



**STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET**

This contract authorizes the professional service contractor to provide professional services. (Authority: 1984 PA 431)

**CONTRACT FOR PROFESSIONAL SERVICE: Indefinite - Scope/Indefinite - Delivery (ISID)
Billing Rate – Not to Exceed**

THIS CONTRACT, authorized this 6th of September in the year two-thousand and nineteen (2019), by the Director, Department of Technology, Management and Budget, BETWEEN the STATE OF MICHIGAN acting through the STATE FACILITIES ADMINISTRATION, DESIGN AND CONSTRUCTION DIVISION of the DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET, 3111 W. St. Joseph Street, Lansing, Michigan, hereinafter called the Department, and

Materials Testing Consultants, Inc.
693 Plymouth NE
Grand Rapids, MI 49505

the Testing Professional Services Contractor, hereinafter called the Professional,

WHEREAS, the Department proposes securing professional services FOR THE FOLLOWING PROJECT:

Indefinite-Scope, Indefinite-Delivery Contract No. 00853

Department of Technology, Management and Budget

State Facilities Administration, Design and Construction Division

Professional Materials Testing, Quality Control, and Geotechnical Engineering Indefinite-Scope, Indefinite Delivery Contract (ISID) for Minor Projects - Various State Departments and Facilities

Various Site Locations, Michigan

Provide Services, technical staff, and support personnel for ISID minor projects on an as-needed basis at various State/Client Agencies within various locations as defined by the State of Michigan. These various ISID minor projects may include projects where the construction costs are between fifteen-thousand dollars (\$15,000) and five-hundred-thousand dollars (\$500,000) for this Contract.

This Contract is for professional material testing, quality control and geotechnical services (Services) for an unspecified number of ISID projects. The scope of work for each assigned project will be defined at the time the project is awarded by the State to the Professional.

The Professional's services shall be performed in strict accordance with this Contract and be in compliance with the Department's approved and attached Appendix 1 – Project/Program Statement.

This Contract does not warrant or imply to the Professional entitlement to perform any specific percentage (%) amount of compensation, work or projects during the life of this Contract.

This Contract will remain in effect for three (3) years from the date of this Contract award but may be unilaterally terminated by the State of Michigan at any time, for cause or its convenience, by written notification of the State, to the Professional. Furthermore, this Contract may be extended for one (1) additional year, at the sole option and discretion of the State upon the Department providing written notice to the Professional prior to the expiration of the original three (3) year Contract time period. Any such time extension shall be subject to the terms and conditions of this Contract, including, but not limited to, the existing hourly billing rates included in this Contract for the Professional, their Consultant, and their employees or agents.

Please note that for this Professional Materials Testing, Quality Control, and Geotechnical Engineering Services Contract your permanent assigned ISID Contract No., as noted on page 1 of this contract, must be provided on all Project correspondence and documents.

The Professional is not to provide any services or incur expenses until individual ISID Projects are assigned to this Contract. (See Article 2 – Compensation and the Project/Program Statement text of this Contract.)

NOW THEREFORE, the State and the Professional, in consideration of the covenants of this Contract, agree as follows:

- I. The Professional shall provide services for the assigned Project during the construction Phase/Task sequence as provided in this Professional Services Contract (Contract) and to the extent authorized by the Department of Technology, Management and Budget (DTMB), State Facilities Administration (SFA), Design and Construction Division (DCD) [Department] and be solely responsible for such service. The services shall be performed in strict accordance with this Contract and be in compliance with the attached Appendix 1 - Project/Program.
- II. The State of Michigan shall compensate the Professional for providing their professional services for the Project in accordance with the conditions of this Contract.

IN WITNESS, WHEREOF, each of the parties has caused this Contract to be executed by its duly authorized representatives on the dates shown beside their respective signatures, with the Contract to be effective upon the date on which the Professional received a copy executed by the authorized State of Michigan representative(s) by regular, registered, or certified mail or by delivery in person.

FOR THE PROFESSIONAL:

Materials Testing Consultants, Inc.
Firm Name
Steven M. Elliott Steven M. Elliott
Sep 17 2019 12:21 PM
Signature
President
Title

[REDACTED]
Federal Identification (I.D.) Number
9/17/19
Date

FOR THE STATE OF MICHIGAN:

Robert Jan
Director, Department of Technology, Management and Budget

September 18, 2019
Date

ARTICLE I: PROFESSIONAL SERVICE

The Professional shall provide all required professional services, technical staff and support personnel necessary to achieve the Project scope of work as described in the attached Appendix – Project/Program Statement in the best interest of the State within the Professional's not-to-exceed fee herein authorized by the State. Project services shall comprise, without exception, every construction quality control and material testing service discipline and expertise necessary to meet all the requirements as described in the attached Appendix - Project/Program Statement and be in accordance with the industries accepted standards of professional practice.

Construction quality control and material testing services shall be provided in the sequence required by the project and shall be rendered in accordance with the Project schedule and direction as provided by the Prime Professional Services Contractor, the Project Construction Contractor, Project Director, the Field Representative, and/or the State/Client Agency. The services of each Phase shall be conducted in accordance with the descriptions in this article except as may be otherwise prescribed by any appended specifications and/or the testing specifications of the Construction Contract for this Project, which are adopted as a separately bound part of this Contract. Written reports on construction Phase quality control and material testing services shall be provided to the Project Director, the Field Representative, the State/Client Agency, the Project Construction Contractor, and the Prime Professional Services Contractor on a daily basis or as directed by the Project Director. The Professional acknowledges that the Department is the first interpreter of the Professional's performance under this Contract.

The Professional acknowledges by signing this Contract, having a clear understanding of the requested Project scope of work and of the Services required by the Department, and further agrees the terms and conditions of this Contract provide adequate professional compensation for the Professional to provide the requested services. No increase in fee to the Professional will be allowed unless there is a material change made to the Project scope of work as described in the attached Appendix - Project/Program Statement and the change in scope is accepted and approved in writing, by the Project Director and the Professional. Services shall not be performed, and no Project expenses shall be incurred by the Professional prior to the issuance of a written and signed Contract and a DTMB Form 402 - Contract Order, authorizing the Professional to begin services. Compensation for Department directed changes to the Project or modifications to the Project scope of work will be provided to the Professional by a Contract Modification and/or Contract Change Order. The preparation of Bulletins and Contract Change Orders resulting from increases in the Project scope of work or previously unknown on-site field conditions will be compensated to the Professional, as approved by the Project Director, on an hourly direct payroll/billing rate basis in accordance with this article.

The Professional shall immediately inform the Department whenever it is indicated that the Professional's authorized Project not-to-exceed Budget cost may be exceeded. The Professional shall make recommendations to the Department for revisions to the Project to bring the Project cost back to the Professional's original authorized Budget amount. Any revision to the Project scope of work must be accepted and approved by the Department in writing.

No substitution of any "Key Principal Personnel/Employee" who is essential for the successful completion of the Project and identified in the Professional's attached Appendix – Project Organizational Chart will be allowed by the Professional for this Contract without the prior written consent from the Project Director. Before any "Key Principal Personnel/Employee" substitution takes place, the Professional shall submit a written request to the Project Director for personnel substitution and this substitution request shall include the following information: (1) A request in writing for a No Cost Contract Modification for this "Key Principal Personnel/Employee" substitution; (2) Detailed written justification for this "Key Principal Personnel/Employee" substitution; (3) The Professional's qualifications of any proposed "Key Principal Personnel/Employee" replacement; and (4) A written statement from the Professional firm assuring the Department that the Project scope of work will not be adversely affected by this "Key Principal Personnel/Employee" substitution change. This request by the Professional to modify their Contract must be accepted and approved in writing by the Project Director and the Department's, Professional Services Contract Modification form (DTMB-410).

The Department will designate an individual to serve as the Project Director for the Project who shall be fully acquainted with the attached Appendix 1 – Project/Program Statement and have the authority to render Project decisions and furnish information promptly. Except in connection with issues under the Article 12 - Contract Claims and Disputes text, the Project Director will exercise general management and administration for the Professional's Services in so far as they affect the interest of the State. The Professional shall indemnify, defend, and hold harmless the State against exposure to claims arising from delays, negligence or delinquencies by the Professional for the services of this Contract.

During the construction phase of this Project, the Professional shall be required to obtain from the Project Director, the on-site Inspection record standard document form titled "DTMB-452, The Professional's Inspection Record" for all on-site Inspection visits to the Project site. This standard document form is part of the "DTMB-460, Project Procedures" documents package.

The Professional's Inspection Record standard document form shall be completed and signed by the Professional and compiled monthly with the original document sent to the Project Director and a copy sent to the Prime Professional Services Contractor, and the involved Project Construction Contractor. The on-site Inspection record standard document form shall be completed and accompany the Professional's monthly submitted payment request.

The "DTMB-460, Project Procedures" documents package shall be used by the Professional in the administration of this Contract and contains the following Department standard document forms: (1) DTMB-413, General Release – Visitors; (2) DTMB-426, Builder's Risk Claim; (3) DTMB-434, Certification of Off-Site Material Storage; (4) DTMB-437, Guarantee and Indebtedness Statement; (5) DTMB-440, Payment Request; (6) DTMB-441, Meeting Attendance Record; (7) DTMB-445, Certificate of Substantial Completion; (8) DTMB-452, Professional's Inspection Record; (9) DTMB-485, Bulletin Authorization No.; (10) Instructions for Schedule of Value; (11) DTMB-487, Material Stored on Project/Job Site; and (12) DTMB-489, Instructions to Construction Contractors for Preparation of Bulletin Cost Quotations for Contract Change Orders.

The services required for each Phase of this Contract shall be performed by the Professional and their Consultants in accordance with Task service descriptions in this article. The following construction Phase/Task descriptions intend to outline the Department's standard of care describing the Professional's responsibilities for providing the Services for this Contract, but do not limit or exclude any regular or normal services necessary to accomplish the Project scope of work and be in accordance with the best industries accepted standards of professional practice for: (1) Construction quality control and material testing services/office/laboratory requisites and (2) The American Society for Testing and Materials, ASTM E329 testing procedures, inspection and testing standards.

PRELIMINARY PLANNING - FOUNDATION ANALYSIS

PHASE 600 - CONSTRUCTION ADMINISTRATION - OFFICE/LABORATORY SERVICES

Task 600 ADMINISTRATIVE OFFICE/LABORATORY SERVICES: Determine whether the construction materials being used for the Phase 600, Construction Phase are in compliance with the Prime Professional Services Contractor's Contract Documents. Provide all administrative office, laboratory, and engineering services to analyze, evaluate, and report the results of all field operations, sampling, and testing. Conduct, prepare, and submit all tests and test result reports, and any associated correspondence. Provide copies to the Project Director, the Field Representative, the State/Client Agency, the Project Construction Contractor, and the Prime Professional Services Contractor. Distribute as the Department may direct. Transmittals of any test result data shall specifically point out any test results not meeting applicable construction quality control and material testing standards or the Prime Professional Services Contractor's Contract Documents.

Task 601 SOIL CONSOLIDATION/COMPACTION: Provide laboratory testing and engineering analysis for bearing capacity and consolidation of natural soils, densification of proposed soils to be used for controlled fill and backfill areas, as well as control of site drainage. Indicate whether the material being tested meets the Prime Professional Services Contractor's Contract Documents requirements.

- a. Affirm bearing capacity and calculations.
- b. Determine the standard and modified field moisture-density relationships (ASTM 698, ASTM D1557, ASTM D4253 and ASTM D4254) and on soils to be used for fill or backfill on the Project.
- c. Determine Atterberg Limits (ASTM D4318) of cohesive soils and Grain Size Analysis of (ASTM D422) granular soils as required by ASTM D423 (liquid limit), ASTM D434 (plastic limit), and ASTM D1140 (wash loss).

Task 602 CONCRETE: Provide laboratory testing and analysis of concrete.

- a. Review ASTM C94 and ACI 211 concrete mix designs.
- b. Conduct compression tests on cylinders (ASTM C39) as per the Prime Professional Services Contractor's Contract Documents specifications.
- c. Perform sieve analysis (ASTM C136), organic colormetric (AASHTO T21), and soft particle determination on aggregates as required by ASTM C33 (aggregate evaluation) and ASTM D422 (aggregate gradation).

Task 603 STRUCTURAL STEEL: Provide shop testing of structural steel.

- a. Verify welder certification (AWS D1.1).

- b. Test high strength tension bolts (AISC).
- c. Perform metallurgical analysis of questionable materials.
- d. Verify weld procedures (AWS D1.1).

Task 604 BITUMINOUS PAVING: Provide laboratory testing, and analysis of bituminous paving.

- a. Review Marshall Mix design (if prepared by others).
- b. Test aggregate base course for compliance with the Prime Professional Services Contractor's Contract Documents (ASTM C136, ASTM D1557 (Modified Proctor), ASTM D692 (coarse aggregate), ASTM D1073 (fine aggregate), and AASHTO T88 (gradation).
- c. Conduct extraction of bituminous paving mixtures as required by ASTM D2172 and ASTM C136, ASTM D692 (coarse aggregate), ASTM D1073 (fine aggregate), AASHTO T88 (gradation), and AASHTO T164 (extraction).
- d. Determine penetration of liquid asphalt as required by ASTM D5 (original penetration) and ASTM (recovered penetration).
- e. Record and report test results and observations.

Task 605 MASONRY: Provide laboratory testing and analysis of masonry.

- a. Review material requirements for compliance with the Prime Professional Services Contractor's Contract Documents specifications for:
 - 1. Reinforcing Materials - size and type.
 - 2. Units - size and type.
 - 3. Masonry Sand - type and storage.
 - 4. Mortar, Cement, and Lime - types and storage.
- b. Review the compressive strength mix designs for compliance with the Prime Professional Services Contractor's Contract Documents for:
 - 1. Mortar and Grout.
 - 2. Masonry Units.
 - 3. Prisms.
- c. Review material certifications for compliance with the Prime Professional Services Contractor's Contract Documents for:
 - 1. Block/Concrete Masonry Units.
 - 2. Brick.
 - 3. Pavers.
 - 4. Sound Barriers.
- d. Test each different clay masonry unit per ASTM C67.
- e. Test each different concrete masonry unit for strength, absorption, and moisture content per ASTM C140.
- f. Perform prism tests per ASTM E447, Method B, Mortar (ASTM 270), and Grout (ASTM C1019).
- g. Record and report test results and observations.

Task 606 ROOFING: Provide laboratory testing and analysis of roofing system.

- a. Attend preliminary roofing conference.
- b. Collect roofing material certifications and compare to the Prime Professional Services Contractor's Contract Documents.
- c. Review roofing installer's certification.
- d. Attend pre-application roofing conference.

- e. Record and report test results and observations.

PHASE 700 -CONSTRUCTION ADMINISTRATION - FIELD INSPECTION/TESTING

- Task 700 FIELD INSPECTION/TESTING: Determine whether the construction materials being used for the Phase 700, Construction Phase are in compliance with the Prime Professional Services Contractor's Contract Documents. Provide all on-site field Inspections, sampling, testing and Inspections as required by the Project construction testing program/requirements to the Project Director, the Field Representative, the State/Client Agency, the Project Construction Contractor, the Prime Professional Services Contractor, and the Department on a daily basis or as directed by the Project Director. Monitor and coordinate on-site field time to efficiently coordinate with the Construction Contractor's operations. On-site field time to provide testing for operations whose planned duration will require overtime shall be reviewed with and approved by the Department. Notice shall be given immediately to the Construction Contractor and to the Project Director and the Field Representative, of any on-site field Inspection or test which fails to meet applicable construction quality control and material testing standards or the Prime Professional Services Contractor's Contract Documents.
- Task 701 SOIL CONSOLIDATION COMPACTION: Provide on-site field testing and engineering analysis for bearing capacity and consolidation of natural soils, densification of proposed soils to be used for controlled fill and backfill areas, as well as control of site drainage.
- a. Verify the Prime Professional Services Contractor's Contract Documents design allowable soil bearing capacity at foundation/footing locations.
 - b. Perform field density testing as required by ASTM D1556 (sand cone), ASTM D2167 (balloon), and ASTM D292 (nuclear density meter).
 - c. Record and report test results and on-site field Inspections.
- Task 702 CONCRETE: Provide on-site field quality control and sampling of concrete as required by ASTM C172 (sampling fresh concrete), ASTM C143 (volumetric air content), ASTM C231 (pressure air content), ASTM C31 (making test cylinders), and ASTM C138 (unit weight and yield).
- a. Test plastic concrete for unit weight/yield, slump, air content, and temperature.
 - b. Collect and verify delivery ticket data from each redi-mix concrete truck. Document the batch time, placement time, and the age of the concrete. Determine the concrete mix design used, and the actual batch weights used for each day of concrete placement, this will include the actual aggregate moisture contents and batch water used.
 - c. Fabricate three (3) cylinders for compressive strength (ASTM C31) for each one hundred (100) cubic yards or fraction of placement. Indicate the number of cylinders frequency of sampling and curing times to compressive strength testing.
 - d. Record and report test results and on-site field Inspections.
- Task 703 STRUCTURAL STEEL: Provide shop and on-site field testing of structural steel as required by AWS D1.1, AISC, ASTM A6 (fabrication shop), AISC for bolted connections for ASTM A325/A490, ASTM F959 (bolted connections), AWS D1.1 (field welding/subsection 7.8.1: stud welding), ASTM E605, E736L (fireproofing), SSPC (paint), and ASNT (nondestructive testing (NDT) requirements).
- a. Inspect structural steel fabricator's facility and equipment.
 - b. Check structural steel mill certificates to verify that materials are in accordance with the Prime Professional Services Contractor's Contract Documents.
 - c. Verify welder certifications.
 - d. Inspect completed structural steel fabrications for conformity to the Prime Professional Services Contractor's Contract Documents.
 - e. Examine critical welds by appropriate nondestructive testing (NDT) methods such as Ultrasonic or Magnetic Particle.
 - f. Test bolted connections for proper bolt tension.
 - g. Test shear studs (AWS D1.1).
 - h. Inspect metal deck for fastening and welding.
 - i. Record and report test results and on-site field Inspections.

- Task 704 BITUMINOUS PAVING: Provide on-site field Inspection and testing of bituminous paving.
- a. Inspect proof-rolling of subgrade.
 - b. Perform density tests (ASTM D2922 or ASTM D2167) on subgrade and aggregate base course.
 - c. Verify thickness of aggregate base.
 - d. Inspect bituminous concrete paving placement as required by ASTM D2950 (nuclear density), and MDOT - Michigan Modified Marshall Test.
 - e. Sample bituminous mixture for laboratory tests (ASTM D979).
 - f. Determine density (ASTM D2950), asphalt content (ASTM 4125), and degree of compaction of pavement as required by ASTM D2950 (nuclear density), and MDOT - Michigan Modified Marshall Test.
 - g. Determine thickness of bituminous paving (ASTM D3549).
 - h. Record and report test results and on-site field Inspections.
- Task 705 MASONRY: Provide on-site field Inspection, testing, and engineering analysis of masonry work.
- a. Inspect masonry materials as delivered to the Project site.
 - b. Review mixing and proportioning techniques of mortar and grout.
 - c. Collect sand, mortar, and grout samples for property requirements test of ASTM C144.
 - d. Collect mortar samples for property requirements of ASTM C270.
 - e. Inspect and evaluate masonry walls for masonry quality assurance labor procedures and for placement of:
 1. Head and bedding joints.
 2. Vertical and horizontal reinforcing.
 3. Wall tie spacing.
 4. Headers, lintels and other trade embeds, including bearing areas.
 5. Flashing, weeps, and vents at all areas detailed in the Prime Professional Services Contractor's Contract Documents drawings.
 6. Grout placement including clean-outs and consolidation of lifts.
 - f. Evaluate quality assurance labor procedures and details that are specific to the Project scope of work.
 - g. Evaluate and report on overall housekeeping of the Project site.
 - h. Record and report test results and on-site field Inspections.
- Task 706 ROOFING: Provide on-site field Inspection and material review of building elements to be used for the Project roofing system.
- a. Visually Inspect roof areas for complete removal of unsatisfactory roofing materials.
 - b. Verify the roofing materials are in compliance with the Prime Professional Services Contractor's Contract Documents.
 - c. Inspect roofing system installation and applications.
 - d. Record and report result of on-site field Inspections.

ARTICLE II: COMPENSATION

In consideration of the performance of this Contract, the Department agrees to pay the Professional, as compensation for services, a fixed unit price per the attached Fee Schedule and/or an hourly billing rate for each employee providing a direct service to this Project, on a not-to-exceed basis as specified herein, subject to subsequent modification mutually agreeable to the parties hereto; provided, however, the Professional may not incur costs, or bill the Department, for professional services in excess of the estimates established for this Project without the prior written agreement of the Department. The attached proposal prepared by the Professional in response to the Request for Proposal, by the Owner, may describe methodology, services, schedule, and other aspects of the work to be performed under the Contract but does not supersede the Contract.

Compensation to the Professional shall be on a fixed unit price, per the attached Fee Schedule, and/or an hourly billing rate basis for services rendered by salaried and non-salaried professional, technical and non-technical support employees, except for any authorized reimbursable expenses provided for in this Contract. Total compensation for any Phase shall not exceed the amount authorized for that Phase, unless authorized in writing by the Department's approved Contract Change Order.

Professional services shall not be performed, and no Project expense shall be incurred by the Professional prior to the issuance of a written and signed Professional Services Contract and a DTMB Form 402 - Contract Order by the Department to the Professional, authorizing the Professional to start the Project work.

The preparation of Bulletins and Contract Change Orders resulting from increases in the Project scope of work or previously unknown on-site field conditions will be compensated to the Professional, as approved by the Project Director, on an hourly billing rate basis in accordance with this article. This compensation shall not exceed seven and half percent (7.5%) of the Construction Contractor's quotation for the Bulletin or Contract Change Order or an amount mutually agreed upon by the Professional and the Project Director.

The Professional shall provide, at no additional compensation, professional services necessary to respond to and resolve all Construction Contractor design related claims arising wholly or in part from the Professional's errors or omissions or other aspects of the Project's design or the Professional's performance which are inconsistent with the Professional or Construction Contract.

Reproduction costs for the Professional's interpretations, study/design clarifications, and Bulletins necessary to achieve the Contract scope of work final design requirements is not allowable for reimbursement and shall be accounted as part of the Professional's lump sum fee of this Contract.

2.1 PREMIUM TIME/OVERTIME: This Contract anticipates that no premium or overtime is required to achieve this Project's scope of work. No compensation will be allowed to the Professional for any premium or overtime cost incurred to achieve the Project schedule of this Contract, unless directed in writing by the Project Director.

2.2 EMPLOYEE HOURLY BILLING RATES: Hourly billing rates will include all direct and indirect costs to the State for the Professional's services under this Contract other than the authorized and approved reimbursements. Hourly billing rates shall be based on the Professional's documented historical operating expenses and adjusted for Project specific costs. In no case shall this documentation period include more than eighteen (18) months prior to the date of award of this Contract. The Professional may not provide different hourly billing rates for the same individual for different Phases.

No lump-sum subcontracts for the professional services of any employee may be billed against this Contract. Any employee associated with this Project who performs the professional services of a subordinate or of a position classification having a lower classification/pay range shall be accounted and paid for at the lower hourly billing pay rate. The hourly billing rate charge of any employee may be changed by the Professional with a written and Department approved Contract Modification during the life of this Contract to account for normal personnel pay increases.

Hourly billing rates include, but are not limited to: Overhead items such as employee fringe benefits, vacations, sick leave, insurance, taxes, pension funds, retirement plans, meals, lodging, computer costs/operating costs and time, telephone, telephone-related services, and all reproduction services (except Contract Bidding Documents).

The hourly billing rate also includes all reproduction costs for design interpretations, study/design clarifications and Bulletins related to design errors or omissions, construction code compliance (precipitating either from design code compliance and plan review, design interpretations, or construction on-site/field Inspections), and all similar, or avoidable costs shall be accounted as part of the Professional's calculated hourly billing rate. All incidental postage, mail, or other shipping or delivery services, acquisition, bad debts, previous business losses, employment fees, depreciation, and operating costs for equipment, including computer design and/or computer drafting systems, and any specialized testing equipment are to be included. The hourly billing rate shall include, without exception, secretarial, computer/typing/word processing, editing, and clerical services utilized in any way for the Project as well as other non-technical and/or overhead employees. The hourly billing rate also includes all profit without regard to its form or distribution.

Items not allowable as part of the Professional's calculated hourly billing rate include, but are not limited to: Any costs associated with litigation and settlements for the Professional, or other liability suits, out-of-state offices, and associated travel, bonuses, profit sharing, premium/overtime costs, public relations, entertainment, business promotion, contributions, and various speculative allowances.

The hourly billing rate for the Professional may not be applied to the work of the Professional's Consultant's staff. Each Consultant firm must submit a separate hourly billing rate with proper documentation for the Consultant services they will provide as part of the Proposal. The hourly billing rate of the respective Consultant firm shall be used for that Consultant firm's personnel only. The Professional may propose a moderate mark-up to their Consultant firm's charges. The Professional's Consultant services shall be billed as an authorized reimbursable expense item at a direct cost times the Firm's mark-up percentage accepted by the Department.

- 2.3 RANGE OF EMPLOYEE HOURLY BILLING RATES: The Professional shall identify the service being provided and include the Professional's or Consultant's employee(s) full names and position classifications for the Project and their current hourly billing rates at the beginning and at the anticipated end of the Project. This hourly billing rate range shall reflect any anticipated pay increases over the life of the Contract. The range of hourly billing rates for any employee position or classification may not be changed without an approved Contract Modification.
- 2.4 DIRECT COST REIMBURSEMENT ITEMS: The Professional's Consultant services, and authorized reimbursable expenses shall be treated as an authorized reimbursable expense item at a direct cost times the firm's mark-up percentage amount approved by the Department. Reimbursement of authorized expense items at direct cost times the firm's mark-up percentage amount is intended only as a means to compensate the Professional for their direct costs. The Professional shall be responsible for the selection of the supplier of their professional services or materials, the coordination, adequacy and application of their professional services, whether provided by the Professional's staff or provided by their Consultant, and therefore responsible for any Project costs that exceed the Contract per Phase reimbursement Budget.
- 2.5 UNIT PRICE ITEMS: Unit price items shall be based on the attached Fee Schedule. No mark-up of unit pricing shall be allowed. Compensation for unit prices shall not exceed the amounts per Project Phase shown in the attached Contract Order unless authorized by a Department approved Contract Modification.

Project related mileage shall be treated as an authorized reimbursable expense at the State of Michigan's current travel rates.

Unless authorized elsewhere in this Contract, direct cost reimbursement items shall be limited to the actual cost of printing and reproduction of project deliverables such as Final Study Reports, Surveys, Bidding Documents, and U.S. Mail regular shipping postage of the project deliverables listed above. In addition, direct cost reimbursement items may include soil borings, site surveys and any required laboratory testing, Design Code Compliance and Plan Review Approval Fees by the licensing agency; reproduction of documents for legislative presentation, artistic productions, mobilization of testing equipment, laboratory costs for testing samples, per-linear-foot cost of soil borings and specialized inspections of the structural, mechanical, electrical, chemical or other essential components of the Project.

Compensation for this Contract shall not exceed the amounts per Project Phase shown in the attached Contract Order unless authorized by a Department approved Contract Modification. It shall be the Professional's responsibility to carefully monitor their and their Consultant firms Project costs, activities, and progress and to give the Project Director timely notification of any justifiable need to increase the authorized fee. The Professional may not proceed with professional services that have not been authorized by the Project Director and shall immediately notify the Project Director if such services have been requested or have become necessary.

Identification of Professional and Consultant staff, hourly billable rates, and an itemized list per Project Phase of authorized direct cost reimbursement items are identified in the attached Professional's proposal.

ARTICLE III: PAYMENTS

Payment of the professional services fee shall be based on the Professional's performance of authorized professional service(s) performed prior to the date of each submitted payment request. Payment requests shall be submitted monthly to the Project Director on a payment request form (DTMB-0440). Payment for each monthly payment request shall be made within thirty (30) consecutive calendar days following the Department's approval of the payment request. Payment requests shall include signed certification by the Professional of the actual percentage of work completed as of the date of invoicing for each Phase and summarize the amounts authorized, earned, previously paid, and currently due for each Project Phase. Payment requests shall be supported by itemized records or documentation in such form and detail as the Department may require. Each of the Professional's Consultant's payment request applications shall include similar information. This includes, but is not limited to:

- a) Phase Numbers for the professional services provided.
- b) Professional's personnel and position/classification providing service and hours worked
- d) Current hourly billing rate charges for each individual position/classification.
- e) Copy of certified on-site visitation log or site visit report showing time on-site.
- f) Itemized invoices from each of the Professional's Consultant's documenting that firm's professional services charge and the Project work related services provided.
- g) Authorized reimbursable expense items provided with receipts and invoices.

ARTICLE IV: ACCOUNTING

The Professional shall keep current and accurate records of Project costs and expenses, of hourly billing rates, authorized reimbursable expense items, and all other Project related accounting document to support the Professional's monthly application for payment. Project records shall be kept on a generally recognized accounting basis. Such records shall be available to the Department for a period of three (3) years after the Department's final payment to the Professional. The State of Michigan reserves the right to conduct, or have conducted, an audit and inspection of these Project records at any time during the Project or following its completion.

ARTICLE V: INSURANCE

The Professional shall purchase, maintain and require such insurance that will provide protection from claims set forth below which may arise out of or result from the Professional firm's services under this Contract, whether such service is performed by the Professional or performed by any of the Professional Firm's Consultant's or by anyone directly or indirectly employed by them, or by anyone for whose acts they may be liable. The following insurance policy limits described below are intended to be the minimum coverage acceptable by the State:

For this Section, "State" includes its departments, divisions, agencies, offices, commissions, officers, employees, and agents.

- (a) The Professional must provide proof that it has obtained the minimum levels of insurance coverage indicated or required by law, whichever is greater. The insurance must protect the State from claims that may arise out of or result from or are alleged to arise out of or result from the Professional's or a Subcontractor's performance, including any person directly or indirectly employed by the Professional or a Subcontractor, or any person for whose acts the Professional or a Subcontractor may be liable.
- (b) The Professional waives all rights against the State for the recovery of damages that are covered by the insurance policies the Professional is required to maintain under this Section. The Professional's failure to obtain and maintain the required insurance will not limit this waiver.
- (c) All insurance coverage provided relative to this Contract is primary and non-contributing to any comparable liability insurance (including self-insurance) carried by the State.
- (d) The State, in its sole discretion, may approve the use of a fully funded self-insurance program in place of any specified insurance identified in this Section.
- (e) Unless the State approves, any insurer must have an A.M. Best rating of "A-" or better and a financial size of VII or better, or if those ratings are not available, a comparable rating from an insurance rating agency approved by the State. All policies of insurance must be issued by companies that have been approved to do business in the State. To view the latest A.M. Best's Key Ratings Guide and the A.M. Best's Company Reports (which include the A.M. Best's Ratings) visit the A.M. Best Company internet web site at <http://www.ambest.com>.
- (f) Where specific coverage limits are listed in this Section, they represent the minimum acceptable limits. If the Professional's policy contains higher limits, the State is entitled to coverage to the extent of the higher limits.
- (g) The Professional must maintain all required insurance coverage throughout the term of this Contract and any extensions. However, in the case of claims-made Commercial General Liability policies, the Professional must secure tail coverage for at least three (3) years following the termination of this Contract.
- (h) The minimum limits of coverage specified are not intended, and may not be construed, to limit any liability or indemnity of the Professional to any indemnified party or other persons.
- (i) The Professional is responsible for the payment of all deductibles.
- (j) If the Professional fails to pay any premium for a required insurance policy, or if any insurer cancels or significantly reduces any required insurance without the State's approval, the State may, after giving the Professional at least 30 days' notice, pay the premium or procure similar insurance coverage from another company or companies. The State may deduct any part of the cost from any payment due the Professional or require the Professional to pay that cost upon demand.

- (k) In the event the State approves the representation of the State by the insurer's attorney, the attorney may be required to be designated as a Special Assistant Attorney General by the Michigan Attorney General.
- (l) If single policy limits are used to fill more than one of these requirements evidence of separate aggregate limits must be noted on the certificate.

5.1 Workers' Compensation and Employer's Liability Insurance

The Professional must provide Workers' Compensation coverage according to applicable laws governing work activities in the state of the Professional's domicile. If the applicable coverage is provided by a self-insurer, the Professional must provide proof of an approved self-insured authority by the jurisdiction of domicile.

For employees working outside of the state of the Professional's domicile, the Professional must provide certificates of insurance proving mandated coverage levels for the jurisdictions where the employees' activities occur.

5.2 Motor Vehicle Insurance

If a motor vehicle is used in relation to the Professional's performance, the Professional must have vehicle liability insurance on the motor vehicle for bodily injury and property damage as required by law.

5.3 Commercial General Liability Insurance

For claims for damages because of bodily injury or death of any person, other than the Professional's employees, or damage to tangible property of others, including loss of use resulting therefrom, to the extent that such kinds of liability are not insured by other specific liability insurance and are ordinarily insurable under general liability insurance. The Professional must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents as additional insureds on the Commercial General Liability certificate. The Professional also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company.

5.4 Professional Liability Insurance (Errors and Omissions)

Contractual Liability Insurance for claims for damages that may arise from the Professional's assumption of liability on behalf of the State under Article 6 concerning indemnification for errors, omissions, or negligent acts in the course of the professional service or other provision within this Contract to the extent that such kinds of contractual liability are insurable in connection with and subject to limits of liability not less than for the general liability insurance and the professional liability insurance and set forth in subsections (c) and (d) above.

Except where the State has approved a subcontract with other insurance provisions, the Professional must require any Consultant/Subcontractor to purchase and maintain the insurance coverage required in this Article. Alternatively, the Contractor may include a Consultant/Subcontractor under the Professional's insurance on the coverage required in that Section. The failure of a Consultant/Subcontractor to comply with insurance requirements does not limit the Professional's liability or responsibility.

Certificate of Insurance documents, acceptable to the State, shall be provided and filed with the Department prior to commencement of the Professional's Project services, unless otherwise approved in writing, and not less than 20 days before the insurance expiration date every year thereafter. Facsimile copies of the Certificate of Insurance **will not** be accepted.

Certificate of Insurance documents must be either submitted hard copy or portable document file (.pdf). The Certificate of Insurance documents must specify on the certificate in the oblong rectangle space labeled "Description of Operations/Locations/Vehicles/Exclusions Added by Endorsement/Special Provisions/Special Items" the following items: **(1) The Project File No.; (2) The Project Title; (3) Description of the Project; and (4) The State of Michigan must be named as an "Additional Insured on the General Liability and Automobile Insurance Policies."**

The Certificate of Insurance documents shall contain a provision that the Project insurance coverage afforded under the insurance policies for this Contract will not be modified or canceled without at least thirty (30) consecutive calendar days' prior written notice, except for 10 days for non-payment of premium, to the State of Michigan, Department.

The attached, Certificates of Insurance documents required for this Project shall be in force for this Project until the final payment by the State to the Professional is made and shall be written for not less than any limits of liability specified above. The Professional has the responsibility for having their Consultant firms comply with these insurance requirements.

Commercial General Liability Insurance	
Required Limits	Additional Requirements
<u>Minimal Limits:</u> \$1,000,000 Each Occurrence Limit \$1,000,000 Personal & Advertising Injury Limit \$2,000,000 General Aggregate Limit \$2,000,000 Products/Completed Operations <u>Deductible Maximum:</u> \$50,000 Each Occurrence	Contractor must have their policy endorsed to add “the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents” as additional insureds using endorsement CG 20 10 11 85, or both CG 2010 07 04 and CG 2037 07 0.
Automobile Liability Insurance	
Required Limits	Additional Requirements
<u>Minimal Limits:</u> \$1,000,000 Per Occurrence	Contractor must have their policy: (1) endorsed to add “the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents” as additional insureds; and (2) include Hired and Non-Owned Automobile coverage.
Workers' Compensation Insurance	
Required Limits	Additional Requirements
<u>Minimal Limits:</u> Coverage according to applicable laws governing work activities.	Waiver of subrogation, except where waiver is prohibited by law.
Employers Liability Insurance	
Required Limits	Additional Requirements
<u>Minimal Limits:</u> \$500,000 Each Accident \$500,000 Each Employee by Disease \$500,000 Aggregate Disease.	
Professional Liability (Errors & Omissions) Insurance	
Required Limits	Additional Requirements
<u>Minimal Limits:</u> \$1,000,000 Each Occurrence \$2,000,000 Annual Aggregate <u>Deductible Maximum:</u> \$50,000 Per Loss	<p>The Professional Firm's Errors and Omissions coverage shall include coverage for claims resulting from acts of forbearance that cause or exacerbate pollution and claims of bodily injury and property damage. This insurance is required of all Professional firms who conduct professional environmental services including, but not limited to, any of the Phase 100 – Study services:</p> <p><i>Contractual Liability Insurance for claims for damages that may arise from the Professional's assumption of liability on behalf of the State under Article VI concerning indemnification for errors, omissions, or negligent acts in the course of the professional service or other provision within this Contract to the extent that such kinds of contractual liability are insurable in connection with and subject to limits of liability not less than for the general liability insurance and the professional liability insurance and set forth in subsections (c) and (d) above.</i></p>

Environmental and Pollution (Errors & Omissions) Insurance	
Required Limits	Additional Requirements
<u>Minimal Limits:</u> \$1,000,000 Each Occurrence \$2,000,000 Annual Aggregate	Contractor must have their policy: (1) be applicable to the work being performed, including completed operations equal to or exceeding statute of repose; (2) not have exclusions or limitations related to remedial system design, remediation management, feasibility development and implementation, hydrogeological evaluation, media testing and analysis, subsurface and geophysical investigation, and other related activities as determined by the Department; and (3) endorsed to add "the State of Michigan, its departments, division, agencies, offices, commissions, officers, employees, and agents" as additional insured.

Additional Insurance Requirements:

Contractor must maintain the insurances identified above and is responsible for all deductibles. All required insurance must: (a) protect the State from claims that may arise out of, are alleged to arise out of, or result from Contractor's or a subcontractor's performance; (b) be primary and non-contributing to any comparable liability insurance (including self-insurance) carried by the State; and (c) be provided by a company with an A.M. Best rating of "A" or better, and a financial size of VII or better.

If any of the required policies provide **claims-made** coverage, the Contractor must: (a) provide coverage with a retroactive date before the effective date of the contract or the beginning of Contract Activities; (b) maintain coverage and provide evidence of coverage for at least three (3) years after completion of the Contract Activities; and (c) if coverage is canceled or not renewed, and not replaced with another claims-made policy form with a retroactive date prior to the contract effective date, Contractor must purchase extended reporting coverage for a minimum of three (3) years after completion of work.

Contractor must: (a) provide insurance certificates to the Contract Administrator, containing (1) The Project File No.; (2) The Project Title; and (3) Description of the Project, at Contract formation and within 20 calendar days of the expiration date of the applicable policies; (b) require that subcontractors maintain the required insurances contained in this Section; (c) notify the Contract Administrator within 5 business days if any insurance is cancelled; and (d) waive all rights against the State for damages covered by insurance. Failure to maintain the required insurance does not limit this waiver.

This Section is not intended to and is not be construed in any manner as waiving, restricting or limiting the liability of either party for any obligations under this Contract (including any provisions hereof requiring Contractor to indemnify, defend and hold harmless the State).

The Professional shall purchase, maintain and require such insurance that will provide protection from claims set forth below which may arise out of or result from the Professional's services under this Contract, whether such service is performed by the Professional or performed by any of the Professional's Consultant's or by anyone directly or indirectly employed by them, or by anyone for whose acts they may be liable. The following insurance policy limits described below are intended to be the minimum coverage acceptable by the State:

For the purpose of this Section, "State" includes its departments, divisions, agencies, offices, commissions, officers, employees, and agents.

- (a) The Contractor must provide proof that it has obtained the minimum levels of insurance coverage indicated or required by law, whichever is greater. The insurance must protect the State from claims that may arise out of or result from or are alleged to arise out of or result from the Contractor's or a Subcontractor's performance, including any person directly or indirectly employed by the Contractor or a Subcontractor, or any person for whose acts the Contractor or a Subcontractor may be liable.
- (b) The Contractor waives all rights against the State for the recovery of damages that are covered by the insurance policies the Contractor is required to maintain under this Section. The Contractor's failure to obtain and maintain the required insurance will not limit this waiver.

- (c) All insurance coverage provided relative to this Contract is primary and non-contributing to any comparable liability insurance (including self-insurance) carried by the State.
- (d) The State, in its sole discretion, may approve the use of a fully funded self-insurance program in place of any specified insurance identified in this Section.
- (e) Unless the State approves, any insurer must have an A.M. Best rating of "A-" or better and a financial size of VII or better, or if those ratings are not available, a comparable rating from an insurance rating agency approved by the State. All policies of insurance must be issued by companies that have been approved to do business in the State. To view the latest A.M. Best's Key Ratings Guide and the A.M. Best's Company Reports (which include the A.M. Best's Ratings) visit the A.M. Best Company internet web site at <http://www.ambest.com>.
- (f) Where specific coverage limits are listed in this Section, they represent the minimum acceptable limits. If the Contractor's policy contains higher limits, the State is entitled to coverage to the extent of the higher limits.
- (g) The Contractor must maintain all required insurance coverage throughout the term of this Contract and any extensions. However, in the case of claims-made Commercial General Liability policies, the Contractor must secure tail coverage for at least three (3) years following the termination of this Contract.
- (h) The minimum limits of coverage specified are not intended, and may not be construed, to limit any liability or indemnity of the Contractor to any indemnified party or other persons.
- (i) The Contractor is responsible for the payment of all deductibles.
- (j) If the Contractor fails to pay any premium for a required insurance policy, or if any insurer cancels or significantly reduces any required insurance without the State's approval, the State may, after giving the Contractor at least 30 day notice, pay the premium or procure similar insurance coverage from another company or companies. The State may deduct any part of the cost from any payment due the Contractor or require the Contractor to pay that cost upon demand.
- (k) In the event the State approves the representation of the State by the insurer's attorney, the attorney may be required to be designated as a Special Assistant Attorney General by the Michigan Attorney General.
- (l) If single policy limits are used to fill more than one of these requirements evidence of separate aggregate limits must be noted on the certificate.

5.1 Workers' Compensation Insurance

The Contractor must provide Workers' Compensation coverage according to applicable laws governing work activities in the state of the Contractor's domicile. If the applicable coverage is provided by a self-insurer, the Contractor must provide proof of an approved self-insured authority by the jurisdiction of domicile.

For employees working outside of the state of the Contractor's domicile, the Contractor must provide certificates of insurance proving mandated coverage levels for the jurisdictions where the employees' activities occur.

5.2 Employers Liability Insurance

Minimal Limits:

\$500,000 Each Accident;
 \$500,000 Each Employee by Disease
 \$500,000 Aggregate Disease

5.3 Motor Vehicle Insurance

If a motor vehicle is used in relation to the Contractor's performance, the Contractor must have vehicle liability insurance on the motor vehicle for bodily injury and property damage as required by law.

5.4 Commercial General Liability Insurance

For claims for damages because of bodily injury or death of any person, other than the Professional's employees, or damage to tangible property of others, including loss of use resulting therefrom, to the extent that such kinds of liability are not insured by other specific liability insurance and are ordinarily insurable under general liability insurance. The Contractor must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents as additional insureds on the Commercial General Liability certificate. The Contractor also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company.

Minimal Limits:

\$1,000,000 Each Occurrence Limit
\$1,000,000 Personal & Advertising Injury Limit
\$2,000,000 General Aggregate Limit
\$2,000,000 Products/Completed Operations

5.5 Professional Liability Insurance (Errors and Omissions)

For claims for damages arising out of an error, omission or negligent act in the performance of professional services.

Minimal Limits:

\$1,000,000 Each Occurrence
\$2,000,000 Annual Aggregate

The Professional's Errors and Omissions coverage shall include coverage for claims resulting from acts of forbearance that cause or exacerbate pollution and claims of bodily injury and property damage in the amount of \$1,000,000 minimum coverage per occurrence, \$2,000,000 annual aggregate. This insurance is required of all Professional firms who conduct professional environmental services including, but not limited to, any of the following services:

- (i) Remedial System Design.
- (ii) Remediation Management.
- (iii) Feasibility Development and Implementation.
- (iv) Hydrogeological Evaluation.
- (v) Media Testing and Analysis.
- (vi) Subsurface and Geophysical Investigation.
- (vii) Other related activities as determined by the Department.

Contractual Liability Insurance for claims for damages that may arise from the Professional's assumption of liability on behalf of the State under Article 6 concerning indemnification for errors, omissions, or negligent acts in the course of the professional service or other provision within this Contract to the extent that such kinds of contractual liability are insurable in connection with and subject to limits of liability not less than for the general liability insurance and the professional liability insurance and set forth in subsections (c) and (d) above. Except where the State has approved a subcontract with other insurance provisions, the Professional must require any Consultant/Subcontractor to purchase and maintain the insurance coverage required in this Article. Alternatively, the Contractor may include a Consultant/Subcontractor under the Professional's insurance on the coverage required in that Section. The failure of a Consultant/Subcontractor to comply with insurance requirements does not limit the Professional's liability or responsibility.

Certificate of Insurance documents, acceptable to the State, shall be provided and filed with the Department prior to commencement of the Professional's Project services, unless otherwise approved in writing, and not less than 20 days before the insurance expiration date every year thereafter. Facsimile copies of the Certificate of Insurance will not be accepted. Certificate of Insurance documents must be either submitted hard copy or portable document file (.pdf). The Certificate of Insurance documents must specify on the certificate in the oblong rectangle space labeled "Description of Operations/Locations/Vehicles/Exclusions Added By Endorsement/Special Provisions/Special Items" the following items: **(1) The Project File No.; (2) The Project Title; (3) Description of the Project; and (4) The State of Michigan must be named as an "Additional Insured on the General Liability AND Automobile Insurance Policies."** The Certificate of Insurance documents shall contain a provision that the Project insurance coverage afforded under the insurance policies for this Contract will not be modified or canceled without at least thirty (30) consecutive calendar days prior written notice, except for 10 days for non-payment of premium, to the State of Michigan, Department.

The attached, Certificates of Insurance documents required for this Project shall be in force for this Project until the final payment by the State to the Professional is made and shall be written for not less than any limits of liability specified above. The Professional has the responsibility for having their Consultant firms comply with these insurance requirements.

ARTICLE VI: INDEMNIFICATION

- (a) To the extent permitted by law, the Professional shall indemnify, defend and hold harmless the State from liability, including all claims and losses, and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties), accruing or resulting to any person, firm or corporation that may be injured or damaged by the Professional in the performance of this Contract and that are attributable to the negligence or tortious acts of the Professional or any of its Subcontractors/Consultants, or by anyone else for whose acts any of them may be liable.
- (b) Employee Indemnification: In any and all claims against the State of Michigan, its departments, divisions, agencies, boards, sections, commissions, officers, employees and agents, by any employee of the Professional or any of its Subcontractors/Consultants, the indemnification obligation under this Contract shall not be limited in any way by the amount or type of damages, compensation or benefits payable by or for the Professional or any of its Subcontractors/Consultants under worker's disability compensation acts, disability benefit acts or other employee benefit acts. This indemnification clause is intended to be comprehensive. Any overlap in provisions, or the fact that greater specificity is provided as to some categories of risk, is not intended to limit the scope of indemnification under any other provisions.
- (c) Patent/Copyright Infringement Indemnification: To the extent permitted by law, the Professional shall indemnify, defend and hold harmless the State from and against all losses, liabilities, damages (including taxes), and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties) incurred in connection with any action or proceeding threatened or brought against the State to the extent that such action or proceeding is based on a claim that any piece of equipment, software, commodity or service supplied by the Professional or its Subcontractors/Consultants, or the operation of such equipment, software, commodity or service, or the use of reproduction of any documentation provided with such equipment, software, commodity or service infringes any United States patent, copyright, trademark or trade secret of any person or entity, which is enforceable under the laws of the United States.

In addition, should the equipment, software, commodity, or services, or its operation, become or in the State's or Professional's opinion be likely to become the subject of a claim of infringement, the Professional shall at the Professional's sole expense (i) procure for the State the right to continue using the equipment, software, commodity or service or, if such option is not reasonably available to the Professional, (ii) replace or modify to the State's satisfaction the same with equipment, software, commodity or service of equivalent function and performance so that it becomes non-infringing, or, if such option is not reasonably available to Professional, (iii) accept its return by the State with appropriate credits to the State against the Professional's charges and reimburse the State for any losses or costs incurred as a consequence of the State ceasing its use and returning it.

Notwithstanding the foregoing, the Professional shall have no obligation to indemnify or defend the State for, or to pay any costs, damages or attorneys' fees related to, any claim based upon (i) equipment developed based on written specifications of the State; or (ii) use of the equipment in a configuration other than implemented or approved in writing by the Professional, including, but not limited to, any modification of the equipment by the State; or (iii) the combination, operation, or use of the equipment with equipment or software not supplied by the Professional under this Contract.

ARTICLE VII: OWNERSHIP OF DOCUMENTS

All Project deliverables, including but not limited to: reports, Bidding Documents, Contract Documents, electronic documents and data, and other Project related documents, including the copyrights, prepared and furnished by the Professional shall become the property of the State of Michigan upon completion of the Project, completion and acceptance of the professional's work, or upon termination of the Contract. Project deliverables shall be delivered to the Department upon their request. The Professional shall have no claim for further employment or additional compensation as a result of this Contract requirement. The Professional may retain a copy of all Project documents for their files.

If the Professional is in default or breach of its obligations under this Contract, the State shall have full ownership rights of the Project deliverables, including, but not limited to, Bidding Documents and Contract Documents, test/laboratory data, including all electronic data. If the Professional is in default or this Contract Agreement is terminated, the State shall not use the Documents and deliverables of this Contract for completion of the Project by others without the involvement of other qualified Professionals who shall assume the professional obligations and liability for the Project work not completed by the Professional. To the fullest extent allowed by law, the

State releases the Professional, the Professionals Consultant(s) and the agents and employees of any of them from and against legal claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of the State's use of the Documents other than in accordance with this Contract Agreement.

All Contract deliverables listed may be published or issued for informational purposes without additional compensation to the Professional. The Professional may not use any of the Contract Documents and Contract deliverables for any purpose that may misrepresent the professional services they provided.

The Professional shall retain full rights to the documents and deliverables and the right to reuse component information contained in them in the normal course of the Professional's activities.

The Contract deliverables, Contract Documents, or other documents produced under this Contract may be used by the Department, or others employed by the Department or State of Michigan, for reference in any completion, correction, remodeling, renovation, reconstruction, alteration, modification of or addition to the Project, without compensation to the Professional.

The State of Michigan will not construct additional Projects or buildings based on the work of this Contract without notice to the Professional.

Whenever renderings, photographs of renderings, photographs or models, or photographs of the Project are released by the State of Michigan for publicity, proper credit for design shall be given to the Professional, provided the giving of such credit is without cost to the State of Michigan.

ARTICLE VIII: TERMINATION

The State may, by written notice to the Professional, terminate this Contract in whole or in part at any time, either for the State's convenience or because of the failure of the Professional to fulfill their Contract obligations. Upon receipt of such notice, the Professional shall:

- a) Immediately discontinue all professional services affected (unless the notice directs otherwise), and
- b) Deliver to the State all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been accumulated by the Professional in performing this Contract, whether completed or in process.

8.1 If the termination is for the convenience of the State, an equitable adjustment in the Contract price shall be made, but no amount shall be allowed for anticipated profit on unperformed professional services.

8.2 If the termination is due to the failure of the Professional to fulfill their Contract obligations, the State may take over the work and prosecute the same to completion by Contract or otherwise. In such case, the Professional shall be liable to the State for any additional cost occasioned to the State thereby.

8.3 If, after notice of termination for failure to fulfill Contract obligations, it is determined that the Professional had not so failed, the termination shall be deemed to have been affected for the convenience of the State. In such event, adjustment in the Contract price shall be made as provided in Section 8.1 of this article.

8.4 The rights and remedies of the State provided in this article are in addition to any other rights and remedies provided by law or under this Contract.

ARTICLE IX-9: SUCCESSORS AND ASSIGNS

This Contract shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns; provided, however, that neither of the parties hereto shall assign this Contract without the prior written consent of the other.

ARTICLE: X GOVERNING LAW

This Contract shall be construed in accordance with the laws of the State of Michigan.

ARTICLE XI: NONDISCRIMINATION

In connection with the performance of the Project under this, the Professional agrees as follows:

- a) The Professional will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, age, sex (*as defined in Executive Directive 2019-09*), height, weight, marital status, or a physical or mental disability that is unrelated to the individual's ability to perform the duties of the particular job or position. The Professional will provide equal employment opportunities to ensure that applicants are employed and that employees are treated during employment, without regard to their race, color, religion, national origin, age, sex, height, weight, marital status, or a physical or mental disability that is unrelated to the individual's ability to perform the duties of the job or position. Such action shall include, but not be limited to, 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.
- b) The Professional will, in all solicitations or advertisements for employees placed by or on behalf of the Professional, state that all qualified applicants will receive equal employment opportunity consideration for employment without regard to race, color, religion, national origin, age, sex, height, weight, marital status, or a physical or mental disability that is unrelated to the individual's ability to perform the duties of the particular job or position.
- c) The Professional or their collective bargaining representative will send to each labor union or representative of workers with which is held a collective bargaining agreement or other Contract or understanding, a notice advising the said labor union or workers' representative of the Professional's nondiscrimination commitments under this article.
- d) The Professional will comply with the Elliot-Larsen Civil Rights Act, 1976 PA 453, as amended, MCL 37.2201 et seq; the Michigan Persons with Disabilities Civil Rights Act, 1976 PA 220, as amended, MCL 37.1101 et seq; Executive Directive 2019-09; and all published rules, regulations, directives and orders of the Michigan Civil Rights Commission which may be in effect on or before the date of award of this Contract.
- e) The Professional will furnish and file nondiscrimination compliance reports within such time and upon such forms as provided by the Michigan Civil Rights Commission; said forms may also elicit information as to the practices, policies, program, and employment statistics of the Professional and of each of their Consultant firms. The Professional will permit access to all books, records, and accounts by the Michigan Civil Rights Commission, and/or its agent, for purposes of investigation to ascertain nondiscrimination compliance with this Contract and with rules, regulations, and orders of the Michigan Civil Rights Commission relevant to Article 6, 1976 PA 453, as amended.
- f) In the event that the Michigan Civil Rights Commission finds, after a hearing held pursuant to its rules, that the Professional has not complied with the contractual nondiscrimination obligations under this Contract, the Michigan Civil Rights Commission may, as part of its order based upon such findings, certify said findings to the State Administrative Board of the State of Michigan, which the State Administrative Board may order the cancellation of the Contract found to have been violated, and/or declare the Professional ineligible for future Contracts with the State and its political and civil subdivisions, departments, and officers, and including the governing boards of institutions of higher education, until the Professional complies with said order of the Michigan Civil Rights Commission. Notice of said declaration of future ineligibility may be given to any or all the persons with whom the Professional is declared ineligible to Contract as a contracting party in future Contracts. In any case before the Michigan Civil Rights Commission in which cancellation of an existing Contract is a possibility, the State shall be notified of such possible remedy and shall be given the option by the Michigan Civil Rights Commission to participate in such proceedings.
- g) The Professional shall also comply with the nondiscrimination provisions of 1976 PA 220, as amended, concerning the civil rights of persons with physical or mental disabilities.
- h) The Professional will include, or incorporate by reference, the nondiscrimination provisions of the foregoing paragraphs a) through g) in every subcontract or Contract Order unless exempted by the rules, regulations or orders of the Michigan Civil Rights Commission, and will provide in every subcontract or Contract Order that said nondiscrimination provisions will be binding upon each of the Professional's Consultant's or seller.

ARTICLE XII: CONTRACT CLAIMS AND DISPUTES

In any claim or dispute by the Professional which cannot be resolved by negotiation, the Professional shall submit the claim or dispute for an administrative decision by the Director within thirty (30) consecutive calendar days of the end of the disputed negotiations, and any decision of the Director may be appealed to the Michigan Court of Claims within one (1) year of the issuance of the Director's decision. The Professional agrees that the Department's appeal procedure to the Director is a prerequisite to filing a suit in the Michigan Court of Claims.

ARTICLE XIII: DEFINITION OF TERMS:

The definition of terms and conditions of this Contract are described and outlined in Articles 1 through 14 and attached appendices. The capitalized defined terms used in this Contract shall have the following definitions:

ADDENDA: Written or graphic numbered documents issued by the Department and/or the Professional prior to the execution of the Construction Contract which modifies or interprets the Project final design Contract Bidding Documents, including drawings, and specifications, by additions, deletions, clarifications or corrections. The Addenda shall: (1) Be identified specifically with a standardized format; (2) Be sequentially numbered; (3) Include the name of the Project; (4) Specify the Project Index No., Project File No., the Contract Order No. Y, and a description of the proposed Addenda scope of work; and (5) Specify the date of Addenda issuance. As such, the Addenda are intended to become part of the Project final design Contract Bidding Documents when the Construction Contract is executed by the Prime Professional Services Contractor's recommended lowest responsive, responsible qualified Construction Contractor. An Addendum issued after the competitive construction Bid opening to those construction Bidders who actually submitted a Bid, for the purpose of rebidding the Project work without re-advertising, is referred to as a post-Bid Addendum.

BID: A written offer by a competitive construction Bidder for the Department's Project construction work, as specified, which designates the competitive construction Bidder's base bid and Bid price for all alternates.

BIDDER: The person acting directly, or through an authorized representative, who submits a competitive construction Bid directly to the Department.

BIDDING DOCUMENTS: The Prime Professional Services Contractor's Project Contract Documents, drawings, and specifications as advertised, including but not limited to, special, general, and supplemental conditions, Departmental form modifications, and all Addenda issued before the competitive construction Bid opening, and after the competitive construction Bid opening, if the Project construction work is rebid without re-advertising.

BUDGET: The maximum legislatively authorized Budget amount to be provided by the State of Michigan and available for a specific purpose or combination of purposes to accomplish the Project scope of work for this Contract.

BULLETIN: A standard document form (DTMB-485, Bulletin Authorization No. and the DTMB-489, Instructions to Construction Contractors for Preparation of Bulletin Cost Quotations for Contract Change Orders) used by the Department to describe a sequence numbered change in the Project scope of work under consideration by the Department and the Professional and to request the Construction Contractor to submit a proposal for the corresponding adjustment in the Contract price and/or Contract time, if any. These standard document forms are a part of the "DTMB-460, Project Procedures" documents package.

CONSTRUCTION CONTRACT: A separate written Contract agreement between the Construction Contractor and the Department for the construction, alteration, demolition, repair, or rebuilding of a State/Client Agency building or other State property.

CONSTRUCTION CONTRACTOR: Any construction firm under a separate Contract to the Department for construction services.

CONSULTANT: Any individual, firm, or employee thereof, not a part of the Professional's staff, but employed by the Professional and whose professional service cost is ultimately paid by the State of Michigan, either as a direct cost or reimbursement. This includes the recipient(s) of Contract Orders for material, support, and/or technical services. Also, included are persons and firms whose management and/or direction of services are assigned to the Professional as may be provided elsewhere in this Contract.

CONTRACT CHANGE ORDER: A written order standard document form (DTMB-403) issued and signed by the State of Michigan and signed by the Professional which amends the attached Appendix 1 – Project/Program Statement scope of work or an adjustment in Contract price and/or Contract time, or both.

CONTRACT DOCUMENTS: The Prime Professional Services Contractor plans/drawings, specifications, proposal, agreement, all Addendums and attachments as may be necessary to comprise a Construction Contract for the Project scope of work for providing professional construction quality control and material testing/engineering services during the Project construction work.

CONTRACT MODIFICATION: A written amendment, standard document form (DTMB-410), to the Contract scope of work signed by the Department and the Professional. The preparation of Bulletins and Contract Change Orders resulting from changes in the attached Appendix 1 – Project/Program Statement or previously unknown on-site field conditions as approved by the Department will be compensated to the Professional by way of the Contract Modification in accordance with the Article 2, Compensation text of this Contract. Any Contract Modification of this Contract must be in writing, signed by duly authorized representatives of the parties, and shall be in such format and detail as the Department may require. No Contract Modification will be approved to compensate the Professional for correcting, or for responding to claims or litigation for the Professional's construction quality control and material testing/engineering design errors, omissions, or neglect on the part of the Professional.

CONTRACT ORDER: A written order standard document form (DTMB-402) issued and signed by the State of Michigan authorizing a professional firm to: (1) Begin to incur Project expenses and proceed with the Project; and (2) Provide the services stipulated in the fully executed Contract for the not-to-exceed dollar fee amount designated in the Phases of the Contract Order. Issuance of this standard document form by the State of Michigan to the Professional certifies that: (1) The State will enter into a Contract for the services described in the Phases of this Contract; and that (2) The proper two (2) sets of Certificate of Insurance documents have been received and accepted by the State along with the approval and signing of the Professional's Contract by the Director.

DEPARTMENT: The Department of Technology, Management and Budget. The Department will represent the State of Michigan in all matters pertaining to this Project. This Contract will be administered through the Department of Technology, Management and Budget, State Facilities Administration, Design and Construction Division on behalf of the Department.

DIRECTOR: The Director of the Department of Technology, Management and Budget or their authorized State of Michigan representative.

DIRECTOR-SFA: The Department of Technology, Management and Budget, Director of State Facilities Administration or their authorized State of Michigan representative.

FIELD REPRESENTATIVE: An employee of the State under the direction of the Project Director who provides the Inspection of construction Projects for compliance with the design intent of the Prime Professional Services Contractor's Contract Documents, drawings, and specification and the building construction codes. The Field Representative is the liaison between the Construction Contractor, the Prime Professional Services Contractor, the Professional, and the Project Director. The Project Director, or their Field Representative, has the authority to require the Prime Professional Services Contractor and the Professional to respond to and resolve design related problems, construction field problems, and to attend Project meetings. Unless delegated by specific written notice from the Department, the Field Representative has no authority to order any changes in the Project scope of work or authorize any adjustments in Contract price or Contract time.

INSPECTION: The Professional and their Consultants on-site and/or off-site examination of the Project construction work completed or in progress by the involved Project Construction Contractor to determine and verify to the Department's Project Director that the quantity and quality of all Project work is in accordance with the design intent of the Prime Professional Services Contractor's Contract Documents, drawings, and specifications.

KEY PRINCIPAL PERSONNEL/EMPLOYEE: A Chief Executive Officer of a professional firm who is essential for the successful completion of the Project.

PHASE: A discretely distinguishable construction Phase step necessary to provide the Project scope of work in the course of the Professional's providing services.

PRIME PROFESSIONAL SERVICES CONTRACTOR: An individual, firm, partnership, corporation, association, or other legal entity who is legally permitted by law to sign and seal final design construction Contract Documents and licensed under the State of Michigan's professional licensing and regulation provisions of the Occupational Code (State Licensing Law), Act 299 of the Public Acts of 1980, Article 20, as amended, to practice architecture, engineering, environmental engineering, geology, land surveying, or landscape architecture services in the State of Michigan.

The Prime Professional Services Contractor, under separate contract with the Department, is responsible for the Project Design, Contract Documents, development of the Project construction phase, and required to define and specify the types of on-site tests required and approximate quantities to be tested during the Project and the projected costs thereof.

The Prime Professional Services Contractor/Professional firm is also legally permitted by the State of Michigan's regulation provisions of the State Construction Code, Act 230 of the Public Acts of 1972, as amended, and designated in a Construction Contract by the Department to recommend construction progress payments to the Construction Contractor.

PROJECT: Any new construction, existing site, new utilities, existing building renovation, roof repairs and/or removal and replacement, additions, alteration, repair, installation, construction quality control and material testing services, painting, decorating, demolition, conditioning, reconditioning or improvement of public buildings, works, bridges, highways or roads authorized by the Department that requires professional services as part of this Contract.

PROJECT COST: The total Project cost including, but not limited to, site purchase, site survey and investigation, hazardous material abatement, construction, site development, new utilities, telecommunications (voice and data), professional fees, construction quality control and material testing services, testing and balancing services, furnishings, equipment, architectural and/or engineering plan(s)/drawing(s) design code compliance and plan review approval fees and all other costs associated with the scope of work.

PROJECT TESTING PROFESSIONAL/PROFESSIONAL: The Professional firm who is under a separate Contract with the Department and is responsible for the Project construction Phase quality control and material testing services program. The construction Phase quality control and material testing services shall include, but not be limited to, office/laboratory and field testing services, determine and verify whether or not the construction materials being used for the Project construction Phase is in accordance with the design intent of the Prime Professional Services Contractor's Contract Documents, drawings, and specifications, and be in compliance with the requirements of this Contract and the attached Appendix 1 – Project/Program Statement. The Professional is required by the Department to define and specify the types of on-site tests required and approximate quantities to be tested during the Project construction Phase and the projected costs thereof. Notice shall be given immediately by the Professional, to the following Project personnel: (1) the Prime Professional Services Contractor; (2) the involved Construction Contractor; (3) the Project Director; and (4) the Field Representative of any on-site field Inspection or test which fails to meet the applicable Project construction quality control and material testing standards or the Prime Professional Services Contractor's Contract Documents, drawings, and specifications.

PROJECT DIRECTOR: The professionally licensed Architect/Engineer, State of Michigan employee, who is responsible for directing and supervising the Services during the life of this Contract. The Project Director is responsible for monitoring and coordinating the performance of the construction Phase services and also responsible for the overall administration and Inspection of Capital Outlay and miscellaneous operating projects (MOP's) construction activities to ensure quality control, final design Contract Documents compliance, and timely Project completion within the established Project construction Budget. The Project Director, or their Field Representative, has the authority to require the Professional and the Consultant firm to respond to and resolve design related problems, construction field problems, and to attend Project related meetings.

PROJECT/PROGRAM STATEMENT: The attached Appendix 1 – Project/Program Statement prepared by the State/Client Agency that defines the scope of the problem and describes why this Project is desirable and provides a preferred resolution of the problem. The Project/Program Statement also requires the Professional to coordinate their services with the involved Project Construction Contractor's construction schedule identifying critical milestone services that shall be required and achieved for the Project.

PROJECT TEAM: Consisting of the Professional, Project Director, Field Representative, Prime Professional Services Contractor, Construction Contractor, representative of the State/Client Agency, and others as considered appropriate by the Department.

STATE: The State of Michigan in its governmental capacity, including its departments, agencies, boards, commissions, officers, employees and agents. Non-capitalized references to a state refer to a state other than the State of Michigan.

STATE/CLIENT AGENCY: A Department of the State of Michigan, for whose use the Project will ultimately serve, which requires professional services. The term State/Client Agency does not include an institution of higher education or a community college.

TASK: Shall mean the following: (1) A quantifiable component of construction related professional construction quality control and material testing engineering Task services required to achieve a construction Phase of the Project; (2) The most manageable sub-element within a construction Phase; (3) A unique item of work within a construction Phase for which primary responsibility can be assigned; and (4) Has a time related duration and a cost that can be estimated within a construction Phase.

DEFINITION OF CONSTRUCTION TESTING REFERENCES: Will be made in capitalized abbreviated alpha numeric form to specific construction Inspection and testing agencies and/or associations for soil consolidation compaction, concrete, structural steel, bituminous paving, masonry, and roofing materials as used in construction (specifications, testing methods, practices, classifications, and definitions). Such construction testing references will be identified by the capitalized alphabetic abbreviation which identifies the specific State agency or national association followed by the numeric construction Inspection and/or testing method and shall be the latest issued date construction Inspection and/or testing method standard(s) in effect at the award of this Contract. The Construction Inspection and/or testing abbreviations used for this Construction Contract are as follows:

<u>Abbreviation</u>	<u>State Agency or National Association</u>
AASHTO	American Association of State Highways and Transportation Officials
ACI	American Concrete Institute
AISC	American Institute of Steel Construction
ASNT	American Society for Nondestructive Testing, Inc.
ASTM	American Society for Testing and Materials
AWS	American Welding Society
MDOT	Michigan Department of Transportation
SSPC	Steel Structures Painting Council

SOIL EROSION AND SEDIMENTATION CONTROL: The planning, design, and installation of appropriate Best Management Practices (as defined by the most current version of the Department's Soil Erosion and Sedimentation Control Guidebook) designed and engineered specifically to reduce or eliminate the off-site migration of soils via water runoff, wind, vehicle tracking, etc. and comply with the Soil Erosion and Sedimentation Control in the State of Michigan as regulated under the 1994 Public Act 451, as amended – The Natural Resources Environmental Protection Act, Part 91 – Soil Erosion and Sedimentation Control. Soil Erosion and Sedimentation Control associated with this Contract will be monitored and enforced by the Department of Technology, Management and Budget, State Facilities Administration, Soil Erosion and Sedimentation Control Program.

ARTICLE XIV COMPLETE AGREEMENT: MODIFICATION

This Contract constitutes the entire agreement, as to the Project, between the parties. Any Contract Modification of this Contract and the Project/Program Statement must be in writing, signed by duly authorized representatives of the parties, and shall be in such format and detail as the State may require. No Contract Modification may be entered into to compensate the Professional for correcting, or for responding to claims or litigation for the Professional's errors, omissions or neglect on the part of the Professional.

APPENDIX I

PROJECT/PROGRAM STATEMENT

PROJECT STATEMENT

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
State Facilities Administration
Design and Construction Division
3111 West St. Joseph Street
Lansing, Michigan 48909

FILE NUMBER VARIOUS	ACCOUNTING TEMPLATE VARIOUS	PROPOSAL DUE DATE Thursday, August 15, 2019 at 2:00 p.m., local time
CLIENT AGENCY Department of Technology, Management and Budget		
PROJECT NAME AND LOCATION VARIOUS		
PROJECT ADDRESS (if applicable) VARIOUS		
CLIENT AGENCY CONTACT		TELEPHONE NUMBER
DTMB - DCD PROJECT DIRECTOR Tim Hall		TELEPHONE NUMBER 517.881.4173

WALK-THROUGH INSPECTION DATE, TIME, AND LOCATION:

None

PROJECT DESCRIPTION/SERVICES REQUESTED

Provide professional materials testing, quality control and geotechnical Indefinite Scope Indefinite Delivery (ISID) services for a variety of stated funded construction projects. The professional is required to submit four (4) hard copy and two (2) electronic format copies of the technical and cost proposal. The professional must use the attached appropriate forms to indicate the billing rates.

The State of Michigan reserves the right not to award the contract(s) or award the contract(s) to one or more firms.

Please NOTE:

- Proposal responses MUST also be uploaded to SIGMA VSS. Please enter the total cost for all phases as bid amount.
- Please remember that individual attachments can be no larger than 6mb.
- If you experience issues or have questions regarding your electronic submission, you must contact the SIGMA Help Desk for assistance. They can be reached by telephone at 888.734.9749 or by email at sigma-procurement-helpdesk@michigan.gov or sigma-vendor@michigan.gov
- Vendors are reminded to keep our office apprised of SIGMA VSS issues and to include your SIGMA ticket number when communicating with our office. Emailed submissions will need prior DCD approval and will be handled on a case by case basis. Approved emailed submissions MUST be received prior to 2:00 p.m. deadline to be considered.

NIGP CODES

90783; 91216; and 91275

DESIRED SCHEDULE OF WORK

Dependent on the assigned project

ACCEPTING RFP QUESTIONS UNTIL: Thursday, August 1, 2019 at 12:00 p.m., local time

REFERENCE STANDARDS: This project will comply with all codes, standards, regulations, and workers' safety rules that are administered by federal agencies (EPA, OSHA, and DOT), state agencies (DCH, DEQ, DNR, and MIOSHA), and any other local regulations and standards that may apply.

This form is required to be a part of the professional service contract. (Authority: 1984 PA 431)
Attachment(s)

APPENDIX II

**PROFESSIONAL'S PROPOSAL
(See Back Cover)**



Materials
Testing
Consultants, INC.

MATERIALS Engineers, Independent TESTING Laboratories, Geotechnical & Environmental CONSULTANTS — Since 1968

Corporate Office

693 Plymouth NE • Grand Rapids, MI 49505 • (616) 456.5469 • FAX (616) 456.5784

Southeast Michigan

253 Dino Drive, Suite B • Ann Arbor, MI 48103 • (800) 968.8378 • (734) 619.6868

August 15, 2019
Proposal No. 14484

Department of Technology, Management and Budget
Facilities and Business Services Administration, Design and Construction Division
P.O. Box 30026
Lansing, MI 48909

Attention: Ms. Anne Watros

Reference: Proposal for 2019 Indefinite-Scope Indefinite-Delivery
Materials Testing, Construction Quality Control, and
Geotechnical Engineering Services
Proposal Part I - Technical
Various Locations throughout Michigan

Dear Ms. Watros:

We appreciate the opportunity to submit this proposal to provide independent construction materials testing services, construction quality control, and geotechnical engineering services. This proposal is submitted in response to a Request for Proposal from Professional Service Contractors issued July 18, 2019. As requested in the RFP Proposal Part I, we provide herein a description of the project understanding, MTC experience and personnel qualifications, management summary, work plan and schedule and the completed professional questionnaire. The Proposal II- Cost will be submitted under separate cover with this proposal.

Understanding of Projects and Tasks

Understanding

As indicated in the RFP, the State of Michigan is seeking a consultant to provide as needed construction inspection and testing services, construction quality control, and geotechnical engineering based on the intermittent needs of the State. This contract allows the State of Michigan to have expedited, quality services for these professional service needs. The services are anticipated to begin in the Fall of 2019 and continue through Fall of 2022, or a three year period. We understand the State will require a variable number of staff based on project work load. The construction materials testing/construction quality control scope of work may include, but is not limited to, asphalt cement, hot mix asphalt, emulsified asphalt, aggregate, soil, sprayed fire-resistive materials, Portland cement concrete, hydraulic cement, unit masonry, and metals. Inspections of materials such as structural steel, soils, and evaluations for assemblies, and construction may also be needed. The geotechnical scope of service may include, investigations

DTMB 2019 Indefinite Scope/Delivery CMT-QA-Geotech
Proposal No. 14484
August 15, 2019
Page No. 2

of soils by various methods, determinations of soil bearing capacity, earth retention, and foundation recommendations.

Introduction to Materials Testing Consultants

We were established in 1968 with core business lines of Geotechnical Engineering and Construction Materials Engineering and Testing.

Our mission is to provide our clients with:

- Cost effective and creative state-of-the-art solutions; and
- Confident assurance of quality on projects through prompt, reputable and unbiased independent testing services.

Our Core Values are:

- **Technical Leadership.** Providing exceptional value with technical expertise
- **Ethics.** Uncompromising in truthfulness, honesty and integrity
- **Service.** Being professional, prompt and courteous
- **Trust.** Having high confidence in our solutions and results

We offer comprehensive testing services through our in-house staff, including:

- soil and aggregates testing;
- subgrade and foundation verification testing;
- concrete field and laboratory testing;
- steel and welding, fabrication and erection inspection;
- masonry testing;
- fireproofing testing;
- vibration and structural monitoring;
- asphalt and pavement testing;
- roofing or other testing as may be necessary;
- ICC and State of Michigan certified Building Inspectors.

We have a broad range of staff available to service this project. Our personnel possess necessary certifications to conduct the testing in:

- concrete
- soil
- aggregates
- bituminous
- masonry

DTMB 2019 Indefinite Scope/Delivery CMT-QA-Geotech
Proposal No. 14484
August 15, 2019
Page No. 3

- steel and welding

The advantages our firm and project team will provide on this contract that other submitting firms may not be able to provide include:

- We are an established 51-yr independent testing firm with an excellent track record.
- We provide comprehensive testing services, all with our in-house experienced staff.
- A past working relationship with the DTMB, as well as other government entities such as MDOT, Road Commissions, Universities, and Local Governments
- Our offices in Grand Rapids and Ann Arbor that will service this contract have 11 civil/geotechnical engineers, at least 30 MDOT and MCA certified technicians, and 3 environmental professionals. We have the ability to provide services throughout the entire state
- We are AASHTO accredited in soil, concrete, aggregates and Hot-Mix Asphalt. In order to achieve the accreditation, our laboratories are inspected by AMRL and CCRL for conformance to the requirements of ASTM C1077, D3666 and D3740. Our testing laboratory meets all applicable ASTM, AASHTO and MDOT requirements.
- We are approved by Consumers Energy, Entergy, and AEP Indiana Michigan Power for their nuclear projects. We are currently providing geotechnical and construction materials testing services at DC Cook Nuclear Plant and Palisades Nuclear Plant. We utilize the same Quality Assurance program on all of our projects.
- In addition to our governmental experience we have extensive experience on thousands of other projects. We have completed major projects such as Van Andel Institute Phase II and DeVos Children's Hospital. In general, those projects consisted of MTC providing geotechnical investigations, deep foundation inspection for augercast, driven piles, caissons, and micropiles, extensive earth retention monitoring, concrete and soil testing, SFRM inspection, masonry inspection, and structural steel inspection.
- We are knowledgeable and experienced with the Michigan Building Code requirements for Special Inspection. We employ certified Building Inspectors.



DTMB 2019 Indefinite Scope/Delivery CMT-QA-Geotech

Proposal No. 14484

August 15, 2019

Page No. 4

- We use our own proprietary report distribution and tracking system for our projects. Our test reports are distributed by e-mail and posted to a secure project-specific website for convenient, economical, and environmentally friendly use.
- Safety is our top priority. Our EMR is 1.00.

Experience

We provide professional engineering, consulting and independent testing services in construction materials, soil mechanics and environmental matters. Our governmental experience includes:

- A current working relationship with the DTMB providing construction materials testing. Projects most recently include:
 - Rose Lake Shooting Range – Contact: Chris Kulhanek, P.E.
 - Belleville Boat Site – Contact: Chris Kulhanek, P.E.
 - Michigan Commission for the Blind Training Center – Contact: Bruce Watkins, P.E.
 - Caro Center Heating Decentralization – Contact: David Sproul P.E.
 - Monroe County Weigh Stations- Contact: Chris Kulhanek, R.A.
- We have extensive experience providing geotechnical and construction materials testing with local government entities. We currently provide annual construction materials testing services to the Cities of Ann Arbor, Grand Rapids, and Wyoming. We currently provide our services to Road Commissions such as Washtenaw County and Kent County.
- We offer experience with the State and hold many MDOT contracts awarded on Quality Based Selection including:
 - MDOT Grand Region's Central HMA Mix Laboratory and Traveling Mix Inspector and support the Southwest Region
 - MDOT Southwest Region As-Needed Inspection and Testing Contract
 - MDOT Grand Region As-Needed Geotechnical Services
 - MDOT Southwest Region As-Needed Geotechnical Services
 - MDOT Statewide As-Needed Geotechnical Services
- We have provided our construction materials testing and geotechnical services on hundreds of Educational Institution projects including: Michigan State University, Grand Valley State University, Central Michigan University, Ferris State University, Western Michigan University, Calvin College, Grand Rapids Community College, Washtenaw Community College, and Aquinas College. Our Project Managers have completed thousands of geotechnical and construction materials testing projects over the last 20 years.

DTMB 2019 Indefinite Scope/Delivery CMT-QA-Geotech
Proposal No. 14484
August 15, 2019
Page No. 5

Below is a detailed description of one of our longest running local government relationships on construction projects.

- City of Grand Rapids CSO project involving complete geotechnical investigation and design for underground infrastructure including concrete box conduits up to 18 ft wide and 11 ft tall and earth retention systems adjacent to (and under) sensitive structures, buildings, railroads and utilities in downtown urban setting. We also provide complete construction materials testing services including, but not limited to, soil testing, concrete testing, pipe testing, earth retention inspection, precast concrete and steel fabrication inspection. The project is ongoing since 1990 and involves over 70 contracts. The design team includes Black & Veatch (B&V), FTC&H and MTC, with B&V being the prime consultant. B&V's Jim Cobb at (616) 706-4600 and FTCH's Bruce Elenbaas at (616) 464-3862 can be reached for reference. MTC's project budgets have totaled over \$2,000,000.



CSO Earth Retention System and Tunnel

PPE/Safety Regulations

All of our field work and services will be performed in accordance with the State's PPE Policy, and OSHA and MIOSHA safety regulations and policy for the particular work being completed. We maintain a corporate safety policy for all our employees and receive yearly OSHA and MIOSHA refresher training from our safety consultant Safety Management Group. The second Friday of each month our employees attend a companywide safety meeting to read our General Safety Rules, report any accidents or near accidents from the prior month, and receive a

DTMB 2019 Indefinite Scope/Delivery CMT-QA-Geotech
Proposal No. 14484
August 15, 2019
Page No. 6

“toolbox” talk on a particular safety topic. Each quarter our Safety Committee made up of an employee from each of our operating departments hold a safety meeting to review follow-up from safety related issues from last quarter’s meeting that are unclosed, and to discuss current safety issues that have developed and action steps needed to address the concern. The department managers attend the meeting for an update at the end of the agenda. This focus is to stress the importance of safety to all levels of our employees. Our Worker Compensation Experience Modification Rate (EMR) for the four most recent years is shown in Table 2 below:

Table 2 - Experience Modification Rate

Materials Testing Consultants	
2019	0.97
2018	0.94
2017	0.91
2016	0.99
2015	0.87

All of our personnel are subject to U.S. DOT Random Drug Screening. All of our geotechnical field personnel are 40-hr HAZWOPER trained and attend annual 8-hr refresher courses. All of our employees attend monthly safety meetings and annual 4-hr general safety training.

Personnel

Our staff is trained to work as an independent testing agency while providing services as part of a team effort, along with the design and construction members, to arrive at a high quality product in the best interest of the Owner. We want to be an active member of the team that imparts quality to the project while not reducing the responsibilities of the individual trades to provide quality materials and work as part of the project.

DTMB 2019 Indefinite Scope/Delivery CMT-QA-Geotech
Proposal No. 14484
August 15, 2019
Page No. 7



Through our project management system, we have developed procedures to track unresolved deficiencies throughout the project and to apply efforts to keep unresolved deficiencies to a minimum. Our project management team is available to answer questions that arise concerning construction materials and related testing as the project progresses.

Our staff assigned to manage this project will be Steven M. Elliott, P.E. (Principal & QA/QC), Douglas W. Sabin, P.E. (Main Point of Contact & Project Manager), Nicholas W. Fransted, P.E. (CMET Division Manager). Resumes of these individuals are attached.

All of our technicians are MCA certified for concrete testing and certified in soils by MDOT and Troxler. Our technicians are also trained in HMA, SFRM, and masonry as well as other specialty items. Resumes of various technicians who could be utilized on this project are attached. We understand the level of service will fluctuate based on the schedule and can provide as many technicians as necessary.

With regard to structural steel inspection, Mike Holston, CWI, will be our structural steel inspector on the various projects. He has over 20 years of experience providing structural steel inspection on hundreds of construction projects. We have other steel inspectors to support the contract as necessary.

The key personnel that will be assigned to the work include:

- Douglas Sabin, P.E. General Manager 34 year experience
- Nicholas Fransted, P.E. Project Manager 17 years experience
- Steven Elliott, P.E., MSCE QA/QC & Principal 38 years experience
- Brian Miller Technician III 35 years experience
- Curt Weaver Field Manager 13 years experience

DTMB 2019 Indefinite Scope/Delivery CMT-QA-Geotech
Proposal No. 14484
August 15, 2019
Page No. 8

- Rainer Frisbie Technician IV 13 years experience
- Jason Sheridan Technician III 14 years experience
- Keith VanStrate Lab Manager 10 years experience

Although not considered key personnel for this contract, we have on staff a vast resource of support personnel available for assistance if needed. They include the following:

- Scott M. Thompson – Field Engineer, 32 years experience with MTC
- Todd D. Munger, P.E., M.S.C.E. – Geotech Department Manager, 12 years with MTC
- Jonathan E. O’Brock, P.E. – Project Engineer/Grand Region Central Mix Laboratory/TMI, 11 years experience with MTC

Douglas W. Sabin, P.E. with over 34 years of geotechnical and construction materials testing will serve as MTC’s main point of contact for this contract. Mr. Sabin will also serve a project manager for various projects. Nicholas Fransted, P.E. with over 17 years of construction materials testing and project management experience will be another key Project Manager for the State of Michigan projects. Our President Steven Elliott, P.E., M.S.C.E., will serve as Principal Engineer and QA/AC director responsible for overseeing our corporate quality standards.

Brian Miller has an Bachelor of Science Degree in Natural Resource Management from Grand Valley State College and maintains the following licenses/certifications: Troxler Nuclear Gauge Safety Training, Michigan Certified Density Technician, MCA Concrete Field Testing Technician Level I and Level II, ACI Concrete Field Testing Technician Grade I, Michigan Certified Aggregate Technician Endorsements A through E, Michigan Qualified Bituminous QC/QA Technician, and Precast/Prestressed Concrete Institute Level I quality Control Personnel Certification. Mr. Miller is our most experienced technician.

Curt Weaver has an Associate’s Degree in Civil Technology from Ferris State University and maintains the following licenses/certifications: MCA Concrete Field Testing Technician – Level I. ACI Concrete Field Testing Technician – Grade I. Michigan Certified Density Technician. Troxler Nuclear Gauge Safety Training. Michigan Certified Aggregate Technician (A).

Rainer Frisbie has an Associate’s Degree in General Sciences at Kellogg Community College and maintains the following licenses/certifications. MCA Concrete Field Testing Technician – Level I. ACI Concrete Field Testing Technician – Grade I. Michigan Certified Density Technician. Troxler Nuclear Gauge Safety Training. Michigan Certified Aggregate Technician (A). Michigan Certified Bituminous Laboratory Technician – Level I. MDEQ Storm Water Management Operator. PCI QC Personnel Certification Technician Level I.

Jason Sheridan was in the United States Air Force for 23 years as a MSgt for Surveying and Construction. He maintains the following licenses/certifications: MCA Concrete Field Testing

DTMB 2019 Indefinite Scope/Delivery CMT-QA-Geotech
Proposal No. 14484
August 15, 2019
Page No. 9

Technician – Level I. ACI Concrete Field Testing Technician – Grade I. Michigan Certified Density Technician. Troxler Nuclear Gauge Safety Training.

Resumes of key personnel are attached. The following listing, with brief resumes, provides the names of technicians that can be utilized beyond the listed key personnel as the need arises.

Kipp Cushman – Technician III

MCA Concrete Field Testing Technician – Level I. ACI Concrete Field Testing Technician – Grade I. Michigan Certified Density Technician. Troxler Nuclear Gauge Safety Training. Michigan Certified Aggregate Technician (A). USDOT and IATA HAZMAT Certification.

Curt Saarinen – Technician III

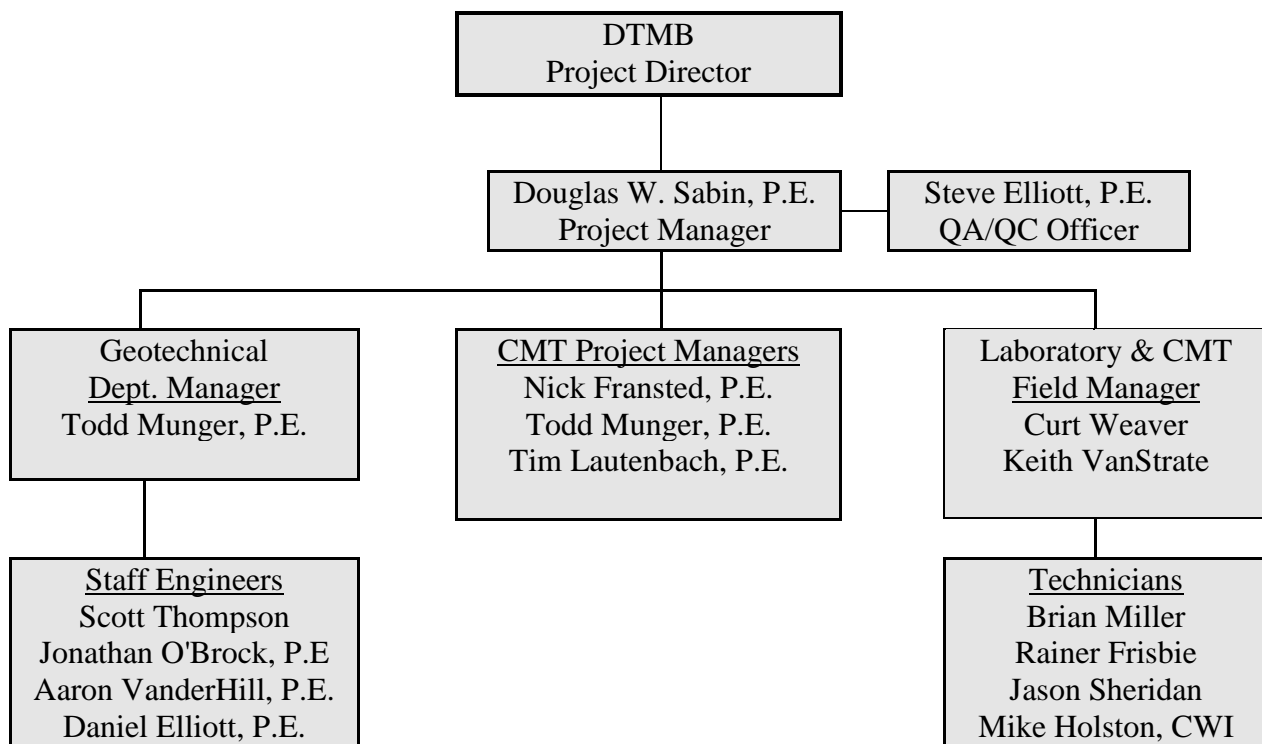
MCA Concrete Field Testing Technician – Level I. ACI Concrete Field Testing Technician – Grade I. Michigan Certified Density Technician. Troxler Nuclear Gauge Safety Training.

DTMB 2019 Indefinite Scope/Delivery CMT-QA-Geotech
 Proposal No. 14484
 August 15, 2019
 Page No. 10

MTC Organizational Chart

Our Organizational Chart, Figure 1, summarizes the structure of our MDOT/MTC project team and line of communication:

Figure 1.



Management Summary, Work Plan, and Schedule

Mr. Douglas Sabin, P.E. will serve as the main point of contact for this contract and as a Project Manager. Mr. Nicolas Fransted, P.E. will also serve as a Project Manager. Initial communication would be between State of Michigan personnel and Mr. Sabin. During that initial communication we anticipate being provided with a general description of the project and at that time a project manager would be assigned. The Project Manager would then discuss the specifics of the project including the start date, the contractor, how to obtain construction documents, State of Michigan personnel involved with the project and their roles, report distribution, etc. We anticipate negotiating a scope of work and budget for each project we are assigned.

DTMB 2019 Indefinite Scope/Delivery CMT-QA-Geotech
Proposal No. 14484
August 15, 2019
Page No. 11

After all the pertinent information has been gathered, the Project Manager will set up the project. The assigned project manager will be responsible for communicating with the State of Michigan staff, technical review of testing reports, engineering consultation on materials that arise, and coordination of assigning staff for testing services. Technicians will work under the direction and technical supervision of the CMT Field Manager Curt Weaver, and the Project Manager.

Our project approach includes assigning one lead technician to the project. As the project progresses, if more technicians are necessary, we have the ability to staff as necessary. None of our testing services will be subcontracted. As indicated previously we have the capability to staff multiple construction projects at the same concurrently.

MTC uses a web-based management and reporting software system, called MTC Green, developed specifically for our testing operations. At the completion of project setup MTC Green will contain project information, testing budget, scope of testing services, contact information, and report distribution lists. As field work takes place reports are typed into the system, laboratory tests are assigned, and the status of laboratory tests are monitored. The system enables our Project Manager to accurately track testing hours and budget, report status, laboratory status, etc. at any one time.

Some of the advantages of MTC Green are as follows:

- Environmentally friendly. The system minimizes usage of paper and non-renewable resources in processing and delivery.
- Efficient and systematic handling of reports. Test reports can be viewed the same day they are signed by the Project Manager.
- Electronic distribution via e-mail and posting to a secure project-specific website.

The system is also used for scheduling. We have a dedicated scheduler, Ms. Lori Soutworth, who takes scheduling calls from clients and technicians and enters the information into the Dispatch side of MTC Green. Entered information includes each scheduling request, time onsite, tests needed, etc.

The Project Manager will review typed field and laboratory reports for accuracy and completeness. Reports are automatically e-mailed to the people on the distribution list and uploaded to the MTC Green project specific website following signature by the Project Manager. The reports are easily accessible to those on the distribution list and can be downloaded upon project completion. The e-mail will also contain the link to the site. The site requires a password which will have been provided at the time of project setup. For those who do not wish to receive reports via the website or e-mail, we can send them through the mail.

DTMB 2019 Indefinite Scope/Delivery CMT-QA-Geotech
Proposal No. 14484
August 15, 2019
Page No. 12

Testing reports are completed in the field. We maintain field files for all of our projects. Our field reports have two carbonless copies, one which can be left with the State of Michigan representative assigned to the project at the time the field time verification forms are signed. The other carbonless copy will be placed in the field file. The field file also contains a Deficiency Report which enables field personnel to record failing density tests, and other issues, not resolved by the end of a site visit. The report helps us to make sure deficiencies are resolved.

Quality Control

Our approach to improving the quality of our documents using MTC Green is part-and-parcel of our engineering business and consistent with our stated core values. We require that each engineering document be internally peer-reviewed and we regularly solicit comments from our client, involved design professionals and reputable specialty geotechnical contractors. Document control and management is included in our Quality Assurance Manual. Our Quality System is audited by an outside independent agency on a regular basis and, as a result of this review we have achieved accreditation under the AASHTO R-18 accreditation program. As evidence of our high level of quality control, we have previously performed work at nuclear power plants on Important-to-Safety projects for Consumers Energy, Entergy and AEP.

Questionnaire

See attached completed form.

DTMB 2019 Indefinite Scope/Delivery CMT-QA-Geotech
Proposal No. 14484
August 15, 2019
Page No. 13

We appreciate the opportunity to provide this professional service to the project team. Please do not hesitate to call should you have any questions.

Sincerely,

MATERIALS TESTING CONSULTANTS, INC.



Douglas W. Sabin, P.E.
Senior Project Manager



Nicholas W. Fransted, P.E.
Project Engineer

Attachments: Questionnaire
Report Examples
Resumes



Questionnaire for Professional Services
Department of Technology, Management and Budget
2019 Indefinite-Scope Indefinite-Delivery – Request for Qualifications
Materials Testing, Quality Control and Geotechnical Engineering Services
Various Locations, Michigan

INSTRUCTIONS: Firms shall complete the following information in the form provided. A separate sheet may be used if additional space is needed; please key the continuation paragraphs to the questionnaire. Answer questions completely and concisely to streamline the review process.

ARTICLE 1: BUSINESS ORGANIZATION

1. Full Name: Materials Testing Consultants, Inc.
Address: 693 Plymouth NE, Grand Rapids, MI 49505
Telephone and Fax: 616-456-5469 / 616-456-5784
Website: <https://www.mtc-test.com/> E-Mail: info@mtc-test.com
SIGMA Vendor ID: [Click or tap here to enter text.](#)

If applicable, state the branch office(s), partnering organization or other subordinate element(s) that will perform, or assist in performing, the work: MTC Southeast Michigan Office, 253 Dino Drive, Suite B, Ann Arbor, MI 48103

2. Check the appropriate status:

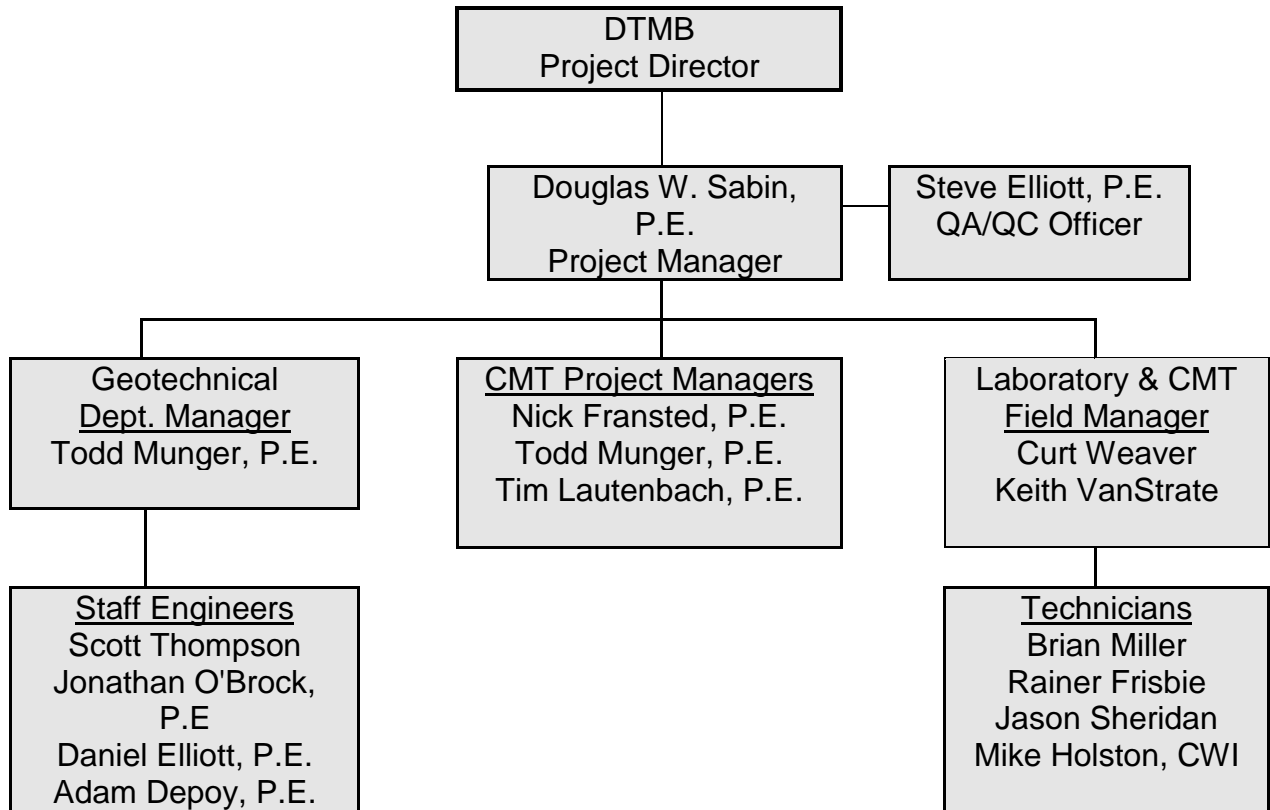
Individual firm Association Partnership Corporation, or Combination – Explain: [Click or tap here to enter text.](#)

If you operate as a corporation, include the state in which you are incorporated and the date of incorporation:
Michigan, 1968

Include a brief history of the Professional's firm: We were established in 1968 with core business lines of Geotechnical Engineering and Construction Materials Engineering and Testing We are AASHTO accredited and participate in AASHTO reference sample programs aand independent review of our internal quality program. Our in-house laboratory meets the requirements of ASTM C1077, D3666, and D3740, the standards that set minimum requirements for laboratories conducting testing on concrete and aggregates, bituminous paving materials, soil and rock. Each year we provide service on hundreds of projects throughout Michigan. With an experienced staff, our test drilling support and in-house laboratory capabilities along with our successful completion of thousands of projects, we offer to our clients comprehensive engineering consultation and testing services for almost any size and complexity of project.Safety is our top priority. We, as a company, hold ourselves to high standards in this area and require adherence from our employees to our safety polices. We have comprehensive forms of insurance, including workers compensation, automobile, general liability, contractors' pollution liability and professional liability. We provide services to the entire state. We have offices located in Grand Rapids and Ann Arbor, therefore our projects tend to be focused in the lower peninsula.

3. Provide an organization chart depicting all personnel and their roles/responsibilities.

4. Provide an organization chart depicting key personnel and their roles for a typical assigned project. Include generic supporting staff positions.



5. Provide a four year rate schedule per position.

Firm Name

Materials Testing Consultants

Yearly Hourly Billing Rate Increase

3%

Level	Employee(s) Name	Position/Classification	Year 1	Year 2	Year 3	Year 4
**	Steve Elliott, P.E.	Principal	\$185.00	\$190.55	\$196.27	\$202.15
**	Doug Sabin, P.E.	General Manager / Principal	\$185.00	\$190.55	\$196.27	\$202.15
**	Nicholas Fransted, P.E.	CMT Division Mgr / Sr Project Manager	\$160.00	\$164.80	\$169.74	\$174.84
	Todd Munger, P.E.	Geotech Division Manager / Senior Project Manager	\$160.00	\$164.80	\$169.74	\$174.84
	Jonathan O'Brock, P.E., Timothy J. Lautenbach, P.E.	Senior Project Engineer	\$135.00	\$139.05	\$143.22	\$147.52
	Adam Depoy, Chelsea Kennedy, Jake Siegrist, Scott Thompson	Assistant Project Engineer	\$115.00	\$118.45	\$122.00	\$125.66
	Mike Holston, CWI	SST Technician III	\$105.00	\$108.15	\$111.39	\$114.74
	Lori Southworth Rockhold	Scheduler	\$50.00	\$51.50	\$53.05	\$54.64
**	Curt Weaver	CMET Field Manager	\$110.00	\$113.30	\$116.70	\$120.20
	Keith VanStrate	CMET Lab Manager	\$110.00	\$113.30	\$116.70	\$120.20
**	Brian Miller, Rainer Frisbie	Technician IV	\$88.00	\$90.64	\$93.36	\$96.16
	Kipp Cushman, David Wahr, Jason Sheridan, Curt Saarinen	Technician III	\$85.00	\$87.55	\$90.18	\$92.88
	Project Assistants - Various	Project Assistant	\$50.00	\$51.50	\$53.05	\$54.64

*Billing Rate will be in accordance with the attached guideline page for instructions regarding the "Overhead Items used for Professional Billing Rate Calculation," and the attached "Sample Standard Contract for Professional Services," Article 5, Compensation Text.

** Key Project Personnel

ARTICLE 2: PRIOR EXPERIENCE

Provide a client reference and brief descriptions of at least three (3) projects in the last five years closely related to the work requested in this Request for Proposal.

Project 1 Reference Information:

Project Name: Belleville Lake East Boating Access Site (DTMB File #741/14006.CAK)
Project Address: 99 Loza Lane
Project City/State/Zip: Belleville, MI 4811
Contact Name and Telephone #: Chris Kulhanek (DTMB) (517) 749-8610
Project 1 Description: MTC provided construction testing on soils, asphalt, and concrete on this project for the DTMB.

Project 2 Reference Information:

Project Name: Biodigestion with Combined Heat and Power at the GR WRRF
Project Address: 1300 Market Avenue SW
Project City/State/Zip: Grand Rapids, MI 49503
Contact Name and Telephone #: Kristin Pfauth (City of Grand Rapids Engineering) (616) 456-3060
Project 2 Description: MTC provided geotechnical consulting, environmental consulting with soil borings, monitoring of low mobility grouting, controlled modulus columns, and environmental sampling. Construction testing included the testing of soils, aggregate, concrete, masonry, reinforcing steel, welding, asphalt, spray applied waterproofing, and Ground Penetrating Radar (GPR). This project was completed for the City of Grand Rapids

Project 3 Reference Information:

Project Name: Rose Lake Shooting Range – New Education Building (DTMB File # 751/15100.CAK)
Project Address: 14500 Peacock Road
Project City/State/Zip: Bath, MI 48808
Contact Name and Telephone #: Chris Kulhanek (DTMB) (517) 749-8610
Project 3 Description: This project consisted construction testing of soils, concrete, reinforcing steel and masonry

ARTICLE 3: CONTRACT UNDERSTANDING

The following items should be addressed on the assumption that your firm is awarded an Indefinite-Scope, Indefinite-Delivery contract. (See attached sample contract).

3.1 Is it understood that your firm is required to respond to small projects (less than \$25,000) as well as larger projects?

Yes No

3.2 Is it understood that there is no guarantee of any work under this contract?

Yes No

3.3 Is it understood that your firm will be required to execute the attached standard State of Michigan contract language for professional services?

Yes No

3.4 Is it clearly understood that professional liability insurance is required at the time of execution of the ISID contract? (See Article 5 of the attached Sample Contract.)

Yes No

3.5 Is it understood that your firm must comply with State of Michigan law as it applies to your services?

Yes No

ARTICLE 4: CAPACITY AND QUALITY

4.1 Briefly describe your firm's methods and procedures for quality control for your services.

Quality control is managed on four levels, which includes operational procedures, personnel, equipment and calibration, and proficiency sample testing and on-site inspections, in accordance with MTC's Quality Assurance manual. Operational procedures are controlled by documenting project details and client information, having this information reviewed by a project manager, and entering this information into the Business office database. Testing samples are assigned identification tags and quality control information is entered into the sample logbook. Samples are kept until the client has been notified of sample results following testing. Reports are generated on standard forms and are checked for accuracy by the Project Manager. A copy of the field reports is retained in the filed file while a copy is used for data entry and proofreading. The Project Manager prior to distribution checks final reports for completeness and accuracy. Personnel are properly trained, and performance is observed by the Department Manager to ensure performance meets MTC standards and local, state, and federal standards. Personnel must meet specific qualifications set forth in MTC's Quality Assurance Manual prior to becoming certified to perform specific testing procedures. Managers and field personnel are encouraged to attend periodic seminars regarding testing procedures. Equipment and Calibration are controlled utilizing inventory, equipment identification tags, and a database setting parameters for calibration. Equipment is recalibrated as directed by the manufacturer, by established standards, when equipment is repaired or modified, or when environmental conditions change. Calibration is documented, records kept on file, and calibration labels placed on the equipment. Proficiency sample testing and on-site inspection are performed by the Laboratory Managers. The Construction Materials Testing (CMT) Laboratory participates in the following reference sample programs: AMRL Soil Proficiency Samples, AMRL Aggregate Proficiency Samples, AMRL Bituminous Mixture Proficiency Samples, and CCRL Concrete Proficiency Samples. We are AASHTO R-18 certified. The CMT Laboratory also conducts On-site AMRL Soil Inspections, AMRL Bituminous Mixture Inspection, and CCRL Concrete and Aggregate Inspection. The Asbestos Laboratory participates in an interlaboratory round robin quality control / assurance samples and AIHA Proficiency Analytical Testing samples. All quality assurance and proficiency testing results are reviewed by the Laboratory Managers and corrective actions performed when necessary.

4.2 Will there be a key person who is assigned to a project for its duration?

Yes No

4.3 Please present your understanding of the relationship between your firm, the DTMB Design and Construction Division, and the State Agency for whom a project will be completed. MTC will ensure that the DTMB Design and Construction Division and the State of Michigan obtains high quality services at competitive and reasonable costs. We will assist both in the geotechnical study and design recommendations that are best suited for the State's needs. We perform the necessary inspections and tests

for the quality assurance on projects. Our services will not relieve the Contractor's requirements for their own quality control. MTC will act a representative of the State acting in the best interest of State. Strong communication between MTC's staff the DTMB and the State of Michigan will be provided.

- 4.4 Describe your approach if a contractor disputes your firm's findings.
If a contractor disputes our findings, we notify the project manager for the State regarding the complaint. The facts will be presented. Our inspections and tests are performed per the prescribed procedures and methods. We follow a strict Quality Assurance manual and maintain excellent records of calibration and maintenance. Through the above procedures, we will support our findings.
- 4.5 How will your firm provide consistent and continuous communication pertaining to project activities and project status to the State of Michigan during the progress of projects?
MTC provides field personnel on projects who communicate directly with State of Michigan on-site supervisors. Each field person is equipped with a cell phone. Office personnel managing projects are in direct contact with field personnel with two-way radios and have the ability via phone, fax, or email to be in contact consistently and continuously with the State of Michigan as projects progress. On larger projects, field personnel will employ the use of field offices to utilize phone, fax, and e-mail so test results and reports are provided to the State of Michigan promptly. MTC utilizes out own proprietary report distribution and tracking system for our projects. Our test reports are distributed by e-mail and posted to a secure project-specific website for convenient, economical, and environmentally friendly use.
- 4.6 Does your company have an FTP or similar site for quick posting and distribution of information, drawings, field inspection reports, and other communications?
Yes No
- 4.7 Are examples of reports, letters, findings from a representative sampling of projects provided?
Yes No
- 4.8 When was the accrediting agency's last inspection of your laboratory?
AASHTO Inspection for Soils, HMA and Quality System meeting AASHTO R-18, ASTM C1077, D3666, D3740, D4561, and E329 – April 23, 2018
CCRL Inspection for Concrete, Aggregate and Quality System meeting AASHTO R-18, ASTM C1077 and E329 - August 5, 2019
- 4.9 Did the inspection list any nonconformities and have these nonconformities been fully addressed?
Yes. The nonconformities noted during onsite inspections are addressed and responded to through our AASHTO Quality Analyst.
- 4.10 Does your laboratory have written equipment calibration procedures for all laboratory and field testing equipment?
Yes No
- 4.11 How frequently are calibrations performed and are calibrations traceable to a National Standard?
Equipment calibrations for every piece of equipment are maintained in a master spreadsheet. Calibrations are performed at the frequency required by the test method, manufacturer, or AASHTO accreditation. All calibrations are traceable to NIST standards.

- 4.12 Are all Field Technicians that will be assigned to State of Michigan projects certified for the tests being performed?
Yes No
- 4.13 Are all field and laboratory reports reviewed by a State of Michigan licensed engineer trained in Construction Materials Testing?
Yes No
- 4.14 How many construction testing projects can be accommodated by your firm within one construction season?
Approximately 500 projects. We are providing services on contracts over one million dollars as well as small projects under \$5,000
- 4.15 What construction testing equipment does your firm possess or have access to?
- | | |
|---------------------------------|--|
| Nuclear Density Gauges | Masonry Testing Equipment (cube molds, slump, etc.) |
| Triaxial Compression | Concrete Testing Equipment (Slump, air meter, thermometer) |
| Concrete Curing Facilities | Consolidation |
| Concrete Compression Testing | Direct Shear |
| Mobile Laboratory Trailers | Steel Tensile and Bend Testing |
| Asphalt Mix Verification | Hydrometer |
| Superpave Gyrotory Compactor | Atterberg Limits |
| Asphalt Ignition Furnace | Pachometer |
| Windsor Probe | Plate Load Testing Equipment |
| Pile Load Testing Equipment | Interface Probe Encore Sampler |
| Dipstick Floor Profiler | pH/Cond/Temp Meter |
| Asbestos Air Sampling Equipment | Panametrics Thickness Gauge |
| 4-Gas Meter | Ultrasonic Equipment |
| Magnetic Particle Equipment | Photo-Ionization Detector |
| Skidmore Bolt Tension | Water Level Meter |
| Menard Pressure Meter | Slope Inclinator |
| Earth Resistivity Equipment | Pile Integrity Testing |
| Concrete Maturity Equipment | Traffic control (signs, arrowboards, cones) |
| Ground Penetration Radar | Seismograph |
| Survey Grade GPS | SFRM Cohesion/Adhesion and Density Testing |
| Crack Monitors | |
| Photo-Ionization Detector | |
| Coring Machine | |
- 4.16 What laboratory facilities are available to your firm?
MTC provides in-house laboratory services for Construction Materials and Asbestos Containing Materials. The Construction Materials Laboratory fully meets the requirements of ASTM C1077, D3666 and D3740, the standards that set the minimum requirements for laboratories conducting tests on concrete and aggregates, bituminous paving materials, soil and rock. We are ASSHTO accredited. We participate in AASHTO and CCRL reference sample programs and independently reviews of our internal quality program. Our laboratories are overseen by one of our professional engineers. In general, our in-house laboratories can be divided into four areas as accredited by AASHTO. The first of these laboratories is our geotechnical laboratory. Our geotechnical laboratory routinely provides the following testing services:
- Direct and Triaxial Shear
 - Consolidation and Compressibility
 - Flexible Wall Permeability
 - Unconfined Compression
 - ASTM D2487 Soil Classifications
 - Hydrometer, Sieve Analysis
 - Atterberg Limits

- Bulk Density, Moisture

Our second division of the laboratory is the aggregate laboratory. Among many of the soils and rock tests we perform, our aggregate laboratory routinely performs the following:

- Sieve Analysis, Loss-By-Wash
- Sodium and Magnesium Soundness
- L.A. Abrasion
- Specific Gravity, Absorption
- Unit Weight
- Modified / Standard Proctor
- Maximum / Minimum Index Density
- Falling / Constant Head Permeability

Our third division of the laboratory is the concrete laboratory. Our concrete laboratory technicians have been certified through both the American Concrete Institute (ACI) and the Michigan Concrete Association (MCA).

The testing performed includes:

- Concrete Compression
- Concrete Tensile
- Concrete / Shotcrete Core Compression
- Hydraulic Cement Cubes
- Beam Flexure
- Trial Batching
- Concrete Shrinkage
- Core Absorption

Our fourth division is the bituminous laboratory. Our asphalt laboratory technicians are certified as Michigan Bituminous QA/QC technicians. The primary work within this laboratory is for MDOT as the Regional Quality Assurance Laboratory and the Regional Mix Inspector (RMI) for the Grand Region. Testing performed includes:

- Ignition Furnace Bitumen Content
- Extraction, Gradation
- Marshal Stability and Flow
- Bulk Specific Gravity
- Theoretical Maximum Density

In addition to the tests indicated above, our laboratory provides tests of other construction materials which include the following:

- Steel Tensile
- Rock Testing
- Welder Qualifications
- Fireproofing Density
- Grout Prism Compression
- CMU Block Compression, Absorption
- PVC and ABS Truss Pipe

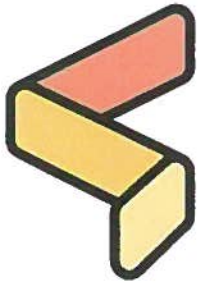
4.17 What types of non-destructive testing can your firm perform?

MTC can provide non-destructive testing for structural steel inspection which includes ultrasonic, magnetic particle, liquid penetrant, and visual inspection. With regard to concrete, MTC can provide Windsor probe testing and Schmidt hammer testing. MTC also owns and operates various Ground Penetrating Radar (GPR) which can be used to scan the ground surface for various anomalies such as tanks or utilities and can also scan concrete and masonry to help identify reinforcement.

- 4.18 What types of construction quality assurance services does your firm provide?
MTC offers quality assurance services and comprehensive engineering and testing services through our in-house staff, including: subgrade verification testing; soil and aggregates testing; concrete field and laboratory testing; steel and welding, fabrication and erection inspection; masonry testing; asphalt and pavement engineering and testing; fireproofing inspection; and roofing or other testing as necessary.

ARTICLE 5: PROJECT EXECUTION

- 5.1 Please provide copies of you company's current Construction Materials Testing laboratory accreditations along with a list of all accredited fields of testing: ex. Asphalt cement, hot mix asphalt, emulsified asphalt, aggregate, soil, sprayed fire – resistive materials (SFRM), Portland cement concrete, hydraulic cement, unit masonry and metals.



AASHTO
ACCREDITED

**CERTIFICATE OF
ACCREDITATION**

AMERICAN ASSOCIATION
OF STATE HIGHWAY AND
TRANSPORTATION OFFICIALS

AASHTO

Materials Testing Consultants, Inc.

in

Grand Rapids, Michigan, USA

has demonstrated proficiency for the testing of construction materials and has conformed to the requirements established in AASHTO R 18 and the AASHTO Accreditation policies established by the AASHTO Committee on Materials and Pavements.

The scope of accreditation can be viewed on the Directory of AASHTO Accredited Laboratories (aashtoresource.org).



Jim Tymon,
AASHTO Executive Director



Moe Jamshidi,
AASHTO COMP Chair

This certificate was generated on 08/13/2019 at 4:32 PM Eastern Time. Please confirm the current accreditation status of this laboratory at aashtoresource.org/aap/accreditation-directory



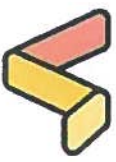
AASHIO
ACCREDITED

SCOPE OF AASHTO ACCREDITATION FOR:

Materials Testing Consultants, Inc.
in Grand Rapids, Michigan, USA

Quality Management System

Standard:		Accredited Since:
R18	Establishing and Implementing a Quality System for Construction Materials Testing Laboratories	01/31/2003
C1077 (Aggregate)	Laboratories Testing Concrete and Concrete Aggregates	01/10/2011
C1077 (Concrete)	Laboratories Testing Concrete and Concrete Aggregates	01/10/2011
D3666 (Aggregate)	Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials	01/10/2011
D3666 (Asphalt Mixture)	Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials	01/10/2011
D3740 (Soil)	Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction	01/10/2011
E329 (Aggregate)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	02/14/2014
E329 (Asphalt Mixture)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	01/10/2011
E329 (Concrete)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	08/13/2012
E329 (Soil)	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	01/10/2011



AASHTO
ACCREDITED

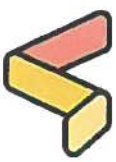
SCOPE OF AASHTO ACCREDITATION FOR:

Materials Testing Consultants, Inc.

in Grand Rapids, Michigan, USA

Asphalt Mixture

Standard:	Accredited Since:
R68 Preparation of Asphalt Mixtures by Means of the Marshall Apparatus	09/27/2011
T30 Mechanical Analysis of Extracted Aggregate	09/27/2011
T164 Quantitative Extraction of Asphalt Binder from Hot Mix Asphalt (HMA)	09/27/2011
T166 Bulk Specific Gravity of Compacted Hot Mix Asphalt Using Saturated Surface-Dry Specimens	09/27/2011
T209 Maximum Specific Gravity of Hot Mix Asphalt Paving Mixtures	09/27/2011
T245 Resistance to Plastic Flow of Asphalt Mixtures Using Marshall Apparatus	09/27/2011
T269 Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures	09/27/2011
T308 Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method	09/11/2013
T312 Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyrotory Compactor	09/27/2011
D2041 Maximum Specific Gravity of Hot Mix Asphalt Paving Mixtures	10/11/2006
D2172 Quantitative Extraction of Asphalt Binder from Hot Mix Asphalt (HMA)	09/11/2013
D2726 Bulk Specific Gravity of Compacted Hot Mix Asphalt Using Saturated Surface-Dry Specimens	10/11/2006
D3203 Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures	10/11/2006
D5444 Mechanical Analysis of Extracted Aggregate	10/11/2006
D6307 Determining the Asphalt Content of Hot Mix Asphalt (HMA) by the Ignition Method	09/11/2013
D6925 Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyrotory Compactor	10/11/2006
D6926 Preparation of Asphalt Mixtures by Means of the Marshall Apparatus	10/11/2006
D6927 Resistance to Plastic Flow of Asphalt Mixtures Using Marshall Apparatus	10/11/2006



AASHTO
ACCREDITED

SCOPE OF AASHTO ACCREDITATION FOR:

Materials Testing Consultants, Inc.

in Grand Rapids, Michigan, USA

Soil

Standard:	Accredited Since:
R58 Dry Preparation of Disturbed Soil and Soil Aggregate Samples for Test	07/10/2018
T88 Particle Size Analysis of Soils by Hydrometer	09/27/2011
T89 Determining the Liquid Limit of Soils (Atterberg Limits)	09/27/2011
T90 Plastic Limit of Soils (Atterberg Limits)	09/27/2011
T99 The Moisture-Density Relations of Soils Using a 5.5 lb [2.5 kg] Rammer and a 12 in. [305 mm] Drop	09/27/2011
T100 Specific Gravity of Soils	09/27/2011
T180 Moisture-Density Relations of Soils Using a 10 lb [4.54 kg] Rammer and an 18 in. [457 mm] Drop	09/27/2011
T215 Permeability of Granular Soils (Constant Head)	09/27/2011
T310 In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)	07/10/2018
D421 Dry Preparation of Disturbed Soil and Soil Aggregate Samples for Test	07/10/2018
D422 Particle Size Analysis of Soils by Hydrometer	10/11/2006
D698 The Moisture-Density Relations of Soils Using a 5.5 lb [2.5 kg] Rammer and a 12 in. [305 mm] Drop	10/11/2006
D854 Specific Gravity of Soils	09/27/2011
D1557 Moisture-Density Relations of Soils Using a 10 lb [4.54 kg] Rammer and an 18 in. [457 mm] Drop	10/11/2006
D2434 Permeability of Granular Soils (Constant Head)	10/11/2006
D4318 Determining the Liquid Limit of Soils (Atterberg Limits)	10/11/2006
D4318 Plastic Limit of Soils (Atterberg Limits)	10/11/2006
D5084 Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter	10/11/2006
D6938 In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)	07/10/2018



AASHIO
ACCREDITED

SCOPE OF AASHTO ACCREDITATION FOR:

Materials Testing Consultants, Inc.
in Grand Rapids, Michigan, USA

Aggregate

Standard:	Accredited Since:
C40 Organic Impurities in Fine Aggregates for Concrete	01/31/2003
C117 Materials Finer Than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing	01/31/2003
C127 Specific Gravity and Absorption of Coarse Aggregate	01/31/2003
C128 Specific Gravity (Relative Density) and Absorption of Fine Aggregate	01/31/2003
C136 Sieve Analysis of Fine and Coarse Aggregates	01/31/2003
C566 Total Moisture Content of Aggregate by Drying	01/31/2003
C702 Reducing Samples of Aggregate to Testing Size	01/31/2003



AASHTO
ACCREDITED

SCOPE OF AASHTO ACCREDITATION FOR:

Materials Testing Consultants, Inc.
in Grand Rapids, Michigan, USA

Concrete

Standard:		Accredited Since:
C31 (Cylinders)	Making and Curing Concrete Test Specimens in the Field	05/05/2017
C39	Compressive Strength of Cylindrical Concrete Specimens	01/31/2003
C138	Density (Unit Weight), Yield, and Air Content of Concrete	01/31/2003
C143	Slump of Hydraulic Cement Concrete	01/31/2003
C172	Sampling Freshly Mixed Concrete	01/31/2003
C173	Air Content of Freshly Mixed Concrete by the Volumetric Method	01/31/2003
C231	Air Content of Freshly Mixed Concrete by the Pressure Method	01/31/2003
C511	Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the testing of Hydraulic Cements and Concretes	08/13/2012
C1064	Temperature of Freshly Mixed Portland Cement Concrete	01/31/2003
C1231 (7000 psi and below)	Use of Unbonded Caps in Determination of Compressive Strength of Hardened Concrete Cylinders	08/13/2012

- 5.2 What is your minimum advanced notification time for scheduling Certified Technicians?
MTC can respond to scheduling requests within hours of notice. We appreciate one day notice.
- 5.3 Are field technicians provided with company vehicles with appropriate signage identifying the testing company or are field technicians required to drive personal vehicles?
Yes No
- 5.4 Are field technicians provided a company photo identification?
Yes No
- 5.5 Would certain technicians be designated for State of Michigan projects and, if not, what is done to assure that the technician assigned for field testing is familiar with State of Michigan specific project testing requirements?
Yes No

If No,

[Click or tap here to enter text.](#)

- 5.6 Are field concrete cylinder curing boxes used on all projects?
Yes No
- 5.7 Are all cylinder boxes equipped with maximum / minimum thermometers?
Yes No
- 5.8 Are maximum / minimum temperatures recorded with each cylinder pickup?
Yes No
- 5.9 Are all cylinder boxes clearly labeled with the laboratory name, address and phone number?
Yes No
- 5.10 What portion of the assigned work will be performed with your staff and what portion will be provided by subconsultants?
[Click or tap here to enter text.](#) 100 % Staff 0% Sub Consultants
- 5.11 What be your response time from the notice of assignment to quote to start of work?
[Click or tap here to enter text.](#) 1 Day
- 5.12 What is mimmum amount of notice your firm requires before commencement can begin?
[Click or tap here to enter text.](#) 1 Day

ARTICLE 6: PERSONNEL

- 6.1 Has an organizational chart that includes each person on your project team and their identified roles for a typical assigned project been included in your RFP response?
Yes No

6.2 Has resumes for the Key Personnel been included in your RFP response?
Yes No

6.3 Please provide a list of Field and Laboratory Technician Certifications
[Click or tap here to enter text.](#)

Michigan Qualified Bituminous QC/QA Technician
MDOT Bituminous Paving Operations
MDOT Superpave Hot Mix Asphalt Mix Design
Michigan Certified Aggregate Technician, Endorsements A – E
Michigan Certified Density Technician
Troxler Nuclear Gauge Training
ACI Aggregate Testing Technician
Soil Erosion and Sedimentation Control Inspector
DEQ Stormwater Management – Construction Site Operator
ACI Concrete Field Testing Technician – Grade I
ACI Concrete Strength Testing Technician
Masonry Institute of Michigan Certification
MCA Concrete Technician Level I and Level II
Precast/Prestressed Concrete Institute (PCI) Quality Control Personnel Certification Ivl I
Post-Tensioning Institute Level I and Level II Inspector Certification
USDOT and IATA Hazmat Certification
Confined Space Training
ACEC MDOT Materials Acceptance Process
HAZWOPER 40 hour Training
OSHA 30 hour Training
OSHA Lead Awareness
Michigan Asbestos Building Inspector License
NIOSH Sampling and Analysis of Airborne Asbestos Fibers
Introduction to/Practical Applications for Highway Construction Work Zones
Hydrogen Sulfide Safety Certification
ICC Commercial Building Inspector
ICC Building Inspector
AWS – Certified Welding Inspector (CWI)
AWS Welding and Quality Control Certification
ASNT NDT Level III MT, UT,
SNT-TC1a Level III - MT, PT, UT
API 653 - Above Ground Storage Tank Inspector
ASNT IRRSP Certified Radiographer
ICBO Certification, Structural Steel and Bolting
ICC Structural Steel and Bolting Inspector
AISC SPE Certification
Bridge Paint Inspector Course



**Materials
Testing
Consultants, INC.**

693 Plymouth NE • Grand Rapids, MI 49505
(616) 456-5469 • FAX (616) 456-5784

Project No:
 Placement Date:
 Report No: 10354-3
 Version: 3 - 12/14/10
 Sheet: 1 of 1



Project:
 Client:
 Contractor:
 Engineer/Architect:

REPORT OF CONCRETE COMPRESSION TEST

WEATHER: Clear LOW TEMP, °F: 35 HIGH TEMP, °F: 65

CONCRETE SUPPLIER: Rock Redi Mix TICKET NO.: 119
 STRUCTURE TYPE: Slab/Top
 LOCATION OF PLACEMENT: Vault #5

FIELD TEST BY: CS
 TRANSPORTED BY: CS
 LAB TEST BY: TL

FIELD TEST RESULTS

Slump, inch: 5
 Entrained Air, %: 7.2
 Agg Corr Factor, %:
 Unit Weight, pcf:
 Concrete Temp, °F: 57
 Air Temp, °F: 42

MIX INFORMATION

Slump Limits, inch: 3 to 5
 Entrained Air Limits, %: 4.5 to 7.5
 Unit Weight, pcf:
 Supplier Product Code: C 4003
 MTC Mix ID: 091534-1

TEST METHODS

ASTM C172, ASTM C143, ASTM C231, ASTM C173, ASTM C138, ASTM C1064, ASTM C31, ASTM C39
 ASTM C143 (Slump)
 ASTM C231 (% Air - Pressure)
 ASTM C173 (% Air - Volume)
 ASTM C138 (Unit Weight)
 ASTM C1064 (Temperature)
 ASTM C39 (Comp Strength)

QUANTITIES, CY

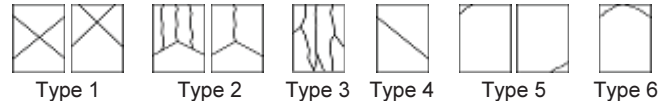
Total: 12
 At time of test: 1
 This truck: 7

COMPRESSIVE STRENGTH REQUIREMENT

4000 psi at 28 days

LABORATORY NUMBER	AGE, DAYS	FIELD CURE, DAYS	FRACTURE TYPE	DIAMETER, IN	CROSS-SECTIONAL AREA, SQ IN	LOAD, POUNDS	COMPRESSIVE STRENGTH, PSI	PERCENT OF DESIGN
10354-3-1	7	1	Type 5	6.00	28.27	73,040	2,580	65
10354-3-2	28	1	Type 5	6.00	28.27	95,010	3,360	84
10354-3-3	28	1	Type 5	6.00	28.27	94,420	3,340	84
10354-3-4	56	1	Type 5	6.00	28.27	118,290	4,180	105

AVERAGE 28-DAY COMPRESSIVE STRENGTH: 3,350 psi



- Appropriate personnel on-site were informed of field test results
- Appropriate personnel were not present on-site to receive test results

Materials Testing Consultants, Inc.

Timothy J. Lautenbach

Timothy J. Lautenbach, E.I.T.

Theresa L. Eilers

Theresa L. Eilers, E.I.T.

12/15/2010

TESTING WAS PERFORMED BY QUALIFIED PERSONNEL IN ACCORDANCE WITH GENERALLY ACCEPTED INDUSTRY PRACTICE, MATERIALS TESTING CONSULTANTS PROCEDURES AND THE ABOVE REFERENCED STANDARDS. THIS REPORT IS APPLICABLE ONLY TO THE ITEMS LISTED HEREIN. THE TESTS PERFORMED AND THIS REPORT ARE NOT INTENDED TO BE CONSIDERED AS ANY GUARANTEE OR WARRANTY OF SUITABILITY FOR SERVICE OR FITNESS OF USE OF ITEMS TESTED AND IT SHOULD NOT BE RELIED ON AS SUCH. THIS REPORT HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF THE CLIENT AND ANY PARTIAL OR WHOLE REPRODUCTION WITHOUT THE CONSENT OF THE CLIENT IS PROHIBITED.



Project:
Client: _____
Contractor: _____
Engineer/Architect: _____

IN-PLACE FIELD DENSITY TESTS

WEATHER: Partly Cloudy LOW TEMP, °F: 35 HIGH TEMP, °F: 60

COMPACTION REQUIREMENTS

	MAXIMUM DENSITY TEST METHODS	COMPACTION REQUIREMENTS
1	Modified Proctor, ASTM D1557, AASHTO T-180	95% of maximum density - ASTM D-1557

MATERIALS COMPACTED

PROCTOR NO.	MATERIAL DESCRIPTION	MAX DENSITY, PCF	OPTIMUM MOISTURE, %	MAXIMUM DENSITY METHOD
102210-1	Gravel 22AA	139.7	7.3	1-Pt Modified Proctor

EQUIPMENT

Density		Moisture		Contractor's Compaction	
<input checked="" type="checkbox"/>	Nuclear Gauge	<input checked="" type="checkbox"/>	Nuclear Gauge	<input type="checkbox"/>	Plate Compactor
<input type="checkbox"/>	Sand Cone	<input type="checkbox"/>	Speedy Gauge	<input checked="" type="checkbox"/>	Hoe-Pack
<input type="checkbox"/>	Balloon Method	<input type="checkbox"/>	Oven Dry	<input type="checkbox"/>	Vibratory Roller
<input type="checkbox"/>	Drive Cylinder	<input type="checkbox"/>	Stove Dry	<input type="checkbox"/>	Sheeps Foot Roller
				<input type="checkbox"/>	Scraper
				<input type="checkbox"/>	Bulldozer
				<input type="checkbox"/>	Loader

WORK AREA: Gravel Base within Pavement Areas
REFERENCE GRADE: Finish Gravel Grade
REPORT BY: CS

TEST RESULTS

TEST NO.	LOCATION OF TEST	DEPTH BELOW REF GRADE, FT	MOISTURE PERCENT	DRY DENSITY, PCF	MAX DRY DENSITY, PCF	COMPACTION PERCENT
1	85'N, 1'W of NE Corner of Vault #2	0	5.8	136.0	139.7	97.4
2	70'N, 13'W of NE Corner of Vault #2	0	4.5	134.4	139.7	96.2
3	50'N, 6'W of NE Corner of Vault #2	0	3.7	134.2	139.7	96.1
4	1'W, 10'S of SE Corner of Vault #2	0	3.8	134.2	139.7	96.1
5	8'N, 10'E of SE Corner of Vault #2	0	4.3	138.8	139.7	99.4
6	12'N, 4'E of NE Corner of Vault #2	0	4.2	134.6	139.7	96.3
7	25'N, 4'W of NE Corner of Vault #2	0	3.3	134.4	139.7	96.2
8	3'N, 6'W of NE Corner of Vault #2	0	3.9	134.3	139.7	96.1
9	6'N, 6'W of SW Corner of Vault #2	0	4.8	133.2	139.7	95.3
10	6'S, 6'E of SW Corner of Vault #2	0	4.1	133.5	139.7	95.6

Materials Testing Consultants, Inc.

Theresa J. Eilers

Theresa L. Eilers, E.I.T.

10/27/2010



Project:
Client: _____
Contractor: _____
Engineer/Architect: _____

IN-PLACE FIELD DENSITY TESTS

WORK AREA: Gravel Base within Pavement Areas
 REFERENCE GRADE: Finish Gravel Grade
 REPORT BY: CS

TEST RESULTS

TEST NO.	LOCATION OF TEST	DEPTH BELOW REF GRADE, FT	MOISTURE PERCENT	DRY DENSITY, PCF	MAX DRY DENSITY, PCF	COMPACTION PERCENT
11	20'S, 4'W of SW Corner of Vault #2	0	5.0	134.8	139.7	96.5
12	85'S, 2'E of SW Corner of Vault #2	0	3.9	133.4	139.7	95.5
13	50'S, 6'E of SW corner of Vault #2	0	4.0	134.4	139.7	96.2
14	35'SE of Vault #3 at Centerline of Steam Line	0	5.7	135.9	139.7	97.3
15	60'SE of Vault #3 at Centerline of Steam Line	0	5.7	137.1	139.7	98.1
16	95'SE of Vault #3 at Centerline of Steam Line	0	4.8	134.2	139.7	96.1
17	120'SE of Vault #3 at Centerline of Steam Line	0	4.6	135.9	139.7	97.3
18	25'N, 5'E of NE Corner of Vault #3	0	5.8	136.2	139.7	97.5
19	10'S, 10'E of NE Corner of Vault #3	0	5.2	135.9	139.7	97.3
20	3'N, 5'W of NE Corner of Vault #3	0	4.8	133.9	139.7	95.8
21	20'N, 9'W of NW Corner of Vault #3	0	4.5	135.2	139.7	96.8

GUAGE NO.: 32512 DAILY STANDARD COUNTS: DS: 2438 MS: 679
 DATE OF CALIBRATION: 02/12/2010

TEST METHODS: ASTM D2922, D3017, D5195

- Appropriate personnel on-site were informed of field test results
- Appropriate personnel were not present on-site to receive test results

Materials Testing Consultants, Inc.

Theresa L. Eilers

Theresa L. Eilers, E.I.T.

10/27/2010



Project:
Client: _____
Contractor: _____
Engineer/Architect: _____

REINFORCING STEEL OBSERVATION

WEATHER: Clear LOW TEMP, °F: 35 HIGH TEMP, °F: 65

INSTALLATION CONTRACTOR	CONTRACTOR'S RESPONSIBLE PERSON	APPROVED SHOP DRAWING REFERENCE
Wobig	Mark	S - 2.1

OBSERVED REINFORCEMENT	Y	N	N/A
Horizontal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vertical	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ties	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Dowels	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Side Bars	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Corner Bars	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hooks	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Welded Wire Fabric	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Embedded Items	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

OBSERVED REINFORCEMENT CONDITION	Y	N	N/A
Free of mud, oil, or other non-metallic coatings	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does not exceed allowable rust or scaling -meets dimensional requirements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

OBSERVED REINFORCEMENT PLACEMENT	Y	N	N/A
Proper size and quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper Cover	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper Spacing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper splice length	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reinforcement secured against displacement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concrete properly consolidated around reinforcement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REINFORCEMENT COATING	Y	N	N/A
Epoxy Coated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REPORT BY: CS
WORK AREAS: Top Vault #5

- Appropriate personnel on-site were informed of field test results
- Appropriate personnel were not present on-site to receive test results

Materials Testing Consultants, Inc.

Theresa L. Eilers

Theresa L. Eilers, E.I.T.

10/22/2010



**Materials
Testing
Consultants, INC.**

693 Plymouth NE • Grand Rapids, MI 49505
(616) 456-5469 • FAX (616) 456-5784

Project No:
Report Date: 08/16/10
Report No: 8671-2

Sheet: 1 of 1



Project:
Client:
Contractor:
Engineer/Architect:

FIELD TESTING OF CONCRETE

WEATHER: Partly Cloudy LOW TEMP, °F: 70 HIGH TEMP, °F: 85
CONCRETE SUPPLIER: Rock Redi-Mix

LOAD NO.	TRUCK NO.	NO. CYLS MOLDED ASTM C31	TRUCK TICKET NO.	YARDS OF CONCRETE	ELAPSED LOAD TIME, min	UNIT WT, PCF ASTM C138	SLUMP, IN ASTM C143	AIR CONTENT % ASTM C231	CONCRETE TEMP, °F ASTM C1064
1	9	4	3074	9	65		4	1.7	80
2	114		3075	9	60		4 (v)		
3	7		3076	9	60			1.7	
4	1		3077	8	65		4 (v)		

LOAD NO.	PLACEMENT LOCATION	COMMENTS
1	Wall, Vault No. 5	
2	Wall, Vault No. 5	
3	Wall, Vault No. 5	
4	Wall, Vault No. 5	

REPORT BY: CS

REMARKS: Product Code: C4015
(v): Visual Slump Estimate

- Appropriate personnel on-site were informed of field test results
- Appropriate personnel were not present on-site to receive test results

Materials Testing Consultants, Inc.

Theresa L. Eilers

Theresa L. Eilers, E.I.T.

08/19/2010



Project:
Client: _____
Contractor: _____
Engineer/Architect: _____

SUBGRADE OBSERVATIONS FOR FOUNDATIONS

WEATHER: Overcast LOW TEMP, °F: 60 HIGH TEMP, °F: 80

REPORT BY: CS

Test Performed on Natural Soil: Dynamic Cone Penetrometer
 Calibrated Penetrometer

Area Represented By Testing: Vaults Numbers 1 and 2

LINE NO.	TEST LOCATION	DESIGN MAX. SOIL BEARING PRESSURE, PSF	PASS (1) OR FAIL
1	5'W, 5'S of NE corner of Vault 1	2000	Fail
2	5'W, 5'S of NE corner of Vault 2	2000	Fail

LINE NO.	TYPE OF STRUCTURE (2)	TOP OF TEST DEPTH, FT	BOTTOM OF TEST DEPTH, FT	GENERAL SOIL TYPE SAND, CLAY OR SILT
1	Slab on Grade	0	2	Sand
2	Slab on Grade	0	0	Sand

- Notes:
1. Passing test indicates area is approved for foundation placement or engineered fill over area tested. Approval is based on observed subsurface conditions at the locations tested, within the test depths indicated and at the time of the test. Should tested areas be disturbed, become wet or frozen, retests should be performed. An MTC Engineer may be contacted for guidance in improving poor subgrade areas.
 2. Indicates type of structure that will bear on the tested area (spread foundation, continuous foundation, or other described). Test depths are with respect to bearing level foundation.

REMARKS: Water table at 2' depth Vault 1
Water table at 0' depth Vault 2

- Appropriate personnel on-site were informed of field test results
 Appropriate personnel were not present on-site to receive test results

Materials Testing Consultants, Inc.

Theresa L. Eilers

Theresa L. Eilers, E.I.T.

06/24/2010



Project:
Client:
Contractor:
Engineer/Architect:

DAILY STRUCTURAL STEEL REPORT

WEATHER: Partly Cloudy LOW TEMP, °F: 65 HIGH TEMP, °F: 65

LOCATION: Kalamazoo, MI
CODE OR STANDARD: MBC, Plans and Specifications, AISC, AWS D1.3
TESTING METHOD: Visual
EQUIPMENT USED:

TECHNICIAN CERTIFICATIONS:
REPORT BY: Mike Montie

REMARKS:

Re-examined roof deck and anchor bolts that required completion from 06/15/11 observation. Below is a summary of observations.

Observations:

Re-examined roof deck installation of #10 Teks screws. Verified installation has been completed. Verified column anchor bolt tightening has been completed per RCSC Requirements.

Discrepancies:

No discrepancies noted at time of site visit.

Discrepancies:

- Appropriate personnel on-site were informed of field test results
- Appropriate personnel were not present on-site to receive test results

Materials Testing Consultants, Inc.

Christopher Kestner

06/17/2011



Project:
 Client: _____
 Contractor: _____
 Engineer/Architect: _____

SUBGRADE OBSERVATIONS FOR FOUNDATIONS

WEATHER: Overcast LOW TEMP, °F: 30 HIGH TEMP, °F: 45

REPORT BY: DSF

Test Performed on Natural Soil: Dynamic Cone Penetrometer
 Calibrated Penetrometer

Area Represented By Testing: Courtyard Addition

LINE NO.	TEST LOCATION	DESIGN MAX. SOIL BEARING PRESSURE, PSF	PASS (1) OR FAIL
1	Courtyard Addition, Northwest Column	4000	Fail
2	Courtyard Addition, East Center Column	4000	Fail
3	Courtyard Addition, Southwest Column	4000	Fail
4	Courtyard Addition, West Center Column	4000	Fail
5	Courtyard Addition, Northeast Column	4000	Fail

LINE NO.	TYPE OF STRUCTURE (2)	TOP OF TEST DEPTH, FT	BOTTOM OF TEST DEPTH, FT	GENERAL SOIL TYPE SAND, CLAY OR SILT
1	Column Footing	0	6	Sand and Clay
2	Column Footing	0	6	Sand and Clay
3	Column Footing	0	6	Sand and Clay
4	Column Footing	0	6	Sand and Clay
5	Column Footing	0	5	Sand and Clay

- Notes:
1. Passing test indicates area is approved for foundation placement or engineered fill over area tested. Approval is based on observed subsurface conditions at the locations tested, within the test depths indicated and at the time of the test. Should tested areas be disturbed, become wet or frozen, retests should be performed. An MTC Engineer may be contacted for guidance in improving poor subgrade areas.
 2. Indicates type of structure that will bear on the tested area (spread foundation, continuous foundation, or other described). Test depths are with respect to bearing level foundation.

REMARKS: 4000 PSF required at columns, 3000 PSF required at continuous footings.

- Appropriate personnel on-site were informed of field test results
 Appropriate personnel were not present on-site to receive test results

Materials Testing Consultants, Inc.

Theresa L. Eilers

Theresa L. Eilers, E.I.T.

04/22/2011

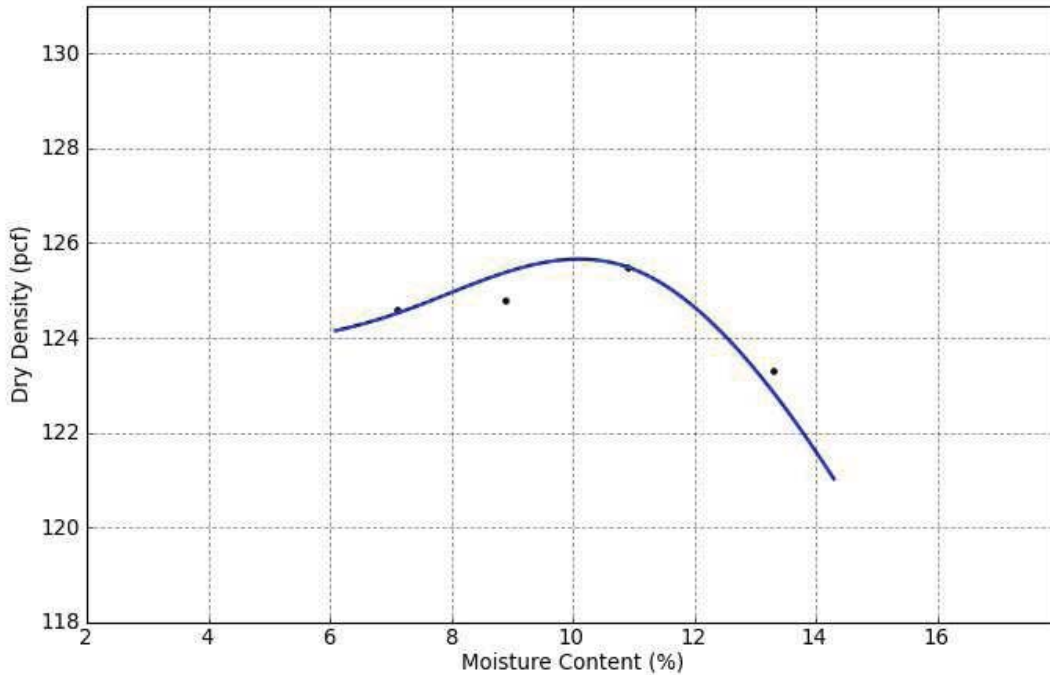


Project:
Client:
Contractor:
Engineer/Architect:

LABORATORY COMPACTION TEST

SOIL DESCRIPTION: Sand w/ trace gravel
ORIGIN OF SAMPLE: Onsite Existing Material
LABORATORY SAMPLE NUMBER: 11874
PREPARATION PROCEDURE: Moist
DESC OF RAMMER: Manual
OVERSIZED CORRECTION: No

NATURAL MOISTURE: 2.1 %
OPTIMUM MOISTURE: 10.1 %
MAX. DENSITY: 125.7 PCF
SAMPLED BY: CAW
SAMPLED DATE: 3/17/2011
REPORT BY: GK



TEST METHOD (As Applicable): ASTM D-1557 Method-A

Materials Testing Consultants, Inc.

Timothy J. Lautenbach, E.I.T.

Christopher Kestner

03/31/2011



Project:
 Client: _____
 Contractor: _____
 Engineer/Architect: _____

REPORT OF MECHANICAL ANALYSIS ASTM C136

SOURCE OF MATERIAL: Onsite Material
 SOURCE LOCATION: Interior Room - Loading Dock
 SAMPLED BY: CAW
 SAMPLE DATE: 3/17/11
 LAB SAMPLE NO.: 11849
 MATERIAL SPECIFICATION: MDOT Class II
 REPORT BY: TL

SIEVE ANALYSIS

SIEVE SIZE	PERCENT PASS	SPECIFICATIONS
3 in	100	100
2 in	100	
1 in	100	60-100
1/2 in	89	
3/8 in	87	
No. 4	78	
No. 30	42	
No. 100	6	0-30

OTHER TESTS

	RESULT	SPECIFICATION
Loss By Wash (P200)	4	0-7

TEST METHOD (As Applicable): MTM 108 (07), MTM 109 (01)

- Sample Met Specification Requirements
- Sample Failed Specification Requirements

Materials Testing Consultants, Inc.

Timothy J. Lautenbach, E.I.T.

Christopher Kestner

03/25/2011



Project:
Client: _____
Contractor: _____
Engineer/Architect: _____

THICKNESS OF SPRAYED FIRE-RESISTIVE MATERIAL ASTM E605

PRODUCT INFORMATION

Manufacturer: Grace Construction Products Product Name: Monokote MK-6/HY

GENERAL AMBIENT CONDITIONS

PERIOD	ENCLOSED AREA (Y/N)	TEMPERATURE (s), °F	WEATHER
During Application	Yes	40-50	Partly Cloudy
During Curing	Yes	40-50	Partly Cloudy
Time of Test	Yes	40-50	Partly Cloudy

THICKNESS TEST RESULTS

TEST NO.	TEST LOCATION DATA				THICKNESS, IN				PASS OR FAIL
	LEVEL	GRID	MEMBER TYPE	MEMBER SIZE	MINIMUM	MAXIMUM	AVERAGE	REQUIRED	
1	3	4.3/0.8	Beam	W16/31	9/16	7/8	13/16	5/8	Pass
2	3	4.1/0.45	Beam	W16/45	11/16	3/4	3/4	1/2	Pass
3	3	4.2/0.5	Beam	W16/31	11/16	7/8	13/16	5/8	Pass
4	3	4.4/0.9	Column	HSS6x6x5/8	9/16	5/8	5/8	3/8	Pass

DENSITY TEST RESULTS - DISPLACEMENT METHOD

TEST NO.	SAMPLE LOCATION DATA				DENSITY, PCF				PASS OR FAIL
	LEVEL	GRID	MEMBER TYPE	SIZE, IN	SPECIMEN			REQUIRED	
					MINIMUM	MAXIMUM	AVERAGE		
1									
2									
3									
4									

REPORT BY: M. Montie

TEST METHODS: ASTM E605

- Appropriate personnel on-site were informed of field test results
 Appropriate personnel were not present on-site to receive test results

Nicholas W. Fransted

 Nicholas W. Fransted, P.E.



Project:
 Client: _____
 Contractor: _____
 Engineer/Architect: _____

COMPRESSIVE STRENGTH OF HYDRAULIC CEMENT MORTARS ASTM C109

WEATHER: Cloudy LOW TEMP, °F: 25 HIGH TEMP, °F: 40

SOURCE OF MORTAR: Mixed on-site, Type S
 LOCATION OF PLACEMENT: CMU on South Wall along Column Line 10.1 at Elevation of 5.0' above Finish Floor.

MORTAR TEMPERATURE, °F: 43
 AIR TEMPERATURE, °F: 38 FIELD CURE: 3 days
 MINIMUM STRENGTH REQUIREMENT: 1,800 psi at 28 days
 FIELD TEST BY: R. Frisbie
 LAB TEST BY: T. Lautenbach

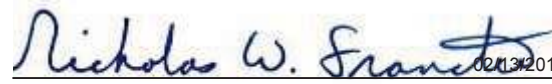
LABORATORY NUMBER	DATE MOLDED	DATE TESTED	AGE IN DAYS	LENGTH X WIDTH, IN		CROSS SECTIONAL AREA, SQ IN	LOAD, LBS	COMPRESSIVE STRENGTH, PSI
20393-3-1	2/3/12	2/10/12	7	2.01	2.02	4.06	13,570	3,340
20393-3-2	2/3/12	2/10/12	7	2.01	2.02	4.06	14,480	3,570
20393-3-3	2/3/12	2/10/12	7	2.01	2.03	4.08	13,510	3,310
20393-3-4	2/3/12	3/2/12	28					
20393-3-5	2/3/12	3/2/12	28					
20393-3-6	2/3/12	3/2/12	28					

AVERAGE 28-DAY COMPRESSIVE STRENGTH: _____ psi

REMARKS: Air Content = 11.5%.

- Appropriate personnel on-site were informed of field test results
- Appropriate personnel were not present on-site to receive test results


 Timothy J. Lautenbach, P.E.


 Nicholas W. Fransted, P.E.

TESTING WAS PERFORMED BY QUALIFIED PERSONNEL IN ACCORDANCE WITH GENERALLY ACCEPTED INDUSTRY PRACTICE, MATERIALS TESTING CONSULTANTS PROCEDURES AND THE ABOVE REFERENCED STANDARDS. THIS REPORT IS APPLICABLE ONLY TO THE ITEMS LISTED HEREIN. THE TESTS PERFORMED AND THIS REPORT ARE NOT INTENDED TO BE CONSIDERED AS ANY GUARANTEE OR WARRANTY OF SUITABILITY FOR SERVICE OR FITNESS OF USE OF ITEMS TESTED AND IT SHOULD NOT BE RELIED ON AS SUCH. THIS REPORT HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF THE CLIENT AND ANY PARTIAL OR WHOLE REPRODUCTION WITHOUT THE CONSENT OF THE CLIENT IS PROHIBITED.



Project:
Client: _____
Contractor: _____
Engineer/Architect: _____

DAILY REPORT OF MASONRY OBSERVATION

WEATHER: Cloudy LOW TEMP, °F: 25 HIGH TEMP, °F: 40

MATERIAL STORAGE

	Y	N	N/A
Block on pallets, covered and protected	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brick on pallets, covered and protected	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Units free of chips, texture appears acceptable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aggregate segregated, covered and protected	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cement/lime stored properly and protected from elements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reinforcement stored off the ground	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MORTAR

	Y	N	N/A
Mortar properly proportioned and mixed 3 to 5 minutes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mortar consistency acceptable, 2 1/2 hr limit not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Full Bed and head joints, no furrowing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Head and bed joint thickness (3/8") and tooling as required	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

GROUT

	Y	N	N/A
Cores aligned and free of debris	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grout consistency (slump 8 to 11 inches)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grout lift height 5 ft maximum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grout consolidated and re-consolidated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grout recess (key) at top of grout placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REINFORCEMENT

	Y	N	N/A
Horizontal (mortar) reinforcement embedded in joint	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Horizontal (mortar) reinforcement cut and bent at wall corners	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Verticle (grout) reinf. in core center with bar positioners	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Verticle (grout) reinf. bar size, spacing and lap length as req'd	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DETAILS

	Y	N	N/A
Weep holes and cavity vents provided as indicated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Brick expansion joints free of mortar and foreign objects	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Control joints, ties and anchors provided as indicated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Flashing, end dams and gravel fill as indicated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Anchorage of relief angles to building structure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Clear space provided below relief angles	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Damproofing of exterior of interior wythe	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Placement and anchorage of cavity insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

PROTECTION

	Y	N	N/A
Completed masonry covered at the end of the day	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Weather resistant membrane	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
*Insulating blankets or double tarp	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Masonry constructed in enclosure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Heat applied to both sides of covered wall	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

REPORT BY: R. Frisbie

WORK AREAS: South Wall on Column Line 10.1 from A.2 to A.4 and between Column Line 10.1, A.4 to A.9, 10.4 at Elevations 0' to 5' above Finish Floor.

REMARKS: Grout consistency: The project documents specify placement of grout with a slump between 10" and 11". The Contractor did not cover walls at the end of the day while we were on-site.

- Appropriate personnel on-site were informed of field test results
- Appropriate personnel were not present on-site to receive test results

Nicholas W. Fransted 02/07/2012

Nicholas W. Fransted, P.E.



Project:
 Client: _____
 Contractor: _____
 Engineer/Architect: _____

COMPRESSIVE STRENGTH OF GROUT ASTM C1019

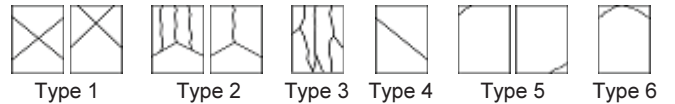
WEATHER: Cloudy LOW TEMP, °F: 25 HIGH TEMP, °F: 40

SOURCE OF GROUT: Mixed on-site
 LOCATION OF PLACEMENT: CMU on South Wall along Column Line 10.1 at Elevation between 0' and 4' above Finish Floor

SLUMP, IN: 8 QUANTITY REPRESENTED, CY <1
 GROUT TEMPERATURE, °F: 44 FIELD CURE: 3 days
 AIR TEMPERATURE, °F: 38
 MINIMUM STRENGTH REQUIREMENT: 3,000 psi at 28 days
 FIELD TEST BY: R. Frisbie
 LAB TEST BY: T. Lautenbach

LABORATORY NUMBER	DATE MOLDED	DATE TESTED	AGE IN DAYS	TYPE OF FRACTURE	LENGTH X WIDTH, IN		CROSS SECTIONAL AREA, SQ IN	LOAD, LBS	COMPRESSIVE STRENGTH, PSI
20393-4-1	2/3/12	2/10/12	7	Type 2	3.02	3.07	9.27	55,040	5,940
20393-4-2	2/3/12	2/10/12	7	Type 2	3.08	3.10	9.55	50,350	5,270
20393-4-3	2/3/12	2/10/12	7	Type 2	3.01	3.08	9.27	53,830	5,810
20393-4-4	2/3/12	3/2/12	28						
20393-4-5	2/3/12	3/2/12	28						
20393-4-6	2/3/12	3/2/12	28						

AVERAGE 28-DAY COMPRESSIVE STRENGTH: _____ psi



REMARKS: Advise Mark, Mason Foreman, of slump results.
 TEST METHOD (As Applicable): ASTM C1019

- Appropriate personnel on-site were informed of field test results
- Appropriate personnel were not present on-site to receive test results

Timothy J. Lautenbach, P.E.

Nicholas W. Fransted, P.E.



Materials
Testing
Consultants, INC.

DOUGLAS W. SABIN, P.E.

EXPERIENCE:

VP/Principal. 2009 - Present

Responsible for directing operations of CMET, Engineering and Environmental Divisions and serve as Vice President on the Board of Directors.

Engineering Division Manager. 2002 - 2009

Responsible for directing operations of Engineering Division and serve as Vice President on the Board of Directors.

Geotechnical Department Manager. 1992 – 2002

Responsible for overall project and personnel management of geotechnical department, design engineering and review of geotechnical projects, client relations, and new business development.

Project Engineer. 1987 – 1992

Responsibilities included preparation of geotechnical reports, supervision of select construction materials testing projects, and management of subsurface investigation studies using SPT, MPT and CPT methods. Analyzed specialty ground improved designs such as compaction grouting, vibro-compaction, minipiles, chemical grouting and cement grouting on various projects.

Years with Other Companies: 3

PROJECT PARTICIPATION:

Gun Lake Casino, Wayland, MI. Project management for casino building and large parking areas. Silt conditions were prevalent throughout the site requiring special considerations during pavement design. Present during construction phase to further evaluate conditions. Used wick drain surcharge to consolidate stiff clay for Phase 2B and rammed aggregate piers in Phase 3A.

Meijer Store, Alma, MI 2013. Project management for geotechnical investigation and parking lot design. Site required fill up to 8 feet deep. Wick drains were utilized throughout parking lots and building to consolidate clay and minimize future settlement.

Meijer Store, Marion, OH Pavement design of a 1,200 vehicle capacity and 15,000 traffic volume parking area over soft, saturated clay including soil-lime laboratory testing with evaluation of both quick and hydrated lime for soil stabilization.

MDOT 120th at M-157 Intersection. Project management for pavement design which included lightweight slag stress compensation with geotextile for new roadway.



Materials
Testing
Consultants, INC.

STEVEN M. ELLIOTT, P.E.

EXPERIENCE:

President 1993 - Present

Management of key geotechnical and materials engineering projects and responsible for various operating Divisions of MTC. Oversight of quality assurance programs, staffing and client and public relations. Participate on MTC's Board of Directors in establishment of corporate goals, direction and policies. Participation in leadership in various technical and professional associations and committees.

Geotechnical Department Manager, General Manager, Vice President, Manager of Construction Technology Division. 1985 – 1993

Project management, technical review of geotechnical and materials engineering projects, review of Department quality assurance programs, staffing and client and public relations. Participate on MTC's Board of Directors in establishment of corporate goals, direction and policies.

Sr. Staff Engineer. 1983-1985

Geotechnical engineering evaluations for various projects in the New York City Metropolitan area for Woodward Clyde Consultants, Wayne, NJ.

Southeast Michigan Branch Manager. 1980 – 1981

Management of geotechnical and construction testing projects, development of staff and clients in southeast Michigan.

Engineering Technician. 1972-1980

Performance of laboratory and field tests on projects related to subgrade, engineered fill, aggregates, concrete, HMA mixtures, fireproofing and roofing. Certifications in radiation safety, concrete field technician, bituminous plant and street technician and aggregate technician.

PROJECT PARTICIPATION:

Flood Protection System Walls and Embankments, structural stability evaluations for various reaches and loading conditions through major urban areas along the Grand River meeting requirements of 44CFR65.10.

16-Story Hotel along edge of Grand River in Grand Rapids, including void-filling low-mobility grouted mini-piles, high-strength structural concrete, underdrain system design.

Steven M. Elliott, P.E.

Page 2

Convention Center, a \$225 million project in west Michigan, including void-filling low-mobility grouted mini-piles, end-bearing and deep skin-friction drilled shafts, riverwall stability analyses, environmental issues, groundwater evaluation and underdrain system design.

Combined Sewer Separation project, including over 100 contracts in urban areas with major underground infrastructure, river crossing with subaqueous pump station connection, pump stations and various tunnels.

Nuclear dry fuel storage casks, pads and grouting projects, including QC for important to safety conditions.

Water intake improvements at several treatment plants along shore of Lake Michigan, including low-lift pump station, wet well, new water intake line and intake structure.

Low-lift pump station along shore of Lake Huron for Genessee County service area, including 60 ft deep excavation, dewatering and slurry cut-off wall.

Medical research institute in west Michigan, foundation systems for phases 1 and 2, six earth retention systems, monitoring of existing adjacent and historic structures during construction.

Investigation and evaluation of curling and cracking of concrete topping over structural slab at multi-level bus storage and maintenance facility.

Pharmaceutical campus in west Michigan. Various projects utilizing compaction grouting, vibrocompaction and permeation grouting.

Public Museum on the banks of the Grand River with drilled shaft foundations bearing on shale bedrock.

Tied-back, sheet pile bulkhead along the shore of Lake Michigan for Steam Generator Replacement at Nuclear Power Plant.

Cogeneration Power Plant in west Michigan. Stone column specifications and vibrocompaction, foundation system analysis with Menard Pressuremeter Testing.

Investigation and evaluation of concrete topping at multi-level shopping mall including cracking, camber, and response to vibrations.

Hazardous waste landfill in west Michigan. Analysis of liner stability, heave potential and settlement.

Steven M. Elliott, P.E.

Page 3

Fly ash disposal facilities at various power generation facilities. Performance of geotechnical investigations of ashponds and perimeter embankments, and stability analyses of perimeter embankments and dredge and stacked compacted flyash slope.

Lake Michigan to City of Wyoming water distribution line.

Stability analysis of earth embankment of proposed emergency spillway under construction and flood conditions. Project included report review and approval by Federal Energy Regulatory Commission (FERC).

EDUCATION:

University of Michigan, MS in Civil Engineering
BS in Civil Engineering

PROFESSIONAL REGISTRATION:

Professional Engineer, Michigan

CERTIFICATES/CONTINUING EDUCATION:

Pressuremeter, Cone Penetrometer and Dilatometer For Foundation Design, Texas A&M University, College Station, TX

Michigan DNR Dam Safety Workshop, Michigan DNR Dam Safety Unit, Land & Water Management Division

Michigan Quality Initiative, Michigan Department of Transportation

Masonry Institute of Michigan, Principles of Masonry Technology

Pavement Design, Michigan State University

PROFESSIONAL AFFILIATIONS:

ACIL: American Council of Independent Laboratories

American Society of Civil Engineers

Michigan Society of Professional Engineers

National Society of Professional Engineers

AWARDS AND RECOGNITIONS:

Engineer of the Year 2000, Michigan Society of Professional Engineers Western Chapter

BOARDS, COMMITTEES AND TASK FORCES:

Sustainable Streets Task Force, Grand Rapids, Michigan

21ST Century Infrastructure Task Force, Grand Rapids, Michigan

ACIL CMET Section Chairman

ACIL Board Member

Douglas W. Sabin, PE

Page 2

Gordon Foods Corporation Headquarters Wyoming, MI 2012. Project management for complete geotechnical investigation and construction materials testing services for this \$40 million, 386,000 sf facility. The building is three-stories in height with a full basement and surrounding parking areas and loading dock. The structure is supported by relatively large spread foundations with cast-in-place concrete foundations and below grade walls. The structural frame above grade is of precast concrete. Mass grading of clay soil conditions was required for the parking lots and building. MTC performed the testing for parking lot and foundation subgrade, soil density, concrete, grouting, precast concrete erection, and asphalt

Geotechnical investigation for storage pads at a nuclear facilities. Verified vibro-compaction ground improvement under Important to Safety protocol.

Renovations to 80-year old building downtown Grand Rapids. Client desired to utilize existing strap foundations to carry loads from new floor construction. Geoprobe drill rig conducted CPT and MPT testing through basement floor to collect subsurface data and engineering characteristics. Engineering analysis evaluated bearing capacity safety factors and predicted settlement.

Stability analyses for various slope configurations such as 100 ft slope for US-131 over Muskegon River, steepened 1V:1H reinforced slopes and sheeted or SRW slopes. PC-STABL and Geo-Slope Slope/W computer software used for slope stability analysis of subsurface data considering both local and global failure conditions.

MDOT US-23/I-96 Interchange Reconstruction, lead geotechnical engineer for 3 new mainline bridges and six reconstructed crossover distribution bridges, MSE pile supported abutments.

EDUCATION:

Michigan Technological University BS Civil Engineering

PROFESSIONAL REGISTRATION:

Professional Engineer: Michigan, Illinois, Wisconsin, Ohio and Indiana

CERTIFICATES/CONTINUING EDUCATION:

Univ. of WI "*Maintaining Asphalt Pavements*" – Madison, WI
GRL "*Pile Driving Analyzer and Wave Equation Analysis of Piles*" – Cleveland, OH
Auburn University "*Geosynthetic Reinforced Retaining Walls*" - Lansing, MI
MSU "*CE 818, Advanced Geotechnical Design*" - Lansing, MI
MDNR, "*Dam Safety Inspection Workshop*", Houghton Lake, MI
IFAI, "*Fundamentals of Geosynthetics*" – Chicago, IL
13th Annual "*Great Lakes Geotechnical Conference*" – Milwaukee
ACEC Transportation Committee member



EXPERIENCE:

Project Manager & Construction Materials Engineering & Testing (CMET) Division Manager.
2010 – Present

Responsible for overall project and personnel management of departments within Construction Materials Engineering and Testing Division; project management and technical review of construction materials testing reports, client relations, and new business development.

Project Geotechnical Engineer. 2008 - 2010

Responsibilities include preparation of geotechnical reports for buildings, roads, bridges, and infrastructure. Manage subsurface investigation studies. Supervise select construction materials testing projects. Design deep foundations consisting of micropiles, drilled piers, steel piles, augercast piles and timber piles. Analyze specialty ground improvement designs such as compaction grouting, vibro-compaction, chemical grouting and cement grouting on various projects.

Staff/Sr. Staff Geotechnical Engineer. 2003 - 2008

Responsibilities include management and field coordination of geotechnical soil sampling programs. Monitoring of vibrocompaction, void filling/compaction grouting and deep pile systems including driven-piles, augercast and micropiles. Operation of pile loading testing, soil resistivity surveys, and seismograph vibration monitoring. Experienced in laboratory consolidation, bearing capacity analysis and settlement calculations.

PROJECT PARTICIPATION:

Amazon Project Rapids Distribution Center, 2018-present. 2.5 million, 4-story steel facility. Project management and project engineering including wick drains, cement stabilization, mass grading, structural steel framing, speciality floor finishing testing including friction, gloss, roughness & flatness/levelness, asphalt. Management of 4 to 7 technicians required daily.

Stella Wind Texas, Turtle Creek Iowa, Pine River Michigan, Bruenning's Breeze Wind Texas, Deerfield Wind Michigan, Cameron Texas Wind Farm, Lake Winds Energy Park, Harvest Winds Phase II, Beebe 1B Wind Project. 2012-2018 Wind farm sites, with 76, 72, 56, 56, 33, and 21 wind turbines, respectively. Project management and project engineering services for access roads, foundation subgrade, reinforcing steel, crane pad subgrade, concrete, and grouting. Laboratory management of on-site facilities. Local staff procurement.

DTE Energy DSI-ACI Power Plant Improvements. 2013-2017. The project consists of renovating existing power plants by installing DSI/ACI equipment. Modifications were at Belle River Power Plant, St. Clair Power Plant, Trenton Channel Power Plant, and Rouge River Power Plant. Project management of complete materials testing services including caissons, driven H-piles, foundation subgrade, reinforcing steel, concrete, concrete maturity, backfill, and steel.

JH Campbell Power Plant AQCS Units 1, 2, and 3. 2012-2017 Project management and project engineering services during construction including review of field and laboratory reports for

complete construction materials. Project engineer for review of installation of 24-inch diameter pipe pipes, 18-inch diameter augercast piles and 8-inch diameter micropiles including monitoring of load tests.

Enbridge Energy Stockbridge Station Facility, 2015-2016. The \$371 million station included construction of five storage tanks, 223 ft in diameter, and supporting facilities. Project management and project engineer for foundation subgrade, soil improvement measures, reinforcing steel, concrete, asphalt, and plate load soil modulus testing.

Michigan State University West Circle Infrastructure and Steam 2013-2014. Project management and supervision of testing services for this \$15 million project which include removal and replacement of high pressure and low pressure steam piping, electrical and communication vaults and duct bank, cast-in-place and precast steam tunnels and vaults, sanitary sewer, storm sewer and water main as well as the complete reconstruction of roadways and lots.

Fermi Nuclear Plant Diesel Storage Buildings. 2013-2014 Project management and project engineering services during construction including review of field and laboratory reports.

Palisades Nuclear Plant Various Projects. 2010-2016 Project management and project engineering services during construction materials of Fukushima Upgrades, Cooling Tower Upgrades, DFS projects, Tank Upgrades, and Screenhouse.

DC Cook Nuclear Plant Dry Cask Storage. 2010-2012 Project management and project engineering services during construction of the structure including review of field and laboratory reports, attendance at project meetings, performance of plate load testing, generating and updating report and other construction materials submittals.

MDOT Grand Region Annual Geotechnical Contract, M-37, I-296, and US-131 and MDOT Southwest Region Annual Geotechnical Contract, I-196 Allegan, M-37 Glass Creek, M-51 Peavine Creek, M-43 Pump Station. 2003-2014 Project and Field Engineer for soils investigation and report preparation including deep foundation recommendations.

JW Marriott Hotel and Parking Ramp, Grand Rapids, Michigan. Field Engineer responsible for daily monitoring of contractor's quality of work during 100 to 200 ton micro-pile installation and void filling operation. Conducted pile load tests.

EDUCATION:

Michigan State University BS Civil Engineering

PROFESSIONAL REGISTRATION:

Professional Engineer: Michigan License 6201055204

PROFESSIONAL AFFILIATIONS:

American Concrete Institute
American Society of Civil Engineers



Materials
Testing
Consultants, INC.

BRIAN D. MILLER

EXPERIENCE:

Engineering Technician III

35 years of experience. Responsible for special inspections and materials testing including evaluation of construction materials consisting of concrete, soil, masonry, fabrication inspection of pre-stressed beams and reinforced concrete pipe, and inspection of concrete reinforcement and HMA lay-down. Experience includes testing of construction materials including: shallow foundations; compaction verification and inspection of subbase, aggregate base, engineered fill and backfill (by nuclear density method and sand cone); quality control inspection and compaction testing of bituminous pavements; plant inspection for HMA; coring of HMA and concrete; quality control inspection and testing of masonry materials; and proper construction and placement of reinforcing steel.

EDUCATION:

Grand Valley State University

BS Natural Resource Management

CERTIFICATES/CONTINUING EDUCATION:

Michigan Certified Aggregate Technician, Endorsements A-C, ID 100808-0320, expires 03/31/20

Michigan Certified Density Technician, ID 30073-0420, expires 04/30/20

ACI Concrete Field Testing Technician – Grade I, ID 01031804, expires 01/05/19

MCA Concrete Technician Level I, expires 04/15/20

ACEC Materials Acceptance Process Training, issued 03/07/11

PCI QC Personnel Level I, ID 13385, expires 06/24/23

Masonry Institute of Michigan Certification, issued 11/08/02

Construction Site Storm Water Operator, ID 17308, expires 07/01/19

Bituminous Paving Operator, issued 02/03/12

Michigan Certified Hot Mix Asphalt QA/QC Technician, ID 0085, expires 05/31/19

Michigan Certified Hot Mix Asphalt Local Agency Sampling, ID 20313, expires 06/30/19

Troxler Nuclear Gauge Safety Training, issued 04/09/88

PROJECT PARTICIPATION:

MDOT Grand Region QC/QA and Traveling Mix Inspector

Ferris State University – Seasonal Aggregate and HMA Instructor / Monitor

MDOT Various Precast Concrete Fabrication Projects

Fermi Nuclear Plant Cask Transfer Facility

Holland Wastewater Treatment Plant, Holland, MI

Palisades Nuclear Plant ISFSI, Covert, MI

South Haven Filtration Plant, South Haven, MI Wind Energy Farm, Scottville, MI

M-96, from Michigan Avenue to 35th Street in the City of Galesburg, Kalamazoo County, MI



Materials
Testing
Consultants, INC.

CURTIS WEAVER

EXPERIENCE:

CMT Field Services Department Manager

2016 - Present

Responsible for general operations of CMT Field Services Department including supervision of engineering technicians, review of quality assurance programs, test equipment maintenance, staffing, client and public relations.

Engineering Technician III

2014 - 2016

Responsible for special inspections and materials testing including evaluation of construction materials consisting of concrete, soil, masonry, and asphalt. Experience includes testing of construction materials including: shallow foundations; compaction verification and inspection of subbase, aggregate base, engineered fill and backfill (by nuclear density method and Michigan Sand Cone); quality control inspection and compaction testing of bituminous pavements; plant inspection for HMA; coring of HMA and concrete; quality control inspection and testing of masonry materials; and proper construction and placement of reinforcing steel. Soil Erosion and Sedimentation Control inspector.

Assistant CMT Field Services Department Manager

2012 - 2014

EDUCATION:

Ferris State University

AS Civil Engineering

CERTIFICATES/CONTINUING EDUCATION:

Michigan Certified Aggregate Technician – Endorsement A

MCA Concrete Field Testing Technician – Level I

ACI Concrete Field Testing Technician

Michigan Certified Density Technician

RNS Consulting Field Book Training

ACEC Materials Acceptance Process Training

MDOT Bituminous Paving Operations Program

PCI QC Personnel Certification – Level I

MDEQ Storm Water Management, ID C-17807

Troxler Nuclear Gauge Safety Training

PROJECT PARTICIPATION:

Lake Winds Wind Farm, Lake County, MI

Holland Wastewater Treatment Plant, Holland, MI

Palisades Nuclear Facility, Stevensville, MI

South Haven Filtration Plant, South Haven, MI

I-75 Weigh Stations, Monroe County, MI



Materials
Testing
Consultants, INC.

RAINER FRISBIE

EXPERIENCE:

Engineering Technician III

12 years of experience. Responsible for field inspection and testing of concrete, reinforcement, post-tensioned tendons, soil, masonry, aggregates, asphalt and geosynthetics. Responsible for special inspections and materials testing including evaluation of construction materials consisting of concrete, soil, masonry, and asphalt. Experience includes testing of construction materials including: shallow foundations; compaction verification and inspection of subbase, aggregate base, engineered fill and backfill (by nuclear density method and Michigan Sand Cone); quality control inspection and compaction testing of bituminous pavements; plant inspection for HMA; coring of HMA and concrete; quality control inspection and testing of masonry materials; and proper construction and placement of reinforcing steel. Prestress Concrete Inspector. HMA Paving Inspector.

EDUCATION:

Kellogg Community College AS in General Sciences

CERTIFICATES/CONTINUING EDUCATION:

ACI Concrete Field Testing Technician – Grade I, ID 01045281, expires 04/23/20
MCA Concrete Technician Level I, expires 04/15/18
Michigan Certified Density Technician, ID 10720-0420, expires 04/30/20
Michigan Certified Aggregate Technician, Endorsement A-C, ID 102296-0221, expires 02/28/21
Michigan Certified Hot Mix Asphalt Local Agency Sampling, ID 20288, expires 06/30/19
Michigan Certified Hot Mix Asphalt Laboratory Technician Level I, ID 101589, expires 04/30/18
Michigan Certified Construction Site Storm Water Operator, ID 12802, expires 07/01/22
ICC Structural Masonry Special Inspector, issued 11/09/16
ICC SFRM Special Inspector, issued 09/13/16
PCI QC Personnel Level II, ID 12568, expires 12/21/22
PTI Field Installation Level I Unbounded, ID 01045281, expires 01/24/20
Troxler Nuclear Gauge Safety Training, issued 04/26/05

PROJECT PARTICIPATION:

140 and 150 Ottawa, Grand Rapids, MI
Second Discharge Line from Livingston Pumping Station Contracts 2 &3, MI
University of Michigan South Quadrangle, Ann Arbor, MI
20 Fulton, Grand Rapids, MI
Venue Tower / B.O.B, Grand Rapids, MI
MDOT Various Precast Concrete Bridge Fabrication Projects
Palisades Nuclear Facility, Stevensville, MI
Heart of City Project, Grand Rapids, MI
Michigan Street Lift Station, Grand Rapids, MI



Materials
Testing
Consultants, INC.

JASON SHERIDAN

EXPERIENCE:

Engineering Technician III

32 years of experience including twenty-three years with United States Air Force – MSgt, Surveying and Construction. Responsible for special inspections and materials testing including evaluation of construction materials consisting of concrete, soil, masonry, and asphalt. Experience includes testing of construction materials including: shallow foundations; compaction verification and inspection of subbase, aggregate base, engineered fill and backfill; quality control inspection and compaction testing of bituminous pavements; coring of HMA and concrete; quality control inspection and testing of masonry materials; and proper construction and placement of reinforcing steel.

EDUCATION:

Lansing Community College
Sheppard Texas Airforce Base

AS in Civil Technology
US Airforce Training

CERTIFICATES/CONTINUING EDUCATION:

MCA Concrete Field Testing Technician – Level I, expires 4/15/20
ACI Concrete Field Testing Technician – Level I, ID 01108557, expires 1/30/19
MCA Concrete Construction Inspector, issued 5/5/11
Michigan Certified Density Technician, ID 11001-0318, expires 3/31/18
Michigan Certified Aggregate Technician, Endorsements A, ID 103210-0422, expires 04/30/22
ICC Structural Masonry Special Inspector, issued 3/26/14
Troxler Nuclear Gauge Safety Training, issued 5/9/11

PROJECT PARTICIPATION:

Ingham County Medical Care Facility Expansion, Meridian Township, MI
Lansing Board of Water and Light Central Substation, Lansing, MI
Saint Louis Water Supply Replacement Wells 10 and 11 Raw Water Transmission Main, MI
Enbridge Storage Facility, Stockbridge, MI
Michigan State University Breslin Center Hall of History Expansion, East Lansing, MI
Michigan State University Data Center, Lansing, MI
Clinton Area Transit, Clinton, MI
Stone School Road Reconstruction, Ann Arbor, MI
Michigan State University Spartan Stadium North End Zone Addition, East Lansing, MI
Michigan State University West Circle Steam Loop Phase II and III, East Lansing, MI
Dexter Avenue Reconstruction, Ann Arbor, MI
Barry County Airport, Barry County, MI
Michigan Street Lift Station, Grand Rapids, MI



EXPERIENCE:

CMT Laboratory Manager. 2017 – Present

Responsibilities include training laboratory personnel, supervision of all laboratory equipment and procedures, project management, technical review of construction materials testing reports, preparation of engineering reports, client relations and assisting in new business development. Testing materials include aggregate, asphalt, concrete, masonry, steel and geotechnical testing of soil and testing and reporting of CCRL, AASHTO and MDOT soil, concrete and asphalt reference samples.

Laboratory Manager. (Ground Engineering, CO) 2007 – 2016

Responsibilities included supervision, scheduling and training laboratory technician staff. Prepared laboratory and field technicians for inspections by AMRL, CCRL and the Army Corps of Engineers. Maintained calibration books/records for laboratory. Responsible for the testing and reporting of proficiency samples from AMRL and CCRL. Experience in laboratory materials testing including soils, concrete, masonry, asphalt and aggregate testing. Responsible for various administrative duties, including: client proposal preparation, calculating laboratory data and generation of reports for testing completed in the laboratory.

PROJECT PARTICIPATION:

Laboratory testing and supervision of soil, asphalt, aggregates, and concrete various construction projects throughout Colorado.

Responsible for HWL Cap Construction for Rocky Mountain Arsenal, consisting of managing all testing, reports and project management.

Laboratory supervisor on concourse C expansion for Denver International Airport. Responsible for all laboratory testing, including; Sampling from the batch plant, gradations, proctors, strength pucks and the making/breaking of beams and cylinders.

EDUCATION:

Michigan State University

BS Earth Science

CERTIFICATES/CONTINUING EDUCATION:

NICET Construction Materials Testing Level III-Asphalt, Concrete & Soils
ACI Concrete Field Testing Technician-Level I
ACI Aggregate Testing Technician-Level I
ACI Aggregate Testing Technician-Level II
ACI Concrete Laboratory Testing Technician-Level I
ACI Concrete Laboratory Testing Technician-Level II
ACI Strength Testing Technician



Materials
Testing
Consultants, INC.

MATERIALS Engineers, Independent TESTING Laboratories, Geotechnical & Environmental CONSULTANTS — Since 1968

Corporate Office

693 Plymouth NE • Grand Rapids, MI 49505 • (616) 456.5469 • FAX (616) 456.5784

Southeast Michigan

253 Dino Drive, Suite B • Ann Arbor, MI 48103 • (800) 968.8378 • (734) 619.6868

August 15, 2019
Proposal No. 14484

Department of Technology, Management and Budget
Facilities and Business Services Administration, Design and Construction Division
P.O. Box 30026
Lansing, MI 48909

Attention: Ms. Anne Watros

Reference: Proposal for 2019 Indefinite-Scope Indefinite-Delivery
Materials Testing, Construction Quality Control, and
Geotechnical Engineering Services
Proposal Part II – Cost Proposal
Various Locations throughout Michigan

Dear Ms. Watros:

We appreciate the opportunity to submit this proposal to provide independent construction materials testing services, construction quality control, and geotechnical engineering services. This proposal is submitted in response to a Request for Proposal from Professional Service Contractors issued July 18, 2019. As requested in the RFP Proposal Part II, we provide herein a completed fee schedule on the form provided with the RFP of commonly requested services, laboratory rates, and materials tests. The Proposal I - Technical will be submitted under separate cover with this proposal.

We appreciate the opportunity to provide this professional service to the project team. Please do not hesitate to call should you have any questions.

Sincerely,

MATERIALS TESTING CONSULTANTS, INC.

Douglas W. Sabin, P.E.
Senior Project Manager

Attachments: Fee Schedule for Commonly Requested Services

Fee Schedule for Commonly Requested Services

This table may be requested as an electronic document. Provide this schedule with your proposal. If other types of tests or services are required they will be quoted at the time of project assignment.

SERVICE TYPE/RATE/CHARGE	UNITS	\$/TEST
EQUIPMENT CHARGES		
Nuclear Density Gauge	Per day	\$60.00
Asphalt Extraction Equipment	Per day	\$120.00
Coring Machine	Per day	\$180.00
Bit Charge	Per inch	\$6.00
LABORATORY RATES		
GEOTECHNICAL		
Granular Proctor	Per Test	\$175.00
Cohesive Proctor	Per Test	\$205.00
Method 'C' Proctor	Additional Charge Per Test	\$80.00
Sieve Analysis	Per Test	\$160.00
Hydrometer Grain Size Distribution	Per Test	\$220.00
Specific Gravity	Per Test	\$120.00
Atterberg Limits	Per Test	\$110.00
Soil Ph	Per Test	\$70.00
Organic Content/Loss on Ignition	Per Test	\$100.00
AGGREGATES		
Aggregate Sieve Analysis	Per Test	\$120.00
Loss by Wash	Per Test	\$40.00
Deleterious Materials, ASTM	Per Test	\$107.00
Deleterious Materials, MTM	Per Test	\$107.00
Percent Crushed	Per Test	\$70.00
CONCRETE		
6" Cylinder, Concrete Compression	Per Cylinder	\$19.00
4" Cylinder, Concrete Compression	Per Cylinder	\$19.00
Core Compression, including saw cut	Per Test	\$70.00
MASONRY		
Grout Prism Compression	Per Prism	\$80.00
Hydraulic Cement Cube Compression	Per Cube	\$28.00
Concrete Masonry Unit Compression	Per Masonry Unit	\$130.00
Brick Compressive Strength, Absorption, Saturation	Set of 15	\$400.00
BITUMINOUS		
Bituminous Mix Verification	Per Test	\$370.00

STEEL		
Steel Fireproofing Density Test	Per Test	\$80.00
SOIL TESTING		
Mobilization/Demobilization		
Within 50-mile radius	By Equipment	\$600.00
Outside 50-mile radius	By Equipment	\$22.00
SPT Testing, Normal soil drilling conditions, per linear foot, 5-foot intervals	Per Linear Foot	\$16.50
SPT Testing, Difficult soil drilling conditions, per linear foot, 5-foot intervals	Per Linear Foot	\$27.00
Drilling surcharge for 50-100-foot depth	Per Linear Foot	\$20.00
Drilling surcharge for 100-150-foot depth	Per Linear Foot	\$27.00
Premium charge for all terrain drill rig	Per Day	\$400.00
Additional SPT samples	Per Sample	\$35.00
Shelby Tubes (undisturbed thin-walled soil samples)	Per Attempt	\$80.00
Drilling through concrete or brick at soil surface	Per Inch	\$20.00

Firm Name
Yearly Hourly Billing Rate Increase

Materials Testing Consultants
3%

Level	Employee(s) Name	Position/Classification	Year 1	Year 2	Year 3	Year 4
**	Steve Elliott, P.E.	Principal	\$185.00	\$190.55	\$196.27	\$202.15
**	Doug Sabin, P.E.	General Manager/Senior Project Manager	\$185.00	\$190.55	\$196.27	\$202.15
**	Nicholas Fransted, P.E.	CMT Division Mgr	\$160.00	\$164.80	\$169.74	\$174.84
	Todd Munger, P.E.	Geotech Division Manager	\$160.00	\$164.80	\$169.74	\$174.84
	Jonathan O'Brock, P.E., Timothy J. Lautenbach, P.E.	Senior Project Engineer	\$135.00	\$139.05	\$143.22	\$147.52
	Adam Depoy, Chelsea Kennedy, Jake Siegrist, Scott Thompson	Assistant Project Engineer	\$115.00	\$118.45	\$122.00	\$125.66
	Mike Holston, CWI	SST Technician III	\$105.00	\$108.15	\$111.39	\$114.74
	Lori Southworth Rockhold	Scheduler	\$50.00	\$51.50	\$53.05	\$54.64
**	Curt Weaver	CMET Field Manager	\$110.00	\$113.30	\$116.70	\$120.20
	Keith VanStrate	CMET Lab Manager	\$110.00	\$113.30	\$116.70	\$120.20
**	Brian Miller, Rainer Frisbie	Technician IV	\$88.00	\$90.64	\$93.36	\$96.16
	Kipp Cushman, David Wahr, Jason Sheridan, Curt Saarinen	Technician III	\$85.00	\$87.55	\$90.18	\$92.88
	Project Assistants - Various	Project Assistant	\$50.00	\$51.50	\$53.05	\$54.64

*Billing Rate will be in accordance with the attached guideline page for instructions regarding the "Overhead Items used for Professional Billing Rate Calculation," and the attached "Sample Standard Contract for Professional Services," Article 5, Compensation Text.

** Key Project Personnel

APPENDIX III

PROFESSIONAL CERTIFICATION FORMS



DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
Facilities and Business Services Administration
Design & Construction Division

Certification of a Michigan Based Business

(Information Required Prior to Contract Award for Application
of State Preference/Reciprocity Provisions)

To qualify as a Michigan business:

Vendor must have, during the 12 months immediately preceding this bid deadline:

or

If the business is newly established, for the period the business has been in existence, it has:

(check all that apply):

- Filed a Michigan single business tax return showing a portion or all of the income tax base allocated or apportioned to the State of Michigan pursuant to the Michigan Single Business Tax Act, 1975 PA 228, MCL 208.1 – 208.145; or
- Filed a Michigan income tax return showing income generated in or attributed to the State of Michigan; or
- Withheld Michigan income tax from compensation paid to the bidder's owners and remitted the tax to the Department of Treasury; or

I certify that I **have personal knowledge** of such filing or withholding, that it was more than a nominal filing for the purpose of gaining the status of a Michigan business, and that it indicates a significant business presence in the state, considering the size of the business and the nature of its activities.

I authorize the Michigan Department of Treasury to verify that the business has or has not met the criteria for a Michigan business indicated above and to disclose the verifying information to the procuring agency.

Bidder shall also indicate one of the following:

- Bidder qualifies as a Michigan business (provide zip code: 49505)
- Bidder does not qualify as a Michigan business (provide name of State: _____).
- Principal place of business is outside the State of Michigan, however service/commodity provided by a location within the State of Michigan (provide zip code: _____)

Bidder: MATERIALS TESTING CONSULTANTS

DOUGLAS SABIN

Authorized Agent Name (print or type)

Douglas Sabi

9/18/19

Authorized Agent Signature & Date

Fraudulent Certification as a Michigan business is prohibited by MCL 18.1268 § 268. A BUSINESS THAT PURPOSELY OR WILLFULLY SUBMITS A FALSE CERTIFICATION THAT IT IS A MICHIGAN BUSINESS OR FALSELY INDICATES THE STATE IN WHICH IT HAS ITS PRINCIPAL PLACE OF BUSINESS IS GUILTY OF A FELONY, PUNISHABLE BY A FINE OF NOT LESS THAN \$25,000 and subject to debarment under MCL 18.264.



DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
Facilities and Business Services Administration
Design & Construction Division

Responsibility Certification

The bidder certifies to the best of its knowledge and belief that, within the past three (3) years, the bidder, an officer of the bidder, or an owner of a 25% or greater interest in the bidder:

- (a) Has not been convicted of a criminal offense incident to the application for or performance of a contract or subcontract with the State of Michigan or any of its agencies, authorities, boards, commissions, or departments.
- (b) Has not had a felony conviction in any state (including the State of Michigan).
- (c) Has not been convicted of a criminal offense which negatively reflects on the bidder's business integrity, including but not limited to, embezzlement, theft, forgery, bribery, falsification, or destruction of records, receiving stolen property, negligent misrepresentation, price-fixing, bid-rigging, or a violation of state or federal anti-trust statutes.
- (d) Has not had a loss or suspension of a license or the right to do business or practice a profession, the loss or suspension of which indicates dishonesty, a lack of integrity, or a failure or refusal to perform in accordance with the ethical standards of the business or profession in question.
- (e) Has not been terminated for cause by the Owner.
- (f) Has not failed to pay any federal, state, or local taxes.
- (g) Has not failed to comply with all requirements for foreign corporations.
- (h) Has not been debarred from participation in the bid process pursuant to Section 264 of 1984 PA 431, as amended, MCL 18.1264, or debarred or suspended from consideration for award of contracts by any other State or any federal Agency.
- (i) Has not been convicted of a criminal offense or other violation of other state or federal law, as determined by a court of competent jurisdiction or an administrative proceeding, which in the opinion of DTMB indicates that the bidder is unable to perform responsibly or which reflects a lack of integrity that could negatively impact or reflect upon the State of Michigan, including but not limited to, any of the following offenses under or violations of:
 - i. The Natural Resources and Environmental Protection Act, 1994 PA 451, MCL 324.101 to 324.90106.
 - ii. A persistent and knowing violation of the Michigan Consumer Protection Act, 1976 PA 331, MCL 445.901 to 445.922.
 - iii. 1965 PA 166, MCL 408.551 to 408.558 (law relating to prevailing wages on state projects) and a finding that the bidder failed to pay the wages and/or fringe benefits due within the time period required.
 - iv. Repeated or flagrant violations of 1978 PA 390 MCL 408.471 to 408.490 (law relating to payment of wages and fringe benefits).
 - v. A willful or persistent violation of the Michigan Occupational Health and Safety Act, 1974, PA 154, MCL 408.10001 to 408.1094, including: a criminal conviction, repeated willful violations that are final orders, repeated violations that are final orders, and failure to abate notices that are final orders.
 - vi. A violation of federal or state civil rights, equal rights, or non-discrimination laws, rules, or regulations.
 - vii. Been found in contempt of court by a Federal Court of Appeals for failure to correct an unfair labor practice as prohibited by Section 8 of Chapter 372 of the National Labor Relations Act, 29 U. s. C. 158 (1980 PA 278, as amended, MCL 423.321 et seq).
- (j) Is NOT an Iran linked business as defined in MCL 129.312.

I understand that a false statement, misrepresentation, or concealment of material facts on this certification may be grounds for rejection of this proposal or termination of the award and may be grounds for debarment.

Bidder:

MATERIALS TESTING CONSULTANTS, INC.

DOUGLAS SABIN

Authorized Agent Name (print or type)

Douglas Sabin 9/18/19
 Authorized Agent Signature & Date

I am unable to certify to the above statements. My explanation is attached.

APPENDIX IV

**OVERHEAD ITEMS ALLOWED FOR THE
PROFESSIONAL SERVICES CONTRACTORS
HOURLY BILLING RATE CALCULATION**

The following instructions are to be used by the Professional Services Contractor firms to determine the hourly billing rate to use on State of Michigan Projects.

The Professional's Consultant must submit a separate hourly billing rate for the professional Consultant services they will provide for State of Michigan Projects. A moderate mark-up of the Professional's Consultant services hourly billing rates will be allowed.

The Department will reimburse the Professional for the actual cost of printing and reproduction of the Contract Bidding Documents, soil borings, surveys and any required laboratory testing services and use of field equipment. No mark-up of these Project costs will be allowed.

CURRENT YEAR HOURLY BILLING RATE

Based on Prior Year Expenses

OVERHEAD ITEMS ALLOWED FOR THE PROFESSIONAL SERVICES CONTRACTOR FIRM'S HOURLY BILLING RATE CALCULATION

SALARIES:

Principals (Not Project Related)
Clerical/Secretarial
Technical (Not Project Related)
Temporary Help
Technical Training
Recruiting Expenses

EQUIPMENT RENTALS:

Computers
Typewriter
Bookkeeping
Dictating
Printing
Furniture and Fixtures
Instruments

EMPLOYEE BENEFITS:

Hospitalization
Employer's F.I.C.A. Tax
Unemployment Insurance
Federal Unemployment Tax
Disability
Worker's Compensation
Vacation
Holidays
Sick Pay
Medical Payments
Pension Funds
Insurance - Life
Retirement Plans

OFFICE FACILITIES:

Rents and Related Expenses
Utilities
Cleaning and Repair

TRAVEL:

All Project-Related Travel*

MISCELLANEOUS:

Professional Organization Dues
for Principals and Employees
Licensing Fees

PRINTING AND DUPLICATION:

Specifications (other than Contract Bidding

SUPPLIES:

Postage
Drafting Room Supplies
Documents)
General Office Supplies
Library
Maps and Charts
Magazine Subscriptions

SERVICES (NONPROFESSIONAL):

Telephone and Telegram
Messenger Services

Drawings (other than Contract Bidding Documents)

Xerox/Reproduction
Photographs

SERVICES (PROFESSIONAL):

Accounting
Legal
Employment Fees
Computer Services
Research

TAXES:

Franchise Taxes
Occupancy Tax
Unincorporated Business Tax
Property Tax
Single Business Tax
Income Tax

LOSSES:

Bad Debts (net)
Uncollectible Fee
Thefts (not covered by Project/Contract bond)
Forgeries (not covered by Project/Contract bond)

FINANCIAL:

Depreciation

INSURANCE:

Professional Liability Insurance
Flight and Commercial Vehicle
Valuable Papers
Office Liability
Office Theft
Premises Insurance
Key-Personnel Insurance

DEPARTMENT OF TECHNOLOGY, MANAGEMENT & BUDGET

**VEHICLE AND TRAVEL SERVICES (VTS)
SCHEDULE OF TRAVEL RATES FOR CLASSIFIED AND UNCLASSIFIED
EMPLOYEES
Effective January 1, 2019**

MICHIGAN SELECT CITIES *

	Individual	Group Meeting pre-arranged and approved
Lodging**	\$85.00	\$85.00
Breakfast	\$10.25	\$13.25
Lunch	\$10.25	\$13.25
Dinner	\$24.25	\$27.25

MICHIGAN IN-STATE ALL OTHER

	Individual	Group Meeting pre-arranged and approved
Lodging**	\$85.00	\$85.00
Breakfast	\$ 8.50	\$11.50
Lunch	\$ 8.50	\$11.50
Dinner	\$19.00	\$22.00
Per Diem	\$87.00	
Lodging	\$51.00	
Breakfast	\$ 8.50	
Lunch	\$ 8.50	
Dinner	\$19.00	

OUT-OF-STATE SELECT CITIES *

	Individual	Group Meeting pre-arranged and approved
Lodging**	Contact Conlin Travel	Contact Conlin Travel
Breakfast	\$13.00	\$16.00
Lunch	\$13.00	\$16.00
Dinner	\$25.25	\$28.25

OUT-OF-STATE ALL OTHER

	Individual	Group Meeting pre-arranged and approved
Lodging**	Contact Conlin Travel	Contact Conlin Travel
Breakfast	\$10.25	\$13.25
Lunch	\$10.25	\$13.25
Dinner	\$23.50	\$26.50
Per Diem	\$97.00	
Lodging	\$51.00	
Breakfast	\$10.25	
Lunch	\$10.25	
Dinner	\$23.50	

Incidental Costs (per overnight stay) \$5.00

Mileage Rates

Premium Rate	\$0.580 per mile
Standard Rate	\$0.340 per mile

*See Select High Cost City Listing

**Lodging available at State Rate, or call Conlin Travel at 877-654-2179 or www.somtravel.com

**DEPARTMENT OF TECHNOLOGY, MANAGEMENT & BUDGET
VEHICLE AND TRAVEL SERVICES (VTS)
SELECT HIGH COST CITY LIST**

**TRAVEL RATE REIMBURSEMENT FOR CLASSIFIED and UNCLASSIFIED EMPLOYEES EFFECTIVE
January 1, 2019**

Michigan Select Cities / Counties

Cities	Counties
Ann Arbor, Auburn Hills, Detroit, Grand Rapids, Holland, Leland, Mackinac Island, Petoskey, Pontiac, South Haven, Traverse City	Grand Traverse Oakland Wayne

Out of State Select Cities / Counties

State	City / County	State	City / County
Arizona	Phoenix, Scottsdale, Sedona	Maryland	Baltimore City, Ocean City (Counties of Montgomery & Prince Georges)
California	Los Angeles (Counties Los Angeles, Orange, Mendocino & Ventura) Edwards AFB, Arcata, McKinleyville, Mammoth Lakes, Mill Valley, San Rafael, Novato, Monterey, Palm Springs, San Diego, San Francisco, Santa Barbara, Santa Monica, South Lake Tahoe, Truckee, Yosemite National Park	Massachusetts	Boston (Suffolk County), Burlington Cambridge, Woodburn Martha's Vineyard
		Minnesota	Duluth, Minneapolis/St. Paul (Hennepin and Ramsey Counties)
		Nevada	Las Vegas
Colorado	Aspen, Breckenridge, Grand Lake, Silverthorne, Steamboat Springs, Telluride, Vail	New Mexico	Santa Fe
Connecticut	Bridgeport, Danbury	New York	Lake Placid, Manhattan (boroughs of Manhattan, Brooklyn, Bronx, Queens and Staten Island), Melville, New Rochelle, Riverhead, (Suffolk County), Ronkonkoma, Tarrytown, White Plains
DC	Washington DC, Alexandria, Falls Church, Fairfax (Counties of Arlington & Fairfax in Virginia) (Counties of Montgomery & Prince George's in Maryland)	Ohio	Cincinnati
		Pennsylvania	(Bucks County) Pittsburgh
Florida	Boca Raton, Delray Beach, Fort Lauderdale, Jupiter, Key West	Rhode Island	Bristol, Jamestown, Middletown, Newport (Newport County), Providence
Georgia	Brunswick, Jekyll Island	Texas	Austin, Dallas, Houston, LB Johnson Space Center
Idaho	Ketchum, Sun Valley	Utah	Park City (Summit County)
Illinois	Chicago (Cook & Lake Counties)	Vermont	Manchester, Montpelier, Stowe (Lamoile County)
Kentucky	Kenton	Virginia	Alexandria, Falls Church, Fairfax
Louisiana	New Orleans	Washington	Port Angeles, Port Townsend, Seattle
Maine	Bar Harbor, Kennebunk, Kittery, Rockport, Sanford	Wyoming	Jackson, Pinedale

APPENDIX V

CERTIFICATE OF INSURANCE



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
09/09/2019

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 Van Wyk Risk Solutions 150 Ottawa Ave NW Suite 1000 Grand Rapids, MI 49503	CONTACT NAME: Richard Etman PHONE (A/C, No. Ext): (616)942-5070 FAX (A/C, No.): (616)942-8199 E-MAIL ADDRESS: ricke@vanwykcorp.com
	INSURER(S) AFFORDING COVERAGE
	NAIC # 13986
	INSURER A : Frankenmuth Insurance
	INSURER B : SECURA Insurance Companies
	INSURER C :
	INSURER D :
	INSURER E :
	INSURER F :

COVERAGES **CERTIFICATE NUMBER:** 19-20 **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
	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GENL AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:						EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY			BA 1989949	6/15/2019	6/15/2020	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ PIP-Property damage liabi \$ STATUTORY
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y / <input checked="" type="checkbox"/> N If yes, describe under DESCRIPTION OF OPERATIONS below		N/A	WC3180499	6/15/2019	6/15/2020	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
A	Auto Physical Damage and Hired Auto Physical Damage			BA 1989949	6/15/2019	6/15/2020	\$100 Deductible \$500 Deductible Comprehensive Collision

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

PROJECT: INDEFINITE SCOPE, INDEFINITE DELIVERY CONTRACT NO. 00853 2019 MATERIALS TESTING, QUALITY CONTROL AND GEOTECHNICAL ENGINEERING SERVICE VARIOUS LOCATIONS, MICHIGAN.
 CERTIFICATE HOLDER IS AN ADDITIONAL INSURED ON THE AUTO LIABILITY POLICY.
 WAIVERS OF SUBROGATION ON THE AUTO LIABILITY AND WORKERS COMPENSATION POLICIES.
 30 DAY NOTICE OF CANCELLATION APPLIES.

CERTIFICATE HOLDER STATE OF MICHIGAN DEPARTMENT OF TECHNOLOGY MANAGEMENT AND BUDGET 3111 W. ST. JOSEPH STREET LANSING, MI 48917	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
--	--



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
09/10/2019

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 Willis of Illinois, Inc. c/o 26 Century Blvd P.O. Box 305191 Nashville, TN 372305191 USA	CONTACT NAME: PHONE (A/C. No. Ext): 1-877-945-7378		FAX (A/C. No.): 1-888-467-2378
	E-MAIL ADDRESS: certificates@willis.com		
INSURER(S) AFFORDING COVERAGE			NAIC #
INSURER A: Admiral Insurance Company			24856
INSURED Materials Testing Consultants, Inc. 693 Plymouth Ave NE Grand Rapids, MI 49505	INSURER B:		
	INSURER C:		
	INSURER D:		
	INSURER E:		
	INSURER F:		

COVERAGES

CERTIFICATE NUMBER: W12568727

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	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:	Y	Y	FEI-ECC-15859-06	06/15/2019	06/15/2020	EACH OCCURRENCE \$ 5,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 5,000,000 GENERAL AGGREGATE \$ 5,000,000 PRODUCTS - COMP/OP AGG \$ 5,000,000
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
A	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 0			FEI-EXS-15860-06	06/15/2019	06/15/2020	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A				<input type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A	Professional Liability			FEI-ECC-15859-06	06/15/2019	06/15/2020	Per Claim \$1,000,000 Aggregate \$2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Excess Liability coverage applies on an occurrence basis to General Liability, Auto Liability and Employer's Liability, and a claims made basis to Professional and Pollution Liability. Primary General Liability, Professional Liability and Pollution Liability limits are underlying to Excess Liability Limits.
SEE ATTACHED

CERTIFICATE HOLDER

CANCELLATION

State of Michigan Department of Technology Management and Budget 3111 W. St. Joseph Street Lansing, MI 48917	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 
---	---



ADDITIONAL REMARKS SCHEDULE

AGENCY Willis of Illinois, Inc.		NAMED INSURED Materials Testing Consultants, Inc. 693 Plymouth Ave NE Grand Rapids, MI 49505	
POLICY NUMBER See Page 1		NAIC CODE See Page 1	
CARRIER See Page 1		EFFECTIVE DATE: See Page 1	

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
 FORM NUMBER: 25 FORM TITLE: Certificate of Liability Insurance

Project: Indefinite Scope, Indefinite Delivery Contract NO. 00853
 2019 Materials Testing, Quality Control and Geotechnical Engineering Services
 Various Locations, Michigan

INSURER AFFORDING COVERAGE: Admiral Insurance Company NAIC#: 24856
 POLICY NUMBER: FEI-ECC-15859-06 EFF DATE: 06/15/2019 EXP DATE: 06/15/2020

TYPE OF INSURANCE:	LIMIT DESCRIPTION:	LIMIT AMOUNT:
Pollution Liability	Per Incident	\$5,000,000
	Aggregate	\$5,000,000