SECTION 00 31 26 – EXISTING HAZARDOUS MATERIAL INFORMATION

PART 1 - GENERAL

1.01 EXISTING HAZARDOUS MATERIAL INFORMATION

A. This Document and its referenced specifications and drawings are included in the Procurement and Contracting Requirements for Project as they provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information and are not a warranty of existing conditions. All Prime Bidders will receive the following list of reference documents:

1. A pre-demolition hazardous material 3-year AHERA investigation report for the Project, prepared by Element Environmental Solutions, dated April 2026, is included as Specification Section 00 31 27.
2. A pre-demolition hazardous materials investigation report for the Project, prepared by Element Environmental Solutions, dated May 2026, is included as Specification Section 00 31 28.

B. Bidder may rely on the scope and technical information contained in the above referenced documents for the purposes of coordination and defining the scope of work that will be in the Environmental Abatement contract.

C. Bidder shall include all other work required for demolition, repair, renovation, or new construction that is not listed in the Environmental scope, or that is required as a function of the Environmental scope to complete the Project.

D. Bidder shall visit the site and review all bid documents to familiarize themselves with existing conditions and the full project scope required. Should Bidder determine that additional information is required, the Bidder shall notify Architect or Construction Manager.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 00 31 26

ELEMENT ENVIRONMENTAL
SOLUTIONS

Asbestos Hazard Emergency Response Act (AHERA)

April 2026 - AHERA 3-Year Re-Inspection

Building: Jarrettown Elementary School
1520 Limekiln Pike
Dresher, PA 19025

Prepared For: Upper Dublin School District
1580 Fort Washington Avenue
Maple Glen, PA 19002

Prepared By: Element Environmental Solutions, Inc.
61 Willow Street, P.O. Box 921
Adamstown, PA 19501

David C. Bertsch, Operations Manager, IAQ
PA Licensed Asbestos Building Inspector/Management Planner (#012648)

E2S File 1056.0053
Copyright 2026

UPPER DUBLIN SCHOOL DISTRICT
JARRETTOWN ELEMENTARY SCHOOL
AHERA 3-YEAR RE-INSPECTION
APRIL 2026

TABLE OF CONTENTS

- Executive Summary
- Table 1 – Summary of Remaining Asbestos-Containing Materials (ACM)
- Table 2 – Room-by-Room Inventory of ACM
- Table 3 – Recommended Minimum Response Actions
- Table 4 – Response Actions Taken Since Previous 3-Year Re-Inspection
- AHERA Re-Inspection Assessment Factors and Values
- Annual Parental Notification of Asbestos Management Plans
- Accreditations

UPPER DUBLIN SCHOOL DISTRICT
JARRETTOWN ELEMENTARY SCHOOL
AHERA 3-YEAR RE-INSPECTION
APRIL 2026

EXECUTIVE SUMMARY

Element Environmental Solutions, Inc. (E2S) was contracted by the Upper Dublin School District to perform the AHERA 3-Year Re-Inspection of Jarrettown Elementary School, which was due in April 2026. The re-inspections are required as part of the Environmental Protection Agency (EPA) AHERA regulations, as detailed in EPA 40 CFR, Part 763. The re-inspection and assessment were performed by Mr. David Bertsch of E2S on Monday, March 30, 2026. Mr. Bertsch is an EPA-certified and PA-licensed Asbestos Building Inspector and Management Planner.

E2S performed a walkthrough of the building and used the room-by-room inventory of ACM from the previous re-inspection (October 2025), in order to locate, identify and assess the condition and quantity of all known and assumed ACM. Please refer to Table 2 for a room-by-room breakdown of all existing/assumed ACM. Any damaged ACM (DC-3 or greater), changes in condition or quantity of ACM, or materials added to the inventory, are identified on Table 2 in **bold** text. Also, in some instances E2S could not locate or identify ACM listed in the previous inventory, and these are identified in the comments section of Table 2. There were no damaged Asbestos-containing Materials (ACM) identified.

Please refer to Table 1 for a summary of remaining ACM by material, type and quantity; Table 2 for a room-by-room breakdown of all existing ACM; Table 3 for recommended response actions for remaining ACM; and to Table 4 for a summary of response actions taken since the previous AHERA 3-year re-inspection (if applicable).

UPPER DUBLIN SCHOOL DISTRICT
JARRETTOWN ELEMENTARY SCHOOL
AHERA 3-YEAR RE-INSPECTION
APRIL 2026

Table 1 – Summary of Remaining ACM

Material Description	Type	Estimated Quantity
9" x 9" Floor Tile and Mastic	M	940 S.F.
Blackboard Mastic*	M	Not Quantified
1' x 1' Floor Tile Mastic (Black)	M	680 S.F.
Glue Dots on Concrete Beams	M	90 S.F.
Stage Light Wiring*	M	Not Quantified
Fitting Insulation on FGIP (Heating)	T	5 Fittings

*Material is assumed to be asbestos containing

M = Miscellaneous ACM

T= Thermal Insulation

FGIP = Fiberglass-Insulated Pipe

TABLE 2 - JARRETTOWN ELEMENTARY SCHOOL
ROOM-BY-ROOM INVENTORY OF ACM

Building	Floor	Room	Material Description	Quantity	LS	DC	E	AT	AF	PD	F	%	Type	Comments
Jarrettown ES	All	Throughout	Blackboard Mastic	**	S	0	0	0	0	1	1	*	*	***Not Quantified, assumed to contain asbestos*
Jarrettown ES	**Upper**	**Library Hallway**	**Beige 1' x 1' Floor Tile & Mastic**	**0**	**S**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**Sampled 3/30/26 and proven non-ACM**
Jarrettown ES	Upper	Supply Closet at Room 1	Black 9" x 9" Floor Tile & Mastic	**220**	S	2	2	1	1	2	2	1	C	**Updated Quantity**
Jarrettown ES	Upper	Closet Across from Room 2	Green 9" x 9" Floor Tile & Mastic	**50**	S	2	4	2	1	2	2	1	C	**Updated Quantity**
Jarrettown ES	**Upper**	**Room 34**	**Beige 1' x 1' Floor Tile & Mastic**	**0**	**S**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**Sampled 3/30/26 and proven non-ACM**
Jarrettown ES	Upper	Room 31 (Book Room)	9" x 9" Floor Tile & Mastic	**460**	S	1	4	2	1	2	2	1	C	**Under Carpet, Updated Quantity**
Jarrettown ES	Upper	IT/Supply Closet at Maintenance	Tan 9" x 9" Floor Tile & Mastic	**210**	S	1	2	1	1	2	2	1	C	**Updated Quantity**
Jarrettown ES	**Upper**	**Kitchen Storage**	**Dark Blue 1' x 1' Floor Tile Mastic**	**260**	**S**	**1**	**2**	**1**	**1**	**2**	**2**	**1**	**C**	**Added April 2026 (pre-demo survey)**
Jarrettown ES	**Upper**	**Nurse's Suite**	**White w/Spec 1' x 1' Floor Tile Mastic**	**420**	**S**	**1**	**2**	**1**	**1**	**2**	**2**	**1**	**C**	**Added April 2026 (pre-demo survey)**
Jarrettown ES	**Upper**	**Classroom 1**	**Glue Dots on Concrete Beam**	**90**	**S**	**1**	**2**	**1**	**1**	**2**	**2**	**1**	**C**	**Added April 2026 (pre-demo survey)**
Jarrettown ES	**Upper**	**Stage**	**Stage Light Wiring**	****	**S**	**1**	**2**	**1**	**1**	**2**	**2**	*	*	**Added April 2026 (pre-demo survey)**
Jarrettown ES	**Upper**	**Crawlspace under Rms 32-38**	**Fitting Insulation on FGIP**	**5**	**Ea**	**1**	**2**	**1**	**1**	**2**	**2**	**1**	**C**	**Added April 2026 (pre-demo survey)**

C = Chrysotile
***= Assumed to be ACM, **= Not Quantified**
FGIP = Fiberglass-insulated Pipe

UPPER DUBLIN SCHOOL DISTRICT
JARRETTOWN ELEMENTARY SCHOOL
AHERA 3-YEAR RE-INSPECTION
APRIL 2026

Table 3 – Recommended Minimum Response Actions

Location/Material	Est. Quantity	Response Action
Throughout		
9” x 9” Floor Tile and Mastic	940 S.F.	Handle under O&M Program
Throughout		
Blackboard Mastic*	Not Quantified	Handle under O&M Program
Nurse’s Suite/Kitchen Storage		
1’ x 1’ Floor Tile Mastic	680 S.F.	Handle under O&M Program
Classroom 1		
Glue Dots on Concrete Beams	90 S.F.	Handle under O&M Program
All-Purpose Room Stage		
Stage Light Wiring*	Not Quantified	Handle under O&M Program
Crawlspace under Rooms 32-38		
Fitting Insulation on FGIP (Heating)	5 Fittings	Handle under O&M Program

*Material is assumed to be asbestos containing

FGIP = Fiberglass-Insulated Pipe

UPPER DUBLIN SCHOOL DISTRICT
JARRETTOWN ELEMENTARY SCHOOL
AHERA 3-YEAR RE-INSPECTION
APRIL 2026

Table 4 – Response Actions Taken Since Previous Re-Inspection

There were no documented abatement response actions taken since the previous AHERA 3-year re-inspection. The following sampling event occurred since the previous AHERA report:

On Monday, March 30, 2026, and Tuesday, April 28, 2026, E2S performed a hazardous materials investigation throughout the school, to support the planned future demolition of the building. Various materials were sampled and submitted to an accredited laboratory for analysis by Polarized Light Microscopy (PLM) to determine asbestos content. Please refer to the E2S report forwarded to Upper Dublin School District, dated May 8, 2026, for additional information. The ACM inventory (Table 2) for Jarrettown Elementary, along with Table 1 and Table 3, have been updated accordingly, with the results of the investigation.

AHERA Re-Inspection Assessment Factors and Values

Damaged Condition (DC)	-	0	Intact, Encapsulated
		1	Intact, Minor Water Stain
		2	Intact, Cover Poor, Moderate Stain, No Damage
		3	Minor Damage, Scrapes, etc., Duct Tape Repair
		5	Damage, Fix with Patch, Repair and Encapsulate
		7	Significant Damage, Some Removal Needed
		10	Very Significant Damage, Removal Mandated
Exposure Factor (E)	-	0	Inaccessible or Non-friable
		1	Very Limited Access
		2	Maintenance Area Like Boiler Room or Above 2x4's
		3	Public Area, 10 Feet and Higher
		4	Public Area, 10 Feet and Lower
Activity Level (AT)	-	0	Behind Walls, Locked Closet, etc.
		1	Low or Medium Usage (1-3 Persons, 8 Hr/Day)
		2	#1 with Vibration or Public Area
		4	High Activity (Gym, Loading Dock) and/or High Vibration
Air Flow Factor (AF)	-	0	No Impingement, Little or No Air Flow
		1	Low Air Flow or Air Velocity, No Impingement
		2	Air Stains, Moderate Velocity, Piston Effect
		4	High Air Velocity, Air Erosion
Potential Damage (PD)	-	0	No ACM
		1	ACM, No Potential Damage
		2	Possible Potential Damage
		3	Potential Damage Expected
		4	Possible Significant Potential Damage
		5	Significant Potential Damage Expected
Friability (F)	-	1	Non-Friable, Behind Walls, etc.
		2	Encapsulated, Ceiling Tile, Hard Surface
		3	Friable - Standard ACM and Fittings
		5	Highly Friable - Delaminating, "Fluffy" Fireproofing
Percent Asbestos (PA)	-	0 = No ACM	
		1 = >1% but <25% - Chrysotile Only	
		2 = 25% to 80% - Chrysotile Only	
		3 = >80% - or any percentage of amosite, crocidolite, anthophyllite, tremolite or actinolite	

Annual Parental Notification of Asbestos Management Plans (2026)

This notice is to inform all parents, faculty and staff of the availability of the asbestos management plan for each building under the jurisdiction of the Upper Dublin School District (UDSD), as required by law. In accordance with the Asbestos Hazard Emergency Response Act (AHERA), 40 CRF Part 763.93, UDSD conducted initial inspections of all the School District buildings for the presence of Asbestos-Containing Building Materials (ACBM) in 1988. An asbestos management plan for each building was developed at that time, detailing the location and condition of all ACBM along with the short-term actions to be taken to protect building occupants, and documentation of response actions. These management plans are available for review by any interested person at either the UDSD Administration Office located at 1580 Fort Washington Avenue, Maple Glen, PA, or at the individual school during normal working hours. AHERA regulations require re-inspections of all ACBM every three years by an accredited building inspector, and this includes an update of the Management Plan. The latest 3-year re-inspection and management plan update was provided by Element Environmental Solutions, Inc. in April 2026.

The AHERA regulations also require surveillance inspections of all ACBM every six months, by an individual with training and knowledge of ACM. Element Environmental Solutions, Inc. completed the most recent 6-month surveillance inspection, which occurred in April 2026, performed in conjunction with the AHERA 3-year re-inspection and management plan update. The next 6-month surveillance inspection is due in October 2026, per the AHERA regulations. These reports and management plan updates are also available for review by any interested person at either the UDSD Administration Office located at 1580 Fort Washington Avenue, Maple Glen, PA, or at the individual school during normal working hours.

ELEMENT ENVIRONMENTAL
S O L U T I O N S

May 8, 2026

Mr. Robert Lester
Director of Facilities
Upper Dublin School District
Administration Office
1580 Fort Washington Avenue
Maple Glen, PA 18045
(E-mail: rlester@udsd.org)

RE: Hazardous Materials Investigation (Pre-Demolition)
Jarrettown Elementary School
E2S Project 1040.0052

Dear Mr. Lester:

Element Environmental Solutions, Inc. (E2S) was contracted by the Upper Dublin School District (UDSD) to perform a hazardous materials investigation of the existing Jarrettown Elementary School located at 1520 Limekiln Pike, Dresher, Pennsylvania. The purpose of the investigation was to identify any hazardous materials that exist in the building, both interior and exterior, to determine what regulatory actions, if any, must be taken prior to the planned demolition of building.

Introduction

Representatives from E2S were on site on Monday, March 30, 2026 (initial visit), and Tuesday, April 28, 2026 (follow-up visit), to perform the hazardous materials investigation. The investigation included a visual inspection and sampling for asbestos-containing materials (ACM), a lead-based paint (LBP) inspection, a visual inspection for mercury and PCB-containing devices and equipment, and any other potentially hazardous or environmentally regulated materials. Our representatives, Messrs. David Bertsch, Michael Seifrit, and Boston Patton, are Environmental Protection Agency (EPA) certified Asbestos Building Inspectors and are licensed as such by the Pennsylvania Department of Labor and Industry (Pa DLI). In addition, Mr. Bertsch is an EPA-certified and PA-licensed Asbestos Management Planner and Lead Inspector/Risk Assessor. See Appendix B for copies of licenses.

Summary

E2S performed an initial walkthrough of the existing buildings, interior and exterior, to locate suspect ACM, perform the LBP testing, and locate suspect light ballasts, light tubes, electronic devices, etc., and documented all findings on field data forms. Based upon the visual inspection, bulk samples were collected of suspect ACM, as necessary, based on previous sampling, and were submitted to an accredited laboratory for asbestos analysis by Polarized Light Microscopy (PLM). The laboratory utilized for this project was: EMSL Analytical, Inc. located in Cinnaminson, New Jersey. EMSL is an American Industrial Hygiene Association (AIHA) and National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory for PLM analyses.

Samples were not collected of suspect materials for liquid PCB's (ballasts, transformer oil, etc.) due to destructive sampling methods required and potential electrical hazards; however, E2S visually inspected labels and devices for documentation pertaining to the content of the materials. If required, assumptions were made to err on the side of caution when handling and disposing of these materials.

The results and findings of the investigation are summarized below and on the referenced tables, for each material referenced above.

Asbestos

The following suspect materials were previously identified, sampled, and determined to contain asbestos at EPA-regulated levels (>1%):

- **9" x 9" Floor Tile**
- **9" x 9" Floor Tile Mastic (Black)**

The following suspect materials were identified, sampled, and determined to contain asbestos at EPA-regulated levels (>1%) during this investigation:

- **Mud Fitting (Gray/White) on FGIP (Fiberglass Insulated Pipe) – Crawlspace (Heating)**
- **White with Beige Spec 1' x 1' Floor Tile Mastic (Black/Yellow) – Nurse's Suite**
- **Dark Blue 1' x 1' Floor Tile Mastic (Black) – Kitchen Storage**
- **Ceiling Glue Dot (Brown/Gray/Tan) – Classroom 1 (Concrete Beam)**

The following suspect materials were identified and assumed (inaccessible) to contain asbestos at EPA-regulated levels (>1%) until sampling is feasible:

- Chalkboard/Tackboard Adhesive – Throughout
- Stage Light Wiring – All-Purpose Room (APR) Stage

The following suspect materials were identified, sampled, and determined **NOT** to contain asbestos:

- Carpet Glue/Mastic (Tan/Black/Yellow)
- Mud Fitting Wrap on FGIP
- Exterior Vent Caulk
- Exterior Window Caulk
- Exterior Building Expansion Caulk
- 2' x 4' Dot Ceiling Tile
- 2' x 2' Decorative Ceiling Tile
- Light Brown Spec 1' x 1' Floor Tile
- Light Brown Spec 1' x 1' Floor Tile Mastic (Gray/Black/Clear)
- Tan Spec 1' x 1' Floor Tile
- Tan Spec 1' x 1' Floor Tile Mastic (Black/Yellow/Clear)
- White with Beige Spec 1' x 1' Floor Tile
- 2' x 4' Fissure Face Ceiling Tile
- 1' x 1' Spline Ceiling Tile
- Mud Fittings (Gray) on FGIP (Above Ceilings – Plumbing)

- Aqua 1’ x 1’ Floor Tile
- Aqua 1’ x 1’ Floor Tile Mastic (Yellow)
- Tan with Brown Spec 1’ x 1’ Floor Tile
- Tan with Brown Spec 1’ x 1’ Floor Tile Mastic (Yellow/Clear)
- Rust 1’ x 1’ Floor Tile
- Rust 1’ x 1’ Floor Tile Mastic (Black/Yellow)
- White with Blue Spec 1’ x 1’ Floor Tile
- Blue 1’ x 1’ Floor Tile
- Blue 1’ x 1’ Floor Tile Mastic (Yellow)
- Light Blue/Blue Checkered 1’ x 1’ Floor Tile
- Light Blue/Blue Checkered 1’ x 1’ Floor Tile Mastic (Yellow)
- Dark Blue 1’ x 1’ Floor Tile
- Brown with Spec 1’ x 1’ Floor Tile (1990’s Addition)
- Brown with Spec 1’ x 1’ Floor Tile Mastic (Black/Clear) (1990’s Addition)
- Ceiling Plaster – Base Coat (Brown/Gray)
- Ceiling Plaster – Skim Coat (White)
- Rough Ceiling Plaster – Base Coat (Gray) – Boiler Room
- Rough Ceiling Plaster – Skim Coat (White) – Boiler Room
- Incinerator Fire Brick
- Flue Patch
- Floor Tile Mastic (Black/Yellow) – Classroom 1
- Floor Tile Mastic (Bronw/White/Black) – Corridor o/s Classroom 1

Please refer to Table 1 for a summary of asbestos bulk sample analytical results, and Table 3 for a summary of findings and cost estimates for removal of asbestos-containing materials identified.

Lead

E2S performed paint chip sampling for lead content, of various painted surfaces and components to support the planned demolition of the building, for informational purposes. The EPA/HUD definition of LBP (>or= 0.5 % wt. as determined by laboratory analysis) was used as a threshold to identify LBP.

The following painted surfaces were identified, sampled, and determined to contain lead at the EPA/HUD lead-based paint (LPB) level, as defined above:

- None

The following painted surfaces were identified, tested, and determined to contain lead at detectable levels, but well below the EPA/HUD lead-based paint (LPB) level, as defined above:

- Throughout Interior – Block Wall Paint
- Throughout Interior – Metal Door Frame Paint
- Boiler Room – Floor Paint
- Exterior – Concrete Soffit Paint

Although none of the surfaces tested contained LBP, surfaces containing any amounts of lead, are regulated by Occupational Health and Safety Administration (OSHA). Therefore, all construction work that impacts painted components containing lead shall be performed in accordance with the OSHA Lead-in Construction Standard (29 CFR 1926.62) and a proper waste management plan shall be utilized to certify that the waste is properly disposed or recycled, as applicable. Contractors working on the project are responsible for fulfilling all applicable OSHA requirements pertaining to lead, as well as all other applicable federal, state, or local requirements or regulations pertaining to lead-in construction. Please refer to Table 2 for a summary of lead-based paint chip sampling results.

PCB's/Mercury (Light Tubes and Ballasts, etc.)

Light ballasts were randomly inspected, and the ballasts visually checked were either Magnetek Triad ballasts, Advance Mark III ballasts, or Advance electronic ballasts which were all labeled "No PCB's". E2S recommends the ballasts be removed prior to demolition and sent for recycling to a facility that accepts non-PCB containing light ballasts as part of their universal waste recycling program.

Fluorescent light tubes were also visually inspected, and the light tubes visually checked were either Sylvania Octron, or Sylvania Supersaver and are assumed to contain amounts of mercury that could deem them "hazardous waste" for disposal purposes. E2S recommends the tubes be removed prior to demolition and sent for recycling as universal waste, to a facility that accepts mercury-containing light tubes as part of their universal waste recycling program.

E2S visually inspected electrical and mechanical equipment and devices, and any other suspect hazardous materials, and identified various exit signs, smoke detectors, and emergency lighting that could potentially contain hazardous materials (lead-acid batteries, Tritium, Americium-241, etc.), along with various thermostats and thermometers and devices that could potentially contain mercury. We recommend a certified recycling facility is utilized to handle all mercury/PCB and other hazardous material recycling and disposal (universal waste). Please refer to Table 3 for a summary of findings and cost estimates for recycling non-PCB and Mercury containing materials identified, as applicable.

Laboratory analytical reports from EMSL Analytical, Inc. with PLM asbestos bulk sample analysis results can be found in Appendix A and accreditations (certifications and licenses) for E2S representatives can be found in Appendix B.

Thank you for the opportunity to present Element Environmental Solutions (E2S) as a partner in your environmental management efforts. Should you have questions or require additional information, please contact me.

Sincerely,
E2S, Inc.



David C. Bertsch
Operations Manager, IAQ

Table 1 - Asbestos Bulk Sample Analytical Results - UDSD - Jarrettown Elementary School

Sample Number	Sample Date	Location	Material Description	Analytical Result (PLM)
JES-3/30-01BK	3/30/2026	Library Hallway	Carpet Glue/Mastic (Tan/Black/Yellow)	None Detected
JES-3/30-02BK-Fitting	**3/30/2026**	**Crawlspace under Hallway at Room 37**	**Mud Fitting (Gray/White) on FGIP (Heating)**	**10% Chrysotile**
JES-3/30-02BK-Wrap	3/30/2026	Crawlspace under Hallway at Room 37	Mud Fitting Wrap on FGIP	None Detected
JES-3/30-03BK	3/30/2026	Exterior	Vent Caulk	None Detected
JES-3/30-04BK	3/30/2026	Exterior	Window Caulk	None Detected
JES-3/30-05BK	3/30/2026	Exterior	Building Expansion Caulk	None Detected
JES-3/30-06BK	3/30/2026	Hallway Right of Classroom 7	2' x 4' Dot Ceiling Tile	None Detected
JES-3/30-07BK	3/30/2026	Library	2' x 2' Decorative Ceiling Tile	None Detected
JES-3/30-08BK-FT	3/30/2026	Hallway near Classroom 34	Light Brown Spec 1' x 1' Floor Tile	None Detected
JES-3/30-08BK-Mastic	3/30/2026	Hallway near Classroom 34	Light Brown Spec 1' x 1' Floor Tile Mastic (Gray/Black/Clear)	None Detected
JES-3/30-09BK-FT	3/30/2026	Library Hallway	Tan Spec 1' x 1' Floor Tile	None Detected
JES-3/30-09BK-Mastic	3/30/2026	Library Hallway	Tan Spec 1' x 1' Floor Tile Mastic (Black/Yellow/Clear)	None Detected
JES-3/30-10BK-FT	3/30/2026	Nurse's Suite	White with Beige Spec 1' x 1' Floor Tile	None Detected
JES-3/30-10BK-Mastic	**3/30/2026**	**Nurse's Suite**	**White with Beige Spec 1' x 1' Floor Tile Mastic (Black/Yellow)**	**4% Chrysotile**
JES-3/30-11BK	3/30/2026	Classroom 36	2' x 4' Fissure Face Ceiling Tile	None Detected
JES-3/30-12BK	3/30/2026	Classroom 36	1' x 1' Spline Ceiling Tile	None Detected
JES-3/30-13BK-Fitting	3/30/2026	Classroom 36	Mud Fitting (Gray) on FGIP (Plumbing)	None Detected
JES-3/30-13BK-Wrap	3/30/2026	Classroom 36	Mud Fitting Wrap on FGIP	None Detected
JES-3/30-14BK-FT	3/30/2026	Stage Storage	Aqua 1' x 1' Floor Tile	None Detected
JES-3/30-14BK-Mastic	3/30/2026	Stage Storage	Aqua 1' x 1' Floor Tile Mastic (Yellow)	None Detected
JES-3/30-15BK-FT	3/30/2026	Teacher Workshop	Tan with Brown Spec 1' x 1' Floor Tile	None Detected
JES-3/30-15BK-Mastic	3/30/2026	Teacher Workshop	Tan with Brown Spec 1' x 1' Floor TileMastic (Yellow/Clear)	None Detected
JES-3/30-16BK-FT	3/30/2026	Cafeteria	Rust 1' x 1' Floor Tile	None Detected
JES-3/30-16BK-Mastic	3/30/2026	Cafeteria	Rust 1' x 1' Floor Tile Mastic (Black/Yellow)	None Detected
JES-3/30-17BK-FT	3/30/2026	Main Lobby	White with Blue Spec 1' x 1' Floor Tile	None Detected
JES-3/30-18BK-FT	3/30/2026	Classroom 4	Blue 1' x 1' Floor Tile	None Detected
JES-3/30-18BK-Mastic	3/30/2026	Classroom 4	Blue 1' x 1' Floor Tile Mastic (Yellow)	None Detected
JES-3/30-19BK	3/30/2026	Classroom 4	1' x 1' Spline Ceiling Tile	None Detected
JES-3/30-20BK	3/30/2026	Hallway at Maintenance	Mud Fitting (Gray) on FGIP (Plumbing)	None Detected
JES-3/30-21BK-FT	3/30/2026	Classroom 6	Light Blue/Blue Checkered 1' x 1' Floor Tile	None Detected
JES-3/30-21BK-Mastic	3/30/2026	Classroom 6	Light Blue/Blue Checkered 1' x 1' Floor Tile Mastic (Yellow)	None Detected
JES-3/30-22BK-FT	3/30/2026	Kitchen Storage	Dark Blue 1' x 1' Floor Tile	None Detected
JES-3/30-22BK-Mastic	**3/30/2026**	**Kitchen Storage**	**Dark Blue 1' x 1' Floor Tile Mastic (Black)**	**6% Chrysotile**
JES-3/30-23BK	3/30/2026	Mainteance Area	Mud Fitting (Gray) on FGIP (Plumbing)	None Detected
JES-3/30-24BK-FT	3/30/2026	Lower Level Hallway (1990s)	Brown with Spec 1' x 1' Floor Tile	None Detected
JES-3/30-24BK-Mastic	3/30/2026	Lower Level Hallway (1990s)	Brown with Spec 1' x 1' Floor Tile Mastic (Black/Clear)	None Detected
JES-3/30-25BK	**3/30/2026**	**Classroom 1**	**Ceiling Glue Dot (Brown/Gray/Tan)**	**3% Chrysotile**
JES-3/30-26BK-Plaster	3/30/2026	Faculty Room Bathroom	Ceiling Plaster - Base Coat (Brown/Gray)	None Detected
JES-3/30-26BK-Joint Compound	3/30/2026	Faculty Room Bathroom	Ceiling Plaster - Skim Coat (White)	None Detected
JES-3/30-27BK-Plaster	3/30/2026	Boiler Room	Rough Ceiling Plaster - Base Coat (Gray)	None Detected
JES-3/30-27BK-Skim Coat	3/30/2026	Boiler Room	Rough Ceiling Plaster - Skim Coat (White)	None Detected
JES-3/30-28BK	3/30/2026	Boiler Room	Incinerator Fire Brick	None Detected
JES-3/30-29BK	3/30/2026	Boiler Room	Flue Patch	None Detected
JES-4/28-01BK	4/28/2026	Classroom 1	Floor Tile Mastic (Black/Yellow)	None Detected
JES-4/28-02BK	4/28/2026	Hallway outside Classroom 1	Floor Tile Mastic (Brown/White/Black)	None Detected

FGIP = Fiberglass-Insulated Pipe
EPA definition of asbestos-containing material (ACM) = >1% asbestos (line items BOLD)

E2S Project 1056.0052
5/8/2026

Table 2 - Lead Paint Chip Sample Analytical Results - UDSD - Jarrettown Elementary School

Sample Number	Location	Material Description	Analytical Result (Flame AAS)
JES-3/30-01PC	Interior - Throughout	Block Wall Paint (Composite)	0.13 % wt.
JES-3/30-02PC	Interior - Throughout	Metal Door Frame Paint (Composite)	0.058 % wt.
JES-3/30-03PC	Boiler Room	Floor Paint	0.038 % wt.
JES-3/30-04PC	Exterior	Concrete Soffit Paint	0.022 % wt.

Table 3 - Summary of Findings and Estimated Removal Costs - UDSD - Jarrettown Elementary School

Location	Material Description	Estimated Quantity	Estimated Cost
Throughout	ACM (Assumed) Chalkboard/Tack-Board Adhesive	Not Quantified	N/A
APR/Stage	ACM (Assumed) Stage Light Wiring	Not Quantified	N/A
Classroom 1	ACM Ceiling Glue Dots (Brown/Gray/Tan)	90 S.F.	$3,000.00
Throughout (some U.C.)	ACM 9" x 9" Floor Tile and Mastic (Black)	940 S.F.	$6,000.00
Crawlspace under Rms 32-38*	ACM Mud Fitting on Fiberglass Insulated Pipe (FGIP)*	5 Fittings (accessible)	$500.00
Nurse's Suite	ACM White w/Beige Spec 1' x 1' Floor Tile Mastic (Black/Yellow)	420 S.F.	$2,500.00
Kitchen Storage	ACM Dark Blue 1' x 1' Floor Tile Mastic (Black)	260 S.F.	$1,500.00
N/A	Quantity Allowances (TBD)	TBD	$10,000.00
Site Mobilization Fee		1	$1,500.00
TOTAL - Asbestos Abatement (Includes identified ACM only, assumed ACM to be determined upon sampling)			**$25,000.00**
Throughout	Light Tubes (Assumed Mercury-Containing)	2,290 Tubes	$2,290.00
Throughout	Light Ballasts (No PCB's)	1,020 Ballasts	$2,040.00
Boiler Rooms	Thermometers	7 Thermometers	$35.00
Throughout	Misc. Devices (Thermostats, Smoke Detectors, Exit Signs, Emergency Lighting, etc.)	Not Quantified	$635.00
TOTAL - Hazardous Materials (Recycling fees only, does not include labor for removal or transportation fees)			**$5,000.00**

***Additional ACM mud fittings on FGIP (heating pipe) may exist in the crawlspaces (inaccessible/demo required)**

U.C. = Under Carpet

Appendix A

Laboratory Analytical Reports – EMSL Analytical, Inc.

Asbestos Bulk - Polarized Light Microscopy (PLM)

Lead Paint Chip – Flame Atomic Absorption Spectroscopy (AAS)

EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042606168
Customer ID:	ELES42
Customer PO:	1056.0052
Project ID:	

Attention:	David Bertsch	**Phone:**	(717) 484-5111
	Element Environmental Solutions, Inc.	**Fax:**	
	61 Willow Street	**Received Date:**	04/01/2026 9:30 AM
	PO Box 921	**Analysis Date:**	04/08/2026 - 04/09/2026
	Adamstown, PA 19501	**Collected Date:**	03/30/2026
Project:	UDSD - Jarettown ES		

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
JES-3/30-01BK *042606168-0001*	Library Hallway - Carpet Glue/Mastic	Tan/Black/Yellow Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
JES-3/30-02BK-Fitting *042606168-0002*	Crawlspace under Hallway at Rm 37 - Mud Fitting on FGIP	Gray/White Fibrous Homogeneous	55% Min. Wool	35% Non-fibrous (Other)	**10% Chrysotile**
JES-3/30-02BK-Wrap *042606168-0002A*	Crawlspace under Hallway at Rm 37 - Wrap on FGIP	Gray/White Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
JES-3/30-03BK *042606168-0003*	Exterior - Vent Caulk	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
JES-3/30-04BK *042606168-0004*	Exterior - Window Caulk	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
JES-3/30-05BK *042606168-0005*	Exterior - Bldg Expansion Caulk	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
JES-3/30-06BK *042606168-0006*	Hallway Right of Classroom 7 - Dot Ceiling Tile 2x4	Gray/White Fibrous Homogeneous	40% Cellulose 30% Min. Wool	10% Perlite 20% Non-fibrous (Other)	None Detected
JES-3/30-07BK *042606168-0007*	Library - 2x2 Ceiling Tile	Gray/White Fibrous Homogeneous	35% Cellulose 45% Min. Wool	20% Non-fibrous (Other)	None Detected
JES-3/30-08BK-FT *042606168-0008*	Hallway near Classroom 34 - Lt. Brown Spec 1x1 FT	Brown/Tan Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
JES-3/30-08BK-Mastic *042606168-0008A*	Hallway near Classroom 34 - Mastic	Gray/Black/Clear Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
JES-3/30-09BK-FT *042606168-0009*	Library Hallway - Tan Spec 1x1 FT	Tan Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
JES-3/30-09BK-Mastic *042606168-0009A*	Library Hallway - Mastic	Black/Yellow/Clear Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
JES-3/30-10BK-FT *042606168-0010*	Nurse Suite - White w/ Beige Spec 1x1 FT	White/Beige Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
JES-3/30-10BK-Mastic *042606168-0010A*	Nurse Suite - Mastic	Black/Yellow Non-Fibrous Heterogeneous		96% Non-fibrous (Other)	**4% Chrysotile**
JES-3/30-11BK *042606168-0011*	Classroom 36 - 2x4 Fissure Ceiling Tile	Gray/White Fibrous Homogeneous	55% Cellulose 10% Min. Wool	15% Perlite 20% Non-fibrous (Other)	None Detected
JES-3/30-12BK *042606168-0012*	Classroom 36 - Spline Ceiling Tile (1x1)	Brown/White Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected

Initial report from: 04/09/2026 08:28:16

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042606168
Customer ID:	ELES42
Customer PO:	1056.0052
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
JES-3/30-13BK-Fitting *042606168-0013*	Classroom 36 - Mud Fitting on FGIP	Gray Non-Fibrous Homogeneous	55% Min. Wool	45% Non-fibrous (Other)	None Detected
JES-3/30-13BK-Wrap *042606168-0013A*	Classroom 36 - Wrap on FGIP	Gray/White Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
JES-3/30-14BK-FT *042606168-0014*	Stage Storage - Aqua 1x1 FT	Blue Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
JES-3/30-14BK-Mastic *042606168-0014A*	Stage Storage - Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
JES-3/30-15BK-FT *042606168-0015*	Teacher Workshop - Tan w/ Brown Spec 1x1 FT	Brown/Tan Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
JES-3/30-15BK-Mastic *042606168-0015A*	Teacher Workshop - Mastic	Yellow/Clear Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
JES-3/30-16BK-FT *042606168-0016*	Cafeteria - Rust 1x1 FT	Rust Non-Fibrous Homogeneous		40% Quartz 60% Non-fibrous (Other)	None Detected
JES-3/30-16BK-Mastic *042606168-0016A*	Cafeteria - Mastic	Black/Yellow Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
JES-3/30-17BK-FT *042606168-0017*	Main Lobby - White w/ Blue Spec 1x1 FT	White/Blue Non-Fibrous Homogeneous		40% Quartz 60% Non-fibrous (Other)	None Detected
JES-3/30-17BK-Mastic *042606168-0017A*	Main Lobby - Mastic				**Layer Not Present**
JES-3/30-18BK-FT *042606168-0018*	Classroom 4 - Blue 1x1 FT	Blue Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
JES-3/30-18BK-Mastic *042606168-0018A*	Classroom 4 - Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
JES-3/30-19BK *042606168-0019*	Classroom 4 - Spline Ceiling Tile (1x1)	Tan/White Fibrous Homogeneous	85% Min. Wool	15% Non-fibrous (Other)	None Detected
JES-3/30-20BK *042606168-0020*	Hallway at Maintenance - Mud Fitting on FGIP	Gray Fibrous Homogeneous	60% Min. Wool	40% Non-fibrous (Other)	None Detected
JES-3/30-21BK-FT *042606168-0021*	Classroom 6 - Lt. Blue/Blue Checkered 1x1 FT	Blue Non-Fibrous Heterogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
JES-3/30-21BK-Mastic *042606168-0021A*	Classroom 6 - Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
JES-3/30-22BK-FT *042606168-0022*	Kitchen Storage - Dark Blue 1x1 FT	Gray/Blue Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
JES-3/30-22BK-Mastic *042606168-0022A*	Kitchen Storage - Mastic	Black Non-Fibrous Homogeneous		94% Non-fibrous (Other)	**6% Chrysotile**
JES-3/30-23BK *042606168-0023*	Maintenance Area - Mud Fitting on FGIP	Gray Fibrous Homogeneous	55% Min. Wool	45% Non-fibrous (Other)	None Detected

Initial report from: 04/09/2026 08:28:16

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042606168
Customer ID:	ELES42
Customer PO:	1056.0052
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
JES-3/30-24BK-FT *042606168-0024*	Lower Level/Hallway (1990's) - Brown w/Spec 1x1 FT	Brown/Tan/White Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
JES-3/30-24BK-Mastic *042606168-0024A*	Lower Level/Hallway (1990's) - Mastic	Black/Clear Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
JES-3/30-25BK *042606168-0025*	Classroom 1 - Ceiling Glue Dot	Brown/Gray/Tan Non-Fibrous Homogeneous		97% Non-fibrous (Other)	**3% Chrysotile**
JES-3/30-26BK-Plaster *042606168-0026* *Sample is drywall*	Faculty Room Bathroom - Ceiling Plaster	Brown/Gray Fibrous Homogeneous	15% Cellulose	65% Gypsum 20% Non-fibrous (Other)	None Detected
JES-3/30-26BK-Joint Compound *042606168-0026A*	Faculty Room Bathroom - Ceiling Joint Compound	White Non-Fibrous Homogeneous		65% Ca Carbonate 35% Non-fibrous (Other)	None Detected
JES-3/30-27BK-Plaster *042606168-0027*	Boiler Room - Ceiling Plaster	Gray Non-Fibrous Homogeneous		60% Gypsum 10% Perlite 30% Non-fibrous (Other)	None Detected
JES-3/30-27BK-Skim Coat *042606168-0027A*	Boiler Room - Ceiling Skim Coat	White Non-Fibrous Homogeneous		10% Quartz 60% Ca Carbonate 30% Non-fibrous (Other)	None Detected
JES-3/30-28BK *042606168-0028*	Boiler Room - Incinerator Fire Brick	Gray/Tan Non-Fibrous Heterogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
JES-3/30-29BK *042606168-0029*	Boiler Room - Flue Patch	Gray Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected

Analyst(s)
Megan Peters (43)

Samantha Sweeney, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA LAP, LLC-IHLAP Lab 100194, PA ID# 68-00367, LA #04127

Initial report from: 04/09/2026 08:28:16

OrderID: 042606168

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (*Lab Use Only*): 042606168

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

Company : Element Environmental Solutions	**EMSL-Bill to:** ☑ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 61 Willow Street PO Box 921	
City: Adamstown **State/Province:** PA	**Zip/Postal Code:** 19501 **Country:** United States
Report To (Name): David Bertsch	**Telephone #:** 717-484-5111
Email Address: IAQ@e2s.us	**Fax #:** **Purchase Order:** 056.0052
Project Name/Number: UDSD – Jarrettown ES	**Please Provide Results:** ☐ Fax ☑ Email ☐ Mail
U.S. State Samples Taken: PA	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☑ 1 Week ☐ 2 Week

For TEM Air 3 hr through 6 hr, please call ahead to schedule. There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PLM - Bulk (reporting limit)	TEM – Bulk
☑ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☐ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☐
☐ Standard Addition Method	

RECEIVED
EMSL
CINNAMINSON, NJ
2026 APR -1 P 2:00

☐ **Check For Positive Stop – Clearly Identify Homogenous Group** **Date Sampled:** 3-30-26

Samplers Name: David Bertsch **Samplers Signature:**

Sample #	HA #	Sample Location	Material Description
JES-3/30	-01BK	Library Hallway	Carpet Glue / Mastic
"	-02BK	Crawlspace under hallway @ Rm 37	Mud Fitting on FHLP
"	-03BK	Exterior	Vent Caulk
"	-04BK	↓	Window Caulk
"	-05BK		Bldg Expansion Caulk
"	-06BK	Hallway Right of Classroom 7	Dot Ceiling Tile 2x4
"	-07BK	Library	2x2 Ceiling Tile
"	-08BK	Hallway near Class Rm 34	Lt. Brown Spec 1x1 FT/M
"	-09BK	Library Hallway	Tan Spec 1x1 FT/M
↓	-10BK	nurse suite	White w/ Beige Spec 1x1 FT/M

Client Sample # (s): **Total # of Samples:**

Relinquished (Client): **Date:** 3/31/26 **Time:** Fed Ex

Received (Lab): EFY **Date:** 4/1/26 **Time:** 930

Comments/Special Instructions:

OrderID: 042606168

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*: 042606168

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
JES-3/30-11BK		Classroom 36	2X4 Fissure Ceiling Tile
	12BK	Classroom 36	Spline Ceiling Tile (1x1)
	13BK	Classroom 36	Mud fitting on FGIP
	14BK	Stage Storage	Aqua 1x1 FT/M
	15BK	Teacher Workshop	Tan w/Brown Spec 1x1 FT/M
	16BK	Cafeteria	Rust 1x1 FT/M
	17BK	main Lobby	White w/Blue Spec 1x1 FT/M
	18BK	Class-Room 4	Blue 1x1 FT/M
	19BK	Classroom 4	Spline Ceiling Tile (1x1)
	20BK	Hallway at Maintenance	Mud Fitting on FGIP
	21BK	Classroom 6	Lt. Blue/Blue Checkered 1x1 FT/M
	22BK	Kitchen Storage	Dark Blue 1x1 FT/M
	23BK	Maintenance Area	Mud Fitting on FGIP
	24BK	Lower Level/Hallway (1990's)	Brown w/spec 1x1 FT/M
	25BK	Classroom 1	Ceiling Glue Dot
	26BK	Faculty Room Bathroom	Ceiling Plaster
	27BK	Boiler Room	Ceiling Plaster
	28BK	↓	Incinerator Fire Brick
	29BK		Flue Patch
	[redacted]		

RECEIVED
EMSL
CINNAMINSON, NJ
2026 APR -1 P 12:04

*Comments/Special Instructions:

Page 2 of 2 pages

EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077

Tel/Fax: (800) 220-3675 / (856) 786-5974

http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042608341
Customer ID:	ELES42
Customer PO:	1056.0052
Project ID:	

Attention:	David Bertsch	**Phone:**	(717) 484-5111
	Element Environmental Solutions, Inc.	**Fax:**	
	61 Willow Street	**Received Date:**	04/29/2026 9:55 AM
	PO Box 921	**Analysis Date:**	05/03/2026
	Adamstown, PA 19501	**Collected Date:**	04/28/2026
Project:	UDSD - Jarrettown ES		

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
JES-4/28-01Bk	Classroom 1 - Floor Tile Mastic	Black/Yellow Fibrous Heterogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected
042608341-0001					
Result includes a small amount of inseparable attached material					
JES-4/28-02Bk	Hallway outside Classroom 1 - Floor Tile Mastic	Brown/White/Black Non-Fibrous Heterogeneous	5% Cellulose	45% Matrix 50% Non-fibrous (Other)	None Detected
042608341-0002					
Result includes a small amount of inseparable attached material					

Analyst(s)

Brian Napper II (1)

Jannat Fareen (1)

Samantha Sweeney

Samantha Sweeney, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations . The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 “Interim Method”) but augmented with procedures outlined in the 1993 (”final”) version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis . Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA LAP, LLC-IHLAP Lab 100194, PA ID# 68-00367, LA #04127

Initial report from: 05/04/2026 11:45:37

OrderID: 042608341

EMSL Analytical, Inc.
200 Route 130 North

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

EMSL ANALYTICAL, INC.
LABORATORY•PRODUCTS•TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (*Lab Use Only*): 042608341

Company : Element Environmental Solutions	**EMSL-Bill to:** ☑ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 61 Willow Street PO Box 921	
City: Adamstown **State/Province:** PA	**Zip/Postal Code:** 19501 **Country:** United States
Report To (Name): David Bertsch	**Telephone #:** 717-484-5111
Email Address: IAQ@e2s.us	**Fax #:** **Purchase Order:** 1056.0052
Project Name/Number: UDSD - Jarrettown ES	**Please Provide Results:** ☐ Fax ☑ Email ☐ Mail
U.S. State Samples Taken: PA	**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☒ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PLM - Bulk (reporting limit)	TEM – Bulk
☒ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☐ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 (TEM)
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1 (friable in NY)	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
☐ OSHA ID-191 Modified	☐
☐ Standard Addition Method	

RECEIVED EMSL CINNAMINSON, NJ 22b APR 29 A 11:55

☐ **Check For Positive Stop – Clearly Identify Homogenous Group** **Date Sampled:** 4/28/2026

Samplers Name: Michael Seifert **Samplers Signature:** [signature]

Sample #	~~HA #~~	Sample Location	Material Description
JES-4/28	-01 ~~BK~~	Classroom 1	Floor Tile Mastic
JES-4/28	-02 ~~BK~~	Hallway outside Classroom 1	Floor Tile Mastic

Client Sample # (s): - **Total # of Samples:** 2

Relinquished (Client): [signature] **Date:** 4/29/2026 **Time:**

Received (Lab): EF+ **Date:** 4/29/26 **Time:** 955

Comments/Special Instructions:

Page 1 of 1 pages

2JAD

EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:cs@emsl.com
www.emsl.com

EMSL Order ID: 012615308
LIMS Reference ID: AE15308
EMSL Customer ID: ELES42

Attention: Dave Bertsch
Element Environmental Solutions, Inc. [ELES42]
61 Willow Street, PO Box 921
Adamstown, PA 19501
(717) 484-5111
IAQ@e2s.us

Project Name: UDSD-Jarrettown ES

Customer PO:
EMSL Sales Rep: Christine Cutler
Received: 04/01/2026 09:30
Reported: 04/08/2026 18:20

Analytical Results

Analyte	Results	RL	Weight	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: JES-3/30-01PC/Throughout (Composit) Block Walls								**Date Sampled: 03/30/26**	
Matrix: Chips								**LIMS Reference ID: AE15308-01**	
Lead	0.13 % wt	0.016 % wt	0.0982 g	04/08/26 TMC	SW-846 3050B	04/08/26 PMx	SW846-7000B	Pb7	1
Client Sample ID: JES-3/30-02PC/Throughout (Composit) Metal Door Frames								**Date Sampled: 03/30/26**	
Matrix: Chips								**LIMS Reference ID: AE15308-02**	
Lead	0.058 % wt	0.0064 % wt	0.2577 g	04/08/26 TMC	SW-846 3050B	04/08/26 PMx	SW846-7000B	Pb7	1
Client Sample ID: JES-3/30-03PC/Boiler Room -Painted Concrete Floors								**Date Sampled: 03/30/26**	
Matrix: Chips								**LIMS Reference ID: AE15308-03**	
Lead	0.038 % wt	0.0064 % wt	0.2612 g	04/08/26 TMC	SW-846 3050B	04/08/26 PMx	SW846-7000B	Pb7	1
Client Sample ID: JES-3/30-04PC/Exterior Painted Concrete Soffits								**Date Sampled: 03/30/26**	
Matrix: Chips								**LIMS Reference ID: AE15308-04**	
Lead	0.022 % wt	0.0064 % wt	0.2648 g	04/08/26 TMC	SW-846 3050B	04/08/26 PMx	SW846-7000B	Pb7	1

EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:cs@emsl.com
www.emsl.com

EMSL Order ID: 012615308
LIMS Reference ID: AE15308
EMSL Customer ID: ELES42

Attention: Dave Bertsch
Element Environmental Solutions, Inc. [ELES42]
61 Willow Street, PO Box 921
Adamstown, PA 19501
(717) 484-5111
IAQ@e2s.us

Project Name: UDSD-Jarrettown ES

Customer PO:
EMSL Sales Rep: Christine Cutler
Received: 04/01/2026 09:30
Reported: 04/08/2026 18:20

Certified Analyses included in this Report

Analyte	Certifications
SW846-7000B in Chips	
Lead	AIHA LAP

List of Certifications

Code	Description	Number	Expires
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2026
AIHA LAP	American Industrial Hygiene Association (AIHA LAP, LLC)	100194	04/01/2027
NYSDOH	New York State Department of Health ELAP	10872	04/01/2026
California ELAP	California Water Boards	1877	06/30/2026
A2LA	A2LA Environmental Certificate	2845.01	07/31/2026
21-A2LA	A2LA Food Chem/Mat Sci	2845.15	07/31/2026
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2026
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2026
CTDPH	Connecticut Department of Public Health	PH-0270	06/30/2026

Please see the specific Field of Testing (FOT) on www.emsl.com <http://www.emsl.com> for a complete listing of parameters for which EMSL is certified.

Notes and Definitions

Item	Definition
Pb7	The RLVS recovery for Lead was outside of the method control limits.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DA	Direct Analysis
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the reporting limit, or the mdl if provided.
NR	Spike/Surrogate showed no recovery.
Q	Qualifier
RCS	Respirable Crystalline Silica
RL	Reporting Limit For paint chips, the RL is 0.0064% by wt. (equiv. to 64 mg/kg, or ppm) based upon a minimum sample weight of 0.25 grams. For soils, the RL is 32 mg/kg (ppm) based upon a minimum sample weight of 0.5 grams. For dust wipes, the RL is 8 µg/wipe; reporting units of µg/sq. ft. are not validated by the lab based upon data provided by non-lab personnel.
Wet	Sample is not dry weight corrected.

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.

EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:cs@emsl.com
www.emsl.com

EMSL Order ID: 012615308
LIMS Reference ID: AE15308
EMSL Customer ID: ELES42

Attention: Dave Bertsch
Element Environmental Solutions, Inc. [ELES42]
61 Willow Street, PO Box 921
Adamstown, PA 19501
(717) 484-5111
IAQ@e2s.us

Project Name: UDSD-Jarrettown ES

Customer PO:
EMSL Sales Rep: Christine Cutler
Received: 04/01/2026 09:30
Reported: 04/08/2026 18:20



Owen McKenna Laboratory Manager or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. QC sample results are within quality control criteria and met method specifications unless otherwise noted. All results for soil samples are reported on a dry weight basis, unless otherwise noted.

Analysis following EMSL SOP for the Determination of Environmental Lead by FLAA. The laboratory has a reporting limit of 0.0064% by wt., based upon a minimum sample weight of 0.25g submitted to the lab, and is not responsible for any result or reporting limit provided in mg/cm2 since it is dependent upon an area value provided by non-lab personnel. A "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty and definitions of modifications are available upon request. Results in this report are not blank corrected unless specified.

EMSL Analytical, Inc.
200 Route 130 North

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Lead (Pb) Chain of Custody

EMSL Order ID *(Lab Use Only):* AE15308

Company: Element Environmental Solutions, Inc.		**EMSL-Bill to:** ☐ Different ☑ Same If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*	
Street: 61 Willow Street P.O. Box 921			
City: Adamstown	**State/Province:** PA	**Zip/Postal Code:** 19501	**Country:** United States
Report To (Name): Dave Bertsch		**Telephone #:** 717-484-5111	
Email Address: IAQ@e2s.us		**Fax #:**	**Purchase Order:** 1056.0052
Project Name/~~Number~~: VDSD - Jarrettown ES		**Please Provide Results:** ☐ FAX ☑ E-mail ☐ Mail	
U.S. State Samples Taken: PA		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☑ 1 Week ☐ 2 Week

**Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide*

Matrix	Method	Instrument	Reporting Limit	Check
Chips ☑ % by wt. ☐ mg/cm² ☐ ppm	SW846-7000B	Flame Atomic Absorption	0.01%	☑
Air	NIOSH 7082	Flame Atomic Absorption	4 µg/filter	☐
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter	☐
	NIOSH 7300 modified	ICP-AES/ICP-MS	0.5 µg/filter	☐
Wipe* ASTM ☐ non ASTM ☐ *if no box is checked, non-ASTM Wipe is assumed	SW846-7000B	Flame Atomic Absorption	10 µg/wipe	☐
	SW846-6010B or C	ICP-AES	1.0 µg/wipe	☐
	SW846-7000B/7010	Graphite Furnace AA	0.075 µg/wipe	☐
TCLP	SW846-1311/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	SW846-1131/SW846-6010B or C	ICP-AES	0.1 mg/L (ppm)	☐
Soil	SW846-7000B	Flame Atomic Absorption	40 mg/kg (ppm)	☐
	SW846-7010	Graphite Furnace AA	0.3 mg/kg (ppm)	☐
	SW846-6010B or C	ICP-AES	2 mg/kg (ppm)	☐
Wastewater Unpreserved ☐ Preserved with HNO_3 pH < 2 ☐	SM3111B/SW846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)	☐
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	EPA 200.7	ICP-AES	0.020 mg/L (ppm)	☐
Drinking Water Unpreserved ☐ Preserved with HNO_3 pH < 2 ☐	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	☐
	EPA 200.8	ICP-MS	0.001 mg/L (ppm)	☐
TSP/SPM Filter	40 CFR Part 50	ICP-AES	12 µg/filter	☐
	40 CFR Part 50	Graphite Furnace AA	3.6 µg/filter	☐
Other:				☐

Name of Sampler: David Bertsch **Signature of Sampler:**

Sample #	Location	Component (composite)	~~Volume/Area~~	Date/~~Time~~ Sampled
ES-3/30-01PC	Throughout		- Block Walls	3/30/26
02PC	↓	↓	- Metal Door Frames	↓
03PC	Boiler Room		- Painted Concrete Floors	
04PC	Exterior		- Painted Concrete Soffits	

Client Sample #'s - **Total # of Samples:** 4

Relinquished (Client):		**Date:** 3-30-26	**Time:**	5:00 p.m.
Received (Lab):	EQuinnEFT	**Date:** 4-01-26	**Time:**	9:30

Comments: 4Eco

Page 1 of 1 pages

SECTION 00 31 32 - GEOTECHNICAL DATA

PART 1 - GENERAL

1.01 INFORMATION AVAILABLE TO BIDDERS – GEOTECHNICAL DATA

A. This Document and its referenced specifications and drawings are included in the Procurement and Contracting Requirements for Project as they provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information and are not a warranty of existing conditions. All Bidders will receive the following list of reference documents:

1. Geotechnical Engineering Report, including all Appendices, for the New Jarrettown Elementary Project (the “Project”) prepared by David Blackmore and Associates Inc. dated January 19, 2026, is included as Specification Section 00 31 33.

B. Geotechnical Data provided as part of this Section and its referenced documents shall not constitute a Contract Document and shall be considered as “general information” only. The data indicated for subsurface conditions is not a representation or guarantee of the continuity of such conditions including variations in kind, depth, quantity, and conditions of soil. The Owner, Construction Manager, and Architect will not be responsible for interpretations or conclusions drawn from the Geotechnical Report(s) by the Bidder. The Owner, Construction Manager, and Architect are not responsible for the accuracy or completeness of the information given in the Geotechnical Report(s).

C. Bidders may rely on the technical data contained in such reports and information presented herein, but not upon non-technical data, interpretations, recommendations, or opinions contained therein or for the completeness thereof for Bidder’s purposes. Bidders shall determine the adequacy of the included geotechnical data for use in preparing the Bid. Should the data contained in the above referenced document(s) not be adequate for the Bidder’s purposes, the Bidder may make, prior to bidding, his own exploration, tests, and analyses.

D. Bidders should visit the site to familiarize themselves with existing conditions. No claims will be honored for inadequacy of data contained within the provided geotechnical reports. Should Bidder determine that additional information is required, the Bidder shall make, prior to bidding, his own exploration, tests, and analyses.

E. Contact ICS, Construction Manager (CM), Ryan Murphy at 610-368-2373 to schedule additional exploration or tests. Bidders shall provide insurance certificates as per General Conditions Article 11 and other information required prior to performing additional exploration or tests.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 00 31 32

Providing Innovative Solutions to Subsurface Problems Since 1985

DAVID BLACKMORE & ASSOCIATES, INC.
GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

REPORT OF GEOTECHNICAL EXPLORATION

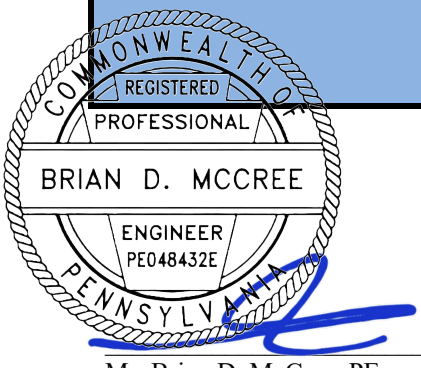
JARRETTOWN ELEMENTARY SCHOOL
1520 LIMEKILN PIKE
UPPER DUBLIN TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

PREPARED FOR

UPPER DUBLIN SCHOOL DISTRICT
C/O ICS, INC.
1400 N. PROVIDENCE ROAD
BUILDING #2, SUITE 4025
MEDIA, PA 19063

PROJECT 5769G1R1
January 19, 2026

DAVID BLACKMORE AND ASSOCIATES, INC.
3335 WEST RIDGE PIKE
POTTSTOWN, PENNSYLVANIA 19464
(610) 495-6255



Mr. Brian D. McCree, PE
President

Mr. Marc Utti-Hodge, EIT
Geotechnical Engineer

TABLE OF CONTENTS

PAGE

EXECUTIVE SUMMARY 4
1. INTRODUCTION 6
2. PROPOSED CONSTRUCTION 6
3. GEOTECHNICAL EXPLORATION 7
4. GEOTECHNICAL BACKGROUND 8
4.1 SITE DESCRIPTION 8
4.2 GEOLOGY 9
4.3 SOILS 9
5. LABORATORY TESTING 10
6. SUBSURFACE CONDITIONS 11
7. GEOTECHNICAL ANALYSIS AND RECOMMENDATIONS 12
7.1 SITE PREPARATION 13
7.2 FOUNDATIONS 14
7.2.1 SEISMIC SITE COEFFICIENT 15
7.3 SLAB ON-GRADE 15
7.4 BACKFILL OF FOUNDATION AND UTILITY TRENCHES 17
7.5 PAVEMENTS AND WALKWAYS 17
7.6 FILL AND COMPACTION CRITERIA 17
7.8 LATERAL EARTH PRESSURES - RETAINING WALLS 18
7.9 STORMWATER INFILTRATION TESTING 19
8. QUALITY CONTROL 22
9. LIMITATIONS 23

FIGURES AND TABLES

FIGURE I: *SITE LOCATION*
FIGURE II: *GEOLOGY*
FIGURE III: *SOILS*

TABLE I: *LABORATORY TEST RESULTS*
TABLE IIA: *APPROXIMATE ROCK E:EVATIONS*
TABLE IIB: *APPROXIMATE DEPTH OF FILL*
TABLE III: *COMPACTION CRITERIA*

APPENDIX

SOIL PARTICLE SIZE ANALYSIS RESULTS
TEST BORING LOGS
PROBE LOGS
TEST PIT LOGS
CASE BOREHOLE LOGS
DOUBLE RING INFILTRATION DATA
CASED BOREHOLE INFILTRATION DATA
TEST LOCATION PLAN

EXECUTIVE SUMMARY

Purpose

This exploration was completed to evaluate the subsurface conditions and their effect upon the proposed site development. This exploration focused on the proposed construction of an 84,000 square foot elementary school and associated paved access drives, athletic fields, and stormwater management facilities.

Scope

A total of ten (10) borings were completed at the subject site. The test borings were drilled to depths of 20.0 feet or to auger refusal. All test borings were completed within the proposed foundation footprint. A total of six (6) auger probes were drilled to a maximum depth of 15.0 feet at proposed infiltration locations to characterize the subsurface soils, as well as identify any limiting zones and groundwater conditions. Four (4) of the borings were converted to cased boreholes and were installed to a depth of 10.0 feet These borings are prepared for the performance of the cased hole infiltration test using the Maryland Method. Eighteen (18) constant head hydraulic conductivity tests (double ring) were conducted. Two (2) infiltration test pits, TP-5 and TP-14, were relocated during the excavation program. Therefore, probe P5 will have differing elevations and subsurface conditions. The test borings, auger probes, cased boreholes, and test pits were located in the field by DBA personnel using a Reference plan in conjunction with a Site Plan prepared by T and M, Sheet 1 of 1, numbered ICSB00002, dated 8/28/2025. Site design was underway during the implementation of our exploration. Therefore, final site design may vary from the preliminary design used to complete this exploration. A copy of the original site plan and the relocated site plan used for our exploration has been annotated with our test boring locations and is included in the appendix of this report.

Findings

Exploration findings include the following:

- Existing fill soils
- Variable depth to dense weathered rock
- Variable infiltration rates
- Groundwater

The results of our exploration of the subject site indicate the presence of an existing intermittent layer of fill material (Stratum IF) ranging from 0.75- to 3.5-foot-thick. This fill is located within the southern half of the proposed building footprint, as well as to the south of the proposed building in proposed field and green space areas, see borings B4 and B6, test pits TP-9 through TP-11, and cased boreholes CB-3 and CB-4. This fill material is variable in strength and content with SPR[1] values ranging from 3 blows per foot (B/F) to 23 B/F. This fill (Stratum IF) consists of a mixture of fine sand and silt with rock fragments, and some organic silt. This fill is underlain by a medium dense orange-brown and gray fine sand clayey silt, and multi-colored fine to medium sand with some silt and sandstone fragments (Stratum II). This material transitions into a dense to very dense reddish brown and multi-colored weathered siltstone and sandstone (Stratum III). Very dense conditions within Stratum III were

encountered at depths ranging from 5 to 19 feet below existing grade and elevations ranging from 282.00 to 301.78 feet. Siltstone bedrock was encountered at a depth of 14.67 feet below grade and an elevation of 291.92 feet at boring B5 and 11.50 feet below grade at an elevation of 280.50 feet at probe P5.

The results of our hydraulic conductivity testing indicate that soils of Stratum II and III have variable infiltration rates. Testing conducted in soils of Stratum II and Stratum III resulted in infiltration rates ranging from 0.0 to 3.0 inches per hour and 0.0 to 7.94 inches per hour, respectively. Four test pits and one cased borehole encountered limiting conditions, see TP-2, TP-10, TP-11, TP-14, and CB-2. Typically, infiltration rates below 0.1 inches per hour are considered as not feasible for stormwater recharge. In addition, groundwater was encountered in cased borehole CB-2 at a depth of 7'10" and elevation of 296.44 feet. Perched water was encountered in test pit TP-14 and when drilling for CB-2, both at a depth of 1'9".

Recommendations:

The site conditions are considered suitable for the support of the proposed construction. However, as discussed herein, DBA recommends that the full removal and replacement of Stratum IF with structural fill be completed prior to building pad preparation. It is anticipated that the majority of this material will be removed in the initial site grading and slab preparation; however, the provisions in Sections 7.3 Slab on Grade.

1. INTRODUCTION

David Blackmore and Associates, Inc. (DBA) has completed the geotechnical exploration of the subject site in accordance with our Proposal 5769G1P1, dated October 3, 2025. This exploration was completed to evaluate the existing subsurface conditions and their effect upon the proposed site development. Specifically, DBA has provided recommendations regarding the following:

- Foundation support of the structure and slabs, including soil bearing pressures, bearing elevations, foundation design recommendations, and anticipated settlement for shallow foundations,
- Depth to material requiring rock excavation methods for removal, if encountered
- Relative elevations of surface and subsurface features,
- Fill and compaction criteria,
- Pavements and floor slabs,
- Lateral earth pressures for retaining walls, and
- General geotechnical related construction procedures.

The following section (2. PROPOSED CONSTRUCTION) summarizes the information available to DBA regarding the proposed site development. This report has been prepared based on the proposed construction. Changes to the proposed construction may require alterations to this report or additional investigative work. DBA should be notified of significant changes to the proposed construction.

2. PROPOSED CONSTRUCTION

The proposed construction consists of the demolition of the existing elementary school building and the construction of a new elementary school with a footprint of 84,000 square feet, as well as related paved access drives, parking facilities, and storm water management facilities. The proposed construction type is a combination of concrete foundations with structural steel framing, slab on grade construction, and masonry interior and exterior walls. The proposed elementary school will have two

finished floor elevations. The northern and southern sections of the building will have finished floor elevations of 307.0 feet and 305.0 feet, respectively.

3. GEOTECHNICAL EXPLORATION

A total of ten (10) borings and six (6) auger probes were completed at the subject site. Six (6) of the test borings were drilled within the proposed structure footprint area to a maximum depth of 20 feet or to auger refusal. Four (4) of the test borings were drilled within proposed field and parking areas south of the proposed building. One (1) boring, B5, encountered auger refusal on siltstone bedrock at a depth of 14.67 feet below existing grade, corresponding to a bedrock surface elevation of 291.92 feet. The remainder of the borings terminated within the dense weathered siltstone stratum. Very dense weathered siltstone was encountered at depths ranging from 8.5 to 19.17 feet below existing grade. The auger probes were completed at proposed double ring test pit locations TP-1, TP-2, TP-5, TP-8, TP-11, and TP-15 and are labeled with corresponding numbers. In an effort to evaluate the potential presence of limiting conditions (Bedrock and/or groundwater) ahead of starting the double ring infiltration testing program. The remaining four (4) borings were drilled to a depth of 10 feet below grade at existing paved areas of the site which are also being contemplated for stormwater management facilities. These borings were converted to cased boreholes for down hole infiltration testing.

Eighteen (18) test pits were excavated to complete constant head hydraulic conductivity testing by the double ring method. Test pits were conducted within locations provided by the project civil engineer which are being contemplated for stormwater management facilities.

The test borings, auger probes, and test pits were located in the field by DBA personnel using a Reference plan in conjunction with the Site Plan prepared by T and M, Sheet 1 of 1, numbered ICSB00002, dated 8/28/2025. The test borings were drilled

by our subcontractor, Corcoran Drilling Company, under the direction of DBA personnel.

All test boring, auger probe, and test pit logs and a test location plan are included in the appendix of this report.

4. GEOTECHNICAL BACKGROUND

4.1 SITE DESCRIPTION

The subject site is situated on the grounds of the existing elementary school at 1520 Limekiln Pike, Dresher, PA 19025. The proposed elementary school is to be located northeast of the existing school within the existing ballfield and grass area. A paved parking lot, access drive, and a paved playground are located to the south of the existing school. A larger paved basketball court and parking area and playing fields are located north and east of the existing school. The site is moderately sloped downward from the north to south. The elevation changes from approximately 314 feet at the northern end of the site and slopes downward to approximately elevation 304.0 feet at the existing school. To the south of the existing school building the grade steeply slopes further downward to approximately elevation 288.0 feet. Existing utilities consisting of underground sanitary, water, electric, telecommunication, and overhead electric feed the existing building from Limekiln Pike to the west and from the residential development to the east. These underground utilities do not appear to conflict with the planned new school building location.

A copy of the USGS Topographical Map, Lansdale Quadrangle, indicating the site is included as Figure I.

4.2 GEOLOGY

Available geological sources indicate the site is underlain by the Stockton Formation, a light gray to buff, coarse grained arkosic sandstone including red to purple red sandstone, shale, and siltstone. Bedding is thin to flaggy; joints are seamy to platy, highly fractured, moderately developed, vertical and open. This formation is highly weathered to a moderate depth, contains a thin overlying mantle, provides good surface drainage, can be excavated with moderate ease, and has poor to fair cut slope stability due to rapid disintegration when exposed to moisture.

A copy of the USGS Geological Map of the Lansdale Quadrangle, indicating the site is included as Figure II.

4.3 SOILS

Soil records indicate the site soils to be of the following series:

Urban land, 0 to 8 percent slopes (UgB)- Soils which have been disturbed, moved, or covered over by land development activity whose profile cannot be typically described.

Readington silt loam, 0 to 3 percent slopes (ReA)- Soils of this series consist of residuum from weathered shale and siltstone and is moderately well drained. Bedrock ranges from 40 to 70 inches below grade with fragipan 20 to 36 inches below grade. This soil is consistent with hydrologic soil group C. The typical soil profile of this series is:

0 to 29 inches: Silt loam
29 to 58 inches: Channery silt loam
58 to 68 inches: Bedrock

Rowland silt loam, terrace (Rt)- Soils of this series consist of alluvially deposited material derived from shale and sandstone. This series is moderately well drained with slopes of 0 to 3 percent. Bedrock ranges from 60 to 99 inches below grade. This soil is consistent with hydrologic soil group C. The typical soil profile of this series is:

0 to 12 inches: Silt loam
12 to 46 inches: Silty clay loam
46 to 61 inches: Stratified gravel to sand

A copy of the soil mapping created using the National Cooperative Soil Survey website developed by the USDA's Natural Resources Conservation Service, indicating the site is included as Figure III.

5. LABORATORY TESTING

Representative soil samples taken during the field exploration were tested in DBA's laboratory for basic engineering properties. The laboratory testing consisted of classification of soil samples for engineering purposes. The laboratory testing included Particle Size Analysis (ASTM D442), Plastic and Liquid Limits (ASTM D4318), and Natural Moisture Content (ASTM D2216). The Unified Soil Classification System (USCS) was used to assign group symbols and group names to the soils tested.

A summary of the test results is provided in Table I. A copy of the particle size analysis results and the plastic and liquid limit analysis results are included in the appendix of this report.

6. SUBSURFACE CONDITIONS

The results of the drilling program revealed a fairly consistent subsurface profile. The following strata, beneath 6" to 9" of topsoil or 5" to 6" of asphalt and 11" to 13" of stone subbase, can describe a typical soil profile.

Stratum IF: 0.75' to 3.5' thick; Fill consisting of brown and multi-colored fine sand and silt with some sandstone fragments, dark brown fine sand and silt, and reddish-brown fine sand and clayey silt with organic silt. This stratum is considered to have a variable density and composition with SPR[1] values ranging from 3 blow per foot (B/F) to 23 B/F. This stratum was encountered in five (5) of the test borings and three (3) of the test pits excavated.

Stratum II: 4.5' to 7.5' thick; Orange brown and gray fine sand clayey silt, and multi-colored fine to medium sand with some silt and sandstone fragments. This stratum is medium dense with SPR values ranging from 6 B/F to 21 B/F. The average SPR value is 14 B/F. This stratum was encountered in each of the boring completed.

Stratum III: 9.75' to 12.25' thick; Redish brown and multi-colored weathered siltstone and sandstone layers. This stratum is considered to be very dense with SPR values ranging from 26 B/F to 50 blows per 0 inches. The average SPR value for this stratum is above 100 B/F. This stratum was encountered in each of the borings completed.

Bedrock: Siltstone bedrock was encountered in one (1) of the test borings completed and one (1) auger probe. Bedrock was encountered in test boring B5 at a depth of 14.67' below grade and elevation of 291.92 feet Probe P5 was encountered at a depth of 11.50 feet and elevation of 280.50 feet.

Groundwater[2]: Groundwater was encountered in boring CB-2 at depth of 7'10" and elevation of 296.44 feet. Perched water was encountered at test pit TP-14 and at boring CB-2 at a depth of 1'9".

NOTES:

1. SPR = the Standard Penetration Resistance or number of blows required of a 140-pound hammer dropping 30", to drive a 2" OD split spoon sampler one foot.

2. The groundwater information provided is based on conditions encountered during the drilling program. Seasonal fluctuations in the groundwater table are to be expected.

7. GEOTECHNICAL ANALYSIS AND RECOMMENDATIONS

The results of our exploration indicate the presence of the following subsurface conditions:

- Existing fill soils
- Relatively shallow depth to dense weathered rock
- Variable infiltration rates
- Groundwater

The drilling program encountered 0.75 to 3.5 feet of existing fill (Stratum IF). This fill material consists of variable strength deposit of brown, reddish brown, and multi-colored fine sand and silt with some sandstone fragments, organic silt, rock fragments, and some clay (Stratum IF) which is likely associated with the construction of the existing school. This fill was encountered across the southern portion of the proposed building pad in three (3) test borings completed (B1, B4, B6). Two (2) of the test borings (CB-3 and CB-4) encountered fill located within the planned green space areas south of the proposed parking lot. This fill was also encountered in three (3) test pits completed (TP-9, TP-10, and TP-11) located southeast of the proposed school in field areas. Refer to Section 7.6 Fill and Compaction Criteria and 7.3 Slab on Grade.

Dense to very dense siltstone and sandstone bedrock (Stratum III) was encountered across the subject site. Very dense portions of Stratum III (siltstone and sandstone bedrock layers) were encountered at depths ranging from 5 to 19 feet below existing grade with corresponding elevations ranging from 282.0 to 301.78 feet. Siltstone bedrock, as indicated by auger refusal, was encountered in boring B5 at the southeast corner of the proposed building pad as well as at the southmost proposed field area in auger probe P5. Test boring B5 encountered siltstone bedrock at a depth of 14.67 feet below existing grade, corresponding to a rock surface elevation of 291.92 feet. Auger probe P5 encountered bedrock at a depth of 11.5 feet below grade, corresponding to a bedrock surface elevation of 280.50 feet. Refer to Table IIA

Approximate Rock Elevations for further information regarding the encountered very dense weathered rock and bedrock depths and elevations.

A total of four (4) falling head infiltration tests were performed within cased boreholes installed in areas where excavating test pits for double ring testing was impractical due to existing site improvements (pavement and walkway areas). The result of the down hole hydraulic conductivity testing indicated a variable infiltration rate for soils of Stratum II and Stratum III. A total of four (4) falling head infiltration tests were performed. Tests CB-3 and CB-4 were performed within Stratum II soils and tests CB-1, and CB-2 were conducted in Stratum III. Infiltration test results ranged within Stratum II ranged from 0.0 to 3.0 inches per hour and infiltration rates within Stratum III ranged from 0.0 to 7.94 inches per hour.

A total of eighteen (18) double ring falling head conductivity tests were conducted at the subject site. Thirteen (13) tests were conducted in soils of Stratum II. Infiltration ranged from 0.0 to 3.0 inches per hour. Two (2) tests were completed in soils of Stratum III, resulting in infiltration rates ranging from 0.0 to 7.94 inches per hour. Out of the remaining three (3) tests, two (2) were conducted in soils of Stratum IF and one (1) test was abandoned due to perched water. Perched water and ground water were encountered at cased borehole CB-2 at a depth of 1'9" and 7'10" respectively. Perched water was encountered again in test pit TP-14.

The site conditions are suitable for the support of the proposed structure. A shallow foundation system with slab on grade construction is feasible provided that the recommendations included herein are followed.

7.1 SITE PREPARATION

All deleterious materials including topsoil, root mass, trees and vegetation, asphalt and other materials determined in the field by the Geotechnical Engineer to be unsuitable shall be removed from all structural areas (buildings, pavements,

and walkways) prior to placement of structural fill. Recycling of the asphalt and underlying stone can be accomplished on site if the asphalt is milled to a maximum 1-inch particle size and the material is used in the upper fill zones of pavement areas only. This fill is not suitable for other structural areas.

7.2 FOUNDATIONS

Foundations shall bear on the undisturbed soils of Stratum II, Stratum III, or on structural fill. Foundations shall not bear on soils of Stratum IF. Soft conditions encountered during foundation construction shall be excavated and replaced with structural fill. Refer to Sections 7.3 and 7.6, Slab on Grade and Fill and Compaction Criteria.

Foundations shall be designed for a maximum soil bearing capacity of 4.0 KSF on Stratum II, Stratum III, or structural fill. If the column loads are to be revised during a re-design of the structure, then the bearing capacity of the soils may have to be subsequently modified. DBA shall be notified of any significant changes in this regard.

Foundation settlements for the bearing capacities provided herein are to be within a tolerance of a half inch total and quarter inch differential. It is anticipated that the bulk of this settlement will take place during the construction period. Settlements of this magnitude are within normal construction tolerances. In the event more stringent settlement tolerances are required a reduction of the allowable bearing capacity and/or a change in depth to bearing strata may be required.

To protect against differential settlements, foundations shall not be placed intermittently on soils and boulders. Small boulders encountered within or directly beneath the footing bearing surface shall be removed and replaced with structural fill. Larger boulders shall either be fully or partially removed and

replaced with structural fill. Trench excavation through areas containing boulders may require substantial over-excavation to facilitate boulder removal. Partial removal can be completed by splitting or hammering to a minimum of 12" below the footing bottom elevation. Boulder protrusion into the bottom or side of the proposed footing is not an acceptable condition. Boulders can be dislodged in bulk excavations.

Should foundation excavation encounter hard bedrock, the foundation is to be undercut a minimum of 12 inches. The undercut area is to be backfilled with a structural fill or a low strength flowable fill (max 500 psi) "cushioning" layer to limit the potential for differential foundation settlement and the development of stress concentrations caused by rock protrusion.

Exterior foundations or foundations in unheated areas shall be provided with a minimum of 36" compacted soil cover above the footing bottom for frost protection.

7.2.1 SEISMIC SITE COEFFICIENT

A review of Section 1613.2.2 of the International Building Code (IBC 2021 edition), ASCE 7_16 Chapter 20, and the existing soil profile indicates that a site class C should be used in the design of the proposed structure for seismic load resistance.

7.3 SLAB ON-GRADE

The proposed building has two main slab on grade elevations. The northern wing has a finish floor elevation is 307.0 feet and the southern wing has a finished floor elevation of 305.0 feet. The proposed slab on grade section has an assumed thickness of 8 inches (4 inches of concrete and 4 inches of subbase stone). The proposed building footprint is situated within existing greenspace with existing

grades ranging from 314 feet at the northern end sloping downward in a southerly direction to elevation 304 feet. Comparing the existing grades to the proposed building subgrade elevation it is anticipated that the majority of the fill (Stratum IF) and the softer soils within the upper portion of Stratum II will be removed during site grading. The remaining portions of Stratum IF are anticipated to be in the range of 0.5 to 1.11 feet thick. These soils are to be densified/evaluated through proof rolling under the direct supervision of the Geotechnical Engineer.

Once the initial site grading is completed, the exposed subgrade is to be proof rolled using a heavy (minimum 15 ton) smooth drum roller. This proof roll shall be completed under the supervision of the Geotechnical Engineer. Any loose/soft zones identified shall be repaired to the satisfaction of the Geotechnical Engineer. Subgrade repair would typically include undercutting and/or the use of stabilization fabric or open graded ballast.

Based on the soil type encountered, standard penetration testing of the existing slab subgrade, and provided that all structural fill will be placed in accordance with the fill and compaction criteria set forth in Section 7.6, an estimated modulus of subgrade reaction of 150 psi/inch may be used for the design of slab sections. Should an increased modulus of subgrade reaction be required for the proposed design it is recommended that field or laboratory testing be completed to establish specific modulus values.

All slab subgrade areas shall be evaluated by the Geotechnical Engineer prior to pouring the slab so that repair can be completed. It is recommended that the slab be poured under roof during periods of harsh weather.

A smooth drum roller shall be made available to seal the subgrade in the event of predicted precipitation.

7.4 BACKFILL OF FOUNDATION AND UTILITY TRENCHES

All foundation and utility trenches shall be backfilled with structural fill, under the supervision of a Geotechnical Engineer (Refer to Section 7.6, Fill and Compaction Criteria). Utility trenches located in the south and southwestern portions of the site and to the south of the proposed new school footprint area extending deeper than 5 feet may encounter dense to very dense weathered rock. See Table IIA Approximate Rock Elevations for further details regarding the depth to rock at the exploratory test locations.

7.5 PAVEMENTS AND WALKWAYS

Pavement and sidewalk areas shall be prepared in a manner similar to the slab on-grade areas. A minimum of 8 inches of crushed aggregate base shall be used beneath exterior pavements due to the frost heave potential of the subgrade soils. The pavement subgrade shall be graded to drain water from beneath the pavement system to prevent ponding and subsequent pumping of silty subgrade soils.

For pavement design a preliminary estimated California Bearing Ratio (CBR) Value of 5.0 may be used for stabilized subgrade areas consisting of on-site clayey silt and sandy silts (Stratum II) or Structural fill selected and placed in accordance with Section 7.6 of this report. Should anticipated heavy duty pavement requirements or other project conditions require final site specific CBR values DBA can complete field and/or laboratory CBR testing of proposed subgrade soils at the client's request.

7.6 FILL AND COMPACTION CRITERIA

Fill supporting slabs, pavements, and foundations is considered herein to be structural fill. Structural fill shall be placed on an approved, proof rolled, nonyielding, level subgrade, in lifts not exceeding 8 inches (loose thickness), unless

otherwise directed by the Geotechnical Engineer. Structural fill shall be maintained nominally at Optimum Moisture Content (ASTM D-698) and uniformly compacted to the percentages of Maximum Dry Density (ASTM D-698) provided in Table III - Compaction Criteria.

Suitable structural fill shall consist of clean soils without deleterious inclusions. On-site soils identified as Stratum II and Stratum III are acceptable for use as structural fill if given the opportunity to dry and the soils are maintained nominally at Optimum Moisture Content. Samples retrieved from the upper 5 feet of the subgrade indicated moisture contents ranging from 8.5 to 21.7 percent. The optimum moisture content for compaction of these soils is estimated to range between 10 and 16 percent. Therefore, some of these soils may require aeration and drying prior to re-using as structural fill, which is best accomplished in the summer months. Specific moisture content test results and associated depths are indicated on the test boring logs in the appendix of this report.

Borrow fill shall be clean well-graded soils with good strength characteristics with a maximum particle size of 3 inches and containing not more than 20% silt/clay (by weight). Samples of on-site or borrow sources of fill shall be submitted to the Geotechnical Engineer for testing at least 1 week before use on site. A minimum of 65 lbs. or two (2) five-gallon buckets is required for testing.

7.8 LATERAL EARTH PRESSURES - RETAINING WALLS

The retaining/loading dock walls of the structure, if proposed, should be designed for an at rest condition (Ko). The foundations and walls must be fully drained to relieve potential hydrostatic pressure. A foundation/wall drainage system is recommended. Soil backfill around the basement walls shall be well compacted and should consist of granular soils to prevent the trapping of water.

Retaining walls outside the structure which are free to rotate should be similarly designed except with an active earth pressure as opposed to Ko condition. Soil parameters used to establish effective fluid pressures (excluding hydrostatic loads) and some additional parameters which may be used in the design of a retaining wall system are summarized in the following table:

SOIL PROPERTIES FOR DETERMINATION OF LATERAL LOADS

Parameter	**Stratum I/IF**	**Stratum II**
Angle of Internal Friction, ϕ	30 degrees	36 degrees
Moist unit weight, γ_m	125 pcf	130 pcf
Active Earth Pressure Coefficient, K_a	0.33	0.260
Passive Earth Pressure Coefficient, K_p	3.0	3.85
At Rest Earth Pressure Coefficient, K_o	0.50	0.41
Soil/Mass concrete interface friction Angle, δ	20 degrees	24 degrees

7.9 STORMWATER INFILTRATION TESTING

Prior to performing infiltration testing on the subgrade soils, test pits were completed to explore the soil profile to identify the presence of soil conditions with a potential for infiltration which are situated at least 2 feet above limiting conditions (groundwater and/or bedrock). Refer to the attached Test Pit logs for soil profile information.

The double-ring infiltrometer test apparatus consists of two (2) concentric steel thin-walled cylinders, 8" and 12" in diameter, both of which are driven into the ground – the smaller inner ring to a depth of approximately 2 inches shallower

than the larger outer ring. Water is then introduced to the rings to the same level in both rings. The change in water level in each ring was then recorded in intervals between 10 and 30 minutes, depending on the rate of drop of the water level. The value of infiltration measured when the water drop became consistent is reported as the saturated infiltration rate.

Prior to performing infiltration testing on the subgrade soils, four (4) test borings (CB-1 through CB-4) were completed to explore the soil profile to identify the presence of soil conditions with a potential for infiltration which are situated at least 2 feet above limiting conditions (groundwater and/or bedrock). These borings are prepared for the performance of the cased hole infiltration test using the Maryland Method. This involves utilizing a six-inch diameter auger to bore a hole to a specified depth, a minimum of two feet below proposed infiltration bed. Spoils are removed upward through the rotation of the auger. Soil spoils are sampled at predetermined intervals every two feet. A 5" well is installed by placing a two-inch layer of sand and sealing the perimeter with bentonite. The well is backfilled by hand and presoaked twenty-four hours prior to testing. Testing is conducted by measuring the drop of water from the top of the casing for a period of one hour for four consecutive hours, for a total of four observations.

The data collected in these tests is included in the Appendix of this report as is a site plan showing the locations of the indicated tests. All infiltration testing was completed in accordance with Appendix C of the PADEP Best Management Practices (BMP) Manual. Infiltration rates at these locations were recorded at specific time intervals and are included on the attached data sheets. The results of the double ring hydraulic conductivity testing are presented in the following table:

INFILTRATION TEST RESULTS

Test Number	Surface Elevation (feet)	Test Depth (feet)	Test Elevation (feet)	Infiltration Rate (in./hr.)	Stratum	Notes
TP-1	309.58	6.0	303.58	1.1	III	
TP-2	303.93	2.0	301.93	1.5	II	Bucket refusal at 4', Test Depth Raised (limiting condition)
TP-3	302.73	6.0	296.73	1.0	II	
TP-4	299.07	6.0	293.07	0.0	II	
TP-5	294.22	7.0	287.22	2.0	II	
TP-6	286.08	2.0	284.08	0.0	II	
TP-7	290.78	2.5	288.28	0.0	II	
TP-8	288.96	2.0	286.96	0.0	II	
TP-9	291.75	2.0	289.75	0.25	II	
TP-10	292.37	0.67	291.70	0.13	IF	Fill
TP-11	292.71	1.0	291.71	0.25	IF	Fill
TP-12	291.17	0.67	286.50	0.0	II	
TP-13	292.3	0.67	291.67	0.0	II	
TP-14	289.8	7.0	282.80	N/A	N/a	Perched water
TP-15	306.82	6.0	300.82	1.06	II	
TP-16	304.38	6.0	298.38	2.16	II	
TP-17	297.94	4.5	293.44	2.0	II	
TP-18	307.76	6.0	301.76	7.94	III	
CB-1	304.06	6.0	295.31	2.88	III	Cased Borehole Test
CB-2	304.27	5.0	295.52	0.0	III	Cased Borehole Test Groundwater at 7'10". Test Depth raised (limiting condition)
CB-3	304.20	6.0	294.20	0.0	II	Cased Borehole Test
CB-4	297.58	7.5	290.08	3.0	II	Cased Borehole Test

Test pit TP-2 encountered bucket refusal at an elevation of 300 feet on very dense shallow weathered rock and therefore the infiltration test was raised above the planned test elevation (298.50) to elevation 302.0 feet in order to collect test results for the soils 24 inches above the limiting condition. Test pits TP-10 and TP-11 encountered fill material extending two feet past the proposed test depth. Infiltration testing was still conducted at the prescribed test depth at these locations. Test pit TP-14 encountered abundant trap/perched water during excavation and could not be tested. In addition, cased borehole CB-2 encountered perched water at a depth of 1'9" and groundwater at a depth of 7'10". Testing continued for the well installed at case borehole CB-2 at a depth of 5 feet.

The double ring infiltrometer was used to conduct constant head hydraulic conductivity testing at each test pit location. The results of this testing indicate variable infiltration rates for soils of Stratum II and III and low infiltration rates for soils of Stratum IF. The findings of the testing in soils of Stratum IF indicate an infiltration rate ranging from 0.13 to 0.25 inches per hour. The range of infiltration for Stratum II is 0.0 to 3.0 inches per hour. Infiltration for soils of Stratum III resulted to range from 0.0 to 7.94 inches per hour.

Four (4) falling head infiltration tests were performed in wells installed at the cased borehole locations. The infiltration testing at these locations resulted in an infiltration rate with a range of 0.0 to 3.0 inches per hour and 0.0 to 2.88 inches per hour for the soils of Stratum II and III, respectively.

8. QUALITY CONTROL

This report was prepared to provide design criteria for the design team. DBA assumes that Geotechnical and Construction Quality Control Services will be provided in order to implement the recommendations provided herein and to identify unanticipated or changed conditions. The Geotechnical Engineer's representative

should review the consistency and texture of the exposed soils with the conditions encountered by this exploration as described herein. Since localized loose and yielding subgrade conditions may be encountered between test locations, provisions for the undercutting and subsequent replacement of these materials should be anticipated in the construction documents. The environmental quality of the subgrade soils was not reviewed as part of this evaluation. All materials generated by grading and excavation shall be managed in accordance with regulatory requirements.

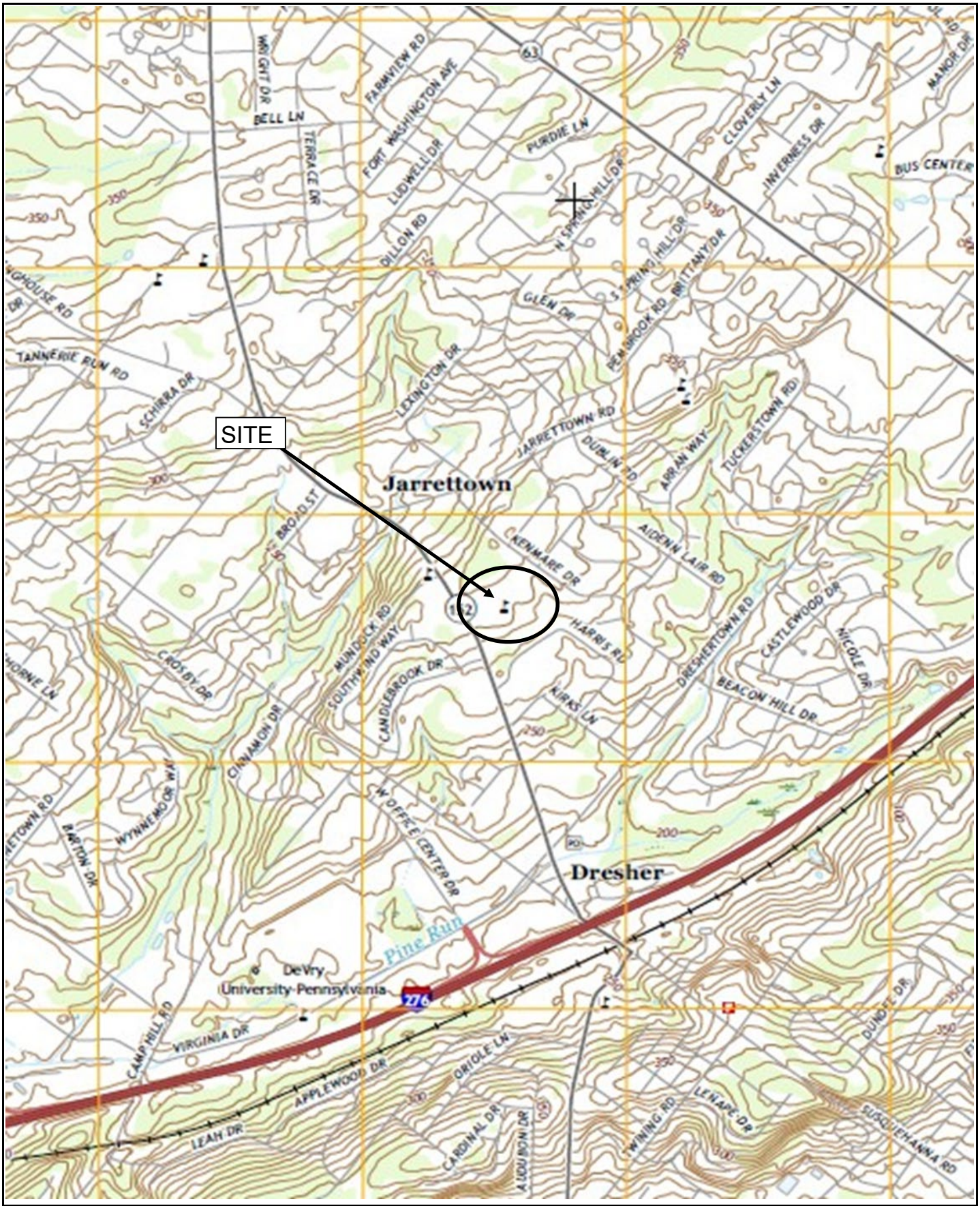
DBA can provide a contract for Geotechnical and Construction Quality Control Services (Special Inspections), as required. A pre-work meeting with the design professionals, contractors, and the Geotechnical Engineer is strongly recommended.

9. LIMITATIONS

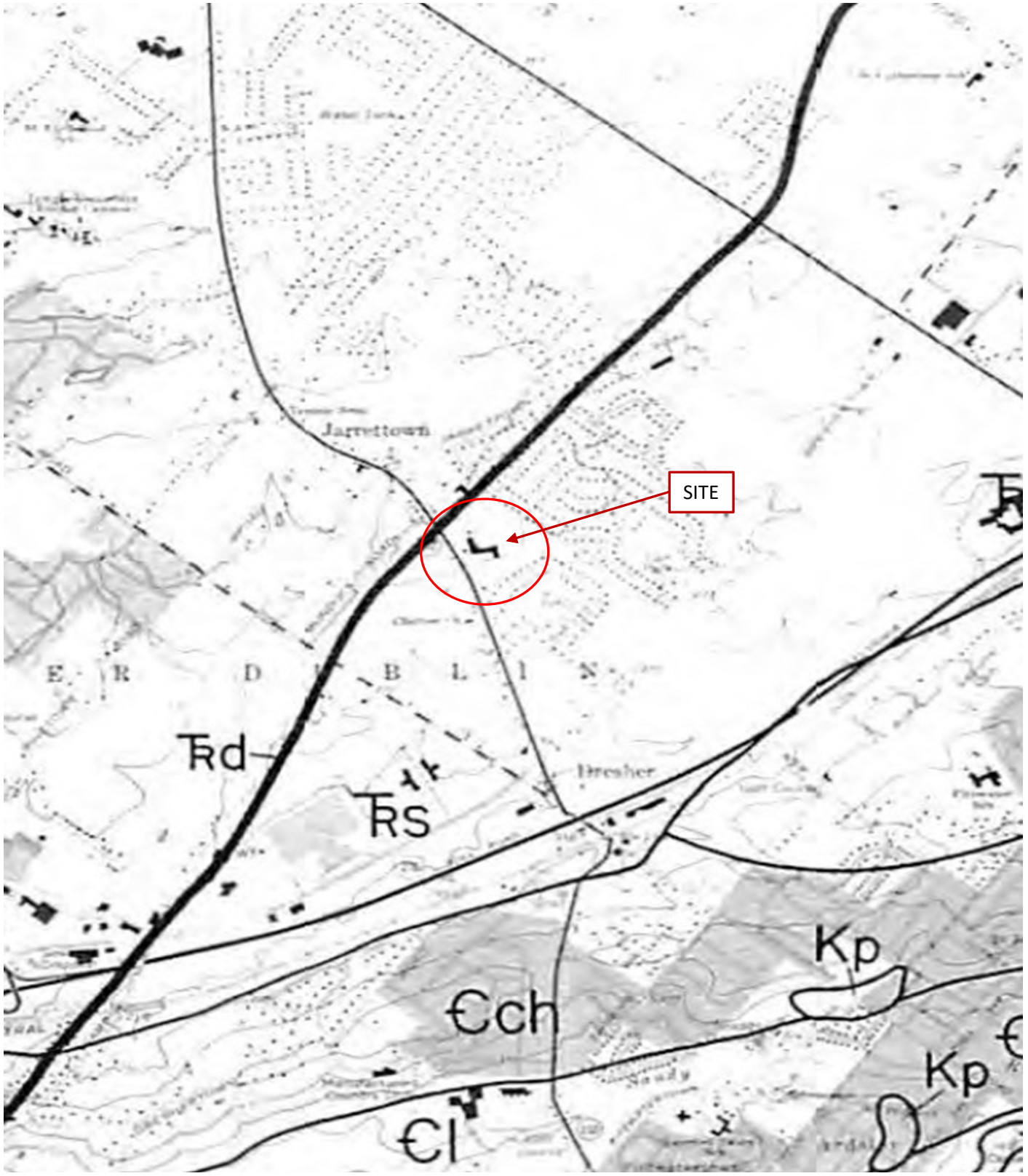
Services performed by DBA, including the Geotechnical Exploration, report, and any subsequent construction monitoring have been or will be conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other warranty or guarantee is indicated or intended in this report or any opinion, document or otherwise stated.

The recommendations included herein are based on the conditions encountered by the test borings performed at the subject site. It is noted that, although soil quality has been inferred from the interpolation of the site sampling data, subsurface conditions beyond the test borings are, in fact, unknown. As a result, these recommendations may require modifications based on the conditions encountered and exposed during construction excavation. Should any conditions encounter during construction differ from those described in the report, this office should be notified immediately in order to review and possibly modify the recommendations included in this report.

FIGURES AND TABLES



GEOTECHNICAL & ENVIRONMENTAL ENGINEERS	**Project 5769G1**
DAVID BLACKMORE & ASSOC., INC. **3335 West Ridge Pike** **Pottstown, Pennsylvania 19464** Telephone: (610) 495-6255 FAX: (610) 495-7353	**Figure I** **SITE LOCATION & TOPOGRAPHY** U.S.G.S. 7.5 Minute Topographic Quadrangle Lansdale Quadrangle



KEY

Trs - Stockton Formation

GEOTECHNICAL & ENVIRONMENTAL ENGINEERS	**Project 5769G1**
DAVID BLACKMORE & ASSOC., INC. **3335 West Ridge Pike** **Pottstown, Pennsylvania 19464** Telephone: (610) 495-6255 FAX: (610) 495-7353	**Figure II** **SITE GEOLOGY** USGS Geologic Quadrangle Maps of PA Lansdale Quadrangle



KEY

UgB - Urban Land, 0 to 8 percent slopes
ReA - Readington Silt loam, 0 to 3 percent slopes
Rt - Rowland Silt loam, terrace

GEOTECHNICAL & ENVIRONMENTAL ENGINEERS
DAVID BLACKMORE & ASSOC., INC.
3335 West Ridge Pike
Pottstown, Pennsylvania 19464
Telephone: (610) 495-6255 FAX: (610) 495-7353

Project 5769G1

Figure III
Soils

Soil Mapping via
USDA Natural Resources Conservation Service

TABLE I
LABORATORY TEST RESULTS

BORING #	B6 CB-4	B6 B1	B2 B3	B1 B3	B2 B3
SAMPLE #	S-1 S-1	S-2 S-2	B-2 B-2	S-3 S-3	S-4 S-4
DEPTH	2' – 4' 2' – 4'	4' – 6' 4' – 6'	4' – 6' 4' – 6'	9' – 11' 9' – 11'	14' – 16' 14' – 15'10"
STRATUM	IF	II	II	III	III
NMC* (%)	9.81 13.08	21.74 14.27	9.93 8.39	10.33 5.56	6.80 6.16

* NMC = Natural Moisture Content

SOIL PARTICLE SIZE DISTRIBUTION

SIEVE #	**PERCENT PASSING BY WEIGHT**				
3/4"	95.30	94.72	100.00	100	100.00
3/8"	91.10	94.72	100.00	99.52	99.24
4	89.20	94.72	100.00	97.50	96.43
10	85.70	94.40	98.76	95.22	88.80
40	44.30	83.67	61.67	60.61	74.19
100	38.90	77.38	28.49	34.68	58.95
200	37.60	75.52	23.09	24.56	46.10

USCS CLASSIFICATION

Eng. Class.	SM	ML	SM	SM	SM
Descr.	Silty Sand	Silt with Sand	Silty Sand	Silty Sand	Silty Sand

TEST PIT #	TP-10	TP-8	TP-2	TP-15	TP-18
DEPTH	8"	2.0'	2.0'	6.0'	6.0'
STRATUM	IF	II	II	II	III
NMC* (%)	14.33 14.29	21.50 21.94	6.76 7.22	15.60 15.81	6.17 6.29

* NMC = Natural Moisture Content

SOIL PARTICLE SIZE DISTRIBUTION

SIEVE #	**PERCENT PASSING BY WEIGHT**				
3/4"	N/A	97.15	100	100	100.00
3/8”	N/A	97.15	100.00	100	96.99
4	N/A	94.65	100.00	99.21	92.78
10	N/A	91.71	96.71	96.88	86.73
40	N/A	65.86	79.61	67.67	37.50
100	N/A	39.61	21.52	46.84	16.82
200	N/A	29.81	12.03	42.27	14.41

USCS CLASSIFICATION

Eng. Class.	SM	SM	SP-SM	SM	SM
Descr.	Silty Sand	Silty Sand	Poorly Graded Sand with Silt	Silty Sand	Silty Sand

TABLE IIA
APPROXIMATE ROCK ELEVATIONS

Boring\ Auger Probe Number	Surface Elevation	Depth to Dense Weathered Rock[1]	Dense Weathered Rock Elevation	Depth to Bedrock[2]	Bedrock Elevation
B1	314.78 feet	13.0 feet	301.78 feet	>19.83 feet	<294.95 feet
B2	310.53 feet	18.5 feet	292.03 feet	>19.0 feet	<291.53 feet
B3	307.51 feet	19.17 feet	288.34 feet	>19.17 feet	<288.34 feet
B4	310.63 feet	17.0 feet	293.63 feet	>19.08 feet	<291.55 feet
B5	306.59 feet	8.5 feet	298.09 feet	14.67 feet	291.92 feet
B6	308.06 feet	10.75 feet	297.31 feet	>20.17 feet	<287.89 feet
CB-1	304.06 feet	8.50 feet	295.56 feet	>8.75 feet	<295.31 feet
CB-2	304.27 feet	8.25 feet	296.02 feet	>8.75 feet	<295.52 feet
CB-3	304.20 feet	>10.0 feet	<294.20 feet	>10.0 feet	<294.20 feet
CB-4	297.58 feet	>10.0 feet	<287.58 feet	>10.0 feet	<287.58 feet
P1	296.50 feet	>15.00 feet	<281.50 feet	>15.00 feet	<281.50 feet
P2	304.0 feet	14.00 feet	290.00 feet	>15.00 feet	<289.00 feet
P5	292.0 feet	9.50 feet	282.50 feet	11.50 feet	280.50 feet
P8	290.0 feet	8.00 feet	282.00 feet	>15.00 feet	<275.00 feet
P11	292.71 feet	5.00 feet	287.71 feet	>15.00 feet	<277.71 feet
P15	306.82 feet	14.00 feet	290.82 feet	>15.00 feet	<291.82 feet

NOTES:
Surface elevations at each boring location were determined in the field using a Trimble 2A Catalyst GPS receiver rover.

>is greater than, < is less than

[1] As determined by drilling difficulty and Standard Penetration Resistance data.
[2] As determined by auger refusal.

TABLE IIB
APPROXIMATE DEPTH OF FILL

Boring\Auger Probe Number	Surface Elevation	Depth to Bottom of Fill	Bottom of Fill Elevation	Proposed Finished Floor Elevation
B1	314.78 feet	1.50 feet	313.28 feet	307 feet
B4	310.63 feet	2.58 feet	308.05 feet	305 feet
B6	308.06 feet	4.17 feet	303.89 feet	305 feet
CB-3	304.20 feet	1.58 feet	302.62 feet	n/a
CB-4	297.58 feet	4.0 feet	293.58 feet	n/a
TP-9	291.75 feet	1.67 feet	290.08 feet	n/a
TP-10	292.37 feet	2.50 feet	289.87 feet	n/a
TP-11	292.71 feet	2.58 feet	290.13 feet	n/a

NOTES: Surface elevations at each boring location were determined in the field using a Trimble 2A Catalyst GPS receiver rover.

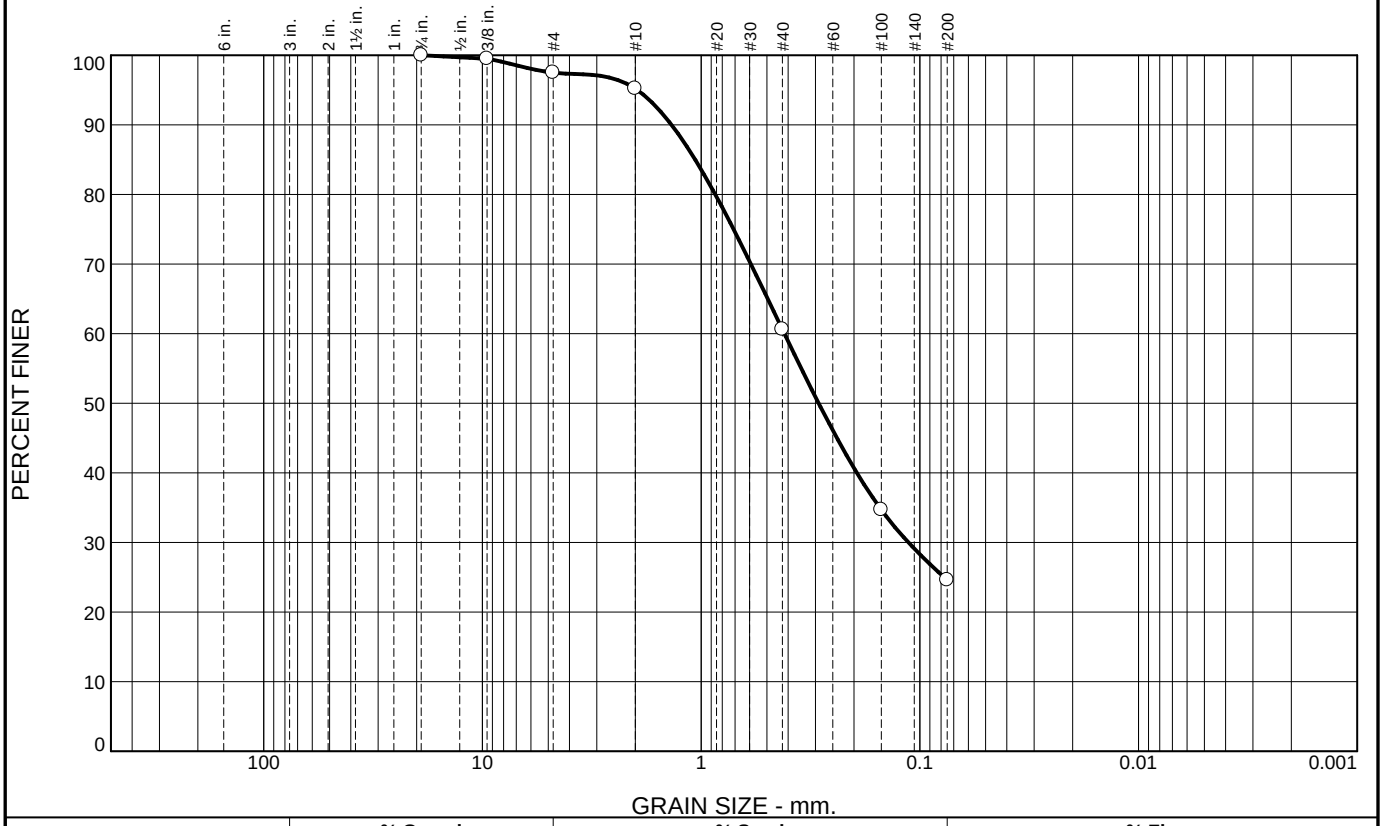
TABLE III
COMPACTION CRITERIA

LOCATION	PERCENT COMPACTION (ASTM-D698)
Foundations	98%
Floor Slabs	98%
Pavements	95%
Berms (non-structural)	93%

APPENDIX

SOIL PARTICLE SIZE ANALYSIS RESULTS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.5	2.3	34.6	36.0	24.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	99.5		
#4	97.5		
#10	95.2		
#40	60.6		
#100	34.7		
#200	24.6		

* (no specification provided)

Material Description

Stratum III: Multi-colored weathered sandstone. (silty sand)

Atterberg Limits

PL= NP LL= NV PI=

Coefficients

D_{90}= 1.3656 D_{85}= 1.0647 D_{60}= 0.4161
D_{50}= 0.2901 D_{30}= 0.1127 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

B2/S3 as received moisture content of 10.33%.
B1/S3 as received moisture content of 5.56%.

Source of Sample: B2/B1 **Depth:** 9'-10'5"
Sample Number: S3/S3

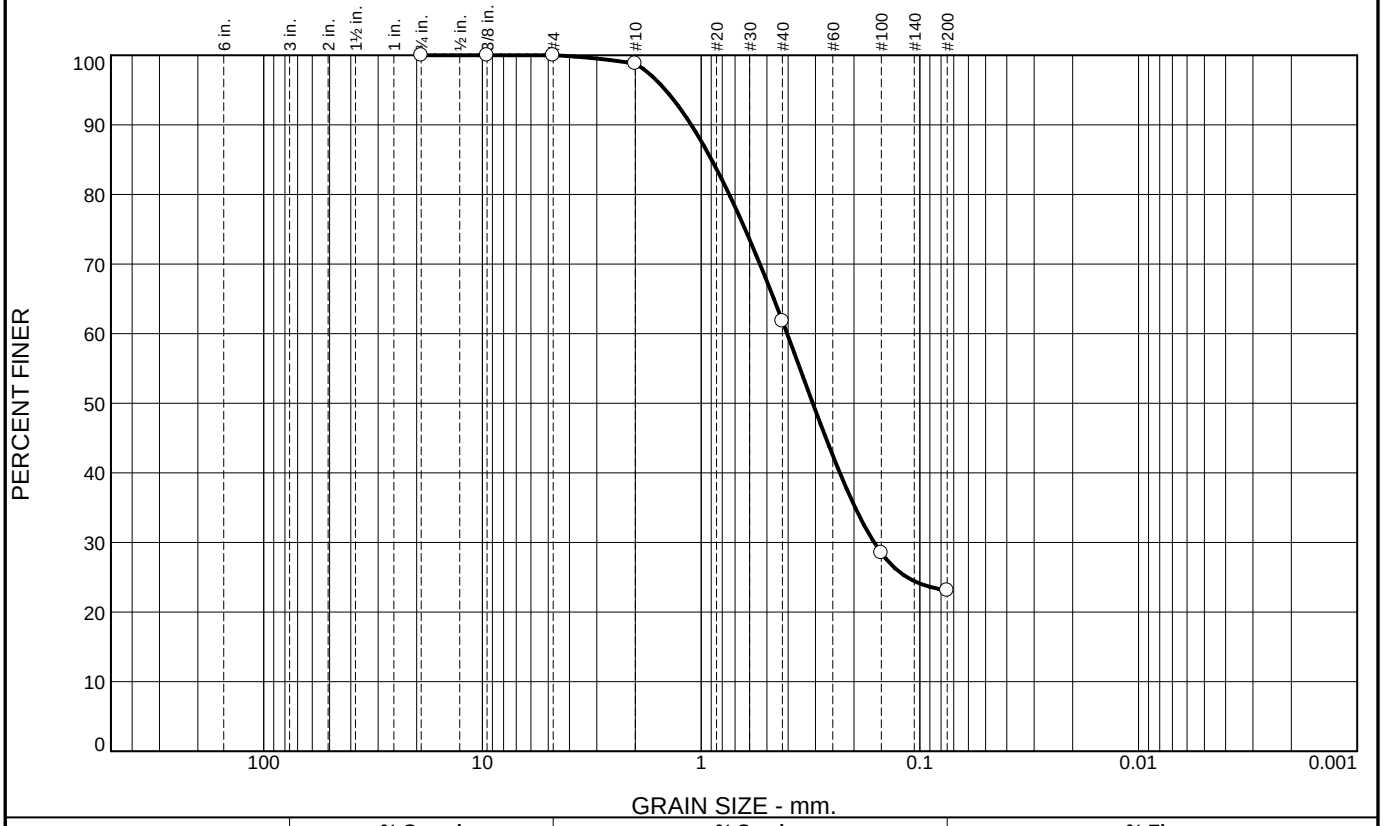
Date: 1/14/2026

DAVID BLACKMORE & ASSOCIATES, INC.
GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

Client: Mr. Doug Taylor, Director of Design Services
Project: Jerrettown Elementy School

Project No: 5769G1 **Plate**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	1.2	37.0	38.7	23.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	100.0		
#4	100.0		
#10	98.8		
#40	61.8		
#100	28.5		
#200	23.1		

* (no specification provided)

Material Description

Stratum II: Tan and orange fine to medium sand with silt. (silty sand)

Atterberg Limits

PL= NP LL= NV PI=

Coefficients

D_{90}= 1.1096 D_{85}= 0.8958 D_{60}= 0.4044
D_{50}= 0.3085 D_{30}= 0.1618 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

B2/S2 as received moisture content of 9.93%.
B3/S2 as received moisture content of 8.39%.

Source of Sample: B2/B3 **Depth:** 4'-6'
Sample Number: S2/S2

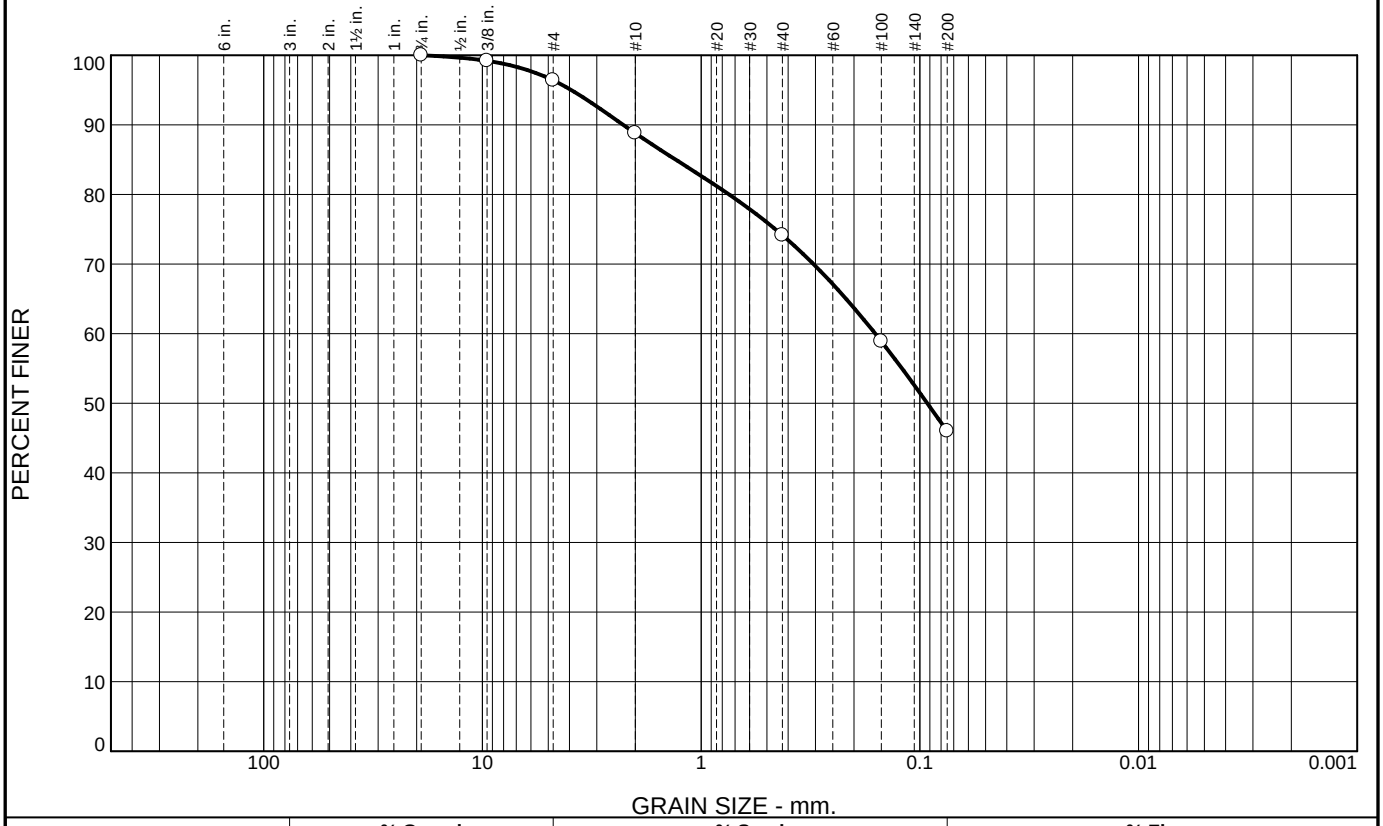
Date: 1/14/2026

DBA DAVID BLACKMORE & ASSOCIATES, INC.
GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

Client: Mr. Doug Taylor, Director of Design Services
Project: Jerrettown Elementy School

Project No: 5769G1 **Plate**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.6	7.6	14.6	28.2	46.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	99.2		
#4	96.4		
#10	88.8		
#40	74.2		
#100	58.9		
#200	46.0		

* (no specification provided)

Material Description

Stratum III: Red to dark red weathered siltstone. (silty sand)

Atterberg Limits

PL= NP LL= NV PI=

Coefficients

D_{90}= 2.2706 D_{85}= 1.3070 D_{60}= 0.1599
D_{50}= 0.0924 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-4(0)

Remarks

B2/S4 as received moisture content of 6.80%.
B3/S4 as received moisture content of 6.16%.

Source of Sample: B2/B3 **Depth:** 14'-16'
Sample Number: S4/S4

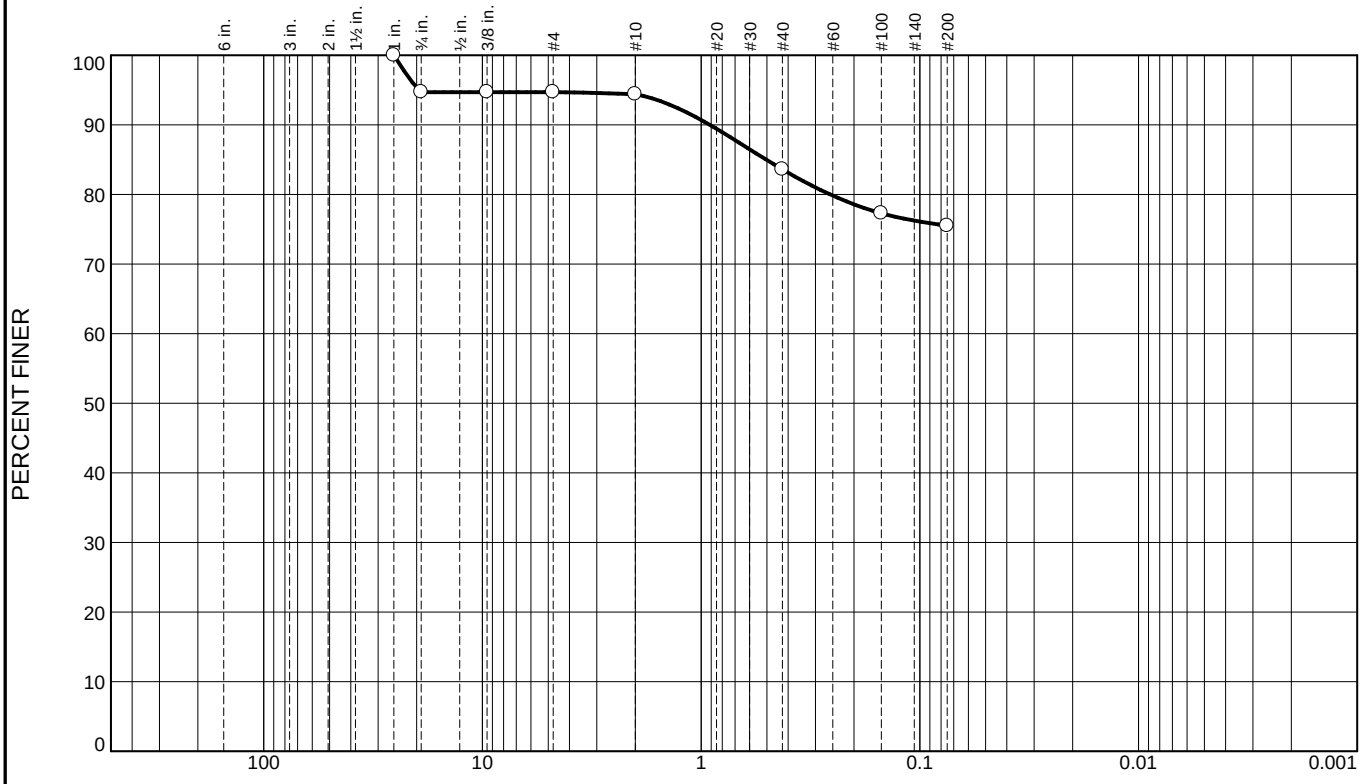
Date: 1/14/2026

DBA DAVID BLACKMORE & ASSOCIATES, INC.
GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

Client: Mr. Doug Taylor, Director of Design Services
Project: Jerrettown Elementy School

Project No: 5769G1 **Plate**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	5.3	0.0	0.3	10.8	8.1	75.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.0	100.0		
.75	94.7		
.375	94.7		
#4	94.7		
#10	94.4		
#40	83.6		
#100	77.3		
#200	75.5		

* (no specification provided)

Material Description

Stratum II: Orange brown fine silt with sand and traces of clay. (silt with sand)

Atterberg Limits

PL= NP LL= NV PI=

Coefficients

D_{90}= 0.9131 D_{85}= 0.5037 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= ML AASHTO= A-4(0)

Remarks

B6/S2 as received moisture content of 21.74%.
B1/S2 as received moisture content of 14.27%.

Source of Sample: B6/B1 **Depth:** 4'-6'
Sample Number: S2/S2

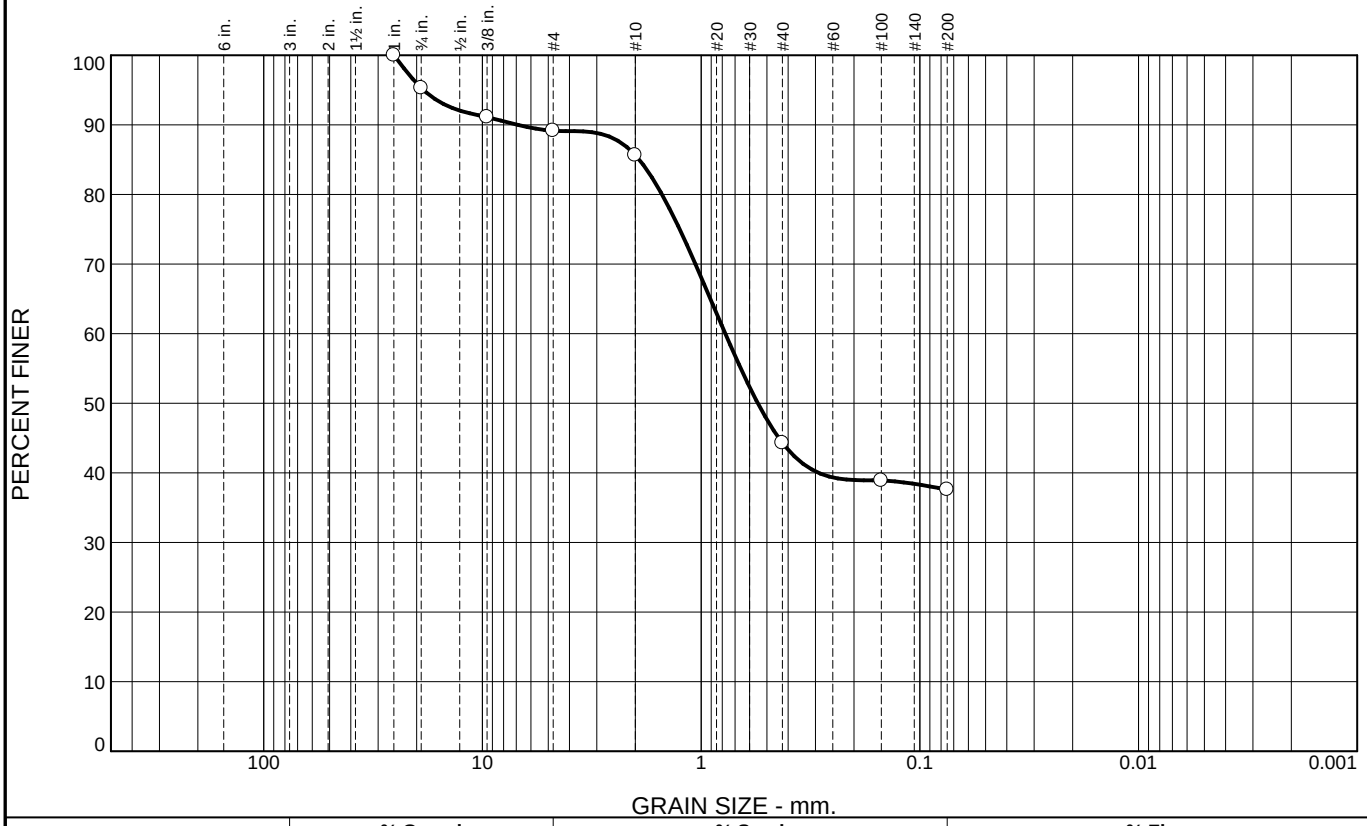
Date: 1/14/2026

DBA DAVID BLACKMORE & ASSOCIATES, INC.
GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

Client: Mr. Doug Taylor, Director of Design Services
Project: Jerrettown Elementy School

Project No: 5769G1 **Plate**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	4.7	6.1	3.5	41.4	6.7	37.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.0	100.0		
.75	95.3		
.375	91.1		
#4	89.2		
#10	85.7		
#40	44.3		
#100	38.9		
#200	37.6		

* (no specification provided)

Material Description

Stratum IF: Fill consisting of multi-colored fine to medium sand with sandstone fragments.
(silty sand)

Atterberg Limits

PL= NP LL= NV PI=

Coefficients

D_{90}= 6.8768 D_{85}= 1.9188 D_{60}= 0.7752
D_{50}= 0.5504 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-4(0)

Remarks

B6/S1 as received moisture content of 9.81%.
CB4/S1 as received moisture content of 13.08%.

Source of Sample: B6/CB4 **Depth:** 2'-4'
Sample Number: S1/S1

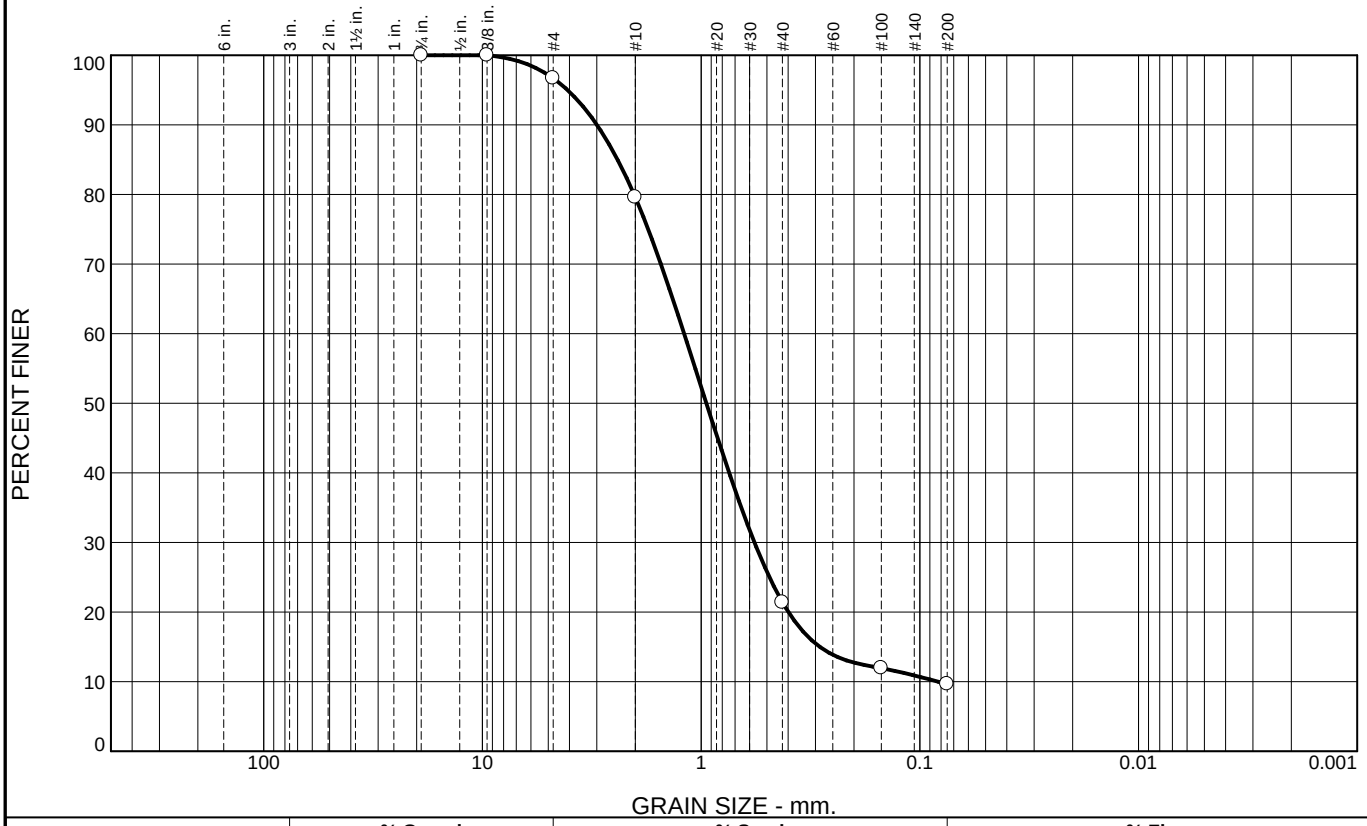
Date: 1/14/2026

DBA DAVID BLACKMORE & ASSOCIATES, INC.
GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

Client: Mr. Doug Taylor, Director of Design Services
Project: Jerrettown Elementy School

Project No: 5769G1 **Plate**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.3	17.1	58.2	11.7	9.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	100.0		
#4	96.7		
#10	79.6		
#40	21.4		
#100	11.9		
#200	9.7		

* (no specification provided)

Material Description

Stratum II: Tan to orange medium to coarse sand with silt. (poorly graded sand with silt)

Atterberg Limits

PL= NP LL= NV PI=

Coefficients

D_{90}= 2.9972 D_{85}= 2.4105 D_{60}= 1.1962
D_{50}= 0.9461 D_{30}= 0.5701 D_{15}= 0.2863
D_{10}= 0.0823 C_u= 14.53 C_c= 3.30

Classification

USCS= SP-SM AASHTO= A-1-b

Remarks

As received moisture content of 6.99%.

Source of Sample: Test Pits
Sample Number: TP 2

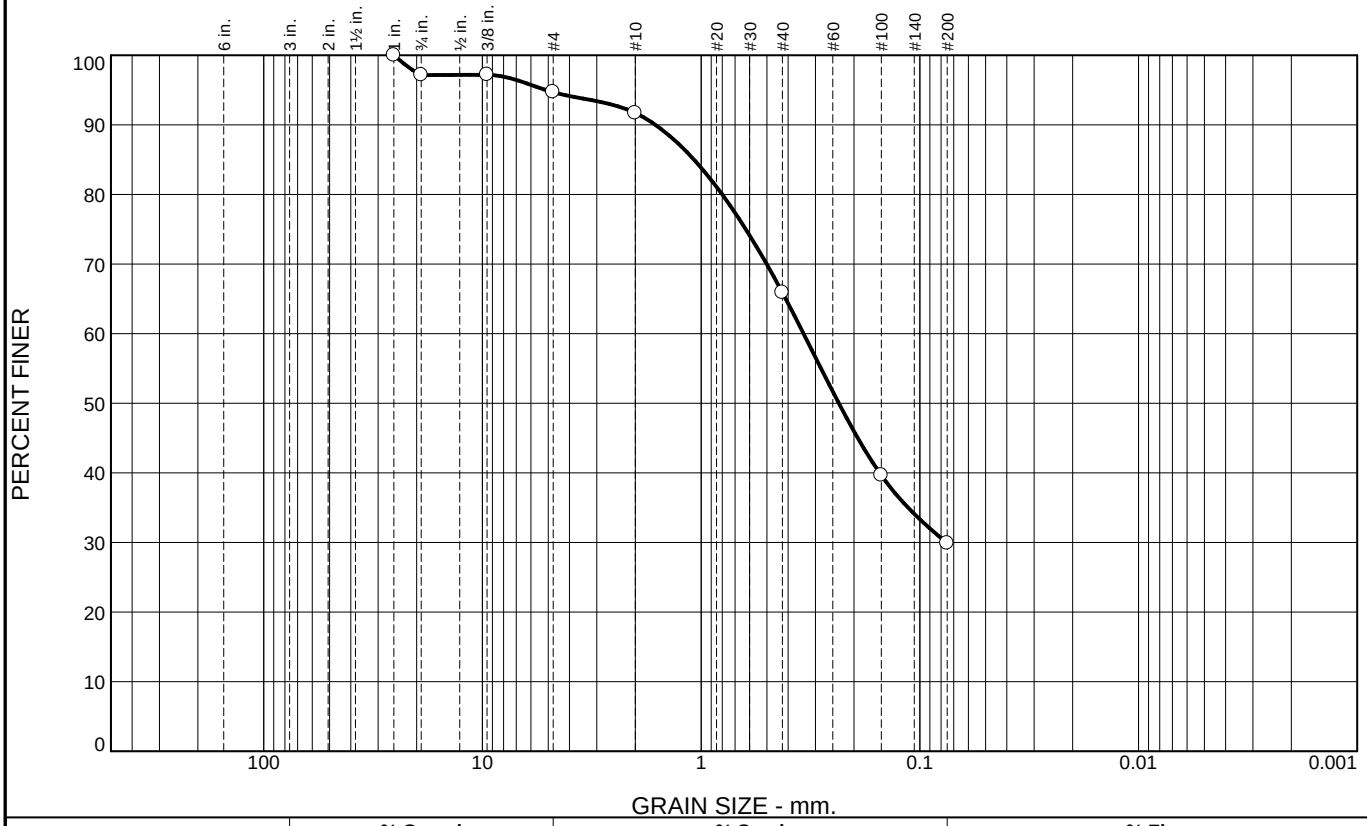
Date: 1/14/2026

DAVID BLACKMORE & ASSOCIATES, INC.
GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

Client: Mr. Doug Taylor, Director of Design Services
Project: Jerrettown Elementy School

Project No: 5769G1 **Plate**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	2.8	2.5	3.0	25.8	36.0	29.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.0	100.0		
.75	97.2		
.375	97.2		
#4	94.7		
#10	91.7		
#40	65.9		
#100	39.6		
#200	29.9		

* (no specification provided)

Material Description

Stratum II: Brown and gray fine sand and silt with occaisional rock fragments.
(silty sand)

Atterberg Limits

PL= NP LL= NV PI=

Coefficients

D_{90}= 1.6177 D_{85}= 1.0777 D_{60}= 0.3401
D_{50}= 0.2345 D_{30}= 0.0757 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

As received moisture content of 21.72%.

Source of Sample: Test Pits
Sample Number: TP 8

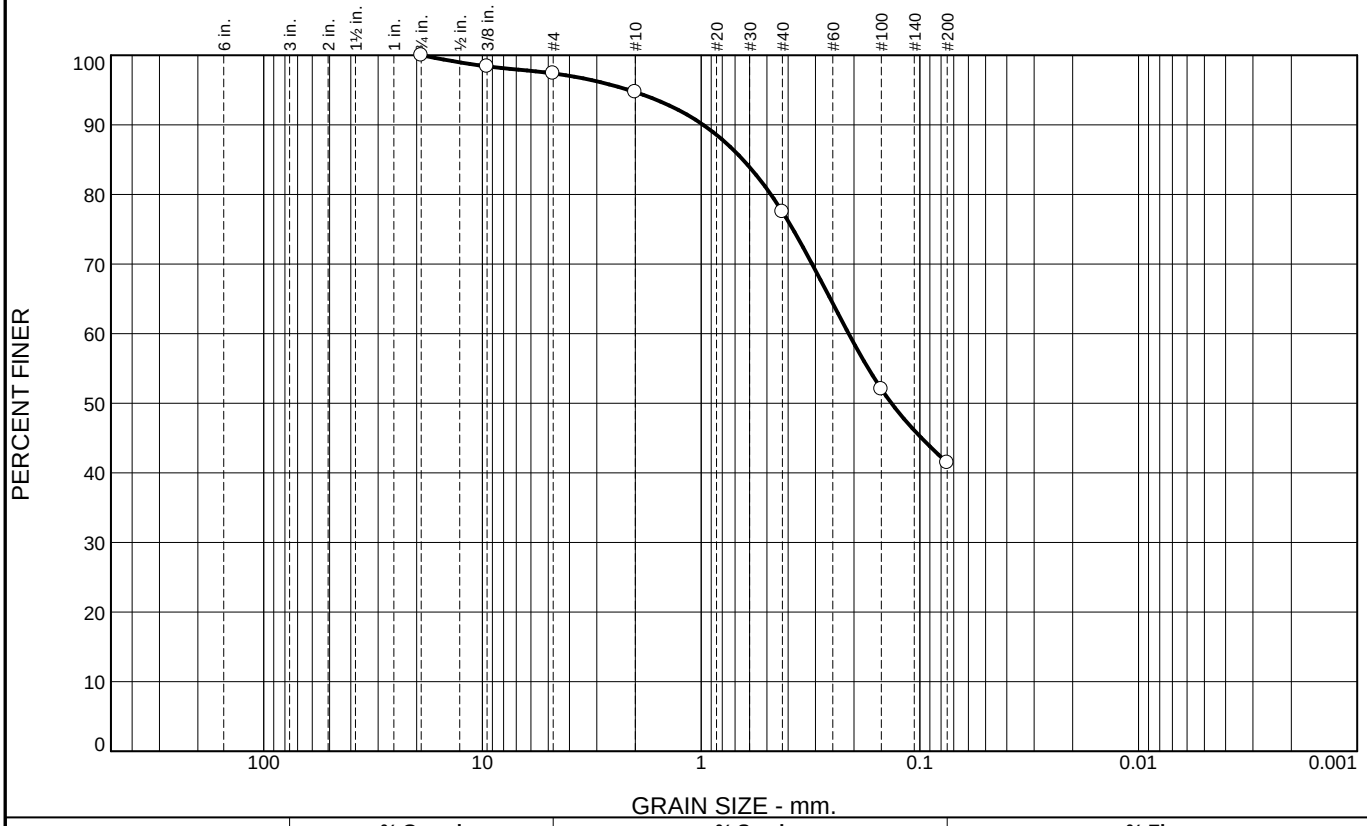
Date: 1/14/2026

DAVID BLACKMORE & ASSOCIATES, INC.
GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

Client: Mr. Doug Taylor, Director of Design Services
Project: Jerrettown Elementy School

Project No: 5769G1 **Plate**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.6	2.7	17.2	36.0	41.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	98.4		
#4	97.4		
#10	94.7		
#40	77.5		
#100	52.0		
#200	41.5		

* (no specification provided)

Material Description

Stratum IF: Dark brown sandy silt with occaisional pebbles. (silty sand)

Atterberg Limits

PL= NP LL= NV PI=

Coefficients

D_{90}= 0.9784 D_{85}= 0.6440 D_{60}= 0.2114
D_{50}= 0.1348 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-4(0)

Remarks

As received moisture content of 14.31%.

Source of Sample: Test Pits
Sample Number: TP 10

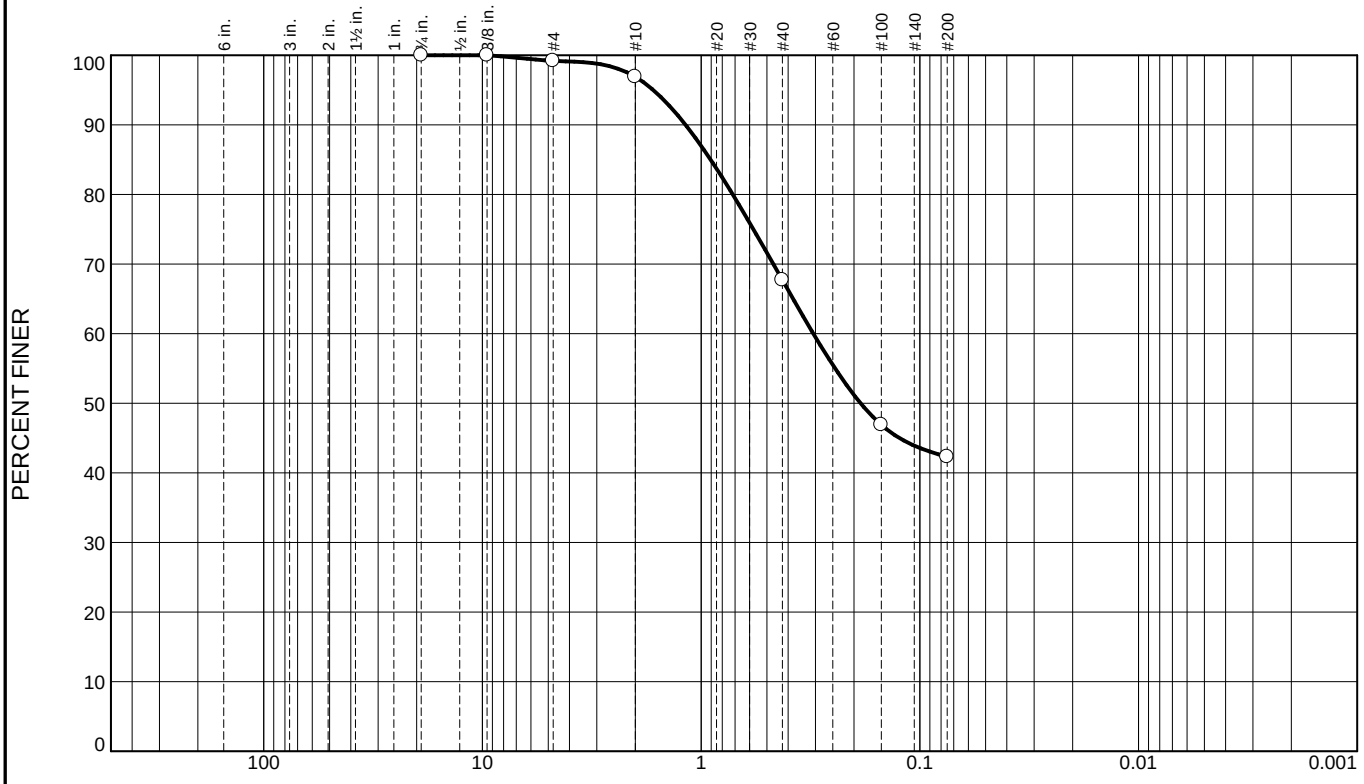
Date: 1/14/2026

DAVID BLACKMORE & ASSOCIATES, INC.
GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

Client: Mr. Doug Taylor, Director of Design Services
Project: Jerrettown Elementy School

Project No: 5769G1 **Plate**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.8	2.3	29.2	25.4	42.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	100.0		
#4	99.2		
#10	96.9		
#40	67.7		
#100	46.9		
#200	42.3		

* (no specification provided)

Material Description

Stratum II: Orange to brown fine sand and silt.
(silty sand)

Atterberg Limits

PL= NP LL= NV PI=

Coefficients

D_{90}= 1.1783 D_{85}= 0.9048 D_{60}= 0.3068
D_{50}= 0.1864 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-4(0)

Remarks

As received moisture content of 15.70%.

Source of Sample: Test Pits
Sample Number: TP 15

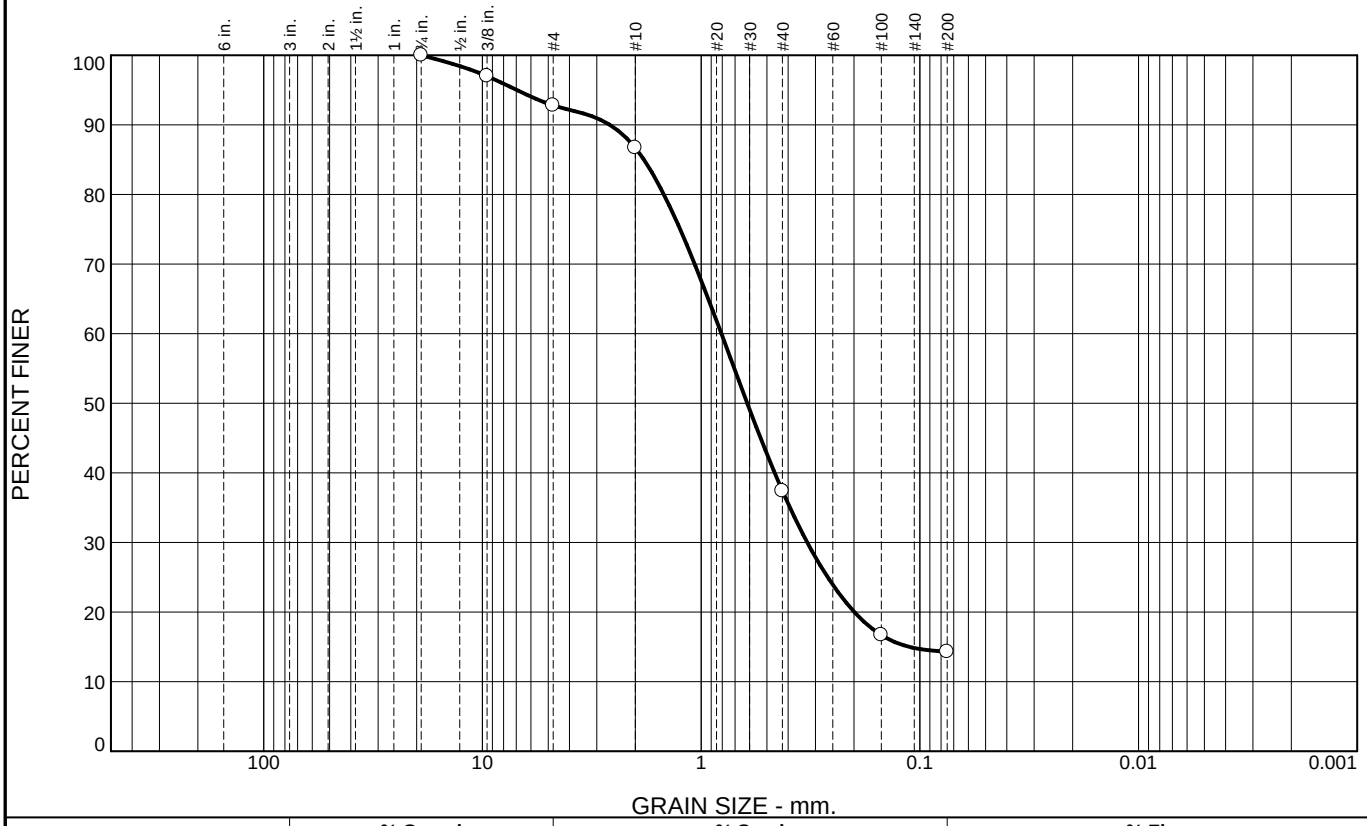
Date: 1/14/2026

DAVID BLACKMORE & ASSOCIATES, INC.
GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

Client: Mr. Doug Taylor, Director of Design Services
Project: Jerrettown Elementy School

Project No: 5769G1 **Plate**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	7.2	6.1	49.3	23.1	14.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	97.0		
#4	92.8		
#10	86.7		
#40	37.4		
#100	16.7		
#200	14.3		

* (no specification provided)

Material Description

Stratum II: Orange and brown fine to medium sand with silt. (silty sand)

Atterberg Limits

PL= NP LL= NV PI=

Coefficients

D_{90}= 2.6129 D_{85}= 1.8260 D_{60}= 0.8079
D_{50}= 0.6150 D_{30}= 0.3271 D_{15}= 0.1117
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-1-b

Remarks

As received moisture content of 6.22%.

Source of Sample: Test Pits
Sample Number: TP 18

Date: 1/14/2026

DAVID BLACKMORE & ASSOCIATES, INC.
GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

Client: Mr. Doug Taylor, Director of Design Services
Project: Jerrettown Elementy School

Project No: 5769G1 **Plate**

TEST BORING LOGS

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Boring Number: B1

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Drilling Contractor: Corcoran Drilling Co., INC.
X Coordinate (ft): Y Coordinate (ft):
Drilling Method #1: 6" Dia. Solid Auger from 0' to 19'
Drilling Method #2: Split Spoon from 19' to 19'10"

Project Number: 5769G1
Date Drilled: 11/14/2025
Inspected By: MUH
Boring Depth: 19.83'
Ground Surface Elevation (ft msl): 314.78
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (5 Hrs)

DEPTH BELOW SURFACE (FT)	WATER LEVEL	LITHOLOGIC SYMBOL	GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	DEPTH (FT)	ELEVATION (FT)	NUMBER	Water Content	SPT DATA	SPT Value	SPT GRAPH (Blows Per Foot)
0			Topsoil (9")	0.75	314.03					
			Stratum IF Fill consisting of brown fine sand and silt	1.50	313.28					
3.5			Stratum II Orange brown and gray fine sand clayey silt			S-1*		2-3-3-7	6	
						S-2*		6-8-10-13	18	
7				7.50	307.28					
			Stratum III Multi-colored weathered sandstone			S-3		23-50/5"	100	
10.5										
14						S-4		50/1"	100	
				16.00	298.78					
			Reddish brown weathered siltstone							
17.5										
				19.83	294.95	S-5		35-50/4"	100	
			Split Spoon Refusal on Dense Weathered Siltstone							
21										
24.5										

Notes:
*Sample is moist
Hard augering from 10' to 13'
Very hard augering from 13' to 16'
Fairly hard augering from 16'

The boring results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of drilling and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Boring Number: B2

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Drilling Contractor: Corcoran Drilling Co., INC.
X Coordinate (ft): Y Coordinate (ft):
Drilling Method #1: 6" Dia. Solid Auger from 0' to 19'
Drilling Method #2: Split Spoon from 19' to 19'

Project Number: 5769G1
Date Drilled: 11/14/2025
Inspected By: MUH
Boring Depth: 19'
Ground Surface Elevation (ft msl): 310.53
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (3 Hrs)

DEPTH BELOW SURFACE (FT)	WATER LEVEL	LITHOLOGIC SYMBOL	GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	DEPTH (FT)	ELEVATION (FT)	NUMBER	Water Content	SPT DATA	SPT Value	SPT GRAPH (Blows Per Foot)
							10 20 30 40			10 20 30 40 60 80
0			Topsoil (7")	0.58	309.95					
			Stratum II Orange brown and gray fine sand clayey silt	2.75	307.78					
3.5			Orange brown and brown fine to medium sand, with some silt, and occasional sandstone fragments			S-1*		4-6-9-10	15	
						S-2*		7-10-11-11	21	
7				8.00	302.53					
			Stratum III Multi-colored weathered sandstone			S-3		10-16-50/5"	100	
10.5				12.50	298.03					
			Reddish brown weathered siltstone							
14						S-4		8-9-30-53	39	
17.5				19.00	291.53					
			Split Spoon Refusal on Dense Weathered Siltstone			S-5		50/0"	100	
21			Notes: *Sample is moist Fairly hard augering from 10'6" to 12'6" Easy augering from 12'6" to 16" Hard augering from 16' to 18'6" Very hard augering from 18'6"							
24.5										

The boring results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of drilling and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Boring Number: B3

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Drilling Contractor: Corcoran Drilling Co., INC.
X Coordinate (ft): Y Coordinate (ft):
Drilling Method #1: 6" Dia. Solid Auger from 0' to 19'
Drilling Method #2: Split Spoon from 19' to 19'2"

Project Number: 5769G1
Date Drilled: 11/14/2025
Inspected By: MUH
Boring Depth: 19.17'
Ground Surface Elevation (ft msl): 307.51
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (1 Hr)

DEPTH BELOW SURFACE (FT)	WATER LEVEL	LITHOLOGIC SYMBOL	GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	DEPTH (FT)	ELEVATION (FT)	NUMBER	Water Content	SPT DATA	SPT Value	SPT GRAPH (Blows Per Foot)
							10 20 30 40			10 20 30 40 60 80
0			Topsoil (7")	0.58	306.93					
			Stratum II Orange brown and brown fine sand and silt with some clay and occasional sandstone fragments	3.42	304.09	S-1*		2-3-5-8	8	
3.5			Orange brown and brown fine to medium sand, with some silt, and occasional sandstone fragments			S-2*		9-10-10-11	20	
7			**Stratum III** Multi-colored weathered sandstone	7.00	300.51					
			Reddish brown weathered sandstone and siltstone	9.50	298.01	S-3		8-6-20-33	26	
10.5			Reddish brown weathered siltstone	12.50	295.01					
14						S-4		26-31-38-50/4"	100	
17.5				19.17	288.34	S-5+		50/2"	100	
			Split Spoon Refusal on Dense Weathered Siltstone							
21			Notes: *Sample is moist +Sample is wet Hard augering from 16'							
24.5										

The boring results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of drilling and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Boring Number: B4

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Drilling Contractor: Corcoran Drilling Co., INC.
X Coordinate (ft): Y Coordinate (ft):
Drilling Method #1: 6" Dia. Solid Auger from 0' to 19'
Drilling Method #2: Split Spoon from 19' to 19'1"

Project Number: 5769G1
Date Drilled: 11/14/2025
Inspected By: MUH
Boring Depth: 19.08'
Ground Surface Elevation (ft msl): 310.63
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (6 Hrs)

DEPTH BELOW SURFACE (FT)	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: DEPTH (FT)	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content	SAMPLING DATA: SPT DATA	SAMPLING DATA: SPT Value	SAMPLING DATA: SPT GRAPH (Blows Per Foot)
0			Topsoil (7")	0.58	310.05					
			Stratum IF Fill consisting of brown fine sand and silt with occasional rock fragments	2.58	308.05					
3.5			**Stratum II** Orange brown fine sand clayey silt with occasional pebbles	4.17	306.46	S-1*		3-3-3-4	6	
			Orange brown and brown fine to medium sand with sandstone fragments			S-2**		4-7-8-11	15	
7										
				9.33	301.30	S-3		18-50/5"	100	
10.5			**Stratum III** Multi-colored weathered sandstone							
			Multi-colored weathered siltstone	13.00	297.63					
14						S-4		50/2"	100	
17.5										
				19.08	291.55	S-5		50/1"	100	
			Split Spoon Refusal on Dense Weathered Siltstone							
21			Notes: *Sample is moist **Sample is damp Fairly hard to hard augering from 10' to 13' Hard augering from 13' Very hard augering from 17'							
24.5										

Water Content: 10 20 30 40
SPT GRAPH (Blows Per Foot): 10 20 30 40 60 80

The boring results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of drilling and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: B5

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Corcoran Drilling Co., INC.
Excavation Equipment:
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 11/14/2025
Logged By:
Test Pit Depth: 14.67'
Ground Surface Elevation (ft msl): 306.59
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (7 Hrs)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content (10 20 30 40)	SAMPLING DATA: Comments/Notes
0			Topsoil (6")	306.09			
			Stratum II Orange brown and brown fine to medium sand with siltstone fragments		S-1		
3.5				301.59	S-2		
			Stratum III Multi-colored weathered sandstone				
7				298.59			
			Multi-colored weathered siltstone		S-3		
10.5							
14				291.92	S-4		
			Auger Refusal on Siltstone Bedrock				
17.5			Notes: Hard augering from 7'6" Very hard augering from 8'6" Extremely hard augering from 14'6"				
21							
24.5							

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Boring Number: B6

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Drilling Contractor: Corcoran Drilling Co., INC.
X Coordinate (ft): Y Coordinate (ft):
Drilling Method #1: 6" Dia. Solid Auger from 0' to 19'
Drilling Method #2: Split Spoon from 19' to 20'2"

Project Number: 5769G1
Date Drilled: 11/17/2025
Inspected By: MUH
Boring Depth: 20.17'
Ground Surface Elevation (ft msl): 308.06
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (1 Hr)

DEPTH BELOW SURFACE (FT)	WATER LEVEL	LITHOLOGIC SYMBOL	GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	DEPTH (FT)	ELEVATION (FT)	NUMBER	Water Content 10 20 30 40	SPT DATA	SPT Value	SPT GRAPH (Blows Per Foot) 10 20 30 40 60 80
0			Topsoil (9")	0.75	307.31					
			Stratum IF Fill consisting of multi-colored fine to medium sand with occasional sandstone fragments			S-1**		10-11-12-12	23	
3.5				4.17	303.89					
			Stratum II Orange brown fine sand clayey silt			S-2*		7-8-8-7	16	
7				7.50	300.56					
			Multi-colored fine to medium sand with many sandstone fragments			S-3**		7-5-5-50/3"	10	
				10.00	298.06					
10.5			**Stratum III** Reddish brown and gray weathered siltstone							
14						S-4		50/2"	100	
17.5						S-5		26-29-50/2"	100	
				20.17	287.89					
21			**Split Spoon Refusal on Dense Weathered Siltstone**							
24.5										

Notes:
*Sample is moist
**Sample is damp
Hard augering from 10'9" to 16'
Fairly hard augering from 16'

The boring results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of drilling and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

PROBE LOGS

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Boring Number: P1

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Drilling Contractor: Corcoran Drilling Co., INC.
X Coordinate (ft): Y Coordinate (ft):
Drilling Method #1: 6" Dia. Solid Auger from 0' to 15'
Drilling Method #2:

Project Number: 5769G1
Date Drilled: 11/18/2025
Inspected By: MUH
Boring Depth: 15'
Ground Surface Elevation (ft msl): 296.50
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (1/2 Hr)

DEPTH BELOW SURFACE (FT)	WATER LEVEL	LITHOLOGIC SYMBOL	GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	DEPTH (FT)	ELEVATION (FT)	DRILLING COMMENTS/REMARKS
0			Topsoil (9")	0.75	295.75	Easy augering to 15'
			Stratum II Brown fine sand and silt with occasional rock fragments	2.00	294.50	
3			Orange brown fine sand and silt with occasional rock fragments			
6			Stratum III Reddish brown and gray weathered siltstone	6.00	290.50	
			Multi-colored weathered sandstone	8.00	288.50	
9						
12						
			Reddish brown and gray weathered sandstone and siltstone	13.00	283.50	
15			Auger Probe Terminated	15.00	281.50	
18						
21						

DRILLING RESISTANCE
0-2 easy 2-4 fairly hard
4-7 hard 7-9 very hard
10 extremely hard

1 2 3 4 5 6 7 8 9

The boring results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of drilling and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

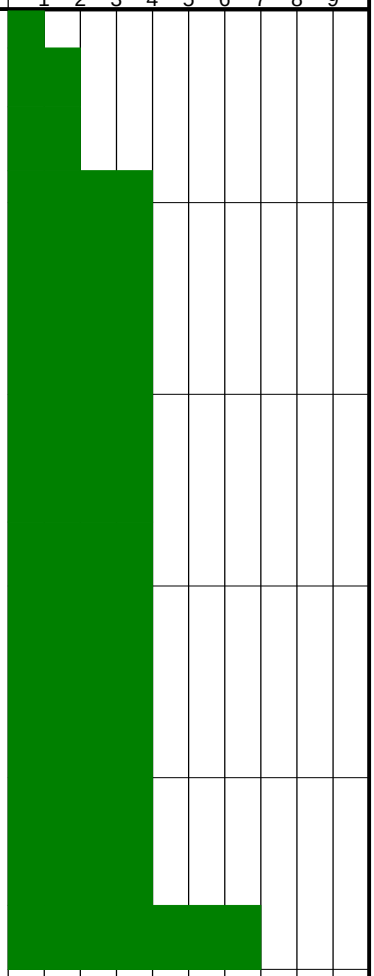
Boring Number: P2

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Drilling Contractor: Corcoran Drilling Co., INC.
X Coordinate (ft): Y Coordinate (ft):
Drilling Method #1: 6" Dia. Solid Auger from 0' to 15'
Drilling Method #2:

Project Number: 5769G1
Date Drilled: 11/18/2025
Inspected By: MUH
Boring Depth: 15'
Ground Surface Elevation (ft msl): 304.0
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (1 Hr)

DEPTH BELOW SURFACE (FT)	WATER LEVEL	LITHOLOGIC SYMBOL	GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	DEPTH (FT)	ELEVATION (FT)	DRILLING COMMENTS/REMARKS
0			Topsoil (7")	0.58	303.42	
			Stratum II Brown fine sand and silt with occasional rock fragments	1.50	302.50	
			Multi-colored fine to medium sand with sandstone fragments	2.50	301.50	Fairly hard augering from 2'6" to 14'
3			Stratum III Multi-colored weathered sandstone			
6						
				8.00	296.00	
9			Reddish brown and gray weathered siltstone			
12						Hard augering from 14'
15				15.00	289.00	
			Auger Probe Terminated			
18						
21						

DRILLING RESISTANCE
0-2 easy 2-4 fairly hard
4-7 hard 7-9 very hard
10 extremely hard



The boring results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of drilling and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

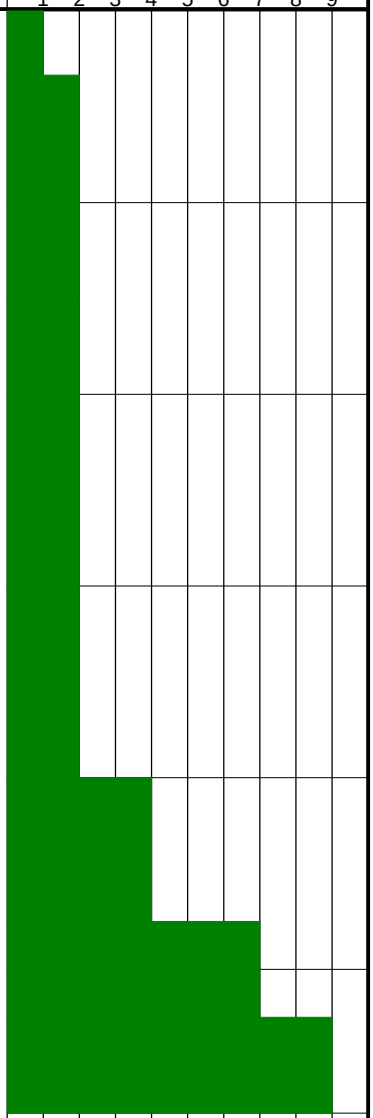
Boring Number: P5

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Drilling Contractor: Corcoran Drilling Co., INC.
X Coordinate (ft): Y Coordinate (ft):
Drilling Method #1: 6" Dia. Solid Auger from 0' to 11'6"
Drilling Method #2:

Project Number: 5769G1
Date Drilled: 11/18/2025
Inspected By: MUH
Boring Depth: 11.5'
Ground Surface Elevation (ft msl): 292.0
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (2 Hrs)

DEPTH BELOW SURFACE (FT)	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	DEPTH (FT)	ELEVATION (FT)	SAMPLING DATA: DRILLING COMMENTS/REMARKS
0			Topsoil (8")	0.67	291.33	
			Stratum II Brown fine sand and silt with some rock fragments	3.00	289.00	
			Reddish brown fine sand and silt with rock fragments	6.00	286.00	
			Stratum III Reddish brown and gray weathered siltstone	8.00	284.00	
			Multi-colored weathered siltstone and sandstone	9.50	282.50	Fairly hard augering from 8'
			Reddish brown weathered siltstone	10.50	281.50	Hard augering from 9'6"
			Gray and orange brown weathered sandstone	11.50	280.50	Very hard augering from 10'6"
			Auger Refusal on Sandstone Bedrock			

DRILLING RESISTANCE
0-2 easy 2-4 fairly hard
4-7 hard 7-9 very hard
10 extremely hard



The boring results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of drilling and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

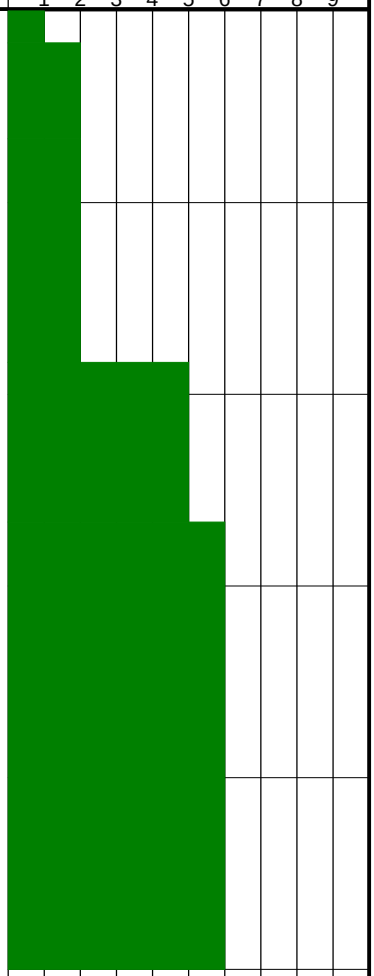
Boring Number: P8

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Drilling Contractor: Corcoran Drilling Co., INC.
X Coordinate (ft): Y Coordinate (ft):
Drilling Method #1: 6" Dia. Solid Auger from 0' to 15'
Drilling Method #2:

Project Number: 5769G1
Date Drilled: 11/18/2025
Inspected By: MUH
Boring Depth: 15'
Ground Surface Elevation (ft msl): 290.0
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (3 Hrs)

DEPTH BELOW SURFACE (FT)	WATER LEVEL	LITHOLOGIC SYMBOL	GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	DEPTH (FT)	ELEVATION (FT)	DRILLING COMMENTS/REMARKS
0			Topsoil (6")	0.50	289.50	
			Stratum II Brown fine sand and silt with some rock fragments	2.00	288.00	
3			Multi-colored fine to medium sand and silt with sandstone fragments and some silt	5.50	284.50	
6			Stratum III Multi-colored weathered sandstone	8.00	282.00	Fairly hard to hard augering from 5'6"
9			Multi-colored weathered siltstone and sandstone			
12						
15				15.00	275.00	
			Auger Probe Terminated			
18						
21						

DRILLING RESISTANCE
0-2 easy 2-4 fairly hard
4-7 hard 7-9 very hard
10 extremely hard



The boring results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of drilling and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

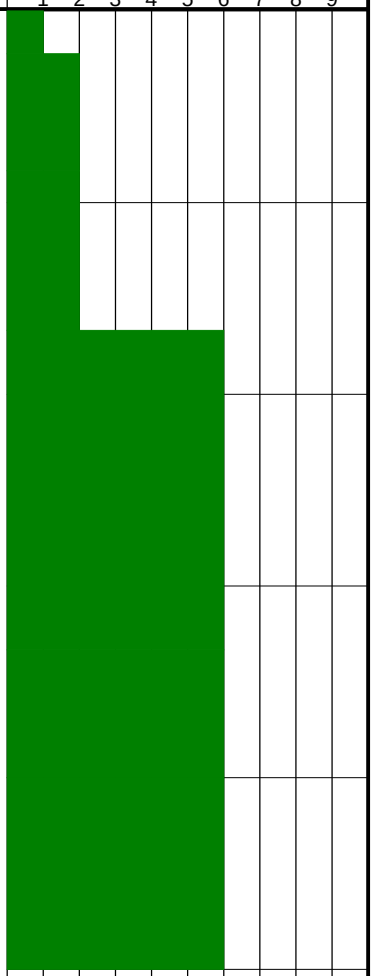
Boring Number: P11

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Drilling Contractor: Corcoran Drilling Co., INC.
X Coordinate (ft): Y Coordinate (ft):
Drilling Method #1: 6" Dia. Solid Auger from 0' to 15'
Drilling Method #2:

Project Number: 5769G1
Date Drilled: 11/18/2025
Inspected By: MUH
Boring Depth: 15'
Ground Surface Elevation (ft msl): 292.71
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (4 Hrs)

DEPTH BELOW SURFACE (FT)	WATER LEVEL	LITHOLOGIC SYMBOL	GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	DEPTH (FT)	ELEVATION (FT)	DRILLING COMMENTS/REMARKS
0			Topsoil (8")	0.67	292.04	
			Stratum II Brown fine sand and silt with some rock fragments	2.50	290.21	
3			Stratum III Reddish brown and gray weathered siltstone	5.00	287.71	
			Weathered red shale			Hard augering from 5'
6						
9				10.00	282.71	
			Reddish brown weathered siltstone	12.00	280.71	
12			Reddish brown and gray weathered siltstone and sandstone	15.00	277.71	
15			Auger Probe Terminated			
18						
21						

DRILLING RESISTANCE
0-2 easy 2-4 fairly hard
4-7 hard 7-9 very hard
10 extremely hard



The boring results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of drilling and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

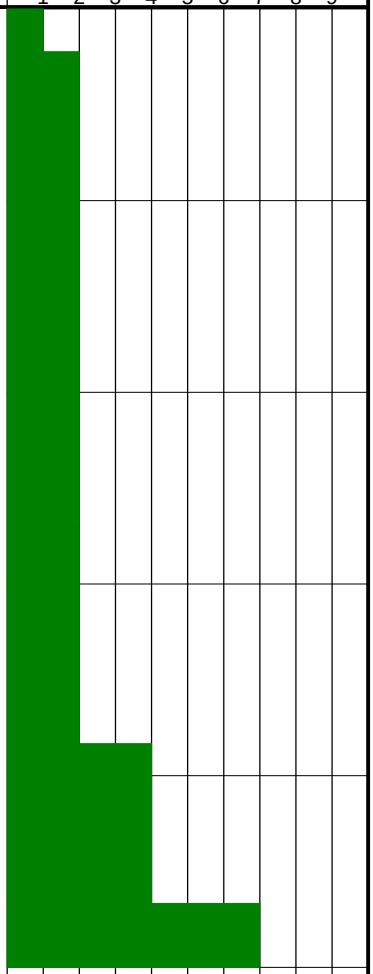
Boring Number: P15

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Drilling Contractor: Corcoran Drilling Co., INC.
X Coordinate (ft): Y Coordinate (ft):
Drilling Method #1: 6" Dia. Solid Auger from 0' to 15'
Drilling Method #2:

Project Number: 5769G1
Date Drilled: 11/18/2025
Inspected By: MUH
Boring Depth: 15'
Ground Surface Elevation (ft msl): 306.82
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (4 Hrs)

DEPTH BELOW SURFACE (FT)	WATER LEVEL	LITHOLOGIC SYMBOL	GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	DEPTH (FT)	ELEVATION (FT)	DRILLING COMMENTS/REMARKS
0			Topsoil (8")	0.67	306.15	
			Stratum II Brown and orange brown fine sand and silt with some rock fragments			Offset 15' towards B3 due to multiple utilites Easy augering to 11'6"
				8.00	298.82	
			Orange brown fine sand and some silt	11.50	295.32	
12			Stratum III Multi-colored weathered sandstone			Fairly hard augering from 11'6" to 14' Hard augering from 14'
				15.00	291.82	
15			Auger Probe Terminated			
18						
21						

DRILLING RESISTANCE
0-2 easy 2-4 fairly hard
4-7 hard 7-9 very hard
10 extremely hard



The boring results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of drilling and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

TEST PIT LOGS

DAVID BLACKMORE & ASSOCIATES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-1

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment: Trackhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 12/01/2025
Logged By: MUH
Test Pit Depth: 8'
Ground Surface Elevation (ft msl): 309.58
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (1 Hr)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content (10 20 30 40)	SAMPLING DATA: Comments/Notes
0			Topsoil (9")	308.83			
			Stratum II Orange brown and brown fine to medium sand and silt				
1.5				306.91			
			Brown fine to medium sand and silt	306.08			
3			Stratum III Multi-colored weathered sandstone				
4.5							
6							
7.5				301.58			
			Test Pit Terminated				
			Notes: Test at 6' depth (Elv. 303.58 feet) IT-1: 1.1 in/hr.				
9							
10.5							

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-2

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment: Trackhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 12/01/2025
Logged By: MUH
Test Pit Depth: 4'
Ground Surface Elevation (ft msl): 303.93
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (4 Hrs)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content 10 20 30 40	SAMPLING DATA: Comments/Notes
0			Topsoil (5")	303.51			
			Stratum II Orange medium to course sand with some silt				
1.5				301.26			
			Stratum III Multi-colored weathered sandstone				
3				299.93			
			Bucket Refusal on Dense Weathered Sandstone				
4.5			Notes: Test at 2' depth (Elv. 301.93 feet) IT-2: 1.50 in/hr.				
6							
7.5							
9							
10.5							

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-3

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment: Trackhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 12/01/2025
Logged By: AYM
Test Pit Depth: 8'
Ground Surface Elevation (ft msl): 302.73
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (4 Hrs)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content (10 20 30 40)	SAMPLING DATA: Comments/Notes
0			Topsoil (7")	302.15			
			Stratum II Brown and orange-brown and gray mottled fine sand and silt				
1.5							
3							
4.5							
6				296.73			
			Brown and dark brown fine sand and silt with some rock fragments				
7.5							
				294.73			
			Test Pit Terminated				
			Notes: Test at 6' depth (Elv. 296.73 feet) IT-3: 1.0 in/hr.				
9							
10.5							

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-4

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment: Trackhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 12/01/2025
Logged By: AYM
Test Pit Depth: 8'
Ground Surface Elevation (ft msl): 299.07
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (1 Hr)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content (10 20 30 40)	SAMPLING DATA: Comments/Notes
0			Topsoil (4")	298.74			
			Stratum II Orange-brown fine sand and silt with rock fragments				
7.5				291.07			
			Test Pit Terminated <u>Notes:</u> Test at 6' depth (Elv. 293.07 feet) IT-4: 0.0 in/hr.				

1.5
3
4.5
6
9
10.5

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-5

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment: Trackhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 11/25/2025
Logged By: AYM
Test Pit Depth: 9'
Ground Surface Elevation (ft msl): 294.22
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (1 Hr)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content (10 20 30 40)	SAMPLING DATA: Comments/Notes
0			Topsoil (8")				
				293.55			
			Stratum II Brown and reddish-brown fine sand and silt with occasional rock fragments, some boulders				
1.5							
3							
4.5							
6							
7.5							
				285.22			
9			Test Pit Terminated				
			Notes: Test at 7' depth (Elv. 287.22 feet) IT-5: 2.0 in/hr.				
10.5							

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-6

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint landscaping
Excavation Equipment: Backhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 12/01/2025
Logged By: AYM
Test Pit Depth: 4'
Ground Surface Elevation (ft msl): 286.08
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (4 Hrs)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content (10 20 30 40)	SAMPLING DATA: Comments/Notes
0			Topsoil (5")	285.66			
			Stratum II Brown fine sand and silt with some clay				
1.5				284.08			
			Reddish-brown fine sand and silt with rock fragments				
3				282.08			
			Test Pit Terminated				
4.5			Notes: Test at 2' depth (Elv. 284.08 feet) IT-6: 0.00 in/hr.				
6							
7.5							
9							
10.5							

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-7

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment: Backhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 12/01/2025
Logged By: AYM
Test Pit Depth: 4.5'
Ground Surface Elevation (ft msl): 290.78
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (4 Hrs)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content 10 20 30 40	SAMPLING DATA: Comments/Notes
0			Topsoil (6")	290.28			
			Stratum II Brown fine sand and silt with rock fragments, some clay				
4.5				286.28			
			Test Pit Terminated Notes: Test at 2.5' depth (Elv. 288.28 feet) IT-7: 0.00 in/hr.				
10.5							

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-8

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment:
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 11/25/2025
Logged By:
Test Pit Depth: 4'
Ground Surface Elevation (ft msl): 288.96
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (3 Hrs)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content (10 20 30 40)	SAMPLING DATA: Comments/Notes
0			Topsoil (6")	288.46			
			Stratum II Brown fine sand and silt with some rock fragments				
1.5				286.96			
			Multi-colored fine sand and silt with sandstone fragments				
3				284.96			
			Test Pit Terminated				
4.5			Notes: Test at 2' depth (Elv. 286.96 feet) IT-8: 0.00 in/hr				
6							
7.5							
9							
10.5							

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-9

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment: Trackhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 11/25/2025
Logged By: ZH
Test Pit Depth: 4'
Ground Surface Elevation (ft msl): 291.75
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (4 Hrs)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content (10 20 30 40)	SAMPLING DATA: Comments/Notes
0			Topsoil (6")	291.25			
			Stratum IF Fill consisting of dark brown and brown fine sand and silt				
1.5				290.08			
			Stratum II Tan, orange brown, and gray fine to medium sand with silt and occasional sandstone fragments				
3				287.75			
			Test Pit Terminated Notes: Test at 2' depth (Elv. 289.75 feet) IT-9: 0.25 in/hr.				
4.5							
6							
7.5							
9							
10.5							

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-10

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment: Trackhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 11/25/2025
Logged By: ZH
Test Pit Depth: 2.5'
Ground Surface Elevation (ft msl): 292.37
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (4 Hrs)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content 10 20 30 40	SAMPLING DATA: Comments/Notes
0			Topsoil (7")				
0.5				291.79			
			Stratum IF Fill consisting of dark brown and brown fine sand and silt with some rock fragments				
1							
1.5							
2							
2.5				289.87			
			Test Pit Terminated				
3							
3.5							

Notes:
Test at 0.67' depth (Elv. 291.70 feet)
IT-10: 0.13 in/hr.

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-11

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment: Trackhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 11/25/2025
Logged By: ZH
Test Pit Depth: 3'
Ground Surface Elevation (ft msl): 292.71
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (4 Hrs)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content (10 20 30 40)	SAMPLING DATA: Comments/Notes
0			Topsoil (5")				
				292.29			
0.5			Stratum II Dark brown and brown fine sand and silt with some rock fragments				
1							
1.5							
2							
2.5				290.13			
			Stratum III Gray and brown weathered siltstone				
3				289.71			
			Test Pit Terminated				
3.5			Notes: Test at 1' depth (Elv. 291.71 feet) IT-11: 0.25 in/hr.				

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-12

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment: Trackhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 11/24/2025
Logged By: AYM
Test Pit Depth: 1.42'
Ground Surface Elevation (ft msl): 291.17
Water Level - Immediate (ft bgs): Dry (5 min)
Water Level - Static (ft bgs): Dry (1 hr)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content (10 20 30 40)	SAMPLING DATA: Comments/Notes
0			Topsoil (5")	290.75			
0.5			Stratum II Brown fine sand and silt				
1				289.75			
1.5			Test Pit Terminated Notes: Test at 0.67' depth (Elv. 286.50 feet) IT-12: 0.0 in/hr.				
2							
2.5							
3							
3.5							

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-13

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment: Backhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 11/24/2025
Logged By: AYM
Test Pit Depth: 3'
Ground Surface Elevation (ft msl): 292.30
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (4 Hrs)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content (10 20 30 40)	SAMPLING DATA: Comments/Notes
0			Topsoil (7")				
0.5				291.72			
			Stratum II Brown and reddish brown fine sand and silt with rock fragments				
1							
1.5							
2							
2.5							
3				289.30			
			Test Pit Terminated Notes: Test at 0.67' (291.67 feet) IT-13: 0.00 in/hr				
3.5							

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-15

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment: Trackhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 11/25/2025
Logged By: MUH
Test Pit Depth: 8'
Ground Surface Elevation (ft msl): 306.82
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (4 Hrs)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content (10 20 30 40)	SAMPLING DATA: Comments/Notes
			Stratum II Reddish brown and brown fine sand and silt with cobbles and rock fragments	305.65			
1.5			Brown and orange brown fine sand and silt				
3							
4.5							
				301.15			*Moist from 5'8" to 7'10"*
6			Orange brown and orange fine sandy silt				
7.5							
				298.99			
			Stratum III Multi-colored weathered sandstone	298.82			
			Test Pit Terminated				
9			Notes: Test at 6' depth (Elv. 300.82 feet) IT-15: 1.06 in/hr.				
10.5							

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-16

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment: Trackhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 11/25/2025
Logged By: MUH
Test Pit Depth: 8'
Ground Surface Elevation (ft msl): 304.38
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (4 Hrs)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content (10 20 30 40)	SAMPLING DATA: Comments/Notes
0			Topsoil (6")	303.88			
			Stratum II Orange brown and brown fine to medium sand and silt with some rock fragments	302.88			
1.5			Brown and orange brown fine to medium sand and some silt				
3							
4.5							
6				297.38			
			Orange brown fine sand silty clay with medium sand	296.38			
7.5			Test Pit Terminated				
			Notes: Test at 6' depth (Elv. 298.38 feet) IT-16: 2.16 in/hr.				
9							
10.5							

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-17

Sheet 1 of 1

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment: Trackhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 11/25/2025
Logged By: MUH
Test Pit Depth: 7'
Ground Surface Elevation (ft msl): 297.94
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (4 Hrs)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content 10 20 30 40	SAMPLING DATA: Comments/Notes
0			Topsoil (4")	297.61			
			Stratum II Orange-brown, brown, and gray fine sand and silt with rock fragments				
1.5							
3							
4.5							
6				290.94			
			Test Pit Terminated				
7.5			Notes: Test at 4.5' depth (Elv. 293.44 feet) IT-17: 2.0 in/hr.				
9							
10.5							

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Test Pit Number: TP-18

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Excavation Contractor: Wayne Carmint Landscaping
Excavation Equipment: Trackhoe
Operator:
X Coordinate (ft): Y Coordinate (ft):

Project Number: 5769G1
Date Excavated: 11/25/2025
Logged By: MUH
Test Pit Depth: 8'
Ground Surface Elevation (ft msl): 307.76
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (4 Hrs)

DEPTH BELOW	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content 10 20 30 40	SAMPLING DATA: Comments/Notes
0			Topsoil (9")	307.01			
			Stratum II Orange brown and brown fine to medium sand and silt				
3				304.18			
			Stratum III Multi-colored weathered sandstone				
7.5				299.76			
			Test Pit Terminated Notes: Test at 6' depth (Elv. 301.76 feet) IT-18: 7.94 in/hr.				
10.5							

The test pit results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of excavation and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

CASED BOREHOLE LOGS

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Boring Number: CB-1

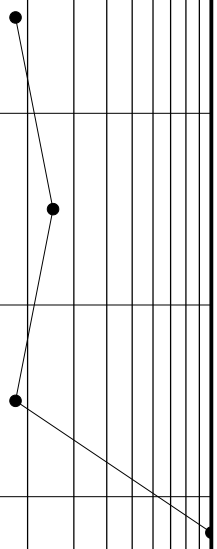
Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Drilling Contractor: Corcoran Drilling Co., INC.
X Coordinate (ft): Y Coordinate (ft):
Drilling Method #1: 6" Dia. Solid Auger from 0' to 8'
Drilling Method #2: Split Spoon from 8' to 8'9"

Project Number: 5769G1
Date Drilled: 11/17/2025
Inspected By: MUH
Boring Depth: 8.75'
Ground Surface Elevation (ft msl): 304.06
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (3 Hrs)

DEPTH BELOW SURFACE (FT)	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	DEPTH (FT)	ELEVATION (FT)	SAMPLING DATA: NUMBER	SPT DATA	SPT Value
0			Asphalt (6")	0.50	303.56			
			Modified stone (11")	1.42	302.64			
2			Stratum II Orange brown and brown fine to medium sand with siltstone fragments	3.25	300.81	S-1**	2-6-12-22	18
4			Stratum III Multi-colored weathered sandstone	4.33	299.73	S-2**	10-12-13-12	25
6			Reddish brown and gray weathered siltstone			S-3**	8-6-12-25	18
8				8.75	295.31	S-4	53-50/3"	100
10			Split Spoon Refusal on Weathered Siltstone					
12								
14								

Water Content: 10 20 30 40

SPT GRAPH (Blows Per Foot): 10 20 30 40 60 80



Notes:
**Sample is damp
Probe to 6' for infiltration (Elv. 298.06 feet)
CB-1: 2.88 in/hr.

The boring results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of drilling and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Boring Number: CB-2

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Drilling Contractor: Corcoran Drilling Co., INC.
X Coordinate (ft): Y Coordinate (ft):
Drilling Method #1: 6" Dia. Solid Auger from 0' to 8'
Drilling Method #2: Split Spoon from 8' to 8'5"

Project Number: 5769G1
Date Drilled: 11/17/2025
Inspected By: MUH
Boring Depth: 8.75'
Ground Surface Elevation (ft msl): 304.27
Water Level - Immediate (ft bgs): 7'10" (5 Min)
Water Level - Static (ft bgs): 1'9" (24 Hrs)

DEPTH BELOW SURFACE (FT)	WATER LEVEL	LITHOLOGIC SYMBOL	GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	DEPTH (FT)	ELEVATION (FT)	NUMBER	Water Content 10 20 30 40	SPT DATA	SPT Value	SPT GRAPH (Blows Per Foot) 10 20 30 40 60 80
0			Asphalt (5")	0.42	303.85					
			Modified stone (12")	1.42	302.85					
2			Stratum II Reddish brown and black fine sand and silt with occasional siltstone fragments			S-1+		2-3-6-10	9	
4			Stratum III Reddish brown fine sand and silt with some siltstone fragments	4.25	300.02	S-2**		7-11-13-14	24	
6				6.67	297.60	S-3		13-22-30-38	52	
8			Reddish brown and gray weathered siltstone	8.75	295.52	S-4		50/5"	100	
10			Split Spoon Refusal on Weathered Siltstone							
12										
14										

Notes:
**Sample is damp
+Sample is wet
Perched water at start of hole at 1'9"
Probe to 5' for infiltration (Elv. 299.27 feet)
CB-2: 0.0 in/hr.

The boring results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of drilling and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Boring Number: CB-3

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Drilling Contractor: Corcoran Drilling Co., INC.
X Coordinate (ft): Y Coordinate (ft):
Drilling Method #1: 6" Dia. Solid Auger from 0' to 8'
Drilling Method #2: Split Spoon from 8' to 10'

Project Number: 5769G1
Date Drilled: 11/17/2025
Inspected By: MUH
Boring Depth: 10'
Ground Surface Elevation (ft msl): 304.20
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (6 Hrs)

DEPTH BELOW SURFACE (FT)	WATER LEVEL	LITHOLOGIC SYMBOL	GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	DEPTH (FT)	ELEVATION (FT)	NUMBER	Water Content 10 20 30 40	SPT DATA	SPT Value	SPT GRAPH (Blows Per Foot) 10 20 30 40 60 80
0			Asphalt (5")	0.42	303.78					
			Stratum IF Fill consisting of brown fine sand and silt with many rock fragments	1.58	302.62					
2			**Stratum II** Reddish brown fine sand and silt, with some clay, and occasional rock fragments			S-1*		4-3-4-5	7	
4				4.17	300.03					
			Orange brown fine sand clayey silt			S-2*		4-5-7-9	12	
				5.50	298.70					
6			Brown and reddish brown fine sand and silt with occasional sandstone fragments and trace of medium sand	6.33	297.87					
			Reddish brown fine sand and silt			S-3**		6-8-11-12	19	
8				9.00	295.20	S-4**		6-8-12-13	20	
			Stratum III Reddish brown weathered siltstone	10.00	294.20					
10			**Boring Terminated**							
12										
14										

Notes:
*Sample is moist
**Sample is damp
Probe to 6' for infiltration (Elv. 298.20 feet)
CB-3: 0.0 in/hr.

The boring results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of drilling and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DAVID BLACKMORE & ASSOCIATIES, INC.
Geotechnical & Environmental Engineers
Phone: 610-495-6255 Fax: 610-495-7353
www.dbaengineering.com

Boring Number: CB-4

Project: Jerrettown Elementy School
Location: 1520 Limekiln Pike
Twp/City/State: Upper Dublin Township/Montgomery County/PA
Drilling Contractor: Corcoran Drilling Co., INC.
X Coordinate (ft): Y Coordinate (ft):
Drilling Method #1: 6" Dia. Solid Auger from 0' to 8'
Drilling Method #2: Split Spoon from 8' to 10'

Project Number: 5769G1
Date Drilled: 11/17/2025
Inspected By: MUH
Boring Depth: 10'
Ground Surface Elevation (ft msl): 297.58
Water Level - Immediate (ft bgs): Dry (5 Min)
Water Level - Static (ft bgs): Dry (7 Hrs)

DEPTH BELOW SURFACE (FT)	WATER LEVEL	LITHOLOGY: LITHOLOGIC SYMBOL	LITHOLOGY: GEOLOGIC DESCRIPTION OF SOIL AND ROCK STRATA	LITHOLOGY: DEPTH (FT)	LITHOLOGY: ELEVATION (FT)	SAMPLING DATA: NUMBER	SAMPLING DATA: Water Content	SAMPLING DATA: SPT DATA	SAMPLING DATA: SPT Value	SAMPLING DATA: SPT GRAPH (Blows Per Foot)
0			Topsoil (5")	0.42	297.16		10 20 30 40			10 20 30 40 60 80
			Modified stone (13")	1.50	296.08					
2			**Stratum IF** Fill consisting of reddish brown fine sand and clayey silt, with some rock fragments, and organic silt	4.00	293.58	S-1*		2-3-4-5	7	
4			**Stratum II** Brown fine sand and silt, with some clay, and occasional rock fragments	5.25	292.33	S-2*		4-5-6-9	11	
6			Brown and orange brown fine sand clayey silt with occasional rock fragments	7.42	290.16	S-3*		4-7-8-9	15	
8			Reddish brown and gray fine sand and some silt	8.58	289.00					
			Stratum III Multi-colored weathered sandstone	10.00	287.58	S-4**		9-14-15-23	29	
10			**Boring Terminated**							
12			Notes: *Sample is moist **Sample is damp Probe to 7'6" for infiltration (Elv. 290.08 feet) CB-4: 3.0 in/hr.							
14										

The boring results represent subsurface conditions at the boring locations only and are not necessarily representative of conditions at other locations. Water levels are taken at the time of drilling and are not indicative of seasonal variations in the ground water lovel. NR = No Recovery, S = Split Spoon sample (2" O.D.), C = Rock Coring Run.

DOUBLE RING INFILTRATION DATA

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-1
Tested By	MUH
Surface Elevation	309.58 feet
Depth of Testing	6.0 feet
Testing Elevation	303.58 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	12/1/2025	10:03 AM	0.50	6.00	1.06	6.00	1.50		2.13	3.00	
	E	12/1/2025	10:33 AM	(.50)	4.94		4.50					
2	S	12/1/2025	10:33 AM	0.50	6.00	0.75	6.00	1.00		1.50	2.00	
	E	12/1/2025	11:03 AM	(1.00)	5.25		5.00					
3	S	12/1/2025	11:03 AM	0.50	6.00	0.50	6.00	0.75		1.00	1.50	
	E	12/1/2025	11:33 AM	(1.50)	5.50		5.25					
4	S	12/1/2025	11:33 AM	0.50	6.00	0.63	6.00	0.75		1.25	1.50	
	E	12/1/2025	12:03 PM	(2.00)	5.38		5.25					
5	S	12/1/2025	12:03 PM	0.50	6.00	0.56	6.00	0.63		1.13	1.25	
	E	12/1/2025	12:33 PM	(2.50)	5.44		5.38					
6	S	12/1/2025	12:33 PM	0.50	6.00	0.50	6.00	0.63		1.00	1.25	
	E	12/1/2025	1:03 PM	(3.00)	5.50		5.38					
									Infiltration (in\hr)	**1.09**	**At Elevation 303.58 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-2
Tested By	MUH
Surface Elevation	303.93 feet
Depth of Testing	2.0 feet
Testing Elevation	301.93 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/25/2025	9:53 AM	0.50	7.00	2.25	6.00	3.69		4.50	7.38	
	E	11/25/2025	10:23 AM	(.50)	4.75		2.31					
2	S	11/25/2025	10:23 AM	0.17	7.00	0.19	6.00	1.00		1.12	6.00	
	E	11/25/2025	10:33 AM	(.67)	6.81		5.00					
3	S	11/25/2025	10:33 AM	0.17	7.00	0.25	6.00	1.00		1.50	6.00	
	E	11/25/2025	10:43 AM	(.83)	6.75		5.00					
4	S	11/25/2025	10:43 AM	0.17	7.00	0.25	6.00	1.00		1.50	6.00	
	E	11/25/2025	10:53 AM	(1.00)	6.75		5.00					
5	S	11/25/2025	10:53 AM	(.17)	7.00	0.25	6.00	1.00		1.50	6.00	
	E	11/25/2025	11:03 AM	(1.17)	6.75		5.00					
6	S	11/25/2025	11:03 AM	(.17)	7.00	0.25	6.00	1.06		1.50	6.38	
	E	11/25/2025	11:13 AM	(1.33)	6.75		4.94					
7	S	11/25/2025	11:13 AM	0.17	7.00	0.25	6.00	1.06		1.50	6.38	
	E	11/25/2025	11:23 AM	(1.50)	6.75		4.94					
8	S	11/25/2025	11:23 AM	0.17	7.00	0.25	6.00	0.94		1.50	5.62	
	E	11/25/2025	11:33 AM	(1.67)	6.75		5.06					
									Infiltration (in\hr)	**1.50**	**At Elevation 301.93 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-3
Tested By	AYM
Surface Elevation	302.73 feet
Depth of Testing	6.00 feet
Testing Elevation	296.73 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/25/2025	9:53 AM	0.50	7.00	0.50	6.00	0.50		1.00	1.00	
	E	11/25/2025	10:23 AM	(.50)	6.50		5.50					
2	S	11/25/2025	10:23 AM	0.50	7.00	0.50	6.00	0.50		1.00	1.00	
	E	11/25/2025	10:53 AM	(1.00)	6.50		5.50					
3	S	11/25/2025	10:53 AM	0.50	7.00	0.50	6.00	0.50		1.00	1.00	
	E	11/25/2025	11:23 AM	(1.50)	6.50		5.50					
4	S	11/25/2025	11:23 AM	0.50	7.00	0.50	6.00	0.50		1.00	1.00	
	E	11/25/2025	11:53 AM	(2.00)	6.50		5.50					
5	S	11/25/2025	11:53 AM	(.50)	7.00	0.50	6.00	0.50		1.00	1.00	
	E	11/25/2025	12:23 PM	(2.50)	6.50		5.50					
6	S	11/25/2025	12:23 PM	(.50)	7.00	0.50	6.00	0.50		1.00	1.00	
	E	11/25/2025	12:53 PM	(3.00)	6.50		5.50					
									Infiltration (in\hr)	**1.00**	**At Elevation 296.73 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-4
Tested By	AYM
Surface Elevation	299.07 feet
Depth of Testing	6.00 feet
Testing Elevation	293.07 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/25/2025	9:53 AM	0.50	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	10:23 AM	(.50)	7.00		5.00					
2	S	11/25/2025	10:23 AM	0.50	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	10:53 AM	(1.00)	7.00		5.00					
3	S	11/25/2025	10:53 AM	0.50	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	11:23 AM	(1.50)	7.00		5.00					
4	S	11/25/2025	11:23 AM	0.50	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	11:53 AM	(2.00)	7.00		5.00					
5	S	11/25/2025	11:53 AM	(.50)	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	12:23 PM	(2.50)	7.00		5.00					
6	S	11/25/2025	12:23 PM	(.50)	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	12:53 PM	(3.00)	7.00		5.00					
									Infiltration (in\hr)	**0.00**	**At Elevation 293.07 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-5
Tested By	MUH
Surface Elevation	294.22 feet
Depth of Testing	7.00 feet
Testing Elevation	287.22 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/25/2025	10:24 AM	0.50	8.00	1.00	7.00	1.00		2.00	2.00	
	E	11/25/2025	10:54 AM	(.50)	7.00		6.00					
2	S	11/25/2025	10:54 AM	0.50	8.00	1.00	7.00	1.00		2.00	2.00	
	E	11/25/2025	11:24 AM	(1.00)	7.00		6.00					
3	S	11/25/2025	11:24 AM	0.50	8.00	1.00	7.00	1.00		2.00	2.00	
	E	11/25/2025	11:54 AM	(1.50)	7.00		6.00					
4	S	11/25/2025	11:54 AM	0.50	8.00	1.00	7.00	1.00		2.00	2.00	
	E	11/25/2025	12:24 PM	(2.00)	7.00		6.00					
5	S	11/25/2025	12:24 PM	0.50	8.00	1.00	7.00	1.00		2.00	2.00	
	E	11/25/2025	12:54 PM	(2.50)	7.00	1.00	6.00					
6	S	11/25/2025	12:54 PM	0.50	8.00	1.00	7.00	1.00		2.00	2.00	
	E	11/25/2025	1:24 PM	(3.00)	7.00	1.00	6.00					
									Infiltration (in\hr)	**2.00**	**At Elevation 287.22 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-6
Tested By	AYM
Surface Elevation	286.08 feet
Depth of Testing	2.0 feet
Testing Elevation	284.08 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/25/2025	9:53 AM	0.50	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	10:23 AM	(.50)	7.00		5.00					
2	S	11/25/2025	10:23 AM	0.50	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	10:53 AM	(1.00)	7.00		5.00					
3	S	11/25/2025	10:53 AM	0.50	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	11:23 AM	(1.50)	7.00		5.00					
4	S	11/25/2025	11:23 AM	0.50	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	11:53 AM	(2.00)	7.00		5.00					
5	S	11/25/2025	11:53 AM	(.50)	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	12:23 PM	(2.50)	7.00		5.00					
6	S	11/25/2025	12:23 PM	(.50)	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	12:53 PM	(3.00)	7.00		5.00					
									Infiltration (in\hr)	**0.00**	**At Elevation 284.08 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-7
Tested By	AYM
Surface Elevation	290.78 feet
Depth of Testing	2.5 feet
Testing Elevation	288.28 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/25/2025	9:53 AM	0.50	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	10:23 AM	(.50)	7.00		5.00					
2	S	11/25/2025	10:23 AM	0.50	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	10:53 AM	(1.00)	7.00		5.00					
3	S	11/25/2025	10:53 AM	0.50	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	11:23 AM	(1.50)	7.00		5.00					
4	S	11/25/2025	11:23 AM	0.50	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	11:53 AM	(2.00)	7.00		5.00					
5	S	11/25/2025	11:53 AM	(.50)	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	12:23 PM	(2.50)	7.00		5.00					
6	S	11/25/2025	12:23 PM	(.50)	7.00	0.00	5.00	0.00		0.00	0.00	
	E	11/25/2025	12:53 PM	(3.00)	7.00		5.00					
									Infiltration (in\hr)	**0.00**	**At Elevation 288.28 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-8
Tested By	AYM
Surface Elevation	288.96 feet
Depth of Testing	2.0 feet
Testing Elevation	286.96 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/25/2025	10:24 AM	0.50	8.00	0.00	7.00	0.00		0.00	0.00	
	E	11/25/2025	10:54 AM	(.50)	8.00		7.00					
2	S	11/25/2025	10:54 AM	0.50	8.00	0.00	7.00	0.00		0.00	0.00	
	E	11/25/2025	11:24 AM	(1.00)	8.00		7.00					
3	S	11/25/2025	11:24 AM	0.50	8.00	0.00	7.00	0.00		0.00	0.00	
	E	11/25/2025	11:54 AM	(1.50)	8.00		7.00					
4	S	11/25/2025	11:54 AM	0.50	8.00	0.00	7.00	0.00		0.00	0.00	
	E	11/25/2025	12:24 PM	(2.00)	8.00		7.00					
5	S	11/25/2025	12:24 PM	0.50	8.00	0.00	7.00	0.00		0.00	0.00	
	E	11/25/2025	12:54 PM	(2.50)	8.00		7.00					
6	S	11/25/2025	12:54 PM	0.50	8.00	0.00	7.00	0.00		0.00	0.00	
	E	11/25/2025	1:24 PM	(3.00)	8.00		7.00					
									Infiltration (in\hr)	**0.00**	**At Elevation 286.96 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-9
Tested By	ZH
Surface Elevation	291.75 feet
Depth of Testing	2.0 feet
Testing Elevation	289.75 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/24/2025	9:55 AM	0.50	6.00	0.13	6.00	0.06		0.25	0.13	
	E	11/24/2025	10:25 AM	(.50)	5.88		5.94					
2	S	11/24/2025	10:25 AM	0.50	6.00	0.13	6.00	0.13		0.25	0.25	
	E	11/24/2025	10:55 AM	(1.00)	5.88		5.88					
3	S	11/24/2025	10:55 AM	0.50	6.00	0.13	6.00	0.13		0.25	0.25	
	E	11/24/2025	11:25 AM	(1.50)	5.88		5.88					
4	S	11/24/2025	11:25 AM	0.50	6.00	0.13	6.00	0.13		0.25	0.25	
	E	11/24/2025	11:55 AM	(2.00)	5.88		5.88					
5	S	11/24/2025	11:55 AM	(.50)	6.00	0.13	6.00	0.13		0.25	0.25	
	E	11/24/2025	12:25 PM	(2.50)	5.88		5.88					
6	S	11/24/2025	12:25 PM	(.50)	6.00	0.13	6.00	0.13		0.25	0.25	
	E	11/24/2025	12:55 PM	(3.00)	5.88		5.88					
7	S	11/24/2025	12:55 PM	0.50	6.00	0.13	6.00	0.13		0.25	0.25	
	E	11/24/2025	1:25 PM	(3.50)	5.88		5.88					
									Infiltration (in\hr)	**0.25**	**At Elevation 289.75 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-10
Tested By	ZH
Surface Elevation	292.37 feet
Depth of Testing	0.67 feet
Testing Elevation	291.70 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/24/2025	9:58 AM	0.50	6.00	0.13	6.00	0.13		0.25	0.25	
	E	11/24/2025	10:28 AM	(.50)	5.88		5.88					
2	S	11/24/2025	10:28 AM	0.50	6.00	0.06	6.00	0.06		0.13	0.13	
	E	11/24/2025	10:58 AM	(1.00)	5.94		5.94					
3	S	11/24/2025	10:58 AM	0.50	6.00	0.13	6.00	0.06		0.25	0.13	
	E	11/24/2025	11:28 AM	(1.50)	5.88		5.94					
4	S	11/24/2025	11:28 AM	0.50	6.00	0.06	6.00	0.06		0.13	0.13	
	E	11/24/2025	11:58 AM	(2.00)	5.94		5.94					
5	S	11/24/2025	11:58 AM	(.50)	6.00	0.06	6.00	0.06		0.13	0.13	
	E	11/24/2025	12:28 PM	(2.50)	5.94		5.94					
6	S	11/24/2025	12:28 PM	(.50)	6.00	0.06	6.00	0.06		0.13	0.13	
	E	11/24/2025	12:58 PM	(3.00)	5.94		5.94					
7	S	11/24/2025	12:58 PM	0.50	6.00	0.06	6.00	0.06		0.13	0.13	
	E	11/24/2025	1:28 PM	(3.50)	5.94		5.94					
									Infiltration (in\hr)	**0.13**	**At Elevation 291.70 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-11
Tested By	ZH
Surface Elevation	292.71 feet
Depth of Testing	1.0 feet
Testing Elevation	291.71 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/24/2025	10:00 AM	0.50	6.00	0.13	6.00	0.06		0.25	0.13	
	E	11/24/2025	10:30 AM	(.50)	5.88		5.94					
2	S	11/24/2025	10:30 AM	0.50	6.00	0.13	6.00	0.13		0.25	0.25	
	E	11/24/2025	11:00 AM	(1.00)	5.88		5.88					
3	S	11/24/2025	11:00 AM	0.50	6.00	0.13	6.00	0.13		0.25	0.25	
	E	11/24/2025	11:30 AM	(1.50)	5.88		5.88					
4	S	11/24/2025	11:30 AM	0.50	6.00	0.13	6.00	0.13		0.25	0.25	
	E	11/24/2025	12:00 PM	(2.00)	5.88		5.88					
5	S	11/24/2025	12:00 PM	(.50)	6.00	0.13	6.00	0.13		0.25	0.25	
	E	11/24/2025	12:30 PM	(2.50)	5.88		5.88					
6	S	11/24/2025	12:30 PM	(.50)	6.00	0.13	6.00	0.13		0.25	0.25	
	E	11/24/2025	1:00 PM	(3.00)	5.88		5.88					
7	S	11/24/2025	1:00 PM	0.50	6.00	0.13	6.00	0.13		0.25	0.25	
	E	11/24/2025	1:30 PM	(3.50)	5.88		5.88					
									Infiltration (in\hr)	**0.25**	**At Elevation 291.71 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-12
Tested By	AYM
Surface Elevation	290.17
Depth of Testing	0.67 feet
Testing Elevation	289.50 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/24/2025	10:00 AM	0.50	6.00	0.00	5.00	0.00		0.00	0.00	
	E	11/24/2025	10:30 AM	(.50)	6.00		5.00					
2	S	11/24/2025	10:30 AM	0.50	6.00	0.00	5.00	0.00		0.00	0.00	
	E	11/24/2025	11:00 AM	(1.00)	6.00		5.00					
3	S	11/24/2025	11:00 AM	0.50	6.00	0.00	5.00	0.00		0.00	0.00	
	E	11/24/2025	11:30 AM	(1.50)	6.00		5.00					
4	S	11/24/2025	11:30 AM	0.50	6.00	0.00	5.00	0.00		0.00	0.00	
	E	11/24/2025	12:00 PM	(2.00)	6.00		5.00					
5	S	11/24/2025	12:00 PM	(.50)	6.00	0.00	5.00	0.00		0.00	0.00	
	E	11/24/2025	12:30 PM	(2.50)	6.00		5.00					
6	S	11/24/2025	12:30 PM	(.50)	6.00	0.00	5.00	0.00		0.00	0.00	
	E	11/24/2025	1:00 PM	(3.00)	6.00		5.00					
									Infiltration (in\hr)	**0.00**	**At Elevation 289.50 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-13
Tested By	AYM
Surface Elevation	292.3 feet
Depth of Testing	0.67 feet
Testing Elevation	291.67 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/24/2025	10:00 AM	0.50	6.00	0.00	5.00	0.00		0.00	0.00	
	E	11/24/2025	10:30 AM	(.50)	6.00		5.00					
2	S	11/24/2025	10:30 AM	0.50	6.00	0.00	5.00	0.00		0.00	0.00	
	E	11/24/2025	11:00 AM	(1.00)	6.00		5.00					
3	S	11/24/2025	11:00 AM	0.50	6.00	0.00	5.00	0.00		0.00	0.00	
	E	11/24/2025	11:30 AM	(1.50)	6.00		5.00					
4	S	11/24/2025	11:30 AM	0.50	6.00	0.00	5.00	0.00		0.00	0.00	
	E	11/24/2025	12:00 PM	(2.00)	6.00		5.00					
5	S	11/24/2025	12:00 PM	(.50)	6.00	0.00	5.00	0.00		0.00	0.00	
	E	11/24/2025	12:30 PM	(2.50)	6.00		5.00					
6	S	11/24/2025	12:30 PM	(.50)	6.00	0.00	5.00	0.00		0.00	0.00	
	E	11/24/2025	1:00 PM	(3.00)	6.00		5.00					
									Infiltration (in\hr)	**0.00**	**At Elevation 291.67 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-15
Tested By	MUH
Surface Elevation	306.82 feet
Depth of Testing	6.0 feet
Testing Elevation	300.82 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/25/2025	10:24 AM	0.50	9.00	1.00	10.00	0.50		2.00	1.00	
	E	11/25/2025	10:54 AM	(.50)	8.00		9.50					
2	S	11/25/2025	10:54 AM	0.50	9.00	0.19	10.00	0.50		0.38	1.00	
	E	11/25/2025	11:24 AM	(1.00)	8.81		9.50					
3	S	11/25/2025	11:24 AM	0.50	9.00	0.56	10.00	0.50		1.13	1.00	
	E	11/25/2025	11:54 AM	(1.50)	8.44		9.50					
4	S	11/25/2025	11:54 AM	0.50	9.00	0.56	10.00	0.50		1.13	1.00	
	E	11/25/2025	12:24 PM	(2.00)	8.44		9.50					
5	S	11/25/2025	12:24 PM	0.50	9.00	0.50	10.00	0.50		1.00	1.00	
	E	11/25/2025	12:54 PM	(2.50)	8.50		9.50					
6	S	11/25/2025	12:54 PM	0.50	9.00	0.50	10.00	0.50		1.00	1.00	
	E	11/25/2025	1:24 PM	(3.00)	8.50		9.50					
									Infiltration (in\hr)	**1.06**	**At Elevation 300.82 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-16
Tested By	MUH
Surface Elevation	304.38 feet
Depth of Testing	6.0 feet
Testing Elevation	298.38 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/25/2025	10:27 AM	0.50	7.00	1.50	7.00	2.00		3.00	4.00	
	E	11/25/2025	10:57 AM	(.50)	5.50		5.00					
2	S	11/25/2025	10:57 AM	0.50	7.00	1.19	7.00	1.19		2.38	2.38	
	E	11/25/2025	11:27 AM	(1.00)	5.81		5.81					
3	S	11/25/2025	11:27 AM	0.50	7.00	1.00	7.00	1.06		2.00	2.13	
	E	11/25/2025	11:57 AM	(1.50)	6.00		5.94					
4	S	11/25/2025	11:57 AM	0.50	7.00	1.13	7.00	2.00		2.25	4.00	
	E	11/25/2025	12:27 PM	(2.00)	5.88		5.00					
5	S	11/25/2025	12:27 PM	0.50	7.00	1.00	7.00	0.50		2.00	1.00	
	E	11/25/2025	12:57 PM	(2.50)	6.00		6.50					
									Infiltration (in\hr)	**2.16**	**At Elevation 298.38 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-17
Tested By	AYM
Surface Elevation	297.94
Depth of Testing	4.50 feet
Testing Elevation	293.44 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/25/2025	10:24 AM	0.50	8.00	1.00	7.00	1.00		2.00	2.00	
	E	11/25/2025	10:54 AM	(.50)	7.00		6.00					
2	S	11/25/2025	10:54 AM	0.50	8.00	1.00	7.00	1.00		2.00	2.00	
	E	11/25/2025	11:24 AM	(1.00)	7.00		6.00					
3	S	11/25/2025	11:24 AM	0.50	8.00	1.00	7.00	1.00		2.00	2.00	
	E	11/25/2025	11:54 AM	(1.50)	7.00		6.00					
4	S	11/25/2025	11:54 AM	0.50	8.00	1.00	7.00	1.00		2.00	2.00	
	E	11/25/2025	12:24 PM	(2.00)	7.00		6.00					
5	S	11/25/2025	12:24 PM	0.50	8.00	1.00	7.00	1.00		2.00	2.00	
	E	11/25/2025	12:54 PM	(2.50)	7.00		6.00					
6	S	11/25/2025	12:54 PM	0.50	8.00	1.00	7.00	1.00		2.00	2.00	
	E	11/25/2025	1:24 PM	(3.00)	7.00		6.00					
									Infiltration (in\hr)	**2.00**	**At Elevation 293.44 feet**	

INFILTROMETER DATA

Project Identification	5769G1
Test Location	IT-18
Tested By	MUH
Surface Elevation	307.76 feet
Depth of Testing	6.0 feet
Testing Elevation	301.76 feet

Constants	Area, in^2
Inner ring	50.3
Annular space	62.9
Inner ring penetration	2 in
Outer ring penetration	4 in

No.	Start or End	Date	Time	Elpd Time, hr (Total)	Water Measurements				Liq Temp ºF	Infiltration Rate		Remarks
					Inner		Annular			Inner in / h	Annular in / h	
					level (h), in	Δh, in	level (h), in	Δh, in				
1	S	11/25/2025	10:21 AM	0.50	9.00	6.63	7.00	4.63		13.25	9.25	
	E	11/25/2025	10:51 AM	(.50)	2.38		2.38					
2	S	11/25/2025	10:51 AM	0.25	9.00	2.00	7.00	2.00		8.00	8.00	
	E	11/25/2025	11:06 AM	(.75)	7.00		5.00					
3	S	11/25/2025	11:06 AM	0.25	9.00	2.00	7.00	1.94		8.00	7.75	
	E	11/25/2025	11:21 AM	(1.00)	7.00		5.06					
4	S	11/25/2025	11:21 AM	0.25	9.00	2.00	7.00	2.00		8.00	8.00	
	E	11/25/2025	11:36 AM	(1.25)	7.00		5.00					
5	S	11/25/2025	11:36 AM	0.25	9.00	1.94	7.00	1.94		7.75	7.75	
	E	11/25/2025	11:51 AM	(1.50)	7.06		5.06					
									Infiltration (in\hr)	**7.94**	**At Elevation 301.76 feet**	

CASED BOREHOLE INFILTRATION DATA

PWD Stormwater Plan Review Infiltration Testing Log

Project Name:	5769G1 - Jarrettown Elementary	**Date:**	11/24/2025
Project Address:	1520 Limekiln Pike //Upper Dublin, PA	**Weather:**	Clear 50°f
Testing Company:	David Blackmore & Associates, Inc.	**Tester's Name:**	Z.Heim
Phone Number:	(610) 496-6255	**Email Address:**	Zheim@dbaengineering.com

Test Number:	1	**Test Pit/Boring Hole Number:**	CB-1	**Test Method:**	Cased Borehole
Test Depth (feet):	6	**Surface Elevation (feet):**	304.06	**Instrument Diameter (inches):**	5" ID

Soil Characterization

Depth (feet):	Soil Texture:	Limiting Layers Type and Depth (feet):

Presoak

Time:	Date	Measurement, (feet):	Remarks
1:00	11/24/2025	5.30	Presoak conducted 24 hours prior to infiltration testing

Infiltration Testing

Time:	Time Interval (10 or 30 minutes):	Measurement, (feet):	Drop in water level, (feet):	Infiltration rate (inches per hour):	Remarks:
1:00	**0**				**Length of pipe -5.67'**
1:30	**30**	**5.4**	**0.27**	**6.48**	**Fill to 5.20'**
2:00	**30**	**5.25**	**0.05**	**1.2**	**Fill to 5.10'**
2:30	**30**	**5.2**	**0.1**	**2.4**	**Fill to 5.17'**
3:00	**30**	**5.11**	**0.06**	**1.44**	

Stabilized Infiltration Testing Rate (inches per hour): 2.88

PWD Stormwater Plan Review Infiltration Testing Log

Project Name:	5769G1 - Jarrettown Elementary	**Date:**	11/24/2025
Project Address:	1520 Limekiln Pike //Upper Dublin, PA	**Weather:**	Clear 50°f
Testing Company:	David Blackmore & Associates, Inc.	**Tester's Name:**	Z.Heim
Phone Number:	(610) 496-6255	**Email Address:**	Zheim@dbaengineering.com

Test Number:	1	**Test Pit/Boring Hole Number:**	CB-2	**Test Method:**	Cased Borehole
Test Depth (feet):	5	**Surface Elevation (feet):**	304.27	**Instrument Diameter (inches):**	5" ID

Soil Characterization

Depth (feet):	Soil Texture:	Limiting Layers Type and Depth (feet):

Presoak

Time:	Date	Measurement, (feet):	Remarks
1:05	11/24/2025	5.35	Presoak conducted 24 hours prior to infiltration testing

Infiltration Testing

Time:	Time Interval (10 or 30 minutes):	Measurement, (feet):	Drop in water level, (feet):	Infiltration rate (inches per hour):	Remarks:
1:05	**0**				**Length of pipe -6.5'**
1:35	**30**	**5.35**	**0**	**0**	
2:05	**30**	**5.35**	**0**	**0**	
2:35	**30**	**5.35**	**0**	**0**	
3:05	**30**	**5.35**	**0**	**0**	
		Stabilized Infiltration Testing Rate (inches per hour):		0	

PWD Stormwater Plan Review Infiltration Testing Log

Project Name:	5769G1 - Jarrettown Elementary	**Date:**	11/20/2025
Project Address:	1520 Limekiln Pike //Upper Dublin, PA	**Weather:**	Cloudy 45°f
Testing Company:	David Blackmore & Associates, Inc.	**Tester's Name:**	Z.Heim
Phone Number:	(610) 496-6255	**Email Address:**	Zheim@dbaengineering.com

Test Number:	1	**Test Pit/Boring Hole Number:**	CB-3	**Test Method:**	Cased Borehole
Test Depth (feet):	6	**Surface Elevation (feet):**	304.2	**Instrument Diameter (inches):**	5" ID

Soil Characterization

Depth (feet):	Soil Texture:	Limiting Layers Type and Depth (feet):

Presoak

Time:	Date	Measurement, (feet):	Remarks
12:05	11/20/2025	7.50	Presoak conducted 24 hours prior to infiltration testing

Infiltration Testing

Time:	Time Interval (10 or 30 minutes):	Measurement, (feet):	Drop in water level, (feet):	Infiltration rate (inches per hour):	Remarks:
12:05	**0**				**Length of pipe -7.5'**
12:35	**30**	**7.5**		**0**	
1:05	**30**	**7.5**		**0**	
1:35	**30**	**7.5**		**0**	
2:05	**30**	**7.5**		**0**	

Stabilized Infiltration Testing Rate (inches per hour): 0

PWD Stormwater Plan Review Infiltration Testing Log

Project Name:	5769G1 - Jarrettown Elementary	**Date:**	11/20/2025
Project Address:	1520 Limekiln Pike //Upper Dublin, PA	**Weather:**	Cloudy 45°f
Testing Company:	David Blackmore & Associates, Inc.	**Tester's Name:**	Z.Heim
Phone Number:	(610) 496-6255	**Email Address:**	Zheim@dbaengineering.com

Test Number:		**Test Pit/Boring Hole Number:**	CB-4	**Test Method:**	Cased Borehole
Test Depth (feet):	7'6"	**Surface Elevation (feet):**	297.58	**Instrument Diameter (inches):**	5" ID

Soil Characterization

Depth (feet):	Soil Texture:	Limiting Layers Type and Depth (feet):

Presoak

Time:	Date	Measurement, (feet):	Remarks
12:00	11/20/2025	8.75	Presoak conducted 24 hours prior to infiltration testing

Infiltration Testing

Time:	Time Interval (10 or 30 minutes):	Measurement, (feet):	Drop in water level, (feet):	Infiltration rate (inches per hour):	Remarks:
12:00	**0**				**Length of pipe - 9.25'**
12:30	**30**	**8.98**	**0.23**	**5.52**	**Fill to 8.70'**
1:00	**30**	**8.85**	**0.15**	**3.6**	**Fill to 8.73'**
1:30	**30**	**8.8**	**0.07**	**1.68**	**Fill to 8.72'**
2:00	**30**	**8.77**	**0.05**	**1.2**	

Stabilized Infiltration Testing Rate (inches per hour): 3

TEST LOCATION PLANS



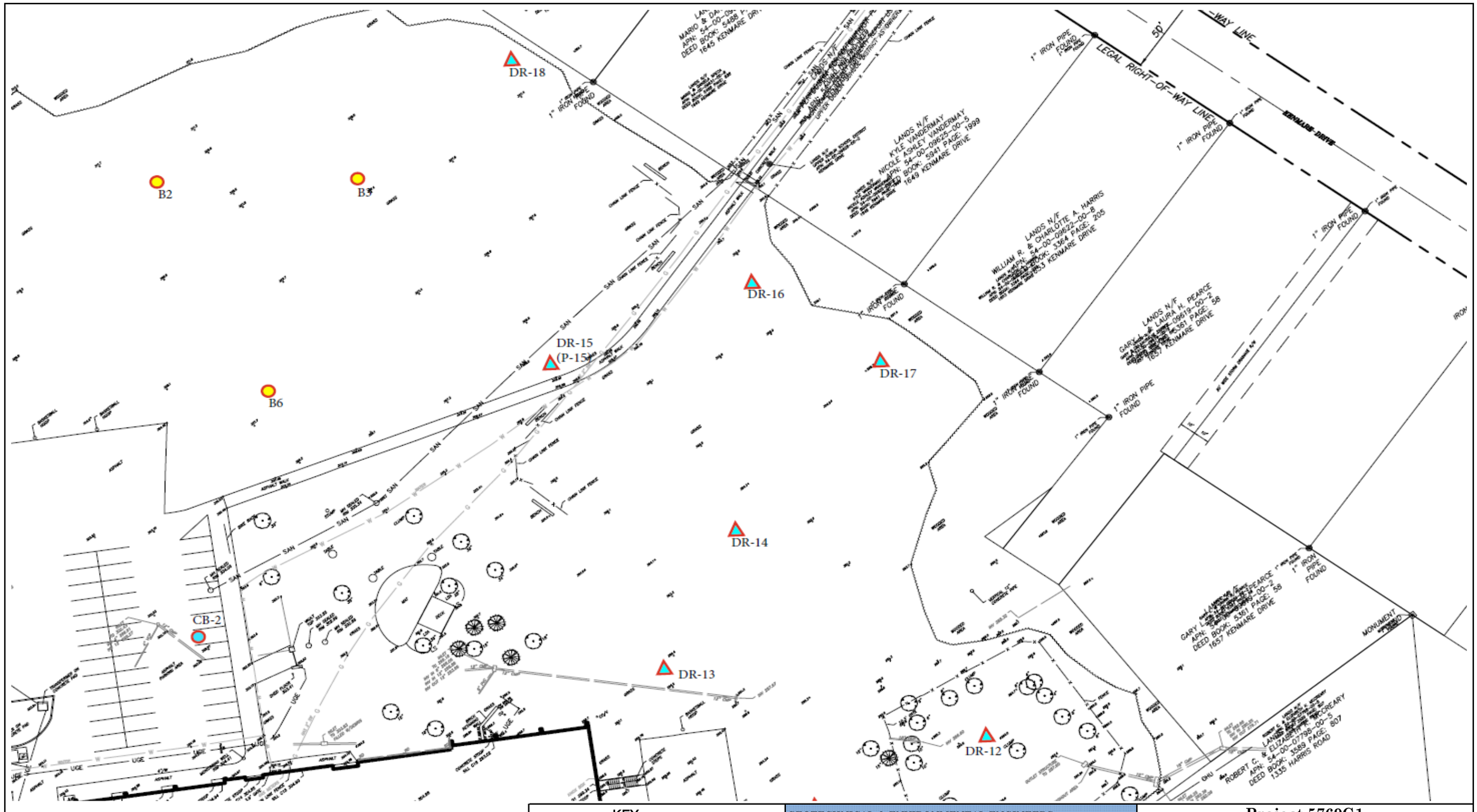
KEY

- Test Boring
- Cased Bore hole Infiltration Test
- Test Pit (Probe) Infiltration Test

GEOTECHNICAL & ENVIRONMENTAL ENGINEERS
DAVID BLACKMORE & ASSOC., INC.
3335 West Ridge Pike
Pottstown, Pennsylvania 19464
Telephone: (610) 495-6255 FAX: (610) 495-7353

Project 5769G1

TEST LOCATION PLAN(Sheet 1 of 3)
Jarrettown Elementary School
1520 Limekiln Pike
Upper Dublin Twp, Montgomery Cty, PA



KEY

- Test Boring
- Cased Bore hole Infiltration Test
- Test Pit (Probe) Infiltration Test

GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

DAVID BLACKMORE & ASSOC., INC.

3335 West Ridge Pike

Pottstown, Pennsylvania 19464

Telephone: (610) 495-6255 FAX: (610) 495-7353

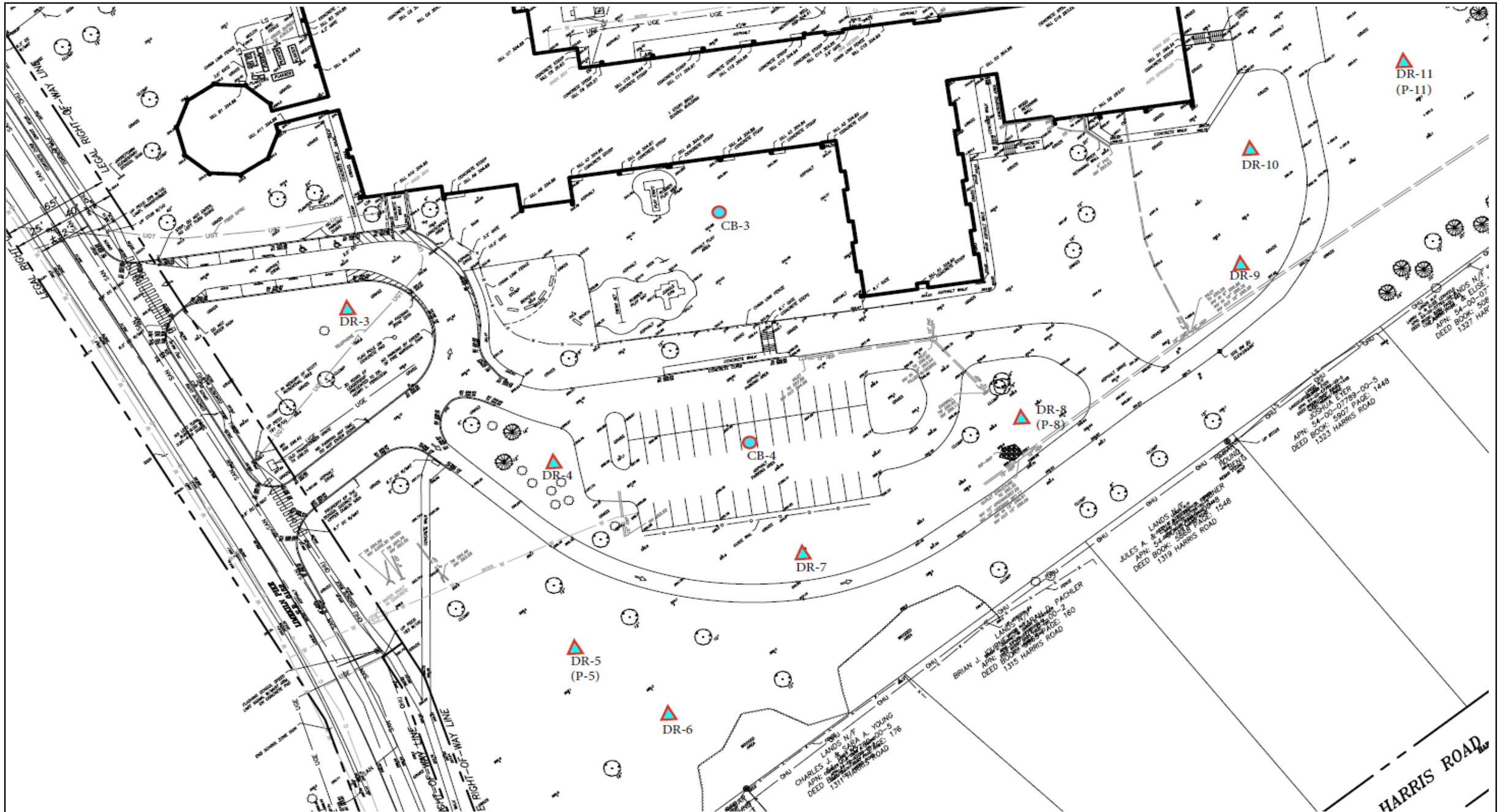
Project 5769G1

TEST LOCATION PLAN(Sheet 2 of 3)

Jarrettown Elementary School

1520 Limekiln Pike

Upper Dublin Twp, Montgomery Cty, PA



KEY

- Test Boring
- Cased Bore hole Infiltration Test
- Test Pit (Probe) Infiltration Test

GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

DAVID BLACKMORE & ASSOC., INC.

3335 West Ridge Pike

Pottstown, Pennsylvania 19464

Telephone: (610) 495-6255 FAX: (610) 495-7353

Project 5769G1

TEST LOCATION PLAN(Sheet 3 of 3)

Jarrettown Elementary School

1520 Limekiln Pike

Upper Dublin Twp, Montgomery Cty, PA