



**STATE OF MICHIGAN**  
**DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET**  
This contract authorizes the professional services contractor to provide professional services.  
(Authority: Public Act 431 of 1984, as amended)

**CONTRACT FOR PROFESSIONAL SERVICES: Indefinite Scope – Indefinite Delivery**  
**Billing Rate – Not to Exceed**

THIS CONTRACT, authorized this 16<sup>th</sup> day of April in the year two-thousand and twenty-one (2021), 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 West St. Joseph Street, Lansing, Michigan, hereinafter called the Department, and

Hubbell, Roth & Clark, Inc.  
555 Hulet Drive  
Bloomfield Hills, MI 48302

the Prime Professional Services Contractor, hereinafter called the Professional,

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

**Indefinite-Scope, Indefinite-Delivery Contract No. 00885**

Department of Technology, Management and Budget  
State Facilities Administration, Design and Construction Division  
Professional Architectural and Engineering Indefinite-Scope, Indefinite Delivery Contract (ISID) for Minor Projects -  
Various State Departments and Facilities  
Various Site Locations, Michigan

Provide professional 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 design 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 firm. The professional services required for each of these assigned projects requested by the Department may include any or all the Tasks included in the Phase 100 – Study through the Phase 700 – Construction text of the Department's Standard Professional Services Contract.

The Professional firm's services shall be performed in strict accordance with this Professional Services Contract and follow the Department's approved and attached Project/Program Statement.

This Contract does not warrant or imply to the Professional design firm entitlement to perform any specific percentage (%) amount of compensation, work, or projects during the life of this four (4) year Contract.

This Contract will remain in effect for four (4) 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 four (4) year Contract 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 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 professional services or incur expenses until individual ISID Projects are assigned to this Contract. (See Article 2 – Compensation and the Project/Program Statement attached to this Contract.)

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

- I. The Professional shall provide the services for the assigned Project in the study, design, and construction administration, Phase and Task sequence provided in this Professional Services Contract and to the extent authorized by the Department of Technology, Management and Budget State Facilities Administration (SFA), Design and Construction Division (DCD) [Department] and be solely responsible for such professional services. The Professional's services shall be performed in strict accordance with this Professional Services Contract and follow the Project/Program Statement.
- II. The State of Michigan shall compensate the Professional for providing their professional architectural and/or engineering study, design, and construction administration services for the Project in accordance with the conditions of this Professional Services Contract.

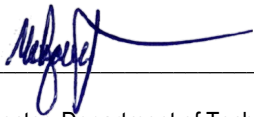
IN WITNESS, WHEREOF, each of the parties has caused this Professional Services Contract to be executed in blue ink, a scanned digital signature is also acceptable, by its duly authorized representatives on the dates shown beside their respective signatures, with the Contract to be effective upon the date on which the Professional received an electronic copy executed by the authorized State of Michigan representative(s) by electronic mail.

**FOR THE PROFESSIONAL:**

Hubbell, Roth & Clark, Inc.  
\_\_\_\_\_  
Firm Name  
  
\_\_\_\_\_  
Signature  
Vice President  
\_\_\_\_\_  
Title

CV0018921  
\_\_\_\_\_  
SIGMA Vendor Number  
04/20/2021  
\_\_\_\_\_  
Date

**FOR THE STATE OF MICHIGAN:**

  
\_\_\_\_\_  
Director, Department of Technology, Management and Budget

4/22/2021  
\_\_\_\_\_  
Date

WHEREAS this Professional Services Contract constitutes the entire agreement as to the Project between the parties, any Contract Modification of this Contract and the Department's approved and attached Project/Program Statement scope of work requirements 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 firm's final design Contract Documents/architectural and engineering design errors, omissions, or neglect on the part of the Professional.

## **ARTICLE I PROFESSIONAL SERVICES SCOPE OF WORK**

The Professional shall provide all professional services, technical staff, and support personnel necessary to achieve the Project as described in its Project/Program Statement, in the best interest of the State, and be within the Professional's fee(s) herein authorized by the State. Assigned project services shall comprise, without exception, every professional discipline and expertise necessary to meet all the requirements as described in the Project/Program Statement and be in accordance with the accepted industry standards for professional practice and services. The Professional's services include attendance at all Project related meetings and conferences. Professional services for the assigned projects under this contract shall be provided in the Phase/Task sequence shown below and shall be rendered in accordance with the Professional's proposed and approved Project Study, Design, and Proposed Construction Schedule. The Professional's study, design and proposed construction schedule shall be detailed, undated, and time sequence related for all Phase/Task services appropriate for the Project. The Professional shall field-check and verify the accuracy of all study/drawing and any data furnished by the Department, the State/Client Agency or any other Project related source. The Professional shall not employ or consult with any firms in completing the Professional's obligations herein who it anticipates will be a construction Bidder for the Project or any part thereof, unless specifically authorized, in writing, by the Department. The Professional acknowledges that the Department is the first interpreter of the Professional's performance under this Contract.

The Professional acknowledges by signing this Professional Services Contract having a clear understanding of the requested Project and of the professional study, design and construction administration services required by the Department to provide it, and further agrees that the terms and conditions of this Professional Services Contract provide adequate professional fee(s) for the Professional to provide the requested Project scope of work requirements for each assigned project. No increase in fee to the Professional will be allowed unless there is a material change made to the Project as described in its Project/Program Statement and the change in scope to the Project/Program Statement is accepted and approved in writing, by the Project Director and the Professional. 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 Professional Services Contract and a Contract Order authorizing the Professional to start the Project work. Compensation for Department directed changes to the Project will be provided to the Professional by a Contract Modification and/or Contract Change Order signed by the Department and the Professional. 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 immediately inform the Department whenever it is indicated that the Professional's authorized not-to-exceed Budget for any of the assigned Projects may be exceeded. The Professional shall make recommendations to the Department for revisions to bring the Project Cost back to the Professional's original authorized Budget amount. Any revision to the Project must be accepted and approved by the Department in writing.

The professional services may also include participation in legislative presentations as described in the "Major Project Design Manual for Professional Services Contractors and State/Client Agencies" and as the legislature or the Department may prescribe.

No substitution of any "Key Principal Personnel/Employee" essential for the successful completion of the Project and identified in the Professional's 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, and this substitution request shall include the following information: (1) A request in writing for a No Cost Contract Modification; (2) Detailed written justification for this substitution; (3) The Professional's qualifications of any proposed "Key Principal Personnel/Employee" replacement; and (4) A written statement from the Professional assuring the Department that the Project scope of work will not be adversely affected by this substitution. This request to modify their Professional Services Contract must be accepted and approved in writing by the Project Director and the Director of the Department. The Department will designate an individual to serve as the Project Director for the Project scope of work who shall be fully acquainted with the Project/Program Statement and have the authority to render Project decisions and furnish information promptly. Except in connection with issues under the Article XII - 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 professional services of this Contract.

During the construction administration services of the Project, the Professional shall be required to complete and submit, the on-site Inspection record form titled "DTMB-0452, The Professional's Inspection Record" for all on-site Inspection visits to the Project site. The Professional's Inspection Record shall be completed and signed by the Professional and submitted monthly, with the original document sent to the Project Director and copies sent to the State/Client Agency and Construction Contractor. The Professional's Inspection Record shall accompany the Professional's monthly submitted payment request.

The "DTMB-0460, Project Procedures" documents package containing Department forms for use during construction administration shall be used by the Professional in the administration of this Contract. All professional services will be consistent with the Department's current "Major Project Design Manual for Professional Services Contractors and State/Client Agencies" unless otherwise approved in writing by the Department.

The professional services required for each Phase of this Contract shall be performed by the Prime Professional and their Consultants in accordance with service descriptions in this article. The following service descriptions outlined in this Contract represents the Department's standard of care method for describing the Professional's responsibilities for providing the professional services of this Contract, but by inclusion, or omission, do not limit or exclude any regular or normal professional services necessary to accomplish the Project and be in accordance with the approved Project Budget and the industries accepted practice and standards for professional services. However, all the services outlined in this Contract may or may not be applicable to the Project/Program Statement and will require the Professional to identify only the services that are applicable for the Project at hand. The Professional shall determine and coordinate the interface of the services required for the Project at hand and be responsible for identifying any additional services necessary to successfully complete their Project.

Soil Erosion and Sedimentation Control in the State of Michigan is regulated under the 1994 Public Act 451, as amended – The Natural Resources and 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.

The professional services may also include participation in legislative presentations as described in the "Major Project Design Manual for Professional Services Contractors and State/Client Agencies" and as the legislature or the Department may prescribe.

The following professional services, if they become necessary and essential for completing the Project, will be individually rendered by the Professional, only upon specific written authorization by the Department and the Project Director to the Professional and for the purpose and to the extent so authorized.

Should litigation occur as a result of this Project, only if through no fault of the Professional, the Professional firm shall be compensated by the Department on an actual hourly billing rate basis at the rate set forth in this Contract by a Contract Modification and/or Contract Change Order, if required to assist the Department of Attorney General, State Affairs Division in providing the professional services necessary during litigation.

LITIGATION: The Professional shall provide all information, presentations, depositions, testimony as "expert witness", and similar or related services, on behalf of the Department, as may be required in relation to the professional services of the study, design and construction of this Project.

ACCOUNTING: The Professional shall provide all specialized categorizations and distributions of the costs of study, design and construction services, construction costs, and operational costs, as may be required according to purpose specific parameters.

PUBLIC AWARENESS: The Professional shall provide all design and construction related services to assist in and make presentations of the professional services of the study, design, construction and operational aspects of the Projects as may be required for public meetings, hearings, and similar informational activities.

### **PHASE 100 - STUDY PHASE**

Provide a complete and comprehensive architectural and/or engineering study consistent with the Project/Program Statement, with itemized construction cost estimates.

Task 101      COORDINATION: Meet with the Project Team and define all areas of investigation. Establish Project Team responsibilities and lines of communications. Review the status of the study efforts with the Project Team at such frequency and times as may be required to achieve the Project objectives.

Present study documents to the State/Client Agency and the Department for their review at the 50 percent and 90 percent completion intervals and at such other times as the Department deems necessary to completely develop and monitor the Project.

Preside at all Project related meetings and prepare and distribute minutes of all meetings, reports of on-site visitations, correspondence, memoranda, telephone, and other conversations or communications. Where essential or significant information is established or evaluated, and/or critical decisions are made, whether in meetings, conversation or email correspondence, include that information or decisions in formal project correspondence and distribute copies to the Project Team within two (2) business days of the date of occurrence, or include such information and decisions in the immediately subsequent project meeting minutes. Meeting minutes shall be distributed within five (5) business days of the meeting.

Task 102 RESEARCH: Gather and/or develop all data to evaluate and clarify the Project. Research existing data, analyze and refine the concepts of the Project/Program Statement. Through discussions with the Project Team, by interrogation and necessary counsel, establish, in requisite detail, the information required to complete the Study incorporating functional and operations needs of the State/Client Agency's respective program(s), as well as operational factors, maintenance, and other support features. Identify all additional research, studies, and analysis necessary to express such objectives and requirements in terms of a fully operable facility or system which will acceptably serve its intended use.

Task 103 ANALYSIS: Analyze data, information and research gathered. Create draft recommendations or results of the study and research. Upon completion of all on-site field investigation activities prepare a complete architectural and/or engineering study report. If appropriate, provide itemized construction cost estimates. The analysis will correlate, describe, and record research findings and information for the Project Team's understanding and acceptance. Transcribe and consolidate all existing data, studies, and the research analysis of Task 102 into a draft study report. Submit one (1) electronic copy in indexed PDF format of the draft study report to the Project Team at 50 percent and 90 percent completion review intervals and solicit review comments.

Task 110 STUDY REPORT: Incorporate the study review comments as directed by the Department into the final study report. Prepare and attend presentations to the Project Team and others for Study acceptance. The final report shall use the following outline and contain such detail as required for the Project Team's understanding and acceptance.

- A. Management Summary
- B. Problem
- C. Research Findings, Discussion and Details
- D. Conclusion
- E. Recommendation

Provide one reproducible original and an electronic copy suitable for legible reproduction. One study report presentation shall be considered basic services for this Task. Any additional study report presentations requested by the Department will be considered extra professional services and the additional study costs will be paid to the Professional by the Department with a Contract Change Order.

### **PHASE 200 - PROGRAM**

Amplify the Project/Program Statement and, if available, final Study Report, to embody the physical, functional, and programmatic relationships required to achieve the Project objectives. The resultant program analysis, when accepted and approved by the Department, shall create the general scope of work of the Project. Such acceptance does not limit subsequent inclusion of minor, but essential, programmatic or design details whose necessity and arrangement may best become apparent during subsequent Phases of the Project's evolution.

Task 201 COORDINATION: Meet with the Project Team and establish lines of communication, authority, and responsibility. Establish a method for the Department and the State/Client Agency to formally sign off on data input, the program analysis, and appropriate elements of the resultant design.

Present proposed program analysis documents to the Project Team for review at the 50 percent and 90 percent completion intervals and at such other times as the Department deems necessary to completely develop and monitor the Project.

Preside at all Project related meetings and prepare and distribute minutes of all meetings, reports of on-site visitations, correspondence, memoranda, telephone, and other conversations or communications.

Where essential or significant information is established or evaluated, and/or critical decisions are made, whether in meetings, conversation or email correspondence, include that information or decisions in formal project correspondence and distribute copies to the Project Team within two (2) business days of the date of occurrence, or include such information and decisions in the immediately subsequent project meeting minutes. Meeting minutes shall be distributed within five (5) business days of the meeting.

Task 202 PROGRAMMING: Identify and develop data to evaluate and clarify the proposed Project. Through discussions with the Project Team, by interrogation and necessary counsel, establish, in requisite detail, the functional and operational needs of the State/Client Agency's respective program(s), as well as operational factors, maintenance and other support features. Allocation of spaces shall be in accordance with the State of Michigan's current "Capital Outlay Design Manual for State Universities, Community Colleges, State Agencies and Professional Service Contractors" and be consistent with the Project/Program Statement and Project Budget. Provide all additional research, studies, and program analysis necessary identify the objectives and requirements for a fully operable Project acceptably serving its intended use.

Task 203 DEVELOPMENT: Transcribe and consolidate all data, studies and the analysis of Task 202 into a program analysis summarizing the complete program for the project, including spaces, physical features, systems, functions, capacities, relationships, and interactions required by the proposed Project. Revise the proposed program as required to achieve the Project objectives and incorporate review comments by the Project Team. Obtain approval and sign-off of space allocations from the Project Director before providing the space allocations to the State/Client Agency for approval and sign-off of the complete program.

Task 209 PROJECT COST ESTIMATE: Provide an itemized cost estimate of the proposed Project program. Verify in writing that the Project Budget is adequate to achieve the proposed Project. Revise the program analysis documents as necessary to provide an acceptable program analysis design within the Department's authorized Project Budget.

Task 210 PROGRAM ANALYSIS REPORT: Prepare a draft program analysis report containing the program, cost estimate, signoffs and backup data and information. Submit one (1) electronic copy in indexed PDF format of the draft study report to the Project Team at 50 percent and 90 percent completion review intervals and solicit review comments. Incorporate review comments as directed by the Department into the proposed final program analysis report. Provide one reproducible original and an electronic copy suitable for legible reproduction. One program analysis report presentation shall be considered basic services for this Task. Any additional program analysis report presentations requested by the Department will be considered extra professional services and the additional study costs will be paid to the Professional by the Department with a Contract Change Order.

### **PHASE 300 - SCHEMATIC DESIGN**

Prepare progressive schematic design deliverables consistent with the Project/Program Statement, and approved program (if applicable). Diagrammatically depict the area(s) and relationship of the Project functions. Establish the design basis for and show principal building design elements and locations of the various structural, mechanical, heating, ventilating, and air conditioning (HVAC), electrical and other systems as necessary to completely achieve the Project. The Professional shall obtain Professional Consultant firms for civil/site survey, site geotechnical investigation analysis and soil testing as the Professional deems necessary to achieve a viable and economic Project design. Revise design as necessary to obtain approval from the Department and the State/Client Agency.

Task 301 COORDINATION: Meet with the Project Team to establish a physical size and arrangement of the Project and its principal systems. Include technical, human, and physical environment requirements consistent with the Project program as well as the functional interrelationships between spaces or systems. Determine any Project requirements as necessary to accommodate artwork.

Where the Project involves work in an existing building, site, and/or utility system, identify and locate by scaled graphic diagram, any building and/or site utility areas that may have potential hazardous material contamination and may require testing, abatement and/or removal by the Department, prior to the renovation and/or during the new construction work of the Project.

Identify and define, in writing, the impact of the proposed Project schematic design on the existing building or facility operations. Assist the Department in determining and resolving any Project requirements for maintaining the current operation of the existing building facility spaces or systems and site utility areas, including as a minimum, the impact of hazardous waste removal, and the associated necessary demolition and repair of the adjoining work.

Hazardous material testing and removal will be performed by the Department by separate Contract using other professional firms. See Task 512 - Hazardous Materials, for text defining the Professional's responsibility for assisting the Department with these materials.

Progressively review, with the Project Team, the development of the schematic design documents and assist in obtaining data and providing timely decisions. Present proposed schematic design documents for review to the State/Client Agency and the Department at 50 percent and 90 percent completion intervals and at such other times as the Department deems necessary to completely develop and monitor the Project.

Preside at all Project related meetings and prepare and distribute minutes of all meetings, reports of on-site visitations, correspondence, memoranda, telephone, and other conversations or communications. Where essential or significant information is established or evaluated, and/or critical decisions are made, whether in meetings, conversation or email correspondence, include that information or decisions in formal project correspondence and distribute copies to the Project Team within two (2) business days of the date of occurrence, or include such information and decisions in the immediately subsequent project meeting minutes. Meeting minutes shall be distributed within five (5) business days of the meeting.

Task 302 CONSTRUCTION CODE AND DESIGN REVIEWS: Identify, list, and define for the Department, in writing, the impact of all applicable construction codes, rules, regulations, environmental requirements, design reviews, and permitting procedures current as of the start of this schematic design Phase that will apply to the design of the proposed Project. Review with the Project Team the principal impacts on Project planning and incorporate these into the schematic design report and the Project cost/proposed construction schedule of Task 309.

Task 303 CIVIL/SITE STAGING INVESTIGATION: The Professional shall retain a civil/site survey Consultant and a site geotechnical testing Consultant and coordinate their proposed architectural and/or engineering services and prepare the site staging investigation survey instructions program(s) required to establish and execute a complete schematic site design appropriate to the Project/Program Statement. Analyze site staging investigation results and incorporate into the schematic site design. Coordinate a site-specific testing program to identify and/or confirm the Project site underground conditions and accurately specify contractual requirements. This includes, but is not limited to, access, traffic control, demolition, Soil Erosion and Sedimentation Control, engineered fill, utilities, removal of obstructions/contaminations, borrow and spoil areas, bracing, shoring, waterproofing, dewatering, dredging, and similar work. Provide the Department with copies of all site investigation geotechnical test reports. Review conclusions and, upon request, explain their influence on the Project schematic design. Define the impact of the Project on adjacent buildings.

Task 304 STRUCTURAL: Research, survey, define, and render all existing structural systems appropriate to the proposed Project. Show facility layout, applicable area floor loadings and basic elevations. Outline any existing principal structural system members and render and show the proposed structural system schematic design for renovations and additions.

Task 305 MECHANICAL/HVAC/PLUMBING/UTILITIES: Research survey, define and render the schematic design basis for all proposed mechanical, plumbing systems, and utility systems appropriate to the Project. This includes but is not limited to all plumbing, HVAC, and other mechanical systems, equipment, and their respective loads. Define and render the schematic design capacities, sources, flows, and functions of all existing and/or proposed utility systems, including but not limited to steam, water, fuel, storm and sanitary sewers, and fire protection. Field-check and verify accessibility and space for all equipment on the proposed schematic design drawings. Confirm, in writing, to the Department, the availability of utility capacities at current or proposed connections. Contact applicable utilities for information on connections, connection permit requirements, fees, and schedules.

Task 306 ELECTRICAL: Research, survey, define and render the schematic design basis for all proposed electrical systems appropriate to the Project.

This may include, but is not limited to utility service systems, primary and secondary distribution systems, building control systems, security systems, elevators, fire alarms, television, data, communications, and similar systems. Define sources, equipment capacities, and loads, including those for open office workstation/partitioning systems. Field-check and verify accessibility and space for all equipment on the proposed schematic design drawings. Confirm, in writing, to the Department, the availability of utility capacities at current or proposed connections. Contact applicable utilities for information on connections, connection permit requirements, required easements, transformers, fees, and schedules.

Task 307 ARCHITECTURAL/ENGINEERING: Research, survey, define, and render the existing and proposed schematic design architectural and/or engineering building area layout appropriate to the Project/Program Statement. Show proposed applicable area/room space, finish treatment, uses, interrelationships, and principal building sections, elevations, and dimensions. Show principal building fire protection spaces and features. Consider sustainability in material, equipment, systems, and general design selections, provide LEED checklist, as applicable.

Task 308 DRAFTING: Prepare and render proposed schematic design documents appropriate to the Project, on sheet size approved by the Project Director. Include all principal building/site utility systems. Coordinate the Project schematic design with all architectural and/or engineering design disciplines for completeness, accuracy and consistency, and conflict avoidance. The Professional shall field-check and verify the accuracy of all existing and proposed architectural and/or engineering drawings and any data furnished by the Department, the State/Client Agency or any other Project related source.

Task 309 PROJECT COST/PROPOSED CONSTRUCTION SCHEDULE: Evaluate the proposed schematic design against the estimated Project cost and design/construction schedule. Revise schematic design as required to produce a design within the Department's approved Budget. Prepare and submit a Project Budget based on the approved schematic design. Apply critical target dates to the Professional's Project Study, Design and Proposed Construction Schedule and submit to the Department for their review and approval.

Task 310 SCHEMATIC DESIGN REVIEW: Prepare, reproduce, submit, and make presentations and revisions of the schematic design planning documents. Present proposed documents for the Project Team review at the 50 percent and 90 percent completion intervals and solicit review comments. Revise proposed schematic design documents, as necessary, to incorporate all requested design review comments. Obtain Department approval and sign-off prior to State/Client Agency sign-off, when requested by Project Director. Where legislative review is required, provide an additional one (1) electronic copy in PDF format of the Department approved proposed schematic design documents to the Department for distribution to the Joint Capital Outlay Subcommittee, in the format of the "Capital Outlay Design Manual for State Universities, Community Colleges, State Agencies, and Professional Service Contractors".

Provide one (1) schematic design presentation to the Project Team for this Task. Any additional schematic design presentations requested by the Department will be considered extra professional services and the additional schematic design costs will be paid to the Professional by the Department with a Contract Change Order.

If Contract Services conclude with this Phase, provide bond prints and an indexed PDF of architectural and/or engineering drawings of the final approved schematic design, suitable for legible reproduction.

#### **PHASE 400 - PRELIMINARY DESIGN**

Prepare progressive preliminary design documents to develop the Project based on the Project/Program Statement, and the approved schematic design and program, if applicable. Refine the schematic design documents as necessary to produce an acceptable preliminary design. The preliminary design and outline draft specification shall be complete and detailed enough to define the size, function, arrangements, spaces, location and operations of equipment, and materials comprising the principal design details of structures and systems. The proposed preliminary design documents and outline draft specifications shall clearly depict the Professional's proposed design intent of the Project's systems, materials, equipment, utilities, site improvements, and other elements through single-line diagrams, system layout drawings and developed plans and design details. The preliminary design thus achieved must constitute the complete basis for further detail into final design drawings.



Prepare in bar chart format, the proposed Project construction schedule. Prepare a complete estimated Project cost statement based on prevailing or predictable factors for the proposed construction bidding period. The Department's written acceptance of the estimated project cost statement will establish the authorized Budget for the Project. The Professional shall apply the means and methods necessary to achieve the proposed preliminary design within the authorized Budget for the Project.

Task 401           COORDINATION: Meet with the Project Team to review the Project/Program Statement, approved schematic design documents (if applicable), and refine the Project. Assist the Project Team to progressively review the proposed preliminary design, develop input, and provide timely decisions.

Where the Project involves work in an existing building, site, and/or utility system, identify and locate by scaled graphic diagram, any building and/or site utility areas that may have potential hazardous material contamination and may require testing, abatement, and/or removal by the Department, prior to the renovation and/or during the new construction work of the Project. Identify and define, in writing, the impact of the proposed Project schematic design on the existing building or facility operations. Assist the Department in determining and resolving any Project requirements for maintaining the current operation of the existing building facility spaces or systems and site utility areas, including as a minimum, the impact of hazardous waste removal, and the associated necessary demolition and repair of the adjoining work.

Hazardous material testing and removal will be performed by the Department by separate Contract using other professional firms. See Task 512 - Hazardous Materials, for text defining the Professional's responsibility for assisting the Department with these materials.

Progressively review, with the Project Team, the development of the preliminary design documents and assist in obtaining data and providing timely decisions. Incorporate design refinements consistent with the proposed Project scope. Establish equipment and/or materials to be furnished by the State. Present proposed preliminary design documents for review to the State/Client Agency and the Department at 50 percent and 90 percent completion intervals and at such other times as the Department deems necessary to completely develop and monitor the Project.

Preside at all Project related meetings and prepare and distribute minutes of all meetings, reports of on-site visitations, correspondence, memoranda, telephone, and other conversations or communications. Where essential or significant information is established or evaluated, and/or critical decisions are made, whether in meetings, conversation or email correspondence, include that information or decisions in formal project correspondence and distribute copies to the Project Team within two (2) business days of the date of occurrence, or include such information and decisions in the immediately subsequent project meeting minutes. Meeting minutes shall be distributed within five (5) business days of the meeting.

Task 402           SPECIFICATIONS: Prepare proposed preliminary design outline draft specifications for Divisions 00 through 49, in the current version of the Master Format Outline by the Construction Specifications Institute (C.S.I.), as appropriate for the defined Project. Outline specifications will address sustainable design in materials selection.

Task 403           CIVIL/SITE STAGING DESIGN/INVESTIGATION: If the Professional did not obtain a site specific geotechnical testing program for this Project and advise the Department during the Schematic Design Phase, they shall retain a civil/site survey Consultant and a geotechnical testing Consultant and coordinate their proposed architectural and/or engineering services to prepare and provide a preliminary geotechnical site investigation and site staging design as directly related to the Project.

Coordinate a site-specific testing program to identify and/or confirm the Project site underground conditions and to accurately specify the proposed construction contractual requirements. This includes, but is not limited to access, traffic control, demolition, Soil Erosion and Sedimentation Control, engineered fill, utilities, removal of obstructions/contaminations, borrow and spoil areas, bracing, shoring, waterproofing, dewatering, dredging, and similar work. Determine and prepare a list of required civil/site drawings as related to the Project. Illustrate and coordinate any off-site work necessary for a completely functioning Project. Revise as required.

Task 404           STRUCTURAL: Prepare structural calculations appropriate to the proposed Project and size major components. Prepare preliminary structural plans, sections, elevations, and details drawings, as applicable for the defined scope of work. Determine and prepare a list of required preliminary structural drawings as related to the proposed Project. Revise as required.

- Task 405      MECHANICAL/HVAC/PLUMBING/UTILITIES: Identify existing mechanical/heating, ventilating, and air conditioning equipment, plumbing systems, and utility systems. Calculate heat loss, heat gain, and other demands for all spaces. Determine ventilation requirements. Calculate total loads, identify, and size new equipment. Identify and/or calculate total utility loads. Include the needs of any existing building or system that is a part of, or interfaces with the Project, as well as those of the Project. Provide basic engineering design appropriate for all principal building components, utility systems and building systems, and all pre-engineered equipment suitable and appropriate for the proposed Project. Field-check and verify clearances for all proposed equipment and systems proposed. Prepare preliminary HVAC, plumbing, and utility drawings. Determine and prepare a list of required preliminary design drawings as related to the proposed Project. Review current, mechanical, plumbing and utility system codes and incorporate applicable requirements. Revise as required. Secure in writing, the approval of capacities and connections for the Project from the appropriate utilities/suppliers.
- Task 406      ELECTRICAL: Identify existing equipment and systems. Prepare load calculations, including electric loads for fixed, and movable, equipment, as appropriate to the defined Project. Determine electric service requirements and size major transformer and service equipment. Provide single line diagrams of primary service and distribution systems. Develop and outline basic equipment and distribution systems for lighting, power, building control, elevators, fire, security, television, data, communications, and other specialized systems of the Project. Coordinate design to incorporate design requirements for any open office workstation/partitioning systems.
- Field-check and verify clearances for all proposed equipment and design systems proposed. Prepare preliminary electrical drawings. Determine and prepare a list of required preliminary design electrical drawings as related to the proposed Project. Review current electrical codes and incorporate all applicable requirements. Revise as required. Secure in writing, the approval of capacities and connections for the Project from the appropriate utility/suppliers.
- Task 407      ARCHITECTURAL/ENGINEERING: Prepare preliminary architectural and/or engineering drawings, appropriate to the proposed Project, to detail and define the Project. Coordinate design to incorporate design requirements for any open office workstation/partitioning systems. Determine and prepare a list of required preliminary design architectural and/or engineering drawings. Drawings will include plans, elevations, sections, and critical construction details in order that an accurate and detailed construction estimate can be provided. Depict sustainable design criteria and energy efficient design features of the Project, provide LEED Checklist, and provide summary calculations to demonstrate applicable compliance with the State of Michigan's current Energy Code requirements. Revise as required.
- Task 408      DRAFTING: Prepare and render the preliminary design architectural and/or engineering documents on sheet size approved by Project Director. Coordinate the preliminary design with related architectural and/or engineering design disciplines for completeness, accuracy and consistency and conflict avoidance. Prepare drawings using applicable State of Michigan standards as defined in the Department's "Capital Outlay Design Manual for State Universities, Community Colleges, State Agencies, and Professional Service Contractors" and DTMB DCD "Design and Construction Standards for Office Construction and Tenant Fit out" for all Project design disciplines. The Professional shall field-check and verify the accuracy of all existing and proposed drawings and any data furnished by the Department, the State/Client Agency, or any other Project related source.
- Task 409      COST ESTIMATE AND CONSTRUCTION SCHEDULE: Prepare an itemized Project construction cost estimate based on prevailing or reasonably predictable factors for the proposed bidding period. Recommend construction strategies, methods, and phasing. Identify long-lead items and any State of Michigan-furnished materials, equipment, systems, and furnishings, with procurement deadlines consistent with the proposed schedule and phasing. Prepare in bar chart format a detailed schedule of the design and proposed bidding and construction schedule, incorporating the information listed above.
- Task 410      PRELIMINARY DESIGN REVIEW: Prepare, reproduce, submit, and make presentations and revisions of the schematic design planning documents. Present proposed documents for the Project Team review at the 50 percent and 90 percent completion intervals and solicit review comments. Revise proposed preliminary design documents, as necessary, to incorporate all requested design review comments.

With the 50 percent review, provide design criteria and calculations of principal architectural, mechanical, plumbing, and electrical engineering systems demonstrating basic compliance with the State of Michigan's current Energy Code requirements.

For each review, present proposed preliminary design documents first to the State/Client Agency for programmatic design conformance review, then present to the Department for review, determination of required revisions, and acceptance. Revise proposed preliminary design documents, as necessary, to incorporate all requested design review comments required for the Department's written acceptance of the proposed Project preliminary design.

Where legislative review is required, provide an additional one (1) electronic copy in PDF format of the approved proposed preliminary design documents to the Department for distribution to the Joint Capital Outlay Subcommittee, in the format of the "Capital Outlay Design Manual for State Universities, Community Colleges, State Agencies, and Professional Service Contractors". Provide one (1) schematic design presentation to the Project Team for this Task. Any additional schematic design presentations requested by the Department will be considered extra professional services and the additional preliminary design costs will be paid to the Professional by the Department with a Contract Change Order. If Contract Services conclude with this Phase, provide bond prints, electronic CAD, and indexed PDF of architectural and/or engineering drawings of the final approved schematic design and outline specifications suitable for legible reproduction.

### **PHASE 500 - FINAL DESIGN**

Prepare for progressive, periodic review, Final Design Documents which shall revise, refine, amplify, and depict, in detail, the Project as described and required by the Project/Program Statement and any approved preliminary design. Final Design Documents shall be prepared in Phases/Bid packages appropriate to the Project, schedule, and funding.

The proposed Final Design Documents shall document a complete and constructible Project. Final Design Documents shall incorporate and comply with all current, applicable regulations, ordinances, construction codes and statutes, and must have accomplished all reviews by appropriate federal, State or any local authorities having jurisdiction before presentation to the Department for acceptance and advertisement for bidding. Where design approvals are required, the Professional shall acquire and provide them. The Final Design Documents shall be without ambiguity and must be so complete that no significant design decision is left to the discretion of any Bidder, manufacturer, or supplier. The Final Design Documents will not define, quantify, or in any other way represent any work as being assignable to, or to be performed by, any Consultant or sub-consultant, except for fire suppression systems or other specialized system(s) provided that it is specifically authorized, in writing, by the department.

Bidding Documents shall consist of, but are not limited to, the Final Design Documents, including final architectural and/or engineering drawings and specifications, special, general, and supplemental conditions of the Construction Contract, and modifications, if any, to MICHSPEC or DCSpec documents provided by the Department. Such standard documents may consist of, but are not limited to, the project advertisement, the Instructions to Bidders, the proposal forms, general, supplemental, and any special conditions of the Construction Contract, and the standard form of agreement between the Department and the Construction Contractor. The Professional may not substitute any other special, general, and supplemental conditions for the Construction Contract or other standard documents provided by the Department. The Professional may not revise, other than the fillable portions of the general conditions, or use any additional general condition requirements unless the revisions or requirements are accepted and approved by the Department in writing.

In addition to the requirements herein, the professional services for this Project shall include, but are not limited to, those set forth in the current version of MICHSPEC or the current DCSPEC as adopted and modified by the State of Michigan and incorporated into the Construction Contract, plus such other Department standard documents and general conditions as may be part of the Construction Contract.

The Contract Documents shall consist of the Bidding Documents and all Addenda and attachments necessary to provide a complete Construction Contract for the Project.

Task 501           COORDINATION: Review approved preliminary design drawings with the Project Team and solicit revisions. Incorporate any revisions and design refinements.

Present proposed final design documents to the State/Client Agency and the Department for their review at the 50 percent and 90 percent completion intervals and at such other times as the Department deems necessary to completely develop and monitor the Project.

Preside at all Project related meetings and prepare and distribute minutes of all meetings, reports of on-site visitations, correspondence, memoranda, telephone, and other conversations or communications.

Where essential or significant information is established or evaluated, and/or critical decisions are made, whether in meetings, conversation, or email correspondence, include that information or decisions in formal project correspondence and distribute copies to the Project Team within two (2) business days of the date of occurrence, or include such information and decisions in the immediately subsequent project meeting minutes. Meeting minutes shall be distributed within five (5) business days of the meeting.

Task 502

**SPECIFICATIONS:** Prepare final design specifications in the format defined below and with Phasing as appropriate for the Project. Include a schedule of all required submittals, a construction material testing schedule, and all other necessary schedules. Specifications shall be coordinated with the final design architectural and/or engineering drawings and shall be prepared in the current version of the Master Format Outline by the Construction Specifications Institute (C.S.I.). The final design architectural and/or engineering specifications shall clearly define the Project design and construction requirements indicating the type and quality of materials, products, and workmanship.

Sustainable Design shall be used wherever possible by the Professional in their Project design. The United States Green Building Council's (USGBC) LEED Green Building Rating System will be used as a convenient and industry accepted standard of reporting and measurement of the materials and design strategies used in the Project, but the USGBC certificate will not be required. Sustainable Design is defined in this Contract as the Professional's use of Project design resources with no negative impact to the natural ecosystems, an emphasis on overall energy efficiency, recycling, reduction of waste, and achieving a net enhancement of the Project.

Performance specifications shall be used when feasible. If not, the Professional shall name at least three (3) acceptable materials, products or systems and the specifications shall contain an "or equal" clause. Whenever possible, recycled materials and/or Michigan-manufactured products shall be named and given first preference. Proprietary specifications or allowances may be permitted with the Department's acceptance and written approval, but only for special, unavoidable conditions. Provide Project specifications to the Department for procurement of items to be pre-purchased through existing State contracts or separate bids.

Task 503

**CIVIL/SITE STAGING DESIGN:** If the Professional did not obtain a site-specific geotechnical testing program for this Project and advise the Department during the Schematic Design Phase, they shall retain a civil/site survey Consultant and a geotechnical testing Consultant and coordinate their proposed architectural and/or engineering services to prepare and provide a preliminary geotechnical site investigation and site staging design as directly related to the Project. Coordinate a site-specific testing program to identify and/or confirm the Project site underground conditions and to accurately specify the proposed construction contractual requirements. This includes, but is not limited to access, traffic control, demolition, Soil Erosion and Sedimentation Control, engineered fill, utilities, removal of obstructions/contaminations, borrow and spoil areas, bracing, shoring, waterproofing, dewatering, dredging, and similar work. Determine and prepare a list of required civil/site drawings as related to the Project. Illustrate and coordinate any off-site work necessary for a completely functioning Project. Revise as required.

Soil Erosion and Sedimentation Control shall be implemented in accordance with the current edition of the Department's compliance manual and 1994 PA 451, as amended – The Natural Resources Environmental Protection Act, Part 91 – Soil Erosion and Sedimentation Control. Submit final civil/site design drawings depicting Soil Erosion and Sedimentation Control measures to the Department's Soil Erosion and Sedimentation Control Program for review in accordance with 1994 PA 451, as amended. For DTMB managed projects, coordinate review submission with Project Director as plan review is completed within the Design and Construction Division.

Task 504

**STRUCTURAL:** Prepare and render complete structural final design documents.

- Task 505 MECHANICAL/HVAC/PLUMBING/UTILITIES: Prepare and render complete mechanical, plumbing, and utility system final design documents.
- Task 506 ELECTRICAL: Prepare and render complete electrical system final design documents.
- Task 507 ARCHITECTURAL/ENGINEERING: Prepare and render complete architectural and/or engineering final design documents. Assist the Department in the determination of and specification of furnishings, colors, and finish selections. Provide material finish and color board for final acceptance as required for the defined Project.
- Task 508 DRAFTING: Prepare complete final design architectural and/or engineering drawings for Bidding Documents on sheet size approved by Project Director using applicable State of Michigan standards as defined in the "Capital Outlay Design Manual for State Universities, Community Colleges, State Agencies and Professional Services Contractors." The Professional shall field-check and verify the accuracy of all existing and proposed drawings and any data furnished by the Department, the State/Client Agency or any other Project related source.
- The Project Bidding Documents derived from the Final Design drawings shall be made available and converted if necessary, to the AutoCAD computer drafting system. Bidding Documents shall be provided electronically in pdf format to the Department for advertisement by the Department.
- Provide one electronic copy of signed and sealed documents in addition to paper review and approval sets of the Contract Documents. The signed and sealed print sets are the controlling Contract Documents for this Project. The software name and release number used to produce the Design Contract drawings will be clearly identified on the electronic media.
- Task 509 CHECKING CONTRACT DOCUMENTS: Check and coordinate all proposed Bidding and Contract Documents for completeness and accuracy. Prepare Bidding and Contract Documents that will protect the Department from unexpected construction cost increases, schedule delays or claims for reason of defective or incomplete rendering of the Professional's design, or for any delinquency by the Professional for performance of the professional design services under this Contract. Check the adequacy of all spaces and clearances.
- Cross-check and coordinate the requirements of all proposed final design drawings between the architectural and/or engineering design disciplines for completeness, accuracy, and consistency, and conflict avoidance. Similarly, cross-check and coordinate all proposed final design drawings against the Project specifications. Mark each drawing with the name of the checker and with the written signature approval of the appropriate Professional "Key Principal Personnel/Employee."
- Task 510 CONSTRUCTION CODES AND PERMITS: The Professional's Contract Documents shall comply with the State of Michigan Construction Code, 1972 PA 230, as amended, the State of Michigan Energy Code, the Americans with Disabilities Act (ADA) Accessibility Guide requirements, the State of Michigan Barrier-Free Access Code requirements, and all Project related construction code requirements in effect at the time of award of this Contract. Assist the Department in obtaining approval of the Project and its design by appropriate governmental regulating and/or code enforcement authorities.
- Project Bidding Documents may not be advertised until plan review approval is obtained.
- Except as otherwise provided for in this Contract, code compliance and plan review approval(s) shall be performed by the, the Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, Plan Review Division, and the Bureau of Fire Services. Code compliance and plan review approval fees shall be paid by the Professional as a reimbursable expense, unless otherwise provided for. Submit all modeling, testing, design data, and appropriate drawings and applications for all permits, tests, and approvals, which the Department is required to secure as a prerequisite authorization for the Project's approval. Submit Soil Erosion and Sedimentation Control plans/drawings to the Department's Soil Erosion and Sedimentation Control Program as the enforcing authority for this Project, no later than at the 90 percent final design stage.
- Provide energy efficient design features and summary calculations to demonstrate Project compliance with the State of Michigan Sustainability requirements.

Submit documents for review in a timely manner allowing appropriate time for review/permitting processes by respective authorities, such that the Project schedule is not unnecessarily delayed. Assist the State/Client Agency to secure any appropriate construction code waivers.

Incorporate all required modifications into the Bidding Documents. Follow through to ensure issuance of the construction codes and permits approvals. Secure all required design approvals before submitting the final design documents to the Project Team for the final design document review of Task 515.

Any approval secured in initial plan review and permitting does not relieve the Professional from complying with code official's construction field inspections enforcement requirements.

Task 511 CONSTRUCTION TESTING PROGRAM: Coordinate Project on-site survey and appropriate research to identify site specific abnormal construction conditions. Coordinate site specific geotechnical testing program of areas, consistent with the design and siting requirements. Identify and confirm the site underground conditions sufficiently to accurately specify the construction contractual requirements. Establish the required construction quality control and materials testing program. Define and specify the types of Project construction tests required, the approximate quantities to be tested and the projected cost thereof. Prepare quality control and material testing services program Bidding Documents for the construction quality control and material testing services. Testing services shall be estimated and identified as an authorized reimbursable expense item in this Contract.

Task 512 HAZARDOUS MATERIALS: Where the Project involves work in an existing building and/or utility system, assist the Department to determine the scope of potential hazardous materials contamination that may require testing, abatement and/or removal by the Department, prior to the renovation and/or during the new construction work of the Project. Hazardous materials testing and removal for this Project will be performed by the Department by separate Contract unless specifically noted in the project scope. Coordinate the professional design services of this Contract with any hazardous material removal services required to implement this Project. Include for the Department's use, architectural and/or engineering drawings and specifications for all restoration work necessary following completion of the removal/abatement Project. Revise the final design drawings, specifications, and schedule, if necessary, to reflect the impact of the hazardous material removal/abatement on the existing State/Client Agency facility operations.

Task 513 DESIGN AND CONSTRUCTION BUDGET: The Professional shall be responsible for all costs incurred by it, necessitated by for rebidding a Project if it is over Budget due to their design. Submit in writing the itemized estimate of the construction costs with each final design review. Include all construction Bid packaging and Phasing. Determine the amount and adequacy of any construction contingency. Upon submittal of the 90 percent complete final design documents, confirm an accurate itemized construction cost estimate in writing to the Department. Confirm that the total Project construction cost is estimated to be within the Project Budget.

Notify the Department in writing if it becomes evident during the final design phase that the Project cannot be constructed within the Professional's estimated construction Budget. Unless the Department determines the problem to be outside the control or responsibility of the Professional, the Professional shall revise their final design drawings and specifications to produce a complete design for the Project within the Professional's original estimated construction Budget cost and will otherwise be responsible for any costs incurred by the Department in rebidding the Project.

Assist the Department to rebid the Project in accordance with the Task 516 construction bidding/contracting procedures.

Task 514 CONSTRUCTION SCHEDULE: Determine the appropriate proposed construction schedule to be part of the Construction Contract. Consider all principal influencing factors, including, but not limited to, current and projected material delivery times, local labor contract periods, and other historical principal causes of delays.

Task 515 FINAL DESIGN BIDDING DOCUMENTS REVIEW: Provide complete final design documents review. When the final design is 50 percent complete, submit the final design documents to the Project team for their review. If the final design appears to exceed the Project Budget, review with the Department all cost reduction design options. Incorporate at 90 percent completion, all required design modifications applicable to the Project, and resubmit to the Project Director. Confirm in writing that the requirements of Tasks 509 and 510 have been met.

Submit 100 percent complete sets of Bidding Documents to the Project Team for their final review. Submit final design documents to the State/Client Agency and the Department for their final design review and revise as necessary to incorporate all review comments required for Department written acceptance of the Bidding Documents. Provide adequate time (minimum of 14 calendar days) for the reviews and implementation of any comments or modifications.

Task 516

CONSTRUCTION BIDDING AND CONTRACTING: Assist the Department in the construction bidding and contracting process. The State of Michigan will advertise for bids and issue construction documents on-line and award and hold the Construction Contract. Prepare (maximum of 6mb electronic PDF files) and distribute Bidding Documents to the Project Director as required to accommodate predetermined construction Bid packages and/or Phases. Conduct pre-bid meetings and issue pre-bid meeting minutes and bidder's lists. Issue Addenda to the Project Director as required for posting. Include in each Addendum complete specifications for the Project if such specifications are not part of the Bidding Documents.

The Professional will be compensated by the Department with a Contract Change Order for providing the professional services necessary to rebid the Project for reason of defaulted or disqualified construction Bidder(s) or unacceptable price range as required by the design and construction Budget text of Task 513.

The Professional's construction bidding and contracting procedure services for Task 516 are not complete until: (1) The responsive, responsible, best value construction Bidder's Bid has been selected and accepted by the Department; and (2) The responsive, responsible, best value construction Bidder's Construction Contract has been executed. The PSC is to also incorporate any State required preferences with their review and recommendation.

Construction Bid Evaluation and Recommendation of Construction Contract Awards: Review and evaluate the submitted construction Bids. Provide the Department with a written recommendation for the apparent lowest responsive, responsible, best value construction Bidder for the Project Construction Contract award(s) within five (5) business days of the date of the Department's construction Bid opening. Exempt from recommendation any firm that in the Professional's opinion is unqualified for the Project (documentation required) or that the Professional has a business association with on this Project, and any firm, that the Professional has used in preparation of the Contract Documents or for any estimating work related to the Project.

The Professional shall conduct pre-contract meetings with responsive, responsible best value construction Bidder(s) to review the following items: (1) Understanding of the design intent of the Contract Documents; and (2) To advise and assist the Construction Contractor(s) in understanding the requirements of the Department's standard form of Construction Contract Documents, Project scope of work, and its Construction Contract award procedures.

Unless otherwise designated in the Department's Notice of Intent to Award letter to the recommended Construction Contractor within fifteen (15) calendar days from the date that the Notice of Intent to Award letter was mailed to the Construction Contractor, the Construction Contractor recommended for the award of the Construction Contract shall (a) Fill out and execute the Department's, current version of MICHSPEC standard form documents Section 00500, Contract Agreement and the Section 00800, Supplementary Conditions, electronically; (b) Execute Section 00610, Performance Bond, and the Section 00620, Payment Bond (and attach to each bond a separate, certified copy of Power of Attorney); and (c) Return to the Department, the Construction Contractor's executed Section 00500, Contract Agreement, Section 00610, Performance Bond, and Section 00620, Payment Bond forms, evidence of Certificates of Insurance and any other legal documents required for submittal by the Department's, Notice of Intent to Award letter.

Task 517

FINAL DESIGN CORRECTION PROCEDURES: Correct at no additional cost to the Department any design errors or omissions and/or other Project related deficiencies identified during the 600 and 700 Construction Phase. All reproduction costs for design interpretations, clarifications, and Bulletins related to the Professional's final design errors or omissions and similar or avoidable costs shall be accounted as part of the Professional's calculated hourly billing rates.

Provide design clarifications and interpretations of the Contract Documents requirements necessary to: (1) Adequately describe the Project work; (2) Adapt architectural and/or engineering final design documents during construction to accommodate field conditions identified during construction; (3) Refine design details that are not feasible and identified during construction; and (4) Comply with current construction/building codes, and all other Project related design and construction matters as may be necessary to produce a complete Project.

Design Interpretations and Clarifications: For elements of construction having no change in cost to the State the Professional will: (1) Provide instructions, and/or design interpretations and clarifications for design details within five (5) business days of the Construction Contractor's request record same, in writing; and (2) Revise the Professional's original final design architectural and/or engineering drawings and specifications as appropriate to the Project. Marking and initialing of drawings is not an acceptable form of written instruction.

Bulletin Authorization: Request authorization from the Project Director to issue each individual Bulletin. The Professional's Bulletin Authorization request will: (1) Identify the problem requiring the change; (2) Describe clearly if such problem arises from the architectural and/or engineering final design errors or omissions; (3) Identify the anticipated design cost and the estimated construction cost to implement the change(s); and (4) Describe clearly in the Professional's opinion which part, if any, of the design and/or construction costs are the obligation of the State, the Professional or the Construction Contractor. Include a Contract Modification request for any work outside the Project. Identify any anticipated Project design or construction schedule implications.

Bulletins: All reproduction costs for design interpretations and clarifications and Bulletins related to the Professional's architectural and/or engineering final design errors or omissions and similar or avoidable costs shall be accounted as part of the Professional's calculated hourly billing rates.

Describe, by Bulletin, design revisions necessary to correct the architectural and/or engineering final design errors or omissions, to address previously unidentified on-site field design conditions, to reduce costs and for all other matters approved by the Department involving costs or credit to the State. Postponement of action on items to accumulate multi-item Bulletins is not permitted.

Prepare and issue Bulletins within ten (10) business days of receipt of the Department's authorization. Bulletins shall be in such form and detail as the Department may prescribe. The Professional shall incorporate all accepted Bulletin revisions or design interpretations into the appropriate originals of all applicable Contract Documents. Such revised drawings and specifications shall be issued as part of Bulletins. Each Bulletin shall prescribe a time schedule for the Construction Contractor's response. Provide one electronic copy of each Bulletin to the Department and distribute as the Department may direct.

Evaluate the Construction Contractor's price quotation(s) and review and attempt to negotiate with the Construction Contractor to provide the Department with costs that are consistent with the value of the Project Bulletin(s). Recommend appropriate action to the Department regarding the Construction Contractor's quotations within five (5) business days of receipt thereof.

### **PHASE 600 - CONSTRUCTION ADMINISTRATION - OFFICE SERVICES**

During the construction Phase of this Project, the "DTMB-0460, Project Procedures" documents package shall be used by the Professional in the administration of this Contract.

The Professional shall use the "DTMB-0452, The Professional's Inspection Record" for all on-site Inspection visits to the Project site. The form shall be completed and signed by the Professional and compiled monthly with the original form document sent to the Department's, Project Director and a copy sent to the Construction Contractor. The on-site Inspection record standard document form shall be completed and accompany the Professional's monthly payment request.

The Professional shall provide all required construction administration services and timely professional and administrative initiatives as the circumstances of the Project construction may require in order to allow the design intent requirements of the Professional's Contract Documents to be successfully implemented into a completed Project through the Construction Contractor's completion of the Construction Contract work.



In observed cases which may involve danger to human life, immediate safety hazards to personnel, existing or impending damage to the Project, to State/Client Agency property or to other property; as may be impacted by the Project, the Professional shall inform the Construction Contractor(s) of the situation and their observations.

The Professional shall immediately record and report such situations to the Department and certify any accrued Project costs in writing. The Professional shall always have access to the Construction Contractor(s) work.

Establish and maintain effective construction administration office procedures, systems, and records to progressively, and exclusively, manage and control the Professional's obligations, commitments, achievements, and expenditures under this construction Phase administration.

Monitor the quality and progress of the Project construction Phase work. Maintain all necessary Project records, provide on-site visitation reports, and provide all administrative office action as may be necessary to inform the Construction Contractor(s), in writing, with respect to their compliance with the design intent of the Contract Documents.

Advise and assist the Department in taking all practical steps necessary to address and complete the Project in the event of performance delays or defaults by the Construction Contractor(s).

Task 601 COORDINATION: Coordinate the Professional's staff, Consultants, and all other Project related resources. Preside at all Project related meetings and prepare and distribute minutes of all meetings, reports of on-site visitations, correspondence, memoranda, telephone, and other conversations or communications. Where essential or significant information is established or evaluated, and/or critical decisions are made, whether in meetings, conversation or email correspondence, include that information or decisions in formal project correspondence and distribute copies to the Project Team within two (2) business days of the date of occurrence, or include such information and decisions in the immediately subsequent project meeting minutes. Meeting minutes shall be distributed within five (5) business days of the meeting. Meeting minutes and agendas are to follow the order and outline of the Departments "Sample Progress Meeting Format" and include a summary of executed CCO's, pending CCO's, Shop and RFI Submittal Logs and statuses.

Task 602 SHOP DRAWINGS, SUBMITTALS, and APPROVALS: Monitor, evaluate, and provide administrative action as necessary to achieve timely processing of shop drawings and such other submittals and approvals that are the responsibility of the Professional. Maintain a record of all required, received, rejected, and approved submittals of shop drawings, color/material samples, finishes, and other items requiring the Professional's approval. Notify the Construction Contractor(s), in writing, (copy to the Department) of delinquent submittals, the consequences of such delays, and prescribe a time schedule for their submittal/resubmittal, which will not jeopardize the Construction Contract completion date.

No design revisions will be made as part of the Professional's review and approval of shop drawings, or other submittals. In addition to all other functions, the Professional's approval of shop drawings shall verify the submittals furnished by the Construction Contractor(s) conforms to the design intent of the Professional's Contract Documents/architectural and/or engineering drawings and specifications requirements. Provide written approval or rejection of shop drawings within ten (10) business days of receipt in the Professional's office. Provide and distribute one electronic copy in PDF format of approved submittals as directed by the Department.

Task 603 PAYMENT PROCEDURES: Monitor, evaluate, and provide timely administrative action, as necessary, to certify or reject, as appropriate, and process the Construction Contractor's schedule of costs and monthly submitted payment requests. Review of Payment Requests are to be completed concurrently by the Professional and the Department's Field Representative in which the Professional is to then provide comments to the Contractor.

Payment by the State of Michigan to the Construction Contractor shall be based on the Construction Contractor's approved completion of Contract work performed prior to the date of each monthly submitted payment request. Payment to the Construction Contractor for each monthly submitted payment request invoice shall be made to the Construction Contractor within thirty (30) consecutive calendar days following the Department's receipt and approval of an approved payment request invoice from the Professional. Certification or rejection of all submitted payment requests will be made by the Professional, in writing, within ten (10) business days of receipt in the Professional's office.

The Professional shall certify to the Department, in writing, the dollar amount the Professional determines to be due to the Construction Contractor for their monthly submitted payment request or the Professional shall return the payment request to the Construction Contractor indicating the specific reasons in writing for rejecting the Construction Contractor's monthly submitted payment request certification.

Issue an appropriate certificate for payment only pursuant to a correctly prepared and accurate payment request and only for acceptable Project work. Payment certification shall constitute a written representation by the Professional, to the Department, that based on their Construction Administration on-site field Inspections, and the Professional's evaluations of field reports, test results, and other appropriate and available factors, the quantity and quality of Project work for which the payment request is certified has been accomplished by the Construction Contractor in accordance with the design intent of the Contract Documents and that the payment request is consistent with the quantity and quality of acceptable Project work in place, and that the acceptable materials are properly stored on-site and/or off-site.

No payment request certificate shall be submitted that requests payment for disputed Project work or any Project work showing deficient test results. No payment request certificate may be submitted after the Construction Contract completion date which does not provide for withholding of assessable and/or projected liquidated damages.

Pursuant to the Department's notification, the Professional's certification shall reduce from the amount earned, two (2) times the amount of any current prevailing wage rate payment deficiency, as certified by the Department of Licensing and Regulatory Affairs, Wage and Hour Division against the Construction Contractor or any Subcontractor or supplier thereof. Payment request rejections shall be accompanied with a written explanation and a copy shall be submitted to the Project Director and Department Field Representative.

#### Task 604

CONSTRUCTION SCHEDULE PROGRESS: Monitor, evaluate, and provide timely administrative action, as necessary, to determine whether the Construction Contractor's construction work schedule and progress appear to be adequate to achieve the Project on time and on schedule. Notify the Department, in writing, within three (3) business days of receipt of the Construction Contractor's proposed Project construction schedule, or amendments thereto, if in the Professional's opinion such construction schedule will produce the Project within the allotted Construction Contract completion time. Notify the Construction Contractor and the Department, in writing, if in the Professional's opinion such schedule should be accepted or rejected. Revise the construction schedule of Task 514 to show that the proposed on-site visitations of Tasks 703-706 are consistent with the actual events of the Project construction schedule. Give prompt, written notification to the Construction Contractor(s) and to the Department of inadequate construction schedule progress.

Unless the Department determines that the needs of the Project require other action the Professional shall proceed as follows: (1) Investigate at the time of occurrence, any areas of inadequate progress whose consequence may be a delay in, or increased cost for, a work item; (2) Notify the Construction Contractor(s) and the Department of the Professional's opinion of the problem and responsibility for the delay and costs. Advise whether the delay in any work may result in delays in the Construction Contract completion date; and (3) Advise the Construction Contractor(s) and the Department, in writing, of recommended action(s) by respective parties necessary to facilitate actions by the Construction Contractor to complete the Project construction on schedule.

Bulletin Costs: During the 600 and 700 Construction Phase, review and evaluate the Construction Contractor's quotations for Bulletin work. Negotiate as appropriate to assure the Department's costs commensurate with the actual value of the Project work. Provide the Department with written recommendation(s) within five (5) business days of receipt of the quotation.

Evaluate any documentable impact on the Project construction schedule claimed by the Construction Contractor(s) arising from Bulletin work. Provide appropriate and timely action under terms allowable under the Construction Contract, to implement any Bulletin work which the Professional and the Department consider critical to the Project construction schedule, but whose cost is disputed.

Within ten (10) business days of its receipt, evaluate and provide the Department with appropriate written recommendations, along with an analysis of any request by the Construction Contractor(s) for a time extension of their Construction Contract completion date.

No recommendation for a Construction Contract time extension may be submitted to the Department which is not substantiated by the Professional's technical review and evaluation of the Project construction schedule showing critical path work, noncritical path work, and float time for the complete Project and any work at issue and having such detail as to clearly document the Construction Contractor's claim. Any recommendation for a time extension of the Construction Contractor's Contract completion date must include a complete analysis of all direct and indirect costs of the Construction Contractor, the Professional, and the Department regarding the time extension. Where the Project is not substantially complete on the Construction Contract completion date, notify the Construction Contractor and the Department, in writing, of the expiration of the Construction Contract completion date and of the assessment and/or withholding of liquidated damages.

Task 605

**CONSTRUCTION TESTING PROGRAM:** Monitor, evaluate, and provide timely administrative action as may be required in response to the results of the construction quality control and material testing program. In circumstances where the testing is not provided by the Department or the Professional, evaluate, and approve, or disapprove the Construction Contractor(s) work plan for providing all construction test reports.

Provide the Construction Contractor(s) and the Department with written evaluation of all construction test reports, copies of construction test reports, marked with the Professional's approval or disapproval within five (5) business days of receipt of the report.

Within five (5) business days of the receipt of any construction test reports not meeting the Construction Contract requirements direct the Construction Contractor(s), in writing, to take appropriate, corrective, or replacement measures within a prescribed time. Follow up, as appropriate, to require the Construction Contractor(s) to achieve the design intent of the Professional's Contract Documents and avoid delays to any element of work which may, in the Professional's opinion, result in a delay in the Construction Contract completion date. Notify the Construction Contractor, in writing, of any delinquent corrections/replacement and take administrative action in accordance with the Construction Contractor performance text of Task 606.

Task 606

**CONSTRUCTION CONTRACTOR PERFORMANCE:** Throughout the execution of the Project Construction Contract, monitor and evaluate the Construction Contractor(s) performance and quality assurance procedures and provide timely, administrative action to cause the Construction Contractor(s) to correct their construction deficiencies. With the Department's concurrence, the Professional may direct, in writing, the exposure and testing of any Project construction work, already in place or covered, which the Professional, and/or the Department, believes may not meet the design intent of the Professional's Contract Documents.

Notify the Construction Contractor, and the Department, in writing, within five (5) business days of its identification, of any aspect of the Construction Contractor's performance which is inconsistent with the Contract Documents or which, in the Professional's opinion, is inconsistent with the design intent of the Professional's Contract Documents. Prescribe a reasonable time for correction which will not jeopardize the Project construction schedule completion date. Exert all practical administrative means necessary to require the Construction Contractor to perform as required by their Construction Contract to meet the design intent of the Professional's Contract Documents/architectural and/or engineering drawings and specifications requirements.

**Deficient Performance:** Upon identification of deficient performance, where the Project Construction Contractor fails to provide timely or acceptable performance, the Professional shall proceed as follows: (1) Notify within three (3) business days the Department, the Construction Contractor and any affected surety, in writing, and by registered mail delivery, of the potential for the Construction Contractor's default action and the Professional's recommendation; (2) Identify applicable Construction Contract references, with design interpretation of such references, and clearly explain where the Construction Contractor's performance fails to meet the design intent of the Professional's Contract Documents; and (3) Specify a time and date for the Construction Contractor to begin active and continuous work towards Contract compliance and a specific time and date for completion.

**Potential Default:** Upon notification by the Department of potential default by the Construction Contractor, where the Project Construction Contractor fails to adequately perform, the Professional shall proceed as follows: (1) Document the potential default, in writing, to the Construction Contractor, the Construction Contractor's surety and the Department; (2) Provide an explanation of the consequences of the potential default to the Project; (3) Provide the Department with a complete set of Project record documentation necessary to assist the Department in the legal implementation of the Construction Contractor's default action; (4) Establish an appropriate amount and withhold from payment certification of the associated line item(s), include a retainage

consisting of any costs expended for testing and other investigations necessary to establish unsatisfactory performance plus a contingency amount, adequate for the Department to correct such unacceptable performance by means other than the Construction Contractor; and (5) Notify the Construction Contractor and their surety, in writing, of the withholding.

Default: Upon notification of the Project Construction Contractor's default, the Professional shall proceed as follows: (1) Identify the extent of defaulted and/or remaining Project work; (2) Recommend a procedural program for the Department to achieve the defaulted work within the remaining Project construction time schedule if possible; and (3) Provide modified Bidding Documents that will allow the Department to rebid the remaining portion of work using the Professional's recommendations. The Professional will be compensated by the Department with a Contract Change Order for providing the defaulted Construction Contractor assistance service.

Task 607 PUNCH LIST PROCEDURES: Prepare and distribute Punch Lists for each Construction Contract. Prescribe a reasonable time schedule for completion of all construction Punch List items and identify an additional amount to be withheld from payment should standard closeout schedule of values be deemed insufficient to assure the Department sufficient funds to cover all costs as may become necessary to complete the remaining delinquent work. Distribute Punch Lists within five (5) business days of the final Inspection. Notify the Construction Contractor of any delinquent Punch List construction corrections and take appropriate action in accordance with Tasks 604 and 606.

Task 608 CLAIMS: Evaluate and respond to any claims (in whole or in part) against the Department within five (5) business days of the receipt of such claim, in the Professional's office. Where any element of claims or subsequent litigation, are based, in whole or in part, upon any deficiency or delinquency in the Professional's services, the Professional shall provide, in a timely manner, all professional services necessary to defend the claim issue(s). No payment will be due for claim defense services accumulated under this Task until settlement or judgment of litigation concludes the claim issue. The claim settlement or judgment decision will be used as the basis for determining the Professional's obligation, if any, for the costs of such professional services and/or for any costs incurred by the Department for which performance by the Professional may be responsible or contributory. Billing under this claims Task will be in accordance with an appropriate Contract Modification and/or Contract Change Order.

Task 609 AS-BUILT DOCUMENTS: Within forty-five (45) consecutive calendar days after receipt of properly prepared and submitted Construction Contractor annotated as-built documents, incorporate, and render them into the Professional's original Contract Documents for as-built documents. The Professional shall provide the Design and Construction Division with the following two (2) types of deliverable as-built documents for Project close-out: 1) One (1) set of legible/reproducible bond copy completely updated and corrected, as-built records of the Contract Documents/architectural and/or engineering drawings; and 2) Two (2) electronic sets of completely updated and corrected as-built record close-out documents and architectural and/or engineering drawings, one in .pdf format and one in Auto CAD format that is "Auto CAD readable" and conforms to the American Institute of Architects (AIA) National CAD Standard format.

The as-built documents shall depict all construction modifications, additions, and deletions made either by Addendum, Bulletin, supplemental written instructions, and the written notations shown on the Construction Contractor's as-built drawings. The Professional's as-built architectural and engineering drawings shall be of such clarity, detail, and completeness that reference to other documents will not be required to describe or depict, the Project. The as-built documents shall be free of the Professional's original architectural and/or engineering final design errors and omissions. The Professional shall revise the final design as-built drawings as necessary to incorporate all requested Department revisions as required for the Department's formal written acceptance and approval of the Project as-built drawings and the Project final on-site Inspection. The Professional's services for the Task 609, As-Built Documents are not complete until: (1) The as-built architectural and engineering drawings have been verified, in writing, by the Professional to the Project Director as being accurate and complete; and (2) The as-built architectural and engineering drawings have been turned over and accepted by the Department's, Project Director in writing.

Task 610 CLOSE-OUT PROCEDURES: Maintain for the Project record a schedule of the Construction Contractor's required submittals for Project close-out. Review and approve or reject all submittals as appropriate.

Within forty-five (45) consecutive calendar days after Substantial Completion of the Project, after building or Project occupancy, verify to the Department's, Project Director in writing, that the following documents have been received: (1.) All Project code compliance approvals; (2.) Final Inspections; (3.) Final occupancy permits; (4.) Construction Contractor's as-built final design marked-up architectural and engineering drawings; (5.) Copies of "Operation and Maintenance Manuals" of the Project systems; and (6.) Equipment warranties and guarantees.

Provide to the Design and Construction Division within forty-five (45) consecutive calendar days after Substantial Completion of the Project, three (3) copies of "Operation and Maintenance Manuals" of the Project systems and equipment. These close-out manuals shall include copies of reduced size, as-built architectural and engineering drawings, specifications, and all instructions published or furnished by respective manufacturers, construction code compliance certificates, equipment warranties, and guarantees. The manuals shall also include a complete description of the Professional's Final Design intent concepts, operation, and required maintenance of each system. Participate in the Construction Contractor's start-up and in the training instruction of State/Client Agency personnel in the operation and use of the Project systems.

### **PHASE 700 - CONSTRUCTION ADMINISTRATION - FIELD SERVICES**

The Department may provide full or part-time Department Field Representatives to monitor the coordination and progress of the services of the Professional and the Project work of the Construction Contractor(s). Such Inspections may generate reports, minutes of meetings, notes, and documents, which will be available to, and may be useful for, the Professional. The Project Director, or Department Field Representative, has the authority to require the Professional to respond to and resolve design related problems, construction field problems and to attend Project related meetings. Unless delegated by specific written notice from the Department, the Department Field Representative does not have any authority to order any changes in the Project scope of work or authorize any adjustments in Contract price or Contract time.

The Professional shall provide sufficient field Inspections of the Project to administer the construction Phase field services and its related construction Phase administration office services, as directly related to the degree of Project complexity and, up to and including full-time field Inspections. The construction field Inspections shall occur as the construction on-site field conditions and the Project may require and during the regularly scheduled twice a month progress meeting. The Professional shall use for their construction field Inspection services, only personnel having such professional expertise, experience, authority, and compatibility with departmental procedures as the Department may approve. The Professional agrees that such characteristics are essential for the successful completion of the Project. Such individuals shall be replaced for cause where the Department determines and notifies the Professional, in writing, of their unacceptable performance.

The Professional shall review the Project construction work in place and that sequentially planned. The Professional shall determine whether the actual Project construction schedule progress appears to be in accordance with the approved Project construction schedule and whether the quality of the work appears to be in accordance with the design intent of the Professional's Phase 500 - Contract Documents/architectural and/or engineering drawings and specifications requirements and are without apparent defects or deficiencies. No on-site advertising by, or of, the Professional or Project signs other than those appropriate to locate an approved field office will be permitted.

- Task 701           COORDINATION: Coordinate the Professional's staff, Consultant firm's staff, Construction Contractors, and all other Project related resources.
  
- Task 702           PRECONSTRUCTION MEETING: Preside at and record preconstruction/organizational meetings for each Construction Contract. Issue meeting minutes and the completed "DTMB 0460, Project Procedures" documents package.
  
- Task 703           CONSTRUCTION INSPECTIONS: The Professional and their Consultants shall conduct and record the principal events and status of the work of all scheduled and other on-site Project activities. The construction field Inspections shall occur as the field conditions and the Project may require and during the regularly scheduled progress and payment meetings.

All construction progress Inspections shall be recorded in the form of a written report to the Department and the Construction Contractor within five (5) business days of the Project construction progress Inspection. The purpose of such Inspection/visitations includes, but is not limited to: (1) Achieve and maintain a working familiarity with the status, quantity, and quality of the Project construction work in place; (2) Determine if the

actual Project construction schedule progress is in accordance with the approved Project construction schedule; (3) Review the installation and determine the acceptability of preparations for, and installation of, pending critical construction components and activities; and (4) The Inspection of Project construction work completed or in progress by the Construction Contractor to determine and verify, in writing, to the Department's, Project Director and the Department Field Representative that the quantity and quality of all Project construction work is in accordance with the design intent of the Professional's Phase 500 - Contract Documents/architectural and/or engineering drawings and specifications requirements.

Task 704      **PROBLEM SOLVING MEETINGS:** Conduct and record problem solving meetings between the Professional and the Professional's Consultants, the Construction Contractor(s), their Subcontractors, the Department, the Project Director and the Department Field Representative, and any construction managers and other affected parties on-site or elsewhere to assess the construction work progress and provide design interpretation decisions to resolve problems affecting the construction work. These problem-solving meetings shall be scheduled as the construction field conditions and the Project may require, and/or shall be at such time as the Construction Contractor(s), the Professional, the Department, the Project Director, the Department Field Representative and any construction manager agree is appropriate to the Project construction work progress. Non-scheduled or emergency meetings shall be held at such time as necessary to maintain the schedule of various work items and to avoid delays in the Construction Contract completion date.

Task 705      **PROGRESS MEETINGS:** Conduct and record scheduled Project construction progress meetings (twice a month) with the Project Director, the Department Field Representative, the State/Client Agency, the Construction Contractor(s), and any construction manager. Assess Project construction work progress and provide timely, administrative actions as necessary to maintain the Project construction work on schedule and respond to and resolve all design related and construction items affecting the Project construction cost and be in compliance with the design intent of the Contract Documents, in accordance with Tasks 513 and 514.

Task 706      **FINAL PROJECT INSPECTION:** Conduct final construction field Inspections of the Project, in concert with the Construction Contractor(s), the Project Director, the Department Field Representative, the State/Client Agency, and any construction manager. Final Project field Inspections shall be conducted to witness and record equipment start-up and all testing, to verify, in writing, that each Construction Contractor has achieved Substantial Completion, to prepare Punch List(s) items, and to determine the status of any part of the Project construction work where the Department intends to take beneficial use or occupancy. Verify to the Project Director and Department Field Representative, in writing, the completeness and accuracy of the Construction Contractor's as-built drawings during the Project construction Phase Field Inspection(s) and identify any corrections required. The Professional shall revise the final as-built drawings as necessary to incorporate all requested Department revisions as required for the Department's formal written acceptance and approval of the Project as-built drawings and the Project final Inspection. Determine to the extent possible that the Project has been constructed in accordance with the design intent of the Professional's Phase 500 - Contract Documents/architectural and/or engineering drawings and specifications requirements and that all equipment and systems function without defects.

## **ARTICLE II COMPENSATION**

In consideration of the performance of this Contract, the Department agrees to pay the Professional, as compensation for professional services, 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 an hourly billing rate basis for professional 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 0402 - 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 Contract Documents 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 firm'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 firm'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 monetary 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's Consultant services shall be billed as an authorized reimbursable expense item at a direct cost times the Firm's mark-up percentage, not to exceed 5%, 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, not to exceed 5%. Reimbursement of authorized expense items at direct cost times the firm's mark-up percentage amount is intended only 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.

For Projects further than 100 miles one-way from the Professional firm's office, travel expenses to the project site will be allowed as a reimbursable expense at the State of Michigan's rates, based on DTMB's Vehicle and Travel Services Travel Rate Reimbursement for premium mileage rates in effect at execution of this contract. Mileage allowed will be actual, less 100 miles each way. Other travel expenses are not to be included, unless specifically authorized in writing.

In addition, direct cost reimbursement items may include soil borings, site surveys and any required laboratory testing not performed in house, 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- 440). Payment for each monthly submitted 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 submitted 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.

The State has the right to withhold payment of any disputed amounts until the parties agree as to the validity of the disputed amount. The State will notify the Professional of any dispute within a reasonable time. Payment by the State will not constitute a waiver of any rights as to the Professional's continuing obligations, including claims for deficiencies or substandard Contract Activities. The Professional's acceptance of final payment by the State constitutes a waiver of all claims by the Professional against the State for payment under this Contract, other than those claims previously filed in writing on a timely basis and still disputed.

The State will only disburse payments under the Contract through Electronic Funds Transfer (EFT). Contractor must register with the State at <http://www.michigan.gov/SIGMAVSS> to receive electronic funds transfer payments. If Contractor does not register, the State is not liable for failure to provide payment. Without prejudice to any other right or remedy if may have, the State reserves the right to set off at any time any amount then due and owing to it by Contractor against any amount payable by the State to Contractor under this Contract.

#### **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 consultant's performance, including any person directly or indirectly employed by the Professional or a Consultant, or any person for whose acts the Professional or a consultant 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) The Professional is responsible for the payment of all deductibles.
- (g) 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.
- (h) Workers' Compensation 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.
- (i) Except where the State has approved a subcontract with other insurance provisions, the Professional must require any Consultant to purchase and maintain the insurance coverage required in this Article. Alternatively, the Professional may include a Consultant/Subconsultant under the Professional's insurance on the coverage required in that Section. The failure of a Consultant/Subconsultant to comply with insurance requirements does not limit the Professional's liability or responsibility.
- (j) If any of the required policies provide claims-made coverage, the Professional 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, Professional must purchase extended reporting coverage for a minimum of three (3) years after completion of work.
- (k) Professional must: (a) provide insurance certificates to the Contract Administrator, containing the (1) project file number; (2) the project title; and (3) description of the program, at Contract formation and within 20 calendar days of the expiration date of the applicable policies; (b) require that consultants 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.

<b>Commercial General Liability Insurance</b>	
<u>Minimum 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	Professional 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 04.
<b>Umbrella or Excess Liability Insurance</b>	
<u>Minimum Limits:</u> \$2,000,000 General Aggregate	Professional must have their policy follow form.
<b>Automobile Liability Insurance</b>	
<u>Minimum Limits:</u> \$1,000,000 Per Accident	Professional 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.
<b>Workers' Compensation Insurance</b>	
<u>Minimum Limits:</u> Coverage according to applicable laws governing work activities.	Waiver of subrogation, except where waiver is prohibited by law.
<b>Employers Liability Insurance</b>	
<u>Minimum Limits:</u> \$500,000 Each Accident \$500,000 Each Employee by Disease \$500,000 Aggregate Disease.	
<b>Professional Liability (Errors and Omissions) Insurance</b>	
<u>Minimum Limits:</u> \$1,000,000 Each Occurrence \$2,000,000 Annual Aggregate  <u>Deductible Maximum:</u> \$50,000 Per Loss	
<b>Environmental and Pollution Liability (Errors and Omissions) ***</b>	
<u>Minimum Limits:</u> \$1,000,000 Each Occurrence \$2,000,000 Annual Aggregate	Professional 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 Transportation (upset overturn, spills during loading or unloading, Hazardous Materials Handling, and Non Owned disposal site liability; and (3) endorsed to add "the State of Michigan, its departments, division, agencies, offices, commissions, officers, employees, and agents" as additional insured.

**(\*\*\* Professional to include Pollution Liability Insurance if needed \*\*\*)**

## **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 Subconsultants/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 Subconsultants/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 Subconsultants/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 Subconsultants/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 because of this Contract requirement. The Professional may retain a copy of all Project documents for their files. The professional is to provide unedited CAD files (without Professionals title block) to the Contractor as requested for use in creating Shop Drawings at no additional cost.

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 Bidding Documents and Contract Documents, including all electronic data. If the Professional is in default or this Contract Agreement is terminated, the State shall not use the Contract 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 Contract 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 Contract Documents and deliverables and the right to reuse component information contained in them in the normal course of the Professional's professional 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 monetary 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.

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 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 job or position.
- b) 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.
- c) 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 Department of Technology, Management and Budget, Director of State Facilities Administration within thirty (30) consecutive calendar days of the end of the disputed negotiations, and any decision of the Director of State Facilities Administration 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 of State Facilities Administration 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 the following Articles 1 through 14 and attached appendices. The capitalized defined terms used in this Professional Services 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 modify or interpret the Project Bidding Documents, including architectural and/or engineering 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 SIGMA Funding Information, Project File No., the Contract Order No. Y, and a description of the proposed Addenda; and (5) Specify the date of Addenda issuance. As such, the Addenda are intended to become part of the Project Contract Documents when the Construction Contract is executed by the Professional's recommended lowest responsive, responsible qualified Construction Contractor. An Addendum issued after the competitive construction Bid opening to those construction Bidders who 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 construction Bidder for the Department. Project construction work, as specified, which designates the 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 Professional's Project Contract Documents as advertised, and all Addenda issued before the construction Bid opening, and after the Construction Bid opening, if the Project construction work is rebid without re-advertising. Bidding documents shall consist of: the Phase 500 - Final Design architectural and/or engineering drawings and specifications, any Addenda issued, special, general, and supplemental conditions of the Construction Contract, and modifications, if any, to standard forms provided by the Department. Such forms consist of: the Project advertisement, the Instructions to Bidders, the proposal forms, general, supplemental, and any special conditions of the Construction Contract, and the form of agreement between the Department and the Construction Contractor for the project work requirements.

**BID SECURITY:** The monetary security serving as guarantee that the Bidder will execute the offered Construction Contract or as liquidated damages in the event of failure or refusal to execute the Construction Contract.

**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 for this Contract.

**BULLETIN:** A standard document form (DTMB-0485, Bulletin Authorization No. and the DTMB-0489, Instructions to Construction Contractors for Preparation of Bulletin Cost Quotations for Contract Change Orders) used by the Department to describe a sequentially numbered change in the Project 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-0460, 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.

**CONSTRUCTION INSPECTION SERVICES:** The Professional's field Inspections of the Project during the construction Phase of this Contract which includes but is not limited to: (1) Documenting the quantity and quality of all Project construction work and verifying that the Project construction work is properly completed; (2) Resolve Project problems that are affecting the Project construction work, certify payment requests, process Bulletins, Contract Change Order recommendations, and requests for information (RFI's) in a timely manner as prescribed in the

Department's, current version of MICHSPEC or DC Spec as adopted and modified by the State of Michigan and incorporated into the Construction Contract; and the (3) Inspection of Project construction work completed or in progress by the Construction Contractor to determine and verify to the Department's Project Director and the Department Field Representative that the Project construction work is in compliance with the Professional's design intent and that the Project has been completed by the Construction Contractor in accordance with the Professional's Phase 500 - Contract Documents/architectural and/or engineering drawings and specifications requirements. The Professional shall provide sufficient Inspections of the Project during the construction Phase to administer the construction Phase field and office services as directly related to the degree of Project complexity, up to and including full-time field Inspections. Construction field Inspections shall occur as the construction field conditions and the Project may require and during the regularly scheduled progress (twice monthly) meetings. The Professional shall use for their construction field Inspection services, only personnel having professional expertise, experience, authority, and compatibility with departmental procedures as the Department may approve. The Professional agrees that such characteristics are essential for the successful completion of the Project. Such individuals shall be replaced for cause where the Department determines and notifies the Professional, in writing, of their unacceptable performance.

**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 authorized 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 Prime Professional as may be provided elsewhere in this Contract.

**CONTRACT CHANGE ORDER:** A standard document form (DTMB-0403) issued and signed by the State of Michigan and signed by the Professional which amends the Project Design Professional's Contract Documents for changes in the Appendix 1 – Project/Program Statement or an adjustment in Contract price and/or Contract time, or both.

**CONTRACT DOCUMENTS:** The Professional's Phase 100 – Study, Final Report and Phase 500 - Final Design architectural and/or engineering plans/drawings, specifications, Construction Contract, instructions to construction Bidders, proposal, Bidding Documents, agreement, conditions of the Contract, payment bond, performance/labor and material bond, prevailing wages if applicable, all Addenda, and attachments as may be necessary to comprise a Construction Contract for the Project. Specifications for this Contract will be prepared for Division 00 through 49, in the current version of the Master Format Outline by the Construction Specifications Institute (C.S.I.), as appropriate for the Project.

**CONTRACT MODIFICATION:** A form (DTMB-0410) amending the Contract signed by the Department and the Professional. The preparation of Bulletins and Contract Change Orders resulting from changes in the 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 Professional Services 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 Phase 100 – Study, Final Report and Phase 500 - Contract Documents/architectural and/or engineering study/design errors, omissions or neglect on the part of the Professional.

**CONTRACT ORDER:** A form (DTMB-0402) issued and signed by the State of Michigan authorizing a Professional to: (1) Begin to incur Project expenses and proceed with the Project on-site; and (2) Provide professional services for the fee amount designated in the Phases of the Contract Order. Issuance of the DTMB-0402 certifies that: (1) The State will enter into a Professional Services Contract for the professional services described in the various Phases of this Contract; and that (2) The proper three (3) sets of Certificate of Insurance documents have been received and accepted by the State along with the approval and signing of the Professional's Professional Services Contract by the SFA, DCD Director.

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

**DESIGN MANUAL:** Provides the Professional with information regarding the Department's current "DTMB DCD Design and Construction Standards for Office Construction and Tenant Fit out" and Capital Outlay Design Manual for State Universities, Community Colleges, State Agencies and Professional Services Contractors" review process requirements regarding the uniformity in Contract materials presented to it by the Professional and the State/Client Agency(ies). This manual contains the following noted standards, instructions, and procedures information for: (1) General instructions for planning documents from Phase 100-Study through Phase 500-Final Design; (2) Net and gross area/volume; (3) Project cost format; (4) Outline architectural and engineering specifications; (5) Specifications in documentation Phase; (6) Instructions for proposal; (7) Bidders questionnaire; and the (8) Project job sign

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



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

**DEPARTMENT FIELD REPRESENTATIVE:** An employee of the State under the direction of the Department who provides the Inspection of construction Projects for compliance with the design intent of the Professional's Phase 500 - Contract Documents/architectural and/or engineering drawings and specification requirements and the building construction codes. The Department Field Representative is the liaison between the Construction Contractor, the Professional, and the Project Director. The Project Director, or the Department Field Representative, has the authority to require the Professional to respond to and resolve study/design related problems, construction field problems and to attend Project meetings. Unless delegated by specific written notice from the Department, the Department 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. The Department Field Representative is included throughout all other phases (100 – 400) to provide additional knowledge and input throughout the development of the project.

**INSPECTION:** The Professional and their Consultant firm's on-site and/or off-site examination of the Project construction work completed or in progress by the Construction Contractor to determine and verify to the Department's, Project Director and the Department Field Representative that the quantity and quality of all Project construction work is in accordance with the design intent of the Professional's Phase 500 - Contract Documents/architectural and/or engineering drawings and specifications requirements.

**KEY PRINCIPAL PERSONNEL/EMPLOYEE:** An individual employee of a Professional who is essential for the successful completion of the Project.

**NOTICE OF INTENT TO AWARD:** A written notice to the Construction Contractor, by the Department accepting the Professional's written recommendation to award the construction Bid to the lowest responsive, responsible best value construction Bidder. The Notice of Intent to Award letter will also designate the Contract price and itemize the alternates that the Department, at its sole discretion has accepted.

**PHASE:** A discretely distinguishable step necessary to produce the Project during the Professional providing architectural and/or engineering study, design, and construction administration services.

**PRIME PROFESSIONAL SERVICES CONTRACTOR/PROFESSIONAL:** 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, civil, land surveying, or landscape architecture services in the State of Michigan.

The Prime Professional Services Contractor/Professional 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 study/design 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 Project .

**PROJECT DIRECTOR:** The professional licensed employee of the Department who is responsible for directing and supervising the Professional's services during the life of this Contract. The Project Director, or the Department Field Representative, has the authority to require the Professional to respond to and resolve study/design related problems, construction field problems and to attend Project related meetings.

**PROJECT/PROGRAM STATEMENT:** The Project/Program Statement is provided by the Department and defines the scope of the problem, describes why this Project is desirable, and provides a preferred resolution of the problem.

**PROJECT TEAM:** The Professional, the Project Director, the Department Field Representative, a representative of the State/Client Agency, and others as considered appropriate by the Department.

**PUNCH LIST:** A list of minor construction Project items to be completed or corrected by the Construction Contractor, any one of which do not materially impair the use of the Project work, or the portion of the Project work inspected, for its intended purpose. A Punch List shall be prepared by the Professional upon having made a determination that the Project work, or a portion of the Project construction work inspected, in concert with the Professional, the Construction Contractor, the Department, the Project Director and the Department Field Representative, the State/Client Agency and any construction manager, is substantially complete and shall be attached to the respective DTMB-0455, Certificate of Substantial Completion form. This standard document form is a part of the "DTMB-0460, Project Procedures" documents package.

**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.

**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 architectural and/or engineering design services.

**SUBSTANTIAL COMPLETION:** The form (DTMB-0445) stating that the Project work, or a portion of the Project work eligible for separate Substantial Completion, has been completed in accordance with the design intent of the Professional's Contract Documents to the extent that the Department and the State/Client Agency can use or occupy the entire Project work, or the designated portion of the Project work, for the use intended without any outstanding, concurrent work at the Project work site, except as may be required to complete or correct the Project work Punch List items.

**SUSTAINABLE DESIGN:** The Professional's use of a balance of appropriate materials, products and design methods that reduce the impact to the natural ecosystems and be within the Budget constraints of the Project. Sustainable Design shall be used wherever possible by the Professional in their Project design and an itemized list shall be provided with the Professional's Contract Documents that identifies the processes and products.

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

## **ARTICLE XIV COMPLETE AGREEMENT/MODIFICATION**

This Professional Services 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 to compensate the Professional for correcting, or for responding to claims or litigation for the Professional's Contract Documents/architectural and/or engineering study/design errors, omissions or neglect on the part of the Professional.

**APPENDIX 1**

**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, March 11, 2021
CLIENT AGENCY Department of Technology, Management and Budget		
PROJECT NAME AND LOCATION 2021 Indefinite Scope Indefinite Delivery (ISID) for General Professional Design Services		
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:  
**No Pre-Proposal Meeting or Walkthrough will be held.**

MANDATORY (Check box if Mandatory)

## PROJECT DESCRIPTION/SERVICES REQUESTED

Provide professional architectural, engineering, surveying, or landscape architectural ISID services for a variety of state funded construction projects.

Please NOTE:

- Proposal responses MUST also be uploaded to SIGMA VSS. Please enter \$1.00 total cost as proposal amount. **Additionally, hard copy proposals MUST also be received by 2:00 p.m., local time on the date due to be considered responsive and responsible.**
- 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](mailto:sigma-procurement-helpdesk@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 responsive and responsible.

## NIGP CODES

90607, 90610, 90632, 90638, 90642, 90644, 90646, 90648, 90658, 90672, 92507, 92531, 92540, 92588

## DESIRED SCHEDULE OF WORK

Dependent on the assigned project.

ACCEPTING RFP QUESTIONS UNTIL: 12:00 p.m., local time on Thursday, March 4, 2021

Please do not submit online questions via VSS. ALL questions should be emailed to Tim Hall at [hallt2@michigan.gov](mailto:hallt2@michigan.gov)

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, EGLE, DNR, and MIOASHA), 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)





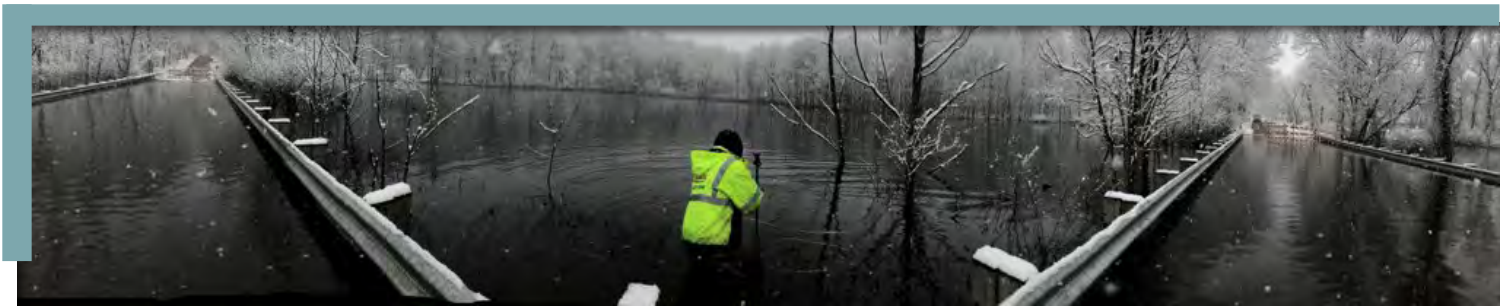
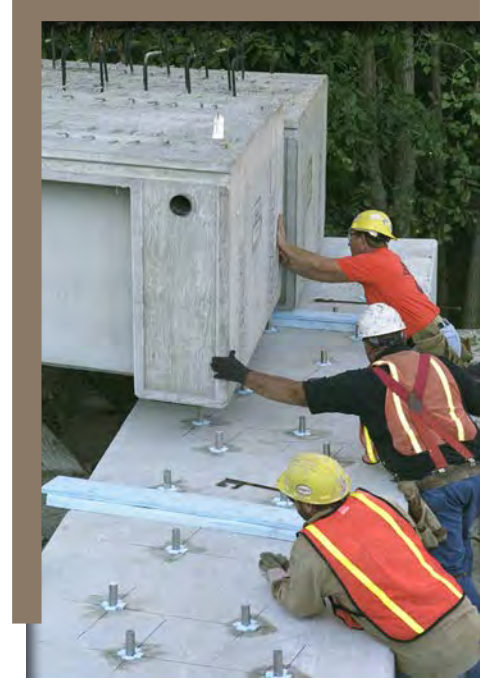
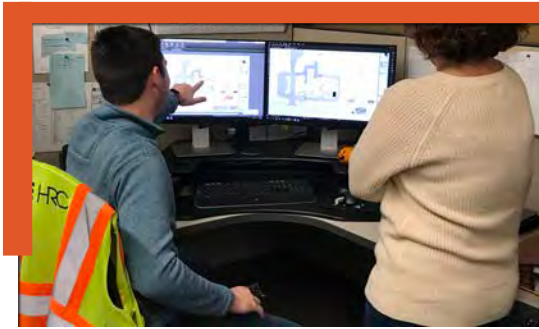
**APPENDIX 2**

**PROFESSIONAL'S PROPOSAL**

# PART I - TECHNICAL

## PROPOSAL FOR 2021 INDEFINITE-SCOPE INDEFINITE-DELIVERY GENERAL PROFESSIONAL DESIGN SERVICES

DUE: MARCH 11, 2021 AT 2:00PM



**SUBMITTED TO:**  
**DEPARTMENT OF TECHNOLOGY,  
MANAGEMENT AND BUDGET**

State Facilities Administration

Attn: Ms. Anne Watros, Department Specialist

Design and Construction Division  
3111 West St. Joseph Street  
Lansing, MI 48917

**PREPARED BY:**  
**HUBBELL, ROTH &  
CLARK, INC.**

□□□ □□□□Dr□

Bloomfield Hills, MI 48302-0360

Phone: 248-454-6300  
Fax: 248-454-6312

**ENGINEERING.**

**ENVIRONMENT.**

**EXCELLENCE.**



March 11, 2021

Department of Technology, Management and Budget  
State Facilities Administration  
Design and Construction Division  
3111 West St. Joseph Street  
Lansing, MI 48917

Attn: Ms. Anne Watros, Department Specialist

Re: Proposal for 2021 Indefinite-Scope Indefinite-Delivery  
General Professional Design Services

HRC Job No. 20210142

Dear : Ms. Watros,

Hubbell, Roth & Clark, Inc. (HRC), is pleased to submit this proposal for professional engineering services as requested under the RFP for ISID General Professional Design Services including Architecture, Engineering, Landscape Architecture for various project throughout Michigan.

HRC is a Michigan based multi-disciplined engineering firm that offers a vast array of capabilities to meet and exceed the needs of our clientele. For over 105 years, we have provided comparable services to clients throughout Michigan, and we continue to refine our structure and approach to best match the needs of each client we serve. We believe that our firm will prove to be a highly qualified, ethical, and valuable partner to the DTMB for the following reasons:

- ≡ Our depth of experience and a wide range of technical expertise allows HRC to provide professional and cost-effective services for virtually any type of architectural, engineering and construction engineering project you might encounter.
- ≡ As a testament to our commitment to individual attention, HRC has a Principal of the firm (Mr. Roland N. Alix, PE) assigned to monitor the account's activities and actively participate during project scoping and administration. This role provides DTMB and State Agency managers with direct access to a Principal of the firm with an interest in all the firm's resources.
- ≡ We are proposing a highly qualified staff who will be available to meet various architectural and engineering needs that may arise through the DTMB for various State Agencies. Our staff would be available to serve on short notice and an as-needed basis. Our proposed project team regularly provides architectural and engineering services to various clients requiring services comparable to Michigan's various State Agencies including: Oakland and Ferris State Universities, various municipal DPW Departments, OCWRC, GLWA among many others. We understand the need to deliver our services efficiently, responsively, and cost-effectively.



**Bloomfield Hills**  
555 Hulet Drive  
Bloomfield Hills, MI 48302  
248-454-6300

**Delhi Township**  
2101 Aurelius Rd.  
Ste. 2A  
Holt, MI 48842  
517-694-7760

**Detroit**  
535 Griswold Street  
Buhl Building  
Suite 1650  
Detroit, MI 48226-3698

**Howell**  
105 W. Grand River  
Howell, MI 48843  
517-552-9199

**Jackson**  
401 S. Mechanic St.  
Suite B  
Jackson, MI 49201  
517-292-1295

**Kalamazoo**  
834 King Highway  
Suite 107  
Kalamazoo, MI 49001  
269-665-2005

**Lansing**  
215 S. Washington  
SQ  
Suite D  
Lansing, MI 48933  
517-292-1488

- ≡ HRC excels in finding ways to maximize our client's infrastructure improvement resources by utilizing emerging technologies, considering life-cycle costs for recommended improvements, and developing contract documents that minimize project overruns. Additionally, we have dedicated professionals leading our clients' asset management charge, which helps to maximize owner's resources for maintaining and updating their assets.

Please note throughout our Proposal and in the Questionnaire for Professional Services we utilize the word "State". This adjective serves to summarize the relationship between DTMB and State Agencies and their personnel for a given project.

Mr. Roland N. Alix, PE (Vice President), will serve as Principal in Charge of all projects and will be the authorized negotiator. Ms. Melissa Coatta, PE (Associate), has over 20 years of experience managing infrastructure projects and will serve as Account Manager and the Primary Point of Contact for day-to-day activities with the DTMB and the State Agencies.

We sincerely appreciate the opportunity to submit this proposal qualifications to perform this work and hope that you find our response well suited for these services. Should you have any questions or require any additional information, please do not hesitate to contact me via email at [ralix@hrcengr.com](mailto:ralix@hrcengr.com) or by phone at (248) 454-6385.

Very truly yours,  
HUBBELL, ROTH & CLARK, INC.



Roland N. Alix, PE  
Principal/Vice President

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# 1. GENERAL INFORMATION AND PROJECT TEAM

## FIRM BACKGROUND

HRC is a 106-year old, privately held, Michigan-headquartered consulting engineering firm that specializes in infrastructure, the environment, and enhancing clients' physical facilities. HRC has been involved in the design and construction of many iconic Michigan projects that have supported the growth and prosperity of our state.

We are 266-plus strong: engineers, scientists, architects, surveyors, and technicians, who strive to remain focused on our clients' desired outcomes, while preparing superior work products. We are hands-on problem solvers.

Our flexible staffing abilities allow our project managers to staff as needed for project requirements. HRC is by design, agile enough to tackle small quick turn-around assignments, as well as large complex projects.

HRC is a multi-disciplined consulting engineering firm with capabilities in the following areas:

≡ Architectural Services	≡ Process Engineering	≡ Construction Services/Material Testing
≡ Site/Civil Engineering	≡ Wastewater Treatment Plants	≡ Traffic Engineering
≡ Environmental Engineering	≡ Sanitary Sewer Systems	≡ Roads & Bridge Design
≡ Landscape Architecture	≡ Water Transmission & Treatment	≡ Easement/Right of Way Services
≡ Structural Engineering	≡ Asset Management	≡ Surveying
≡ Industrial Facilities Design	≡ CSO Retention & Treatment	≡ GIS
≡ Instrumentation & Control	≡ Wetlands/Watershed Management	≡ Electrical Engineering/Lighting



## REPUTATION FOR PROFESSIONAL INTEGRITY AND COMPETENCE

Our philosophy is reinforced through our management group with our employees so that our clients and their respective projects benefit directly daily. These inherent values have served us well for over 100 years, and we believe they will continue to do so in our future. We consider our clients to be a part of our culture, and they appreciate our values and commitment.

In the over 100 years HRC has been in business and considering the tens of thousands of projects we have worked on, we are not aware of a single legal claim made against our ethics or integrity, nor has HRC ever experienced bad publicity for such behavior.

It is the mission of Hubbell, Roth & Clark, Inc. to consistently provide our clients with services that meet or exceed their expectations at a fee that is reasonable and competitive and that produces a profit sufficient to ensure the stability, development, and growth of our firm.

To accomplish our mission, every employee must continuously strive to uphold these values:

- ≡ To always deal honestly and fairly
- ≡ To consistently improve our methods, techniques, and knowledge in order to better serve our clients' needs
- ≡ To give our clients full value on every service provided
- ≡ To always handle our clients' requests promptly
- ≡ To accept our clients' complaints with patience, calmly and courteously, and make a full and satisfactory explanation, exercising tact at all times
- ≡ To take a personal interest and initiative in meeting our clients' needs within the realm of our professional activity
- ≡ To guard and protect confidential client information
- ≡ To be professional in thoughts, attitude, and action when discussing our competition – If it is not possible to say something good about the competition, say nothing at all

## ACHIEVEMENTS

HRC is proud of its many engineering achievements and has received numerous awards from the American Council of Engineering Companies (ACEC), American Society of Civil Engineers (ASCE), American Public Works Association (APWA), Michigan Concrete Association (MCA) and other professional organizations for innovative and cost-effective projects. A notable example is the selection by the ASCE/Michigan of the HRC designed 1967–1985 upgrade of the Detroit Wastewater Treatment Plant as one of Michigan's Top Ten Civil Engineering Projects of the 20th Century.

*Award-Winning State Street Renovation*



The MCA Parking Lot Award and the Farmington Hills' **Nine Mile Road and Halstead Road Intersection** Project earned the APWA/Michigan 2020 Project of the Year Award along with the Michigan Concrete Association award in the Intersections category.

*Award-Winning Geddes Avenue & Sanitary Improvement*



The Delhi Charter Township's **Realize Cedar**, which earned the 2018 Transportation Achievement Award from ITE.

*Award-Winning Realize Cedar*



### Additional HRC Awards

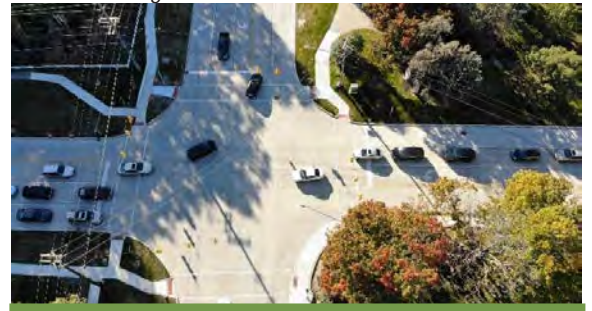
- ≡ 2020 MCA - Special Innovative Award - Innovation Hills, City of Rochester Hills,
- ≡ 2020 MCA - Arterials Award - The University Drive Rehabilitation, City of Pontiac
- ≡ 2020 MWEA Pump Award - Wastewater Treatment Plant, City of Warren
- ≡ 2020 MWEA Pump Award - Wastewater Treatment Plant, City of Petoskey
- ≡ 2019 APWA Award - Sanitary Forcemain in Market Avenue Water Resource Recovery Facility, City of Grand Rapids

*Award-Winning 16-Inch Transmission Main Rehabilitation*



HRC's recent awards include the Groundbreaking Trenchless Technology Southeastern Oakland County Water Authority (SOCWA) 16-Inch Transmission Main Rehabilitation on Coolidge Highway Project which earned the 2020 ACEC/Michigan Engineering Merit Award, **City of Howell State Street Renovation**, earned both the APWA/Michigan 2020 Project of the Year Award.

*Award-Winning Nine Mile and Halstead Road Intersection*



The City of Ann Arbor's **Geddes Avenue and Sanitary Improvement** Project, earned the ACEC 2019 Engineering Merit Award; and the **City of Troy's Historical Village ADA Ramps** received the APWA Historic Restoration/Preservation Award (For Projects Under \$1 Million).

*Award-Winning Troy Historical Village ADA Ramps*



HRC has been recognized as a **2020 Top Workplace** by the Detroit Free Press followed by being awarded as a **2021 National Top Workplace in the USA**. We are also a **Top 50 Trenchless Technology Design Firm**, and an ENR **Top 500 Design Firm**. Recently, HRC received the honor of being named one of the **Cool Places to Work in Michigan** by Crain's Detroit Business magazine.



## 2. UNDERSTANDING OF PROJECT AND TASKS

The following is a summary of the work scope of a typical project authorized under this process and a summarized plan for accomplishing our work. Please note that we have made this list general because each project is expected to be variable in scope and magnitude and the assigned tasks will likely change as well.

As a full service consulting engineering firm, HRC's understanding and experience in many varied facets of professional design services provides us a unique advantage, in that we understand how to design and implement site plans addressing the issues outlined above in new construction and rehabilitation projects, either as a portion or the focus of HRC's scope of work.

Professional services required and typically provided by HRC, as consultants for the DTMB and the applicable State Agency could include any or all of the following:

### STUDY PHASE

#### PHASE 100

This phase of work would be performed by competent professionals required in the initial definition and development of a specific project. Items of work typically performed in this phase include:

- ≡ Project kick-off meeting with key stake holders
- ≡ Data collection
- ≡ Analyses of available information
- ≡ Provide cost estimates if applicable
- ≡ Prepare a report at 50% complete
- ≡ Revise the report based on State review
- ≡ Prepare 90% and Final Report

### PROGRAMMING PHASE

#### PHASE 200

This phase of work would be further definition and development of a specific project if the Study Phase is included. Items of work typically performed in this phase include:

- ≡ Project kick-off meeting with key stake holders
- ≡ Study, assess, identify and evaluate the needs of the project
- ≡ Preparation of preliminary budget cost estimates and schedules or review previously developed cost estimates and revise if needed
- ≡ Submittal 50% report for State approval
- ≡ Incorporate comments and prepare 90% and Final report
- ≡ Meetings/conferences with various approving agencies and with utility companies affected

### SCHEMATIC DESIGN PHASE

#### PHASE 300

This phase of work is required to prepare and present preliminary and schematic engineering design services. This may also include Environmental Assessments, Feasibility and Scoping studies. Typically, these services include the following items:

- ≡ Project kick-off meeting with key stake holders
- ≡ Preparation of preliminary engineering studies, designs and configurations. These will be submitted for review and approval by the State and other required agencies
- ≡ Presentations of reports, drawings, plans, schematic design and/or design development drawings, etc. to various departments, stakeholder groups, public officials and the public as required
- ≡ Planning for and obtaining additional field information beyond surveys and geotechnical information
- ≡ Identifications of preliminary right-of-way impacts and develop ROW sketches and easement descriptions
- ≡ Identification of additional impacts including
  - Wetlands
  - Hazardous Materials
  - Private and public utilities

## PHASE 300

- Review and summarization of applicable zoning and building code requirements
- Develop traffic studies and traffic plans
- Develop plans of action for obtaining required local, state and federal agency approvals and permits
- Project refinement based on reviews conducted, including:
  - Schematic designs
  - Cost estimates
  - Project schedules
- Preparation of written reports as required that substantiate the project development
- Written confirmation to the State that an internal HRC quality review has been performed. Conducting meetings throughout the preliminary project phase including kick-off meeting, technical review meetings, public information meetings, stakeholder meetings and mailings.

## DESIGN DEVELOPMENT PHASE

## PHASE 400 & PHASE 500

Services performed in this phase of the work consist of professional services as required to prepare construction drawings, specifications and bid documents for a project. The contract documents, plans and specifications will be in accordance with the current State of Michigan Standards typically utilizing AutoCAD Civil 3D. This phase would commence upon Agency approval of the Schematic Engineering or design report and would include Preliminary and Final Design

- Project meetings
- Public presentations, as required, including renderings, presentation boards, and associated materials
- Furnishing engineering data, for finalizing applications for regulatory permits required by Local, State, or Federal authorities
- Finalizing of detailed construction plans
- Hosting meetings with private and public utilities to mitigate impacts and coordinate design efforts
- Preparation of construction cost estimates, specifications Program Applications and contract documents
- Furnishing the City copies of drawings, specifications, contract documents at approximately 50% and 90% complete
- Developing 100% complete plans along with a documented QA/QC of the final plans
- Assist the State in securing bids, tabulating and analyzing bid results and furnishing recommendations on award of construction contracts
- Assistance in the preparation of formal contract documents for the award of construction contracts

## CONSTRUCTION ENGINEERING/INSPECTION PHASE SERVICE

The following phases of the work would be performed during the actual construction of projects, and would be performed by HRC staff to ensure the work has been completed in accordance with the approved construction drawings and specifications and will be consistent with sound engineering practices. Services to be performed in the phase include:

## CONSTRUCTION ADMINISTRATION-OFFICE SERVICES

## PHASE 600

- Project Meetings
- Consultation and advice to the State during construction
- Track contractor payment and schedule
- Preparation of elementary sketches, supplementary sketches, and change order documentation
- Checking detailed construction drawings and shop and erection drawings submitted by contractors for compliance
- Reviewing laboratory, shop and mill test reports of material and equipment
- Preparing record drawings and other submittals
- Monitor materials testing reports and note any non-compliance
- Preparing As-built documents and potentially O&M manuals for the project upon system start-up, in accordance with State standards

# CONSTRUCTION ADMINISTRATION-FIELD SERVICES

## PHASE 700

- ≡ Preconstruction meeting and meeting minutes
- ≡ Conducting on site progress meetings
- ≡ Conducting field visits to the project site in accordance with the scope of services to observe work in progress; and directing the contractor to make changes; when authorized by the State
- ≡ Construction layout as requested
- ≡ Observing initial operation of the project and/or of performance tests required by specifications; and directing the contractor to make changes in the work, when authorized by the State
- ≡ Develop a punch-list and conduct inspection of substantial completion with the State
- ≡ Develop as-built plans with information from inspectors Daily Reports and utilizing survey data if needed

Under this Task, HRC will provide construction observation services for construction projects, including providing IDRs. The importance of quality construction observation cannot be overstated. This is particularly true in the areas where much of the work will be underground.

All of our field technicians, who have an average of 20 years' experience, will work under the direction of licensed professional engineers in the State of Michigan. Our technicians hold various inspection certifications including: concrete pavement construction, bridge construction, bituminous pavement construction and field and laboratory testing of concrete and bituminous materials.

## SUMMARY

This section outlines the professional services HRC will provide the State to help successfully complete a typical project. For additional examples of HRC's experience, please refer to Section 6. The project examples are just a small representation of HRC's experience in the areas of work necessary to successfully execute this work for the State. Given these project examples across many areas of expertise required, HRC is particularly well suited to provide the services requested.

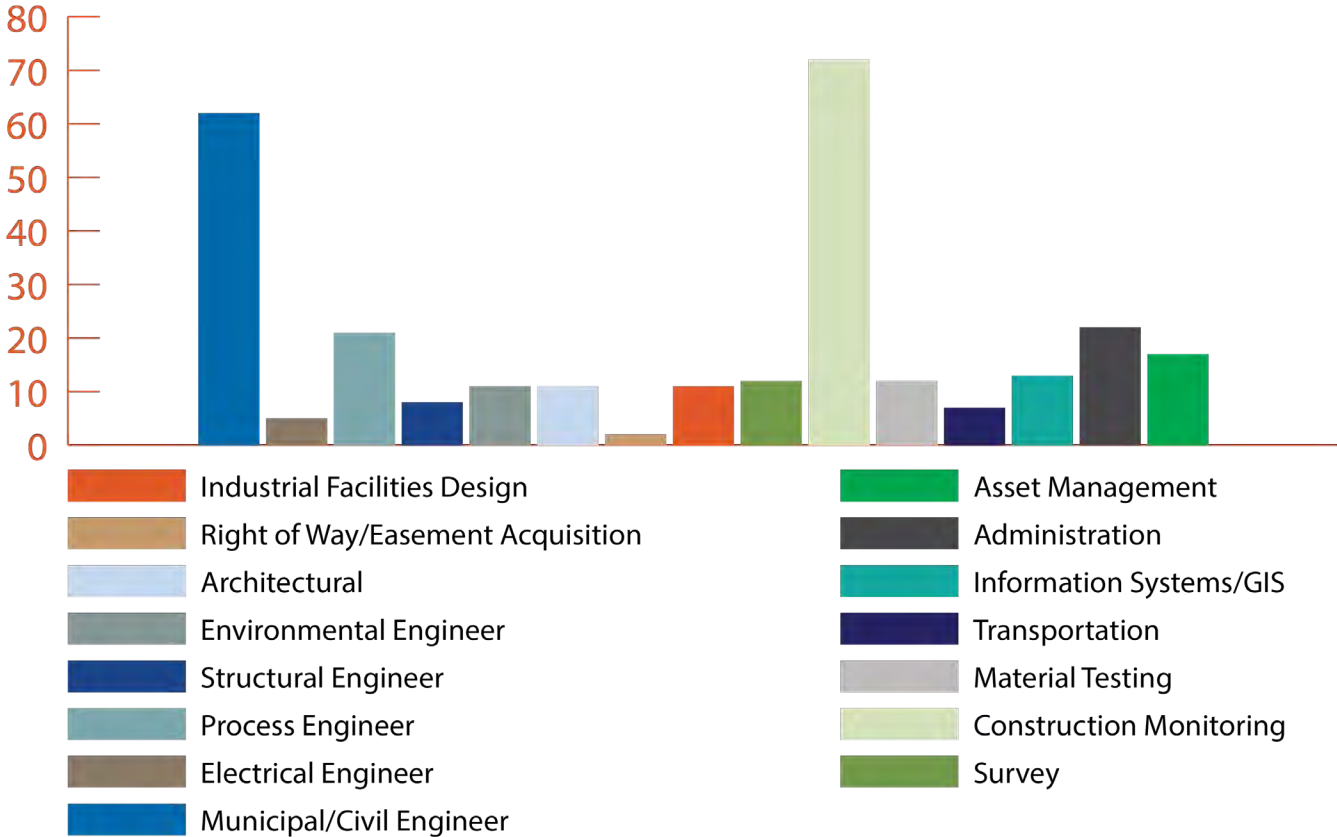


# 3. PERSONNEL

HRC has assembled an experienced team of highly qualified professionals, technicians, and support staff to provide Professional Design Services to the DTMB. Our key personnel are identified in this section.

HRC also has a complement of graduate engineers who continue to grow and develop cutting-edge technology and design models for our projects to support our leaders. The key personnel, whom the majority live locally, will be the leaders of the multiple disciplines required to complete quality, timely, and cost-efficient projects for the City. In addition to these key personnel, HRC has a staff of over 260 employees. Included are engineers, surveyors, designers, and other technical support staff that are an invaluable part of our team. HRC's depth and expertise should provide the State with confidence that our team has the resources needed to complete successful projects on an as-needed basis. In addition, this depth ensures that the HRC culture is maintained. We summarized our current staff by the department in Figure 1.

Figure 1. Additional HRC Staff by Discipline







Roland Alix directs and is an integral participant on projects for many of the firm's public and private clients inclusive of industrial and manufacturing. He has extensive experience administering the design and construction of various project types including road and bridge rehabilitations, municipal utility relocation, site development, manufacturing building modifications, shipping/distribution facilities, spill containment, and aboveground and underground storage tanks.

Mr. Alix has participated on and managed a wide array of new facility and renovation projects involving vehicle traffic and flow studies, parking lots, storm, sanitary and process sewer projects, pump stations, waste treatment plants, roof assessments, site security lighting, generators and HVAC building improvements.

Mr. Alix's professional expertise includes a vast number of past and current general engineering and infrastructure improvement projects for many local municipalities, as well as Oakland County Parks & Recreation, Michigan Department of Technology, Management and Budget (DTMB) and private manufacturing and waste-handling clients.

<p><b>EDUCATION</b>          BS, Civil Engineering          Michigan State University 2003</p> <p><b>EXPERIENCE</b>          With HRC since 2005          15 Years of Experience</p>	<p><b>PROFESSIONAL REGISTRATION/CERTIFICATION</b>          Professional Engineer          Michigan No. 57100</p>	<p><b>AFFILIATIONS</b>          American Society of Civil Engineers          American Public Works Association Member          American Council of Engineering Companies —          Scholarship Committee</p>
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**Professional Experience**

**MUNICIPAL CONSULTING**

- ≡ Road, Water and Sewer Improvement Projects, Traffic Impact Studies, CDBG Sidewalk Improvements, Preventative Pavement Maintenance Programs, SAW Asset Management, GIS Analysis, Combined Sewer Capacity Studies, Parks and Recreation Upgrades, Water Reliability Studies – [City of Berkley](#)
- ≡ MS4 Permitting, Municipal Building Assessments and Improvements, Bridge Inspections, SAW Asset Management, MDNR Grant Applications – [City of Linden](#)
- ≡ Residential SAD roadway improvements, Water Treatment Plant & Distribution Improvements, Parks and Recreation Upgrades, Water Reliability Studies, Site Plan Reviews – [Hartland Township](#)
- ≡ Public Utility Improvements, Sidewalk Extension Projects, Water Reliability Studies – [Highland Township](#)
- ≡ Site Plan Reviews, Municipal Building Roof Assessments, Industrial SAD Sanitary Sewer Connections, Pedestrian Facilities, Municipal Parking Lot Improvements, MS4 Permitting – [Milford Township](#)
- ≡ Residential SAD roadway improvements, easement/right of way acquisitions, Residential SAD storm water improvements – [West Bloomfield Township](#)
- ≡ ADA Accessibility Survey and Design Renovations – [Canton Township](#)

**MUNICIPAL FACILITIES**

- ≡ New Police Headquarters Building – [Battle Creek Police Department](#)
- ≡ Firing Range Addition – [Novi Police Department](#)

**PARKS AND RECREATION**

- ≡ Innovation Hills – [City of Rochester Hills](#)
- ≡ Utility Improvements for Groveland Oaks County Campground – [Oakland County Parks & Recreation](#)

**INDUSTRIAL FACILITIES**

- ≡ Containment Studies & Improvements
- ≡ Facility & Utility Improvements
- ≡ Rail Transfer Facility Studies, Willow Run Yard
- ≡ Industrial Waste Water Treatment Plant Improvements

**ROADS/BRIDGES**

- ≡ Harvard Road Reconstruction – [City of Berkley](#)
- ≡ Main Street Rehabilitation – [Village of Armada](#)
- ≡ Coolidge Highway Rehabilitation, 11 Mile Road to 12 Mile Road – [City of Berkley](#)

- ≡ Orion Road Bridge Replacement over Paint Creek – Road Commission for Oakland County
- ≡ Ambassador Bridge Gateway Project – Detroit International Bridge Company
- ≡ 10 Mile Road Rehabilitation, Telegraph Road to Evergreen Road – City of Southfield
- ≡ Williams Lake Road Widening – Road Commission for Oakland County
- ≡ Nine Mile Road Widening – Road Commission for Oakland County

WASTEWATER COLLECTION/TREATMENT

- ≡ Secondary Effluent Pump Replacement – City of Ann Arbor Wastewater Treatment Plant
- ≡ Headworks Improvements – Cleveland, Ohio Wastewater Treatment Plant

WATER TREATMENT/DISTRIBUTION

- ≡ Ambassador Bridge Gateway Project, Stormwater Pump Station – Detroit International Bridge Company

TRAFFIC ENGINEERING/INTELLIGENT TRANSPORTATION SYSTEMS

- ≡ Harvard Road Reconstruction – City of Berkley
- ≡ Design Build 9 Dynamic Message Signs, Fiber Optic Cable and Related Infrastructure – J. Ranck Electric, Inc.
- ≡ MDOT North and Superior Region Design Build, Installation of Environmental Sensor Stations and Dynamic Message Signs – J. Ranck Electric, Inc.



While pursuing her engineering degree, Melissa Coatta began working for Hubbell, Roth & Clark, Inc. as a field observer in 2001. She hired on full-time in 2002. Ms. Coatta is responsible for preparation of plans, profile drawings and bid specifications, preparation of permit applications, stormwater drainage design, environmental/green infrastructure, water main replacement, sanitary sewer replacement, road rehabilitation design, preparation of cost estimates, supervising construction activities, and administering construction contracts for private, medical, education, and municipal clients.

<p><b>EDUCATION</b>          BS, Civil Engineering          Michigan State University, 2002</p> <p><b>EXPERIENCE</b>          With HRC since 2001          19 Years of Experience</p>	<p><b>PROFESSIONAL REGISTRATION/CERTIFICATION</b>          Professional Engineer          Michigan No. 53704</p>	<p><b>AFFILIATIONS</b>          American Society of Civil Engineers (ASCE)          Commercial Real Estate Women (CREW)</p>
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**Professional Experience**

**EDUCATIONAL**

- ≡ [Oakland Community College](#) – Managed, and designed plans and specifications for various site locations including parking lot reconstruction and storm water management.
- ≡ [Ferris State University](#) – Managed, administrated, and designed plans and specifications for various site locations including parking lot reconstruction and storm water management.

**ROADS/BRIDGES**

- ≡ 2015–2019 Road Improvement Program – [City of Bloomfield Hills](#)
- ≡ 2003–2016 Major and Local Street Programs – [City of Southfield](#)
- ≡ 2004–2009 Road Reconstruction Program – [City of Rochester](#)
- ≡ 2003–2011 Bituminous Resurfacing Program – [City of Rochester](#)
- ≡ Utica Road Reconstruction – [City of Utica](#)
- ≡ Safe Routes to School – [City of Southfield](#)

**WATER RESOURCES/WATERSHED MANAGEMENT**

- ≡ Briarwood Mall, Pond No. 4 Cleanout – [Simon Companies](#)
- ≡ Sylvan Glen, Phase II – [City of Troy](#)
- ≡ Aquatic Habitat Restoration Project – [City of Troy](#)
- ≡ Meadowbrook Culvert Repair, Pavilion Culvert Replacement, Sheep Barn Drainage Improvements – [Oakland University](#)
- ≡ Crittenton Hospital Storm Sewer Detention Basin – [City of Rochester](#)

**WATER TREATMENT/DISTRIBUTION**

- ≡ 2002 Watermain Program, Phase 2 – [Village of Clarkston](#)
- ≡ 2015–2019 Road Improvement Program – [City of Bloomfield Hills](#)
- ≡ 2003–2016 Major and Local Street Programs – [City of Southfield](#)
- ≡ 2004–2009 Road Reconstruction Program – [City of Rochester](#)

**INDUSTRIAL FACILITIES**

- ≡ [EWI Worldwide](#) – Managed, administrated, and designed plans and specifications for various site locations including parking lot reconstruction and storm water management.
- ≡ [MAHLE Industries](#) – MAHLE North America Headquarters

**PRIVATE DEVELOPMENT**

- ≡ Subaru Research and Development, Van Buren Township – [ACS](#)
- ≡ Veoneer USA, Southfield – [Jonna Companies](#)
- ≡ Parking Lot Expansion, Novi – [Brightmoor Church](#)

- ≡ Rose Senior Living at Providence Park – Edward Rose and Sons

COMMERCIAL DEVELOPMENT

- ≡ Schostak – Project Manager for the design of various projects, including parking rehabilitation, new commercial development, and new residential development.
- ≡ Lautrec – Project Manager for the design of various projects, including parking rehabilitation, new commercial development, and new residential development.

MEDICAL

- ≡ Ascension Health – Project Manager for the design and construction administration of various projects, including parking rehabilitation, building and parking lot expansions, storm water study, and stormwater management at hospitals and medical office buildings
- ≡ Henry Ford Health Services – Project Manager for the design of various projects, including parking rehabilitation, storm water study, and stormwater management at hospitals and medical office building.



Randy Wilcox has over 37 years of varied experience in the civil/municipal engineering field. He has served as the dedicated Engineer for several Michigan municipalities. His project experience includes water and wastewater treatment, collection/distribution projects, local street and utility projects, master utility planning, storm drain, and stormwater management. He has also managed MDOT and local agency transportation projects during both design and construction activities. His recent experience has been in technical sales for specialty dewatering and sediment management for marine dredging projects. Mr. Wilcox excels at effective communication with involved parties on complex projects. He has been involved with projects from simple small municipal projects to large and complex municipal and transportation projects. He also has worked on projects with alternate project delivery methods such as design/build.

<p><b>EDUCATION</b>          BS, Civil Engineering          Michigan Technological University, 1984</p> <p><b>EXPERIENCE</b>          With HRC since 2019          37 Years of Experience</p>	<p><b>PROFESSIONAL REGISTRATION/CERTIFICATION</b>          Professional Engineer          Michigan No. 6201034587</p> <p>Storm Water Management Operator (C11499)          OSHA HAZWOPER 40 Hour</p>	<p><b>AFFILIATIONS</b>          ADale Carnegie Leadership Training          ISO Internal Auditor Training          TenCate University (Geosynthetics)          CEC/M Management Training</p>
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**Professional Experience**

WASTEWATER COLLECTION/TREATMENT

- ≡ Sisson Street Sanitary Sewer and Pump Station – [City of Battle Creek](#)
- ≡ Wentworth Avenue Trunk Sewer Lining Evaluation – [City of Battle Creek](#)
- ≡ WWTP Improvements – [City of Hastings](#)
- ≡ WWTP Expansion – [Village of Caledonia](#)
- ≡ Broadmoor Avenue and 76th Street Collection System – [Caledonia Township](#)
- ≡ Campau Lake Treatment and Collection Systems – [Caledonia Township](#)
- ≡ North Kent Landfill Force Main Extension – [Kent County Department of Public Works](#)
- ≡ Wastewater Treatment Plant Expansion – [Wheatland Township/Leprino Foods](#)
- ≡ Wastewater Treatment Plant Expansion – [Leprino Foods Allendale](#)

WATER TREATMENT/DISTRIBUTION

- ≡ Watermain Replacement Project– [City of Cheboygan](#)
- ≡ Water System Improvements – [City of Cheboygan](#)
- ≡ Water System Funding Assistance – [Perry Township](#)
- ≡ Water Distribution and Storage System – [Caledonia Township](#)
- ≡ Waterline extensions – [Village of Fowler](#), [Village of Pewamo](#)

WATER RESOURCES/WATERSHED MANAGEMENT

- ≡ Grand River Cap Removal Project – [City of Jackson](#)
- ≡ Depot Town Frog Island Park Improvements – [City of Ypsilanti](#)
- ≡ Storm Water Master Plan – [Caledonia Township](#)

ROADS/BRIDGES (INCLUDING MDOT)

- ≡ Southern Road Safety Project – [Branch County Road Commission](#)
- ≡ Division Road Improvements – [Village of Sherwood/Branch County Road Commission](#)
- ≡ US-23 in Alcona County – [Michigan Department of Transportation](#)
- ≡ M-99 in Ingham County – [Michigan Department of Transportation](#)
- ≡ Countywide LAP Projects – [Branch County Road Commission](#)
- ≡ Solon/Nichols Roads – [Road Commission of Kalamazoo County](#)
- ≡ G Avenue Safety Project - [Road Commission of Kalamazoo County](#)
- ≡ Michigan Street/College Ave. Intersection – [City of Grand Rapids](#)
- ≡ 36th Street Extension near Airport – [Kent County Road Commission](#)
- ≡ Centerline and Pinkney Roads – [Ionia County Road Commission](#)
- ≡ M-45 construction engineering multiple phases in Ottawa County – [Michigan Department of Transportation](#)

- ≡ M-45 in Ottawa County design – Michigan Department of Transportation
- ≡ M-6 construction engineering – Michigan Department of Transportation
- ≡ Roundabout at Parkland School – City of Jackson
- ≡ Giddings and Lake Angeles Roads – City of Auburn Hills

TRAFFIC ENGINEERING/TRAFFIC STUDIES

- ≡ Five-year as-needed traffic engineering support contract – City of Grand Rapids
- ≡ West Side Bike Lane Implementation – City of Grand Rapids
- ≡ Ionia Bike Lane Implementation – City of Grand Rapids
- ≡ Study for the conversion of Ottawa and Ionia from One-way to Two-way Traffic – City of Grand Rapids

MUNICIPAL CONSULTING

- ≡ As-needed consulting services – City of Big Rapids
- ≡ Township Engineer – Caledonia Township

PARKS AND RECREATION

- ≡ Musketawa Trail, Phase III – City of Muskegon
- ≡ Howard Street Pathway – City of Kalamazoo





Albert Mickalich joined HRC in 2015. His primary work experience includes the site engineering design and land surveying of commercial, industrial and residential projects. His responsibilities include managing multi-discipline projects, design of stormwater, sanitary sewer, water main and the grading and paving systems that support the proposed project improvements. Mr. Mickalich has experience in the design of site improvements for higher education, industrial, commercial, multi-family and residential projects. With his communication skills and knowledge of designs in stormwater management, sanitary sewers, potable water, grading and paving, along with construction management and oversight, Mr. Mickalich ensures clients' expectations are exceeded.

<p><b>EDUCATION</b>                  BS, Civil Engineering                  Michigan Technological University</p>	<p><b>EXPERIENCE</b>                  With HRC since 2015</p>	<p><b>PROFESSIONAL REGISTRATION/                  CERTIFICATION</b>                  Professional Engineer,                  Michigan No. 36979</p>
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**Professional Experience**

COMMERCIAL DEVELOPMENT

- ≡ Eleven Mile New School South Lyon Schools – [Integrated Design Solutions](#)
- ≡ South Lyon High School South Lyon Schools – [Integrated Design Solutions](#)
- ≡ Eleven Mile Elementary Row South Lyon Schools – [Integrated Design Solutions](#)
- ≡ Dolsen Elementary South Lyon Schools – [Integrated Design Solutions](#)
- ≡ Sayre Elementary South Lyon Schools – [Integrated Design Solutions](#)
- ≡ Brummer Elementary South Lyon Schools – [Integrated Design Solutions](#)
- ≡ Millennium Middle School South Lyon Schools – [Integrated Design Solutions](#)
- ≡ Salem Elementary South Lyon Schools – [Integrated Design Solutions](#)
- ≡ Plans and Specifications Speedway LLC. Grand Ledge – [Yaldo Construction](#)
- ≡ Dolsen Portables and Sanitary Connection South Lyon Schools – [Integrated Design Solutions](#)
- ≡ Early Childhood Center South Lyon Schools – [Integrated Design Solutions](#)
- ≡ Bartlett Elementary South Lyon Schools – [Integrated Design Solutions](#)
- ≡ East High School South Lyon Schools – [Integrated Design Solutions](#)
- ≡ Centennial Middle School South Lyon Schools – [Integrated Design Solutions](#)

PARKING, PAVEMENT AND STREET LIGHTING

- ≡ Plans and Specifications Library Parking Lot Reconstruction – [N/A](#)
- ≡ Plans and Specifications for Library Parking Lot Reconstruction – [Clarkston Independence District Library](#)
- ≡ Plans and Specifications Seymour Lake Cemetery Parking Lot Addition – [Township of Brandon](#)

PRIVATE DEVELOPMENT

- ≡ Plans and Specifications Shenandoah Country Club – [Shenandoah Country Club](#)

WATER RESOURCES/WATERSHED MANAGEMENT

- ≡ Construction Administration Partridge Creek Habitat Restoration – [Macomb County Public Works](#)
- ≡ EPA Construction Administration Clinton River Spillway Phase I Implementation – [Macomb County Public Works](#)
- ≡ NOAA Program Management Clinton River Spillway Phase I Implementation – [Macomb County Public Works](#)
- ≡ Construction Administration McBride Drain Habitat Restoration – [Macomb County Public Works](#)
- ≡ Design Administration McBride Drain Habitat Restoration – [Macomb County Public Works](#)
- ≡ NOAA Construction Administration Clinton River Spillway Phase I Implementation – [Macomb County Public Works](#)
- ≡ Permitting McBride Drain Habitat Restoration – [Macomb County Public Works](#)
- ≡ EPA Public Relations Clinton River Spillway Phase I Implementation – [Macomb County Public Works](#)
- ≡ Bidding Phase Partridge Creek Habitat Restoration – [Macomb County Public Works](#)
- ≡ Design Partridge Creek Habitat Restoration – [Macomb County Public Works](#)
- ≡ EPA Grant Public Relations Partridge Creek Habitat Restoration – [Macomb County Public Works](#)

- ≡ Field Assessment McBride Drain Habitat Restoration – Macomb County Public Works
- ≡ Bidding Phase McBride Drain Habitat Restoration – Macomb County Public Works
- ≡ EPA Grant Administration Clinton River Spillway Phase I Implementation – Macomb County Public Works
- ≡ EPA Design Administration Clinton River Spillway Phase I Implementation – Macomb County Public Works
- ≡ Program Management McBride Drain Habitat Restoration – Macomb County Public Works
- ≡ Field Assessment Partridge Creek Habitat Restoration – Macomb County Public Works
- ≡ EPA Program Management Clinton River Spillway Phase I Implementation – Macomb County Public Works
- ≡ Program Management Partridge Creek Habitat Restoration – Macomb County Public Works
- ≡ Permitting Partridge Creek Habitat Restoration NOAA Design Administration Clinton River Spillway Phase I Implementation – Macomb County Public Works
- ≡ NOAA Permitting Clinton River Spillway Phase I Implementation – Macomb County Public Works
- ≡ Survey Partridge Creek Habitat Restoration – Macomb County Public Works
- ≡ NOAA Public Relations Clinton River Spillway Phase I Implementation – Macomb County Public Works

WATER TREATMENT/DISTRIBUTION

- ≡ Study Plan Review Master Stormwater Management Plan – Catholic Management Services

MISCELLANEOUS

- ≡ Survey Mickalich General Services – Mickalich Engineering Inc.



Ashley Allen is a project environmental analyst at Hubbell, Roth & Clark, Inc. and works on a variety of projects in the environmental engineering department. Her primary responsibilities include drain inspections, assistance with stormwater management plans, grant applications, EGLE permit applications and creating and submitting MS4 Permit applications and supporting documents.

<p><b>EDUCATION</b>          B.S., Environmental Studies &amp; Agriscience          Michigan State University, 2013</p> <p><b>EXPERIENCE</b>          With HRC since 2015          6 Years of Experience</p>	<p><b>PROFESSIONAL REGISTRATION/CERTIFICATION</b>          EGLE Construction Stormwater Operator Certification, C-18860          EGLE Certified Industrial Storm Water Operator, Certificate No I-14980</p>	<p><b>AFFILIATIONS</b>          Michigan Water Environment Association Member, 2019          FEMA, Unified Hazard Mitigation Assistance Project Implementation &amp; Programmatic Closeout          MISS DIG Design Ticket User</p>
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**Professional Experience**

WATER TREATMENT/DISTRIBUTION

- ≡ Stormwater Program Support – [Detroit Water and Sewerage Department](#)
- ≡ Stormwater Management Plan – [Water Resources Commissioner, Calhoun County](#)
- ≡ Hazard Mitigation Project Planning – [Bloomfield Township](#)
- ≡ King Street Drainage – [Gratiot and Midland Counties](#)
- ≡ Townline Drain – [Gratiot and Midland Counties](#)

MUNICIPAL CONSULTING

- ≡ MS4 Stormwater Permits and Supporting Documents – [Various Municipalities](#)
- ≡ SWPPP/PIPP Inspections – [Various Municipalities](#)

MISCELLANEOUS

- ≡ Final EPA Reports – [Various Municipalities](#)
- ≡ Certified Payroll Review – [Macomb County Public Works Commissioner, City of Sterling Heights, City of Utica, City of Troy](#)
- ≡ DNR, EGLE, NFWF and USFWS Grants – [Various Municipalities](#)
- ≡ Study for the Repair, Maintenance, and Management of Red Run – [Oakland County Water Resources Commissioners](#)
- ≡ Unit 8 for the Watershed Management Certification Program – [Michigan Department of Agriculture and Rural Development](#)
- ≡ Submittal of EGLE JPA Permits - [Various Municipalities](#)

Lawrence Ancypa is responsible for all phases of design and specifications for projects requiring building components. He has an extensive background in building assessment and project planning. Mr. Ancypa is a LEED accredited professional. He also provides building code review services for some of HRC's municipal clients.

Additionally, he has been a member of the National Code Organizations since 1990 and regularly attends code update seminars covering the latest code changes and accessibility issues.

EDUCATION	PROFESSIONAL REGISTRATION/ CERTIFICATION	AFFILIATIONS
B.S., Architecture Lawrence Technological University, 1969	Registered Architect, Michigan No. 21295  National Council of Architectural Registration Boards (NCARB) Certified  US Green Building Council Leadership in Energy & Environmental Design Accredited Professional Building Design and Construction (LEED AP, BD+C)	Construction Specification Institute Society for Protective Coatings
<b>EXPERIENCE</b> With HRC since XXXX 49 Years of Experience		

## Professional Experience

### MUNICIPAL FACILITIES

- Public Safety Building Leak Investigation – [City of Berkley](#)
- 50th District Court Building Evaluation – [City of Pontiac](#)
- Pontiac City Hall Building Evaluation – [City of Pontiac](#)
- Wallaceville Yard Improvements – [Wayne County Department of Public Services](#)
- MDOT Bay City TSC Building Addition – [Michigan DTMB, Bay City, MI](#)
- Davisburg Maintenance Garage Fire Restoration – [Oakland County Road Commission](#)
- DeWitt Rest Area – [MDOT](#)
- Potterville Rest Area – [MDOT](#)
- Berry Road Rest Area – [MDOT](#)
- Swartz Creek Rest Area – [MDOT](#)
- Utica City Hall and Police Department Needs Analysis – [City of Utica](#)
- Utica Salt Storage – [City of Utica](#)
- DPW Garage H&V – [City of Sterling Heights](#)
- Baumgartner Park Comfort Station Renovation – [Sterling Heights](#)

### COMMERCIAL DEVELOPMENT

- Building Renovation, Your Source Management Group – [Your Source Management Group, Auburn Hills, MI](#)
- Plan Review Services for Building Departments for Commercial Buildings – [City of Bloomfield Hills; Bloomfield Township; Village of Grosse Pointe Shores](#)
- Dental Office Renovation – [Tina M. Marshall, DDS](#)

### INDUSTRIAL FACILITIES

- Building Assessment for Solar Panel – [3F, LLC](#)
- Green Roof Initiative – [General Motors, LLC](#)
- Infrared Roof Scanning – [General Motors, LLC](#)
- Elopak Incorporated, Energy Reduction Study & Reroofing – [Milford, MI](#)
- Pontiac North Campus, Building 17, Truck Dock No. 4 – [General Motors, LLC](#)
- Saginaw Metal Casting Operations, Consolidated Training Facility (CTF) – [General Motors, LLC](#)
- Pontiac North Plant 14 Conveyor Replacement – [General Motors, LLC](#)

### MUNICIPAL CONSULTING

- Canton Voting Precincts ADA Evaluation – [Canton Township](#)
- Accessibility Study and ADA Design Renovations – [Canton Township](#)

## PARKS AND RECREATION

- ≡ Marina Rehab & Modernization – Grosse Pointe Farms
- ≡ Harbor Dredging – Grosse Pointe Farms & Grosse Pointe Shores
- ≡ Grayhaven Marina Study – Michigan Department of Management & Budget
- ≡ Conner Creek Docks – Bayview Yacht Club
- ≡ Harbor Renovation Study - Grosse Pointe Shores
- ≡ City Park ADA Improvements – West Bloomfield Township

## PRIVATE DEVELOPMENT

- ≡ Plan Review Services for Building Departments for Private Buildings – City of Bloomfield Hills; Bloomfield Township; Village of Grosse Pointe Shores

## ROADS/BRIDGES

- ≡ Blue Water Bridge Maintenance Facility – MDOT

## TRAFFIC ENGINEERING/INTELLIGENT TRANSPORTATION SYSTEMS

- ≡ Central Campus Transit Center (CCTC) – University of Michigan
- ≡ Troy-Birmingham Intermodal Transit – Cities of Troy and Birmingham
- ≡ Traffic Operations Center – Road Commission for Oakland County
- ≡ I-696 Sound Wall Repairs – Michigan Department of Transportation
- ≡ Traffic Operations Center – Macomb County Road Commission

## WASTEWATER COLLECTION/TREATMENT

- ≡ Wayne County Downriver WWTP – Wayne County
- ≡ South Lyon WWTP Expansion – City of South Lyon
- ≡ Algonac WWTP Outfall Extension – Algonac Harbor Club Marina / St. Clair Road Commission
- ≡ South Huron Valley Wastewater Treatment Plant Expansion – Wayne County
- ≡ South Huron Valley Waste Water Treatment Plant, Flow Equalization Basin – Wayne County
- ≡ Warren Waste Water Treatment Plant – City of Warren
- ≡ Romeo Waste Water Treatment Plant – City of Romeo
- ≡ Bay City WWTP Expansion and Improvements Project – City of Bay City
- ≡ Linden Park CSO – Oakland County Drain Commissioner
- ≡ Bloomfield Village CSO – Oakland County Drain Commissioner
- ≡ Acacia Park CSO – Oakland County Drain Commissioner
- ≡ East Lansing CSO – City of East Lansing
- ≡ Midland Storage Basin – City of Midland

## WATER TREATMENT/DISTRIBUTION

- ≡ Kerby Road Pump Station – City of Grosse Pointe Farms
- ≡ Water Filtration Plant – City of Grosse Pointe Farms
- ≡ Marysville Water Treatment Plant – City of Marysville
- ≡ Ferndale Water Treatment Tanks – City of Ferndale

## MISCELLANEOUS

- ≡ Vernier School Demolition – Village of Grosse Pointe Shores
- ≡ Canton ADA Lawsuit, Expert Witness – Canton Township
- ≡ Ypsilanti ADA Lawsuit, Expert Witness – Ypsilanti Township



Ms. Babakhani specializes in hydraulic and hydrology analysis, design, and software modeling, including EPA SWMM, HEC-RAS, RIVERMorph. Her work experience includes engineering design, technical calculations and writing, river restoration, watershed management, sediment transport, stormwater assessment and management, design of green infrastructure, and permit acquisition.

She received her Ph.D. in Environmental Engineering from Wayne State University in 2016. She has done the research and published several papers on dam removal, sediment transport modeling, and river restoration topics.

<p><b>EDUCATION</b>          PhD, Civil &amp; Environmental Engineering          Wayne State University, 2016          MS, Water and Wastewater Engineering          Shahid Beheshti University, Iran, 2009          BS, Civil Engineering,          University of Semnan, Iran, 2007</p>	<p><b>EXPERIENCE</b>          5 years of experience abroad,          With HRC since February 2017,          3 years of experience with HRC</p> <p><b>PROFESSIONAL REGISTRATION/CERTIFICATION</b>          Professional Engineer,          Michigan No. 6201066498</p>	<p><b>PROFESSIONAL DEVELOPMENT</b>          Chi Epsilon National Civil Engineering Honor Society          American Society of Civil Engineers (ASCE)          Water Environment Federation (WEF)</p>
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**Professional Experience**

**WATER RESOURCES/WATERSHED MANAGEMENT**

- Partridge Creek Habitat Restoration – [Macomb County Public Works](#)
- Clinton River Corridor Restoration – [City of Sterling Heights](#)
- McBride Drain Habitat Restoration – [Macomb County Public Works](#)
- Open Channel Inspection – [Spicer Group and City of Bloomfield Hills](#)
- Develop Open Channel Field Reference Guides – [Oakland County Water Resources Commissioner](#)
- Avon Creek Phase IV Restoration – [City of Rochester Hills](#)
- Lower Grand River Watershed Wetland Mitigation Bank – [Ottawa County Water Resources Commissioner](#)
- Descriptions and Map Boundaries GIS SAW Grant Application – [Macomb County Public Works](#)
- Stormwater Management Plan (SAW Grant) – [Delhi Charter Township](#)
- Walton Blvd Culvert Replacement – [Road Commission of Oakland County](#)
- Power Road Culvert Replacement – [City of Farmington Hills](#)
- Hickory Grove Culvert Replacement – [City of Bloomfield Hills](#)
- Shiawassee River Culvert Replacement Project – [Charter Township of Spring Filed](#)
- 8th street and S Avenue Culvert Replacement – [Road Commission of Kalamazoo County](#)
- Brookview Estates Culvert Design – [Community E.S. INC.](#)
- Stormwater Management Plan – [Oakland University](#)
- Windsor Drain and Patterson Drain Stormwater Design – [Eaton County Drain Commissioner](#)
- Okemos Pointe Stream Mitigation/ JPA Permitting – [Okemos Pointe, LLC](#)
- Adams Road Bridge Rehabilitation JPA Permitting – [City of Rochester Hills](#)
- Sylvan Glen Wetland Mitigation/ JPA Permitting – [City of Troy](#)
- Townline Intercounty Drain JPA Permitting – [Merit Energy](#)
- Design Standards Evaluation and Update – [Macomb County Public Works](#)
- Watershed Management Certification Program – [Michigan Department of Agriculture and Rural Development](#)
- Floodway and Floodplain Modeling with HEC RAS Red Run Drain – [Oakland County Water Resources Commissioner](#)
- Floodplain Modeling and LOMR Allen Creek Drain – [JC Beal Construction Inc.](#)
- Oakland Hills Master Drainage Plan – [Oakland Hills Country Club](#)
- Huron Hills Golf Course Natural Channel Design – [Washtenaw County Water Resources Commissioner](#)
- Soccer Site Drainage Study – [City of Farmington Hills](#)
- JST Detroit Site Drainage Study – [City of Farmington Hills](#)
- Study for the Repair, Maintenance, and Management of Red Run – [Oakland County Water Resources Commissioners](#)

- ≡ Mound Rd Post Construction Stormwater Runoff Control Program – HNTB Architects Engineers Planners
- ≡ Section 197 District Boundary Study – St Clair County and Eaton County Drain Commissioners
- ≡ EPA Design Sterling Relief Drain Retrofit – T R Pieprzak
- ≡ Innovation Hills Park Pond Design – City of Rochester Hills

MISCELLANEOUS

- ≡ Watershed Modeling with SWAT (Soil and Water Assessment Tool) – U.S. Army Corps of Engineers, Detroit District



James Burton assists HRC's municipal and private clients with environmental, stormwater management, sustainability initiatives and habitat restoration projects. He is responsible for the direction, focus and success of the firm's environmental engineering department. His extensive civil engineering experience, combined with his in-depth understanding of municipally-owned, bid, constructed and administered projects, makes him an effective leader and ensures environmental projects meet all project and client expectations.

Mr. Burton is a key participant in the preparation of SRF and DWRP project plans, as well as S2 grant funding activities for municipal water projects. He has successfully managed the procurement and administration of millions of dollars in grant funding for communities and governmental agencies. Additionally, his responsibilities include the coordination of environmental permit approvals and ensuring department projects meet regulatory compliance. He manages the firm's involvement with client utility rates and performs detailed financial analyses for HRC clients.

EDUCATION	PROFESSIONAL REGISTRATION/CERTIFICATION	AFFILIATIONS
MBA, Integrative Management, Eli Broad Graduate School of Management/MSU, 2004 BS, Biosystems Engineering Michigan State University, 1998	Professional Engineer Michigan No. 49137 US Green Building Council Leadership in Energy & Environmental Design Accredited Professional (LEED AP)	American Society of Civil Engineers (ASCE) American Society of Agriculture Engineers (ASAE) Michigan Water Environment Association (MWEA)
EXPERIENCE		
With HRC since 1998 21 Years of Experience		

## Professional Experience

### WATER RESOURCES/WATERSHED MANAGEMENT

- ≡ Paint Creek Habitat Restoration Dam Removal – [Clinton River Watershed Council](#)
- ≡ Clinton River Spillway Habitat Restoration – [Macomb County Public Works](#)
- ≡ Restoring Fish Passage in Red Run Headwaters – [City of Troy](#)
- ≡ Rouge River Restoration Projects – [City of Birmingham](#)
- ≡ Avon Creek Restoration and Dam By-Pass – [City of Rochester Hills](#)
- ≡ SAW Stormwater Management Plan – [Calhoun County](#); [Delhi Township](#); [City of Bloomfield Hills](#)
- ≡ Sashabaw Regional Drainage District – [Independence Township](#)
- ≡ Randolph St. Intercounty Drain Improvements – [OCWRC/ RSCID Board](#)
- ≡ Drain Projects – [Saginaw County](#); [Gratiot County](#); [Livingston County](#)
- ≡ Great Lakes Restoration Initiative and Related Grants
- ≡ Black River Watershed Wetland Mitigation Bank – [Michigan Department of Transportation](#)
- ≡ Long Lake Shores Association Canal Dredging SAD Project, Upper Long Lake Board – [Bloomfield Township](#); [West Bloomfield Township](#)
- ≡ Williams Lake Canal Dredging SAD Project – [Waterford Township](#)

### WATER TREATMENT/DISTRIBUTION

- ≡ DWRP Project Contracts 5A & 5B – [Independence Township](#)
- ≡ Water System Improvements – [City of Bloomfield Hills](#)
- ≡ Water System Master Plan – [City of Bloomfield Hills](#)
- ≡ Carpenter Road Storm Water Management Plan – [Washtenaw County Road Commission](#)

### WASTEWATER COLLECTION/TREATMENT

- ≡ MIDD SA Grant Project Plan – [Macomb County Public Works Office](#)
- ≡ MIDD SRF Project Plan – [Macomb County Public Works Office](#)
- ≡ On-Site Sewage Disposal System and Septic Investigation – [City of Bloomfield Hills](#)
- ≡ CSO District Sewer Rehabilitation – [City of Bloomfield Hills](#)
- ≡ Sludge Dewatering and Drying Project – [Delhi Township](#)
- ≡ Sanitary Sewer Master Plan – [Brandon Township](#)
- ≡ Andersonville Road Low Pressure Sanitary Sewer SAD – [Independence Township](#)

### PARKS AND RECREATION

- ≡ Safety Path Master Plan – [City of Bloomfield Hills](#)



- ≡ M-15 Safety Path-Brandon Township – Road Commission for Oakland County
- ≡ Rail Trail Southeast Connector – City of South Lyon
- ≡ Kensington-Island Lake Connector – Western Oakland County Trail Management Council
- ≡ Clinton Riverwalk at Memorial Park – City of Utica

MUNICIPAL CONSULTING

- ≡ Primary contact for several cities, townships and villages, managing the entirety of municipal projects – Bloomfield Township; City of Bloomfield Hills; Delhi Township; Eaton Rapids; Holly Township; Brandon Township; Macomb County Office of the Public Works Commissioner; Village of Franklin
- ≡ GLRI – EPA Environmental Projects – Macomb County; Sterling Heights; City of Troy – Sites: Clinton River Corridor; McBride Drain; Partridge Creek; Clinton River Spillway; Sylvan Glen Golf Course
- ≡ Vulnerability Assessment – City of Bloomfield Hills – Project manager for federally mandated vulnerability assessment as required by the Bioterrorism Preparedness Act of 2001
- ≡ Short-Term Corrective Action Plan – City of Bloomfield Hills – Project manager for the city’s ongoing annual STCAP plan required by EGLE and outlined with the city’s administrative consent order
- ≡ Water and Sewer Utility Rate Analysis – City of Bloomfield Hills

MUNICIPAL FACILITIES

- ≡ Capital Building Program – Bloomfield Township – Bloomfield Township municipal complex construction

ROADS/BRIDGES

- ≡ West Stadium Boulevard Reconstruction – City of Ann Arbor
- ≡ Geddes Avenue Reconstruction – City of Ann Arbor
- ≡ Tamworth Street Bridge Replacement Project – Road Commission for Oakland County
- ≡ 2007-2017 Road Improvement Programs – City of Bloomfield Hills
- ≡ Island Park Restoration – City of Eaton Rapids Downtown Development Authority
- ≡ Road Improvement Program Master Plan – City of Bloomfield Hills
- ≡ Abbott Road Reconstruction – City of East Lansing



- ≡ Stormwater Asset Management and Wastewater (SAW) Grants – 60+ Projects
- ≡ NPDES Permit Asset Management Plans – Various Clients
- ≡ MDEQ Act 399 Water Asset Management Programs – Various Clients

MUNICIPAL CONSULTING

- ≡ Operation and Maintenance Manuals – Various Projects
- ≡ Project Planning for MDEQ State Revolving Funds – City of Bay City, Caro, East Lansing, Fenton, Inkster, Saginaw, Warren, Genesee, Oakland and Wayne Counties

ROADS/BRIDGES

- ≡ MDOT 1-696 / Franklin Road Interchange – City of Southfield
- ≡ National Street Extension Project – City of Howell



TRAFFIC ENGINEERING/INTELLIGENT TRANSPORTATION SYSTEMS

- ≡ New Traffic Operations Center – [Road Commission for Oakland County](#)
- ≡ City of Grand Rapids Traffic Management Center (TMC) – [Iteris](#)
- ≡ “FAST-TRAC” Traffic Operations Center Project – [Road Commission for Oakland County](#)
- ≡ Design/Build Traffic Operations Center – [Road Commission of Macomb County](#)

WATER TREATMENT/DISTRIBUTION

- ≡ East Lansing-Meridian Water Plant – Filter Addition – [East Lansing – Meridian Water & Sewer Authority](#)
- ≡ East Lansing-Meridian Water Plant – HVAC Improvements (Phase 1 through 3) – [East Lansing – Meridian Water & Sewer Authority](#)
- ≡ Allegan Water Treatment Plant – [City of Allegan/Prein & Newhof](#)

AIRPORTS AND TRANSPORTATION FACILITIES

- ≡ City of Monroe Transit Waiting Area - [Lake Erie Transit Authority](#)
- ≡ Central Campus Transit Center – [University of Michigan](#)
- ≡ Troy Multi Modal Transit Facility – [City of Troy](#)
- ≡ SMART HVAC Building/Terminal Assessments (Wayne, Oakland, Macomb Facilities) – [Suburban Mobility for Regional Transportation](#)
- ≡ SMART Macomb Terminal, East Wall Assessment – [Suburban Mobility for Regional Transportation](#)
- ≡ Forensic Design, Engineering and Related Services for the Repairs and Maintenance of Existing Facilities, Detroit Metropolitan and Willow Run Airports – [Wayne County Airport Authority](#)



Stephen Jacobi serves as a project manager within our survey department. He is very familiar with the operation of various state-of-art field instruments and is extremely proficient in the use of Leica Total Stations and GPS Receivers. Mr. Jacobi is currently responsible for project administration, developing and implementing quality control programs for projects, and is responsible for data processing and verifying accuracy of the field data prior to drafting.

Mr. Jacobi has over 29 years of experience in control and design surveys for roads and highways, structure surveys, ground control surveys, hydraulic surveys, right of way and construction surveying. Mr. Jacobi has been involved in surveys both in the field and in the office and has proven record of stringent quality control programs. Mr. Jacobi has been involved with numerous design and construction projects for both private and municipal clients.

<p><b>EDUCATION</b>          BS, Survey Engineering          Ferris State University,          1992</p> <p><b>EXPERIENCE</b>          With HRC since 2015          29 years of experience</p>	<p><b>PROFESSIONAL REGISTRATION/CERTIFICATION</b>          Professional Surveyor          Michigan No. 4001043057</p>	<p><b>AFFILIATIONS</b>          National Society of Professional Surveyors          Michigan Society of Professional Surveyors          American Congress of Surveying and Mapping</p>
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**Professional Experience**

**AIRPORTS AND TRANSPORTATION FACILITIES**

- ≡ Woodward Light Rail – MDOT/URS/SSI

**COMMERCIAL DEVELOPMENT**

- ≡ Detroit Public Schools – City of Detroit/Farbman Group
- ≡ Greektown Casino, Hotel and Parking Garage – Greektown Casino/Jenkins/Skanska/Assemblers/Blaze
- ≡ Wayne State University – WSU/Assemblers/Turner/TYJT
- ≡ Campus Base Map and Control Network – Wayne State University
- ≡ Comerica Park – City of Detroit/Turner/Millgard
- ≡ Ford Field – City of Detroit/Turner/Millgard
- ≡ MGM Casino – City of Detroit/PSI/Blaze

**MUNICIPAL CONSULTING**

- ≡ City of Detroit – ADA Ramp Compliance Program – Tucker, Young, Jackson and Tull

**PARKS AND RECREATION**

- ≡ The Detroit Zoo – Detroit Zoological Society/Turner Construction
- ≡ Campus Martius Park – City of Detroit/Blaze/TYJT

**ROADS/BRIDGES**

- ≡ I-75/I-696 Interchange – Michigan Department of Transportation
- ≡ Detroit Upper Rouge Tunnel Project – Parson Brinckerhoff
- ≡ US-24 BR (Cesar Chavez Avenue) – Michigan Department of Transportation (MDOT)
- ≡ US-24 BR (Square Lake) – Michigan Department of Transportation (MDOT)
- ≡ Detroit Rail Tunnel Project – Michigan Department of Transportation (MDOT)
- ≡ Ambassador Gateway – Michigan Department of Transportation (MDOT)

**WASTEWATER COLLECTION/TREATMENT**

- ≡ Flint Transmission System – Detroit Water & Sewerage Department

**WATER RESOURCES/WATERSHED MANAGEMENT**

- ≡ Franklin River Watershed Study – Oakland County/Applied Science
- ≡ Carpenter Lake Study – Environmental Consulting & Technology, Inc



Thomas Maxwell's experience includes planning, design and construction administration for projects in large diameter piping, pollution abatement, storm drainage, municipal wastewater treatment systems, combined sewer overflows, sanitary sewer overflows, flow monitoring, and the development of various environmental reports. He is also responsible for obtaining and managing grant funded programs.

Mr. Maxwell has experience in commercial and heavy construction and served as a project manager for a water resources commissioner's office. He has been involved in more than \$600 million in projects and studies.

<p><b>EDUCATION</b>                  BS, Civil Engineering                  Michigan Technological University, 1986                  MS, Civil Engineering                  Wayne State University 1993                  MAcc, Accounting                  Oakland University 2014</p> <p><b>EXPERIENCE</b>                  With HRC since 1988                  34 Years of Experience</p>	<p><b>PROFESSIONAL REGISTRATION/                  CERTIFICATION</b>                  Professional Engineer                  Michigan No. 36813                  Florida No. 66745 (expired 2012)                  NASSCO, Inc. Pipeline Assessment and Certification Program (PACP)                  NASSCO, Inc. Manhole Assessment and Certification Program (MACP)                  NASSCO, Inc. Lateral Assessment and Certification Program (LACP)</p>	<p><b>AFFILIATIONS</b>                  American Society of Civil Engineers-Southeastern Branch President 2000-2001                  Michigan Water Environment Association                  American Society of Civil Engineers Michigan Section, President</p>
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**Professional Experience**

**INDUSTRIAL FACILITIES**

- Utility Tunnel Assessment and Restoration – General Motors Corporation, Lansing
- Roulo Creek Enclosure Survey – Ford Motor Company

**WASTEWATER COLLECTION/TREATMENT**

- Pump Station #1, Contract B – Genesee County Water and Waste Services
- Fox Pump Station – Genesee County Water and Waste Services
- Northeast Extension System – Genesee County Water and Waste Services
- Pump Station Improvements, Farrand Road & No. 4, 5, 7 & 8 – Genesee County Water and Waste Services
- Douglass & Drake Pump Stations – City of Saginaw
- River Crossing Emergency Repair – City of Saginaw
- CSO Control Program – City of Saginaw
- 52-MGD Pump Station – City of Midland WWTP
- 43 5-MG Storage Basin & 52-MGD Pump Station – City of Midland WWTP
- Preliminary Treatment System Improvement Project – City of Saginaw Wastewater Treatment Plant
- WWTP Secondary Clarifier Improvements – City of Midland
- WWTP Improvement Project – Village of Caro
- Primary Tank Renovations – Downriver WWTP
- Sanitary Sewer Program – City of Southfield
- 15 Mile Road and Telegraph Road, Emergency Sanitary Sewer Repair – Oakland County Water Resources Commissioner
- 5-MGD Pump Station – City of East Lansing
- Maple North Pump Station – City of Wixom/Booster Pump Station – City of Rochester Hills
- Wastewater Treatment Plant Master Plan, Needs Assessment and Stress Test – City of East Lansing
- Wastewater Treatment Plant Master Plan – Downriver Wastewater Treatment Facility Wayne County
- Bates Street Sewer/Utilities Permit Project – One Detroit Center
- Sanitary Sewer Master Plan Review – Charter Township of Northville
- Backwash Water Study – St. John's Providence Hospital
- 1.9-MG CSO Retention Treatment Facility – City of Inkster
- Cedar Street Sewer and Watermain (Outfall#009) – City of East Lansing

- ≡ Wilmarth Sewer Separation (Outfall #013) – City of East Lansing
- ≡ CSO Control Facilities (Phase A and B) – City of East Lansing
- ≡ CSO Control Facilities (Phase C) – City of East Lansing
- ≡ Middlebelt Transport and Storage Tunnel, Pollution Abatement of Sanitary Sewer Overflows – Oakland County Water Resources Commissioner
- ≡ HRSDS 1-MG Sanitary Retention Facility – Oakland County Water Resources Commissioner
- ≡ North Evergreen Interceptor – Stonycroft Relief Sewer, Pollution Abatement of Sanitary Sewer Overflows – Oakland County Water Resources Commissioner
- ≡ North Evergreen Interceptor – Wattle Road Linear Storage, Pollution Abatement of Sanitary Sewer Overflows – Oakland County Water Resources Commissioner
- ≡ North Evergreen Interceptor – Hydraulic Improvements, Pollution Abatement of Sanitary Sewer Overflows – Oakland County Water Resources Commissioner
- ≡ North Evergreen Interceptor – Quarton Road Relief Sewer, Pollution Abatement of Sanitary Sewer Overflows – Oakland County Water Resources Commissioner

WATER TREATMENT/DISTRIBUTION

- ≡ Force Main, Contract 2A – Genesee County Drain Commissioner
- ≡ Water Works Park Comprehensive Condition Assessment – Great Lakes Water Authority
- ≡ Groundwater Collection System – City of Saginaw
- ≡ Stormwater Relief Pump Station Improvements – City of Saginaw
- ≡ Stormwater Master Plan – City of Wixom, City of Southfield
- ≡ George St. Basin Storm Drain Improvements – City of Midland





As head of Hubbell, Roth & Clark’s architectural department, Adrianna Melchior conceptualizes, designs and orchestrates functional and aesthetically pleasing architectural solutions for commercial, industrial, municipal and private clients. With a talent for exceeding client expectations, her responsibilities include space planning and design, construction documents, bid management, construction administration, shop drawing review, cost estimating, code compliance reviews, 3D modeling and renderings, material finish selections and coordination and project close outs. She places a high priority on attention to detail and problem solving on every project. Her work is showcased at HRC corporate headquarters, where she is responsible for the firm’s renovation of its Bloomfield Hills office.

<p><b>EDUCATION</b> BA, Architecture University of Detroit Mercy, 2000 MA, Architecture University of Detroit Mercy, 2004</p> <p><b>EXPERIENCE</b> With HRC since 2012 20 Years of Experience</p>	<p><b>PROFESSIONAL REGISTRATION/ CERTIFICATION</b> Registered Architect, Michigan No. 51959  US Green Building Council Leadership in Energy &amp; Environmental Design Accredited Professional Building Design and Construction (LEED AP BD+C)</p>	<p><b>AFFILIATIONS</b> American Institute of Architects International Code Council</p>
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**Professional Experience**

COMMERCIAL DEVELOPMENT

- Generator Enclosure – [Hubbell, Roth & Clark, Inc.](#)
- Interior Finish Selection and Millwork Designs – [Metro Welding Supply Corporation](#)
- Kingswood Hospital Roof Drainage Improvements – [Ascension Health](#)
- Exterior Façade & Roof Drainage Improvements – [Providence Hospital Pavilion Office Building](#)
- Kmart Façade Renovation – [Sears Holdings Management Corporation](#)

INDUSTRIAL FACILITIES

- Design-Build Ash Handling Building New Construction – [DTE Trenton Channel Power](#)
- Office Renovation – [US Ecology Belleville](#)
- Locker Room Addition/Renovation & Electrical Building New Construction – [US Ecology Romulus](#)
- Parking Canopy Study, Milford Proving Ground Campus – [General Motors Corporation](#)
- Well House 8 Building New Construction, Milford Proving Ground Campus – [General Motors Corporation](#)
- Multiple Renovation Projects in Existing Automobile Manufacturing Facilities – [MAHLE Industries](#)

MUNICIPAL CONSULTING

- Fire Station #4 Roofing Replacement – [City of Warren](#)
- Fire Station Kitchen Renovations, Multiple Stations – [City of Warren](#)
- Multiple Building Demolitions – [City of South Lyon](#)
- Youth Recreation Center Building Assessments – [City of Pontiac](#)
- City Hall Masonry Repair Recommendations – [City of Howell](#)
- Fire Station HQ Masonry Investigation – [City of St. Clair Shores](#)
- Salt Storage Building – [City of St. Clair Shores](#)
- WWTP Building Assessments – [South Huron Valley Utility Authority](#)
- POTW Building Assessments & Facility Needs Analysis – [Delhi Township](#)
- WWTP Miscellaneous Building Improvements, Bldg. C Re-Roofing, & Locker Room Renovation – [City of Warren](#)
- Solids Handling Building New Construction – [City of Flint](#)
- Secondary Headworks Multiple Building Renovations – [Wayne County Downriver Wastewater Treatment Facility](#)
- Allegan Wastewater Treatment Plant, UV Enclosure Building New Construction – [City of Allegan](#)
- 50th District Courthouse Renovations – [City of Pontiac](#)
- Fire Station New Construction Study – [City of Cedar Springs](#)
- Police Headquarters Locker Rooms Renovation – [City of Warren](#)
- City Hall Roofing Replacement – [Milford Township](#)

- DPW Renovation and Addition – [Township of Independence](#)
- Historic Grist Mill Building Assessment and Renovations – [City of Linden](#)
- Salt Storage Dome Building – [City of Southfield](#)
- City Hall Building Renovations – [City of Howell](#)
- City Hall and Fire Station Needs Assessment Study – [Township of Manchester](#)
- City Hall and Public Safety Building Assessments – [City of Marysville](#)
- Livonia Library Roofing Replacement – [City of Livonia](#)
- City Hall Building Renovations – [City of Sylvan Lake](#)
- City Hall ADA Assessments & Recommendations – [City of Beverly Hills](#)

#### PARKS AND RECREATION

- City Park Building Renovations, Multiple Parks – [City of Warren](#)
- Oxford Park Splash Pad & Restroom New Construction – [City of Berkley](#)
- Ice Arena Demolition – [City of Berkley](#)
- Pioneer Park Comfort Station New Construction – [City of Utica](#)
- Historic Farm Park Main Barn Re-Roofing and Structural Repairs – [City of Troy](#)
- Park Pavilions and Restroom/Concession Buildings New Construction – [City of Hartland](#)
- Park Comfort Station New Construction – [City of Linden](#)
- ADA Compliant Ramps – [City of Troy Historic Village](#)
- City Park ADA Assessments & Recommendations – [City of Howell](#)
- Designs for ADA Compliant Township Pavilion – [Plymouth Township](#)

#### PRIVATE DEVELOPMENT

- Industrial Office Building Roof Framing Repairs – [Lautrec, Ltd.](#)
- Corporate Headquarters Renovations & Vestibule Addition – [Hubbell, Roth & Clark, Inc.](#)
- Interior Office Renovations – [Lautrec, Ltd.](#)
- Design of New Addition & Interior Renovations – [Lakeshore Residence](#)

#### AIRPORTS AND TRANSPORTATION FACILITIES

- LET Monroe Transit Center Tenant Build Out – [Suburban Mobility Authority for Regional Transportation \(SMART\)](#)
- Blue Deck Steam Line Replacement Project – [Wayne County Airport Authority](#)
- Interior Finish Selection and Furniture Design – [Suburban Mobility Authority for Regional Transportation \(SMART\)](#)
- Pump Station 14 Building Assessment – [Wayne County Airport Authority](#)
- Blue Deck Parking Lot Entrance Canopy New Construction – [Wayne County Airport Authority](#)
- LC Smith Terminal Demolition Coordination – [Wayne County Airport](#)
- Package D, Forensic Design, Engineering and Related Services for the Repairs and Maintenance of Existing Facilities – [Wayne County Airport Authority](#) – Assessments at Buildings 348, 356, 357, 705 and 738; North Terminal Public Area Restroom Improvements; North Terminal Skycap Station Radiant Heater & Drainage Improvements; North Terminal Miscellaneous Assessments & Decorative Wall Panel Designs; McNamara Terminal Parking Garage Improvements; Ground Transportation Center Circulation Study; Willow Run Airport Hanger 1 IR Heater Renovations; McNamara Terminal Pre-Cast Panel Assessment; Roof Repairs/Replacements at Buildings 354, 403, 455, 509, 530, 802, 737, 821, and 831; Blue Deck Steam Line Renovations

#### WASTEWATER COLLECTION/TREATMENT

- Pump Station New Construction & Administration Building Major Renovations – [City of Hastings](#)
- Farrand Road Pump Station New Construction – [Genesee County Drain Commissioner](#)
- Huron Rouge Equipment Building New Construction – [Oakland County Water Resources Commissioner](#)
- WWTP Building D Break Room Renovation – [City of Warren](#)
- WWTP Multiple Building Fall Protection Improvements – [City of Warren](#)
- WWTP Additions and Building Renovation – [City of Hammond, IN](#)
- WWTP Major Building Renovations and Roof Replacements – [City of Petoskey](#)
- WWTP Building Assessments – [City of Flint](#)
- Major WWTP Pump Station Renovation – [City of South Haven](#)

#### MISCELLANEOUS

- PuStilwell Manor Senior Apartments Roof Replacement – [City of Warren](#)
- Building Assessments at Multiple Cemetery Facilities – [Archdiocese of Detroit](#)
- Code Compliance Reviews-New Construction & Renovations – [Willow Run Hangar 2 Reuse; Target Rightsizing ; Multiple Bloomfield Township School Renovations; Marian High School; Erhard BMW; At Home Store; Victory Indian Motorcycle Warehouse; Starbucks New Building; New High-End Office Building; Birmingham Country Club; Costco Fueling Station Expansion; T Golling Dealership Addition; Urgent Care Buildout; Sylvan Lake Parking Deck Structural Renovation; Jimmy John's New Building; Oakland Veterinary Addition, among others](#)



Richard Nacey is the Structural Department Manager with Hubbell, Roth & Clark, Inc. He has a passion for design and innovation and is familiar with multiple materials and leading construction methods. This professional insight provides him with the ability to develop and evaluate options and implement solutions. Through evaluation, he identifies the strengths and weaknesses of alternative solutions, conclusions or approaches to potential project obstacles and for recommendations for remedial rehabilitation. He works in collaboration with multidiscipline teams to evaluate project challenges and identify design opportunities a unified and efficient final design.

Mr. Nacey is responsible for and oversees structural design engineering and contract documents of the Structural Department. Mr. Nacey has extensive bridge design, bridge rehabilitation, bridge scoping and bridge inspection experience.

EDUCATION	PROFESSIONAL REGISTRATION/CERTIFICATION	AFFILIATIONS
BS, Civil Engineering, Structures Michigan State University, 1981	Professional Engineer, Michigan No. 35232 Florida No. 69493 MDOT/FHWA Qualified Team Leader (QTL) US & Canadian Patent – Specialized Bridge Bearing System	American Association of State Highways and Officials (AASHTO) Structural Engineers Association of Michigan (SEAMI) American Institute of Steel Construction (AISC) American Society of Civil Engineers (ASCE) American Concrete Institute (ACI)
EXPERIENCE		
With HRC since 1985 38 Years of Experience		

## Professional Experience

### PEDESTRIAN BRIDGES

- ≡ Dodge Park East Pedestrian Bridge – [City of Sterling Heights](#)
- ≡ Innovation Hills Trails and Pedestrian Bridge – [City of Rochester Hills](#)
- ≡ Northlawn Drive Pedestrian Bridge Rehabilitation – [City of Sterling Heights](#)
- ≡ Pedestrian Bridge Replacement in Dodge Park – [City of Sterling Heights](#)
- ≡ Gar Island Park Historic Pedestrian Bridge Rehabilitation – [City of Eaton Rapids](#)
- ≡ 2014 Municipal Park South Pedestrian Bridge – [Village of Clarkston](#)
- ≡ Township Park Foot Bridge – [Plymouth Township](#)
- ≡ Heritage Park Improvements – [City of Utica](#)
- ≡ Paint Creek Walkway Phase II Rehabilitation – [City of Rochester](#)
- ≡ Riverland Drive Pedestrian Bridge Replacement – [City of Sterling Heights](#)

### ROADS/BRIDGES

- ≡ Nine Mile Road Bridge Replacement Project over the Rouge River – [City of Southfield](#)
- ≡ Sharon Valley Road Bridge Replacement Project over the Raisin River – [Washtenaw County Road Commission](#)
- ≡ Structure A Bridge Rehabilitation, Phase 1 & 2 – [General Motors Milford Proving Grounds](#)
- ≡ Structure B Bridge Rehabilitation, Phase 1 & 2 – [General Motors Milford Proving Grounds](#)
- ≡ Structure C Bridge Replacement Project – [General Motors Milford Proving Grounds](#)
- ≡ Twelve Mile Road Bridge at Gate 1, Bridge Deck and Railing Replacement – [General Motors Warren Tech Center](#)
- ≡ Drake Road Culvert Replacement – [City of Farmington Hills](#)
- ≡ Orion Road Bridge over Paint Creek – [Road Commission for Oakland County](#)
- ≡ Tamworth Street Bridge Replacement – [Road Commission for Oakland County](#)
- ≡ Cass Lake Road Bridge Replacement – [Road Commission for Oakland County](#)
- ≡ Seventeen Mile Road Bridge over Conrail Superstructure Replacement – [City of Sterling Heights](#)
- ≡ Dodge Park Road Reconstruction Metro Parkway to Utica Road – [City of Sterling Heights](#)
- ≡ Beech Road Bridge over the Rouge River Replacement – [City of Southfield](#)
- ≡ Featherstone Road Bridge Replacement – [City of Pontiac](#)
- ≡ Eleven Mile Road Bridge over Pernick Drain Rehabilitation – [City of Southfield](#)
- ≡ 2010 Road and Bridge Improvement Program – [City of Bloomfield Hills](#)
- ≡ 2010 Cranbrook Road Bridge Replacement Projects – [City of Bloomfield Hills](#)
- ≡ Tienken Road Bridge Replacement – [City of Rochester Hills](#)

- ≡ Cooley Lake Road Bridge Rehabilitation – Road Commission for Oakland County
- ≡ Evergreen Road Bridge over Rouge River Rehabilitation – Village of Beverly Hills
- ≡ Civic Center Drive Bridge Deck Joint Replacement – City of Southfield
- ≡ Bridge Street Bridge Deployment – City of Southfield
- ≡ University Street Bridge over Paint Creek Replacement – City of Rochester
- ≡ Second Street over Paint Creek Replacement – City of Rochester
- ≡ Cass Avenue and Auburn Road Reconstruction and Bridge Rehabilitation – City of Utica
- ≡ Long Lake Road Over Gibson Drain Bridge Replacement – City of Troy
- ≡ Ryan Road Culvert Bridge Replacement – City of Sterling Heights
- ≡ Eighteen and a Half Mile Road Culvert Bridge Replacement – City of Sterling Heights
- ≡ Thirteen Mile Culvert over Rouge River Reconstruction – Village of Beverly Hills
- ≡ 2011 Vehicular and Pedestrian Bridge Rehabilitation – City of Rochester Hills
- ≡ Rummell Relief Drain Bridge Replacement – City of Southfield
- ≡ Fifteen Mile Road Bridge over Red Run Drain Reconstruction – City of Sterling Heights
- ≡ Bridge Inspection for GM Milford Proving Grounds – General Motors Corporation
- ≡ Bridge Inspection and Appraisals – Numerous Clients, Michigan Bridge Inspection System
- ≡ Evergreen Road Culvert Stabilization – Village of Beverly Hills
- ≡ M-24 Dam Rehabilitation Phase II – Village of Lake Orion
- ≡ Walton Blvd Culvert Replacement – City of Auburn Hills & Rochester Hills

WATER AND WASTEWATER TREATMENT/DISTRIBUTION/COLLECTION

- ≡ Novi SSO Storage Facility – Water Resource Commission for Oakland County
- ≡ Woodingham Pumping Station – City of East Lansing
- ≡ Hammond Sanitary District Headworks Pimp Station Improvements – City of Hammond
- ≡ Hastings WWTP Improvements – City of Hastings



Stephanie Petriello joined Hubbell, Roth & Clark, Inc. in 2019 as a project analyst in the firm's environmental department. She received her Masters in Environmental Management from Duke University with a focus on Ecosystem Science and Conservation. Her work experience includes stream and wetland mitigation and restoration, natural channel design, regulatory compliance, and project management.

<p><b>EDUCATION</b>          MEM, Ecosystem Science and Conservation          Duke University, 2012           BS, Biology; Environmental Science          Muhlenberg College, 2010</p> <p><b>EXPERIENCE</b>          With HRC since 2019          9 Years of Experience</p>	<p><b>PROFESSIONAL REGISTRATION/CERTIFICATION</b>          Certificate of Geospatial Analysis          Duke University</p>	<p><b>AFFILIATIONS</b>          Michigan Water Environment Association (MWEA)</p>
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**Professional Experience**

DEPARTMENT OF FISH AND WILDLIFE RESOURCES, FRANKFORT, KY

Ms. Petriello was an Environmental Scientist V. Her responsibilities included the following tasks:

- ≡ Investigate new sites for stream and wetland mitigation purposes
- ≡ Initial project development involved: landowner outreach and stakeholder meetings, multiple agency coordination, project budget planning, and property evaluations
- ≡ Used GIS and GPS applications for map production and data management
- ≡ Performed wetland delineations, stream surveying, and rapid bioassessments

**MISCELLANEOUS**

- ≡ Dave Rosgen Level I – [Applied Fluvial Geomorphology](#)
- ≡ Dave Rosgen Level II – [River Morphology and Applications](#)
- ≡ Dave Rosgen Level III – [River Assessment and Monitoring](#)
- ≡ Will Harmon Stream Mechanics – [Stream Functions Pyramid Framework](#)
- ≡ Will Harmon Stream Mechanics – [Natural Channel Design Review Checklist](#)
- ≡ Richard Chinn Environmental Training – [ACOE Wetland Delineations/Regional Supplement/Waters of the United States](#)



Scott Roth has 12 years of experience as a professional surveyor on public and private infrastructure projects. Mr. Roth is a key participant in project requirements that include industrial site survey control networks, boundary surveys, 3D laser scanning with point cloud modeling, right of way acquisition, GNSS technology, GIS data collection and geodatabase development, route, and construction surveying, radial topographic mapping, horizontal and vertical control surveys, State Plane and UTM coordinate use, and work with various datum and computations. His experience also includes asset management, infrared forensic engineering, ADA compliance assessments, industrial infrared building envelope integrity surveys, research, and computer-aided drafting.

<p><b>EDUCATION</b>          BS, Surveying Engineering,          Michigan Technological University, 2008</p> <p><b>EXPERIENCE</b>          With HRC since 2008          12 Years of Experience</p>	<p><b>PROFESSIONAL REGISTRATION/CERTIFICATION</b>          Professional Surveyor          Michigan No. 4001061490          Level II Certified Infrared Thermographer</p>	<p><b>AFFILIATIONS</b>          Michigan Society of Professional Surveyors (MSPS)          Michigan Society of Professional Surveyors, SE          Chapter - Board President          National Society of Professional Surveyors (NSPS)          Northwestern Michigan College – Surveying          Program Industrial Advisory Board Member</p>
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**Professional Experience**

**AIRPORTS AND TRANSPORTATION FACILITIES**

- ≡ Smith Terminal Survey – [Detroit Metro Airport](#)
- ≡ Lots A&B ALTA Survey – [Detroit Metropolitan Airport](#)
- ≡ Petroleum Terminal HDS Laser Scan – [Sunoco Logistics, Romulus, Michigan](#)
- ≡ FAA Navigation Antennas – [Detroit Metro Airport](#)
- ≡ Public Safety Training Facility Investigation Services – [Wayne County Airport Authority](#)
- ≡ Willow Run Hangar 1 Laser Scanning – [Wayne County Airport Authority](#)
- ≡ Petroleum Terminal Containment – [Sunoco Logistics Romulus and Port Huron, Michigan](#)
- ≡ Ground Transportation Center HDS Laser Scan and Data Gathering – [Wayne County Airport Authority](#)
- ≡ Construction Layout of Intermodal Lighting – [CSX Louisville, Kentucky](#)

**COMMERCIAL DEVELOPMENT**

- ≡ Fillmore Theater Laser Scan – [City of Detroit](#)
- ≡ Gibson House Laser Scan – [City of Wixom](#)
- ≡ Home Depot/Chili’s ALTA Survey – [City of Wixom](#)
- ≡ Universal Mall – [City of Warren](#)
- ≡ Providence Hospital/Providence Park – [City of Novi](#)
- ≡ Vermulen Building Condominium Development – [City of Jackson](#)
- ≡ Grovenburg ALTA Survey – [Delhi Township](#)
- ≡ Masonic Temple – [City of Jackson](#)

**PARKING, PAVEMENT AND STREET LIGHTING**

- ≡ Meckler Drain Culvert Replacement and Stream Enhancement – [GM Global Facilities](#)
- ≡ Quarton Lake Maintenance and Dredging – [City of Birmingham](#)
- ≡ Pavilion Drive Culvert Replacement and Stream Restoration – [Oakland University](#)
- ≡ Storm Collection Inventory and Assessment SAW Grant – [City of Marysville](#)

**ROADS/BRIDGES**

- ≡ W Avenue Reconstruction and Improvements – [Road Commission of Kalamazoo County](#)
- ≡ School Safety Routes – [Delhi Charter Township](#)
- ≡ Eighth Street Safety Project – [Road Commission of Kalamazoo County](#)
- ≡ Drake Road CMAQ Fiber and Signal AMTRAK Crossing – [Road Commission of Kalamazoo County](#)
- ≡ Drake Road Mill and Overlay KL Avenue to M-43 – [Road Commission of Kalamazoo County](#)
- ≡ City Parking Lots Reconstruction – [City of Lansing](#)

- ≡ Lydia Street Reconstruction – [City of Jackson](#)
- ≡ Francis Street Reconstruction – [City of Jackson](#)
- ≡ Stonewall and 4th Street Intersection – [City of Jackson](#)
- ≡ Pearl Street Enhancements – [City of Jackson](#)
- ≡ Bucky Harris Park Improvements – [City of Jackson](#)
- ≡ Wealthy Street Reconstruction – [City of Grand Rapids](#)
- ≡ Almena and KL Realignment – [Road Commission of Kalamazoo County](#)
- ≡ Multi-Year Road Improvements – [City of Howell](#)
- ≡ Tienken Road Reconstruction – [City of Rochester Hills](#)
- ≡ Wixom Road Bypass – [City of Wixom](#)
- ≡ Franklin Road Layout – [Village of Franklin](#)
- ≡ Pinckney Road/D-19 Reconstruction – [City of Howell](#)
- ≡ John R Road – [City of Rochester](#)
- ≡ I-69 MDOT Survey – [City of Flint](#)
- ≡ MDOT I-75 Reconstruction – [Genesee County](#)
- ≡ Nine Mile Road Bridge Layout – [City of Southfield](#)
- ≡ Seventeen Mile Road Bridge over Conrail Railroad Laser Scan – [City of Sterling Heights](#)
- ≡ Lakeside Pedestrian Bridge Structural Assessment – [City of Sterling Heights](#)
- ≡ Bridge Street Carbon Reinforced Bridge Layout – [City of Southfield](#)
- ≡ Ambassador Bridge – [DIBC](#)
- ≡ Torrey Road Bridge – [City of Fenton](#)
- ≡ University Drive Reconstruction – [City of Rochester](#)
- ≡ Topographical Survey Design Engineering for West Michigan and Howard Fiber Signal and Pathway – [City of Kalamazoo](#)
- ≡ Design Survey for Western Michigan University and Howard Fiber Signal and Pathway – [City of Kalamazoo](#)

#### TRAFFIC ENGINEERING/INTELLIGENT TRANSPORTATION SYSTEMS

- ≡ Morrell Street Lighting Improvements – [City of Jackson](#)
- ≡ Adrian Street Lighting Improvements – [City of Jackson](#)
- ≡ Burton and Michigan Pedestrian Crossing Laser Scan and Survey – [City of Grand Rapids](#)
- ≡ Cooper Street Lighting Improvements – [City of Jackson](#)
- ≡ Silver Parkway Lighting, Landscape, and Resurfacing – [City of Fenton](#)
- ≡ University of Toledo, Intersection Evaluation Study – [Toledo, Ohio](#)
- ≡ North Huron Valley/Rouge Valley Sewer System – [Wayne County](#)
- ≡ Glenwood Pedestrian Crossing Laser Scan and Survey – [City of Grand Rapids](#)
- ≡ SMART Transit Survey & Laser Scanning – [Macomb, Oakland and Wayne Counties](#)

#### WATER RESOURCES/WATERSHED MANAGEMENT

- ≡ Library Parking Deck – [City of Jackson](#)
- ≡ Pavement Rehabilitation – [Sears Holdings Corporation](#); [Our Lady of Loretto](#); [St. Margarets of Scotland](#)
- ≡ Pavement Management Sidewalk Study – [University of Toledo](#)
- ≡ Minnow Pond Drain – [City of Farmington Hills](#)
- ≡ Meckler Drain Culvert Replacement and Stream Enhancement – [GM Global Facilities](#)
- ≡ Quarton Lake Maintenance and Dredging – [City of Birmingham](#)
- ≡ Pavilion Drive Culvert Replacement and Stream Restoration – [Oakland University](#)
- ≡ Storm Collection Inventory and Assessment SAW. Grant – [City of Marysville](#)
- ≡ ADA Improvements – [West Bloomfield Parks and Recreation](#)

#### WATER TREATMENT/DISTRIBUTION

- ≡ Jackson Water Plant – [City of Jackson](#)
- ≡ 2017 Watermain Projects – [City of Jackson](#)
- ≡ West Service Center Water Distribution Improvements – [Great Lakes Water Authority](#)

#### ENERGY AND DISTRIBUTION

- ≡ Natural Gas Pipeline Railway Crossing – [Michigan Gas Utility](#)
- ≡ DTE Energy Training and Development Center Solar Panel Array – [City of Westland](#)
- ≡ GM Detroit Hamtramck Assembly Plant Solar Panels – [J. Ranck Electric, Inc.](#)
- ≡ Gas Main Right of Way – [Consumer Energy Delhi Twp.](#)
- ≡ Petroleum Terminal Containment and Infrastructure Laser Scan – [Sunoco Logistics Romulus and Port Huron](#)
- ≡ Michigan Marine Terminal HDS Laser Scan – [City of River Rouge](#)

**ENVIRONMENTAL ENGINEERING DEPARTMENT MANAGER**



Lynne Seymour joined Hubbell, Roth & Clark, Inc. in 2017 as manager of the Environmental Engineering Department. Her prior experience includes management of an environmental division and environmental education program, securing stormwater and environmental grants, public stewardship, and orchestrating outreach events and watershed management activities.

Ms. Seymour's has overseen MS4 permits and coordinated with EGLE, county departments, municipalities, and school districts to ensure compliance with MS4 permits. Her responsibilities have included: management of more than \$20 million in state and federal grants for asset management, habitat restoration, and stormwater management, developing engineering standards, assisted staff in the management of construction projects and aided with the compliance of established standards. She has also participated in public meetings on county drains and presented at municipal meetings and conferences.

<p><b>EDUCATION</b>                  BS, Civil Engineering,                  Purdue University, 1996</p> <p><b>EXPERIENCE</b>                  With HRC since 2017                  22 Years of Experience</p>	<p><b>PROFESSIONAL REGISTRATION/CERTIFICATION</b>                  Professional Engineer,                  Michigan No. 6201048185                  Michigan Industrial Stormwater Operator Certification                  Soil Erosion and Sedimentation Control Certification</p>	<p><b>AFFILIATIONS</b>                  Clinton River Area of Concern Council, Former Chair                  Area of Concern State Public Advisory Council                  Southeast Michigan Partners for Clean Water                  Southeast Michigan Council of Governments (SEMCOG) Water Resources Task Force                  SEMCOG Green Infrastructure Vision Task Force                  EGLE MS4 Implementation Committee                  Southeast Michigan Regional IDEP Group</p>
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**Professional Experience**

**ASSET MANAGEMENT**

- ≡ SAW Grant Program – [City of Bloomfield Hills](#)
- ≡ Sashabaw Road – [Independence Township](#)
- ≡ Red Run Drain – [Red Run Intercounty Drain Board](#)

**PARKING, PAVEMENT AND STREET LIGHTING**

- ≡ Parking Lot /BMP – [City of Birmingham](#)

**PARKS AND RECREATION**

- ≡ Clintonwood Splash Pad Permit Assistance – [Independence Township](#)

**WATER RESOURCES/WATERSHED MANAGEMENT**

- ≡ Avon Creek Restoration – [City of Rochester Hills](#)
- ≡ Sterling Relief Drain Daylighting – [Macomb County](#)
- ≡ Sterling Relief Pocket Parks – [City of Sterling Heights](#)
- ≡ Regulatory Compliance Permits – [Over 20 clients including Oakland University](#)
- ≡ Stormwater Asset Management Plans – [City of Bloomfield Hills, Independence Township, Red Run Drainage Board](#)
- ≡ Parking Lot Reconfiguration and Bioswale Retrofit – [City of Birmingham](#)
- ≡ Universal Design Boardwalk – [City of Rochester Hills](#)
- ≡ Innovative Glow Stone Technology Pathway – [City of Rochester Hills](#)
- ≡ Universal Design & ADA Pathways – [City of Rochester Hills](#)
- ≡ Porous Paver Sidewalk & Bioswales – [City of Rochester Hills](#)
- ≡ Stormwater Standards Update – [Livingston County Drain Commissioner](#)
- ≡ Stormwater Tactical Plan Update – [Oakland University](#)
- ≡ Illicit Discharge Elimination Plan Sampling – [South Lyon, Oakland County](#)
- ≡ Sashabaw Road – [Independence Township](#)
- ≡ Red Run Drain Maintenance Master Plan – [Red Run Intercounty Drain Board](#)
- ≡ Floodplain and Wetland Permitting for Innovation Hills – [City of Rochester Hills](#)
- ≡ Innovation Hills – [City of Rochester Hills](#)
- ≡ Great Lakes Restoration Initiative and Related Grants – [Various](#)
- ≡ Dye Tracing – [Birmingham Golf Courses, Lathrop Village](#)



- ≡ Storm Water Management – Village of Lake Orion, Beverly Hills, Romeo, Bingham Farms, Franklin Village, City of Bloomfield Hills, Linden, Marysville, Lathrup Village, Birmingham, Grosse Pointe, Troy, Utica, Clarkston, South Lyon, Oakland University
- ≡ Storm Water Management Audit Assistance – Oakland University, Lathrop Village, Village of Franklin
- ≡ Benz Creek Restoration – Washtenaw County

*FLOODPLAIN AND WETLAND PERMITTING*

- ≡ Innovation Hills – City of Rochester Hills
- ≡ Avon Creek Restoration – City of Rochester Hills

*SOIL EROSION AND SEDIMENTATION CONTROL*

- ≡ SESC Program Assistance – Bloomfield Hills, Farmington Hills, St Clair Shores
- ≡ Audit Assistance – St Clair Shores, Farmington Hills



Derek Stratelak is a licensed landscape architect, registered forester, geomorphologist and certified professional wetland scientist with a broad range of public and private sector experience in performing site planning and landscape architectural designs, woodland and tree evaluations, expert witness services, wetland delineations, restoration and mitigation design, stream evaluations, relocation and bank restoration design. Mr. Stratelak's experience also includes environmental permitting and application negotiations, urban planning, engineering and construction administration. He has worked on a wide variety of large and complex projects including parks, corporate headquarters, universities, government facilities, military facilities and bases, nuclear power plants, cemeteries, golf courses, recreational facilities, residential developments, commercial developments, public and private roads including work with numerous county road commissions, county drain commissions, the state transportation departments and federal agencies (DoD, EPA, FWS, NRC).

<p><b>EDUCATION</b>                  BS, Landscape Architecture                  Michigan State University, 1983</p> <p><b>EXPERIENCE</b>                  With HRC since 2014                  36 Years of Experience</p>	<p><b>PROFESSIONAL REGISTRATION/                  CERTIFICATION</b>                  Licensed Landscape Architect No.1021, Michigan, 1986                  Professional Wetland Scientist, No. 993, 1996                  NPDES Certified Stormwater Operator, No. C-00188, 1994                  Certified Arborist, No. MI-0377, International Society of Arboriculture, 1997                  Registered Forester, No. 46096, Michigan 2015</p> <p><b>AFFILIATIONS</b>                  Society of Wetland Scientists                  American Geophysical Union                  State Association of Wetland Managers                  International Society of Arboriculture</p>	<p><b>AFFILIATIONS</b>                  Applied Fluvial Geomorphology, Wildland Hydrology (Dave Rosgen, PhD) (2008)                  River Morphology and Applications, Wildland Hydrology (Dave Rosgen, PhD) (2008)                  River Assessment and Monitoring Wildlife Hydrology (Dave Rosgen, PhD) (2009)                  Michigan River Restoration and Natural Channel Design Wildland Hydrology (Dave Rosgen, PhD) (2009)</p>
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**Professional Experience**

**LANDSCAPE ARCHITECTURE**

- Police Headquarters Landscape Plan – [City of Battle Creek](#)
- Civic Center Landscape Master Plan – [City of Sterling Heights](#)
- Parking Lot No. 6 – [City of Birmingham, Michigan](#)
- Utica Road Streetscape Landscape Plan – [City of Sterling Heights](#)
- Circle Square Housing Development Landscape Plan – [City of Pontiac Public Housing Authority](#)
- N. Capital Ave. Streetscape – [City of Lansing, Michigan](#)
- Telegraph Road Medians – [City of Southfield, Michigan](#)
- LA Fitness Landscape Plan – [Bloomfield Hills, Oakland County, Michigan](#)
- Oasis at Centennial Park Landscape Plan – [City of Troy, Oakland County, Michigan](#)
- CVS Pharmacy Landscape Plan – [Waterford Township, Oakland County, Michigan](#)

**WATER RESOURCES/WATERSHED MANAGEMENT**

- Clinton River Spillway Habitat Improvement Project – [Clinton River Intercounty Drain Commission, Harrison Township, Michigan](#)
- Clinton River Riverbank Stabilization – [Oakland County Public Works Commissioner, Rochester Hills](#)
- Richmond Park Stream Restoration – [City of Grand Rapids, Michigan](#)
- Regional Wetland Mitigation Banks – [Allegan and Fennville, Michigan](#)
- Streamwood Riverbank Stabilization – [Clinton River in Rochester Hills, Oakland County](#)
- GLRI — EPA Grant Projects: Clinton River Corridor, McBride Drain, Partridge Creek (Gloede Drain), Clinton River Spillway, Sylvan Glen Golf Course – [Macomb County Public Works Commissioner, City of Sterling Heights, City of Troy, Michigan](#)
- Munson Medical Center – [Kids Creek Tributary Relocation and Restoration, Traverse City, Michigan](#)
- Copperwood Copper Mine Tailing Basin – [Stream Relocation and Restoration, Ironwood, Michigan](#)
- County Road 595 Environmental Permitting – [Marquette County Road Commission, Marquette County, Michigan](#)
- Township Forestry and Wetland Consultant – [West Bloomfield Township, Oakland County, Michigan](#)
- Pinnacle Aeropark of Wayne County – [Wayne County Economic Development Dept., Huron Township, Michigan](#)

- ≡ Belle River Watershed Master Plan – St. Clair County, Michigan
- ≡ Henry Ford West Bloomfield Hospital – Oakland County, Michigan
- ≡ Jamain Drain – Oakland County Drain Commissioner, Oakland County, Michigan
- ≡ Shenandoah Golf and Country Club – Oakland County, Michigan
- ≡ Champs-Elysees, Residential Development – Oakland County, Michigan
- ≡ Brookside Condo Association Streambank Stabilization – Oakland County, Michigan
- ≡ Ravines Condo Association Streambank Stabilization – Oakland County, Michigan
- ≡ Bay Aggregate Relocation – Bay County, Michigan
- ≡ Pinnacle Racecourse – Wayne County Economic Development Dept., Wayne County, Michigan
- ≡ Clinton Forest Office Park – Clinton Township, Macomb County, Michigan
- ≡ Big Beaver Place – City of Troy, Oakland County, Michigan
- ≡ Henry Ford West Bloomfield Hospital – Oakland County, Michigan
- ≡ Heritage Park Wetland Mitigation – Farmington Hills, Michigan
- ≡ Augusta Dr. Green Infrastructure – Oakland County Water Resource Commissioner, Oakland County, Michigan
- ≡ Ferris State University Wetland Mitigation – Big Rapids, Michigan
- ≡ Hammond WWTP Wetland Monitoring – Hammond, Indiana



Douglas Urquhart has seven years of water and wastewater engineering experience with a background in planning, design, and construction administration for municipal and industrial water and wastewater treatment facilities, sanitary sewer design, hydraulic modeling, and infiltration and inflow studies. He also has four years of environmental engineering experience, including chemical, bioremediation, and groundwater treatment systems. Doug was also a Peace Corps volunteer in the Republic of Macedonia. He worked in the Municipality of Berovo with the local public utility supporting their water and wastewater infrastructure needs.

<p><b>EDUCATION</b>  MS, Environmental Engineering  University of Michigan, 2004  BS Chemical Engineering  University of Michigan, 2003</p> <p><b>EXPERIENCE</b>  With HRC since 2019  14 Years of Experience</p>	<p><b>PROFESSIONAL REGISTRATION/CERTIFICATION</b>  Professional Engineer  Michigan No. 67401  Professional Engineer,  Virginia No. 040251592</p>	<p><b>AFFILIATIONS</b>  Water Environment Federation (WEF)  Michigan Water Environment Association (MWEA)</p>
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**Professional Experience**

**INDUSTRIAL FACILITIES**

- ≡ Chemical Pretreatment System Improvements – [Industrial Client, VA](#)
- ≡ pH Neutralization System Improvements – [Industrial Client, MD](#)
- ≡ Anaerobic Digestion and Combined Heat and Power System Construction and Startup Support – [Industrial Client, TN](#)
- ≡ Groundwater Remediation System Evaluation and Preliminary Design – [Industrial Client, NY](#)
- ≡ Soil Vapor Extraction System Design and Construction Administration – [Industrial Client, OR](#)
- ≡ In-situ Soil and Ground Water Chemical Remediation of Chromium VI – [Oregon Department of Environmental Quality](#)
- ≡ In-situ Anaerobic Biological Remediation and Soil Vapor Extraction System – [Industrial Client, WA](#)

**WASTEWATER COLLECTION/TREATMENT**

- ≡ Hastings WWTP Solids Dewatering Equipment Replacement – [City of Hastings, MI](#)
- ≡ Hastings WWTP Wastewater Treatment Plant Improvements – [City of Hastings, MI](#)
- ≡ Headworks Pump Station Improvements – [Hammond Sanitary District, IN](#)
- ≡ Tertiary Screw Pump Replacement – [Hammond Sanitary District, IN](#)
- ≡ Wastewater Treatment Plant Improvements, Construction and Operations Support – [City of Petoskey MI](#)
- ≡ Wastewater Asset Management Business Risk Evaluation – [City of Petoskey, MI](#)
- ≡ Hospital Sewer Odor Testing and Control Plan – [City of Petoskey, MI](#)
- ≡ Digester Upgrades Owner Representation Construction Engineering Support – [City of Traverse City, MI](#)
- ≡ Primary Treatment Options Study – [City of Traverse City, MI](#)
- ≡ 2017 Influent Pump Station and Wastewater Treatment Facility Renovations – [City of Galax, VA](#)
- ≡ 2017 Pump Station Improvements – [City of Galax, VA](#)
- ≡ 2013 Wastewater Treatment Plant Improvements – [Town of Grottoes, VA](#)
- ≡ 2016 Grit Removal Equipment Replacement – [Town of Abingdon, VA](#)
- ≡ Draper Road Sanitary Sewer Modeling and Capacity Evaluation – [Town of Blacksburg, VA](#)
- ≡ WWTP Evaluation and Flow Equalization Preliminary Engineering Report – [City of Covington, VA](#)
- ≡ Infiltration and Inflow Study – [City of Cheboygan, MI](#)
- ≡ East Front Street Sewer Rehabilitation – [City of Traverse City, MI](#)
- ≡ WWTP Operations and Maintenance Plan and Engineering Support – [City of Covington, VA](#)
- ≡ Sanitary Sewer Model Update – [Town of Purcellville, VA](#)
- ≡ College Street Sanitary Sewer Model Evaluation – [Town of Christiansburg, VA](#)
- ≡ 2015 Interceptor Modeling Evaluation and Preliminary Engineering Report – [Town of Christiansburg, VA](#)
- ≡ 2017 Interceptor Model Evaluation – [Blacksburg Virginia Polytechnic Institute Sanitation Authority, VA](#)

- ≡ Emory Meadowview Sanitary Sewer Model Evaluation – Washington County Public Service Authority, VA
- ≡ Sanitary Sewer Evaluation Study and RD Funding Application – Town of Glasgow, VA
- ≡ Bear Mountain Wastewater Treatment Plant Improvements – Bear Mountain State Park, NY
- ≡ Sanitary Sewer Rehabilitation Study – City of Salem, VA
- ≡ Pump Station Capacity Evaluations – Town of Blacksburg, VA
- ≡ West Club Pump Station Preliminary Design and Engineering Report – City of Salem, VA
- ≡ Sewer System Monitoring Support – Town of Blacksburg, VA

STORMWATER COLLECTION

- ≡ Alpine Stormwater Pump Station Improvements – City of Grand Rapids, MI



Mr. Wagenmaker has 30 years of experience in design of municipal wastewater and water treatment facilities, combined sewer overflow treatment facilities, pumping stations, elevated/ground water storage facilities, sanitary sewer, watermain and storm sewer utilities, raw water intakes, roadways, bridges, dams and has served as city engineer and as a construction manager. Mr. Wagenmaker also has experience as a resident project construction representative, shop drawing reviewer, in the preparation of planning and design reports, development of operation/maintenance manuals, grant application/administration and administration of construction projects.

<p><b>EDUCATION</b> BSE, Civil Engineering University of Michigan, 1990</p> <p><b>EXPERIENCE</b> With HRC since 2011 30 Years of Experience</p>	<p><b>PROFESSIONAL REGISTRATION/CERTIFICATION</b> Professional Engineer Michigan No.40131</p>	<p><b>AFFILIATIONS</b> American Water Works Association Water Environment Federation</p>
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## Professional Experience

### ASSET MANAGEMENT

- Development of an Asset Management Plan – City of Allegan; City of Flint, City of Howell, City of Warren

### MUNICIPAL CONSULTING

- Construction Scheduling and Coordination – City of Brighton, City of Milan
- Engineering – City of Milan, Green Oak Township

### WASTEWATER COLLECTION/TREATMENT

- Aeration Tank Retrofit and Turbo Blower Addition – City of Frankenmuth, South Huron Valley Wastewater Treatment Plant, City of Howell
- Biological Nutrient Removal Conversion and WWTP Improvements – City of Frankenmuth, City of Allegan City of Howell, City of Milan, Genoa Oceola, Sylvan Glen
- Grit Removal Improvements – City of Frankenmuth, City of Bay City, City of Flint, City of Allegan, City of Milan, City of Howell, Delhi Township, City of Cheboygan
- Final Clarifier Improvements – City of Frankenmuth, City of Warren, City of Chelsea, City of Milan, City of Cheboygan, City of Allegan, Genoa Oceola, City of Howell, Salem Township, South Huron Valley UA
- Primary Clarifier Improvements – City of Frankenmuth, City of Howell, City of Flint, City of Warren
- Sludge/Cake Pumping – City of Frankenmuth, City of Milan, Genoa Oceola, City of Flint, City of Howell, City of Wixom, City of Bay City
- Ash Lagoon Replacement – City of Warren
- Sewer Siphon – City of Frankenmuth
- Pump Stations – City of Frankenmuth, City of Allegan, City of Port Huron, Genoa Township, City Milan, Hamburg Township, Oceola Township, Livingston County, City of Chelsea, City of DeWitt, Delhi Township, City of Williamston, City of Linden, City of Howell
- Fine Screening – City of Milan, City of Cheboygan, City of Howell, Genoa Oceola, City of Allegan, City of Bay City, Northfield Township
- Solids Dewatering Improvements – City of Bay City, City of Wixom, City of Flint, City of Howell
- Ultraviolet Disinfection Improvements – City of Milan, City of Chelsea, Genoa Oceola, City of Flint, Salem Township, City of Allegan, City of Howell
- Ash Dewatering and Treatment System – DTE Trenton Channel Power Plant
- Solids Loading Facility – City of Flint
- Odor Control Improvements – City of Saline, City of Howell
- Tertiary Filtration Reconstruction and Miscellaneous Improvements – City of Ann Arbor, City of Wixom, Salem Township, Genoa Oceola
- Miscellaneous Upgrades to Existing CSO WWTP – City of Bay City
- Fixed Film to Activated Sludge Conversion and WWTP Expansion – City of Milan, City of Cheboygan
- Groundwater to Surface Water Discharge Conversion and WWTP Expansion – Genoa-Oceola Sewer/Water Authority
- Membrane Bioreactor WWTP Design – Armada Township Industrial Park
- SBR Plant EQ Tank Addition – Genoa Township, Lake Edgewood WWTP
- Lagoon Final Effluent Pumping Station Strainer Improvements – City of Muskegon
- New Surface Water Discharge Tertiary WWTP Design/Construction – Salem Township

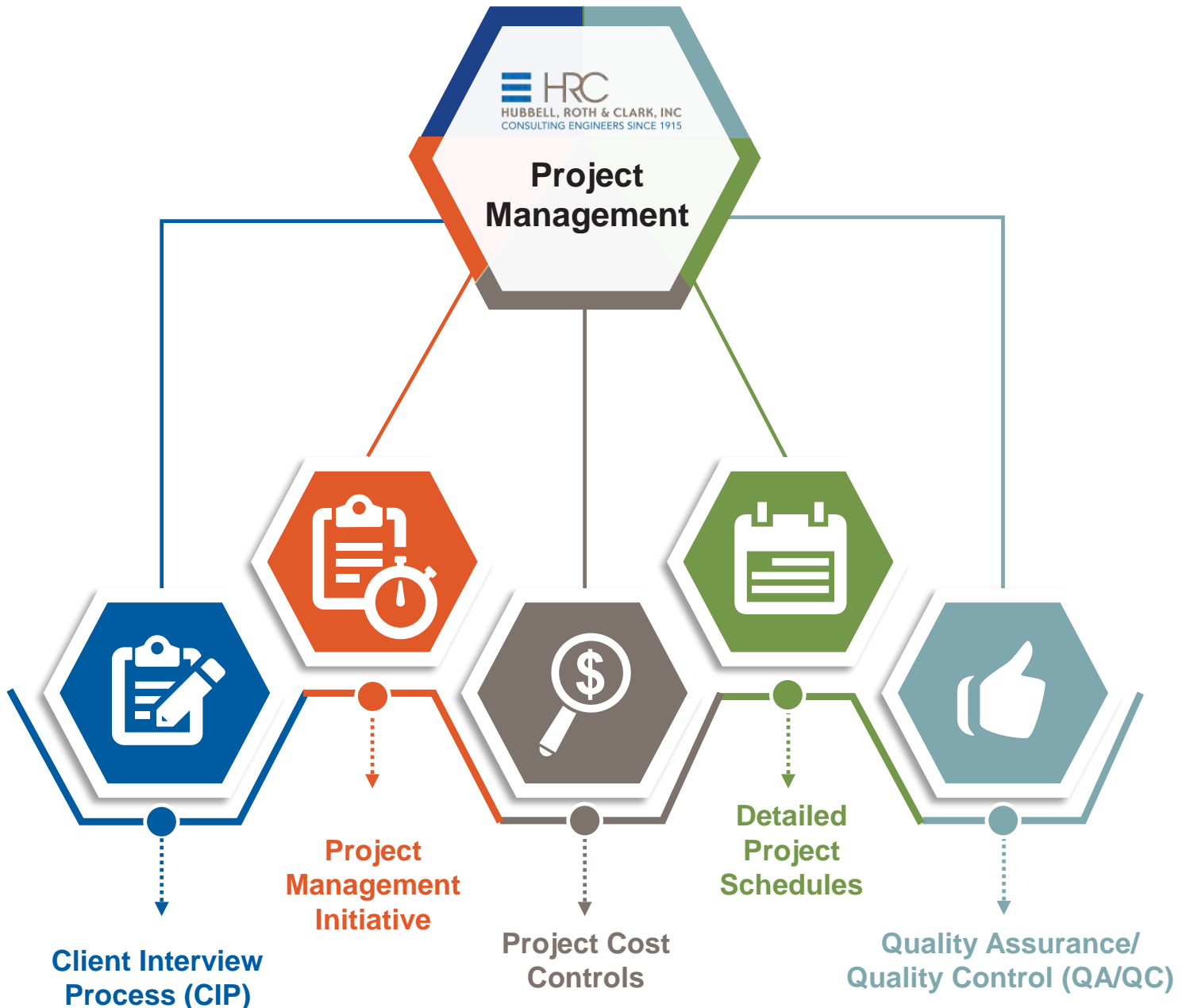


# 4. MANAGEMENT SUMMARY, WORK PLAN AND SCHEDULE

## PROJECT MANAGEMENT SUMMARY

HRC has a well-defined project management process to control scope, schedule, and total project costs. This process for us, and our clients, means fully understanding the goals of the project, always being aware of the items that could affect these goals, fully understanding the client's "must-haves," and as importantly, the client's "must NOT haves." Therefore the foundation of this process is identifying and closely following key issues that affect the project's scope, schedule, and budget.

HRC's procedures that ensure projects are developed at the highest level of competency while meeting the financial, scheduling, and technical goals include:



- ≡ HRC's robust **Project Management Process**, was developed to ensure the client's expectations are met while being able to maintain a business model that retains and rewards the employees of HRC. This process includes:
  - Development of a Work Plan that provides HRC's team members knowledge of all aspects of the project, including non-technical items. This document is reviewed throughout the project to ensure that goals are being addressed. Requiring communication with the client and the project team that is timely and efficient.



- HRC encourages our Team Leaders to proactively seek out, identify and confront potential issues that may cause problems later on so that they can be discussed and potential solutions can be developed in advance of their occurrence.
  - Regularly providing the Account of Project Standing to the client, updating key project elements including schedule, budget, and other items that need to be communicated.
  - Identifying the key items that need immediate attention or close monitoring because of their potential to affect the client’s desired project outcomes. HRC’s Risk Communication Process is intended to alert the client to substantial risks early-on so that decisions can be made before work is performed, money is spent, and any potential consequences occur.
  - Recognizing that while there is typically more than one way to solve a problem, one solution often stands out when measured against the goals of the project
  - Utilizing the vast expertise and experience of HRC personnel to assist and brainstorm on projects, or tasks, which may require a more in-depth review of an issue
- ≡ Developing early Construction Cost Estimates that immediately provide information for DTMB to make informed decisions going forward based on the available budget
  - ≡ Developing detailed project schedules that include deliverable dates for reviews by DTMB and other stakeholders. This project schedule is included in the Project Work Plan and is provided to all HRC team members.
  - ≡ A QA/QC process that includes reviews by highly experienced staff members
  - ≡ Assigning team members that are best suited for the project. This includes an analysis of disciplines required for the project, current obligations, and evaluating which staff members have the tools that best fit the client’s technical, financial, and scheduling goals.
  - ≡ Developing a project Work Plan provided to all team members, including sub-consultants (if required) that outlines:
    - Project Schedule
    - Key deliverables
    - Project Scope
    - Anticipated effort broken out by staff
    - Key DTMB staff
    - Potential issues to be aware of

Below, HRC has described in detail items that most affect the project costs and our processes to keep these costs within budget.

## COST ESTIMATING

An important part of Project Management is estimating the construction cost of a project. HRC understands the critical nature of cost estimates and project budgets. Estimating these accurately allows DTMB to prepare budgets and follow capital improvement planning with minimal surprises that can impact other projects. HRC’s methods to ensure that our construction cost estimates are accurate starts with our Project Management Process, which confirms the scope of work and budget. The experience and technical expertise of HRC’s staff are critical to successful and accurate estimates. During the detailed design phase, HRC’s accuracy greatly increases as the unknowns are reduced, and contingencies continue to lessen. HRC’s method for preparing accurate estimates of construction cost includes:

- ≡ After the scoping meeting and initial concepts are developed, a construction estimate is prepared. This estimate includes identifying the key elements that may have the most impact on costs. This estimate is sometimes developed with a range that allows the owner to determine the level of risk they want to assume and provides the information needed to make decisions.
- ≡ HRC uses a vast amount of information to confirm our estimating including bid tabs from recent and similar jobs in the proximity of the project, vendor/manufacturer information, average unit price documents, and, on occasion, advice from local contractors



- ≡ Accounts of Project Standing to ensure that DTMB is updated on project progress, schedule, budget-related issues, and any impediments to progress that might arise. This supplements early and effective communications between the Project Leaders and DTMB.
- ≡ Timely Risk Communication whenever a decision or event has the potential to affect the desired outcomes for the project

Reviews are completed throughout the project and may include the following:

- ≡ Planning
  - Review of cost estimates
  - Review of technical concepts
- ≡ Design
  - Review of conceptual estimates
  - Before preliminary plan submittal
  - Before submittal to agencies for permits
  - Before final plan submittal
- ≡ Construction
  - Review of submittals and recommendations to DTMB
  - Review of Pay Application to the Contractor
  - Review of changes or mitigation plans that greatly affect the project costs or schedule

Upon completing all HRC reviews, the Team Leaders will be responsible for addressing all comments and preparing a letter to certify that HRC has completed this thorough QA/QC process. We have found that this added element helps ensure the highest quality contract documents and identifies opportunities, such as value engineering considerations and alternate design concepts. This is included in the submittal to our clients as part of our QA/QC procedure.





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

Please see attached proposal. (Page 7)

Has there been a recent change in organizational structure (e.g., management team) or control (e.g. merger or acquisition) of your company? If the answer is yes: (a) explain why the change occurred and (b) how this change affected your company.

No

6. Provide a four year rate schedule per position.

Please see proposal Part II - Cost.

## ARTICLE 2: PROJECT TYPES AND SERVICES OFFERED

Identify ALL project types and professional services for which your firm is exceptionally qualified and experienced.

Provide attachments illustrating a minimum of three examples, with references, of successful projects performed in the last five years for each item checked. Identification of specialties will not exclude selected firms from project types but will assist the DCD Project Directors in matching firms with projects.

- ADA facility assessment and remodeling
- Boilers and steam systems
- Bridges – pedestrian and vehicular
- Building and structure additions
- Building envelope investigation, repair, upgrade
- Correctional facilities
- Door and window replacement
- Fire and security alarm systems
- Fish passage structures
- General architectural and/or engineering design
- HVAC equipment replacement, upgrade, selection
- HVAC controls replacement, upgrade, selection
- Interior remodeling and renovation
- Laboratory facilities
- Landscape architecture
- Land Planning
- Locks, Dams, Water Diking Systems and Water Control Structures
- Maintenance and facility preservation
- Marine work - boat launch facilities, docks, harbors
- Parking and paving
- Recreation and Sports Facilities / Fields
- Roof repair, restoration and/or replacement design
- Soil Erosion Sedimentation Controls
- Site surveying
- Stormwater management and drainage plans
- Structural investigation and assessment
- Toilet and/or shower room remodeling or design.
- Trail design and development
- Wastewater systems
- Water supply systems

### ARTICLE 3: PROJECT LOCATION

Identify the regions where your firm can most efficiently provide services. Assignments may vary from the regions checked, depending on the specialties and services required.

- Western Upper Peninsula (west of Marquette)
- Eastern Upper Peninsula (east of Marquette)
- Northern Lower Peninsula (north of Grayling)
- Saginaw Bay area (east of 127, north of I-69 and M 57, south of Grayling)
- Western Lower Peninsula (west of 127, north of Muskegon, south of Grayling)
- Central Lower Peninsula (east of Battle Creek, west of Chelsea, south of M 46 and M 57)
- Southwestern Lower Peninsula (west of Battle Creek, south of Muskegon)
- Southeastern Lower Peninsula (east of Chelsea, south of I-69)

### ARTICLE 4: 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).

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

Yes     No

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

Yes     No

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

Yes     No

**4.4 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

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

Yes     No

**4.6 Is your firm familiar with Design and Construction's MICHSpec and DCSpec contracts and the enforcement of such?**

Yes     No

If yes, explain: HRC has on-going and completed projects using Michigan and Federal contract language and fully understands the importance of strict adherence to the specification language as well as the use of the proper bidding and contract documents based on project scope and cost. We are familiar with the guidance documents related to these contracts.

**4.7 Does your firm have prior experience working with the State of Michigan?**

Yes     No

If yes, explain: Within the last 10 years we have successfully completed over 50 jobs for a variety of State Agencies including: MDNR, MDOT and EGLE (formally DEQ).

## ARTICLE 5: CAPACITY AND QUALITY

### 5.1 Briefly describe your firm's methods and procedures for quality control for your deliverables and services.

HRC's quality and project management processes are practical, time-efficient, and focused on communicating essential information to the right people at the right time. Our process includes:

Independent reviews by experienced professionals of work products by HRC team members, which may include sub-consultants.

Accounts of Project Standing to ensure that the State Project Manager(s) are updated on project progress, schedule, budget-related issues, and any impediments to progress that might arise. This supplements early and effective communications between HRC Project Manager and the State.

Timely Risk Communication whenever a decision or event has the potential to affect the desired outcomes for the project.

Reviews are completed throughout the project and may include the following:

- Planning
  - Review of cost estimates
  - Review of technical concepts
- Design
  - Review of conceptual estimates
  - Before preliminary plan submittal
  - Before submittal to agencies for permits
  - Before final plan submittal
- Construction
  - Review of submittals and recommendations to the State
  - Review of Pay Application to the Contractor
  - Review of changes or mitigation plans that greatly affect the project costs or schedule

Upon completing all HRC reviews, the Team Leaders will be responsible for addressing all comments and preparing a letter to certify that HRC has completed this thorough QA/QC process. We have found that this added element helps ensure the highest quality contract documents and identifies opportunities, such as value engineering considerations and alternate design concepts. This is included in the submittal to our clients as part of our QA/QC procedure.

### 5.2 Has your firm been involved in claims or suits associated with professional services errors and/or omissions?

Yes  No

If yes, explain:

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

Yes  No

### 5.4 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.

It is our understanding that HRC will have a contract with the State of Michigan through the design and construction divisions of the DTMB. The DTMB specializes in connecting your customers (State Agencies) with, in this case, Architectural and Engineering firms to deliver a successful project. The DTMB will assist with project coordination between HRC and the State Agency responsible for a specific project. HRC will interface with both DTMB and State Agency Project Managers during the course of design and construction.

### 5.5 Describe your approach if a bidder proposes a substitution of a specified material during bidding.

The bidding process needs to be transparent and open. If the proposed substitution is determined to be potentially beneficial to the State, communication with the State would be necessary to determine if the substitution would be considered and if so, an addendum would be prepared to make the substitution applicable to all bidders.



**5.6 Describe your approach if a contractor proposes a substitution of a specified material or detail with shop drawing submittals or in construction.**

After the bidding phase, the contractor is required to provide the specified material or equal. It is the burden of the contractor to demonstrate that the material meets the “or equal” clause. If the material is not considered equal to the specified material, either the shop drawing would not be approved or the substitution would be denied. If the substituted material would function the same as the specified material HRC would communicate with the State’s Project Managers to determine the best course of action additionally if there is a potential cost savings to the project HRC would request this savings in writing and review with the State’s Project Managers.

**5.7 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?**

The HRC Team recognizes that good communication is a key component to a successful project. Project communication would occur through several different means, including meetings, telephone calls, emails, and letters. During the initial project kickoff meeting, a proposed communication process would be reviewed and modified to reflect the State and stakeholders’ input. Details such as email addresses, telephone numbers, and primary points of contact would be established. Generally, the State and the HRC primary communication will be through the State’s Project Manager(s) and the HRC Project Manager. In turn, the HRC Project Manager would communicate, through the Work Plan, to all team members the City’s needs and desires making sure expected outcomes are achieved. Team members would not communicate directly with the State but rather through the HRC Project Manager. On occasion, it may be appropriate for an HRC staff member to communicate directly with the State’s staff to which the project manager will be copied on the communication, however, this will only occur with prior approval of the State’s Project Manager.

The preferred method of daily communication is via email. Email allows for efficient distribution of information to team members, State staff, and other concerned parties. HRC would also submit regular, typically monthly, our Account of Project Standing (APS). Telephone calls would be summarized and emailed to appropriate parties to document conversations and inform others about the issues at hand.

**5.8 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

Yes, HRC has experience vast experience with file sharing platforms including: Microsoft Teams, Basecamp, Dropbox, One Drive/ Sharepoint and BIM 360 Docs.

**5.9 Describe your method of estimating construction costs and demonstrate the validity of that method.**

The first step in the calculation of a reliable Construction Cost Estimate (Estimate) is the complete listing of items that the cost will be based on. This may or may not be the same as the bid form, but assuming it is a unit price bid, it would likely be the same. We use a consistent cost estimating spreadsheet with a compiled listing of unit prices from past projects. Some adjustment to the typical unit pricing may be made to account for site specific construction considerations or other factors. In addition, the Estimate is part of the QA/QC process and is reviewed as an integral and critical part of the construction documents.

We understand the importance of a reliable Estimate and take pride in the overall accuracy. No firm can say that their estimates are 100% accurate, but our approach has been shown to be extremely reliable when bid pricing is compared with Estimate after each project bid opening.

**5.10 Describe your approach to minimizing construction cost over-runs.**

HRC’s philosophy for controlling the costs of projects is based on the foundation of effective and frequent communication in all aspects of the project. The HRC Team Leaders have significant experience in projects where continuity existed from early planning through design and construction. Cost control is critical not only for the project construction costs but also contractual costs for services provided. With both factors in mind, HRC’s Team Leaders will be actively involved in all aspects of the project and its costs. This includes providing high-quality products delivered on reliable schedules. These primary focuses are directly related to one another, and evaluating and managing them together provides the best opportunity to control costs effectively. When projects lack thorough design, construction costs can escalate. When contracts and projects have schedule extensions or delays, costs may increase. With this in mind, the Team Leaders follow HRC’s philosophy in all aspects of the project, including proposal preparation and planning, design, construction document development, and

construction administration. HRC's philosophy for controlling costs during construction includes:

- First and foremost, effective and early communication utilizing HRC project management tools
- Thorough reviews of submittals and requests
- Early identification of potential issues
  - Communicating the solution or mitigation immediately with the Client, and others as needed.
  - Communicating with the contractor for engagement in the solution process
- Mitigate additional cost requests
- Stay up-to-date with and track all daily reports, progress, quantities, requests, changes, and other project information. This includes requiring timely requests from the Contractor
- Consultation with the Client if extra work is increasing the project costs. Keeping tabs on costs will allow the owner to make informed decisions, which may include eliminating portions of proposed work
- Working with the Client and the Contractor to finish on time and close-out the project in a timely manner directly promotes cost control

**5.11 What percentage of the PSC cost should be devoted to construction administration (office and field)?**

This can vary based on many factors, but the typical percentages would be 20% Phase 600 Construction Administration- Office Services and 35% Phase 700 Construction Administration- Field Services.

Assume- PSC = Professional Service Contract

Assume- Full-time inspection

Assume- No construction staking or materials testing

**5.12 What portion of the assigned work will be performed with your staff and what portion will be provided by sub-consultants?**

It may change based on the assigned project, but we would not expect to utilize any sub-consultants for the assigned work. Therefore, 100% of the work is anticipated to be performed by HRC staff.

**5.13 On a typical project, what would be your response time, from the time receive a project assignment to starting investigation and design work? A typical project might be one involving several disciplines and in the neighborhood of a \$25,000 fee.)**

Work normally is expected to begin immediately, but always within 5 working days, of receiving a project assignment.

**5.14 How do you assess whether a construction bidder is responsive and responsible?**

A construction bidder is responsive if their bid is submitted on time and contains all the required bid information. A construction bidder is responsible when they provide the requested/required information with the bid.

**5.15 Describe your firm's understanding of Sustainable Design and LEED Certification.**

Sustainable design refers to the design process that integrates an environmentally friendly approach and considers nature resources as part of the design.

Leadership in Energy and Environmental Design (LEED) Certification is a popular certification demonstrating "green" building programs.

HRC has five (5) LEED Certified professionals and is a leader in Sustainable Design practices.

**5.16 Describe your experience with similar open-ended contracts.**

HRC has current open-ended contracts with several state and municipal agencies. These include:

- Michigan Department of Transportation
- Wayne County Department of Public Services
- Great Lakes Water Authority
- Oakland County Water Resource Commissioner
- Livingston County Drain Commission
- Over 50 Cities and Townships throughout Michigan

HRC has the staff and resources to respond to all of our clients' needs and is well versed working under open-ended contract and is currently doing so with over 50 clients. We understand that the workload can be sporadic and is not guaranteed.

**5.17 Describe your methodology for obtaining information about the existence and condition of an existing, facility's components and systems.**

We feel that the most effective method to collect information about a facility is to first review any as-built (record) drawings and other available project related documentation. Once the available information is collected and reviewed, a site visit is typically scheduled. Where practical, meeting with the on-site personnel is arranged during the same visit.

**5.18 Describe your approach to securing permits/approvals for the following: campgrounds, critical dunes, coastal zone management, projects adjacent to Michigan lakes and rivers.**

Where appropriate, communication with the permitting agencies is a critical component of natural resource related permitting. At early stages, this communication is typically helpful to ensure that the required information is prepared and submitted with the permit package. Please note that this is not done because we are unclear about the requirements, but because we want to facilitate the permitting process as efficiently as possible. The schedule for submittal of permit application packages is normally a critical timeline task and needs to be handled accordingly.

**5.19 Describe your approach to a construction contractor's request for additional compensation for a change in the project scope.**

Each request for additional compensation is seriously reviewed for its merits. Ultimately some of these requests are valid and some are not. As your consultant, it is our duty to provide the State's Project Mangers with the facts and recommendation based on the available information. If the request is determined to be justifiable, paperwork for approval will be prepared and submitted to the appropriate party within the State for approval.

# 6. REFERENCES

## ADA FACILITY ASSESSMENT AND REMODELING

### CITY OF HOWELL HOWELL PARK ADA ASSESSMENT



HRC was requested by the City of Howell to perform an Accessibility Review of the Howell City Park. The purpose of the review was to determine the current level of accessibility of the park, pursuant to the American's with Disabilities Act (ADA) and to provide recommendations on improvements to be undertaken. Visual inspections of the park facilities were performed and a report was provided which documented compliance issues and presented options for upgrading or improving the non-compliant items. Cost estimates for the recommended improvements were also provided to the Owner as part of the report.

**Client**

City of Howell  
611 East Grand River Avenue  
Howell, MI 48843  
*Mr. Shea Charles*  
City Manager  
(517) 546-3502

### CITY OF MARYSVILLE CITY HALL & PUBLIC SAFETY BUILDINGS NEEDS ASSESSMENT



**Client**

City of Marysville  
1111 Delaware Ave.  
Marysville, MI 48040  
*Mr. Barry Kreiner*  
Director of Public Services  
(810) 455-1385

HRC to provide a comprehensive report on the current status of the Public Safety and City Hall buildings. HRC reviewed existing conditions of both buildings in terms of ADA compliance, life safety, architectural, structural, mechanical, electrical, and plumbing systems. The HRC assessment team also provided recommendations for maintenance, repair and code violations, as well as cost estimates for the improvements.

### CITY OF TROY HISTORICAL VILLAGE ADA RAMPS



**Client**

City of Troy  
Engineering Department  
500 W. Big Beaver  
Troy, MI  
Mr. Antonio Cicchetti, PE  
(248) 524-3385

HRC was retained by the City of Troy to prepare construction documents for the installation of three new ADA compliant ramps to existing buildings at their Historical Village on Wattles Rd. The city had installed new ramps at other buildings on site several years ago and desired to provide new compliant ramps for the remainder of the main buildings. The ramps were designed to match the appearance of the other ramps on site, while also fitting the historic nature of the facility. Ramps were carefully laid out to minimize disruption to existing walking paths. Rain barrels were included on one of the ramps to capture rain for use by the City's volunteer gardening association.

The City of Troy and HRC were awarded the American Public Works Association's Historic Restoration/Preservation Award (For Projects Under 1 Million) in March of 2016 for the project.

## BRIDGES - PEDESTRIAN AND VEHICULAR

### CITY OF STERLING HEIGHTS RIVERLAND PEDESTRIAN BRIDGE



#### Client

City of Sterling Heights  
40555 Utica Road  
Sterling Heights, Michigan 48313

*Mr. Brent Bashaw, P.E.*  
City Engineer  
(586) 446-2721

During a routine inspection of the Riverland Drive pedestrian bridge in 2015, it was discovered that the bridge was structurally deficient. The inspection revealed excessive rust and corrosion on the metal components that support the wooden deck. As a cautionary measure, the pedestrian bridge was closed by the city. This bridge provides a connection for pedestrians and bicyclists crossing the east side of the Clinton River to restaurants and a shopping center on the west side. HRC prepared plans and specification for the installation of the pre-fabricated pedestrian bridge and bridge abutment modifications. During construction, HRC provided construction staking, materials testing, construction inspection and contract administration, under an Engineering Services contract with the City of Sterling Heights.

### CITY OF SOUTHFIELD 9 MILE ROAD BRIDGE OVER THE EVANS BRANCH OF THE ROUGE RIVER REPLACEMENT PROJECT



#### Client

City of Southfield  
26000 Evergreen Road  
P.O. Box 2055  
Southfield, Michigan 48037

*Ms. Leigh Schultz*  
City Engineer  
(248) 796-4812

The 9 Mile Road Bridge over Evans Branch of the Rouge River Replacement Project involved the complete removal of a deteriorated five-lane bridge originally built during the 1920's with a three-lane bridge with shoulders, a pedestrian sidewalk, decorative vehicular and pedestrian tube steel railings, all supported on deep foundations. The approach pavements were also replaced. The new bridge is 125' long by 63' wide and consists of prestressed concrete girders, concrete deck and concrete abutments supported on steel pile foundations. This project was funded through FHWA/MDOT's Local Agency Program and opened to traffic June 2019. HRC was involved in all phases of this project originally starting from performing the MDOT/MBIS routine bridge inspections, preparing the Local Agency Program application, initial, preliminary and final design, along with contract administration, construction engineering, and construction observation.

### CITY OF STERLING HEIGHTS DODGE PARK PEDESTRIAN BRIDGE



#### Client

City of Sterling Heights  
40555 Utica Road  
Sterling Heights, Michigan 48313

*Mr. Brent Bashaw, P.E.*  
City Engineer  
(586) 446-2721

In 2014, the City of Sterling Heights began planning for the replacement of an old, narrow, functionally obsolete 4-foot-wide footbridge over the Clinton River in Dodge Park. The bridge is a critical link to the city's Clinton River Park Trail System, and county and regional pathway systems. They include:

- ≡ A non-motorized bridge was constructed in part with a FY2010 TE grant over the Clinton River in Heritage Park in Utica.
- ≡ Added nearly 2 miles to the trail system along the Clinton River.
- ≡ The envisioned Freedom Trail allowing trail users to bike or hike from Dodge Park all the way to Lake St. Clair Metropark.

HRC provided construction staking, materials testing, construction inspection and contract administration under an Engineering Services contract with the City.

## BUILDING AND STRUCTURE ADDITIONS

### INDEPENDENCE TOWNSHIP DPW ADDITION & RENOVATION



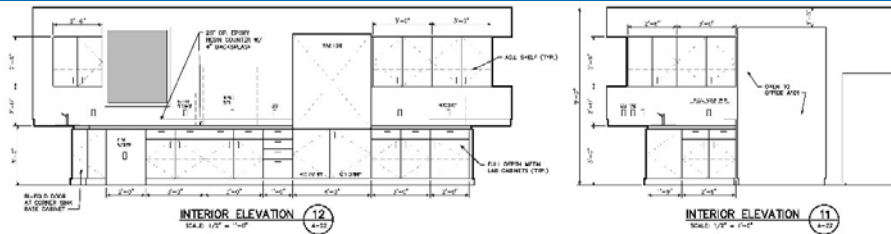
#### Client

Independence Twp. Department of  
Public Works  
6050 Flemings Lake Rd.  
Independence Twp., Michigan 48346

Mr. Dave McKee  
DPW Director  
(248) 625-8222

The DPW in Independence Township had outgrown its existing space and desired a major expansion and renovation of the building in order to make it relevant for its current and future needs. The design included repaving and regrading the entire site, as well as a new rain garden with landscape buffer to provide additional screening for an adjacent residential property. HRC also produced several elevation schemes to determine options for reskinning the exterior of the building. The final design included new metal façade panels at the garage portions of the building, and new E.I.F.S. and veneer stone at the office portion of the building. The exterior design of the new addition included a split-faced CMU base with metal panels above. HRC was requested to provide all design, bidding and construction administration services for this work. Designs included site survey, civil, architectural, electrical, mechanical and structural. City approvals were also obtained.

### CITY OF HOWELL WASTEWATER TREATMENT PLANT UPGRADES



#### Client

City of Howell WWTP

Mr. Mike Spittler, Supt.  
mspittler@cityofhowell.org  
517-546-6230

Design of \$16.5M treatment plant upgrade. This project is currently under construction. It consists of the following architectural elements:

- ≡ New Construction of an Influent Building (1,500 SF) and a Solids Handling Building (6,000 SF total)
- ≡ Significant Addition to the Administration Building
- ≡ Complete Interior Renovations to the Administration Building, including new Offices, Locker/Shower Rooms, Meeting Room and Lab Facility.
- ≡ Roofing Replacements at the existing RAS Building, Aeration Pump Station, Generator Building and Maintenance Garage
- ≡ New Roof Coating at the Primary Sludge Pumping Station
- ≡ Extensive Exterior repairs to UV Building, Sludge Processing Building,

### CITY OF SOUTH HAVEN WASTEWATER TREATMENT PLANT PUMP STATION REPLACEMENT



#### Client

City of South Haven  
1199 8th Avenue  
South Haven, Michigan 49090

Mr. David Mulac  
WWTP Superintendent  
(269) 637-0716

This project included an extensive renovation and large addition to the original South Haven main pump station located at 120 Dunkley Avenue that was constructed in 1933. A new mechanical fine screening system replaced the existing Arc Screen system. The new system includes two parallel mechanical fine screens installed in parallel channels and one screenings washer/compactor. Each screen is designed to handle a peak flow of 8.0 MGD, the current average daily flow of 1.4 MGD, and the current minimum daily flow of 0.5 MGD. The new mechanical fine bar screen has 1/4-inch teardrop shaped bars with 1/4-inch clear openings. The screenings discharge from the mechanical fine screen into a washer/compactor device. The washer/compactor moves the screenings horizontally with an auger and includes a water rinse to clean the screenings. The new system produces higher screening capture, fewer operational and maintenance impacts, and improves flow conditions through the screen.

## BUILDING ENVELOPE INVESTIGATION, REPAIR, UPGRADE

### CITY OF HOWELL HOWELL CITY OFFICES WALL REPAIR PROJECT



#### Client

City of Howell  
611 East Grand River Avenue  
Howell, MI, 48843

*Mr. Shea Charles*  
City Manager  
(517) 546-3500

This project included the installation of structural steel and related components for the stabilization of the east masonry wall of the Howell City Office Building. It also entailed the improvement of the structural connections between the steel joists and the south wall for a wall length of approximately 27 feet, beginning at the southeast building corner. It was determined that the original construction of the building was causing the east wall to separate from the building. Also, included in the repair efforts were the repointing of cracks in mortar joints and along with faces of the concrete masonry block in the east and west stairwells and the mechanical rooms, as well as replacement of interior finishes affected by the structural modifications. To assess the building condition and collect information that would assist in the preparation of a variety of repair options, HRC conducted a 3D laser scan evaluation of the east and west stairwells, as well as a comprehensive structural/architectural evaluation of the entire building with follow up reports after each assessment. The options were presented to the Howell City Council. After selecting and approving one of the options, the Council gave HRC the notice to proceed with the installation of 24 crack monitors and preparation of construction documents.

### CITY OF LINDEN HISTORIC BUILDING ASSESSMENT



#### Client

City of Linden  
132 E. Broad St.  
Linden, MI 48451

*Mr. Paul C. Zelenak, Manager*  
810-735-7980

The work included a building assessment of Linden's historic Grist Mill, which houses a historical museum, a library and City Council Meeting Chambers. HRC provide a comprehensive analysis of all components of the building. An assessment report was provided for the client, which included reviews focusing on accessibility, electrical, mechanical, structural and environmental issues. Additional specialty services were provided, including: an infrared scan for thermal envelope efficiency, a lab analysis of surface finishes for the presence of mold, asbestos, and lead based paint, and crack monitoring for seasonal building movement. The final report also included recommendations for repairs and improvements, as well as cost estimates for recommended fixes.

### CITY OF PONTIAC MUNICIPAL BUILDING ASSESSMENTS, DESIGN & CONSTRUCTION



#### Client

City of Pontiac  
47450 Woodward Ave.  
Pontiac, Michigan 48341

*Mr. Abdul Siddiqui*  
248-758-3615

This work included a set of building assessments for the City of Pontiac for the 50th District Court building, the City Hall building and the Youth Recreation Center on Golf Drive. HRC provided a comprehensive analysis of existing components at all buildings. An assessment report was provided to the client for each building, which included reviews of all building systems including architectural, accessibility, life-safety, electrical and mechanical systems. The final reports also included recommendations for repairs and improvements, as well as cost estimates for the recommended fixes.

## DOOR AND WINDOW REPLACEMENT

### WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES DOWNRIVER WASTEWATER TREATMENT FACILITY SECONDARY SYSTEM AND HEADWORKS SYSTEM RENOVATION PROJECT



#### Client

Wayne County  
Department of Public Services  
797 Central Avenue  
Wyandotte, Michigan

*Mr. Greg Tupancy, Engineer*  
(313) 224-7558

*Firooz Fath-azam*  
(734) 285-5246

HRC provided the evaluation, design, and construction administration services for renovations to three major process areas of the Downriver Wastewater Treatment Facility (DWTF). These areas house critical infrastructure for the county. An extensive assessment of the entire campus, which included 45 buildings, was performed in 2009 and again in 2015. It included reviews of all buildings and systems, including architectural, structural, electrical, mechanical, process, site/civil, and instrumentation. We reviewed building envelopes forensically with the use of infrared camera technology to detect possible leaks and/or energy loss. The assessment report formed the Basis of Design for the construction project. The renovations included an evaluation and replacement of all process, mechanical, electrical, lighting and control equipment. Architectural/structural work included replacement doors, windows, skylights and roofing throughout, as well as masonry repairs/repainting, repairs to structural steel and concrete components, new guardrails and service platforms, and new interior wall and ceiling finishes.

### CITY OF PONTIAC 50TH DISTRICT COURT RENOVATIONS



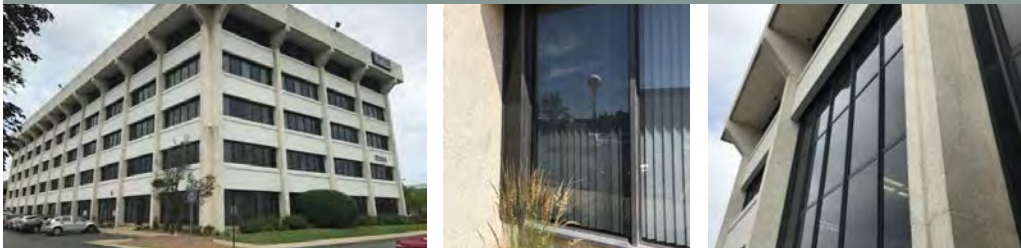
#### Client

City of Pontiac  
47450 Woodward Ave.  
Pontiac, Michigan 48341

*Mr. Dan Ringo*  
Department of Public Works  
(248) 758-3600

HRC provided a full building assessment at the 50th District Court. Based on the findings and recommendations made in this report, HRC was part of a major renovation project that was undertaken to address issues. HRC provided design, bidding assistance, construction administration and finish selections for this project. The exterior scope included replacement of all the windows, joint re-caulking and replacement windowsills at deteriorated locations. Minor roof repairs were also included in the work scope to address ponding on the roof at the existing H&V unit. HRC added new secure Attorney-Client meeting rooms, and a new ADA toilet room to comply with Federal Standards for the Jury Room, in addition to renovating the public toilet rooms for ADA compliance. HRC also provided design services for extensive upgrades and augmentations to the buildings' antiquated HVAC system.

### ASCENSION HEALTH SYSTEMS - ASCENSION REAL ESTATE GROUP PROVIDENCE PAVILION MEDICAL OFFICE BUILDING ENVELOPE IMPROVEMENTS



#### Client

Ascension Health Systems  
Ascension Real Estate Group

*Mr. Joe Kyle*  
(248) 331-4703

HRC provided an initial study for the client to determine replacement and repair options to an aging curtain wall window system at the Providence Pavilion Medical Office Building in Southfield. After the study results were presented, the client opted to proceed with re-caulking all the curtain wall systems at the building. HRC provided design coordination, bidding assistance and construction administration on the renovation work. The project had an extremely tight timeline and required coordination with various tenants and building security personnel to expedite. The contractor completed the work on time and on budget, due to HRC's daily on-site observation of the project, which facilitated communication and the quick resolution of any issues.



## FISH PASSAGE STRUCTURE

### PLUM HOLLOW COUNTRY CLUB WATERSHED ENGINEERING SERVICES



In 2020, HRC was retained by Plum Hollow Country Club in the City of Southfield to assist with a comprehensive plan to reduce course flooding, improve the river through the course, and repair, replace, or remove a dam structure used to feed their primary irrigation pond. HRC recommended and implemented a design/build project to remove the dam, installing a fish passage structure, disconnection the pond from the river but installing a feeder line from further upstream, creating 4 acres of wetland flood storage areas and restoring over 3000 linear feet of stream. HRC prepared plans and specifications, assist in regulatory permits, and provided construction administration for the structural removal and other watershed stabilization on this project.

#### Client

*Plum Hollow Country Club  
21631 Lahser Road  
Southfield, Michigan 48033*

*Mr. Rick Burkardt  
(248) 357-5353*

### CLINTON RIVER WATERSHED COUNCIL PAINT CREEK HABITAT RESTORATION DAM REMOVAL, CLINTON RIVER AREA OF CONCERN



#### Client

*Clinton River Watershed Council  
1115 W. Avon Road  
Rochester Hills, Michigan 48309*

*Ms. Anne Vaara  
Executive Director  
(248) 601-0606*

Paint Creek is part of the Clinton River Coldwater Conservation Project - a partnership between the Michigan Department of Natural Resources, Clinton River Watershed Council, Trout Unlimited, and area municipalities to improve the local trout fishery. The State determined this site represents one of the highest priority dam removal projects in Michigan after Geomorphic stream survey data verified the habitat was impaired by deposition in the streambed above the dam and erosion of the streambed below the dam. The project consists of these activities and outcomes: Remove dam on Paint Creek & re-connect 16 stream miles, Restore 1,500 feet of stream channel & re-connect 2.5 acres of floodplain/wetlands, Reduce bank erosion by >95% in this reach, Restore native fish populations; improve managed trout fishery. HRC was instrumental in obtaining grant funding for this project from EPA through the first round of the Great Lakes Restoration Initiative.

### CLINTON RIVER SPILLWAY INTERCOUNTY DRAIN DRAINAGE BOARD CLINTON RIVER SPILLWAY HABITATION RESTORATION PLANNING, DESIGN AND CONSTRUCTION ADMINISTRATION



#### Client

*Clinton River Spillway Intercounty  
Drain Drainage Board*

*Ms. Candice Miller  
Macomb County Public Works  
Commissioner  
(586) 469-5325  
public.works@macombgov.org*

Connectivity to Lake St. Clair was impacted – hampering fish passage, creating habitat loss and promoting growth of invasive plant species. Changes in hydrology, due to the installation of the weir, led to sediment deposition in the natural channel and downcutting and erosion in the spillway. Efforts to restore the damaged habitat along the two and one-half mile, 80-foot wide man-made channel took shape in 2011. HRC led the project team on the NOAA-funded engineering and design phase of that two-year project, which was completed in 2013. In 2014, the Clinton River Spillway Phase I Implementation Plan, designed by HRC, was awarded \$2.5 million by NOAA. The Clinton River Spillway Intercounty Drain Drainage Board soon approved HRC as the lead consultant. The firm, along with its team of sub consultants, immediately began performing grant administration, monitoring, and construction engineering services on the spillway. Designed to increase native species cover, fish spawning and other wildlife diversity within the Clinton River Spillway and adjacent Lake St. Clair shoreline, successful completion of this project reduces sediment loading and modifies bank heights through bank stabilization. A significant component of this project also targets the removal, treatment and deterrent of invasive species.

## GENERAL ARCHITECTURAL AND/OR ENGINEERING DESIGN

### HARTLAND TOWNSHIP HERITAGE PARK & SETTLERS PARK



#### Client

Hartland Township  
2655 Clark Road  
Hartland, MI 48353

*Mr. Bob West*  
Public Works Director  
(517) 861-7889

HRC provided construction documents, bidding assistance, construction administration, and construction observation services for new pavilion facilities at two different parks. The structure at Heritage Park consists of restroom facilities, snack bar, covered picnic pavilion, and equipment storage. The buildings at Settlers Park include a restroom facility with equipment storage and a separate covered picnic pavilion. The pavilions are considered a summer use building only with no heating and the design included energy-efficient electrical, lighting, and ventilation. The restroom doors at the facilities are also operated on a timer lock system, so that Hartland staff do not have to lock and unlock the doors daily, thereby saving time and effort.

### CITY OF CEDAR SPRINGS MUNICIPAL PARK BUILDINGS AND SITE IMPROVEMENTS — AMPHITHEATER



#### Client

Cedar Springs Community Development  
Team (CBDT)  
PO Box 210K  
251 W. Cherry Street  
Cedar Springs, MI. 49319

*Mr. Kurt Mabie*  
Chairman

In 2015 HRC was awarded a contract for providing General Engineering services for assistance with a series of projects that they wanted to undertake related to the re-development of a former Fire Barn site within their community. The CBDT and DDA were working together on a multi-purpose project to accomplish the following objectives at the intersection of Main Street and Maple Street: Construct a new non-motorized pathway and boardwalk with educational bump-outs across the site, Construct a new Library and vehicle parking area, Construct a rain garden and/or other interesting water feature to provide stormwater management for the site, Work to preserve and enhance the existing trout habitat in Cedar Creek, Relocate the existing Fire Barn to the current library site, and Construct an amphitheater to allow for community entertainment. HRC was called upon by the CBDT to assist in miscellaneous facets of these projects including the initial planning process, grant application assistance, site design, MDEQ approvals, attendance at Council and Design Team meetings and preliminary design.

### CITY OF SOUTHFIELD DPW SALT DOME BUILDING



#### Client

City of Southfield  
25501 Clara Lane  
Southfield, MI 48034

*Larry Sirls*  
Public Works Operations Manager  
(248) 796-4883

HRC provided design, bidding assistance, and construction administration for this Salt Storage Dome building for the City of Southfield at their DPW yard. The goal of the project was to replace in-kind their existing dilapidated salt storage building. Due to the desire to fast-track the project, the new salt dome was constructed adjacent to the existing dome, so that the demolition of the existing dome would not hold up the start of construction on the new building. The structure consists of a pre-engineered dome building set on a 10' high concrete push wall. The dome was comprised of pre-engineered wood truss framing with an asphalt shingle finish at the exterior surfaces. The 82 feet diameter building was set on a 10 feet high cast in place concrete wall with Xypex additive that acted as a push wall which assists in the pickup of salt by front-end loaders for distribution. The salt is loaded into the facility via a pit with drive over grating attached to a conveyor belt. By using a pre-engineered building, construction time was greatly reduced.

## INTERIOR REMODELING AND RENOVATION

### WCAA MCNAMARA PARKING DECK ASSESSMENTS, DESIGN & CONSTRUCTION SERVICES



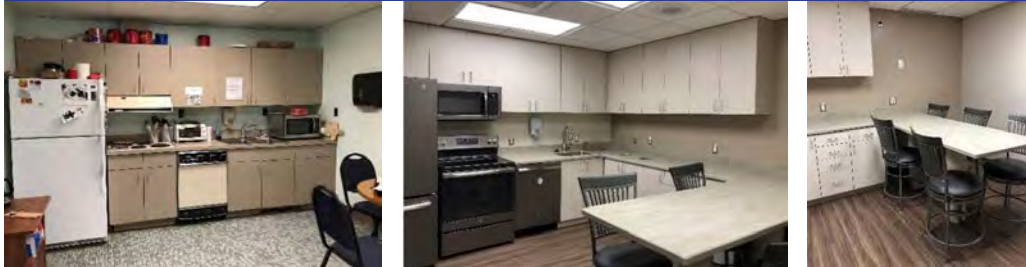
#### Client

Wayne County Airport Authority  
11050 Rogell Dr., Building #602  
Detroit, MI 48242

*Mr. Michael Rudzinski, AIA NCARB  
Deputy Director  
Planning, Design and Construction  
Division  
(734) 247-7036*

The Wayne County Airport Authority engaged HRC to provide assessment, design and construction services on a significant project at the McNamara Parking Deck's Ground Transportation Center. The area was underserved in terms of heating capacity, so HRC rigorously examined the building and surrounding deck areas for HVAC deficiencies. A 3-D laser scan was done at the affected areas, and HRC created a detailed 3-D BIM model of the spaces. The building was then analyzed by HRC staff with the use of advanced Computational Fluid Dynamics (CFM) to determine how to remedy the issues. Once the project moved into the Design Phase, HRC provided a Life Cycle Cost Assessment for the proposed improvements as a way for the Owner to determine the best long-term course of action for repairs.

### CITY OF WARREN WWTP BUILDING D BREAK ROOM REMODEL



#### Client

City of Warren WWTP  
32360 Warkop  
Warren, Michigan 48093

*Mr. Joe Kovalcik  
Wastewater Specialist  
(586) 264-2530*

HRC provided design, bidding assistance, interior design finish selection, and construction administration for the renovation of the break room at the Warren Wastewater Treatment Plant. The goal of the renovation was to update and improve the functionality of the existing break room. A new layout was designed to add storage, provide more counter space and create an integrated seating area for employees. Durable finishes were selected for new flooring, wall finishes, and cabinetry with consideration to the project budget while working to convey a warm and modern environment for employees. The ceiling, lighting and electrical were also reworked and updated to better serve the client. Two design options, including conceptual renderings, were completed to aid the client in the selection of the color scheme for the space. The resulting project is a more cohesive space that now maximizes usage of the room.

### HUBBELL, ROTH & CLARK, INC. HUBBELL, ROTH & CLARK, INC. HEADQUARTERS OFFICE RENOVATIONS



#### Client

Hubbell, Roth & Clark, Inc.  
555 Hulet Dr.  
Bloomfield Hills, MI 48302

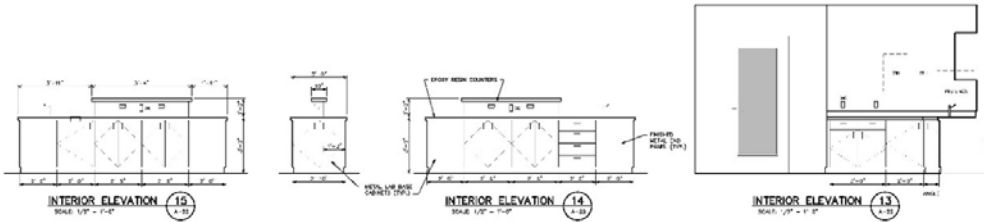
As part of our commitment to pursue excellence in all that we do, HRC renovated our corporate headquarters building in Bloomfield Hills, MI. The goal of the project was to create a more open, collaborative and energetic space, fostering communication and creativity. The design intent was to open the spaces by removing high cubicle walls and barriers to allow all the staff direct access to light and views. Additional collaboration spaces were added and a spacious, dividable conference room was created for large company gatherings and events. The interior spaces were completely renewed with updated finishes throughout, new cubicles and a refined floor plan layout that better serves HRC's employees and clients. As part of the renovation efforts, HRC also designed and oversaw construction on a prominent new main entry vestibule at the building. The renovations were completed over six phases to minimize disturbances to staff. HRC oversaw construction administration on the project. The work included coordinating daily activities with the construction manager and several independent contractors hired directly by HRC.

## LABORATORY FACILITIES

### CITY OF HOWELL WASTEWATER TREATMENT PLANT UPGRADES

#### Client

City of Howell WWTP  
Mr. Mike Spittler, Supt.  
mspittler@cityofhowell.org  
517-546-6230



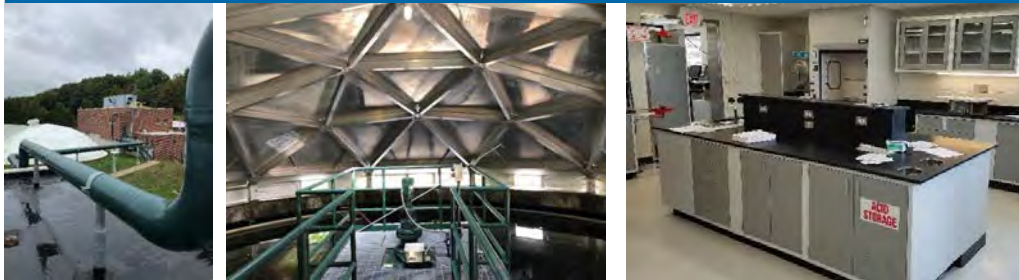
Design of \$16.5M treatment plant upgrade. This project is currently under construction. It consists of the following architectural elements:

- ≡ New Construction of an Influent Building (1,500 SF) and a Solids Handling Building (6,000 SF total)
- ≡ Significant Addition to the Administration Building
- ≡ Complete Interior Renovations to the Administration Building, including new Offices, Locker/Shower Rooms, Meeting Room and Lab Facility.
- ≡ Roofing Replacements at the existing RAS Building, Aeration Pump Station, Generator Building and Maintenance Garage
- ≡ New Roof Coating at the Primary Sludge Pumping Station
- ≡ Extensive Exterior repairs to UV Building, Sludge Processing Building,

### CITY OF PETOSKEY WASTEWATER TREATMENT PLANT IMPROVEMENTS

#### Client

City of Petoskey  
101 E. Lake St.  
Petoskey, MI 49770  
Sherrie Elliott  
(231) 347-2500



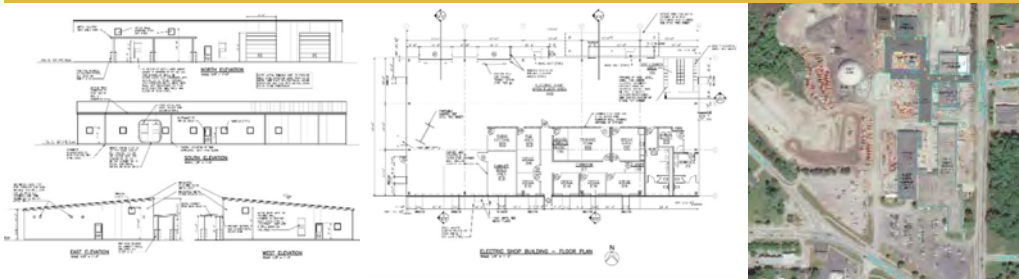
HRC was retained to provide professional design and construction engineering services for improvements and upgrades to the existing WWTP campus. The following components were included in the project design:

- ≡ Major renovations to the existing administration building, including a complete gut and replacement of the lab, creation of additional lab space, office space and conference room updates, new locker rooms and restrooms, and new ceiling, wall and floor finishes throughout the building.
- ≡ Extensive exterior improvements to the administration, disinfection and digester buildings, including full roof replacements, repainting, new windows and doors, and masonry repointing and infill openings.
- ≡ Structural rehabilitation of the existing aeration gallery ceiling (overhead) and walkway. Rehabilitation of the existing concrete cover on Digester No. 1.
- ≡ Aluminum geodesic dome installation on the existing primary and final settling tanks.

### ROAD COMMISSION OF OAKLAND COUNTY PVR CENTER – NEW ELECTRIC SHOP AND MATERIALS TESTING LAB RENOVATION

#### Client

Road Commission for  
Oakland County (RCOC)  
2420 Pontiac Lake Rd.  
Waterford, MI. 48328  
Mary N. Gillis, PE  
Director – Central Operations  
(248) 858-4798



The RCOC retained HRC to develop improvements for their PVR Center Campus in Waterford. This location houses RCOC's main fleet vehicle maintenance facilities, a salt storage dome, sign shop, material storage/warehousing, permitting department, materials testing lab, electrical shop, and associated administrative office spaces. HRC began the project by providing an existing facility assessment and Needs Analysis/ Programming followed by Schematic Design, Design Development, and Construction Documents. The project also includes expanding RCOC's Material Testing Lab into the space vacated. HRC's Site/Civil Design services included new site utilities – natural gas, storm, sanitary, and watermain – extended to the new building location. We also provided coordination between the County, the Road Commission, and the Township for project site plan approval and permitting; HRC is also providing construction administration and site observation services for the work.

## LANDSCAPE ARCHITECTURAL AND ENGINEERING DESIGN

### CITY OF BIRMINGHAM LANDSCAPE ARCHITECTURE



#### Client

City of Birmingham Engineering Department  
151 Martin Street  
Birmingham, Michigan 48009  
(248) 530-1850

The City of Birmingham retained HRC to provide civil and landscape architecture to rebuild one of their existing parking lots. One of the City's goals was improving pedestrian access, have green infrastructure on-site, and enhance the parking lot by adding additional landscaping. HRC provided landscaping plans and specifications during the design phase, and during the construction provide construction administration with approval submittals, observing installation of landscaping, and review the condition of the landscaping during the warranty period.

### CITY OF STERLING HEIGHTS CIVIC CENTER LANDSCAPE MASTER PLAN



#### Client

City of Sterling Heights  
40555 Utica Road  
P.O. Box 8009  
Sterling Heights, Michigan 48311  
*Mr. Brent Bashaw, P.E.*  
*City Engineer*  
(586) 446-2721

The Civic Center is a small campus of public service buildings that includes the city hall and offices, the police headquarters and public library. The buildings are surrounded by a complex of green space, sidewalks, small plazas, planting beds and parking lots. The campus has undergone a series of additions and improvements that date back to the early 1950s when the first building was constructed. Over the years' additional sidewalks and landscaping was added, but never in a unified design. HRC was retained to take a fresh look at the campus to provide an analysis of landscape architectural design, planting layout and pedestrian flow, condition of the existing plants, and to make recommendations to provide aesthetical and functional improvements to the campus. Upon our initial site visit we discovered that all the landscaping was not being maintained according to the original design intentions. Plants that were supposed to grow and spread into a shrub mass were being pruned into defined shapes. This resulted in a very undesirable appearance. It also became apparent that most of the landscaping was of a similar type, and there was a notable absence of color both in flowers and in leaf color. HRC designed massive foundation beds which utilized perennial plant massing to supplement the existing evergreen shrubs. Some existing shrub beds were removed, and the problematic exposed wood mulch beds which erode into the storm drain system were removed. Areas adjacent to the driveways which receive tire traffic and snow storage were converted into cobblestone beds for a unique, durable and functional solution.

### REDSTONE ARCHITECTS CITY OF BATTLE CREEK POLICE HEADQUARTERS



#### Client

Redstone Architects  
2709 S. Telegraph Road Bloomfield Hills, MI 48302  
*Daniel Redstone, FAIA, NCARB*  
(248) 418-0990

The team of Redstone Architects and Architecture + design, Inc. was chosen to develop a Space Needs Analysis and phasing plan to allow the City of Battle Creek to plan for a new Police Headquarters Building. The analysis determined that a new facility, to be built across the street from the current headquarters, would be the most cost-effective solution. The new 46,000sf, two-story facility is more than double the size of the current facility. By planning for a new facility, all police operations will remain intact while the new facility is constructed. The site is designed to provide secure parking facilities for the department, and a well-defined and welcoming public entry.

## MAINTENANCE AND FACILITY PRESERVATION

### CITY OF WARREN WASTEWATER TREATMENT PLANT, BUILDING C IMPROVEMENTS



HRC has been the architect of record for several recent projects at Building C at the Warren WWTP. The building is located directly over an underground retention basin

and was originally used to house equipment and processes pursuant to the basin. These processes have been largely eliminated or replaced, and so it was desired to reuse the spaces for storage and to accommodate plant maintenance

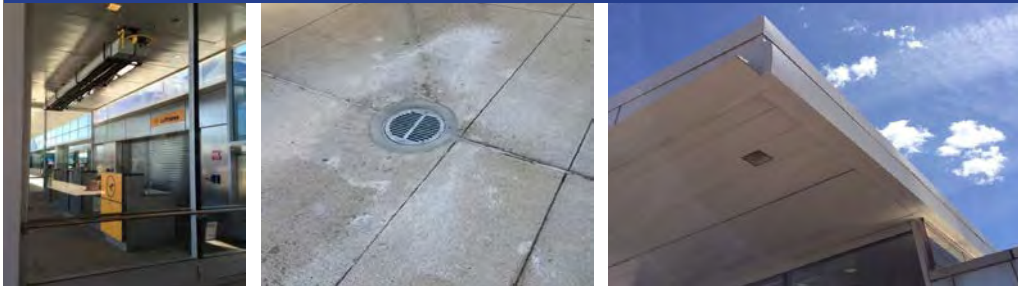
activities. HRC provided design, bidding assistance, and construction administration services to the Owner on all of the work tasks. Interior renovations included creating new openings in the masonry walls to accommodate new pedestrian access doors and rolling overhead doors, new concrete ramps were installed. Exterior renovations included removal and reinstall of the top 4 courses of brick with new mortar and additional reinforcing. The project also included the installation of new windows, a large exhaust fan, and a new egress door that required a partial excavation of the west façade to accommodate the new landing. In conjunction with the exterior repairs, a full roof replacement was undertaken.

#### Client

City of Warren WWTP  
32360 Warkop  
Warren, Michigan 48093

*Mr. Joe Kovalcik  
Wastewater Specialist  
(586) 264-2530*

### WAYNE COUNTY AIRPORT AUTHORITY NORTH TERMINAL MISC. ASSESSMENTS AND CURBSIDE IMPROVEMENTS



HRC was brought in by the Wayne County Airport Authority to perform assessments on several different areas at the North Terminal to review possible issues that had developed since the construction of the facility and be proactive about resolving any underlying problems. From the assessments, a design project was developed, and HRC prepared full architectural drawings and specifications for the proposed remedies. Bidding assistance and construction administration were also provided as a part of this task.

#### Client

Wayne County Airport Authority  
11050 Rogell Dr., Building #602  
Detroit, MI 48242

*Mr. Michael Rudzinski, AIA NCARB  
Deputy Director  
Planning, Design and Construction  
Division  
(734) 247-7036*

### ROAD COMMISSION OF OAKLAND COUNTY FACILITY ASSESSMENTS



**PVR Center Office Area - Condition Assessment-** HRC performed a visual condition assessment of their PVR Center Office area in Waterford and made recommendations as to the feasibility of a building remodel. HRC provided RCOC with a written report outlining the existing conditions and recommendations, including Code upgrades that would need to be addressed, should the County desire to renovate or expand the PVR Center Offices.

**Beverly Hills Office Building – Roof & Structure Assessment -** HRC was retained to investigate and identify solutions to solve on-going roof leaks that troubled the facility. Woodroof truss settlement and damage was identified –HRC provided RCOC with an assessment of the findings, recommendations for correction and budgetary costs to implement the solutions.

**Pole Barn – Structural Assessments -** RCOC retained HRC to perform structural assessments on two wood-framed pole barns that were damaged by heavy equipment impact to the roof truss system that broke the bottom truss cords. The barns are used to store materials and road signage. HRC structural staff visit both sites, assessed the conditions found then developed a two-fold solution; first to stabilize the structures, then secondly, to repair them. RCOC retained a building contractor who worked directly with HRC to implement the repairs quickly so that the structures remained safe and useable.

#### Client

Road Commission for  
Oakland County  
31001 Lahser Rd.  
Beverly Hills, MI 48025

*Dennis Kolar, PE  
Managing Director  
(248) 645-2000*

## MARINE WORK - BOAT LAUNCH FACILITIES, DOCKS, HARBORS

### CITY OF GROSSE POINTE FARMS, VILLAGE OF GROSSE POINTE SHORES, A MICHIGAN CITY, CITY OF GROSSE POINTE HARBOR DREDGING



#### Client

City of Grosse Pointe Farms  
90 Kerby Road  
Grosse Pointe Farms, Michigan 48236

*Mr. Shane Reeside*  
(313) 885-6600

Village of Grosse Pointe Shores  
795 Lakeshore Road  
Grosse Pointe Shores, Michigan  
48236

*Mr. Brett Smith*  
(313) 881-6565

The three communities realized a common need to deepen their marina facilities to accommodate boaters due to declining lake levels and were able to achieve a common goal. HRC was able to identify the individual needs, obtain the marina dredging permits, coordinate with MDEQ, provide analytical sampling of the harbor sediment, take bids, monitor the dredging and to meet the required schedules, financial goals, and regulatory requirements of each community. From start to finish, this project took approximately six months to accomplish. HRC also re-applied to the Army Corp of Engineers and the Michigan Department of Environmental Quality to extend the expiration deadline for 2 of the 3 dredge permits.

### BAYVIEW YACHT CLUB CONNER CREEK DOCKS



#### Client

Bayview Yacht Club  
100 Clairpointe  
Detroit, Michigan 48215

*Mr. Mark Steffke*  
General Manager  
(313) 822-1853

HRC provided design services which included 3 main piers that extended into Conner Creek from the steel sheet piled wall on shore and had a "T" dock on the end and 2 tapered finger piers on each side of the main dock. The design also included a 100' long, 6' wide pier for launching and retrieving sail boats to and from a land based storage yard. The docks superstructure was designed as galvanized structural steel supported by steel pipe piles driven into the bottom of Conner Creek. This structure was covered by facing and surface material of pressure treated wood. The Main Piers were outfitted with marine service pedestals that had power and water connections for each of the slips. 10" spring piles were also provided for adjoining slips to assist the boater in docking and tying the boat in windy conditions

### GROSSE POINTE FARMS PIER PARK MARINA



#### Client

City of Grosse Pointe Farms  
90 Kerby Road  
Grosse Pointe Farms, Michigan 48236

*Mr. Shane Reeside*  
(313) 885-6600

The Grosse Pointe Farms Marina had evolved over the years from a single municipal pier, to a boat harbor for small boats to a full-fledged marina to service the City's residents. Prior to this current work the marina had its last major renovation in the 1960s. A complete new electrical system was installed to allow the flexibility of having shore power available at all of the larger slips. Along with the shore power the pedestals included potable water connections and provisions for cable TV connections and lighting for the docks and piers at night. Several large slips were included to reflect today's boating lifestyle (45' to 55'). Several large slips were included to reflect today's boating life style (45' to 55'). Several slips were designed to meet the U.S. Access Boards current Guidelines for Recreational Facilities. One major improvement was the extension of the main outside wall to form one single unified entrance with provisions at that entrance for wave attenuation. The new finger piers and docks were surfaced with Trex plasticized wood to reduce long term maintenance issues. All the steel for the finger piers and docks were galvanized to guarantee a long, maintenance free service life. The harbor also now has a dry fire suppression system.

## PARKING AND PAVING

### SOUTH LYON COMMUNITY SCHOOL DISTRICT 2015 BOND PROGRAM



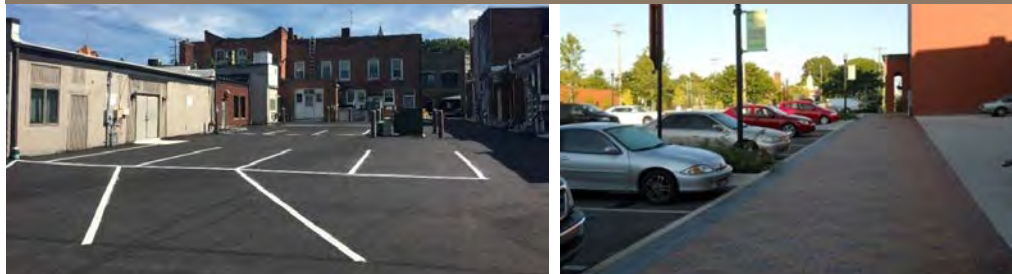
#### Client

South Lyon Community School District  
345 South Warren  
South Lyon, Michigan 48187

*Chris Bullinger*  
Manager of Facilities and Grounds  
248-573-8922

HRC assisted the South Lyon Public School with the rehabilitation of ten of their existing schools from Elementary to High School located in three townships in three different counties. The project also included the new Pearson Elementary located on 11 Mile Road in Lyon Township. The rehabilitation projects to the existing schools ranged from improvements to their existing storm systems, milling and capping drives and parking lots, to providing new traffic circulation for improved pick-up and drop-off zones for the students. The new elementary school site design for new utilities to the building, new access site access with turning lane on 11 Mile, access road, site grading, and proposed parking lots.

### CITY OF HOWELL PARKING LOT NO. 4 RECONSTRUCTION



#### Client

City of Howell  
611 E. Grand River Ave.  
Howell, Michigan 48843

*Mr. Shea Charles*  
City Manager  
(517) 546-3502

This locally funded project involved preliminary engineering and construction engineering for the reconstruction of an existing parking lot in downtown Howell. Designs included a new pavement section, new storm drainage, sidewalks, utility relocation, construction staging, permitting, pavement markings and soil erosion control. Also included was a new water main and sanitary sewer for the businesses located adjacent to the parking lot. The existing parking lot layout and entrance locations were evaluated and reconfigured to provide additional spaces and better access. Utility relocation also included replacement and reconfiguration of existing electrical, telephone and cable TV services. Electrical design also included coordination with the electrical, telephone and cable TV utilities.

### FERRIS STATE UNIVERSITY LOT 36 RECONFIGURATION, AND STADIUM DRIVE AND SOUTH STREET INTERSECTION



#### Client

Ferris State University  
Physical Plant  
111 W. Knollview Drive  
Big Rapids, Michigan 49307

*Mr. Michael Hughes*  
Associate Vice President for Physical  
Plant  
(231) 591-2920  
hughesm@ferris.edu

This project involved the realignment of Stadium Drive westerly along South Street to expand the existing Parking Lot No. 36 for additional parking spaces and provide vehicle access to nearby Parking Lot No. 35 and No. 37 in the City of Big Rapids. Hubbell, Roth & Clark (HRC) design a new intersection with pedestrian crossing to alleviate traffic congestion and improved pedestrian crossing. The project included removal of existing trees, site grading, pulverizing existing pavement, concrete curb and gutter, the extension of storm sewer, HMA roadway and parking lot, ADA pedestrian sidewalk and crossings, permanent pavement markings, and signage.



## PARKING AND PAVING

### CITY OF WIXOM 2018 PARKING LOT PROGRAM: CIVIC CENTER LOT



#### Client

City of Wixom

Steve Brown, City Manager  
248-624-4557

This locally funded project involved preliminary engineering and construction engineering for the reconstruction of the Civic Center parking lots in downtown Wixom. Designs included a new pavement section, new storm drainage, utility relocation, construction staging, permitting, pavement markings and soil erosion control. Also included was the design of a new carport for the police department vehicles.. The existing parking lot layout was evaluated and reconfigured to provide additional spaces and enclosed parking spaces for the police department.

### CITY OF JACKSON PARKING LOT 7 RECONSTRUCTION



#### Client

City of Jackson  
161 W. Michigan Avenue  
Jackson, Michigan 49201

Jon H. Dowling, P.E.  
City Engineer  
(517) 788-4160

HRC was selected to provide preliminary engineering (PE) and construction engineering (PE) services for the enhancements at Emma Nichols Garden and Parking Lot 7 in the City of Jackson. This fast-track project, consisted of creating new landscaping and patio areas in an existing paved alleyway. In addition, the parking lot adjacent to the alleyway was reconstructed. The existing alleyway is located off the City's central downtown district and was an underused space filled with concrete. The existing concrete in the alleyway was removed and existing trees were saved and incorporated into the new design. A new sidewalk and patio areas were installed along with landscaping beds. Irrigation and lighting were also installed. Poor soils beneath the existing parking lot required the removal of the existing pavement and base material and installation of a geotextile membrane. A new grass island was placed in the parking lot to provide additional green space and allow a location for electric vehicle charging stations.

### OAKLAND COMMUNITY COLLEGE GENERAL ENGINEERING SERVICES



#### Client

Oakland Community College  
2900 Featherstone Road  
Room B-215  
Auburn Hills, Michigan 48326

Mr. Robert M. Kelley  
Executive Director of Facilities  
Operations  
(248) 232-4408  
rmkelly1@oaklandcc.edu

HRC has provided civil engineering services to Oakland Community College projects since 2015 on several campuses. These projects vary from surveying, stormwater management studies, permitting, stormwater improvements, parking lot rehabilitation, road rehabilitation, structural inspection and repairs, and construction layout. Some of HRC's responsibilities include preparation of construction documentation, coordination of permits, local approval, assistance in bid selection, contract administration assistance, and project closeout

## RECREATION AND SPORTS FACILITIES/FIELDS

### CITY OF ROCHESTER HILLS INNOVATION HILLS



Innovation Hills is a park located along the Clinton River with access to regional trails and on-site natural resources in the City of Rochester Hills. The focal point of the project was a stormwater detention pond designed to be a water feature with waterfalls. Trails and boardwalks were designed to be Universal-Design compliant pedestrian pathways throughout the park and wetlands. Tree tagging and surveying were done to ensure minimal tree removal and to allow the pathway and boardwalk to meander naturally within the park. Additional amenities include rain gardens, interpretive signage, seating, Universal Design approved restrooms and drinking fountains, and landscape areas, thus establishing a sense of place and destination.

#### Client

City of Rochester Hills  
1000 Rochester Hills Drive  
Rochester Hills, MI 48309

Mr. Ken Elwert, CPRE  
Director of Parks and Natural Resources  
(248) 656-4640

### REDSTONE ARCHITECTS, INC. CIRCLE SQUARE HOUSING DEVELOPMENT – SITE AMENITIES MASTER PLAN



The Pontiac Housing Commission has been tasked with improving the living conditions at many of the housing facilities they manage. A major aspect of that effort includes addressing the condition of the original site amenities that have fallen in disrepair due to age or use. HRC was hired to evaluate the Circle Square facility and to develop a master site plan. The master site plan was then presented to the housing authority and stakeholder residents at the facility for input. A final site master plan was completed, and contract documents are under way pending funding. HRC will prepare all contract documents, solicit for bids and provide construction administration for the project. Additionally, HRC will also provide construction layout and will oversee construction observation for the restoration and improvement of the outdoor people spaces at the facility.

#### Client

Redstone Architects, Inc.  
2709 S. Telegraph Road  
Bloomfield Hills, MI 48302-1008

Daniel Redstone, FAIA, NCARB  
LEED Accredited Professional  
(248) 418-0990

### BRANDON TOWNSHIP PARKS AND RECREATION BASEBALL FIELDS AND PARK- LAND AND WATER CONSERVATION GRANT



#### Client

Brandon Township  
395 Mill Street  
Ortonville, Michigan 48462

Mr. Fred Waybrant  
Director of Parks and Recreation  
(248) 627-4640  
fmwaybrant@brandontownship.us

Since 2015, HRC's Environmental Engineering Department (EED) successfully applied for grants totaling over \$690,000 from the Land and Water Conservation Fund for Brandon Township. In Brandon Township, the EED has secured the following grants from the Land and Water Conservation Fund:

- ≡ Grant 1 – 2016 LWCF Baseball Fields, Parking Areas and Associated Equipment: Awarded \$300,000
- ≡ Grant 2 – 2017 LWCF Basketball Courts, Volleyball Courts and Associated Equipment: Awarded \$140,000
- ≡ Grant 3 – 2019 LWCF Concession Building with Comfort Station – Applied for and awaiting approval for \$250,000
- ≡ Grant 4 – 2020 LWCF – Applied for additional baseball fields with associated parking and equipment as well as Pavilion area

The HRC Team provided grant writing assistance, site plan development, Oakland County SESC permitting, construction staking and management of reimbursements.



## SITE SURVEYING

### CITY OF HOWELL GRAND RIVER AVENUE MID-BLOCK CROSSING

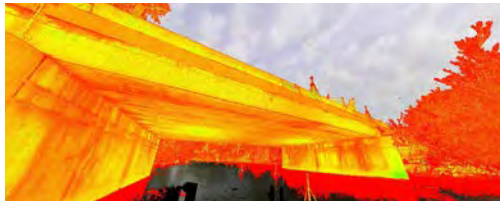
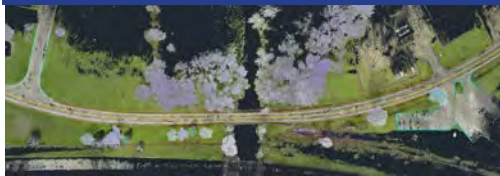


HRC completed 3-D High-Definition laser scans at three locations along Grand River Avenue in downtown Howell. The purpose of this project was to design pedestrian crosswalks at high traffic locations. Laser scanning provided a high-level of detail that was necessary to gather enough detailed existing grades of the roadway. It also provided an added benefit of being able to tour the area and images from the scanner setup locations.

#### Client

City of Howell  
*Ervin Suida*  
DPW Superintendent  
(517) 546-7510

### CITY OF JACKSON HIGH STREET BRIDGE REHABILITATION



For this project, HRC utilized terrestrial laser scanning which allowed survey crews to collect data from outside the roadway and collect all aspects of the bridge structure. Additionally, laser scanning collects many times the amount of data which was used to create very accurate existing roadway model and more accurate roadway cross-sections. The laser scanning sensors include HDR imagery to colorize the point cloud.

#### Client

City of Jackson  
*Jon Dowling*  
City Engineer  
517-768-6070

### CITY OF STERLING HEIGHTS 17 MILE ROAD BRIDGE REPLACEMENT



HRC completed High Definition 3-D Laser Scans of a newly reconstructed bridge on 17 Mile Road over Conrail / Norfolk Southern rail lines. The scans were critical for analyzing cross sections of the bridge and creating a high detailed As-Built road surface to compare against the design surface.

#### Client

City of Sterling Heights  
*Brent Bashaw*  
City Engineer  
(586) 446-2360

### CITY OF GRAND RAPIDS TOPOGRAPHICAL SURVEY EASTERN AVENUE TRAFFIC ENGINEERING



HRC completed 3D Laser Scans at three intersection along Eastern Ave. in the City of Grand Rapids traffic signal and intersection upgrades. Point clouds were essential to model the locations of existing signal poles and overhead wires and to check under clearances.

#### Client

City of Grand Rapids  
*John Bartlett, P.E.*  
Traffic System Engineer  
Mobile GR Department  
Office: 616-456-4313

## SOIL EROSION, SEDIMENTATION CONTROLS

### CITY OF BLOOMFIELD HILLS PROGRAM MANAGEMENT



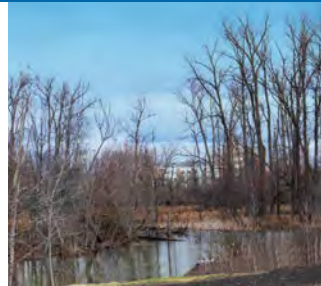
#### Client

The City of Bloomfield Hills  
45 E. Long Lake Road  
Bloomfield Hills, MI 48304

*Mr. David Hendrickson*  
City Manager  
248-644-1520

HRC assists City of Bloomfield Hills with implementing their Soil Erosion and Sedimentation Control (SESC) Programs in accordance with Part 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Our program management involves reviewing SESC plans for conformance with Part 91 and the community SESC Ordinance, regular inspections of the project site during construction, issuance and enforcement of on-site violations, and review of the final stabilization and closing of the permit. Regular SESC inspections are conducted by HRC staff who are State of Michigan certified SESC Inspectors and/or Construction Site Storm Water Operator certified. HRC can assist communities with implementing their own SESC program. This involves drafting of an SESC Ordinance, creation of the program policies and procedures, and approval from the Michigan Department of Environment, Great Lakes & Energy (EGLE). HRC also has assisted the City with EGLE's audit of their programs. This process includes site inspections and file reviews. The City have received the highest audit results and EGLE compliments.

### LAUTREC LTD. BARRINGTON APARTMENTS



#### Client

Lautrec Ltd.

*Mr. James Galbraith*  
31550 Northwestern Highway  
Suite 220  
Farmington Hills, MI 48334  
(248) 737-1478

HRC was retained by the client to design 58 acres for 308 apartment units. Part of this process was to obtain local and state permits for soil erosion and sedimentation control. These soil erosion and sedimentation control plans were designed to maintain and protect an existing wetland/bog onsite, and a regional wetland adjacent to the site.

### CITY OF FARMINGTON HILLS PROJECT



#### Client

City of Farmington Hills  
31555 W. Eleven Mile Road  
Farmington Hills, MI 48336

*Mr. Jim Cubera*  
City Engineer 248-644-1520

Since 1998, HRC supports the City of Farmington Hills with their Soil Erosion and Sedimentation Control (SESC) Programs under Part 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. HRC reviewing Soil Erosion and Sedimentation Control Plans on behalf of the City, and provides schedule inspections of the site during construction, follows thru with any on-site violation with the property owner and City, and helps the City in their process of closing out a project by review on final restoration. HRC staff, who are the State of Michigan certified SESC Inspectors and/or Construction Site Storm Water Operator certified, are the ones who complete the SESC soil inspections.

# STORMWATER MANAGEMENT AND DRAINAGE PLANS

## MACOMB COUNTY PUBLIC WORKS STERLING RELIEF DRAIN RETROFITTING



HRC was a subconsultant by the Macomb County Public Works Office to compile the QAPP, oversee site assessment, provide water quality and habitat enhancement design, and obtain necessary permits. The project includes

one mile (4,500 feet of an open channel) of the Sterling Relief Drain corridor between Van Dyke and Dodge Park Road and will improve runoff from 1,133 acres of the highly urbanized Red Run watershed. The Sterling Relief Drain was designed in 1970 as a 4-foot diameter concrete pipe serving as an underdrain to an open, mowed grass trapezoidal channel (measuring 60 feet bottom x 10 feet deep x 140 feet top). Lateral storm sewers collect urban drainage and are directly connected to the underdrain, which serves as a direct, untreated conduit to the Red Run Drain. The underdrain carries all flows, except in extreme storm events, when the large trapezoidal channel fills with stormwater. This open channel rarely sees more than a small amount of standing water and only during the most extreme storm events. The Sterling Relief Drain corridor was redesigned to manage runoff from smaller rain events. By restricting flow in the underdrain and diverting the flow to the open channel use of standpipes, stormwater will flow into the open channel and infiltrate into the ground. The primary objectives and goals of this project are to improve the water quality entering the Red Run Drain by treating the first flush rain event within the two-mile corridor and also create approximately 40 acres of habitat through ecological restoration.

### Client

Macomb County Public Works Office  
21777 Dunham Road  
Clinton Township, MI 48036

*Candice Miller*  
Macomb County Public Works  
Commissioner  
(586) 469-5325

## WAYNE COUNTY AIRPORT AUTHORITY YIP STORM WATER DIVERSIONS PROJECT



HRC was retained by Wayne County Authority (WCAA) to provide study, design, and construction administration services to separate WCAA's stormwater drainage from the old manufacturing plant's stormwater. After conducting a drainage investigation and a flow metering study, HRC designed a series of three stormwater diversions diverting flow from and completely separating YIP drainage from a standard 48-inch YIP/RACER/YAM storm sewer. HRC worked closely with stakeholders and their engineers to achieve a solution that accommodated all parties. WCAA received a \$500,000 grant from the Michigan Department of Environmental Quality (MDEQ) for constructing the diversions. HRC developed plans, technical specifications, and assisted WCAA with preparing bid documents. HRC provided construction administration services, including full-time construction observation, material testing, and administrative tasks. The project was completed on time and under budget.

### Client

Wayne County Airport Authority

*Bryan Wagoner*  
Director, Environment Sustainability  
(734) 247-3686  
Bryan.wagoner@wcaa.com

## OAKLAND UNIVERSITY CAMPUS IMPROVEMENTS



HRC have been providing as-needed civil engineering service to Oakland University since 2004. These projects have been located throughout the campus and included their golf course, road and culvert crossings, emergency repairs, storm sewer, water main, sanitary sewer, and assistance in grant applications, studies, and report permitting. HRC assists Oakland University with the Phase II stormwater Permit Compliance required by the State of Michigan stormwater management assessment and MS4 permitting to EGLE. HRC is currently working on a storm water planning which some of the goals are wetland restoration and potential for new trails and educations of stormwater.

### Client

Oakland University  
Facilities Management  
Rochester, MI 48309-4401

*Mr. Ryan Giorio*  
Senior Engineer  
(248) 370-4383

## STRUCTURAL INVESTIGATION AND ASSESSMENT

### WAYNE COUNTY AIRPORT COMMISSION EMERGENCY RETAINING WALL REPAIRS



#### Client

Wayne County Airport Authority  
(WCAA)

Mr. Ethan Fulton, PE  
Project Manager  
(734) 247-2819  
ethan.fulton@wcaa.us

Initially constructed in 1999, the McNamara Parking Structure is a multi-story open-air parking deck with the lower two-levels below grade, bordered by concrete and steel sheet pile retaining wall. Before this project, sinkholes would develop behind the retaining wall, within space accessible to the public. Cracks were also developing in the wall's precast concrete panels. One section of the wall was discovered to be advancing toward a column supporting the structure's upper levels. In response to these discoveries, the WCAA requested HRC to investigate the cause of the sinkholes and design a means of repair that would eliminate future sinkhole development and stop the retaining wall's advancement near the parking structure support column. HRC provided an initial study, developed emergency repair plans for removing the precast panels and provided construction administration services, including a new, low profile cast-in-place concrete wall supported by a drilled soil anchor system. Fundamental to this project's success was the design of numerous rehabilitation techniques for the existing wall, allowing flexibility during construction to match the actual conditions encountered in the field

### GENERAL MOTORS FACILITIES GLOBAL MANAGEMENT MILFORD PROVING GROUND BRIDGE STRUCTURE C REPLACEMENT PROJECT



The bridge was originally built in 1953, structural steel repainted in 1977 and a partial deck replacement in 1991. Over the years the bearings, ends of the girders, concrete deck and substructure units sustained significant amounts of deterioration and the bridge

#### Client

General Motors Facilities Global Management  
Milford Proving Grounds  
3300 General Motors Rd.,  
Milford, Michigan 48380

Dan Mullen, P.E.  
Senior Community Leader  
(248) 379-9398

was no longer functioning as originally designed. At the request of General Motors, HRC prepared and submitted an economic feasibility comparison study between rehabilitating and replacing this bridge. This study required HRC to perform a routine bridge inspection, bridge scoping, load rating, and preliminary rehabilitation and replacement bridge design. It was concluded that a new replacement bridge was economically more beneficial than rehabilitation of the existing bridge. The replacement bridge includes two abutments and one pier, all supported by deep foundations. HRC was the engineer for the various phases of the project, initially starting from the above-mentioned routine bridge inspection, initial, preliminary and final design, along with contract administration, construction engineering and construction observation.

### ROAD COMMISSION FOR OAKLAND COUNTY STORAGE GARAGE STRUCTURAL ASSESSMENT



#### Client

Road Commission for Oakland County  
Central Operations Department

Ken Hudak - Facilities Manager  
248-858-4890 (office)

HRC recently completed structural assessments for two large timber-truss storage garage facilities for the Road Commission of Oakland County (RCOC). The garages, located in the cities of Southfield and Lake Orion, were damaged during material deliveries when trucks impacted the overhead truss framing members and tension tie-rods spanning between the building wood column/support posts. HRC provided a report of findings for each location. The report included photo documentation of the conditions found, along with repair recommendations and estimated repair costs. The garage in Lake Orion suffered additional damage during a more recent sand delivery. HRC was called upon to provide fast-tracked construction documents for RCOC's selected contractor to provide temporary stabilization and then make permanent truss and tie-rod repairs.

## TOILET AND/OR SHOWER ROOM REMODELING OR DESIGN

### CITY OF LINDEN EAGLE WOODEN PARK PAVILION



#### Client

City of Linden  
132 E. Broad Street  
Linden, Michigan 48451

*Mr. Paul C. Zelenak, Manager*  
810-735-7980

HRC recently completed the construction documents for new pavilion facilities in Linden. The pavilions are considered a summer use building only with no heating and the design included minimal electrical, lighting and ventilation requirements as required by the building code. HRC assisted Linden with grant funding through the Michigan Department of Natural Resources (MDNR) Michigan Land and Water Conservation Fund (LWCF) program. HRC provided complete design engineering services including architectural and site civil. Further, HRC will assist City staff with construction administration regarding request for information handling, change orders and contract change modifications.

### CITY OF WARREN POLICE HEADQUARTERS LOCKER ROOM RENOVATIONS



#### Client

City of Warren  
Engineering Division  
One City Square  
Warren, MI 48093

*Jim VanHavermaat, PE*  
City Engineer  
(586) 759-9300

HRC provided design, bidding assistance, interior design finish selection, and construction administration for the renovation of the staff locker rooms for the City of Warren at their Police Department Headquarters Building. The goal of the project was to replace the existing lockers, provide new shower stalls, and redo the locker room toilet facilities. The flooring, ceilings, and wall finishes were also replaced for a complete refresh of the spaces. Four locker rooms were renovated: Officer's (Main), Women's, Supervisors, and the Gym. The new locker rooms included a total of 241 full-size lockers that featured large gear drawers, charging stations and had either built-in benches or pull out benches attached. There was also a total of 51 small lockers for use in the gym locker room. Several of the locker rooms also had separate maple top benches for general use. The Women's and Supervisor's Locker Rooms included reconfigurations of the toilet and shower areas to meet the needs of the current staff, which included provisions for nursing mothers.

### WAYNE COUNTY AIRPORT AUTHORITY WCAA METRO AIRPORT NORTH TERMINAL RESTROOM IMPROVEMENTS



#### Client

Wayne County Airport Authority  
11050 Rogell Dr., Building #602  
Detroit, MI 48242

*Mr. Michael Rudzinski, AIA NCARB*  
Deputy Director  
Planning, Design and Construction  
Division  
(734) 247-7036

HRC) provided comprehensive design and administration services on this project to renovate the sink areas at the existing public area restrooms at the North Terminal at Detroit Metropolitan Airport in Romulus, Michigan. The existing sinks and counters were in poor condition, despite only being seven years old. As part of the design process, HRC researched new options for replacement sinks, counters and fixtures, and 3D Revit renderings of multiple concepts were presented to the owner for their consideration. Full construction documents and specifications were provided, as well as bidding assistance and construction administration on this project. Close coordination with the contractor was undertaken to ensure a smooth construction process, and the project was completed ahead of schedule and within budget.



## TRAIL DESIGN AND DEVELOPMENT

### DELHI DOWNTOWN DEVELOPMENT AUTHORITY ESKER LANDING PARK



#### Client

Delhi DDA

*Mr. Howard Haas  
Executive Director  
4410 Holt Rd, Holt, MI 488422  
(517) 699-3866*

The Delhi Downtown Development Authority received a \$400,000 Trust Fund Grant through the Michigan Department of Natural Resources (MDNR) to develop a regional. HRC provided several conceptual designs before a final alternative was selected. The project was partially funded through the MDNR grant which required strict adherence to ADA requirements.

### BLOOMFIELD TOWNSHIP SAFETY PATH PROGRAM, MULTI-YEAR, ONGOING



#### Client

Charter Township of Bloomfield  
4200 Telegraph Road  
Bloomfield Hills, MI 48302

*Ms. Olivia Olsztyn-Budry, PE  
Director of Engineering & Environmental  
Services  
(248) 594-2800*

HRC has been active in the design and overseeing of the construction of safety paths for communities wishing to provide a safe transportation route for pedestrians throughout their neighborhoods. For the most part, these paths consist of a six-foot-wide concrete sidewalk that runs adjacent to the roadway and within the road right of way. The paths are designed predominantly for walkers, joggers, parents with small children, and children on bicycles. Bloomfield Township has invested in miles of safety path construction over the past ten years through a millage specifically targeting the construction of safety paths throughout the township. This ongoing program in Bloomfield Township has resulted in safety path construction along almost every major road in the township.

HRC provides the construction observation as well as project management services for the township. The residents' response to the paths have been overwhelmingly positive. As further evidence of the support, township residents recently renewed the safety path millage for another five years. The passage of the Americans with Disabilities Act (ADA) has had a big impact on the design and construction of pedestrian facilities nationwide. Ramps with truncated dome inserts constructed at all road crossings, maximum slopes not to be exceeded, and pedestrian crossing signals with push button actuators are the norm throughout the township's safety path system.

### COMMERCE, WALLED LAKE, AND WIXOM TRAILWAY MANAGEMENT (CW2) COUNCIL MI AIR LINE TRAIL



#### Client

City of Wixom  
49045 Pontiac Trail  
Wixom, Michigan 48393

*Mr. Tim Sikma  
DPW Director  
(248) 624-0141*

Commerce, Walled Lake, and Wixom  
Trailway Management (CW2) Council  
2009 Township Drive  
Commerce Township, MI 48390

*Mr. John Hensler  
Manager  
(248) 506-0942*

The City of Wixom with collaboration with Milford Township, and the Commerce, Walled Lake, and Wixom Trailway Management (CW2) Council and other stakeholders are extending Phase 2 of the MI Aire Line Trail approximately 2.4 miles for a shared-use, non-motorized path from Old Plank Road to the current terminus of Phase 1 of Air Line Tail at Wixom Road.

## WASTEWATER SYSTEMS

### CITY OF WARREN MAJOR IMPROVEMENTS AT THE WASTEWATER TREATMENT PLANT



#### Client

City of Warren  
12821 Stevens  
Warren, MI 48089

*Mr. Bryan Clor  
Division Head  
(586) 264-2530*

(HRC) has been the engineer of record for several recent projects at the Warren Wastewater Treatment Plant (WWTP). The Warren plant is a 60 MGD activated sludge, tertiary plant.

Peripheral Feed Final Clarifiers #5 through #8 Rehabilitation

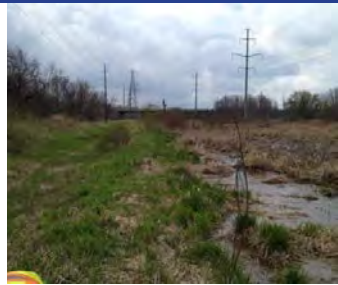
Ultraviolet Disinfection System

Secondary Clarifiers #1 through #4

Switchgear Replacement

Ash Lagoons

### CITY OF JACKSON NORTH SANITARY SEWER EXTENSION



#### Client

City of Jackson  
161 W. Michigan Avenue  
Jackson, Michigan 49201

*Mr. Jon Dowling  
Project Manager  
(517) 788-4170*

HRC was selected to develop a study that identified route options to provide a redundant sanitary sewer to the wastewater plant. An aging 60-inch sewer served as the sole means of transporting sewage from the City of Jackson to the wastewater treatment plant. In addition, HRC provided options for the rehabilitation to the existing sewer. HRC developed five options that included gravity systems and a combination of gravity and pump stations. Options included ROW, wetland, and river impacts. Pros and cons and probable construction costs were detailed so that the city could make the most informed decision. The 60" gravity sewer was eventually chosen.

### CITY OF GRAND RAPIDS SANITARY FORCEMAIN IN MARKET AVENUE, WATER RESOURCE RECOVERY FACILITY TO BARTLETT STREET



#### Client

City of Grand Rapids  
300 Monroe Ave NW  
Grand Rapids, MI 49503

*Mr. Breese Stam, PE  
Project Manager  
(616) 456-3078*

*Mr. John Hayes  
Assistant Project Manager  
(616) 456-3831*

The City of Grand Rapids selected HRC to provide professional engineering services for the design and construction phases of the Sanitary Forcemain in Market Avenue from Water Resource Recovery Facility (WRRF) to Bartlett Street. Project construction began in the summer of 2017.

The project included the installation and surface restoration of a PVC and ductile iron force main. The following installations methods were required to meet the preferred alignment; traditional open-cut, directional drill, jack and bore, pipe rammer, and pipe mounting within trunk sewer. The project also included a pump, and designated pipes, valves and flow measurement devices for operation and control of the segregated concentrated waste. Project plans, special provisions, and cost estimates were prepared in accordance with all City standards and requirements.

## WATER SUPPLY SYSTEMS

### HARTLAND TOWNSHIP

#### M-59 WATER MAIN EXTENSION: PROGRESSIVE DRIVE TO HARTLAND GLEN LANE



HRC provided preliminary engineering (PE) for Hartland Township's M-59 water main extension project. This project consisted of the installation of approximately 10,000' of new 16-inch water main along the south side of M-59 and from Progressive Drive to Hartland Glen Lane. The water main will follow Cundy Road from the M-59 intersection to the entrance of the Hartland Glen golf course. The water main will be installed by the horizontal directional drill (HDD) method, with the exception of the two (2) locations in existing wetlands, which will be installed by open cut on timber piles. The water main will provide water for future development proposed at the current Hartland Glen golf course. HRC's scope included the design of the water main, roadway, and pile supports as well as technical specifications and estimates, providing bidding assistance and construction administration, once the project is bid and constructed.

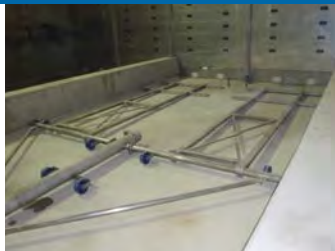
#### Client

Hartland Township

*Bob West, Township Manager*  
810-632-7498

### CITY OF MARYSVILLE

#### WATER TREATMENT PLANT IMPROVEMENTS



#### Client

City of Marysville  
Water Treatment Plant (WTP)  
1535 River Road  
Marysville, MI 48040

*Mr. Bari Wrubel*  
Supervisor Water/Wastewater  
(810)364-8460

HRC was authorized by the City of Marysville to provide professional design and construction engineering services for improvements and upgrades to the 13.0 MGD WTP based on a Master Plan completed by HRC. The existing water plant's source water is the St. Clair River, which is fed from Lake Huron. Most of the current plant and equipment date back to the 1970s or earlier and were in need of replacement. The design consisted of the retrofit and rehabilitation of the existing settling basins with automated sludge suction collectors, sludge pumping, inlet diffusers, new roof and concrete wall rehabilitation. Ten of the existing thirteen filters were equipped with new filter function valves, flowmeters, turbidimeters and control panels. All of the existing filters had their media replaced. The existing HVAC equipment was replaced and a new dehumidification system added in the filter gallery. A new SCADA system was installed for total operation and control of all plant functions. The existing finished water clearwell was structurally rehabilitated, including new access hatches, crack repair and waterproofing. In addition, new piping/valves were added to provide for the capability to bypass the clearwell for maintenance. A new high service pump with VFD was added to replace an existing pump which did not have adequate capacity. The existing two intakes, which had sustained significant damage from boat anchors in the River channel, were replaced with new structures to minimize the possibility of future damage.

### VILLAGE OF LAKE ORION

#### DWSRF WATER MAIN REPLACEMENT



#### Client

Village of Lake Orion  
21 East Church Street  
Lake Orion, MI 48362

*Mr. K. Joseph Young*  
Village Manager  
(248) 693-8391

Up until approximately 40 years ago, the entire Village had been served by community well and water distribution mains prior to the Village connecting to the DWSD system through a contract with neighboring Orion Township. Over the years, some mains were replaced and upsized; however, the majority of the old mains remained undersized, aging, with some exhibiting a reduction in flow area through the pipe. The Village proposed an extensive, multi-phase, multi-year water main replacement program utilizing a DWRF loan. The initial project included the replacement of all existing 4-inch and 6-inch diameter water mains, as well as a section of problematic 8" diameter water main, utilizing primarily pipe bursting (with temporary water set-up) as well as some sections of horizontal directional drilling and open cut methods for installation. Proposed water mains that cross water ways, i.e., mains connecting peninsulas/islands, were installed using horizontal directional drilling methods under the lakebed. Most of the existing water services were replaced from the new main to the stop box (which were also replaced). A few lead/galvanized services were also encountered and replaced to the home. New gate valves and hydrants were also installed along the new 8" main.



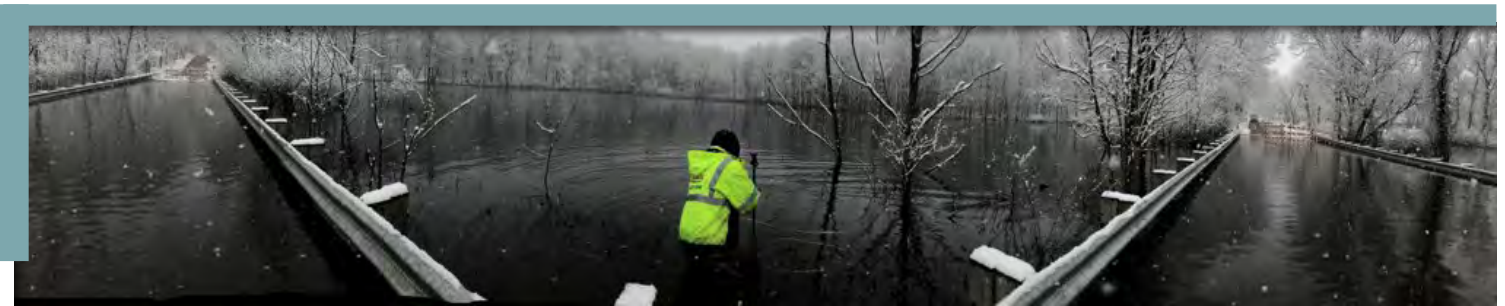
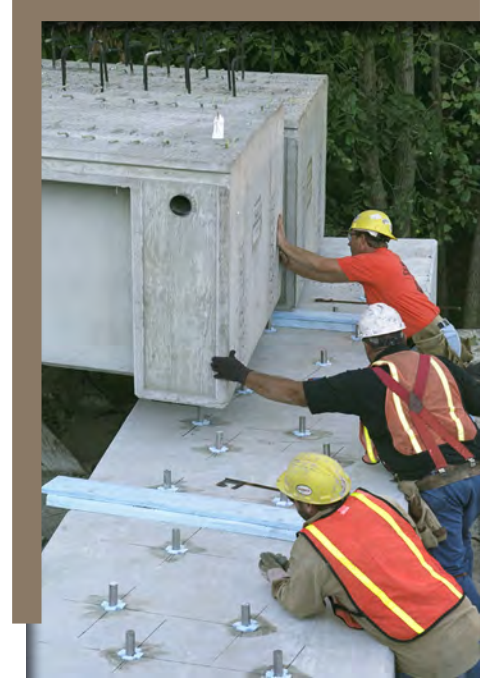
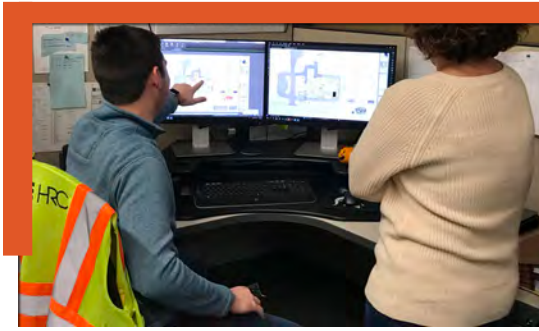
# Office Locations

- Bloomfield Hills**  
555 Hulet Drive  
Bloomfield Hills, MI 48302  
248-454-6300 | Fax: 248.454-6312
- Delhi Township**  
2101 Aurelius Road, Suite 2  
Holt, MI 48842  
517-694-7760
- Detroit**  
Buhl Building, Suite 1650  
535 Griswold Street | Detroit, MI 48226  
313-965-3330
- Grand Rapids**  
1925 Breton Rd SE, Suite 100  
Grand Rapids, MI 49506  
616-454-4286
- Howell**  
105 West Grand River Avenue  
Howell, MI 48843  
517-552-9199
- Jackson**  
401 S. Mechanic Street, Suite B  
Jackson, MI 49201  
517-292-1295
- Kalamazoo**  
834 King Highway, Suite 107  
Kalamazoo, MI 49001  
269-665-2005
- Lansing**  
215 South Washington Square, Suite D  
Lansing, MI 48933  
517-292-1488

# PART II - COST

## PROPOSAL FOR 2021 INDEFINITE-SCOPE INDEFINITE-DELIVERY GENERAL PROFESSIONAL DESIGN SERVICES

DUE: MARCH 11, 2021 AT 2:00PM



### SUBMITTED TO:

**DEPARTMENT OF TECHNOLOGY,  
MANAGEMENT AND BUDGET**

State Facilities Administration

Attn: Ms. Anne Watros, Department Specialist

Design and Construction Division  
3111 West St. Joseph Street  
Lansing, MI 48917

### PREPARED BY:

**HUBBELL, ROTH &  
CLARK, INC.**

□□□ □□□□Dr□

Bloomfield Hills, MI 48302-0360

Phone: 248-454-6300

Fax: 248-454-6312

**ENGINEERING.**

**ENVIRONMENT.**

**EXCELLENCE.**

# PRIMARY PROFESSIONAL AND SUBCONSULTANT(S) - POSITION, CLASSIFICATION & EMPLOYEE BILLABLE RATE INFORMATION

## Position, Classification and Employee Billing Rate Information

2021 Indefinite-Scope Indefinite-Delivery - Request for Proposal  
 General Professional Design Services  
 (Architecture, Engineering, Landscape Architecture)

<b>Name</b>	Hubbell, Roth & Clark, Inc
<b>Yearly Hourly Billing Rate Increase</b>	0% in Year 2, 5% increase for Year 3 & 4.
<b>Mark-up for Sub-Consultants (not to exceed 5%)</b>	0%
<b>Mark-up for Reimbursable (not to exceed 5%)</b>	0%

Position/Classification	Rate Ranges			
	Year 1	Year 2	Year 3	Year 4
Principal	147.00-197.00	147.00-197.00	154.00-206.00	154.00-206.00
Senior Associate/Managing Engineer	171.00-197.00	171.00-197.00	180.00-206.00	180.00-206.00
Associate/Managing Engineer	122.00-163.00	122.00-163.00	128.00-171.00	128.00-171.00
Manager	110.00-170.00	110.00-170.00	115.00-178.00	115.00-178.00
Supervisor	96.00-137.00	96.00-137.00	101.00-144.00	101.00-144.00
Senior Project Engineer/Architect/Surveyor	128.00-160.00	128.00-160.00	134.00-168.00	134.00-168.00
Project Engineer/Architect/Surveyor	110.00-128.00	110.00-128.00	115.00-135.00	115.00-135.00
Staff Engineer/Architect/Surveyor	95.00-121.00	95.00-121.00	99.00-127.00	99.00-127.00
Senior Project Analyst	141.00-145.00	141.00-145.00	148.00-152.00	148.00-152.00
Project Analyst	92.00-128.00	92.00-128.00	96.00-135.00	96.00-135.00
Staff Analyst	83.00-83.00	83.00-83.00	87.00-87.00	87.00-87.00
Graduate Engineer/Architect/III	75.00-102.00	75.00-102.00	79.00-107.00	79.00-107.00
Technical Specialist	105.00-147.00	105.00-147.00	110.00-154.00	110.00-154.00
Senior Designer	121.00-130.00	121.00-130.00	127.00-136.00	127.00-136.00
Designer	114.00-138.00	114.00-138.00	120.00-145.00	120.00-145.00
CADD Technician	55.00-115.00	55.00-115.00	57.00-121.00	57.00-121.00
Senior Survey Office Technician	92.00-107.00	92.00-107.00	97.00-112.00	97.00-112.00
Survey Party Chief	82.00-122.00	82.00-122.00	86.00-128.00	86.00-128.00
Survey - Field Technician	57.00-64.00	57.00-64.00	60.00-67.00	60.00-67.00
Project Representatives	95.00-140.00	95.00-140.00	99.00-146.00	99.00-146.00
Senior Construction Observer	86.00-97.00	86.00-97.00	90.00-101.00	90.00-101.00
Construction Observer/III	58.00-78.00	58.00-78.00	61.00-82.00	61.00-82.00
Construction - Office Technician	63.00-78.00	63.00-78.00	66.00-82.00	66.00-82.00
Supervisor Lab Testing	83.00-83.00	83.00-83.00	87.00-87.00	87.00-87.00
Testing Technician	54.00-72.00	54.00-72.00	57.00-75.00	57.00-75.00
Administrative Support	56.00-80.00	56.00-80.00	58.00-84.00	58.00-84.00



# Office Locations

- ≡ **Bloomfield Hills**  
555 Hulet Drive  
Bloomfield Hills, MI 48302  
248-454-6300 | Fax: 248.454-6312
- ≡ **Delhi Township**  
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313-965-3330
- ≡ **Grand Rapids**  
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- ≡ **Jackson**  
401 S. Mechanic Street, Suite B  
Jackson, MI 49201  
517-292-1295
- ≡ **Kalamazoo**  
834 King Highway, Suite 107  
Kalamazoo, MI 49001  
269-665-2005
- ≡ **Lansing**  
215 South Washington Square, Suite D  
Lansing, MI 48933  
517-292-1488

**APPENDIX 3**

**PROFESSIONAL CERTIFICATION FORMS**





Certification of a Michigan Based Business

I, the undersigned, am the owner of the business and I am a resident of the State of Michigan.

I am a resident of the State of Michigan.

I am a resident of the State of Michigan and I am a resident of the State of Michigan.

I am a resident of the State of Michigan.

- Checkboxes for Michigan-based business certification, including a checked box for Michigan-based business and a checkbox for Michigan-based business.

I have personal knowledge of the business and I am a resident of the State of Michigan.

I am a resident of the State of Michigan and I am a resident of the State of Michigan.

I am a resident of the State of Michigan.

- Checkboxes for Michigan-based business certification, including a checked box for Michigan-based business and a checkbox for Michigan-based business.

Hubbell, Roth & Clark, Inc.

Roland N. Alix

Signature of Roland N. Alix dated 04/20/2021

I am a resident of the State of Michigan and I am a resident of the State of Michigan.



**APPENDIX 4**

**OVERHEAD ITEMS ALLOWED FOR THE  
PROFESSIONAL SERVICES CONTRACTOR FIRM'S  
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, not to exceed 5%, 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 IF such items are provided in house by the professional.

**2021 HOURLY BILLING RATE**  
Based on 2020 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

OFFICE FACILITIES:

Rents and Related Expenses  
Utilities  
Cleaning and Repair

SUPPLIES:

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

SERVICES (PROFESSIONAL):

Accounting  
Legal  
Employment Fees  
Computer Services  
Research

FINANCIAL:

Depreciation

EQUIPMENT RENTALS:

Computers  
Typewriter  
Bookkeeping  
Dictating  
Printing  
Furniture and Fixtures  
Instruments

TRAVEL:

All Project-Related Travel\*

MISCELLANEOUS:

Professional Organization Dues  
for Principals and Employees  
Licensing Fees

SERVICES (NONPROFESSIONAL):

Telephone and Telegram  
Messenger Services

TAXES:

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

INSURANCE:

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

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

PRINTING AND DUPLICATION:

Specifications (other than Contract Bidding Documents)  
Drawings (other than Contract Bidding Documents)  
Xerox/Reproduction  
Photographs

LOSSES:

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



**SELECT HIGH COST CITY LIST**

**TRAVEL RATE REIMBURSEMENT FOR CLASSIFIED AND UNCLASSIFIED EMPLOYEES**

**Effective October 1, 2020**

**Michigan Select Cities/Counties**

<b><u>Cities</u></b>	<b><u>Counties</u></b>
Ann Arbor, Auburn Hills, Detroit, Grand Rapids, Holland, Leland, Mackinac Island, Petoskey, Pontiac, South Haven, Traverse City	All of Grand Traverse, Oakland and Wayne

**Out of State Select Cities/Counties**

<b><u>State</u></b>	<b><u>City/County</u></b>	<b><u>State</u></b>	<b><u>City/County</u></b>
Arizona	Phoenix, Scottsdale, Sedona	Maine	Bar Harbor, Kennebunk, Kittery, Rockport, Sanford
California	Los Angeles (Los Angeles, Orange, Mendocino & Ventura Counties, and Edwards AFB), Eureka, 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	Maryland	Counties of Montgomery & Prince Georges, Baltimore City, Ocean City
		Massachusetts	Boston (Suffolk), Burlington, Cambridge, Woburn, Martha's Vineyard
		Minnesota	Duluth, Minneapolis/St. Paul (Hennepin and Ramsey Counties)
		Nevada	Las Vegas
		New Mexico	Santa Fe
Colorado	Aspen, Breckenridge, Grand Lake, Silverthorne, Steamboat Springs, Telluride, Vail	New York	Lake Placid, Manhattan (the borough of Manhattan, Brooklyn, Bronx, Queens and Staten Island), Riverhead, Ronkonkoma, Melville, Suffolk County, Tarrytown, White Plains, New Rochelle
Connecticut	Bridgeport, Danbury	Ohio	Cincinnati
District of Columbia	Washington DC (also the cities of Alexandria, Falls Church and Fairfax, and the counties of Arlington and Fairfax, in Virginia; and the counties of Montgomery and Prince George's in Maryland) (See also Maryland and Virginia)	Pennsylvania	Bucks County, Pittsburgh
Florida	Boca Raton, Delray Beach, Jupiter, Fort Lauderdale, Key West	Rhode Island	Bristol, Jamestown/Middletown/Newport (Newport County) Providence
Georgia	Jekyll Island, Brunswick	Texas	Austin, Dallas, Houston, L.B. Johnson Space Center
Idaho	Sun Valley, Ketchum	Utah	Park City (Summit County)
Illinois	Chicago (Cook and Lake counties)	Vermont	Manchester, Montpelier, Stowe (Lamoille County)
Kentucky	Kenton	Virginia	Alexandria, Falls Church, Fairfax
Louisiana	New Orleans	Washington	Port Angeles, Port Townsend, Seattle
		Wyoming	Jackson, Pinedale

**APPENDIX 5**

**CERTIFICATES OF INSURANCE**



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

4/20/2021

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 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).

<b>PRODUCER</b> Professional Concepts Insurance Agency, Inc. 1127 South Old US Highway 23  Brighton MI 48114-9861	<b>CONTACT NAME:</b> certs@pciaonline.com <b>PHONE (A/C No. Ext):</b> (800)969-4041 <b>E-MAIL ADDRESS:</b> certs@pciaonline.com	<b>FAX (A/C No):</b> (800)969-4081
	<b>INSURER(S) AFFORDING COVERAGE</b>	
<b>INSURED</b> Hubbell, Roth & Clark, Inc. 555 Hulet Drive  Bloomfield Hills MI 48303-0824	<b>INSURER A:</b> Twin City Fire Insurance Co. <b>NAIC #</b> 29459	
	<b>INSURER B:</b> Hartford Accident & Indemnity <b>22357</b>	
	<b>INSURER C:</b> Hartford Casualty Insurance Co. <b>29424</b>	
	<b>INSURER D:</b> AXA XL <b>37885</b>	
	<b>INSURER E:</b>	
	<b>INSURER F:</b>	

**COVERAGES**

CERTIFICATE NUMBER: 20-21

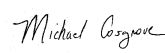
REVISION NUMBER:

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			35SBWAA0393	06/30/2020	06/30/2021	<input type="checkbox"/> 1,000,000
	<input type="checkbox"/> Contractual Liability	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input type="checkbox"/> 1,000,000
	<input checked="" type="checkbox"/> X,C,U						<input type="checkbox"/> 10,000
	<input type="checkbox"/>						<input type="checkbox"/> 1,000,000
	<input type="checkbox"/>						<input type="checkbox"/> 2,000,000
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY			35UEGBL5413	06/30/2020	06/30/2021	<input type="checkbox"/> 1,000,000
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input type="checkbox"/> 1,000,000
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input type="checkbox"/> 1,000,000
C	<input checked="" type="checkbox"/> UMBRELLA LIAB			35XHGWU0618	06/30/2020	06/30/2021	<input type="checkbox"/> 2,000,000
	<input checked="" type="checkbox"/> EXCESS LIAB						<input type="checkbox"/> 2,000,000
B	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY (Mandatory in NH)			35WEGAB5DXL	06/30/2020	06/30/2021	<input checked="" type="checkbox"/> 500,000
	<input type="checkbox"/>						<input type="checkbox"/> 500,000
	<input type="checkbox"/>						<input type="checkbox"/> 500,000
D	<input checked="" type="checkbox"/> Professional Liability			DPR9961217	07/01/2020	07/01/2021	<input type="checkbox"/> 1,000,000 <input type="checkbox"/> 2,000,000

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

The State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents are considered additional insured's with respects to general and auto liability coverages as long as required within a written contract. Waiver of subrogation in favor of certificate holder and additional insured's as long as required within a written contract. Coverage is considered primary and non-contributory on the general liability coverage. 30 day written notice provided to certificate holder and additional insured's for cancellation of coverages listed. 10 day notice for

**CERTIFICATE HOLDER****CANCELLATION**

The Michigan Department of Technology Management and Budget State Facilities Administration Design and Construction Div. 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 Mike Cosgrove/KATHRY 
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## COMMENTS/REMARKS

nonpayment of listed policies.

Indefinite-Scope, Indefinite-Delivery Contract No 00885  
Department of Technology, Management and Budget  
State Facilities Administration, Design and Construction Division  
Professional Architectural and Engineering Indefinite-Scope,  
Indefinite Delivery Contract (ISID) for Minor Projects -  
Various State Departments and Facilities  
Various Site Locations, Michigan



**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**ADDITIONAL INSURED - OWNERS, LESSEES OR CONTRACTORS - SCHEDULED PERSON OR ORGANIZATION**

This endorsement modifies insurance provided under the following:

**BUSINESS LIABILITY COVERAGE FORM**

**SCHEDULE**

**NameOfAdditionalInsured Person(s)OrOrganization(s):** The Michigan Department of Technology, Management and Budget, State Facilities Administration, Design and Construction Div.

**Location(s) Of Covered Operations:** 3111 W. St. Joseph Street, Lansing, MI 48917.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

**A. Section C. – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

- 1. Your acts or omissions; or
- 2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

**B.** With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

- 1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
- 2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.





THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## NOTICE OF CANCELLATION TO DESIGNATED CERTIFICATE HOLDER

### SCHEDULE

**Number of Days Notice:**

Part A: 30

Part B: 10

Part C: 30

**Name of Certificate Holder:**

\_\_\_\_ M \_\_\_\_\_ D \_\_\_\_\_ \_\_\_\_\_ M \_\_\_\_\_  
\_\_\_\_d \_\_\_\_\_ \_\_\_\_\_ d \_\_\_\_\_ D \_\_\_\_\_ d  
\_\_\_\_r \_\_\_\_\_ D \_\_\_\_\_

This policy is subject to the following additional Conditions when a number of days are shown in the Schedule for any of the above Parts.

- A. If this policy is cancelled by the Company, other than for nonpayment of premium, notice of such cancellation will be provided to the certificate holder in the Schedule, at least the number of days in advance of the cancellation effective date, as shown in Part A.
- B. If this policy is cancelled by the Company for nonpayment of premium, notice of such cancellation will be provided to the certificate holder in the Schedule within the number of days notice of the cancellation effective date, as shown in Part B.
- C. If this policy is cancelled by the insured, notice of such cancellation will be provided to the certificate holder in the Schedule, within the number of days notice of the cancellation effective date, as shown in Part C.

If notice is mailed, proof of mailing notice to the certificate holder's mailing address as shown in the Schedule will be sufficient proof of notice. If the number of days notice in the schedule for any Part is left blank or is shown as zero, no notice will be provided to the Scheduled certificate holder under that Part.

Any notification rights provided by this endorsement apply only to active certificate holder(s) who were issued a certificate of insurance applicable to this policy's term

Failure to provide such notice to the certificate holder(s) will not amend or extend the date the cancellation becomes effective, nor will it negate cancellation of the policy. Failure to send notice shall impose no liability of any kind upon the Company or its agents or representatives.



**APPENDIX 6**

**FEDERAL PROVISIONS ADDENDUM**

(If your project is funding wholly or in part by federal funds, this appendix applies)







**FEDERAL PROVISIONS ADDENDUM**

THIS ADDENDUM TO THE CONTRACT AGREEMENT IS PART OF THE CONTRACT. IT IS HEREBY AGREED THAT THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPLICABLE AGENCIES AND AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPLICABLE AGENCIES AND AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPLICABLE AGENCIES AND AUTHORITIES.

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**2. Davis-Bacon Act (Prevailing Wage)**

THIS CONTRACT IS A **prime construction contract** as defined in 29 CFR 1.162-2(b)(1) and is subject to the Davis-Bacon Act (40 USC 3141-3145) and the Davis-Bacon Regulations (29 CFR 162.0-162.10), "Labor Standards for Federal Construction", and during performance of this Contract the Contractor shall be bound by

- a. The prevailing wage rates for the applicable geographic area as determined by the Department of Labor, Bureau of Labor Statistics, Office of Wage Determination, and the applicable collective bargaining agreements.
- b. The prevailing wage rates for the applicable geographic area as determined by the Department of Labor, Bureau of Labor Statistics, Office of Wage Determination, and the applicable collective bargaining agreements.
- c. The prevailing wage rates for the applicable geographic area as determined by the Department of Labor, Bureau of Labor Statistics, Office of Wage Determination, and the applicable collective bargaining agreements.

**3. Copeland "Anti-Kickback" Act**

THIS CONTRACT IS SUBJECT TO THE COPPELAND "ANTI-KICKBACK" ACT (18 USC 873), WHICH PROHIBITS ANY PERSON FROM OBTAINING OR ATTEMPTING TO OBTAIN ANY FEDERAL CONTRACT OR SUBCONTRACT BY PAYING OR OFFERING TO PAY ANY BRIBES, REBATES, OR OTHER UNLAWFUL INFLUENCES TO ANY OFFICIAL OR EMPLOYEE OF THE FEDERAL GOVERNMENT.

**FEDERAL PROVISIONS ADDENDUM**

Kickback” Act ([31 U.S.C. 853](#)), “Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”), which prohibits the contractor and subcontractors from making any kickback or rebate to any officer or employee of the United States or any agency thereof, or to any member of the immediate family of any such officer or employee, or to any person acting in concert with any such officer or employee, in connection with the award, performance, or completion of any contract, subcontract, or purchase of any goods or services by the United States or any agency thereof.

- a. **Contractor** shall be responsible for ensuring that the contractor and subcontractors do not make any kickback or rebate to any officer or employee of the United States or any agency thereof, or to any member of the immediate family of any such officer or employee, or to any person acting in concert with any such officer or employee, in connection with the award, performance, or completion of any contract, subcontract, or purchase of any goods or services by the United States or any agency thereof.
- b. **Subcontracts** shall be responsible for ensuring that the contractor and subcontractors do not make any kickback or rebate to any officer or employee of the United States or any agency thereof, or to any member of the immediate family of any such officer or employee, or to any person acting in concert with any such officer or employee, in connection with the award, performance, or completion of any contract, subcontract, or purchase of any goods or services by the United States or any agency thereof.
- c. **Breach** of the contract shall constitute a breach of the contract and shall be cause for termination of the contract.

**4. Contract Work Hours and Safety Standards Act**

Contract in excess of \$100,000 and involves the employment of mechanics or laborers shall be subject to the provisions of the [Davis-Bacon Act](#) and [Contract Work Hours and Safety Standards Act](#), which require the contractor to determine and pay the prevailing wage for the work to be performed and to comply with the requirements of the Act.

- a. **Overtime requirements** shall be responsible for ensuring that the contractor and subcontractors do not require any employee to work more than 40 hours per week, or more than 8 hours per day, except for overtime work. Overtime work shall be compensated at a rate of not less than one and one-half times the regular rate of pay. The contractor shall also be responsible for ensuring that the contractor and subcontractors do not require any employee to work in a hazardous or dangerous environment without providing appropriate safety equipment and training.
- b. **Violation; liability for unpaid wages; liquidated damages.** In the event of a violation of the provisions of the Davis-Bacon Act or the Contract Work Hours and Safety Standards Act, the contractor shall be liable for the unpaid wages and liquidated damages. The contractor shall also be liable for the costs of any investigation and any civil penalties imposed by the Department of Labor. The contractor shall also be liable for the costs of any investigation and any civil penalties imposed by the Department of Labor.



**FEDERAL PROVISIONS ADDENDUM**

**R**

Contractor shall be responsible for obtaining all necessary permits and licenses for the performance of the work under this contract. Contractor shall be responsible for obtaining all necessary permits and licenses for the performance of the work under this contract.

**Federal Water Pollution Control Act**

Contractor shall be responsible for obtaining all necessary permits and licenses for the performance of the work under this contract. Contractor shall be responsible for obtaining all necessary permits and licenses for the performance of the work under this contract.

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Contractor shall be responsible for obtaining all necessary permits and licenses for the performance of the work under this contract. Contractor shall be responsible for obtaining all necessary permits and licenses for the performance of the work under this contract.

**7. Debarment and Suspension**

A "contract award" (see [28 C.F.R. 101.11](#)) shall be defined as the award of a contract to a contractor under the Federal Acquisition Regulation (28 C.F.R. 101.11) for the performance of work under this contract. The contractor shall be responsible for obtaining all necessary permits and licenses for the performance of the work under this contract. SAM Exclusions contains the names of parties debarred or suspended under the Federal Acquisition Regulation (28 C.F.R. 101.11) for the performance of work under this contract.

- a. Contractor shall be responsible for obtaining all necessary permits and licenses for the performance of the work under this contract. Contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined as any individual, partnership, corporation, or other entity that is owned or controlled by the contractor) shall be responsible for obtaining all necessary permits and licenses for the performance of the work under this contract.
- b. Contractor shall be responsible for obtaining all necessary permits and licenses for the performance of the work under this contract. Contractor shall be responsible for obtaining all necessary permits and licenses for the performance of the work under this contract.
- c. Contractor shall be responsible for obtaining all necessary permits and licenses for the performance of the work under this contract. Contractor shall be responsible for obtaining all necessary permits and licenses for the performance of the work under this contract.
- d. Contractor shall be responsible for obtaining all necessary permits and licenses for the performance of the work under this contract. Contractor shall be responsible for obtaining all necessary permits and licenses for the performance of the work under this contract.

**FEDERAL PROVISIONS ADDENDUM**

Procurement contracts awarded through the Michigan State Procurement System shall include the following provisions:

**8. Byrd Anti-Lobbying Amendment**

Contractors who receive or bid for an order of **\$100,000 or more** shall complete the required certification in *Exhibit 1 – Byrd Anti-Lobbying Certification* and submit the completed form to the State Procurement System. Contractors shall certify that they, their agents, or representatives have not, and will not, use any state funds to influence any state legislator or state official to influence the award of the contract. Contractors shall also certify that they, their agents, or representatives have not, and will not, use any state funds to influence any state legislator or state official to influence the award of the contract. Contractors shall also certify that they, their agents, or representatives have not, and will not, use any state funds to influence any state legislator or state official to influence the award of the contract.

**9. Procurement of Recovered Materials**

Order [EPA R 100000](#) contractors shall comply with the following provisions:

- a. The contractor shall comply with the following provisions:
  - ☐ The contractor shall use the following materials:
    - ☐ Recycled paper
    - ☐ Recycled plastic
    - ☐ Recycled metal
    - ☐ Recycled glass
    - ☐ Recycled wood
    - ☐ Recycled rubber
    - ☐ Recycled steel
    - ☐ Recycled aluminum
    - ☐ Recycled copper
    - ☐ Recycled zinc
    - ☐ Recycled lead
    - ☐ Recycled tin
    - ☐ Recycled nickel
    - ☐ Recycled chromium
    - ☐ Recycled manganese
    - ☐ Recycled cobalt
    - ☐ Recycled iron
    - ☐ Recycled carbon
    - ☐ Recycled nitrogen
    - ☐ Recycled phosphorus
    - ☐ Recycled sulfur
    - ☐ Recycled oxygen
    - ☐ Recycled hydrogen
    - ☐ Recycled helium
    - ☐ Recycled neon
    - ☐ Recycled argon
    - ☐ Recycled krypton
    - ☐ Recycled xenon
    - ☐ Recycled radon
- b. Contractors shall comply with the following provisions:
  - ☐ Contractors shall use the following materials:
    - ☐ Recycled paper
    - ☐ Recycled plastic
    - ☐ Recycled metal
    - ☐ Recycled glass
    - ☐ Recycled wood
    - ☐ Recycled rubber
    - ☐ Recycled steel
    - ☐ Recycled aluminum
    - ☐ Recycled copper
    - ☐ Recycled zinc
    - ☐ Recycled lead
    - ☐ Recycled tin
    - ☐ Recycled nickel
    - ☐ Recycled chromium
    - ☐ Recycled manganese
    - ☐ Recycled cobalt
    - ☐ Recycled iron
    - ☐ Recycled carbon
    - ☐ Recycled nitrogen
    - ☐ Recycled phosphorus
    - ☐ Recycled sulfur
    - ☐ Recycled oxygen
    - ☐ Recycled hydrogen
    - ☐ Recycled helium
    - ☐ Recycled neon
    - ☐ Recycled argon
    - ☐ Recycled krypton
    - ☐ Recycled xenon
    - ☐ Recycled radon
- c. Contractors shall comply with the following provisions:
  - ☐ Contractors shall use the following materials:
    - ☐ Recycled paper
    - ☐ Recycled plastic
    - ☐ Recycled metal
    - ☐ Recycled glass
    - ☐ Recycled wood
    - ☐ Recycled rubber
    - ☐ Recycled steel
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    - ☐ Recycled copper
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    - ☐ Recycled nitrogen
    - ☐ Recycled phosphorus
    - ☐ Recycled sulfur
    - ☐ Recycled oxygen
    - ☐ Recycled hydrogen
    - ☐ Recycled helium
    - ☐ Recycled neon
    - ☐ Recycled argon
    - ☐ Recycled krypton
    - ☐ Recycled xenon
    - ☐ Recycled radon

**10. Additional FEMA Contract Provisions.**

Contractors shall comply with the following provisions:

- a. **Access to Records** Contractors shall comply with the following provisions:
  - ☐ Contractors shall use the following materials:
    - ☐ Recycled paper
    - ☐ Recycled plastic
    - ☐ Recycled metal
    - ☐ Recycled glass
    - ☐ Recycled wood
    - ☐ Recycled rubber
    - ☐ Recycled steel
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    - ☐ Recycled argon
    - ☐ Recycled krypton
    - ☐ Recycled xenon
    - ☐ Recycled radon





**EXHIBIT 1 - BYRD ANTI-LOBBYING CERTIFICATION**

Hubbell, Roth & Clark, Inc. is a registered lobbyist for the State of Michigan. The undersigned certifies that the undersigned is not a registered lobbyist for the State of Michigan and that the undersigned is not acting as a lobbyist for the State of Michigan in connection with the procurement process. The undersigned certifies that the undersigned is not acting as a lobbyist for the State of Michigan in connection with the procurement process.



Signature of Contractor's Authorized Official

Roland N. Alix, Vice President

Name and Title of Contractor's Authorized Official

04/20/2021

Date