

**PROFESSIONAL SERVICES AGREEMENT BETWEEN
TETRA TECH OF MICHIGAN, PC
AND THE CITY OF ANN ARBOR
FOR PROFESSIONAL SERVICES**

This agreement ("Agreement") is between the City of Ann Arbor, a Michigan municipal corporation, having its offices at 301 E. Huron St. Ann Arbor, Michigan 48104 ("City"), and Tetra Tech of Michigan, PC ("Contractor"), a(n) Michigan Corporation, with its address at 710 Avis Drive, Suite 100, Ann Arbor, MI 48108. City and Contractor are referred to collectively herein as the "Parties." The Parties agree as follows:

I. DEFINITIONS

Administering Service Area/Unit means Water Treatment Service Unit.

Contract Administrator means Sr. Utilities Engineer, acting personally or through any assistants authorized by the Administrator/Manager of the Administering Service Area/Unit.

Deliverables means all Plans, Specifications, Reports, Recommendations, and other materials developed for and delivered to City by Contractor under this Agreement.

Project means WTP Professional Engineering Services, RFP 20-18.
Project name

II. DURATION

Contractor shall commence performance on July 1, 2020 ("Commencement Date"). This Agreement shall remain in effect until satisfactory completion of the Services specified below unless terminated as provided for in Article XI. The terms and conditions of this Agreement shall apply to the earlier of the Effective Date or Commencement Date.

Subject to the availability of funding, the Agreement may be extended at the City's option for up to two additional one-year periods subject to the same terms and conditions, except fees, rates, and unit prices which may be adjusted by agreement. If the City elects to exercise its option to extend, written notice of same shall be provided to the Contractor no later than 60 days before the end of the original or extended term, after which the Contractor shall have 30 days to respond in writing that it agrees to the extension and stating the agreed upon fee and unit price adjustments. Failure to respond as provided may result in the City reissuing the professional services for bid. The City Administrator is authorized to execute, on behalf of the City, an extension agreement.

III. SERVICES

- A. The Contractor agrees to provide Professional Consulting Engineering Services
Type of service
("Services") in connection with the Project as described in Exhibit A. The City retains the right to make changes to the quantities of service within the general scope of the

Agreement at any time by a written order. If the changes add to or deduct from the extent of the services, the compensation shall be adjusted accordingly. All such changes shall be executed under the conditions of the original Agreement.

- B. Quality of Services under this Agreement shall be of the level of quality performed by persons regularly rendering this type of service. Determination of acceptable quality shall be made solely by the Contract Administrator.
- C. The Contractor shall perform its Services for the Project in compliance with all statutory, regulatory, and contractual requirements now or hereafter in effect as may be applicable to the rights and obligations set forth in the Agreement. The Contractor shall also comply with and be subject to the City of Ann Arbor policies applicable to independent contractors.
- D. The Contractor may rely upon the accuracy of reports and surveys provided to it by the City (if any) except when defects should have been apparent to a reasonably competent professional or when it has actual notice of any defects in the reports and surveys.

IV. INDEPENDENT CONTRACTOR

The Parties agree that at all times and for all purposes under the terms of this Agreement each Party's relationship to any other Party shall be that of an independent contractor. Each Party will be solely responsible for the acts of its own employees, agents, and servants. No liability, right, or benefit arising out of any employer/employee relationship, either express or implied, shall arise or accrue to any Party as a result of this Agreement.

Contractor does not have any authority to execute any contract or agreement on behalf of the City, and is not granted any authority to assume or create any obligation or liability on the City's behalf, or to bind the City in any way.

V. COMPENSATION OF CONTRACTOR

- A. The Contractor shall be paid in the manner set forth in Exhibit B. Payment shall be made monthly, unless another payment term is specified in Exhibit B, following receipt of invoices submitted by the Contractor, and approved by the Contract Administrator.
- B. The Contractor will be compensated for Services performed in addition to the Services described in Article III, only when the scope of and compensation for those additional Services have received prior written approval of the Contract Administrator.
- C. The Contractor shall keep complete records of work performed (e.g. tasks performed, hours allocated, etc.) so that the City may verify invoices submitted by the Contractor. Such records shall be made available to the City upon request and submitted in summary form with each invoice.

VI. INSURANCE/INDEMNIFICATION

- A. The Contractor shall procure and maintain from the Effective Date or Commencement Date of this Agreement (whichever is earlier) through the conclusion of this Agreement, such insurance policies, including those set forth in Exhibit C, as will protect itself and the City from all claims for bodily injuries, death or property damage that may arise under this Agreement; whether the act(s) or omission(s) giving rise to the claim were made by the Contractor, any subcontractor, or anyone employed by them directly or indirectly. Prior to commencement of work under this Agreement, Contractor shall provide to the City documentation satisfactory to the City, through City-approved means (currently myCOI), demonstrating it has obtained the policies and endorsements required by Exhibit C. Contractor shall add registration@mycoitracking.com to its safe sender's list so that it will receive necessary communication from myCOI. When requested, Contractor shall provide the same documentation for its subcontractor(s) (if any).
- B. Any insurance provider of Contractor shall be authorized to do business in the State of Michigan and shall carry and maintain a minimum rating assigned by A.M. Best & Company's Key Rating Guide of "A-" Overall and a minimum Financial Size Category of "V". Insurance policies and certificates issued by non-authorized insurance companies are not acceptable unless approved in writing by the City.
- C. To the fullest extent permitted by law, Contractor shall indemnify, defend, and hold the City, its officers, employees and agents harmless from all suits, claims, judgments and expenses, including attorney's fees, resulting or alleged to result, from any acts or omissions by Contractor or its employees and agents occurring in the performance of or breach in this Agreement, except to the extent that any suit, claim, judgment or expense are finally judicially determined to have resulted from the City's negligence or willful misconduct or its failure to comply with any of its material obligations set forth in this Agreement.

VII. COMPLIANCE REQUIREMENTS

- A. Nondiscrimination. The Contractor agrees to comply, and to require its subcontractor(s) to comply, with the nondiscrimination provisions of MCL 37.2209. The Contractor further agrees to comply with the provisions of Section 9:158 of Chapter 112 of the Ann Arbor City Code and to assure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity.

- B. Living Wage. If the Contractor is a “covered employer” as defined in Chapter 23 of the Ann Arbor City Code, the Contractor agrees to comply with the living wage provisions of Chapter 23 of the Ann Arbor City Code. The Contractor agrees to pay those employees providing Services to the City under this Agreement a “living wage,” as defined in Section 1:815 of the Ann Arbor City Code, as adjusted in accordance with Section 1:815(3); to post a notice approved by the City of the applicability of Chapter 23 in every location in which regular or contract employees providing services under this Agreement are working; to maintain records of compliance; if requested by the City, to provide documentation to verify compliance; to take no action that would reduce the compensation, wages, fringe benefits, or leave available to any employee or person contracted for employment in order to pay the living wage required by Section 1:815; and otherwise to comply with the requirements of Chapter 23.

VIII. WARRANTIES BY THE CONTRACTOR

- A. The Contractor warrants that the quality of its Services under this Agreement shall conform to the level of quality performed by persons regularly rendering this type of service.
- B. The Contractor warrants that it has all the skills, experience, and professional licenses (if applicable) necessary to perform the Services pursuant to this Agreement.
- C. The Contractor warrants that it has available, or will engage, at its own expense, sufficient trained employees to provide the Services pursuant to this Agreement.
- D. The Contractor warrants that it has no personal or financial interest in the Project other than the fee it is to receive under this Agreement. The Contractor further certifies that it shall not acquire any such interest, direct or indirect, which would conflict in any manner with the performance of the Services it is to provide pursuant to this Agreement. Further Contractor agrees and certifies that it does not and will not employ or engage any person with a personal or financial interest in this Agreement.
- E. The Contractor warrants that it is not, and shall not become overdue or in default to the City for any contract, debt, or any other obligation to the City including real and personal property taxes. Further Contractor agrees that the City shall have the right to set off any such debt against compensation awarded for Services under this Agreement.
- F. The Contractor warrants that its proposal for services was made in good faith, it arrived at the costs of its proposal independently, without consultation, communication or agreement, for the purpose of restricting completion as to any matter relating to such fees with any competitor for these Services; and no attempt has been made or shall be made by the Contractor to induce any other person or firm to submit or not to submit a proposal for the purpose of restricting competition.

- G. The person signing this Agreement on behalf of Contractor represents and warrants that she/he has express authority to sign this Agreement for Contractor and agrees to hold the City harmless for any costs or consequences of the absence of actual authority to sign.

IX. OBLIGATIONS OF THE CITY

- A. The City agrees to give the Contractor access to the Project area and other City-owned properties as required to perform the necessary Services under this Agreement.
- B. The City shall notify the Contractor of any defects in the Services of which the Contract Administrator has actual notice.

X. ASSIGNMENT

- A. The Contractor shall not subcontract or assign any portion of any right or obligation under this Agreement without prior written consent from the City. Notwithstanding any consent by the City to any assignment, Contractor shall at all times remain bound to all warranties, certifications, indemnifications, promises and performances, however described, as are required of it under the Agreement unless specifically released from the requirement, in writing, by the City.
- B. The Contractor shall retain the right to pledge payment(s) due and payable under this Agreement to third parties.

XI. TERMINATION OF AGREEMENT

- A. If either party is in breach of this Agreement for a period of fifteen (15) days following receipt of notice from the non-breaching party with respect to a breach, the non-breaching party may pursue any remedies available to it against the breaching party under applicable law, including but not limited to, the right to terminate this Agreement without further notice. The waiver of any breach by any party to this Agreement shall not waive any subsequent breach by any party.
- B. The City may terminate this Agreement, on at least thirty (30) days advance notice, for any reason, including convenience, without incurring any penalty, expense or liability to Contractor, except the obligation to pay for Services actually performed under the Agreement before the termination date.
- C. Contractor acknowledges that, if this Agreement extends for several fiscal years, continuation of this Agreement is subject to appropriation of funds for this Project. If funds to enable the City to effect continued payment under this Agreement are not appropriated or otherwise made available, the City shall have the right to terminate this Agreement without penalty at the end of the last period for which funds have been appropriated or otherwise made available by giving written notice of termination to Contractor. The Contract Administrator shall give Contractor written notice of such non-appropriation within thirty (30) days after it receives

notice of such non-appropriation.

- D. The provisions of Articles VI and VIII shall survive the expiration or earlier termination of this Agreement for any reason. The expiration or termination of this Agreement, for any reason, shall not release either party from any obligation or liability to the other party, including any payment obligation that has already accrued and Contractor's obligation to deliver all Deliverables due as of the date of termination of the Agreement.

XII. REMEDIES

- A. This Agreement does not, and is not intended to, impair, divest, delegate or contravene any constitutional, statutory and/or other legal right, privilege, power, obligation, duty or immunity of the Parties.
- B. All rights and remedies provided in this Agreement are cumulative and not exclusive, and the exercise by either party of any right or remedy does not preclude the exercise of any other rights or remedies that may now or subsequently be available at law, in equity, by statute, in any agreement between the parties or otherwise.
- C. Absent a written waiver, no act, failure, or delay by a Party to pursue or enforce any rights or remedies under this Agreement shall constitute a waiver of those rights with regard to any existing or subsequent breach of this Agreement. No waiver of any term, condition, or provision of this Agreement, whether by conduct or otherwise, in one or more instances, shall be deemed or construed as a continuing waiver of any term, condition, or provision of this Agreement. No waiver by either Party shall subsequently effect its right to require strict performance of this Agreement.

XIII. NOTICE

All notices and submissions required under this Agreement shall be delivered to the respective party in the manner described herein to the address stated below or such other address as either party may designate by prior written notice to the other. Notices given under this Agreement shall be in writing and shall be personally delivered, sent by next day express delivery service, certified mail, or first class U.S. mail postage prepaid, and addressed to the person listed below. Notice will be deemed given on the date when one of the following first occur: (1) the date of actual receipt; (2) the next business day when notice is sent next day express delivery service or personal delivery; or (3) three days after mailing first class or certified U.S. mail.

If Notice is sent to the CONTRACTOR, it shall be addressed and sent to:

Tetra Tech of Michigan, PC
Attn: Brian Rubel, PE
710 Avis Drive, Suite 100
Ann Arbor, MI 48108

If Notice is sent to the CITY, it shall be addressed and sent to:

City of Ann Arbor
Attn: Glen Wiczorek, WTP Senior Utilities Engineer
301 E. Huron St.
Ann Arbor, Michigan 48104

With a copy to: The City of Ann Arbor
ATTN: Office of the City Attorney
301 East Huron Street, 3rd Floor
Ann Arbor, Michigan 48104

XIV. CHOICE OF LAW AND FORUM

This Agreement will be governed and controlled in all respects by the laws of the State of Michigan, including interpretation, enforceability, validity and construction, excepting the principles of conflicts of law. The parties submit to the jurisdiction and venue of the Circuit Court for Washtenaw County, State of Michigan, or, if original jurisdiction can be established, the United States District Court for the Eastern District of Michigan, Southern Division, with respect to any action arising, directly or indirectly, out of this Agreement or the performance or breach of this Agreement. The parties stipulate that the venues referenced in this Agreement are convenient and waive any claim of non-convenience.

XV. OWNERSHIP OF DOCUMENTS

Upon completion or termination of this Agreement, all documents (i.e., Deliverables) prepared by or obtained by the Contractor as provided under the terms of this Agreement shall be delivered to and become the property of the City. Original basic survey notes, sketches, charts, drawings, partially completed drawings, computations, quantities and other data shall remain in the possession of the Contractor as instruments of service unless specifically incorporated in a deliverable, but shall be made available, upon request, to the City without restriction or limitation on their use. The City acknowledges that the documents are prepared only for the Project. Prior to completion of the contracted Services the City shall have a recognized proprietary interest in the work product of the Contractor.

XVI. CONFLICTS OF INTEREST OR REPRESENTATION

Contractor certifies it has no financial interest in the Services to be provided under this Agreement other than the compensation specified herein. Contractor further certifies that it presently has no personal or financial interest, and shall not acquire any such interest, direct or indirect, which would conflict in any manner with its performance of the Services under this Agreement.

Contractor agrees to advise the City if Contractor has been or is retained to handle any matter in which its representation is adverse to the City. The City's prospective consent to the Contractor's representation of a client in matters adverse to the City, as identified above, will not apply in any instance where, as the result of Contractor's representation, the Contractor has obtained

sensitive, proprietary or otherwise confidential information of a non-public nature that, if known to another client of the Contractor, could be used in any such other matter by the other client to the material disadvantage of the City. Each matter will be reviewed on a case by case basis.

XVII. SEVERABILITY OF PROVISIONS

Whenever possible, each provision of this Agreement will be interpreted in a manner as to be effective and valid under applicable law. However, if any provision of this Agreement or the application of any provision to any party or circumstance will be prohibited by or invalid under applicable law, that provision will be ineffective to the extent of the prohibition or invalidity without invalidating the remainder of the provisions of this Agreement or the application of the provision to other parties and circumstances.

XVIII. EXTENT OF AGREEMENT

This Agreement, together Exhibits A, B, and C, constitutes the entire understanding between the City and the Contractor with respect to the subject matter of the Agreement and it supersedes, unless otherwise incorporated by reference herein, all prior representations, negotiations, agreements or understandings whether written or oral. Neither party has relied on any prior representations, of any kind or nature, in entering into this Agreement. No terms or conditions of either party's invoice, purchase order or other administrative document shall modify the terms and conditions of this Agreement, regardless of the other party's failure to object to such form. This Agreement shall be binding on and shall inure to the benefit of the parties to this Agreement and their permitted successors and permitted assigns and nothing in this Agreement, express or implied, is intended to or shall confer on any other person or entity any legal or equitable right, benefit, or remedy of any nature whatsoever under or by reason of this Agreement. This Agreement may only be altered, amended or modified by written amendment signed by the Contractor and the City. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement.

XIX. ELECTRONIC TRANSACTION

The parties agree that signatures on this Agreement may be delivered electronically in lieu of an original signature and agree to treat electronic signatures as original signatures that bind them to this Agreement. This Agreement may be executed and delivered by facsimile and upon such delivery, the facsimile signature will be deemed to have the same effect as if the original signature had been delivered to the other party.

XX. EFFECTIVE DATE

This Agreement will become effective when all parties have signed it. The Effective Date of this Agreement will be the date this Agreement is signed by the last party to sign it.

FOR CONTRACTOR

By Brian M. Rubel
Brian Rubel, PE
Its Vice President
Date: 5/20/20

FOR THE CITY OF ANN ARBOR

By Christopher Taylor 06/09/2020
CHRISTOPHER TAYLOR, MAYOR

By Jacqueline Beaudry 06/15/2020
JACQUELINE BEAUDRY, CITY CLERK

Date: _____

Approved as to substance

Craig Hupy 06/04/2020
CRAIG HUPY, PUBLIC SERVICES AREA ADMINISTRATOR

Tom Crawford 06/08/2020
TOM CRAWFORD, INTERIM CITY ADMINISTRATOR

Approved as to form and content

Stephen K. Postema 06/08/2020
STEPHEN POSTEMA, CITY ATTORNEY

**EXHIBIT A
SCOPE OF SERVICES**

(Insert/Attach Scope of Work & Deliverables Schedule)

SCOPE OF WORK

We have organized this section as requested in the RFP. Tetra Tech anticipates that the City will contract directly for geotechnical and material testing services. However, we have relationships with these firms should this type of service be needed.

Staffing and Personnel

Brian Rubel will be assigned to ensure that all services performed by Tetra Tech meet or exceed the City's expectations. He will assign staff to the project based on City needs. Eric Geerlings will assist Brian in overseeing and executing assignments. As the Project Manager, Brian will assemble a qualified team to complete each assignment. His approach is to utilize staff with prior experience working on Ann Arbor WTP projects, ensuring we have a thorough understanding of the challenges that WTP facilities personnel have to deal with on a daily basis.

Communication and Coordination

Tetra Tech tailors our communication to the needs of each client and project. We will review the approach desired by the City prior to starting any assignment. Our communication norms are listed below:

- Monthly meetings to review project status
- Prepare meeting minutes for distribution, transmitted within 24 hours to ensure accurate information and a timely review
- Attend/Participate in public information meetings
- Daily Construction Progress Reports e-mailed at the close of business (upon request)
- Client interviews to ensure our project team meets expectations
- Weekly email status reports

Compatibility with City Standards, Goals, and Objectives

Tetra Tech's approach for this contract includes:

- Developing a thorough scope of work and schedule at the beginning of each assignment for mutual agreement to avoid conflicts regarding the project definition
- A project start meeting at the beginning of each assignment to further refine the problem statement and to understand the client's goals and objectives
- Conduct a Tetra Tech internal kickoff meeting where the specific project technical standards are discussed (i.e., review of drawing standards and client specifications)
- In-person progress meetings (monthly or more) to discuss the project and to adjust Tetra Tech's execution to arrive at the City's goals. These periodic workshops allow clients to give their technical input to ensure satisfaction with the work
- To the extent practical and acceptable to the City, Tetra Tech will assign the same staff to multiple projects so that our staff learns your facility and expectations

Tetra Tech is familiar with numerous City design, bidding, and construction standards such as:

- Equipment standards
- Bid advertisement and award process
- Construction documents (general conditions, insurance) and administration process
- Equipment commissioning including operational Demonstration

Working Relationship Between Consultant and City Staff

Tetra Tech envisions a working relationship where we are an extension of the City of Ann Arbor's staff. Our consistent team members will lead to a working understanding of the City's expectations and technical practices. The relationship we enjoy with communities like Brighton and Northfield Township allow us to coordinate project execution within multiple departments/units of each community, thereby reducing the burden of the staff of clients we serve.

Tetra Tech's Ann Arbor office and proximity to all City buildings make us ideally suited to schedule a needed meeting with any City employee. We invite our clients to review our performance annually (or more frequently) so we can make necessary adjustments to improve and exceed expectations. At times through this contract, our project manager has met with the WTP staff to provide biweekly updates to ensure the projects are proceeding acceptably.

Tetra Tech is committed to being available 24/7 to the City. We can serve the City from our office at 710 Avis Drive, Ann Arbor. Our Project Manager, Brian Rubel, is an Ann Arbor resident and homeowner. He can generally be mobilized to any Ann Arbor site within 10 minutes. He is a dedicated employee who monitors his cell phone and e-mail in the evenings and weekends. We invite you to contact him at any time to confirm this commitment:

brian.rubel@tetrattech.com, Cell: 734.649.4546

Tetra Tech is able to use a variety of delivery systems including design-bid-build projects. From the past seven years of serving the Ann Arbor WTP, Tetra Tech has never declined to prepare a competitive proposal for any of the plant's needs.

Detailed Scope of Services

Tetra Tech's approach to managing projects is depicted Quality Assurance/Quality Control Procedures graphic. These procedures are used to produce a technically sound product. Since each project we complete is customized to our clients' needs, client input is clearly defined at most steps to ensure a successful project outcome. We have summarized in the next few pages Tetra Tech's general approach to projects that may be completed as part of this contract.

Water Treatment Plant Design

Tetra Tech employs a bottom-up approach to designing any project. That is, we first dive in to thoroughly understand the problem and our clients' goals and objectives. Only upon mastering those facts do we begin the design process. Our design process involves speaking to all project stakeholders to ensure the design meets the needs of the facility and the staff who operate and maintain it. We consider the permit requirements and the regulatory needs throughout the process.

When considering leading edge technologies, Tetra Tech always suggests involving regulators early and thoroughly checking previous users of the technologies to understand their experiences. Site visits to witness newer technologies is always something we recommend. Typical design standards/references include:

- » Recommended Standards for Water Works (Ten State Standards)
- » Michigan Safe Drinking Water Act, Amendments, and Regulations
- » Federal Safe Drinking Water Act, Amendment, and Regulations

Tetra Tech is familiar with all processes currently at the Ann Arbor water treatment plant including:

- » Lime feed systems
- » Rapid mixing systems
- » Flocculators
- » Clarifiers

- » Carbon Dioxide addition
- » Sedimentation handling
- » Plate and frame presses and residual management systems
- » Pumping systems
- » Ozone treatment
- » Chloramine disinfection
- » Filtration
- » NaOH and Phosphate addition

Additionally, Tetra Tech is a national leader in leading edge treatment systems such as:

- » Riverbank filtration
- » Membrane treatment
- » Alternative disinfectants
- » High-rate clarification and softening

Our standard in completing plant projects is to use Building Information Management (BIM) software such as Bentley's REVIT. BIM allows for three dimensional designs, leading to fewer utility conflicts and contractor change orders. The software also allows utility staff to visualize the completed project and make changes during design.

Instrumentation

Tetra Tech has unmatched credentials in designing and administering construction for water plant instrumentation systems. Many local civil engineering consultants seek to team with us for our instrumentation skills. We have in-house programmers to provide the required code for PLCs and SCADA screens. Our clients resoundingly prefer programming by the design engineer (as opposed to the contractor) because the designer is the best judge of how the equipment should be controlled and the engineer collaborates with the plant operators during the programming phase. As the cost of bandwidth has decreased in recent years, Tetra Tech has expanded SCADA systems to include plant security features such as video monitoring, audio transmission, and key card access. Tetra Tech is familiar with the VT SCADA software, which will soon be implemented at the WTP.

Dam Inspection and Design

Tetra Tech can complete any dam service needed, including:

- FERC Part 12 Inspections
- Earth/Rock fill dam design
- Dam repairs/improvements
- Spillway evaluations and modifications
- Embankment armoring
- Embankment stability, seepage, and settlement analyses
- Location exploration and site determinations
- Subsurface explorations and in situ testing
- Geologic mapping and site characterization
- Lab testing programs
- Site preparation, earthwork, grading
- Construction dewatering
- Inspections
- Seismic studies
- Instrumentation programs and evaluations
- Seepage barriers: jet grouting, slurry walls, sheet piling, cement and chemical grouting

- Internal erosion (piping) investigation/mitigation
- Cost estimates/specifications
- Hydroelectric power
- Security assessment/plans

Tetra Tech's engineers have the experience and knowledge to investigate, evaluate, and formulate solutions for any subsurface condition, reducing risk exposure to our clients. Our experience for dams encompasses inspections; subsurface explorations and in-situ testing; instrumentation programs; investigation, evaluation and design of new dams; dam rehabilitations and modifications; embankment armoring (roller-compacted concrete, soil cement, and proprietary systems); site preparation, earthwork, and grading; construction dewatering; seismic studies (liquefaction, lateral spreading, site response); stream bank stabilizations; landslide investigations, evaluations, and repairs; fish passage improvements; retaining walls and river structures; bridge abutments and foundations; and anchorage design for habitat and flow control features.

Tetra Tech provides comprehensive dam safety services for every dam type from concrete gravity, arch, and embankment dams to masonry, timber crib, and rubber dams. Safety inspection and assessment services extend beyond dams to appurtenant structures such as penstocks, tunnels, canals, auxiliary spillways, power intakes, surge tanks, outlet works, and powerhouses. Our dam safety experts conduct inspections throughout North America in accordance with the requirements of various federal and state regulatory bodies including the Federal Energy Regulatory Commission, United States Army Corps of Engineers, Bureau of Reclamation, as well as the Michigan Environmental, Great Lakes & Energy.

Tetra Tech is extensively involved in the design of new dams and modification of existing dams. We recently completed the design and repair of dams in Ohio, West Virginia, Florida, Colorado, Oklahoma, Arizona, Nevada, New Mexico, and other states.

Pump Station and Storage Tank Design

A key step in pump station and storage design is to understand the goals and constraints. The following criteria must be clearly defined before design is initiated:

- Pump sizes (heads and design flow) and number
- Pump type/configuration
- Setting constraints (right-of-way, easements)
- Station size
- Control schemes

Close collaboration with the City would be needed to ensure consistency between the proposed project and City practices. For instance, it may be prudent to use a specific pump manufacturer if City maintenance staff is familiar with the manufacturer's equipment.

Our multi-disciplinary staff of process, electrical, and mechanical engineers make us ideally suited to tackle all challenges that occur on a pump station and tank design project. Tetra Tech frequently teams with specialty firms such as Dixon Engineering or Nelson Tank Engineering to provide specialty tank design and inspection services.

Tetra Tech's design practice is to ensure each project can be constructed to reduce construction cost and easily be maintained to reduce City staff time.

Permitting

Environmental Permitting

The Tetra Tech team has extensive experience working with federal, state, and local regulatory and permitting agencies, such as the Environmental Protection Agency (EPA), EGLE, and USACE. We employ wetland scientists in our Ann Arbor office who are respected by the EGLE and can delineate the wetland and define wetland permit requirements for any project. We can facilitate meetings with regulatory agencies and with the City to negotiate the terms and conditions for any permit or permit modifications necessary.

Tetra Tech is familiar with all parts of the Act 399 Permit. Our construction specifications are written so contractors complete work in accordance with permit requirements. Tetra Tech successfully received permits for numerous City projects, including Steere Farm and the Manchester Tank. We have and will work successfully with EGLE's district engineer, Stephanie Johnson.

Repair of Existing Buildings and Other Structures

Having designed over 50 percent of the water and wastewater treatment plants in Michigan, Tetra Tech has a deep bench of engineers and architects who understand the needs of municipal buildings, including construction and maintenance. Our architects and mechanical, structural, and electrical engineers stand ready to serve the City's needs. Recent projects include:

- Ann Arbor Steere Farm well houses
- Major pump station improvements (structural and mechanical) for the Ypsilanti Community Utilities Authority and Oakland County Ann Arbor WTP Control Room

Understanding that some of Ann Arbor's facilities date back to the 1930s and earlier, extending the useful life of older facilities will be a challenge until significant upgrades can be made. Tetra Tech has experience with various engineering studies on maintenance, operation, and construction feasibility for repairs and restoration.

Tetra Tech's recent experience ensures we have a detailed cost database, which allows us to prepare accurate and dependable cost opinions. Tetra Tech has experts in concrete repair and rehabilitation who can solve almost any issue that may be encountered. Our professionals understand local and federal codes and regulations and can pull from international experience to offer unique solutions to common infrastructure and building integrity problems. For instance, our thorough understanding of the Americans with Disabilities Act ensures proper accessibility is incorporated into each project. Our architects keep abreast of the latest construction materials and specialize in a seamless blending of improvements into a building.

Construction Observation and Administration

Construction administration and inspection are responsibilities that Tetra Tech takes seriously. We recognize that the construction professional has a large role in managing risk, minimizing cost overruns, and scheduling delays on projects. They are the last set of eyes on a project before and during construction and should anticipate issues and resolve them before they become problems. Additionally, construction professionals must accurately and diligently document issues that occur during construction, so the client's risk is managed.

In many projects, the construction professional maintains the records of elevations and locations for completing accurate and reliable conforming-to construction records drawings (i.e., as-builts). On complex projects, observation may be on a full-time basis. On less complex projects, part-time observation may be adequate.

The construction professional must be the liaison between the public and the City. They must possess interpersonal skills to listen to the public, understand their concerns, and resolve issues that impact them.

Tetra Tech has a track record of working with our clients to determine a role for our construction professionals that fit their needs. Examples include:

- Providing experienced engineering and construction professionals to represent clients as “expert witnesses” on their behalf
- E-mailing reports at the end of each day (as requested)
- Using laptops to reference record drawings useful to the project
- Conducting post-construction review meetings with client staff to identify and document issues discovered during construction directly leading to improved design documents and construction procedures
- Meeting with commercial businesses and private homeowners in affected areas to educate, inform, and to discuss project issues (access, safety etc.)
- Preparing informational newsletters, press releases, and letters for public and businesses that may be affected by construction activities

The daily construction observation is performed by a Resident Project Representative (RPR). Space prohibits listing all the responsibilities of this individual but some of them include:

- Observe and monitor contractor’s installation methods and operations to ensure conformance with contract requirements and approved submittals, including pipe material, backfill material, size of lifts, compaction efforts, proper pipe jointing, and pipe restraints (if needed)
- Act as liaison between contractor and the public
- Review shop drawings to verify materials on site are correct per the specifications
- Coordinate material testing/survey staking requests as needed
- Perform quality checks on staking and cut sheets
- Monitor material testing and assure they are completed in accordance to standards
- Assist in the review of contractor’s proposed costs for changes in work
- Set up an easy to maintain and use filing system, show team where all files and books are located, and emphasize the importance of utilizing them
- Check utilities that may pose a conflict with the construction process
- Prepare daily reports, review, and edit
- Support RPR’s reports, update Conforming-to-Construction-Record Drawings (CCRDs), and complete all other necessary paperwork on a daily basis
- Take progress photos as appropriate, attach to the daily report
- Document all accidents and apparent unsafe conditions, notify Construction Manager (CM) immediately of any unsafe condition— ultimately, contractor is responsible for safety on the job site
- Check pay estimates on a regular basis and flag items that will be in over-run. Notify the CM of any potential issues
- Prepare and update project punch lists for the contractor to complete the work
- Conduct final project observation with the owner and contractor
- Assist in project administration and closeout
- Review CCRDs for completeness and back-check until ready for submittal
- Lead RPRs should constantly train secondary RPRs to make sure they stay focused, learn their position, and how important it is for the project and the project team

- Be professional when representing the City as well as the Tetra Tech team Tim Ard has led several recent Ann Arbor construction projects and has ensured the City received the quality construction project it paid for.

Land Surveying

Tetra Tech has an outstanding surveying department in support of its architectural and engineering activities. Our survey staff is made up of licensed professional surveyors and support personnel to handle a variety of surveying operations. Our surveying staff has demonstrated strong experience in planning, directing, and performing field surveys and office work for horizontal and vertical control surveys for a variety of projects. This experience includes establishing primary and secondary horizontal and vertical control networks for local governmental agencies, photo control surveys, Michigan Department of Transportation (MDOT) design and construction surveys, route/right-of-way surveys, and property/boundary surveys. Tetra Tech's survey department uses seven robotic and reflectorless total stations with on-board electronic data collectors that give simultaneous distance and angle measurements with single pointing; eight GPS units tied to MDOT Continuously Operating Reference Station (CORS) towers for the establishment of horizontal control based on the Michigan State Plane Coordinate System (Michigan SPCS), and the North American Datum of 1983 (NAD83); and five digital levels with on-board data collection for efficient, error-free recording of level loops to a higher level of accuracy than can be achieved by conventional leveling methods.

Operation & Maintenance Manuals and Staff Training

Tetra Tech can assist in developing operation & maintenance (O&M) manuals for any system constructed. Our approach relies heavily upon the expert for the equipment manufacturer. However, Tetra Tech packages the individual equipment manuals to make a comprehensive document. Our specialty is developing multimedia, electronic O&M manuals that can be loaded onto a server. This allows complex equipment to be demonstrated with audio/video which is easier to understand and more likely to be used by operators.

Tetra Tech can assist in training on any new piece of equipment. We may facilitate the manufacture to lead this training or may lead it using one of Tetra Tech's Michigan-based licensed plant operators. On several recent projects, we have completed SOPs that City operators will use to operate and maintain the systems. Tetra Tech understands the City is considering utilizing interactive on-line modules for staff training. We have developed these ourselves and teamed with specialty firms to provide these services to clients.

Public Engagement

Tetra Tech recognizes the importance of an involved and educated public. We incorporate public engagement in most of our design projects and in many important studies. We can complete this service internally or involve specialty consultants. We are familiar with the City's Public Engagement Toolkit and led public meetings for the sludge removal project.

Underground Utility Design

Tetra Tech offers all services the City may require for water distribution design and construction. We provide planning, design, and construction assistance for new construction as well as innovative solutions to replacement and rehabilitation of infrastructure. Tetra Tech's local engineers have designed hundreds of miles of transmission and distribution water mains and utilized the most current innovative technologies for replacement of aging pipes. Our engineers provide design solutions seeking to minimize the system life-cycle costs and is proficient with many software packages that analyze distribution systems, including those produced by Bentley, Innovye, and KYsoftware. Our field staff is experienced in water design data collection including

leak analysis and fire hydrant pressure testing. Tetra Tech's designers work hand-in-hand with our electrical and structural engineers to provide safe and reliable designs for underground metering facilities.

Tetra Tech staff have worked with nearly all types of water mains including:

- Asbestos – cement
- Ductile iron
- Cast iron
- PCCP
- HDPE
- PVC

Tetra Tech staff have utilized innovative means to inspect and rehabilitate aging pipe including:

- Sonar
- Pipe diver, assessment robotic
- CIPP lining
- Pipe bursting
- Pigging
- Diving

Stormwater Management

Tetra Tech staff have been involved in all aspects of stormwater management for treatment plant and pipeline projects. Typical services have included:

- Storm sewer design
- Stormwater best management practices design
- Erosion and sedimentation control (including SESC permitting)
- Secondary containment design
- Stormwater pollution prevention plans

Tetra Tech utilizes both hand calculations and computer modeling depending on the size, complexity, and goals for the project.

Our center of excellence for sustainable stormwater design (green infrastructure) is in Ann Arbor. While green infrastructure may not be applicable to some portions of a treatment plant due to chemical spill concerns, it may be implementable to other parts, such as employee/visitor parking. Tetra Tech wrote the *MDOT Drainage Manual* that guides all design work for MDOT facilities.

Feasibility Studies

Tetra Tech's expertise extends to evaluating concepts and documenting alternatives within feasibility studies. Tetra Tech has completed over 100 EGLE revolving fund loan project plans. Any discipline discussed within this report can be addressed within a feasibility study. Typical feasibility study components include:

- Executive Summary
- Introduction (Background Analysis)
- Identification Alternatives
- Evaluation of Alternatives
- Recommended Alternative
- Summary and Recommendations
- Appendices

Tetra Tech typically analyzes life cycle costs to ensure that our client is aware of all costs with an alternative and not just the initial capital costs.

Retrofitting of Existing Infrastructure

Retrofits are typically the most challenging projects to successfully implement with the numerous hazardous material, space, and funding constraints. Accurately understanding the existing facility through survey and material testing is critical. Also critical is listening and utilizing the input of the system operators so the aesthetics CNA functionality are considered. Sequencing of construction is also important in retrofits as a working process needs to be removed and replaced while the overall WTP must continue to function.

Tetra Tech approached the recent opportunities to design retrofits of the control room and backwash systems. Through these projects, we thoroughly listened and incorporated the gathered information into the contract specifications so the improved project functions better than the previous infrastructure.

Road Design and Construction

Tetra Tech is well qualified to complete local and major road improvement projects. Our MDOT experience speaks to our transportation skills. MDOT requires that consultants pass through a rigorous prequalification process in engineering categories before being allowed to complete state projects.

MDOT has recognized Tetra Tech's credentials and have prequalified us to complete work in 39 categories of work. We also routinely employ this expertise on local road projects. Our experience with the City of Lansing and City of Brighton demonstrates our knowledge of executing municipal transportation design.

Asset Management

Tetra Tech has been completing treatment plant and underground utility asset management plans for over 20 years. The recent grant program in Michigan has produced more wastewater and stormwater plans. Tetra Tech can successfully lead Ann Arbor through all steps of a plan including:

- Inventory
- Level of service
- Condition assessment
- Business risk evaluation
- O&M
- Capital improvement plan
- Revenue structure
- Asset management plan

While most consultants now have asset management experience, what sets us apart includes:

- Software - Assisting clients select software that is useful in a plant environment. We understand Ann Arbor uses Cityworks and Tetra Tech has experience with this software.
- Engagement - For any asset management plan to be valuable, the staff must use the plan and its processes. Tetra Tech recognizes this and works closely with client staff to involve them in plan development, so staff are familiar with the plan and understand its value to the organization. This also ensures City staff can update the plan without consulting assistance.

- Rates - Tetra Tech recognizes a plan is not implementable if the community cannot support it through utility rates. Tetra Tech's rate expertise assists any community with understanding either specific or approximate rate impacts resulting from the proposed work so good decisions can be made while preparing the plan.
- Treatment Plants - Most consultants have experience with asset management plans for pipelines. Few consultants have experience with asset management plans for treatment facilities. As demonstrated by the work for YCUA, our engineers can successfully evaluate treatment facility equipment including instrumentation. Our knowledge of emerging technology ensures future plans consider the next generation of technology. We also incorporate sustainable features into our asset management plans.

Sustainability

In November 2019, the Ann Arbor City Council established a goal for the community to be carbon neutral by 2030. City government and City projects/operations will be tasked to set the pace to achieve this goal. As previously stated, Tetra Tech is an industry leader in sustainability. ENR ranks us No. 1 in Wind Power and No. 5 Solar Energy. Tetra Tech has been involved in adding solar generation to treatment facilities including Toledo's Collins Park WTP. Our sustainability approach extends to green stormwater practices and design certifications such as LEED and ENVISION. Tetra Tech is prepared to assist the WTP comply and lead with this ambitious City goal.

Hydrogeology

Tetra Tech has full service hydrogeologic capabilities including siting new water supply wells for communities, permitting, well installation oversight, and field and computational aquifer analyses. Other services include delineating and characterizing aquifers; determining groundwater sources, recharge, discharge and mixing zones; mapping geology and hydrostratigraphy; characterizing the connection between surface and groundwaters; remediating groundwater; modeling contaminant fate and transport; capture zone analyses for pumping wells; and collecting and interpreting groundwater and aquifer information. Tetra Tech is prepared to continue to assist Ann Arbor with its important and visible hydrogeology concerns.

EXHIBIT B COMPENSATION

General

Contractor shall be paid for those Services performed pursuant to this Agreement inclusive of all reimbursable expenses (if applicable), in accordance with the terms and conditions herein. The Compensation Schedule below/attached states nature and amount of compensation the Contractor may charge the City.

The fees for services shall be determined for each task, per RFP No. 20-18 and based upon the fee schedule provided in the Contractor's proposal. Fees/rates shall be held and maintained for up to three (3) years. The total amount of fees to be paid under this Agreement shall not exceed \$500,000.00.

(insert/Attach Negotiated Fee Arrangement)

**EXHIBIT C
INSURANCE REQUIREMENTS**

From the earlier of the Effective Date or the Commencement Date of this Agreement, and continuing without interruption during the term of this Agreement, Contractor shall have, at a minimum, the following insurance, including all endorsements necessary for Contractor to have or provide the required coverage.

A. The Contractor shall have insurance that meets the following minimum requirements:

1. Professional Liability Insurance or Errors and Omissions Insurance protecting the Contractor and its employees in an amount not less than \$1,000,000.

2. Worker's Compensation Insurance in accordance with all applicable state and federal statutes. Further, Employers Liability Coverage shall be obtained in the following minimum amounts:

Bodily Injury by Accident - \$500,000 each accident
Bodily Injury by Disease - \$500,000 each employee
Bodily Injury by Disease - \$500,000 each policy limit

3. Commercial General Liability Insurance equivalent to, as a minimum, Insurance Services Office form CG 00 01 04 13 or current equivalent. The City of Ann Arbor shall be an additional insured. There shall be no added exclusions or limiting endorsements that diminish the City's protections as an additional insured under the policy. Further, the following minimum limits of liability are required:

\$1,000,000	Each occurrence as respect Bodily Injury Liability or Property Damage Liability, or both combined
\$2,000,000	Per Project General Aggregate
\$1,000,000	Personal and Advertising Injury

4. Motor Vehicle Liability Insurance equivalent to, as a minimum, Insurance Services Office form CA 00 01 10 13 or current equivalent. Coverage shall include all owned vehicles, all non-owned vehicles and all hired vehicles. The City of Ann Arbor shall be an additional insured. There shall be no added exclusions or limiting endorsements that diminish the City's protections as an additional insured under the policy. Further, the limits of liability shall be \$1,000,000 for each occurrence as respects Bodily Injury Liability or Property Damage Liability, or both combined.

5. Umbrella/Excess Liability Insurance shall be provided to apply in excess of the Commercial General Liability, Employers Liability and the Motor Vehicle coverage enumerated above, for each occurrence and for aggregate in the amount of \$1,000,000.

- B. Insurance required under A.3 and A.4 above shall be considered primary as respects any other valid or collectible insurance that the City may possess, including any self-insured retentions the City may have; and any other insurance the City does possess shall be considered excess insurance only and shall not be required to contribute with this insurance. Further, the Contractor agrees to waive any right of recovery by its insurer against the City for any insurance listed herein.
- C. Insurance companies and policy forms are subject to approval of the City Attorney, which approval shall not be unreasonably withheld. Documentation must provide and demonstrate an unconditional and unqualified 30-day written notice of cancellation in favor of the City of Ann Arbor. Further, the documentation must explicitly state the following: (a) the policy number(s); name of insurance company; name(s), email address(es), and address(es) of the agent or authorized representative; name and address of insured; project name; policy expiration date; and specific coverage amounts; (b) any deductibles or self-insured retentions, which may be approved by the City in its sole discretion; (c) that the policy conforms to the requirements specified. Contractor shall furnish the City with satisfactory certificates of insurance and endorsements prior to commencement of any work. If any of the above coverages expire by their terms during the term of this Agreement, the Contractor shall deliver proof of renewal and/or new policies and endorsements to the Administering Service Area/Unit at least ten days prior to the expiration date.