WDD ARCHITECTS
5050 NORTHSHORE LN
NORTH LITTLE ROCK, AR 72118

WDD ARCHITECTS

BRINKLEY HIGH CHOOL

BRINKLEY PUBLIC SCHOOLS

BRINKLEY, ARKANSAS

WDD PROJECT NO. 23-069

PHASE ONE DEMOLITION SET

SEPTEMBER 20, 2024

WITTENBERG, DELONY & DAVIDSON, INC.
5050 NORTHSHORE LN, NORTH LITTLE ROCK, ARKANSAS 72118
(501) 376-6681

Mechanical-Electrical Engineers
INSIGHT ENGINEERING, PLLC
201 S CHESTER ST, LITTLE ROCK, ARKANSAS 72201

Structural Engineers
ENGINEERING CONSULTANTS, INC.
401 W CAPITOL AVE, STE 305, LITTLE ROCK, ARKANSAS 72205

Civil Engineers
MCCLELLAND CONSULTING ENGINEERS, INC.
7302 KANIS RD, LITTLE ROCK, ARKANSAS 72204

Food Service Consultants
MCKAY-LANE CONSULTING, INC.
1807 DODSON AVE, FORT SMITH, ARKANSAS 72901

TABLE OF CONTENTS
FOR
NEW BRINKLEY HIGH SCHOOL
BRINKLEY SCHOOL DISTRICT
BRINKLEY, ARKANSAS

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 01 - GENERAL REQUIREMENTS

DIVISION 02 - EXISTING CONDITIONS

Sealed proposals will be received on selected Bid Packages for the NEW BRINKLEY HIGH SCHOOL – PHASE ONE DEMOLITION PACKAGE for BRINKLEY PUBLIC SCHOOLS located at 200 TIGER DRIVE, BRINKLEY, AR 72021. The Construction Manager, Baldwin & Shell Construction Company, will receive bids at their office located at 1000 WEST CAPITOL AVENUE, LITTLE ROCK, AR 72201, ON TUESDAY, OCTOBER 15TH, 2024 at 2:00PM LOCAL TIME.

Once the time to receive bids has passed, bids received will be privately opened and read aloud. Bids offered after the time to receive bids has passed will not be accepted.

The following Trade Contract Bid Packages will be bid at this time:

1. Asbestos Abatement & Remediation
2. Building Demolition
3. Asbestos Abatement & Remediation and Building Demolition Turnkey (Combo of Packages 1 & 2)

A non-mandatory pre-bid conference will be held at 2:00 PM on Monday, October 07, 2024, at 200 Tiger Drive, Brinkley, AR 72021. Subcontractors are strongly encouraged to attend this meeting but are not required to attend. The Owner reserves the right to schedule additional meetings.

Bidders are instructed to review SECTION 00 52 00 – BID PACKAGE SCHEDULE in the project manual and/or addenda for a complete description of these packages.

Obtaining contract documents through any source other than the Construction Manager or their representative(s) is not advisable due to the risks of receiving incomplete or inaccurate information. Contract documents obtained through the Construction Manager, or their representative(s) are considered the official versions and take precedence should any discrepancies occur. The official version of the complete set of the contract documents should be examined and are obtainable from Southern Reprographics, 901 W 7th St, Little Rock, AR 72201.

All Bid Proposals must be submitted on a copy of the Bid Forms provided in the project manual and/or addenda. Bidders may photocopy these forms. The entire manual does not need to be submitted with the bids. Faxed Bid Proposals and Phone Quotes will not be accepted.

A 5% Bid Bond or Cashier's Check must accompany each bid in accordance with the contract documents.

Bidders shall conform to the requirements of the Arkansas licensing laws and regulations for contractors and shall be licensed before a bid is submitted.

Both the Owner and Construction Manager reserve the right to reject any and all bids, and to waive any formalities.

BALDWIN & SHELL CONSTRUCTION CO.
CONSTRUCTION MANAGER
1000 WEST CAPITOL AVENUE
LITTLE ROCK, ARKANSAS 72201

END OF DOCUMENT 00 11 13

PART 1 - GENERAL

1.01 DESCRIPTION OF BID

A. Base Bid: Work includes Site Preparation and Improvements, General Construction, Mechanical Work and Electrical Work, and Kitchen, as shown on the Drawings and described herein, all to be let under one prime contract.

B. Bid Documents: Bidders, sub-bidders, material suppliers and other interested parties are encouraged to obtain complete sets of Bid Documents from the Architect. Complete sets of Bid Documents should always be used in preparing bids. Neither the Owner nor Architect assumes responsibility for errors in bidding or misinterpretations of Bid Documents resulting from the use of incomplete sets of Bid Documents. The documents obtained through the Architect are considered the official version and take precedence if any discrepancies occur. The use of incomplete or inaccurate Bid Documents does not relieve the bidder of the obligation to perform all work related to his bid as detailed in a complete set of Bid Documents.

1.02 EXAMINATION OF PREMISES

A. Before submitting his bid, Contractor will be held to have examined the premises and satisfied himself as to existing conditions under which he will be obligated to operate, or that will in any manner affect Work under this contract.

B. Bidder must inform himself fully of conditions relating to construction of project and employment of labor. Failure to do so does not relieve successful bidder of his obligation to furnish material and labor necessary to carry out provisions of his contract. Insofar as possible Contractor, in carrying out his Work, must employ such methods or means to avoid any interruption of or interference with Work of any other Contract.

1.03 CONTRACTOR'S LICENSE

A. Parties bidding on this Work must comply with all requirements and regulations of Contractor's License Law of the State of Arkansas, as set forth in Arkansas Code Annotated § 17-25-101 et. seq.

B. In case of discrepancy between written amounts shown by bidder and amounts in numerical figures on bid form, the amount written out rather than amount in numerical figures shall govern.

1.04 INTERPRETATIONS

A. No interpretation of plans, specifications or other bid documents will be made orally to any bidder. Requests for interpretation or clarification of Bid Documents must be made in writing addressed to **Wittenberg, Delony & Davidson, Inc.,**
ATTN: Gordon Duckworth, AIA, duck@wddarchitects.com.

1. **TO BE GIVEN CONSIDERATION, REQUESTS FOR INTERPRETATION MUST BE RECEIVED AT LEAST FIVE (5) WORKING DAYS PRIOR TO DATE FIXED FOR OPENING OF BIDS.**

B. Interpretations and supplemental information will be issued in the form of written addenda issued to prospective prime contract bidders. **ADDENDA WILL NOT BE ISSUED WITHIN THREE (3) WORKING DAYS (72 hours) PRIOR TO DATE FIXED FOR OPENING OF BIDS.** Failure of bidder to receive any addendum shall not relieve bidder from obligation under his bid as submitted. All addenda so issued shall become part of Contract Documents.

C. Should an error, inconsistency or omission be found in the Bid Documents after the Bid Opening, the Contractor will be deemed to have prepared his bid based upon the more costly or complex way of performing the Work or in accordance with the more stringent requirements.

D. Anything mentioned in the Specifications and not shown on the Drawings or shown on the Drawings and not mentioned in the Specifications is to have the same effect as if shown or mentioned in both.

E. Precedence **IS NOT** given to the Specifications over the Drawings or to Large Scale Drawings over Smaller Scale Drawings. All drawings and all specifications are complimentary and shall be viewed collectively when interpreting the Design Intent for the Project. The Architect is the sole judge and interpreter of Design Intent and his decision will be final and binding upon the General Contractor.

1.05 OPENING OF BIDS

A. Refer to Construction Manager Trade packages.

1.06 WITHDRAWAL OF BIDS PRIOR TO BID OPENING

A. Refer to Construction Manager Trade packages.

1.07 QUALIFICATIONS OF BIDDER

A. Refer to Construction Manager Trade packages.

1.08 POWER OF ATTORNEY

A. Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

1.09 LAWS AND REGULATIONS

A. Bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and rules and regulations of authorities having jurisdiction over construction of project shall apply to contract throughout, and they will be deemed to be included in contract the same as though written out in full.

1.10 BID FORMALITIES AND REJECTION OF BIDS

A. Owner reserves right to waive any formalities in a bid or to reject any or all bids.

1.11 CONDITIONAL BIDS

A. Conditional bids will not be considered.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF DOCUMENT 00 21 13

THIS PAGE LEFT INTENTIONALLY BLANK FOR DUPLEX PRINTING

PART 1 - GENERAL

1.01 EXISTING ASBESTOS INFORMATION

A. Asbestos Assessment Report has been made for the Owner by Environmental for this Project. This report has been bound herein for information purposes only.

B. Additional tests and other exploratory operations may be performed by Contractor, at the Contractor's expense; however, no change in the Contract Sum will be authorized for such additional exploration.

1.02 ASBESTOS ABATEMENT

A. The Owner will enter into a separate contract with an abatement contractor to have all friable asbestos removed from the areas in which the contractor for this project will be working.

B. During the construction of this project, if work involving friable asbestos is suspected, or encountered, Contractor shall notify Owner or Owner's representative immediately and Owner, with his own forces or by separate contract is responsible for complete investigation, removal and disposition of friable asbestos hazard in accordance with applicable laws and regulations.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF DOCUMENT 00 31 19

THIS PAGE LEFT INTENTIONALLY BLANK FOR DUPLEX PRINTING

PART 1 - GENERAL

1.01 SOILS REPORT

A. A geotechnical investigation of the site has been made for use in site grading and foundation design for this Project. This report has been bound herein for information purposes only. Boring logs and test data are for information only. Conditions are not intended as representations or warranties of accuracy or continuity between each soil boring. Architect and Owner will not be responsible for interpretations or conclusions drawn from this data by Contractor and advise Contractor to make his own investigations as he deems necessary.

B. Additional boring tests and other exploratory operations may be performed by Contractor, at the Contractor's expense; however, no change in the Contract Sum will be authorized for such additional exploration.

1.02 SUPPLEMENTAL INFORMATION

A. Demolition, clearing, grubbing, preliminary grading, site utility work and building pad preparation is currently being performed by the Owner at the site. Work on the building pad is scheduled to be substantially completed prior to the issuance of a Notice to Proceed for the building construction portion of this project.

B. Upon completion of the work for the "Earthwork Package", the Contractor for the earthwork package will prepare Construction Record Documents. Information on these drawings will be verified and checked for accuracy and compliance with construction documents by both an independent geotechnical consulting firm and a registered land surveyor employed by the Owner.

C. Drawings and additional geotechnical information will be assembled by the Architect and furnished to the General Contractor for the building construction portion of this project. Information to be furnished to General Contractor includes, but may not be limited to, the following:

1. Site Grading Plans including all site and building pad elevations.
2. Site Utility Plans including drainage structures.
3. Compaction and Field density test reports.
4. Other pertinent geotechnical data.

D. This information will be provided for information purposes only. Architect and Owner will not be responsible for interpretations or conclusions drawn from this data by Contractor and will assume no responsibility for interpretations made from said data and advise Contractor to make his own investigations. Additional testing and exploratory operations may be performed by Contractor, at the Contractor's expense; however, no change in the Contract Sum will be authorized for such additional exploration.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF DOCUMENT 00 31 32

Report of Subsurface Exploration and Geotechnical Evaluation
Brinkley High School
Brinkley, Arkansas
BUILDING & EARTH SCIENCES, INC.
PROJECT NO.: LR240081

PREPARED FOR:
WDD Architects

May 30, 2024

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

29 Collins Industrial Place, Building 1, Suite C
North Little Rock, Arkansas, 72113
Ph: 501/504-6929

May 30, 2024

WDD Architects
5050 Northshore Lane
North Little Rock, Arkansas 72118

Attention: Mr. Brad Chilcote
Principal, Vice President

Subject: Subsurface Exploration and Geotechnical Evaluation
Brinkley High School
Brinkley, Arkansas
Building & Earth Sciences, Inc. Project No: LR240081

Dear Mr. Brad Chilcote:

Building & Earth Sciences, Inc. has completed the authorized subsurface exploration and geotechnical engineering evaluation for the Brinkley High School located at 100 Tigers Drive in Brinkley, Arkansas.

The purpose of this exploration and evaluation was to determine general subsurface conditions at the site and to address applicable geotechnical aspects of the proposed construction and site development. The recommendations in this report are based on a physical reconnaissance of the site and observation and classification of samples obtained from 16 soil test borings conducted at the site. Confirmation of the anticipated subsurface conditions during construction is an essential part of geotechnical services.

We appreciate the opportunity to provide consultation services for the proposed project. If you have any questions regarding the information in this report or need any additional information, please call us.

Respectfully Submitted,
Building & Earth Sciences, Inc.
AR Certificate of Authorization No. 569, Expiration Date 12/31/25

Stuart M. Scheiderer, P. E.
Branch Manager
Arkansas 11424

Joseph D. Vistad, P.E.
Senior Engineering Review - Principal

Table of Contents

Appendices

1.0 Project & Site Description

The subject site is located at 100 Tigers Drive, Brinkley, Arkansas. Information relative to the proposed site and the proposed development is listed in Table 1 below. Photographs depicting the current site condition are presented on the following page.

Table 1: Project and Site Description

Detail	Description
General Site	
Size (Ac.)	±10.0
Existing Development	High School Campus
Vegetation	Mowed Grass
Slopes	No
Retaining Walls	No
Drainage	Surface drainage to existing drainage features
Cuts & Fills	Minimal
Proposed Buildings	
No. of Bldgs	One
Square Ft.	±52,000
Stories	One
Construction	Steel framed with brick and metal panel veneer
Column Loads	100 kips (Assumed)
Wall Loads	2 klf (Assumed)
Preferred Foundation	Conventional Shallow Foundation
Preferred Slab	Slab-on-Grade
Pavements	
Traffic	Not Provided
Standard Duty	Rigid and Flexible
Heavy Duty	Rigid and Flexible

Reference: Boring Location Plan by WDD, Brinkley High School Schematic Design, dated 5/7/24

Notes:

1. ***If actual loading conditions exceed our assumed loads, Building & Earth Sciences, Inc. should be allowed to review the proposed structural design and its effects on our recommendations for foundation design.***
2. ***When a grading plan is finalized, Building & Earth Sciences, Inc. should be allowed to review the plan and its effects on our recommendations.***

Site Photos

Photograph 1: East Side of Existing Building

Photograph 2: West Side of Existing Building

Photograph 3: North Side of Existing Building and Parking Lot

Photograph 4: Modular Buildings

2.0 Scope of Services

The authorized subsurface exploration was performed on May 6 and May 7, 2024 in conformance with our proposal LR260585, dated March 5, 2024. A signed proposal was returned on April 25, 2024..

The purpose of the geotechnical exploration was to determine general subsurface conditions at specific boring locations and to gather data on which to base a geotechnical evaluation with respect to the proposed construction. The subsurface exploration for this project consisted of sixteen (16) soil test borings. Refer to the Geotechnical Investigation Methodologies Appendix for a description of the drilling and sampling procedures. The site was drilled using a Geoprobe 7822DT equipped with anautomatic hammer for performing Standard Penetration Tests (SPT) to help evaluate the relative soil strength.

The soil boring locations were determined in the field by a representative of our staff using boring plan provided and handheld GPS unit. As such, the boring locations shown on the Boring Location Plan attached to this report should be considered approximate.

The results of the laboratory analysis are presented on the enclosed Boring Logs and in tabular form in the Appendix of this report. Descriptions of the laboratory tests that were performed are also included in the Laboratory Test Procedures Appendix.

The soil samples recovered during our site investigation were visually classified and specific samples were selected by the project engineer for laboratory analysis. The laboratory analysis consisted of:

Table 2: Scope of Laboratory Tests

Test	ASTM	No. of Tests
Natural Moisture Content	D2216	86
Atterberg Limits	D4318	10
Material Finer Than No. 200 Sieve by Washing	D1140	7

The information gathered from the exploration was evaluated to determine a suitable foundation type for the proposed structure. The information was also evaluated to help determine if any special subgrade preparation procedures will be required during the earthwork phase of the project.

The results of the work are presented within this report that addresses:

- Site geology and potential impact on site development.
- Summary of existing surface conditions.
- A description of the subsurface and groundwater conditions encountered at the boring and test pit locations. Long-term monitoring of groundwater was not included in our scope of work.
- Presentation of field and laboratory test results.
- Site preparation considerations including material types to be expected at the site and treatment of unsuitable soils, if encountered.
- Compaction requirements and recommended criteria to establish suitable material for structural backfill.
- Recommendations to be used for foundation design, including appropriate foundation types, bearing pressures, and depths.
- Recommendations for slab-on-grade design, including a modulus of subgrade reaction.
- Recommendations for suitable pavement sections based on provided or assumed traffic information, including general recommendations for rigid and/or flexible pavement design.

3.0 Geotechnical Site Characterization

The following discussion is intended to create a general understanding of the site from a geotechnical engineering perspective. It is not intended to be a discussion of every potential geotechnical issue that may arise, nor to provide every possible interpretation of the conditions identified. The following conditions and subsequent recommendations are based on the assumption that significant changes in subsurface conditions do not occur between boreholes. However, anomalous conditions can occur due to the geologic conditions at the site, and it will be necessary to evaluate the assumed conditions during site grading and foundation installation.

3.1 Geology

The Geologic Map of Arkansas, published by the Arkansas Geological Commission in coordination with the United States Geological Survey, indicates the site is located within the Mississippi Embayment physiographic province of eastern Arkansas. The

area is comprised of terrace and alluvial deposits resulting primarily of the Mississippi River, White River and their tributaries. Complex sequences of gravels, sands, silts, clays and mixtures of these materials are common. However, individual deposits are often lenticular and discontinuous. The thickness and layering can vary significantly and are sometimes erratic. The soils encountered are considered consistent with the local geology.

3.2 Existing Surface Conditions

Several structures are located within the proposed construction area. Associated pavements, drives, landscaping and green areas are also present. A large high school building and performing arts center occupied a majority of the construction area, both of which will be demolished to facilitate construction. Modular classrooms also exist and will be relocated. Pavements are also located on the north side of the buildings along West Lynn Street and extended into the campus behind the performing arts center. The existing gymnasium will remain during construction, but will eventually be demolished.

The depth of topsoil was approximated to be between 2 and 3 inches in the green areas investigated. Asphalt and in most cases thin amounts of base were encountered in the remaining borings. The thickness of asphalt ranged from 2.5 to 3.0 inches where present, with up to 2 inches of underlying aggregate base. Variable amounts of concrete, 8 to 12 inches thick, was encountered in isolated areas. Due to the age of the campus, several overlays, movement of buildings, concrete aprons, etc., have occurred. Thus, variable conditions should be expected.

3.3 Subsurface Conditions

A generalized stratification summary has been prepared using data from the soil test borings and is presented in the table below. The stratification depicts the general soil conditions and strata types encountered during our field investigation.

Table 3: Stratification Summary

Stratum No.	Description	Consistency/Relative Density
1	**Alluvium** - Lean Clay (CL) with Sand	Very Soft to Stiff
2	**Alluvium** - Fat Clay (CH) wtih Sand	Soft to Stiff
3	**Alluvium** - Silty Sand (SM)	Loose to Medium Dense

Subsurface soil profiles which show the thickness of the stratum referenced above have also been prepared based on the data obtained at the specific boring locations. The subsurface soil profiles are presented in the Subsurface Soil Profiles Appendix. For specific details on the information obtained from individual soil borings, please refer to the Boring Logs included in the Boring Logs Appendix. The elevations of the borings indicated in this report were estimated based on Google Earth.

3.3.1 Soil Type 1 - Lean Clay (CL) with Sand

Lean Clay (CL) with Sandwas encountered beneath the existing topsoil and pavements in a majority of the borings. Though some of these materials could be fill from original construction of the building, a definitive determination between natural ground and fill could not be made. These soils extended to depths ranging from 11 to 16 feet below existing grades. Laboratory testing indicated plasticity index values within these soils as high as 23, though a majority were below 19 and decreased with depth. These materials were found to contain between 71% and 88% passing the No. 200 sieve. N-values obtained from the borings were below 5 in all borings within 2 feet of the surface, which is considered soft and unstable. The values generally increased with depth, but soft soils extended to as much as 10 feet below the surface in some areas.

3.3.2 Soil Type 2 - Fat Clay (CH) with Sand

Highly plastic soils (CH) were also encountered, most often beneath a thin layer of lean clay. A representative sample of this material type had a liquid limit of 56 and plasticity index of 35, with similar amounts of sand based on visual observations. The N-values were generally higher than those obtained in the overlying clay, though some undercut will also likely be required. The top of this layer, when encountered, ranged between 2 and 4 feet below the surface in most borings but was just beneath the topsoil in an isolated area. The thickness of this layer was variable, extending to depths ranging from 5 to 13.5 feet below existing grades.

3.3.3 Soil Type 3 - Silty Sand (SM)

Granular silty sand (SM) was encountered beneath the cohesive soils at depths ranging from 11 to 16 feet and extending to the terminal depths explored. These materials were found to be non-plastic or exhibit trace plasticity and contained and average of 36% passing the No. 200 sieve in the samples tested. The consistency was found to be loose to medium dense in most cases.

3.3.4 Groundwater

At the time of drilling, groundwater was not encountered in the boreholes. Water levels reported are accurate only for the time and date that the borings were drilled. Long term monitoring of the boreholes was not included as part of our subsurface exploration. The borings were backfilled the same day they were drilled.

3.4 Seismic Site Classification

Table 4: Seismic Site Classification

Basis of Evaluation	Recommended Site Classification
2015 International Building Code (IBC) and ASCE 7, Chapter 20	D
This recommended seismic site classification is based on the 2015 Edition of the International Building Code, the subsurface conditions encountered in the borings, and our knowledge of the geologic conditions of the site. Our subsurface exploration extended to a maximum depth of about 25 feet; hence the seismic site classification should be re-evaluated in the event subsurface information is made available to a depth of 100 feet.	

4.0 Site Development Considerations

A grading plan was not available at the time of this report. Based solely on visual observations, significant amounts of cut or fill are not anticipated to obtain finished grades. ***Once the grading plan is finalized, Building & Earth Sciences, Inc. should be allowed to review the plan and its effects on our recommendations.***

Based on our evaluation of the subsurface soil information, and the anticipated foundation loads, it appears that construction with a Conventional Shallow Foundation system is feasible. The site development recommendations outlined below are intended for development of the site to support construction with a Conventional Shallow Foundation system. ***If a different type of foundation system is preferred, Building & Earth Sciences, Inc. should be allowed to review the site development recommendations to verify that they are appropriate for the preferred foundation system.***

The primary geotechnical concerns for this project are:

- The presence of existing structures on the site. Buried structures and deleterious materials could be encountered.
- Low consistency (N-value≤6) clay soils identified across the site within 2 to 5 feet of the surface

- Moisture sensitive soils encountered throughout the site.
- Perched water could be encountered during construction whcih may required dewatering efforts, particularly beneath existing structures and pavements.

Recommendations addressing the site conditions are presented in the following sections.

4.1 Demolition

Demolition of existing buildings, pavements, landscaping and other surface items will be required to facilitate construction. Demolition should include footings, utilities and other below grade items as necessary. Voids left by removal of these items should be backfilled with structural fill as outlined in a later section, flowable fill or lean concrete. There is considered to be an increased potential of encountered buried debris given the age of the existing campus. Deleterious items should be removed to their full extent, especially in structural areas. Perched water should be expected beneath existing structures and pavements and will be more prevalent during wet or winter months.

4.2 Initial Site Preparation

All trees, vegetation, roots, topsoil and deleterious materials within construction areas should be removed from the proposed construction areas. Approximately 2 to 3 inches of topsoil were observed in the borings in grass areas. The topsoil thickness is accurate only at the specific boring locations but can be extrapolated between boreholes for initial cost estimating purposes. A geotechnical engineer should observe stripping and grubbing operations to evaluate that all unsuitable materials are removed from locations for proposed construction.

Because of past use of the site, buried structures could be encountered such as foundations, utility lines, septic tanks, etc. If encountered, they should be removed and backfilled in accordance with requirements outlined in the Structural Fill section of this report.

Materials disturbed during clearing operations should be stabilized in place or, if necessary, undercut to undisturbed materials and backfilled with properly compacted, approved structural fill.

During site preparation activities, the contractor should identify borrow source materials that will be used as structural fill and provide samples to the testing laboratory so that conformance to the Structural Fill requirements outlined below and appropriate moisture-density relationship curves can be determined.

4.3 Subgrade Evaluation

We recommend that the project geotechnical engineer or a qualified representative evaluate the subgrade after the site is prepared. Some unsuitable or unstable areas may be present in unexplored areas of the site. All areas that will require fill or that will support structures should be carefully proofrolled with a heavy (40,000 # minimum), rubber-tired vehicle at the following times.

- After an area has been stripped, and undercut if required, prior to the placement of any fill.
- After grading an area to the finished subgrade elevation in a building or pavement area.
- After areas have been exposed to any precipitation, and/or have been exposed for more than 48 hours.

Some instability may exist during construction, depending on climatic and other factors immediately preceding and during construction. If any soft or otherwise unsuitable soils are identified during the proofrolling process, they must be undercut or stabilized prior to fill placement, pavement construction, or floor slab construction. All unsuitable material identified during the construction shall be removed and replaced in accordance with the Structural Fill section of this report.

4.4 Moisture Sensitive Soils

Moisture sensitive clays were encountered throughout the site during the subsurface exploration. These soils will degrade if allowed to become saturated. Therefore, not allowing water to pond by maintaining positive drainage and temporary dewatering methods (if required) is important to help avoid degradation and softening of the soils.

The contractor should anticipate some difficulty during the earthwork phase of this project if moisture levels are moderate to high during construction. Increased moisture levels will soften the subgrade and the soils may become unstable under the influence of construction traffic. Accordingly, construction during wet weather

conditions should be avoided, as this could result in soft and unstable soil conditions that would require ground modification, such as in place stabilization or undercutting.

4.5 Undercutting of Low Consistency Soils

Low consistency soils (N≤6) were encountered in all borings within 2 feet of the surface; however, soft soils extended to up to 5 feet throughout most of the site and to as much as 10 feet in isolated areas of the site (reference borings B-03, B-09, P-03, and P-04). Low consistency soils should be undercut to a stable, suitable subgrade. The undercutting should extend laterally 5 feet outside the building footprint.

In the planned pavement areas, the low consistency soils will be removed during grading operations, in order to reach the planned subgrade elevation or the undercutting should extend laterally 3 feet outside of the edge of pavement. It may be possible to stabilize the soft soils in the pavement areas in place. Typical stabilization methods vary widely and include modification of the soft soils with the addition of shot rock or No. 2 stone, as well as utilization of geogrids and graded aggregates. The design of a specific stabilization method is beyond the scope of this investigation but can be provided by Building & Earth Sciences, Inc. as an additional service if desired. Any undercutting or stabilization performed in pavement areas should be conducted under the observation of the geotechnical engineer or a designated representative.

Some unsuitable or unstable areas may be present in unexplored areas of the site. Once the known undercut is complete, the areas planned for construction should be proofrolled in order to identify any additional soft soils requiring removal.

Undercut soils should be replaced with structural fill. Clean, non-organic, non-saturated soils taken from the undercut area can be re-used as structural fill. The placement procedure, compaction and composition of the structural fill must meet the requirements of the Structural Fill section of this report.

The undercutting should be conducted under the observation of the geotechnical engineer or a designated representative. *Weather conditions at the time of construction will affect the undercutting depths and quantities.* Some instability may exist during construction, depending on climatic and other factors immediately preceding and during construction.

4.6 Undercutting of Highly Plastic Soils

Based on the laboratory test results, highly plastic clay (CH) was encountered at variable depths and thicknesses. We recommend that the building area be undercut so that the highly plastic clay is located at least 5 feet below the planned subgrade elevation. The undercutting should extend at least 5 feet horizontally outside the building footprint.

In parking and drive areas the highly plastic clays should be undercut to one foot below the planned subgrade elevation (bottom of the base layer). The undercut material should be replaced with structural fill meeting the requirements outlined in the Structural Fill section of this report.

The undercutting should be conducted under the observation of the geotechnical engineer or his representative. *Weather conditions at the time of construction will affect the undercutting depths and quantities.* Some instability may exist during construction, depending on climatic and other factors immediately preceding and during construction.

4.7 Structural Fill

Requirements for structural fill on this project are as follows:

Table 5: Structural Fill Requirements

Soil Type	USCS Classification	Property Requirements	Placement Location
Sand and Gravel	GW, GP, GM, SW, SP, SM or combinations	Maximum 2" particle size	All locations and depths with proper drainage.
Clay	CL, SC, GC	LL<50, PI<20, γ_d>100 pcf	All locations and depths.
Clay	CH	LL>50, PI>25, γ_d<100 pcf	Not suitable as structural fill.
Silt	ML, MH	N/A	Not suitable as structural fill.
On-site soils	CL	LL<50, PI<20, γ_d>100 pcf	All locations and depths.

Notes:

1. All structural fill should be free of vegetation, topsoil, and any other deleterious materials. The organic content of materials to be used for fill should be less than 3 percent unless approved by the geotechnical engineer.
2. LL indicates the soil Liquid Limit; PI indicates the soil Plasticity Index; γ_d indicates the maximum dry density as defined by the density standard outlined in the table below.
3. Laboratory testing of the soils proposed for fill must be performed in order to verify their conformance with the above recommendations.
4. Any fill to be placed at the site should be reviewed by the geotechnical engineer.

Placement requirements for structural fill are as follows:

Table 6: Structural Fill Placement Requirements

Specification	Requirement
Lift Thickness	Maximum 8-inch loose lifts when compacted with large heavy compaction equipment. Maximum 6-inch loose lifts when compacted with lightweight compaction equipment. (thinner lifts may be required in confined locations).
Density	Minimum of 98 percent of maximum dry density as defined by ASTM D698 at all locations and depths.
Moisture	±2 percent of optimum moisture as defined by ASTM D698 for cohesive soils. For cohesionless soils with greater than 2 percent passing the US Standard No. 200 sieve, ±3 percent of optimum moisture as defined above. Moisture requirement is waived for cohesionless soil with less than 12 percent passing the No. 200 sieve.
Density Testing Frequency	One test per 2,500 sf in building areas and one test per 5,000 sf in pavement areas with minimum of 3 tests per lift. One test per 200 feet of trench backfill with minimum of 2 tests per lift. The testing frequency can be increased or decreased by the Geotechnical Engineer of Record in the field based on uniformity of material being placed and compactive effort used.

4.8 Excavation Considerations

All excavations performed at the site should follow OSHA guidelines for temporary excavations. Excavated soils should be stockpiled according to OSHA regulations to limit the potential cave-in of soils.

It should be noted that fluctuations in the water level could occur due to seasonal variations in rainfall. The contractor must be prepared to remove groundwater seepage from excavations if encountered during construction. Excavations extending below groundwater levels will require dewatering systems (such as well points, sump pumps or trench drains). The contractor should evaluate the most economical and practical dewatering method.

4.9 Utility Trench Backfill

All utility trenches must be backfilled and compacted in the manner specified above for structural fill. It may be necessary to reduce the lift thickness to 4 to 6 inches to achieve compaction using hand-operated equipment.

4.10 Landscaping and Drainage Consideration

The potential for soil moisture fluctuations within building areas and pavement subgrades should be reduced to lessen the potential of subgrade movement. Site grading should include positive drainage away from buildings and pavements. Excessive irrigation of landscaping poses a risk of saturating and softening soils below shallow footings and pavements, which could result in settlement of footings and premature failure of pavements.

4.11 Wet Weather Construction

Excessive movement of construction equipment across the site during wet weather may result in ruts, which will collect rainwater, prolonging the time required to dry the subgrade soils.

During rainy periods, additional effort will be required to properly prepare the site and establish/maintain an acceptable subgrade. The difficulty will increase in areas where clay or silty soils are exposed at the subgrade elevation. Grading contractors typically postpone grading operations during wet weather to wait for conditions that are more favorable. Contractors can typically disk or aerate the upper soils to promote drying during intermittent periods of favorable weather. When deadlines restrict postponement of grading operations, additional measures such as undercutting and replacing saturated soils or stabilization can be utilized to facilitate placement of additional fill material.

5.0 Foundation Recommendations

Specific structural loading conditions were not known at the time of this report; however, based on our experience with similar projects, we anticipate that the individual column loads will be less than 100 kips and wall loads will be less than 2 kips per linear foot. ***If these assumptions concerning structural loading are incorrect, our office should be contacted, such that our recommendations can be reviewed.***

5.1 Shallow Foundations

Based on the conditions encountered during our field investigation and after our site preparation and grading recommendations are implemented, the proposed structure can be supported on conventional shallow foundations designed using an allowable soil bearing capacity of 2000 psf.

Even though computed footing dimensions may be less, column footings should be at least 24 inches wide and strip footings should be at least 18 inches wide. These dimensions facilitate hand cleaning of footing subgrades disturbed by the excavation process and the placement of reinforcing steel. They also reduce the potential for localized punching shear failure. ***All exterior footings should bear at least 18 inches below the adjacent exterior grade.*** Total settlement of footings designed and constructed as recommended above should be 1 inch or less.

The following items should be considered during the preparation of construction documents and foundation installation:

- The geotechnical engineer of record should observe the exposed foundation bearing surfaces prior to concrete placement to verify that the conditions anticipated during the subsurface exploration are encountered.
- All bearing surfaces must be free of soft or loose soil prior to placing concrete.
- Concrete should be placed the same day the excavations are completed and bearing materials verified by the engineer. If the excavations are left open for an extended period, or if the bearing surfaces are disturbed after the initial observation, then the bearing surfaces should be reevaluated prior to concrete placement.
- Water should not be allowed to pond in foundation excavations prior to concrete placement or above the concrete after the foundation is completed.
- Wherever possible, the foundation concrete should be placed "neat", using the sides of the excavations as forms. Where this is not possible, the excavations created by forming the foundations must be backfilled with suitable structural fill and properly compacted.
- The site should be sloped to drain away from the building foundations.
- Roof drains should be routed away from the foundation soils.

6.0 Floor Slabs

Site development recommendations presented in this report should be followed to provide for subgrade conditions suitable for support of grade supported slabs. Floor slabs will be supported on properly compacted structural fill.

We recommend floor slabs for the proposed structure be supported on a minimum four-inch layer of clean, densely-graded granular material commonly referred to as "crusher-run" materials. Alternatively, DOT approved road base with 100% passing

the 1-1/2 in sieve, 15% to 55% passing the No. 4 sieve and less than 12% passing the No 200 sieve. The material passing the #200 sieve should be clean, granular fill with less than 3% clay or friable particles. The purpose of this layer is to help provide a uniform loading condition and act as a capillary break for moisture migration through the subgrade soil. This gravel material should be consolidated in-place with vibratory equipment. a modulus of subgrade reaction of 125 pci can be used in the design of a grade-supported building floor slab.

We recommend a minimum 10-mil thick vapor retarder meeting ASTM E 1745, Class C requirements be placed directly below the slab-on-grade floors. A higher quality vapor retarder (Class A or B) may be used if desired to further inhibit the migration of moisture through the slab-on-grade and should be evaluated based on the floor covering and use. The vapor retarder should extend to the edge of the slab-on-grade floors and should be sealed at all seams and penetrations. The slab should be appropriately reinforced (if required) to support the proposed loads.

Where applicable, we recommend that the floor slab be isolated from the foundation footings so differential settlement of the structure will not induce shear stresses on the floor slab. Temperature and shrinkage reinforcements in slabs on grade maybe considered and incorporated accordingly in the slab design. ACI 360-10 provides guidance on the proper quantity of such reinforcement. The slab should also be appropriately reinforced to support the proposed loads as required. If welded-wire mesh reinforcement is utilized, the mesh reinforcement should be placed 2 inches below the slab surface or upper one-third of the slab thickness, whichever is closer to the surface. Adequate construction joints, contraction joints and isolation joints should also be provided in the slab to reduce the impacts of cracking and shrinkage, in general accordance with ACI standards and guidelines (ACI360R-10).

7.0 Pavement Considerations

Based on the materials encountered at the boring locations and after our recommendations for site preparation are implemented, pavements at the subject site may be designed based on a California Bearing Ratio (CBR) of five (5). Note that no CBR or plate load testing was completed to develop these recommendations. For pavement design purposes, we have assumed two levels of traffic for commonly used pavement sections. Specific traffic information was not provided.

It has been our experience that parking lots experience a certain level of wear and stress greater than roadways designed for similar traffic volumes. Therefore, parking lots are typically designed using the AASHTO method and adjusted based on experience. If the owner would like Building & Earth Sciences, Inc. to assess other likely traffic volumes, we will gladly review other options.

In addition, we have assumed the following design parameters:

Table 7: Assumed Design Parameters

Design Criteria	Value
Design life (Years)	20
Terminal Serviceability	2.0
Reliability	85%
Initial Serviceability	4.2
Standard Deviation	0.45 (Flexible)
Standard Deviation	0.35 (Rigid)
Assumed Standard Duty Traffic Volume	<100,000
Assumed Heavy Duty Traffic Volume	<200,000

Note: All base and pavement construction operations should meet minimum requirements of the Arkansas Department of Transporation (ArDOT) Standard Specifications for Highway Construction, 2014 Edition. The applicable sections of the specifications are identified as follows:

Table 8: DOT Specification Sections

Material	Specification Section
Portland Cement Concrete Pavement	501
Bituminous Asphalt Wearing Layer	407
Bituminous Asphalt Binder Layer	406
Mineral Aggregate Base Materials	303

7.1 Flexible Pavement

The asphalt pavement sections described herein were designed using the "AASHTO Guide for Design of Pavement Structures, 1993". Alternative pavement sections were designed by establishing the structural numbers used for the AASHTO design system and substituting materials based upon structural equivalency as follows:

Table 9: Structural Equivalent Coefficient

Material	Structural No.
Asphalt Concrete	0.44
Crushed Stone Base	0.14

The following flexible pavement sections are based on the design parameters presented above:

Table 10: Asphalt Pavement Recommendations

Minimum Recommended Thickness (in)		Material
Standard Duty	Heavy Duty	
2	3	**Surface Course**
6	8	**Base**

7.2 Rigid Pavement

The following rigid pavement sections are based on the design parameters presented above. We assume an effective modulus of subgrade reaction (k) of 125 pci. We have assumed concrete elastic modulus (E_c) of 3.6 x 10^6 psi, and a concrete modulus of rupture (S'_c) of 650 psi.

Table 11: Rigid Pavement Recommendations

Minimum Recommended Thickness (in)		Material
Standard Duty	Heavy Duty	
5	6	Portland Cement Concrete, f'_c=**4000** psi
4	4	**Base**

The concrete should be protected against moisture loss, rapid temperature fluctuations, and construction traffic for several days after placement. All pavements should be sloped for positive drainage. We recommended the pavements be reinforced to hold any cracks that might develop tightly together and restrain their growth.

All pavement components must be placed and compacted in accordance with the applicable sections of the Arkansas Department of Transporation (ArDOT) Standard Specifications for Highway Construction, 2014 Edition. All base and pavement

construction operations should meet minimum requirements of the Arkansas Department of Transporation (ArDOT) Standard Specifications for Highway Construction, 2014 Edition.

8.0 Subgrade Rehabilitation

The subgrade soils often become disturbed during the period between initial site grading and construction of surface improvements. The amount and depth of disturbance will vary with soil type, weather conditions, construction traffic, and drainage.

The engineer should evaluate the subgrade soil during final grading to verify that the subgrade is suitable to receive pavement and/or concrete slab base materials. The final evaluation may include proofrolling or density tests.

Subgrade rehabilitation can become a point of controversy when different contractors are responsible for site grading and building construction. The construction documents should specifically state which contractor will be responsible for maintaining and rehabilitating the subgrade. Rehabilitation may include moisture conditioning and re-compacting soils. When deadlines or weather restrict grading operations, additional measures such as undercutting and replacing saturated soils or chemical stabilization can often be utilized.

9.0 Construction Monitoring

Field verification of site conditions is an essential part of the services provided by the geotechnical consultant. In order to confirm our recommendations, it will be necessary for Building & Earth Sciences, Inc. personnel to make periodic visits to the site during site grading. Typical construction monitoring services are listed below.

- Periodic observation and consultation by a member of our engineering staff during site development.
- Continuous monitoring during structural fill placement.
- Field density testing during structural fill placement.
- Observation and verification of the bearing surfaces exposed after foundation excavation.
- Molding and testing of concrete cylinders.
- Structural steel inspections.
- Sampling of asphalt for verification and coring for determination of in-place density and thickness.

10.0 Closing and Limitations

This report was prepared for WDD Architects, for specific application to the Brinkley High School located in Brinkley, Arkansas. The information in this report is not transferable. This report should not be used for a different development on the same property without first being evaluated by the engineer.

The recommendations in this report were based on the information obtained from our field exploration and laboratory analysis. The data collected is representative of the locations tested. Variations are likely to occur at other locations throughout the site. Engineering judgment was applied in regards to conditions between borings. It will be necessary to confirm the anticipated subsurface conditions during construction.

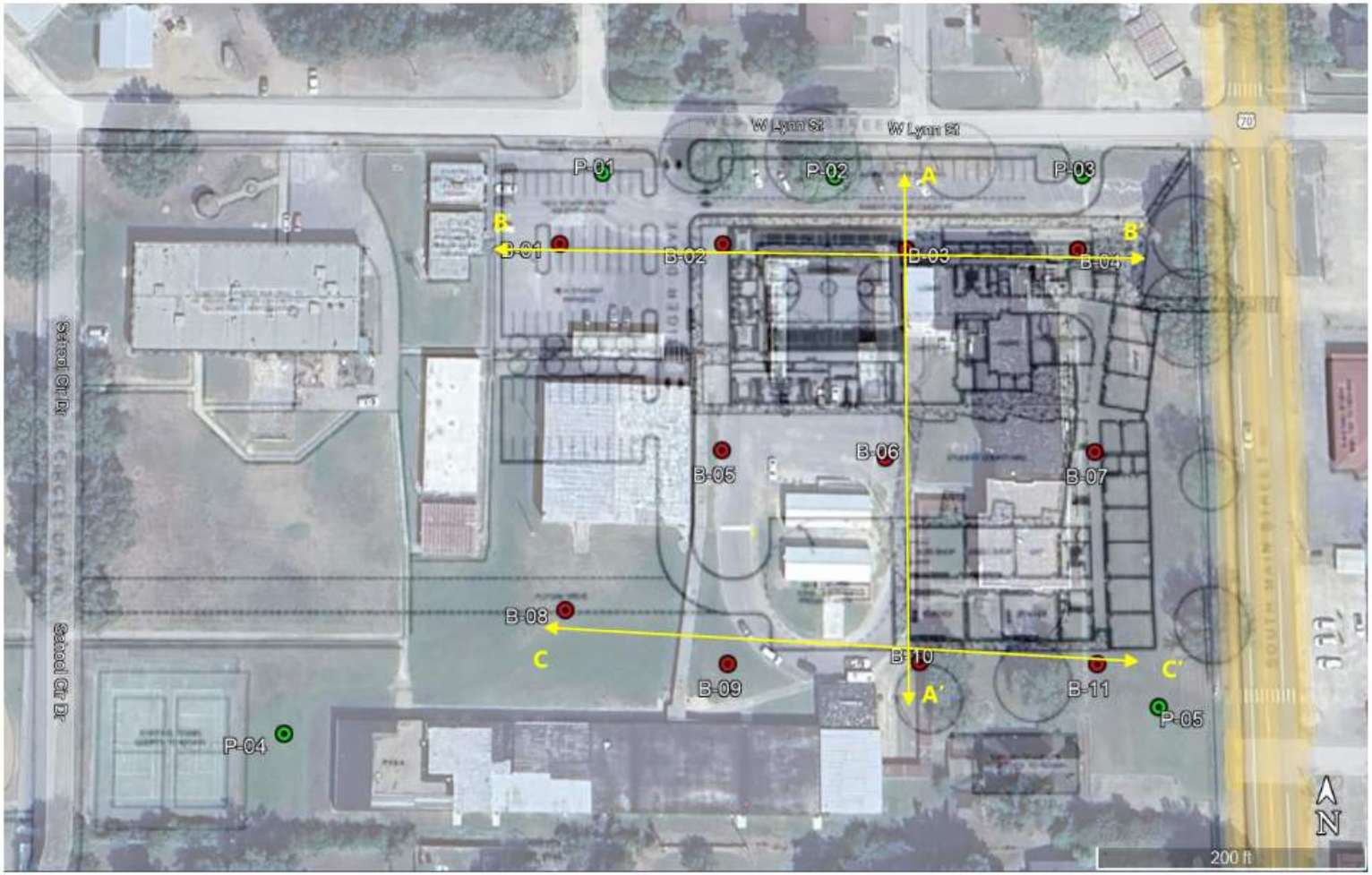
This report has been prepared in accordance with generally accepted standards of geotechnical engineering practice. No other warranty is expressed or implied. In the event that changes are made, or anticipated to be made, to the nature, design, or location of the project as outlined in this report, Building & Earth Sciences, Inc. must be informed of the changes and given the opportunity to either verify or modify the conclusions of this report in writing, or the recommendations of this report will no longer be valid.

The scope of services for this project did not include any environmental assessment of the site or identification of pollutants or hazardous materials or conditions. If the owner is concerned about environmental issues Building & Earth Sciences, Inc. would be happy to provide an additional scope of services to address those concerns.

This report is intended for use during design and preparation of specifications and may not address all conditions at the site during construction. Contractors reviewing this information should acknowledge that this document is for design information only.

An article published by the Geoprofessional Business Association (GBA), titled *Important Information About Your Geotechnical Report*, has been included in the Supporting Documentation Appendix. We encourage all individuals to become familiar with the article to help manage risk.

A-1
BORING LOCATION PLAN

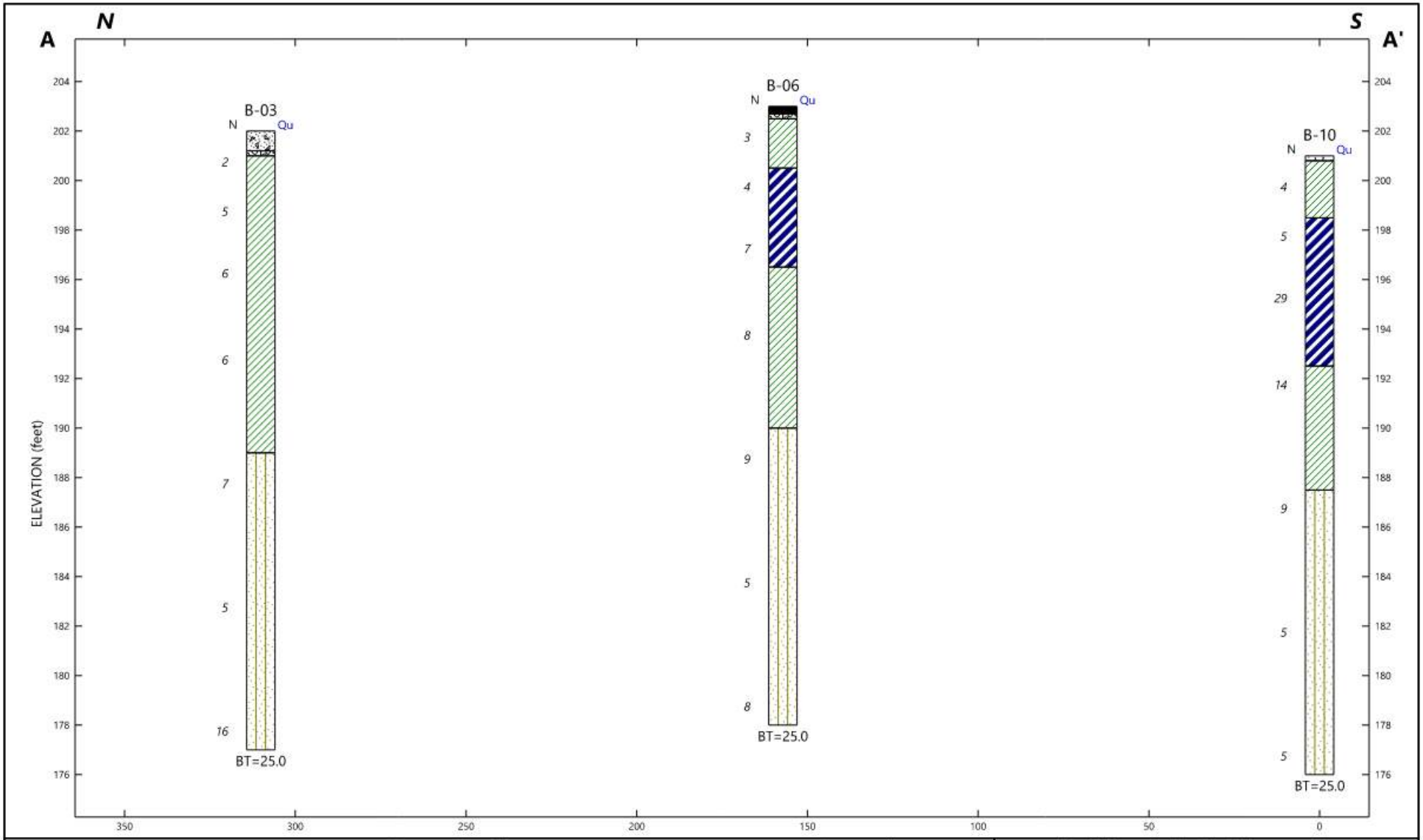


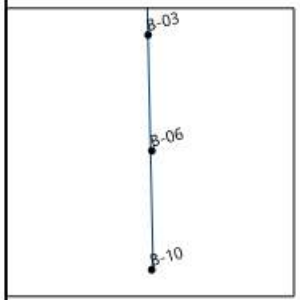
REFERENCE USED TO PRODUCE THIS DRAWING: Google Earth Satellite Imagery dated 09/18/23 with overlay of created by WDD, dated 05/07/24	**BORING LOCATION PLAN**		**DATE: 05/07/2024**
	PROJECT NO. LR240081	**PROJECT NAME / LOCATION:** Brinkley High School Brinkley, Arkansas	**SCALE:** As Shown

BUILDING & EARTH

Geotechnical, Environmental, and Materials Engineers

A-2
SUBSURFACE SOIL PROFILES





Site Map Scale 1 inch equals 255 feet

Key to Hatches

- Concrete
- Aggregate Base Material
- USCS Low Plasticity Clay
- USCS Silty Sand
- Asphalt
- USCS High Plasticity Clay
- Topsoil

Legend

BT=Boring Termination, TPT=Test Pit Terminated
AR=Auger Refusal, ER=Excavation Refusal
N=Standard Penetration Test N-Value
Qu=Unconfined compressive strength estimate from pocket penetrometer test (tsf)
Water Level Reading at time of drilling.
Water Level Reading after drilling.

0 41

Horizontal Scale (feet)
Vertical Exaggeration: 7x

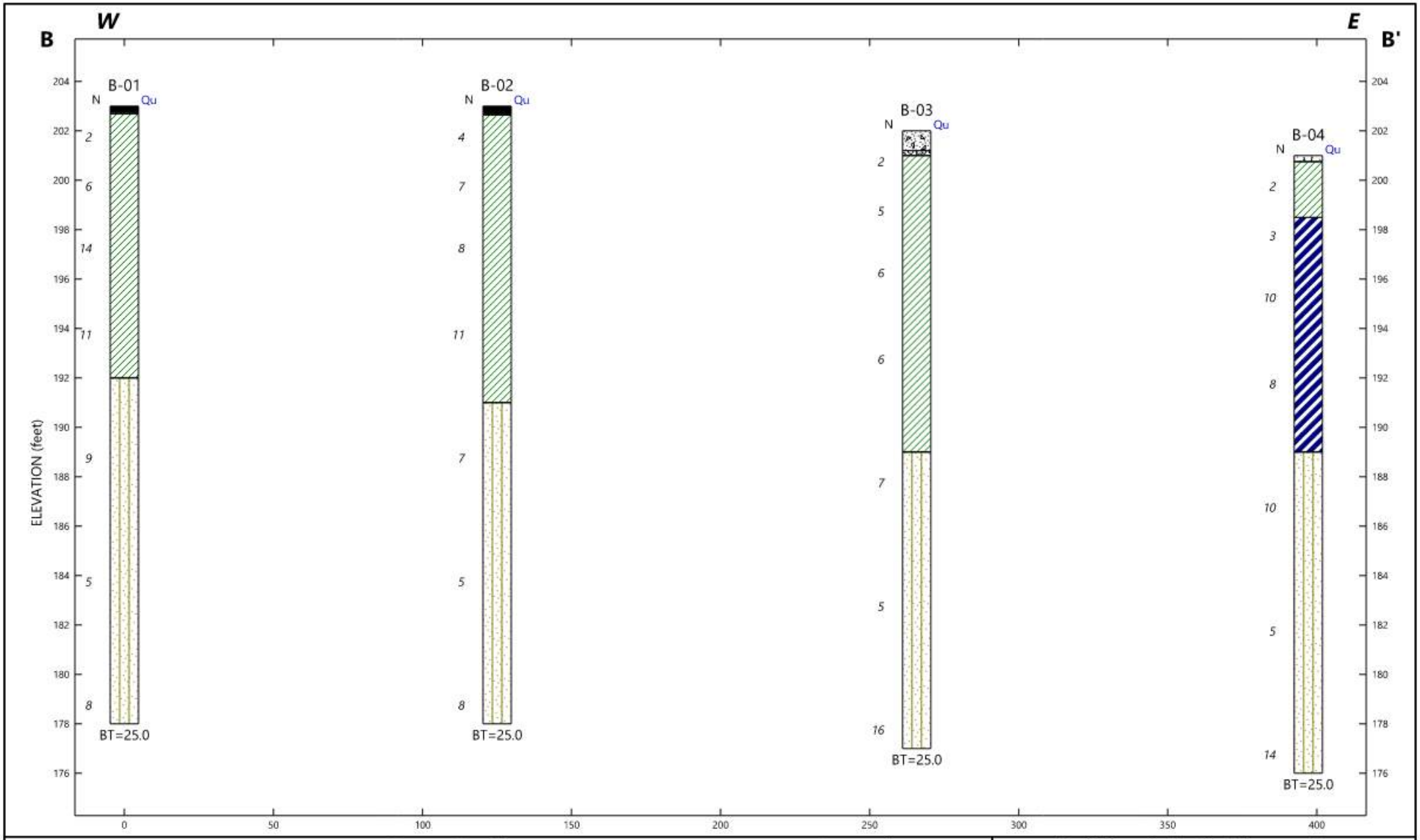
Building & Earth Sciences, Inc.
29 Collins Industrial Place, Little Rock, Akansas 72113

Brinkley High school
Brinkley, AR

A-A': Subsurface Profile

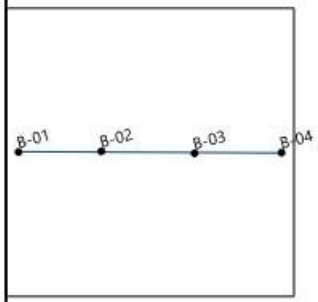
PROJECT NO: LR240081	PLATE NO:	DATE: 5/21/24

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers



Key to Hatches

- Asphalt
- USCS Silty Sand
- USCS High Plasticity Clay
- Aggregate Base Material
- Concrete
- USCS Low Plasticity Clay
- Topsoil



Site Map Scale 1 inch equals 290 feet

Legend

BT=Boring Termination, TPT=Test Pit Terminated
AR=Auger Refusal, ER=Excavation Refusal
N=Standard Penetration Test N-Value
Qu=Unconfined compressive strength estimate from pocket penetrometer test (tsf)
Water Level Reading at time of drilling.
Water Level Reading after drilling.

0 47

Horizontal Scale (feet)
Vertical Exaggeration: 8.5x

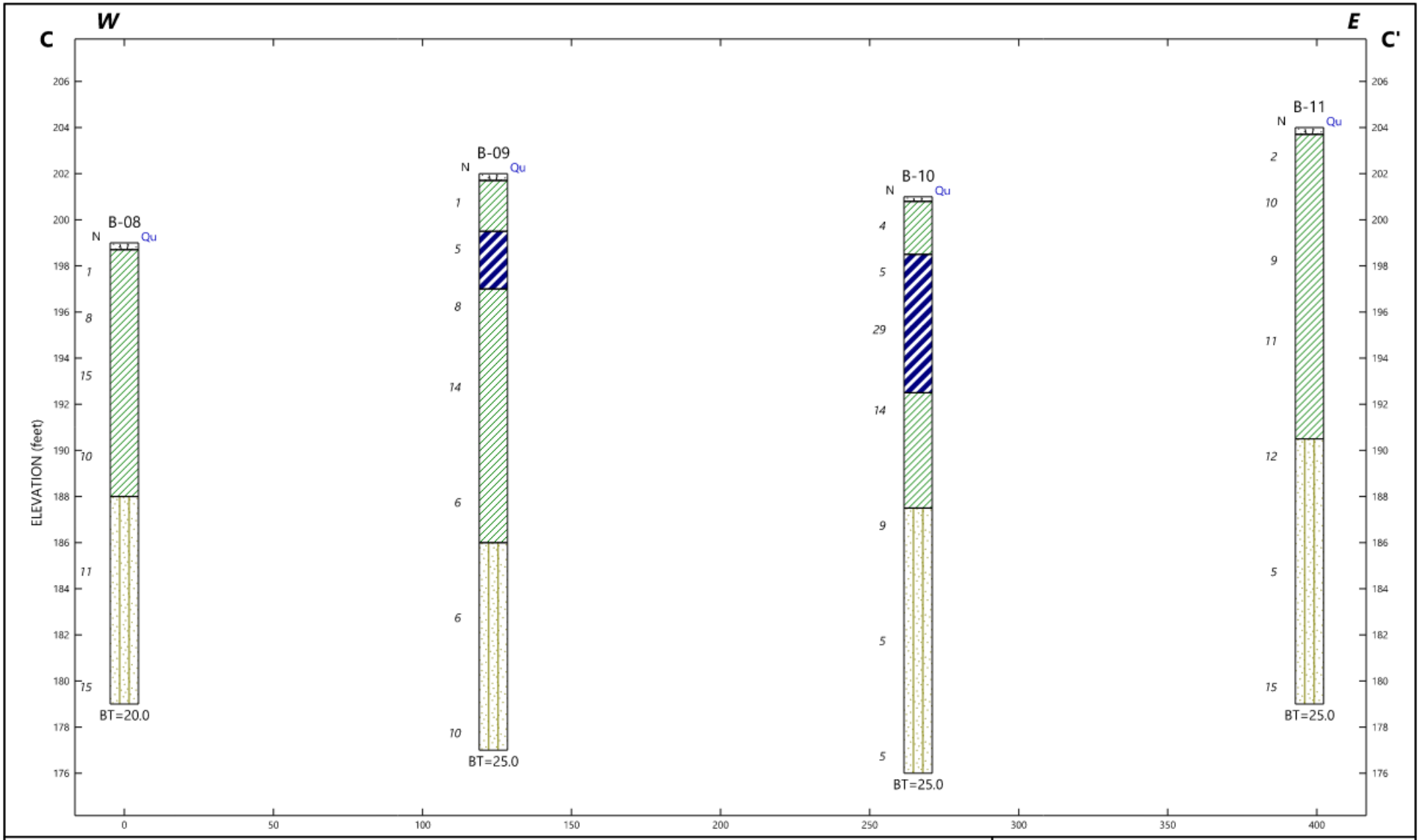
Building & Earth Sciences, Inc.
29 Collins Industrial Place, Little Rock, Akansas 72113

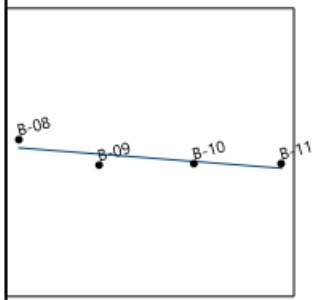
Brinkley High school
Brinkley, AR

B-B': Subsurface Profile

PROJECT NO: LR240081	PLATE NO:	DATE: 5/21/24

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers





Site Map Scale 1 inch equals 290 feet

Key to Hatches

- Topsoil
- USCS Low Plasticity Clay
- USCS Silty Sand
- USCS High Plasticity Clay

Legend

BT=Boring Termination, TPT=Test Pit Terminated
AR=Auger Refusal, ER=Excavation Refusal
N=Standard Penetration Test N-Value
Qu=Unconfined compressive strength estimate from pocket penetrometer test (tsf)
Water Level Reading at time of drilling.
Water Level Reading after drilling.

0 47

Horizontal Scale (feet)
Vertical Exaggeration: 7.5x

Building & Earth Sciences, Inc.
29 Collins Industrial Place, Little Rock, Akansas 72113

Brinkley High school
Brinkley, AR

C-C': Subsurface Profile

PROJECT NO: LR240081	PLATE NO:	DATE: 5/21/24

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

A-3
BORING LOG DESCRIPTION

Building & Earth Sciences, Inc. used the gINT software program to prepare the attached boring logs. The gINT program provides the flexibility to custom design the boring logs to include the pertinent information from the subsurface exploration and results of our laboratory analysis. The soil and laboratory information included on our logs is summarized below:

Depth and Elevation

The depth below the ground surface and the corresponding elevation are shown in the first two columns.

Sample Type

The method used to collect the sample is shown. The typical sampling methods include Split Spoon Sampling, Shelby Tube Sampling, Grab Samples, and Rock Core. A key is provided at the bottom of the log showing the graphic symbol for each sample type.

Sample Number

Each sample collected is numbered sequentially.

Blows Per Increment, REC%, RQD%

When Standard Split Spoon sampling is used, the blows required to drive the sampler each 6-inch increment are recorded and shown in column 5. When rock core is obtained the recovery ration (REC%) and Rock Quality Designation (RQD%) is recorded.

Soil Data

Column 6 is a graphic representation of four different soil parameters. Each of the parameters use the same graph, however, the values of the graph subdivisions vary with each parameter. Each parameter presented on column 6 is summarized below:

- N-value - The Standard Penetration Test N-value, obtained by adding the number of blows required to drive the sampler the final 12 inches, is recorded. The graph labels range from 0 to 50.
- Qu – Unconfined Compressive Strength estimate from the Pocket Penetrometer test in tons per square foot (tsf). The graph labels range from 0 to 5 tsf.

- Atterberg Limits – The Atterberg Limits are plotted with the Plastic Limit to the left, and Liquid Limit to the right, connected by a horizontal line. The difference in the Plastic and Liquid Limits is referred to as the Plasticity Index. The Atterberg Limits test results are also included in the Remarks column on the far right of the boring log. The Atterberg Limits graph labels range from 0 to 100%.
- Moisture – The Natural Moisture Content of the soil sample as determined in our laboratory.

Soil Description

The soil description prepared in accordance with ASTM D2488, Visual Description of Soil Samples. The Munsel Color chart is used to determine the soil color. Strata changes are indicated by a solid line, with the depth of the change indicated on the left side of the line and the elevation of the change indicated on the right side of the line. If subtle changes within a soil type occur, a broken line is used. The Boring Termination or Auger Refusal depth is shown as a solid line at the bottom of the boring.

Graphic

The graphic representation of the soil type is shown. The graphic used for each soil type is related to the Unified Soil Classification chart. A chart showing the graphic associated with each soil classification in the Soil Classification Methodology section of this Appendix.

Remarks

Remarks regarding borehole observations, and additional information regarding the laboratory results and groundwater observations.

A-4
BORING LOGS

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

Designation: B-01

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.877555, -91.196468

LOCATION: Brinkley, AR
DATE DRILLED: 5/6/24
WEATHER: Partly Cloudy
ELEVATION: 203
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre

DEPTH (ft)	ELEVATION (ft)	SAMPLE TYPE	SAMPLE NO.	BLOWS PER INCREMENT	N-Value / Qu (tsf) / Atterberg Limits / % Moisture	LAB DATA	SOIL DESCRIPTION	GRAPHIC	REMARKS
0	203						0.3 ASPHALT: ~2.5 inches (202.7) AGGREGATE BASE: <1 inch LEAN CLAY (CL) WITH SAND: soft, brown, yellow, low plasticity, moist, (ALLUVIAL)		
		☒	S-01	1 1 1		Sample S-01 LL: 34 PL: 22 PI: 12 M: 20.1%	stiff		
	200	☒	S-02	2 2 4					
5		☒	S-03	3 6 8		Sample S-03 M: 20.2%	very stiff, fat clay pockets		
	195	☒	S-04	5 5 6		Sample S-04 M: 18.6%	medium plasticity		
10							11.0 (192.0) SILTY SAND (SM): medium dense, brown, (ALLUVIAL)		
	190	☒	S-05	3 5 4		Sample S-05 M: 12.1%			
15									
	185	☒	S-06	3 3 2		Sample S-06 M: 9.9%	loose		
20									
	180	☒	S-07	4 3 5		Sample S-07 LL: NP PL: NP PI: NP	medium dense		Groundwater not encountered at time of drilling. Borehole backfilled on date drilled unless otherwise noted. Consistency/Relative Density based on correction factor for Automatic hammer.
25							25.0 (178.0) Boring Terminated at 25 feet.		

SAMPLE TYPE ☒ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

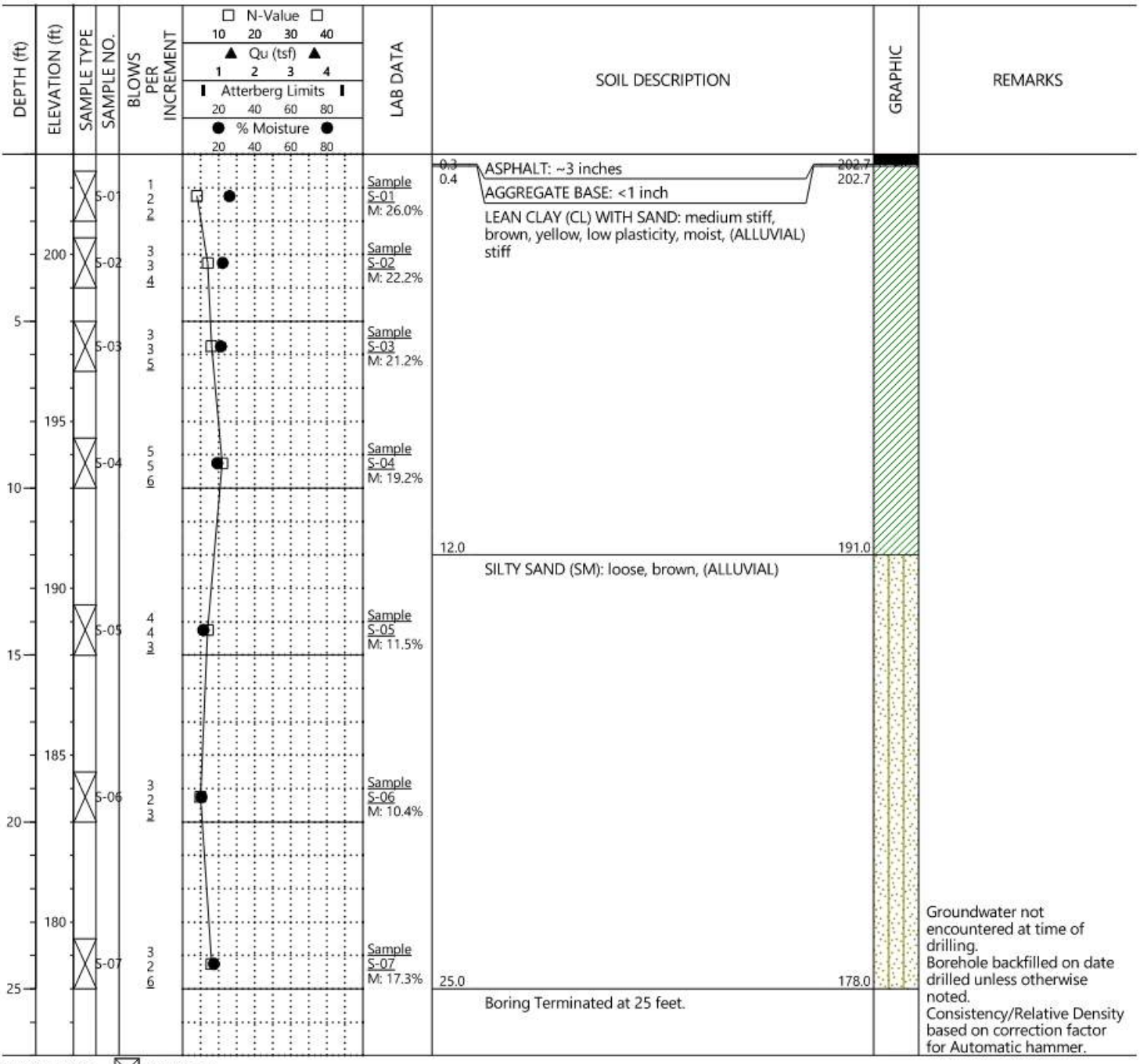
Designation: B-02

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.877555, -91.196051

LOCATION: Brinkley, AR
DATE DRILLED: 5/6/24
WEATHER: Partly Cloudy
ELEVATION: 203
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre



SAMPLE TYPE ☒ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

Designation: B-03

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.877544, -91.195582

LOCATION: Brinkley, AR
DATE DRILLED: 5/6/24
WEATHER: Partly Cloudy
ELEVATION: 202
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre

DEPTH (ft)	ELEVATION (ft)	SAMPLE TYPE	SAMPLE NO.	BLOWS PER INCREMENT	N-Value / Qu (tsf) / Atterberg Limits / % Moisture	LAB DATA	SOIL DESCRIPTION	GRAPHIC	REMARKS
0	202						0.8 CONCRETE: ~8 inches (201.2)		
							1.0 AGGREGATE BASE: ~2 inches base (201.0)		
	200	☒	S-01	1 1 1		Sample S-01 M: 22.9% F: 71.3%	LEAN CLAY (CL) WITH SAND: soft, brown, yellow, medium plasticity, moist, fat clay pockets, (ALLUVIAL) medium stiff		
		☒	S-02	2 2 3		Sample S-02 M: 25.2%			
5		☒	S-03	1 3 3		Sample S-03 LL: 39 PL: 20 PI: 19 M: 20.4%			
	195	☒	S-04	2 3 3		Sample S-04 M: 21.6%			
10									
	190						13.0 (189.0) SILTY SAND (SM): loose, brown, (ALLUVIAL)		
		☒	S-05	3 4 3		Sample S-05 M: 16.7%			
15									
	185								
		☒	S-06	3 3 2		Sample S-06 M: 16.7%			
20									
	180								Groundwater not encountered at time of drilling. Borehole backfilled on date drilled unless otherwise noted. Consistency/Relative Density based on correction factor for Automatic hammer.
		☒	S-07	4 5 11		Sample S-07 M: 14.9%	medium dense		
25							25.0 (177.0) Boring Terminated at 25 feet.		
	175								

SAMPLE TYPE ☒ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

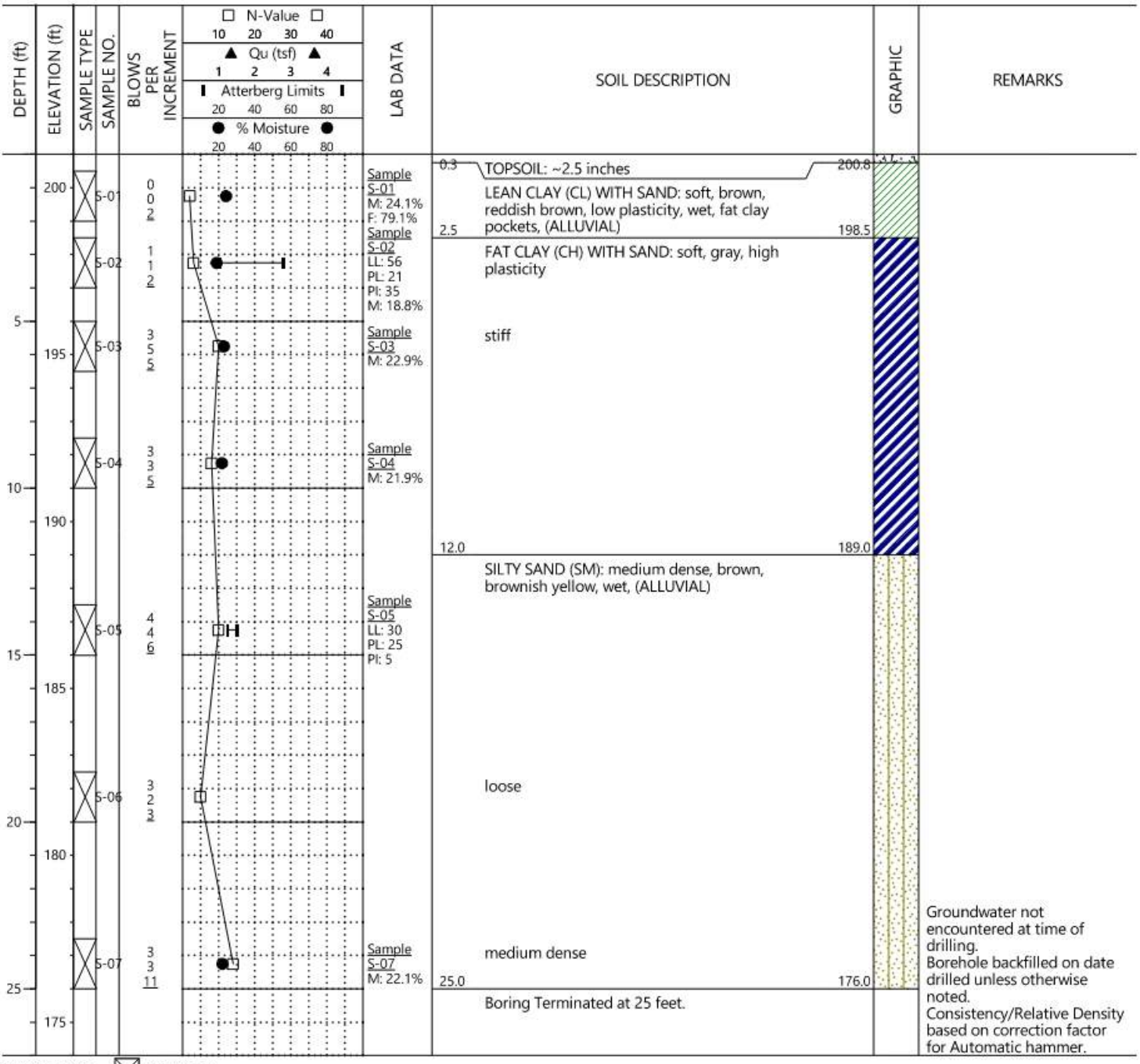
Designation: B-04

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.877544, -91.195144

LOCATION: Brinkley, AR
DATE DRILLED: 5/7/24
WEATHER: Cloudy, Light Rain
ELEVATION: 201
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre



SAMPLE TYPE ☒ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

Designation: B-05

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.877124, -91.196060

LOCATION: Brinkley, AR
DATE DRILLED: 5/7/24
WEATHER: Cloudy, Light Rain
ELEVATION: 203
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre

DEPTH (ft)	ELEVATION (ft)	SAMPLE TYPE	SAMPLE NO.	BLOWS PER INCREMENT	N-Value / Qu (tsf) / Atterberg Limits / % Moisture	LAB DATA	SOIL DESCRIPTION	GRAPHIC	REMARKS
0							0.3 ASPHALT: ~3 inches (202.7)		
							0.5 AGGREGATE BASE: ~2 inches (202.5)		
							2.5 LEAN CLAY (CL) WITH SAND: medium stiff, brown, yellow, low plasticity, moist, (ALLUVIAL) (200.5)		
	200		S-01	1 2 2		Sample S-01 M: 22.6%			
			S-02	1 3 3		Sample S-02 M: 21.6%	FAT CLAY (CH) WITH SAND: medium stiff, gray, high plasticity, moist, (ALLUVIAL)		
5			S-03	2 4 4		Sample S-03 M: 20.9%	stiff, brownish yellow		
	195		S-04	1 2 3		Sample S-04 M: 23.9%	medium stiff, brown		
10									
	190		S-05	4 4 4		Sample S-05 M: 8.2%	13.5 (189.5) SILTY SAND (SM): medium dense, brown, moist, (ALLUVIAL)		
15									
	185		S-06	3 2 3		Sample S-06 M: 12.9%	loose		
20									
	180		S-07	4 4 8		Sample S-07 M: 11.3%	medium dense		Groundwater not encountered at time of drilling. Borehole backfilled on date drilled unless otherwise noted. Consistency/Relative Density based on correction factor for Automatic hammer.
25							25.0 (178.0) Boring Terminated at 25 feet.		

SAMPLE TYPE ☒ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

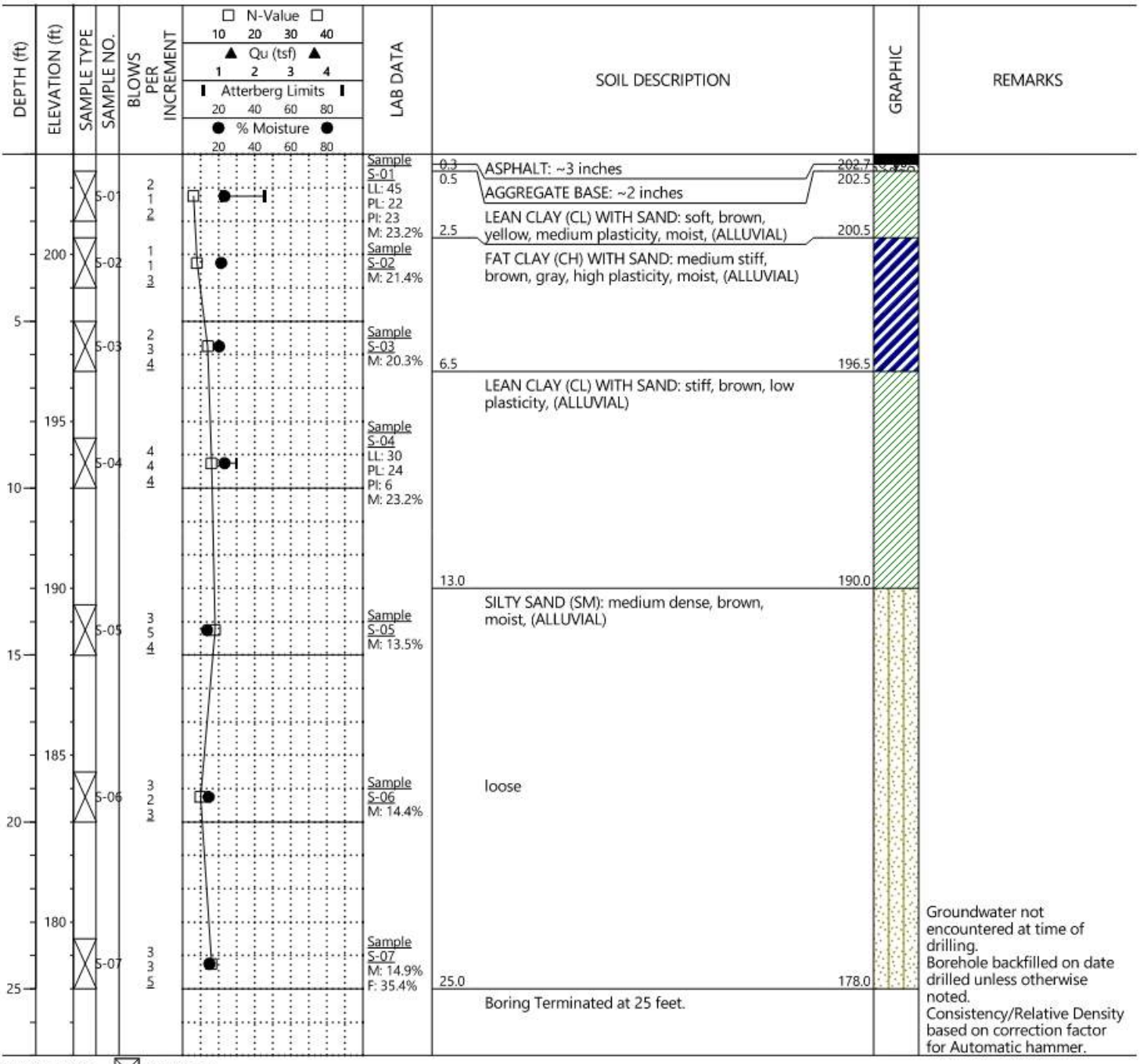
Designation: B-06

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.877124, -91.195569

LOCATION: Brinkley, AR
DATE DRILLED: 5/7/24
WEATHER: Cloudy, Light Rain
ELEVATION: 203
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre



SAMPLE TYPE ☒ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

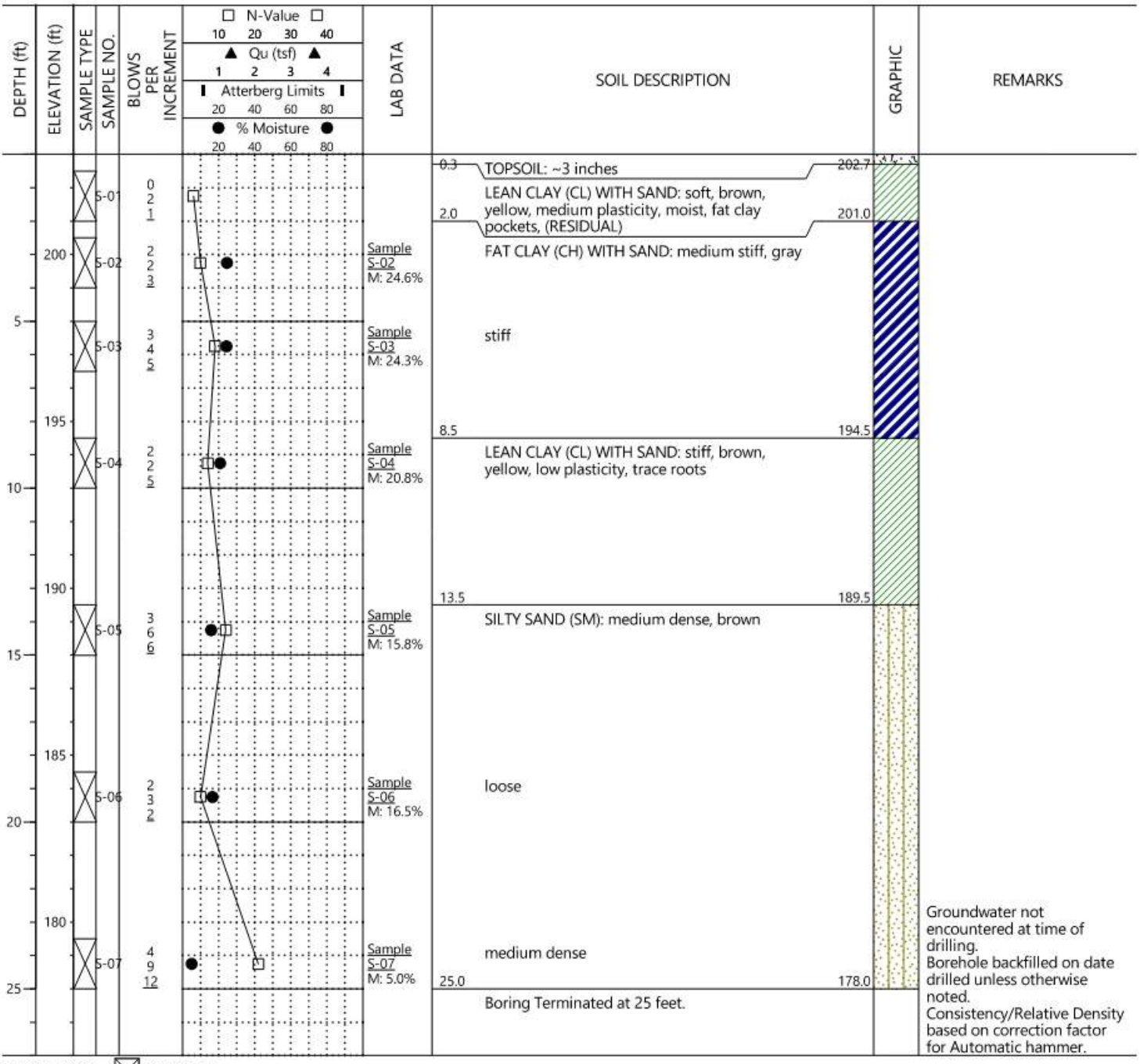
Designation: B-07

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.877120, -91.195122

LOCATION: Brinkley, AR
DATE DRILLED: 5/7/24
WEATHER: Cloudy, Light Rain
ELEVATION: 203
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre



SAMPLE TYPE ☒ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

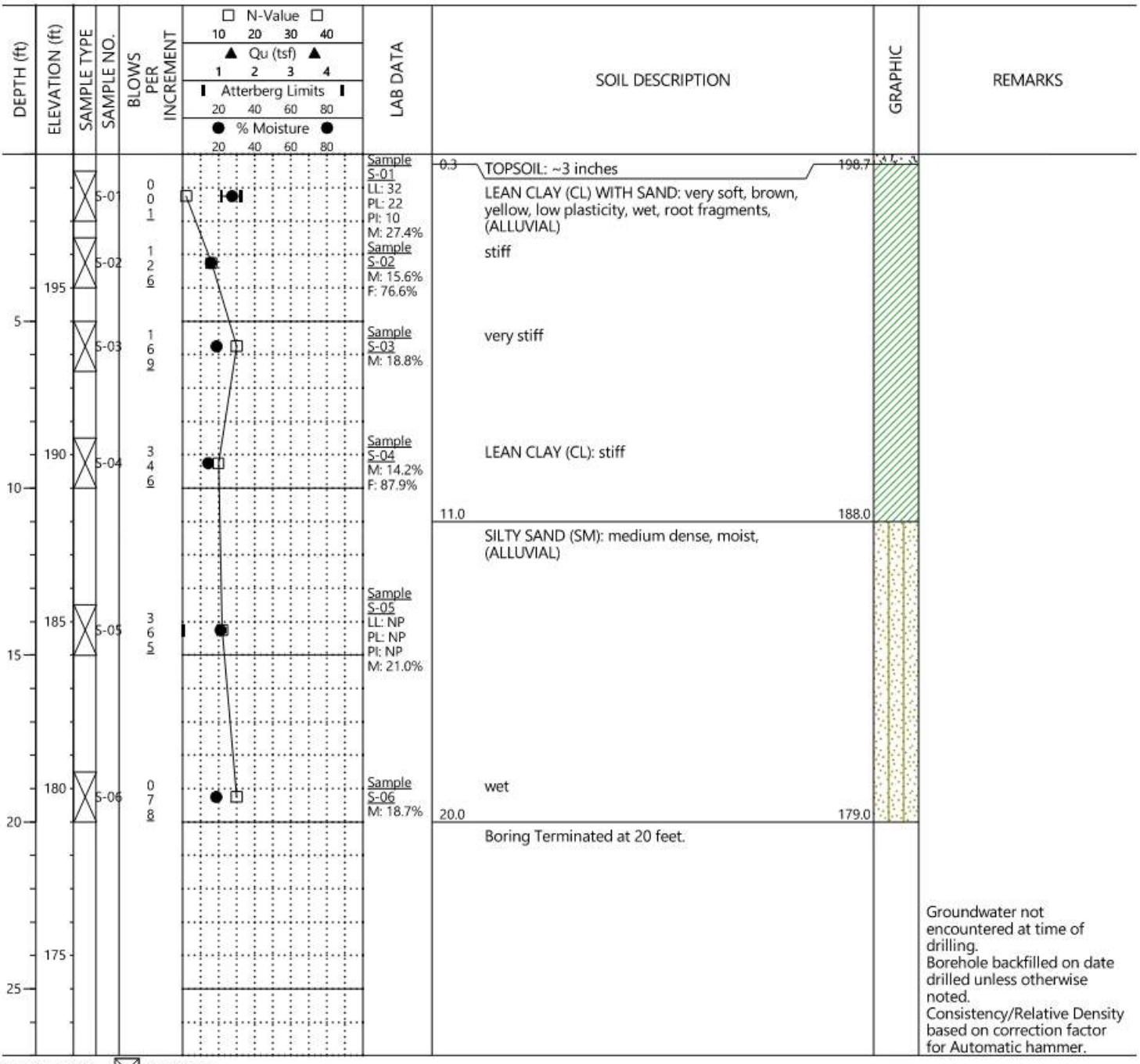
Designation: B-08

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.876797, -91.196454

LOCATION: Brinkley, AR
DATE DRILLED: 5/7/24
WEATHER: Cloudy, Light Rain
ELEVATION: 199
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre



SAMPLE TYPE ☒ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

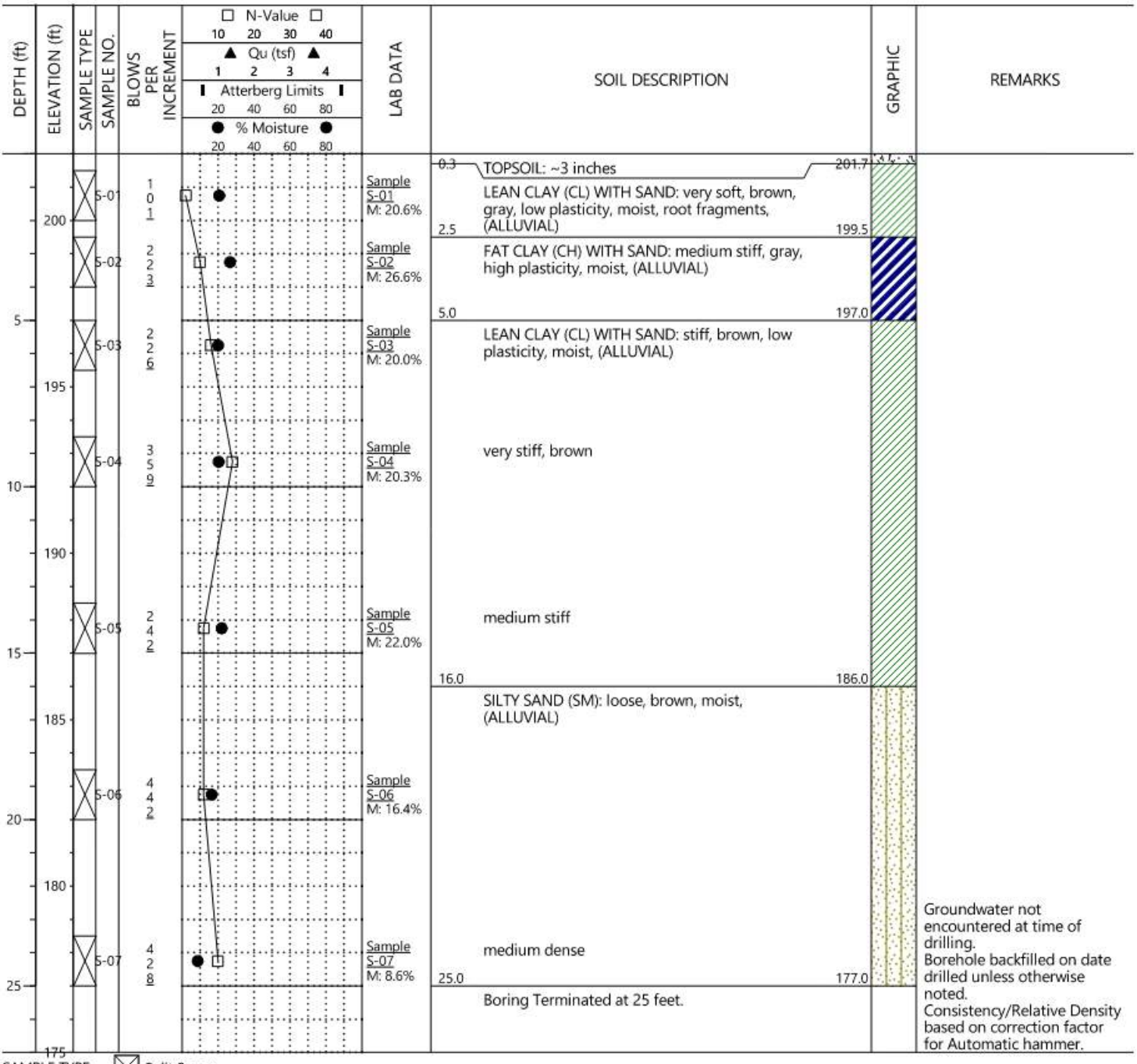
Designation: B-09

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.876689, -91.196051

LOCATION: Brinkley, AR
DATE DRILLED: 5/7/24
WEATHER: Cloudy, Light Rain
ELEVATION: 202
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre



SAMPLE TYPE ☒ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

Designation: B-10

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.876692, -91.195574

LOCATION: Brinkley, AR
DATE DRILLED: 5/7/24
WEATHER: Cloudy, Light Rain
ELEVATION: 201
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre

DEPTH (ft)	ELEVATION (ft)	SAMPLE TYPE	SAMPLE NO.	BLOWS PER INCREMENT	N-Value / Qu (tsf) / Atterberg Limits / % Moisture	LAB DATA	SOIL DESCRIPTION	GRAPHIC	REMARKS
0	200	⊠	S-01	1 1 3		Sample S-01 M: 27.4%	0.2 TOPSOIL: ~2 inches 200.8 LEAN CLAY (CL) WITH SAND: medium stiff, brown, yellow, low plasticity, moist, root fragments, (ALLUVIAL)		
		⊠	S-02	1 2 3		Sample S-02 M: 22.2%	2.5 198.5 FAT CLAY (CH) WITH SAND: medium stiff, gray, high plasticity, moist, (ALLUVIAL)		
5	195	⊠	S-03	3 13 16		Sample S-03 M: 25.5%			
		⊠	S-04	4 7 7		Sample S-04 M: 14.9%	8.5 192.5 LEAN CLAY (CL) WITH SAND: very stiff, brown, low plasticity, moist, (ALLUVIAL)		
10	190								
		⊠	S-05	4 4 5		Sample S-05 M: 13.9%	13.5 187.5 SILTY SAND (SM): medium dense, brown, moist, (ALLUVIAL)		
15	185								
		⊠	S-06	2 2 3		Sample S-06 M: 14.3%	loose		
20	180								
		⊠	S-07	1 3 2			25.0 176.0 Boring Terminated at 25 feet.		Groundwater not encountered at time of drilling. Borehole backfilled on date drilled unless otherwise noted. Consistency/Relative Density based on correction factor for Automatic hammer.
25	175								

SAMPLE TYPE ⊠ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

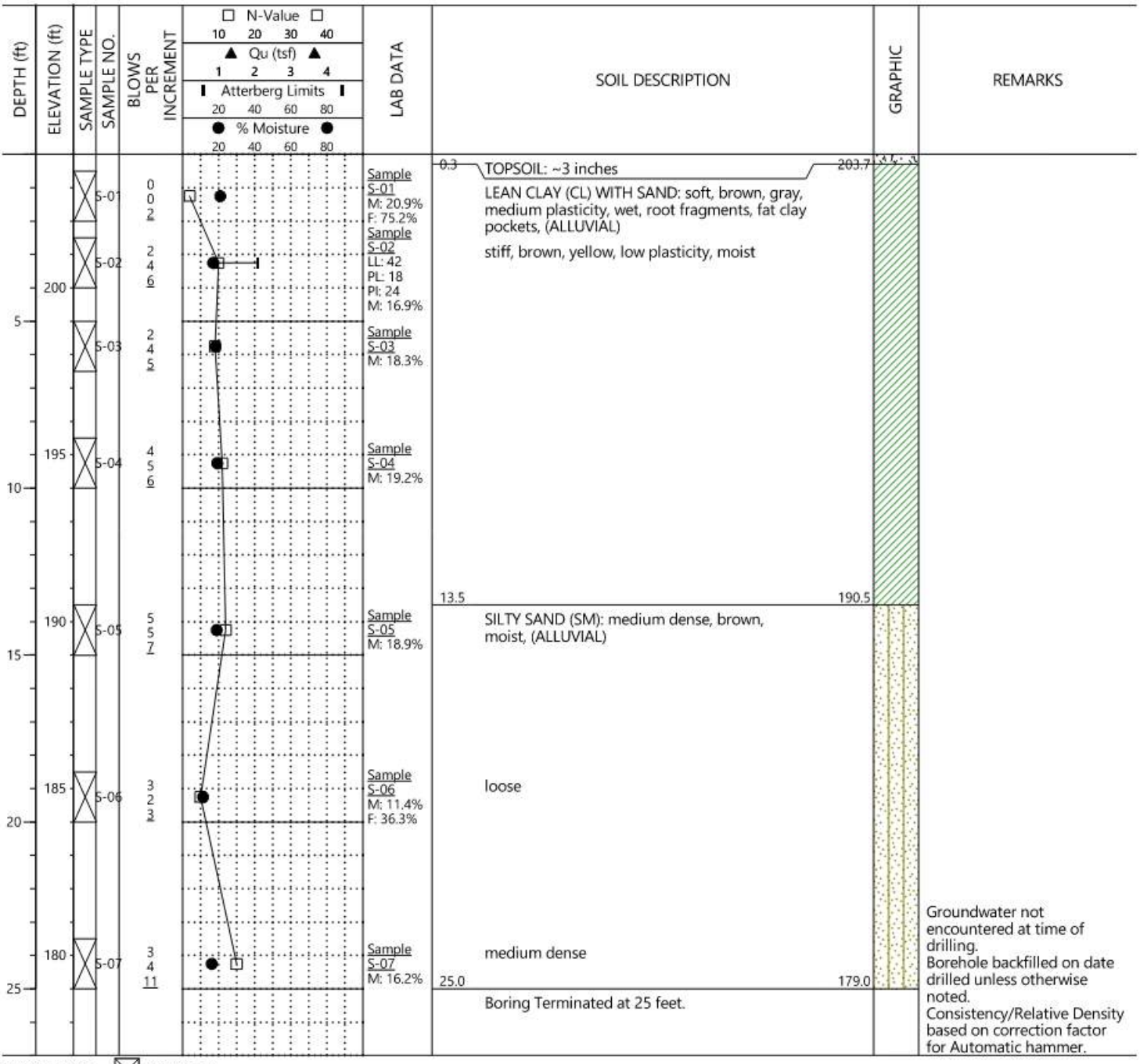
Designation: B-11

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.876689, -91.195135

LOCATION: Brinkley, AR
DATE DRILLED: 5/7/24
WEATHER: Cloudy, Light Rain
ELEVATION: 204
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre



SAMPLE TYPE ☒ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

Designation: P-01

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.877706, -91.196358

LOCATION: Brinkley, AR
DATE DRILLED: 5/6/24
WEATHER: Partly Cloudy
ELEVATION: 203
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre

DEPTH (ft)	ELEVATION (ft)	SAMPLE TYPE	SAMPLE NO.	BLOWS PER INCREMENT	N-Value / Qu (tsf) / Atterberg Limits / % Moisture	LAB DATA	SOIL DESCRIPTION	GRAPHIC	REMARKS
0							CONCRETE: 12 inches		
1.0	202.0								
		☒	S-01	1 2 2		Sample S-01 M: 26.9%	LEAN CLAY (CL) WITH SAND: medium stiff, brown, yellow, medium plasticity, moist, (ALLUVIAL)		
2.5	200.5								
	200	☒	S-02	2 2 3		Sample S-02 M: 23.3%	FAT CLAY (CH) WITH SAND: medium stiff, gray, high plasticity, moist, (ALLUVIAL)		
5.0	198.0								
5		☒	S-03	1 4 5		Sample S-03 M: 19.7%	LEAN CLAY (CL) WITH SAND: stiff, brown, low plasticity, moist, (ALLUVIAL)		
6.5	196.5								
	195						Boring Terminated at 6.5 feet.		
10	190								
15	185								
20	180								
25									

Groundwater not encountered at time of drilling.
Borehole backfilled on date drilled unless otherwise noted.
Consistency/Relative Density based on correction factor for Automatic hammer.

SAMPLE TYPE ☒ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

Designation: P-02

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.877699, -91.195762

LOCATION: Brinkley, AR
DATE DRILLED: 5/6/24
WEATHER: Partly Cloudy
ELEVATION: 202
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre

DEPTH (ft)	ELEVATION (ft)	SAMPLE TYPE	SAMPLE NO.	BLOWS PER INCREMENT	N-Value / Qu (tsf) / Atterberg Limits / % Moisture	LAB DATA	SOIL DESCRIPTION	GRAPHIC	REMARKS
0	202						0.2 TOPSOIL: ~2 inches 201.8		
	200		S-01	2 2 3		Sample S-01 M: 14.3%	LEAN CLAY (CL) WITH SAND: medium stiff, brown, yellow, low plasticity, moist, (ALLUVIAL)		
			S-02	5 4 5		Sample S-02 M: 16.1%	stiff		
5			S-03	5 5 8		Sample S-03 M: 14.8%	very stiff		
	195						6.5 195.5 Boring Terminated at 6.5 feet.		
10	190								
15	185								
20	180								Groundwater not encountered at time of drilling. Borehole backfilled on date drilled unless otherwise noted. Consistency/Relative Density based on correction factor for Automatic hammer.
25	175								

SAMPLE TYPE ☒ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

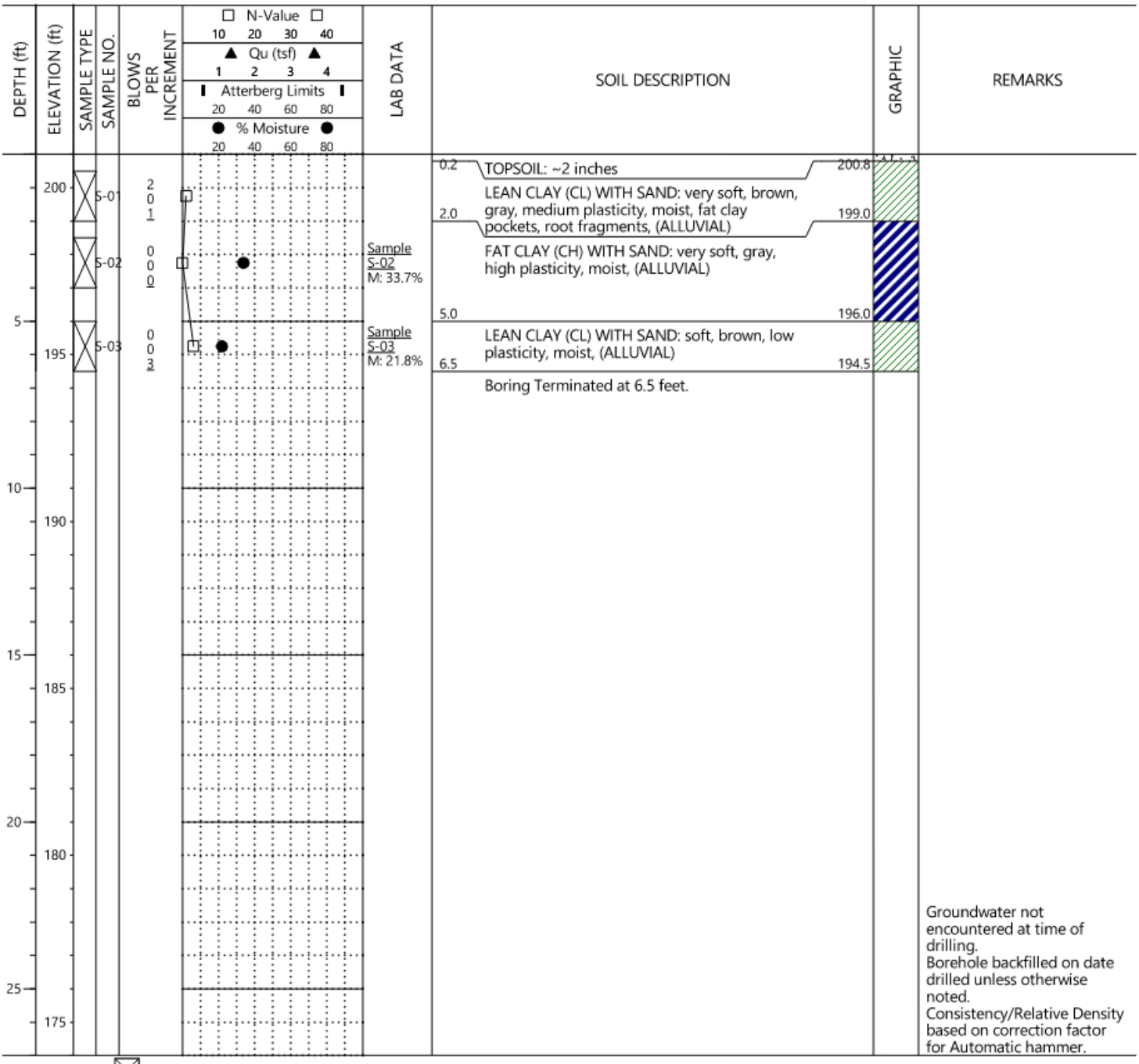
Designation: P-03

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.877703, -91.195127

LOCATION: Brinkley, AR
DATE DRILLED: 5/7/24
WEATHER: Cloudy, Light Rain
ELEVATION: 201
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre



SAMPLE TYPE ☒ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

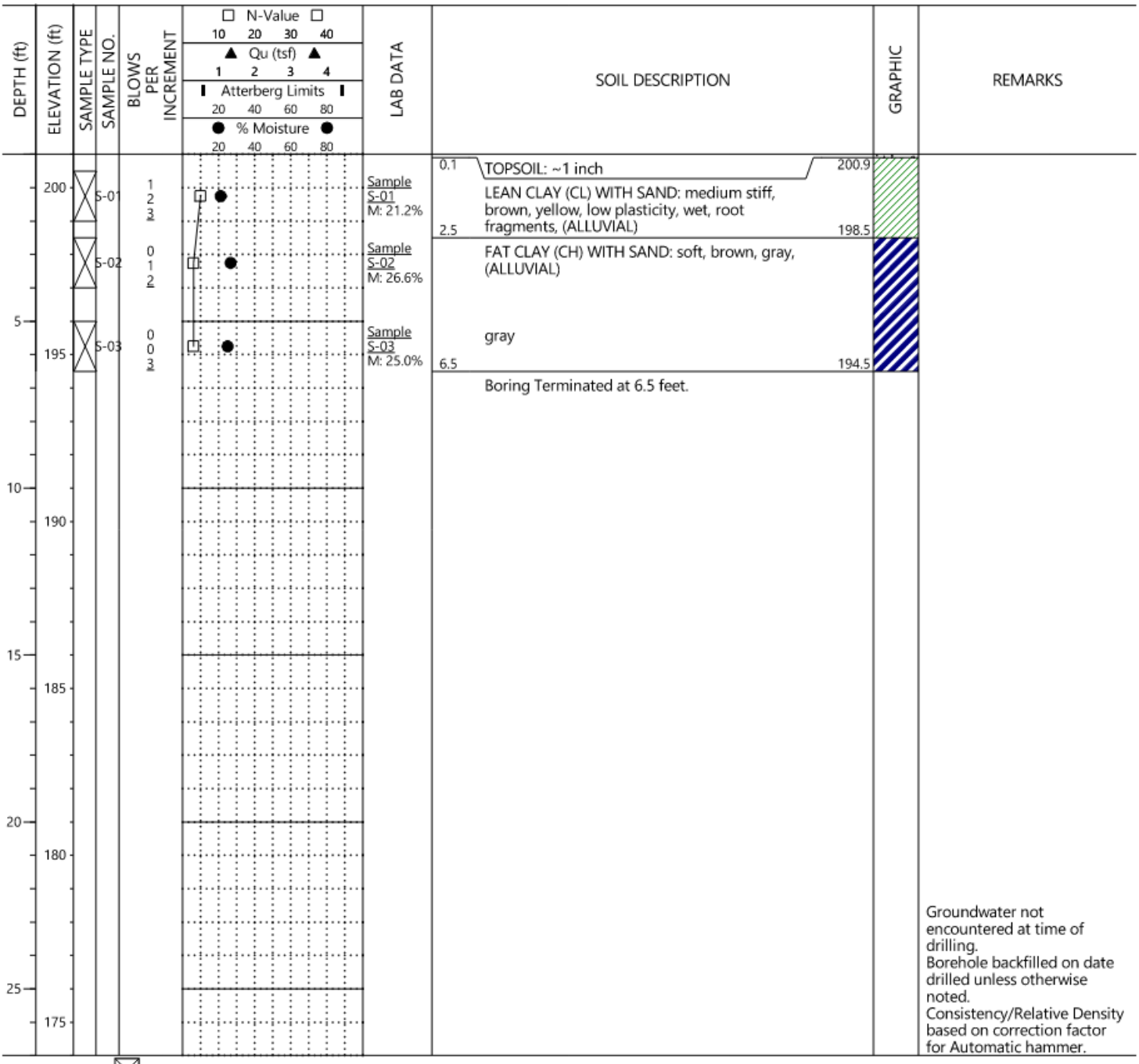
Designation: P-04

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.876549, -91.197151

LOCATION: Brinkley, AR
DATE DRILLED: 5/7/24
WEATHER: Cloudy, Light Rain
ELEVATION: 201
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre



SAMPLE TYPE ☒ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

LOG OF BORING

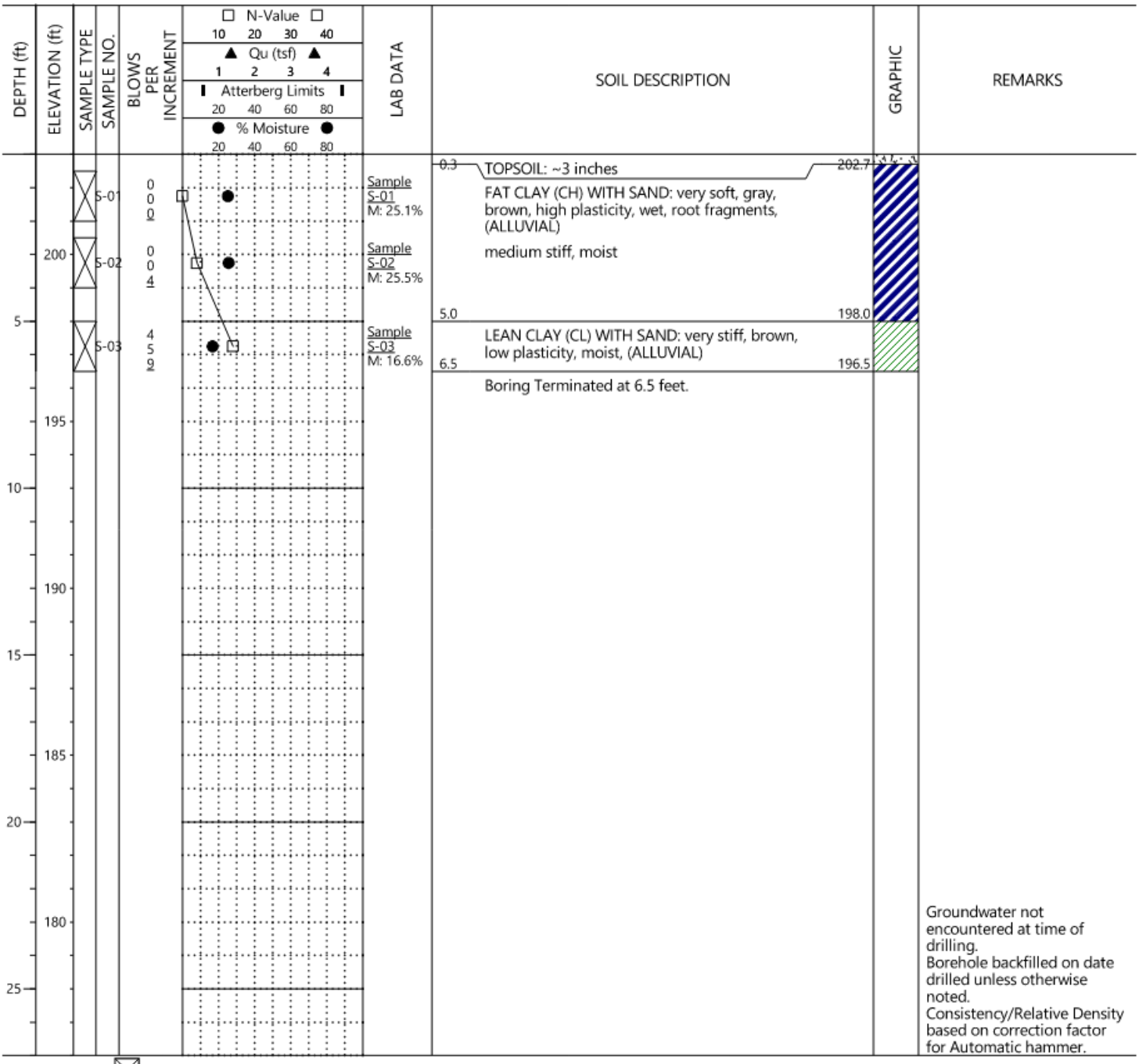
Designation: P-05

Sheet 1 of 1

29 Collins Industrial Place
Little Rock, Akansas 72113
Office: 5015046929
sscheiderer@builldingandearth.com

PROJECT NAME: Brinkley High school
PROJECT NUMBER: LR240081
DRILLING METHOD: Hollow Stem Auger
EQUIPMENT USED: Geoprobe 7822DT
HAMMER TYPE: Automatic
BORING LOCATION: 34.876603, -91.194986

LOCATION: Brinkley, AR
DATE DRILLED: 5/7/24
WEATHER: Cloudy, Light Rain
ELEVATION: 203
DRILL CREW: Building & Earth
LOGGED BY: J. St. Pierre



SAMPLE TYPE ☒ Split Spoon

N-VALUE STANDARD PENETRATION RESISTANCE (AASHTO T-206)
% MOISTURE PERCENT NATURAL MOISTURE CONTENT
▽ GROUNDWATER LEVEL IN THE BOREHOLE AT TIME OF DRILLING
▼ STABILIZED GROUNDWATER LEVEL

REC RECOVERY
RQD ROCK QUALITY DESIGNATION
UD UNDISTURBED
Qu POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH

LL: LIQUID LIMIT **M:** NATURAL MOISTURE CONTENT
PL: PLASTIC LIMIT **F:** PERCENT PASSING NO. 200 SIEVE
PI: PLASTICITY INDEX

A-5
LABORATORY TEST RESULTS

LABORATORY TEST RESULTS

The results of the laboratory testing are presented in the following tables.

BORING NO.	DEPTH	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	% PASSING #200 SIEVE	CLASSIFICATION
B-01	0.5 - 2.0	20.1	34	22	12		
B-01	5.0 - 6.5	20.2					
B-01	8.5 - 10.0	18.6					
B-01	13.5 - 15.0	12.1					
B-01	18.5 - 20.0	9.9					
B-01	23.5 - 25.0		NP	NP	NP		
B-02	0.5 - 2.0	26.0					
B-02	2.5 - 4.0	22.2					
B-02	5.0 - 6.5	21.2					
B-02	8.5 - 10.0	19.2					
B-02	13.5 - 15.0	11.5					
B-02	18.5 - 20.0	10.4					
B-02	23.5 - 25.0	17.3					
B-03	0.5 - 2.0	22.9				71	
B-03	2.5 - 4.0	25.2					
B-03	5.0 - 6.5	20.4	39	20	19		
B-03	8.5 - 10.0	21.6					
B-03	13.5 - 15.0	16.7					
B-03	18.5 - 20.0	16.7					
B-03	23.5 - 25.0	14.9					
B-04	0.5 - 2.0	24.1				79	
B-04	2.5 - 4.0	18.8	56	21	35		
B-04	5.0 - 6.5	22.9					
B-04	8.5 - 10.0	21.9					
B-04	13.5 - 15.0		30	25	5		
B-04	23.5 - 25.0	22.1					
B-05	0.5 - 2.0	22.6					
B-05	2.5 - 4.0	21.6					
B-05	5.0 - 6.5	20.9					
B-05	8.5 - 10.0	23.9					
B-05	13.5 - 15.0	8.2					

TABLE L-1: General Soil Classification Test Results

Soils with a Liquid Limit (LL) greater than 50 and Plasticity Index (PI) greater than 25 usually exhibit significant volume change with varying moisture content and are considered to be highly plastic
[1] Indicates visual classification. WR indicates weathered rock.

LABORATORY TEST RESULTS

The results of the laboratory testing are presented in the following tables.

BORING NO.	DEPTH	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	% PASSING #200 SIEVE	CLASSIFICATION
B-05	18.5 - 20.0	12.9					
B-05	23.5 - 25.0	11.3					
B-06	0.5 - 2.0	23.2	45	22	23		
B-06	2.5 - 4.0	21.4					
B-06	5.0 - 6.5	20.3					
B-06	8.5 - 10.0	23.2	30	24	6		
B-06	13.5 - 15.0	13.5					
B-06	18.5 - 20.0	14.4					
B-06	23.5 - 25.0	14.9				35	
B-07	2.5 - 4.0	24.6					
B-07	5.0 - 6.5	24.3					
B-07	8.5 - 10.0	20.8					
B-07	13.5 - 15.0	15.8					
B-07	18.5 - 20.0	16.5					
B-07	23.5 - 25.0	5.0					
B-08	0.5 - 2.0	27.4	32	22	10		
B-08	2.5 - 4.0	15.6				77	
B-08	5.0 - 6.5	18.8					
B-08	8.5 - 10.0	14.2				88	
B-08	13.5 - 15.0	21.0	NP	NP	NP		
B-08	18.5 - 20.0	18.7					
B-09	0.5 - 2.0	20.6					
B-09	2.5 - 4.0	26.6					
B-09	5.0 - 6.5	20.0					
B-09	8.5 - 10.0	20.3					
B-09	13.5 - 15.0	22.0					
B-09	18.5 - 20.0	16.4					
B-09	23.5 - 25.0	8.6					
B-10	0.5 - 2.0	27.4					
B-10	2.5 - 4.0	22.2					
B-10	5.0 - 6.5	25.5					

TABLE L-1: General Soil Classification Test Results

Soils with a Liquid Limit (LL) greater than 50 and Plasticity Index (PI) greater than 25 usually exhibit significant volume change with varying moisture content and are considered to be highly plastic
[1] Indicates visual classification. WR indicates weathered rock.

LABORATORY TEST RESULTS

The results of the laboratory testing are presented in the following tables.

BORING NO.	DEPTH	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	% PASSING #200 SIEVE	CLASSIFICATION
B-10	8.5 - 10.0	14.9					
B-10	13.5 - 15.0	13.9					
B-10	18.5 - 20.0	14.3					
B-11	0.5 - 2.0	20.9				75	
B-11	2.5 - 4.0	16.9	42	18	24		
B-11	5.0 - 6.5	18.3					
B-11	8.5 - 10.0	19.2					
B-11	13.5 - 15.0	18.9					
B-11	18.5 - 20.0	11.4				36	
B-11	23.5 - 25.0	16.2					
P-01	0.5 - 2.0	26.9					
P-01	2.5 - 4.0	23.3					
P-01	5.0 - 6.5	19.7					
P-02	0.5 - 2.0	14.3					
P-02	2.5 - 4.0	16.1					
P-02	5.0 - 6.5	14.8					
P-03	2.5 - 4.0	33.7					
P-03	5.0 - 6.5	21.8					
P-04	0.5 - 2.0	21.2					
P-04	2.5 - 4.0	26.6					
P-04	5.0 - 6.5	25.0					
P-05	0.5 - 2.0	25.1					
P-05	2.5 - 4.0	25.5					
P-05	5.0 - 6.5	16.6					

TABLE L-1: General Soil Classification Test Results

Soils with a Liquid Limit (LL) greater than 50 and Plasticity Index (PI) greater than 25 usually exhibit significant volume change with varying moisture content and are considered to be highly plastic
(1) Indicates visual classification. WR indicates weathered rock.

A-6
LABORATORY TEST PROCEDURES

A brief description of the laboratory tests performed is provided in the following sections.

Description of Soils (Visual-Manual Procedure) (ASTM D2488)

The soil samples were visually examined by our engineer and soil descriptions were provided. Representative samples were then selected and tested in accordance with the aforementioned laboratory-testing program to determine soil classifications and engineering properties. This data was used to correlate our visual descriptions with the Unified Soil Classification System (USCS).

Pocket Penetrometer

Natural Moisture Content (ASTM D2216)

Natural moisture contents (M%) were determined on selected samples. The natural moisture content is the ratio, expressed as a percentage, of the weight of water in a given amount of soil to the weight of solid particles.

Atterberg Limits (ASTM D4318)

The Atterberg Limits test was performed to evaluate the soil's plasticity characteristics. The soil Plasticity Index (PI) is representative of this characteristic and is bracketed by the Liquid Limit (LL) and the Plastic Limit (PL). The Liquid Limit is the moisture content at which the soil will flow as a heavy viscous fluid. The Plastic Limit is the moisture content at which the soil is between "plastic" and the semi-solid stage. The Plasticity Index (PI = LL - PL) is a frequently used indicator for a soil's potential for volume change. Typically, a soil's potential for volume change increases with higher Plasticity Indices.

Material Finer than No. 200 Sieve by Washing (ASTM D1140)

Grain-size tests were performed to determine the partial soil particle size distribution. The amount of material finer than the openings on the No. 200 sieve (0.075 mm) was determined by washing soil over the No. 200 sieve. The results of wash #200 tests are presented on the boring logs included in this report and in the table of laboratory test results.

A-7
GEOTECHNICAL INVESTIGATION METHODOLOGIES

The subsurface exploration, which is the basis of the recommendations of this report, has been performed in accordance with industry standards. Detailed methodologies employed in the investigation are presented in the following sections.

Drilling Procedures - Standard Penetration Test (ASTM D1586)

At each boring location, soil samples were obtained at standard sampling intervals with a split-spoon sampler. The borehole was first advanced to the sample depth by augering and the sampling tools were placed in the open hole. The sampler was then driven 18 inches into the ground with a 140-pound automatic hammer free-falling 30 inches. The number of blows required to drive the sampler each 6-inch increment was recorded. The initial increment is considered the "seating" blows, where the sampler penetrates loose or disturbed soil in the bottom of the borehole.

The blows required to penetrate the final two (2) increments are added together and are referred to as the Standard Penetration Test (SPT) N-value. The N-value, when properly evaluated, gives an indication of the soil's strength and ability to support structural loads. Many factors can affect the SPT N-value, so this result cannot be used exclusively to evaluate soil conditions.

The SPT testing was performed using a drill rig equipped with an automatic hammer. Automatic hammers mechanically control the height of the hammer drop, and doing so, deliver higher energy efficiency (90 to 99% efficiency) than manual hammers (60% efficiency) which are dropped using a manually operated rope and cathead system. Because historic data correlations were developed based on use of a manual hammer, it is necessary to adjust the N-values obtained using an automatic hammer to make these correlations valid. Therefore, an energy correction factor of 1.3 was applied to the recorded field N-values from the automatic hammer for the purpose of our evaluation. The N-values discussed or mentioned in this report and shown on the boring logs are recorded field values.

Samples retrieved from the boring locations were labeled and stored in plastic bags at the jobsite before being transported to our laboratory for analysis. The project engineer prepared Boring Logs summarizing the subsurface conditions at the boring locations.

SOIL CLASSIFICATION METHODOLOGY

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

SOIL CLASSIFICATION METHODOLOGY

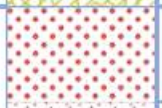
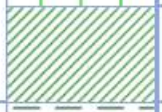
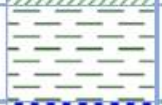
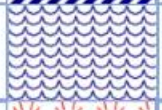
Major Divisions			Symbols: Lithology	Symbols: Group	Group Name & Typical Description
Coarse Grained Soils *More than 50% of material is larger than No. 200 sieve size*	**Gravel and Gravelly Soils** *More than 50% of coarse fraction is larger than No. 4 sieve*	**Clean Gravels** *(Less than 5% fines)*		**GW**	*Well-graded gravels, gravel – sand mixtures, little or no fines*
				**GP**	*Poorly-graded gravels, gravel – sand mixtures, little or no fines*
		Gravels with Fines *(More than 12% fines)*		**GM**	*Silty gravels, gravel – sand – silt mixtures*
				**GC**	*Clayey gravels, gravel – sand – clay mixtures*
	Sand and Sandy Soils *More than 50% of coarse fraction is smaller than No. 4 sieve*	**Clean Sands** *(Less than 5% fines)*		**SW**	*Well-graded sands, gravelly sands, little or no fines*
				**SP**	*Poorly-graded sands, gravelly sands, little or no fines*
		Sands with Fines *(More than 12% fines)*		**SM**	*Silty sands, sand – silt mixtures*
				**SC**	*Clayey sands, sand – clay mixtures*
Fine Grained Soils *More than 50% of material is smaller than No. 200 sieve size*	**Silts and Clays** *Liquid Limit less than 50*	**Inorganic**		**ML**	*Inorganic silts and very find sands, rock flour, silty or clayey fine sands or clayey silt with slight plasticity*
				**CL**	*Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays*
		Organic		**OL**	*Organic silts and organic silty clays of low plasticity*
	Silts and Clays *Liquid Limit greater than 50*	**Inorganic**		**MH**	*Inorganic silts, micaceous or diatomaceous fine sand, or silty soils*
				**CH**	*Inorganic clays of high plasticity*
		Organic		**OH**	*Organic clays of medium to high plasticity, organic silts*
Highly Organic Soils				**PT**	*Peat, humus, swamp soils with high organic contents*

Table 1: Soil Classification Chart (based on ASTM D2487)

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

SOIL CLASSIFICATION METHODOLOGY

Building & Earth Sciences classifies soil in general accordance with the Unified Soil Classification System (USCS) presented in ASTM D2487. Table 1 and Figure 1 exemplify the general guidance of the USCS. Soil consistencies and relative densities are presented in general accordance with Terzaghi, Peck, & Mesri's (1996) method, as shown on Table 2, when quantitative field and/or laboratory data is available. Table 2 includes Consistency and Relative Density correlations with N-values obtained using either a manual hammer (60 percent efficiency) or automatic hammer (90 percent efficiency). The *Blows Per Increment* and *SPT N-values* displayed on the boring logs are the unaltered values measured in the field. When field and/or laboratory data is not available, we may classify soil in general accordance with the Visual Manual Procedure presented in ASTM D2488.

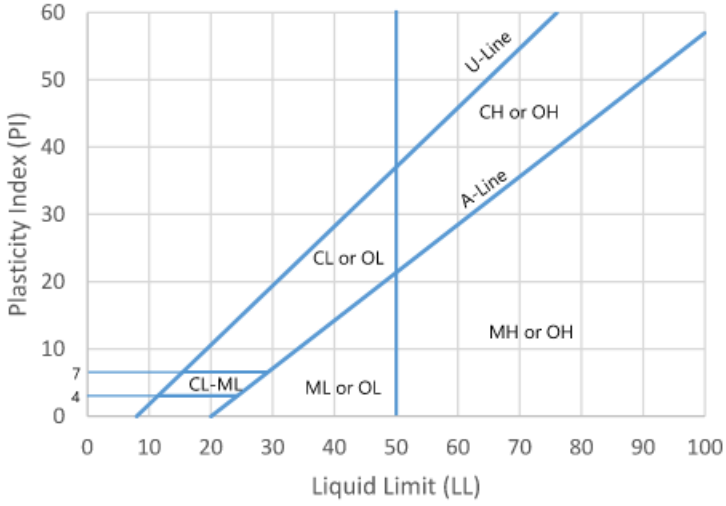


Figure 1: Plasticity Chart (based on ASTM D2487)

Non-cohesive: Coarse-Grained Soil			**Cohesive: Fine-Grained Soil**			
SPT Penetration (blows/foot)		**Relative Density**	**SPT Penetration (blows/foot)**		**Consistency**	**Estimated Range of Unconfined Compressive Strength (tsf)**
			Automatic Hammer*	Manual Hammer		
Automatic Hammer*	Manual Hammer		< 2	< 2	Very Soft	< 0.25
0 - 3	0 - 4	Very Loose	2 - 3	2 - 4	Soft	0.25 – 0.50
3 - 8	4 - 10	Loose	3 - 6	4 - 8	Medium Stiff	0.50 – 1.00
8 - 23	10 - 30	Medium Dense	6 - 12	8 - 15	Stiff	1.00 – 2.00
23 - 38	30 - 50	Dense	12 - 23	15 - 30	Very Stiff	2.00 – 4.00
> 38	> 50	Very Dense	> 23	> 30	Hard	> 4.00

Table 2: Soil Consistency and Relative Density (based on Terzaghi, Peck & Mesri, 1996)

* - Modified based on 80% hammer efficiency

KEY TO LOGS

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

KEY TO LOGS

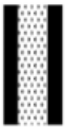
	Standard Penetration Test ASTM D1586 or AASHTO T-206		Dynamic Cone Penetrometer (Sower DCP) ASTM STP-399
	Shelby Tube Sampler ASTM D1587		No Sample Recovery
	Rock Core Sample ASTM D2113		Groundwater at Time of Drilling
	Auger Cuttings		Groundwater as Indicated

Table 1: Symbol Legend

Soil	Particle Size	U.S. Standard
Boulders	Larger than 300 mm	N.A.
Cobbles	300 mm to 75 mm	N.A.
Gravel	75 mm to 4.75 mm	3-inch to #4 sieve
Coarse	75 mm to 19 mm	3-inch to ¾-inch sieve
Fine	19 mm to 4.75 mm	¾-inch to #4 sieve
Sand	4.75 mm to 0.075 mm	#4 to #200 Sieve
Coarse	4.75 mm to 2 mm	#4 to #10 Sieve
Medium	2 mm to 0.425 mm	#10 to #40 Sieve
Fine	0.425 mm to 0.075 mm	#40 to #200 Sieve
Fines	Less than 0.075 mm	Passing #200 Sieve
Silt	0.075 mm to 2 µm	N.A.
Clay	Less than 2 µm	N.A.

Table 2: Standard Sieve Sizes

N-Value 	Standard Penetration Test Resistance calculated using ASTM D1586 or AASHTO T-206. Calculated as sum of original, field recorded values.	Atterberg Limits  PL LL	A measure of a soil's plasticity characteristics in general accordance with ASTM D4318. The soil Plasticity Index (PI) is representative of this characteristic and is bracketed by the Liquid Limit (LL) and the Plastic Limit (PL).
Qu	Unconfined compressive strength, typically estimated from a pocket penetrometer. Results are presented in tons per square foot (tsf).	% Moisture	Percent natural moisture content in general accordance with ASTM D2216.

Table 3: Soil Data

Hollow Stem Auger	Flights on the outside of the shaft advance soil cuttings to the surface. The hollow stem allows sampling through the middle of the auger flights.
Mud Rotary / Wash Bore	A cutting head advances the boring and discharges a drilling fluid to support the borehole and circulate cuttings to the surface.
Solid Flight Auger	Flights on the outside bring soil cuttings to the surface. Solid stem requires removal from borehole during sampling.
Hand Auger	Cylindrical bucket (typically 3-inch diameter and 8 inches long) attached to a metal rod and turned by human force.

Table 4: Soil Drilling Methods

Descriptor	Meaning
Trace	Likely less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

Table 5: Descriptors

Manual Hammer	The operator tightens and loosens the rope around a rotating drum assembly to lift and drop a sliding, 140-pound hammer falling 30 inches.
Automatic Trip Hammer	An automatic mechanism is used to lift and drop a sliding, 140-pound hammer falling 30 inches.
Dynamic Cone Penetrometer (Sower DCP) ASTM STP-399	Uses a 15-pound steel mass falling 20 inches to strike an anvil and cause penetration of a 1.5-inch diameter cone seated in the bottom of a hand augered borehole. The blows required to drive the embedded cone a depth of 1-3/4 inches have been correlated by others to N-values derived from the Standard Penetration Test (SPT).

Table 6: Sampling Methods

Non-plastic	A 1/8-inch thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be re-rolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be re-rolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.

Table 7: Plasticity

Dry	Absence of moisture, dusty, dry to the touch.
Moist	Damp but no visible water.
Wet	Visible free water, usually soil is below water table.

Table 8: Moisture Condition

Stratified	Alternating layers of varying material or color with layers at least ½ inch thick.
Laminated	Alternating layers of varying material or color with layers less than ¼ inch thick.
Fissured	Breaks along definite planes of fracture with little resistance to fracturing.
Slickensides	Fracture planes appear polished or glossy, sometimes striated.
Blocky	Cohesive soil that can be broken down into small angular lumps which resist further breakdown.
Lensed	Inclusion of small pockets of different soils, such as small lenses of sand scattered through a mass of clay.
Homogeneous	Same color and appearance throughout.

Table 9: Structure

KEY TO HATCHES

BUILDING & EARTH
Geotechnical, Environmental, and Materials Engineers

KEY TO HATCHES

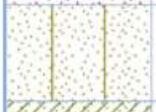
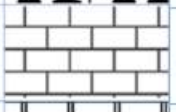
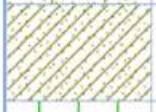
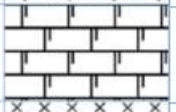
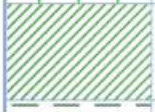
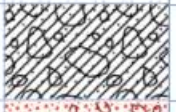
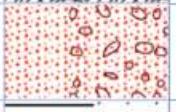
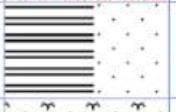
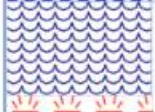
Hatch	Description	Hatch	Description	Hatch	Description
	**GW** - *Well-graded gravels, gravel – sand mixtures, little or no fines*		*Asphalt*		*Clay with Gravel*
	**GP** - *Poorly-graded gravels, gravel – sand mixtures, little or no fines*		*Aggregate Base*		*Sand with Gravel*
	**GM** - *Silty gravels, gravel – sand – silt mixtures*		*Topsoil*		*Silt with Gravel*
	**GC** - *Clayey gravels, gravel – sand – clay mixtures*		*Concrete*		*Gravel with Sand*
	**SW** - *Well-graded sands, gravelly sands, little or no fines*		*Coal*		*Gravel with Clay*
	**SP** - *Poorly-graded sands, gravelly sands, little or no fines*		**CL-ML** - *Silty Clay*		*Gravel with Silt*
	**SM** - *Silty sands, sand – silt mixtures*		*Sandy Clay*		*Limestone*
	**SC** - *Clayey sands, sand – clay mixtures*		*Clayey Chert*		*Chalk*
	**ML** - *Inorganic silts and very find sands, rock flour, silty or clayey fine sands or clayey silt with slight plasticity*		*Low and High Plasticity Clay*		*Siltstone*
	**CL** - *Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays*		*Low Plasticity Silt and Clay*		*Till*
	**OL** - *Organic silts and organic silty clays of low plasticity*		*High Plasticity Silt and Clay*		*Sandy Clay with Cobbles and Boulders*
	**MH** - *Inorganic silts, micaceous or diatomaceous fine sand, or silty soils*		*Fill*		*Sandstone with Shale*
	**CH** - *Inorganic clays of high plasticity*		*Weathered Rock*		*Coral*
	**OH** - *Organic clays of medium to high plasticity, organic silts*		*Sandstone*		*Boulders and Cobbles*
	**PT** - *Peat, humus, swamp soils with high organic contents*		*Shale*		*Soil and Weathered Rock*

Table 1: Key to Hatches Used for Boring Logs and Soil Profiles

IMPORTANT INFORMATION ABOUT THIS GEOTECHNICAL-ENGINEERING REPORT

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a civil engineer may not fulfill the needs of a constructor — a construction contractor — or even another civil engineer. Because each geotechnical- engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. No one except you should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you* — should apply this report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical-engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

Geotechnical Engineers Base Each Report on a Unique Set of Project-Specific Factors

Geotechnical engineers consider many unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk-management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical-engineering report that was:

- not prepared for you;
- not prepared for your project;
- not prepared for the specific site explored; or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical-engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical-engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical-engineering report whose adequacy may have been affected by:* the passage of time; man-made events, such as construction on or adjacent to the site; or natural events, such as floods, droughts, earthquakes, or groundwater fluctuations. *Contact the geotechnical engineer before applying this report to determine if it is still reliable.* A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ — sometimes significantly — from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide geotechnical-construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are Not Final

Do not overrely on the confirmation-dependent recommendations included in your report. *Confirmation-dependent recommendations are not final,* because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's confirmation-dependent recommendations if that engineer does not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A Geotechnical-Engineering Report Is Subject to Misinterpretation

Other design-team members' misinterpretation of geotechnical-engineering reports has resulted in costly

problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical-engineering report. Confront that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical-engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give constructors the complete geotechnical-engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure constructors have sufficient time* to perform additional study. Only then might you be in a position to give constructors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and constructors fail to recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Environmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold-prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold- prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical- engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

Rely, on Your GBC-Member Geotechnical Engineer for Additional Assistance

Membership in the Geotechnical Business Council of the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you GBC-Member geotechnical engineer for more information.

GEOTECHNICAL BUSINESS COUNCIL
of the Geoprofessional Business Association

8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone: 301/565-2733 Facsimile: 301/589-2017
e-mail: info@geoprofessional.org www.geoprofessional.org

PART 1 - GENERAL

RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specifications Sections apply to this Section and all Sections.

SUMMARY

A. This Section includes a summary of each contract, including responsibilities for coordination and temporary facilities and controls.

B. Related Sections include the following:
1. 00 01 01 - PROJECT TITLE PAGE
2. 00 01 10 - TABLE OF CONTENTS
   00 11 13 - ADVERTISEMENT FOR BID
3. 00 21 13 - INSTRUCTIONS TO BIDDERS
4. 00 31 19 - EXISTING CONDITION INFORMATION
5. 00 31 32.01 - GEOTECHNICAL DATA
6. 00 31 32.02 - Copy of Geotechnical Report
   00 52 00 - BID PACKAGE SCHEDULE
   00 52 13 - AGREEMENT FORM - STIPULATED SUM (SINGLE PRIME CONTRACT)
      AIA® A101™ - 2017, Standard Form of Agreement Between Owner and Contractor (Reference Only)
7. 00 61 13 - PERFORMANCE AND PAYMENT BOND FORM
8. 00 72 13 - GENERAL CONDITIONS
      AIA® A201™ - 2017, General Conditions of the Contract for Construction (Reference Only)
      AIA® A201™ - 2017, Exhibit A, Insurance and Bonds (Reference)
9. 00 73 00 - SUPPLEMENTARY CONDITIONS
10. 00 73 19 - OSHA GUIDELINES FOR TRENCH SAFETY
11. 01 11 00 - SUMMARY OF WORK
12. 01 33 00 - SUBMITTAL AND SUBSTITUTION PROCEDURES
      WD&D Substitution Form
13. 01 45 23 - TESTING AND INSPECTION SERVICES
14. 01 50 00 - TEMPORARY FACILITIES AND CONTROLS
15. 01 74 23 - FINAL CLEANING
16. 01 78 00 - CLOSEOUT SUBMITTALS

C. Contract Documents: Each and Every Trade Contractor to execute Owner's Standard Contract and related Performance Bond and Payment Bond without alteration.

COORDINATION

A. Project Coordinator shall be responsible for coordination between the Trade Contracts.
   1. Owner shall act as Project Coordinator.

TRADE CONTRACT BID PACKAGES

A. Trade Contracts are contracts with the Owner that represent significant construction activities performed concurrently with and closely coordinated with construction activities performed on the project under other separate trade contracts. Trade Contract Bid Packages for this project include:

01 Asbestos Abatement & Remediation
02 Building Demolition
03 Asbestos Abatement & Remediation and Building Demolition Turnkey (Combo of Packages 1 & 2)

EXTENT OF TRADE CONTRACT WORK

A. The extent of each trade contract is indicated in the Contract Documents. Except where no other more specific description is contained in the Contract Documents, general names and terminology on the drawings and in specification sections determine which trade contract includes a specific element of work.

B. Local custom and trade-union jurisdictional settlements do not control the scope of work included in each trade contract. When a potential jurisdictional dispute or similar interruption of construction activities is first identified or threatened, the affected trade contracts shall promptly negotiate a reasonable settlement to avoid or minimize the pending interruption and its delays.

CONTRACT DOCUMENTS

A. The Owner through the Construction Manager will furnish 1 complete electronic set of Contract Documents to the successful trade Contractor for use in construction of the Work unless otherwise negotiated. Each Trade Contractor shall supply complete sets of Contract Documents to subcontractors or material suppliers.

B. Additional sets of Contract Documents, beyond the sets furnished by the Owner, which are requested by a Trade Contractor, may be purchased from the Construction Manager at the Trade Contractor's expense. Refer to the General Conditions.

EXAMINATION OF THE PREMISES

A. Before submitting proposal, each Trade Contractor will be held to have examined the premises and existing conditions under which Trade Contractor will be obligated to operate or that will in any manner affect the work under this contract.

RESPONSIBILITIES OF OWNER

A. Responsibilities of Owner include the following:
   1. Owner furnished items as defined in the Contract Documents.
   2. Provide water for the project.
   3. Remove all furnishings and stored items from the Small Gymnasium prior to start of work.

RESPONSIBILITIES OF CONSTRUCTION MANAGER

A. Responsibilities of Construction Manager include the following:
   1. Provide temporary fencing.

RESPONSIBILITIES OF EACH TRADE CONTRACTOR

A. All Trade Contractors in excess of $50,000.00 must furnish a Performance and Payment Bond and it must be on the Contract Documents Standard Bond Forms before a contract can be issued.

B. Except as otherwise specifically stated in the Contract Documents, each Trade Contractor shall provide and pay for all materials, labor, tools, equipment, transportation, superintendence, engineering and layout, safety, protection of work by others, traffic control, weather protection, dump fees, clean up, storage, performance and payment bonds and taxes legally collectable because of the work. Each Trade Contractor shall provide all other services and facilities of every nature whatsoever necessary to execute the work of each contract and shall deliver the work complete in every respect within the specified time.

C. Engineering and Layout for your Work.

D. Coordination with other trades.

E. Temporary Facilities and Controls: In addition to specific responsibilities for temporary facilities and controls indicated in this Section and in Division 1 Section "Temporary Facilities and Controls", each contractor is responsible for the following:
   1. Installation, operation, maintenance, and removal of each temporary facility usually considered as its own normal construction activity, and costs associated with each facility.
   2. Plug-in electric power cords and extension cords, supplementary plug-in task lighting, and special lighting and electrical power necessary exclusively for its own activities.
   3. Its own storage and fabrication sheds.
   4. Temporary enclosures for its own construction activities.
   5. Waste disposal, including collection and legal disposal of its own hazardous, dangerous, unsanitary, or other harmful waste materials. Dumpsters for waste caused by Demolition & Abatement Trade Contractors, shall haul off site their own waste or provide separate dumpsters for their sole and exclusive use. The Construction Manager will not be providing dumpsters for this package.
   6. Progress cleaning of its own areas on a daily basis.

7. Secure lockup of its own tools, materials, and equipment.
8. Construction aids and miscellaneous services and facilities necessary exclusively for its own construction activities.

F. Existing Conditions: Repair damage to existing improvements, facilities, buildings and utilities to the satisfaction of the Owner, without compromise to existing warranties, at no additional cost to the Owner.

WORK PERFORMED UNDER SEPARATE TRADE CONTRACTS

A. This is not a complete list of all Work but is a general guideline. The Contract Documents for these sections determine the total scope of the work. Each Trade Contract Bid Package can be summarized as follows:

01 Asbestos Abatement & Remediation

This Trade Package shall include the complete Scope of Work as described in the following Specification Sections without exception:

02 26 00 - HAZARDOUS MATERIAL ASSESSMENT
Asbestos Sampling - High School Building
Asbestos Survey - Small Gym

The Scope of Work shall specifically include but not necessarily be limited to the following:
a. Engineering & Layout for your Work.
b. Cost of Safety for your Personnel
c. Protection of Work by Others.
d. Daily Clean up.
e. Include Work Referred to as in the Related Specifications Section of the Specifications Sections Listed for this Trade Bid Package. All Work Related to or that is Integral for the Completion of the Work Specified under this Trade Bid Package are included.
f. Mobilizations & All Necessary Equipment Required for Completion of Work for this Package
g. Remove and properly dispose of all hazardous materials as required in the Asbestos Surveys.
h. Legally & Completely Dispose of Construction Debris & Provide Dumpsters for your Work.
i. Maintain and control dust from abatement.
j. Provide Superintendent throughout entire project.
k. Include Phase 1 work only.
l. File NOI with the Arkansas Department of Environmental Quality per Rule 21.
m. Provide temporary power for your work.

02 Building Demolition

This Trade Package shall include the complete Scope of Work as described in the following Specification Sections without exception:

02 41 13 - SELECTIVE SITE DEMOLITION
02 41 19 - SELECTIVE STRUCTURE DEMOLITION

The Scope of Work shall specifically include but not necessarily be limited to the following:

a. Engineering & Layout for your Work.
b. Cost of Safety for your Personnel
c. Protection of Work by Others.
d. Daily Clean up.
e. Include Work Referred to as in the Related Specifications Section of the Specifications Sections Listed for this Trade Bid Package. All Work Related to or that is Integral for the Completion of the Work Specified under this Trade Bid Package are included.
f. Mobilizations & All Necessary Equipment Required for Completion of Work for this Package
g. Dumpsters for your work.
h. Coordination with Utility Companies.
i. Legally & Completely Dispose of Construction Debris & Provide Dumpsters for your Work. Provide landfill tickets for verification.
j. Building Demo in Entirety - All Structures, MEP / FP Systems, Interior Elements, Furniture, Fixtures, & Equipment.
k. Remove All Utilities Completely. Includes Capping (Make Safe) & Removal of All Utilities Back to the Site Point of Entry above building slab.
l. Dust & Erosion Control as required.
m. Keep Dust/Mud/Rocks off of Roads.
n. Import approved select fill at basement level of High School & Regrade Existing.
o. Provide Earthwork Necessary to Conform Grade to Specified Levels Per Contract Drawings.
p. Include Phase 1 work only.
q. Exclude removal of building foundations except at basement of High School building.
r. Exclude removal of site Asphalt, Sidewalk, Curb & Gutter and Base Rock.
s. Fill Excavations, Open Pits, Trenches, & Holes in Ground Areas Due to Building & above slab utility demo.
t. Provide Superintendent throughout entire project.

03 Asbestos Abatement & Remediation and Building Demolition Turnkey (Combo of Packages 1 & 2)

This Trade Package shall include the complete Scope of Work as described in Trade Package 01 (Asbestos Abatement & Remediation) & Trade Package 02 (Building Demolition)

PART 2 - DEFINITION OF THE EXTENT OF TRADE CONTRACT WORK

A. Determines which Trade contract includes a specific element of work.

B. Local custom and trade union jurisdictional settlements do not control the scope-of-work included in each Trade contract. When a potential jurisdictional dispute or similar interruption of construction activities is first identified or threatened, the affected Trade contracts shall promptly negotiate a reasonable settlement to avoid or minimize the pending interruption and its delays.

C. As point of clarifications, note the following:
   1. Contractor/s will provide their own Temporary toilets.
   2. Construction Manager will be responsible for temporary fencing.

EXAMINATION OF THE PREMISES

A. Before submitting his quotation, each Trade Contractor will be held to have examined the premises and satisfied himself as to existing conditions under which he will be obligated to operate or that will in any manner affect the work under this contract.

TRADE CONTRACTORS USE OF PREMISES

A. General: The Trade Contractors shall limit their use of the premises to construction activities in areas indicated; allow for Owner occupancy and use by the public.
   1. Confine operations to areas within contract limits indicated. Portions of the site beyond areas in which construction operations are indicated are not to be disturbed.
   2. Burial of waste materials: Do not dispose of organic and hazardous material on site, either by burial or by burning.
   3. Each Trade Contractor will be responsible for leaving work area broom clean.

PART 3 - PRODUCTS - NOT USED

PART 4 - EXECUTION - NOT USED

END OF DOCUMENT 00 52 00

PART 1 - GENERAL

1.01 AUTHORITY

A. The Agreement Form and Exhibit A, Insurance and Bonds, are an integral part of all sections of Project Manual. Their contents and provisions shall be carefully noted in performance of Work. Include this Agreement Form and Exhibit A in the bid documents for all building construction and renovation projects.

B. The Agreement Form is the legal instrument which is typically signed by an owner and a contractor subsequent to contract award. A legally binding contract is actually created when accepted, without qualification, the Contractor's bid. However it is this Agreement Form, which when subsequently signed by the parties, formalizes the Contract and confirms the Contractor's intention to be bound by its provisions.

1.02 GOVERNING STANDARD DOCUMENT

A. "Standard Form of Agreement Between Owner and Contractor", AIA Document A101 - 2017 of American Institute of Architects, 2017 Edition, Articles 1 through 9 inclusive, and AIA Document A101 - 2017 Exhibit A is hereby referenced and incorporated into these specifications and is to be used as the General Conditions for this contract.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF DOCUMENT 00 52 13

THIS PAGE LEFT INTENTIONALLY BLANK FOR DUPLEX PRINTING

PART 1 - GENERAL

1.01 CONTRACTOR'S GUARANTY BOND

A. Contractor shall furnish "Performance and Payment Bond" in amount equal to 100% of contract price, as security for faithful performance of this contract and for payment of all indebtedness for labor and materials furnished or performed in connection with this contract. Bond shall be written by surety company which has qualified and is authorized to do business in the State of Arkansas and must be executed by a resident or nonresident agent who is licensed by the Insurance Commissioner to represent surety company executing said bond and filing with said bond, his power of attorney as his authority. Mere countersigning of a bond will not be sufficient. Bond shall be written in favor of Owner, and executed pursuant to terms of Arkansas Code Annotated §18-44-501 et seq., §18-44-503 et seq., §19-4-1401 et seq., and §22-9-401 et seq. The Surety guarantees that the Principal shall comply with Ark. Code Ann. §22-9-301 et seq. by payment and full compliance with all prevailing hourly wage contract provisions where the contract amount exceeds the amount provided by law. An original and two copies of bond must be furnished, with power of attorney attached to each. Bond must not be dated prior to date of the contract. Contractor shall file (not record) the original with the Clerk in the Circuit Court of the County in which Work to be performed is located. Contractor to pay all expenses incident the filing of bond. Remaining two copies should be certified by the Clerk to evidence filing of original, and these two copies submitted to Architect.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF DOCUMENT 00 61 13

THIS PAGE LEFT INTENTIONALLY BLANK FOR DUPLEX PRINTING

PART 1 - GENERAL

1.01 AUTHORITY

A. General Conditions and Supplementary Conditions are an integral part of all sections of Project Manual. Their contents and provisions shall be carefully noted in performance of Work.

1.02 GOVERNING STANDARD DOCUMENT

A. American Institute of Architects AIA Document A201 - 2017 Edition, General Conditions of the Contract for Construction, Articles 1 through 15 inclusive, is hereby referenced and incorporated into these specifications and is to be used as the General Conditions for this contract.

1.03 AMENDED PROVISIONS

A. Where any article or articles of above AIA General Conditions are supplemented by Supplementary Conditions, provisions of such articles shall remain in effect and supplementary provisions shall be considered as added thereto. Where any such article or part of such article is amended, voided or changed by Supplementary Conditions, provisions not specifically so amended, voided or changed shall remain in full effect. Where provisions of Supplementary Conditions are at variance or conflict with provisions of the AIA General Conditions, Supplementary Conditions shall govern. AIA General Conditions and Supplementary Conditions apply to all Work in every Division or Section of these Specifications.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF DOCUMENT 00 72 13

THIS PAGE LEFT INTENTIONALLY BLANK FOR DUPLEX PRINTING

PART 1 - GENERAL

1.01 REFERENCE DOCUMENT

A. These Supplementary Conditions are included as a part of the contract documents for this project to amend the provisions of the "General Conditions of the Contract for Construction", Document A201 of the American Institute of Architects, 2017 Edition, as required for this project. Reference herein to articles of the General Conditions refer to said Document A201.

1.02 PARAGRAPH 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

A. Add subparagraph 3.3.4 as follows:

"3.3.4 Contractor (1) shall review any specified construction or installation procedure (including those recommended by manufacturers); (2) shall advise the Architect (a) if the specified procedure deviates from good construction practice, (b) if following the procedure will affect any warranties, including the Contractor's general warranty, or (c) of any objections the contractor may have to the procedure; and (3) to propose any alternative procedure which the Contractor will warrant."

1.03 PARAGRAPH 3.4 LABOR AND MATERIALS

A. Add Subparagraphs 3.4.4 as follows:

"3.4.4 All contractors and subcontractors engaged in the Owner/Contractor Agreement shall conform to the labor laws of the State in which Work is to be performed and the various acts amendatory and supplementary thereto; and to all other laws, ordinances and legal requirements applicable thereto."

1.04 PARAGRAPH 3.5 WARRANTY

A. Add subparagraph 3.5.3 as follows:

"3.5.3 The Contractor shall guarantee and warrant his and his subcontractor's work and materials (including the materials and work of suppliers of the Contract and his subcontractors) for a period of one year from the date of Substantial Completion. This Warranty shall be for a longer period on certain items if so designated in the Specifications. The foregoing one-year guaranty and warranty shall not in any way limit, restrict or affect the liability of the Contractor, or his subcontractors, for indemnity as provided for in this Contract, nor shall it in any way shorten the period of limitation fixed by law for the filing of any action against the Contractor for enforcement of the or breach of any provision of the contract documents. Should the Contractor elect to use any of the equipment in the building during the construction period, he shall make arrangements with

the subcontractor or supplier of the equipment for any extension of warranty of that equipment made necessary by such use. The Warranty period for such equipment to the Owner shall not be reduced by the use of equipment by the Contractor".

1.05 PARAGRAPH 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

A. Add the following to subparagraph 3.12.5.1:

"3.12.5.1 Incomplete or poorly prepared shop drawings or other submittals will be returned to the Contractor to be revised or redrawn prior to resubmittal. The Contractor will hold the Architect and Owner harmless against claims for losses or injury caused by errors or omissions in the shop drawings or other submittals for the Work made by the Contractor, a subcontractor, any lower tier subcontractor, manufacturer, supplier or distributor."

B. Delete subparagraph 3.12.8 and substitute the following:

"3.12.8 The Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect of such deviations in a separate writing or by submitting a separate written request for change at the time of submittal and the Architect has given written approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof."

1.06 PARAGRAPH 4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT

A. Add sub-subparagraph 4.2.4.1 as follows:

"4.2.4.1 Any direct communications between the Owner and the Contractor; or between the Contractor or Sub-contractors and the Architect's Consulting Engineers that affect the performance or administration of the Contract shall be made or confirmed in writing, with copies to the Architect, and any such communications that represent a modification of the Contract requirements will be documented appropriately. Any communications among the Architect and Subcontractors shall be confirmed in writing to the Contractor."

1.07 PARAGRAPH 7.2 CHANGE ORDERS

A. Delete subparagraph 7.2.1 and substitute the following:

"7.2.1 All requests for changes, additions or deductions, shall be submitted in a complete itemized breakdown acceptable to the Architect.

7.2.2 Wherein unit prices are stated in the contract, submit itemized break down showing each unit price and it quantities.

7.2.3 The contractor shall present an itemized accounting together with appropriate supporting data for the purposes of considering additions or deductions. Supporting data shall include but is not limited to the following:

.1 costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and worker or workmen's compensation insurance;

.2 costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;

.3 rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;

.4 costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and

.5 additional costs of supervision and field office personnel directly attributable to the change.

.6 the value of all such additions and deductions shall then be computed as set forth in Paragraph 7.2.5.

7.2.4 The burden of proof of cost rests upon the Contractor. Contractor agrees that Owner or Owner's Representative shall have the right, at reasonable times, to inspect and audit the books and records of Contractor to verify the propriety and granting of such cost.

7.2.5 Compute requests for changes be they additions or deductions as follows:

.1 For work performed by the Contractor:

Net cost of material and delivery	a
State Sales Tax	b
Net Placing cost	c
W.C. Insurance Premium and FICA Tax	d
	a+b+c+d
Overhead and Profit, shall not exceed 12% x (a+b+c+d)	e
Allowable Bond Premium	f
TOTAL COST	(a+b+c+d)+e+f

.2 Credit for work omitted shall be computed as outlined in 7.2.5.1 "a through e" except the contractor's share of overhead and profit is 7%.

.3 For work performed by Subcontractors:
Subcontractors shall compute their work as outlined in 7.2.5.1 "a through e". To the cost of that portion of the work (change) that is performed by the subcontractor, the general contractor shall add an overhead and profit change of five (5%) percent plus the allowable bond premium.

1.08 PARAGRAPH 9.3 APPLICATIONS FOR PAYMENT

A. Delete subparagraph 9.3.1 and substitute the following:

"9.3.1 The Contractor shall present to the Architect an application for payment on or before the twenty-fifth day of each calendar month. These periodical estimates for partial payment shall be submitted on forms, prepared at the Contractor's expense and conforming to AIA Document G702. An original and a requested number of copies of such estimate shall be tendered to the Architect."

1. Each application for payment shall be accompanied by a revised Construction Schedule. Failure to provide the revised Construction Schedule may cause a delay in processing payment applications. Any areas of the Construction Schedule that are delayed from the previous schedule shall be highlighted for the Architects attention and a detailed explanation of the reason for the delay shall accompany the revised schedule.

1.09 PARAGRAPH 9.6 PROGRESS PAYMENTS

A. Delete subparagraph 9.6.1 and substitute the following:

"9.6.1 Retainage: No later than the 10th day of each calendar month, the Owner will make partial payment to the Contractor, but the Owner will retain 5% of the amount of each payment. Retaining 5% of each payment will continue until final completion and acceptance of all work covered by the contract. However, the Architect may upon approval by the Owner, at any time after 50% of the Contract Work has been completed and based on satisfactory workmanship, and progress has been attained, including written consent of surety, recommend that any of the remaining partial payments be stopped. The retainage will be paid to the Contractor after completion of the Contract for Construction and after the Contractor has submitted all Project Record Documents, Maintenance Manuals, Warranties and Guarantees (Close-Out Documents). No retainage shall be held on materials properly stored at the site or in the Contractor's bonded or insured warehouse if certificates of insurance or bond and invoices are provided."

9.6.1.1 Progress payments will be made for work completed or for materials delivered and properly stored, in accordance with subparagraph 9.6.1, through the Contracted Construction Period. No payments will be made after the Contracted Construction Period has expired until Final Payment, unless an extension of the Contract Time has been granted. in which case, an additional progress payment will be made for work performed during the extension time period only."

1.10 PARAGRAPH 9.8 SUBSTANTIAL COMPLETION

A. Add the following sub-subparagraphs 9.8.3.1 thru 9.8.3.3 as follows:

"9.8.3.1 If the Architect or any of the Architect's Consultants determines that the Work has still not reached Substantial Completion a second list of deficiencies will be issued to the Contractor.

9.8.3.2 Any additional inspections by the Architect or the Architect's Consultants to determine Substantial Completion will be considered additional services and will be billed directly to the Owner.

9.8.3.3 The Contractor will reimburse the Owner for expenses related to these additional services, or, the Owner may choose to withhold money from Progress Payment(s) or from retainage as reimbursement for additional services."

1.11 PARAGRAPH 9.10 FINAL COMPLETION AND FINAL PAYMENT

A. Add sub-subparagraphs 9.10.1.1 thru 9.10.1.4 as follows:

"9.10.1.1 If the Architect or any of the Architect's Consultants determines that the Work has not reached Final Completion a list of deficiencies will be issued to the Contractor.

9.10.1.2 Any additional inspections by the Architect or the Architect's Consultants to determine Final Completion will be considered additional services and will be billed directly to the Owner.

9.10.1.3 The Contractor will reimburse the Owner for expenses related to these additional services, or, the Owner may choose to withhold money from Final Payment or from retainage as reimbursement for additional services.

9.10.1.4 Before issuance of the final certificate, the Contractor shall obtain in writing from the bonding company approval of such payment. No certificate issued nor payment made to the Contractor, nor partial or entire use or occupancy of the Contract Work by the Owner, shall be an acceptance of any work or materials not in accordance with this contract."

9.10.1.5 Final payment will not be made until all project closeout documents are received from the Contractor and a release from the Contractor's Surety Company is received.

1.12 PARAGRAPH 11.1 CONTRACTOR'S INSURANCE AND BONDS

A. Delete subparagraph 11.1.2 and substitute the following:

"11.1.2 Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from date of commencement of the work until date of final payment and termination of any coverage required to be maintained after final payment. The insurance required shall be written for not less than the following, or greater if required by law:

.1 Workers' Compensation:

(a)	State:		Statutory
(b)	Applicable Federal:		Statutory
(c)	Employers' Liability:	Per Accident:	$100,000
		Disease, Policy Limit:	$500,000
		Disease, Each Employee:	$100,000.

.2 Commercial General Liability (including premises-operations); independent contractors protective; products and completed operations) as follows:

(a) Coverage should apply at each work site. Limits required as follows:

(1)	General Aggregate:	Per Project:	$2,000,000
	Completed Operations:	Aggregate:	$1,000,000
	Personal Injury:		$1,000,000

Each Occurrence Limit: $1,000,000

(2) Products and Completed Operations to be maintained for one year after final payment.

(3) Property Damage Liability Insurance will provide X, C, or U coverage as applicable.

(b) Comprehensive General Liability. Coverage provided will be on the Comprehensive General Liability form with the Broad Form General Liability Endorsement. Limits provided as follows:

(1) Combined Single Limit: $1,000,000 each occurrence and aggregate

(2) Products and Completed Operations to be maintained for one year after final payment.

(3) Property Damage Liability Insurance will provide X, C, or U coverage as applicable.

(4) Contractual Liability:
Bodily Injury: Combined Single Limit
Property Damage: $1,000,000 Each Occurrence

(5) Personal Injury, with Employment Exclusion deleted:
Combined Single Limit
$1,000,000 Each Occurrence

(6) Bodily Injury and Property Damage (Combined Single Limit) (any auto, including Owned, Hired and Non-Owned Autos):
Bodily Injury: Combined Single Limit
Property Damage: $1,000,000 Each Occurrence"

(7) Umbrella Liability: $5,000,000

B. Add sub-subparagraph 11.1.2.1 as follows:

"11.1.2.1 The performance-payment bond shall be in compliance with the laws of the State in which the Work is to be performed and as stipulated in Document 00 61 13, Performance and Payment Bond, of these specifications."

C. Add sub-subparagraphs 11.1.3.1 and 11.1.3.2 as follows:

"11.1.3.1 The Contractor shall furnish one copy of each certificate of insurance herein required for each copy of the agreement which shall specifically set forth evidence of all coverage required by subparagraphs 11.1.1 and 11.1.2. Furnish to the Owner copies of any endorsements that are subsequently issued amending coverage of limits."

"11.1.3.2 The Contractor shall not commence work under this contract until he has obtained all insurance with responsible insurance companies satisfactory to the Owner required under this article, and such insurance has been accepted by the Owner. Nothing in this article shall create any obligation on the part of the Architect to see that the specified insurance is maintained."

D. Add subparagraph 11.1.5 as follows:

"11.1.5 All Subcontractors shall be required to maintain contractors liability insurance the same as required to be maintained by the Prime Contractor as specified in 11.1.1 and the limits of liability shall be not less than those required to be maintained by the Prime Contractor unless their operations are covered to the specified limits by the insurance maintained by the Prime Contractor."

1.13 PARAGRAPH 11.2 OWNER'S INSURANCE

A. Delete subparagraph 11.2.1 and substitute the following:

"11.2.1 The Contractor shall procure and maintain during the term of this contract, Owner's Protective Liability Insurance with an endorsement to the policy to include as additional insured, the Architect, with limits not less than $1,000,000 each occurrence and $1,000,000 in the aggregate for property damage liability."

B. Add subparagraph 11.2.2.1 as follows:

“11.2.2.1 Contractor shall procure and maintain during the life of this contract Builder’s Risk or Course of Construction (COC) Insurance, or installation Floater Insurance, and any extended coverage which shall cover damage for the project.”

1.14 PARAGRAPH 15.1 CLAIMS

A. Refer to sub-paragraph 15.1.5, Claims for Additional Time and add the following sub-subparagraph 15.1.6.3 as follows:

"15.1.6.3 In order for a claim for additional time due to adverse weather conditions to be considered valid, the Contractor must show that adverse weather conditions beyond those normally expected have occurred. For claims related specifically to "Rain Days" the following table of normal rain days will be employed to determine if the Contractor is entitled to a time extension. A "Rain Day" is defined as a 24 hour period in which 1/100" (.01) of rain or more falls and is recorded by the National Weather Service or other official reporting service in the immediate vicinity of the project. Extensions of time will be granted if the number of officially reported "Rain Days" is greater than normal during a given month. Claims for additional time must be submitted with the Contractor's monthly payment application for review. Failure to make timely and proper request for additional time will result in no time extension being allowed.

Average Days with 1/100" of Precipitation or More: Northeast Arkansas

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
9	8	11	11	11	9	9	8	8	8	9	9

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF DOCUMENT 00 73 00

PART 1 - GENERAL

1.01 EXCAVATION SAFETY PROCEDURES

A. In accordance with Arkansas Code Annotated § 22-9-212 et. seq., the Contractor shall include a separate pay item for trench or excavation safety systems for any trench or excavation which equals or exceeds five (5) feet in depth and this pay item shall be a part of the base bid.

B. The Occupational Safety and Health Administration (OSHA) Safety and Health Regulations for Construction, 29 CFR 1926, Subpart P - Excavations (07-01-2021 Edition), is hereby referenced and incorporated into this Project Manual and must be complied with at all times.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF DOCUMENT 00 73 19.13

THIS PAGE LEFT INTENTIONALLY BLANK FOR DUPLEX PRINTING

PART 1 - GENERAL

1.01 CONTRACT BASIS

A. Work is based upon conditions at site, Project Manual, contract Drawings for WDD Project No. 23-069, all addenda issued and the Contract executed between Owner and Contractor.

1.02 OWNER

A. Wherever term "Owner" or "Owners" is used in the Contract Documents it refers to Brinkley Public Schools. All papers required to be delivered to Owner shall be delivered to Dr. Brenda Poole, Superintendent, 200 Tiger Drive, Brinkley, AR 72021.

1.03 ARCHITECT

A. Wherever term "Architect" or "Architects" is used in the Contract Documents it refers to **Wittenberg, Delony & Davidson, Inc., 5050 Northshore Ln, North Little Rock, Arkansas 72118.**

1.04 TIME FOR COMPLETION

A. Time for completion shall be as stated in the Owner Contractor Agreement.

1.05 RESPONSIBILITIES OF CONTRACTOR

A. Except as otherwise specifically stated in the contract, Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, heat, power, transportation, superintendence, temporary construction of every nature, taxes legally collectible because of the Work and all other services and facilities of any nature necessary to execute Work as shown and/or specified under the contract and deliver it complete in every respect within specified time.

B. If, during the course of construction of this project, the Contractor discovers errors, inconsistencies or omissions in the Contract Documents, the Contractor will report them to the Architect who will issue written instructions to the Contractor. If the Contractor performs Work knowing there is an error, inconsistency or omission in the Contract Documents without giving notice to the Architect or receiving written instruction from the Architect, the Contractor assumes responsibility for the Work and will bear all costs associated with the performance or correction of the Work.

1.06 COORDINATION OF WORK

A. General Contractor to give special attention for coordination of work by various trades to provide uniform and symmetrical layout and spacing of exposed components which affect the finished architectural design and appearance. Where spacing and related locations are not specifically shown on the drawings, or where in doubt, Contractor's Superintendent shall consult Architect's Representative prior to installation of that part of the Work. Location of electrical and telephone outlets shall be verified with Architect prior to installation.

1.07 PRECONSTRUCTION CONFERENCE

A. Either before or soon after actual award of Contract (but in any event prior to start of construction), Contractor or his representative shall attend Preconstruction Conference with representatives of Owner and Architect. Conference will serve to acquaint participants with general plan of contract administration and requirements under which construction operation is to proceed, and will inform Contractor, in detail, of obligations imposed on him and his subcontractors.

1. Hold pre-installation meetings where select specified product systems required to meet warranty or guarantee, which may include Contractor, Architect, Engineer, Consultant, Installer, Owner’s Representative, and Manufacturer’s Designated Representative.

1.08 CONSTRUCTION DRAWINGS AND SPECIFICATIONS

A. Architect to furnish one (1) set of contract drawings and specifications, without cost, to Construction Manager for use in constructing Work. Construction Manager shall supply all contract drawings and specifications to his subcontractors or material suppliers. - Additional sets or partial sets of Bidding Documents (including addenda) requested by Construction Manager, will be furnished for actual cost of printing, handling and shipping costs at Construction Manager’s expense. Bidding Documents may also be obtained in electronic format through Southern Reprographics at www.sriplanroom.com for a non-refundable fee as pre-determined by level of access.

1.09 DEFINITION

A. The word "Provide", as used throughout these specifications, means furnish and install.

1.10 REFERENCE STANDARDS

A. Except as otherwise noted, references throughout Project Manual to Codes, Federal Specifications, ASTM Standards, Association or Industry Specifications and other published standards, are to latest edition or publication of such standards.

1.11 PERMITS

A. Utilizing the contract documents (Project Manual and Drawings) prepared by the Architect and his Consultants, along with information provided by the Owner or his Consultants, the Contractor is responsible for securing permits required to successfully complete the project. This responsibility includes payment for the permit and coordination of all submittals.

B. Storm Water Discharge Permit: Contractor shall be responsible for obtaining this permit from Arkansas Department of Environmental Quality for construction sites where **one (1) acre** or more is disturbed, and meet all other storm water regulations. Contractor shall keep a copy of his Storm Water Discharge Permit on the job site at all times.

1.12 INFORMATIONAL DRAWINGS

A. Drawings bound into working drawing set and labeled as informational drawings are not part of the Contract Documents. Information on these drawings is for reference and coordination only and is not a representation or warranty of existing or proposed conditions. The Architect and Owner are not responsible for interpretations or conclusions made by the Contractor based on these drawings.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 11 00

THIS PAGE LEFT INTENTIONALLY BLANK FOR DUPLEX PRINTING

PART 1 - GENERAL

1.01 DESCRIPTION

A. Make submittals required by Contract Documents; revise and resubmit as necessary to establish compliance with specified requirements. Submittals which are received from sources other than through the General Contractor's office will be returned by the Architect without action. Submit at least one original of manufacturer's product literature. The remainder of the number of copies required for submittal may be reproductions of manufacturer's literature. **FAX submittals, poor quality reproductions or illegible submittals will not be accepted.**

B. Contractor's submittal of (and Architect's review of) shop drawings, product data or samples which relate to work not complying with requirements of Contract Documents, does not constitute an acceptable or valid request for a substitution, nor approval thereof.

1.02 RELATED DOCUMENTS

A. Applicable portions of the Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to the execution of the Contract, other documents listed in the Agreement and Modifications issued after the execution of the Contract shall apply to this Section.

1.03 QUALITY ASSURANCE

A. Coordination of Submittals: Prior to each submittal, carefully review and coordinate all aspects of each item being submitted. By affixing Contractor's approval stamp to each submittal, certify that coordination has been performed.

B. Verify that each item and submittal for it conform in all respects with specified requirements.

C. Certificates: Document required of Contractor, or of a manufacturer, supplier, installer, or subcontractor through Construction Manager. The purpose is to document procedures, acceptability of methods, or personnel qualifications for a portion of the work.

1.04 TIMING OF SUBMITTALS

A. General: Make submittals far enough in advance of scheduled dates of installation to provide required time for reviews, securing necessary approvals, possible revision and resubmittal, placing orders and securing delivery.

B. Owner will not bear costs of delays due to late submittals.

1.05 COORDINATION AND SEQUENCING

A. Coordinate preparation and processing of submittals with performance of work so that work will not be delayed by submittals.

B. Coordinate and sequence different categories of submittals for same work, and for interfacing units of work, so that one will not be delayed for coordination of Architect's review with another.

1.06 SUBMITTAL FORMAT AND TRANSMISSION

A. Provide submittals in electronic format, with the exception of material samples. Use PDF as the electronic format, unless otherwise specified or directed by the architect.

B. Compile the electronic submittal file as a single, complete document. Name the electronic submittal file specifically according to its contents. **Bookmark individual submittals exceeding 20 pages, and those with multiple products and systems integrated into a single submission.**

C. Electronic files must be of sufficient quality that all information is legible. Generate PDF files from original documents so that the text included in the PDF file is both searchable and can be copied.

D. E-mail electronic submittal documents smaller than 5MB in size to e-mail addresses as directed by the architect.

E. Provide electronic documents over 5MB through an electronic FTP file sharing system. Confirm that the electronic FTP file sharing system can be accessed from the architect’s computer network. The Contractor is responsible for setting up, providing, and maintaining the electronic FTP file sharing system for the construction contract period of performance.

F. Provide hard copies of submittals when requested by the architect. Up to 3 additional hard copies of any submittal may be requested at the discretion of the architect, at no additional cost to the owner.

PART 2 - PRODUCTS

2.01 PROGRESS SCHEDULE

A. Within 7 days after Notice to Proceed, submit to Architect a bar-chart type progress schedule indicating time bar for each trade or operation of work to be performed. Time bar shall demonstrate planned work, properly sequenced and intermeshed, for expeditious completion of Work. Identify phases if required.

B. Distribute progress schedule including all updates to Architect, Owner, subcontractor, suppliers, fabricators, and others with need-to-know schedule compliance requirements. Post copy in field office.

2.02 SCHEDULE OF VALUES

A. Immediately after execution of the Contract Documents, Contractor shall submit for approval a Schedule of Values totaling the amount of the Contract.

2.03 LIST OF SUBCONTRACTORS

A. Immediately after execution of the Contract Documents, Contractor shall submit for approval a listing of all subcontractors to be used for the project stating portions of Work to be performed, address and telephone number of firm, and contact at firm familiar with project.

B. If all subcontrators have not been determined, submit a partial listing with regular updates indicating newly added subcontractors.

2.04 ROOFING APPLICATOR CERTIFICATE

A. A photocopy of the roofing membrane manufacturer's current and valid "Approved Applicator" Certificate (must be an Approved Applicator at least three months prior to the bid date) for the approved system they intend to use on this project must be submitted.

2.05 SUBSTITUTION REQUESTS

A. Products specified herein establish a quality standard for comparison by manufacturers of similar products. Products of other manufacturers may be substituted for those specified herein on an "Approved Equal" basis. DO NOT propose the substitution of products that do not meet or exceed the quality standards established by the specified product. Products proposed as equivalent MUST be submitted through the General Contractor for review by the Architect after the Contract for Construction is awarded. DO NOT request approval of products prior to the awarding of the contract.

B. Requests for substitution will be reviewed when extensive revisions to contract documents are not required and changes are in keeping with general intent of Contract Documents; when timely, fully documented and properly submitted; and when one or more of following conditions is satisfied, all as judged by Architect/Engineer. Otherwise, requests will be returned without action except to record non-compliance with these requirements.
   1. Where request is directly related to an "or equal" clause or other language of same effect in Contract Documents.
   2. Where required product, material or method cannot be provided within Contract Time, but not as a result of Contractor's failure to pursue the Work promptly or to coordinate various activities properly.

3. Where required product, material or method cannot be provided in a manner which is compatible with other materials of the Work, or cannot be properly coordinated therewith, or cannot be warranted as required, or cannot be used without adversely affecting Owner's insurance coverage on completed work, or will encounter other substantial non-compliance items which are not possible to otherwise overcome except by making requested substitution, which Contractor thereby certified to overcome such non-compatibility, non-coordination, non-warranty, non-insurable or other non-compliance as claimed.
4. Where required product, material or method cannot receive required approval by a governing authority, and requested substitution can be so approved.

C. **SUBSTITUTIONS REQUESTS MUST BE SUBMITTED WITHIN 45 DAYS AFTER THE DATE OF THE NOTICE TO PROCEED**. Substitution requests received after that time will be returned and the Contractor will be required to provide the product specified, except in the following instances:
1. Unavailability of product, material or method, not due to the Contractor's failure to pursue the work promptly or to coordinate various activities properly.
2. Where a specified product or material contains a hazardous material, as defined in 40 CFR 261 and as defined by applicable state and local regulations and of which the Owner and Architect refuse to approve for use, based on Contractor furnished information.

D. Submit request for substitutions in writing using the Substitution Request form found at the end of this Section. This is the only form that will be accepted.

E. Submit 3 copies of substitution request, fully identified for product or method being replaced by substitution, including related specification section and drawing number(s), and fully documented to show compliance with requirements for substitutions. Include manufacturer's product data/drawings, description of installation methods, material samples where applicable, complete color and finish selection cards or samples, Contractor's detailed comparison of significant qualities between specified item and proposed substitution, statement of effect on construction time and coordination with other affected work, cost information or proposal, and Contractor's statement to the effect that proposed substitutions will result in overall work equal-to-or-better-than work originally indicated.

F. Failure to provide the requested data and samples within the specified time frame will be grounds for rejection as a comparable product.

G. Do not incorporate substitutions into Shop Drawings until they have been reviewed by the Architect and written permission has been issued to make the proposed substitution a part of the contract.

H. Under no circumstances shall Architect's review of any such substitution relieve Contractor from timely, full and proper performance of Work.

I. In the event that the substitution of a product by the General Contractor necessitates the redrawing, redesign, modification or other change to the Contract Documents, the General Contractor will bear all associated costs of these changes.

2.06 REQUEST FOR SUPPLEMENTARY INFORMATION

A. Make timely requests of Architect for additional information required in planning and production of Work.

B. File requests in ample time to permit appropriate action by all parties involved and avoid delay in performance of Work.

C. Owner will not bear costs for delays due to Contractor's failure to request information in a timely manner.

2.07 SHOP DRAWINGS

A. Provide newly-prepared information, on reproducible sheet formats, with graphic information at accurate scale (except as otherwise indicated), with name of preparer indicated (firm name). Do not duplicate and submit Architect's construction drawings as shop drawings. Show dimensions and notes which are based on field measurement. Identify materials and products in work shown. Indicate compliance with standards, and special coordination requirements. **DIGITAL SUBMISSIONS ARE ALLOWED**.

B. Shop drawings must bear Contractor's approval stamp. This approval stamp certifies that the Contractor has reviewed the shop drawings, product data, samples or similar submittals for conformance with the Contract Documents. All deviations will be noted in writing and highlighted on the submittal for Architect's review. The Architect is not responsible for errors, omissions or deviations in the shop drawings, product data, samples or similar submittals by the Contractor.

C. Submittals are reviewed by the Architect for design intent only. The Contractor is responsible for verification of dimensional requirements, compliance with contract documents and local codes, quantities and coordination of all affected trades.

D. Under no circumstances shall Architect's review of shop drawings or submittals relieve Contractor from timely, full and proper performance of Work in accordance with the Contract Documents.

E. Contract Documents (including all drawings, specifications, addenda and supplemental information) will not be made available in any digital format or on any other reproducible media to Prime Bidders or Sub-bidders before the award of a Contract nor will they be made available to the Contractor or Sub-contractors after the award of a Contract. Prime Bidders may obtain Bidding Documents in electronic or paper format through Southern Reprographics at www.sriplanroom.com for a non-refundable fee as pre-determined by level of access.

F. CAD files will be available to the successful Contractor or Sub-contractors with a release letter or per AIA Document C106™ - 2013 Digital Data Licensing Agreement, after the award of a Contract.

2.08 PRODUCT DATA

A. Collect required data into one submittal for each unit of work or system; mark each copy to show which choices and options are applicable to project AND WHICH ARE AVAILABLE FOR SELECTION BY THE ARCHITECT WITHOUT ADDITIONAL COST. NO PAYMENT WILL BE MADE FOR ADDITIONAL COST OF ANY CHOICES OR OPTIONS SUBMITTED BY THE CONTRACTOR FOR SELECTION BY THE ARCHITECT AND NOT CLEARLY SHOWN AS NOT AVAILABLE WITHIN THE CONTRACT.

B. Include manufacturer's standard published recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements which have been checked, and special coordination requirements.

C. Maintain one set of product data (for each submission) at project site, available for reference by Architect and others.

D. Do not submit product data until compliance with requirements of contract documents has been confirmed by Contractor.

E. Copies:
   1. Submit 3 paper copies of product data for Architect's review for items specified in various specification sections, **unless digital submission**.
   2. Three paper copies required for mechanical and electrical data, **unless digital submission**.

F. Installer's Copy: Do not proceed with installation of materials, products or systems until final authorized copy of applicable product data is in possession of installer.

G. **Material Safety Data Sheet (MSDS):** MSDS provides basic information on a material or chemical product. A MSDS describes the properties and potential hazards of the material, how to use it safely, and what to do in an emergency. DO NOT PROVIDE WITHIN A SHOP DRAWING SUBMISSION UNLESS SPECIFICALLY REQUESTED BY THE DESIGN PROFESSIONAL. MSDS information shall be kept on file with the contractor and subcontractors for reference. Refer to OSHA MSDS Rules for clarification at website: https://msdsauthoring.com/msds-safety-data-sheet-chemicals-osha-msds-rules.

2.09 SAMPLES

A. Unless precise color and pattern is specified in Contract Documents, submit accurate color and pattern charts or actual material samples to Architect for selection. Refer to pertinent sections of specifications for detailed submission requirements. Provide units identical with final condition of proposed materials or products for the work. Include "range" samples (not less than 3 units) where unavoidable variations must be expected, and describe or identify variations between units of each set.

B. Make all submissions affecting color selection within sufficient time to allow selection without causing delay in Work.

C. Submit items requiring color selection or verification AS ONE SUBMISSION to facilitate coordination of all colors at one time. Interior items may be submitted separately from exterior items.

D. Provide full set of optional samples where Architect's selection is required. DO NOT INCLUDE OPTIONS REQUIRING ADDITIONAL COST.

E. Samples are submitted for review and confirmation of color, pattern, texture and "kind" by Architect. Architect will not "test" samples (except as otherwise indicated) for compliance with other requirements, which are therefore the exclusive responsibility of Contractor.

F. Submit 3 sets of samples in final submittal.
   1. Furnish two sets to Architect and assemble one set on site. When all samples are on site, Owner and Architect are to review. Contractor shall provide job samples indicating finished color selections for any and all items requiring finish color for project.
   2. Quality Control Set: Maintain returned final set of samples at project site, in suitable condition and available for quality control comparisons by Architect and Owner. Written approval from Owner is required before the work is begun for any finish requiring color review.

G. Reusable Samples: Returned samples which are intended or permitted to be incorporated into Work must be in undamaged condition at time of use.

2.10 STRUCTURAL SUBMITTALS

A. Structural submittals, where required, include shop drawings, design calculations, diagrams, illustrations, schedules, performance charts, nomenclature charts, samples, brochures and other data prepared by the Contractor or any subcontractor, manufacturer, supplier, fabricator, or distributor and which illustrate some portion of the Project directly related to the structural design of the project.

B. Contractor shall make all submittals in advance of installation or construction to allow sufficient time for review.

C. Work requiring shop drawings, whether called for by the Contract Documents or requested by the Contractor, shall not commence until the submission has been reviewed by the Architect/Structural Engineer. Work may commence if the Contractor verifies the accuracy of the Architect/Structural Engineer's corrections and notations and complies with them without exception and without requesting change in Contract Sum or Contract Time.

PART 3 - EXECUTION

3.01 SUBMITTAL PREPARATION

A. Permanently mark each submittal to identify project, date, Contractor, subcontractor, submittal name and similar information to distinguish it from other submittals. Show Contractor's executed review and approval marking.

B. Indicate project, date, "To:"; "From:"; names of subcontractors, suppliers, manufacturers, required references, category and type of submittal, purpose, description, distribution record and signature of transmitter.

C. Indicate drawing number and specifications section number to which submittal applies.

3.02 ARCHITECTS ACTION ON SUBMITTALS

A. Architect will respond to submittals from Contractor by completing the "LETTER OF TRANSMITTAL" form.

B. Architect's Submittal Review: Submittal review does not relieve Contractor(s) of compliance with Contract Documents or local codes. Review is only for conformance with the design intent of the Project and compliance with information given in the Contract Documents. The contractor is responsible to coordinate and to confirm all dimensions for use at the site. The contractor is responsible for coordination of the work of all trades.

C. Architect's Action: Where action and return is required or requested, Architect will review each submittal and mark per the following, and where possible return within fifteen (15) working days of receipt. When a submittal must be coordinated with submittals of other trades, Contractor is responsible for gathering all information and forwarding to Architect as a single submittal.

D. Architect's Response:
1. Final Unrestricted Release: Work may proceed, provided it complies with notations and corrections on submittal and with Contract Documents, when submittal is returned with the following: **Marking: "Reviewed".**
2. Final-But-Restricted Release: Work may proceed, provided it complies with notations and corrections on submittal and with Contract Documents, when submittal is returned with the following: **Marking: "Reviewed and Noted".**

3. Returned for Resubmittal: Do not proceed with work. Revise submittal in accordance with notations thereon, and resubmit without delay to obtain a different action marking. Do not allow submittals with the following marking (or unmarked submittals where a marking is required) to be used in connection with performance of the Work: **Marking: "Revise and Resubmit".**
4. Other Action: Where submittal is returned for other reasons, with Architect explanation included, it will not be marked or marked "Revise and Resubmit".

END OF SECTION 01 33 00

THIS PAGE LEFT INTENTIONALLY BLANK FOR DUPLEX PRINTING

WITTENBERG, DELONY & DAVIDSON, INC.
5050 Northshore Ln
North Little Rock, AR 72118
Tel: 501-376-6681 Fax: 501-372-6317

SUBSTITUTION REQUEST

WDD does NOT Pre-Qualify before bidding
To Be Submitted AFTER Award of Contract

Project:
Project No:

Date:
Contractor:
Contact Person:

Contractor hereby requests consideration of a product substitution as follows:

1. Refer To: Section - _____ and/or Drawing - _____
2. Item Description: _____
3. Proposed Substitution:
   Manufacturer: _____
   Model Number: _____
   Description: _____
4. Reason for Substitution:
   ___ Availability
   ___ Delivery Schedule
   ___ Cost Advantage
   ___ Quality Advantage
   ___ Performance Advantage
   ___ Other: _____
5. Coordination:
   Difference in dimensions between the specified and proposed substitute **(WILL) (WILL NOT)** affect dimensions on drawings and adjacent items.

   Describe the effect of the substitution on work of other trades: _____

   Describe the effect of the substitution on other required new or existing materials including electrical wiring, piping, ductwork, finishes, structure, etc.: _____

   Acceptance of this substitution will cause **(NO CHANGE IN) (A REDUCTION OF_____ DAYS FROM)** the completion date of this project.

   Describe any required architectural or engineering design changes required to accommodate the substitution: _____
6. Differences:
   The proposed substitution **(MEETS) (DOES NOT MEET)** the reference standards (ASTM, AWI, UL, etc.) as specified.

   The proposed substitution **(MEETS) (DOES NOT MEET)** the fire rating classification (class, type, FM, UL, NFPA) as specified.

   The proposed substitution is available in the following **(COMPARABLE) (LIMITED) (ADDITIONAL)** finishes.

   Note: Any additional cost associated with proposed substitute finishes will be absorbed by the contractor if this substitution is approved and implemented.

7. Warranty:
   Specified Warranty Length and Coverage:_____
   Substitute Warranty Length and Coverage (Sample warranty attached):_____
   _____
8. This substitution will result in a cost savings and credit of $_____.
9. The proposed substitute has been used in the following installations (attached):_____
   _____
10. Service and replacement material are available from the following (attached):_____
    _____

By submitting this Request for Substitution, the Contractor accepts the following terms and conditions:

1. The proposed substitution, if accepted, will provide performance equivalent to the material or equipment specified. Should a substitution be accepted and should the substitute material or equipment prove defective or otherwise unsatisfactory for the service intended, the Contractor will replace the material or equipment with the material or equipment specified.
2. If the substitution will affect a correlated function, adjacent construction, or work of other trades or contractors, the necessary changes and modifications to affected work are considered to be part of the substitution and will be accomplished without additional cost to the Owner.
3. In the event that the substitution of materials or equipment necessitates the redrawing, redesign, modification or other change to the Contract Documents, the General Contractor will bear all associated costs of these changes.

Contractor warrants that they have verified and believe this substitute is equal or superior to the specified item in all respects. There will be no additional cost associated with coordinating installation of this substitute. Costs and effects of the substitution, as outlined herein, are certified and complete. Claims for additional costs related to acceptance of this substitution, which may become apparent later, are waived.

Manufacturer's product cut sheets, drawings, samples, data sheets, sample warranties, manufacturer's certification, etc. for the substitute are attached.

Contractor:_____ Date:_____

By:_____

Typed Name:_____

Architect's Action:

_____ Substitution is Accepted
_____ Substitution is Rejected for the following reason(s):_____
_____

By:_____

Typed Name:_____

Date:_____

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Testing laboratory services and inspection services.

B. Contractor to include, in Base Bid, cost of all field and laboratory testing which is required by various sections of Technical Divisions of these specifications. This will include, but is in no way limited to the following tests:

1. Soil Compaction
2. Soil Bearing
3. Parking Lots:
    a. Subgrade Densities
    b. Base Course Densities
    c. Asphalt Densities
    d. Core Samples to Determine Asphalt Thickness
4. Concrete:
    a. Making Test Cylinders
    b. Compression Tests
    c. Concrete floor moisture vapor emission, in-situ relative humidity and pH (alkalinity) testing at concrete substrates scheduled to receive finish flooring as indicated on Drawings and/or specified in various finish flooring sections. Refer to current version of ASTM F 2170.
        1) Testing shall be conducted based on flooring moisture and pH tolerance requirements submitted by finish flooring trades.
        2) Areas failed to achieve the required moisture and/or pH levels shall be re-mitigated and re-tested at no additional cost to the Owner.
        3) Moisture vapor and pH Test results shall be signed off by respective flooring manufacturers and installers to obtain full warranty on flooring product and installation.
        4) The Owner may conduct and pay for his own random moisture and pH tests at his sole discretion to verify and confirm Construction Manager's test results.
        5) Information on grout mixing and placement, and on grout testing is contained in Grouting Concrete Masonry Walls, **TEK 3-2A** and Grout Quality Assurance, **TEK 18-8B** (refs. 1,2), respectively, as published in the National Concrete Masonry Association (NCMA).
5. Structural Steel Welding
6. Topsoil analysis of existing and that brought in off-site
7. Other tests required by Specification Sections

1.02 RELATED DOCUMENTS

A. Applicable portions of the Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, and Addenda issued prior to the execution of the Contract, other documents listed in the Agreement and Modifications issued after the execution of the Contract shall apply to this Section. The general requirements for this work are in Division 1 of the Specifications.

1.03 SUBMITTALS AND SUBSTITUTIONS

A. In accordance with Section 01 33 00.

B. Substitutions will not be considered prior to the award of the General Contract.

1.04 QUALIFICATIONS OF LABORATORIES

A. Meet "Recommended Requirements for Independent Laboratory Qualification", published by American Council of Independent Laboratories.

B. Meet basic requirements of ASTM E329, "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel as used in Construction".

C. Authorized to operate in state where project is located.

D. Testing equipment must be calibrated at reasonable intervals by devices of accuracy, traceable to either National Bureau of Standards or accepted values of national physical constants.

1.05 LABORATORIES DUTIES

A. Perform specified inspections, sampling and testing of materials and methods of construction. Comply with specified standards. Ascertain compliance of materials with requirements of projects.

B. Promptly notify Architect and Contractor of observed irregularities or deficiencies of work or products.

C. Promptly submit written report of each test and inspection; two copies to Architect and one copy to Contractor for record document files. Each report shall include the following:
   1. Date issued
   2. Project title and number
   3. Testing laboratory name, address and telephone number
   4. Name and signature of laboratory inspector
   5. Date and time of sampling or inspection
   6. Record of temperature and weather conditions
   7. Date of test
   8. Identification of product

9. Location of sample or test in project
10. Type of inspection or test
11. Results of tests and compliance with contract documents
12. Interpretation of test results, when requested by owner or owner's representative.

1.06 LIMITATIONS OF AUTHORITY OF TESTING LABORATORIES

A. Laboratories shall not be authorized to release, revoke, alter or enlarge on requirements of contract documents; approve or accept any portion of work or perform any duties of Contractor or Architect.

1.07 CONTRACTOR'S RESPONSIBILITIES

A. Cooperate with laboratory personnel, provide access to work and operations.

B. Secure and deliver to laboratory adequate quantities of representational samples of materials proposed to be used which require testing.

C. Provide laboratory with preliminary design mix proposed to be used for concrete and other materials mixes which require control by testing laboratory.

D. Furnish copies of manufacturer's test reports of products as required.

E. Furnish incidental labor and facilities as follows:
1. To provide access to work to be tested.
2. To obtain and handle samples at project site or at source of product to be tested.

1.08 SPECIAL INSPECTIONS

A. Special inspections shall be required in accordance with Chapter 17 of the Building Code. The construction manager (CM) shall be responsible for coordinating all inspections with relevant inspection agency.
1. Arkansas Special Inspections Guidelines and Special Inspection Forms, revised January 01, 2023, may be downloaded from the Structural Engineers Association of Arkansas website at www.seaoar.org/resources and comply with the 2021 AFPC (2021 IBC in conjunction with the State of Arkansas Amendments), hereafter referred to as the Building Code.

B. Special Inspector shall keep respective records of inspections. Inspection reports shall be submitted to the Building Official or Authority Having Jurisdiction (AHJ) and to the registered design professional in responsible charge.

C. Reports shall indicate that inspected work was done in conformance to approved construction documents. Discrepancies shall be brought to the immediate attention of contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official (AHJ) and the registered design professional in responsible charge, prior to the completion of that phase of the work.

D. A final report of inspections documenting required Special Inspections, and correction of any discrepancies, shall be submitted to the Owner, Building Official (AHJ) and the registered design professional in responsible charge at the completion of respective portion(s) of the work.

1.09 HAZARDOUS MATERIAL ABATEMENT

A. During the construction of this project, if work involving hazardous material is suspected, or encountered, Contractor shall notify Owner or Owner's representative immediately and Owner, with his own forces or by separate contract is responsible for complete investigation, removal and disposition of hazard material in accordance with applicable laws and regulations.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 REPAIR AND PROTECTION

A. Upon completion of inspection, testing, sample taking and similar services performed on the work, repair damaged work and restore substrates and finishes to eliminate deficiencies, including deficiencies in the visual qualities of exposed finishes. Protect work exposed by or for testing activities and protect repaired work.

END OF SECTION 01 45 23

PART 1 - GENERAL

1.01 GENERAL SITE REQUIREMENTS

A. Do not close or obstruct streets, walks or other occupied or used facilities without permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways.

B. Ensure safe passage of persons around areas of construction. Conduct operations to prevent injury to adjacent buildings, structures, facilities and persons.

C. Erect temporary covered passageways as required by authorities having jurisdiction.

D. Provide dust-proof partitions if required. If not indicated on the drawings, provide dust-proof partitions as directed by the Architect to comply with applicable sections of the Life Safety Code.

E. Provide temporary enclosures at doors and other openings in walls as necessitated by weather conditions. Construct enclosures with fire retardant treated lumber. Tape joints and caulk to prevent dust and debris from migrating beyond construction areas. Maintain enclosures in good repair and remove when no longer needed.

F. Provide interior and exterior shoring, bracing or support as needed to prevent movement, settlement or collapse.

1.02 PROJECT SIGNS

A. Subject to prior approval of Owner as to size, design, type, location and to local regulations, Contractor and his subcontractors may erect temporary signs for purposes of identification and controlling traffic.

B. Additional banner signs with grommets may be provided by the Architect to be placed as directed. Signs shall be maintained throughout the project then returned to architect's site representative or discarded.

C. Construction Manager shall furnish and erect temporary construction sign at job site and remove sign at end of construction period. Paint and letter as directed by Architect to identify project, Owner, Architect and Contractor. Refer to general sign drawing (s) following this Section for reference and to Section 01 21 00 - Allowances.

1.03 JOB OFFICES AND STORAGE

A. Contractor and his subcontractors shall maintain office and storage facilities on site as may be necessary. Locate so as to cause no interference with work to be performed on the site by Owner or with Owner's operations. Consult with Architect regarding locations. Office shall have as a minimum the following items:
   1. Complete set of Construction Documents including all addenda and supplemental information.
   2. Telephone and fax machine.
   3. Layout and meeting space for Architects or Owners representative to use when visiting the site.
   4. Complete job file with copies of all correspondence concerning the project.
   5. Other standard office equipment as is normally required to operate a business.

B. Upon completion of project, or as directed by Architect, Contractor shall remove temporary structures and facilities from the site, same to become his property. Leave the premises in condition required by Contract.

1.04 SANITARY ARRANGEMENTS

A. Contractor, at beginning of Work, to provide on premises suitable temporary convenience and enclosure for use of workmen on job. Maintain in sanitary condition and remove at completion of Work or when directed by Architect.

1.05 TEMPORARY UTILITIES FOR CONSTRUCTION

A. Provide all gas and electric service for heating, cooling, lighting and power required for construction purposes.

B. Provide all water required for construction purposes. Run temporary lines and provide necessary standpipes.

C. Contractor to pay all utility charges until time of substantial completion.

1.06 USE CHARGES

A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise directed. Allow other entities to use temporary services and facilities without cost, including, but not limited to Construction Coordinator, Design Professional, testing agencies, and authorities having jurisdiction.

B. Sewer Service: Pay sewer-service use charges for sewer usage by all entities for construction operations.

C. Water Service: Pay water-service use charges for water used by all entities for construction operations.

D. Electric Power Service: Pay electric-power-service use charges for electricity used by all entities for construction operations.

E. Water Service from Existing System: Water from Owner's existing water system is available for use with metering and with payment of use charges. Provide meter connections and extensions of services as required for construction operations.

1.07 TEMPORARY HEATING

A. Provide temporary heating, coverings and enclosures necessary to protect operations and materials against damage by dampness and cold, to dry out work, and facilitate completion of Work.

B. Maintain critical installation temperatures required in separate Sections of the Specifications. Repair or replace at no additional cost to Owner, any materials and work damaged by dampness, insufficient or abnormal heat.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 50 00

THIS PAGE LEFT INTENTIONALLY BLANK FOR DUPLEX PRINTING

PART 1 - GENERAL

1.01 CLEANING AND WASTE REMOVAL

A. Progress Cleaning:
   1. The premises and the job site shall be maintained in a reasonable neat and orderly condition and kept free from accumulations of waste materials and rubbish during the entire construction period. Remove crates, cartons, and other flammable waste materials or trash from the work areas at the end of each working day. Do not allow debris to blow onto adjoining properties. Respond immediately to request from adjoining property owners to remove any debris that does manage to show up on adjoining properties. Collect and remove waste materials, debris, and rubbish from site weekly, daily if necessary and dispose off-site.
   2. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
   3. Broom and vacuum clean interior areas prior to start of surface finishing and continue cleaning to eliminate dust.

B. Final Cleaning:
   1. Use cleaning materials and agents recommended by manufacturer or fabricator of surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property, or that might damage finished surfaces.
   2. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of Work to condition expected from a commercial building cleaning and maintenance program. Comply with manufacturer's published instructions.
   3. Complete following cleaning operations before requesting inspection for Substantial Completion, where applicable to project scope:
      a. Clean Project Site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste materials, litter and foreign substances. Sweep paved areas broom clean. Remove petro-chemical spills, stains, and other foreign deposits. Rake grounds to a smooth even-textured surface.
      b. Remove tools, construction equipment, machinery, and surplus material from Project Site.
      c. Remove snow and ice to provide safe access to building.
      d. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
      e. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
      f. Broom clean concrete floors in unoccupied spaces.

g. Vacuum clean carpet and similar soft surfaces, removing debris and excess nap. Shampoo if required.

h. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped, scratched, or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces. Do not use razor blades to clean glass. Any scratches on the glass caused by the cleaning process will be cause for the removal and replacement of the damaged glass at the Contractor's expense.

i. Remove labels that are not permanent labels.

j. Touch-up and otherwise repair and restore marred exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored, or that show evidence of repair or restoration. Do not paint over "UL" and similar labels, including mechanical and electrical name plates.

k. Wipe surfaces of mechanical and electrical equipment, and other similar equipment. Remove excess lubrication, paint and mortar droppings and other foreign substances.

l. Plumbing fixtures are to be cleaned to a sanitary condition, free of stains, including stains resulting from water exposure.

m. Replace all disposable filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills. Clean ducts, blowers, and coils if units were operated without filters during construction.

n. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned out bulbs, and defective and noisy starters in fluorescent and mercury vapor fixtures.

o. Leave Project clean and ready for occupancy.

4. Engage an experienced licensed exterminator to make a final inspection, and rid Project of rodents, insects, and other pests. Comply with regulations of local authorities having jurisdiction.

5. Remove temporary protection and facilities installed during construction to protect previously completed installations during remainder of construction.

6. Comply with governing regulations and safety standards for cleaning operations. Remove waste materials from Project Site and dispose of in accordance with requirements of local authorities having jurisdiction.

   a. Extra materials of value that remain after completion of construction and have become the Owner's property are to be stored as directed by Owner.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 01 74 23

PART 1 - GENERAL

1.01 DESCRIPTION

A. Upon completion of Work and prior to final payment, a digital electronic copy of the following items must be submitted to Architect, tabbed and with a Table of Contents conforming to the current version of the CSI MasterFormat. Formatted items may be submitted on a thumb drive or via Microsoft OneDrive file hosting service (OneDrive also works as the storage backend of the web version of Microsoft 365 / Office cloud storage):

1. General Contractors letter of warranty
2. General Contractors letter stating that all deficiency list items are complete
3. Lien releases
4. Consent of Surety to pay final retainage
5. List of all subcontractors and suppliers, including portions of the work performed, address and telephone number of firm, and a contact name familiar with the project. Two (2) copies. One copy in each binder.
6. Guarantees and Warranties: Refer to specific sections of Project Manual for general requirements on warranties, product/workmanship bonds, and maintenance agreements. Furnish two (2) fully executed copies of each guarantee and warranty specified for review by Architect, one copy in each binder.
7. Certificates: Fully executed copy of each certificate specified, where applicable:
   a. Certificate of Occupancy
   b. Final Termite Inspection
   c. Final Plumbing Inspection
   d. Final Electrical Inspection
   e. Certificate of Air Balance
8. Miscellaneous other inspection reports, where applicable:
   a. Boiler and Tank
   b. Elevators and Hoist Systems
   c. Backflow Preventers on Potable Water
   d. Fire Suppression System
   e. Fire Alarm System
   f. Security System
   g. Backup Power Generator
   h. Cable Test/Certification Reports and Startup Records
9. Instructions: Operating, service and maintenance manual or instruction sheet for each item as requested by specifications and required for Owner’s use.
10. Building hardware packet as described in Section 08 71 00, if applicable.
11. Shop Drawings: A complete file of final copies of all shop drawings used in construction of project.
12. Complete set of all submittals for products used in construction of project.

B. Project Record Drawings: The Contractor shall provide one (1) complete set of project record drawings and two (2) CD's of scanned images of the drawings.

1. Cloud and reference each of the following items on the Record Drawings:
    a. written addendum items
    b. addendum drawings
    c. "X" drawings
    d. Supplemental Instructions
    e. Change Orders
    f. responses to RFI's
    g. any other deviations from the original drawings that are made in the field
2. Record final locations of underground lines by depth from finished grade and by accurate horizontal offset distances to permanent surface improvements such as buildings, curbs, edges, or walks.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION

3.01 EXTENDED WARRANTIES

A. The entire project is warranted for a period of one (1) year from the date of substantial completion and several materials and systems require extended warranties. It is the responsibility of the General Contractor to review the Project Manual to determine the term of the extended warranties and provide the extended warranties required.

END OF SECTION 01 78 00

PART 1 - GENERAL

1.01 ASBESTOS SURVEY REPORT

A. An Asbestos Survey has been performed for the Owner by Environmental Protection Associates at (501) 562-3818 for this project. These reports has been bound herein for information purposes only.
   1. Asbestos Sampling - High School Building, dated August 20, 2024.
   2. Asbestos Survey - Small Gym, dated August 20, 2024.

B. Additional tests and other exploratory operations may be performed by Contractor, at the Contractor's expense; however, no change in the Contract Sum will be authorized for such additional exploration.

1.02 ASBESTOS ABATEMENT

A. Drawings, general provisions of the contract, including general and supplementary conditions and other Division 01 specifications, shall apply to the work of this section.

B. Recommended Licensed and Certified Contractors:

1.	Environmental Protection Associates	(501) 562-3818
2.	Gerken Environmetal Enterprises, Inc.	(501) 225-4191
3.	Nabholz Environmental	(501) 217-5506
4.	Parker Environmental	(501) 653-7713
5.	Snyder Environmental	(888) 353-2080

C. During the construction of this project, if work involving friable asbestos is suspected, or encountered, Contractor shall notify Owner or Owner's representative immediately and Owner, with his own forces or by separate contract is responsible for complete investigation, removal and disposition of friable asbestos hazard in accordance with applicable laws and regulations.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF DOCUMENT 02 26 00

THIS PAGE LEFT INTENTIONALLY BLANK FOR DUPLEX PRINTING

Environmental Protection Associates

#9 Remington Cove
Little Rock, Arkansas 72204
Phone: 501-562-3818
Fax: 501-562-5701
Toll Free: 1-800-530-7706

Asbestos Sampling

To:	Brad Chilcote, AIA, LEED AP, ALP WDD Architects 5050 Northshore Lane North Little Rock, AR 72118	**From:**	Gary Nooner
Email:	bradc@wddarchitects.com		
Fax:		**Date:**	August 20, 20204
Phone:	501-376-6681	**Pages:**	**19** Including cover sheet
Cell:	501-425-3940		
Re:	High School Building Brinkley Public Schools	**cc:**	

Comments

Environmental Protection Associates

#9 Remington Cove
Little Rock, Arkansas 72204
501-562-3818
Fax 501-562-5701

August 20, 2024

WDD Architects
5050 Northshore Lane
North Little Rock, AR 72118

RE: Asbestos Sampling
High School Building
Brinkley Public Schools
200 Tigers Drive
Brinkley, AR 72021

Mr. Brad Chilcote, AIA, LEED AP, AL

On August 13, 2024 at your request I collected samples from the above referenced location to determine if asbestos was present. Twenty-eight (28) samples were collected for laboratory analysis.

Laboratory analysis of these samples have determined the following:

Asbestos Detected in the following Materials

	Description	**Location**	
Sample #**BHS-01, 02**	Roofing	Roof	Approx. 18,000 Sft.
Sample #**BHS-15**	Lab Counter Top (Black)	2nd Floor - Room 210	Approx. 300 Sft.
Sample #**BHS-16**	Lab Counter Top (Green)	2nd Floor - Room 208	Approx. 200 Sft.
Sample #**BHS-17**	Chemical Vent hood	2nd Floor - Room 210	Approx. 100 Sft.
Sample #**BHS-18**	Floor Tile and Mastic (2 layers)	2nd Floor - Room 210	Approx. 4,900 Sft.
Sample #**BHS-19**	Floor Tile and Mastic (2 layers or Carpet)	1st Floor - Addition	Approx. 4,900 Sft.
Assumed	Gasket, rope and/or refractory mud	Boiler room - Boilers	2 ea. Boilers 6'x4'x'4 & 5'x4'x4'

Federal and state regulations with the exception of OSHA, determine a material to be asbestos containing if it contains 1% or more asbestos. OSHA states that any amount is an asbestos material.

Therefore the following materials must be removed by a licensed asbestos contractor if disturbed by renovation or demolition.
Roofing, Lab Counter Tops, Chemical Vent hood, Floor Tile & Mastic and Assumed Boilers in Basement

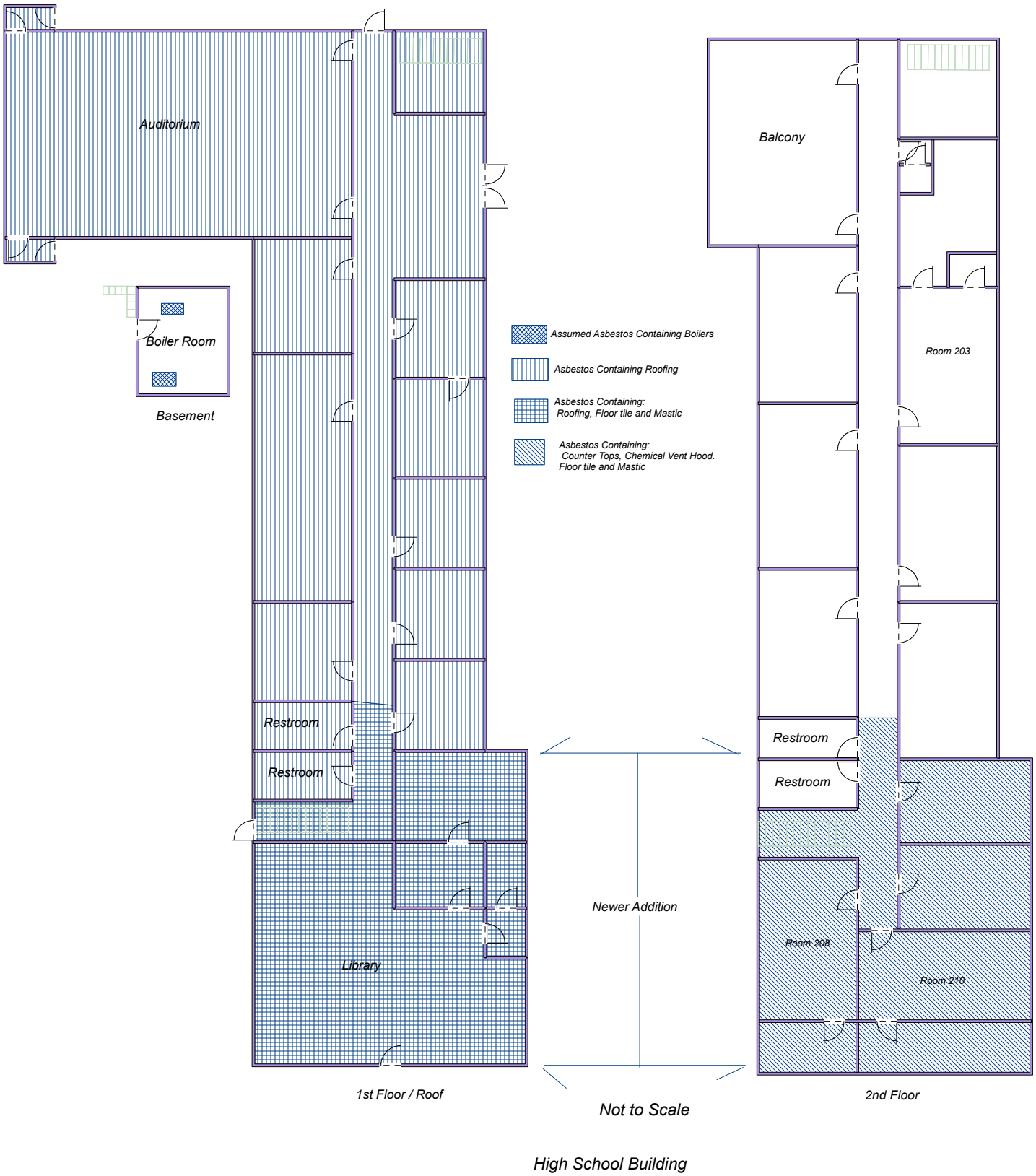
For further clarification of the Arkansas asbestos regulation 21. You may contact the Arkansas Department of Environmental Quality (ADEQ) Phone - 501-682-0718 or visit their website at - www.adeq.state.ar.us

I have attached my chain of custody and laboratory findings. Please contact me with any Questions you may have.

Sincerely,

Gary Nooner
Inspector
License No. 005065

Enclosures



Not to Scale

High School Building

Environmental Protection Associates

#9 Remington Cove
Little Rock, Arkansas 72204
501-562-3818
Fax 501-562-5701

Asbestos Sampling Chain of Custody
Field Data Sheet

GAL24086486

Client	Property		
Brad Chilcote, AIA, LEED AP, ALP	High School Building	Inspector	Gary Nooner
WDD Architects	Brinkley Public Schools	Building ID	High School Building
5050 Northshore Lane	200 Tigers Drive	Date	8/13/2024
North Little Rock, AR 72118	Brinkley, AR 72021	Turnaround Time	Rush (24 hour)

SAMPLE ID	HA	Sample Description Example: FT1- 12 x 12 white Floor tile	Sample Location	A	C	♦	Class (S,T,M)	Friability (F, NF)	Condition (G, D, SD)	Damage (%)	POT. DAM (L, M, H)	Quantity
BHS-01		Roofing	Roof	X			M	NF	D	30%	H	+/- 18,000 sift
BHS-02		Roofing	Roof	X			M	NF	D	30%	H	See Above
BHS-03		Sheetrock & Joint Compound	2nd Floor - Ceilings	X			M	F	D	30%	H	+/- 18,000 sift
BHS-04		Sheetrock & Joint Compound	2nd Floor - Ceilings	X			M	F	D	30%	H	See Above
BHS-05		Plaster	2nd Floor - Ceilings	X			S	F	D	30%	H	+/- 13,000 sift
BHS-06		Plaster	2nd Floor - Ceilings	X			S	F	D	30%	H	See Above
BHS-07		Lay-in Ceiling Tile	2nd Floor - Ceilings	X			M	F	D	30%	H	+/- 18,000 sift
BHS-08		Lay-in Ceiling Tile	2nd Floor - Ceilings	X			M	F	D	30%	H	See Above
BHS-09		Sheetrock & Joint Compound	2nd Floor - Walls	X			M	F	D	30%	H	Undetermined
BHS-10		Sheetrock & Joint Compound	2nd Floor - Walls	X			M	F	D	30%	H	Undetermined
BHS-11		No-Drip Tape	HVAC Units in each room	X			M	NF	G	5%	H	+/- 20 left
BHS-12		Ceramic Tile and Grout	2nd Floor - Small Restroom	X			M	NF	G	5%	H	+/- 180 sift
BHS-13		Floor Tile and Adhesive	2nd Floor - Room 203	X			M	NF	G	5%	H	+/- 800 sift
BHS-14		Ceramic Tile and Grout	2nd Floor - off of Room 203	X			M	NF	G	5%	H	+/- 80 sift
BHS-15		Lab Counter Top (Black)	2nd Floor - Room 210	X			M	NF	G	5%	H	+/- 300 sift
BHS-16		Lab Counter Top (Green)	2nd Floor - Room 208	X			M	NF	G	5%	H	+/- 200 sift
BHS-17		Chemical Vent hood	2nd Floor - Room 210	X			M	NF	G	5%	H	+/- 100 sift
BHS-18		Floor Tile and Mastic (2 layers)	2nd Floor - Addition	X			M	NF	G	10%	H	+/- 4,900 sift x2
BHS-19		Floor Tile and Mastic (2 layers or Carpet)	1st Floor - Addition	X			M	NF	G	10%	H	+/- 4,900 sift x2
BHS-20		Plaster	1st Floor - Ceilings	X			S	F	D	30%	H	+/- 11,000 sift
BHS-21		Sheetrock & Joint Compound	1st Floor - Ceilings	X			M	F	D	30%	H	+/- 15,000 sift
BHS-22		Lay-in Ceiling Tile	1st Floor - Ceilings	X			M	F	D	30%	H	+/- 15,000 sift
BHS-23		Ceramic Tile and Grout	1st & 2nd Floor - Main Restrooms	X			M	NF	G	15%	H	+/- 1,000 sift
BHS-24		Sheetrock & Joint Compound	Boiler Room - Ceilings	X			M	F	G	10%	H	+/- 550 sift
BHS-25		White Mastic on Fiberglass Pipes	Boiler Room / Crawlspace	X			M	NF	D	30%	H	+/- 2,400 left
BHS-26		White Mastic on Canvas	Boiler Room	X			M	NF	G	10%	H	+/- 50 'ft
BHS-27		White Mastic on Small Tank	Boiler Room	X			M	NF	G	10%	H	+/- 50 sift
BHS-28		Roof Shingle / Debris	Boiler Room - Shed Roof	X			M	NF	D	30%	H	+/- 200 sift
Assumed		Gasket, rope and/or refractory mud	Boiler room - Boilers				M	NF	G	5%	H	2 ea. Boilers 6'x4'x'4 & 5'x4'x4'

HA - Homogeneous Area A - Analyze C - Catalogue ♦ - Analyze only if the previous sample was found to be negative.

10:30AM

Class: S-surfacing, **T**-thermal, **M**-miscellaneous. **Friability: F**-friable, **NF**-non-friable. **Condition: G**-good, **D**-damaged, **SD**-severely damaged. **POT. DAM** (Potential Damage)**: L**-low, **M**-moderate, **H**-high

Relinquished By Gary Nooner	Time 08:00 Date 8-16-24	Relinquished By	Time ____ Date AUG 19 2024
Received By	Time ____ Date ____	Received By	Time ____ Date

Comments: **Composite Sample all positive Sheetrock and Joint Compound Samples**

And Few Silos

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Materials Characterization - Bulk Asbestos Analysis

Laboratory Analysis Report - Polarized Light

Environmental Protection Associates
#9 Remington Cove
Little Rock, AR 72204

Attn: Gary Nooner
Customer Project: High School Building, Brinkley Public Sch
Reference #: CAL24086486AG Date: 08/20/24

Analysis and Method

Summary of polarized light microscopy (PLM / Stereomicroscopy bulk asbestos analysis) using the methods described in 40CFR Part 763 Appendix E to Subpart E (Interim and EPA 600 / R-93 / 116 (Improved). The sample is first viewed with the aid of a stereomicroscope. Numerous liquid slide preparations are created for analysis under the polarized microscope where identifications and quantifications are preformed. Calibrated liquid refractive oils are used as liquid mouting medium. These oils are used for identification (dispersion staining). A calibrated visual estimation is reported, should any asbestiform mineral be present. Other techniques such as acid washing are used in conjugation with refractive oils for detection of smaller quantities of asbestos. All asbestos percentages are based on calibrated visual estimation traceable to NIST standards for regulated asbestos. Traceability to measurement and calibration is achieved by using known amounts and types of asbestos from standards where analyst and laboratory accuracy are measured. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 0.50% (well above the laboratory definition of trace).

Discussion

Vermiculite containing samples may contain trace amounts of actinolite/tremolite. When not detected by PLM, these samples should be analyzed using TEM methods and / or water separation techniques. Suspected actinolite/vermiculite presence will be indicated through the sample comment section of this report.

Fibrous talc containing samples may contain a regulated asbestos fiber known as anthophyllite. Under certain conditions the same fiber may actually contain both talc and anthophyllite (a phenomenon called intergrowth). Again, TEM detection methods are recommended. CA Labs PLM report comments will denote suspected amounts of asbestiform anthophyllite with talc, where further analysis is recommended.

Some samples (floor tiles, surfacings, etc.) may contain fibers too small to be detectable by PLM analysis and should be analyzed by TEM bulk protocols.

A "trace asbestos" will be reported if the analyst observes far less than 1% asbestos. CA Labs defines "trace asbestos" as a few fibers detected by the analyst in several preparations and will indicate as such under these circumstances.

Since allowable variation in quantification of samples close to 1% is high, <1% may be reported. Such results are ideal for point counting, and the technique is mandatory for friable samples (NESHAP, Nov. 1990 and clarification letter 8 May 1991) under 1% percent asbestos or "trace asbestos". **In order to make all initial PLM reports issued from CA Labs NESHAP compliant, all <1% asbestos results (except floor tiles) will be point counted at no additional charge.**

Qualifications

CA Labs is accredited by the National Voluntary Accreditation Program (NVLAP) for selected test methods for airborne fiber analysis (TEM), and for bulk asbestos fiber analysis (PLM). CA Labs is also accredited by AIHA LAP, LLC. in the PLM asbestos field of testing for Industrial Hygiene. All analysts have completed college courses or hold a degree in a natural science (geology, biology, or environmental science). Recognition by a state professional board in one these disciplines is preferred, but not required. Extensive in-house training programs are used to augment the educational background of the analyst. The Laboratory Director and Quality Manager have received supplemental McCrone Research training for asbestos identification. Analysis performed at Crisp Analytical Labs, LLC 1929 Old Denton Road Carrollton, TX 75006

Dallas NVLAP Lab Code 200349-0 TEM/PLM TDSHS 30-0235
AIHA LAP, LLC Laboratory #102929

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Overview of Project Sample Material Containing Asbestos

Customer Project: High School Building, Brinkley Public Schools **CA Labs Project #:** CAL24086486AG

Laboratory Sample ID	Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affected Building Material Types
70190	BHS-01	*1-1*	***Roofing**/ various black tar and black felt layers*	***2% Chrysotile***	***various black tar and black felt layers***
70191	BHS-02	*2-1*	***Roofing**/ various black tar and black felt layers*	***2% Chrysotile***	***gray transite*** ***green transite*** ***white transite*** ***tan floor tile*** ***black mastic***
70204	BHS-15	*15-1*	***Lab Countertop**/ gray transite*	***20% Chrysotile***	
70205	BHS-16	*16-1*	***Lab Countertop**/ green transite*	***22% Chrysotile***	
70206	BHS-17	*17-1*	***Chemical Vent Hood**/ white transite*	***20% Chrysotile***	
70207	BHS-18	*18-3*	*tan floor tile*	***2% Chrysotile***	
70207		*18-4*	*black mastic*	***2% Chrysotile***	
70208	BHS-19	*19-3*	*tan floor tile*	***2% Chrysotile***	

Dallas NVLAP Lab Code 200349-0 TEM/PLM TDSHS 30-0235

AIHA LAP, LLC Laboratory #102929

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate
gypsum - gypsum
bi - binder
or - organic
ma - matrix
mi - mica
ve - vermiculite
ot - other
pe - perlite
qu - quartz
fg - fiberglass
mw - mineral wool
wo - wollastinite
ta - talc
sy - synthetic
ce - cellulose
br - brucite
ka - kaolin (clay)
pa - palygorskite (clay)

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Overview of Project Sample Material Containing Asbestos

Customer Project: High School Building, Brinkley Public Schools **CA Labs Project #:** CAL24086486AG

Laboratory Sample ID	Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affected Building Material Types
70208		*19-4*	*black mastic*	***2% Chrysotile***	

Dallas NVLAP Lab Code 200349-0 TEM/PLM TDSHS 30-0235
AIHA LAP, LLC Laboratory #102929

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate
gypsum - gypsum
bi - binder
or - organic
ma - matrix
mi - mica
ve - vermiculite
ot - other
pe - perlite
qu - quartz
fg - fiberglass
mw - mineral wool
wo - wollastinite
ta - talc
sy - synthetic
ce - cellulose
br - brucite
ka - kaolin (clay)
pa - palygorskite (clay)

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:** Gary Nooner
Environmental Protection Associates
#9 Remington Cove
Little Rock, AR 72204

Phone # 501-562-3818
Fax #

Customer Project:
High School Building, Brinkley Public Schools

Turnaround Time:
24 hours

CA Labs Project #:
CAL24086486AG

Date: 8/20/2024
Samples Rec'd: 8/19/24 10:30AM
Date Of Sampling: 8/13/2024
Purchase Order #:

Laboratory Sample ID	Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
70190	BHS-01		*1-1*	***Roofing**/ various black tar and black felt layers*	*n*	***2% Chrysotile***	20% ce	78% qu,bi
70191	BHS-02		*2-1*	***Roofing**/ various black tar and black felt layers*	*n*	***2% Chrysotile***	20% ce	78% qu,bi
70192	BHS-03		*3-1*	***Sheetrock & Joint Compound**/ white surfaced white compound*	*n*	***None Detected***		100% mi,qu,ca
70192			*3-2*	*white drywall with brown paper*	*n*	***None Detected***	15% ce	85% qu,gy
70193	BHS-04		*4-1*	***Sheetrock & Joint Compound**/ white surfaced white compound*	*n*	***None Detected***		100% mi,qu,bi,ca
70193			*4-2*	*white drywall with brown paper*	*n*	***None Detected***	10% ce	90% qu,gy
70194	BHS-05		*5-1*	***Plaster**/ white surfaced tan plaster*	*n*	***None Detected***		100% qu,bi,ca

Dallas NVLAP Lab Code 200349-0 TEM/PLM *TDSHS 30-0235*

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Justin Cox
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:** Gary Nooner
Environmental Protection Associates
#9 Remington Cove
Little Rock, AR 72204

Phone # 501-562-3818
Fax #

Customer Project:
High School Building, Brinkley Public Schools

Turnaround Time:
24 hours

CA Labs Project #:
CAL24086486AG

Date: 8/20/2024
Samples Rec'd: 8/19/24 10:30AM
Date Of Sampling: 8/13/2024
Purchase Order #:

Laboratory Sample ID	Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
70195	BHS-06		*6-1*	***Plaster**/ tan plaster*	*y*	***None Detected***		100% qu,bi,ca
70196	BHS-07		*7-1*	***Lay-in Ceiling Tile**/ white surfacing*	*y*	***None Detected***		100% qu,bi
70196			*7-2*	*tan ceiling tile*	*y*	***None Detected***	35% ce 35% fg	30% qu,ca
70197	BHS-08		*8-1*	***Lay-in Ceiling Tile**/ white surfacing*	*y*	***None Detected***		100% qu,bi
70197			*8-2*	*tan ceiling tile*	*y*	***None Detected***	35% ce 35% fg	30% qu,ca
70198	BHS-09		*9-1*	***Sheetrock & Joint Compound**/ white surfaced white compound*	*n*	***None Detected***		100% mi,qu,bi,ca
70198			*9-2*	*white compound (beneath tape)*	*y*	***None Detected***		100% mi,qu,ca

Dallas NVLAP Lab Code 200349-0 TEM/PLM TDSHS 30-0235

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Justin Cox
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:** Gary Nooner
Environmental Protection Associates
#9 Remington Cove
Little Rock, AR 72204

Phone # 501-562-3818
Fax #

Customer Project:
High School Building, Brinkley Public Schools

Turnaround Time:
24 hours

CA Labs Project #:
CAL24086486AG

Date: 8/20/2024
Samples Rec'd: 8/19/24 10:30AM
Date Of Sampling: 8/13/2024
Purchase Order #:

Laboratory Sample ID	Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
70198			*9-3*	*white drywall with brown paper*	*n*	***None Detected***	10% ce	90% qu,gy
70199	BHS-10		*10-1*	***Sheetrock & Joint Compound**/ white surfaced white compound*	*n*	***None Detected***		100% mi,qu,bi,ca
70199			*10-2*	*white compound (beneath tape)*	*y*	***None Detected***		100% mi,qu,ca
70199			*10-3*	*white drywall with brown paper*	*n*	***None Detected***	10% ce	90% qu,gy
70200	BHS-11		*11-1*	***No-Drip Tape**/ black sealant*	*y*	***None Detected***		100% qu,gy,bi
70201	BHS-12		*12-1*	***Ceramic Tile and Grout**/ tan ceramic tile*	*y*	***None Detected***		100% qu,ma
70201			*12-2*	*gray grouting*	*y*	***None Detected***		100% qu,ca

Dallas NVLAP Lab Code 200349-0 TEM/PLM *TDSHS 30-0235*

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Justin Cox
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:** Gary Nooner
Environmental Protection Associates
#9 Remington Cove
Little Rock, AR 72204

Phone # 501-562-3818
Fax #

Customer Project:
High School Building, Brinkley Public Schools

Turnaround Time:
24 hours

CA Labs Project #:
CAL24086486AG

Date: 8/20/2024
Samples Rec'd: 8/19/24 10:30AM
Date Of Sampling: 8/13/2024
Purchase Order #:

Laboratory Sample ID	Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
70202	BHS-13		*13-1*	***Floor Tile and Adhesive**/ white floor tile*	*y*	***None Detected***		100% qu,ca
70202			*13-2*	*gray leveling compound*	*y*	***None Detected***		100% qu,bi,ca
70203	BHS-14		*14-1*	***Ceramic Tile and Grout**/ tan spotted ceramic tile*	*y*	***None Detected***		100% qu,ma
70203			*14-2*	*gray grouting*	*y*	***None Detected***		100% qu,ca
70204	BHS-15		*15-1*	***Lab Countertop**/ gray transite*	*y*	***20% Chrysotile***		80% qu,ca,ma
70205	BHS-16		*16-1*	***Lab Countertop**/ green transite*	*y*	***22% Chrysotile***		78% qu,ca,ma
70206	BHS-17		*17-1*	***Chemical Vent Hood**/ white transite*	*y*	***20% Chrysotile***		80% qu,ca,ma

Dallas NVLAP Lab Code 200349-0 TEM/PLM TDSHS 30-0235

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Justin Cox
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:** Gary Nooner
Environmental Protection Associates
#9 Remington Cove
Little Rock, AR 72204

Phone # 501-562-3818
Fax #

Customer Project:
High School Building, Brinkley Public Schools

Turnaround Time:
24 hours

CA Labs Project #:
CAL24086486AG

Date: 8/20/2024
Samples Rec'd: 8/19/24 10:30AM
Date Of Sampling: 8/13/2024
Purchase Order #:

Laboratory Sample ID	Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
				***Floor Tile and Mastic**/ gray*				
70207	BHS-18		*18-1*	*floor tile*	*y*	***None Detected***		100% qu,ca
70207			*18-2*	*tan mastic*	*y*	***None Detected***		100% gy,bi
70207			*18-3*	*tan floor tile*	*y*	***2% Chrysotile***		98% qu,ca
70207			*18-4*	*black mastic*	*y*	***2% Chrysotile***		98% gy,bi
				***Floor Tile and Mastic**/ white*				
70208	BHS-19		*19-1*	*floor tile*	*y*	***None Detected***		100% qu,ca
70208			*19-2*	*tan mastic*	*y*	***None Detected***		100% gy,bi
70208			*19-3*	*tan floor tile*	*y*	***2% Chrysotile***		98% qu,ca

Dallas NVLAP Lab Code 200349-0 TEM/PLM TDSHS 30-0235

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Justin Cox
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:** Gary Nooner
Environmental Protection Associates
#9 Remington Cove
Little Rock, AR 72204

Phone # 501-562-3818
Fax #

Customer Project:
High School Building, Brinkley Public Schools

Turnaround Time:
24 hours

CA Labs Project #:
CAL24086486AG

Date: 8/20/2024
Samples Rec'd: 8/19/24 10:30AM
Date Of Sampling: 8/13/2024
Purchase Order #:

Laboratory Sample ID	Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
70208			*19-4*	*black mastic*	*y*	***2% Chrysotile***		98% gy,bi
70209	BHS-20		*20-1*	***Plaster**/ tan plaster*	*y*	***None Detected***		100% qu,bi,ca
70210	BHS-21		*21-1*	***Sheetrock & Joint Compound**/ white surfaced white compound*	*n*	***None Detected***	2% ta	98% qu,mi,bi,ca
70210			*21-2*	*white drywall with brown paper*	*n*	***None Detected***	15% ce	85% qu,gy
70211	BHS-22		*22-1*	***Lay-in Ceiling Tile**/ white surfacing*	*y*	***None Detected***		100% qu,bi
70211			*22-2*	*tan ceiling tile*	*y*	***None Detected***	30% ce 35% fg	35% qu,pe,ca
70212	BHS-23		*23-1*	***Ceramic Tile and Grout**/ tan ceramic tile*	*y*	***None Detected***		100% qu,ma

Dallas NVLAP Lab Code 200349-0 TEM/PLM *TDSHS 30-0235*

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Justin Cox
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:** Gary Nooner
Environmental Protection Associates
#9 Remington Cove
Little Rock, AR 72204

Phone # 501-562-3818
Fax #

Customer Project:
High School Building, Brinkley Public Schools

Turnaround Time:
24 hours

CA Labs Project #:
CAL24086486AG

Date: 8/20/2024
Samples Rec'd: 8/19/24 10:30AM
Date Of Sampling: 8/13/2024
Purchase Order #:

Laboratory Sample ID	Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
70212			*23-2*	*gray grouting*	*y*	***None Detected***		100% qu,ca
70212			*23-3*	*gray ceramic tile*	*y*	***None Detected***		100% qu,ma
70213	BHS-24		*24-1*	***Sheetrock & Joint Compound**/ white surfaced white compound*	*n*	***None Detected***		100% mi,qu,bi,ca
70213			*24-2*	*tan drywall with brown paper*	*n*	***None Detected***	10% ce	90% qu,gy
70214	BHS-25		*25-1*	***Mastic on Fiberglass Pipes**/ tan surfacing*	*y*	***None Detected***		100% qu,bi
70214			*25-2*	*yellow insulation*	*y*	***None Detected***	100% fg	
70215	BHS-26		*26-1*	***Mastic on Canvas**/ yellow insulation with foil*	*n*	***None Detected***	85% fg	15% ot

Dallas NVLAP Lab Code 200349-0 TEM/PLM *TDSHS 30-0235*

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Justin Cox
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:** Gary Nooner
Environmental Protection Associates
#9 Remington Cove
Little Rock, AR 72204

Phone # 501-562-3818
Fax #

Customer Project:
High School Building, Brinkley Public Schools

CA Labs Project #:
CAL24086486AG

Turnaround Time:
24 hours

Date: 8/20/2024
Samples Rec'd: 8/19/24 10:30AM
Date Of Sampling: 8/13/2024
Purchase Order #:

Laboratory Sample ID	Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
70216	BHS-27		*27-1*	***Mastic on Tank**/ tan surfacing*	*y*	***None Detected***		100% qu,bi
70216			*27-2*	*yellow insulation*	*y*	***None Detected***	100% fg	
70217	BHS-28		*28-1*	***Roof Shingle, Debris**/ black roofing shingle with white gravel*	*y*	***None Detected***	10% ce	90% qu,bi

Dallas NVLAP Lab Code 200349-0 TEM/PLM TDSHS 30-0235

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Justin Cox
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

STATE OF ARKANSAS DEPARTMENT OF ENERGY AND ENVIRONMENT

Division of Environmental Quality

OFFICE OF AIR QUALITY, ASBESTOS PROGRAM

GARY NOONER

having satisfied the requirements necessary to meet the provisions of AHERA/ASHARA under TSCA Title II and the Arkansas Pollution Control and Ecology Commission's Rule 21 pursuant to AC.A. § 20-27-1001, et seq., within the State of Arkansas is hereby certified to perform activities related to asbestos containing material in the following discipline(s)

Discipline	Issue Date	Effective Date	Expiration Date
Air Monitor	12/05/2023	12/12/2023	12/31/2024
Contractor Supervisor	12/05/2023	12/12/2023	12/31/2024
Inspector	12/04/2023	12/12/2023	12/31/2024
Project Designer	12/06/2023	12/12/2023	12/31/2024

Certification Number: **005065**

Caleb J. Osborne
Division of Environmental Quality, Director
Chief Administrator, Environment
Arkansas Department of Energy & Environment

STATE OF ARKANSAS DEPARTMENT OF ENERGY AND ENVIRONMENT

Division of Environmental Quality

OFFICE OF AIR QUALITY, ASBESTOS PROGRAM

ENVIRONMENTAL PROTECTION ASSOCIATES (EPA)

having qualified as required by law in accordance with the rules adopted by the Arkansas Pollution Control and Ecology Commission's Rule 21 pursuant to AC.A 20-27-1001, et seq., relative to performing asbestos related work within the State of Arkansas is licensed as an

Asbestos Abatement Contractor

License Number: 000020

Issue Date: 11/30/2023
Expiration Date: 12/1/2024

Caleb J. Osborne
Division of Environmental Quality, Director
Chief Administrator, Environment
Arkansas Department of Energy & Environment

License No. 0003060425

ID #1964

State of Arkansas

Commercial Contractors Licensing Board

ENVIRONMENTAL PROTECTION ASSOCIATES OF RUSSELLVILLE, INC.
9 REMINGTON COVE
LITTLE ROCK, AR 72204

This is to Certify That ENVIRONMENTAL PROTECTION ASSOCIATES OF RUSSELLVILLE, INC.

is duly licensed under the provisions of Ark. Code Ann. § 17-25-101 et. seq. as amended and is entitled to practice Contracting in the State of Arkansas within the following classifications/specialties:

BUILDING
- (COMMERCIAL & RESIDENTIAL)
SPECIALTY
Asbestos
Environmental General

This contractor has an unlimited suggested bid limit.

from May 17, 2024 **until** April 30, 2025 **when this Certificate expires.**

Witness our hands of the Board, dated at North Little Rock, Arkansas:

GREAT SEAL OF THE STATE OF ARKANSAS

CHAIRMAN

SECRETARY

May 17, 2024 - dsa

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 1/3/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Sterling Seacrest Pritchard, Inc. 4601 East McCain Blvd Suite B North Little Rock AR 72117	**CONTACT NAME:** **PHONE (A/C, No, Ext):** 501-588-0857 **FAX (A/C, No):** **E-MAIL ADDRESS:**
INSURED ENVIPRO-02 Environmental Protection Associates of Russellville, Inc. 9 Remington Cove Little Rock AR 72204	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** Arch Specialty Insurance Company — 21199 **INSURER B :** Lafayette Insurance — 18295 **INSURER C :** Berkley Casualty Company — 15911 **INSURER D :** **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 626015020 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY** [ ] CLAIMS-MADE [X] OCCUR X Blkt Contractual X XCU Included GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY X PRO-JECT [ ] LOC OTHER:	Y	Y	12EMP2232804	12/31/2023	12/31/2024	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
B	**AUTOMOBILE LIABILITY** X ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS X HIRED AUTOS ONLY X NON-OWNED AUTOS ONLY	Y	Y	60521561	12/31/2023	12/31/2024	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 1,000,000 $ $ $ $
A	X **UMBRELLA LIAB** X OCCUR **EXCESS LIAB** [ ] CLAIMS-MADE [ ] DED X RETENTION $ 0	Y	Y	12EMX2232904	12/31/2023	12/31/2024	EACH OCCURRENCE AGGREGATE $	$ 5,000,000 $ 5,000,000 $
C	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y/N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] N/A **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below		Y	AMWC408701	12/31/2023	12/31/2024	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
A	Pollution Incl Mold Professional Liability			12EMP2232804	12/31/2023	12/31/2024	Limit Per Incident Aggregate	1,000,000 2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Reference Number: 200189892.

The following applies when required in a written contract or agreement: Certificate holder and owner are included as additional insureds on a primary and non-contributory basis with respect to General Liability (including completed operations), Auto Liability, Professional Liability, and Umbrella. Waiver of subrogation is provided on General Liability, Auto Liability, Umbrella, Professional Liability, and Workers Compensation.

CERTIFICATE HOLDER

International Paper Company, its subsidiaries and affiliated Companies
PO Box 100085 - IP
Duluth GA 30096

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Environmental Protection Associates

#9 Remington Cove
Little Rock, Arkansas 72204
Phone: 501-562-3818
Fax: 501-562-5701
Toll Free: 1-800-530-7706

Asbestos Survey

To:	Brad Chilcote, AIA, LEED AP, ALP WDD Architects 5050 Northshore Lane North Little Rock, AR 72118	**From:**	Gary Nooner
Email:	bradc@wddarchitects.com		
Fax:		**Date:**	August 20, 2024
Phone:	501-376-6681	**Pages:**	**15** Including cover sheet
Cell:	501-425-3940		
Re:	Small Gym Brinkley Public Schools	**cc:**	

Comments

Environmental Protection Associates

#9 Remington Cove
Little Rock, Arkansas 72204
501-562-3818
Fax 501-562-5701

August 20, 2024

WDD Architects
5050 Northshore Lane
North Little Rock, AR 72118

RE: Asbestos Survey
Small Gym
Brinkley Public Schools
200 Tigers Drive
Brinkley, AR 72021

Mr. Brad Chilcote, AIA, LEED AP, ALP

On August 15, 2024 at your request I collected samples from the above referenced location to determine if asbestos was present. Thirteen (13) samples were collected for laboratory analysis.

Laboratory analysis of these samples have determined the following:

Asbestos Detected in the following Materials

	Description	Location	
Sample # BG-01	Flooring	See Drawing Area # 4	Approx. 60 Sft.
Sample # BG-05	Flooring	See Drawing Areas # 11, 12, 13, & 14	Approx. 550Sft.
Sample # BG-09	Window Putty	Upper Exterior Windows behind Sheet Metal panels	Approx. 26 each
Sample # BG-10	Stucco and Tar	Upper Wall behind Sheet Metal Panels	Approx. 1,500 Sft.

Federal and state regulations with the exception of OSHA, determine a material to be asbestos containing if it contains 1% or more asbestos. OSHA states that any amount is an asbestos material.

Therefore the following materials must be removed by a licensed asbestos contractor if disturbed by renovation or demolition.
Flooring from areas 4, 11, 12,13 &14, Exterior Window Putty and Stucco / Tar

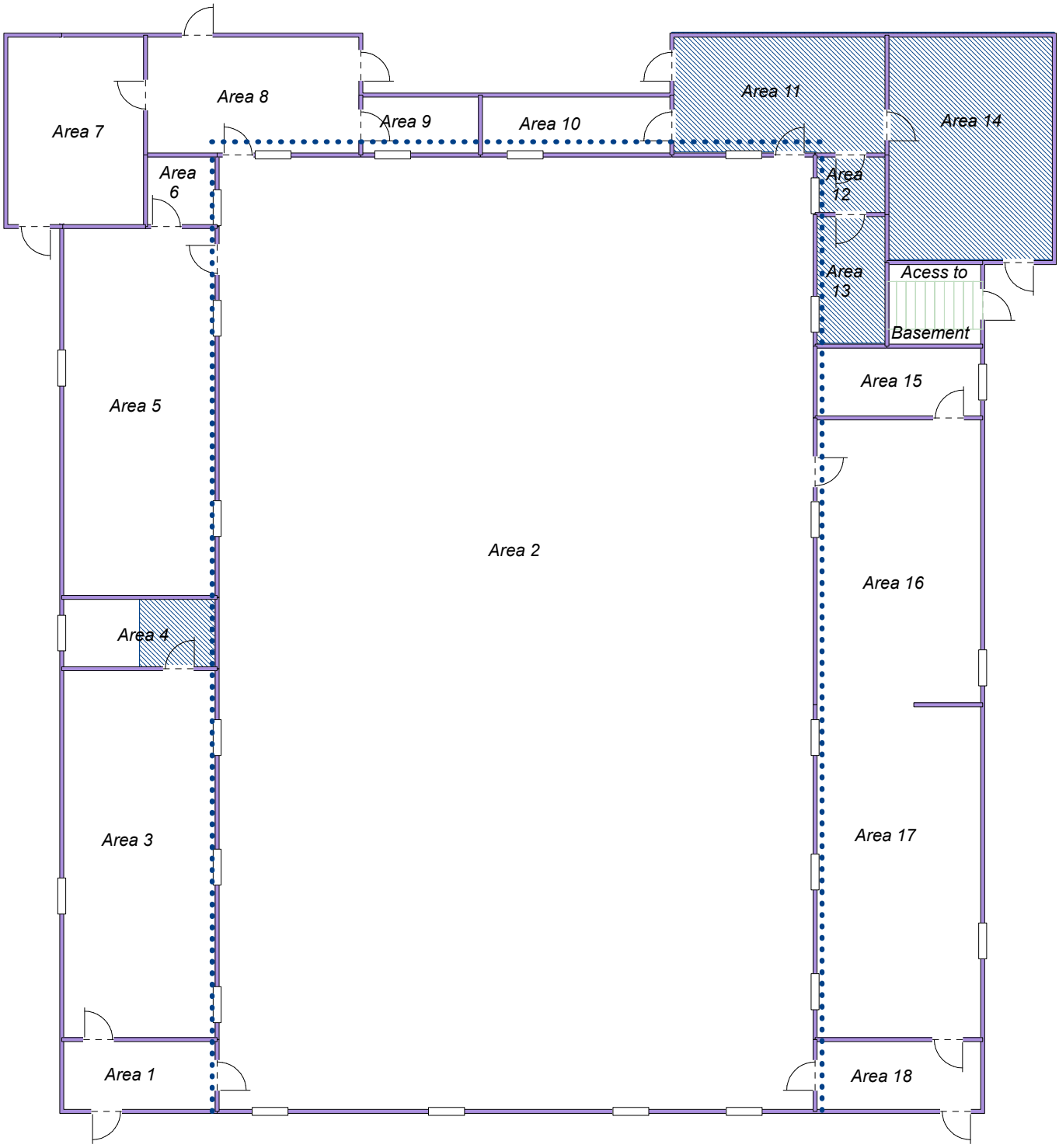
For further clarification of the Arkansas asbestos regulation 21. You may contact the Arkansas Department of Environmental Quality (ADEQ) Phone - 501-682-0718 or visit their website at - www.adeq.state.ar.us

I have attached my chain of custody and laboratory findings. Please contact me with any Questions you may have.

Sincerely,

Gary Nooner
Inspector
License No. 005065

Enclosures



Brinkley High School Gym (Small)

Not to Scale

Asbestos Containing Flooring and Mastic. On Wood Sub-floor

Asbestos Containing Window Putty

Asbestos Containing Stucco / Tar

Environmental Protection Associates

#9 Remington Cove
Little Rock, Arkansas 72204
501-562-3818
Fax 501-562-5701

Asbestos Sampling Chain of Custody
Field Data Sheet

CAL24086485

Client
Brad Chilcote, AIA, LEED AP, ALP
WDD Architects
5050 Northshore Lane
North Little Rock, AR 72118

Property
Small Gym
Brinkley Public Schools
200 Tigers Drive
Brinkley, AR 72021

Inspector Gary Nooner
Building ID
Date 8/15/2024
Turnaround Time Rush (24 hour)

SAMPLE ID	HA	Sample Description Example: FT1- 12 x 12 white Floor tile	Sample Location	A	C	♦	Class (S,T,M)	Friability (F, NF)	Condition (G, D, SD)	Damage (%)	POT. DAM (L, M, H)	Quantity
BG-01		Flooring	See Drawing Area # 4	X			M	N	G	10%	H	+/- 60 sft
BG-02		Flooring	See Drawing Areas # 1 & 18	X			M	N	G	10%	H	+/- 130 sft
BG-03		Lay-in Ceiling Tile	See Drawing Area # 5	X			M	F	G	10%	H	+/- 390 sft
BG-04		Flooring	See Drawing Area # 8	X			M	N	G	10%	H	+/- 180 sft
BG-05		Flooring	See Drawing Areas # 11, 12, 13, & 14	X			M	N	G	10%	H	+/- 550 sft
BG-06		Lay-in Ceiling Tile	See Drawing Area # 14	X			M	F	G	10%	H	+/- 265 sft
BG-07		1'x1' Acoustical Tiles (Ceiling & Walls)	See Drawing Areas # 3, 11,14. & 2	X			M	N	G	10%	H	+/- 1,000 sft
BG-08		Flooring	See Drawing Area # 15	X			M	N	G	10%	H	+/- 85 sft
BG-09		Window Putty	Upper Exterior Windows behind Sheet Metal panels	X			M	N	G	10%	H	26 Each
BG-10		Stucco and Tar	Upper Wall behind Sheet Metal Panels	X			M	N	G	10%	H	+/- 1,500 sft
BG-11		Roof Shingle and Felt paper	Upper Gym Roof	X			M	N	G	10%	H	+/- 5,500 sft
BG-12		Roofing	Lower Roof	X			M	N	G	10%	H	+/- 4,500 sft
BG-13		Roof Edge Flashing	Lower Roof	X			M	N	G	10%	H	+/- 1,500 sft

HA - Homogeneous Area **A - Analyze** **C - Catalogue** **♦ - Analyze only if the previous sample was found to be negative.**

10:30AM

Class: S-surfacing, **T**-thermal, **M**-miscellaneous. **Friability: F**-friable, **NF**-non-friable. **Condition: G**-good, **D**-damaged, **SD**-severely damaged. **POT. DAM** (Potential Damage): **L**-low, **M**-moderate, **H**-high

Relinquished By Gary Nooner	Time 11:00 Date 8-16-24	Relinquished By	Time Date AUG 19 2024
Received By	Time Date	Received By	Time Date

Comments: **Composite Sample all positive Sheetrock and Joint Compound Samples**

And Few Sikes

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Materials Characterization - Bulk Asbestos Analysis

Laboratory Analysis Report - Polarized Light

Environmental Protection Associates
#9 Remington Cove
Little Rock, AR 72204

Attn: Gary Nooner
Customer Project: Small Gym, Brinkley Public School
Reference #: CAL24086485AG Date: 08/20/24

Analysis and Method

Summary of polarized light microscopy (PLM / Stereomicroscopy bulk asbestos analysis) using the methods described in 40CFR Part 763 Appendix E to Subpart E (Interim and EPA 600 / R-93 / 116 (Improved). The sample is first viewed with the aid of a stereomicroscope. Numerous liquid slide preparations are created for analysis under the polarized microscope where identifications and quantifications are preformed. Calibrated liquid refractive oils are used as liquid mouting medium. These oils are used for identification (dispersion staining). A calibrated visual estimation is reported, should any asbestiform mineral be present. Other techniques such as acid washing are used in conjugation with refractive oils for detection of smaller quantities of asbestos. All asbestos percentages are based on calibrated visual estimation traceable to NIST standards for regulated asbestos. Traceability to measurement and calibration is achieved by using known amounts and types of asbestos from standards where analyst and laboratory accuracy are measured. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 0.50% (well above the laboratory definition of trace).

Discussion

Vermiculite containing samples may contain trace amounts of actinolite/tremolite. When not detected by PLM, these samples should be analyzed using TEM methods and / or water separation techniques. Suspected actinolite/vermiculite presence will be indicated through the sample comment section of this report.

Fibrous talc containing samples may contain a regulated asbestos fiber known as anthophyllite. Under certain conditions the same fiber may actually contain both talc and anthophyllite (a phenomenon called intergrowth). Again, TEM detection methods are recommended. CA Labs PLM report comments will denote suspected amounts of asbestiform anthophyllite with talc, where further analysis is recommended.

Some samples (floor tiles, surfacings, etc.) may contain fibers too small to be detectable by PLM analysis and should be analyzed by TEM bulk protocols.

A "trace asbestos" will be reported if the analyst observes far less than 1% asbestos. CA Labs defines "trace asbestos" as a few fibers detected by the analyst in several preparations and will indicate as such under these circumstances.

Since allowable variation in quantification of samples close to 1% is high, <1% may be reported. Such results are ideal for point counting, and the technique is mandatory for friable samples (NESHAP, Nov. 1990 and clarification letter 8 May 1991) under 1% percent asbestos or "trace asbestos". **In order to make all initial PLM reports issued from CA Labs NESHAP compliant, all <1% asbestos results (except floor tiles) will be point counted at no additional charge.**

Qualifications

CA Labs is accredited by the National Voluntary Accreditation Program (NVLAP) for selected test methods for airborne fiber analysis (TEM), and for bulk asbestos fiber analysis (PLM). CA Labs is also accredited by AIHA LAP, LLC. in the PLM asbestos field of testing for Industrial Hygiene. All analysts have completed college courses or hold a degree in a natural science (geology, biology, or environmental science). Recognition by a state professional board in one these disciplines is preferred, but not required. Extensive in-house training programs are used to augment the educational background of the analyst. The Laboratory Director and Quality Manager have received supplemental McCrone Research training for asbestos identification. Analysis performed at Crisp Analytical Labs, LLC 1929 Old Denton Road Carrollton, TX 75006

Dallas NVLAP Lab Code 200349-0 TEM/PLM TDSHS 30-0235
AIHA LAP, LLC Laboratory #102929

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Overview of Project Sample Material Containing Asbestos

Customer Project: Small Gym, Brinkley Public School **CA Labs Project #:** CAL24086485AG

Laboratory Sample ID	Sample #	Layer #	Analysts Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affected Building Material Types
70177	BG-01	*1-1*	***Flooring**/ tan linoleum*	***21% Chrysotile***	***tan linoleum***
70181	BG-05	*5-1*	***Flooring**/ tan floor tile*	***4% Chrysotile***	***tan floor tile***
70185	BG-09	*9-1*	***Window Putty**/ off-white surfaced off-white caulking*	***2% Chrysotile***	***off-white surfaced off-white caulking***
70186	BG-10	*10-1*	***Stucco and Tar**/ brown surfaced black tar*	***4% Chrysotile***	***brown surfaced black tar***

Dallas NVLAP Lab Code 200349-0 TEM/PLM TDSHS 30-0235
AIHA LAP, LLC Laboratory #102929

Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):

ca - carbonate
gypsum - gypsum
bi - binder
or - organic
ma - matrix
mi - mica
ve - vermiculite
ot - other
pe - perlite
qu - quartz
fg - fiberglass
mw - mineral wool
wo - wollastinite
ta - talc
sy - synthetic
ce - cellulose
br - brucite
ka - kaolin (clay)
pa - palygorskite (clay)

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:** Gary Nooner
Environmental Protection Associates
#9 Remington Cove
Little Rock, AR 72204

Phone # 501-562-3818
Fax #

Customer Project:
Small Gym, Brinkley Public School

Turnaround Time:
24 hours

CA Labs Project #:
CAL24086485AG

Date: 8/20/2024
Samples Rec'd: 8/19/24 10:30AM
Date Of Sampling: 8/15/2024
Purchase Order #:

Laboratory Sample ID	Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
70177	BG-01		*1-1*	***Flooring**/ tan linoleum*	*y*	***21% Chrysotile***		79% qu,ma
70177		***4***	*1-2*	*brown mastic*				
70178	BG-02		*2-1*	***Flooring**/ red linoleum with black backing*	*y*	***None Detected***	20% ce	80% qu,bi
70178			*2-2*	*black mastic*	*y*	***None Detected***		100% gy,bi
70179	BG-03		*3-1*	***Lay-in Ceiling Tile**/ white surfacing*	*y*	***None Detected***		100% qu,bi
70179			*3-2*	*tan ceiling tile*	*y*	***None Detected***	40% ce 30% fg	30% qu,pe
70180	BG-04		*4-1*	***Flooring**/ off-white floor tile*	*y*	***None Detected***		100% qu,ca

Dallas NVLAP Lab Code 200349-0 TEM/PLM *TDSHS 30-0235*

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Robert Olivarez
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:** Gary Nooner
Environmental Protection Associates
#9 Remington Cove
Little Rock, AR 72204

Phone # 501-562-3818
Fax #

Customer Project:
Small Gym, Brinkley Public School

Turnaround Time:
24 hours

CA Labs Project #:
CAL24086485AG

Date: 8/20/2024
Samples Rec'd: 8/19/24 10:30AM
Date Of Sampling: 8/15/2024
Purchase Order #:

Laboratory Sample ID	Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
70180			*4-2*	*tan mastic*	*y*	***None Detected***		100% gy,bi
70181	BG-05		*5-1*	***Flooring**/ tan floor tile*	*y*	***4% Chrysotile***		96% qu,ca
70181			*5-2*	*black mastic*	*y*	***None Detected***		100% gy,bi
70181			*5-3*	*black felt*	*y*	***None Detected***	60% ce	40% qu,bi
70181			*5-4*	*brown mastic*	*y*	***None Detected***		100% qu,bi
70182	BG-06		*6-1*	***Lay-in Ceiling Tile**/ white vinyl surfacing*	*y*	***None Detected***		100% qu,ma
70182			*6-2*	*yellow ceiling tile*	*y*	***None Detected***	100% fg	

Dallas NVLAP Lab Code 200349-0 TEM/PLM *TDSHS 30-0235*

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Robert Olivarez
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:** Gary Nooner
Environmental Protection Associates
#9 Remington Cove
Little Rock, AR 72204

Phone # 501-562-3818
Fax #

Customer Project:
Small Gym, Brinkley Public School

Turnaround Time:
24 hours

CA Labs Project #:
CAL24086485AG

Date: 8/20/2024
Samples Rec'd: 8/19/24 10:30AM
Date Of Sampling: 8/15/2024
Purchase Order #:

Laboratory Sample ID	Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
70183	BG-07		*7-1*	***1x1 Acoustical Tiles**/ white surfacing*	*y*	***None Detected***		100% qu,bi
70183			*7-2*	*tan ceiling tile*	*y*	***None Detected***	100% ce	
70184	BG-08		*8-1*	***Flooring**/ off-white floor tile*	*y*	***None Detected***		100% qu,ca
70184			*8-2*	*tan mastic*	*y*	***None Detected***		100% gy,bi
70185	BG-09		*9-1*	***Window Putty**/ off-white surfaced off-white caulking*	*n*	***2% Chrysotile***		98% qu,bi,ca
70186	BG-10		*10-1*	***Stucco and Tar**/ brown surfaced black tar*	*n*	***4% Chrysotile***		96% qu,bi
70186			*10-2*	*gray stucco*	*y*	***None Detected***		100% qu,ca

Dallas NVLAP Lab Code 200349-0 TEM/PLM *TDSHS 30-0235*

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Robert Olivarez
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:** Gary Nooner
Environmental Protection Associates
#9 Remington Cove
Little Rock, AR 72204

Phone # 501-562-3818
Fax #

Customer Project:
Small Gym, Brinkley Public School

Turnaround Time:
24 hours

CA Labs Project #:
CAL24086485AG

Date: 8/20/2024
Samples Rec'd: 8/19/24 10:30AM
Date Of Sampling: 8/15/2024
Purchase Order #:

Laboratory Sample ID	Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
70187	BG-11		*11-1*	***Roof Shingle and Felt Paper**/ black roofing shingle with black backing*	*y*	***None Detected***	20% fg	80% qu,bi
70187			*11-2*	*black felt*	*y*	***None Detected***	60% ce	40% qu,bi
70188	BG-12		*12-1*	***Roofing**/ black tar and black felt layers*	*n*	***None Detected***	30% ce 10% fg	60% qu,bi
70188			*12-2*	*white sealant*	*y*	***None Detected***		100% qu,gy,bi
70188			*12-3*	*off-white foam*	*y*	***None Detected***		100% ot
70188			*12-4*	*tan insulation*	*y*	***None Detected***	100% ce	
70189	BG-13		*13-1*	***Roof Edge Flashing**/ black tar and black felt layers*	*n*	***None Detected***	30% ce 10% fg	60% qu,bi

Dallas NVLAP Lab Code 200349-0 TEM/PLM *TDSHS 30-0235*

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Robert Olivarez
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

CA Labs
Dedicated to Quality

Crisp Analytical, L.L.C.
1929 Old Denton Road
Carrollton, TX 75006
Phone 972-242-2754
Fax 972-242-2798

CA Labs, L.L.C.
12232 Industriplex, Suite 32
Baton Rouge, LA 70809
Phone 225-751-5632
Fax 225-751-5634

Polarized Light Asbestiform Materials Characterization

Customer Info: **Attn:** Gary Nooner
Environmental Protection Associates
#9 Remington Cove
Little Rock, AR 72204

Phone # 501-562-3818
Fax #

Customer Project:
Small Gym, Brinkley Public School

Turnaround Time:
24 hours

CA Labs Project #:
CAL24086485AG

Date: 8/20/2024
Samples Rec'd: 8/19/24 10:30AM
Date Of Sampling: 8/15/2024
Purchase Order #:

Laboratory Sample ID	Sample #	Comment	Layer #	Analysts Physical Description of Subsample	Homogeneous (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
70189			*13-2*	*white sealant*	*y*	***None Detected***		100% qu,gy,bi
70189			*13-3*	*off-white foam*	*y*	***None Detected***		100% ot

Dallas NVLAP Lab Code 200349-0 TEM/PLM TDSHS 30-0235

AIHA LAP, LLC Laboratory #102929

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). *All samples received in good condition unless noted.*
Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gy - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastonite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Robert Olivarez
Analyst

Technical Manager
Tanner Rasmussen

Senior Analyst
Julio Robles

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze
6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

STATE OF ARKANSAS DEPARTMENT OF ENERGY AND ENVIRONMENT

Division of Environmental Quality

OFFICE OF AIR QUALITY, ASBESTOS PROGRAM

GARY NOONER

having satisfied the requirements necessary to meet the provisions of AHERA/ASHARA under TSCA Title II and the Arkansas Pollution Control and Ecology Commission's Rule 21 pursuant to AC.A. § 20-27-1001, et seq., within the State of Arkansas is hereby certified to perform activities related to asbestos containing material in the following discipline(s)

Discipline	Issue Date	Effective Date	Expiration Date
Air Monitor	12/05/2023	12/12/2023	12/31/2024
Contractor Supervisor	12/05/2023	12/12/2023	12/31/2024
Inspector	12/04/2023	12/12/2023	12/31/2024
Project Designer	12/06/2023	12/12/2023	12/31/2024

Certification Number: **005065**

Caleb J. Osborne
Division of Environmental Quality, Director
Chief Administrator, Environment
Arkansas Department of Energy & Environment

STATE OF ARKANSAS DEPARTMENT OF ENERGY AND ENVIRONMENT

Division of Environmental Quality

OFFICE OF AIR QUALITY, ASBESTOS PROGRAM

ENVIRONMENTAL PROTECTION ASSOCIATES (EPA)

having qualified as required by law in accordance with the rules adopted by the Arkansas Pollution Control and Ecology Commission's Rule 21 pursuant to AC.A 20-27-1001, et seq., relative to performing asbestos related work within the State of Arkansas is licensed as an

Asbestos Abatement Contractor

License Number: 000020

Issue Date: 11/30/2023
Expiration Date: 12/1/2024

Caleb J. Osborne
Division of Environmental Quality, Director
Chief Administrator, Environment
Arkansas Department of Energy & Environment

License No. 0003060425

ID #1964

State of Arkansas

Commercial Contractors Licensing Board

ENVIRONMENTAL PROTECTION ASSOCIATES OF RUSSELLVILLE, INC.
9 REMINGTON COVE
LITTLE ROCK, AR 72204

This is to Certify That ENVIRONMENTAL PROTECTION ASSOCIATES OF RUSSELLVILLE, INC.

is duly licensed under the provisions of Ark. Code Ann. § 17-25-101 et. seq. as amended and is entitled to practice Contracting in the State of Arkansas within the following classifications/specialties:

BUILDING
- (COMMERCIAL & RESIDENTIAL)
SPECIALTY
Asbestos
Environmental General

This contractor has an unlimited suggested bid limit.

from May 17, 2024 **until** April 30, 2025 **when this Certificate expires.**

Witness our hands of the Board, dated at North Little Rock, Arkansas:

GREAT SEAL OF THE STATE OF ARKANSAS

CHAIRMAN

SECRETARY

May 17, 2024 - dsa

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 1/3/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Sterling Seacrest Pritchard, Inc. 4601 East McCain Blvd Suite B North Little Rock AR 72117	**CONTACT NAME:** **PHONE (A/C, No, Ext):** 501-588-0857 **FAX (A/C, No):** **E-MAIL ADDRESS:**
INSURED ENVIPRO-02 Environmental Protection Associates of Russellville, Inc. 9 Remington Cove Little Rock AR 72204	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** Arch Specialty Insurance Company — 21199 **INSURER B :** Lafayette Insurance — 18295 **INSURER C :** Berkley Casualty Company — 15911 **INSURER D :** **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 626015020 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY** [ ] CLAIMS-MADE [X] OCCUR X Blkt Contractual X XCU Included GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY X PRO-JECT [ ] LOC OTHER:	Y	Y	12EMP2232804	12/31/2023	12/31/2024	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
B	**AUTOMOBILE LIABILITY** X ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS X HIRED AUTOS ONLY X NON-OWNED AUTOS ONLY	Y	Y	60521561	12/31/2023	12/31/2024	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 1,000,000 $ $ $ $
A	X **UMBRELLA LIAB** X OCCUR **EXCESS LIAB** [ ] CLAIMS-MADE [ ] DED X RETENTION $ 0	Y	Y	12EMX2232904	12/31/2023	12/31/2024	EACH OCCURRENCE AGGREGATE $	$ 5,000,000 $ 5,000,000 $
C	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y/N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] N/A **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below		Y	AMWC408701	12/31/2023	12/31/2024	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
A	Pollution Incl Mold Professional Liability			12EMP2232804	12/31/2023	12/31/2024	Limit Per Incident Aggregate	1,000,000 2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Reference Number: 200189892.

The following applies when required in a written contract or agreement: Certificate holder and owner are included as additional insureds on a primary and non-contributory basis with respect to General Liability (including completed operations), Auto Liability, Professional Liability, and Umbrella. Waiver of subrogation is provided on General Liability, Auto Liability, Umbrella, Professional Liability, and Workers Compensation.

CERTIFICATE HOLDER

International Paper Company, its subsidiaries and affiliated Companies
PO Box 100085 - IP
Duluth GA 30096

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included: Site preparation includes, but is not necessarily limited to:
1. Temporary fencing and protective barricades.
2. Protection of trees and shrubs to remain.
3. Felling of trees removed, removal of stumps, roots and debris from Work.
4. Removal of obstructions which interfere with Work.
5. Stripping of topsoil and vegetation from earth areas of site.
6. Removal of concrete and removal of asphaltic concrete pavement.
7. Abandonment and capping wells or cisterns.
8. Demolition and removal of buildings or building elements.
9. Protection of active utilities and removal of utilities abandoned.

1.02 RELATED DOCUMENTS

A. Applicable portions of the Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, and Addenda issued prior to the execution of the Contract, other documents listed in the Agreement and Modifications issued after the execution of the Contract shall apply to this Section. The general requirements for this work are located in Division 1 of the Specifications.

1.03 SUBMITTALS AND SUBSTITUTIONS

A. In accordance with Section 01 33 00.

B. Substitutions will not be considered prior to the award of the General Contract.

1.04 QUALITY ASSURANCE

A. Workmen Qualifications: One person present during tree clearing and grubbing operations, thoroughly familiar with types of trees involved. Direct trimming of roots and limbs where required.

B. Codes and Standards: Comply with pertinent codes and regulations, plus requirements of insurance carriers providing coverage for Work.

1.05 JOB CONDITIONS

A. Dust Control: Prevent spread of dust during performance of Work. Thoroughly moisten surfaces required to prevent dust nuisance to public, neighbors, and concurrent performance of other work on site.

B. On-site Burning: Will not be permitted.

C. Protection: Protect existing objects not to be removed. In event of damage, immediately make repairs and replacements necessary to approval of Architect at Contractor's expense.

1.06 HAZARDOUS MATERIAL ABATEMENT

A. During the construction of this project, if work involving hazardous material is suspected, or encountered, Contractor shall notify Owner or Owner's representative immediately and Owner, with his own forces or by separate contract is responsible for complete investigation, removal and disposition of hazard material in accordance with applicable laws and regulations.

PART 2 - PRODUCTS

2.01 BARRICADES AND FENCE MATERIALS

A. Materials required for barricades, tree protection and related fencing furnished by Contractor.

2.02 FILL MATERIAL

A. Refer to Section 31 00 10, if applicable.

PART 3 - EXECUTION

3.01 PREPARATION

A. Notification: Notify Architect at least two full working days prior to commencing work.

B. Site Inspection:
1. Prior to work of this Section, carefully inspect entire site and objects designated to be removed or preserved.
2. Locate existing utility lines to be abandoned and determine requirements for disconnecting and capping.
3. Locate existing active utility lines which are to remain and determine requirements for their protection.

C. Clarification:
1. Drawings do not purport to show all objects existing on site.
2. Before commencing work of this Section, verify with Architect all objects to be removed and all objects to be preserved.

D. Scheduling:
1. Schedule work in a careful manner with necessary consideration for neighbors and public.
2. Avoid interference with use of, and passage to and from, adjacent buildings and facilities.

3.02 DISCONNECTION OF UTILITIES

A. Before commencing demolition or removal, and if not already accomplished, disconnect or arrange for disconnection of utility service connections, including water, gas, electricity, and telephone, to buildings to be demolished complying with regulations of utility concerned. Plug sanitary sewer lines in accordance with local requirements. Conduct operations at Contractor's expense and in manner to preserve service to areas and structures not demolished. If underground utility services disconnections are required in public thorough-fares, comply with removal and restoration of pavement requirements and other pertinent matters.

B. Preserve in operating condition active utilities bordering or traversing site designated to remain. Protect property, including, but not limited to, valve boxes, poles, guys and related appurtenances. Repair damage to active utility, due to work under contract, to satisfaction of utility concerned. Remove utility lines that are to be abandoned from building area.

3.03 STRIPPING TOPSOIL

A. Remove existing grass and overburden before excavating topsoil.

B. Prior to beginning excavation or fill, strip the topsoil to a depth of at least 6 inches or to a depth sufficient to remove all organic material and stockpile for future use.

C. In general, remove topsoil where structures are to be built, trenches dug and roads, parking lots, walks and similar improvements constructed within the areas presently covered with topsoil.

D. Store topsoil clear of the construction area.

E. Take reasonable care to prevent the topsoil from becoming mixed with subsoil or eroding.

3.04 DEMOLITION OF STRUCTURES

A. Demolish buildings and/or building elements designated for demolition, pulling out foundations and concrete slabs. Completely remove designated building components and any obstructions above ground level and down to bottom of footings below ground level. Salvageable materials become property of Contractor unless otherwise shown or specified and shall be promptly removed from site.

B. Fill holes and trenches resulting from demolition and removal, to ground surface. Rock and materials from masonry construction may be used in backfilling up to a depth of 1 foot below ground surface if sufficient fine materials are mixed therewith to fill voids. Use dirt for top 1 foot of fill, free from trash, wood, pipe and debris.

C. After clearing, perform rough grading necessary to provide complete run-off of surface water.

D. Barricade open excavations until backfilled. Do not backfill until backfill materials have been inspected and approved by Architect's representative.

E. Wet down masonry thoroughly during demolition to prevent spread of dust.

F. Leave parcel site in safe and clean condition, free from rubbish, debris, materials, and equipment.

G. When Contractor starts building demolition, excluding interior striping of salvable items including plumbing and electrical fixtures, he is to continue work during normal working days suitable to operations until demolition and site clearance is completed, unless otherwise specifically authorized by Owner.

3.05 PROTECTION AND REPAIR

A. Erect temporary barricades and fencing required to protect existing and new site construction including but not limited to new and existing walks, drives, roads, curb and gutter, etc. during construction.

B. Allow no heavy traffic on new or existing paving unless authorized in writing by Owner.

C. Contractor is responsible for restoring all existing site construction, including softscape (landscape), that is damaged during construction to new condition.

D. If it is necessary to cut or trench across any existing paving (including walks), Contractor is responsible for restoring damaged areas to new condition.

3.06 PROTECTION OF TREES TO REMAIN

A. At trees to remain, construct temporary barricade around tree at tree's approximate drip line. Provide barricades at least 3 feet high, consisting of 2 inch by 4 inch or larger posts set at least 18 inches into ground, no more than 6 feet on centers, joined at top by 1 inch by 6 inch or larger boards firmly nailed to posts.

B. Trimming of Trees: In company with Architect, ascertain limbs and roots which are to be trimmed and clearly mark them to designate approved cutting point. Cut evenly, using proper tools and skilled workmen to achieve neat severance with least possible damage to tree. Promptly coat cut area with approved pruning paint complying with manufacturer's recommendations. In case of root cuts, apply wet burlap or related protection approved by Architect, to prevent drying out.

3.07 TREE/BRUSH REMOVAL

A. Remove trees, brush and vegetation except trees which are to remain, from Project site. Material resulting from clearing becomes property of Contractor, who shall be responsible for disposal.

B. Wet down areas where required during site clearing to prevent spread of dust.

C. Blasting on Project site is not allowed as a means of tree removal.

3.08 STUMPS AND ROOTS

A. Remove completely stumps and roots from areas within building walls and 5 feet outside building walls. Remove remaining stumps and roots to clear depth of not less than 2 feet below subgrade level. Material resulting from grubbing becomes property of Contractor, to dispose of by him. Burn no material on premises.

3.09 OBSTRUCTIONS

A. Remove existing obstructions from area to be occupied by Work under this Contract unless otherwise specified herein, or specifically directed by Architect to remain.

3.10 REMOVAL OF DEBRIS AND CLEANING

A. Remove and legally dispose of rubbish and debris found on demolition area at start of the Work that resulting from demolition activities or deposited on site by others during the duration of contract. Keep project area and public right-of-way reasonably clear at all times. Upon completion of work remove temporary construction, equipment, salvaged materials, trash and debris leaving entire project area in neat condition.

END OF SECTION 02 41 13

THIS PAGE LEFT INTENTIONALLY BLANK FOR DUPLEX PRINTING

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included: Demolition and removal work required for construction and connecting new Work to existing building and for reconstructing existing building. Work also includes barricades, temporary protection, dust protection, removal from site trash and debris from demolition work, and repairing existing hardscape/softscape damaged during the course of the work.

B. Extent of selective demolition work is generally indicated on drawings. Selective demolition not shown on the drawings may be determined by examination of existing facilities and the proposed new and reconstructed work. Existing items not shown on the plans of proposed work and preventing the execution of proposed work are in the scope of the selective demolition work.

C. Disconnecting, removal and/or relocation and reconnecting of existing mechanical, electrical and fire protection work including equipment, piping and wiring are included in this Contract.

1.02 RELATED DOCUMENTS

A. Applicable portions of the Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, and Addenda issued prior to the execution of the Contract, other documents listed in the Agreement and Modifications issued after the execution of the Contract shall apply to this Section. The general requirements for this work are in Division 1 of the Specifications.

1.03 SCHEDULES

A. Before commencing any alteration work, submit for review and approval of the Architect, a schedule showing the commencement, the order, and the completion dates for the various parts of this work.

B. Before starting any work relating to existing utilities that will temporarily discontinue service to the existing building, notify the Owner 5 days in advance and obtain the Owner's approval before proceeding with this phase of work. Do not disconnect or disrupt service without Owner's prior approval.

1.04 HAZARDOUS MATERIAL ABATEMENT

A. During the construction of this project, if work involving hazardous material is suspected, or encountered, Contractor shall notify Owner or Owner's representative immediately and Owner, with his own forces or by separate contract is responsible for complete investigation, removal and disposition of hazard material in accordance with applicable laws and regulations.

PART 2 - PRODUCTS

2.01 BARRICADE AND SUPPORT MATERIALS

A. Before starting demolition and removal work, furnish and erect necessary barricades. Barricades shall provide for safe passage at all times. Provide temporary protection to keep existing building weathertight. Dust proof areas that are to be kept in use in manner to permit necessary passage for personnel and the protection of equipment. During process of demolition and removal, install temporary supports and bracing, to prevent building damage.

B. If approved by Architect, materials from demolition work may be used for construction of temporary protective barricades, temporary partitions, noise barriers and dust barriers and for temporary non-structural supports. Where suitable materials are not available from demolition work, furnish materials of proper type and construction to perform function specified above.

2.02 OTHER MATERIALS

A. Provide materials, not specifically described but required for proper completion of work of this Section, selected by Contractor subject to Architect's approval.

PART 3 - EXECUTION

3.01 PREPARATION

A. Make such explorations and probes as are necessary to ascertain required protection measures before proceeding with alteration work. Give particular attention to shoring and bracing requirements so as to prevent any damage to existing construction.

B. Provide, erect, and maintain catch platforms, lights, barriers, weather protection, warning signs, and other items as required for proper protection of the workmen engaged in alteration operations, and adjacent construction.

C. Provide and maintain weather protection at exterior openings so as to fully protect the interior premises against damage from the elements until such openings are closed by new construction.

D. Provide and maintain temporary protection of the existing building where demolition, removal, and new work is being done, connections made, materials handled, or equipment moved.

E. Take necessary precautions to prevent dust and dirt from rising by wetting demolished masonry, concrete, plaster, gypsum board, sprayed fireproofing and similar debris, or by other means. Protect unaltered portions of the existing building affected by the operations under this section by dust-proof partitions and other adequate means.

F. Do not close or obstruct walkways or passageways without the authorization of the Owner. Do not store or place materials in passage-way or other means of egress. Conduct operations with minimum traffic interference.

G. Owner will be continuously occupying areas of the building immediately adjacent to areas of selective demolition. Conduct selective demolition work in manner that will minimize need for disruption of Owner's normal operations. Provide minimum of 72 hours advance notice to Owner of demolition activities which will severely impact Owner's normal operations.

3.02 UTILITY SERVICE

A. Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition operations.

B. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services such as emergency power, fire alarm, heating and air conditioning, during interruptions to existing utilities, as acceptable to Owner and governing authorities. Allow no interruption in service unless coordinated with Owner at least 24 hours in advance.

C. Disconnect and seal utilities serving interior area to be demolished, prior to start of demolished work.

D. Protect smoke and fire detectors from construction damage, dust and false alarms.

E. Request Owner to identify any data/communication wiring above the ceiling that should be removed. Remove this wiring and all abandoned conduit and wiring above ceiling.

3.03 INSTALLATION/APPLICATION/PERFORMANCE

A. Provide alteration work as indicated on the drawings or required for the work of this Contract. Be responsible for any damage that may be caused by such work to any part or parts of existing structures or items designated for reuse or salvage. Perform patching, restoration, and new work in accordance with applicable technical sections of the Specifications.

B. Where alterations occur, or new and old work join, cut, remove, patch, repair, or refinish the adjacent surfaces or as required by the involved conditions, and leave in as good a condition as existed prior to the commencing of the work. Refinish painted surfaces from intersection to intersection unless indicated otherwise. Materials and workmanship employed in the alterations, unless otherwise indicated or specified, shall conform to that of the original work. Materials not specifically described but required for a complete and proper installation of the work, shall be new, first quality of their respective kinds, as selected by Contractor subject to the approval of the Architect. Alteration work shall be performed by the various respective trades that normally perform the particular items of work.

C. Finish new and adjacent existing surfaces as specified for new work. Clean existing surfaces of dirt, grease and loose paint before refinishing.

D. Where alterations occur in areas to be completed during later phases of the work only prepare adjacent surfaces as necessary and complete finishing during proper phase of the work.

E. If it will be necessary to disrupt internal pedestrian traffic flow along means of egress from the building, the Contractor must consult the presiding code official in regards to temporary means of egress, temporary exit signage and other related items. Implementation of requirements made by the code official are the responsibility of the Contractor.

F. If unanticipated mechanical, electrical or structural elements which conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to Owner's Representative in written, accurate detail. Pending receipt of directive from Owner's Representative rearrange selective demolition schedule as necessary to continue overall job progress without delay.

3.04 SALVAGE

A. Certain items and materials removed from existing building in demolition work are to be relocated or reused by Contractor in new construction work under this Contract. Items and materials for relocation or reuse and which are damaged by careless handling in removal may be rejected by Architect if considered unsuitable for re-use. Replace rejected items at Contractor's expense. Salvable materials, removed in demolition work and not for relocation or re-use or not turned over to the Owner for disposition, become property of Contractor and shall be hauled away from site as they are removed.

B. In all cases of interior demolition, door hardware, light fixtures, emergency lighting, art work, furniture, window treatments such as blinds, drapes, curtains and operating hardware, signage and graphics and other interior decor items are to be carefully removed and turned over to Owner unless designated to be cleaned or refurbished and reinstalled.

3.05 REMOVAL OF DEBRIS AND CLEANING

A. Remove and legally dispose of rubbish and debris found in demolition area at start of the Work that resulted from demolition activities or were deposited on site by others during the duration of contract. Keep project area and public right-of-way reasonably clear at all times. Upon completion of work remove temporary construction, equipment, salvaged materials, trash and debris leaving entire project area in a neat and clean condition.

3.06 PROTECTION AND REPAIR

A. Erect temporary barricades and fencing required to protect existing and new site construction including but not limited to new and existing walks, drives, roads, curb and gutter, etc. during construction activities.

B. Allow no heavy traffic on new or existing paving unless authorized in writing by Owner.

C. Contractor is responsible for restoring all existing site construction, including softscape (landscape) and hardscape, that is damaged during construction to new condition.

D. If it is necessary to cut or trench across any existing paving (including walks), Contractor is responsible for restoring damaged areas to new condition.

END OF SECTION 02 41 19

THIS PAGE LEFT INTENTIONALLY BLANK FOR DUPLEX PRINTING