

**PROFESSIONAL SERVICES AGREEMENT BETWEEN
HUBBELL, ROTH, & CLARK, INC.
AND THE CITY OF ANN ARBOR
FOR
WWTP Headworks Improvement Project, RFP # 19-12**

The City of Ann Arbor, a Michigan municipal corporation, having its offices at 301 E. Huron St. Ann Arbor, Michigan 48104 ("City"), and Hubbell, Roth, & Clark, Inc. (HRC) ("Contractor"), a(n) Michigan Corporation with its address at 555 Hulet Drive, Bloomfield Hills, Michigan, agree as follows:

The Contractor agrees to provide services to the City under the following terms and conditions:

I. DEFINITIONS

Administering Service Area/Unit means Public Services Area.

Contract Administrator means Christopher Englert, 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 WWTP Headworks Improvement Project.

II. DURATION

Contractor shall commence performance on _____, 20____ ("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.

III. SERVICES

- A. The Contractor agrees to provide Professional Engineering Services ("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 contract sum 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.
- 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.

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 during the life of this contract 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 contract; 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 necessary to perform the Services specified in this Agreement.
- C. The Contractor warrants that it has available, or will engage, at its own expense, sufficient trained employees to provide the Services specified in this Agreement.
- D. 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.
- E. 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.

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 in this Agreement 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:

HRC, Inc.
Charles E. Hart, Vice President
555 Hulet Drive
Bloomfield Hills, Michigan 48302

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

City of Ann Arbor
Craig Hupy, Public Services Administrator
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.

Unless otherwise stated in this Agreement, any intellectual property owned by Contractor prior to the effective date of this Agreement (i.e., Preexisting Information) shall remain the exclusive property of Contractor even if such Preexisting Information is embedded or otherwise incorporated in materials or products first produced as a result of this Agreement or used to develop Deliverables. The City's right under this provision shall not apply to any Preexisting Information or any component thereof regardless of form or media.

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 with any affixed exhibits, schedules or other documentation, 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.

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 _____
Charles E. Hart
Its: Vice President
Date: _____

FOR THE CITY OF ANN ARBOR

By _____
Christopher Taylor, Mayor

By _____
Jacqueline Beaudry, City Clerk

Approved as to substance

Craig A. Hupy, PE, Service Area
Administrator

Howard S. Lazarus, City Administrator

Approved as to form and content

Stephen K. Postema, City Attorney

EXHIBIT A
SCOPE OF SERVICES



WORK PLAN AND SCOPE OF SERVICES

ANN ARBOR WWTP HEADWORKS IMPROVEMENT PROJECT

RFP #19-12

TASK 1 – PROJECT APPROACH AND MANAGEMENT

Kickoff and Project Meetings

A Headworks Improvement Project Kickoff Meeting will be held to present, discuss, and establish project goals from all key staff, including key performance indicators, and to identify Task team leaders, establish communication protocols, deliverables and review meetings to set the path for an organized and successful program.

For each meeting, HRC will prepare the draft agenda and handouts to review with the project manager. After the meeting, HRC will disseminate meeting notes with action items, timing, and responsibilities indicated.

HRC will hold the following meetings:

- ≡ Kickoff Meeting
- ≡ Progress Meetings
- ≡ Submittal Review Meetings
- ≡ EGLE Permit Review Meeting

Workshops

Workshops will be held for specific task for more in-depth and detailed presentation and discussion to gain understanding and consensus on the more complex problems or foundational issues. The workshop will be formalized in a technical memo or other documentation that memorializes the proceedings, findings, and conclusions of a workshop.

We have planned the following workshops:

- ≡ Grit Characterization Workshop
- ≡ Headworks Hydraulic Assessment Workshop
- ≡ Hydraulic Findings and Screening Qualitative Assessment
- ≡ Grit Characterization Findings and Grit Facility Alternatives
- ≡ Screenings and Grit Quantitative Assessment

Progress Meetings

Weekly conference calls will be held to discuss project status, upcoming deliverables, review meetings and other action items.

TASK 2 – BASIS OF DESIGN

Task 2.1 – Screening Facilities

Task 2.1.1 – Headworks Hydraulic Assessment

HRC will discuss the Headworks normal and alternative operations and the hydraulic flow paths (i.e., bypass channel, and the 22 slide gates), primarily to understand what channels and gates are used and if still required, and what may be abandoned or used for screenings or grit removal. These discussions will be held at the Kick-off Meeting and documented in the meeting notes.

HRC will evaluate the head loss conditions and any upstream impacts under several fine screen bar spacing or plate perforations. Specifically, HRC will look at head loss conditions with a one-quarter-inch bar spacing and whether the channel should be deepened back to the original depth, to slow down velocities lower head loss and improve screen performance.

HRC will utilize a computation fluid dynamics (CFD) model to assess the approach flow regime to each screen under normal operations. HRC will similarly assess the screen approach velocities, and if adverse conditions are observed, determine ways to improve the Headworks' hydraulics. The hydraulic assessment will also look for channel velocities that are two fps or less, which might allow grit to settle in undesirable areas.

Task 2.1.2 – Screening Equipment Alternatives Qualitative and Quantitative Assessments

HRC will prepare a qualitative analysis of various types of screens suitable for the Ann Arbor Headworks project, including Duperon Flex Rake and other mechanically cleaned bar rake screens, catenary type screen, drum screen, griper style screen and climber screens. The qualitative analysis will include advantages/disadvantages, floor space requirements, operational and maintenance considerations, proprietary or competitive bid, and relative costs. The qualitative screen analysis will be reviewed with project staff to provide the basis for selecting several alternatives for cost-effective life cycle analysis.

Following the review of the qualitative analysis, a more detailed quantitative assessment and life cycle analysis will be performed for several selected screen types. The life cycle analysis will be performed on several selected alternatives and will include floor plan layouts, screenings handling, power demands, controls, water requirements. Following review and discuss of the Quantitative Screen Assessment Technical memorandum, field trips may be initiated before selecting the final screen style.

Task 2.2 – Grit System Evaluation

The HRC Team will address a series of fundamental questions

1. What is the nature (characterization) of the grit? (size, gradation, and settling velocity)
2. What is the desired removal size?
3. Can the existing chambers settle and remove this desired grit size?
4. If not, what can the existing chambers remove, and is that acceptable?
5. If that is acceptable, where does the uncaptured grit settle/end up, and can it be removed there?
6. If not acceptable, what improvements are required and how much will it cost?

Task 2.2.1 – Existing System Performance Assessment

The HRC Team will undertake a performance analysis of the existing system to assess process capacity and identify any current performance issues. The performance evaluation will consist of collecting the influent and effluent waste streams of the grit chambers to determine fractional removal efficiencies for a single event. We will also document existing equipment condition. This evaluation will provide a baseline for developing alternatives for improvements.

The grit chambers will also be assessed against WEF's Manual of Practice (MOP 8) and '10 States Standards' guidelines. This desktop analysis will help establish the theoretical process performance, in conjunction with the performance field tests.

The CFD model will also be used to determine where the remaining, uncaptured grit settles downstream. Improvement options such as closing off the alcove and extending the channel aeration system to prevents deposits from forming upstream of the primary clarifiers will be evaluated.

Task 2.2.2 – Grit Characterization

A grit characterization study will be performed to evaluate the distribution of grit in terms of size and settling velocity. This information will be used to aid in the evaluation of alternatives in terms of removal benefit.

Jimmie Griffiths of Black Dog Analytical (BDA) can be used to perform the grit characterization. BDA's grit characterization approach is focused on particle size characteristics and is the basis of our proposed approach. However other methods for grit characterization are available, and we recommend consideration of the ViCAs Method, which offers several key advantages which significantly lowers the per test cost and allows for testing of more operating conditions. As part of our Grit Characterization Workshop, we will compare the BDA and ViCAs methods and discuss these with Ann Arbor. The selected methodology will be carried forward in the field sampling effort.

Grit Characterization Workshop

The HRC-Hazen Team will conduct a Grit Characterization Workshop to:

- ≡ Discuss and select characterization approach
(BDAs method versus ViCAs method)
- ≡ Discuss/verify grit removal objectives
- ≡ Establish criteria (cost and non-cost) for alternative evaluation

Task 2.2.3 – Alternative Assessment

Grit Chambers

HRC will explore and propose ways to optimize the existing grit chambers, building layout and process units without the expense of costly upgrades such as new infrastructure. Utilizing the existing chambers may not provide the very best grit removal, but it may be a good enough system.

If optimization of the existing grit chambers is determined to be insufficient, unfeasible or cost prohibitive, alternate technologies will be considered. A grit removal technology workshop will be held to discuss process alternatives and key equipment options and selection as well as alternative materials. The advantages and disadvantages of alternatives will be presented along with relative comparisons of capital cost, life-cycle costs, performance expectations, operability, maintainability, risk, and any schedule considerations. To better understand some of the proposed equipment options being considered, plant visits of existing installations are encouraged and could be coordinated by the HRC–Hazen Team if desired by Ann Arbor.

Alternate types of grit removal chambers to be considered for the headworks include stirred vortex and stacked tray (commonly referred to as a HeadCell® unit, the brand name of the stacked tray separator manufactured by Hydro International).

Grit Processing

Settled grit will be pumped from the grit separator units to grit processing equipment, which will clean some organic material from the grit and remove excess water from the grit. The grit processing equipment that will be evaluated as part of this project include the following:

- ≡ Conventional Grit Cyclone/Classifier
- ≡ Slurry Cup/Grit Snail

Task 2.3 – Building Evaluation and Modifications

Once the screen type and grit facilities have been selected, the building infrastructure needs will be determined. The building needs will include the necessary modifications required to suit the process selections, as well as equipment and infrastructure that is near or beyond its useful life. HRC–Hazen Team will assemble a group of structural, architectural, process, electrical, and I&C engineers to perform an on-site inspection of the facilities. Access to remove, install and maintain the equipment will be assessed. Building infrastructure needs will be identified and costs for those improvements will be determined.

Task 2.4 – The Basis of Design Report

The findings of the prior analysis will be compiled into the Draft Basis of Design report and reviewed during the Draft Basis of Design Report Review Meeting. The engineer's opinion of construction costs will be developed as well as a construction schedule. Following the meeting, any further analysis will be performed, edits made, comments addressed, and the draft report resubmitted as a Revised Basis of Design Report

TASK 2 DELIVERABLES

- ≡ Headworks Hydraulic, Control and CFD Assessment TM
- ≡ Screenings Equipment Qualitative Assessment TM
- ≡ Screenings Equipment Quantitative Assessment TM
- ≡ Grit Characterization and Grit Removal Design Criteria TM
- ≡ Grit Equipment Alternatives Assessment TM
- ≡ Basis of Design Reports (Draft, Revised and Final)

TASK 3 – DESIGN IMPROVEMENTS

Several aspects of our design tasks are identified below. HRC Will:

- ≡ Prepare three-dimensional model
- ≡ Determine performance assurance for grit removal
- ≡ Identify proper access for maintenance
- ≡ Develop construction sequencing and maintain of plant operations (mopo)
- ≡ Provide I&C integration
- ≡ Prepre selective demolition
- ≡ Identify the reuse of PVC coated rigid (whenever possible)

Deliverables

- ≡ 50%, 90% and issued for Bid Design Documents

DESIGN AND FEE PROPOSAL ASSUMPTIONS

Several key assumptions are presented below, which help form the basis for the fee proposal.

Civil

- ≡ Civil engineering (i.e. access drive, sidewalks, outdoor utilities, surveys, etc.) is not included in the scope

Structural

- ≡ No additional building or structural chambers outside the Headworks Facility is included. For example, if a new vortex separator type grit chamber is selected and an entirely new structure is required, the design of that facility is outside of our scope.
- ≡ Structural modifications to the existing grit chamber are included. For example, file concrete baffle walls to the existing chamber are within our scope. A confined space entry to assess channel or tank condition is not included
- ≡ The base scope includes condition assessment of the structure. Repairs to visible cracks or spalling repairs are included in our scope.

Process/Mechanical

- ≡ The H&V fans, ductwork, and electrical units' heaters appear to be in good conditions, and thus H&V design is not included in our scope. A cursory assessment of ventilation rates is included.
- ≡ Odor control equipment is not included

Architectural:

- ≡ The doors and windows appear to be in good condition and will not be replaced.
- ≡ If a roof hatch is needed over any fine screen, that is included, including replacement and roof repairs.

Electrical/Instrumentation & Control

- ≡ The electrical design assumes that the existing electrical power supply to the equipment will be reused where new(er). Older electrical, level devices or other control equipment will be replaced
- ≡ The I&C design assumes near identical operation and/or functionality as the existing system.

Optional Value-Added Services

- ≡ Laser scanning the building interior and or channels can be performed for additional compensation.
- ≡ Field trip to observe equipment within 1-1/2 hours from Ann Arbor are included, but longer site visits may require additional compensation. This visit will be very site-specific.

PROJECT FEE

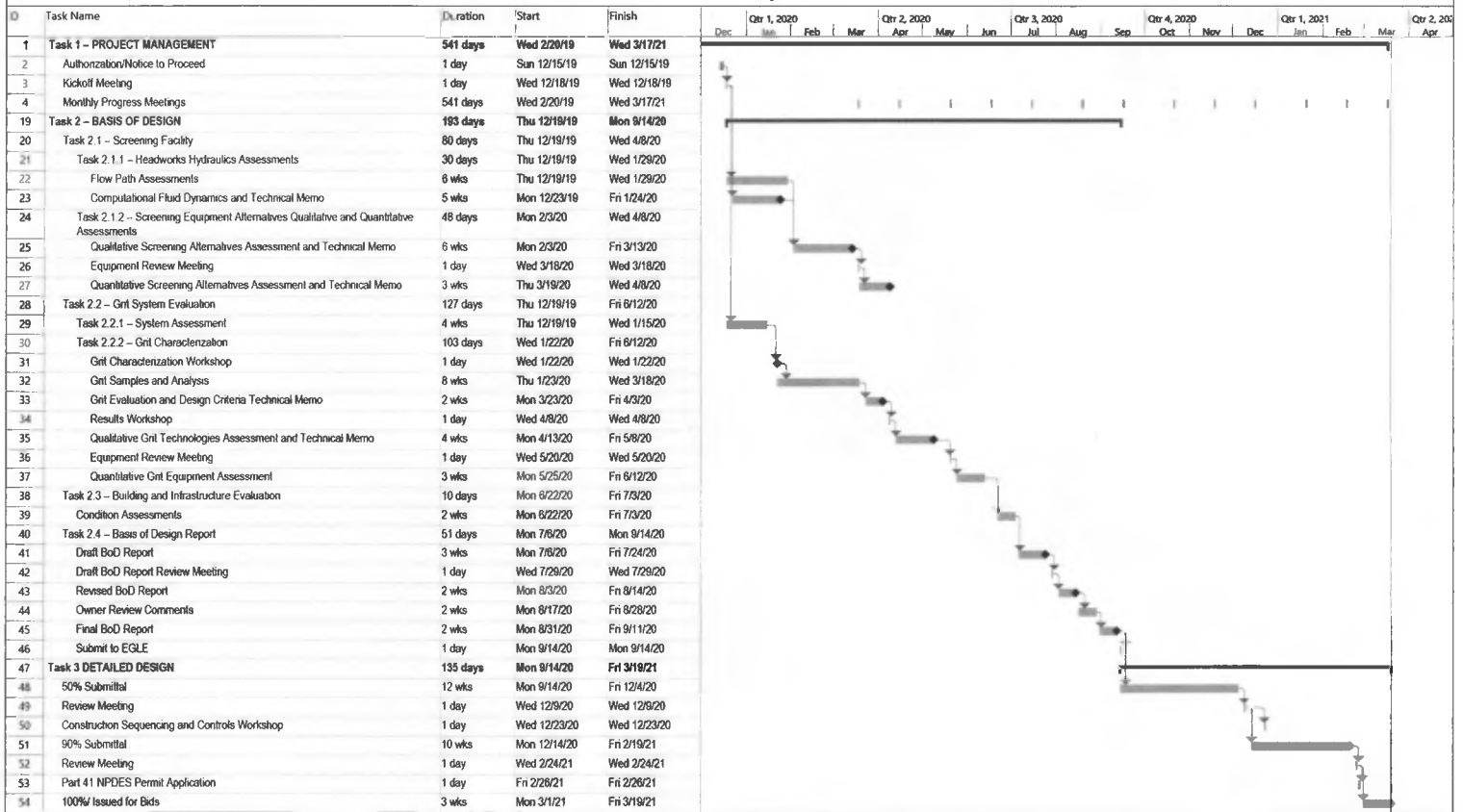
The project fee is summarized below.

Firm	Original Proposal	Efficiency Reductions	New Proposed Costs
HRC	\$ 301,359.63	\$ 22,680.00	\$ 278,679.63
Hazen	\$ 178,044.50	\$ 11,513.60	\$ 166,530.90
ASI	\$ 37,460.00	\$ 5,250.00	\$ 32,210.00
Totals	\$ 516,864.13	\$ 39,443.60	\$ 477,420.53

PROJECT SCHEDULE

The Project Schedule is attached.

Ann Arbor WWTP Headworks Improvements Schedule



HRC Job No.: 20190321
Date: Tue 10/1/19



Task Milestone

Summary

Ann Arbor WWTP Headworks Improvements Schedule

ID	Task Name	Duration	Start	Finish	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
1	Task 1 – PROJECT MANAGEMENT	541 days	Wed 2/20/19	Wed 3/17/21																	
2	Authorization/Notice to Proceed	1 day	Sun 12/15/19	Sun 12/15/19																	
3	Kickoff Meeting	1 day	Wed 12/18/19	Wed 12/18/19																	
4	Monthly Progress Meetings	541 days	Wed 2/20/19	Wed 3/17/21																	
19	Task 2 – BASIS OF DESIGN	193 days	Thu 12/19/19	Mon 9/14/20																	
20	Task 2.1 – Screening Facility	80 days	Thu 12/19/19	Wed 4/8/20																	
21	Task 2.1.1 – Headworks Hydraulics Assessments	30 days	Thu 12/19/19	Wed 1/29/20																	
22	Flow Path Assessments	6 wks	Thu 12/19/19	Wed 1/29/20																	
23	Computational Fluid Dynamics and Technical Memo	5 wks	Mon 12/23/19	Fri 1/24/20																	
24	Task 2.1.2 – Screening Equipment Alternatives Qualitative and Quantitative Assessments	48 days	Mon 2/3/20	Wed 4/8/20																	
25	Qualitative Screening Alternatives Assessment and Technical Memo	6 wks	Mon 2/3/20	Fri 3/13/20																	
26	Equipment Review Meeting	1 day	Wed 3/18/20	Wed 3/18/20																	
27	Quantitative Screening Alternatives Assessment and Technical Memo	3 wks	Thu 3/19/20	Wed 4/8/20																	
28	Task 2.2 – Grit System Evaluation	127 days	Thu 12/19/19	Fri 6/12/20																	
29	Task 2.2.1 – System Assessment	4 wks	Thu 12/19/19	Wed 1/15/20																	
30	Task 2.2.2 – Grit Characterization	103 days	Wed 1/22/20	Fri 6/12/20																	
31	Grit Characterization Workshop	1 day	Wed 1/22/20	Wed 1/22/20																	
32	Grit Samples and Analysis	8 wks	Thu 1/23/20	Wed 3/18/20																	
33	Grit Evaluation and Design Criteria Technical Memo	2 wks	Mon 3/23/20	Fri 4/3/20																	
34	Results Workshop	1 day	Wed 4/8/20	Wed 4/8/20																	
35	Qualitative Grit Technologies Assessment and Technical Memo	4 wks	Mon 4/13/20	Fri 5/8/20																	
36	Equipment Review Meeting	1 day	Wed 5/20/20	Wed 5/20/20																	
37	Quantitative Grit Equipment Assessment	3 wks	Mon 5/25/20	Fri 6/12/20																	
38	Task 2.3 – Building and Infrastructure Evaluation	10 days	Mon 6/22/20	Fri 7/3/20																	
39	Condition Assessments	2 wks	Mon 6/22/20	Fri 7/3/20																	
40	Task 2.4 – Basis of Design Report	51 days	Mon 7/6/20	Mon 9/14/20																	
41	Draft BoD Report	3 wks	Mon 7/6/20	Fri 7/24/20																	
42	Draft BoD Report Review Meeting	1 day	Wed 7/29/20	Wed 7/29/20																	
43	Revised BoD Report	2 wks	Mon 8/3/20	Fri 8/14/20																	
44	Owner Review Comments	2 wks	Mon 8/17/20	Fri 8/28/20																	
45	Final BoD Report	2 wks	Mon 8/31/20	Fri 9/11/20																	
46	Submit to EGLE	1 day	Mon 9/14/20	Mon 9/14/20																	
47	Task 3 DETAILED DESIGN	135 days	Mon 9/14/20	Fri 3/19/21																	
48	50% Submittal	12 wks	Mon 9/14/20	Fri 12/4/20																	
49	Review Meeting	1 day	Wed 12/9/20	Wed 12/9/20																	
50	Construction Sequencing and Controls Workshop	1 day	Wed 12/23/20	Wed 12/23/20																	
51	90% Submittal	10 wks	Mon 12/14/20	Fri 2/19/21																	
52	Review Meeting	1 day	Wed 2/24/21	Wed 2/24/21																	
53	Part 41 NPDES Permit Application	1 day	Fri 2/26/21	Fri 2/26/21																	
54	100% Issued for Bids	3 wks	Mon 3/1/21	Fri 3/19/21																	

HRC Job No.: 20190321
Date: Tue 10/1/19



Task

Milestone

Summary

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:

FEE PROPOSALHRCPROJECT TOTALS

Notes

1 Includes a 5% fee on the Subconsultants

2 Black Dog Analytics costs are a daily rate and trip expenses

FEE PROPOSAL

ANN ARBOR WWTP HEADWORKS IMPROVEMENTS PROJECT

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PROJECT TOTALS										Totals			
		HRC (1)	Hazen	ASI	BOD (2)								
Task 1	PROJECT MANAGEMENT	44	\$7,374	20	\$3,080	16	\$2,400	80	\$12,854				
Task 2	BASIS OF DESIGN	493	\$72,804	482	\$76,016	240	\$31,460	1,215	\$191,279				
Task 3	DETAILED DESIGN	1,380	\$183,662	500	\$76,435	-	\$0	1,880	\$260,087				
		1,917	\$263,830	1,002	\$155,531	256	\$33,860	3,175	\$464,220				

	\$	153,030.90
Grit Testing (BDA)	\$	11,000.00
Misc. Expenses	\$	2,500.00
	\$	166,530.90

\$ 13,500

FEE PROPOSAL

ANN ARBOR WWTP HEADWORKS IMPROVEMENTS PROJECT

APPLIED SCIENCE, Inc										Principal	Project Manager	QA/QC Review	Process J. Michalski	Lead / Department Engineers										Process S. McConnell	Engineers/Arch										CADD Tech D. Herold-Jacks	Field Surveyors	Admin	Totals																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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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. Upon request, the Contractor shall provide within 30 days, a copy of the policy(ies) and all required endorsements to the City. If any of the above coverages expire by their terms during the term of this contract, 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.