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BILL NO. S-16-02-11

SPECIAL ORDINANCE NO. S-

AN ORDINANCE approving PROFESSIONAL SERVICES AGREEMENT - ST. JOE DAM PUMP #2 IMPROVEMENTS - RES. #66451, W.O. #66451 between ARCADIS U.S., INC. and the City of Fort Wayne, Indiana, in connection with the Board of Public Works.

# NOW, THEREFORE, BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF FORT WAYNE, INDIANA:

SECTION 1. That the PROFESSIONAL SERVICES AGREEMENT - ST. JOE DAM PUMP #2 IMPROVEMENTS - RES. #66451, W.O. #66451 by and between ARCADIS U.S., INC. and the City of Fort Wayne, Indiana, in connection with the Board of Public Works, is hereby ratified, and affirmed and approved in all respects, respectfully for:

All labor, insurance, material, equipment, tools, power, transportation, miscellaneous equipment, etc., necessary for Professional Engineering services for the St. Joe Dam Pump #2 Improvements including services for planning and design of the pumping system at the St. Joe Dam raw water facility; provide a technical memorandum identifying efficient, reliable and necessary upgrades to the facility. Pump #2 would be the focus of initial improvements related to electrical, controls, programming, process piping, pumping, and valve work. Future improvements are to be identified and given priority listing based on reliability:

involving a total cost of not to exceed THREE HUNDRED THIRTY-TWO THOUSAND, ONE HUNDRED SEVENTY AND 00/100 DOLLARS - (\$332,170.00). A copy of said Contract is on file with the Office of the City Clerk and made available for public inspection, according to law.

SECTION 2. That this Ordinance shall be in full force and effect from and after its passage and any and all necessary approval by the Mayor. Council Member APPROVED AS TO FORM AND LEGALITY Carol Helton, City Attorney 

#### PROFESSIONAL SERVICES AGREEMENT

#### ST. JOE DAM PUMP #2 IMPROVEMENTS

This Agreement is by and between

CITY OF FORT WAYNE ("CITY")

by and through its

Board of Public Works City of Fort Wayne 200 E. Berry Street, Suite 240 Fort Wayne, IN 46802

And

ARCADIS U.S., INC. ("ENGINEER") 130 West Main Street, Suite 23 Fort Wayne, Indiana 46802

Who agree as follows:

CITY hereby engages ENGINEER to perform the services set forth in Part I - Services ("Services") and ENGINEER agrees to perform the Services for the compensation set forth in Part III - Compensation ("Compensation"). ENGINEER shall be authorized to commence the Services upon execution of this Agreement and written authorization to proceed from CITY. CITY and ENGINEER agree that these signature pages, together with Parts I-IV and attachments referred to therein, constitute the entire Agreement ("Agreement") between them relating to the Project.

well

#### APPROVALS

### APPROVED FOR CITY

DATE:

BOARD OF PU	BLIC WORKS
BY:	Robert P. Kennedy, Chair
BY:	Mike Avila, Member
BY:	Kumar Menon, Member
ATTEST:	Lyndsey Richards, Clerk
DATE:	2/10/16
APPROVED FO	OR ENGINEER
ву:	Paul H. Powers, P.E., Principal Engineer

#### PART I

#### SCOPE OF BASIC ENGINEERING SERVICES

#### A. GENERAL

ENGINEER shall provide the CITY professional engineering services in all phases of the project to which this scope of services applies. These services will include serving as CITY's professional representative for the Project, providing professional engineering consultation and advice, furnishing civil engineering services and other customary services incidental thereto.

#### B. PROJECT DESCRIPTION

The St. Joe Dam Pumps #2 Improvements project seeks to continue improvement measures to the St. Joe Dam and Intake Facility by optimizing the function of the system from intake to the Three Rivers Filtration Plant. Recommended alternatives will take into account the criticality of the improvements combined with the budgetary constraints of the CITY. The Pump Station has four Low Service Pumps (Pump #1 - #4) which supply raw water to the 72 MGD Plant. The recent St. Joseph Dam Pump Station Electrical Project in 2009 replaced low service Pumps #1 and #3 and the associated control valves; improved the station intakes, intake sluice gates, bridge cranes and traveling screens; included the addition of a new emergency generator and electrical building with a new electrical switchyard; and increased reliability by conversion of the 2,400-Volt service to 4,160-Volt service. The two new 36-MGD, horizontal split-case, centrifugal pumps (Pumps #1 and #3) were equipped with medium-voltage, variable frequency drives (VFDs), and were designated to operate primarily individually with the option to operate in tandem based on their capacities and the historical demand required by the Plant. Historical demands and pump curves will be evaluated to provide smooth operation at all demands. Pump #2 currently has operational issues with its control valve and start/stop function that the CITY desires to remediate during a near-term improvements stage encompassing all of the early action items.

Pumps #2 and #4, which have been operating since their installation in the late 1970's, are the larger of the Pump Station pumps, used when raw water demand is above 40 MGD. Currently, Pump #4 is the most frequently used of the two, and although it is a 2 speed pump, it lacks SCADA controls. Pump #2 is operationally challenging due to discharge valve control issues and also lacks SCADA controls. Long-term solutions for Pumps #2 and #4 include the complete replacement of both pumps to provide a range of 36 to 72 MGD, replacement of the discharge valves, and addition of remote start/stop capability and VFDs. For the immediate needs of the Station, a near-term solution involving replacement of the Pump #2 control valve, connection of Pump #2 to the SCADA system and possible Pump #2 upgrades is required.

Based on this background, the CITY desires to continue improvement measures to this critical facility by performing the necessary planning and design efforts to provide value-driven solutions that meet the long-term operational needs of the Utility within their annual budget targets. Through intensive examination, review, and modeling efforts by Dr. David Werth of Clemson Engineering Hydraulics (CEH), the current operability of the intakes, pumping operation, and transmission mains to the treatment plant will be established. From this analysis, modifications and upgrades to improve the longevity, security, flexibility and functionality of the facility will be determined and scheduled based on time, immediate needs, and budgetary constraints. These Capital Improvement Projects (CIPs) will be outlined in a Technical Memorandum. The near-term needs of Pump #2 and the associated control valve will be determined and design and bidding of the improvements will provided to complete this project.

#### C. SCOPE OF WORK

The duty of the ENGINEER is to provide the analysis of the existing system, determine areas for improvement, recommend improvement alternatives, provide a phased schedule of implementation for the solutions, and develop final construction documents for the near-term improvements to Pump #2. The final construction documents shall be stamped by a Registered Professional Engineer, licensed in the state of Indiana and employed by the ENGINEER. The ENGINEER shall develop and provide the following services:

#### Task 1: Project Schedule and Review Meetings

- I.1 Prepare a project schedule to include:
  - a. Initial evaluation of existing conditions.
  - b. Development of long-term solutions for the intake to Plant optimization.
  - c. Development of near-term solutions for Pump #2 and the related control valve along with remote start/stop control.
  - d. Design and bidding of the implemented near-term solutions,
- 1.2 Hold workshops and meetings for the St. Joe Dam Pumps #2 Improvements project at critical stages of the project as follows (Meetings can be remote and web based as needed):
  - a. Kick-off Meeting
  - b. Preliminary Alternatives Workshop
  - c. Final Alternatives Workshop
  - d. Final Project Phasing Workshop
  - e. 60% Submittal Review Workshop
  - f. 90% Submittal Review Workshop
  - g. Pre-Bid Meeting
- 1.3 Prepare agendas, handouts, and meeting notes for all meetings and workshops. Provide to owner minimum of three (3) business days prior to meeting/workshop agendas, handouts, and review documents including respective plans and specifications. Provide meeting/workshop notes within one (1) week following the meeting or workshop.
- 1.4 The total number of meetings/workshops budgeted is seven (7).

#### Task 2: Evaluation and Planning

#### Phase I - Previous Hydraulic Analysis / Review of Existing Information

- 2.1 Examine and document existing facility functional requirements including: flow ranges for summer mode and winter mode, wet well high level and low level, pump combinations typically used, number of transmission mains used, maintenance issues (noise, vibration, bearing temperatures, maintenance records), and normal startup and shutdown procedures. The requirements will be examined in the **Kickoff Meeting**.
- 2.2 As an optional service, field testing may be performed to:
  - a. Obtain pressure and flow data over the full operating range of the pump station. Pressure and flow data shall be obtained for each pump and various combinations of pumps and force mains in service.
  - b, Obtain wet well levels during tests.
  - e. Obtain pump shaft speed during tests.
  - d. Obtain pump vibration readings.
  - e. Obtain bearing temperature readings.
  - f. Obtain volt and amp readings for each phase during tests.
  - g. Obtain power factor and calculate brake horsepower.
  - h. Review data collected for anomalous readings. Calculate brake horsepower based on amps, volts and power factor data. Compare calculated brake horsepower to expected brake horsepower from pump curve.
- Examine the existing hydraulic model of the system, from the intake at the river through the pump station, transmission mains, and influent areas of the water treatment plant, to assess that no hydraulic anomalies exist and areas of hydraulic limitation are identified.
- 2.4 Examine the current pump station assets including, pumps, valves, piping, priming system, electrical components, and controls for age, performance issues, capacity, and maintenance needs.
- 2.5 Perform a pump system analysis on each pump based on existing certified pump curves. The pump systems analysis shall include plots of system curves on certified pump curves to establish

minimum and maximum capacity range, efficiency, motor horsepower, and Net Positive Suction Head (NPSH) available and required. The analysis shall also:

- a. Estimate suction piping velocities for each pump based on the maximum capacity of the pump. Suction piping velocities will be compared to recommendations of the Hydraulic Institute Standards.
- b. Perform NPSH analysis. The NPSH analysis shall include plots of NPSH required to NPSH available over the full operating range of each pump. NPSH available should exceed NPSH required by a factor of 1.5 or a minimum of 5 feet.
- 2.6 Perform a pump operations analysis including plots of system curves and various combinations of pump curves at minimum and maximum speed. The purpose of this analysis is to identify gaps in the operating range between combinations of pumps and to identify capacity of individual pumps when operating in various combinations.
- 2.7 ENGINEER will coordinate with Dr. David Werth of Clemson Engineering Hydraulics (CEH) who is performing the wet well physical modeling.
  - a. Based on the results of the existing conditions evaluation, ENGINEER will coordinate test runs for the exiting condition model with CEH to verify wet well and pump inlet conditions for each pump and various pump combinations at minimum and maximum flow capacities.
  - b. The physical model will be used to investigate station hydraulics and assist in selecting the recommended sizes and types of pumps to replace Pump #2 and #4 to cover the desired flow ranges and regimes ("summer" and "winter" modes) required to optimize Plant/Station operation.
  - c. As an optional service, system curve will be examined to determine if Pumps #1 and #3 are operating as designed. If the existing pumps and pump combinations are not operating as anticipated on the system curve, CEH will be contacted to assist in determining the limitations preventing the pumps from operating as expected:
- 2.8 Summarize the results and major conclusions from the existing conditions evaluation in a draft of the Existing Conditions Technical Memorandum. Submit electronic copies of the draft Technical Memorandum to the CITY for review.
- 2.9 Submit 3 copies of the final Existing Conditions Technical Memorandum to the CITY, including results of the existing conditions physical model testing.

#### Phase II - Develop Long-Term Solutions

- 2.10 Establish the CITY's desired results for the system taking into account seasonal changes in river level and demand ("Summer Mode" and "Winter Mode" flow ranges), control and monitoring requirements, and future system functional requirements. Develop long-term, improvement alternatives for the overall system including pumps and pump alterations, intake/building alterations, electrical gear improvements, valve improvements, controls upgrades, and other associated elements based on these standards.
- 2.11 Develop system curves for the long-term needs of the CITY based on seasonal ("summer" and "winter" flow modes) and future demands. Once the system curves are established, replacement pumps can be selected. The most effective pump type, taking cost, space, efficiency, electrical, structural, and maintenance needs into account in addition to providing the optimal hydraulic output, will be investigated.
- 2.12 Identify and review proposed alternatives in the Preliminary Alternatives Workshop including:
  - a. Pump type: vertical turbine or horizontal split-case
  - Pump combinations such as four new pumps, two new pumps with two existing pumps, one new pump with three existing pumps
- 2.13 Evaluate remote monitoring, control and telemetry of Pumps #2 and #4 from Plant, as well as upgrades to Plant/Station controls, telemetry, and programming needed to bring the facility into compliance with Utility-established control system standards and to modify controls of Pumps #1 and #3 in accordance with plant preferences (flow or frequency)
- 2.14 Perform the following for each alternative identified:

- a. Select pump or pumps required to meet the proposed future condition functional requirements. Pump selections will be optimized to achieve best operating efficiency.
- b. For each pump selection, perform a pump systems analysis. The pump systems analysis shall include plots of system curves on manufacturers pump curves to establish minimum and maximum capacity range, efficiency, motor horsepower, and NPSH required.
- Estimate suction piping velocities for each pump based on the maximum capacity of the pump. Suction piping velocities will be compared to recommendations of the Hydraulic Institute Standards.
- d. For each pump selection, perform NPSH analysis. The NPSH analysis shall include plots of NPSH required to NPSH available over the full operating range of each pump. NPSH available should exceed NPSH required by a factor of 1.5 or a minimum of 5 feet.
- e. For each pump selection perform pump operations analysis. The operations analysis shall include plots of system curves and various combinations of pump curves at minimum speed and at maximum speed to verify that there are no gaps in the operating range.
- f. Analyze electrical systems to determine updates and improvements to the pumps, motors, valves, and control elements that will contribute to the ultimate design.
- g. For vertical turbine pump alternatives, perform preliminary structural analysis of the building to identify improvements necessary to accommodate the static and dynamic loads from the proposed equipment.
- h. Develop opinions of probable construction cost and probable life cycle costs to account for operations and maintenance requirements as well as energy efficiency for all proposed options and compare with Pump 2 modifications only.
- Identify advantages and disadvantages.
- Compare alternatives based on life cycle cost, advantages and disadvantages and make recommendations for implementation.
- 2.15 Perform constructability and operability reviews by experienced technical staff.
- 2.16 Coordinate test runs for the proposed condition based on recommended alternatives for the proposed condition physical model with CEH. Use test runs to verify wet well and pump inlet conditions for each pump and various pump combinations at minimum and maximum flow capacity.
- 2.17 Summarize the recommendations from the alternative analysis in the draft Alternatives Technical Memorandum. Submit electronic copies of the draft Technical Memorandum to the CITY for review, and discuss findings and conclusions with the CITY at the Final Alternatives Workshop.
- 2.18 Submit 3 copies of the final Alternatives Technical Memorandum to the CITY, including results of the proposed condition physical model.

#### Phase III - Develop Near-Term Improvements for Pump #2 and Control Valve

- 2.19 Rehabilitation or replacement of Pump #2 will be prioritized in the near-term as an early-action item. Updates to Pump #2 and the control valve to improve the current capacity and efficiency of the pump station will be determined and implemented in the Phase I work, independent of the final solution upgrades. The goal of the near-term improvements is to optimize the current assets and determine a method of upgrading Pump #2 to provide reliable pumping at all planned flow rates, and eliminate the flow gaps that currently occur in the system within the City's near-term budget.
- 2.20 Investigate updates to the existing control of Pump 2, including the upgrade of Pump #2 to allow remote start/stop control, similar to Pumps #1 and #3.
- 2.21 Investigate overall control of the system. Determine range of flows to be delivered and refine the operation to eliminate gaps in the delivery using the system curves with the improved Pump #2 operating.
- 2,22 Analyze the electrical operation of Pump #2 to improve pump and valve performance within the constraints of the near-term concept,
- 2.23 Develop opinions of probable construction cost and probable life cycle costs to account for operations and maintenance requirements as well as energy efficiency. Establish the near-term

design recommendations by determining the highest value options obtainable within the near-term budget to resolve the most critical issues facing the operation of Pump #2.

#### Phase IV - Establishing the Capital Improvements Projects

- 2.24 The alternatives for the ultimate design and the near-term Pump #2 improvements shall be examined by the ENGINEER and the CITY to determine the most economically feasible alternatives to achieve the end goals of the projects and establish a phased improvement program, Budgetary constraints over the coming years shall be taken into consideration to determine the most attainable solutions.
- 2.25 Identify CITY objectives with respect to budget, capacity needs, and schedule.
- 2.26 Identify improvement priorities, successors, and predecessors and package improvements into project phases for implementation. Prioritize the alternatives due to need and expected results and align with the proposed budget to determine the most feasible schedule for implementation.
- 2.27 Develop a plan for implementation of the project phases, including the following:
  - a. Project drivers and design criteria
  - Summary of improvements to be implemented including layout, controls, and electrical modifications
  - c. Design and construction schedules
  - d. Opinions of probable construction costs and total project costs
  - Summary of project risks and maintenance of plant operations
- 2.28 Summarize the recommended plan in the draft Project Phasing Technical Memorandum. Submit electronic copies of the draft Technical Memorandum to the CITY for review, and discuss findings and conclusions at the Final Project Phasing Workshop. Upon approval of the draft by the CITY, submit 3 copies of the final Project Phasing Technical Memorandum to the CITY.

#### Task 3: Near-Term Improvements Design Services

- 3.1 Prepare detailed design drawings for all elements of the near-term improvements to Pump #2. The drawings will show layout of the pump station facilities, transmission mains, and other areas requiring improvement including mechanical equipment configuration and layout, electrical equipment and connections, and process instrumentation and control diagrams and flow charts. All Drawings prepared under this Agreement will become the property of the CITY upon completion of the work. Comply with CITY CADD standards. Provide AutoCAD drawings and PDF files at time of "Conformed To Contract" (CTC) document transmittal in accordance with CITY standards. Provide PDF files of 60%, 90%, 100%, and CTC document set transmittals. All drawings sheets to be stamped by a professional engineer registered in the State of Indiana.
- 3.2 Prepare construction specifications to supplement the detail design drawings. The front-end documents including the notice to bidders, instruction to bidders, bid forms, bid surety forms, contract agreement form, typical contract provisions, and specific contract provisions will be in the CITY's standard format. Technical specifications including Division 01 through 48 will be in ENGINEER's Standard Construction Specifications Institute (CSI) 2007 format. A cover sheet located after the specification title sheet will detail who takes professional engineering responsibility for Divisions 0 through 48. Provide PDF and word format specifications with 60%, 90%, 100% and CTC document review transmittals. Provide Printable PDF documents at 100% document submittal.
- 3.3 Prepare Design Criteria Summary Memorandum that documents the design basis and sizing for all major equipment.
- 3.4 Prepare Maintenance of Plant Operations (MOPO) Plan to ensure continuous operation of the Plant and Pump Station during construction.
- 3.5 Update opinions of probable construction costs for the work covered by the detail design drawings and specifications. Cost estimate level to be Class 1 in accordance with the Association for the Advancement of Cost Engineering's (AACE) standards. Cost estimate to be provided with 60 and 100% design completion deliverables.

- 3.6 Update preliminary construction schedule that identifies all required major milestone dates for the 60% design review workshop.
- 3.7 Building Permits: The specifications will define requirements for the Contractor to obtain and pay for all required building permits.
- 3.8 Perform constructability, operability and bidability reviews by experienced technical staff, designers and construction experts throughout the design process. Initial constructability review will be held during the Preliminary Alternatives Workshop with more detailed reviews occurring at the 60% design phase. Operability and bidability reviews will be performed at appropriate design stages.

#### 3.9 Deliverables:

- a. 60% Design Submittal: The 60% Submittal will consist of a set of well-coordinated documents that clearly communicate the design approach/intent of all disciplines. Electronic copies of the 60% Submittal will be submitted to CITY, and reviewed at the 60% Submittal Review Workshop. The 60% Submittal will include the following:
  - Specifications: First cut at the front end, and technical specifications (Divisions 01 through 48) including maintenance of plant operations plan and control system functional descriptions.
  - Design Drawings including site grading and piping plans, structural and architectural plans, mechanical plans, HVAC plans, electrical, and process and instrumentation diagrams.
  - 3) List of spare parts, training, and vendor operation and maintenance manuals
  - 4) Updated opinions of probable construction costs
  - 5) Updated construction schedule
- b. 90% Design Submittal: At 90% Submittal, no new drawings and/or specifications are expected and all previous review comments have been incorporated or resolved. Electronic copies of the 90% Submittal will be submitted to CITY, and reviewed at the 90% Submittal Review Workshop. The 90% Submittal will include the following:
  - 1) Updated project specifications
  - 2) Updated design drawings
  - 3) Updated opinions of probable construction costs.
  - 4) Updated construction schedule.
- c. Bid Submittal: The Bid Submittal consists of 100 percent complete drawings and specifications suitable for bid purposes. The completed drawings and specifications will have incorporated all CITY comments. Two complete sets of the Bid Submittal with Blectronic copies will be submitted to CITY seven (7) calendar days before advertisement. The Bid Submittal will include the following:
  - 1) Final Bid Form.
  - 2) Final project specifications with all required signatures and seals.
  - 3) Final design drawings with all required signatures and seals.
  - 4) Final updated quantities and opinions of probable construction costs.
- d. Upon approval of Final Design drawings and project specifications, prepare and submit one (1) set of stamped paper bond drawings, one (1) electronic version of the project specifications (Microsoft Word) and one electronic copy of project drawings in 2014 DWG file format or newer (Civil 3D 2014 or newer).

#### Task 4: Bid Support Services

The bidding phase services shall include the following:

- 4.1 Answer questions during the advertisement period.
- 4.2 Attend and document Pre-bid Meeting,
- 4.3 Prepare and assist CITY with issue of the addenda, as needed to interpret, clarify or expand bidding documents.
- 4.4 Review and evaluate the bids received.

4.5 Conformed Contract Documents: The BNGINEER will prepare a complete set of Contract Documents (drawings and specifications) incorporating revisions from all issued addenda after execution of the Owner-Contractor Agreement (Construction Contract). These "Conformed to Contract" (CTC) set of Contract Documents will contain revisions that incorporate specific changes made by addenda and accepted bid proposal. Submit one (1) electronic version of CTC project drawings in both PDF and DWG file format in the latest version and one (1) electronic copy of the CTC project specifications (Microsoft Word).

#### D. SCHEDULE

The project will be completed per attached design schedule. This schedule is based on receiving a Notice to Proceed by \_\_\_\_\_\_ and receiving prompt review and approvals from CITY agencies and Program Manager (2-weeks per review are included in the schedule).

SCHEDULE	DATE
Task 2 - Evaluation and Planning	120 days from Notice to Proceed
Task 3 - Pumn #2 Design	240 days from Notice to Proceed

#### E. OPTIONAL ADDITIONAL SERVICES

Upon separate written authorization by CITY and negotiated fees, ENGINEER can provide the following additional services:

- 1. Field Testing of existing system, as outlined in Task 2.2
- Attend on-site hydraulic modeling demonstrations by Dr. David Werth at Clemson Engineering Hydraulics, as requested by the CITY.
- 3. Pumps #1 and #3 analysis as outlined in Task 2.7.

#### CONTINGENCY TASKS (including, but not specifically limited to):

Contingency items are authorized by the Program Manager and shall have prior approval of fees prior to commencement.

- 1. Attend additional meetings as needed to review and discuss the project.
- 2. Attend Pre-Construction Meeting.
- 3. Perform site visits to assist Program Manager in resolution of design or construction problems.
- 4. Development of any graphic models, boards or renderings for any use.

#### PART II

#### CITY'S RESPONSIBILITIES

CITY shall, at its expense, do the following in a timely manner so as not to delay the services:

#### A. INFORMATION REPORTS/CITY UTILITY MAPS/AERIAL MAPS/CONTOUR MAPS

- Make available to ENGINEER reports, studies, regulatory decisions and similar information relating to the Services that ENGINEER may rely upon without independent verification unless specifically identified as requiring such verification.
- 2. Provide ENGINEER with a maximum of two (2) copies each of existing CITY utility maps, aerial maps and contour maps that are readily available in the Citizens Square Building.
- 3. Provide ENGINEER with electronic copies of ortho aerial photography, GIS base map information (AutoCAD format) on right-of-way and lot information, GIS information on existing water and sewer lines (AutoCAD format).
- Contract with Dr. David Werth of Clemson Engineering Hydraulies to develop a geometrically accurate station hydrodynamic model.

#### B. DESIGN PHASE

- 1. Coordinate with other CITY projects and approvals.
- 2. Submit and pay for permit applications.

#### C. BID PHASE

- 1. Reproduce and distribute Bid Documents during Bid Phase.
- 2. Distribute Pre-Bid Meeting Minutes.
- 3. Distribute Addenda.
- 4. Award selected bidder.

#### D. REPRESENTATIVE

Designate a representative of the CITY for the project who shall have the authority to transmit instructions, receive information, interpret and define CITY's requirements and make decisions with respect to the Services. The CITY representative for this Agreement will be Chris L. Ravenscroft, P.B.

#### E. DECISIONS

Provide all criteria and full information as to CITY's requirements for the Services and make timely decisions on matters relating to the Services.

#### F. PROPERTY OWNER NOTIFICATION

Property owner survey notification letters will be prepared and mailed by the CITY.

# G. $^\circ$ St. Joseph dam station integration with city water system controls & telemetry

The CITY will provide necessary coordination and support for ENGINEER to:

- Design the proposed near-term improvement items associated with recommended Station controls and telemetry into the CITY's Plant and Station control system that comply with Utility process control system design standards.
- 2. Address recommendations included in the Technical Memorandum (Part 1) that comply with Utility process control system design standards.

#### PART III

#### COMPENSATION

#### A. COMPENSATION

Compensation for services performed in accordance with Part I – Scope of Basic Engineering Services of this Agreement will be based on hours actually spent and expenses actually incurred with a not-to-exceed Engineering fee of \$332,170.00 as summarized in attached Attachment 1.

ENGINEER's costs will be based on the hours incurred to complete the project times the hourly rates of the various personnel, per Attachment 2 – Hourly Rate Schedule. All Reimbursable costs incurred for the project will be invoiced at cost.

Payment for outside consulting and/or professional services such as Geotechnical, Utility Locates, Registered Land Surveyor for easement preparation, or Legal Services performed by a Subconsultant at actual cost to ENGINEER plus 10 percent for administrative costs. The ENGINEER will obtain written CITY approval before authorizing these services.

#### B. BILLING AND PAYMENT

#### 1. Timing/Format

- a. ENGINEER shall invoice CITY monthly for Services completed at the time of billing. Such invoices shall be prepared in a form and supported by documentation as CITY may reasonably require.
- b, CITY shall pay ENGINEER within 30 days of receipt of approved invoice.

#### 2. Billing Records

ENGINEER shall maintain accounting records of its costs in accordance with generally accepted accounting practices. Access to such records will be provided during normal business hours with reasonable notice during the term of this Agreement and for 3 years after completion.

#### PART IV STANDARD TERMS AND CONDITIONS

- 1. STANDARD OF CARE. Services shall be performed in accordance with the standard of professional practice ordinarily exercised by the applicable profession at the time and within the locality where the services are performed. No warranty or guarantee, express or implied, are provided, including warranties or guarantees contained in any uniform commercial
- 2. CHANGE OF SCOPE. The scope of Services set forth in this Agreement is based on facts known at the time of execution of this Agreement, including, if applicable, information supplied by ENGINEER and CITY. ENGINEER will promptly notify CITY of any perceived changes of scope in writing and the parties shall negotiate medifications to this Agreement.
- 3. SAPETY. ENGINEER shall establish and maintain programs and procedures for the safety of its employees. ENGINEER specifically disclaims any authority or responsibility for general job site safety and safety of persons other than ENGINEER employees.
- 4. DELAYS. If events beyond the control of ENGINEER, including, but not limited to, fire, flood, explosion, riot, strike, war, process shutdown, act of God or the public enemy, and act or regulation of any government agency, result in delay to any schedule established in this Agreement, such schedule shall be extended for a period equal to the delay. In the event such delay exceeds 90 days, ENGINEER will be entitled to an equitable adjustment in
- 5. TERMINATION/SUSPENSION. Bither party may terminate this Agreement upon 30 days written notice to the other party in the event of substantial fallure by the other party to perform in accordance with its obligations under this Agreement through no fault of the terminating party. CITY shall pay ENGINEER for all Services, including profit relating thereto, rendered prior to termination, plus any expenses of termination.

BNGINEER or CITY, for purposes of convenience, may at any time by written notice terminate the services under this Agreement. In the event of such termination, ENGINEER shall be paid for all authorized services rendered prior to termination including reasonable profit and expenses relating thereto.

- 6. REUSE OF PROJECT DELIVERABLES. Reuse of any documents or other deliverables, including electronic media, pertaining to the Project by CITY for any purpose other than that for which such documents or deliverables were originally prepared, or alternation of such documents or deliverables without written verification or adaptation by ENGINEER for the specific purpose intended, shall be at CITY's sole risk.
- 7. OPINIONS OF CONSTRUCTION COST. Any opinion of construction costs prepared by ENGINEER is supplied for the general guidance of the CITY only. Since ENGINEER has no control over competitive bidding or market conditions, ENGINEER cannot guarantee the accuracy of such opinions as compared to contract bids or actual costs to CITY.
- 8. RELATIONSHIP WITH CONTRACTORS, ENGINEER shall serve as CITY's professional representative for the Services, and may make recommendations to CITY concerning actions relating to CITY's contractors, but ENGINEER specifically disclaims any authority to direct or supervise the means, methods, techniques, sequences or procedures of construction selected by CITY's contractors.
- 9. MODIFICATION. This Agreement, upon execution by both parties hereto, can be modified only by a written instrument signed by both parties.
- 10. PROPRIETARY INFORMATION. Information relating to the Project, unless in the public domain, shall be kept confidential by ENGINEER and shall not be made available to third parties without written consent of CITY.
- 11. INSURANCE. ENGINEER shall maintain in full force and effect during the performance of the Services the following insurance coverage; provided, however, that if a High Risk Insurance Attachment is attached hereto, the requirements of the High Risk Insurance Attachment shall be substituted in lieu of the following requirements;

a) Worker's Componsation per statutory requirements
b) General Liability \$1,000,000 minimum per occurrence/\$1,000,000
aggregate (if the value of the projects exceeds
\$10,000,000 then this shall be \$5,000,000 aggregate).

- c) Automobile Liability \$1,000,000 per occurrence
- d) Products Liability \$1,000,000 per occurrence
- e) Completed Operations Liability \$1,000,000 minimum per occurrence

The Certificate of Insurance must show the City of Fort Wayne, its Divisions and Subsidiaries as an Additional Insured and a Certificate Holder, with 30 days notification of cancellation or non-renewal. All Certificates of Insurance should be sent to the following address: City of Fort Wayne Purchasing Department 200 East Berry St., Suite #480 Fort Wayne, IN 46802

- 12. INDEMNITIES. To the fullest extent permitted by law, ENGINEER shall indemnify and save harmless the City from and against loss, liability, and damages sustained by CITY; its agents, employees, and representatives by reason of injury or death to persons or damage to taugible property to the extent caused directly by the negligent errors or omissions of ENGINEER, its agents or employees.
- 13. LIMITATIONS OF LIABILITY. Each party's liability to the other for any loss, cost, claim, liability, damage, or expense (including attorneys' fees) relating to or arising out of any negligent act or omission in its performance of obligations arising out of this Agreement, shall be limited to the amount of direct damage actually incurred. Absent gross negligence or knowing and willful misconduct which causes a loss, neither party shall be liable to the other for any indirect, special or consequential damage of any kind
- 14. ASSIGNMENT. The rights and obligations of this Agreement cannot be assigned by either party without written permission of the other party. This Agreement shall be binding upon and insure to the benefit of any permitted
- 15. ACCESS. CITY shall provide ENGINEER safe access to any premises necessary for ENGINEER to provide the Services.
- 16. PREVAILING PARTY LITIGATION COSTS, In the event any actions are brought to enforce this Agreement, the prevailing party shall be entitled to collect its litigation costs from the other party.
- 17. NO WAIVER. No waiver by either party of any default by the other party in the performance of any particular section of this Agreement shall invalidate another section of this Agreement or operate as a waiver of any future default, whether like or different in character,
- 18. SEVERABILITY. The various term, provisions and covenants herein contained shall be deemed to be separate and severable, and the invalidity or unenforceability of any of them shall not affect or impair the validity or enforceability of the remainder.
- 19. AUTHORITY. The persons signing this Agreement warrant that they have the authority to sign as, or on behalf of, the part for whom they are
- 20. STATUTE OF LIMITATION. To the fullest extent permitted by law, parties agree that, except for claims for indomnification, the time period for bringing claims regarding Engineer's performance under this Agreement shall expire one year after Project Completion.

#### ATTACHMENT #1

### SUMMARY SHEET

## SCOPE OF BASIC ENGINEERING SERVICES FEE PROPOSAL

TOTAL NOT TO EXCEED FEE:	\$ 332,170
Contingency - As authorized by PM For Services outlined in Section E, a not to exceed sum of:	\$ 20,000
Optional Additional Services	
Bid Support Services: - Task 4 For Services outlined in Task 4, not to exceed a fee of:	\$ 13,756
Near-Term Improvements Design Services — Task 3 For Services outlined in Task 3 not to exceed a fee of:	\$ 86,855
Evaluation, Planning, and Design - Task 2 For Services outlined in Task 2 not to exceed a fee of:	\$ 174,119
Project Schedule and Review Meetings — Task 1 For Services outlined in Task 1 not to exceed a fee of:	\$ 37,440

#### ATTACHMENT #2

#### EMPLOYEE HOURLY RATE SCHEDULE

1. Payment of actual hourly rates for services rendered by ARCADIS-US employees working directly on the Project. Hourly rates will be in accordance with the following schedule:

EMPLOYEE/SERVICE DESCRIPTION	RATE
Officer	\$246.00/hr
Principal Engr, II	\$229.00/hr
Principal Engr. I	\$203.00/hr
Sr. Project Engineer – Grade 6	\$182.00/hr
Project Engineer - Grade 5	\$153.00/hr
Project Engineer - Grade 4	\$132.00/hr
Engineer – Grade 3	\$122.00/hr
Engineer – Grade 2	\$110.00/hr
Engineer – Grade 1	\$ 99,00/hr
Technician – Grade 8	\$161.00/hr
Technician – Grade 7	\$138,00/hr
Technician – Grade 6	\$124.00/hr
Technician – Grade 5	\$107.00/hr
Technician – Grade 4	\$101.00/hr
Technician – Grade 3	\$ 78,00/hr
Technician – Grade 2	\$ 65.00/hr
Technician – Grade 1	\$ 57.00/hr

2. Payment for reimbursable costs will be invoiced at cost. These items may include, but not limited to: shipping charges; printing services; or traveling and lodging expenses, as required, performing project duties. Mileage for travel will be billed at the IRS business rate per mile for automobile.

#### CITY OF FORT WAYNE, INDIANA

\_\_\_\_\_ARCADIS-US (Vendor Name)

#### **VENDOR DISCLOSURE STATEMENT RELATING TO:**

- 1. FINANCIAL INTERESTS;
- POTENTIAL CONFLICTS OF INTERESTS;
- 3. CURRENT AND PENDING CONTRACTS OR PROCUREMENTS

Vendors desiring to enter into certain contracts with the City of Fort Wayne, Indiana (the "City") shall disclose their financial interests, potential conflicts of interest and current and pending contract or procurement information as set forth below.

The following disclosures by Vendors are required for all contracts with annual payments by the City in the amount of \$25,000 or more. Vendors shall disclose the financial interests, potential conflicts of interest and other contract and procurement information identified in Sections 1, 2 and 3 below as a prerequisite for consideration of an award of contract by the City. This Disclosure Statement must be completed and submitted together with Vendor's contract, bid, proposal, or offer.

A publicly traded entity may submit its current 10K disclosure filling in satisfaction of the disclosure requirements set forth in Sections 1 and 2 below.

#### Section 1. Disclosure of Financial Interest in Vendor

a.	apply and provide their names and addresses (att		
	(i) Equity ownership exceeding 5%	()	
	(ii) Distributable income share exceeding 5%	()	
	(iii)Not Applicable (If N/A, go to Section 2)	(X_)	
	Name:	Name:	
	Address:	Address:	
	For each individual listed in Section 1a., show his/he  () partnership interest ()  For each individual listed in Section 1a., show the pownership interest:%	units (LLC) () other (exp	olain)
Se	ction 2. Disclosure of Potential Conflicts of I	nterest (not applicable for vendo	ors who file a 10K)
ÇOI	or each individual listed in Section 1a., check "Yes" of finiterest relationships apply. If "Yes", please of ditional pages as necessary):  City employment, currently or in the previous 3	lescribe using space under applica	

b.	(defined	herein as:	spouse, pare	Immediate Fan ent, child or sib ces in the prev	ling) including	Yes		į	No.	_x_
C.				diate Family ho rious 3 years,	olding <u>elective</u>	Yes	<del></del>	1	No.	_x_
d.				dlate Family ho rious 3 years	olding <u>appointive</u>	Yes	·		No	_x
Şec	tion 3.	DISCLOS	SURE OF OT	HER CONTRA	ACT AND PROCU	REMEN	T RELATI	ED INFO	ORMA	TION
b.	If "Yes", i	identify eacl	n current co	ntract with de	leases) with the C scriptive informationships using space below	on inclu	ding purci		der o	r contract
2	DSDC Sewe Watel Asset SRPO Design Maste Facility South	C Effluent Ae or Capacity P r Utility Progr i Managemer PRT Tunnel F n and Constr or Specification	eration Impro roject Assist ram Assistar nt Services Planning and ruction Mana on Developm d Storm Engi elief Sewer D	vements ance Design agement Servic nent Services ineering Assist		ogrades				
		endor have p with the Ci		ntracts (Includi	ng leases), bids, p	proposal	s, or other Yes _		ıg proi lo.	curement X
					lptive information i additional pages as			oject nu	ımber,	contract
Sect	lon 4.	CERTIFIC	CATION OF	DISCLOSURE	s					
		with the di			ections 1, 2 and	3 Vendo	or hereby	certifie	s that	, except
	a.	Disclosure	Statement r voluntarily	, been debar	in the five (5) yeared, suspended, any transactions	propos	ed for de	barmer	nt dec	clared

**Revision 7.18.13** 

- No officer or director of Vendor (or its parent) or individual listed in Section 1a. is presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state or local) with commission of any offense;
- c. Vendor (or its parent) has not, within the five (5) year period preceding the date of this Disclosure Statement, had one or more public transactions (federal, state or local) terminated for cause or default;
- d. No officer or director of Vendor (or its parent) or individual listed in Section 1a. has, within the five (5) year period preceding the date of this Disclosure Statement, been convicted, adjudged guilty, or found liable in any criminal or civil action instituted by the City, the federal or state government or any other unit of local government; and
- e. Neither Vendor, nor its parent, nor any affiliated entity of Vendor, or any of their respective officers, directors, or Individuals listed in Section 1a. is barred from contracting with any unit of any federal, state or local government as a result of engaging in or being convicted of: (i) bid-rigging; (ii) bid-rotating; or (iii) any similar federal or state offense that contains the same elements as the offense of bid-rigging or bid-rotating
- f. Pursuant to IC 5-22-16.5, Vendor hereby certifies they do NOT provide \$20 million dollars or more in goods or services to the energy sector of Iran. Vendor also certifies it is not a financial institution that extends \$20 million dollars or more in credit that will provide goods or services to the energy sector of Iran or extends \$20 million dollars or more in credit to a person identified on the list as a person engaging in investment activities in Iran.

The disclosures contained Sections 1, 2 and 3 and the foregoing Certifications are submitted by

ARCADIS-US	130 West Main Street, Suite 23, Fort Wayne, IN
(Name of Vendor)	Address
•	( 260) 424-0401
•	Telephone
	Paul.Powers@Arcadis-us.com
	E-Mail Address

The individual authorized to sign on behalf of Vendor represents that he/she: (a) is fully informed regarding the matters pertaining to Vendor and its business; (b) has adequate knowledge to make the above representations and disclosures concerning Vendor; and (c) certifies that the foregoing representations and disclosures are true and accurate to the best of his/her knowledge and belief.

Name (Printed) Paul H. Powers	TitlePrincipal Engineer
Signature aue N. Tours	Date 2/4/16

NOTE: FAILURE TO COMPLETE AND RETURN THIS FORM WITH YOUR DOCUMENTATION MAY RESULT IN YOUR CONTRACT, OFFER, BID OR PROPOSAL BEING DISQUALIFIED FROM CONSIDERATION.

#### **CITY OF FORT WAYNE, INDIANA**

ARCADIS-US
(Vendor Name)

#### **VENDOR DISCLOSURE STATEMENT RELATING TO:**

- 1. FINANCIAL INTERESTS:
- 2. POTENTIAL CONFLICTS OF INTERESTS;
- 3. CURRENT AND PENDING CONTRACTS OR PROCUREMENTS

Vendors desiring to enter into certain contracts with the City of Fort Wayne, Indiana (the "City") shall disclose their financial interests, potential conflicts of interest and current and pending contract or procurement information as set forth below.

The following disclosures by Vendors are required for all contracts with annual payments by the City in the amount of \$25,000 or more. Vendors shall disclose the financial interests, potential conflicts of interest and other contract and procurement information identified in Sections 1, 2 and 3 below as a prerequisite for consideration of an award of contract by the City. This Disclosure Statement must be completed and submitted together with Vendor's contract, bid, proposal, or offer.

A publicly traded entity may submit its current 10K disclosure filling in satisfaction of the disclosure requirements set forth in Sections 1 and 2 below.

#### Section 1. Disclosure of Financial Interest in Vendor

a.	If any individuals have either of the following financia apply and provide their names and addresses (attachment)	, , , , , , , , , , , , , , , , , , , ,	check all that
	(I) Equity ownership exceeding 5%	()	
	(ii)Distributable income share exceeding 5%	()	
	(iii)Not Applicable (If N/A, go to Section 2)	(_X_)	
	Name:	Name:	
	Address:	Address:	
	For each individual listed in Section 1a., show his/her () partnership interest ()  For each individual listed in Section 1a., show the pe	units (LLC) () other (explain)	
	ownership interest: %	roomago or ownording intercount vender (	or no parenty.
Se	ction 2. Disclosure of Potential Conflicts of In	terest (not applicable for vendors who t	file a 10K)
co:	r each individual listed in Section 1a., check "Yes" or offict of interest relationships apply. If "Yes", please de ditional pages as necessary): City employment, currently or in the previous 3	scribe using space under applicable subs	
	including contractual employment for services.	Yes No	X

b.	(defined	ployment of "Member of Immediate Family" herein as: spouse, parent, child or sibling) including ual employment for services in the previous 3 years.	Yes		No.	_x_
C.		ship to Member of Immediate Family holding <u>elective</u> se currently or in the previous 3 years.	Yes		No.	_x_
d.		ship to Member of Immediate Family holding <u>appointive</u> e currently or in the previous 3 years	Yes		. No	_x_
Şed	otion 3.	DISCLOSURE OF OTHER CONTRACT AND PROCU	REMEN	IT RELATE	D INFORMA	ATION
b.	If "Yes", i	dor have <u>current</u> contracts (including leases) with the C identify each current contract with descriptive informati number, contract date and City contact using space belov	on inclu	iding purch	XNo ase order o pages as ne	r contract
2 2 8 7 8	2. DSDC 3. Sewe 4. Water 5. Asset 6. 3RPO 7. Design 8. Maste 9. Facility 9. South	P Primary/Secondary Treatment and Digester Process Up C Effluent Aeration Improvements r Capacity Project Assistance r Utility Program Assistance Management Services RT Tunnel Planning and Design n and Construction Management Services r Specification Development Services y, Sewer and Storm Engineering Assistance Maumee Relief Sewer Design old LS Alternative Analysis	ogrades			
		endor have <u>pending</u> contracts (including leases), bids, posith the City?	proposa	ls, or other Yes	pending pro No.	ocurement X
		ntify each pending matter with descriptive information City contact using space below (attach additional pages as			ject number	, contract
Sect	ion 4.	CERTIFICATION OF DISCLOSURES				
		with the disclosures contained in Sections 1, 2 and in attached Schedule A:	3 Vend	or hereby o	certifies tha	t, except
	a.	Vendor (or its parent) has not, within the five (5) ye Disclosure Statement, been debarred, suspended, ineligible or voluntarily excluded from any transactions	propos	ed for del	barment de	clared

**Revision 7.18.13** 

government;

- No officer or director of Vendor (or its parent) or individual listed in Section 1a. is presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state or local) with commission of any offense;
- Vendor (or its parent) has not, within the five (5) year period preceding the date of this Disclosure Statement, had one or more public transactions (federal, state or local) terminated for cause or default;
- d. No officer or director of Vendor (or its parent) or individual listed in Section 1a. has, within the five (5) year period preceding the date of this Disclosure Statement, been convicted, adjudged guilty, or found liable in any criminal or civil action instituted by the City, the federal or state government or any other unit of local government; and
- e. Neither Vendor, nor its parent, nor any affiliated entity of Vendor, or any of their respective officers, directors, or individuals listed in Section 1a. is barred from contracting with any unit of any federal, state or local government as a result of engaging in or being convicted of: (i) bid-rigging; (ii) bid-rotating; or (iii) any similar federal or state offense that contains the same elements as the offense of bid-rigging or bid-rotating
- f. Pursuant to IC 5-22-16.5, Vendor hereby certifies they do NOT provide \$20 million dollars or more in goods or services to the energy sector of Iran. Vendor also certifies it is not a financial institution that extends \$20 million dollars or more in credit that will provide goods or services to the energy sector of Iran or extends \$20 million dollars or more in credit to a person identified on the list as a person engaging in investment activities in Iran.

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ARCADIS-US	130 West Main Street, Suite 23, Fort Wayne, IN
(Name of Vendor)	Address
•	(_260) 424-0401
	Telephone
	Paul.Powers@Arcadis-us.com
	E-Mail Address

The individual authorized to sign on behalf of Vendor represents that he/she: (a) is fully informed regarding the matters pertaining to Vendor and its business; (b) has adequate knowledge to make the above representations and disclosures concerning Vendor; and (c) certifies that the foregoing representations and disclosures are true and accurate to the best of his/her knowledge and belief.

Name (Printed) Paul H. Powers

Signature

Date 2/4/16

NOTE: FAILURE TO COMPLETE AND RETURN THIS FORM WITH YOUR DOCUMENTATION MAY RESULT IN YOUR CONTRACT, OFFER, BID OR PROPOSAL BEING DISQUALIFIED FROM CONSIDERATION.

# Interoffice Memo

Date:

February 15, 2016

To:

Common Council Members

From:

Chris Ravenscroft, City Utilities Engineering

RE:

St. Joe Dam Pump #2 Improvements

Res. #66451, W.O. #66451

#### Council District # N/A

Engineer shall provide the City professional Engineering services in all phases of the Project to which the scope of services applies. These services will include serving as City's professional representative for the Project, providing professional Engineering consultation and advice, and other customary services incidental thereto. "St. Joe Dam Pump #2 Improvements" project would provide services for planning and design of the pumping system at the St. Joe Dam raw water facility. The planning would provide a technical memorandum identifying efficient, reliable, and necessary upgrades to the facility. Pump #2 would be the focus of initial improvements related to electrical, controls, programming, process piping, pumping, and valve work. Future improvements are to be identified and given priority listing based on reliability.

Implications of not being approved: The St. Joe Dam raw water facility has four pumps to deliver water to the Three Rivers Filtration Plant. In 2009, the low demand pumps #1 and #3 were replaced, along with new controls and appurtenances. Pumps #2 and #4 are used in high demand periods. Pump #2 was installed in 1979 and is ready to be updated. Operational challenges with Pump #2 have limited it to emergency use only. The pump control valve has limited range, hindering performance, and all adjustments to pump and control operations must be made manually at the St. Joe Dam. Without improvements to Pump #2, high demand times would continue to rely on the operation of Pump #4.

#### If Prior Approval is being Requested, Justify: N/A

#### Selection and Approval Process:

The consultant was selected through the Competitive Sealed Proposal (CSP) process. The RFQ announcement was sent to over 100 firms and posted on the City website, and 4 firms submitted a statement of qualifications. Utilities Engineering staff reviewed the qualifications of all interested firms, established a short list of consultants. A request for proposals was then developed and sent to the selected shortlisted firms. Two shortlisted firms submitted Competitive Sealed Proposals. A scoring matrix was used to score all firms based on responses to the RFQ and RFP's. RFP scoring was based on expertise, prior work experiences, qualifications, proposed scope of work and fee. Using this process, Utilities Engineering selected Arcadis for this project and finds their scope and fee to be the best value for this project. The Board of Public Works approved the contract on February 10, 2016.

The cost of said project funded by Water Revenue

Council Introduction Date:

February 23, 2016

CC: BOW

Matthew Wirtz Diane Brown

Construction Manager

Chrono File