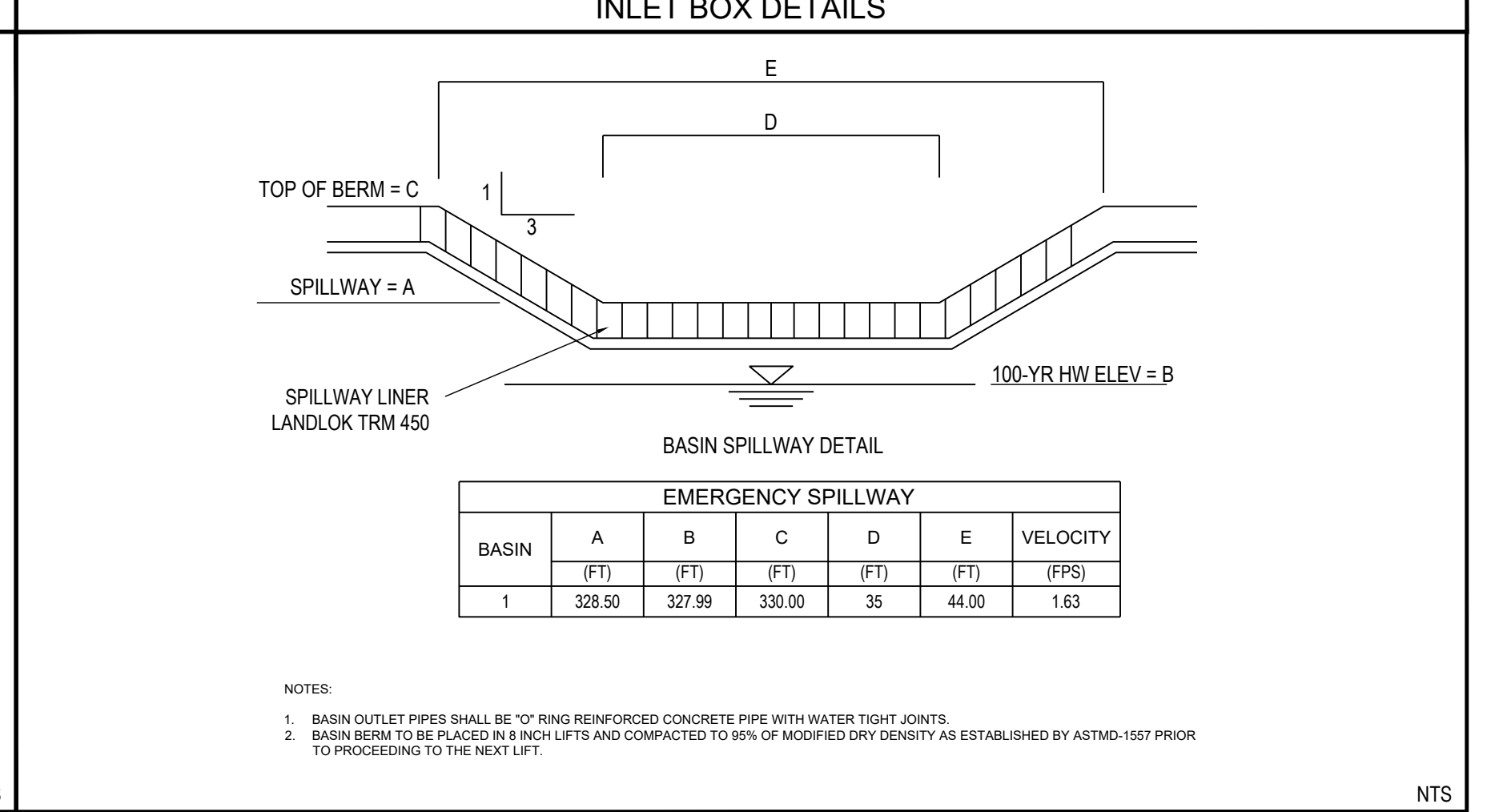
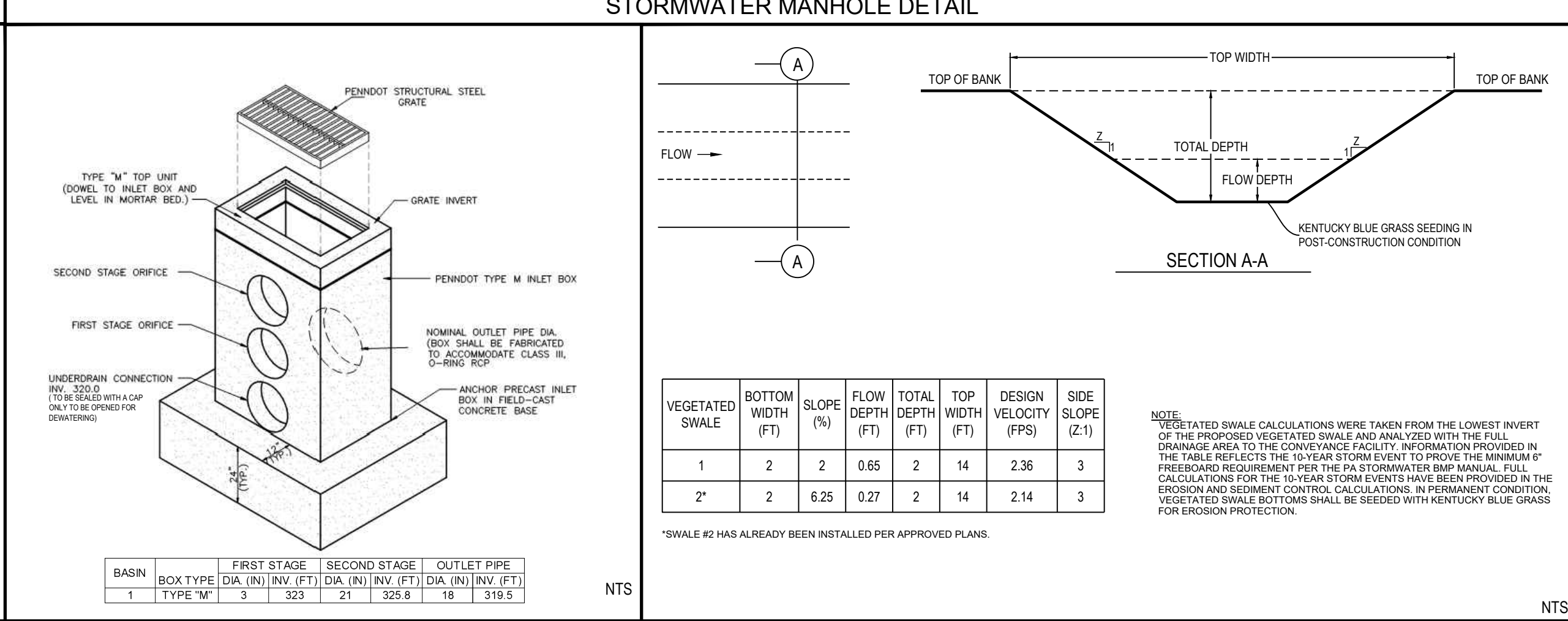
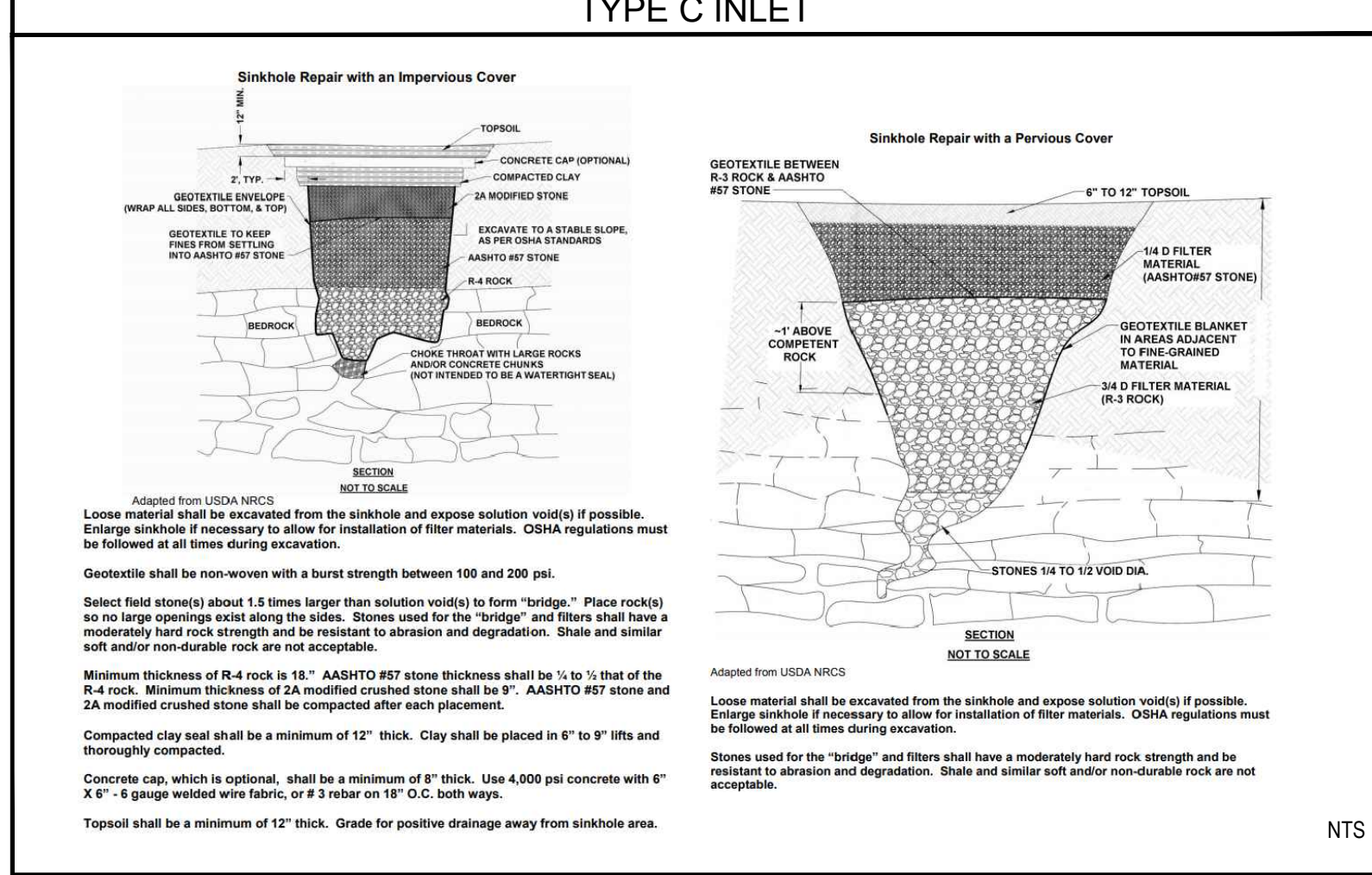
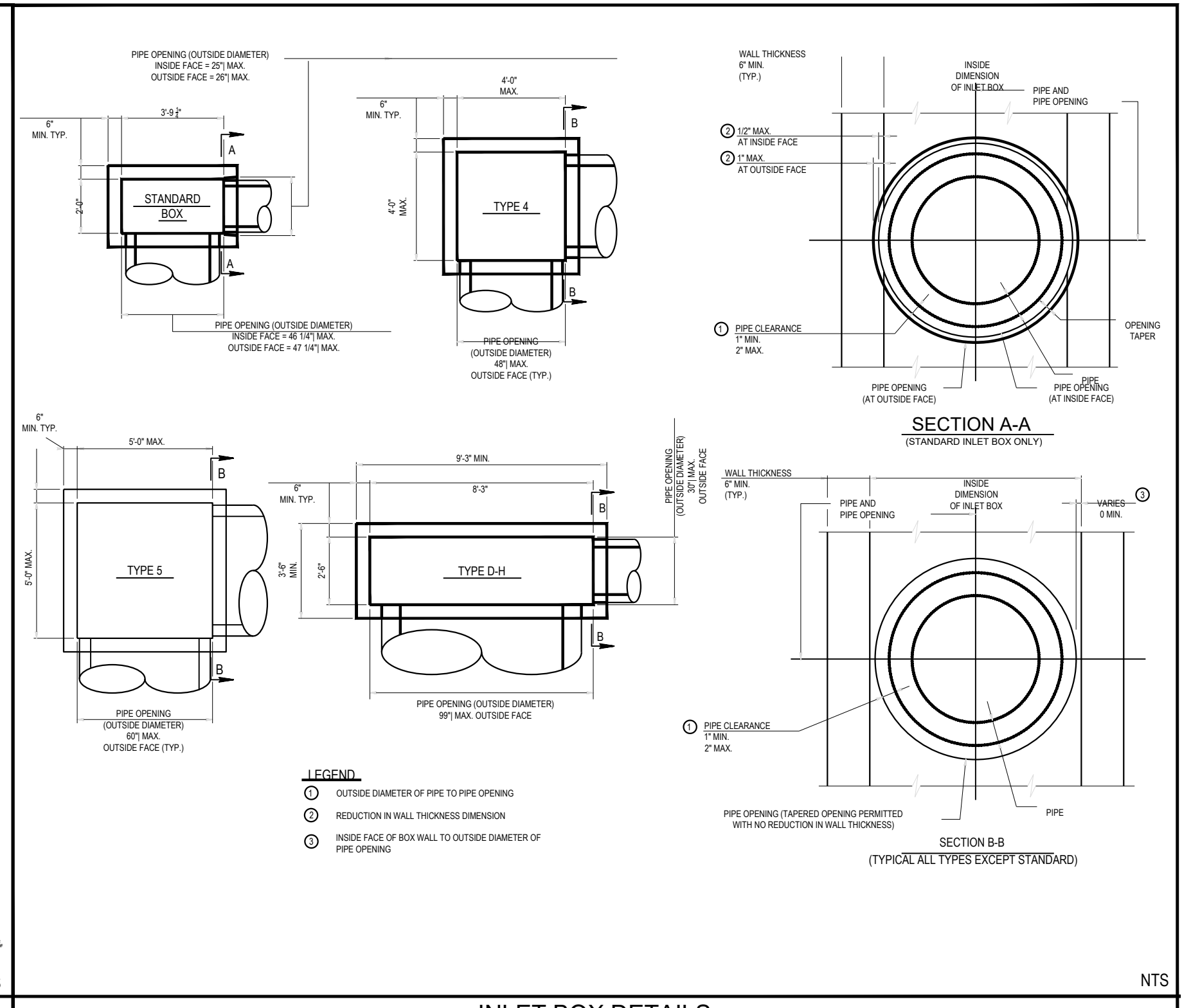
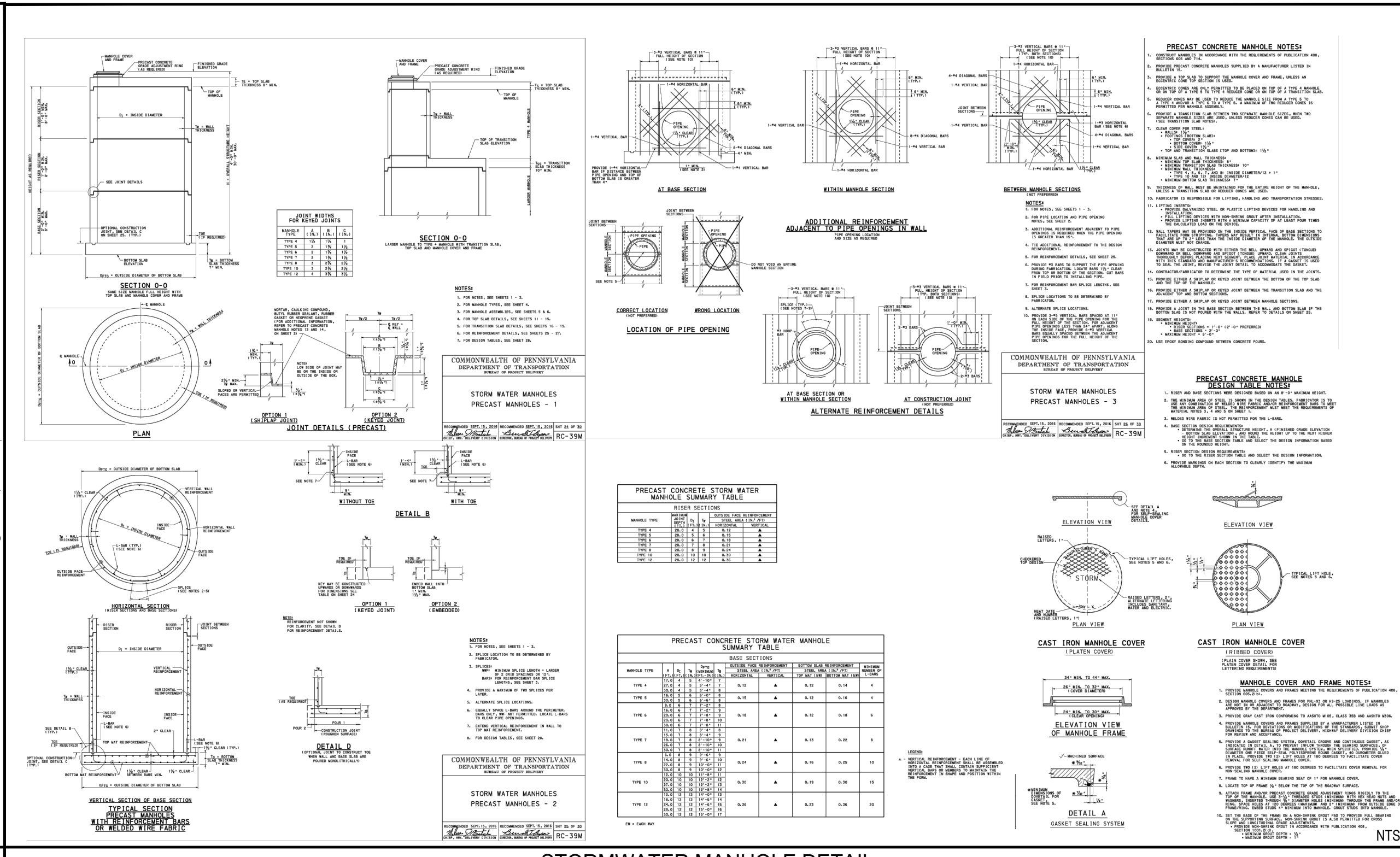
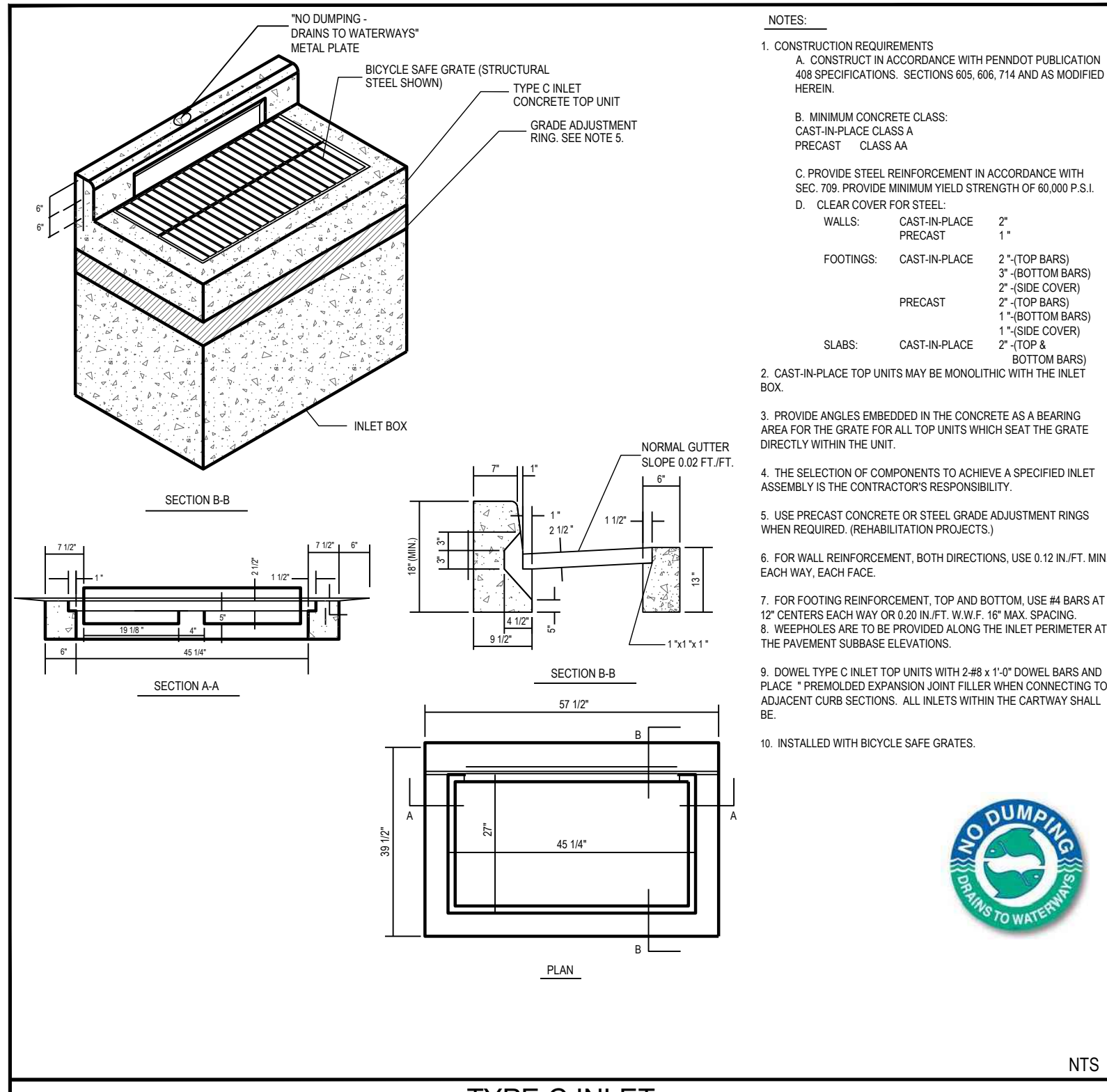
Project
CLAUSER FACILITY EXPANSION
TMP # 26-001-103-001

NEW BRITAIN TOWNSHIP
BUCKS COUNTY PENNSYLVANIA

Drawing Title
POST - CONSTRUCTION STORMWATER MANAGEMENT PLAN

REGISTERED PROFESSIONAL ENGINEER
CHIRAG V. THAKKAR
No. 075153
PA LIC. No. 75153

01-12-24	REVISED PER TOWNSHIP AND BCCD COMMENTS	1.
REVISIONS		
Project No.	230020201	
Date	09-22-2023	
Scale	1" = 40'	
Drawn By	KGP	
Checked By	AB	
Drawing No.	CG-201	
Sheet	7 of 12	



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T: 215.766.8280
F: 215.434.5280
NJ Certificate of Authorization: 24GA28242200

Project
CLAUSER FACILITY EXPANSION
TMP # 26-001-103-001
NEW BRITAIN TOWNSHIP
BUCKS COUNTY PENNSYLVANIA

Drawing Title
POST-CONSTRUCTION STORMWATER MANAGEMENT DETAILS

01-12-24
DATE
REVISOR
COMMENTS
NO.

Project No. 230020201
Date 09-22-2023
Scale NOT TO SCALE
Drawn By KGP
Checked By AB
Drawing No. CG-501
Sheet 8 of 12

ON-SITE SOIL TYPE DESCRIPTION						
Map Symbol	Soil	Hydrological Soil Group	Seasonal High Water Table (FT)	Depth to Bedrock (IN)	Agricultural Soil	Hydric
ReB	Readington silt loam 3% to 8% slopes	C	2.25	50	Yes	No
RIB	Reaville channery silt loam 3% to 8% slopes	D	1.75	30	Yes	No

Soil Information based on NRCS Websoil Survey for Bucks County, PA

GEOGRAPHIC MAPPING FEATURES:
NOTE THAT THROUGH SOIL INVESTIGATION TESTING AS WELL AS THE PAST AND PRESENT USES OF THE LAND, THE SITE IS NOT INTENDED TO BE CONTAMINATED WITH POLLUTANTS OR HAVE SINKHOLES. THE FOLLOWING GUIDELINES ARE PROVIDED IN THE CASE THAT ANTICIPATED POLLUTANTS AND/OR SINKHOLES ARISE DURING CONSTRUCTION.

FOR CONTAMINATION:
1. IF HAZARDOUS MATERIAL IS IDENTIFIED DURING CONSTRUCTION, EARTH MOVING SHALL IMMEDIATELY CEASE UNTIL CONTAMINATED AREA IS REMEDIATED.
2. CONTRACTOR SHALL IDENTIFY AND PHYSICALLY MARK LIMITS OF HAZARDOUS MATERIAL WITHIN THE AREA OF CONSTRUCTION.
3. EXCAVATE HAZARDOUS MATERIAL AND STOCK PILE IN AREA SHOWN ON THIS PLAN.
4. HAUL TO A PENNSYLVANIA DEP APPROVED HAZARDOUS WASTE FACILITY.
5. VERIFY THAT ALL HAZARDOUS MATERIAL IDENTIFIED HAS BEEN REMOVED FROM SITE PRIOR TO COMMENCING CONSTRUCTION AND EARTH MOVING PRACTICES.

SINKHOLE:
1. IF A SINKHOLE IS IDENTIFIED DURING CONSTRUCTION, EARTH MOVING SHALL IMMEDIATELY CEASE UNTIL THE SINKHOLE IS REPAIRED.
2. CONTRACTOR SHALL IDENTIFY AND PHYSICALLY MARK LIMITS OF SINKHOLE REPAIR NECESSARY.
3. SINK HOLE SHALL BE REPAIRED PER DETAILS PROVIDED ON CE-502 (EITHER FOR PERVIOUS OR IMPVIOUS COVER).
4. CONSTRUCTION AND EARTH MOVING PRACTICES MAY RESUME ONLY AFTER THE REPAIR OF THE SINKHOLE AREA IS COMPLETED.

DEFINITIONS:
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. UNCONTAMINATED MEANS UNAFFECTED BY SPILL OR RELEASE, OR IF AFFECTED, LEVELS ARE BELOW RESIDENTIAL STANDARDS.
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, SANSDORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS.

THERMAL IMPACT ANALYSIS NOTE:
THERMAL IMPACTS WILL BE MINIMIZED AND MITIGATED IN THE EAS PHASE BY FILTERING RUNOFF THROUGH NATURAL VEGETATION, COMPOST FILTER SOCKS, AND SEDIMENT TRAPS PRIOR TO DISCHARGING OFF-SITE.

CRITICAL STAGES OF CONSTRUCTION:
THE STORMWATER MANAGEMENT SYSTEM SHALL BE INSPECTED DURING CRITICAL STAGES OF CONSTRUCTION.
1. PRIOR TO COMMENCEMENT OF CONSTRUCTION AT THE PRE-CONSTRUCTION MEETING.
2. DURING THE INSTALLATION OF THE UNDERGROUND STORMWATER CONVEYANCE SYSTEM.
3. FOLLOWING THE COMPLETION OF ALL SITE IMPROVEMENTS.
THE MUNICIPALITY SHOULD INSPECT ALL PHASES OF INSTALLATION OF STORMWATER FACILITIES. SHALL PERFORM A FINAL INSPECTION, AND AS-BUILT PLANS SHALL BE SUBMITTED OF THE INSTALLED FACILITIES INCLUDING CERTIFICATION OF COMPLETION BY A QUALIFIED PROFESSIONAL, VERIFYING THAT ALL SWI BMPs HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

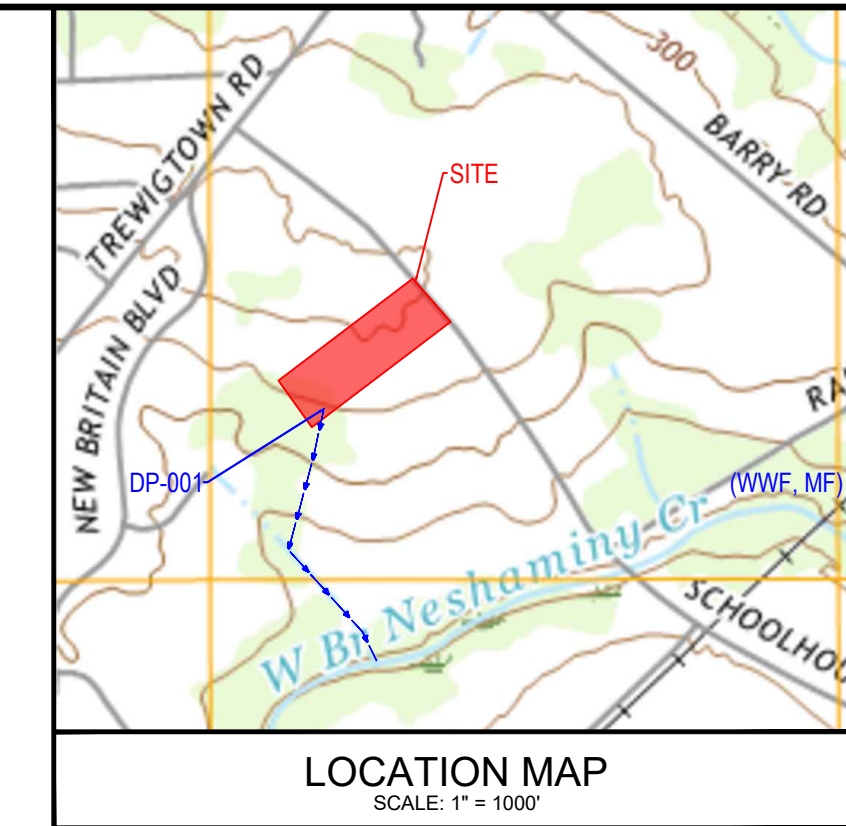
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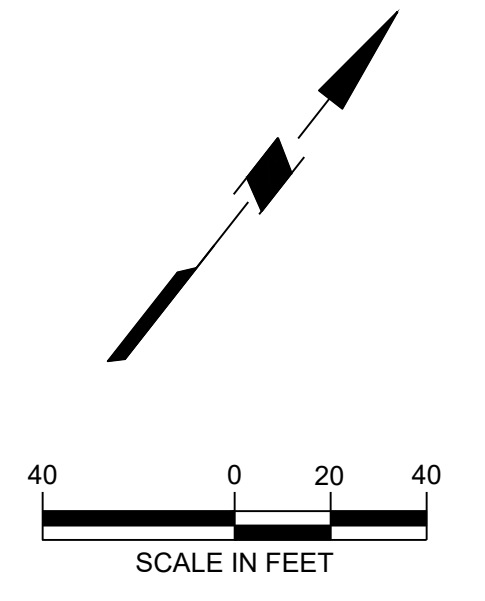
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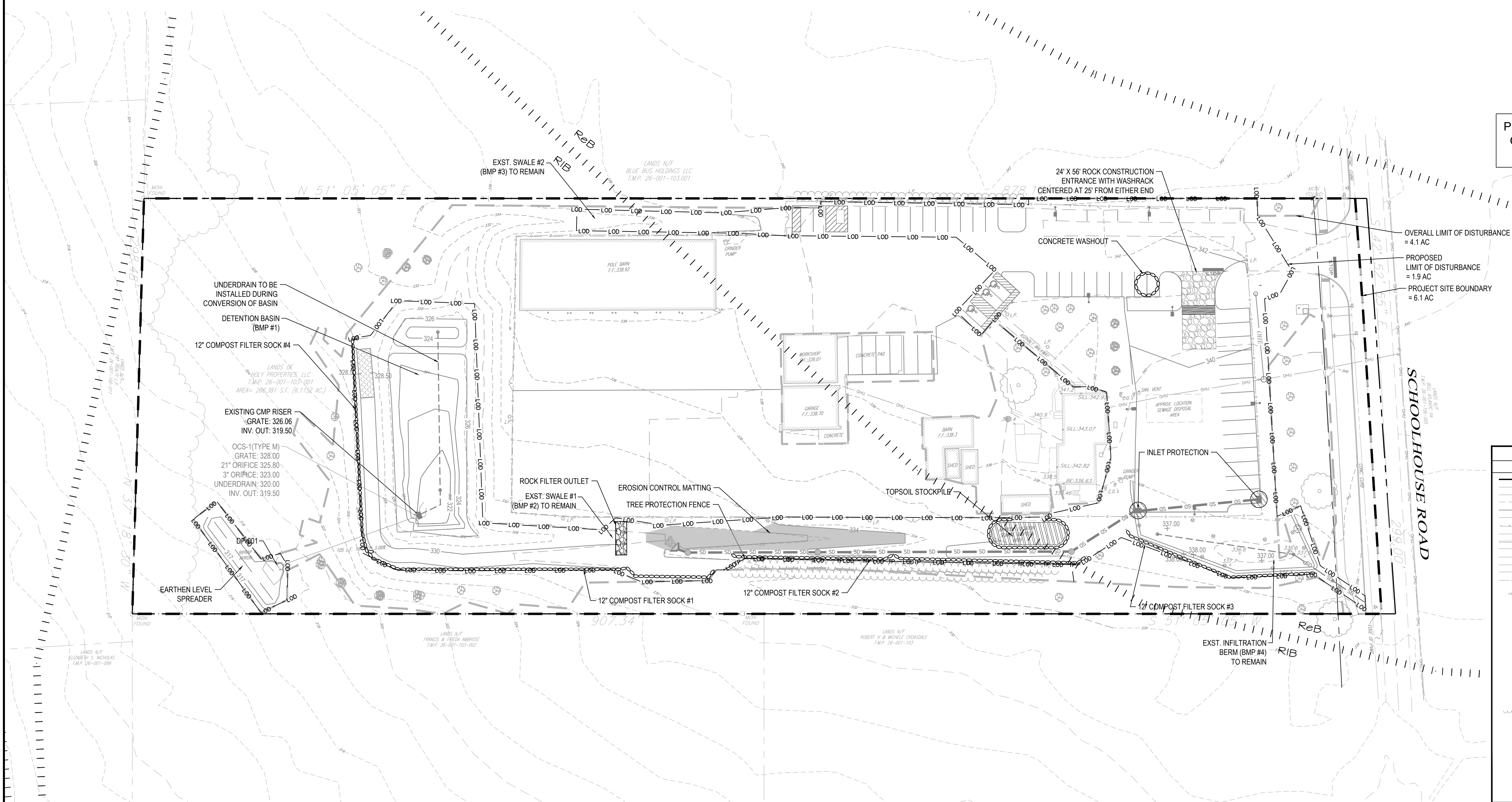
PRELIMINARY DESIGN SERIAL NUMBER: 2023020201



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Doylestown, PA 18901
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SOIL LIMITATIONS AND RESOLUTIONS	
SOIL LIMITATION	RESOLUTION(S)
CUTBANKS CAVE	PROVIDE APPROPRIATE BENCHING AND/OR SHORING IN AREAS OF EXCAVATION.
CORROSIVE TO CONCRETE/STEEL	INSTALL REBAR TO MINIMUM COVER REQUIREMENTS AND USE EPOXY COATED REBAR. APPLY MOISTURE BARRIER TO SURFACE OF EXPOSED CONCRETE.
DROUGHTY	SOIL SHOULD BE INSPECTED BY A GEOTECHNICAL ENGINEER PRIOR TO USE ON SITE. ANY RECOMMENDATIONS PRESCRIBED BY THE GEOTECHNICAL ENGINEER SHALL BE FOLLOWED PRIOR TO USE ON SITE.
EASILY ERODIBLE	SOILS SHALL BE STABILIZED WITH EITHER TEMPORARY OR FINAL STABILIZATION IN AREAS WHERE EARTHWORK IS DELAYED OR STOPPED FOR FOUR CONSECUTIVE DAYS.
DEPTH TO SATURATED ZONE / SEASONAL HIGH WATER TABLE	SOILS SHOULD BE EVALUATED FOR WETNESS PRIOR TO USE IN SITE WORK. IF GEOTECHNICAL ENGINEER DEMS SOILS TOO WET FOR SITE WORK, THEN SOILS SHALL BE AMENDED OR DRIED PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
HYDRIC / HYDRIC INCLUSIONS	SOILS TO BE EVALUATED BY A GEOTECHNICAL SPECIALIST. WATER TABLE EVALUATION WILL BE REQUIRED, POSSIBLY IN AREA OF WETLANDS.
LOW STRENGTH / LANDSLIDE PRONE	SOILS SHOULD NOT BE USED FOR STRUCTURAL FILL UNLESS THEY HAVE BEEN EVALUATED BY A GEOTECHNICAL ENGINEER AND THE GEOTECHNICAL ENGINEER DEMS THEM SUITABLE AS FILL OR PROVIDES RECOMMENDATIONS TO AMEND SOILS MAKING THEM SUITABLE AS FILL.
SLOW PERCOLATION	SOIL TO BE EVALUATED FOR SUITABILITY FOR INFILTRATION PRACTICES.
PIPING	AREAS OF EMBANKMENTS WITH PIPES PASSING THROUGH THEM SHALL HAVE ANTI-SEEP COLLARS INSTALLED PER THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S (PA DEP) EROSION AND SEDIMENT CONTROL PROGRAM.
POOR SOURCE OF TOPSOIL	SOILS SHOULD BE AMENDED AS RECOMMENDED TO PROVIDE ADEQUATE MATERIALS NECESSARY FOR REQUIRED PLANT GROWTH.
FROST ACTION	SOILS SHOULD BE FREE OF FROZEN OR MUCKY MATERIALS. FILL SHOULD NOT BE PLACED ON SATURATED OR FROZEN SURFACES. EARTHWORK INVOLVING THESE SOILS SHOULD BE LIMITED TO THE WARMER MONTHS WHEN PRACTICAL.
WETNESS	SOILS SHOULD BE EVALUATED FOR WETNESS PRIOR TO USE IN SITE WORK. IF GEOTECHNICAL ENGINEER DEMS SOILS TOO WET FOR SITE WORK, THEN SOILS SHALL BE AMENDED OR DRIED PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.



NOTE: DAMAGED BAFFLES ARE TO BE REPLACED.

RECEIVING WATER: WEST BRANCH OF NESHAMINY CREEK,
PART OF THE NESHAMINY CREEK WATERSHED
CH. 93 CLASSIFICATION: WWF, MF

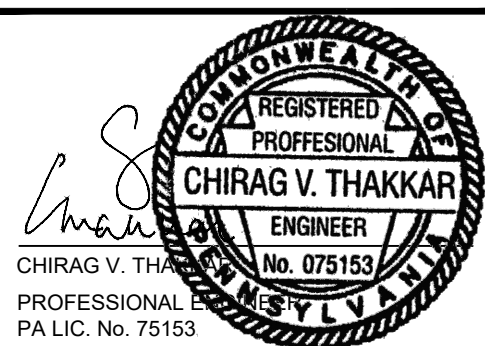
PROPOSED LIMIT OF DISTURBANCE = 1.9 AC
OVERALL LIMIT OF DISTURBANCE = 4.1 AC
PROJECT SITE BOUNDARY = 6.1 AC

SOIL EROSION LEGEND	
PROJECT SITE BOUNDARY	---
OVERALL LIMIT OF DISTURBANCE	---
LIMIT OF DISTURBANCE	---
COMPOST FILTER SOCK	---
EXISTING CONTOUR	---
PROPOSED CONTOUR	---
TREE PROTECTION FENCE	---
TOPSOIL STOCKPILE	---
INLET PROTECTION	---
CONSTRUCTION ENTRANCE	---
ROCK FILTER OUTLET	---
EROSION CONTROL MATTING	---
SOILS LIMITS	---
SOILS TYPE	---

LEGEND	
EXISTING SYMBOLS & LINES	PROPOSED SYMBOLS & LINES
PROPERTY LINE	PROPERTY LINE
EASEMENT	SETBACK LINE
CONTOUR LINE	BUILDING
EDGE OF PAVEMENT	CURB LINE
CURSING	DEPRESSED CURB LINE
FENCE LINE	TRAFFIC SIGN
GUIDE RAIL	CURB RAMP
SANITARY SEWER LINE	PARKING ROW COUNT
STORM SEWER LINE	BUILDING DOOR
GAS LINE UNDERGROUND	BUFFER
TELEPHONE UNDERGROUND	FENCE
OVERHEAD LINES	BASIN
WATER LINE	
BUILDING	
SOIL	
IRON PIN	
CONCRETE MONUMENT	
UTILITY POLE	
GAS VALVE	
WATER VALVE	
WATER METER	
FIRE HYDRANT	
SANITARY CLEANOUT	
SANITARY MANHOLE STORM	
MANHOLE	
STORM INLET	
HEADWALL	
LIGHT POLE	
TREE	
TREE LINE	
BUSH SHRUBS	
	GRADING AND DRAINAGE
	STORM PIPE
	CATCH BASIN
	STORM MANHOLE
	CONTOUR
	SPOT GRADE
	X TO 1/8" = 1'0"
	X TO 1/16" = 1'0"
	X TO 1/32" = 1'0"
	TOP OF CURB ELEVATION
	BOTTOM OF CURB ELEVATION
	FLOW ARROW
	HEADWALL - FLARED END SECTION
	SRP SAP
	SRP SAP
	DRAINAGE AREA LIMITS
	UTILITY
	WATER LINE
	GAS LINE
	TELEPHONE & ELECTRIC LINE
	HYDRANT
	VALVE
	CLEANOUT
	SANITARY MANHOLE
	PROPOSED SANITARY PIPE
	PROPOSED ELECTRIC TRANSFORMER
	PROPOSED ELECTRIC JUNCTION BOX

Project
CLAUSER FACILITY EXPANSION
TMP # 26-001-103-001
NEW BRITAIN TOWNSHIP
BUCKS COUNTY PENNSYLVANIA

Drawing Title
SOIL EROSION AND SEDIMENT CONTROL PLAN



DATE	REVISIONS	NO.
01-12-24	REVISED PER TOWNSHIP AND BCCD COMMENTS	1.

Project No.	230020201
Date	09-22-2023
Scale	1" = 40'
Drawn By	KGP
Checked By	AB
Drawing No.	CE-101
Sheet	9 of 12

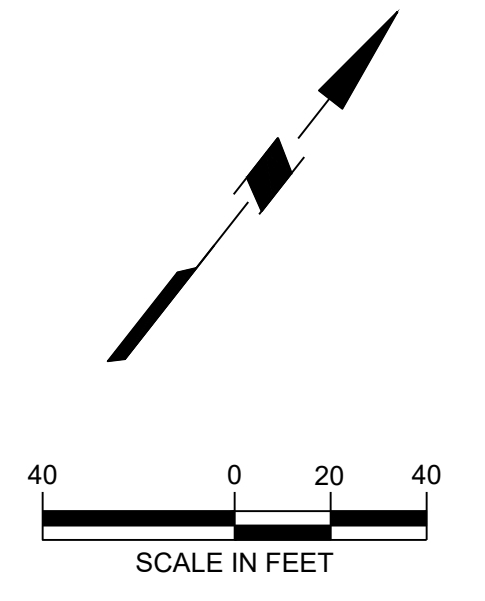
New Britain Township: Landscape Compliance Chart						
ORDINANCE SECTION	REQUIREMENT	REQUIRED	APPROVED	EXISTING/INSTALLED	PROPOSED	PROVIDED / COMPLIANCE
Zoning 27-2004 h.1	Any lot that would include more than 30 parking spaces shall be required to provide landscaped areas within the paved area. Required landscaped area shall be equal to a minimum of 2% of the total paved area.	86,630 sf Paved Area 5% = 4,332 sf	-	-	5,328 sf	5,328 sf COMPLY
Zoning 27-2004 h.2	One deciduous tree shall be required for every 4,000 square feet of paved area.	86,630 sf / 4,000sf = 21.7 = 22 Trees	5 Trees (19,539 sf)	12 Trees	10	22 Trees COMPLY
Parking Area Landscaping	At ten-foot by eighteen-foot planting islands shall contain one shade tree. Planting strips shall be a minimum of 10 feet wide, and shall run the length of a parking row. Planting strips shall contain one shade tree at intervals of every 25 feet on average.	5-10x18' planting islands = 4 Trees 24-foot planting strip between main driveway and new outdoor storage at 25 feet intervals. 2425 ÷ 0.96 = 1 Tree	2 Trees (2-10x18' planting islands)	-	5 Trees	5 Trees COMPLY
Street Trees	Street trees shall be planted every 30 feet along all proposed streets and existing streets when they abut or lie within the proposed subdivision and/or land development.	Schoolhouse Rd Length = 299.1' - 25' (Driveway) = 274.100' ÷ 9.16 = 10 Trees Required	10 Trees	10 Trees	-	10 Trees COMPLY
Landscape Buffer and Screens	One deciduous or evergreen shrub planted every five feet along the perimeter of the parking area (402 ft). One deciduous or evergreen tree planted every 20 feet, plus one deciduous or evergreen shrub every 10 feet along the basin perimeter, planted in an internal arrangement.	402 ft ÷ 5 = 82 Shrubs 402 ft ÷ 20 = 20 Trees + 301 ft ÷ 10 = 31 Shrubs	54 Shrubs (269 ft)	-	21 Shrubs	21 Shrubs WAIVER
		Retention Berm Perimeter = 301 feet 301 ft / 20 ft = 15 Trees + 301 ft / 10 ft = 31 Shrubs	15 Trees + 31 Shrubs	10 Trees + 18 Shrubs	5 Trees + 13 Shrubs	15 Trees + 31 Shrubs COMPLY
		Detention Basin Berm Perimeter = 743 feet 743 ft / 20 ft = 38 Trees + 743 ft / 10 ft = 75 Shrubs	39 Trees + 75 Shrubs	39 Trees + 68 Shrubs	7 Shrubs	39 Trees + 75 Shrubs COMPLY

Note:
1. Section 27-2004 h.3. For every existing tree on the lot that is preserved and maintained and that would generally meet the requirements of this section, one less shade tree shall be required to be planted.

PLANT MATERIAL SCHEDULE			
TREES - DECIDUOUS-PARKING			
ABB. SCIENTIFIC NAME	COMMON NAME	QTY.	SIZE
AR	<i>Acer rubrum</i>	16	3.5' Cal
TREES - DECIDUOUS-BASIN PERIMETER			
ABB. SCIENTIFIC NAME	COMMON NAME	QTY.	SIZE
BN	<i>Betula nigra</i>	5	3.5' Cal
MV	<i>Magnolia virginiana</i>	2	3.5' Cal
TREES - EVERGREEN PARKING PERIMETER			
ABB. SCIENTIFIC NAME	COMMON NAME	QTY.	SIZE
TA	<i>Thuja (standishii x plicata)</i>	26	6' Ht. min.
SHRUBS - PARKING			
ABB. SCIENTIFIC NAME	COMMON NAME	QTY.	SIZE
IV	<i>Ilex verticillata</i>	15	42" Ht. min.
MP	<i>Myrica pennsylvanica</i>	6	42" Ht. min.
SHRUBS - BASIN PERIMETER			
ABB. SCIENTIFIC NAME	COMMON NAME	QTY.	SIZE
AA	<i>Aronia arbutifolia</i>	13	42" Ht. min.
CS	<i>Cornus sericea</i>	7	42" Ht. min.

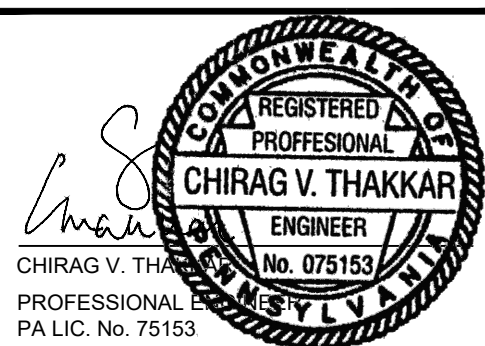


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Project
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TMP # 26-001-103-001
NEW BRITAIN TOWNSHIP
BUCKS COUNTY PENNSYLVANIA

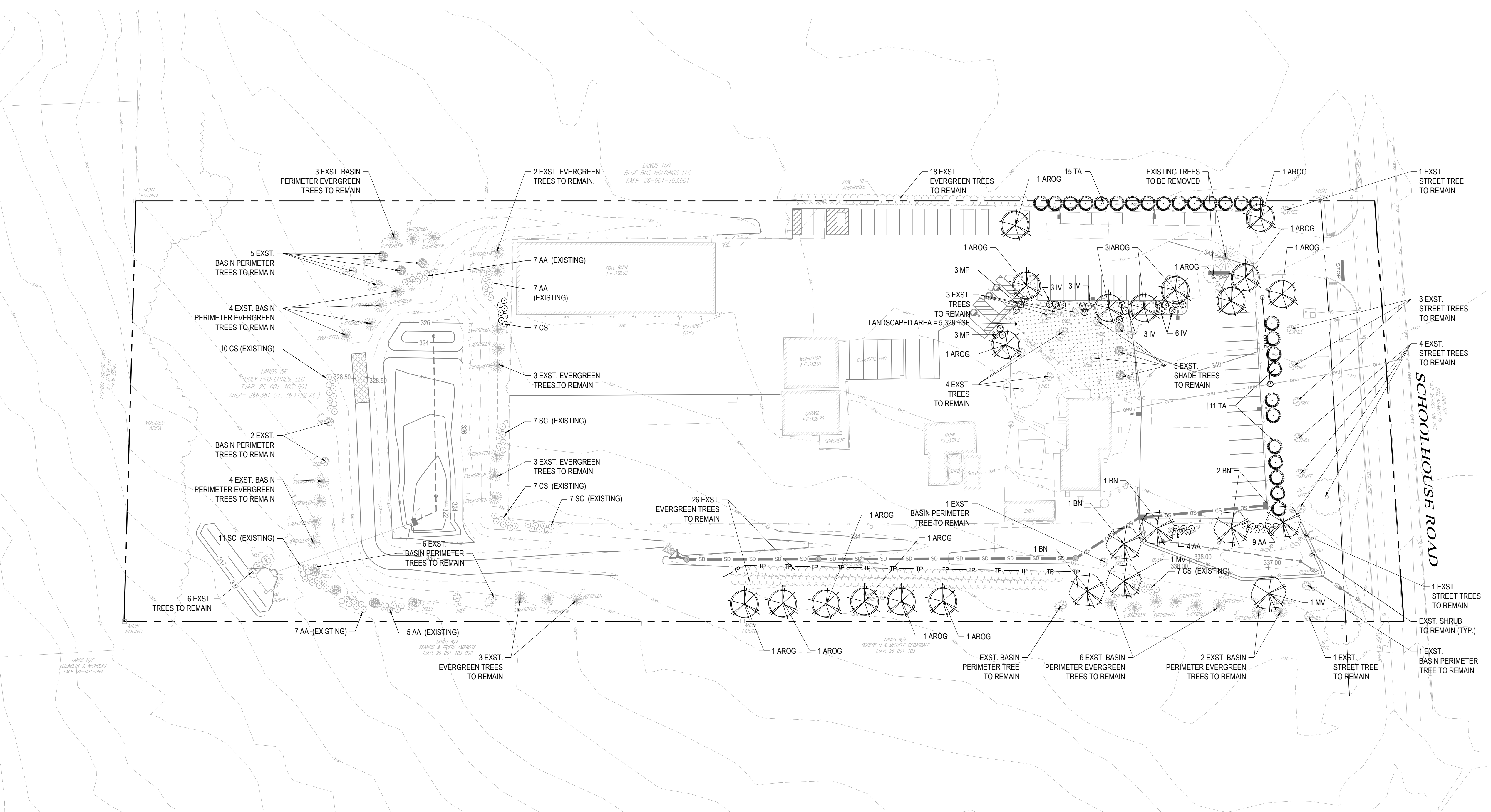
LANDSCAPE PLAN



DATE	REVISIONS	COMMENTS	NO.
01-12-24	REVISED PER TOWNSHIP AND BCCD COMMENTS		1.

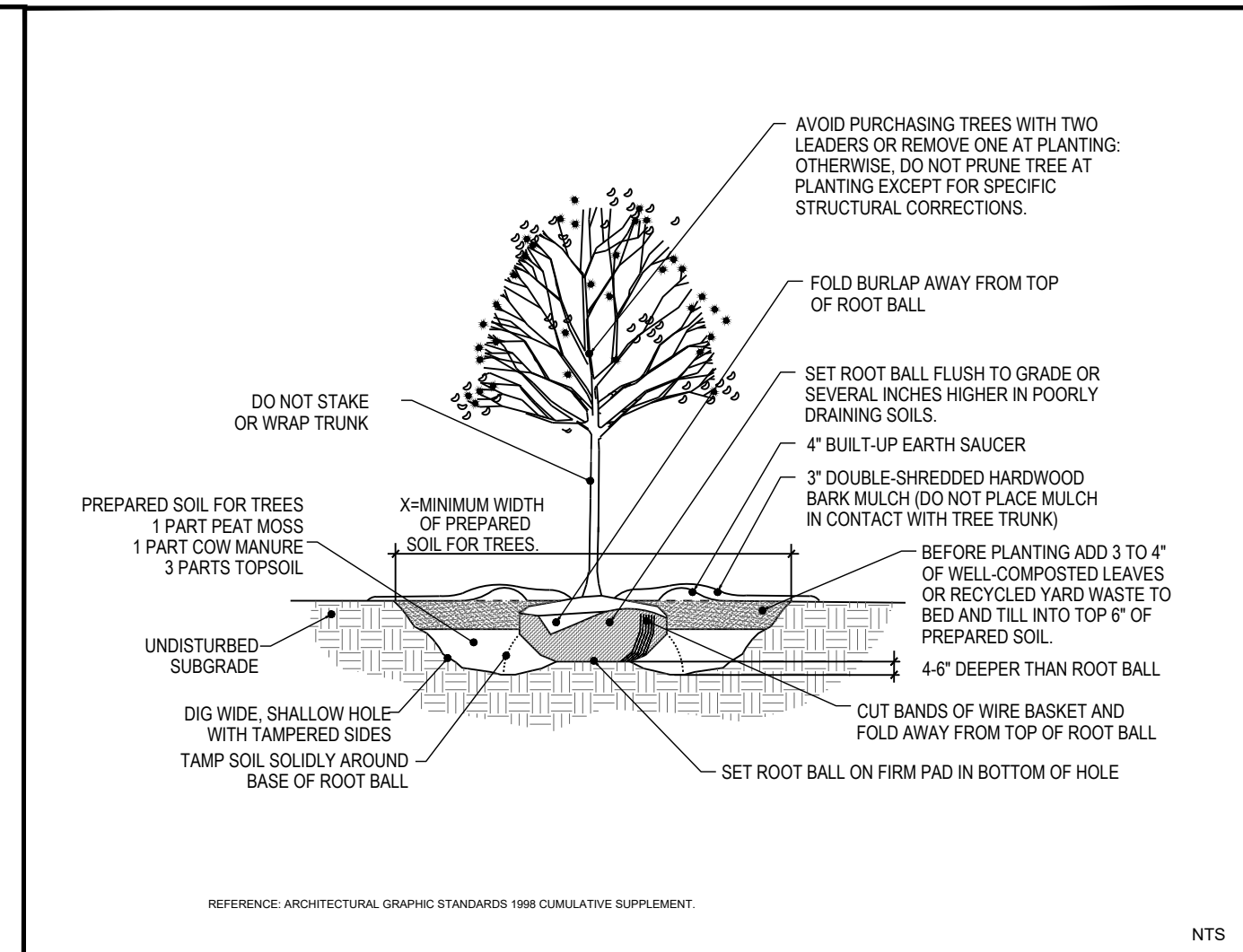
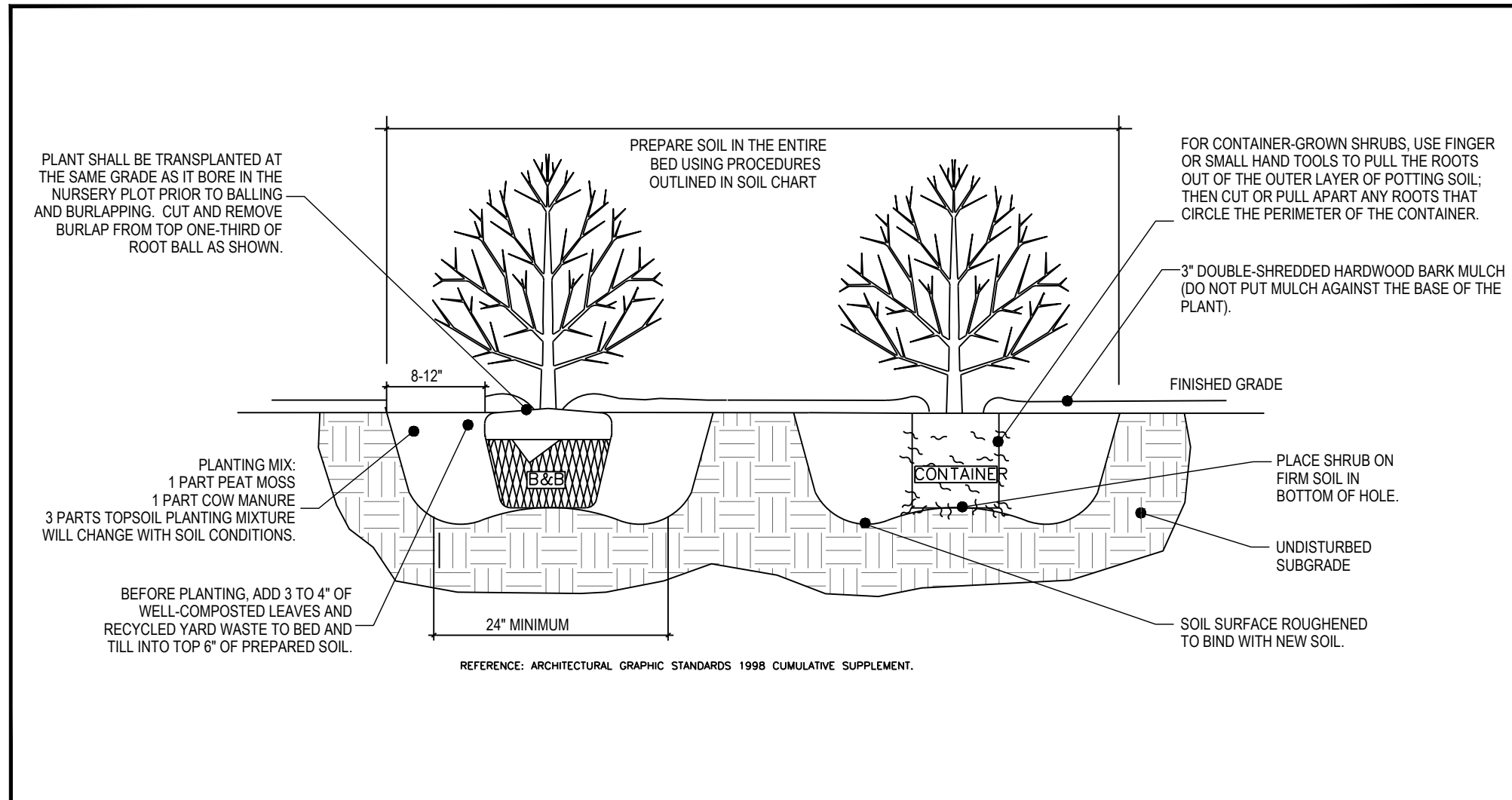
Project No.	230020201
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Scale	1" = 40'
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Checked By	AB

LP-101



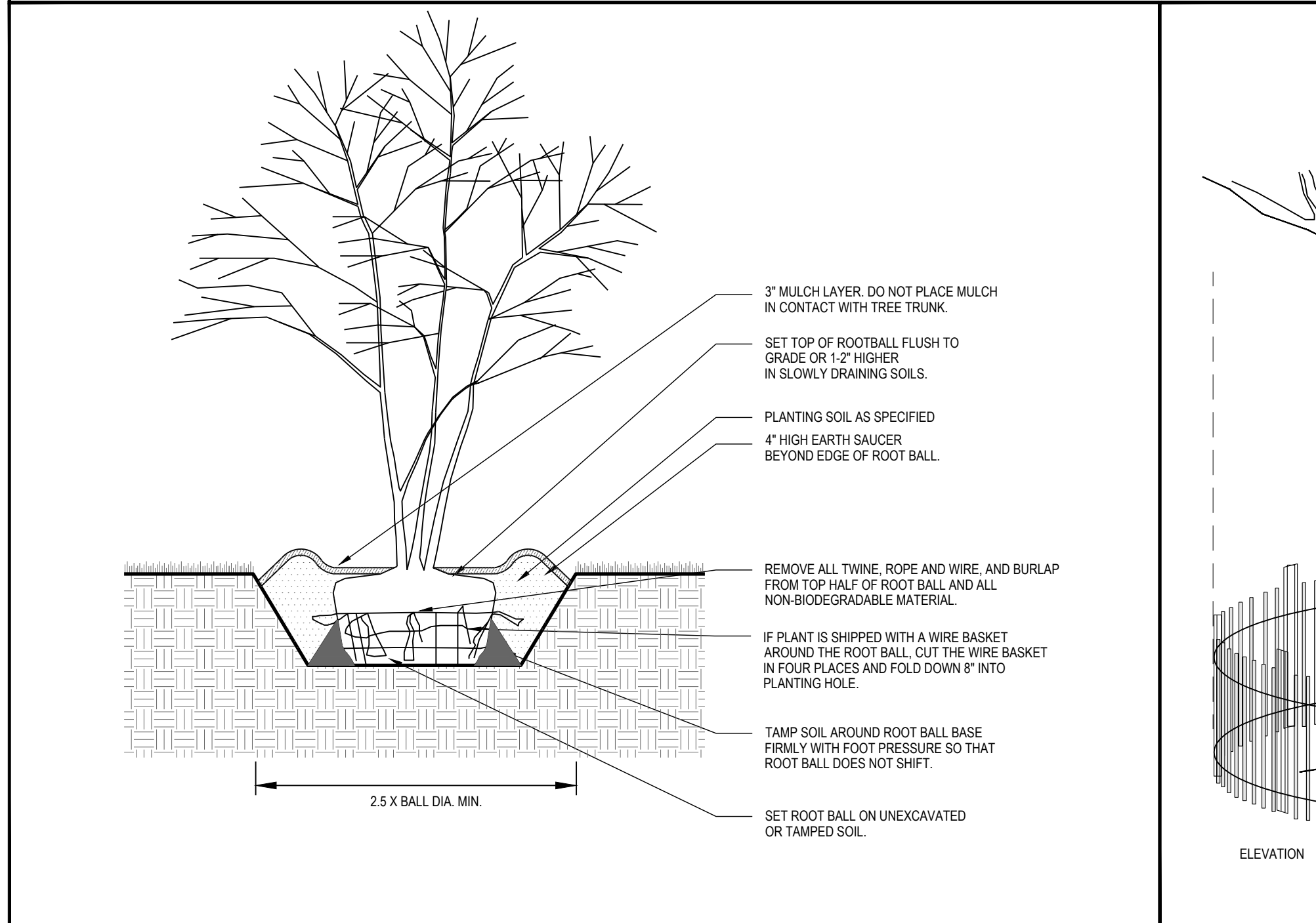
PLANTING LEGEND	
(Symbol)	SHRUB (BASIN PERIMETER)
(Symbol)	SHRUB (PARKING PERIMETER)
(Symbol)	EVERGREEN TREE
(Symbol)	DECIDUOUS TREE (PARKING)
(Symbol)	DECIDUOUS TREE (BASIN PERIMETER)
(Symbol)	LANDSCAPED AREA

LEGEND	
EXISTING SYMBOLS & LINES	PROPOSED SYMBOLS & LINES
(Symbol)	PROPERTY LINE
(Symbol)	EASEMENT
(Symbol)	CONTOUR LINE
(Symbol)	EDGE OF PAVEMENT
(Symbol)	CURBING
(Symbol)	CURB LINE
(Symbol)	DEPRESSED CURB LINE
(Symbol)	GUIDE RAIL
(Symbol)	CURB RAMP
(Symbol)	STORM SEWER LINE
(Symbol)	GAS LINE UNDERGROUND
(Symbol)	TELEPHONE UNDERGROUND
(Symbol)	ELECTRIC
(Symbol)	OVERHEAD LINES
(Symbol)	WATER LINE
(Symbol)	BUILDING
(Symbol)	SILO
(Symbol)	IRON PIN
(Symbol)	CONCRETE MONUMENT
(Symbol)	UTILITY POLE
(Symbol)	GAS VALVE
(Symbol)	WATER VALVE
(Symbol)	WATER METER
(Symbol)	FIRE HYDRANT
(Symbol)	SANITARY CLEANOUT
(Symbol)	SANITARY MANHOLE STORM
(Symbol)	MANHOLE
(Symbol)	STORM INLET
(Symbol)	HEADWALL / FLARED END SECTION
(Symbol)	RIP RAP
(Symbol)	LIGHT POLE
(Symbol)	TREE
(Symbol)	TREE LINE
(Symbol)	BUSH / SHRUBS
(Symbol)	STORM PIPE
(Symbol)	CATCH BASIN
(Symbol)	STORM MANHOLE
(Symbol)	CONTOUR
(Symbol)	SPOT GRADE
(Symbol)	TOP OF CURB ELEVATION
(Symbol)	BOTTOM OF CURB ELEVATION
(Symbol)	FLOW ARROW
(Symbol)	HEADWALL / FLARED END SECTION
(Symbol)	RIP RAP
(Symbol)	DRAINAGE AREA LIMITS
(Symbol)	WATER LINE
(Symbol)	GAS LINE
(Symbol)	TELEPHONE & ELECTRIC LINE
(Symbol)	HYDRANT
(Symbol)	VALVE
(Symbol)	CLEANOUT
(Symbol)	SANITARY MANHOLE
(Symbol)	PROPOSED SANITARY PIPE
(Symbol)	PROPOSED ELECTRIC TRANSFORMER
(Symbol)	PROPOSED ELECTRIC JUNCTION BOX

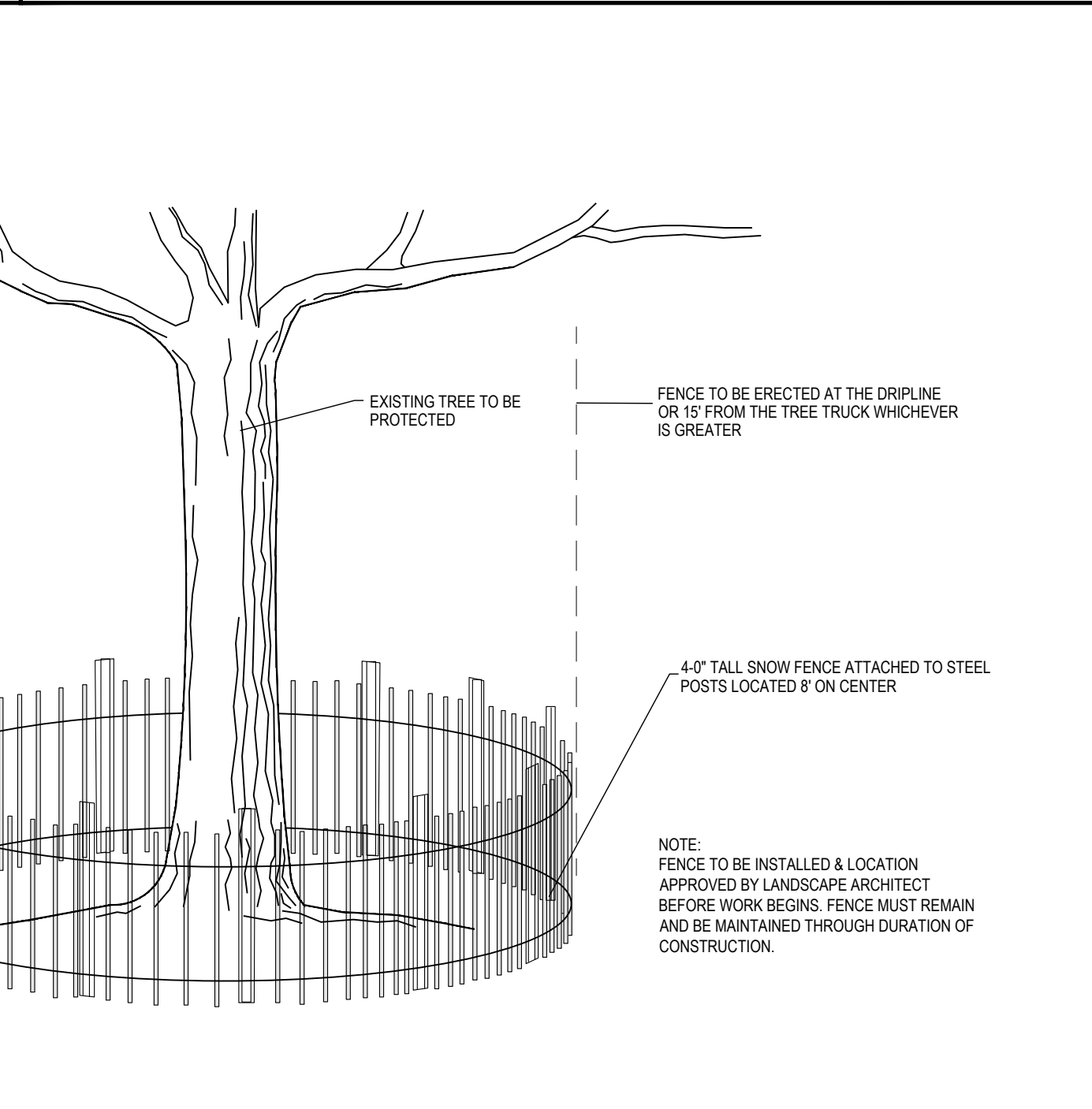


DECIDUOUS AND EVERGREEN SHRUB PLANTING DETAIL

DECIDUOUS TREE PLANTING DETAIL



MULTI-STEM TREE PLANTING



TREE PROTECTION FENCING

GENERAL LANDSCAPE PLANTING NOTES

- NAMES OF PLANTS AS DESCRIBED ON THIS PLAN CONFORM TO THOSE GIVEN IN "STANDARDIZED PLANT NAMES" 1992 EDITION, PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF PLANT VARIETIES NOT INCLUDED THEREIN CONFORM TO NAMES GENERALLY ACCEPTED IN NURSERY TRADE.
- ALL EXPOSED GROUND SURFACES THAT ARE NOT PAVED WITHIN THE CONTRACT LIMIT LINE AND THAT ARE NOT COVERED BY LANDSCAPE PLANTING OR SEEDING AS SPECIFIED, SHALL BE COVERED BY A NATURAL MULCH THAT WILL PREVENT SOIL EROSION AND THE EMANATION OF DUST.
- NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR PROJECT ENGINEER.
- STANDARDS FOR TYPE, SPREAD, HEIGHT, ROOT BALL AND QUALITY OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH GUIDELINES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERMEN. PLANT MATERIAL SHALL HAVE NORMAL HABIT OF GROWTH AND BE HEALTHY, VIGOROUS, AND FREE FROM DISEASES AND INSECT INFESTATION.
- NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE SET PLUMB, STAKE AS NECESSARY, AND SHALL BEAT THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANTS ORIGINAL GRADE BEFORE GRADING. PLANT MATERIAL OF THE SAME SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SIMILAR IN SHAPE, COLOR AND HABIT. THE LANDSCAPE ARCHITECT HAS THE RIGHT TO REJECT PLANT MATERIAL THAT DOES NOT CONFORM TO THE TOPSOIL OR SPECIFIED HABIT OF THAT SPECIES.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY AND SEWER LINES PRIOR TO THE START OF EXCAVATION ACTIVITIES. NOTIFY THE PROJECT ENGINEER AND OWNER IMMEDIATELY IF ANY CONFLICTS WITH PROPOSED PLANTING LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE.
- THE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS. IF THE SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBSTITUTIONS MAY ONLY BE PERMITTED WHEN SUBMITTED THROUGH A WRITTEN REQUEST TO THE CITY AND/OR THEIR REPRESENTATIVES AND APPROVED BY THE CITY AND/OR THEIR REPRESENTATIVES.
- LANDSCAPE CONTRACTOR TO STAKE OUT PLANTING LOCATIONS FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR OWNER BEFORE PLANTING WORK BEGINS. THE LANDSCAPE ARCHITECT AND/OR OWNER SHALL DIRECT THE CONTRACTOR IN THE FINAL PLACEMENT OF ALL PLANT MATERIAL AND LOCATION OF PLANTING BEES TO ENSURE COMPLIANCE WITH DESIGN INTENT UNLESS OTHERWISE INSTRUCTED. THE LANDSCAPE ARCHITECT MAY REVIEW PLANT MATERIALS AT THE SITE. BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY.
- THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO FURTHER REVIEW PLANT MATERIALS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEM, INJURIES, AND LATENT DEFECTS, AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. THE CONTRACTOR SHALL REMOVE REJECTED PLANT MATERIALS IMMEDIATELY FROM PROJECT SITE AND REPLACE WITH PLANT MATERIAL SPECIFIED HEREIN AS DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER.
- DELIVERY, STORAGE, AND HANDLING
 - PACKAGED MATERIALS: PACKAGED MATERIALS SHALL BE DELIVERED IN CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. MATERIALS SHALL BE PROTECTED FROM DETERIORATION DURING DELIVERY AND WHILE STORED AT SITE.
 - TREES AND SHRUBS: THE CONTRACTOR SHALL PROVIDE TREES AND SHRUBS DUG FOR THE GROWING SEASON FOR WHICH THEY WILL BE PLANTED. DO NOT PRUNE PRIOR TO DELIVERY UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. DO NOT BEND OR BEND TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING TRANSPORT. DO NOT DROP BALLED AND BURLAPPED STOCK DURING DELIVERY OR HANDLING.
 - ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOTBALL WRAPPING AND BRACING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED FROM THE TOP 1/3 OF THE BALL AT THE TIME OF PLANTING. IF THE PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, THE WIRE BASKET SHALL BE CUT AND FOLDED DOWN 9 INCHES INTO THE PLANTING HOLE. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE ROOT BALL SHALL BE CUT THROUGH THE SURFACE IN TWO LOCATIONS.
 - THE CONTRACTOR SHALL HAVE TREES AND SHRUBS DELIVERED TO SITE AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANT IMMEDIATELY IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY. THE CONTRACTOR SHALL SET TREES AND SHRUBS IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE AND KEEP ROOTS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.
- ALL LANDSCAPE AREAS TO BE CLEARED OF ROCKS, STUMPS, TRASH AND OTHER UNSIGHTLY DEBRIS. ALL FINE GRADED AREAS SHOULD BE HAND RAKED SMOOTH ELIMINATING ANY CLUMPS AND OR UNEVEN SURFACES PRIOR TO PLANTING OR MULCHING.
- ALL PLANT MATERIAL SHALL BE INSTALLED AS PER DETAILS, NOTES AND CONTRACT SPECIFICATIONS. THE LANDSCAPE ARCHITECT MAY REVIEW INSTALLATION AND MAINTENANCE PROCEDURES.
- PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF TWO YEARS FOLLOWING ACCEPTANCE BY THE OWNER. PLANT MATERIAL FOUND TO BE UNHEALTHY, DYING OR DEAD DURING THIS PERIOD, SHALL BE REMOVED AND REPLACED AT KIND BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER. IN ADDITION, ALL PLANT MATERIAL SHALL BE MAINTAINED FOR THE PERPETUITY OF THE SITE. ANY PLANT MATERIAL WHICH DIES SHALL BE REPLACED WITH PLANT MATERIAL OF THE SAME SIZE AND SPECIES.
- THE CONTRACTOR SHALL KEEP AREA CLEAN DURING DELIVERY AND INSTALLATION OF PLANT MATERIALS. REMOVE AND DISPOSE OF OFF-SITE ANY ACCUMULATED DEBRIS OR UNUSED MATERIALS. REPAIR DAMAGE TO ADJACENT AREAS CAUSED BY LANDSCAPE INSTALLATION OPERATIONS.
- ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24 HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR AS REQUIRED BY SITE AND WEATHER CONDITIONS TO MAINTAIN VIGOROUS AND HEALTHY PLANT GROWTH. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE WATER TO ALL PLANTS UNTIL THE JOB IS ACCEPTED AS COMPLETE.
- THE SOIL MIXTURE AND SOIL MIXES ARE TO BE INSTALLED PER THE SPECIFICATIONS.
- AFTER PLANT IS PLACED IN PLANTING HOLE, ALL TWINE HOLDING ROOT BALL TOGETHER SHOULD BE COMPLETELY REMOVED AND THE BURLAP SHOULD BE FOLDED DOWN SO 1/3 OF THE ROOT BALL IS EXPOSED. SYNTHETIC BURLAP SHOULD BE COMPLETELY REMOVED AFTER INSTALLATION.
- MULCH SHOULD NOT BE PILED UP AROUND THE TRUNK OF ANY PLANT MATERIAL. NO MULCH OR TOPSOIL SHOULD BE TOUCHING THE BASE OF THE TRUNK UNTIL THE ROOT COLLAR.
- ALL FENCE INSTALLATION SHALL BE COMPLETED PRIOR TO COMMENCEMENT OF ANY LANDSCAPE PLANTING, SEEDING, SOAKING, OR BRIGATION WORK.
- CONTRACTOR TO COORDINATE FENCE INSTALLATION WITH OTHER TRADES INVOLVED WITH SITE WORK. CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL FENCE POST INSTALLATION WITH EXISTING AND PROPOSED UTILITIES.

PLANTING SPECIFICATIONS:

- SCOPE OF WORK
 - THIS WORK SHALL CONSIST OF PERFORMING, CLEARING AND SOIL PREPARATION, FINISH GRADING, PLANTING AND DRAINAGE, INCLUDING ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT.
- MATERIALS
 - ALL MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE PENNDOT MANUAL OF ROADWAY AND BRIDGE CONSTRUCTION (1998) OR APPROVED EQUAL.
 - ALL PLANTS SHALL BE HEALTHY OR NORMAL GROWTH, WELL ROOTED, FREE FROM DISEASE AND INSECTS.
 - LOAMLY SILT, HAVING AN ORGANIC CONTENT NOT LESS THAN 6%, AN RANGE BETWEEN 4:1 TO 6:1, BE FREE OF DEBRIS, ROCKS, LARGER THAN TWO INCHES (2"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLODS.
 - DOUBLE-SHEDDED HARDWOOD BARK MULCH.
- FERTILIZER AND SOIL CONDITIONER
 - ORGANIC FERTILIZER: SHALL BE PROCESSED SEWER SLUDGE WITH MINIMAL CONTENT OF 1% NITROGEN AND 2% PHOSPHORUS EQUAL TO NITROGENS.
 - ORGANIC FERTILIZER AND SOIL CONDITIONER: SHALL BE 100% POWER AND ORGANIC BASE MATERIALS COMPRISED OF DECOMPOSED ANIMAL AND VEGETABLE MATTER AND COMPOSTED TO SUPPORT BACTERIAL CULTURES, CONTAINING NO POLYTRY, ANIMAL OR HUMAN WASTE. GUARANTEED ANALYSIS: (5-3-1) NITROGEN 5%, PHOSPHATE 3%, POTASH 1%, 50% HUMUS AND 15% HUMIC ACIDS.
- GENERAL WORK PROCEDURES
 - LANDSCAPE WORK SHALL COMMENCE AS SOON AS THOSE PORTIONS OF THE SITE ARE AVAILABLE. CONTRACTOR TO UTILIZE WORMHOLE STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH DAY'S WORK. ALL DEBRIS, MATERIALS, AND TOOLS SHALL BE PROPERLY STOCKPILED OR DISPOSED OF. ALL PAVED SURFACES SHALL BE SWEEP CLEAN AT THE END OF EACH DAY'S WORK.
- SEEDING
 - BEFORE AND DURING PRELIMINARY GRADING AND FINISH GRADING, ALL WEEDS AND GRASSES SHALL BE DIGG OUT BY THE ROOTS AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
- TOPSOILING
 - CONTRACTOR TO PROVIDE FOUR INCHES (4") MINIMUM THICK TOPSOIL LAYER IN ALL PLANTING AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO PRODUCE A FOUR INCH (4") COMPACTED THICKNESS. TOPSOIL PRESENT AT THE SITE, IF ANY, MAY BE USED TO SUPPLEMENT TOTAL AMOUNT REQUIRED. CONTRACTOR TO FURNISH ANALYSIS OF ON-SITE TOPSOIL. UTILIZED IN ALL PLANTING AREAS. ADJUST pH AND NUTRIENT LEVELS AS REQUIRED TO ENSURE AN ACCEPTABLE GROWING MEDIUM.
- SOIL CONDITIONING
 - CULTIVATE ALL AREAS TO A DEPTH OF 6". ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE. SPREAD EVENLY IN ALL PLANTING AREAS AND TILL (2 DIRECTIONS) INTO TOP 4" WITH THE FOLLOWING PER 1,000 SQ. FT.: 150 POUNDS GROUPOVER 100 POUNDS AGRICULTURAL (GROUPOVER 20 POUNDS METRIC) COARSE 3/4" BLUE CHIP SOIL MODIFICATIONS, THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 6 TO 12 IN. OF MOST PLANTING SOILS TO IMPROVE THE SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS. USE COMPOSTED BARK, RECYCLED YARD WASTE, PEAT MOSS, OR MUNICIPAL PROCESSED SEWAGE SLUDGE. ALL PRODUCTS SHALL BE CUT AND FOLDED DOWN 9 INCHES INTO THE PLANTING HOLE. RECYCLED MATERIAL WITH A pH HIGHER THAN 7.5. MOIST HEAVY CLAY OR SILT MORE THAN 40% CLAY OR SILT BY ADDING COMPOSTED FINE BARK (UP TO 20% BY VOLUME) AND/OR SAND. COARSE SAND MAY BE USED IF COUPOH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. IMPROVE DRAINAGE IN HEAVY SOILS BY PLANTING ON RAISED MOUNDS OR BEDS AND INCLUDING SUBSURFACE DRAINAGE LINES. MOISTURE EXTREMELY SANDY SOILS (MORE THAN 80% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDED CLAY LOAM UP TO 20% OF THE TOTAL MIX.
- PLANTING POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE EXCAVATING PITS. MAKING NECESSARY ADJUSTMENTS AS DIRECTED.
 - PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS, WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACK FILLED WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
1 PART PEAT MOSS
1 PART COW MANURE BY VOLUME
3 PARTS TOPSOIL BY VOLUME.
 - PREPARED SOIL SHALL BE TAMPERED FIRMLY AT BOTTOM OF PIT. FILL PREPARED SOIL AROUND BALL OF PLANT TO WAY AND INSERT PLANT TABLETS. COMPLETE BACK FILL AND WATER THOROUGHLY.
 - ALL PLANTS SHALL BE SET SO THAT THEY BEAT THE SAME RELATION TO THE REQUIRED GRADE AS THEY BORE TO THE NATURAL GRADE BEFORE BEING TRANSPORTED.
 - PREPARE RAISED EARTH BASIN AS WIDE AS PLANTING HOLE OF EACH TREE.
 - WATER IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACK FILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED.
 - FRONT ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS TO A MIN. OF 7" BRANCHING HEIGHT.
- GROUND COVER
 - ALL GROUND COVER AREAS SHALL RECEIVE A 1/4" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO PLANTING GROUND COVER.
 - GROUND COVER AND VARIETY OF GROUND COVER SHALL BE AS SHOWN ON DRAWINGS.
 - IMMEDIATELY AFTER PLANTING GROUND COVER, CONTRACTOR SHALL THOROUGHLY WATER GROUND COVER.
 - ALL GROUND COVER AREAS SHALL BE TREATED WITH A PRE-EMERGENT BEFORE FINAL LANDSCAPE INSPECTION. GROUND COVER AREAS SHALL BE WEEDED PRIOR TO APPLYING PRE-EMERGENT. PRE-EMERGENT TO BE APPLIED AS PER MANUFACTURER'S RECOMMENDATION.
- FINISH GRADING
 - ALL AREAS WILL BE RECEIVED BY THE CONTRACTOR AT SUBSTANTIALLY PLUS/MINUS 1 FOOT OF FINISH GRADE.
 - ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE, UNLESS OTHERWISE DIRECTED BY LANDSCAPE ARCHITECT. SOIL AREAS SHOULD BE GRADED TO ALLOW FREE FLOW OF SURFACE WATER.
 - ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER.
- GUARANTEE
 - CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF EIGHTEEN (18) MONTHS FROM ACCEPTANCE OF JOB BY THE CITY. OWNER TO SECURE A MAINTENANCE BOND FROM THE CONTRACTOR FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE COMMENCEMENT OF THE GUARANTEE PERIOD AND PASSES A FINAL INSPECTION BY THE OWNER OR OWNERS REPRESENTATIVE.
- CLEANUP
 - UPON THE COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE BROOM CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNERS AUTHORIZED REPRESENTATIVE. MAINTAIN TREES, SHRUBS AND OTHER PLANTS BY PRUNING, CULTIVATING AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS, TIGHTEN AND REPAIR STAKE AND CIVIL SUPPORTS AND RESET TREES AND SHRUBS TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED. RESTORE OR REPLACE DAMAGED WRAPPINGS. SPRAY WITH HERBICIDE AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE. MAINTAIN LAWNS BY WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, AND OTHER OPERATIONS SUCH AS ROLLING, REGRADING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF PRODS OR BARE AREAS.
- MAINTENANCE (ALTERNATE BID) COST PER MONTH AFTER INITIAL 90-DAY MAINTENANCE PERIOD.

LAWN SEEDING NOTES

- LAWN AREAS - AREAS DESIGNATED AS LAWN OR DISTURBED AREAS NOT DESIGNATED FOR ANY OTHER PLANTING SHALL BE PERMANENTLY STABILIZED BY SEEDING WITH THE FOLLOWING SEED MIXTURE AT A RATE OF 200 POUNDS PER ACRE:
 - 50% KENTUCKY BLUEGRASS - BARON MIX 2
 - 5% RED FESCUE - PENNLAN
 - 20% CHAMPION PERENNIAL RYE
 - 5% ANNUAL RYEGRASS
- SEEDING DATES FOR THIS MIXTURE SHALL BE APRIL 1 TO JUNE 1 OR SEPTEMBER 1 TO OCTOBER 31.
- SOIL PREPARATION, SEEDING, MULCHING AND MAINTENANCE SHALL BE DONE AS INDICATED IN THE CONSTRUCTION SPECIFICATIONS AND THE EROSION AND SEDIMENT POLLUTION CONTROL PLANS.

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Project
CLAUSER FACILITY EXPANSION
TMP # 26-001-103-001
NEW BRITAIN TOWNSHIP
BUCKS COUNTY PENNSYLVANIA

LANDSCAPE DETAILS

Professional Engineer
CHIRAG V. THAKKAR
No. 075153
PA LIC. No. 75153

DATE	REVISIONS	NO.
01-12-24	REVISED PER TOWNSHIP AND BCCD COMMENTS	1.

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Date	09-22-2023
Scale	NOT TO SCALE
Drawn By	KGP
Checked By	AB

Drawing No.
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PROJECT: 230020201 CLAUSER FACILITY EXPANSION