

# REQUEST FOR PROPOSAL

RFP # 22-22

## WWTP Ultraviolet (UV) Disinfection Replacement Project

City of Ann Arbor  
Public Services Area/Wastewater Treatment Services Unit



**Due Date: April 6, 2022 by 2:00 p.m. (local time)**

Issued By:

City of Ann Arbor  
Procurement Unit  
301 E. Huron Street  
Ann Arbor, MI 48104

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## **SECTION I - GENERAL INFORMATION**

### **A. OBJECTIVE**

The City of Ann Arbor is seeking the services of a Professional Engineering Services Firm (Consultant) in connection with its Wastewater Treatment Plant (WWTP) Ultraviolet (UV) Disinfection System Replacement Project. Under this Project, the City intends to replace the existing UV system used for disinfection of the WWTP's final effluent.

The existing Trojan UV4000 disinfection system has been in service since December 2000 and production of certain parts and maintenance items are being phased out by the manufacturer. Therefore, the system has reached the end of its useful life and must be replaced.

The objective of this RFP is to seek the services of a Consultant to review existing information, collect additional data and information (as necessary), propose alternative UV disinfection systems and prepare contract documents for a replacement UV disinfection system based on the selected alternative. The scope of services will also include integration of the control system for the new UV disinfection system into the WWTP's Process Information and Control System (PICS). For the control strategy, the consultant will utilize the existing PLC programming files and obtain preferences and opinions from plant supervisors.

At a minimum, the work required under this RFP shall be divided into two phases as described in Section II, Scope of Engineering Services. The successful Consultant is to provide a professional engineering evaluation, develop and present alternatives for UV replacement, prepare design memoranda, prepare a bid package for UV disinfection replacement, and provide bid advertisement services, bid review and award recommendation. As a future second phase of work, the City anticipates seeking a proposal from the successful Consultant for engineering support services and construction management during UV replacement.

The Consultant will have approximately 12 months to complete all work identified in Phase 1 of the Scope of Engineering Services (evaluation, design, and contract document preparation). The construction activities for the Project are expected to begin in late summer or fall of 2023.

The successful Consultant will coordinate work with City of Ann Arbor WWTP staff who will provide access to the WWTP, UV equipment, PICS and provide City records necessary to complete the Scope of Services.

## **B. QUESTIONS AND CLARIFICATIONS / DESIGNATED CITY CONTACTS**

All questions regarding this Request for Proposal (RFP) shall be submitted via e-mail. Questions will be accepted and answered in accordance with the terms and conditions of this RFP.

**All questions shall be submitted on or before March 25, 2022 at 5:00 p.m.**, and should be addressed as follows:

Scope of Work/Proposal Content questions shall be e-mailed to Chris Englert, Engineer WWTSU – [cenglert@a2gov.org](mailto:cenglert@a2gov.org)

RFP Process and Compliance questions shall be e-mailed to Colin Spencer, Buyer - [CSpencer@a2gov.org](mailto:CSpencer@a2gov.org)

Should any prospective offeror be in doubt as to the true meaning of any portion of this RFP, or should the prospective offeror find any ambiguity, inconsistency, or omission therein, the prospective offeror shall make a written request for an official interpretation or correction by the due date for questions above.

All interpretations, corrections, or additions to this RFP will be made only as an official addendum that will be posted to [a2gov.org](http://a2gov.org) and [MITN.info](http://MITN.info) and it shall be the prospective offeror's responsibility to ensure they have received all addenda before submitting a proposal. Any addendum issued by the City shall become part of the RFP, and must be incorporated in the proposal where applicable.

## **C. PRE-PROPOSAL MEETING**

A **MANDATORY pre-proposal meeting** will be held:

**WHEN: March 9, 2022 at 10:00 a.m.**

**WHERE:** Ann Arbor Wastewater Treatment Plant, Maintenance Building, 49 Old Dixboro Rd, Ann Arbor, Michigan 48104

The meeting is mandatory. The purpose of this meeting is to discuss the project with prospective offerors and to answer any questions concerning RFP 22-22. Any questions and answers furnished in the pre-proposal meeting will not be official until verified in writing through an addendum.

## **D. PROPOSAL FORMAT**

To be considered, each firm must submit a response to this RFP using the format provided in Section III. No other distribution of proposals is to be made by the prospective offeror. An official authorized to bind the offeror to its provisions must

sign the proposal in ink. Each proposal must remain valid for at least ninety days from the due date of this RFP.

Proposals should be prepared simply and economically providing a straightforward, concise description of the offeror's ability to meet the requirements of the RFP. No erasures are permitted. Mistakes may be crossed out and corrected and must be initialed in ink by the person signing the proposal.

## **E. SELECTION CRITERIA**

Responses to this RFP will be evaluated using a point system as shown in Section III. A selection committee comprised of staff from the City will complete the evaluation.

The fee proposals will not be reviewed at the initial evaluation. After initial evaluation, the City will determine top proposals, and open only those fee proposals. The City will then determine which, if any, firms will be interviewed. During the interviews, the selected firms will be given the opportunity to discuss their proposal, qualifications, past experience, and their fee proposal in more detail. The City further reserves the right to interview the key personnel assigned by the selected offeror to this project. If the City chooses to interview any respondents, the interviews will be tentatively held the **week of April 18, 2022**. Offeror must be available on these dates.

All proposals submitted may be subject to clarifications and further negotiation. All agreements resulting from negotiations that differ from what is represented within the RFP or in the proposal response shall be documented and included as part of the final contract.

## **F. SEALED PROPOSAL SUBMISSION**

**All proposals are due and must be delivered to the City on or before, April 6, 2022 at 2:00 p.m. (local time).** Proposals submitted late or via oral, telephonic, telegraphic, electronic mail or facsimile **will not** be considered or accepted.

**Each respondent must submit in a sealed envelope**

- **one (1) original proposal**
- **three (3) additional proposal copies**
- **one (1) digital copy of the proposal preferably on a USB/flash drive as one file in PDF format**

**Each respondent must submit in a single separate sealed envelope marked Fee Proposal**

- **two (2) copies of the fee proposal**

**The fee proposal and all costs must be separate from the rest of the proposal.**

Proposals submitted must be clearly marked: “**RFP No. 22-22 – WWTP Ultraviolet Disinfection Replacement Project**” and list the offeror’s name and address.

Proposals must be addressed and delivered to:  
City of Ann Arbor  
c/o Customer Service  
301 East Huron Street  
Ann Arbor, MI 48107

All proposals received on or before the due date will be publicly opened and recorded on the due date. No immediate decisions will be rendered.

Hand delivered bids may be dropped off in the Purchasing drop box located in the Ann Street (north) vestibule/entrance of City Hall which is open to the public at all hours. The City will not be liable to any prospective offeror for any unforeseen circumstances, delivery, or postal delays. Postmarking on the due date will not substitute for receipt of the proposal. Offerors are responsible for submission of their proposal. Additional time will not be granted to a single prospective offeror. However, additional time may be granted to all prospective offerors at the discretion of the City.

**A proposal may be disqualified if the following required forms are not included with the proposal:**

- **Attachment C - City of Ann Arbor Non-Discrimination Declaration of Compliance**
- **Attachment D - City of Ann Arbor Living Wage Declaration of Compliance**
- **Attachment E - Vendor Conflict of Interest Disclosure Form of the RFP Document**

***Proposals that fail to provide these forms listed above upon proposal opening may be deemed non-responsive and may not be considered for award.***

***Please provide the forms outlined above (Attachments C, D and E) within your narrative proposal, not within the separately sealed Fee Proposal envelope.***

***All proposed fees, cost or compensation for the services requested herein should be provided in the separately sealed Fee Proposal envelope only.***

## **G. DISCLOSURES**

Under the Freedom of Information Act (Public Act 442), the City is obligated to permit review of its files, if requested by others. All information in a proposal is subject to disclosure under this provision. This act also provides for a complete disclosure of contracts and attachments thereto.

## **H. TYPE OF CONTRACT**

A sample of the Professional Services Agreement is included as Appendix A. Those who wish to submit a proposal to the City are required to review this sample agreement carefully. **The City will not entertain changes to its Professional Services Agreement.**

The City reserves the right to award the total proposal, to reject any or all proposals in whole or in part, and to waive any informality or technical defects if, in the City's sole judgment, the best interests of the City will be so served.

This RFP and the selected offeror's response thereto, shall constitute the basis of the scope of services in the contract by reference.

## **I. NONDISCRIMINATION**

All offerors proposing to do business with the City shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the Section 9:158 of the Ann Arbor City Code. Breach of the obligation not to discriminate as outlined in Attachment C shall be a material breach of the contract. Contractors are required to post a copy of Ann Arbor's Non-Discrimination Ordinance attached at all work locations where its employees provide services under a contract with the City.

## **J. WAGE REQUIREMENTS**

The Attachments provided herein outline the requirements for payment of prevailing wages or of a "living wage" to employees providing service to the City under this contract. The successful offeror must comply with all applicable requirements and provide documentary proof of compliance when requested.

## **K. CONFLICT OF INTEREST DISCLOSURE**

The City of Ann Arbor Purchasing Policy requires that the consultant complete a Conflict of Interest Disclosure form. A contract may not be awarded to the selected offeror unless and until the Procurement Unit and the City Administrator have reviewed the Disclosure form and determined that no conflict exists under applicable federal, state, or local law or administrative regulation. Not every relationship or situation disclosed on the Disclosure Form may be a disqualifying conflict. Depending on applicable law and regulations, some contracts may award on the recommendation of the City Administrator after full disclosure, where such action is allowed by law, if demonstrated competitive pricing exists and/or it is determined the award is in the best interest of the City. A copy of the Conflict of Interest Disclosure Form is attached.

## L. COST LIABILITY

The City of Ann Arbor assumes no responsibility or liability for costs incurred by the offeror prior to the execution of a Professional Services Agreement. The liability of the City is limited to the terms and conditions outlined in the Agreement. By submitting a proposal, offeror agrees to bear all costs incurred or related to the preparation, submission, and selection process for the proposal.

## M. DEBARMENT

Submission of a proposal in response to this RFP is certification that the Respondent is not currently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from participation in this transaction by any State or Federal departments or agency. Submission is also agreement that the City will be notified of any changes in this status.

## N. PROPOSAL PROTEST

All proposal protests must be in writing and filed with the Purchasing Manager within five (5) business days of the award action. The offeror must clearly state the reasons for the protest. If an offeror contacts a City Service Area/Unit and indicates a desire to protest an award, the Service Area/Unit shall refer the offeror to the Purchasing Manager. The Purchasing Manager will provide the offeror with the appropriate instructions for filing the protest. The protest shall be reviewed by the City Administrator or designee, whose decision shall be final.

Any inquiries or requests regarding this procurement should be only submitted in writing to the Designated City Contacts provided herein. Attempts by the offeror to initiate contact with anyone other than the Designated City Contacts provided herein that the offeror believes can influence the procurement decision, e.g., Elected Officials, City Administrator, Selection Committee Members, Appointed Committee Members, etc., may lead to immediate elimination from further consideration.

## O. SCHEDULE

The proposals submitted should define an appropriate schedule in accordance with the requirements of the Proposed Work Plan in Section III.

The following is the schedule for this RFP process.

<b>Activity/Event</b>	<b>Anticipated Date</b>
Pre Bid Meeting (Mandatory)	March 9, 2022, 10:00 a.m. (Local Time)
Written Question Deadline	March 25, 2022, 5:00 p.m.
Addenda Published (if needed)	March 30, 2022
Proposal Due Date	April 6, 2022, 2:00 p.m. (Local Time)
Tentative Interviews (if needed)	Week of April 18, 2022
Selection/Negotiations	April / May 2022



Expected City Council Authorizations  
Notice to Proceed

June 2022  
July 1, 2022

The above schedule is for information purposes only and is subject to change at the City's discretion.

**P. IRS FORM W-9**

The selected offeror will be required to provide the City of Ann Arbor an IRS form W-9.

**Q. RESERVATION OF RIGHTS**

1. The City reserves the right in its sole and absolute discretion to accept or reject any or all proposals, or alternative proposals, in whole or in part, with or without cause.
2. The City reserves the right to waive, or not waive, informalities or irregularities in of any proposal if determined by the City to be in its best interest.
3. The City reserves the right to request additional information from any or all offerors.
4. The City reserves the right to reject any proposal that it determines to be unresponsive and deficient in any of the information requested within RFP.
5. The City reserves the right to determine whether the scope of the project will be entirely as described in the RFP, a portion of the scope, or a revised scope be implemented.
6. The City reserves the right to select one or more consultants to perform services.
7. The City reserves the right to retain all proposals submitted and to use any ideas in a proposal regardless of whether that proposal is selected. Submission of a proposal indicates acceptance by the firm of the conditions contained in this RFP, unless clearly and specifically noted in the proposal submitted.
8. The City reserves the right to disqualify proposals that fail to respond to any requirements outlined in the RFP, or failure to enclose copies of the required documents outlined within RFP.

**R. ENVIRONMENTAL COMMITMENT**

The City of Ann Arbor recognizes its responsibility to minimize negative impacts on human health and the environment while supporting a vibrant community and economy. The City further recognizes that the products and services the City buys have inherent environmental and economic impacts and that the City should make procurement decisions that embody, promote, and encourage the City's commitment to the environment.

The City encourages potential vendors to bring forward emerging and progressive products and services that are best suited to the City's environmental principles.

## **SECTION II - SCOPE OF SERVICES**

### 1. Background

The City of Ann Arbor Wastewater Treatment Plant (WWTP) provides wastewater treatment for the City of Ann Arbor and portions of three adjacent townships. The plant treats an average of 18 million gallons per day (MGD) with a design capacity of 29.5 MGD.

The WWTP has used Ultraviolet (UV) treatment for disinfection of the final effluent before discharge into the Huron River. The existing Trojan UV4000 system was started up in December 2000 and needs to be replaced due to the manufacturer discontinuing production of certain parts and maintenance items. Therefore, the system has reached the end of its useful life and must be replaced.

### 2. Objective

The City of Ann Arbor is seeking the services of a Professional Engineering Services Firm (Consultant) in connection with its WWTP UV Disinfection System Replacement Project. Under this Project, the City intends to replace the existing UV system used for disinfection of the WWTP's final effluent.

The objective of this RFP is to seek the services of a Consultant to review existing information, collect additional data and information (as necessary), propose alternative UV disinfection systems, and prepare contract documents for a replacement UV disinfection system based on the selected alternative. The scope of services will also include integration of the control system for the new disinfection system with the WWTP's Process Information and Control System (PICS). For the control strategy, the consultant will utilize the existing PLC programming files and obtain preferences and opinions from plant supervisors.

At a minimum, the work required under this RFP shall be divided into two phases. The successful Consultant is to provide a professional engineering evaluation, develop and present alternatives for UV replacement, prepare design memoranda, prepare a bid package for UV disinfection replacement, and provide bid advertisement services, bid review and award recommendation.

As a future second phase of work, the City anticipates seeking a proposal from the successful Consultant for engineering support services and construction management for UV replacement. Work scope and budget for the second phase services are not part of this RFP.

The Consultant will have approximately 12 months to complete all work identified in Phase 1 of the Scope of Engineering Services (evaluation, design, and contract document preparation). The Consultant shall define a plan for maintenance of plant

operations (MOPO) for disinfection of final effluent during implementation of a new disinfection system. Construction activities for the Project are expected to begin during the fall of 2023.

The successful Consultant will coordinate work with City of Ann Arbor WWTP staff who will provide access to the WWTP, UV equipment, electrical equipment, PICS information, and provide WWTP records necessary to complete the Scope of Services.

Programming shall be completed offline prior to making PICS modifications for the new system.

The existing Trojan UV4000 system is powered from MCC-P located in the Tertiary Filter Building.

PLC SLC 05 CPU located on the UV deck controls the Trojan UV4000.

Screen shots of the existing PICS screens are provided for reference in Attachment A. Design drawing for the Trojan UV4000 system, power supply from the Central Electrical Building, and O&M for the existing Trojan UV4000 are also provided for reference in Attachment A.

### 3. Requirements

This UV Disinfection Replacement Project shall include two phases described as follows:

#### **A. Phase 1 Services**

Phase 1 shall include an evaluation of the existing system to understand the design conditions, hydraulic limitations, and piping configuration associated with the Trojan UV4000 system. Once the physical constraints are understood, the successful Consultant shall identify feasible alternative UV systems for disinfection and present the alternatives and costs to City staff in a report. Ann Arbor WWTP staff will consider those alternatives and ask questions necessary to identify and choose a preferred replacement option.

Phase 1 services shall include a condition assessment of the existing UV concrete structure that will be taken into consideration for evaluation of replacement alternatives. This phase also includes development of a detailed design package for a replacement disinfection system and an accurate opinion of probable cost for the owner-selected option. Phase 1 services shall also include bid and advertising support (e.g., conducting a pre-bid meeting, preparing and routing any necessary addenda, providing bid evaluations, recommendation of award, etc.).

The Consultant shall prepare a plan and schedule for approval by City staff that includes any shutdowns or bypass pumping required to provide disinfection during construction of a replacement disinfection system. If disinfection must be interrupted

during construction, the interruption duration shall be defined in the construction documents. A complete and well detailed maintenance of plant operations (MOPO) plan, developed with WWTP staff, shall be included in the contract documents.

The Consultant shall provide two sets of biddable drawings and specifications. The design documents shall include a sequence of construction and appropriate modifications to the existing tank, piping, electrical and control systems. The Consultant shall provide all bid documents in MS Word format and/or AutoCAD 2015 format.

Final design documents shall be signed and sealed (each drawing) by a Professional Engineer licensed in the STATE OF MICHIGAN. All plans and specifications shall be prepared in accordance with the City's Public Services Area Standard Specifications. The Consultant shall also prepare and provide documentation for submittal of all necessary state and local permit applications. The Consultant shall prepare the EGLE Part 41 application for construction of the new disinfection system.

The Consultant shall submit a proposed design schedule for Phase 1 services that includes the number of meetings with City of Ann Arbor staff during the design process. Also, as part of their proposal, the Consultant shall submit a list of expectations for City of Ann Arbor staff time to provide information or time commitment during the design phase.

## **B. Phase 2 Services (Potential Future Services)**

Phase 2 services will be addressed in a future proposal after completion of Phase 1 services. Phase 2 services shall include full construction support (e.g., technical support, shop drawing review and approval, responding to RFI's, issuing Work Change Directives, project management, contractor oversight, project field representation and inspection, start-up services include providing assembled Operation & Maintenance (O&M) Manuals, O&M staff training, comprehensive electrical diagrams, process system diagrams and piping labeling, etc.). All disinfection system O&M Manuals shall be delivered in both hard copy and electronic MS Word format and Acrobat pdf format. As built and record drawings shall be delivered in hard copy, Acrobat pdf, and electronic AutoCAD 2015 format.

## **C. Review of Existing Related Documents and Information**

- Review 2021 and 2022 UVT Operating Data
- Review City of Ann Arbor WWTP construction drawings related to UV replacement

- Review as-built drawings of MC's located in the Tertiary Filter Building. MCC- P currently provides power for the Trojan UV 4000.
- Review information included in this RFP
- Other documents and data may be available upon request.

### Consultant's Proposal

In keeping with the objective, the description, the requirements, and the Consultant's tasks as previously indicated in this Request for Proposal, the Consultants submitting proposals shall outline in detail the manner in which the Consultant shall work to fulfill the City's needs and achieve the project objectives.

The outline at a minimum shall address:

- A. Staffing and personnel.
- B. Communication and coordination.
- C. Compatibility with city's standards, goals, and objectives.
- D. Working relationship between consultant and City staff.
- E. Information that will assist the City to determine the consultant's capability of performing the work.

## **SECTION III - MINIMUM INFORMATION REQUIRED**

### **PROPOSAL FORMAT**

Offerors should organize Proposals into the following Sections:

- A. Professional Qualifications
- B. Past Involvement with Similar Projects
- C. Proposed Work Plan
- D. Fee Proposal (include in a separate sealed envelope clearly marked "Fee Proposal")
- E. Authorized Negotiator
- F. Attachments

The following describes the elements that should be included in each of the proposal sections and the weighted point system that will be used for evaluation of the proposals.

#### A. Professional Qualifications – 25 points

1. State the full name and address of your organization and, if applicable, the branch office or other subsidiary element that will perform, or assist in performing, the work hereunder. Indicate whether it operates as an individual, partnership, or corporation. If as a corporation, include whether it is licensed to operate in the State of Michigan.
2. Include the name of executive and professional personnel by skill and qualification that will be employed in the work. Show where these personnel will be physically located during the time they are engaged in the work. Indicate which of these individuals you consider key to the successful completion of the project. Identify only individuals who will do the work on this project by name and title. Resumes and qualifications are required for all proposed project personnel, including all subcontractors. Qualifications and capabilities of any subcontractors must also be included.
3. State history of the firm, in terms of length of existence, types of services provided, etc. Identify the technical details that make the firm uniquely qualified for this work.

#### B. Past Involvement with Similar Projects – 25 points

The written proposal must include a list of specific experience in the project area and indicate proven ability in implementing similar projects for the firm **and** the individuals to be involved in the project. A complete list of client references must be provided for similar projects recently completed. The list shall include the firm/agency name, address, telephone number, project title, and contact person.

C. Proposed Work Plan – 35 points

Provide a detailed and comprehensive description of how the offeror intends to provide the services requested in this RFP. This description shall include, but not be limited to: how the project(s) will be managed and scheduled, how and when data and materials will be delivered to the City, communication and coordination, the working relationship between the offeror and City staff, and the company's general philosophy in regards to providing the requested services.

Offerors shall be evaluated on the clarity, thoroughness, and content of their responses to the above items.

D. Fee Proposal - 15 points

Fee schedules shall be submitted in a separate, sealed, envelope as part of the proposal. Fee quotations are to include the names, title, hourly rates, overhead factors, and any other relevant details. The proposal should highlight key staff and positions that would likely be involved with projects. Offerors shall be capable of justifying the details of the fee proposal relative to personnel costs, overhead, how the overhead rate is derived, material and time.

E. Authorized Negotiator

Include the name, phone number, and e-mail address of persons(s) in your organization authorized to negotiate the agreement with the City

F. Attachments

Legal Status of Offeror, Conflict of Interest Form, Living Wage Compliance Form, and the Non-Discrimination Form must be returned with the proposal. These elements should be included as attachments to the proposal submission.

## **PROPOSAL EVALUATION**

1. The selection committee will evaluate each proposal by the above-described criteria and point system (A through C) to select a short-list of firms for further consideration. The City reserves the right to reject any proposal that it determines to be unresponsive and deficient in any of the information requested for evaluation. A proposal with all the requested information does not guarantee the proposing firm to be a candidate for an interview. The committee may contact references to verify material submitted by the offerors.
2. The committee then will schedule interviews with the selected firms if necessary. The selected firms will be given the opportunity to discuss in more detail their qualifications, past experience, proposed work plan and fee proposal.

3. The interview must include the project team members expected to complete a majority of work on the project, but no more than six members total. The interview shall consist of a presentation of up to thirty minutes (or the length provided by the committee) by the offeror, including the person who will be the project manager on this contract, followed by approximately thirty minutes of questions and answers. Audiovisual aids may be used during the oral interviews. The committee may record the oral interviews.
4. The firms interviewed will then be re-evaluated by the above criteria (A through D), and adjustments to scoring will be made as appropriate. After evaluation of the proposals, further negotiation with the selected firm may be pursued leading to the award of a contract by City Council, if suitable proposals are received.

The City reserves the right to waive the interview process and evaluate the offerors based on their proposals and fee schedules alone and open fee schedules before or prior to interviews.

The City will determine whether the final scope of the project to be negotiated will be entirely as described in this RFP, a portion of the scope, or a revised scope.

Work to be done under this contract is generally described through the detailed specifications and must be completed fully in accordance with the contract documents.

Any proposal that does not conform fully to these instructions may be rejected.

## **PREPARATION OF PROPOSALS**

Proposals should have no plastic bindings but will not be rejected as non-responsive for being bound. Staples or binder clips are acceptable. Proposals should be printed double sided on recycled paper. Proposals should not be more than 20 sheets (40 sides), not including required attachments and resumes.

Each person signing the proposal certifies that they are a person in the offeror's firm/organization responsible for the decisions regarding the fees being offered in the Proposal and has not and will not participate in any action contrary to the terms of this provision.

## **ADDENDA**

If it becomes necessary to revise any part of the RFP, notice of the addendum will be posted to Michigan Inter-governmental Trade Network (MITN) [www.mitn.info](http://www.mitn.info) and/or the City of Ann Arbor web site [www.A2gov.org](http://www.A2gov.org) for all parties to download.

Each offeror must acknowledge in its proposal all addenda it has received. The failure of an offeror to receive or acknowledge receipt of any addenda shall not relieve the offeror of the responsibility for complying with the terms thereof. The City will not be bound by oral responses to inquiries or written responses other than official written addenda.



## **SECTION IV - ATTACHMENTS**

Attachment A –

- WWTP Hydraulic Profile Drawings,
- Process Instrumentation and Control System (PICS) Screens,
- Trojan UV4000 O&M Manual.

Attachment B - Legal Status of Offeror

Attachment C – Non-Discrimination Ordinance Declaration of Compliance Form

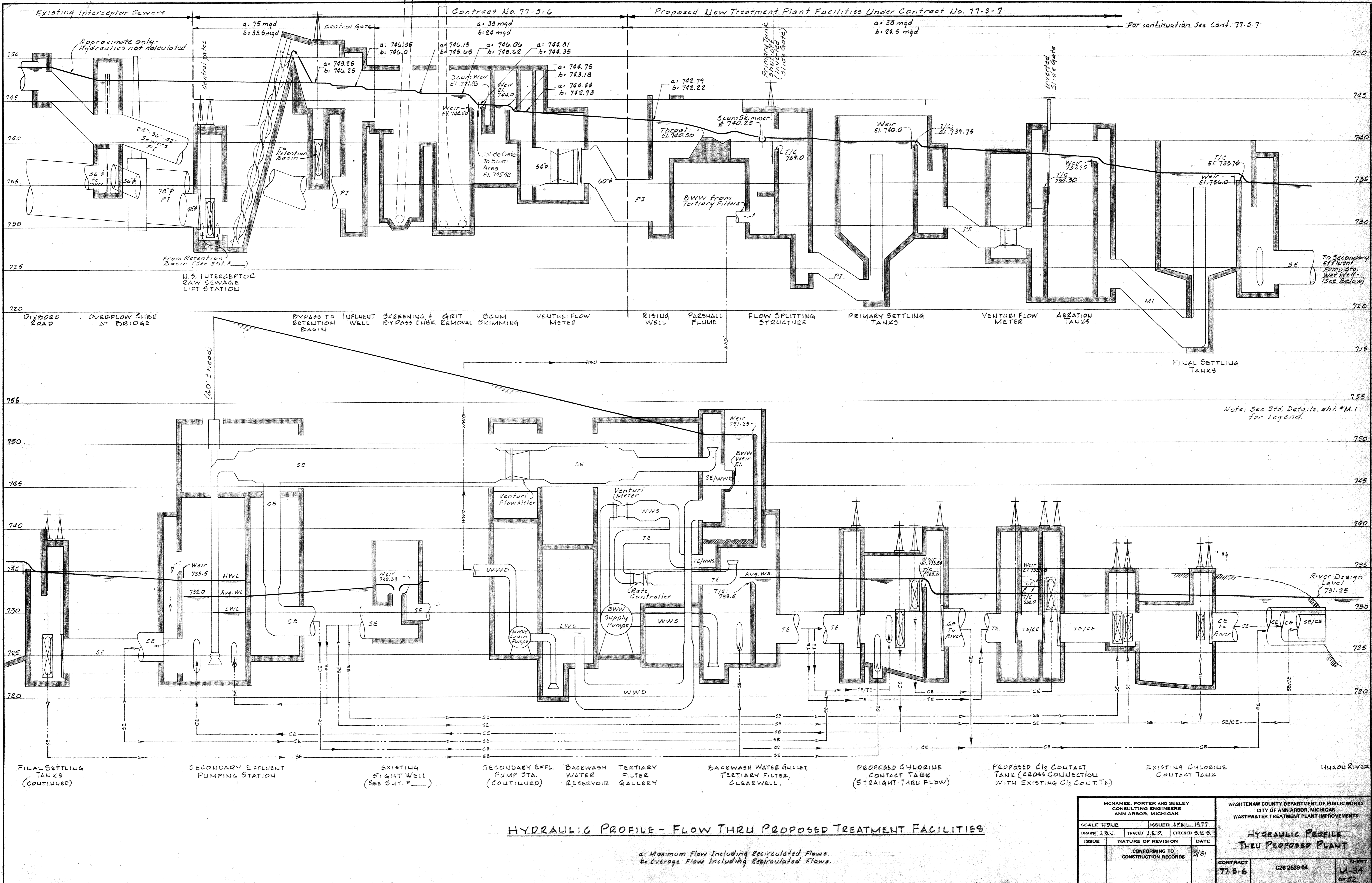
Attachment D – Living Wage Declaration of Compliance Form

Attachment E – Vendor Conflict of Interest Disclosure Form

Attachment F – Non-Discrimination Ordinance Poster

Attachment G – Living Wage Ordinance Poster

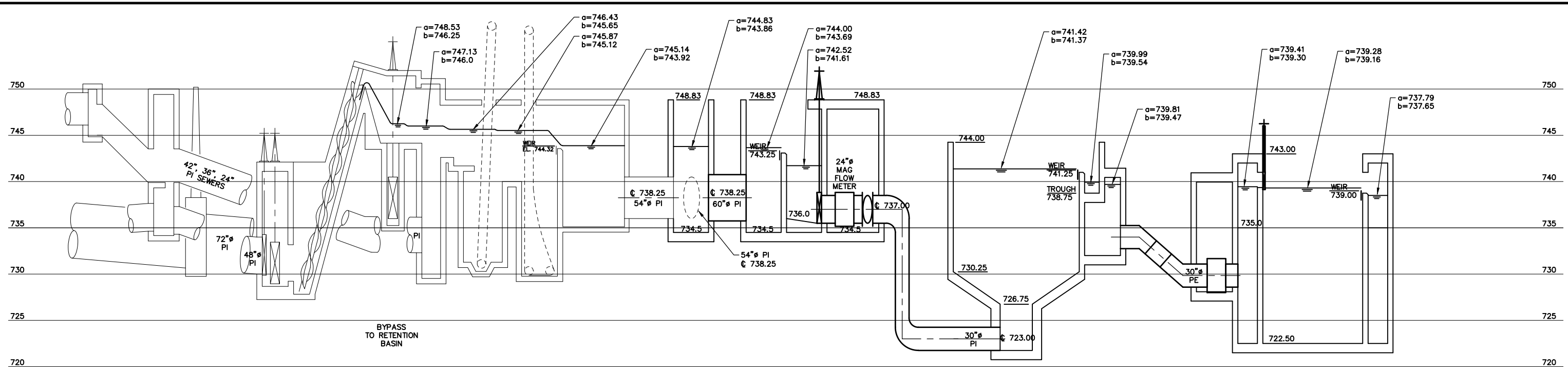
**ATTACHMENT A  
(PROJECT SPECIFIC ATTACHMENTS)**



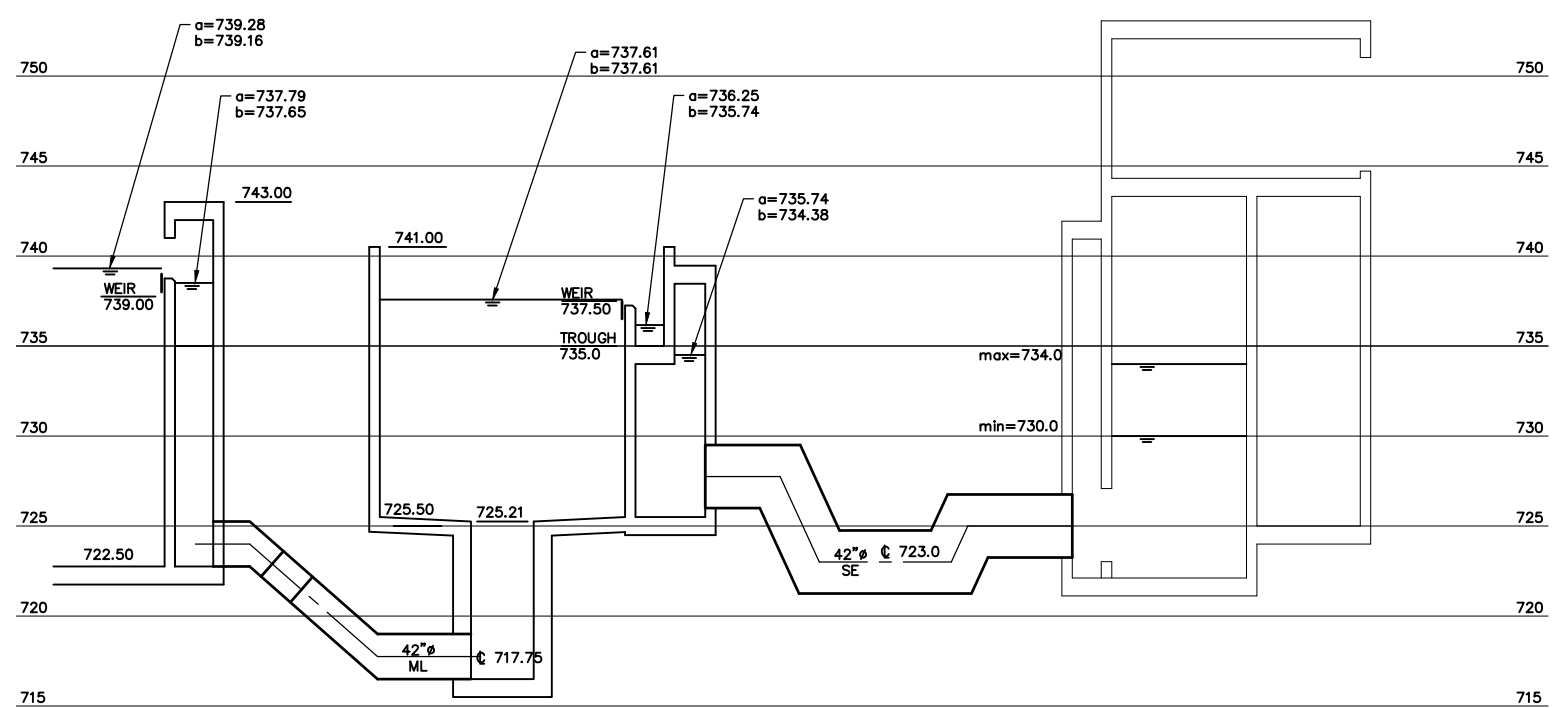
HYDRAULIC PROFILE - FLOW THRU PROPOSED TREATMENT FACILITIES

a: Maximum Flow Including Recirculated Flows.  
 b: Average Flow Including Recirculated Flows.

MCMAMEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN		WASHTENAW COUNTY DEPARTMENT OF PUBLIC WORKS CITY OF ANN ARBOR, MICHIGAN WASTEWATER TREATMENT PLANT IMPROVEMENTS	
SCALE 1/2"=1'	ISSUED APRIL 1977	HYDRAULIC PROFILE	
DRAWN J.B.N.	TRACED J.E.D.	CHECKED S.K.S.	THE PROPOSED PLANT
ISSUE	NATURE OF REVISION	DATE	
	CONFORMING TO CONSTRUCTION RECORDS	3/81	
CONTRACT 77-3-6	C28 2639 04	SHEET M-34 OF 32	



OVERFLOW CHAMBER AT BRIDGE      RAW SEWAGE LIFT STATION      INFLUENT WET WELL      SCREENING AND BYPASS CHAMBER      GRIT REMOVAL CHAMBER      INFLUENT JUNCTION CHAMBER      INFLUENT FLOW SPLITTER      WEST PLANT FLOW MONITORING AND CONTROL STATION      WEST PRIMARY CLARIFIERS      MAG FLOW METER CHAMBER      WEST AERATION TANKS



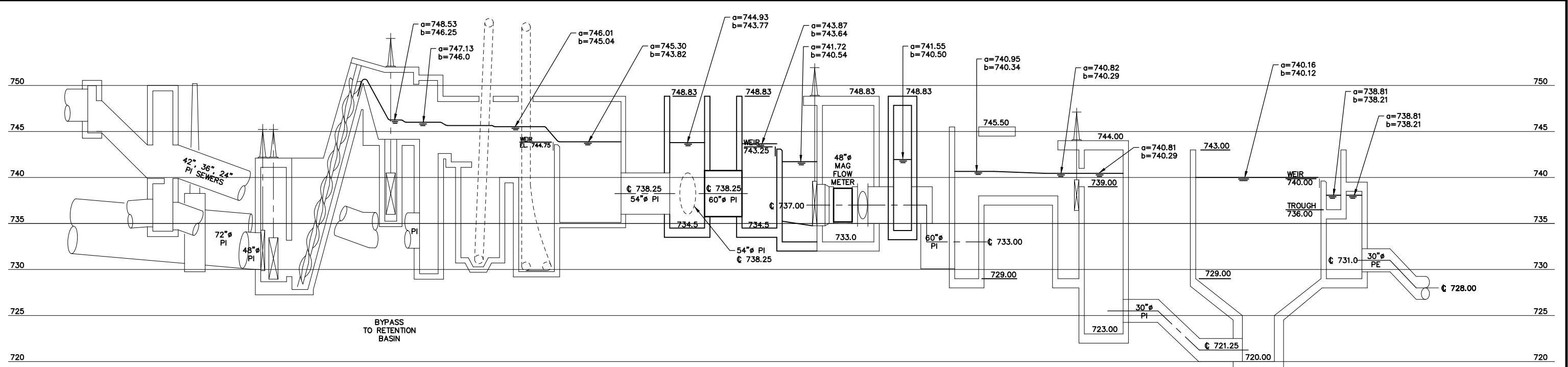
WEST AERATION TANKS      WEST SECONDARY CLARIFIERS      EXISTING TERTIARY WET WELL

West Plant Hydraulic Design Conditions		
Plant Flow at Specific Location	Design Average Flow (mgd)	Peak Hourly Flow (mgd)
Plant Inflow Through Headworks	25.0	72.0
Plant Recycle (at Influent Junction Chamber)	1.5	3.0
Plant Plus Recycle Flow (mgd)	26.5	75.0
Flow to Equalization	0.0	21.0
Flow to Treatment	26.5	54.0
No. of Trains in Service (Under West Plant Design Conditions)		
East Plant (out of 4 total trains)	3	3
West Plant (out of 2 total trains)	2	2
Total No. of Trains in Service (out of 6 total)	5	5
Flow Split to East and West Plants Under Design Condition		
Total Flow to East Plant (mgd)	15.9	32.4
Total Flow to West Plant (mgd)	10.6	21.6
Flow Per East Plant Train	5.3	10.8
Return Activated Sludge Per Train (to Anoxic Zone)	1	3.6
Effluent Pump Station	NA	54.0
Final Effluent	25.0	54.0

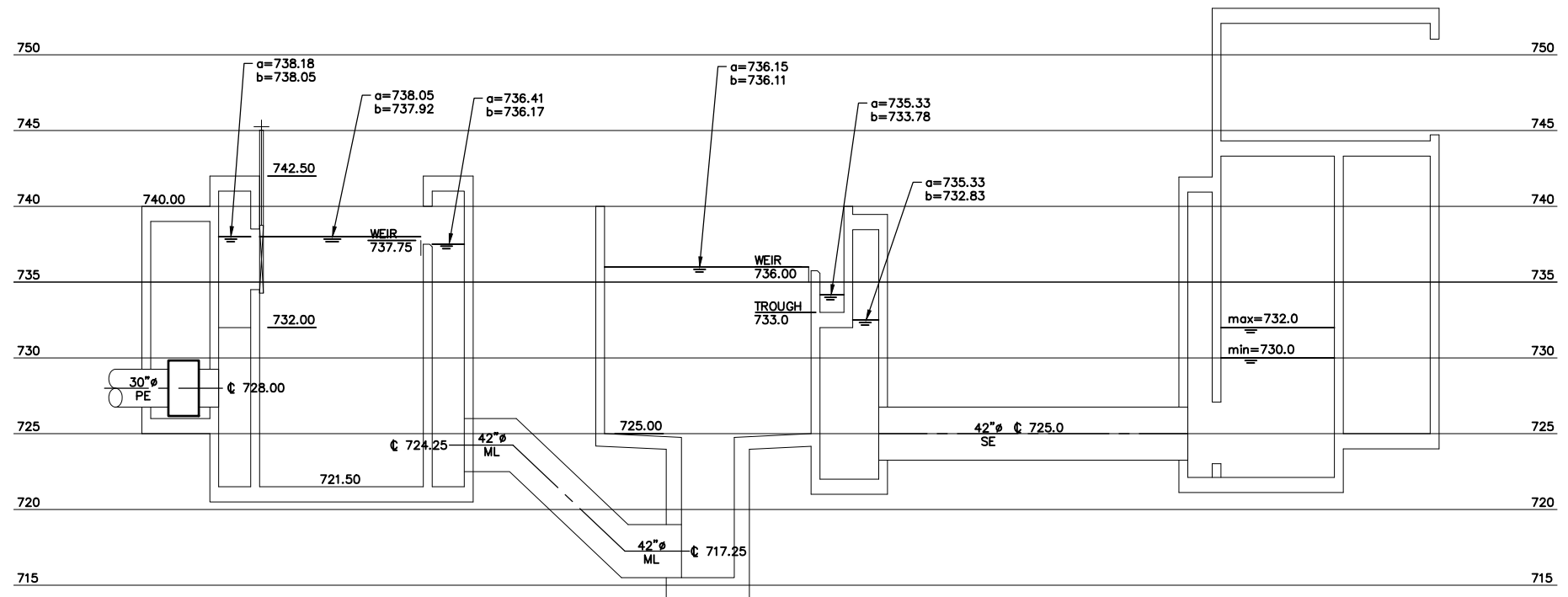
**LEGEND**  
 a=21.6 MGD (PEAK FLOW)  
 b=9.8 MGD (AVERAGE FLOW)

	CONFORMED SET JULY 2012	<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <th>NO.</th> <th>REMARKS</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS		NO.	REMARKS					DES ABG DWN MA CKD TFL	CITY OF ANN ARBOR, MICHIGAN <b>ANN ARBOR WASTEWATER TREATMENT PLANT FACILITIES RENOVATIONS</b>	MECHANICAL <b>HYDRAULIC PROFILE – FLOW THRU WEST PLANT TREATMENT FACILITIES</b> SCALE: NOT TO SCALE	ISSUED STATUS: <u>  </u> BID SET DATE: <u>  </u> NOVEMBER 2011 SHEET: <u>  </u> M00-13 CAD REF. NO. <u>  </u> 3185004-093
	REVISIONS													
NO.	REMARKS													

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OVERFLOW CHAMBER AT BRIDGE      RAW SEWAGE LIFT STATION      INFLUENT WET WELL      SCREENING AND BYPASS CHAMBER      GRIT REMOVAL CHAMBER      INFLUENT JUNCTION CHAMBER      INFLUENT FLOW SPLITTER      EAST PLANT FLOW MONITORING AND CONTROL STATION      EAST JUNCTION CHAMBER      EAST PLANT FLOW SPLITTING STRUCTURE      EAST PRIMARY CLARIFIERS



MAG FLOW METER CHAMBER      EAST AERATION TANKS      EAST SECONDARY CLARIFIERS      EXISTING TERTIARY WET WELL

East Plant Hydraulic Design Conditions		
Plant Flow at Specific Location	Design Average Flow (mgd)	Peak Hourly Flow (mgd)
Plant Inflow Through Headworks	25.0	72.0
Plant Recycle (at Inflow Junction Chamber)	1.5	3.0
Plant Plus Recycle Flow (mgd)	26.5	75.0
Flow to Equalization	0.0	21.0
Flow to Treatment	26.5	54.0
No. of Trains in Service (Under East Plant Design Conditions)		
East Plant (out of 4 total trains)	4	4
West Plant (out of 2 total trains)	1	1
Total No. of Trains in Service (out of 6 total)	5	5
Flow Split to East and West Plants Under Design Condition		
Total Flow to East Plant (mgd)	21.2	43.2
Total Flow to West Plant (mgd)	5.3	10.8
Flow Per East Plant Train		
Return Activated Sludge Per Train (to Anoxic Zone)	1	3.6
Effluent Pump Station	NA	54.0
Final Effluent	25.0	54.0

**LEGEND**  
 a=32.4 MGD (PEAK FLOW)  
 b=15.9 MGD (AVERAGE FLOW)

	CONFORMED SET JULY 2012	NO.    BY    DATE    REMARKS	DES ABG DWN MA CKD TFL	CITY OF ANN ARBOR, MICHIGAN <b>ANN ARBOR WASTEWATER TREATMENT          PLANT FACILITIES RENOVATIONS</b>	<b>MECHANICAL          HYDRAULIC PROFILE – FLOW THRU          EAST PLANT TREATMENT FACILITIES</b>	ISSUED STATUS: <u>  </u> BID SET
		REVISIONS				DATE: <u>  </u> NOVEMBER 2011
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						CAD REF. NO. <u>  </u> 3185004-095

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CITY OF ANN ARBOR, MICHIGAN  
Water Utilities Department  
Wastewater Treatment Plant

**OPERATION AND MAINTENANCE MANUAL**

FOR

*DISINFECTION FACILITIES UPGRADE*

August 2001

Prepared By

**GREELEY AND HANSEN LLP**

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Detroit, Michigan 48226-3202

CITY OF ANN ARBOR, MICHIGAN  
Water Utilities Department  
Wastewater Treatment Plant

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## **1.0 Introduction**

The Ann Arbor Wastewater Treatment Plant (WWTP) treats wastewater collected from the City of Ann Arbor, Pittsfield Township and Scio Township which is ultimately discharged to the Huron River. As required by the WWTP National Pollutant Discharge Elimination System (NPDES) permit, the treated water is disinfected prior to being discharged to the Huron River. The Disinfection Facilities Upgrade (DFU) project involved design and construction of an ultraviolet disinfection system retrofitted into the existing North Chlorine Contact Tank, removal of the existing gaseous chlorine system and decommissioning of the sulfur dioxide system.

In addition to installation of an ultraviolet disinfection system, other equipment is provided for operational flexibility and to maintain the performance of the ultraviolet disinfection equipment, including slide and sluice gates, dry chemical feed equipment, skimmings removal equipment and associated electrical components.

This Operation and Maintenance Manual describes modifications made at the WWTP and provides a brief synopsis of the purpose, operating scenarios, periodic inspection and maintenance and safety issues related to the new equipment installed as part of the DFU project. Detailed information regarding the new equipment is provided in the Equipment Operation and Maintenance (O&M) Manual dated June 2001. The following individual equipment O&M Manuals are included in the Equipment O&M manual dated June 2001:

- Trojan UV 4000 Ultraviolet Disinfection Equipment
- US Filter Skimmings Removal Equipment
- Waterman 72-inch x 72-inch Slide Gates, 12-inch x 12-inch Sluice Gate and 48-inch x 48-inch Sluice Gate
- Hammonds Table Chlorinator Dry Chemical Feed Equipment
- Electrical Equipment

## 2.0 Ultraviolet Disinfection Equipment

### 2.1 General

The existing North Chlorine Contact Tank (NCCT) is an underground concrete structure located west of the Tertiary Filter Building (See Figure A) that is modified allowing for the installation of new Trojan Technologies, Inc. UV4000 disinfection equipment (See Figure B).

#### *2.1.1 Description*

The new ultraviolet disinfection (UV4000) equipment is designed to disinfect up to 48 million gallons per day (mgd) to the WWTP NPDES permit disinfection standards. The final pass of the NCCT, immediately upstream of the weir chamber, is reconfigured. A concrete structure is built into the existing pass dividing it into two channels, each sized for installation of a UV4000 Reactor. Filtered effluent enters the NCCT and, subsequently, the two new channels that house the UV4000 equipment. Each of the two Reactors is comprised of two Banks, each Bank with six modules, each module with six medium pressure, high intensity mercury vapor lamps and quartz sleeves.

The new concrete structure extends above the finished grade over the NCCT to accommodate the height of the UV4000 equipment. The UV4000 equipment is installed such that the "suitcase" ballast enclosures on each module arm are above the 100-year flood elevation of 738.80. A concrete platform, built at the finished elevation of 743.00 of the UV4000 module arms, is accessible by a ramp and stairs. Above the equipment and platform, a canopy is installed which overhangs the platform entirely, including portions of the ramp to minimize collection of precipitation on the platform and equipment and provide shelter from the sun. Level with the new concrete platform, grating is installed in each channel to protect against unintentional access to the channel below. Portions of the grating is removable to allow for raising of the module arms for inspection and repairs.

To improve hydraulic characteristics through the NCCT, the existing steel plates, sulfur dioxide diffusers and sampling piping immediately upstream of the weir were removed. The sulfur dioxide piping and sample piping are capped on the west side of the wall which separates the first pass of the NCCT from the last pass of the NCCT.

The quartz sleeves that encase the lamps require periodic cleaning to maintain optimal transmittance of UV light to the effluent. The UV4000 equipment utilizes an automatic mechanical/chemical cleaning system. A combination of Lime-A-Way solution and mechanical wipers are used to clean the quartz sleeves. The period of time between automatic cleanings can be adjusted from 1 to 500 hours. During startup of the UV4000 system, Trojan recommended and set the cleaning frequency to once every 4 hours for all Banks. During a cleaning cycle, neither the lamps nor the modules need to be placed out of service.

A portable emergency shower and eyewash with cart is housed in the Tertiary Filter Building. It is recommended that the portable emergency shower and eyewash be at the UV4000 system platform during operations that require use of Lime-A-Way solution.

*2.1.2 Purpose*

The purpose of the UV4000 equipment is to disinfect WWTP effluent flows up to 48 mgd to meet the WWTP NPDES permit standards.

*2.1.3 Design*

Lamp Type	High intensity, medium pressure
Maximum Flow Capacity	48 mgd (24 mgd per Reactor)
Minimum Flow Capacity	10 mgd (5 mgd per Reactor)
Maximum Equipment Power Draw	605 KW
Headloss @ 24 mgd per reactor	< 9.00 inches
UV Dose @ 253.7 nm	> 22,000 $\mu\text{W}\cdot\text{s}/\text{cm}^2$
Fecal Coliform concentrations	< 200 MPN/100mL, 30-day geometric mean; < 400 MPN/100mL, 7-day geometric mean

*2.1.4 Inspection and Maintenance*

Take all necessary precautions to prevent exposure to UV light including the following:

- a. Wear protective eyewear which protects against UVA, UVB and UVC light.

- b. Refer to the MSDS for Lime-A-Way solution in the UV4000 O&M Manual.
- c. Prior to disconnecting power to a Bank, ensure the other Bank in the Reactor is powered and operating.
- d. Prior to working on any portion of a module arm or Bank, disconnect the power and follow lockout procedures for the module arm or Bank.

Perform the following inspection and associated maintenance daily:

- a. Check cleanliness of the cuvette in the UV transmittance (UVT) Sensor/Sampler Panel. Follow the manufacturer's procedures for cleaning the cuvette.
- b. Check the level of 0% Transmittance solution in the reservoir bottle in the Sensor/Sampler Panel. Refill with distilled water as necessary.
- c. Check the System Control Center (SCC) Panelview for current and recent alarms. Follow appropriate actions described in the UV4000 O&M manual for the alarm displayed.

On a monthly basis, verify proper operation of the potable emergency shower and eyewash. Following operation of the portable emergency shower and eyewash, check the water level and refill as needed. Perform a visual inspection, preferably during the lowest flow period, of the structural components of the system once per year.

Follow the manufacturer's suggested daily, weekly, monthly and annual inspection and maintenance requirements provided in Trojan Technologies, Inc.'s UV4000 Operation and Maintenance Manual.

If disinfected effluent is found to violate the NPDES permit required water quality standards for disinfection, isolate and inspect the disinfection system. Additionally, during the use of the on site diesel engine generators, ensure that the immunity of electronic loads to line frequency is not exceeded.

## **2.2 Modes of Operation**

The UV4000 equipment can be operated in either manual or automatic mode. In automatic mode, the level of disinfection by ultraviolet (UV) light is calculated utilizing the effluent flow rate and the UV transmittance of the effluent. The effluent

flow rate is metered in the Plant Effluent Manhole downstream of the NCCT using an existing Accusonics flow meter. The flow rate is transmitted to the UV4000 SCC via the plant Process Information Control System (PICS) telemetry system. Samples of the effluent are taken immediately downstream of the UV 4000 equipment by a sample pump. The UVT of the samples is measured by a spectrophotometer and transmitted to the SCC via control wiring.

In automatic mode, based on the effluent flowrate, the effluent UVT and the age of the UV lamps in service, the SCC adjusts the power to the UV4000 equipment ballasts which, in turn, adjusts the intensity of the light emitted by the lamps. A UV intensity probe is installed in each Bank. The SCC uses the measured UV intensity to adjust the UV dosage as the lamp age increases and transmission of light from the lamp decreases due to fouling between lamp cleanings.

#### *2.2.1 Normal operation*

Under normal conditions, water flows from the Tertiary Filter Building Clearwells to the NCCT. At the NCCT, flow enters both channels that house the skimmings removal equipment and, subsequently, the UV4000 system. Normal operation of the UV4000 system is in automatic mode and with one Bank of lamps operating in each Reactor. The UV4000 equipment is designed to provide the required disinfection at design peak flow with one module out of service and all lamps at the end of their lamp life.

##### 2.2.1.1 Gate and Valve Positions

Refer to Table 2 and Figure C for position of the gates and valves in the NCCT and Tertiary Filter Building during normal operation.

#### *2.2.2 High River Level*

Under normal operating conditions, the disinfected effluent flows by gravity to the Huron River. As the water surface level of the Huron River rises, due to precipitation or operational changes to the dams upstream and downstream of the plant, the ability to discharge disinfected effluent by gravity is affected. When flow by gravity cannot be achieved, the disinfected effluent is pumped to the Huron River using the west Secondary Effluent Pumps in the Tertiary Filter Building.

##### 2.2.2.1 Gate and Valve Positions

During high river levels, gate and valve positions are affected as follows:

- a. The 48-inch sluice gate (ID S-58-1), also referred to as the Bypass Gate, is opened.
- b. The 54-inch sluice gate (ID S-55-1), also referred to as the River Gate, is closed.
- c. The 36-inch sluice gate (ID S-2-1) in the west Secondary Effluent Pump wetwell is closed
- d. The 48-inch butterfly valve (ID B-2-1) is closed.
- e. The 42-inch butterfly valve (ID B-3-1) is opened.

Refer to Figure C for location of the affected gates.

### *2.2.3 Restricting Flow to One Channel*

If one of the two UV4000 Reactors requires isolation, operation of the ultraviolet disinfection system and gate positions are affected.

#### 2.2.3.1 Equipment Operation

During isolation of a channel, disable or de-energize the Reactor in the isolated channel. The capacity of each channel is limited hydraulically to 24 mgd. Attempting to direct greater than 24 mgd through one channel will ultimately raise the water surface elevations in the Tertiary Filter Building and the Secondary Clarifiers.

#### 2.2.3.2 Gate and Valve Positions

To isolate a channel the slide gates on the upstream and downstream ends of the channel are placed in the closed position. Refer to Table 2 and Figure C for the position and location of the gates in the NCCT affected during isolation of a channel.

### *2.2.4 Multiple Lamp/Ballast Failures*

The control program in the SCC is programmed so that up to six lamps or ballasts may fail in one Bank before a Multiple Lamp Failure alarm for that Bank is displayed. When a Multiple Lamp Failure alarm is triggered in a Bank, that Bank will not operate in automatic mode until the failed lamps and/or ballasts are replaced.



#### 2.2.4.1 Gate and Valve Positions

The gate positions in the NCCT are not directly affected by a multiple lamp/ballast failures. If a Multiple Lamp Failure is triggered in both banks of a Reactor, the affected channel should be isolated during repair of the failed lamps and/or ballasts. Refer to Section 2.2.3 for channel isolation procedures.

#### *2.2.5 Loss of Power*

A loss of power to the WWTP from the Detroit Edison power source will cause the UV4000 system to de-energize. Upon restoration of the power, the Banks that were energized at the time of the power loss will time off for 7 minutes before re-energizing. The Banks, if any, that were de-energized during the power loss, will energize to 88% intensity for 9 minutes prior to being adjusted to the required dosage, upon restoration of power to the UV4000 equipment.

##### 2.2.5.1 Equipment Operation

If power to the entire UV4000 system is lost, no equipment operation is possible until the power is restored. If power to only one of the Reactors is lost, the channel with the de-energized Reactor should be isolated until the lost power is restored.

Power to the SCC is fed through an automatic transfer switch (ATS) fed from both the Tertiary Filter Building and Fabrication Building. The power to the ATS is normally fed from the Tertiary Filter Building. If power to the Tertiary Filter Building is lost, then the ATS switches to emergency power from the Fabrication Building to the SCC.

##### 2.2.5.2 Gate and Valve Positions

If power is lost to one of the two Reactors, isolation of a channel is required. Refer to Section 2.2.3 for channel isolation procedures.

##### 2.2.5.3 Alternative Disinfection

As was the case with the gaseous chlorination system, there is no backup disinfection system for the UV4000 equipment. In emergency cases, chlorine solution from the dry chemical feed equipment can be directed to the Tertiary Filter Building clearwells utilizing the existing chlorination system piping (See Figure D). Dechlorination of the effluent would occur

in the southeast corner chamber of the NCCT if sulphur dioxide is available. It should be noted that the dry chemical feed equipment is not sized for effluent disinfection. Refer to Section 5.0 for operation of the dry chemical feed equipment.

### 3.0 Slide and Sluice Gates

Four new 72-inch by 72-inch slide gates, one new 12-inch by 12-inch sluice gate and a replacement 48-inch by 48-inch sluice gate were installed as part of the disinfection facilities upgrade.

#### 3.1 12-inch Sluice Gate

##### 3.1.1 Description

One new 12-inch by 12-inch sluice gate, manufactured by Waterman Industries, Inc., is installed in the existing scum junction chamber in the West Plant. Skimming drain piping connects the skimming troughs located upstream of the UV4000 equipment to the existing scum junction chamber in the West Plant. The position of the 12-inch by 12-inch sluice gate is manually adjusted using the floor mounted manual operator. The 12-inch by 12-inch sluice gate is not connected to the PICS telemetry system.

It is suggested that the 12-inch by 12-inch sluice gate be normally maintained in the closed position. The 12-inch by 12-inch sluice gate is opened during skimmings removal procedures described in Section 4.1.

##### 3.1.2 Purpose

The purpose of this sluice gate is to preclude tertiary effluent from flowing into the scum junction chamber from the NCCT during high flow events when the skimmings removal equipment is submerged.

##### 3.1.3 Design

Size	12-inch x 12-inch
Direction	Unseating
Head	10 feet
Operator	Floor standing, manual crank
Fitting	Flange mounted with wall thimble

#### 3.2 48-inch Sluice Gate

##### 3.2.1 Description

In the final pass of the existing NCCT, a 48-inch by 48-inch sluice gate is used to direct disinfected effluent to the Secondary Effluent Pumping Station wetwell for

pumping effluent to the Huron River during high river level conditions. The 48-inch by 48-inch sluice gate is maintained in the closed position during normal operation. During high river level conditions, the 48-inch by 48-inch sluice gate is opened.

The 48-inch sluice gate position can be adjusted using the floor mounted manual crank or utilizing the motor operator. The new 48-inch sluice gate operator is connected to the PICS. Identification of gate position and remote operation of the operator are accessible using the PICS telemetry system.

### *3.2.2 Purpose*

The new 48-inch sluice gate is utilized to bypass flows to the Secondary Effluent Pumping Station wetwell for pumping disinfected effluent to the Huron River.

### *3.2.3 Design*

Size	48-inch x 48-inch
Direction	Seating and unseating
Head	12 feet
Operator	Floor mounted, non-modulating electric motor

## **3.3 72-inch Slide Gates**

### *3.3.1 Description*

Four manually operated 72-inch by 72-inch slide gates were installed in the new Reactor channels. One slide gate is installed upstream of each channel and one is downstream down stream of the UV4000 equipment (see Figure C). The slide gates are not designed to be watertight, there may be leakage requiring the use of a dewatering pump to maintain a dewatered channel.

The 72-inch by 72-inch slide gates are maintained in the open position. During isolation of a channel two of the 72-inch by 72-inch slide gates are closed.

### *3.3.2 Purpose*

The 72-inch by 72-inch gates can be used to offer some operational flexibility or when one of the UV Reactors is taken out of service for a short duration.

### 3.3.3 *Design*

Material	Type 6061-T6 aluminum alloy
Style	Self-contained, flush bottom
Size	72-inches x 72-inches
Direction	Seating and unseating
Head	14 feet
Operator	Manual with removable crank

## **4.0 Skimmings Removal Equipment**

### **4.1 Description**

The skimmings removal equipment consists of two worm-gear operated troughs. Each trough consists of 12-inch diameter steel pipe with a 60-degree slot cut symmetrically about the vertical axis of the pipe. One trough is installed immediately upstream of each new Reactor within the new channels. Operation of the worm gear operator rotates the trough about its centerline. As the trough is rotated, material floating on the water surface enters the trough. The skimmings troughs are connected together and to 12-inch skimmings drain piping which discharges the skimmings to the scum junction chamber connected to the West Plant Secondary Clarifiers. Ultimately, the skimmings are collected and combined with scum and directed to the scum concentrator. A wooden baffle wall is mounted immediately downstream of each trough to minimize the floating material passing over the troughs during high flow events.

Remove collected skimmings during average plant flows. Do not operate the skimmings removal equipment during high plant flows. Utilize the following procedures to remove skimmings from upstream of the UV4000 equipment:

- a. Open the 12-inch by 12-inch sluice gate in the scum junction chamber in the West Plant.
- b. Rotate the wheel on the worm-gear operator to rotate the troughs about their centerline until effluent enters the troughs.
- c. Maintain the trough in its rotated position until all skimmings are collected in the troughs.
- d. Rotate the wheel on the worm-gear operator to rotate the troughs until the trough slot is parallel to the water surface.
- e. Close the 12-inch by 12-inch sluice gate in the scum junction chamber in the West Plant.

### **4.2 Purpose**

The purpose of the skimmings removal equipment is to aid in maximizing the disinfection system by removing materials that could adversely affect the performance of the system.

### **4.3 Design**

Trough Diameter	12-inch
Wall Thickness Schedule	20
Operator	Worm-gear

### **4.4 Inspection and Maintenance**

Follow USFilter/Link-Belts's inspection and maintenance program, provided in the skimmings removal equipment Operation and Maintenance Manual.

## 5.0 Dry Chemical Feed Equipment

### 5.1 General

Although effluent disinfection no longer requires the use of gaseous chlorine, there remain operations at the Wastewater Treatment Plant that require the use of chlorine solution. The primary use of chlorine solution is disinfection of overflows from the Retention Basin. Other uses at the plant include odor control in the Gravity Thickeners. To supply the necessary chlorine solution without storing gaseous chlorine on-site, a dry chemical feed system was installed.

#### *5.1.1 Description*

The dry chemical feed equipment installed is a Model 30600L-FP Tablet Chlorinator System (TCS) manufactured by Hammonds Technical Services, Inc. The TCS can be operated either manually or automatically.

Calcium hypochlorite tablets, which are placed in a tank on the TCS, are dissolved using plant effluent water to form a chlorine solution that flows by gravity to a storage tank, also on the TCS. The chlorine solution is then pumped from the storage tank to the existing chlorine solution piping in the Chlorine Building. A bypass line is present to prevent the pump from cycling on and off.

Caution must be taken to prevent direct human contact with the calcium hypochlorite tablets or the chlorine solution generated by the TCS. Wear protective eyewear, clothing and gloves while operating the TCS. Refer to the MSDS for calcium hypochlorite in the TCS O&M Manual.

#### *5.1.2 Purpose*

The purpose of this new equipment is to provide a means to produce a chlorine solution. The primary purpose of the chlorine solution is for disinfection of Retention Basin overflows. The secondary purpose for this equipment is to provide a chlorine solution for odor control at the Gravity Thickeners. It must be noted that the TCS is not designed to be used as backup protection to the UV4000 system.



### 5.1.3 Design

Tablet Chlorinator Storage Capacity	1,100 lb
Solution Tank Capacity	120 gallons
Free Chlorine Flow Rate	1,200 lb/day
Electrical service	480V, 3Ø, 60 Hz
Minimum Pump Capacity	150 gpm
Discharge Pressure	40 psig

### 5.1.4 Inspection and Maintenance

Inspection and maintenance of the TCS includes the following procedures:

- a. Follow Hammonds Technical Services, Inc.'s suggested inspection and maintenance program, provided in the Tablet Chlorinator System Operation and Maintenance Manual.
- b. Verify operation of the TCS monthly. Replace tablets, as necessary.
- c. Flush all chlorine solution lines following operation of the TCS.

## 5.2 Modes of Operation

### 5.2.1 Normal Operation

The primary purpose of the TCS is for disinfection of overflows from the Retention Basin using chlorine solution.

#### 5.2.1.1 System Settings

The automatic mode program in the TCS was set by the manufacturer's representative to provide the required chlorine solution concentration for disinfection of Retention Basin overflows. WWTP Staff programmed the PICS program to trigger operation of the TCS when the Retention Basin overflows to the Retention Basin Chlorine Contact Tank.

#### 5.2.1.2 Valve Positions in Chlorine Building

By virtue of the PICS program being set up to automatically transmit a trigger signal to the TCS when the Retention Basin overflows, the TCS should be maintained in automatic mode and the valve positions in the chlorine solution piping should be such that the chlorine solution is directed to the Retention Basin Chlorine Contact Tank. Refer to Figure D for location and position of chlorine solution piping and valves associated

with distribution to the Retention Basin. Verify the correct positions for the associated valves on the chlorine solution piping to the Retention outside of the Chlorine Building to allow flow to reach the required location.

#### *5.2.2 Alternative Operation (Gravity Thickener Chlorination)*

The secondary purpose of the TCS is to provide chlorine solution to the gravity thickeners for odor control. Ultimately, chlorine solution can be carried to anywhere in the plant that existing chlorine solution piping is installed.

##### 5.2.2.1 System Settings

To adjust the chlorine solution concentration for odor control, the TCS must be placed in manual mode. Using the procedure provided in Hammonds Technical Services, Inc.'s TCS Operation and Maintenance Manual, adjust the flowrate and chlorine solution concentration as needed.

##### 5.2.2.2 Valve Positions in Chlorine Building

The valve positions in the Chlorine Building must be adjusted to direct the chlorine solution to the desired location before starting the TCS. Following use of the TCS for uses other than its primary purpose, the valve positions must be adjusted for distribution of chlorine solution to the Retention Basin Chlorine Contact Tank.

## 6.0 Power Monitoring Equipment

### 6.1 Description

Four Allen-Bradley Bulletin 1403 Power Monitor II's were installed to monitor power usage of each of the Banks of the UV4000 equipment. Each power monitor has an IP address and is connected to the PICS telemetry system. The IP addresses of the power monitors are as follows:

<u>IP Address</u>	<u>Bank</u>
192.168.12.76	1A
192.168.12.77	1B
192.168.12.78	2A
192.168.12.79	2B

The power monitors for Banks 1A and 1B are installed in MCC's K and L, respectively, in the Fabrication Building. The power monitors for Banks 2A and 2B are installed in Unit Substation 4B in the Tertiary Filter Building.

### 6.2 Purpose

The purpose of the power monitors is for logging power usage and associated power quality parameters for each Bank. The associated software, RS Power, installed on a workstation in the operator's room in the Administration Building, can be configured to record events that are triggered by changes in the power quality to the UV4000 equipment.

## **7.0 Miscellaneous Other Equipment**

### **7.1 Compressed Air Equipment**

The compressed air piping in the Fabrication Building was extended to the Tertiary Filter Building to provide redundant compressed air piping in the Tertiary Filter Building and a compressed air tool station at the UV4000 platform.

The compressed air piping is 1½-inch Type K copper piping. The piping was laid in the same trench as the east and west electrical ductbanks. At the UV4000 platform, the compressed air piping extends above the platform and traverses the channels at the underside of the canopy. The air tool station is mounted on a canopy column on the east side of the platform. The air tool station consists of a pressure regulator, filter and moisture separator, lubricator, and quick disconnect coupling.

Verify the valves on the compressed air piping in the basement of the Fabrication Building and at the UV4000 platform are open prior to operating the air tool station.

### **7.2 Yard Hydrant**

To provide Plant Effluent Water (PEW) to the UV4000 platform, a 1½-inch HDPE line was laid in the east electrical ductbank between the Tertiary Filter Building and the UV4000 platform. A 1¼-inch frost-free yard hydrant was installed adjacent to the UV4000 platform next to the access ramp.

### **7.3 Electrical System Upgrade**

Two electrical ductbanks were installed which contain the conduit and cables to power the UV4000 system. One ductbank is installed between the west side of the Tertiary Filter Building and the east side of the UV4000 platform and the other ductbank is installed between the east side of the Fabrication Building and the west side of the UV4000 platform (See Figure A). Power for Reactor 1 of the UV4000 equipment (See Figure C) is fed from the Fabrication Building, specifically, Banks UV-1A and UV-1B are fed from the Motor Control Centers MCC-K and MCC-L, respectively. Power for Reactor 2, Banks 2A and 2B, of the UV4000 equipment is fed from Substation No. 4B in the Tertiary Filter Building. Each power feed has a disconnect located on the primary side of the isolations transformers, a k-4 rated transformer, and a secondary disconnect switch located at the UV4000 platform.

The existing motor starters in the units which feed the power to Banks 1A and 1B were removed and replaced with 400-amp frame, 200-amp trip, 3 pole, 600 volt rated, stab-on molded case circuit breakers. New 800-amp frame, 200-amp trip, 3 pole, 600 volt rated, drawout, steel frame air circuit breakers were installed in the units in Unit Substation No. 4B in the Tertiary Filter Building which feed power to Banks 2A and 2B. Additionally, a new 100-amp frame, 60-amp trip, 3 pole, 600 volt rated, drawout, steel frame air circuit breaker was installed in the unit in MCC-P in the Tertiary Filter Building which feeds the new PP-UV at the UV4000 platform.

At the UV4000 platform, a new lighting panel, LP-UV, a new lighting transformer, LT-UV, a new power panel, PP-UV and a new automatic transfer switch were installed mounted on an electrical mounting rack at the north end of the UV4000 platform.



FLOWS

WEST AERATION BASINS AUTO GATE EXERCISING READY TO START

# ANN ARBOR WWTP UV SYSTEM DATA

EAST AERATION BASINS AUTO GATE EXERCISING READY TO START

SCRATCH PAD

EXIT APP

GATE

LOGIN

2/7/2022  
3:24:21 PM  
nickj

SYSTEM FLOW	17.75	MGD
INTENSITY	100.21	mW/cm2
RETENTION TIME	0.27	Sec

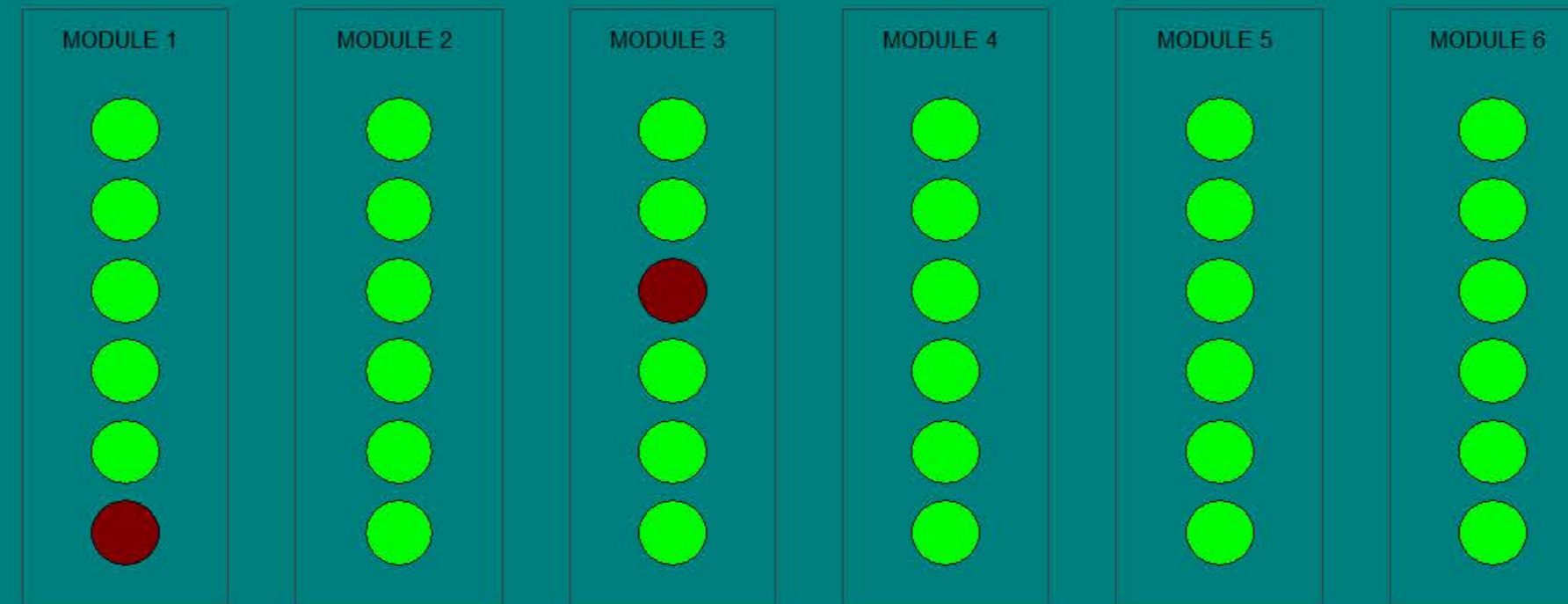
UV DOSE	26.80	mW Sec/cm2
MAX UV CAPACITY	307.40	mW/cm2
UV TRANSMITTANCE	85.0	%

BANK 1A POWER LEVEL	39.0	%
BANK 1B POWER LEVEL	0.0	%
BANK 2A POWER LEVEL	39.0	%
BANK 2B POWER LEVEL	0.0	%

UVB-1A POWER  
46829.8 WATTS  
UVB-1B POWER  
1939.9 WATTS

BANK 1A LAMPS    BANK 1B LAMPS    BANK 2A LAMPS    BANK 2B LAMPS  
BANK 1A BALLASTS    BANK 1B BALLASTS    BANK 2A BALLASTS    BANK 2B BALLASTS

BANK DISPLAYED	BANK 1A
LAMPS / BALLASTS	LAMPS
LEAD / LAG	LEAD



{/RSLINX\_Server::[TF]F12:88} 47

{/RSLINX\_Server::[TF]F12:89} 2



FLOWS

WEST AERATION BASINS AUTO GATE  
EXERCISING READY TO START

# ANN ARBOR WWTP UV SYSTEM DATA

EAST AERATION BASINS AUTO GATE  
EXERCISING READY TO START

SCRATCH PAD

EXIT APP

GATE

LOGIN

2/7/2022  
3:25:08 PM  
nickj

SYSTEM FLOW	19.13	MGD
INTENSITY	100.21	mW/cm2
RETENTION TIME	0.27	Sec

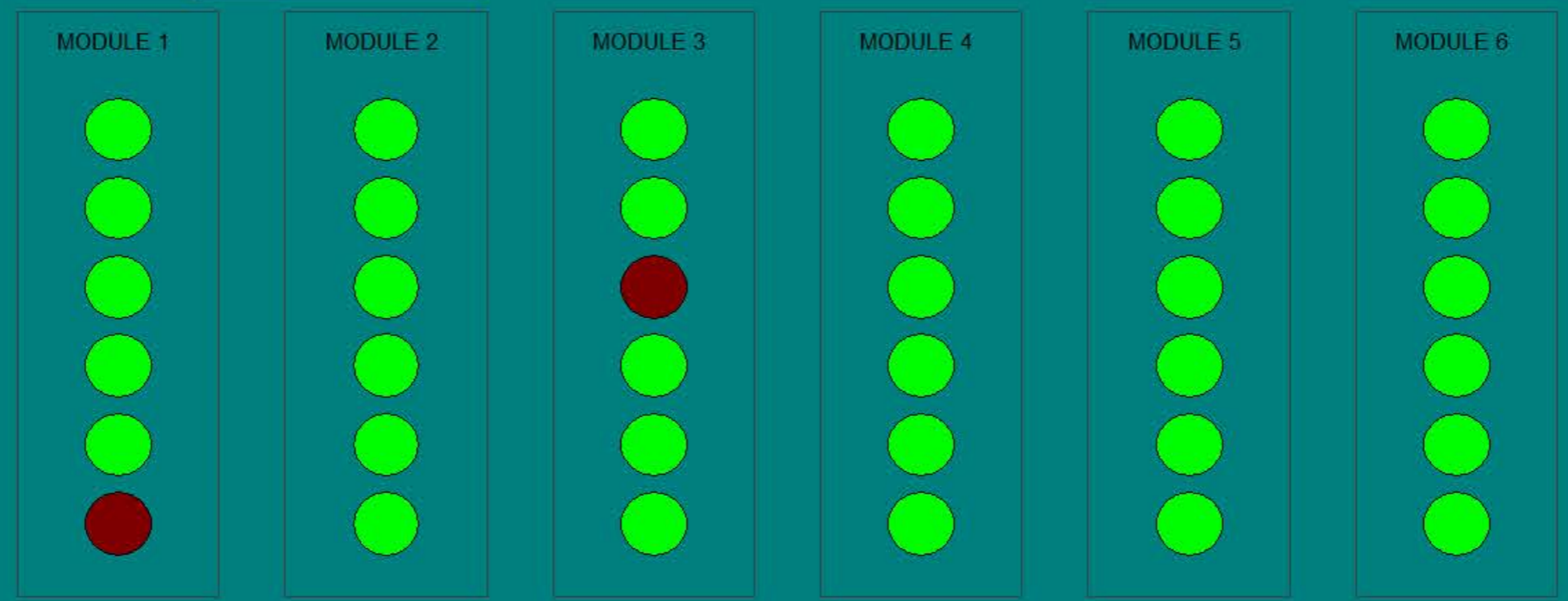
UV DOSE	27.39	mW Sec/cm2
MAX UV CAPACITY	307.40	mW/cm2
UV TRANSMITTANCE	85.0	%

BANK 1A POWER LEVEL	39.0	%
BANK 1B POWER LEVEL	0.0	%
BANK 2A POWER LEVEL	39.0	%
BANK 2B POWER LEVEL	0.0	%

UVB-1A POWER  
46829.8 WATTS  
UVB-1B POWER  
1939.9 WATTS

- BANK 1A LAMPS
- BANK 1A BALLASTS
- BANK 1B LAMPS
- BANK 1B BALLASTS
- BANK 2A LAMPS
- BANK 2A BALLASTS
- BANK 2B LAMPS
- BANK 2B BALLASTS

- BANK DISPLAYED: BANK 1A
- LAMPS / BALLASTS: BALLASTS
- LEAD / LAG: LEAD



{/RSLINX\_Server::[TF]F12:88} 47  
{/RSLINX\_Server::[TF]F12:89} 2

**ATTACHMENT B  
LEGAL STATUS OF OFFEROR**

(The Respondent shall fill out the provision and strike out the remaining ones.)

The Respondent is:

- A corporation organized and doing business under the laws of the state of \_\_\_\_\_, for whom \_\_\_\_\_ bearing the office title of \_\_\_\_\_, whose signature is affixed to this proposal, is authorized to execute contracts on behalf of respondent.\*

\*If not incorporated in Michigan, please attach the corporation's Certificate of Authority

- A limited liability company doing business under the laws of the State of \_\_\_\_\_, whom \_\_\_\_\_ bearing the title of \_\_\_\_\_ whose signature is affixed to this proposal, is authorized to execute contract on behalf of the LLC.
- A partnership organized under the laws of the State of \_\_\_\_\_ and filed with the County of \_\_\_\_\_, whose members are (attach list including street and mailing address for each.)
- An individual, whose signature with address, is affixed to this RFP.

Respondent has examined the basic requirements of this RFP and its scope of services, including all Addendum (if applicable) and hereby agrees to offer the services as specified in the RFP.

\_\_\_\_\_ Date: \_\_\_\_\_,  
Signature

(Print) Name \_\_\_\_\_ Title \_\_\_\_\_

Firm: \_\_\_\_\_

Address: \_\_\_\_\_

Contact Phone \_\_\_\_\_ Fax \_\_\_\_\_

Email \_\_\_\_\_



## ATTACHMENT C CITY OF ANN ARBOR DECLARATION OF COMPLIANCE

### Non-Discrimination Ordinance

The “non discrimination by city contractors” provision of the City of Ann Arbor Non-Discrimination Ordinance (Ann Arbor City Code Chapter 112, Section 9:158) requires all contractors proposing to do business with the City to treat employees in a manner which provides equal employment opportunity and does not discriminate against any of their employees, any City employee working with them, or any applicant for employment on the basis of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight. It also requires that the contractors include a similar provision in all subcontracts that they execute for City work or programs.

In addition the City Non-Discrimination Ordinance requires that all contractors proposing to do business with the City of Ann Arbor must satisfy the contract compliance administrative policy adopted by the City Administrator. A copy of that policy may be obtained from the Purchasing Manager

The Contractor agrees:

- (a) To comply with the terms of the City of Ann Arbor’s Non-Discrimination Ordinance and contract compliance administrative policy.
- (b) To post the City of Ann Arbor’s Non-Discrimination Ordinance Notice in every work place or other location in which employees or other persons are contracted to provide services under a contract with the City.
- (c) To provide documentation within the specified time frame in connection with any workforce verification, compliance review or complaint investigation.
- (d) To permit access to employees and work sites to City representatives for the purposes of monitoring compliance, or investigating complaints of non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the Ann Arbor Non-Discrimination Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Non-Discrimination Ordinance, obligates the Contractor to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract.

---

Company Name

---

Signature of Authorized Representative	Date
--	------

---

Print Name and Title

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Address, City, State, Zip

---

Phone/Email address

**Questions about the Notice or the City Administrative Policy, Please contact:**  
Procurement Office of the City of Ann Arbor  
(734) 794-6500

Revised 3/31/15 Rev. 0

NDO-2

**ATTACHMENT D  
CITY OF ANN ARBOR  
LIVING WAGE ORDINANCE DECLARATION OF COMPLIANCE**

The Ann Arbor Living Wage Ordinance (Section 1:811-1:821 of Chapter 23 of Title I of the Code) requires that an employer who is (a) a contractor providing services to or for the City for a value greater than \$10,000 for any twelve-month contract term, or (b) a recipient of federal, state, or local grant funding administered by the City for a value greater than \$10,000, or (c) a recipient of financial assistance awarded by the City for a value greater than \$10,000, shall pay its employees a prescribed minimum level of compensation (i.e., Living Wage) for the time those employees perform work on the contract or in connection with the grant or financial assistance. The Living Wage must be paid to these employees for the length of the contract/program.

*Companies employing fewer than 5 persons and non-profits employing fewer than 10 persons are exempt from compliance with the Living Wage Ordinance. If this exemption applies to your company/non-profit agency please check here  No. of employees*

The Contractor or Grantee agrees:

- (a) To pay each of its employees whose wage level is not required to comply with federal, state or local prevailing wage law, for work covered or funded by a contract with or grant from the City, no less than the Living Wage. The current Living Wage is defined as \$14.05/hour for those employers that provide employee health care (as defined in the Ordinance at Section 1:815 Sec. 1 (a)), or no less than \$15.66/hour for those employers that do not provide health care. The Contractor or Grantor understands that the Living Wage is adjusted and established annually on April 30 in accordance with the Ordinance and covered employers shall be required to pay the adjusted amount thereafter to be in compliance with Section 1:815(3).

**Check the applicable box below which applies to your workforce**

Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage without health benefits

Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage with health benefits

- (b) To post a notice approved by the City regarding the applicability of the Living Wage Ordinance in every work place or other location in which employees or other persons contracting for employment are working.
- (c) To provide to the City payroll records or other documentation within ten (10) business days from the receipt of a request by the City.
- (d) To permit access to work sites to City representatives for the purposes of monitoring compliance and investigating complaints or non-compliance.
- (e) To take no action that would reduce the compensation, wages, fringe benefits, or leave available to any employee covered by the Living Wage Ordinance or any person contracted for employment and covered by the Living Wage Ordinance in order to pay the living wage required by the Living Wage Ordinance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services or agrees to accept financial assistance in accordance with the terms of the Living Wage Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Living Wage Ordinance, obligates the Employer/Grantee to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract or grant of financial assistance.

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Street Address

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Date

\_\_\_\_\_  
City, State, Zip

\_\_\_\_\_  
Print Name and Title

\_\_\_\_\_  
Phone/Email address



**ATTACHMENT E**

<b>VENDOR CONFLICT OF INTEREST DISCLOSURE FORM</b>
--

All vendors interested in conducting business with the City of Ann Arbor must complete and return the Vendor Conflict of Interest Disclosure Form in order to be eligible to be awarded a contract. Please note that all vendors are subject to comply with the City of Ann Arbor’s conflict of interest policies as stated within the certification section below.

If a vendor has a relationship with a City of Ann Arbor official or employee, an immediate family member of a City of Ann Arbor official or employee, the vendor shall disclose the information required below.

1. No City official or employee or City employee’s immediate family member has an ownership interest in vendor’s company or is deriving personal financial gain from this contract.
2. No retired or separated City official or employee who has been retired or separated from the City for less than one (1) year has an ownership interest in vendor’s Company.
3. No City employee is contemporaneously employed or prospectively to be employed with the vendor.
4. Vendor hereby declares it has not and will not provide gifts or hospitality of any dollar value or any other gratuities to any City employee or elected official to obtain or maintain a contract.
5. Please note any exceptions below:

Conflict of Interest Disclosure*	
Name of City of Ann Arbor employees, elected officials or immediate family members with whom there may be a potential conflict of interest.	<input type="checkbox"/> Relationship to employee <hr/> <input type="checkbox"/> Interest in vendor’s company <input type="checkbox"/> Other (please describe in box below)

\*Disclosing a potential conflict of interest does not disqualify vendors. In the event vendors do not disclose potential conflicts of interest and they are detected by the City, vendor will be exempt from doing business with the City.

I certify that this Conflict of Interest Disclosure has been examined by me and that its contents are true and correct to my knowledge and belief and I have the authority to so certify on behalf of the Vendor by my signature below:		
Vendor Name	Vendor Phone Number	
Signature of Vendor Authorized Representative	Date	Printed Name of Vendor Authorized Representative

**ATTACHMENT F  
CITY OF ANN ARBOR NON-DISCRIMINATION ORDINANCE**

Relevant provisions of Chapter 112, Nondiscrimination, of the Ann Arbor City Code are included below.  
You can review the entire ordinance at [www.a2gov.org/humanrights](http://www.a2gov.org/humanrights).

**Intent:** It is the intent of the city that no individual be denied equal protection of the laws; nor shall any individual be denied the enjoyment of his or her civil or political rights or be discriminated against because of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight.

**Discriminatory Employment Practices:** No person shall discriminate in the hire, employment, compensation, work classifications, conditions or terms, promotion or demotion, or termination of employment of any individual. No person shall discriminate in limiting membership, conditions of membership or termination of membership in any labor union or apprenticeship program.

**Discriminatory Effects:** No person shall adopt, enforce or employ any policy or requirement which has the effect of creating unequal opportunities according to actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight for an individual to obtain housing, employment or public accommodation, except for a bona fide business necessity. Such a necessity does not arise due to a mere inconvenience or because of suspected objection to such a person by neighbors, customers or other persons.

**Nondiscrimination by City Contractors:** All contractors proposing to do business with the City of Ann Arbor shall satisfy the contract compliance administrative policy adopted by the City Administrator in accordance with the guidelines of this section. All city contractors shall ensure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate inequality based upon any classification protected by this chapter. All contractors shall agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of any applicable protected classification. All contractors shall be required to post a copy of Ann Arbor's Non-Discrimination Ordinance at all work locations where its employees provide services under a contract with the city.

**Complaint Procedure:** If any individual believes there has been a violation of this chapter, he/she may file a complaint with the City's Human Rights Commission. The complaint must be filed within 180 calendar days from the date of the individual's knowledge of the allegedly discriminatory action or 180 calendar days from the date when the individual should have known of the allegedly discriminatory action. A complaint that is not filed within this timeframe cannot be considered by the Human Rights Commission. To file a complaint, first complete the complaint form, which is available at [www.a2gov.org/humanrights](http://www.a2gov.org/humanrights). Then submit it to the Human Rights Commission by e-mail ([hrc@a2gov.org](mailto:hrc@a2gov.org)), by mail (Ann Arbor Human Rights Commission, PO Box 8647, Ann Arbor, MI 48107), or in person (City Clerk's Office). For further information, please call the commission at 734-794-6141 or e-mail the commission at [hrc@a2gov.org](mailto:hrc@a2gov.org).

**Private Actions For Damages or Injunctive Relief:** To the extent allowed by law, an individual who is the victim of discriminatory action in violation of this chapter may bring a civil action for appropriate injunctive relief or damages or both against the person(s) who acted in violation of this chapter.

**THIS IS AN OFFICIAL GOVERNMENT NOTICE AND  
MUST BE DISPLAYED WHERE EMPLOYEES CAN READILY SEE IT.**

ATTACHMENT G

CITY OF ANN ARBOR LIVING WAGE ORDINANCE

**RATE EFFECTIVE APRIL 30, 2021 - ENDING APRIL 29, 2022**

**\$14.05 per hour**

If the employer provides health care benefits\*

**\$15.66 per hour**

If the employer does **NOT** provide health care benefits\*

Employers providing services to or for the City of Ann Arbor or recipients of grants or financial assistance from the City of Ann Arbor for a value of more than \$10,000 in a twelve-month period of time must pay those employees performing work on a City of Ann Arbor contract or grant, the above living wage.

**ENFORCEMENT**

The City of Ann Arbor may recover back wages either administratively or through court action for the employees that have been underpaid in violation of the law. Persons denied payment of the living wage have the right to bring a civil action for damages in addition to any action taken by the City.

Violation of this Ordinance is punishable by fines of not more than \$500/violation plus costs, with each day being considered a separate violation. Additionally, the City of Ann Arbor has the right to modify, terminate, cancel or suspend a contract in the event of a violation of the Ordinance.

\* Health Care benefits include those paid for by the employer or making an employer contribution toward the purchase of health care. The employee contribution must not exceed \$.50 an hour for an average work week; and the employer cost or contribution must equal no less than \$1/hr for the average work week.

**The Law Requires Employers to Display This Poster Where Employees Can Readily See It.**

**For Additional Information or to File a Complaint contact  
Colin Spencer at 734/794-6500 or [cspencer@a2gov.org](mailto:cspencer@a2gov.org)**

**APPENDIX A: SAMPLE PROFESSIONAL SERVICES AGREEMENT**

*If a contract is awarded, the selected Firm(s) will be required to adhere to a set of general contract provisions which will become a part of any formal agreement. These provisions are general principles which apply to all contractors/service providers to the City of Ann Arbor. The required provisions are:*

(2020 PSA over \$25,000 NO Auto AI Rev. 1)

This agreement ("Agreement") is between the City of Ann Arbor, a Michigan municipal corporation, having its offices at 301 E. Huron St. Ann Arbor, Michigan 48104 ("City"), and \_\_\_\_\_ ("Contractor"), a(n) \_\_\_\_\_, with its address at \_\_\_\_\_ (State where organized) \_\_\_\_\_ (Partnership, Sole Proprietorship, or Corporation). City and Contractor are referred to collectively herein as the "Parties." The Parties agree as follows:

**I. DEFINITIONS**

Administering Service Area/Unit means \_\_\_\_\_.

Contract Administrator means \_\_\_\_\_, 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 \_\_\_\_\_.  
Project name

**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 \_\_\_\_\_

Type of service

("Services") in connection with the Project as described in Exhibit A. The City retains the right to make changes to the quantities of service within the general scope of the Agreement at any time by a written order. If the changes add to or deduct from the extent of the services, the compensation shall be adjusted

accordingly. All such changes shall be executed under the conditions of the original Agreement.

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

#### **IV. INDEPENDENT CONTRACTOR**

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

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

#### **V. COMPENSATION OF CONTRACTOR**

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

## VI. INSURANCE/INDEMNIFICATION

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

## VII. COMPLIANCE REQUIREMENTS

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



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

## **VIII. WARRANTIES BY THE CONTRACTOR**

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

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

**IX. OBLIGATIONS OF THE CITY**

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

**X. ASSIGNMENT**

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

**XI. TERMINATION OF AGREEMENT**

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

notice of such non-appropriation.

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

## **XII. REMEDIES**

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

## **XIII. NOTICE**

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

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

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

City of Ann Arbor

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(insert name of Administering Service Area 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, 3<sup>rd</sup> Floor  
Ann Arbor, Michigan 48104

#### **XIV. CHOICE OF LAW AND FORUM**

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

#### **XV. OWNERSHIP OF DOCUMENTS**

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

#### **XVI. CONFLICTS OF INTEREST OR REPRESENTATION**

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

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

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

#### **XVII. SEVERABILITY OF PROVISIONS**

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

#### **XVIII. EXTENT OF AGREEMENT**

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

#### **XIX. ELECTRONIC TRANSACTION**

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

#### **XX. EFFECTIVE DATE**

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

**[REMAINDER OF PAGE LEFT BLANK; SIGNATURE PAGE FOLLOWS]**

**FOR CONTRACTOR**

By \_\_\_\_\_  
Type Name

Its

Date: \_\_\_\_\_

**FOR THE CITY OF ANN ARBOR**

By \_\_\_\_\_  
Christopher Taylor, Mayor

By \_\_\_\_\_  
Jacqueline Beaudry, City Clerk

Date: \_\_\_\_\_

**Approved as to substance**

\_\_\_\_\_  
Type Name  
Brian Steglitz, Interim Public Service Area  
Administrator

\_\_\_\_\_  
Milton Dohoney Jr., Interim City Administrator

**Approved as to form and content**

\_\_\_\_\_  
Stephen K. Postema, City Attorney

**EXHIBIT A  
SCOPE OF SERVICES**

**(Insert/Attach Scope of Work & Deliverables Schedule)**

## **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:

(insert/Attach Negotiated Fee Arrangement)



**EXHIBIT C  
INSURANCE REQUIREMENTS**

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

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

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

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

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

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

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

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

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

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