STATE OF MINNESOTA (REV 10/20/2014)

Professional Technical Services Master Contract --Encumbrance Form (For State Use Only)

RECS Project ID.: N/A	**Project Mgr.:** Eric Radel	**Contract Specialist:** Samantha Hicks
		RFP Event ID (if applicable) 2-15977
Project Name: Construction Testing and Inspection Services Master Contract		

Total Amount of Contract: **N/A**	Amount of Contract First FY:	Vendor Number: **0000202849**
Category Code: 81101703	Category Code:	Category Code:
Account:	Account:	Account:
Amount: **N/A**	Amount:	Amount:

Accounting Distribution 1:	Accounting Distribution 2:	Accounting Distribution 3:
Business Unit:	Business Unit:	Business Unit:
Accounting Date:	Accounting Date:	Accounting Date:
Fund:	Fund:	Fund:
DeptID:	DeptID:	DeptID:
AppropID:	AppropID:	AppropID:
Project ID: **N/A** Activity:	Project ID: Activity:	Project ID: Activity:
Amount: N/A	Amount:	Amount:

SWIFT Contract No: **257087 / T#2502A**

_____
Number/Date/Entry Initials

SWIFT Order: _____-
Number / Date/ See Signature Page

*[Individual signing SWIFT Order or Contract certifies that funds have been encumbered as required by Minn. Stat. §§ 16A.15*and *16C.05]*

NOTICE TO CONSULTANT: You are required to provide your social security number or Federal employer tax identification number and Minnesota tax identification number if you do business with the State of Minnesota.

Contractor Name and Address: **American Engineering Testing, Inc.**
550 Cleveland Avenue North
St. Paul, MN 55114

Contract Execution Date: 09/13/2024

Contract End Date: 08/31/2029

(*Note: According to Minn. Stat. 16C.08 Subd. 3(5), the combined contract and amendment cannot exceed five years, unless otherwise provided for by law.)

Contact Person: **Phillip Chwialkowski**
Contact Person Phone: **651.789.4651**
Contact Person Email: pchwialkowski@teamAET.com

Docusign Envelope ID: 8FD9B14A-4174-4726-9154-52DC70877C7B

Professional and Technical Services Master Contract

State of Minnesota

SWIFT Contract No.: 00000000000000000000257087
Master Contract T-Number: 2502A

This Master Contract is between the State of Minnesota, acting through its Commissioner of Administration ("State") and **American Engineering Testing, Inc., 550 Cleveland Avenue North, St. Paul, MN 55114** ("Consultant"). State and Consultant may be referred to jointly as "Parties."

Recitals

1. Under Minn. Stat. § 15.061 the State is empowered to engage such assistance as deemed necessary.
2. The State is in need of **construction testing and inspection services;**
3. State issued a solicitation identified as 2000015977, Professional Services for Construction Testing and Inspection on **June 28, 2024,** for **Geotechnical, Concrete Testing and Inspection, Masonry Testing and Inspection, Structural Steel Testing and Inspection, Pavement Testing and Inspection, Window/Curtainwall Testing and Inspection, Roofing/Waterproofing Testing and Inspection, Fireproofing/Firestopping Testing and Inspection, Sealant Pull tests, Fluid-Applied Vapor Barrier Testing, Phase I and II Archaeological Resources Investigations, Phase I and II Environmental Investigation and Remediation Services**. Continuously Open RFP ("Solicitation");
4. Consultant provided a response to the Solicitation indicating its interest in and ability to provide the services requested in the Solicitation; and
5. The Consultant represents that it is duly qualified and agrees to perform services described in this master contract and performed under work order contracts to the satisfaction of the State.
6. Subsequent to an evaluation in accordance with the terms of the Solicitation and negotiation, the Parties desire to enter into a contract.

Accordingly, the Parties agree as follows:

Master Contract

1 Term of Master Contract

1.1 ***Effective Date*:** the date the State obtains all required signatures under Minn. Stat. § 16C.05, subd. 2, whichever is later. **The Consultant must not accept work under this Master Contract until this Master Contract is fully executed and the Consultant has been notified by the State's Authorized Representative that it may begin accepting Work Order Contracts.**

1.2 ***Work Order Contracts.*** The term of work under work order contracts issued under this master contract may not extend beyond the expiration date of this master contract.

1.3 ***Expiration Date*: August 31, 2029.**

1.4 ***Survival of Terms*.** The following clauses survive the expiration or cancellation of this master contract and all work order contracts: Indemnification; State Audits; Government Data Practices and Intellectual Property; Publicity and Endorsement; Governing Law, Jurisdiction, and Venue; and Data Disclosure.

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2 Scope of Work

The Consultant, who is not a state employee, may be requested to perform any of the following services under individual work order contracts:

Geotechnical, Concrete Testing and Inspection, Masonry Testing and Inspection, Structural Steel Testing and Inspection, Pavement Testing and Inspection, Window/Curtainwall Testing and Inspection, Roofing/Waterproofing Testing and Inspection, Fireproofing/Firestopping Testing and Inspection, Sealant Pull tests, Fluid-Applied Vapor Barrier Testing, Phase I and II Environmental Investigation and Remediation Services.

The Contractor understands that only the receipt of a fully executed work order contract authorizes the Contractor to begin work under this master contract. Any and all effort, expenses, or actions taken before the work order contract is fully executed is not authorized under Minnesota Statutes and is undertaken at the sole responsibility and expense of the Contractor. A sample work order contract is attached and incorporated into this master contract as Exhibit A.

The Contractor understands that this master contract is not a guarantee of a work order contract. The State has determined that it may have need for the services under this master contract but does not commit to spending any money with the Contractor.

3 Time

The Consultant must comply with all the time requirements described in work order contracts. In the performance of work order contracts, time is of the essence.

4 Consideration and Payment

4.1 ***Consideration***. The State will pay for all services satisfactorily performed by the Contractor for all work order contracts issued under this master contract. The total compensation of all work order contracts may not exceed **$1,000,000.00**. All costs will follow the Contractor's fee schedule attached as **Exhibit B** and incorporated into this agreement. The Contractor may revise its fee schedule **once a year after the execution date** of this Agreement. However, hourly rates may not exceed a **3%** increase each year. Revised fee schedules meeting the requirements of this section will be effective on the date received by the State.

Travel Expenses. There is no allowable travel or other reimbursable expenses for travel to Projects located **within 100 miles** roundtrip of the Responder's office location (accumulative mileage to and from site), the State ***will not*** pay for travel time. All such expenses are included in the Consultant's fee schedule of hourly rates.

On projects located **over 100 miles** round trip of the Responder's office location, the State ***will*** pay for travel time and Reimbursable Expenses per day for all work days (Monday through Sunday and State Holidays).

***Reimbursable Expenses*:** The State reserves the right to modify the allowable reimbursable expenses prior to execution of Work Order Contracts. In the event expenses are reimbursed, they shall be reimbursed in the same manner and in no greater amount than provided in the current "Commissioner's Plan" promulgated by the Commissioner of Minnesota Management and Budget. A copy of the Commissioner's Plan is available on the web at: at https://mn.gov/mmb/employee-relations/labor-relations/labor/commissioners-plan.jsp. The Contractor will not be reimbursed for travel and subsistence expenses incurred outside Minnesota unless it has received the State's prior written approval for out of state travel. Minnesota will be considered the home state for determining whether travel is out of state.

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Subconsultant and testing services, when approved by the State's Project Manager, will be negotiated as an additional service at one (1.0) times Responder's cost. There are no other allowable reimbursable expenses.

4.2. ***Payment***

(A) ***Invoices.*** The State will promptly pay the Consultant after the Consultant presents an itemized invoice for the services actually performed and the State's Authorized Representative accepts the invoiced services. Invoices must be submitted timely no more frequently than monthly.

(B) **Retainage.** Under Minn. Stat. § 16C.08, subd. 2(10), no more than 90 percent of the amount due under any work order contract may be paid until the final product of the work order contract has been reviewed by the State's agency head. The balance due will be paid when the State's agency head determines that the Consultant has satisfactorily fulfilled all the terms of the work order contract.

5 Conditions of Payment

All services provided by the Consultant under a work order contract must be performed to the State's satisfaction, as determined at the sole discretion of the State's Authorized Representative and in accordance with all applicable federal, state, and local laws, ordinances, rules, and regulations. The Consultant will not receive payment for work found by the State to be unsatisfactory or performed in violation of federal, state, or local law.

6 Authorized Representatives and Project Managers

The State's Authorized Representative for this master contract is Samantha Hicks, Contracts Specialist, 651.201.2389 or Eric Radel, Project Operations Manager, 651.201.2380 his/her successor, and has the responsibility to monitor the Contractor's performance.

The State's Project Manager will be identified in each work order contract.

The Consultant's Authorized Representative is Phillip Chwialkowski, 651.789.4651. If the Consultant's Authorized Representative changes at any time during this master contract, the Consultant must immediately notify the State.

The Consultant's Project Manager will be identified in each work order contract.

7 Assignment, Amendments, Waiver, and Contract Complete

7.1 ***Assignment.*** The Consultant may neither assign nor transfer any rights or obligations under this master contract or any work order contract without the prior consent of the State and a fully executed Assignment Agreement, executed and approved by the same parties who executed and approved this master contract, or their successors in office.

7.2 ***Amendments.*** Any amendment to this master contract or any work order contract must be in writing and will not be effective until it has been executed and approved by the same parties who executed and approved the original contract, or their successors in office.

7.3 ***Waiver.*** If the State fails to enforce any provision of this master contract or any work order contract, that failure does not waive the provision or its right to enforce it.

7.4 ***Contract Complete.*** This master contract and any work order contract contain all negotiations and agreements between the State and the Contractor. No other understanding regarding this master contract or work order contract, whether written or oral, may be used to bind either party.

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8 Force Majeure

Neither party shall be responsible to the other or considered in default of its obligations within this Master Contract and any Work Order Contract to the extent that performance of any such obligations is prevented or delayed by acts of God, war, riot, disruption of government, or other catastrophes beyond the reasonable control of the party unless the act or occurrence could have been reasonably foreseen and reasonable action could have been taken to prevent the delay or failure to perform. A party relying on this provision to excuse performance must provide the other party prompt written notice of the inability to perform and take all necessary steps to bring about performance as soon as practicable.

9 Indemnification

9.1 In the performance of this Master Contract and any Work Order Contract, the Indemnifying Party must indemnify, save, and hold harmless the State, its agents, and employees, from any claims or causes of action, including attorney's fees incurred by the State, to the extent caused by Indemnifying Party's:

- Intentional, willful, or negligent acts or omissions; or
- Actions that give rise to strict liability; or
- Breach of contract or warranty.

The Indemnifying Party is defined to include the Contractor, Contractor's reseller, any third party that has a business relationship with the Contractor, or Contractor's agents or employees, and to the fullest extent permitted by law. The indemnification obligations of this section do not apply in the event the claim or cause of action is the result of the State's sole negligence. This clause will not be construed to bar any legal remedies the Indemnifying Party may have for the State's failure to fulfill its obligation under this Contract.

9.2 Nothing within this Master Contract and any Work Order Contract, whether express or implied, shall be deemed to create an obligation on the part of the State to indemnify, defend, hold harmless or release the Indemnifying Party. This shall extend to all agreements related to the subject matter of this Contract, and to all terms subsequently added, without regard to order of precedence.

10 State Audits

Under Minnesota Statute§ 16C.05, subdivision 5, the Consultant's books, records, documents, and accounting procedures and practices relevant to any work order contract are subject to examination by the State and/or the State Auditor or Legislative Auditor, as appropriate, for a minimum of six years from the end of this master contract.

11 Government Data Practices and Intellectual Property

The Contractor and State must comply with the Minnesota Government Data Practices Act, Minn. Stat. Ch. 13, (or, if the State contracting party is part of the Judicial Branch, with the Rules of Public Access to Records of the Judicial Branch promulgated by the Minnesota Supreme Court as the same may be amended from time to time) as it applies to all data provided by the State under this Master Contract and any Work Order Contract, and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the Contractor under this Master Contract and any Work Order Contract. The civil remedies of Minn. Stat. § 13.08 apply to the release of the data governed by the Minnesota Government Practices Act, Minn. Stat. Ch. 13, by either the Contractor or the State.

If the Contractor receives a request to release the data referred to in this clause, the Contractor must immediately notify and consult with the State's Authorized Representative as to how the Contractor should respond to the request. The Contractor's response to the request shall comply with applicable law.

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12 Intellectual Property Rights.

12.1 Definitions. For the purpose of this Section, the following words and phrases have the assigned definitions:

12.1.1 "Documents" are the originals of any databases, computer programs, reports, notes, studies, photographs, negatives, designs, drawings, specifications, materials, tapes, disks, or other materials, whether in tangible or electronic forms, prepared by the Contractor, its employees, agents, or subcontractors, in the performance of this Master Contract and any Work Order Contract.

12.1.2 "Pre-Existing Intellectual Property" means intellectual property developed prior to or outside the scope of this Master Contract and any Work Order Contract, and any derivatives of that intellectual property.

12.1.3 "Works" means all inventions, improvements, discoveries (whether or not patentable), databases, computer programs, reports, notes, studies, photographs, negatives, designs, drawings, specifications, materials, tapes, and disks conceived, reduced to practice, created or originated by the Contractor, its employees, agents, and subcontractors, either individually or jointly with others in the performance of this Master Contract and any Work Order Contract. "Works" includes Documents.

12.2 Ownership. The State owns all rights, title, and interest in all of the intellectual property rights, including copyrights, patents, trade secrets, trademarks, and service marks in the Works and Documents created and paid for under this Master Contract and any Work Order Contract. The Documents shall be the exclusive property of the State and all such Documents must be immediately returned to the State by the Contractor upon completion or cancellation of this Master Contract and any Work Order Contract. To the extent possible, those Works eligible for copyright protection under the United States Copyright Act will be deemed to be "works made for hire." The Contractor assigns all right, title, and interest it may have in the Works and the Documents to the State. The Contractor must, at the request of the State, execute all papers and perform all other acts necessary to transfer or record the State's ownership interest in the Works and Documents.

12.3 Pre-existing Intellectual Property. Each Party shall retain ownership of its respective Pre-Existing Intellectual Property. The Contractor grants the State a perpetual, irrevocable, non-exclusive, royalty free license for Contractor's Pre-Existing Intellectual Property that are incorporated in the products, materials, equipment, deliverables, or services that are purchased through the Master Contract and any Work Order Contract.

12.4 Obligations.

12.4.1 Notification. Whenever any invention, improvement, or discovery (whether or not patentable) is made or conceived for the first time or actually or constructively reduced to practice by the Contractor, including its employees and subcontractors, in the performance of this Master Contract and any Work Order Contract, the Contractor will immediately give the State's Authorized Representative written notice thereof, and must promptly furnish the State's Authorized Representative with complete information and/or disclosure thereon.

12.4.2 Representation. The Contractor must perform all acts, and take all steps necessary to ensure that all intellectual property rights in the Works and Documents are the sole property of the State, and that neither Contractor nor its employees, agents, or subcontractors retain any interest in and to the Works and Documents. The Contractor

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represents and warrants that the Works and Documents do not and will not infringe upon any intellectual property rights of other persons or entities.

12.4.3 Indemnification. Notwithstanding any other indemnification obligations addressed within this Master Contract and any Work Order Contract, the Contractor will indemnify; defend, to the extent permitted by the Attorney General; and hold harmless the State, at the Contractor's expense, from any action or claim brought against the State to the extent that it is based on a claim that all or part of the Works or Documents infringe upon the intellectual property rights of others. The Contractor will be responsible for payment of any and all such claims, demands, obligations, liabilities, costs, and damages, including but not limited to, attorney fees. If such a claim or action arises, or in the Contractor's or the State's opinion is likely to arise, the Contractor must, at the State's discretion, either procure for the State the right or license to use the intellectual property rights at issue or replace or modify the allegedly infringing works or documents as necessary and appropriate to obviate the infringement claim. This remedy of the State will be in addition to and not exclusive of other remedies provided by law.

13 Affirmative Action Requirements for Contracts in Excess of $100,000 and if the Consultant has More than 40 Full-time Employees in Minnesota or its Principal Place of Business

The State intends to carry out its responsibility for requiring affirmative action by its Consultants.

13.1. Covered Contracts and Consultants. If the Contract exceeds $100,000 and the Consultant employed more than 40 full-time employees on a single working day during the previous 12 months in Minnesota or in the state where it has its principle place of business, then the Consultant must comply with the requirements of Minnesota Statute § 363A.36 and Minnesota Rule Parts 5000.3400-5000.3600. A Consultant covered by Minnesota Statute § 363A.36 because it employed more than 40 full-time employees in another state and does not have a certificate of compliance, must certify that it is in compliance with federal affirmative action requirements.

13.2. Minnesota Statute § 363A.36. Minnesota Statute § 363A.36 requires the Consultant to have an affirmative action plan for the employment of minority persons, women, and qualified disabled individuals approved by the Minnesota Commissioner of Human Rights ("Commissioner") as indicated by a certificate of compliance. The law addresses suspension or revocation of a certificate of compliance and contract consequences in that event. A contract awarded without a certificate of compliance may be voided.

13.3. Minnesota Rule Parts 5000.3400-5000.3600.

(A) *General*. Minnesota Rule Parts 5000.3400-5000.3600 implement Minnesota Statute § 363A.36. These rules include, but are not limited to, criteria for contents, approval, and implementation of affirmative action plans; procedures for issuing certificates of compliance and criteria for determining a Consultant's compliance status; procedures for addressing deficiencies, sanctions, and notice and hearing; annual compliance reports; procedures for compliance review; and contract consequences for non-compliance. The specific criteria for approval or rejection of an affirmative action plan are contained in various provisions of Minnesota Rule Parts 5000.3400-5000.3600 including, but not limited to, parts 5000.3420-5000.3500 and 5000.3552-5000.3559.

(B) *Disabled Workers*. The Consultant must comply with the following affirmative action requirements for disabled workers.

(1) The Consultant must not discriminate against any employee or applicant for employment because of physical or mental disability in regard to any position for which the employee or applicant for employment is qualified. The Consultant agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified disabled persons without

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discrimination based upon their physical or mental disability in all employment practices such as the following: employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

(2) The Consultant agrees to comply with the rules and relevant orders of the Minnesota Department of Human Rights issued pursuant to the Minnesota Human Rights Act.

(3) In the event of the Consultant's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with Minnesota Statutes Section 363A.36, and the rules and relevant orders of the Minnesota Department of Human Rights issued pursuant to the Minnesota Human Rights Act.

(4) The Consultant agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the commissioner of the Minnesota Department of Human Rights. Such notices must state the Consultant's obligation under the law to take affirmative action to employ and advance in employment qualified disabled employees and applicants for employment, and the rights of applicants and employees.

(5) The Consultant must notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Consultant is bound by the terms of Minnesota Statutes Section 363A.36, of the Minnesota Human Rights Act and is committed to take affirmative action to employ and advance in employment physically and mentally disabled persons.

(C) *Consequences*. The consequences for the Consultant's failure to implement its affirmative action plan or make a good faith effort to do so include, but are not limited to, suspension or revocation of a certificate of compliance by the Commissioner, refusal by the Commissioner to approve subsequent plans, and termination of all or part of this contract by the Commissioner or the State.

(D) *Certification*. The Consultant hereby certifies that it is in compliance with the requirements of Minnesota Statute§ 363A.36 and Minnesota Rule Parts 5000.3400-5000.3600 and is aware of the consequences for noncompliance.

14 Workers' Compensation and Other Insurance

Consultant certifies that it is in compliance with all insurance requirements specified in Exhibit D1.

Further, the Consultant certifies that it is in compliance with Minnesota Statute§ 176.181, subdivision 2, pertaining to workers' compensation insurance coverage. The Consultant's employees and agents will not be considered State employees. Any claims that may arise under the Minnesota Workers' Compensation Act on behalf of these employees or agents and any claims made by any third party as a consequence of any act or omission on the part of these employees or agents are in no way the State's obligation or responsibility.

15 Publicity and Endorsement

15.1 ***Publicity***. Any publicity regarding the subject matter of a work order contract must identify the State as the sponsoring agency and must not be released without prior written approval from the State's Authorized Representative. For purposes of this provision, publicity includes notices, informational pamphlets, press releases, research, reports, signs, and similar public notices prepared by or for the Consultant individually or jointly with others, or any subconsultants, with respect to the program, publications, or services provided resulting from a work order contract.

15.2 ***Endorsement***. The Consultant must not claim that the State endorses its products or services.

16 Governing Law, Jurisdiction, and Venue

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Minnesota law, without regard to its choice-of-law provisions, governs this master contract and all work order contracts. Venue for all legal proceedings out of this master contract and/or any work order contracts, or its breach, must be in the appropriate state or federal court with competent jurisdiction in Ramsey County, Minnesota.

17 Payment to Subconsultants

(If applicable) As required by Minnesota Statute§ 16A.1245, the prime Consultant must pay all subconsultants, less any retainage, within 10 calendar days of the prime Consultant's receipt of payment from the State for undisputed services provided by the subconsultant(s) and must pay interest at the rate of one and one-half percent per month or any part of a month to the subconsultant(s) on any undisputed amount not paid on time to the subconsultant(s).

18 Minnesota Statute§ 181.59 The vendor will comply with the provisions of Minnesota Statute § 181.59 which requires:

> Every contract for or on behalf of the state of Minnesota, or any county, city, town, township, school, school district, or any other district in the state, for materials, supplies, or construction shall contain provisions by which the Consultant agrees: (1) That, in the hiring of common or skilled labor for the performance of any work under any contract, or any subcontract, no Consultant, material supplier, or vendor, shall, by reason of race, creed, or color, discriminate against the person or persons who are citizens of the United States or resident aliens who are qualified and available to perform the work to which the employment relates; (2) That no Consultant, material supplier, or vendor, shall, in any manner, discriminate against, or intimidate, or prevent the employment of any person or persons identified in clause (1) of this section, or on being hired, prevent, or conspire to prevent, the person or persons from the performance of work under any contract on account of race, creed, or color; (3) That a violation of this section is a misdemeanor; and (4) That this contract may be canceled or terminated by the state, county, city, town, school board, or any other person authorized to grant the contracts for employment, and all money due, or to become due under the contract, may be forfeited for a second or any subsequent violation of the terms or conditions of this contract.

19 Termination

19.1 ***Termination for Convenience***. The State or Commissioner of Administration may cancel this Master Contract and any Work Order Contract at any time, with or without cause, upon 30 days' written notice to the Contractor. Upon termination for convenience, the Contractor will be entitled to payment, determined on a pro rata basis, for services or goods satisfactorily performed or delivered.

19.2 ***Termination for Breach.*** The State may terminate this Master Contract and any Work Order Contract, with cause, upon 30 days' written notice to Contractor of the alleged breach and opportunity to cure. If after 30 days, the alleged breach has not been remedied, the State may immediately terminate the Contract.

19.3 ***Termination for Insufficient Funding.*** The State may immediately terminate this Master Contract and any Work Order Contract if it does not obtain funding from the Minnesota Legislature, or other funding source; or if funding cannot be continued at a level sufficient to allow for the payment of the services addressed within this Contract. Termination must be by written notice to the Contractor. The State is not obligated to pay for any services that are provided after notice and effective date of termination. However, the Contractor will be entitled to payment, determined on a pro rata basis, for services satisfactorily performed to the extent that dedicated funds are available. The State will not be assessed any penalty if the Contract is terminated because of the decision of the Minnesota Legislature, or other funding source, not to appropriate funds. The State

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must provide the Contractor notice of the lack of funding. This notice will be provided within a reasonable time of the State's receiving notice.

20 Data Disclosure

Under Minnesota Statute § 270C.65, Subdivision 3 and other applicable law, the Consultant consents to disclosure of its social security number, federal employer tax identification number, and/or Minnesota tax identification number, already provided to the State, to federal and state agencies and state personnel involved in the payment of state obligations. These identification numbers may be used in the enforcement of federal and state laws which could result in action requiring the Consultant to file state tax returns, pay delinquent state tax liabilities, if any, or pay other state liabilities.

21 E-Verify Certification (In accordance with Minn. Stat. §16C.075)

For services valued in excess of $50,000, Consultant certifies that as of the date of services performed on behalf of the State, Consultant and all its subconsultants will have implemented or be in the process of implementing the federal E-Verify program for all newly hired employees in the United States who will perform work on behalf of the State. Consultant is responsible for collecting all subconsultant certifications and may do so utilizing the E-Verify Subconsultant Certification Form available at http://www.mmd.admin.state.mn.us/doc/EverifySubCertForm.doc. All subconsultant certifications must be kept on file with Consultant and made available to the State upon request.

22 Certification of Nondiscrimination (In accordance with Minn. Stat. § 16C.053)

The following term applies to any contract for which the value, including all extensions, is $50,000 or more: Consultant certifies it does not engage in and has no present plans to engage in discrimination against Israel, or against persons or entities doing business in Israel, when making decisions related to the operation of the vendor's business. For purposes of this section, "discrimination" includes but is not limited to engaging in refusals to deal, terminating business activities, or other actions that are intended to limit commercial relations with Israel, or persons or entities doing business in Israel, when such actions are taken in a manner that in any way discriminates on the basis of nationality or national origin and is not based on a valid business reason.

23 Debarment by State, its Departments, Commissions, Agencies, or Political Subdivisions.

Contractor certifies that neither it nor its principals is presently debarred or suspended by the Federal government, the State, or any of the State's departments, commissions, agencies, or political subdivisions. Contractor's certification is a material representation upon which the Contract award was based. Contractor shall provide immediate written notice to the State's Authorized Representative if at any time it learns that this certification was erroneous when submitted or becomes erroneous by reason of changed circumstances.

24 Federal Funds.

24.1 Compliance with Federal Requirements. Federal money will be used or may potentially be used to pay for all or part of the goods, construction or services under the Master Contract. The Contractor is responsible for compliance with all federal requirements imposed on the funds and accepts full financial responsibility for any requirements imposed by the Contractor's failure to comply with federal requirements.

24.2 Certification regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion. Federal money will be used or may potentially be used to pay for all or part of the work under the Master Contract, therefore Contractor certifies that it is in compliance with federal requirements on debarment, suspension, ineligibility and voluntary exclusion specified in the solicitation document implementing Executive Order 12549. Contractor's certification is a material representation upon which the Contract award was based.

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25 Contingency Fees Prohibited.

Pursuant to Minn. Stat. § 10A.06, no person may act as or employ a lobbyist for compensation that is dependent upon the result or outcome of any legislation or administrative action.

26 Schedule of Exhibits

The following exhibits are attached and incorporated into this Master Contract.

Exhibit A: Sample Work Order
Exhibit B: Fee Schedule
Exhibit C: Consultant's Qualifications
Exhibit D:

1. State Insurance Requirements
2. Consultant Certificate of Insurance

Exhibit E: Workforce and Equal Pay Declaration
Exhibit F: Certification Regarding Lobbying
Exhibit G: Not Used
Exhibit H: Not Used
Exhibit I: Affidavit of Noncollusion

Distribution:
Consultant
Agency
State's Authorized Representative

Signatures

Title	Name	Signature	Date
VP	Phillip Chwialkowski	Signed by: Phillip Chwialkowski DA1D00F32040472...	September 13, 2024
Accounting Technician	Julie C. Ouradnik	DocuSigned by: Julie C Ouradnik 9417904E36A0440...	September 13, 2024
Construction Ops Mgr	Radel,Eric Alan	DocuSigned by: Radel,Eric Alan 6B7A6FF4AA564AB...	September 13, 2024
Contracts Specialist	Haylie Heil	DocuSigned by: Haylie Heil 4AB4CCB119DA413...	September 13, 2024

Admin ID

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Exhibit A

State of Minnesota Professional and Technical Services Work Order Contract

SWIFT Contract Number:_____
Master Contract T-Number:_____

This Work Order Contract is between the State of Minnesota, acting through its Commissioner of Administration, **Real Estate and Construction Services, 309 Administration Building, 50 Sherburne Ave., St. Paul, MN 55155** ("State") and [Contractor] whose designated business address is [Contractor's business address] ("Contractor"). This Work Order Contract is issued under the authority of Master Contract T-Number [####], SWIFT Contract Number [####], and is subject to all provisions of the Master Contract which is incorporated by reference.

Contract

1. **Term of Contract**
   1.1 **Effective date.** The date the State obtains all required signatures under Minn. Stat. § 16C.05, subd. 2. **The Contractor must not being work under this contract until this contract is fully executed and the Contractor has been notified by the State's Authorized Representative to begin work.**

   1.2 **Expiration date.** [Spell out full date (e.g., March 31, 2020)], or until all obligations have been satisfactorily fulfilled, whichever occurs first.

2. **CONSULTANT's Duties**

The CONSULTANT shall perform all duties described in this Contract to the satisfaction of the State.

The CONSULTANT, who is not a state employee, will perform [FILL IN BRIEF DESCRIPTION OF CONSULTANT DUTIES], including the duties identified in attached Exhibit [A], dated [Month Day, Year], which is incorporated by reference and made a part of this Work Order. No terms and conditions of the CONSULTANT's proposal will be construed to modify, diminish or derogate the terms and conditions of this Work Order.

3. **Consideration and Payment**
   3.1 Consideration. The State will pay for all services performed by the CONSULTANT under this work order contract as follows:

   3.1.1 **Compensation**. Compensation in an amount not to exceed [## CONSULTANT FEE], as provided in attached Exhibit [A], dated [Month Day, Year] which is incorporated by reference and made a part of this Work Order and in accordance with Master Contract No. [Master Contract T-Number [####], SWIFT Contract Number [####]], fee schedule on file with the STATE.

   3.1.2 **Travel Expenses**. Reimbursement for travel and subsistence expenses actually and necessarily incurred by the Contractor as a result of this Work Order Contract will not exceed $[##]. In the event these expenses are reimbursed, they shall be reimbursed in the same manner and in no greater amount than provided in the current "Commissioner's Plan" promulgated by the Commissioner of Minnesota Management and Budget, which is incorporated in the contract by reference. A copy of the Commissioner's Plan is available on the Web at: http://www.mmb.state.mn.us/comp-commmissioner (click on "Commissioner's Plan" in the right side column). The CONSULTANT will not be reimbursed for travel and subsistence expenses incurred outside Minnesota unless it has received

SAMPLE

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the State's prior written approval for out of state travel. Minnesota will be considered the home state for determining whether travel is out of state.

3.1.3 **Total Obligation**. The total obligation of the State for all compensation and reimbursements to the Contractor under this Work Order Contract will not exceed $[##]. [This must be the combined total of compensation and travel expenses, if applicable.]

3.2 **Invoices**. The State will promptly pay the CONSULTANT after the CONSULTANT presents an itemized invoice for the services actually performed and the State's Authorized Representative accepts the invoiced service, pursuant to clause 4.2 of Master Contract [Master Contract T-Number [####], SWIFT Contract Number [####]]. Invoices must be submitted timely and according to the following schedule:

CONSULTANT shall use the STATE's "Pay Request Form for Consultant" to request payment for services. Pay Request Forms shall identify hours worked, services performed, and detailed information on reimbursable expenses. A Pay Request Form shall be submitted monthly for work completed and shall be marked as a partial or final billing. A copy of the Pay Request Form is available on the Web at: http://mn.gov/admin/business/vendor-info/construction-projects/manuals-guidelines-forms/forms/index.jsp

4. **Project Managers/Authorized Representative:**

The STATE's Authorized Representative for the purposes of administration of this work order is [name, telephone number]. T Such representative shall have final authority for acceptance of CONSULTANT's services and if such services are accepted as satisfactory, shall so certify on each invoice submitted for payment.

The CONSULTANT's Authorized Representative for the purposes of administration of this Work Order is [name, telephone number]. If the CONSULTANT's Project Manager changes at any time during this work order contract, the CONSULTANT must immediately notify the State.

5. If the final product of the contract is a written report, the Consultant must file a copy with the State of Minnesota Legislative Reference Library in accordance with Minnesota Statute 16C.08 Sub. 6. One (1) electronic copy (Word, PDF, URL) to reports@lrl.leg.mn and two (2) print copies to:

Legislative Reference Library
645 State Office Bldg.
100 Rev. Dr. MLK Jr. Blvd.
St. Paul, MN 55155

[IF CONTRACT WILL EXCEED $50,000, THE FOLLOWING CLAUSE MUST BE INCLUDED if not already included in Master Contract:]

Certification of Nondiscrimination (In accordance with Minn. Stat. § 16C.053)

The following term applies to any contract for which the value, including all extensions, is $50,000 or more: Contractor certifies it does not engage in and has no present plans to engage in discrimination against Israel, or against persons or entities doing business in Israel, when making decisions related to the operation of the vendor's business. For purposes of this section, "discrimination" includes but is not limited to engaging in refusals to deal, terminating business activities, or other actions that are intended to limit commercial relations with Israel, or persons or entities doing business in Israel, when such actions are taken in a manner that in any way discriminates on the basis of nationality or national origin and is not based on a valid business reason.

IN WITNESS WHEREOF, the parties have caused this Work Order to be duly executed intending to be bound thereby.

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[The number of signatures required for your work order depends on the number required by the Department of Administration's master contract certification form.]

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Exhibit B: Hourly Fee Schedule

Hourly Fee Schedule and Other Rates

A complete 2024 Fee Schedule for American Engineering Testing is included on the following pages.

We understand that our fee schedule may be revised once a year after the start date of the Master Contract, with hourly rates may not exceed a 3% increase each year. We also understand that the State will only pay for travel time and/or expenses on projects located over 100 miles round trip from our office location (including Monday through Sunday and State Holidays)

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AMERICAN ENGINEERING TESTING

Saint Paul 2024 Fee Schedule

AET Employee Personnel Rates		
Description	**Unit**	**Rate**
Chemist, Senior	Hour	$225.00
Chemist, Principal	Hour	$265.00
Draftsperson I	Hour	$115.00
Draftsperson II	Hour	$150.00
Draftsperson- Design	Hour	$180.00
Drilling Crew Assistant	Hour	$115.00
Drilling Technician	Hour	$125.00
Drilling Crew Chief	Hour	$135.00
Engineer, Field	Hour	$115.00
Engineer, Level I	Hour	$170.00
Engineer, Level II	Hour	$190.00
Engineer, Senior	Hour	$220.00
Engineer, Principal	Hour	$265.00
Expert Witness-Deposition or Court Time (4 hr minimum)	Hour	$475.00
Expert Witness-Litigation Preparation	Hour	$380.00
Geologist, Field	Hour	$115.00
Geologist, Level I	Hour	$170.00
Geologist, Level II	Hour	$190.00
Geologist, Senior	Hour	$220.00
Geologist, Principal	Hour	$265.00
NDT Technician, Level I	Hour	$105.00
NDT Technician, CWI Certified, Level II	Hour	$145.00
NDT Technician, Level II	Hour	$130.00
NDT Technician, Level III	Hour	$145.00
Petrographer, Level I	Hour	$190.00
Petrographer, Level II	Hour	$200.00
Petrographer, Senior	Hour	$225.00
Petrographer, Principal	Hour	$265.00
Principal of Firm	Hour	$295.00
Project Administrator	Hour	$85.00
Project Manager, Level I	Hour	$170.00
Project Manager, Level II	Hour	$190.00
Project Manager, Senior	Hour	$220.00
Project Manager, Principal	Hour	$265.00
Scientist, Field	Hour	$115.00
Scientist, Level I	Hour	$170.00
Scientist, Level II	Hour	$190.00
Scientist, Senior	Hour	$220.00
Scientist, Principal	Hour	$265.00
Technician, Level I	Hour	$100.00
Technician, Level II	Hour	$115.00
Technician, Level III, Senior	Hour	$135.00
Technician, Level IV, Engineering Assistant	Hour	$160.00
Engineering Assistant, Senior	Hour	$170.00

The rates presented are portal to portal, with vehicle mileage, expenses, and equipment rentals being additional. Overtime for personnel charged at above cost plus 25% for over 8 hours per day, nights, or Saturday; and at above cost plus 50% for Sundays or Holidays.

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AET Equipment Rental		
Service Item	**Unit**	**Rate**
Air Compressor (Standard)	Day	$100.00
Borescope	Each	$100.00
Concrete Testing Equipment	Day	$23.00
Coring Equipment - Hourly	Hour	$74.00
Coring Equipment - Daily	Day	$420.00
Electronic Leak Detector Rental	Day	$315.00
Floor Flatness Profilograph Equipment Rental	Day	$179.00
GPS Equipment Rental	Day	$210.00
Hammer Drill Rental	Each	$35.00
Ladders	Day	$20.00
Metal Detector	Day	$53.00
Mobile Construction Site Trailer Rental	Day	$104.00
Nuclear Density Gauge Rental - Daily	Day	$76.00
Nuclear Density Gauge Rental - Hourly	Hour	$18.00
Seismograph Equipment Rental (daily)	Day	$105.00
Seismograph Equipment Rental (weekly)	WEEK	$630.00
Seismograph Equipment Rental (monthly)	Month	$1,575.00
AET Project Direct Expenses		
Lab Minimum	Project	$275.00
Report	Each	$70.00
Sample Pickup	Each	$100.00
Asphalt Patching Material	Each	$23.00
Bag of Granular Bentonite	Each	$14.00
Beam Mold with Prep and Cleanup	Each	$76.00
Borehole Grouting Per Foot- Bentonite Grout	Foot	$2.00
Borehole Grouting Per Foot- Neat Cement Grout	Foot	$11.00
Bumper Post	Each	$76.00
Case of 4x8 Cylinder Molds	Each	$100.00
Case of 6x12 Cylinder Molds	Each	$100.00
Core Drill Bit Wear	Inch	$9.00
Core Hole Patching Material	Each	$15.00
Cube Mold Rental	Day	$58.00
Film (14 x 17 Inch)	Each	$19.00
Film (4.5 x 10 Inch)	Each	$7.00
Film (4.5 x 17.5 Inch)	Each	$8.00
Film (7 x 17 Inch)	Each	$12.00
Grout Box	Each	$15.00
Individual Plastic Cylinder Molds (one time use)	Each	$6.00
Locking J Plug	Each	$15.00
Maturity Probes	Each	$131.00
MC PVC Liner 60”	Each	$4.00
Paint Filter	Each	$53.00
Patching Material	Each	$18.00
Plugs/Caps	Each	$8.00
ProTop	Each	$200.00
Redi-Mix Concrete	Each	$13.00
Riser	Each	$53.00
Sampling Materials (GW or Soil)	Sample	$41.00
Screen	Each	$71.00
Shelby Tubes	Each	$53.00
Well Sand	Each	$29.00
AET Vehicle Mileage and Rental		
Standard Vehicle Mileage	Mile	$1.30
Company Vehicle Rental	Hour	$30.00
Auxiliary Vehicle Mileage	Mile	$1.60
Auxiliary Vehicle Rental	Hour	$37.00
Auxiliary Vehicle Rental - Daily	Day	$92.00

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AET Vehicle Mileage and Rental - Continued		
Service Item	**Unit**	**Rate**
Truck with Drill Rig Mileage	Mile	$1.85
Truck with Drill Rig Rental	Hour	$116.00
Rotary Drill on All-Terrain Vehicle Rental	Hour	$151.00
Tractor with Lowboy Trailer Mileage	Mile	$2.40
Trailer Rental	Day	$95.00
CPT Rig Mileage	Mile	$2.20
CPT Rig Rental	Hour	$197.00
Truck with Warning Sign/Crash Trailer Mileage	Mile	$1.70
Truck with Warning Sign/Crash Trailer Rental	Hour	$55.00
Dark Room Truck Mileage	Mile	$1.65
Dark Room Truck Rental	Hour	$37.00
Aggregate		
AASHTO T 103 Aggregate Freeze-Thaw Procedure A	Test	$488.00
AASHTO T 103 Aggregate Freeze-Thaw Procedure B or C	Test	$788.00
AASHTO T 11 / ASTM C117 Materials Finer Than No. 200 Sieve	Test	$133.00
AASHTO T 113 Lightweight Pieces (shale)	Test	$214.00
AASHTO T 176 Sand Equivalent of Fine Aggregate	Test	$260.00
AASHTO T 19 Bulk Density and Voids in Coarse Aggregate	Test	$110.00
AASHTO T 19 Bulk Density and Voids in Fine Aggregate	Test	$110.00
AASHTO T 27 Sieve Analysis of Coarse or Fine Aggregate	Test	$145.00
AASHTO T 304 Uncompacted Void Content of Fine Aggregate (FAA)	Test	$146.00
AASHTO T 326 Coarse Aggregate Angularity	Test	$152.00
AASHTO T 330 Methylene Blue	Test	$305.00
AASHTO T 335 Fractured Particles in Coarse Aggregate	Test	$116.00
AASHTO T 96 Degradation of Coarse Aggregate by Los Angeles Abrasion	Test	$289.00
ACI 211.2 Specific Gravity and Absorption of Lightweight Aggregate	Test	$247.00
Aggregate Crushing	Hour	$126.00
Aggregate Qualification Testing	Each	$3,465.00
ASTM C117 Materials Finer Than No. 200 Sieve	Test	$68.00
ASTM C123 Lightweight Particles in Coarse Aggregate	Test	$180.00
ASTM C123 Lightweight Particles in Coarse Aggregate @ 2.0	Test	$179.00
ASTM C123 Lightweight Particles in Coarse Aggregate @ 2.4	Test	$263.00
ASTM C123 Lightweight Particles in Fine Aggregate	Test	$145.00
ASTM C123 Lightweight Particles in Fine Aggregate @ 2.0	Test	$147.00
ASTM C123 Lightweight Particles in Fine Aggregate @ 2.4	Test	$231.00
ASTM C1252 Uncompacted Void Content of Fine Aggregate	Test	$139.00
ASTM C1252/AASHTO T 304 Fine Aggregate Angularity Method A	Test	$147.00
ASTM C1252/AASHTO T 304 Fine Aggregate Angularity Method C	Test	$147.00
ASTM C127 Specific Gravity and Absorption of Coarse Aggregate	Test	$126.00
ASTM C128 Specific Gravity and Absorption of Fine Aggregate	Test	$137.00
ASTM C131 Los Angeles Rattler (LAR) Abrasion	Test	$131.00
ASTM C136 Sieve Analysis of Aggregate (Coarse and Fine)	Test	$135.00
ASTM C136 Sieve Analysis of Asphalt Aggregate	Test	$133.00
ASTM C136 Sieve Analysis of Coarse Aggregate	Test	$68.00
ASTM C136 Sieve Analysis of Coarse Aggregate (3 in. plus)	Test	$300.00
ASTM C136 Sieve Analysis of Coarse Aggregate (Base Aggregate)	Test	$162.00
ASTM C136 Sieve Analysis of Coarse Aggregate (RAB Aggregate)	Test	$185.00
ASTM C136 Sieve Analysis of Fine Aggregate (includes #200 wash)	Test	$137.00
ASTM C142 Clay Lumps and Friable Particles in Coarse Aggregate	Test	$142.00
ASTM C142 Clay Lumps and Friable Particles in Fine Aggregate	Test	$110.00
ASTM C144 Aggregate for Masonry Mortar	Sample	$924.00
ASTM C1524 (Soxhlet) Water-Extractable Chlorides in Aggregate	Sample	$555.00
ASTM C1777 Methylene Blue	Sample	$305.00
ASTM C1778 Alkali Carbonate Reaction Potential XRF	Test	$580.00
ASTM C231 Air Content by Pressure Method, Agg Correction Factor	Test	$289.00
ASTM C289 Potential ASR of Aggregates-Chemical Method	Test	$1,250.00
ASTM C29 Unit Weight of Coarse Aggregate (Loose or Rodded)	Test	$95.00

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Aggregate - Continued		
Service Item	**Unit**	**Rate**
ASTM C29 Unit Weight of Fine Aggregate (Loose or Rodded)	Test	$84.00
ASTM C295 Petrographic Analysis of Aggregate for Concrete-Coarse	Test	$2,100.00
ASTM C295 Petrographic Analysis of Aggregate for Concrete-Fine	Test	$2,100.00
ASTM C295 Petrographic Analysis of Rock	Test	$580.00
ASTM C33 Standard Spec for Concrete Aggregate-Coarse	Test	$1,560.00
ASTM C33 Standard Spec for Concrete Aggregate-Fine	Test	$1,445.00
ASTM C40 Modified Test for Organic Impurities	Test	$81.00
ASTM C40 Organic Impurities in Fine Aggregate	Test	$84.00
ASTM C535 Los Angeles Rattler (LAR) Abrasion of Coarse Aggregate	Test	$184.00
ASTM C641 Lightweight Staining	Test	$578.00
ASTM C702 Reducing Samples to Testing Size	Test	$85.00
ASTM C87 Organic Impurities in Fine Aggregate	Test	$1,500.00
ASTM C88 Soundness of Aggregates (5 cycles on 2 pans)	Test	$315.00
ASTM C88 Soundness of Aggregates (5 cycles on 3 pans)	Test	$315.00
ASTM C88 Soundness of Aggregates (5 cycles on 4 pans)	Test	$315.00
ASTM C88 Soundness of Aggregates (5 cycles on 5 pans)	Test	$315.00
ASTM D1140 Material Finer Than No. 200 Sieve in Soils	Each	$64.00
ASTM D2419 Sand Equivalent Value of Soils and Fine Aggregate	Test	$268.00
ASTM D3042 Insoluble Residue in Carbonate Aggregates	Test	$1,575.00
ASTM D3042 Insoluble Residue in Carbonate Aggregates- AET Modified	Test	$370.00
ASTM D3042 Insoluble Residue in Carbonate Aggregates- Kentucky Method 64-265-08	Test	$610.00
ASTM D3042 Insoluble Residue in Carbonate Aggregates, Plus No. 200 Insoluble Residue	Test	$945.00
ASTM D3744/AASHTO T 210 Aggregate Durability Index	Test	$357.00
ASTM D4791 Flat and Elongated Particles	Test	$221.00
ASTM D5239 Chemical Characterization of Fly Ash for Soil Stabilization	Sample	$970.00
ASTM D5821 Percent Fractured Particles in Coarse Aggregate	Test	$221.00
ASTM D6928 Coarse Aggregate Degradation by Micro Deval	Test	$305.00
ASTM D7012 Compressive Strength of Intact Rock Cores	Test	$750.00
ASTM D7428 Resistance of Fine Aggregate Degradation by Micro Deval	Test	$305.00
AWWA B100 Acid Solubility	Each	$158.00
AWWA B100 Mechanical Analysis-Coarse & Fine Aggregate	Each	$105.00
AWWA B100 MOH Hardness	Each	$105.00
AWWA B100 Porosity	Each	$105.00
AWWA B100 Thin, Flat and Elongated	Each	$158.00
AWWA B202 Available CaO Sec. 5.3	Test	$945.00
Canadian Sulfide Sulfur for Aggregates	Sample	$650.00
Chemical Composition of Carbonate Aggregates - TGA & XRF	Test	$610.00
CRD-C130 Scratch Hardness of Aggregate	Test	$231.00
Electrical Conductivity (EC)	Test	$39.00
Electrical Resistivity Coarse Aggregate- Substation Yard Surfacing	Test	$578.00
Field Gradation of Rip Rap Material	Sample	QUOTE
FLH T508 Flakiness Index of Aggregate	Test	$210.00
Fractured Faces	Test	$173.00
Hardness, Total	Test	$23.00
Insoluble Residue	Test	$140.00
ISSA TB-100 Raveling	SET	$394.00
Marshall Air Voids	Test	$254.00
Mill Abrasion	Test	$310.00
Sandstone Percentage	Test	QUOTE
USACE Deleterious Series CA +3/4" (200 lbs)	Test	$6,300.00
USACE Deleterious Series CA -3/4" (25 lbs)	Test	$5,700.00
USACE Deleterious Series FA (10 lbs)	Test	$2,100.00
Aggregate - Rip Rap		
Sample Preparation for Rip Rap	Hour	$115.00
ASTM D4644 Slake Durability of Shales and Other Similar Weak Rocks	CORE	QUOTE
ASTM D4992 Petrographic Analysis of Rock Used for Erosion Control	Test	$950.00

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Aggregate - Rip Rap - Continued		
Service Item	**Unit**	**Rate**
ASTM D5312/CRD-C144 Durability of Rock for Erosion Under Freeze-Thaw	Test	$1,155.00
ASTM D5313/CRD-C169 Durability of Rock for Erosion Under Wet-Dry	Test	$1,735.00
ASTM D6473 Absorption and Specific Gravity	Test	$265.00
CRD-C148 Expansive Breakdown on Soaking in Ethylene Glycol of Stone	Test	$750.00
Air Monitoring Services and Equipment Rental		
ACM Air Monitoring Kit	Day	$163.00
ACM Hi Volume Air Sampling Pumps	Day	$11.00
ACM Phase Contrast Microscope Kit	Day	$110.00
Air Flow Measurement Instrumentation	Day	$137.00
Air Quality Analysis	Test	$173.00
Asbestos Inspection	Test	$173.00
Bulk Asbestos (Multiple)	Test	$33.00
Bulk Asbestos (Single)	Test	$46.00
Dust - Mold; Cassettes-Slides-Swabs	Each	$9.00
EPA Method 10 Analyzer	Day	$357.00
EPA Method 18/NCASI Sample Train	Day	$278.00
EPA Method 23 Sampling Train	Day	$630.00
EPA Method 25A Analyzer	Day	$415.00
EPA Method 25A Methane Cutter Analyzer	Day	$441.00
EPA Method 29 Sampling Train	Day	$630.00
EPA Method 3A Analyzers	Day	$357.00
EPA Method 4 Sampling Train	Day	$278.00
EPA Method 5 17 Sampling Train	Day	$467.00
EPA Method 6C Analyzer	Day	$357.00
EPA Method 7E Analyzer	Day	$357.00
Explosimeter/Combustible Gas Indicator	Day	$122.00
Extractive FTIR Analyzer	WEEK	$3,675.00
Gas Meter LEL-O2-H2S-CO	Day	$126.00
Heated Sample Line Assembly	Day	$163.00
Hi and Lo Volume Air Sampling Pumps	Each	$15.00
Hi and Lo Volume Pump Calibration Equipment	Day	$21.00
Mobile Air Lab	Quote	$95.00
Mold Analysis	Test	$104.00
Photoionization Detector	Each	$137.00
Quality Control Charts	Each	$1,271.00
Quality Control Program	Each	$924.00
Sample Gas Conditioner	Day	$110.00
Tedlar Bag	Each	$32.00
Tedlar Bag Vacuum Sample Train	Day	$110.00
Alkali Reactivity		
AASHTO T 303 Potential ASR Coarse Aggregate	Test	$1,065.00
AASHTO T 303 Potential ASR Fine Aggregate	Test	$1,065.00
ASTM C1105 Potential ACR of Concrete	Test	$1,560.00
ASTM C1260 Potential ASR Aggregate Combination	Test	$1,155.00
ASTM C1260 Potential ASR Coarse Aggregate	Test	$920.00
ASTM C1260 Potential ASR Fine Aggregate	Test	$920.00
ASTM C1293 Potential Reactivity of Coarse Aggregate	Test	$1,550.00
ASTM C1293 Potential Reactivity of Fine Aggregate	Test	$1,450.00
ASTM C1567 Potential ASR Aggregate Combination	Test	$1,155.00
ASTM C1567 Potential ASR Coarse Aggregate	Test	$920.00
ASTM C1567 Potential ASR Fine Aggregate	Test	$920.00
ASTM C227 Potential ASR Coarse Aggregate	Test	$1,040.00
ASTM C227 Potential ASR Fine Aggregate	Test	$1,040.00
ASTM C586 Potential ACR of Quarry Stone	Test	$1,130.00
CRD-C662-10 Potential ASR Mitigation with Lithium Admixture	Test	$1,155.00

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Bituminous		
Service Item	**Unit**	**Rate**
AASHTO T 209 Rice Theorectical Max Specific Gravity of Hot Mix Asphalt	Test	$173.00
AASHTO T 324 Hamburg Wheel of Compacted Asphalt (MnDOT Modified)	SET	$1,024.00
Asphalt Aggregate Qualification Testing	Test	$1,559.00
Asphalt Core Only	Each	$122.00
ASTM D1560 Resistance to Deformation and Cohesion of Asphalt Mixtres by Means of Hveem Apparatus	SET	QUOTE
ASTM D2041 Specific Gravity and Density of Bituminous Paving Mixture	Test	$142.00
ASTM D2172 Quantitative Extraction of Asphalt Binder (gradation included)	Test	$331.00
ASTM D2172 Quantitative Extraction of Asphalt Binder (gradation not included)	Test	$289.00
ASTM D2172/AASHTO T 164 Quantitative Extraction of Asphalt Binder (gradation included)	Test	$231.00
ASTM D2172/AASHTO T 164 Quantitative Extraction of Asphalt Binder (gradation not included)	Test	$139.00
ASTM D2726 Specific Gravity and Density of Non-Absorptive Asphalt	CORE	$56.00
ASTM D2726/AASHTO T 166 Bulk Specific Gravity and Density of Asphalt Mixtures	CORE	$203.00
ASTM D2950 Density of Bituminous Concrete in Place by Nuclear Methods	Test	$35.00
ASTM D3203/AASHTO T 269 Percent Air Voids in Compacted Asphalt Mix	Test	$376.00
ASTM D4867 Moisture on Asphalt Concrete Paving Mixtures, Virgin Aggregate	Quote	QUOTE
ASTM D5444 Extraction & Gradation	Test	$260.00
ASTM D6307/AASHTO T 308 Asphalt Content by Ignition (gradation not included)	Each	$139.00
ASTM D6307/AASHTO T 308 Asphalt Content by Ignition (gradation included)	Each	$231.00
ASTM D6925/AASHTO T 312 Relative Density of Asphalt, Gyratory Compact	Each	$578.00
ASTM D6926 Preparation of Asphalt Specimens Using Marshall Apparatus	Test	$399.00
ASTM D6927 Marshall Stability and Flow of Asphalt	Test	$72.00
ASTM D7369 Resilient Modulus of Asphalt/Reclaimed Mixes	Test	$840.00
Chemical Extraction	Test	$268.00
Cold In-Place Recycling (CIR) Mix Design	Quote	QUOTE
Density & Thickness	CORE	$55.00
Full-Depth Reclamation (FDR) Mix Design	Quote	QUOTE
Gyratory Mix Properties (Suite of Tests)	Test	$625.00
R-Value (Hveem Stabilometer)	Test	$494.00
Seal Coat Compatibility	Each	$155.00
Seal Coat Design	Each	$625.00
Superpave Gyratory Air Voids	Each	$254.00
Surface Completion	Each	QUOTE
TSR Test	Each	$48.00
Building Technology Services and Equipment Rental		
AAMA 501 Nozzle Rental	Each	$26.00
Air Leakage Equipment	Day	$100.00
CCTV Equipment Rental	Day	$263.00
Copper Half Cell Rental	Day	$158.00
Crack Gauge - All Types	Each	$84.00
Dew Point - RH - Surface Temp - Ambient Temp Meter	Day	$105.00
Drone (Small) Rental	Day	$158.00
Drone (Large) Rental	Day	$394.00
Drone (Large) with Camera Rental	Day	$446.00
Dry Film Thickness Gauge Rental	Day	$173.00
Fiber Optic Scope Rental	Day	$404.00
Ground Penetrating Radar Equipment Rental	Day	$404.00
Holiday Testing Equipment (Sponge and Spark) Rental	Day	$116.00
Infrared Camera Rental	Day	$105.00
Load Testing Equipment Rental	Day	$184.00
Moisture Meter Rental	Day	$105.00
Pull Testing Equipment Rental	Day	$116.00
See-Snake Rental	Day	$420.00
Settlement Plate Set-Ups (one plate and initial 5' segment)	Each	$231.00

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Building Technology Services and Equipment Rental - Continued		
Service Item	**Unit**	**Rate**
Slab Moisture Emission Kit	Day	$53.00
Slab Moisture RH/Temp Probe	Day	$105.00
Survey Equipment Rental	Day	$79.00
Temperature Probes	Each	$64.00
Ultrasonic Tomograph (MIRA) Rental	Day	$924.00
Video Camera Rental	Day	$66.00
Window Testing Equipment Rental	Each	$289.00
Windsor Pin (for Mortar and Block, Set of 10)	Each	$116.00
Windsor Probe (for Concrete, Set of 3)	Each	$368.00
Cement/Cementitious		
ASTM C1012 Mortar Bar Sulfate Expansion 6 months	Test	$985.00
ASTM C1012 Mortar Bar Sulfate Expansion 12 months	Test	$1,270.00
ASTM C1012 Mortar Bar Sulfate Expansion 18 months	Test	$1,500.00
ASTM C1038 Expansion of Cement Mortar Bars in Water	Test	$400.00
ASTM C1072 Masonry Flexural Bond Strength	Sample	$1,500.00
ASTM C109 Mortar Cube Compressive Strength individual cube	Test	$35.00
ASTM C109 Mortar Cube Compressive Strength three ages	Test	$450.00
ASTM C114 Acid Soluble Chloride Analysis of Cement	Test	$120.00
ASTM C114 Acid Soluble Chloroform Analysis of Cement	Test	$495.00
ASTM C114 Acid Soluble Sulfate Analysis of Cement	Test	$310.00
ASTM C114 Insoluble Residue Analysis of Cement	Test	$185.00
ASTM C114 Loss on Ignition Analysis of Cement	Test	$125.00
ASTM C114 Modified Water Soluble Sulfate Analysis of Cement	Test	$370.00
ASTM C114 Sulfide Sulfur Analysis of Cement	Test	$490.00
ASTM C114 Sulfide Sulfur Analysis of Cement with XRD	Test	$865.00
ASTM C114 Total Alkali Analysis of Cement	Test	$370.00
ASTM C114 Water-Soluble Alkali Analysis of Cement	Test	$435.00
ASTM C1157 Specification for Hydraulic Cement - Chemical	Sample	$450.00
ASTM C1240 Silica Fume Table 1 Chemical Requirements, SiO2, Moisture, and LOI	Sample	$255.00
ASTM C1240 Specification for Silica Fume Physical Testing	Series	$980.00
ASTM C150 Cement Table 1 Chemical Requirements; XRF, LOI, and Insoluble Residue	Sample	$440.00
ASTM C150 Specification for Cement Physical Testing	Sample	$2,000.00
ASTM C151 Autoclave Expansion of Cement	Test	$365.00
ASTM C1602 Specification for Mixing Water in Concrete Chemical Testing	Test	QUOTE
ASTM C1602 Specification for Mixing Water in Concrete Physical Testing	Quote	$1,420.00
ASTM C1679 Hydration Kinetics Using Isothermal Calorimetry	Sample	$3,675.00
ASTM C1702 Isothermal Calorimetry 3 and 7 Days	Test	$790.00
ASTM C1702 Isothermal Calorimetry 28 Days	Test	$790.00
ASTM C185 Air Content of Cement	Test	$240.00
ASTM C186 Heat of Hydration of Portland Cement 7 and 28 Day	Test	$1,650.00
ASTM C186 Heat of Hydration of Portland Cement and SCM(s) Laboratory Blending	Test	$465.00
ASTM C187 Standard Test Method for Amount of Water Required for Normal Consistency of Hydraulic Cement Paste	Each	$115.00
ASTM C188 Density of Hydraulic Cement	Test	$125.00
ASTM C1897 Reactivity of SCMs by Isothermal Calorimetry	Test	$1,155.00
ASTM C191 Time of Setting by Vicat Needle	Test	$365.00
ASTM C204 Blaine Fineness of Cement	Test	$125.00
ASTM C25 Calcium Carbonate Equivalent	Sample	$490.00
ASTM C25 Chemical Analysis of Limestone & Hydrated Lime - Free Lime	Sample	$490.00
ASTM C25 Chemical Analysis of Limestone & Hydrated Lime - pH	Sample	$125.00
ASTM C25 Chemical Analysis of Limestone & Hydrated Lime by XRF, Moisture and LOI	Sample	$490.00
ASTM C25 Total CaO%	Test	$1,155.00
ASTM C266 Time of Setting by Gillmore Needle	Test	$365.00
ASTM C270 Specification for Mortar for Unit Masonry (Mix Design)	MIX	$400.00
ASTM C305 Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency	Each	$500.00

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Cement/Cementitious - Continued		
Service Item	**Unit**	**Rate**
ASTM C311/C618 Density		
ASTM C311/C618 Fly Ash or Natural Pozzolans for Portland-Cement Concrete – Available Alkalis	Test	$440.00
ASTM C311/C618 Fly Ash or Natural Pozzolans for Portland-Cement Concrete–Chemical Oxides, Moisture, LOI	Test	$255.00
ASTM C311/C618 Strength Activity Index (SAI)	Test	$520.00
ASTM C311/C618 Water Requirement	Test	$195.00
ASTM C348 Flexural Strength of Mortar (three test ages)	Test	$500.00
ASTM C359 Early Stiffening of Cement (Mortar Method)	Test	$430.00
ASTM C430 Fineness of Cement by No. 325 Sieve	Test	$65.00
ASTM C451 Early Stiffening of Cement	Test	$280.00
ASTM C452 Potential Expansion of Mortar Bars Exposed to Sulfate	Test	$695.00
ASTM C471 Chemical Analysis of Gypsum	Test	$3,500.00
ASTM C471 Modified Chemical Analysis of Gypsum by XRF	Sample	$1,090.00
ASTM C471 Section 10 Insoluble Residue Chemical Analysis of Gypsum	Sample	$250.00
ASTM C471 Section 14 SO3 Chemical Analysis of Gypsum	Sample	$310.00
ASTM C471 Section 15 Chloride Chemical Analysis of Gypsum	Sample	$185.00
ASTM C595 Blended Cement (No Slag) Table 1 Chemical; XRF and LOI	Sample	$250.00
ASTM C595 Blended Cement (w/Slag) Table 1 Chemical; XRF, LOI, Insoluble Residue, and Sulfide	Each	$920.00
ASTM C595 Specification for Blended Cements - Physical	Each	$1,945.00
ASTM C595 Specification for Blended Cements Methylene Blue	Sample	$320.00
ASTM C596 Drying Shrinkage of Mortar Bars	Test	$490.00
ASTM C618 Specification for Fly Ash and Pozzolan Physical Testing	Series	$1,850.00
ASTM C618 Specification for Fly Ash and Pozzolan Chemical Testing -Table 1	Test	$250.00
ASTM C618 Specification for Fly Ash and Pozzolan Non Standard Analysis	Quote	QUOTE
ASTM C91 Specification for Masonry Cement	Quote	QUOTE
ASTM C989 Slag Cement Chemical Testing	Sample	$490.00
ASTM C989 Slag Cement Physical Testing	Series	$1,180.00
ASTM D806 Cement Content of Soil Cement Mixtures by Wet Chemistry Methods	Test	$1,650.00
British Method of Free Lime Content	Test	$490.00
Chemical Admixtures		
Admixture Presence and Content of Chemical Retarders (Sugars)	Test	$2,185.00
Admixture Presence and Content of Nitrite - NC DOT #C-20.0	Test	$975.00
ASTM C1017 Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete-IR, Residue, Specific Gravity	Sample	$1,210.00
ASTM C1582 Specification for Corrosion Inhibiting Admixtures Chemical Testing	Sample	$1,700.00
ASTM C1582 Specification for Corrosion Inhibiting Admixtures Physical Testing - 1st Admix	Sample	$8,400.00
ASTM C1582 Specification for Corrosion Inhibiting Admixtures Physical Testing - 2nd Admix	Sample	$5,775.00
ASTM C233 Standard Test Method for Air-Entraining Admixtures for Concrete - pH	Test	$100.00
ASTM C260 Specification for Air-Entraining Admixtures - 1st Admix	Sample	$8,400.00
ASTM C260 Specification for Air-Entraining Admixtures - 2nd Admix	Sample	$5,775.00
ASTM C260 Specification for Air-Entraining Admixtures for Concrete Chemical	Test	$1,700.00
ASTM C494 IR Analysis of Chemical Admixtures for Concrete by ATR	Test	$435.00
ASTM C494 Specification for Chem Admixtures for Concrete Physical Testing	Test	$8,400.00
ASTM C494 Specification for Chemical Admixtures for Concrete Physical Testing – 2nd Admix	Test	$5,700.00
ASTM C494 Specification for Chemical Admixtures for Concrete Chemical Testing	Test	$1,700.00
ASTM C979 Section 8.1 Water Wettability of Pigments in Concrete	Sample	$95.00
ASTM C979 Section 8.2 Alkali Resistance of Pigments in Concrete	Sample	$370.00
ASTM C979 Section 8.3 Percentage of Sulfates for Pigments in Concrete	Sample	$2,310.00
ASTM C979 Section 8.4 Water Solubility of Pigments in Concrete	Sample	$195.00
ASTM C979 Section 8.6 Light Resistance of Pigments for Concrete	Quote	QUOTE
ASTM C979 Section 8.8 Color Match of Pigments in Concrete	Sample	$610.00
ASTM D1309 Settling Properties of Traffic Paints During Storage	Sample	$120.00
ASTM E1252 Infrared Spectroscopy (FTIR) by ATR - Scan Only	Sample	$450.00

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Chemical Admixtures - Continued		
Service Item	**Unit**	**Rate**
ASTM G109 Corrosion Inhibiting Admixtures for Embedded Steel, First Set	SET	$6,405.00
ASTM G109 Corrosion Inhibiting Admixtures for Embedded Steel, Additional Set	SET	$3,465.00
ASTM G109 Corrosion Inhibiting Admixtures for Embedded Steel, Test Additional Year	SET	$1,315.00
ASTM G180 Alternate Corrosion Inhibiting Admixtures for Steel	Test	QUOTE
Chemical Admixtures for Concrete - Residue by oven-drying only	Test	$490.00
Chemical Admixtures for Concrete - Specific gravity only	Test	$320.00
Chemical Analysis by XRF	Test	$250.00
Marshall Mix Properties	Test	$665.00
Chemistry		
Chloride Sample Preparation	Test	$55.00
AASHTO T 260 Acid-Soluble Chloride Ion in Concrete & Concrete Raw Materials (submit as -50 powder)	Test	$65.00
AASHTO T 260 Water-Soluble Chloride Ion in Concrete & Concrete Raw Materials (submit as -50 powder)	Test	$65.00
Aluminum Grade - LIBS	Sample	$175.00
ASTM C1152 Acid-Soluble Chloride in Mortar and Concrete (submit as -20 powder)	Test	$65.00
ASTM C1218 Water-Soluble Chloride in Mortar and Concrete (submit as -20 powder)	Test	$65.00
ASTM C1318 Section 11.1 Standard Test Method for TNC as CaO	Test	$3,675.00
ASTM C146 Chemical Analysis of Glass Sand	Sample	$550.00
ASTM C1602/1603 Mixing Water in Concrete Chemical Testing-Chloride, Sulfate, Alkalies, Total Solids	Sample	$580.00
ASTM C618 Specification for Fly Ash and Pozzolan Chemical Testing -Table 1	Test	$250.00
ASTM C618 Specification for Fly Ash and Pozzolan Non Standard Analysis	Quote	QUOTE
ASTM D512 Chloride Ion in Water	Test	QUOTE
Chemical Control Sample Lab Preparation	Test	$651.00
Chemistry Evaluation 856-1252 Basic	Test	$840.00
Chemistry Evaluation 856-1252 Medium	Test	$1,260.00
Chemistry Evaluation 856-1252 Full	Test	$3,780.00
Chemistry Raw Data Interpretation Basic	Test	$2,100.00
Chemistry Raw Data Interpretation Medium	Test	$420.00
Chemistry Raw Data Interpretation Full	Test	$840.00
Chloride Content - Non Standard Material	Test	$840.00
Crushing and Reducing Large Sample to Sample Test Size	Sample	$158.00
Florida DOT FM 5-516 Chloride in Concrete and Raw Materials	Test	$465.00
Ion Chromatography Assessment	Sample	QUOTE
Polymer Identification by FTIR Infrared Spectroscopy	Each	$485.00
Sulfates in Concrete	Test	QUOTE
Wirtgen Foaming Properties (WLB-10S)	Test	$1,575.00
Concrete		
AASHTO T 259/T 260 Chloride Ion Ponding of Concrete, AET Cast	Project	$1,520.00
AASHTO T 336 Coefficient of Thermal Expansion	Test	$605.00
AASHTO T 358 Surface Resistivity-1st Test Charge	Test	$175.00
AASHTO T 358 Surface Resistivity-Additional	Test	$60.00
AASHTO T 380 Potential Alkali Reactivity, Miniature Concrete Prism Test	Each	$750.00
AASHTO TP 119 Electrical Resistivity of Concrete in Uniaxial Resistance (Bucket Test)	Quote	QUOTE
ACI 211 Concrete Mix Design (previously designed)	MIX	$158.00
ACI 211 Normal Weight Concrete Mix Design	MIX	$275.00
Admixture Content in Concrete	Quote	QUOTE
Air Meter Calibration	Each	$152.00
ASTM C1084 Portland Cement Content of Concrete	Test	$2,100.00
ASTM C1084 Portland Cement Content of Concrete Chemistry Only	Test	$2,100.00
ASTM C1084 Portland Cement Content of Concrete Premium	Test	$4,200.00
ASTM C1140 Compression Testing of Specimens from Shotcrete Panels	Test	$79.00
ASTM C1140 Preparing Specimens from Shotcrete Panels (6 cores)	Panel	$231.00
ASTM C1202/AASHTO T 277 Resistance to Rapid Chloride-Ion Penetration	Set of 2	$630.00
ASTM C1202/AASHTO T 277 Resistance to Rapid Chloride-Ion Penetration (Single Slice)	Test	QUOTE
ASTM C1202/AASHTO T 277 Resistance to Rapid Chloride-Ion Penetration-Additional	Test	$185.00

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Concrete - Continued		
Service Item	**Unit**	**Rate**
ASTM C1556 Apparent Chloride Diffusion Coefficient - Choride Results for Nine Test Depths	Test	$2,800.00
ASTM C157 Length Change of Concrete (Drying Shrinkage) (56 day Test)	Set of 3	$630.00
ASTM C157 Modified Length Change of Concrete (Drying Shrinkage) (35 day)	Set of 3	$630.00
ASTM C1581 Age at Cracking (Ring Test)	Project	$7,800.00
ASTM C1585 Rate of Absorption of Water by Concrete	Test	$1,850.00
ASTM C1646 Making & Curing Specimens for Freeze-Thaw	Each	$630.00
ASTM C1803/C1353/C241 Taber Abrasion	Set of 3	$635.00
ASTM C1876 Standard Test Method for Bulk Electrical Resistivity of Bulk Conductivity of Concrete	Test	$289.00
ASTM C192 Making Concrete in the Laboratory (< 2 cu.ft.)	MIX	$630.00
ASTM C192 Making Concrete in the Laboratory (> 2 cu.ft.)	MIX	$866.00
ASTM C232 Bleeding of Concrete	Test	$263.00
ASTM C293 Concrete Flexural Strength (center point loading)	Test	$79.00
ASTM C330 Specification for Lightweight Aggregates	Quote	QUOTE
ASTM C39 Concrete Compressive Strength 4x8 Cylinder	Test	$42.00
ASTM C39 Concrete Compressive Strength 6x12 Cylinder	Test	$53.00
ASTM C39 Concrete Compressive Strength HPC	Test	$63.00
ASTM C39 Concrete Compressive Strength of HOLD Cylinder	Test	$53.00
ASTM C39 Cylinder End Prep	Sample	$32.00
ASTM C403 Concrete Time of Set (< 6 hrs)	SET	$265.00
ASTM C403 Concrete Time of Set (> 6 hrs)	SET	$137.00
ASTM C42 Saw Trimming of Core Ends	CORE	QUOTE
ASTM C42 Section 7 Concrete Core Compressive Strength	Test	$140.00
ASTM C42 Section 7.5 Density and Absorption of Drilled Cores	Test	$87.00
ASTM C42 Section 8 Concrete Core Tensile Strength	Test	$184.00
ASTM C457 Hardened Air Content	Test	$600.00
ASTM C469 Modulus of Elasticity	Test	$605.00
ASTM C469 Modulus of Elasticity, Additional Test	Test	$315.00
ASTM C496 Concrete Splitting Tensile Strength	Test	$100.00
ASTM C497 Concrete Pipe, Concrete Box Sections, Manhole Sections, or Tile - Absorption Testing	Test	$155.00
ASTM C512 Creep of Concrete in Compression	AOL	$6,400.00
ASTM C567 Lightweight Concrete Unit Weight, Equilibrium	Set of 3	$465.00
ASTM C567 Lightweight Concrete Unit Weight, Oven Dry	Set of 3	$465.00
ASTM C642 Density, Absorption and Voids in Hardened Concrete	Test	$290.00
ASTM C666 Procedure A Freezing & Thawing in Water - Individual	Sample	$455.00
ASTM C666 Procedure A Freezing and Thawing in Water	Set of 3	$1,365.00
ASTM C672 Scaling Resistance of Concrete	Test	$925.00
ASTM C78 Concrete Flexural Strength (third point loading)	Test	$80.00
ASTM C803 Penetration Resistance of Hardened Concrete by Windsor Probe	Set of 3	$76.00
ASTM C856 Petrographic Analysis of Concrete - Fire Damage Assessment	Test	$1,050.00
ASTM C856 Petrographic Analysis of Concrete - Limited Microscopic Obs	Test	$600.00
ASTM C856 Petrographic Analysis of Concrete - Premium with SEM	Test	$2,700.00
ASTM C856 Petrographic Analysis of Concrete with ASTM C457 and Thin Section	Test	$2,100.00
ASTM C856 Petrographic Analysis of Concrete with Thin Section	Test	$1,475.00
ASTM C873 Cast-In-Place-Punch-Out Cylinder (CIPPOC) Compressive Strength	Test	$79.00
ASTM C873 Cast-In-Place-Punch-Out Cylinder (CIPPOC) molds	Mold	$74.00
ASTM C936 Solid Concrete Paving Units aspect ratio < 0.6 or > 1.2	Set of 6	$277.00
ASTM C936 Solid Concrete Paving Units aspect ratio between 0.6 and 1.2	Set of 6	$249.00
ASTM C936 Solid Concrete Paving Units Compressive Strength	Set of 3	$249.00
ASTM C936 Specification for Solid Concrete Interlocking Paving Units	SET	$265.00
ASTM D427 Shrinkage Limit	Test	$150.00
ASTM D1633 Standard Test Methods for Compressive Strength of Molded Soil-Cement Cylinders	Each	$69.00

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Concrete - Continued		
Service Item	**Unit**	**Rate**
ASTM D4832 Preparation and Testing of Controlled Low Strength Material (CLSM) Test Cylinders	Test	$53.00
ASTM D5385 Hydrostatic Pressure Resistance of Waterproofing Membranes on Concrete	Test	$2,415.00
ASTM E1155 Floor Flatness	Each	QUOTE
ASTM F1869 Moisture Vapor Emission Rate of Concrete, Calcium Chloride	Test	$58.00
Carbonation Analysis, 1st Test Charge	Test	$350.00
Carbonation Analysis, Additional Test Charge	Test	$185.00
Concrete Cylinders Curing & Handling of Non-tested Cylinders	Each	$42.00
CRD-C36 Thermal Diffusivity	Test	QUOTE
Erionite (SEM)	Test	$578.00
Fiber Content of Hardened Concrete	Test	$575.00
NT Build 492 Chloride Migration Coefficient - Set of 3	Test	$1,890.00
pH analysis of Concrete	Test	$100.00
Plastic Concrete Testing - Suite of Tests (Air Content, Slump, Unit Weight, Temperature and Casting of Cylinders)	SET	QUOTE
Presence of Water Proofing Additives / Integral Water Proofing Agents	Sample	$970.00
Resisitivity	Test	$116.00
Specific Conductance	Test	$19.00
Specific Gravity	Test	$58.00
Thin Section Analysis	Each	$950.00
Flooring/Adhesives		
ASTM C1324 Gypsum Flooring	Test	$2,250.00
Chemical Analysis of Flooring including debonding-blistering-discoloration	Test	$1,460.00
Concrete Flooring Moisture Mitigation Alkali Two Depths	Sample	$600.00
Concrete Flooring Moisture Mitigation Organic Two Depths	Sample	$730.00
Flooring Failure Analysis	Quote	QUOTE
Flooring Test Suite - Sodium, Potassium, Chloride, and Sulfate (Water-Soluble) at Two Depths	Sample	$970.00
Concrete Flooring Moisture Mitigation Organic Three Depths	Sample	$975.00
Pre-Application Moisture Mitigation Assessment	Each	$1,725.00
Pre-Installation Flooring Evaluation Chemistry and Petrography	Each	$2,185.00
Preparation of Laboratory Control Sample Mixes	Sample	$1,050.00
Presence of Unreacted Alkali Silicate Product	Test	$2,080.00
Frac Sand Testing		
API RP 56 Bulk Density	Test	$116.00
API RP 56 Sphericity and Roundness	Test	$289.00
Geotechnical Services and Equipment Rental		
Bore Hole Permeability-Open End Casing Method	Day	$170.00
Borehole Abandonment	Foot	$3.00
Borehole Pressuremeter	Hour	$98.00
CAPWAP analysis of PDA data (per analysis)	Each	$383.00
Diamond Bit Wear - Metamorphic and Igneous Rock	Foot	$26.00
Diamond Bit Wear - Sedimentary Rock	Foot	$17.00
Double Ring Equipment Rental	Day	$336.00
Electronic Cone or Piezocone with Computer	Hour	$61.00
Field Electrical Resistivity Wenner 4 Pin	Day	$323.00
Field Vane Shear	Day	$404.00
Grout Pump	Day	$150.00
Hand Auger	Day	$87.00
Inclinometer Reading Equipment	Day	$420.00
Modified Philip-Dunne (MPD) Infiltrometer	Day	$336.00
Monitoring Well Drilling and Installation	Foot	$99.00
Pile Driving Analyzer (PDA)	Day	$827.00
Pile Driving Analyzer (PDA) EOID	Each	$420.00
Pile Driving Analyzer (PDA) Restrike	Each	$420.00

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Geotechnical Services and Equipment Rental - Continued		
Service Item	**Unit**	**Rate**
Pre-construction Wave Equation Analysis of PDA data (WEAP) (per analysis)	Each	$866.00
Refined Wave Equation Analysis of PDA data (WEAP) (per analysis)	Each	$751.00
Soil Sampler	Hour	$10.00
Steam Cleaner	Day	$162.00
Water Sampler	Hour	$27.00
Groundwater Monitoring Services and Equipment Rental		
Anemometer	Day	$64.00
Bailers	Each	$23.00
Conductivity Meter	Day	$32.00
Dissolved Oxygen Meter	Day	$58.00
Ground Water Multi Meter-pH/Temp/ORP/Conductivity/DO	Day	$116.00
Groundwater Filter Nalgene	Each	$32.00
Low Flow Air Pump	Day	$56.00
Oil Water Interface Sensor	Day	$105.00
Peristaltic Pump	Day	$76.00
pH Meter	Day	$32.00
Redox Potential Meter	Day	$32.00
Submersible Pump (4")	Day	$122.00
Turbidity	Test	$33.00
Turbidity Meter	Day	$63.00
Water Level Probe	Day	$53.00
Well Rate of Recovery Equipment	Day	$184.00
Wilden or Transfer Pump	Day	QUOTE
YSI Multi Parameter Meter	Day	$184.00
Grout/Repair Products		
ASTM C1019 Sampling and Testing Grout - Each	Test	$60.00
ASTM C1019 Sampling and Testing Grout - Set (AET Fabricated)	SET	$240.00
ASTM C1090 Measuring Changes in Height of Cement Grout	Test	$1,040.00
ASTM C1107 Specification for Packaged Dry Non-Shrink Grout, per temp.	Sample	$60.00
ASTM C579 Standard Test Methods for Compressive Strength of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings, and Polymer Concretes	Each	$13.00
ASTM C827 Change in Height at Early Ages	Test	$1,525.00
ASTM C882 Bond Strength of Epoxy-Resin Systems by Slant Shear two ages	Test	$1,097.00
ASTM C928 Specification for Packaged Dry Repair Materials	Sample	$3,700.00
Compressive Strength of Mortar/Grout 2x4 Cylinders	Each	$45.00
Instrument Use Rates		
Color LAB Values	Sample	$175.00
FTIR Infrared Spectroscopy Scan Only	Test	$440.00
LIBS Elemental Scan Values	Sample	$175.00
Scanning Electron Microscope (SEM) Photography with EDS	Hour	$465.00
Thermogravimetric Analysis (TGA)	Test	$405.00
X-Ray Diffraction (XRD) Analysis	Test	$400.00
X-Ray Fluorescence (XRF) Analysis	Test	$250.00
Masonry		
ASTM C1028 Coefficient of Friction by the Horizontal Dynamometer Pull-Meter	Each	$289.00
ASTM C1324 / C856 Petrographic Analysis of Grout	Test	$2,250.00
ASTM C1324 Hardened Masonry Mortar-Historic or Modern	Test	$2,250.00
ASTM C1324 Masonry Plaster - (Brown + Scratch Coats)	Test	$3,350.00
ASTM C1324 Masonry Plaster Stucco - 2 part Stucco	Test	$2,250.00
ASTM C1364 Specification for Architectural Cast Stone	Set of 3	QUOTE
ASTM C140 Net Area Determination of Concrete Masonry Units	Set of 3	$142.00
ASTM C1506 Water Retention of Hydraulic-Cement Based Mortars	Test	$400.00
ASTM C531, Section 9, Linear Coefficient of Thermal Expansion	Each	$1,200.00
ASTM C780 Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry	Set of 3	QUOTE

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Masonry - Continued		
Service Item	**Unit**	**Rate**
Color LAB Values Mortar/Acid Insoluble Sand	Test	$150.00
Masonry Efflorescence XRD FTIR	Test	$420.00
Masonry Expert Interpretation of ASTM C1324 Data/Results	Test	$440.00
Masonry Unit Weight (Density)	Test	$175.00
Sieve Analysis of ASTM C1324 Acid Insoluble Sand	Test	$320.00
Masonry/CMU		
ASTM C1194 & C1195 Testing Suite - Compressive Strength and Absorption of Architectural Cast Stone	SET	$450.00
ASTM C1194 Compressive Strength of Architectural Cast Stone	SET	$320.00
ASTM C1262 Freeze-Thaw Durability of Retaining Wall Units (100 Cycles)	Set of 3	$1,155.00
ASTM C1314 Compressive Strength of Masonry Prisms, field fab & test	SET	$152.00
ASTM C1314 Compressive Strength of Masonry Prisms, filled cells	SET	$131.00
ASTM C1372 Dry-Cast Segmental Retaining CMU, compressive strength & absorption	SET	$341.00
ASTM C140 Section 7 Compressive Strength of CMU's (set of 3)	Set of 3	$184.00
ASTM C140 Section 7 Compressive Strength of CMU's (set of 6)	Set of 6	$335.00
ASTM C140 Section 8 Absorption of Concrete Masonry Units	Set of 3	$168.00
ASTM C140 Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units - Compression Strength Test	Each	$268.00
ASTM C140 Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units - Water Absorption Test	Each	QUOTE
ASTM C140 Testing Suite for Loadbearing Concrete Masonry Units	SET	$268.00
ASTM C140 Testing Suite for Solid Concrete Interlocking Paving Units	SET	$268.00
ASTM C140/C293 Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units - Flexural Test	Each	QUOTE
ASTM C1645 Freeze-Thaw Durability of Concrete Interlock Paving Units	Set of 3	$690.00
ASTM C170 Compressive Strength of Dimension Stone	Each	$50.00
ASTM C1721 Petrographic Analysis of Dimension Stone-Failure Analysis	Quote	QUOTE
ASTM C1721 Petrographic Analysis of Dimension Stone-Pre Installation	Test	$950.00
ASTM C67 Absorption and Initial Rate of Absorption of Brick and Structural Clay Tile	Set of 5	$250.00
ASTM C67 Compressive Strength and Absorption of Brick and Structural Clay Tile	Set of 5	$520.00
ASTM C67 Compressive Strength of Brick and Structural Clay Tile	Set of 5	$275.00
ASTM C67 Freeze-Thaw of Brick and Structural Clay Tile (Method B)	Set of 5	$575.00
ASTM C67 Testing Brick and Structural Clay Tile, suite not including F-T	Set of 5	$950.00
ASTM C880 Flexural Strength of Dimension Stone	Test	$85.00
ASTM C90 Absorption of Loadbearing Concrete Masonry Units	Set of 3	$85.00
ASTM C90 Compressive Strength of Loadbearing Concrete Masonry Units	Set of 3	$125.00
ASTM C90 Fire Rating of Loadbearing Concrete Masonry Units	SET	QUOTE
ASTM C90 Specification for Loadbearing Concrete Masonry Units	Set of 6	$245.00
ASTM C97 Absorp, Bulk Specific Gravity and Density of Dimension Stone	Each	$75.00
ASTM C99 Modulus of Rupture of Dimension Stone	Each	$85.00
ASTM E303 Surface Frictional Properties Using the British Pendulum	Quote	QUOTE
ASTM Masonry Prism Suite- C1314 and C140 Section 8	SET	$635.00
ASTM Masonry Prism Suite- C1314 and C140 Sections 7 & 8	SET	$705.00
Block Prism - Lab Fabrication	SET	QUOTE
Sample Preparation of Dimension Stone	Hour	$125.00
Mass Concrete		
ASTM C1074 Maturity	Test	$865.00
ASTM D5334 Thermal Conductivity/Resistivity of Concrete (Dry Out Curve)	Test	$3,465.00
ASTM D5334 Thermal Conductivity/Resistivity of Concrete (Sample Prep)	Each	$60.00
ASTM D5334 Thermal Conductivity/Resistivity of Concrete (Single Point)	Test	$475.00
Mass Concrete Thermal Control Plan Report	Each	QUOTE
Thermal Property Testing for Mass Concrete	Test	QUOTE
Non-Destructive Testing		
ASTM E605 Thickness and Density of Sprayed Fire-Resistant Material	Each	$41.00
ASTM E736 Cohesion/Adhesion of Sprayed Fire-Resistive Materials	Each	$41.00
ASTM F2170 Relative Humidity in Concrete Floor Slabs by In-Situ Probe	Each	$116.00

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Non-Destructive Testing - Continued		
Service Item	**Unit**	**Rate**
Computed Radiography	Hour	$268.00
Fireproofing Density Tests	Test	$110.00
Impellor Rental	Each	$160.00
Paint Thickness Meter Rental	Day	$46.00
Procedure Qualification	Each	$945.00
Procedure Qualification - Additional	Each	$945.00
Proof Load Test	Test	QUOTE
Rebar Locator	Day	$156.00
Rebound Hammer Rental	Day	$68.00
Thermal Control Plan	Each	$45.00
Welder Qualification	Each	$150.00
Welder Qualification, Additional	Each	QUOTE
Pavement Services and Equipment Rental		
ASTM E1710 Measurement of Retroreflective Pavement Marking Materials Using a Portable Retroreflectometer - Hourly	Hour	$184.00
ASTM E1710 Measurement of Retroreflective Pavement Marking Materials Using a Portable Retroreflectometer - Daily	Day	$368.00
Attenuator Rental - Hourly	Hour	$50.00
Falling Weight Deflectometer with Truck (travel)	Hour	$126.00
Falling Weight Deflectometer with Truck (testing)	Hour	$247.00
Falling Weight Deflectometer with Truck (travel) either ½ or full day	Day	$982.00
Falling Weight Deflectometer with Truck (testing) either ½ or full day	Day	$1,943.00
Geoprobe Direct Push Sampling System (travel)	Hour	$75.00
Geoprobe Direct Push Sampling System (testing)	Hour	$137.00
Geoprobe Direct Push Sampling (travel) either ½ or full day	Day	$504.00
Geoprobe Direct Push Sampling (testing) either ½ or full day	Day	$1,008.00
Geoprobe w/One Man Crew	Hour	$214.00
Geoprobe w/Two Man Crew	Hour	$347.00
Ground Penetrating Radar (travel)	Hour	$63.00
Ground Penetrating Radar (testing)	Hour	$130.00
Ground Penetrating Radar with Truck (travel) either ½ or full day	Day	$457.00
Ground Penetrating Radar with Truck (testing) either ½ or full day	Day	$893.00
HD Camera Rental	Day	$137.00
High Speed Inertial Profiler (travel)	Hour	$68.00
High Speed Inertial Profiler (testing)	Hour	$126.00
High Speed Inertial Profiler (travel) either ½ or full day	Day	$520.00
High Speed Inertial Profiler (testing) either ½ or full day	Day	$1,008.00
Highway Traffic Control Signage (Set)	Day	QUOTE
MIT Scanner Rental (daily)	Day	$160.00
MIT Scanner Plate	Each	$10.00
Pavement Density & Thickness	Test	$58.00
Traffic Control Signs	Day	$158.00
Sealers/Coatings		
AASHTO T 259/T 260 Chloride Ion Ponding of Concrete, First Sealer	Sample	$3,360.00
AASHTO T 259/T 260 Chloride Ion Ponding of Concrete, Additional Sealer	Sample	$2,520.00
Alberta BT001 Vapor Transmission, Waterproofing, Hiding Power Sealers	Sample	$7,875.00
Alberta BT001 Each Additional Product	Sample	$6,064.00
ASTM C1315 Section 8.7.6 Yellowing Resistance of Liquid Membrane-Forming Compounds	Sample	$1,155.00
ASTM C1315 Section 8.7.7 Acid Alkali Resistance of Liquid Membrane-Forming Compounds	Sample	$175.00
ASTM C1315 Specification for Liquid Membrane-Forming Compounds Type 1	Sample	$3,985.00
ASTM C156 Water Loss Through Liquid Membrane-Forming Curing Compounds	Sample	$1,000.00
ASTM C309 Specification for Liquid Membrane-Forming Compounds Type 1	Sample	$1,560.00
ASTM C309 Specification for Liquid Membrane-Forming Compounds Type 2	Sample	$1,735.00
ASTM C666 Procedure A Freezing and Thawing in Water, First Sealer	Sample	$3,407.00

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Sealers/Coatings - Continued		
Service Item	**Unit**	**Rate**
ASTM C666 Procedure A Freezing and Thawing in Water, Additional Sealer	Sample	$1,617.00
ASTM C672 Scaling Resistance of Concrete, First Sealer	Sample	$3,400.00
ASTM C672 Scaling Resistance of Concrete, Additional Sealer	Sample	$1,735.00
ASTM C97 Bulk Specific Gravity and Density of Dimension Stone, First Sealer	Sample	$785.00
ASTM D1475 Density of Liquid Coatings	Sample	$120.00
ASTM D2369 Volatile Content of Coatings	Sample	$120.00
ASTM C97 Bulk Specific Gravity and Density of Dimension Stone, Additional Sealer	Sample	$410.00
ASTM E96 Water Vapor Transmission of Materials, First Sealer	Sample	$5,198.00
ASTM E96 Water Vapor Transmission of Materials, Additional Sealer	Sample	$2,310.00
Revision of Report for Product Name Change	Project	$825.00
Rilem Test II.4 Water Absorption Under Low Pressure	Test	$290.00
Soil and Earthwork Testing		
AASHTO Soil Suite - Sulfate, Chloride, and pH	Sample	$610.00
AASHTO T 180 Standard Method of Test for Moisture–Density Relations of Soils using Modified Effort	Test	$231.00
AASHTO T 191 Density of Soil In-Place by the Sand-Cone Method	Test	$76.00
AASHTO T 267 Organic Content in Soils by Loss on Ignition	Sample	$121.00
AASHTO T 272 One Point Method For Max Dry Density & Optimum Moist	Test	$145.00
AASHTO T 288 Determination of Minimum Laboratory Soil Resistivity	Test	$260.00
AASHTO T 289 pH of Soil for Use in Corrosion Testing	Test	$95.00
AASHTO T 290 Determining Water-Soluble Sulfate Ion Content in Soil	Test	$370.00
AASHTO T 291 Determining Water-Soluble Chloride Ion Content in Soil	Test	$370.00
AASHTO T 310 Density of Soil In-Place by the Nuclear Gauge	Test	$41.00
AASHTO T 322 Low Temp Creep/Tensile	Test	$1,943.00
AASHTO T 89/90 Atterberg Limited (Plasticity)	Test	$145.00
AASHTO T 99 Standard Method of Test for Moisture–Density Relations of Soils using Standard Effort	Test	$231.00
ASTM C1580 Water-Soluble Sulfate in Soil	Test	$475.00
ASTM D1556 Density and Unit Weight of Soil by Sand-Cone	Test	$92.00
ASTM D1557 Modified Proctor	Test	$189.00
ASTM D1557 Modified Proctor (Cohesive)	Test	$210.00
ASTM D1883 California Bearing Ratio of Cohesive Soils (1 pt) (proctor not included)	Test	$404.00
ASTM D1883 California Bearing Ratio – Additional Point	Test	$191.00
ASTM D1883 California Bearing Ratio of Cohesive Soils (3 pt, 1 moisture content) (proctor not included)	Test	$898.00
ASTM D1883 California Bearing Ratio of Granular Soils (proctor not included)	Test	$788.00
ASTM D2166 Unconfined Compressive Strength of Cohesive Soil	Test	$133.00
ASTM D2216 Water Content of Soil and Rock by Mass	Each	$18.00
ASTM D2434 Constant Head Permeability of Granular Soils	Test	$335.00
ASTM D2435 Consolidation Properties of Soils (up to 32 tsf, P-e & Time Curves)	Test	$761.00
ASTM D2435 Consolidation Properties of Soils (with P-e curve only)	Test	$620.00
ASTM D2435 Consolidation Properties of Soils (with P-e curve, time curves)	Test	QUOTE
ASTM D2487 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)	Test	$1,365.00
ASTM D2844 R-value of Compacted Soils by Hveem Stabilometer	Test	$494.00
ASTM D2850 Unconsolidated Undrained Triaxial Comp of Cohesive Soils	Point	$310.00
ASTM D2974 Moisture, Ash and Organic Matter of Peat & Organic Soils	Test	$95.00
ASTM D3080 Direct Shear of Cohesive Soils (proctor not included)	Test	$600.00
ASTM D3080 Direct Shear of Cohesive Soils, Consolidated Drained Conditions	Test	$693.00
ASTM D3080 Direct Shear of Granular Soils Residual Strength with 3 Normal Loads (proctor not included)	Test	$583.00
ASTM D3080 Direct Shear of Granular Soils with 3 Normal Loads (proctor not included)	Test	$583.00
ASTM D422 Particle Size Analysis of Soils (includes gradation)	Test	$263.00
ASTM D4318 Atterberg Limits Dry Preparation	Test	$145.00
ASTM D4318 Atterberg Limits Wet Preparation	Test	$203.00
ASTM D4318 Atterberg Limits, Liquid Limit or Plastic Limit, Individual	Test	$132.00

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Soil and Earthwork Testing - Continued		
Service Item	**Unit**	**Rate**
ASTM D4318 Atterberg Plasticity Index	Test	$148.00
ASTM D4327 Water-Soluble Chloride and Sulfate	Sample	$610.00
ASTM D4373 Rapid Determination of Carbonate Content of Soils	Test	$250.00
ASTM D4767 Consolid Undrained Triaxial Compression of Cohesive Soils	Point	$443.00
ASTM D4972 Standard Test Methods for pH of Soils	Test	$305.00
ASTM D5084 Hydraulic Conductivity of Remolded Saturated Clay by Flexible Wall Permeater	Test	$474.00
ASTM D5084 Hydraulic Conductivity of Saturated Clay by Flexible Wall Permeater	Test	$473.00
ASTM D5334 / IEEE 442 Thermal Conductivity of Soil, as received & oven dried	Test	$1,105.00
ASTM D5334 / IEEE 442 Thermal Conductivity of Soil, Dry Out Curve	Test	$1,370.00
ASTM D5856 Hydraulic Conductivity of Remolded Clay Using Rigid Wall Permeater	Test	$457.00
ASTM D5856 Hydraulic Conductivity of Sand Using Rigid Wall Permeater	Test	$578.00
ASTM D6528 Standard Test Method for Consolidated Undrained Direct Simple Shear Testing of Fine Grain Soils	Test	$710.00
ASTM D6913 Sieve Analysis of Soils	Test	$133.00
ASTM D6938 Density and Water Content of Soil by Nuclear Methods	Test	$44.00
ASTM D698 Standard Proctor	Test	$184.00
ASTM D698 Standard Proctor (Cohesive)	Test	$210.00
ASTM D7263 Lab Determination of Dry Density of Soil (includes water content)	Test	$95.00
ASTM D7928 Particle Size Distribution of Fine-Grained Soils - Sedimentation Analysis (Hydrometer)	Test	$289.00
ASTM D854 Specific Gravity of Mineral Soil	Test	$176.00
ASTM D854 Specific Gravity of Soil Solids by Water Pycnometer, Organic Soil	Test	$173.00
ASTM G57 Soil Resistivity by Wenner Probe	Test	$116.00
ASTM Soil Suite - Sulfate, Chloride, and pH	Sample	$610.00
ASTM G187 Standard Test Method for Measurement of Soil Resistivity Using the Two-Electrode Soil Box Method	Each	$130.00
Caltrans Soil Suite - Sulfate, Chloride, and pH	Sample	$610.00
Canadian CSA A23.2-3B Total and Water-Soluble Sulfate in Soil	Test	$450.00
Dial Indicator Gauges	Each	$41.00
Dynamic Cone Penetrometer	Test	$42.00
Dynamic Cone Penetrometer Rental - Daily	Day	$125.00
Expansive Soil Testing	Test	$173.00
Flexible Wall Permeability Testing	Test	QUOTE
Florida DOT Soil Suite - Sulfate, Chloride, and pH	Sample	$610.00
Hand Penetrometer / Torvane	Test	$18.00
Langelier Saturation Index	Test	QUOTE
Moisture Content (Soil)	Test	$35.00
Nuclear Density Test	Test	$42.00
Preparation for Clay Proctor Sample	Hour	$95.00
Rigid Wall Permeability Testing	Test	$335.00
Shelby Tube Extraction	Each	$29.00
Swell/Consolidation	Test	$173.00
Test Charge, Nuclear and Sand-Cone (at AET's option)	Test	$42.00
Test Charge, Sand-Cone (when required by client)	Test	$74.00
Thin Wall Sample Extrusion	Each	$41.00
Thin Wall Sampler Replacement	Each	$32.00
Thin Wall Tube Sampling	Each	QUOTE
Unconfined Compression	Test	$110.00
USACE Soil Suite (ASTM)	Test	$1,050.00
Water Content	Test	$16.00
Soil Sampling Services and Equipment Rental		
ACM Kit	Day	$58.00
AS/SVE Monitoring Equipment	Each	$226.00
AS/SVE System Rental - Daily	Day	$226.00
AS/SVE System Rental - Monthly	Month	$924.00

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Soil Sampling Services and Equipment Rental - Continued		
Service Item	**Unit**	**Rate**
Generator Rental	Day	$32.00
HEPA Vacuum Rental	Day	$16.00
Phase Converter Rental - Monthly	Month	$500.00
Phase Converter Rental - Weekly	WEEK	$125.00
Power Auger Rental	Day	$74.00
Roofing Kit	Day	$50.00
Soil Auger Assembly Rental	Day	$58.00
Soil Vapor Pilot System Rental	Day	$347.00
SVE Monitoring Equipment Rental	Day	$185.00
Soil Vapor Sampling Purge Manifold	Each	$55.00
Vapor Pins	Each	$110.00
XRF Analyzer Rental	Day	$609.00
Wastewater Monitoring Services and Equipment Rental		
ISCO Autosampler Rental	Day	$63.00
Refrigerated ISCO Autosampler Rental	Day	$110.00

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INTRODUCTION

American Engineering Testing, Inc. (AET) is pleased to present this proposal for construction testing and inspection services to the State of Minnesota's Department of Administration's Real Estate and Construction Services (RECS), also referred to as "the State" or "the Client" in this proposal. We understand that selected firms will be part of a 5-year Master Contract program, potentially serving all state agencies and Minnesota State Colleges and Universities. AET has been proud to serve the State under the previous contract and we hope to continue to build upon that relationship over the next 5 years.

AET an employee-owned engineering consulting firm, specializing in geotechnical, pavement, environmental, and forensic engineering; construction materials engineering and testing; building technology, and petrography / chemistry services. Our technical expertise, in-house lab and drilling resources, decades of experience, and rock-solid reputation attract quality-focused regional, national, and international clientele. Headquartered in St Paul, Minnesota, we employ over 500 people in 20 offices.

We are technical professionals who care passionately about delivering reliable, thoughtful, and cost-effective solutions. We can be counted on to give accurate scope the first time around and stay within budgeted resources, while maintaining the flexibility to respond to changes, as needed. At the end of the day, steering you in the right direction before problems happen, being a part of your team, and earning your trust are what matter most to us.

Safety
Our Environmental Health and Safety Program requires extensive employee safety training and development across all job descriptions. This includes safety and environmental regulatory compliance for all uses of laboratory equipment and hazardous chemicals. Our staff respect the health and well-being of the communities where we live and work and we strive to minimize environmental impact and reduce waste.

We train and empower our employees to:

- Proactively identify hazards and mitigate unsafe conditions
- Use appropriate PPE and best practices
- Stop work immediately if unsafe conditions are encountered
- Report unsafe conditions

Quality
Quality is at the core of our services and key to the success of our project teams. We have an operating Quality Management System (QMS) that guides our staff during technical work. Our QMS is designed to comply with AASHTO R18 Establishing and Implementing a Quality System for Construction Materials Testing Laboratories, and ASTM Quality Management System standards C1077, D3666, D3740, and E329.

Laboratory Accreditation
Our offices in Saint Paul, Rochester, Duluth, Wausau, Sheridan, Fargo, Sioux Falls, and Williston are accredited by the AASHTO Accreditation Program (AAP) in geotechnical and construction materials engineering and testing. Our offices in Saint Paul, Rochester, Duluth, Fargo, and Rapid City also carry a US Army Corps of Engineers (USACE) Validation for materials testing on aggregates, concrete, cement, and masonry.

Communication
Our project team understands that there can be no "surprises" and that critical schedules and technical information need to be relayed to the Client as work is progressing.

Conflict of Interest
As noted in our Organizational Conflict of Interest form, AET is not aware of any actual or perceived organizational conflicts of interest in relation to the proposed work. Should we become aware of a conflict in the future, we would promptly notify the client.

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CATEGORIES OF TESTS AND INSPECTIONS - SUMMARY

AET staff have extensive experience and expertise in all of the required Service Categories, with the exception of Phase I and Phase II Archaeological Resources Investigations. We routinely perform all of the listed subtasks noted with an "X" below, with the exception of "Recommendations for Septic Systems" in the Geotechnical Services category (we can perform perc tests, however). AET also offers numerous additional services that may be needed within each category. We can often provide one-stop-shop convenience within and across service categories.

Geotechnical Services
- ☒ Pre-construction Soil Exploration and Testing
- ☒ Percolation Tests, Recommendations for Septic Systems
- ☒ Foundation and Pavement Design Recommendations
- ☒ Observation / Testing of Existing Soils during Excavation / Grading
- ☒ Laboratory Testing of Proposed Fill Material
- ☒ Observation / Testing of Fill and Backfill for Moisture, Compaction

Masonry Testing and Inspection Services
- ☒ Mortar, Masonry Fill Mix Design
- ☒ Laboratory Tests on Masonry Prisms
- ☒ Laboratory Test of Mortar and Core-fill for Compressive Strength / Bond Strength
- ☒ Special Inspection of Structural Masonry Construction (Continuous **X** / Periodic **X**)

Pavement Testing and Inspection
- ☒ Observe / Test Rolling Operations on Subgrade Soils
- ☒ Field / Laboratory Tests on Aggregate Base
- ☒ Field / Laboratory Tests during Bituminous Paving (Continuous **X** / Periodic **X**)

Phase I Environmental Investigation
- ☒ Phase I Environmental Site Assessment
- ☒ Visual assessment for typical suspect ACM
- ☒ PCB assessment
- ☒ Historical data review

Phase II Environmental Investigation
- ☒ Phase II Investigation Workplan
- ☒ Site safety and contingency plan
- ☒ Phase II Environmental Investigation

Remediation Services
- ☒ Response Action Plan (RAP)
- ☒ Implementation Report preparation

Concrete Testing and Inspection Services
- ☒ Concrete, Grout Mix Design
- ☒ Observe / Document Formwork Construction
- ☒ Observe / Document Placement of Reinforcing Steel
- ☒ Slump, Temperature, Air Entrainment Tests of Fresh Concrete
- ☒ Cast, Cure, Test Concrete Cylinders for Compressive Strength

Structural Steel Testing and Inspection
- ☒ Strength Testing of Embedded Bolts
- ☒ Observe / Test Welded and Bolted Connections during Structural Steel / Precast Concrete Erection
- ☒ Observe / Test Welding and Screw Fastening during Metal Deck Installation

Fireproofing / Firestopping Testing and Inspection
- ☒ Test Installed Spray-on Fireproofing for Thickness, Density, Adhesion
- ☒ Observe / Document Installation of Fire-Resistive Joint Systems

Other
- ☒ Window/Curtain Wall Testing and Inspection
- ☒ Roofing/Waterproofing Testing and Inspection

Phase I Archaeological Resources Investigation
- ☐ Determine presence of cultural resources, eligibility for NRHP
- ☐ All field methods / reporting, following guidelines / standards
- ☐ Wash, analyze, catalogue artifacts
- ☐ Curate artifacts at MHS under Contractor's curation agreement

Phase II Archaeological Resources Investigation
- ☐ Excavate and document designated features
- ☐ Record excavation data on standardized forms and log book
- ☐ Radiocarbon sample collection and analysis
- ☐ Clean, catalogue, label, bag artifacts for MHS for curation.

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RESPONDER'S QUALIFICATIONS AND PROJECT REFERENCES

Geotechnical Services

From Mississippi River bridges and skyscrapers, to power plants and sports stadiums, to large water tanks and grain bins, AET's geotechnical engineers have worked on thousands of challenging projects throughout the Twin Cities and Upper Midwest. We regularly consult for MN RECS; MPCA; MCES; and many municipalities and counties across the region, including Saint Paul and Minneapolis.

AET has conducted several thousand geotechnical investigations on a wide variety of projects; including buildings, bridges, roadways, light rail corridors, heavy rail corridors, interceptor sewers, force mains, and various other utilities. We perform soil borings and geotechnical investigations on multiple project sites with multiple drill rigs on a daily basis. Our drilling crew chiefs have experience drilling on a wide range of site conditions and are familiar with the various regional soil and bedrock types, groundwater conditions (including artesian conditions) and variable methods of drilling required.

Our St Paul location has access to 11 drill rigs include truck-mounted, track-mounted ATV, rubber tire ATV, and skid-mounted drilling platforms, 2 CPT rigs, and 3 direct push Geo-Probes -- so we can access and explore almost any site. Our fleet includes both electric and diesel powered portable drill rigs for working in confined spaces and areas with low head-room. AET has even drilled from a barge in the Mississippi River and from a Marsh Master large amphibious transport vehicle in swampy backwaters of both the Minnesota River and the Mississippi River for Xcel Energy projects. AET also conducts bedrock coring to evaluate the integrity of the rock formations when larger, heavily loaded structures will be supported by bedrock or when deeper utility excavations will extend into the bedrock. We have dedicated maintenance personnel to keep our fleet running well and available for your projects when you need them. We also have a large assortment of drill tools to tackle drilling tasks in most soil and bedrock situations.

Our drillers also support drilling requirements on environmental projects across the region. Worker safety, public safety, handling/containerizing contaminated soils/groundwater, and preventing cross-contamination are a few of the keys to successful environmental drilling projects. Personnel assigned to drill crews and subsurface sampling duties receive training that meets OSHA and DOT requirements. This training includes 40-hour and 8-hour refresher courses on hazardous materials handling, confined space entry, hazardous materials transport, and other salient topics. We have significant experience installing and sealing boreholes and monitoring wells as outlined in MDH Chapter 4725. AET is a Minnesota Department of Health (MDH) licensed monitoring well contractor (License No. 1795).

Reducing uncertainty regarding soil properties can lead to lower construction costs. Working with our experienced geotechnical engineers, using sophisticated investigation and laboratory testing tools, we provide your design team with a Geotechnical Report containing the accurate data and thoughtful recommendations needed to select appropriate foundation materials. You'll have access to our senior geotechnical engineers and advanced monitoring/data collection equipment during construction, too.

AET is the leader in the use of state-of-the-art geotechnical equipment and testing in the region. AET has been conducting electronic cone penetration testing and seismic cone testing (CPT) since 2003 using a 20-ton CPT push rig and a tracked CPT rig for more flexibility when working on softer, wet, or unstable sites. The CPT test method was used to efficiently define fill, swamp, and soft clay stratigraphy on hundreds of projects in the Twin Cities metropolitan area, and numerous projects outstate. The acquired data assists in the evaluation of potential settlements of softer soils, and also allows AET Geotechnical Engineers to design conventional spread footing foundations and to design deep foundations.

AET also specializes in other geotechnical state-of-the-art capabilities that allow us to provide more detailed site engineering analyses. These services include:

- Pile Driving Analyzer® (PDA) equipment, which evaluates pile load capacity during pile driving, is also used to develop pile driving guidelines. Our engineers also provide high strain dynamic pile testing services, which are certified by Pile Driving Contractors Association/ Pile Dynamics, Inc. (PDCA/PDI).
- Field seismic refraction (ReMi) equipment to evaluate the geophysical site conditions.
- Ground Penetrating Radar (GPR) and Falling Weight Deflectometer (FWD) equipment for non-destructive testing and analysis of pavement structures.

- Laboratory thermal resistivity of soils.
- Field electrical resistivity testing of soils and bedrock conditions.

AET Geotechnical Engineers and Geologists can use the aforementioned tools to prepare Geotechnical Reports that provide you with a quality definition of the subsurface conditions at each of their sites. This is important to ensure the proper foundations are used for structures and proper earthwork activities are used for support of various utilities, pavements, and rail lines. In addition to Geotechnical Reports, AET has prepared Geotechnical Baseline Reports (GBR), which are used as specific specification sections which establish baseline conditions for the contractor. Accordingly, we can provide recommendations which are specific to your project needs; such as settlement potential, and dewatering needs and/or groundwater impacts. We also consider and present construction difficulties which can assist you with risk reduction pertaining to unexpected conditions.

Geotechnical Project Experience / References

Project name: State Building Office Addition
Dates: 2023

This project was an addition to the north side of the State Office Building, AET performed **soil exploration and testing** consisting of 5 CPT soundings down to 40 feet. We provided **recommendations for foundation types and depths** within the proposed addition and within the atrium. These included allowable soil bearing capacity and estimates of foundation settlement; evaluation of mechanical room foundations, including procedures pertaining to exposing the tops of existing foundations, underpinning, and/or possibly reducing the bearing capacity of foundations; also analysis of existing foundations and opinions on settlement associated with increased allowable bearing capacity; as well as options to supplement foundation capacity including helical piles.

In preparation for the renovation project, AET also met with stake holders, attended pre-construction meetings, and led pre-construction condition surveys (PCCS) of the State office building, State Capital, and other adjacent structures. .AET developed a vibration monitoring plan and monitor layout.

Supervising Staff Member: Thomas Evans, PE / P. Randy Tufts, PE
Years of experience: 12
Required MN License, registration, or certifications: Professional Engineer (MN #55092)

Client: Minnesota Department of Administration, Real Estate and Construction Services
Mailing Address: 50 Sherburne Ave, Suite 309, St Paul, MN 55155
Client contact: Eric Radel, Construction Operations Manager, eric.radel@state.mn.us , 651-201-2380

Project name: Fourth & Park Tower, Minneapolis, Minnesota
Dates: January 2022, foundation construction; 2024 Project completion

AET performed the pre-construction **soil and bedrock exploration and testing**, and **geotechnical consulting services**, including **foundation recommendations**. Three soil borings were drilled and cored 20 to 30 feet into soil and bedrock of the Platteville Limestone, and Glenwood Shale formations. The structure will be a 27-story condominium concrete structure with one level below grade. The foundation support system consists of drilled piers bearing in the limestone bedrock proportioned for an end bearing pressure of 150,000 psf. The recommended installation of the retention system was drilled in casings and H-piles set in predrilled holes with wood lagging. This was chosen over driving the piles to minimize vibrations to the surrounding structures. AET also performed the foundation observations and construction testing services at the project site, including observation and testing of existing soils during **excavation and grading** observations, laboratory testing of **proposed fill** material, and compaction testing of **fill and backfill soils**.

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Supervising Staff Member: Joseph Ross O'Connor, PE (MN) / Gregory R. Rueter, PE PG D.GE (MN)
Years of experience: 14 & 40
Required MN License, registration, or certifications: MN 62070 / MN19885

Client: Ryan Companies U.S., Inc
533 South 3rd Street, Minneapolis, Minnesota, 55415
Client contact: Neil Johnson, Director of Construction, 612-360-3294

Project name: University of St. Thomas, Lee & Penny Anderson Arena, St. Paul, Minnesota
Dates: Geotechnical May 2023 with expected completion in 2026

AET performed the geotechnical exploration, including pre-construction **soil and bedrock exploration and testing**, and **geotechnical consulting services**, including **foundation recommendations.** The combination basketball and hockey arena and practice facility building has one level below grade and four to five levels above grade with post-tensioned concrete slabs. The tunnel system that connects to adjacent campus buildings was extended to the new arena. We performed 12 soil borings and cored into the Decorah Shale bedrock in 3 locations. Due to site conditions, the foundation was built into existing bedrock with additional soil-supported footings to support the structure. Differential settlement concerns between the rock-bearing foundations and soil-supported foundations needed to be considered. The building is supported on spread footings proportioned for bearing pressures of 4,000 to 12,000 psf. A drilled caisson retention system was placed to allow for excavation of the lower level adjacent to the McCarthy Gymnasium. AET also performed soil observations and testing during excavation and grading, lab testing of proposed fill material, and testing of fill and backfill and will be providing additional testing and inspections services, as construction progresses.

Supervising Staff Members: Rob Flickinger / Gregory Reuter, PE, PG.
Years of experience: 43 / 45
Required MN License – Gregory Reuter MN PE 19885

Client: University of St Thomas
2115 Summit Avenue, St. Paul, Minnesota, 55105
Client contact: Jim Brummer, Vice President of Facilities Management, 651-962-6595, brum4505@stthomas.edu

Project Name: I-35W North MnPass Project; Roseville to Blaine
Date: 2019-2021

Project Description

For this project AET performed **observation and testing of existing soils during excavation and grading** of 12 miles of interstate, 5 bridges, and noise walls This included observing MnDOT test rolling operation on roadway sub grade soils via the TR 10 method (tandem axle dump truck). The inspector made observations related to rutting, deflection, and cracking of the sub grade soils. The AET staff member acted as the QC inspector for the contractor team. The observations were discussed with the QA verification team based on project contract requirements and specifications for passing or failing test result.

AET performed **Field and Laboratory Tests on Proposed Fill Material** This included field and laboratory testing on aggregate materials incorporated on the project. The field testing included sampling of aggregates and sand for roadway and storm sewer embankment materials. Also, performed **Observation and Testing of Fill and Backfill.** This included density testing of the aggregates and sand placed for roadway and storm sewer embankment.

AET also performed **laboratory testing for sieve analysis for the fill materials** used for roadway and storm sewer embankment. We also, performed **moisture testing on the fill materials** used for roadway and storm sewer embankment.

All testing was compared to the project specifications and contract requirements for a pass or fail result.

Docusign Envelope ID: 8FD9B14A-4174-4726-9154-52DC70877C7B

AET performed full time inspection observations on the placement of bituminous for roadways. The inspector collected truck tickets to confirm correct mix design and total tonnage was placed. Also, performed temperature checks, lift thickness, and cross slope of the bituminous. Observation included placement and compaction operation of the bituminous layer.

An AET professional also served as Construction Quality Manager and Deputy Pavement Engineer who was responsible for managing all aspects of the construction quality, supervising a construction Quality Control staff of 5-7 engineering technicians,.coordinating pavement testing activities, and performing the analysis of collected pavement data. This included preparation of the materials design recommendation report for the project.

Supervising Staff Member: Robert Anderson / Jacob Michalowski, PE
Years of experience: 27
Required: MnDOT Certification #7430, ICC #1136558 Certification, Construction Site Manager (SWPP), MnDOT ADA Certification , BNSF, E-Rail Safe, Amry Corps of Engineering Construction Quality Manager Certification*2115 Summit Avenue, St. Paul, Minnesota, 55105*

Client: Ames Construction
Mailing Address: 2500 County Road 42 W Burnsville MN 55337
Client Contact: Ryan McShane, ryanmcshane@amesco.com, (952) 435-7106

Project name: TH 10/169 Reconstruction, Ramsey, MN
Dates: 2020-2023

AET served as Lead Geotechnical Engineer and performed **soil exploration and testing** for the TH 10/169 reconstruction through Ramsey, Minnesota. The project consisted of four new bridges, overhead signs, many MSE and CIP retaining walls, embankments of up to 30 feet, and the reconstruction of TH 10/169, between the Anoka/Ramsey city limits and the Main Street interchange, as well as several nearby side streets and ramps. The exploration included a life-cycle cost analysis, SPT borings, CPT soundings, Ground Penetrating Radar (GPR), and pavement cores.

Supervising Staff Member: Thomas Evans, PE
Years of experience: 12
Required MN License, registration, or certifications: Professional Engineer (MN #55092)

Client: Bolton Menk, Inc.
Mailing Address: 12224 Nicollet Ave, Burnsville, MN 55337
Client contact: Dena King, 952-890-0509, Dena.King@bolton-menk.com

Testing and Inspection Services

AET staff have performed construction testing and special inspections on construction projects across the state. Our Twin Cities area construction testing and inspection staff include over 100 experienced professionals, supplemented by seasonal employees, who excel at adapting to demanding construction schedules and last-minute testing needs. AET special inspectors maintain ICC certification in areas such as concrete reinforcement, masonry, structural steel, welding, bolting, and fireproofing. Our projects range from straightforward small buildings, developments, and infrastructure to the largest and most complicated design build and transit projects in the Metro.

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Concrete Testing / Inspection Services

Whether you are measuring the compressive strength of a concrete cylinder or conducting long-term creep and shrinkage tests, AET can evaluate and pre-qualify construction materials via our extensive range of laboratory testing and analysis services. We offer over 300 standards-based concrete and cementitious product tests, one of the largest lists of services in the industry.

We have extensive experience performing tests such as in-field concrete strength, slump, air content, etc. In fact, our St. Paul office has one of the largest testing departments in the upper mid-west and breaks over 20,000 concrete cylinders and beams per year. Our ACI and ICC certified technicians serve hundreds of projects in the Twin Cities every week.

Test schedules are developed to meet your needs, including rush services to minimize or eliminate any project delays. Test results are reported promptly. For long-term tests, such as creep and shrinkage, alkali-silica reactivity, and admixture evaluations, interim results are provided.

Our concrete/aggregate petrographic and chemistry team members are world renown for their expertise in identifying the root-causes of defects and failures and helping to resolve tricky construction issues. By following ASTM C856 guidelines, almost every concrete-related distress can be diagnosed through petrographic analysis of concrete and its aggregate mixes.

We participate in the Concrete and Cement Reference Laboratory (CCRL) program. As part of this program, a comprehensive examination of AET's laboratory procedures and equipment is conducted biannually. Also, AET is recognized and certified by AASHTO and validated by the Corps of Engineers. AET is active in technical organizations such as ASTM, ACI, and PCI. AET is very involved in construction industry organizations and some of professionals participate in the development, adaptation and implementation of many test standards.

Concrete Project Experience and References

Project name: Fourth & Park Tower, 700 Fourth Street South, Minneapolis, Minnesota
Dates: Started February 2022, Completed April 2024

We performed special inspections during construction of the 27-story office/apartment building, including **masonry, concrete, structural steel,** and **fireproofing/firestoppin**g. The building is a cast-in-place post-tensioned concrete structure supported on drilled pier foundations. AET performed observations of the drilled pier foundations along with performing thermal integrity profile testing of select pier foundations. We also performed **observations of the reinforcing steel** and post tensioned tendon installation and stressing of the tendons, **fresh and cured testing of the concrete**, including **Slump, Temperature, and Air Entrainment Tests of Fresh Concrete** and the **Casting, Curing and Testing of Concrete Cylinders for Compressive Strength**. AET also performed lab testing and special inspections of the masonry grout, lab testing of mortar, observations and testing of the welded and bolted connections for the structural steel frame and exterior precast wall panels, testing of welding and screw fastening during metal deck installation, observing and testing the spray applied fireproofing and fire stop materials, and performing compaction testing of backfill soils.

Supervising Staff Member: Joseph Ross O'Connor, PE (Minnesota)
Years of experience: 14
Required MN License, registration, or certifications: MN 62070

Client: Ryan Companies U.S., Inc
533 South 3rd Street, Minneapolis, Minnesota, 55415
Client contact: Tim Maher, Primary Project Manager, Construction, 612-282-2279

Docusign Envelope ID: 8FD9B14A-4174-4726-9154-52DC70877C7B

Project name: University of St. Thomas, Schoenecker Center, St. Paul, Minnesota
Dates: Started February 2022, completion May 2024

AET performed the geotechnical exploration and geotechnical consulting services prior to the start of construction, and we performed special inspections during construction of the 4-story classroom/laboratory building. The building is a cast-in-place post-tensioned concrete structure supported on spread footings. The special inspections performed by AET included lab testing of proposed fill material, observations and testing of the foundation soils during excavation and grading, the **reinforcing steel** and post tensioned tendon installation and stressing of the tendons, **concrete framework observations**, **fresh and cured testing of the concrete**, including **Slump, Temperature, and Air Entrainment Tests of Fresh Concrete** and the **Casting, Curing and Testing of Concrete Cylinders for Compressive Strength.** AET also performed lab testing and special inspection of the masonry grout, lab testing of mortar, observations and testing of the welded and bolted connections for the structural steel frame and exterior precast wall panels, testing of welding and screw fastening during metal deck installation, observing and testing the spray applied fireproofing and fire stop materials, and performing compaction testing of backfill soils.

Supervising Staff Members: Rob Flickinger and Justin Eikeland, PE
Years of experience: 43 and 25
Required MN License – Justin G. Eikeland MN PE 48387

Client: University of St Thomas
2115 Summit Avenue, St. Paul, Minnesota, 55105
Client contact: Jim Brummer, Vice President of Facilities Management, 651-962-6595, brum4505@stthomas.edu

Project name: Identity Dinkytown Apartments, Minneapolis, Minnesota
Dates: Started February 2022, completion May 2024

AET performed special inspections during construction of the 6-story apartment building, including **structural steel** testing and inspection, **concrete testing and inspection**, masonry testing and inspection, and fireproofing/firestopping testing and inspection. The building also has 2 levels of below grade parking. The building is a cast-in-place post-tensioned concrete structure supported on spread footings. The special inspections performed by AET included observation and testing of existing soils during excavation and grading, observations of the foundation soils, the **reinforcing steel** and post tensioned tendon installation and stressing of the tendons, **fresh and cured testing of the concrete**, including **Slump, Temperature, and Air Entrainment Tests of Fresh Concrete** and the **Casting, Curing and Testing of Concrete Cylinders for Compressive Strength.** AET also provided lab testing and special inspection of the masonry grout, lab testing of mortar, observations and testing of the welded and bolted connections for the structural steel frame, testing of welding and screw fastening during metal deck installation, observing and testing the spray applied fireproofing and fire stop materials, lab testing of proposed fill material, and performing observations and compaction testing of fill and backfill soils.

Supervising Staff Members: Curtis L. Johnson, PE
Years of experience: 28
Required MN License – Curtis L. Johnson MN PE 46608

Client: Catalyst Construction
833 E Michigan St UNIT 1000, Milwaukee, WI 53202
Client contact: Andrew LaBonte, Catalyst Construction, (720) 541-0262

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Masonry Testing / Inspection Services

We perform quality assurance testing for block, cement, and aggregate producers, building owners, and contractors. Concrete block sampling and testing, masonry mortar testing, grout placement and prism testing are just some of the services we can provide. to determine the conformance of masonry materials and products to job and product specifications. AET is active in technical organizations such as ASTM, ACI, and Minnesota Concrete & Masonry Association, We also participates in the development, adaptation and implementation of many test standards.AET has performed masonry observation and testing on numerous schools, warehouses and towers that have masonry block walls for elevators and stairwells. We also have experience consulting on wall failures.

Masonry Project Experience and References

Project name: Fourth & Park Tower, 700 Fourth Street South, Minneapolis, Minnesota
Dates: Started February 2022, Completed April 2024

We performed special inspections during construction of the 27-story office/apartment building, including **masonry testing and inspection,** as well as testing and inspection of concrete, structural steel, and fireproofing/firestopping. The building is a cast-in-place post-tensioned concrete structure supported on drilled pier foundations. AET performed observations of the drilled pier foundations along with performing thermal integrity profile testing of select pier foundations. We also performed observations of the reinforcing steel and post tensioned tendon installation and stressing of the tendons, fresh and cured testing of the concrete, **lab testing on masonry prisms and Special Inspections of the masonry grout and masonry construction**, **lab testing of mortar for Compressive Strength and Bond Strength**, observations and testing of the welded and bolted connections for the structural steel frame and exterior precast wall panels, testing of welding and screw fastening during metal deck installation, observing and testing the spray applied fireproofing and fire stop materials, and performing compaction testing of backfill soils.

Supervising Staff Member: Joseph Ross O'Connor, PE (Minnesota)
Years of experience: 14
Required MN License, registration, or certifications: MN 62070

Client: Ryan Companies U.S., Inc
533 South 3rd Street, Minneapolis, Minnesota, 55415
Client contact: Tim Maher, Primary Project Manager, Construction
612-282-2279

Project name: University of St. Thomas, Schoenecker Center, St. Paul, Minnesota
Dates: Started February 2022, completion May 2024

AET performed the geotechnical exploration and geotechnical consulting services prior to the start of construction, and we performed special inspections during construction of the 4-story classroom/laboratory building. The building is a cast-in-place post-tensioned concrete structure supported on spread footings. The special inspections performed by AET included lab testing of proposed fill material, observations and testing of the foundation soils during excavation and grading, the reinforcing steel and post tensioned tendon installation and stressing of the tendons, concrete framework observations, fresh and cured testing of the concrete, **lab testing on masonry prisms and Special Inspection of the masonry grout and masonry construction, lab testing of mortar for Compressive Strength and Bond Strength**, observations and testing of the welded and bolted connections for the structural steel frame and exterior precast wall panels, testing of welding and screw fastening during metal deck installation, observing and testing the spray applied fireproofing and fire stop materials, and performing compaction testing of backfill soils.

Supervising Staff Members: Rob Flickinger and Justin Eikeland, PE
Years of experience: 43 and 25
Required MN License – Justin G. Eikeland MN PE 48387

Client: University of St Thomas
2115 Summit Avenue, St. Paul, Minnesota, 55105
Client contact: Jim Brummer, Vice President of Facilities Management, 651-962-6595, brum4505@stthomas.edu

Project name: Identity Dinkytown Apartments, Minneapolis, Minnesota
Dates: Started February 2022, completion May 2024

AET performed special inspections during construction of the 6-story apartment building, including structural steel testing and inspection, concrete and **masonry testing and inspection**, and fireproofing/firestopping testing and inspection. The building also has 2 levels of below grade parking. The building is a cast-in-place post-tensioned concrete structure supported on spread footings. The special inspections performed by AET included observation and testing of existing soils during excavation and grading, observations of the foundation soils, the reinforcing steel and post tensioned tendon installation and stressing of the tendons, fresh and cured testing of the concrete, **lab testing on masonry prisms and special inspection of the masonry grout and masonry construction**, **lab testing of mortar for Compressive Strength and Bond Strength**, observations and testing of the welded and bolted connections for the structural steel frame, testing of welding and screw fastening during metal deck installation, observing and testing the spray applied fireproofing and fire stop materials, lab testing of proposed fill material, and performing observations and compaction testing of fill and backfill soils.

Supervising Staff Members: Curtis L. Johnson, PE
Years of experience: 28
Required MN License – Curtis L. Johnson MN PE 46608

Client: Catalyst Construction
833 E Michigan St UNIT 1000, Milwaukee, WI 53202
Client contact: Andrew LaBonte, Catalyst Construction, (720) 541-0262

Structural Steel Testing / Inspection

AET employs certified weld inspectors (CWI's), structural engineers, and other professionals experienced in observing welded and other structural connections, including field testing of bolted connections. Your projects get a double advantage because many of our CWI's are also Level II radiography technicians and therefore their experience includes comparing their visual connection observations with detailed internal visual analysis.

Steel Project Experience and References

Project name: Fourth & Park Tower, 700 Fourth Street South, Minneapolis, Minnesota
Dates: Started February 2022, Completed April 2024

We performed special inspections during construction of the 27-story office/apartment building, including **structural steel testing and inspection**, as well as testing and inspection on masonry, concrete, structural steel, and fireproofing/firestopping. The building is a cast-in-place post-tensioned concrete structure supported on drilled pier foundations. AET performed observations of the drilled pier

foundations along with performing thermal integrity profile testing of select pier foundations. We also performed **observations of the reinforcing steel and post tensioned tendon installation and stressing of the tendons**, fresh and cured testing of the concrete, lab testing and special inspections of the masonry grout, lab testing of mortar, **observations and testing of the welded and bolted connections for the structural steel frame and exterior precast wall panels**, **testing of welding and screw fastening during metal deck installation**, observing and testing the spray applied fireproofing and fire stop materials, and performing compaction testing of backfill soils.

Supervising Staff Member: Joseph Ross O'Connor, PE (Minnesota)
Years of experience: 14
Required MN License, registration, or certifications: MN 62070

Client: Ryan Companies U.S., Inc
533 South 3rd Street, Minneapolis, Minnesota, 55415
Client contact: Tim Maher, Primary Project Manager, Construction
612-282-2279

Project name: University of St. Thomas, Schoenecker Center, St. Paul, Minnesota
Dates: Started February 2022, completion May 2024

AET performed the geotechnical exploration and geotechnical consulting services prior to the start of construction, and we performed special inspections during construction of the 4-story classroom/laboratory building. The building is a cast-in-place post-tensioned concrete structure supported on spread footings. The special inspections performed by AET included lab testing of proposed fill material, observations and testing of the foundation soils during excavation and grading, **the reinforcing steel and post tensioned tendon installation and stressing of the tendons**, concrete framework observations, fresh and cured testing of the concrete, lab testing and special inspection of the masonry grout, lab testing of mortar, **observations and testing of the welded and bolted connections for the structural steel frame and exterior precast wall panels**, **testing of welding and screw fastening during metal deck installation**, observing and testing the spray applied fireproofing and fire stop materials, and performing compaction testing of backfill soils.

Supervising Staff Members: Rob Flickinger and Justin Eikeland, PE
Years of experience: 43 and 25
Required MN License – Justin G. Eikeland MN PE 48387

Client: University of St Thomas
2115 Summit Avenue, St. Paul, Minnesota, 55105
Client contact: Jim Brummer, Vice President of Facilities Management, 651-962-6595, brum4505@stthomas.edu

Project name: Identity Dinkytown Apartments, Minneapolis, Minnesota
Dates: Started February 2022, completion May 2024

AET performed special inspections during construction of the 6-story apartment building, including **structural steel testing and inspection**, concrete and masonry testing and inspection, and fireproofing/firestopping testing and inspection. The building also has 2 levels of below grade parking. The building is a cast-in-place post-tensioned concrete structure supported on spread footings. The special inspections performed by AET included observation and testing of existing soils during excavation and grading, observations of the foundation soils, observations of the reinforcing steel and post tensioned tendon installation and stressing of the tendons, fresh and cured testing of the concrete, lab testing and special inspection of the masonry grout, lab testing of mortar, **observations and testing of the welded and bolted connections for the structural steel frame**, **testing of welding and screw fastening during metal deck**

installation, observing and testing the spray applied fireproofing and fire stop materials, lab testing of proposed fill material, and performing observations and compaction testing of fill and backfill soils.

Supervising Staff Members: Curtis L. Johnson, PE
Years of experience: 28
Required MN License – Curtis L. Johnson MN PE 46608

Client: Catalyst Construction
833 E Michigan St UNIT 1000, Milwaukee, WI 53202
Client contact: Andrew LaBonte, Catalyst Construction, (720) 541-0262

Fireproofing / Firestopping Testing and Inspection

Our inspectors are available to perform visual inspections to a variety of codes and standards. We are experienced in performing fire-proofing testing, as well as protective coating verification and bolt testing. AET routinely performs direct and remote visual inspections, as well as positive material identification (PMI) tests.

Fireproofing / Firestopping Project Experience and References

Project name: Fourth & Park Tower, 700 Fourth Street South, Minneapolis, Minnesota
Dates: Started February 2022, Completed April 2024

We performed special inspections during construction of the 27-story office/apartment building, including masonry, concrete, structural steel**, as well as special inspections of fireproofing/firestopping**. The building is a cast-in-place post-tensioned concrete structure supported on drilled pier foundations. AET performed observations of the drilled pier foundations along with performing thermal integrity profile testing of select pier foundations. We also performed observations of the reinforcing steel and post tensioned tendon installation and stressing of the tendons, fresh and cured testing of the concrete, lab testing and special inspections of the masonry grout, lab testing of mortar, observations and testing of the welded and bolted connections for the structural steel frame and exterior precast wall panels, testing of welding and screw fastening during metal deck installation, **testing of installed spray-on fireproofing for thickness, density, adhesion, observed and documented the installation of fire-resistive joint systems**, and performing compaction testing of backfill soils.

Supervising Staff Member: Joseph Ross O'Connor, PE (Minnesota)
Years of experience: 14
Required MN License, registration, or certifications: MN 62070

Client: Ryan Companies U.S., Inc
533 South 3rd Street, Minneapolis, Minnesota, 55415
Client contact: Tim Maher, Primary Project Manage -- Construction, 612-282-2279

Project name: University of St. Thomas, Schoenecker Center, St. Paul, Minnesota
Dates: Started February 2022, completion May 2024

AET performed the geotechnical exploration and geotechnical consulting services prior to the start of construction, and we performed special inspections during construction of the 4-story classroom/laboratory building. The building is a cast-in-place post-tensioned

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concrete structure supported on spread footings. The special inspections performed by AET included lab testing of proposed fill material, observations and testing of the foundation soils during excavation and grading, the reinforcing steel and post tensioned tendon installation and stressing of the tendons, concrete framework observations, fresh and cured testing of the concrete, lab testing and special inspection of the masonry grout, lab testing of mortar, observations and testing of the welded and bolted **connections** for the structural steel frame and exterior precast wall panels, testing of welding and screw fastening during metal deck installation, **testing of installed spray-on fireproofing for thickness, density, adhesion, observed and documented the installation of fire-resistive joint systems**, and performing compaction testing of backfill soils.

Supervising Staff Members: Rob Flickinger and Justin Eikeland, PE
Years of experience: 43 and 25
Required MN License – Justin G. Eikeland MN PE 48387

Client: University of St Thomas
2115 Summit Avenue, St. Paul, Minnesota, 55105
Client contact: Jim Brummer, Vice President of Facilities Management, 651-962-6595, brum4505@stthomas.edu

Project name: Identity Dinkytown Apartments, Minneapolis, Minnesota
Dates: Started February 2022, completion May 2024

AET performed special inspections during construction of the 6-story apartment building, including **structural steel** testing and inspection, **concrete** and **masonry** testing and inspection, and fireproofing/firestopping testing and inspection. The building also has 2 levels of below grade parking. The building is a cast-in-place post-tensioned concrete structure supported on spread footings. The special inspections performed by AET included observation and testing of existing soils during **excavation and grading**, observations of the foundation soils, the **reinforcing steel** and post tensioned tendon installation and stressing of the tendons, **fresh and cured testing of the concrete**, **lab testing and special inspection of** the **masonry** grout, lab testing of **morta**r, observations and testing of the **welded and bolted connections** for the structural steel frame, testing of welding and screw fastening during metal deck installation, **observing and testing the spray applied fireproofing and fire stop materials**, lab testing of proposed **fill material**, and performing observations and compaction testing of **fill and backfill** soils.

Supervising Staff Members: Curtis L. Johnson, PE
Years of experience: 28
Required MN License – Curtis L. Johnson MN PE 46608

Client: Catalyst Construction
833 E Michigan St UNIT 1000, Milwaukee, WI 53202
Client contact: Andrew LaBonte, Catalyst Construction, (720) 541-0262

Pavement Testing / Inspection

AET pavement staff provide extensive knowledge in all aspects of the construction, resurfacing and rehabilitation of concrete, bituminous, and gravel-surfaced pavements. We partner with our clients to address cost-effectiveness, construction/rehabilitation, project efficiency, public safety, and provide forensic analysis and consulting services on structure longevity & maintenance issues.

Since the early 2000s, AET has been at the forefront of cold in-place recycling (CIR) and stabilized full-depth reclamation (SFDR) efforts in the Midwest, and the mix design processes first developed at AET have emerged as industry and agency standards. Our staff has worked on over 400 CIR and SFDR projects over the past 15 years, across the many phases of the pavement rehabilitation

process. These phases include preliminary pavement condition analysis, mix design testing services, material testing services during construction, and most importantly, the selection of an appropriate pavement rehabilitation method given costs, construction, and available resources.

AET performs pavement condition analysis and evaluation surveys using non-destructive testing methods such as falling weight deflectometer (FWD) and ground penetrating radar (GPR) to evaluate existing pavements and subgrade soils. AET also provides inspection and quality control/quality assurance (QA/QC) testing during the construction phases of roadway construction and rehabilitation.

Our staff are experts in pavement design. In the past we have worked with MnDOT to develop MnDOT's design procedure for concrete pavements (MnPAVE Rigid), and provided continuing research to improve MnPAVE Flexible (MnDOT's procedure for flexible pavements design). We have also worked with clients to test the effectiveness and development of mix design testing procedures for new stabilizing agents.

AET also has extensive experience developing bituminous and concrete mix designs for both temporary and permanent pavements that will be exposed to heavy loads and extreme environmental conditions. Our expertise is highly regarded among state and county transportation and highway departments, civil design consulting engineers as well as highway and heavy construction contractors and private developers. Our goal is to help clients construct and operate durable and safe pavements and transportation infrastructure, while reducing costly maintenance and repair.

AET's bituminous testing laboratory is MnDOT certified and is fully equipped to perform routine asphalt testing and pavement mix designs. Our bituminous lab performs mix designs for pavement construction projects throughout the world using a variety of reclaimed materials and stabilizing agents (such as engineered emulsion, foamed asphalt, cement, lime, fly-ash and other proprietary products). Our lab is equipped with industry-leading equipment -- including one of the few Wirtgen foamed asphalt mix design tables in the region -- as well as two Gyratory Compactors, unconfined compression machine, resilience modulus and indirect tension test device, dynamic modulus test device, disc-shaped compact tension tester (DCT), low temperature cracking chamber, semi-circular bending tester (SCB), and the Hamburg wheel tester (HWT) for rutting and stripping resistance.

Pavement Project Experience / References

Project Name: I-35W North MnPass Project; Roseville to Blaine
Date: 2019-2021

Project Description

AET **observed MnDOT test rolling operation on roadway sub grade soils** via the TR 10 method (tandem axle dump truck). The inspector made observations related to rutting, deflection, and cracking of the sub grade soils. The AET staff member acted as the QC inspector for the contractor team. The observations were discussed with the QA verification team based on project contract requirements and specifications for passing or failing test result.

AET performed **field and laboratory tests on aggregate base** incorporated on the project. The field testing included sampling of aggregates and sand for roadway and storm sewer embankment materials. Also, performed density testing of the aggregates and sand placed for roadway and storm sewer embankment. AET also performed laboratory testing for sieve analysis for the materials used for roadway and storm sewer embankment. Also, performed moisture testing on the materials used for roadway and storm sewer embankment. All testing was compared to the project specifications and contract requirements for a pass or fail result.

AET performed **Field inspection and Testing during Bituminous Paving (Continuous)** This included full time field inspection observations on the placement of bituminous for roadways. The inspector collected truck tickets to confirm correct mix design and total

tonnage was placed. Also, performed temperature checks, lift thickness, and cross slope of the bituminous. Observation included placement and compaction operation of the bituminous layer.

Supervising Staff Member: Robert Anderson
Years of experience: 27
Required: MnDOT Certification #7430, ICC #1136558 Certification, Construction Site Manager (SWPP), MnDOT ADA Certification , BNSF, E-Rail Safe, Amry Corps of Engineering Construction Quality Manager Certification*2115 Summit Avenue, St. Paul, Minnesota, 55105*

Client: Ames Construction
Mailing Address: 2500 County Road 42 W Burnsville MN 55337 (952) 435-7106
Client Contact: Ryan McShane, ryanmcshane@amesco.com, (952) 435-7106

Project Name: I-90 UBOL Design-Build Project; TH22 to 169, Blue Earth
Date: 2023-2024

Project Description

AET **observed MnDOT test rolling operation on roadway sub grade soils** via the TR 10 method (tandem axle dump truck). The inspector made observations related to rutting, deflection, and cracking of the sub grade soils. The AET staff member acted as the QC inspector for the contractor team. The observations were discussed with the QA verification team based on project contract requirements and specifications for passing or failing test result.

AET performed **field and laboratory tests on aggregate base** incorporated on the project. The field testing included sampling of aggregates and sand for roadway and storm sewer embankment materials. Also, performed density testing of the aggregates and sand placed for roadway and storm sewer embankment. AET also performed laboratory testing for sieve analysis for the materials used for roadway and storm sewer embankment. Also, performed moisture testing on the materials used for roadway and storm sewer embankment. All testing was compared to the project specifications and contract requirements for a pass or fail result.

AET performed **Field inspection and Testing during Bituminous Paving (Continuous)** This included full time field inspection observations on the placement of bituminous for roadways. The inspector collected truck tickets to confirm correct mix design and total tonnage was placed. Also, performed temperature checks, lift thickness, and cross slope of the bituminous. Observation included placement and compaction operation of the bituminous layer.

Supervising Staff Member: Robert Anderson
Years of experience: 27
Required: MnDOT Certification #7430, ICC #1136558 Certification, Construction Site Manager (SWPP), MnDOT ADA Certification , BNSF, E-Rail Safe, Amry Corps of Engineering Construction Quality Manager Certification*2115 Summit Avenue, St. Paul, Minnesota, 55105*

Client: PCi Roads
Mailing Address:14123 42nd Steet Northeast, St Michale, MN 55376
Client Contact: Rachel Wedig, 763-497-6100

Project Name: CR 61 and CSAH 15 Improvements, Washington Co, MN
Date: 2020-2023
Project Manager: Responsible for overall project management and reporting for pavement rehabilitation improvements considering CIR, SFDR, and FDR as well as full reconstruction. The scope consisted of GPR, FWD, soil borings, and

pavement cores. AET also continued work on the project to provide observations during construction including test rolling, materials testing of aggregate base and bituminous pavement.

Supervising Staff Member: Thomas Evans, PE
Years of experience: 12
Required MN License, registration, or certifications: Professional Engineer (MN #55092)

Client: Washington County Public Works
Mailing Address: Washington County Public Works, 11660 Myeron Road North, Stillwater, Minnesota 55082
Client Contact: Andrew Giesen, PE, Andrew.Giesen@co.washington.mn.us

Other (Building Envelope / Roofing)

AET provides investigative and analytical services to diagnose a variety of building problems. This includes condition assessments, documentation of building and structural systems, building envelope evaluations and specialized field and laboratory testing. Offering high quality reports and solutions, our goal is to help you maintain buildings and structures that are safe and durable. Testing and inspection of windows and curtain walls, roofing, and waterproofing. AET also provides design services in these areas.

Envelope / Roofing Project Experience / References

Isles Condominium Electronic Leak Detection Assessment and Roof Inspection
November 2023

AET performed **Roofing/Waterproofing Testing and Inspection**, using electronic leak detection and visual inspection to assess for leaks in the Thermoplastic Polyolefin (TPO) single-ply **roofing membrane** on the roof of the Isles Condominium Building in Minneapolis, MN. **Water intrusion had been reported** in the top story units after heavy rain events. The ELD identified caulking of seams and joints as the primary points of failure across the roof. AET used a Tramex moisture meter to assess for moisture in roofing materials below some of the identified TPO leaks. AET identified clean spots on the TPO and dents in the metal parapet wall cap consistent with large hail damage.

Supervising Staff Member: P. Randy Tufts, PE
Years of experience: 25
Required MN License, registration, or certifications: MN PE

Client: *TKDA*
Mailing Address: *444 Cedar St Ste 1500, Saint Paul, MN 55101*
Client contact: *Steve Foss, 651-955-1471, steve.foss@tkda.com*

Vaderstad Headquarters Curtain Wall Leak Testing
Wahpeton, ND May 2024

AET performed **Window/Curtain Wall Testing and Inspection** a Vaderstad, assessing the leakage potential of two curtain wall areas on **new construction** using test method AAMA 501.2-15 *Quality Assurance and Field Check of Installed Storefronts, Curtain Walls, and Slope Glazing Systems.*

Supervising Staff Member: Christine Snider
Years of experience: 25
Required MN License, registration, or certifications: CPPM

Client: *Comstock Construction, Inc.*
Mailing Address: *1003 Progress Drive, Fergus Falls, MN 56537*
Client contact: *Kevin Koppang, 701-640-1695*

Dakota County Crisis and Recovery Center
April and May 2024

AET **conducted a Fluid-Applied Vapor Barrier Testing**, **inspecting the air barrier coating application consistency on the exterior walls**. AET performed ASTM E1186: *Standard Practice for Air Leakage Site Detection in Building Envelopes and Air Barriers via the Bubble Gun Test* over a site where anchors penetrated the air barrier.

Supervising Staff Member: Andrew Schmid
Years of experience: 30
Required MN License, registration, or certifications: MN PE and other states

Client: *Dakota County.*
Mailing Address: *1590 West Highway 55, Hastings, MN 55033*
Client contact: *Trish Bremer, Sr. Project Manager trish.bremer@co.dakota.mn.us , 651-438-4357*

Environmental Services

When you work with AET, our team of dedicated experts, Environmental Engineers, Scientists, and Technicians, will be committed to your projects. Your goals, expectations, and schedules will be at the center of our conversations with you.

Integrating health and safety (H&S) into all we do is a core value of AET. Our staff follow our Health & Safety Management Plan, prepare Site-Specific and Project-Specific Health and Safety Plans, and prepare and follow Standard Operating Procedures (SOPs) for all investigative work.

Our agile and mobile project managers and staff have worked extensively with various regulatory and government agencies including State voluntary programs (VIC, PBP, AgVIC), enforcement programs (PRP, RCRA), financing programs (DEED, TBRA, Hennepin and Ramsey County ERFs, Petrofund, ACRRA), the US Environmental Protection Agency (US EPA), Minnesota Pollution Control Agency (MPCA), Minnesota Department of Health (MDH), as well as Metropolitan Council, and city and county governments throughout Minnesota (from International Falls to the Iowa, Dakotas and Wisconsin borders).

AET senior environmental staff includes Dennis McComas, PG; Joe Conlan, CHMM; Bruce Boehm Carlson, Susan Mickus, PG, and Michael Taylor, PG, who each hold certifications from state bodies and have over 20 years of experience in the field of environmental services. Our experienced team of field technicians includes experts such as Bill Tomczyk, a senior field technician with over 30 years of varied field experience, USCS field soil logging, and is also a Geoprobe drill rig operator.

Our established Environmental Division has extensive experience planning and conducting environmental investigation and cleanup plans. In the last 6 years, we have completed over 900 Phase I Environmental Investigations, 300 Phase II Environmental Investigations, and 80 regulatory approved RAP/CCPs for a variety of clients, including private developers, financial companies,

municipalities, and counties. Our environmental expertise includes related services for asbestos and regulated waste surveys, tank removal activities, excavation and management of contaminated media, sample collection and analysis, vapor intrusion investigation and mitigation design and implementation, preparation and implementation of response action plan/Construction Contingency Plan (RAP/CCPs), regulatory support, assistance obtaining liability protection assurances from state regulators, and preparing grant applications for reimbursement of assessment and cleanup costs. Over the past several years, AET has also secured over $6 M in cleanup grants for our clients.

Phase I Environmental Investigation

Phase I Environmental Investigations
Phase I Environmental Investigations (Phase I) have been a core business practice at AET since 1990. AET has conducted over 900 Phase I projects over the last 10 years. AET subscribes to ASTM E-1527-21 and the EPA All Appropriate Inquiry (AAI) standards when performing Phase I Environmental Investigations. Dennis McComas was in charge of a focus group on the E-50 ASTM Phase I ESA committee, tasked with updating and refining the "shelf-life viability" for the revised E-1527-21 standard. All the Phase I ESAs for property in Minnesota performed by AET meet the standards in the MPCA guidelines (i.e., Guidance Document #8- Phase I Investigation), in the event the property will be entered in the Voluntary Brownfield Program, as well as E1527-21. As part of the application process for this program, the MPCA requires an up-to-date Phase I report (no more than one year old), or in some cases a Phase I report with a recent update, be included with the application, and that the Phase I meet the AAI requirements. Phase I documents that AET submits to the MPCA are routinely accepted by the agency.

Another core environmental service provided by AET since the 1990s is hazardous materials building surveys for both building demolitions and renovations. The building surveys typically include lead paint, documenting asbestos containing materials (ACM), PCBs in caulk and electrical equipment and components, and bulbs and ballasts that contain mercury and/or PCBs. Our asbestos surveys conform to MPCA Guidance Document #9-Guidance for Investigation and Remediating Asbestos-Containing Waste Materials. Other hazardous materials that can be included in a survey are lead plates and treated lumber, as well as containers of chemicals. AET has performed hazardous materials surveys on residences, single-story commercial buildings and bridges, and multi-story office and industrial buildings.

Phase I ESA Project Experience / References

Minnesota Department of Administration, Demo of Ford Building, St, Paul, MN
2023 / ongoing

From at least 1884 the two original adjoining structures on the Subject Property were listed as roofing and cornice factory and as a carpet cleaning and rug factory in 1903. The Subject Property was a sub-assembly plant for Ford Motor vehicles from approximately 1914 to 1935. After the closure of the Ford plant in 1935, the building was redeveloped into government office spaces. It was used as office space until 2004 and has been vacant since. AET prepared a **Phase I ESA** of the Ford property in February 2023, **consistent with the American Society of Testing and Materials standard for a Phase I ESA and the Minnesota Pollution Control Agency Voluntary Investigation and Cleanup Program Guidance Document #8**. During the Phase I ESA, AET identified a closed-in-place underground storage tank (UST) in the south part of the basement of the Subject Property with no identified tank closure assessment documentation. Additionally, test pits excavated for the Phase II ESA identified impacted fill containing buried debris, including **building materials containing asbestos,** underlying the Site. **After completion of the Phase I ESA, AET completed Phase II ESA services** at the Ford Building in conjunction with the planned demolition of the Ford Building and redevelopment of the Property with a smaller building, including an elevator shaft.

Supervising Staff Member: Dennis McComas
Years of experience: 35

Required MN License, registration, or certifications: PG & HazWoper certification

Client: Department of Administration, Real Estate & Construction
50 Sherburne Avenue, Suite 309, St. Paul, MN 55155
Client contact: Ms. Cindy Dillahunty, SPA Coordinator

Various MnDOT Phase I ESA Corridor Projects
2018 / ongoing

As part of planned reconstruction activities, MnDOT Highway Corridor **Phase I ESAs, consistent with the American Society of Testing and Materials standard for a Phase I ESA and the Minnesota Pollution Control Agency Voluntary Investigation and Cleanup Program Guidance Document #8,** were completed by AET on select portions of **more than 23 roadway corridor projects** in the last six years. The purpose of these Corridor Phase I ESAs is to identify possible sources of contamination that proposed construction activities could impact or that could affect property acquisition in the proposed project corridor. Each adjacent site was evaluated to determine if it posed a risk of resulting in contamination. **Phase II Drilling Investigation work plans** were prepared for each roadway corridor project and assessment activities completed to assess for soil, groundwater and/or soil vapors. Assessment occurred within the right-of-way areas or adjacent properties with an access agreement. Regular discussions with appropriate personnel occurred throughout the project to ensure proper sampling was performed with consideration to the proposed construction plans. Various impacts including petroleum, chlorinated solvents, agricultural chemicals, RCRA Metals, **asbestos** and other contaminants were identified as part of these various assessment activities. Documentation of the contaminant locations was prepared to assist with construction monitoring needs. Construction monitoring occurred on select projects to document contaminant management activities of contaminated and regulated materials.

Supervising Staff Member: Joe Conlan
Years of experience: 20
Required MN License, registration, or certifications: CHMM

Client: MnDOT Office of Environmental Stewardship
395 John Ireland Boulevard, MS 620, St. Paul, MN 55155-1899
Client contact: Ms. Jill Keefe, Hydrologist / Contaminated Materials Specialists, 612-257-1987

Portfolio of Phase I ESAs for Gas Stations/Convenience Stores
2016 / ongoing

Conduct multiple **Phase I Environmental Site Assessment consistent with the American Society of Testing and Materials standard for a Phase I ESA and the Minnesota Pollution Control Agency Voluntary Investigation and Cleanup Program Guidance Document #8,** for Holiday Stationstores/Circle K Convenience Stores throughout Minnesota (from International Falls to the Dakota, Wisconsin and Iowa borders) to determine a baseline environmental state for each site prior to sale, demolition, and/or reconstruction. Work is often paired with Phase II ESAs, tank pulls, petroleum limited site investigations, geotechnical evaluations, and **visual (existing structures) assessment for typical suspect asbestos containing materials (ACM)**. and hazardous waste inspections.

Supervising Staff Member: Michael Taylor
Years of experience: 25
Required MN License, registration, or certifications: HazWoper Certified

Client: Holiday Stationstores
4567 American Blvd. West Bloomington, Minnesota 55437
Client contact: Alan Cubberly, PE, Environmental Manager, (952) 830-8899

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Phase II Environmental Investigation

Phase II Environmental Investigations
As a core environmental service that has been provided since the 1990s, AET routinely prepares and implements plans for Phase II Environmental Investigations (Phase II) of subsurface soils, soil vapors, and groundwater contamination for contaminated or potentially contaminated properties, typically identified during a Phase I ESA. Our team of environmental engineers, scientists, and technicians have extensive field capabilities and work with advanced field instrumentation to gain cost-effective, timely, and accurate results.

If the Phase II is likely to be enrolled in or is in the MPCA Voluntary Brownfields Program (VBP), or the State Superfund program, AET prepares a Phase II ESA workplan for review and approval by the MPCA. The workplans are prepared according to MPCA guidelines (i.e., Guidance Documents #11-Phase II Investigation Work Plan and #12 Phase II Investigation Report) and consistent with the American Society of Testing and Materials standard E1903. Site safety and contingency plans are typically prepared for Phase II projects. Often, development of these plans involves direct discussions with the MPCA. AET project staff then implement the plans after they have been reviewed and approved by the agency. Where EPA funding is involved, AET works with the MPCA and the EPA to develop Quality Assurance Project Plans (QAPPs) and Sampling Analysis Plan (SAPs). The workplans are consistent with VBP and MERLA guidance. Once the workplan is approved by the MPCA, if submitted, the Phase II ESA and subsequent work is completed per MPCA Remediation Division General Policy, c-rem2-03, June 2024.

AET owns and maintains the latest soil, soil vapor and groundwater sampling equipment, including drill rigs, Geoprobe© equipment, PIDs, pumps, and field meters, as well as air sampling/monitoring equipment. This means we also control the scheduling of equipment, so it will be available for time-critical projects.

Phase II Project Experience / References

Fox Hollow Golf Club, St. Michael, Minnesota
2021 / 2022

The existing golf course was historically farmland with a farmstead near the northwest corner of the Site until the late 1940s. The Site was developed as a golf course with adjoining residential properties in approximately 1990.The Phase I ESA, performed by AET, revealed RECs were present at the Site. The RECs included the historic use of the Site as a golf course which may have used fertilizers, herbicides or pesticides, including mercury containing fungicides. The RECs also included the presence of a plumbing system in the maintenance shop, including a flammable waste trap connected to two 1,500-gallon septic tanks and an accompanying septic drain field, as well as a parts washer. One CREC was identified, consisting of closed MPCA Leak Site LS14162, related to an onsite public water supply well.

A Phase II ESA was performed consistent with the American Society of Testing and Materials standard E1903. A site safety and contingency plan was prepared. To address the RECs, four soil borings were advanced in and near the maintenance building, the supply well in the shop was sampled, and two rounds of soil vapor sampling (non-heating season and heating season) of four sub-slab vapor (SSV) borings were advanced. Regarding the soil vapor sampling, all detected VOCs were below their respective 33x Commercial/Industrial ISVs in both rounds for samples collected and analyzed for this investigation. To address the REC associated with the historic use of the Site as a golf course since at least 1990, 6 greens, 6 tee boxes and the practice putting green, or 13 areas were sampled, according to the current Minnesota Department of Agriculture Guidance Document GD-30 – Soil Sampling at Golf Courses for Contamination. Based on this sampling,

it was AET's opinion that the concentrations detected during the Phase II ESA represented background levels. Upon submittal of the reports to the MPCA, a No Action Determination for Soil Vapor letter was granted by the MPCA in April 2022.

Supervising Staff Member: Dennis McComas
Years of experience: 35
Required MN License, registration, or certifications: PG

Client: 21st Century Bank
2335 Highway 36, Suite 202, Roseville, MN 55113
Client contact: Mr. Levi Peterson, Senior Credit Analyst, Team Lead, 612-372-4338.

Confidential Client, Southern Minnesota Industrial Facility
2021 / 2022

This comprehensive **Phase II ESA was performed consistent with the American Society of Testing and Materials standard E1903. A site safety and contingency plan was prepared.** The project involved the assessment of subsurface conditions within and outside of Site buildings located at the industrial property. Soil, groundwater, and soil gas samples were collected to evaluate the recognized environmental conditions (RECs) identified in the Phase I ESA Report prepared by Amereco, Inc., dated November 15, 2021 (November 2021 Phase I ESA). The findings of the Phase I ESA included the following recognized environmental conditions (RECs) in connection with the Site; Historic Petroleum Release on Subject Site, Historic and Current Underground Storage Tanks (USTs), Current and Historic Aboveground Storage Tanks (ASTs), Historic Long-term Industrial Use of the Site Including Solvent and paint use with evidence of releases, Usage and Possible Mismanagement of RCRA Waste Including Perchloroethylene (PCE) (D039) and Methyl Ethyl Ketone (MEK) (D001), Railroad Spurs and Former Turntable/Round House, and a Vapor Encroachment Condition.

Based on the above RECs AET completed a Phase II ESA in accordance with current Minnesota Pollution Control Agency (MPCA) guidance. The scope of the investigation included; Using geophysical equipment to determine if suspected USTs identified in the November 2021 Phase I ESA were present, five interior soil borings/temporary wells, 13 soil borings to an estimated depth of 15 feet below ground surface (bgs), four "wipe" samples for PCBs, 28 sub-slab vapor (SSV) borings inside the two buildings in accordance with the methods and procedures defined by current MPCA Vapor Intrusion (VI) Best Management Practices (BMPs), six soil vapor borings to an estimated depth of 5 feet bgs, collected and analyzed all 34 soil vapor samples for VOCs by EPA Method TO-15.

Based on the work performed, the Phase II ESA confirmed the presence of soil and soil vapor impacts by hazardous substances and petroleum products at the Site under conditions that indicate disposal or release, consisting of RCRA metal and petroleum compound concentrations above unregulated fill criteria that render fill at the Site as regulated fill for offsite use. Also apparent petroleum releases associated with current or former storage tanks were identified, apparent non-tank petroleum releases were identified, a chlorinated solvent release was identified within the primary Site building as indicated by PCE concentrations above regulatory thresholds, TCE concentrations above regulatory thresholds and trichlorofluoromethane concentrations above regulatory thresholds. Based on this Phase II ESA, it was AET's opinion that these detections constituted a release to the environment. In accordance with Minnesota Statute §115.061, AET recommended that the owner of the Site and/or responsible parties associated with the release notify the State Duty Officer, who will then relay the information to the MPCA

Supervising Staff Member: Dennis McComas, PG
Years of experience: 35
Required MN License, registration, or certifications: PG, HazWoper

Client: Confidential
15760 Willows Drive
Spring Lake, MI 49456
Client contact: Mr. Edward J. Cooney, Ph.D., P.E, 630-319-9316

Inland Development, Hy-Vee, Inc., City of Robbinsdale
2015 / 2019

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AET provided environmental and geotechnical services to demolish a blighted mall and theater and redevelop the Site into a new Hy-Vee grocery store and convenience/gas store. AET prepared a Phase I ESA; multiple soil, groundwater and vapor **Phase II ESA**s; a Response Action Plan; MCES water discharge permits; and DNR groundwater extraction permits. Contamination included petroleum-contaminated soils and groundwater, debris-laden soils, construction debris, VOCs, and asbestos-containing building materials in the soil. AET conducted oversight of the implementation of the RAP and was onsite during construction to monitor soils and management of contamination. AET prepared successful environmental grant applications for over $340,000.

Supervising Staff Member: Dennis McComas (PM) / Jake Dalbec (RAP PM)
Years of experience: 30 / 12
Required MN License, registration, or certifications: PG, HazWoper / PG, HazWoper

Client: Inland Development / Hy-Vee
20505 Lakeview Ave., Deephaven, MN 55331 /
Client contact: Kent Carlson, Managing Partner, Inland / Jeff Stein, PE, Director, Site Planning, Hy-Vee, 612-360-3229 phone

Remediation Services

AET has been preparing and implementing response action plan/construction contingency plans (RAP/CCPs) for brownfield sites in the MPCA VBP, including for both the VIC program and PBP since the 1990s.

AET prepares RAP/CCPs following MPCA Brownfield Program Response Action Plans, c-rem4-43, April 2024, approved thru the MPCA Voluntary Investigation and Cleanup Program Guidance Documents. AET routinely implements MPCA approved RAPs for soil impacted with diesel range organics (DRO), gasoline range organics (GRO), volatile organic compounds (VOC), semi-VOCs (SVOC), polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCB), and/or one or more of the RCRA 8 metals. AET has also prepared and implemented MPCA-approved RAPs for other types of soil contamination, such as soils impacted with iron slag and cyanide.

For contaminated groundwater, AET prepares and implements approved RAPs that typically address VOC and DRO impacts to groundwater, and to a lesser extent groundwater impacted by PAHs and metals. AET implements RAPs that include soil vapor mitigation of TO-15 VOCs and/or methane in new and existing buildings. AET's RAPs that include vapor mitigation involve preparing a vapor mitigation design, that AET designs, that typically consists of a sub-slab depressurization system (SSDS). AET performs remediation services in accordance with MPCA Remediation Division General Policy, c-rem2-03, June 2024.

AET has experience preparing bidding specifications for environmental remediation, hazardous material abatement, and soil vapor mitigation for numerous projects that have been entered into the MPCA Voluntary Brownfield Program. The basis for environmental soil remediation bidding specifications is the MPCA-approved RAP, which provides the required environmental parameters for establishing bid specifications. Most often, AET's specifications for soil remediation incorporate a flexible approach to soil management based on the approved RAP.

Soils identified as unregulated fill that does not contain contamination at levels that exceed the RAP cleanup goals or the MPCA guidance for unregulated fill, are managed according to MPCA unregulated fill criteria, either onsite or offsite. For contaminated soils at concentrations above the unregulated fill criteria, AET proposes to reuse the impacted material onsite, if allowed by the approved RAP and the material meets geotechnical requirements for the proposed improvements, or offsite at a Minnesota licensed RCRA Subtitle D landfill. Impacted regulated fill that cannot be left on the site and usually needs to be disposed of at a state permitted landfill, typically fill with significant debris, is proposed to be handled in accordance with MPCA guidance and the approved RAP.

In addition to soil remediation, AET has considerable experience preparing bid specifications for abatement of ACM from buildings, as well as the abatement of lead-based paint, PCB caulk, and other equipment that can contain hazardous materials (e.g., mercury in light bulbs, PCB-containing light ballasts and other electrical equipment, mercury in electrical equipment, treated wood, slag, etc.).

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Where active groundwater remediation is required, AET has on numerous projects, prepared bidding specifications for contractors to install a product recovery system, soil vapor extraction system, air-sparging system, in-situ chemical oxidation program, or granulated activated carbon for groundwater discharges. AET, on a routine basis, also prepares bid specifications for passive and active soil vapor mitigation systems for new buildings and for existing buildings. The vapor mitigation designs usually involve an SSDS that must be designed around building footings and buried utilities. A key part of AET's vapor mitigation designs is incorporating specifications and requirements that protect the vapor mitigation system during construction.

An integral part of the environmental services that AET offers is on-site monitoring and contractor oversight as part of RAP implementation for soil contamination, abatement of asbestos and hazardous material in buildings and structures, installation of active groundwater remediation systems, and installation of soil vapor mitigation systems.

AET field staff routinely perform site monitoring and contractor oversight for site cleanup of brownfield sites in the Voluntary Brownfield Program. Site monitoring generally entails screening excavated soils for potential contamination by field photoionization detection (PID) analysis and visual observation of soil staining and/or debris and wastes. Site monitoring would cover both the excavation of contaminant "Hot Spots," as well as excavation of soils with low levels of contamination that are reused at a site.

When the extent of the excavation has been reached, field staff then collect a representative number of confirmation samples to document that RAP cleanup goals have been met. In those instances where unexpected contamination is discovered that is not identified in the RAP, AET will communicate these occurrences with the MPCA Project Manager and confirm with the MPCA that the Construction Contingency Plan (CCP) within the RAP will be implemented to manage the unexpected contamination.

In addition to monitoring and contractor oversight for remediating soil contamination, AET also performs contactor oversight for asbestos abatement and removal of hazardous materials from buildings and we can perform air monitoring when it is required. As a routine practice, AET performs contractor oversight of soil vapor mitigation systems that we design, and we also perform pilot testing and post installation testing of active mitigation systems.

Remediation Project Experience / References

Ramsey County Environmental Service Center, Roseville, MN
2023 / ongoing

The Site is a vacant parcel encompassing 17.8 acres. The Site is currently owned by Ramsey County and is used for storage of new aggregate, a staging area for contractors during county highway projects, storage/draining of street sweepings, storage/drainage of sludge from vac-truck cleaning of stormwater catch basins along University Avenue, storage/draining of soils excavated from water main breaks, storage of tree chippings, and the storage of extra hot and cold bituminous mix. The Site and adjoining properties were undeveloped or utilized for agriculture from the 1880s through the 1920s. The Site was utilized as a gravel pit or storage yard by 1957. The first areas of surficial disturbance were identified at the southwest corner of the Site, followed by the center of the Site, moving toward the northwest. Evidence of disturbance expanded over time to nearly the entire Site.

Ramsey County is in the process of constructing a new Ramsey County Environmental Service Center on the south approximately 10 of the 17.8 acres of the Site. The new development will occupy the southern and central portions of the Site, near Kent Street and Larpenteur Avenue. The proposed building will be 30,000 to 35,000 square feet.

AET prepared and submitted to the MPCA a **Response Action Plan/Construction Contingency Plan (RAP/CCP)**,dated July 20, 2023, to perform corrective actions, including the removal of up to 7,400 cubic yards of impacted soil and debris. AET received an Approval of the RAP/CCP Letter from the MPCA dated October 4, 2023, with the Site IDs BF0002568 and SR0001636. This letter requested that AET prepare and submit an Investigation Workplan for Superfund Program review and approval for additional investigation activities and completion of a second seasonal soil vapor sampling event for SR0001636. The previous reports completed

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by AET for the Site prior to completion of the RAP/CCP included a Phase I Environmental Site Assessment, dated December 3, 2021, a Phase II Environmental Site Assessment, dated February 14, 2022, a Supplemental Geotechnical and Environmental Investigation, dated June 20, 2023, and another Phase I Environmental Site Assessment, dated July 5, 2023.

The Superfund work has been completed, a report submitted to the MPCA and AET is awaiting a response from the MPCA. The RAP/CCP is in process. While onsite doing observation and sampling of excavation and grading in April 2024 as part of the RAP Implementation, AET observed apparent floor tile with possible mastic in a small pile on the west side of the Site. The material was determined to be ACWM, with Chrysotile asbestos above 1 part per million. Ultimately approximately 50 cubic yards of the asbestos containing tile material was properly managed and removed as ACWM to SKB landfill.

Supervising Staff Member: Dennis McComas
Years of experience: 35
Required MN License, registration, or certifications: PG

Client: Ramsey County Property Management
121 7th Place East, Suite 220
St. Paul, MN 55101
Client contact: Mr. Thomas Yang, Project Manager, Cell (651) 235-9839

Enclave Companies, Ever Apartments Project, Bloomington, MN
2023 / ongoing

Historical records indicate the Site was utilized for agriculture from at least 1937 until the 1960s. The prior structure at the Site was built in the early 1970s and was utilized as a racquet and swim club until 2006 when the structure was demolished. Enclave Companies is in the process of redeveloping the Site with a five-level apartment building and a daycare facility, with associated improvements.

Several previously conducted environmental assessments and Phase II ESAs at the Site have identified fill throughout the Site. The fill material includes recycled concrete which has an asbestos containing material (ACM) adhered to the former court surface which renders the recycled concrete asbestos containing waste material (ACWM). The bulk of the ACWM is located in the top 6 inches to 2 feet of the fill, covering approximately 80% of the Site. The estimated volume of ACWM at the Site is 15,000 cubic yards. However, the top 2 feet of the buildable area, containing most of the ACWM, is approximately 6,000 cubic yards.

In addition, based on several iterations of recent Phase II investigative work, it was determined that Dichlorodifluoromethane (Freon-12) was identified at elevated concentrations within and adjacent to the proposed daycare building footprint for the planned redevelopment at the Site. The MPCA stated that although there is not currently a Residential/Recreational ISV for Freon-12, the elevated concentrations of Freon-12 present a possible health risk for the proposed sensitive population (daycare facility), and therefore vapor mitigation is necessary for the proposed daycare building. Ethylbenzene was identified at concentrations exceeding 33X the Residential/Recreational ISV below where the apartment facility is planned at the Site. Based on the presence of VOC concentrations exceeding 33X the Residential/Recreational ISVs, soil vapor mitigation is also warranted beneath the proposed apartment building.

AET prepared a RAP/CCP and a RAP Addendum and prepared an Implementation Report for submission to the MPCA for review and approval of the recommended corrective actions to accommodate the improvements at the Site, which were both approved. AET assisted the City of Bloomington with their application for cleanup grant funds for Enclave to pay for the corrective actions at the Site, including the removal of approximately 6,000 cubic yards of ACWM near the surface, the design, installation, testing and reporting of the two sub-slab depressurization systems (SSDSs) at the Site. The cleanup grant applications were successful and this redevelopment project was awarded $119,000 from the Hennepin County ERF, $228,000 from the Metropolitan Council TBRA in the November 2023 environmental cleanup grant round and was also awarded $550,000 from DEED in the May 2024 environmental cleanup grant round for a total grant of approximately $900,000.

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Supervising Staff Member: Dennis McComas
Years of experience: 35
Required MN License, registration, or certifications: PG

Client: Enclave Companies
300 23rd Avenue East, Suite 300
West Fargo, ND 58078
Client contact: Mr. Brian Bochman, Project Manager, 701-997-2567

Saint Paul City Schools Redevelopment Project, Saint Paul, MN

2020 / 2023

Assisted with planning and coordinating environmental work associated with construction of a private charter school in Saint Paul, MN. As part of this, AET completed Phase I ESA, Phase II ESA (several iterations), **prepared and implemented a RAP/CCP**, performed implementation activities for soil and soil vapor response actions to complete an implementation report, completed an operation and maintenance manual, and verified proper installation of vapor mitigation system throughout construction.

The project included the construction of the 50,000 square foot school building, which required the excavation and management of approximately 10,000 cubic yards of contaminated soil disposed at a permitted facility. Based on elevated soil vapors under the proposed school footprint, AET completed the design and oversight and testing of the construction of a sub-slab vapor mitigation system equipped with a sub-slab piping network connected to risers/roof vents and associated active blowers to mitigate petroleum and chlorinated solvent impacts in soil vapor. The project received significant grant funding to assist with cleanup and redevelopment of the blighted property to its current use. AET led an effort for the charter school to procure approximately $335,000 for DEED and Ramsey County ERF Contaminated Cleanup funds in 2022.

Supervising Staff Member: Joe Conlan
Years of experience: 20
Required MN License, registration, or certifications: CHMM

Client: St. Paul City School
260 Edmund Ave. Saint Paul, MN 55103 (primary school) &
643 Virginia St. Saint Paul, MN 55103 (middle school)
Client contact: Dr. Meg Cavalier, Executive Director, 651-225-9177

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Exhibit D1

PROFESSIONAL/TECHNICAL CONTRACTS
GENERAL INSURANCE REQUIRMENTS

A. Contractor shall not commence work under the contract until they have obtained all the insurance described below and the State of Minnesota has approved such insurance. Contractor shall maintain such insurance in force and effect throughout the term of the contract.

B. Contractor is required to maintain and furnish satisfactory evidence of the following insurance policies:

1. **Workers' Compensation Insurance:** Except as provided below, Contractor must provide Workers' Compensation insurance for all its employees and, in case any work is subcontracted, Contractor will require the subcontractor to provide Workers' Compensation insurance in accordance with the statutory requirements of the State of Minnesota, including Coverage B, Employer's Liability. Insurance **minimum** limits are as follows:

   $100,000 – Bodily Injury by Disease per employee
   $500,000 – Bodily Injury by Disease aggregate
   $100,000 – Bodily Injury by Accident

   If Minnesota Statute 176.041 exempts Contractor from Workers' Compensation insurance or if the Contractor has no employees in the State of Minnesota, Contractor must provide a written statement, signed by an authorized representative, indicating the qualifying exemption that excludes Contractor from the Minnesota Workers' Compensation requirements.

   If during the course of the contract the Contractor becomes eligible for Workers' Compensation, the Contractor must comply with the Workers' Compensation Insurance requirements herein and provide the State of Minnesota with a certificate of insurance.

2. **Commercial General Liability Insurance:** Contractor is required to maintain insurance protecting it from claims for damages for bodily injury, including sickness or disease, death, and for care and loss of services as well as from claims for property damage, including loss of use which may arise from operations under the Contract whether the operations are by the Contractor or by a subcontractor or by anyone directly or indirectly employed by the Contractor under the contract. Insurance **minimum** limits are as follows:

   $2,000,000 – per occurrence
   $2,000,000 – annual aggregate
   $2,000,000 – annual aggregate – Products/Completed Operations

   The following coverages shall be included:

   Premises and Operations Bodily Injury and Property Damage
   Personal and Advertising Injury
   Blanket Contractual Liability
   Products and Completed Operations Liability
   Other; if applicable, please list_____
   State of Minnesota named as an Additional Insured

3. **Commercial Automobile Liability Insurance:** Contractor is required to maintain insurance protecting it from claims for damages for bodily injury as well as from claims for property damage resulting from the ownership, operation, maintenance or use of all owned, hired, and non-owned autos which may arise from operations under this contract, and in case any work is subcontracted the contractor will require the subcontractor to maintain Commercial Automobile Liability insurance. Insurance **minimum** limits are as follows:

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Exhibit D1

$2,000,000 – per occurrence Combined Single limit for Bodily Injury and Property Damage

In addition, the following coverages should be included:

Owned, Hired, and Non-owned Automobile

4. **Professional/Technical, Errors and Omissions, and/or Miscellaneous Liability Insurance**

This policy will provide coverage for all claims the contractor may become legally obligated to pay resulting from any actual or alleged negligent act, error, or omission related to Contractor's professional services required under the contract.

Contractor is required to carry the following **minimum** limits:

$2,000,000 – per claim or event
$2,000,000 – annual aggregate

Any deductible will be the sole responsibility of the Contractor and may not exceed $50,000 without the written approval of the State. If the Contractor desires authority from the State to have a deductible in a higher amount, the Contractor shall so request in writing, specifying the amount of the desired deductible and providing financial documentation by submitting the most current audited financial statements so that the State can ascertain the ability of the Contractor to cover the deductible from its own resources.

The retroactive or prior acts date of such coverage shall not be after the effective date of this Contract and Contractor shall maintain such insurance for a period of at least three (3) years, following completion of the work. If such insurance is discontinued, extended reporting period coverage must be obtained by Contractor to fulfill this requirement.

C. Additional Insurance Conditions:

- Contractor's policy(ies) shall be primary insurance to any other valid and collectible insurance available to the State of Minnesota with respect to any claim arising out of Contractor's performance under this contract;

- If Contractor receives a cancellation notice from an insurance carrier affording coverage herein, Contractor agrees to notify the State of Minnesota within five (5) business days with a copy of the cancellation notice, unless Contractor's policy(ies) contain a provision that coverage afforded under the policy(ies) will not be cancelled without at least thirty (30) days advance written notice to the State of Minnesota;

- Contractor is responsible for payment of Contract related insurance premiums and deductibles;

- If Contractor is self-insured, a Certificate of Self-Insurance must be attached;

- Contractor's policy(ies) shall include legal defense fees in addition to its liability policy limits, with the exception of B.4 above;

- Contractor shall obtain insurance policy(ies) from insurance company(ies) having an "AM BEST" rating of A- (minus); Financial Size Category (FSC) VII or better, and authorized to do business in the State of Minnesota; and

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Exhibit D1

- An Umbrella or Excess Liability insurance policy may be used to supplement the Contractor's policy limits to satisfy the full policy limits required by the Contract.

D. The State reserves the right to immediately terminate the contract if the contractor is not in compliance with the insurance requirements and retains all rights to pursue any legal remedies against the contractor. All insurance policies must be open to inspection by the State, and copies of policies must be submitted to the State's authorized representative upon written request.

E. The successful responder is required to submit Certificates of Insurance acceptable to the State of MN as evidence of insurance coverage requirements prior to commencing work under the contract.

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ACORD

EXHIBIT D1

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YY): Date Cert. Typed

PRODUCER

Agent/Broker Name & Address

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER, THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSUREERS AFFORDING COVERAGE

INSURED

Contractor/Vendor Name & Address

INSURER A: [illegible] Insurance Company

INSURER B: "

INSURER C: "

INSURER D: "

INSURER E: "

INSURER F: "

COVERAGES

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	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE	POLICY EXPIRATION DATE(MM/DD/YY)	LIMITS	
A	GENERAL LIABILITY ☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS MADE ☒ OCCUR ☐ _____ ☐ _____ GENERAL AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☐ PROJECT ☐ LOC	Policy Number	Effective date of policy	Expiration date of policy	EACH OCCURENCE FIRE DAMAGE (Any one fire) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGRREGATE PRODUCTS-COMP/OP AGG	$2,000,000 $50,000 $5,000 $2,000,000 $2,000,000 $2,000,000
B	AUTOMOBILE LIABILITY ☐ ANY AUTO ☒ ALL OWNED AUTOS ☐ SCHEDULED AUTOS ☒ HIRED AUTOS ☒ NON-OWNED AUTOS ☐ _____ ☐	Policy Number	Effective date of policy	Expiration date of policy	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$2,000,000 $ $ $
	GARAGE LIABILITY ☐ ANY AUTO ☐				AUTO ONLY-EA ACCIDENT OTHER THAN AUTO ONLY: EA AGG	$ $ $
C	EXCESS LIABILITY ☒ OCCUR ☐ CLAIMS MADE ☐ DEDUCTIBLE ☐ RETENTION $	Policy Number (*Excess/Umbrella may be used to supplement the GL & Auto limits, to satisfy policy limits	Effective date of policy	Expiration date of policy	EACH OCCURRENCE AGGREGATE	$ * $ *
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	Policy Number	Effective date of policy	Expiration date of policy	☒ WC STATU- ☐ OTH-ER E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE – POLICY LIMIT	 $100,000 $100,000 $500,000
E	OTHER Professional Liability (applicable if design related services provided) ☒ CLAIMS MADE ☐ OCCUR	Policy Number	Effective date of policy	Expiration date of policy	Each Occurrence Aggregate	$2,000,000 $2,000,000

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS

Project Location & Description: The State of Minnesota is named as an Additional Insured.

CERTIFICATE HOLDER | X | **ADDITIONAL INSURED; INSURER LETTER: _** | **CANCELLATION**

The State of Minnesota
Department of Administration-Real Estate & Construction Services
RECS.ConstructionCOI.ADM@state.mn.us

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT.

AUTHORIZED REPRESETNATIVE

Example

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AMERCON-12 AROSS

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 9/12/2024

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 License # 20443386 HUB International Great Plains, LLC 245 E. Roselawn Avenue Suite 31 Saint Paul, MN 55117-1940	CONTACT NAME: Ann Ross PHONE (A/C, No, Ext): (651) 288-5137 FAX (A/C, No): (651) 286-0560 E-MAIL ADDRESS: ann.ross@hubinternational.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : The Phoenix Insurance Company	25623
INSURER B : The Travelers Indemnity Company of America	25666
INSURER C : Travelers Property Casualty Company of America	25674
INSURER D : Charter Oak Fire Insurance Company	25615
INSURER E : Continental Casualty Company	20443
INSURER F :	

INSURED
AMERICAN CONSULTING SERVICES INC
AMERICAN ENGINEERING TESTING INC
AMERICAN PETROGRAPHIC SERVICES INC
550 CLEVELAND AVE N
ST PAUL, MN 55114-1804

COVERAGES **CERTIFICATE NUMBER:** **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 GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:	X		P630539K8896PHX24	1/1/2024	1/1/2025	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 2,000,000 $ 1,000,000 $ 25,000 $ 2,000,000 $ 4,000,000 $ 4,000,000
B	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY / SCHEDULED AUTOS HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY			8102L6457122443G	1/1/2024	1/1/2025	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 2,000,000 $ $ $
C	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 0			CUP3K2260092443	1/1/2024	1/1/2025	EACH OCCURRENCE AGGREGATE	$ 15,000,000 $ 15,000,000
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: N If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		UB9H9151012443G	1/1/2024	1/1/2025	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
E	PROF/POLL LIABILITY			ECH254066939	1/1/2024	1/1/2025	EACH CLAIM	10,000,000
E	RETRO 7-2-87			ECH254066939	1/1/2024	1/1/2025	AGGREGATE	15,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
RENEWALS: contracts@teamAET.com

PREQUAL 12-31-30 STATE OF MINNESOTA MASTER 5 YR CONTRACT / MnDOT Contract #RFP / TESTING AND INSPECTIONS / STATE OF MINNESOTA REFER TO ATTACHED ENDORSEMENTS FOR ADDITIONAL INSURED STATUS - COVERAGE BECOMES EFFECTIVE ONLY AFTER ALL PARTIES HAVE SIGNED THE CONTRACT REQUIRING THE ADDITIONAL INSURED COVERAGE.

CERTIFICATE HOLDER

STATE OF MINNESOTA
Department of Administration
Real Estate & Construction Services
50 Sherburne Ave., Suite 309
Saint Paul, MN 55155

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

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Exhibit E & Exhibit E1

Workforce and Equal Pay Declaration Page

This form is **required for all businesses** executing government contracts under the following:

Select one:

- [X] Businesses executing a contract with **State or Metropolitan agencies** in excess of $100,000 (Workforce Certificate) and if applicable $500,000 (Equal Pay Certificate)
- [ ] Businesses executing a contract with **University of Minnesota** for general obligation bond funded capital projects in excess of $100,000 (Workforce Certificate) and if applicable $500,000 (Equal Pay Certificate)
- [ ] Businesses executing a contract with **Political Subdivisions** for general obligation bond funded capital projects in excess of $250,000 (Workforce Certificate) and if applicable $1,000,000 (Equal Pay Certificate)

Select all that apply:

We are a Certificate holder:

- [X] Workforce Certificate under the name: **American Engineering Testing, Inc.**
- [X] Equal Pay Certificate under the name: **American Engineering Testing, Inc.**

We are applying/have applied for the following certificate(s):

- [ ] Workforce Certificate Application date (MM/DD/YYYY): _____
- [ ] Equal Pay Certificate Application date (MM/DD/YYYY): _____

We have not applied for one or both certificates:

- [ ] Our Company does not yet have a Workforce Certificate or Equal Pay Certificate. We acknowledge that a Workforce and, if applicable, Equal Pay Certificate, or approved exemption by MDHR is required before a contract can be executed.

We are Exempt:

- [ ] We attest to MDHR that we have not employed 40 or more employees on a single day during the prior 12 months in Minnesota or the state in where we have our primary place of business. MDHR may request the names of our employees during the previous 12 months, the date of separation, if applicable, and the current employment status and count.

Business Information

VN0000202849	**American Engineering Testing, Inc.**	**Department of Administration's Real Estate and Construction Services (RECS)**
Vendor/Supplier ID	**Business Name**	**Name of Contracting Agency**
Phillip Chri	VP	8/27/24
Authorized Signatory Name	**Title**	**Date**
Signature	**Email**	**Phone**

For assistance with this form, email the Minnesota Department of Human Rights **Compliance.MDHR@state.mn.us**

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Exhibit E

Exhibit F
CERTIFICATION REGARDING LOBBYING
For State of Minnesota Contracts and Grants over $100,000

The undersigned certifies, to the best of his or her knowledge and belief that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, Disclosure Form to Report Lobbying in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

American Engineering Testing, Inc.

Organization Name

Name and Title of Official Signing for Organization

By: _____

Signature of Official

8/27/24

Date

Rev. 01/16

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Exhibit I

Affidavit of Noncollusion

State of Minnesota
Request for Proposals

Firm Name:

Instructions: Please return your completed form as part of the Response submittal.

I swear (or affirm) under the penalty of perjury:

1. That I am the Responder (if the Responder is an individual), a partner in the company (if the Responder is a partnership), or an officer or employee of the responding corporation having authority to sign on its behalf (if the Responder is a corporation).
2. That the attached proposal submitted in response to the <insert name> Request for Proposals has been arrived at by the Responder independently and has been submitted without collusion with and without any agreement, understanding or planned common course of action with, any other Responder of materials, supplies, equipment, or services described in the Request for Proposals, designed to limit fair and open competition.
3. That the contents of the proposal have not been communicated by the Responder or its employees or agents to any person not an employee or agent of the Responder and will not be communicated to any such persons prior to the official opening of the proposals.
4. That I am fully informed regarding the accuracy of the statements made in this affidavit.

Authorized Signature

Responder's firm name: American Engineering Testing, Inc.

Print authorized representative name: Phillip Chmiel Title: VP

Authorized signature: [signature] Date (mm/dd/yyyy): 8/27/24

Notary Public

Subscribed and sworn to before me this:

27 day of August, 2024

[signature]
Notary Public signature

1/31/2028
Commission expires (mm/dd/yyyy)

KAREN LYNN BRYANT
NOTARY PUBLIC
MINNESOTA
My Commission Expires Jan. 31, 2028