

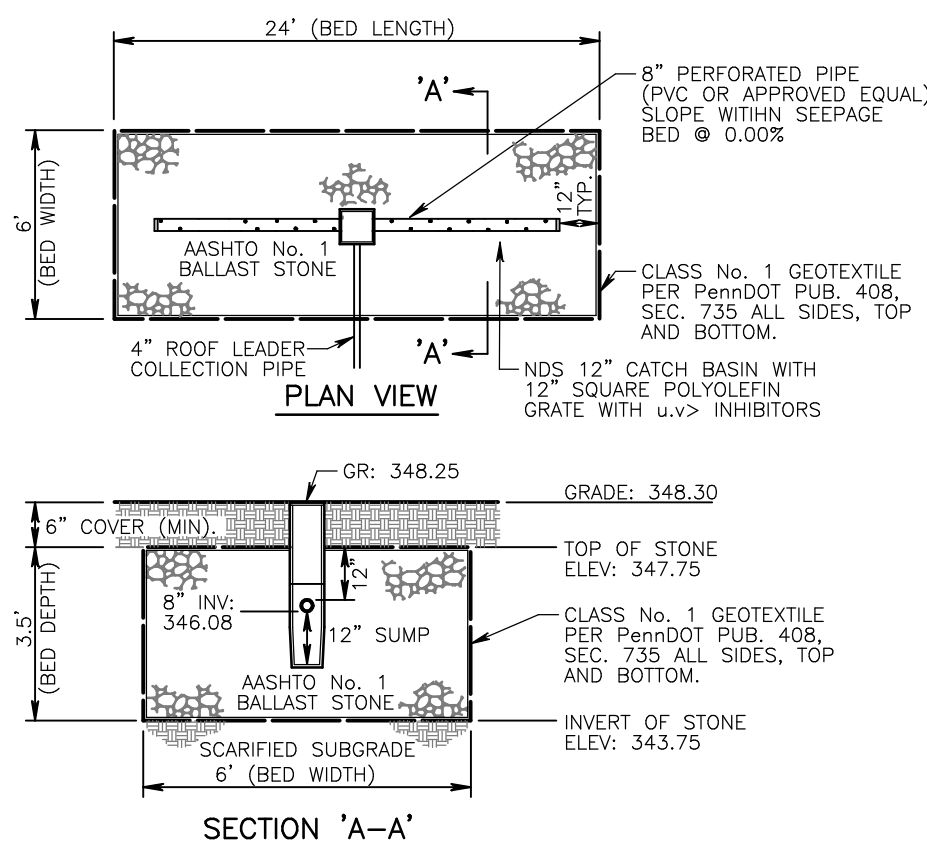
ZONING and SITE DATA SCHEDULE			
Zoning District: R2 - RESIDENTIAL MEDIUM DENSITY DISTRICT			
Item	Requirement	Plan Provided	
Permitted Use:	200-20. A.(2):	Single-Family Detached Residential	
Lot:			
Minimum Lot Area:	200-22:	16,500 Sq. Ft.	22,329.59 Sq. Ft.
Minimum Width at Building Line:	200-22:	110 FT.	205.9 FT.
Maximum Building and Structures:	200-22:	35 FT.	Existing
Minimum Front Yard:	200-22:	40 FT.	41.4 Ft.
Minimum Side Yard:	200-22:	15 FT.	34.5 Ft.
Minimum Rear Yard:	200-22:	40 FT.	64.5 Ft.
Maximum Impervious Coverage:	200-23:	18 %	23.30%

**IMPERVIOUS SURFACE TABULATION:**

ZONED: R2 - RESIDENTIAL MEDIUM DENSITY DISTRICT  
 MAX. IMPERVIOUS SURFACE: 4,019 Sq. Ft. or 18%

LOT AREA:	22,329.59 Sq. Ft.
<b>EXISTING:</b>	
DWELLING:	3,008 S.F.
PAVED DRIVEWAY:	1,442 S.F.
F.WALKWAY:	209 S.F.
R.WALKWAY:	50 S.F.
<b>SUBTOTAL:</b>	<b>4,709 S.F.</b>
<b>POOL PERMIT PLAN:</b>	
DWELLING:	3,008 S.F.
PAVED DRIVEWAY:	1,442 S.F.
F.WALKWAY:	209 S.F.
R.WALKWAY:	133 S.F.
<b>POOL SURROUND/COPING:</b>	<b>473 S.F.</b>
MECH. PAD:	21 S.F.
<b>SUBTOTAL:</b>	<b>5,203 S.F.</b>
<b>NET INCREASE:</b>	<b>494 S.F.</b>
PREDEVELOPMENT:	4,709 S.F. or 21.09% [E]
POST DEVELOPMENT:	5,203 S.F. or 23.30% [V]

[E] EXISTING NON-CONFORMING  
 [V] VARIANCE REQUIRED



**SEEPAGE BED CALCULATION**  
 NET SITE IMPERVIOUS INCREASE = (1.184) Sq. Ft. (over 18%)  
 RUN-OFF CAPTURE STORAGE REQUIRED:  
 $R_v = 2.00 \text{ in.} \times (1.184) = 2.368 \text{ Cu. Ft. of Recharge}$   
 $R_v = 2.00 \text{ in.} \times (1.184) = (197.333) \text{ Cu. Ft. of Recharge}$   
 $R_v = (197.333) / 0.40 \text{ Stone Voids} = (493.333) \text{ Cu. Ft. SAY 495}$   
 $V_p = (6) \text{ Ft. Width} \times (24) \text{ Ft. Length} \times (3.5) \text{ Ft. Depth} = (720.0) \text{ Cu. Ft. Provided}$

**DOUBLE INLET IN-LINE SEEPAGE BED**  
 Not To Scale

**POST CONSTRUCTION MAINTENANCE PROGRAM:**

The applicant/owner, its assigns shall be responsible for the ownership and maintenance of the proposed BMP's shown on this plan in perpetuity. All BMP's shall be maintained in accordance with all applicable Township Standards and Specifications as so designated in the Ownership and Maintenance agreement as entered into between the Owner and the Township.

**MAINTENANCE OF THE SEEPAGE BED:**

- The applicant/owner, shall ensure that all catch basins within the system are inspected and cleaned after each runoff event. Remove any debris such as lawn, clippings, leaves or accumulated trash that may prohibit runoff from entering the catch basins.
- The applicant/owner, shall ensure that the overlying vegetation of the seepage bed should be maintained in good vegetated conditions, and any bare spots revegetated immediately.
- The applicant/owner, shall ensure that no vehicular traffic is permitted over or on the seepage bed and care should be taken to avoid excessive compaction by lawn equipment.
- The applicant/owner, shall ensure all roof leaders that lead to the seepage bed are free and clear of any debris that may cause clogging of the seepage bed inflow pipe. Quarterly flushing of the catch basins and inflow pipe are required.

Should any of the BMP's shown on this plan fail to function as designed, the applicant/owner shall be responsible for all corrective measures including but not limited to cleaning, flushing, repair or replacement as necessary or directed by the Township Engineers Office.

**OWNER ACKNOWLEDGEMENT:**

I/we, Nicholas and Ryan Judge acknowledge that the stormwater management facilities shown on these plans can only be altered or removed after approval of a revised plan by the applicable municipality, owner also agrees to all above listed BMP maintenance program requirements.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

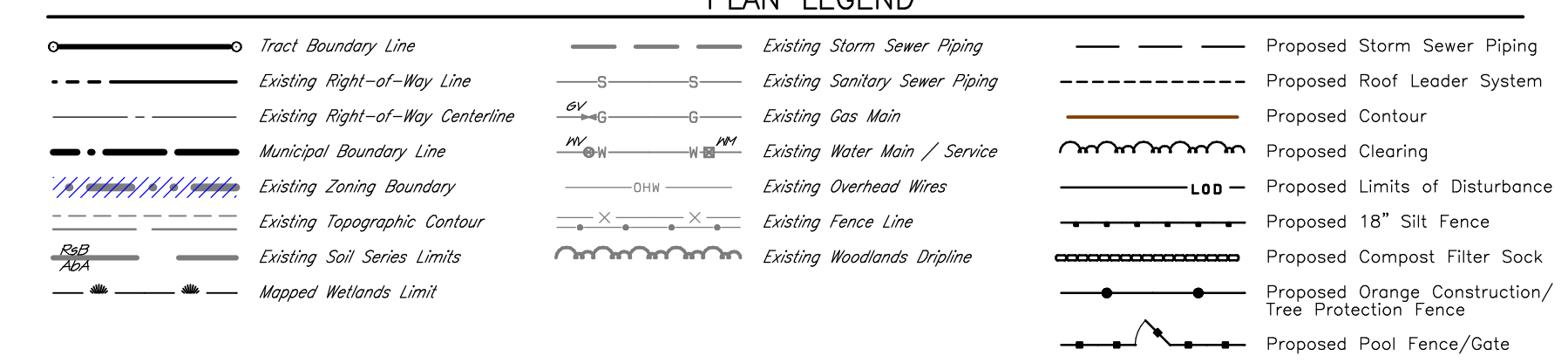
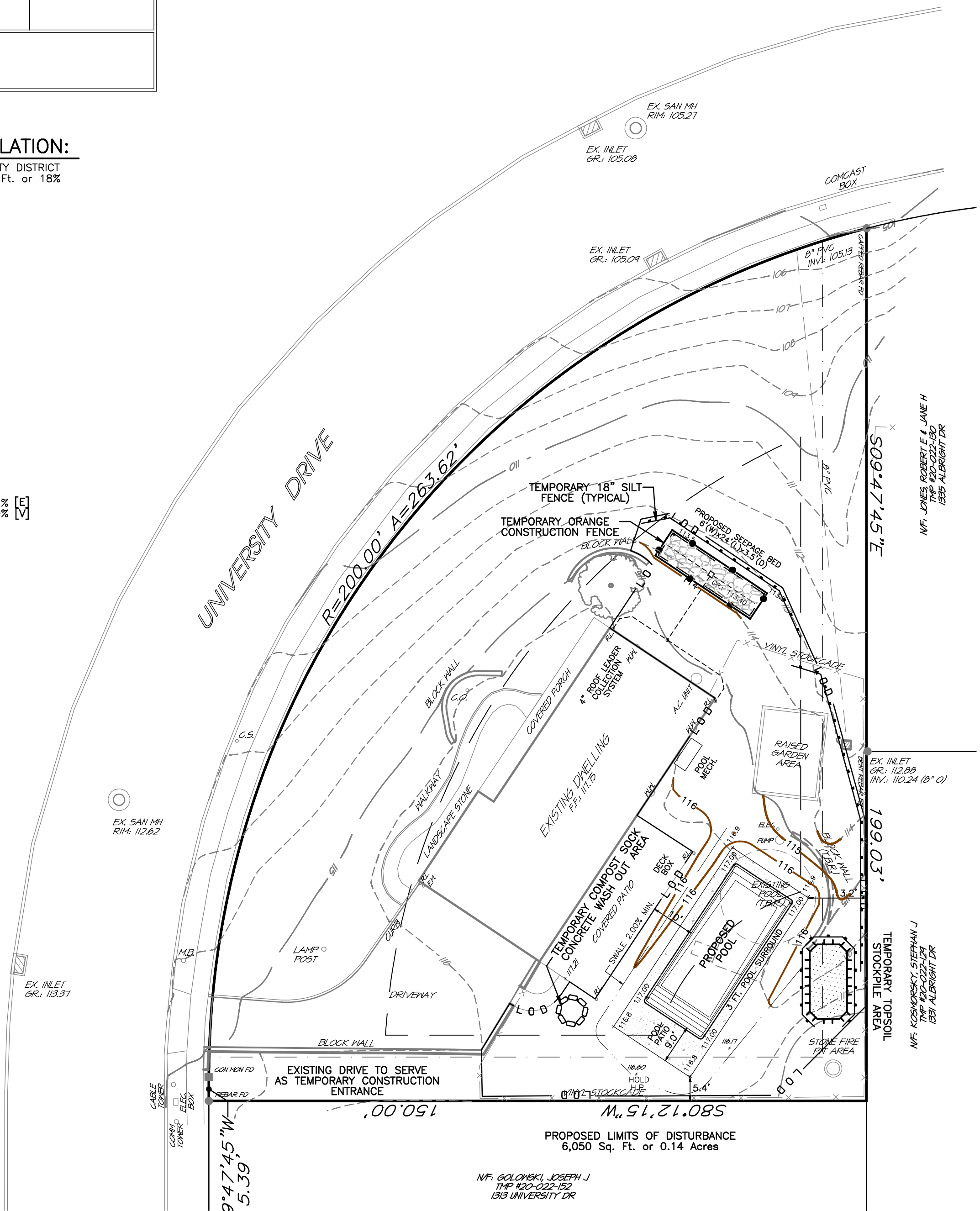
**PROJECT SOILS DATA**

Soils Type:	Slopes:	Depth to Restrictive Feature:	Depth to Water Table:	Hydrologic Soil Group:
UxB Urban-land Perm Complex	0 to 8 percent	20-40" to lithic bedrock	>=80"	B

**ACKNOWLEDGEMENT:**

I, TIMOTHY P. WOODROW, P.E. acknowledge that the PROPOSED GRADING ACTIVITIES SHOWN ON THIS PLAN SHALL NOT SIGNIFICANTLY INCREASE STORMWATER RUNOFF TO, AND/OR OTHERWISE ADVERSELY IMPACT, ADJACENT PROPERTIES, EXCEPT AS MAY BE PART OF AN APPROVED STORMWATER RUNOFF COLLECTION AND MANAGEMENT PLAN.

Signature: \_\_\_\_\_ Date: 11/03/2024



**PROJECT SHEET INDEX**

SHEET No.:	SHEET DESCRIPTION:
1 of 2	SITE IMPROVEMENTS PLAN
2 of 2	CONSTRUCTION DETAILS SHEET 'A'

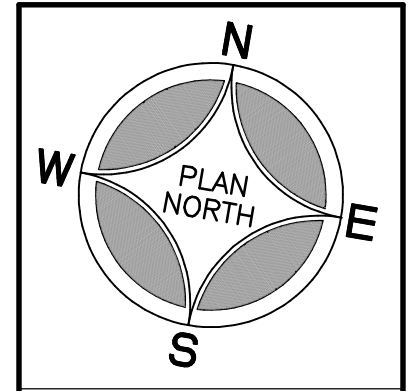
**GENERAL NOTES:**

- Outbound & topographic survey information was taken from a field survey performed by Woodrow & Associates, Inc. during the month of September 2024.
- All proposed fencing shall comply with all applicable Township ordinance standards and specifications. All gates shall be in an open position and must be equipped with self closing and latching devices in compliance with 2015 ISPS - Section 27-803.1-8.11.c.
- All proposed pool construction shall be in strict accordance with the 2015 International Swimming Pool and Spa Code, Section 305.
- Temporary construction fence must be installed around the pool area once excavated and until such time the pool is filled and final perimeter pool fencing has been installed.
- The Township Engineers office must be contacted a minimum of 48 hours in advance of installation of Stormwater Management Facilities.
- Any damage within the right of way of University Drive caused by the contractor during pool construction shall be repaired/replaced as directed by the Township Engineer at the sole expense of the owner/contractor.
- Each dwelling door that directly accesses the pool area shall be equipped with an alarm that sounds at least thirty (30) seconds when the door is opened and is audible throughout the dwelling. (Pennsylvania Uniform Construction Code - Swimming Pool).
- The contractor shall make end-of-day checks on all Erosion & Sediment Control measures. Any repairs needed shall be corrected immediately.
- During construction no mud may be tracked from the development onto the surrounding roadways whether or not they are dedicated, and no dirt from construction operations shall be permitted to settle on adjoining properties. Adequate water provisions shall be onsite to help contain dust to within the active work area.
- The property owner shall sign and record an Operations and Maintenance Agreement with the Township for the proposed Storm Trap Basin.
- The Township Engineers office must be contacted a minimum of 48 hours in advance of installation of Stormwater Management Facilities.

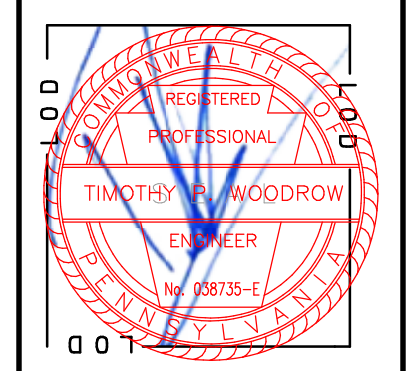
**GRADING AND DRAINAGE NOTES:**

- All contractors working on this project shall comply with the requirements of P.L. 852, No. 287, December 10, 1974, as amended, and P.L. 1788 P.L. 1574, No. 172, December 17, 1998. Contractors must notify PA One Call System, Inc. three (3) days prior to the start of any construction. 1-(800)-242-1776.
- Contractors shall not encroach onto adjoining properties unless a temporary grading easement has been obtained from the adjoining owners. All property lines must be adequately marked and any area that proposed grading encroaches within five (5) feet of the property line the contractor shall install temporary Orange Construction Fence to prevent encroachment onto adjoining properties.
- All contractors working on this project shall ensure that all construction performed is in accordance with all applicable OSHA (Occupational Safety and Health Administration) standards and specifications.
- The contractor shall ensure that all necessary permits and approvals have been obtained prior to commencement of any site construction activities.
- Erosion and sedimentation control measures shall be in place and functional prior to any earth disturbance or grading work within the tributary area.
- Burling of trees, tree stumps and construction debris is prohibited. All debris shall be removed and disposed of in strict accordance with all Federal, State and Local Municipality standards and specifications. Tree stumps may be ground or chipped and spread on site.
- All construction requirements, methods, materials and specifications shall be in accordance with all Municipal Authority Standards, Municipally Standards and Penn-DOT Form 408 (Latest Edition). Where in the case of conflict the more stringent requirement shall apply.
- All precast storm sewer structures such as inlets, storm manholes, endwalls, etc. shall conform to the Commonwealth of Pennsylvania Department of Transportation Publication #72 (latest addition). Shop Drawings shall be submitted to the Township Engineers Office for review and approval prior to fabrication.
- All utility installation must be in accordance with the requirements of the Pennsylvania Uniform Construction Code, as adopted by the Municipality.
- All slopes with grades three (3) foot horizontal to one (1) foot vertical (3:1) shall be stabilized with a North American Green or approved equal Erosion Control Blanket installed in strict accordance with manufacturers standards and specifications. See Erosion Control Plans for location and details.
- Any spring encountered during construction of the roadways shall be underdrained to the nearest inlet. Other spring locations found outside the roadway shall be underdrained to the nearest inlet or watercourse.
- The minimum slope in grassed areas shall not be less than 2% and the minimum in paved areas shall not be less than 1%.
- Site grading shall be performed in accordance with these plans. The contractor shall be responsible for removing and replacing soil, yielding or unsuitable materials and replacing with suitable materials. All excavated or filled areas shall be compacted to 95% of modified proctor maximum density per ASTM Test D-1557, moisture content at time of placement shall be no more than 2% above nor 3% below optimum, contractor shall submit a compaction report prepared by a qualified soils engineer, registered within the state where the work is performed, verifying that all filled areas and subgrade areas within the building pad area and areas to be paved have been compacted in accordance with these plans.
- Any/all storm water conveyance system(s) and detention facilities shown on these plans are a basic and perpetual part of the storm water management system for this Township, and as such, are to be protected, maintained and preserved in accordance with the approved final plans. The Township and/or its agents may reserve the right and privilege to enter upon such lands from time to time for the purpose of inspection of said storm water management system in order to determine that the structural design and integrity are being maintained.
- A minimum of six (6) inches of clean topsoil shall be provided on all lawn and planting areas.
- Subbase material for sidewalks, curb, or asphalt shall be free of organics and other unsuitable materials. Should subbase be deemed unsuitable, subbase is to be removed and filled with approved fill material compacted to 95% optimum density (as determined by modified proctor method).
- Any damage caused within the right of way as a result of construction shall be repaired at the expense of the Owner.
- The Owner agrees to make necessary corrective measures to alleviate any drainage issues that on this property and/or adjacent properties that might arise for a period of 6-months after the improvements have been completed, as deemed necessary by the Township.

**REVISIONS**



**SEAL**



PROJECT SERIAL NUMBER FOR DESIGN: 2023-11-01

Month: 11, 2023

Year: 2023

Parcel Information:

20-022-151  
 Block 022 Unit 151

Deed Area: 22,329.59 Sq. Ft.  
 Legal RW: n/a  
 UT. RW: n/a  
 NET Area: 22,329.59 Sq. Ft.

Applicant:  
 Nicholas and Ryan Judge

1309 University Drive  
 Yardley, PA 19067

Scale in Feet (1" = 20')

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WOODROW & ASSOCIATES, INC.  
 MUNICIPAL / CIVIL CONSULTING ENGINEERS

LOWER MERIDEN TOWNSHIP - BUCKS COUNTY - PENNSYLVANIA

1108 North Bethlehem Pike / Suite 5 - Lower Meriden - PA 19002

Phone: (610) 242-2040 Web: www.woodrowinc.com

POOL PERMIT PLAN

SITE IMPROVEMENTS PLAN

7309 UNIVERSITY DRIVE

Layer List: Sh01\_PPP

Job No: 21-0204D24-01

Plan Date: OCTOBER 1, 2024

Sheet No: 1 of 2

Print Date: Nov-03-2024 10:20:00 AM Plot Scale: 1" = 20'00" File Name: 20240224-010204D24-01\_Plan\_Sheet\_01.dwg User: Timothy P. Woodrow



**ZONING DATA:**

LMR LOW-MEDIUM RESIDENTIAL DISTRICTS  
 CURRENT USE: B2 SINGLE FAMILY DETACHED  
 PROPOSED: C2 PRIVATE IN-GROUND SWIMMING POOL

DESCRIPTION	REQUIRED	EXISTING	PROPOSED
MIN. NET LOT AREA	16,500 S.F.	21,474 S.F.	21,474 S.F.
MIN. LOT FRONTAGE @ B.S.B.L.	110'	135'	135'
MIN. FRONT YARD	40' (1)	40.3' / 40.4' / 82.0'	40.3' / 40.4' / 82.0'
MIN. SIDE YARD	15' (3)	17.1'	17.1'
MIN. REAR YARD	50' (2)	NA	NA
MAX. BUILDING HEIGHT	35'	2 STORY <35'	2 STORY <35'
MAX. IMPERVIOUS SURFACE	18%	19.4%*	24.2%

\* EXISTING NON-CONFORMITY  
 \*\* PROPOSED NON-CONFORMITY  
 (1) WHERE A YARD ABUTS A MAJOR COLLECTOR OR ARTERIAL ROAD LISTED IN § 200-63 OF THIS CHAPTER, THE BUILDING SETBACK SHALL BE INCREASED TO 80 FEET FOR COLLECTOR ROADS AND 100 FEET FOR ARTERIAL ROADS.  
 (2) REAR YARD OPEN PORCHES ARE AN EXCEPTION TO THE REAR YARD SETBACK.  
 (3) WHERE A LOT HAS BEEN APPROVED AND RECORDED ON A PLAN PRIOR TO JANUARY 1, 1947, AND THE LOT HAS A WIDTH OF 100 FEET OR LESS AT THE BUILDING LINE, THERE SHALL BE TWO SIDE YARDS OF A COMBINED WIDTH OF NOT LESS THAN 26 FEET AND NEITHER SIDE YARD SHALL BE LESS THAN 10 FEET IN WIDTH.

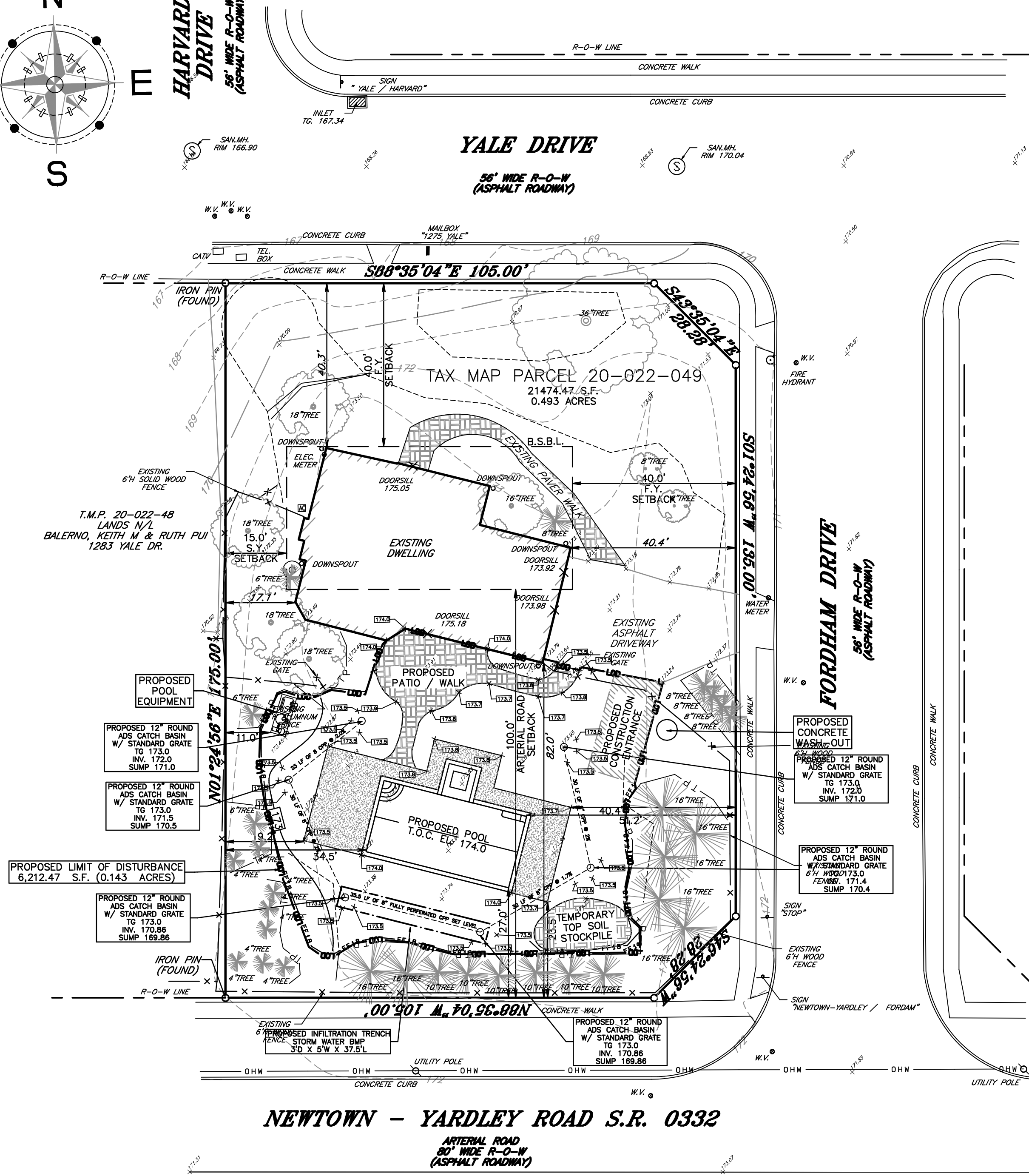
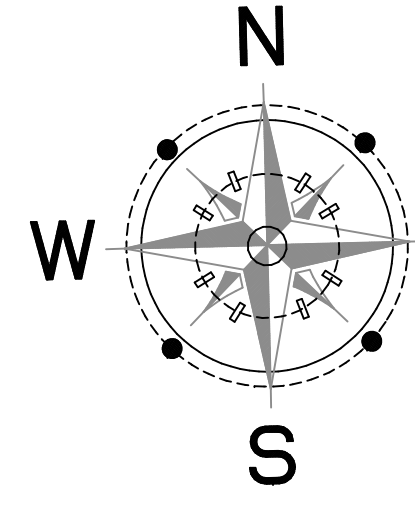
**IMPERVIOUS CALCULATIONS:**

DESCRIPTION	EXISTING	PROPOSED	PROPOSED
DWELLING	2,338 S.F.	0 S.F.	2,338 S.F.
LEAD WALK	340 S.F.	0 S.F.	340 S.F.
DRIVEWAY	1,042 S.F.	0 S.F.	1,042 S.F.
PATIO / WALK	454 S.F.	114 S.F.	568 S.F.
POOL COPING	0 S.F.	124 S.F.	124 S.F.
POOL DECK	0 S.F.	769 S.F.	769 S.F.
EQUIP. PAD	0 S.F.	21 S.F.	21 S.F.
<b>4,174 S.F. TOTAL</b>	<b>4,174 S.F. TOTAL</b>	<b>1,028 S.F. TOTAL</b>	<b>5,202 S.F. TOTAL</b>

4,174 S.F. / 21,474 S.F. = 19.4% EXISTING IMPERVIOUS  
 5,202 S.F. / 21,474 S.F. = 24.2% PROPOSED IMPERVIOUS  
 MAXIMUM ALLOWABLE IMPERVIOUS 18% OR 3,865 S.F.  
 SIMPLIFIED STORM WATER MANAGEMENT FOR ALL IMPERVIOUS OVER 18% 1,337 S.F.

**POOL NOTES:**

- 200-70. PRIVATE SWIMMING POOLS.  
 A PRIVATE SWIMMING POOL AND FENCE ACCESSORY THERETO MAY BE ERRECTED IN A REAR YARD, SIDE YARD OR SPECIAL SETBACK IN ANY RESIDENTIAL DISTRICT AS AN ACCESSORY STRUCTURE TO A SINGLE-FAMILY DETACHED DWELLING ONLY, PROVIDED THAT IT COMPLIES WITH THE FOLLOWING CONDITIONS:
- THE POOL SHALL BE LOCATED AT LEAST 10 FEET FROM THE REAR OR SIDE PROPERTY LINE AND 10 FEET FROM ANY PORTION OF THE BUILDING. IT SHALL BE LOCATED AT LEAST 60 FEET FROM THE RIGHT-OF-WAY LINE OF ANY COLLECTOR ROAD IN THE TOWNSHIP AND AT LEAST 80 FEET FROM THE RIGHT-OF-WAY LINE OF ANY ARTERIAL ROAD IN THE TOWNSHIP.
  - IT SHALL BE SUITABLY DESIGNED AND LOCATED SO AS NOT TO BECOME A NUISANCE OR HAZARD TO ADJOINING PROPERTY OWNERS OR THE PUBLIC. OUTDOOR LIGHTS, IF USED, SHALL BE SHIELDED AND NOT REFLECTED TOWARD ADJACENT RESIDENTIAL PROPERTIES.
  - PROVISION SHALL BE MADE FOR DRAINAGE OF THE POOL AND BACKWASH WATER DISPOSAL. THE USE OF OPEN FIELDS, LAWNS OR DRY WELLS SHALL BE PERMITTED FOR THIS PURPOSE, PROVIDED THAT THEY MEET THE REQUIREMENTS OF THE PENNSYLVANIA DEPARTMENT OF HEALTH. WATER SHALL NOT BE EMPTIED ONTO PUBLIC ROADS OR ADJOINING LAND BELONGING TO OTHERS OR INTO THE PUBLIC SANITARY SEWER SYSTEM.
  - THE ENTIRE POOL AREA SHALL BE ENCLOSED BY A FENCE FIVE FEET IN HEIGHT CONSTRUCTED OF CHAIN LINK, SOLID MASONRY, SOLID WOODEN OR PICKET (WITH SPACING NO GREATER THAN TWO INCHES) AND A GATE WHICH IS EQUIPPED WITH A SELF-LATCHING, SELF-LOCKING LOCK AND WHICH SHALL BE KEPT LOCKED WHEN THE POOL IS NOT IN USE. THE FENCE MUST BE SETBACK AT LEAST 10 FEET FROM THE WATER'S EDGE. ALL OUTDOOR SWIMMING POOLS SHALL COMPLY WITH THIS PROVISION IRRESPECTIVE OF THE DATE OF ORIGINAL CONSTRUCTION OR STATUS AS A NONCONFORMITY. POOLS NOT COMPLYING WITH THIS PROVISION SHALL BE BROUGHT INTO COMPLIANCE WITHIN ONE YEAR OF THE PASSAGE OF THIS CHAPTER.



NEWTOWN - YARDLEY ROAD S.R. 0332

**VOLUME CONTROL CALCULATIONS**

VOLUME (CUBIC FEET) = (2 INCHES RUNOFF/12 INCHES) \* IMPERVIOUS SURFACE (SQ FT)  
 222.83 (CUBIC FEET) = (2 INCHES RUNOFF/12 INCHES) \* 1,337 (SQ FT)  
 (REQUIRED VOLUME CONTROL / 4 (VOID RATIO FOR STONE) = TOTAL VOLUME  
 222.83 / 4 = 55.71  
 INFILTRATION TRENCH DIMENSIONS  
 1 TRENCH @ 3'D X 5'W X 37.5'L = 562.5 CU.FT.

**ACKNOWLEDGEMENTS**

PROPERTY OWNER IS RESPONSIBLE FOR MAINTENANCE OF STORMWATER MANAGEMENT FACILITIES. ALL FACILITIES SHALL MEET THE PERFORMANCE STANDARDS AND DESIGN CRITERIA SPECIFIED IN CHAPTER 179 STORM WATER.

LOWER MAKEFIELD TOWNSHIP AND OR ITS REPRESENTATIVES SHALL BE GRANTED A BLANKET EASEMENT TO ENTER THE PROPERTY FOR THE INSPECTION AND OR REPAIRS OF THE STORM WATER BMP.

**SOILS EVALUATION NOTE:**

A SOILS EVALUATION OF THE PROJECT SITE HAS NOT BEEN PERFORMED. IF DURING THE COURSE OF CONSTRUCTION OF THE STORM WATER MANAGEMENT FACILITY ANY RESTRICTIVE SOIL LAYERS ARE DISCOVERED I.E. SEASONAL HIGH WATER TABLE BEDROCK ETC. AN ALTERNATE METHOD OF STORM WATER MANAGEMENT MUST BE DESIGNED IN ACCORDANCE WITH THE TOWNSHIPS STORM WATER ORDINANCE IN EFFECT AT THAT TIME AND APPROVED BY THE TOWNSHIP.

**DRAINAGE PLAN CERTIFICATION**

ANY REVISION TO THE APPROVED DRAINAGE PLAN MUST BE APPROVED BY THE MUNICIPALITY, AND THAT A REVISED EROSION AND SEDIMENT CONTROL PLAN MUST BE SUBMITTED TO THE MUNICIPALITY AND COUNTY CONSERVATION DISTRICT FOR APPROVAL.

SIGNED \_\_\_\_\_ (OWNER) DATE \_\_\_\_\_

SIGNED \_\_\_\_\_ (OWNER) DATE \_\_\_\_\_

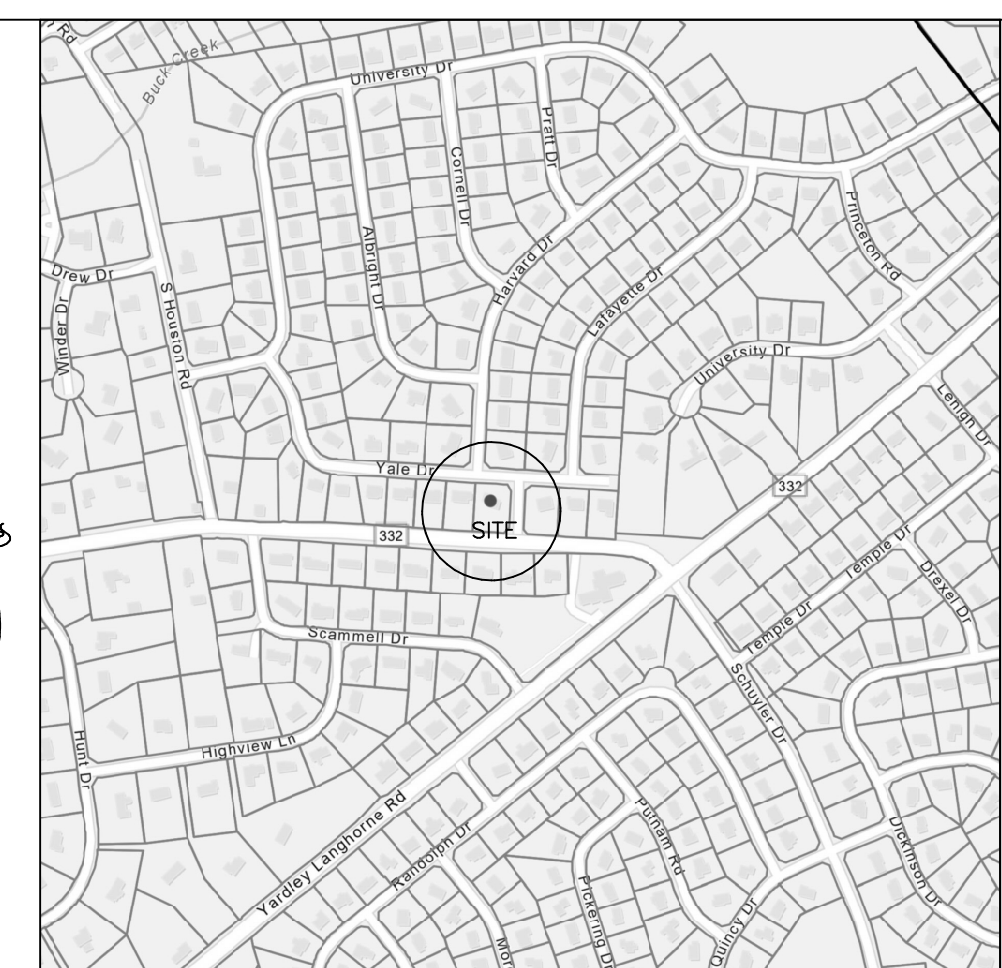
**DESIGN ENGINEER CERTIFICATION**

I, THOMAS LEE COOLBAUGH, PLS, ON THIS DATE (DATE OF SIGNATURE), HEREBY CERTIFY THAT THIS SWM SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE NESHAMINY CREEK WATERSHED ACT 167 STORMWATER MANAGEMENT ORDINANCE OR PLAN.

SIGNED \_\_\_\_\_ PLS DATE 11/18/24

**REFERENCES:**

- DEED INSTRUMENT #2011051737
- FINAL PLAN OF "SANDY RUN SECTION 2-B", MADE BY RUSSELLS. LYMAN, REGISTERED PROFESSIONAL ENGINEER, DATED JULY 5, 1967, LAST REVISED APRIL 10, 1969, AND RECORDED IN PLAN BOOK 71, PAGE 10,
- LOWER MAKEFIELD TOWNSHIP ORDINANCE CHAPTER 200 ZONING.
- LOWER MAKEFIELD ORDINANCE CHAPTER 173 STORM WATER MANAGEMENT DELAWARE RIVER SOUTH.
- USDA / NRCS WEB SOIL SURVEY



**LOCATION MAP**

SCALE: NOT TO SCALE  
 SOURCE: GOOGLE MAPS

**GENERAL NOTES**

- OWNER/APPLICANT:  
 SPARLING, JAQUELINE  
 1275 YALE DRIVE  
 YARDELY, PA 19087
- ZONING SUMMARY:  
 ZONED: "R-2" MEDIUM DENSITY RESIDENTIAL DISTRICT  
 EXISTING USE: SINGLE FAMILY DETACHED DWELLING  
 PROPOSED ACCESSORY USE: RESIDENTIAL POOL
- VERTICAL DATUM IS NAVD 88 AND WAS ESTABLISHED BY GLOBAL POSITIONING SYSTEM (GPS). HORIZONTAL DATUM IS BASED ON 1983 STATE PLANE COORDINATE SYSTEM ESTABLISHED UTILIZING GLOBAL POSITIONING SYSTEM (GPS), WITH OBSERVATIONS REFERENCE TO THE TOP SURV SURVEY NETWORK. ROTATION TO DEED MERIDIAN 02 DEGREES 29 MINUTES 04 SECONDS CLOCKWISE
  - CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, (29 U.S.C. 651 ET SEQ.), AS AMENDED AND ANY MODIFICATIONS, AMENDMENTS OR REVISIONS TO SAME.
  - NORTH STAR SURVEYING SOLUTIONS CORP. HAS NO CONTRACTUAL, LEGAL OR OTHER RESPONSIBILITY FOR JOB SITE SAFETY OR JOB SITE SUPERVISION, OR ANYTHING RELATED TO SAME.
  - THE PLAN IS INTENDED TO PROVIDE GENERAL INFORMATION, ONLY, REGARDING ITEMS TO BE DEMOLISHED AND/OR REMOVED. THE CONTRACTOR MUST ALSO REVIEW THE OTHER SITE PLAN DRAWINGS AND INCLUDE IN DEMOLITION ACTIVITIES ALL INCIDENTAL WORK NECESSARY FOR THE CONSTRUCTION OF THE NEW SITE IMPROVEMENTS.
  - CONTRACTOR MUST RAISE ANY QUESTIONS CONCERNING THE ACCURACY OR INTENT OF THESE PLANS OR SPECIFICATIONS, CONCERNS REGARDING THE APPLICABLE SAFETY STANDARDS, OR THE SAFETY OF THE CONTRACTOR OR THIRD PARTIES IN PERFORMING THE WORK ON THIS PROJECT, WITH NORTH STAR SURVEYING SOLUTIONS CORP. IN WRITING, PRIOR TO THE INITIATION OF ANY SITE ACTIVITY AND ANY DEMOLITION ACTIVITY. ALL DEMOLITION ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, RULES, REQUIREMENTS, STATUTES, ORDINANCES AND CODES.
  - PRIOR TO STARTING ANY DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR:
    - OBTAINING ALL REQUIRED PERMITS AND MAINTAINING THE SAME ON SITE FOR REVIEW BY THE ENGINEER AND OTHER PUBLIC AGENCIES HAVING JURISDICTION THROUGHOUT THE DURATION OF THE PROJECT, SITE WORK AND DEMOLITION WORK.
    - IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL CONSTRUCTION CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION AND COMMENCEMENT OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT AND/OR DISCREPANCY BETWEEN THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR TO THE RELATIVE OR APPLICABLE CODES, REGULATIONS, LAWS, RULES, STATUTES AND/OR ORDINANCES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD, IN WRITING, OF SAID CONFLICT AND/OR DISCREPANCY PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR'S FAILURE TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE CONTRACTOR'S FULL AND COMPLETE ACCEPTANCE OF ALL RESPONSIBILITY TO COMPLETE THE WORK SHOWN ON THESE DRAWINGS AND IN FULL COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, LAWS, STATUTES, ORDINANCE.
  - THE CONTRACTOR MUST LOCATE AND CLEARLY AND UNAMBIGUOUSLY DEFINE VERTICALLY AND HORIZONTALLY ALL ACTIVE AND INACTIVE UTILITY AND/OR SERVICE SYSTEMS THAT ARE TO BE REMOVED. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE AND INACTIVE SYSTEMS THAT ARE NOT BEING REMOVED/RELOCATED DURING SITE ACTIVITY.
  - THE CONTRACTOR MUST COMPLY, TO THE FULLEST EXTENT, WITH THE LATEST OSHA STANDARDS AND REGULATIONS, AND/OR ANY OTHER AGENCY WITH JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES AND CONSULTANT SHALL HAVE NO RESPONSIBILITY FOR OR AS RELATED TO EXCAVATION AND TRENCHING PROCEDURES.
  - IN THE EVENT OF DISCREPANCIES AND/OR CONFLICTS BETWEEN PLANS OR RELATIVE TO OTHER PLANS, THE SITE PLAN WILL TAKE PRECEDENCE AND CONTROL. CONTRACTOR MUST IMMEDIATELY NOTIFY THE DESIGN ENGINEER, IN WRITING, OF ANY DISCREPANCIES AND/OR CONFLICTS.
  - CONTRACTOR IS REQUIRED TO SECURE ALL NECESSARY AND/OR REQUIRED PERMITS AND APPROVALS FOR ALL OFF SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. CONTRACTOR MUST SUPPLY A COPY OF APPROVALS TO ENGINEER AND OWNER PRIOR TO INITIATING ANY WORK.
  - ALL MATERIAL FROM SITE EXCAVATION NOT USED IN GRADING OF POOL AREA IS TO BE REMOVED FROM SITE.
  - CONSULTANT IS NEITHER LIABLE NOR RESPONSIBLE FOR ANY SUBSURFACE CONDITIONS AND FURTHER, SHALL HAVE NO LIABILITY FOR ANY HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES, OR POLLUTANTS ON, ABOUT OR UNDER THE PROPERTY.
  - FENCE TO BE CONSTRUCTED IN ACCORDANCE WITH 2018 INTERNATIONAL SWIMMING POOL AND SPA CODE.
  - NO WATER SHALL BE PLACED IN THE POOL UNTIL A FENCE AS REQUIRED BY THE TOWNSHIP ORDINANCE HAS BEEN INSTALLED.
  - REFER TO POOL COMPANY PLANS FOR POOL CONSTRUCTION DETAILS.
  - ANY DWELLING DOOR OR WINDOW LEADING TO THE POOL AREA SHALL BE EQUIPPED WITH AN AUDIBLE ALARM OR THE POOL SHALL BE EQUIPPED WITH A POWERED SAFETY COVER. BOTH METHODS SHALL MEET THE REQUIREMENTS OF THE 2018 ISPCS.
  - DISTURBED AREAS SHALL BE TEMPORARILY STABILIZED IF NO WORK IS TO BE PERFORMED FOR FOUR DAYS AND TEMPORARY STOCKPILES SHALL BE STABILIZED IMMEDIATELY.



PENNSYLVANIA ONE CALL SYSTEM, INC.  
 905 Irwin Run Road  
 West Mifflin, Pennsylvania  
 15120 - 3078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776  
 NON-MEMBERS MUST BE CONTACTED DIRECTLY  
 PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

DATE: 11/18/24 SCALE: 1" = 20'  
 DESIGN: T.L.C. DRAWING: T.L.C.  
 SHEET NO. 2 OF 4  
 PROJECT NO. 2024-056

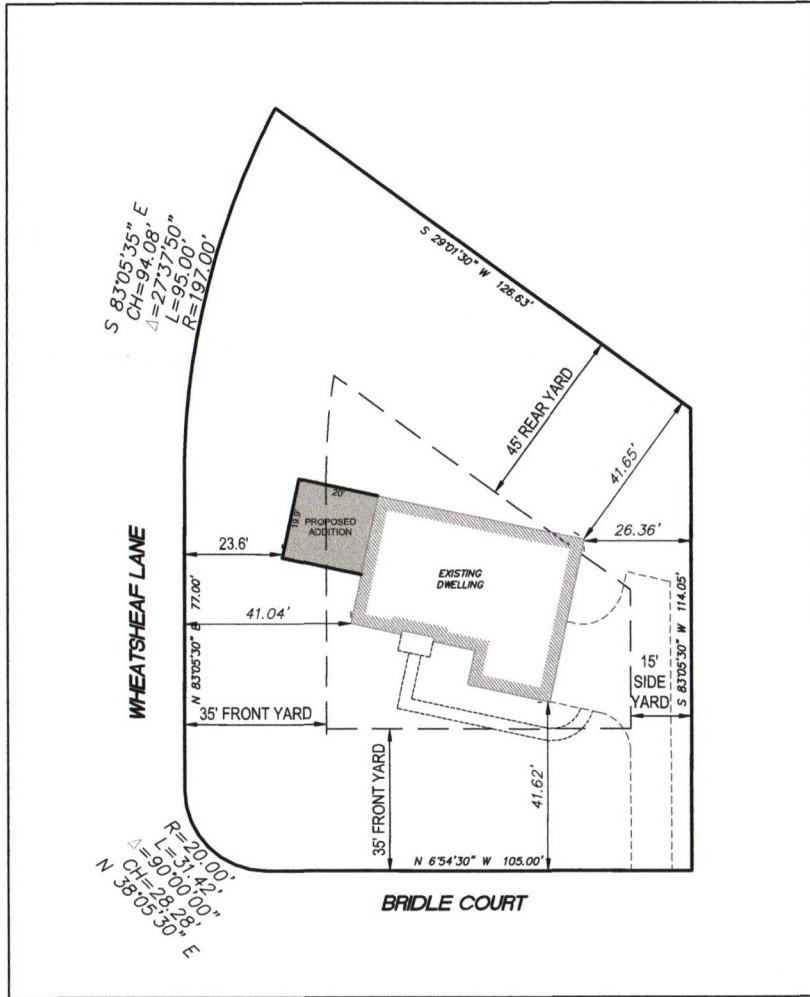
**POOL PERMIT PLAN**  
**SPARLING RESIDENCE**  
 1275 YALE DRIVE  
 TAX MAP PARCEL 20-022-049  
 LOWER MAKEFIELD TOWNSHIP, BUCKS COUNTY  
 COMMONWEALTH OF PENNSYLVANIA

Professional  
 Land Surveying  
 6182 NORTH TROPICAL TRAIL  
 MERRITT ISLAND, FL 32953  
 E-MAIL: tcoolbaugh162@gmail.com

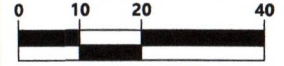
**NORTH STAR SURVEYING SOLUTIONS CORP.**

THOMAS L. COOLBAUGH  
 PENNSYLVANIA PROFESSIONAL LAND SURVEYOR #8095718

Revision/Issue



**GRAPHIC SCALE**



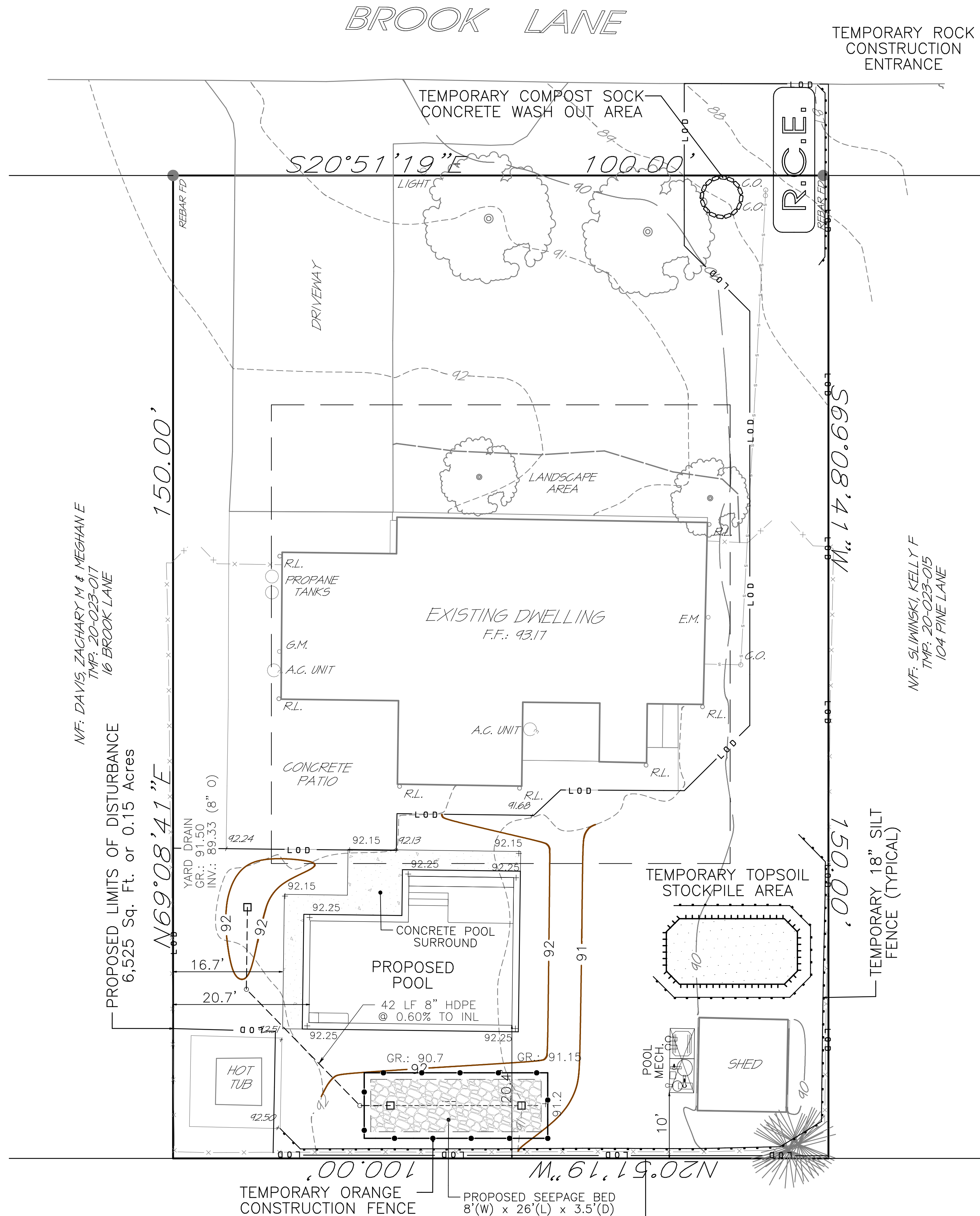
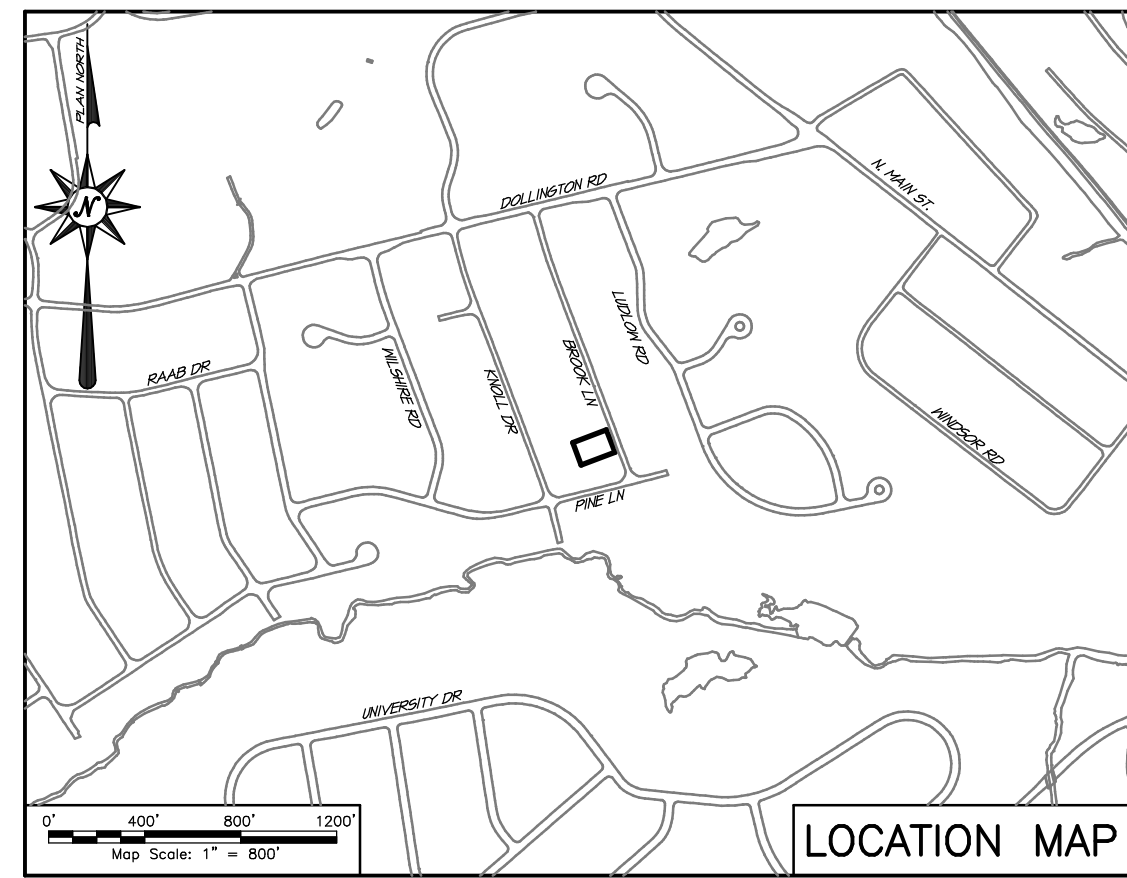
1 INCH = 20 FT

REV	DESCRIPTION	AUTH	DATE

**ZONING HEARING EXHIBIT PLAN**

**NOTE:**  
 BOUNDARY AND PLANIMETRIC INFORMATION TAKEN FROM PROPOSED HOUSE LOCATION PLAN FOR LOT NO.77, PREPARED BY BENCHMARK CONSULTING ENGINEERS & SURVEYORS, DATED 8/30/90

<b>DATE:</b>	DECEMBER 6, 2024
<b>SCALE:</b>	1"=20'
<b>DESIGNED BY:</b>	BW
<b>DRAWN BY:</b>	LSM
<b>CHECKED BY:</b>	BW
<b>JOB NUMBER:</b>	N/A



**GENERAL NOTES:**

1. Outbound & topographic survey information was taken from a field survey performed by Woodrow & Associates, Inc. during the month of September 2024.
2. All proposed fencing shall comply with all applicable Township ordinance standards and specifications. All gates shall open in an outward direction and must be equipped with self-closing and latching devices in compliance with 2015 ISPS: Section 27-803.1.11.1.c.
3. All proposed pool construction shall be in strict accordance with the 2015 International Swimming Pool and Spa Code, Section 305.
4. Temporary construction fence must be installed around the pool area once excavated and until such time the pool is filled and final perimeter pool fencing has been installed.
5. The Township Engineers office must be contacted a minimum of 48 hours in advance of installation of Stormwater Management Facilities.
6. Any damage within the right of way of Brook Lane caused by the contractor during pool construction shall be repaired/replaced as directed by the Township Engineer at the sole expense of the owner/contractor.
7. Each dwelling door that directly accesses the pool area shall be equipped with an alarm that sounds at least thirty (30) seconds when the door is opened and is audible throughout the dwelling. (Pennsylvania Uniform Construction Code - Swimming Pool).
8. The contractor shall make end-of-day checks on all Erosion & Sediment Control measures. Any repairs needed shall be corrected immediately.
9. During construction no mud may be tracked from the development onto the surrounding roadways (whether or not they are dedicated), and no oil or dirt from construction operations shall be permitted to settle on adjoining properties. Adequate water provisions shall be onsite to help contain dust to within the active work area.
10. The property owner shall sign and record an Operations and Maintenance Agreement with the Township for the proposed Storm Trap Basin.

**GRADING AND DRAINAGE NOTES:**

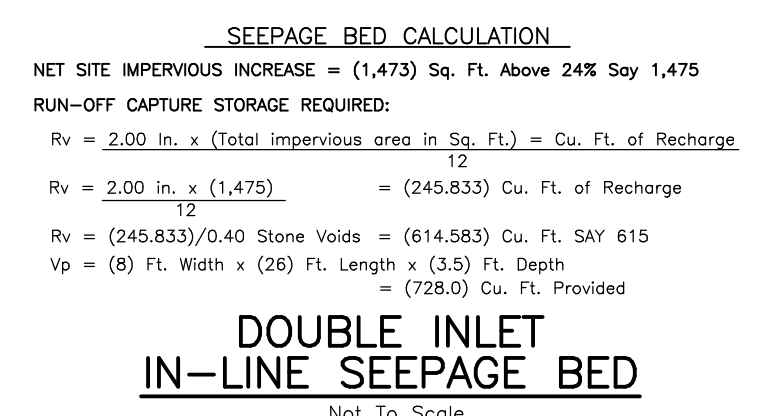
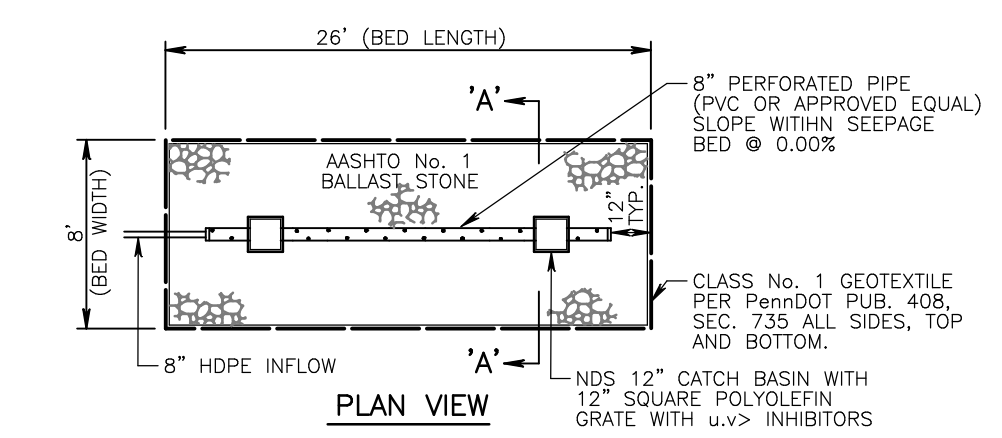
1. All contractors working on this project shall comply with the requirements of P.L. 852, No. 287, December 10, 1974, as amended on December 12, 1986 P.L. 1574, No. 172. Contractors must notify PA One Call System, Inc. three (3) days prior to the start of any construction. 1-800-242-7772.
2. Contractors shall not encroach onto adjoining properties unless a temporary grading easement has been obtained from the adjoining owners. All property lines must be adequately marked and any area that proposed grading encroaches within five (5) feet of the property line the contractor shall install temporary Orange Construction Fence to prevent encroachment onto adjoining properties.
3. All contractors working on this project shall ensure that all construction performed is in accordance with all applicable OSHA (Occupational Safety and Health Administration) standards and specifications.
4. The contractor shall ensure that all necessary permits and approvals have been obtained prior to commencement of any site construction activities.
5. Erosion and sedimentation control measures shall be in place and functional prior to any earth disturbance or grading work within the tributary area.
6. Burying of trees, tree stumps and construction debris is prohibited. All debris shall be removed and disposed of in strict accordance with all Federal, State and Local Municipality standards and specifications. Tree stumps may be ground or chipped and spread on site.
7. All construction requirements, methods, materials and specifications shall be in accordance with all Municipal Authority Standards, Municipality Standards and Penn-DOT Form 408 (Latest Edition) there in the case of conflict the more stringent requirement shall apply.
8. All precast storm sewer structures such as inlets, storm manholes, endwalls, etc. shall conform to the Commonwealth of Pennsylvania Department of Transportation Publication #72 (latest edition). Shop Drawings shall be submitted to the Township Engineers Office for review and approval prior to fabrication.
9. All utility installation must be in accordance with the requirements of the Pennsylvania Uniform Construction Code, as adopted by the Municipality.
10. All slopes with grades three (3) foot vertical to one (1) foot horizontal (3:1) shall be stabilized with a North American Green or approved equal Erosion Control Blanket installed in strict accordance with manufacturer standards and specifications. See Erosion Control Plans for location and details.
11. Any spring encountered during construction of the roadway shall be underdrained to the nearest inlet. Other spring locations found outside the roadway shall be underdrained to the nearest inlet or watercourse.
12. The minimum slope in grassed areas shall not be less than 2% and the minimum in paved areas shall not be less than 1%.
13. Site grading shall be performed in accordance with these plans. The contractor shall be responsible for removing and replacing all soil, yielding or unsuitable materials and replacing with suitable materials. All excavated or filled areas shall be compacted to 95% of modified proctor maximum density per A.S.T.M. Test D-1557, moisture content at time of placement shall be no more than 2% above nor 3% below optimum, contractor shall submit a compaction report prepared by a qualified soils engineer, registered within the state where the work is performed, verifying that all filled areas and subgrade areas within the building pad area and areas to be paved have been compacted in accordance with these plans.
14. Any/all storm water conveyance system(s) and detention facilities shown on these plans are a basic and perpetual part of the storm water management system for this Township, and as such, are to be protected, maintained and preserved in accordance with the approved final plans. The Township and/or its agents may reserve the right and privilege to enter upon such lands from time to time for the purpose of inspection of said storm water management system in order to determine that the structural design and integrity are being maintained.
15. A minimum of six (6) inches of clean topsoil shall be provided on all lawn and planting areas.
16. Subbase material for sidewalks, curb, or asphalt shall be free of organics and other unsuitable materials. Should subbase be deemed unsuitable, subbase is to be removed and filled with approved fill material compacted to 95% optimum density (as determined by modified proctor method).
17. Any damage caused within the right of way as a result of construction shall be repaired at the expense of the Owner.
18. The Owner agrees to make necessary corrective measures to alleviate any drainage issues that on this property and/or adjacent properties that might arise for a period of 6-months after the improvements have been completed, as deemed necessary by the Township.

**IMPERVIOUS SURFACE TABULATION:**

ZONED:	R-2 RESIDENTIAL MEDIUM DISTRICT
MAX. IMPERVIOUS SURFACE:	24%
LOT AREA:	15,000 Sq. Ft.
DEVELOPMENT:	5,073 S.F. OR 33.82%
NET INCREASE:	341 S.F.

EXISTING:	EXISTING:
DWELLING: 2,051 S.F.	DWELLING: 2,051 S.F.
DRIVEWAY: 1,254 S.F.	DRIVEWAY: 1,254 S.F.
CONC. PATIO/WALKS: 1,145 S.F.	CONC. PATIO/WALKS: 1,145 S.F.
HOT TUB PAD: 176 S.F.	HOT TUB PAD: 176 S.F.
SHED: 74 S.F.	SHED: 74 S.F.
BILCO: 32 S.F.	BILCO: 32 S.F.
<b>SUBTOTAL: 4,732 S.F.</b>	<b>SUBTOTAL: 4,732 S.F.</b>
<b>POOL PERMIT PLAN:</b>	<b>POOL PERMIT PLAN:</b>
DWELLING: 2,051 S.F.	DWELLING: 2,051 S.F.
DRIVEWAY: 1,254 S.F.	DRIVEWAY: 1,254 S.F.
CONC. PATIO/WALKS: 1,145 S.F.	CONC. PATIO/WALKS: 1,145 S.F.
HOT TUB PAD: 176 S.F.	HOT TUB PAD: 176 S.F.
SHED: 74 S.F.	SHED: 74 S.F.
BILCO: 32 S.F.	BILCO: 32 S.F.
<b>SUBTOTAL: 5,073 S.F.</b>	<b>SUBTOTAL: 5,073 S.F.</b>
POOL SURROUND: 215 S.F.	POOL SURROUND: 215 S.F.
POOL COPING: 102 S.F.	POOL COPING: 102 S.F.
MECH. PAD: 21 S.F.	MECH. PAD: 21 S.F.
<b>SUBTOTAL: 5,073 S.F.</b>	<b>SUBTOTAL: 5,073 S.F.</b>
<b>NET INCREASE: 341 S.F.</b>	<b>NET INCREASE: 341 S.F.</b>
<b>PREDEVELOPMENT: 4,732 S.F. OR 31.55%</b>	<b>PREDEVELOPMENT: 4,732 S.F. OR 31.55%</b>
<b>POST DEVELOPMENT: 5,073 S.F. OR 33.82%</b>	<b>POST DEVELOPMENT: 5,073 S.F. OR 33.82%</b>



**POST CONSTRUCTION MAINTENANCE PROGRAM:**

The applicant/owner, its assigns shall be responsible for the ownership and maintenance of the proposed BMP's shown on this plan in perpetuity. All BMP's shall be maintained in accordance with all applicable Township Standards and Specifications as so designated in the Ownership and Maintenance agreement as entered into between the Owner and the Township.

**MAINTENANCE OF THE SEEPADE BED:**

1. The applicant/owner, shall ensure that all catch basins within the system are inspected and cleaned after each runoff event. Remove any debris such as lawn, clippings, leaves or accumulated trash that may prohibit runoff from entering the catch basins.
2. The applicant/owner, shall ensure that the overlying vegetation of the seepage bed should be maintained in good vegetated conditions, and any bare spots revegetated immediately.
3. The applicant/owner, shall ensure that no vehicular traffic is permitted over or on the seepage bed and care should be taken to avoid excessive compaction by lawn equipment.
4. The applicant/owner, shall ensure all roof leaders that lead to the seepage bed are free and clear of any debris that may cause clogging of the seepage bed inflow pipe. Quarterly flushing of the catch basins and inflow pipe are required.

Should any of the BMP's shown on this plan fail to function as designed, the applicant/owner shall be responsible for all corrective measures including but not limited to cleaning, flushing, repair or replacement as necessary or directed by the Township Engineers Office.

**OWNER ACKNOWLEDGEMENT:**

I/we Ernest P. Falco acknowledge that the stormwater management facilities shown on these plans can only be altered or removed after approval of a revised plan by the applicable municipality, owner also agrees to all above listed BMP maintenance program requirements.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

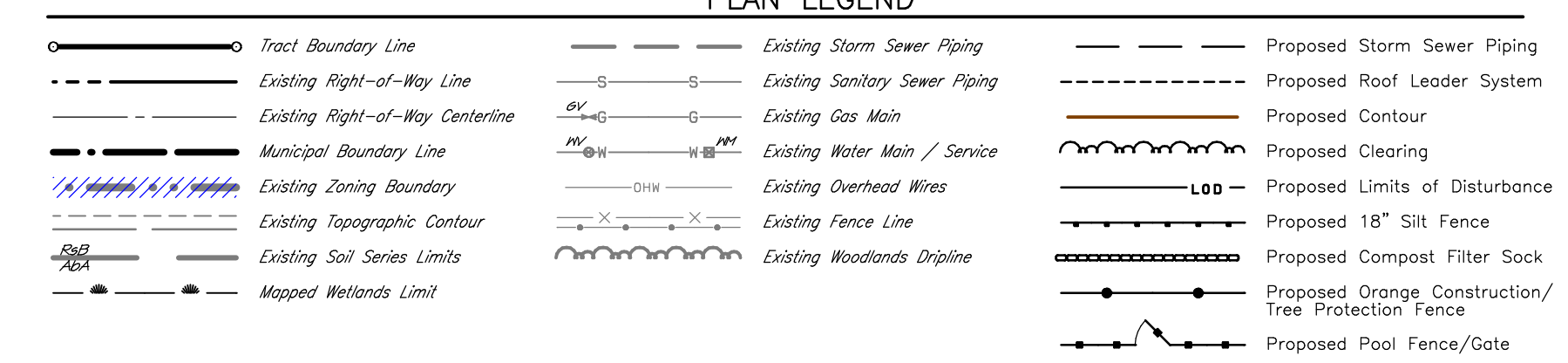
**PROJECT SOILS DATA**

Soils Type:	Slopes:	Depth to Restrictive Feature:	Depth to Water Table:	Hydrologic Soil Group:
UvD (Urban-land Lonsdale Complex)	0 to 8 percent	42-99' to lithic bedrock	>=80"	B

**ACKNOWLEDGEMENT:**

I, TIMOTHY P. WOODROW, P.E. ACKNOWLEDGE THAT THE PROPOSED GRADING ACTIVITIES SHOWN ON THIS PLAN SHALL NOT SIGNIFICANTLY INCREASE STORMWATER RUNOFF TO, AND/OR OTHERWISE ADVERSELY IMPACT, DOWNSTREAM PROPERTIES, EXCEPT AS MAY BE PART OF AN APPROVED STORMWATER RUNOFF COLLECTION AND MANAGEMENT PLAN.

Signature: \_\_\_\_\_ Date: 10/03/2022

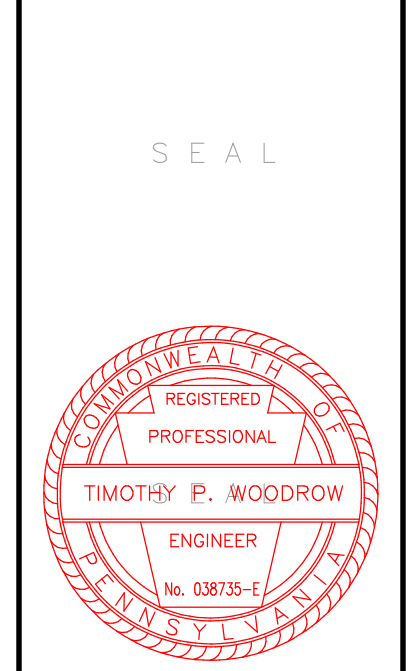
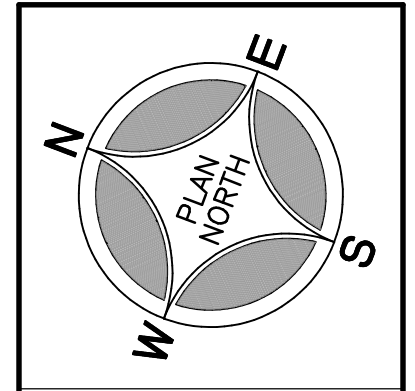


**PROJECT SHEET INDEX**

SHEET NO.	SHEET DESCRIPTION:
1 of 2	SITE IMPROVEMENTS PLAN
2 of 2	CONSTRUCTION DETAILS SHEET 'A'

**REVISIONS**

NO.	DATE	DESCRIPTION
1	12/17/24	REVISED PER ZBA DECISION



PROJECT SERIAL NUMBER FOR DESIGN: 2023-016  
Month: \_\_\_\_\_ 2023

Parcel Information:  
20-023-016  
Block 023 Unit 016

Deed Area: 15,000 Sq. Ft.  
Legal RW: n/a  
UL: RW: n/a  
NET Area: 15,000 Sq. Ft.

Applicant:  
**Ernest P. Falco**  
18 Brook Lane  
Yardley, PA 19067

Scale in Feet (1" = 20')  
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**WOODROW & ASSOCIATES, INC.**  
MUNICIPAL / CIVIL CONSULTING ENGINEERS  
1108 North Bethlehem Pike / Suite 5 - Lower Gwynedd - PA 19002  
Phone: (215) 242-2948 Web: www.woodrowinc.com

Layer List:  
Sh01\_PPP  
Job No:  
19-501-D24-08  
Plan Date:  
SEPTEMBER 18, 2024  
Sheet No: