



Progressive Design-Build Agreement for Water and Wastewater Projects Modified for City of Ann Arbor

This **AGREEMENT** is made as of the 23rd day of January in the year of 2019, by and between the following parties, for services in connection with the Project identified below:

OWNER:

(Name and address)

City of Ann Arbor
301 East Huron Street
Ann Arbor, Michigan 48107

DESIGN-BUILDER:

(Name and address)

J. Ranck Electric, Inc.
1993 Gover Parkway
Mt. Pleasant, MI 48858

PROJECT:

(Include Project name and location as it will appear in the Contract Documents)

Progressive Design-Build for WTP SCADA Modernization Project

City of Ann Arbor Water Treatment Plant
919 Sunset Road
Ann Arbor, Michigan 48103

In consideration of the mutual covenants and obligations contained herein, Owner and Design-Builder agree as set forth herein.

Article 1

General

- 1.1 Duty to Cooperate. Owner and Design-Builder commit at all times to cooperate fully with each other, and proceed on the basis of trust and good faith to permit each party to realize the benefits afforded under this Agreement.
- 1.2 Definitions. Terms, words and phrases used in this Agreement shall have the meanings given them in DBIA Document No. 535, *Standard Form of General Conditions of Contract Between Owner and Design-Builder* (2010 Edition) ("General Conditions of Contract").
- 1.3 Design Services. Design-Builder shall, consistent with applicable state licensing laws, provide design services, including architectural, engineering, and other design professional services required by this Agreement. Such design services shall be provided through qualified, licensed design professionals who are either (i) employed by Design-Builder, or (ii) procured by Design-Builder from independent sources. Nothing in this Agreement is intended to create any legal or contractual relationship between Owner and any independent design professional.
- 1.4 City Ordinance. Services provided under this Agreement are considered to be Professional Services within the meaning of Chapter 14 of the City of Ann Arbor's Code of Ordinance.

Article 2

Design-Builder's Services and Responsibilities

2.1 General Services.

2.1.1 Owner shall provide Design-Builder with Owner's Project Criteria describing Owner's program requirements and objectives for the Project as set forth in Exhibit A. Owner's Project Criteria shall include Owner's use, space, price, time, site, performance, and expandability requirements. Owner's Project Criteria may include conceptual documents, design specifications, design performance specifications, and other technical materials and requirements prepared by or for Owner.

2.1.2 If Owner's Project Criteria have not been developed prior to the execution of this Agreement, Design-Builder will assist Owner in developing Owner's Project Criteria, with such service deemed to be an additional service for which additional compensation shall be paid by Owner to Design-Builder. If Owner has developed Owner's Project Criteria prior to executing this Agreement, Design-Builder shall review and prepare a written evaluation of such criteria, including recommendations to Owner for different and innovative approaches to the design and construction of the Project. The parties shall meet to discuss Design-Builder's written evaluation of Owner's Project Criteria and agree upon what revisions, if any, should be made to such criteria.

2.2 Phased Services.

2.2.1 Phase 1 Services. Design-Builder shall perform the services of design, pricing, and other services for the Project based on Owner's Project Criteria, as may be revised in accordance with Section 2.1 hereof, as set forth in Exhibit B, Scope of Services. Design-Builder shall perform such services to the level of completion required for Design-Builder and Owner to establish the Contract Price for Phase 2, as set forth in Section 2.3 below. The Contract Price for Phase 2 shall be developed during Phase 1 on an "open-book" basis. Design-Builder's Compensation for Phase 1 Services is set forth in Section 7.0 herein. The level of completion required for Phase 1 Services is defined in Exhibit B, Scope of Services (either as a percentage of design completion or by defined deliverables).

2.2.2 Phase 2 Services. Design-Builder's Phase 2 services shall consist of the completion of design services for the Project, the procurement of all materials and equipment for the Project, the performance of construction services for the Project, the start-up, testing, and commissioning of the Project, and the provision of warranty services, all as further described in the Contract Price Amendment. Upon receipt of Design-Builder's proposed Contract Price for Phase 2, Owner may proceed as set forth in Article 2.3.

2.3 Proposal. Upon completion of the Phase 1 Services and any other Basis of Design Documents upon which the parties may agree, Design-Builder shall submit a proposal to Owner (the "Proposal") for the completion of the design and construction for the Project for the Contract Price, which shall be based on a Design-Builder's Fee and Cost of the Work, subject to a Guaranteed Maximum Price (GMP).

2.3.1 The Proposal shall include the following unless the parties mutually agree otherwise:

2.3.1.1 The Contract Price based on a Design-Builder's Fee and Cost of the Work, subject to a GMP, which shall be the sum of:

- i. Design-Builder's Fee as defined in Section 7.4.1 hereof;
- ii. The estimated Cost of the Work as defined in Section 7.5 hereof, inclusive of any Design-Builder's Contingency as defined in Section 7.6.2 hereof; and
- iii. If applicable, any prices established under Section 7.1.3 hereof;

2.3.1.2 The Basis of Design Documents, which may include, by way of example, Owner's Project Criteria, which are set forth in detail and are attached to the Proposal;

2.3.1.3 A list of the assumptions and clarifications made by Design-Builder in the preparation of the Proposal, which list is intended to supplement the information contained in the drawings and specifications and is specifically included as part of the Basis of Design Documents;

2.3.1.4 The Scheduled Substantial Completion Date upon which the Proposal is based, to the extent said date has not already been established under Section 6.2.1 hereof, and a schedule upon which the Scheduled Substantial Completion Date is based and a Project Schedule for the Work;

2.3.1.5 If applicable, a list of Allowance Items, Allowance Values, and a statement of their basis;

2.3.1.6 If applicable, a schedule of alternate prices;

2.3.1.7 If applicable, a schedule of unit prices;

2.3.1.8 If applicable, a statement of Additional Services which may be performed but which are not included in the Proposal, and which, if performed, shall be the basis for an increase in the Contract Price and/or Contract Time(s);

2.3.1.9 If applicable, a Savings provision;

2.3.1.10 If applicable, Performance Incentives;

2.3.1.11 The time limit for acceptance of the Proposal; and

2.3.1.12 An Owner's permit list, a list detailing the permits and governmental approvals that Owner will bear responsibility to obtain.

2.3.2 Review and Adjustment to Proposal.

2.3.2.1 After submission of the Proposal, Design-Builder and Owner shall meet to discuss and review the Proposal. If Owner has any comments regarding the Proposal, or finds any inconsistencies or inaccuracies in the information presented, it shall promptly give written notice to Design-Builder of such comments or findings. If appropriate, Design-Builder shall, upon receipt of Owner's notice, make appropriate adjustments to the Proposal.

2.3.2.3 Acceptance of Proposal. Design-Builder acknowledges that the power to act on the Proposal rests with City Council which may require up to ninety days (90) days to exercise that power. If Owner accepts the Proposal, as may be amended by Design-Builder, the Contract Price and its basis shall be set forth in an amendment to this Agreement, when mutually agreed between the parties (Contract Price Amendment). Once the parties have agreed upon the Contract Price and Owner has issued a Notice to Proceed with Phase 2, Design-Builder shall perform the Phase 2 Services, all as further described in the Contract Price Amendment, as it may be revised.

2.3.2.4 Failure to Accept the Proposal. If Owner rejects the Proposal, or fails to notify Design-Builder in writing within ninety (90) days that it accepts the Proposal, the Proposal shall be deemed withdrawn and of no effect. In such event, Owner and Design-Builder shall meet and confer as to how the Project will proceed, with Owner having the following options:

i. Owner may suggest modifications to the Proposal, whereupon, if such modifications are accepted in writing by Design-Builder, the Proposal shall be deemed accepted and the parties shall proceed in accordance with Section 2.3.2.3 above;

ii. Owner may authorize Design-Builder to continue to proceed with the Work on the basis of reimbursement as provided in Section 7.1.2 hereof without a Contract Price, in which case all references in this Agreement to the Contract Price shall not be applicable; or

iii. Owner may terminate this Agreement for convenience in accordance with Article 9 hereof; provided, however, in this event, Design-Builder shall not be entitled to the payment provided for in Sections 9.2, 9.1.2, and 9.1.3 hereof.

If Owner fails to exercise any of the above options, Design-Builder shall have the right to (a) continue with the Work as if Owner had elected to proceed in accordance with Item 2.3.2.4 ii. above, and be paid by Owner accordingly, unless and until Owner notifies it in writing to stop the Work, (b) suspend performance of Work in accordance with Section 11.3.1 of the General Conditions of Contract, provided, however, that in such event Design-Builder shall not be entitled to the payment provided for in Section 9.2 hereof, or (c) may give written notice to Owner that it considers this Agreement completed. If Owner fails to exercise any of the options under Section 2.3.2.4 within twenty one (21) days of receipt of Design-Builder's notice, then this Agreement shall be deemed completed. If Owner terminates the relationship with Design-Builder under Section 2.3.2.4(iii), or if this Agreement is deemed completed under this paragraph, then Design-Builder shall have no further liability or obligations to Owner under this Agreement.

Article 3

Contract Documents

3.1 The Contract Documents are comprised of the following:

3.1.1 All written modifications, amendments, minor changes, and Change Orders to this Agreement issued in accordance with DBIA Document No. 535, *Standard Form of General Conditions of Contract Agreement Between Owner and Design-Builder* (2010 Edition) (“General Conditions of Contract”);

3.1.2 The Contract Price Amendment referenced in Section 2.3.2.3 herein or the Proposal accepted by Owner in accordance with Section 2.3 herein.

3.1.3 This Agreement, including all exhibits;

3.1.4 The General Conditions of Contract; and,

3.1.5 Construction Documents prepared and approved in accordance with Section 2.4 of the General Conditions of Contract.

Article 4

Interpretation and Intent

4.1 Design-Builder and Owner, at the time of acceptance of the Proposal by Owner in accordance with Section 2.3 hereof, shall carefully review all the Contract Documents, including the various documents comprising the Basis of Design Documents for any conflicts or ambiguities. Design-Builder and Owner will discuss and resolve any identified conflicts or ambiguities prior to execution of the Agreement, or if applicable, prior to Owner’s acceptance of the Proposal.

4.2 The Contract Documents are intended to permit the parties to complete the Work and all obligations required by the Contract Documents within the Contract Time(s) for the Contract Price. The Contract Documents are intended to be complementary and interpreted in harmony so as to avoid conflict, with words and phrases interpreted in a manner consistent with construction and design industry standards. In the event inconsistencies, conflicts, or ambiguities between or among the Contract Documents are discovered after Owner’s acceptance of the Proposal, Design-Builder and Owner shall attempt to resolve any ambiguity, conflict, or inconsistency informally, recognizing that the Contract Documents shall take precedence in the order in which they are listed in Section 3.1 hereof.

4.3 Terms, words, and phrases used in the Contract Documents, including this Agreement, shall have the meanings given them in the General Conditions of Contract.

4.4 If Owner’s Project Criteria contain design specifications: (a) Design-Builder is entitled to reasonably rely on the accuracy of the information represented in the design specifications and their compatibility with other information set forth in Owner’s Project Criteria, including any design performance specifications; and (b) Design-Builder shall be entitled to an adjustment in its Contract Price and/or Contract Time(s) to the extent Design-Builder’s cost and/or time of performance have been adversely impacted by such inaccurate design specification.

4.5 The Contract Documents form the entire agreement between Owner and Design-Builder and by incorporation herein are as fully binding on the parties as if repeated herein. No oral representations or other agreements have been made by the parties except as specifically stated in the Contract Documents.

Article 5

Ownership of Work Product

5.1 Work Product. All drawings, specifications and other documents and electronic data, including such documents identified in the General Conditions of Contract, furnished by Design-Builder to Owner under this Agreement (“Work Product”) are deemed to be instruments of service and Design-Builder shall

retain the ownership and property interests therein, including but not limited to any intellectual property rights, copyrights, and/or patents, subject to the provisions set forth in Sections 5.2 through 5.5 below.

5.2 Owner's License. By this Agreement, Design-Builder grants Owner a license to use the Work Product in connection with Owner's occupancy and use of the Project, conditioned on Owner's express understanding that its alteration of the Work Product without the involvement of Design Builder is at Owner's sole risk and without liability or legal exposure to Design-Builder or anyone working by or through Design-Builder, including Design Consultants of any tier (collectively the "Indemnified Parties"), and on the Owner's obligation to provide the indemnity set forth in Section 5.5 herein.

5.3 [Not Used]

5.4 [Not Used]

5.5 Owner's Indemnification for Alteration of Work Product. Owner shall defend, indemnify, and hold harmless the Indemnified Parties from and against any and all claims, damages, liabilities, losses, and expenses, including attorneys' fees, arising out of or resulting from Owner's alteration of the Work Product, to the fullest extent permitted by applicable law. Notwithstanding the foregoing, Owner has no obligation to defend, indemnify, or hold harmless the Indemnified Parties related to their own acts or omissions.

Article 6

Contract Time

6.1 Date of Commencement. The Phase 1 Services shall commence within five (5) days of Design-Builder's receipt of Owner's Notice to Proceed unless the parties mutually agree otherwise in writing. The Work shall commence within five (5) days of Design-Builder's receipt of Owner's Notice to Proceed for Phase 2 Services ("Date of Commencement") if the Proposal is accepted and the Contract Price Amendment is amended to this Agreement unless the parties mutually agree otherwise in writing.

6.2 Substantial Completion and Final Completion.

6.2.1 Substantial Completion of the entire Work shall be achieved no later than Twenty (20) consecutive calendar months after the Date of Commencement ("Scheduled Substantial Completion Date").

6.2.2 Interim milestones and/or Substantial Completion of identified portions of the Work shall be achieved as follows: Phase I GMP shall be achieved no later than Eight (8) consecutive calendar months after the Date of Commencement.

6.2.3 Final Completion of the Work or identified portions of the Work shall be achieved no later than Thirty (30) calendar days after Substantial Completion. Final Completion is the date when all Work is complete pursuant to the definition of Final Completion set forth in Section 1.2.7 of the General Conditions of Contract.

6.2.4 All of the dates set forth in this Article 6 ("Contract Time(s)") shall be subject to adjustment in accordance with the General Conditions of Contract.

6.3 Time is of the Essence. Owner and Design-Builder mutually agree that time is of the essence with respect to the dates and times set forth in the Contract Documents.

6.4 Liquidated Damages. Design-Builder understands that if Substantial Completion is not attained by the Scheduled Substantial Completion Date, Owner will suffer damages which are difficult to determine and accurately specify. Design-Builder agrees that if Substantial Completion is not attained by the milestones identified in Section 6.2.1 and Section 6.2.2, Design-Builder shall pay Owner One Thousand Dollars (\$1,000.00) as liquidated damages for each day that Substantial Completion extends beyond the LD Date.)

6.5 Any liquidated damages assessed by Owner and paid by Design-Builder pursuant to this Agreement shall be in lieu only of other damages arising directly and solely from Design-Builder's breach of the Agreement by its failure to attain Substantial Completion by the Scheduled Substantial Completion Date.

6.6 Early Completion Bonus. If Substantial Completion is attained on or before N/A () days before the Scheduled Substantial Completion Date (the "Bonus Date"), Owner shall pay Design-Builder at the time of Final Payment under Section 8.4 hereof an early completion bonus of N/A Dollars (\$) for each day that Substantial Completion is attained earlier than the Bonus Date.

Article 7

Contract Price

7.1 Contract Price.

7.1.1 Owner shall pay Design-Builder in accordance with Article 6 of the General Conditions of Contract the sum of Two Hundred Ten Thousand One Hundred and Ninety Eight Dollars (\$ 210,198) for the Phase 1 Services, subject to adjustments made in accordance with the General Conditions of Contract. Unless otherwise provided in the Contract Documents, the Phase 1 Services compensation is deemed to include all sales, use, consumer and other taxes mandated by applicable Legal Requirements.

7.1.2 For Phase 2 Services, Owner shall pay Design-Builder in accordance with Article 7 of the General Conditions of Contract a contract price ("Contract Price") equal to the Design-Builder's Fee (as defined in Section 7.4 hereof) plus the Cost of the Work (as defined in Section 7.5 hereof), subject to any GMP established in Section 7.6 hereof or as set forth in the Contract Price Amendment and any adjustments made in accordance with the General Conditions of Contract.

7.1.3 For the specific Work set forth below, Owner agrees to pay Design-Builder, as part of the Contract Price, on the following basis:

7.2 [Not Used]

7.3 Markups for Changes. If the Contract Price requires an adjustment due to changes in the Work, and the cost of such changes is determined under Sections 9.4.1.3 or 9.4.1.4 of the General Conditions of Contract, the following markups shall be allowed on such changes:

7.3.1 For additive Change Orders, including additive Change Orders arising from both additive and deductive items, it is agreed that Design-Builder shall receive a Fee of Seven and One Half percent (7.5 %) of the additional costs incurred for that Change Order.

7.3.2 For deductive Change Orders, including deductive Change Orders arising from both additive and deductive items, the deductive amounts shall include an amount equal to Zero percent (0 %) applied to the direct costs of the net reduction (which amount will account for a reduction associated with Design-Builder's Fee).

7.4 Design-Builder's Fee.

7.4.1 Design-Builder's Fee shall be Seven and One Half percent (7.5%) of the Cost of the Work, as adjusted in accordance with Section 7.4.2 below.

7.4.2 Design-Builder's Fee will be adjusted as follows for any changes in the Work:

7.4.2.1 For additive Change Orders, including additive Change Orders arising from both additive and deductive items, it is agreed that Design Builder shall receive a Fee of Seven and One Half percent (7.5 %) of the additional Costs of the Work incurred for that Change Order.

7.4.2.2 For deductive Change Orders, including deductive Change Orders arising from both additive and deductive items, the deductive amounts shall include an amount equal to Zero percent (0 %) applied to the direct costs of the net reduction (which amount will account for a reduction associated with Design-Builder's Fee).

7.5 Cost of the Work.

7.5.1 The term Cost of the Work shall mean costs reasonably incurred by Design-Builder in the proper performance of the Work. The Cost of the Work shall include only the following:

7.5.1.1 Wages of direct employees of Design-Builder performing the Work at the Site or, with Owner's written agreement, at locations off the Site, provided, however, that the costs for those employees of Design-Builder performing design services shall be calculated on the basis of prevailing market rates for design professionals performing such services or, if applicable, those rates set forth in an exhibit to this Agreement.

7.5.1.2 Wages or salaries of Design-Builder's supervisory and administrative personnel engaged in the performance of the Work and who are located at the Site or working off-Site to assist in the production or transportation of material and equipment necessary for the Work.

7.5.1.3 [Not Used]

7.5.1.4 Costs incurred by Design-Builder for employee benefits, premiums, taxes, insurance, contributions and assessments required by law, collective bargaining agreements, or which are customarily paid by Design-Builder, to the extent such costs are based on wages and salaries paid to employees of Design-Builder covered under Sections 7.5.1.1 through 7.5.1.3 hereof.

7.5.1.5 The reasonable portion of the cost of travel and accommodations for Design-Builder's personnel necessarily and directly incurred in connection with the performance of the Work.

7.5.1.6 Payments properly made by Design-Builder to Subcontractors and Design Consultants for performance of portions of the Work, including any insurance and bond premiums incurred by Subcontractors and Design Consultants.

7.5.1.7 [Not Used]

7.5.1.8 Costs, including transportation, inspection, testing, storage, and handling of materials, equipment, and supplies incorporated or reasonably used in completing the Work.

7.5.1.9 Costs less salvage value of materials, supplies, temporary facilities, machinery, equipment and hand tools not customarily owned by the workers that are not fully consumed in the performance of the Work and which remain the property of Design-Builder, including the costs of transporting, inspecting, testing, handling, installing, maintaining, dismantling, and removing such items.

7.5.1.10 Costs of removal of debris and waste from the Site.

7.5.1.11 The reasonable costs and expenses incurred in establishing, operating and demobilizing the Site office, including the cost of facsimile transmissions, long-distance telephone calls, postage and express delivery charges, telephone service, photocopying, and reasonable petty cash expenses.

7.5.1.12 Rental charges and the costs of transportation, installation, minor repairs and replacements, dismantling and removal of temporary facilities, machinery, equipment and hand tools not customarily owned by the workers, which are provided by Design-Builder at the Site, whether rented from Design-Builder or others, and incurred in the performance of the Work.

7.5.1.13 A pro rata share, to which Owner agrees in writing, of premiums for insurance and bonds required by this Agreement or the performance of the Work.

7.5.1.14 All fuel and utility costs incurred in the performance of the Work.

7.5.1.15 Sales, use, or similar taxes, tariffs, or duties incurred in the performance of the Work, unless those taxes, tariffs, or duties could have been avoided by Owner's direct purchase.

7.5.1.16 [Not Used]

7.5.1.17 Costs for permits, royalties, licenses, tests and inspections incurred by Design-Builder as a requirement of the Contract Documents.

7.5.1.18 The cost of defending suits or claims for infringement of patent rights arising from the use of a particular design, process, or product required by Owner, paying legal judgments against Design-Builder resulting from such suits or claims, and paying settlements made with Owner's consent.

7.5.1.19 Deposits which are lost, except to the extent caused by Design-Builder.

7.5.1.20 Costs incurred in preventing damage, injury, or loss in case of an emergency not caused by Design-Builder affecting the safety of persons and property.

7.5.1.21 Accounting and data processing costs required by the Work.

7.5.1.22 Other costs reasonably and properly incurred in the performance of the Work to the extent approved in writing by Owner.

7.5.2 Non-Reimbursable Costs. The following shall be excluded from the Cost of the Work:

7.5.2.1 Compensation for Design-Builder's personnel stationed at Design-Builder's principal or branch offices, except as provided for in Sections 7.5.1.1, 7.5.1.2, and 7.5.1.3 hereof.

7.5.2.2 Overhead and general expenses, except as provided for in Section 7.5.1 hereof, or which may be recoverable for changes to the Work.

7.5.2.3 The cost of Design-Builder's capital used in the performance of the Work.

7.5.2.4 If the parties have agreed on a GMP, costs that would cause the GMP, as adjusted in accordance with the Contract Documents, to be exceeded.

7.6 The Guaranteed Maximum Price.

7.6.1 Design-Builder guarantees that it shall not exceed the GMP of **TBD** Dollars (\$_____). Documents used as basis for the GMP shall be identified as

the Contract Price Amendment to this Agreement. Design-Builder does not guarantee any specific line item provided as part of the GMP, provided, however, that it does guarantee the line item for its general project management and general conditions costs, in the amount of TBD Dollars (\$), and as set forth in the Contract Price Amendment (“General Conditions Cap”). Design-Builder agrees that it will be responsible for paying the applicable general conditions costs in excess of the General Conditions Cap, as well as be responsible for all costs of completing the Work which exceed the GMP, as said general conditions line item and the GMP may be adjusted in accordance with the Contract Documents, including but not limited to the markups for Change Orders set forth in Section 7.3 herein.

7.6.2 The GMP includes a Contingency in the amount of TBD Dollars (\$) which is available, if Owner consents in writing, for Design-Builder’s use for unanticipated costs it has incurred that are not the basis for a Change Order under the Contract Documents. By way of example, and not as a limitation, such costs may include: (a) trade buy-out differentials; (b) overtime or acceleration; (c) escalation of materials; (d) correction of defective, damaged or nonconforming Work, design errors or omissions, however caused; (e) Subcontractor defaults; or (f) those events under Section 8.2.2 of the General Conditions of Contract that result in an extension of the Contract Time but do not result in an increase in the Contract Price. Design-Builder shall provide Owner notice of all anticipated charges against the Contingency, and shall provide Owner as part of the monthly status report required by Section 2.1.2 of the General Conditions of Contract an accounting of the Contingency, including all reasonably foreseen uses or potential uses of the Contingency in the upcoming three (3) months. Design-Builder agrees that with respect to any expenditure from the Contingency relating to a Subcontractor default or an event for which insurance or bond may provide reimbursement, Design-Builder will in good faith exercise reasonable steps to obtain performance from the Subcontractor and/or recovery from any surety or insurance company. Design-Builder agrees that if Design-Builder is subsequently reimbursed for said costs, then said recovery will be credited back to the Contingency.

7.6.3 Savings.

7.6.3.1 If the sum of the actual Cost of the Work and Design-Builder’s Fee (and, if applicable, any prices established under Section 7.1.3 hereof) is less than the GMP, as such GMP may have been adjusted over the course of the Project, the difference (“Savings”) shall be shared as follows:

Thirty percent (30 %) to Design-Builder and
Seventy percent (70 %) to Owner.

or

7.6.3.2 Savings shall be calculated and paid as part of Final Payment under Section 8.4 hereof, with the understanding that to the extent Design-Builder incurs costs after Final Completion which would have been payable to Design-Builder as a Cost of the Work, the parties shall recalculate the Savings in light of the costs so incurred, and Design-Builder shall be paid by Owner accordingly.

7.7 Allowance Items and Allowance Values.

7.7.1 Any and all Allowance Items, as well as their corresponding Allowance Values, are set forth in the Contract Price Amendment or the Proposal.

7.7.2 Design-Builder and Owner have worked together to review the Allowance Items and Allowance Values based on design information then available to determine that the Allowance Values constitute reasonable estimates for the Allowance Items. Design-Builder and Owner will

continue working closely together during the preparation of the design to develop Construction Documents consistent with the Allowance Values. Nothing herein is intended in any way to constitute a guarantee by Design-Builder that the Allowance Item in question can be performed for the Allowance Value.

7.7.3 No work shall be performed on any Allowance Item without Design-Builder first obtaining in writing advanced authorization to proceed from Owner. Owner agrees that if Design-Builder is not provided written authorization to proceed by the date set forth in the Project schedule, due to no fault of Design-Builder, Design-Builder may be entitled to an adjustment of the Contract Time(s) and Contract Price.

7.7.4 The Allowance Value includes the direct cost of labor, materials, equipment, transportation, taxes, and insurance associated with the applicable Allowance Item. All other costs, including design fees, Design-Builder's overall project management and general conditions costs, overhead and Fee, are deemed to be included in the original Contract Price, and are not subject to adjustment notwithstanding the actual amount of the Allowance Item.

7.7.5 Whenever the actual costs for an Allowance Item is more than or less than the stated Allowance Value, the Contract Price shall be adjusted accordingly by Change Order, subject to Section 7.7.4. The amount of the Change Order shall reflect the difference between actual costs incurred by Design-Builder for the particular Allowance Item and the Allowance Value.

7.8 Performance Incentives.

7.8.1 Owner and Design-Builder have agreed to the performance incentive arrangements set forth in Exhibit N/A .

Article 8

Procedure for Payment

8.1 Payment for Preliminary Services. Design-Builder and Owner agree upon the following method for partial and final payment to Design-Builder for the services hereunder: TBD .

8.2 Contract Price Progress Payments.

8.2.1 Design-Builder shall submit to Owner on the last business day of each month, beginning with the first month after the Date of Commencement, Design-Builder's Application for Payment in accordance with Article 6 of the General Conditions of Contract.

8.2.2 Owner shall make payment within thirty (30) days after Owner's receipt of each properly submitted and accurate Application for Payment in accordance with Article 6 of the General Conditions of Contract, but in each case less the total of payments previously made, and less amounts properly withheld under Section 6.3 of the General Conditions of Contract.

8.2.3 If Design-Builder's Fee under Section 7.4 hereof is a fixed amount, the amount of Design-Builder's Fee to be included in Design-Builder's monthly Application for Payment and paid by Owner shall be proportional to the percentage of the Work completed, less payments previously made on account of Design-Builder's Fee.

8.3 Retainage on Progress Payments.

8.3.1 Owner will retain ten percent (10%) of each Application for Payment.

8.3.2 Within thirty (30) days after Substantial Completion of the entire Work or, if applicable, any portion of the Work, pursuant to Section 6.6 of the General Conditions of Contract, Owner shall release to Design-Builder all retained amounts relating, as applicable, to the entire Work or completed portion of the Work, less an amount equal to: (a) the reasonable value of all remaining or incomplete items of Work as noted in the Certificate of Substantial Completion; and (b) all other amounts Owner is entitled to withhold pursuant to Section 6.3 of the General Conditions of Contract.

8.4 Final Payment. Design-Builder shall submit its Final Application for Payment to Owner in accordance with Section 6.7 of the General Conditions of Contract. Owner shall make payment on Design-Builder's properly submitted and accurate Final Application for Payment (less any amount the parties may have agreed to set aside for warranty work) within thirty (30) days after Owner's receipt of the Final Application for Payment, provided that: (a) Design-Builder has satisfied the requirements for final payment set forth in Section 6.7.2 of the General Conditions of Contract.

8.5 Interest. Payments due and unpaid by Owner to Design-Builder, whether progress payments or final payment, shall to the extent permissible, bear interest commencing thirty (30) days after payment is due at the rate of one half percent (0.5%) per month until paid.

8.6 Record Keeping and Finance Controls. Design-Builder acknowledges that this Agreement is to be administered on an "open book" arrangement relative to Costs of the Work. Design-Builder shall keep full and detailed accounts and exercise such controls as may be necessary for proper financial management, using accounting and control systems in accordance with generally accepted accounting principles and as may be provided in the Contract Documents. During the performance of the Work and for a period of three (3) years after Final Payment, Owner and Owner's accountants shall be afforded access to, and the right to audit from time to time, upon reasonable notice, Design-Builder's records, books, correspondence, receipts, subcontracts, purchase orders, vouchers, memoranda, and other data relating to the Work, all of which Design-Builder shall preserve for a period of three (3) years after Final Payment. Such inspection shall take place at Design-Builder's offices during normal business hours unless another location and time is agreed to by the parties. Any multipliers or markups agreed to by the Owner and Design-Builder as part of this Agreement are only subject to audit to confirm that such multiplier or markup has been charged in accordance with this Agreement, but the composition of such multiplier or markup is not subject to audit.

Article 9

Termination for Convenience

9.1 Upon ten (10) days' written notice to Design-Builder, Owner may, for its convenience and without cause, elect to terminate this Agreement. In such event, Owner shall pay Design-Builder for the following:

9.1.1 All services actually performed and Work actually executed;

9.1.2 The reasonable out-of-pocket costs and expenses attributable solely to such termination, including demobilization costs and amounts due in settlement of terminated contracts with Subcontractors; and

9.1.3 The fair and reasonable sums for overhead and profit on the sum of items 9.1.1 and 9.1.2 above.

9.2 In addition to the amounts set forth in Section 9.1 above, Design-Builder shall be entitled to receive one of the following as applicable:

9.2.1 If Owner terminates this Agreement prior to commencement of construction, Design-Builder shall be paid Zero percent (0%) of the remaining balance of the Contract Price or, if a GMP has not been established, the remaining balance of the most recent estimated Contract Price.

9.2.2 If Owner terminates this Agreement after commencement of construction, Design-Builder shall be paid Zero percent (0%) of the remaining balance of the Contract Price or, if a GMP has not been established, the remaining balance of the most recent estimated Contract Price.

9.3 If Owner terminates this Agreement pursuant to Section 9.1 above and proceeds to design and construct the Project through its employees, agents or third parties, Owner's rights to use the Work Product shall be as set forth in Article 5 hereof. Such rights may not be transferred or assigned to others without Design-Builder's express written consent and such third parties' agreement to the terms of Article 5.

Article 10

Representatives of the Parties

10.1 Owner's Representatives.

10.1.1 Owner designates the individual listed below as its Senior Representative ("Owner Senior Representative"), which individual has the authority and responsibility for avoiding and resolving disputes under Section 10.2.3 of the General Conditions of Contract:

(Identify individual's name, title, address, and telephone numbers.)

**WTP Manager, WTP Senior Utilities Engineer, or WTP SCADA Network Administrator
919 Sunset Rd.
Ann Arbor, MI 48103-2924
(734) 794-6426**

10.1.2 Owner designates the individual listed below as its Owner's Representative, which individual has the authority and responsibility set forth in Section 3.4 of the General Conditions of Contract:

(Identify individual's name, title, address, and telephone numbers.)

**WTP Manager, WTP Senior Utilities Engineer, or WTP SCADA Network Administrator
919 Sunset Rd.
Ann Arbor, MI 48103-2924
(734) 794-6426**

10.2 Design-Builder's Representatives.

10.2.1 Design-Builder designates the individual listed below as its Senior Representative ("Design-Builder's Senior Representative"), which individual has the authority and responsibility for avoiding and resolving disputes under Section 10.2.3 of the General Conditions of Contract: *(Identify individual's name, title, address, and telephone numbers.)*

Refer to Exhibit B

10.2.2 Design-Builder designates the individual listed below as its Design-Builder's Representative, which individual has the authority and responsibility set forth in Section 2.1.1 of the General Conditions of Contract:

(Identify individual's name, title, address, and telephone numbers.)

Refer to Exhibit B

Article 11

Bonds and Insurance

11.1 Insurance. Design-Builder and Owner shall procure the insurance coverages set forth in the Insurance Exhibit attached hereto and in accordance with Article 5 of the General Conditions of Contract.

11.2 Bonds and Other Performance Security. Design-Builder shall provide the following performance bond and labor and material payment bond or other performance security:

Performance Bond.

Required Not Required

Payment Bond.

Required Not Required

Other Performance Security.

Required Not Required

Article 12

Other Provisions

12.1 Other provisions, are as follows:

12.1.1 Owners Advisor. Stantec is serving as Owner's Advisor with respect to this Agreement, the Work and the Project. Stantec's, or its employees' or agents', notices, communications, and directives to Design-Builder shall have the same effect as if they're Owner's, and Design-Builder shall treat them accordingly.

12.1.2 Wage Provisions. Design-Builder shall conform to Chapter 14 of Title I of the Code of the City of Ann Arbor as amended, which in part states "... that all craftsmen, mechanics and laborers employed directly on the site in connection with said improvements, including said employees of subcontractors, shall receive the prevailing wage for the corresponding classes of craftsmen, mechanics and laborers, as determined by statistics for the Ann Arbor area compiled by the United States Department of Labor." Design-Builder shall provide satisfactory proof of its compliance and that of any of its subcontractors upon Owner's demand.

Pursuant to Resolution R-16-469 all public improvement contractors are subject to prevailing wage and shall provide to Owner payroll records, and cooperate with wage rate interviews, sufficient to demonstrate compliance with the prevailing wage requirements.

Where the Agreement and the Ann Arbor City Ordinance are silent as to definitions of terms required in determining contract compliance with regard to prevailing wages, the definitions provided in the Davis-Bacon Act as amended (40 U.S.C. 278-a to 276-a-7) for the terms shall be used.

If Design-Builder is a “covered employer,” as defined in Chapter 23 of the Ann Arbor City Code, Design-Builder shall comply with the living wage provisions of Chapter 23 of the Ann Arbor City Code. In that case, Design-Builder shall: pay those employees providing Services 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); post a notice approved by the Owner of the applicability of Chapter 23 in every location in which regular or contract employees providing services under this Agreement are working; maintain records of compliance; if requested by Owner, provide documentation to verify compliance; 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 comply with the requirements of Chapter 23.

All subcontracts Design-Builder enters with respect to the Agreement shall contain similar wage provisions, covering any subcontractor’s employees.

12.1.3 Non-Discrimination Ordinance. Design-Builder shall comply, and to require its subcontractor(s) to comply, with the nondiscrimination provisions of MCL 37.2209. Design Builder shall comply with the provisions of Section 9:158 of Chapter 112 of Title IX of the Ann Arbor City Code, and shall ensure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity.

12.1.4 Hours of Work. Absent prior written Owner approval, or except as is absolutely necessary due to an emergency, Design-Builder may not work at night, i.e. between 8:00 p.m. and 7:00 a.m., or on weekends or City holidays.

12.1.5 Sales Tax. Owner is exempt from the assessment of State Sales Tax on its direct purchases. Those who acquire materials, equipment, supplies, etc., for incorporation in Owner projects, are not likewise exempt. Design-Builder should plan accordingly. No extra payment will be allowed under this Agreement for Design-Builder’s failure to make proper allowance for taxes it must or may pay.

12.1.6 Design-Builder represents and warrants that it has no personal or financial interests in the Project other than those it has under the Agreement. Design-Builder represents and warrants that it is not, and will not become, overdue or in default to Owner for any contract, debt, or any other obligation including taxes. Notwithstanding any other provision of the Agreement, Owner shall have the right to set off any such debt against any payment obligation arising under the Agreement.

12.1.7 Non-Disclosure Agreement. To protect Owner’s confidences, Design-Builder and its employees, agents and contractors shall execute non-disclosure agreements in a form satisfactory to City.

12.1.8 Material Salvage. Owner may designate for salvage any materials removed as part of the Project, in which case such materials shall remain Owner property and Design-Builder shall transport them to, and store them at, a location determined by Owner.

12.1.9 Nothing in this Agreement shall be construed to waive any immunity to which Owner is entitled by law or equity.

12.1.10 Owner shall at all times have access to the Work whenever it is in preparation or progress, and Design-Builder shall provide proper facilities for access and for inspection.

12.1.11 In procuring goods and services related to this Agreement, Design-Builder shall comply with any procurement laws with which City would be obligated to comply if it were procuring those goods and services itself.

12.2 Listing of Exhibits and documents incorporated herein:

Exhibit A – Project Technical Requirements
Exhibit B – Scope of Design-Builder Services
Exhibit C – Fee Proposal
DBIA Document No. 535, Standard Form of General Conditions of Contract Between Owner and Design-Builder Modified for City of Ann Arbor ("General Conditions of Contract")
Contract Price Amendment, if any (to be developed for Phase 2).

Any claims, disputes, or controversies between the parties arising out of or related to the Agreement, or the breach thereof, which have not been resolved in accordance with the procedures set forth in Section 10.2 of the General Conditions of Contract shall be resolved in the Circuit Court for Washtenaw County, which Owner and Design-Builder agree is the proper venue and most convenient forum, and to the jurisdiction of which Owner and Design-Builder submit.

In executing this Agreement, Owner and Design-Builder each individually represents that it has the necessary financial resources to fulfill its obligations under this Agreement, and each has the necessary corporate approvals to execute this Agreement, and perform the services described herein.

OWNER:

City of Ann Arbor
(Name of Owner)

By Christopher Taylor, Mayor

By Jacqueline Beaudry, City Clerk

Approved as to substance

Howard S. Lazarus, City Administrator

Craig Hupy, Public Services Area Administrator

Approved as to form and content

Stephen K. Postema, City Attorney

DESIGN-BUILDER:

J. Ranck Electric, Inc.
(Name of Design-Builder)

(Signature)

(Printed Name)

(Title)

Date: _____

Exhibit A
Project Technical Requirements

Project Technical Requirements

The Design Builder (DB) shall take full responsibility for and shall coordinate the work to guarantee a complete and finished installation of the SCADA and non-SCADA components of the project. The requirements for the SCADA modifications in the control room are part of Phase 1A. The requirements for the non-SCADA modifications in the control room are listed in Phase 1B.

The DB shall follow the following technical requirements as a minimum. Additional requirements may develop as the project progresses. These requirements will be discussed and coordinated with the Owner, Owner's Advisor and DB.

Phase 1A – SCADA Components

BACKGROUND

The City of Ann Arbor Water Treatment Services system includes a 50 MGD lime softening water treatment plant, four (4) remote pumping stations, three (3) water storage reservoirs, two (2) elevated tanks, three (3) wells, ten (10) distribution system pressure monitoring sites, two (2) distribution system control valves, two (2) recreational dams, and two (2) dams with hydroelectric generators.

Plant processes are controlled via Rockwell Automation PLC-5 programmable logic controllers and associated I/O points with some minor subsystems controlled using CompactLogix PLC systems. The plant SCADA system is comprised of redundant servers running GE iFix software (version 5.1 with ongoing upgrade to version 5.8) distributing data to thick client type computers located throughout the plant.

The internal plant communication network is a fiber optic-based Ethernet main trunk with copper and fiber optic branch links. The Ethernet network and major hardware components are administered and maintained by City Information Technology (IT) staff, not by WTP personnel. Communications with remote water treatment system facilities also use this City-owned Ethernet network. The remainder of the remote facilities communicate using a Motorola MOSCAD radio and PLC system that communicates directly with the SCADA software via an RS-232 link. This radio frequency is shared with County emergency services.

The Input/Output, controllers/PLC quantities and communication infrastructure information provided below is the current hardware/configuration and should be used for reference only. It is expected that the DB will undertake a thorough review of existing facilities and provide recommendations for full or partial replacement of equipment.

A major technical requirement of the project is to replace all “sunsetting” hardware which at a minimum includes the PLC-5 Series PLCs. The final scope for equipment replacement will be developed in a consensus between Owner and DB as part of the workshops.

The City SCADA system presently has the following hard-wired Input/Output Counts:

- Analog Inputs: 446

- Analog Outputs: 76
- Digital/Discrete Inputs: 1352
- Digital/Discrete Output: 2607

Please refer to **Table 1 AAWTP PLC and Controller List** for further details. This list includes information related to the WTP, remote locations and Dams. It also includes guidance on PLC replacement, communications and process description/location. The guidance is only for reference.

The City presently has a mix of Motorola MOSCAD radio communication infrastructure, fiber optic private network, and Ethernet radio private network.

TECHNICAL SECTIONS

1. PLC Panels/Wiring/Drawings
2. Communications and Security
3. VT SCADA - Control Screens
4. Network
5. Server Hardware/Data Storage
6. Rockwell Logix – PLC programming
7. Analytics and Integration

1. PLC Panels/Wiring/Drawings

As part of the project PLC panels, wiring and drawings will be identified and reviewed. This task will include field visits to both the WTP and the remote sites. The DB will make recommendations for improvements to the control systems and will be reviewed with the Owner and Owner's Advisor. These recommendations will be discussed in workshops.

Topics to be discussed in the four (4) PLC panel workshops include, but are not limited to the following:

- PLC and associated communications and I/O module requirements
- Uninterruptible power supply
- Major control panel hardware such as network switches/fiber interface, DC power supply, relays, and wired components
- Suggested method of PLC panel replacement such as complete replacement, subplate replacement, conversion kit, or equipment-only replacement
- Major PLC or SCADA programming changes to be incorporated into the new PLC program (if applicable)

P&ID Drawings

The DB shall develop draft Piping and Instrumentation Diagram (P&ID) drawings prior to issuance of the Guaranteed Maximum Price (GMP). P&ID drawings shall be developed for each of the panels and shall follow the latest ANSI/ISA 5.1 standards.

The following items will be identified and reviewed by the DB. These items serve as minimum and DB is required to make recommendation or confirmation on the project approach.

- Basic Wiring Diagrams and Design Requirements – Submit prior to GMP

- Basic wiring diagrams including replacement approach shall be provided prior to the GMP. They will include one of the following replacements techniques:
 - Complete Backplane Replacement
 - Complete Enclosure Replacement
 - Rockwell/Phoenix Prewired Replacement System
 - Sub-Panel/Partial Replacement
 - Processor “Brain” Replacement
 - Conversion to I/O Rack
- Minimum requirement and equipment to be provided at each panel may include:
 - Dynamic Switching Uninterruptable Power Supply with 30-Minute Run Time
 - Windows Based Touch Screen, size to be determined.
 - 15% spare I/O – 120 Volt and Dry Contact
 - 25% spare I/O – Analog In and Out Signals
 - Allen-Bradly Logix Processor
 - Hot Swappable Processors
 - Standardized Tagging
 - Terminal Strips
 - UL compliant – 508A Industrial Panels
 - Minimum #16 Wiring for Non-Analog Signals
 - Minimum #18 Wiring for Analog Signals
 - Segregation of Signal Types per IEEE Standards
 - As-Built Drawings

Conduit Plan View

The DB shall develop conduit plan view drawings for any additional premise wiring. These drawings shall be submitted to the Owner and Owner’s advisor and will become part the as-built drawing submittals.

2. Communications and Security

The DB shall complete the following;

- Present guidelines for Owner and Owner’s Advisor review. The guidelines shall be in accordance with the AWWA Security Standards.
- Conduct a security workshop related to AWWA Security Standards.
- Develop a security plan based on AWWA Security Standards and feedback from the Owner and Owner’s Advisor, document deviation from the recommended AWWA Security Standards.
- Design and implement SCADA software security practices. During the security workshop, present the limitation and capabilities of an open network. Present the benefits of a closed network.
- Design and apply technology for sharing data among City Departments and General Public. During the security workshop present the limitation and capabilities of sharing technologies and the associated risks.
- Design and apply technology for using tablets/laptops on closed and secured Wi-Fi network. During the security workshop present the limitation and capability of this technology.

Topics to be discussed in the workshop include, but are not limited to the following:

- Applicability of AWWA security standards

- SCADA software security capabilities
- Sharing data with other websites including the City website
- PLC and PICS (SCADA) network layout
- Use of Wi-Fi tablets on PLC and PICS (SCADA) networks
- FERC requirements for dam and hydro locations

3. Control Screens VTScada HMI Package

The following items will be identified and reviewed by the DB. These items serve as minimum and DB is required to make recommendation or confirmation on the project approach.

- The DB shall conduct a workshop, develop, confirm and implement the following HMI standards.
 - Color Standards – Fixed and Animation
 - Setpoint and Button Interface
 - Menu Hierarchy
 - Standard Information
 - Alarming and Sound
 - Animation Techniques
 - Operator Notes
 - Interfacing with WEB, LIMS, Main Saver (CMSS) and Yellow Fin
 - Historian Configuration
 - Run Time Configuration
 - Thin Clients
- The DB shall include in the GMP the HMI standards that are developed during the workshop.
- The DB shall design and program all HMI interfaces in VTScada by Trihedral.

Topics to be discussed in the workshop include, but are not limited to the following:

- Animation color standards for running, stopped, and fault
- Setpoint and button interface such as the use of popups
- Menu location and use
- Information to be included in every screen
- Alarms and sound
- Various animation-related topics such as pipe color change and tank level indication

4. Network

The following items will be identified and reviewed by the DB. These items serve as minimum and DB is required to make recommendation or confirmation on the project approach.

- The DB shall conduct a workshop, develop, confirm and implement the following Network related systems.
 - License Radio Topology to Provide Redundancy to City's Fiber Network
 - VLAN vs. Separated Networks (FERC Licensed Structures)
 - Network Topology Configuration
 - Redundancy and Reliability
 - Limitations with PLCs and Network Topology
 - Wireless Internal Radio System
 - Fiber Optics

- Network Management Including Alarms
- The DB shall include in the GMP the HMI standard that are develop during the workshop.
- The DB shall provide and make functional the network requirement based on the workshops.

Topics to be discussed in the workshop include, but are not limited to the following:

- Review and discuss the existing WTP network configuration (WTP and remote sites)
- Proposed wireless technology and redundancy to the City's fiber network
- VLAN versus separated networks (FERC regulated facilities)
- Network topology configuration
- Redundancy and reliability
- Limitations with PLCs and network topology

5. Server Hardware/Data Storage

The following items will be identified and reviewed by the DB. These items serve as minimum and DB is required to make recommendation or confirmation on the project approach.

- The DB shall conduct a workshop, develop, confirm and implement the following Server Hardware/Data Storage related systems.
 - Municipal Standards
 - Virtualization – Impacts on VTScada
 - SCADA Interface with City Server, LIMS and CMSS
 - Server Hardware Based on VTScada Requirements
 - Data Management and Storage
 - Network Configurations
- The DB shall include in the GMP the server hardware/data storage standards that are develop during the workshop.
- The DB shall provide and make functional the server hardware and data storage requirements based on the workshops.

Topics to be discussed in the workshop include, but are not limited to the following:

- Discussion with the City IT staff regarding City standards, and hardware and software preferences
- Virtualization – Impacts on VTScada
- Current SCADA interface with the City server, LIMS, and CMSS
- Integration issues
- Server and network configurations
- Approach to databases and the sharing of data between them
- Client computer requirements, reuse of existing equipment, and standardization
- Server and client security, virus protection, software updates, etc.

6. Rockwell Logix – PLC Programming

The following items will be identified and reviewed by the DB. These items serve as minimum and DB is required to make recommendation or confirmation on the project approach.

- The DB shall conduct a workshop, develop, confirm and implement the following Rockwell Logix – Programmable Logic Controller (PLC) related systems.
 - Revision Control and Storage
 - Naming System and Approach
 - Logic Programming Approach
 - Communication and Data
 - Recovery from Faults and Outages
- The DB shall include in the GMP the Rockwell Logix – PLC Programming standard that are developed during the workshop.
- The DB shall conform to IEC standard 61131-3 for all programming approaches. The DB shall submit copies of the programs prior to installation for confirmation.
- The DB shall provide and make functional the PLC programming for the location detailed in the PLC Panels/Wiring/Drawings section based on the workshops.

Topics to be discussed in the workshop include, but are not limited to the following:

- Revision control and storage
- Naming system and approach
- Logic programming approach
- Communication and data
- Recovery from faults and outages

7. Analytics and Integration

The following items will be identified and reviewed by the DB. These items serve as minimum and DB is required to make recommendation or confirmation on the project approach.

- The DB shall conduct a workshop, develop, confirm and implement the following Analytics and Integration related systems.
 - Complete exchange of data with the City’s existing LIMS
 - Complete exchange of data with the City’s existing Mainsaver CMMS
 - Complete exchange of data with the City’s proposed Yellow Fin Analytic package
- Evaluate Analytic Forecasting capabilities including the following.
 - Pump and Motor Repair
 - Chemical Feed System
 - Maintenance Programs
 - Sensor and Field Instrumentation Calibration and Replacement
- The DB shall include in the GMP the Analytic and Integration developed during the workshop.
- The DB shall conform to industry standard for data exchange between system.
- The DB shall provide and make functional the Analytics and Integration into the proposed and existing systems based on the workshop.

Topics to be discussed in the workshop include, but are not limited to the following:

- Complete exchange of data with the City’s existing LIMS
- Complete exchange of data with the City’s existing Mainsaver CMMS
- Complete exchange of data with the City’s proposed Yellow Fin Analytic package
- Analytic forecasting including pump and motor repair, chemical feed system, maintenance programs, and sensor & field instrumentation calibration & replacement

Table 1
AAWTP PLC and Controller List

Local Active Control Panels with PLC-5 Controllers

Controller Series	Description	Communications	Notes
PLC-5	C1 Control Panel	Local Network	PLC to be replaced as a minimum
PLC-5	C2 Control Panel	Local Network	PLC to be replaced as a minimum
PLC-5 (RIO)	RIO-C2 Control Panel	Local Network	PLC to be replaced as a minimum
PLC-5	HS Control Panel	Local Network	PLC to be replaced as a minimum
PLC-5	OZ Control Panel	Local Network	PLC to be replaced as a minimum
PLC-5 (RIO)	RIO-OZ Control Panel	Local Network	PLC to be replaced as a minimum
PLC-5	P1 Control Panel	Local Network	PLC to be replaced as a minimum
PLC-5	P2 Control Panel	Local Network	PLC to be replaced as a minimum
PLC-5	FP Control Panel	Local Network	PLC to be replaced as a minimum
PLC-5	Control Panel (F1 PLC)	Local Network	PLC to be replaced as a minimum
PLC-5	Control Panel (F2 PLC)	Local Network	PLC to be replaced as a minimum
PLC-5	Control Panel (F3 PLC)	Local Network	PLC to be replaced as a minimum
PLC-5	EQ Control Panel	Local Network	PLC to be replaced as a minimum

13 Local Active Control Panels with PLC-5 Controllers

Local Active Control Panels with CompactLogix Controllers

Controller Series	Description	Communications	Notes
CompactLogix	LS #1 CP	Local Network	
CompactLogix	LS #2 CP	Local Network	
CompactLogix	WHS Main CP	Local Network	
CompactLogix	LOX Control Panel	Local Network	To be Replaced 2018 by Owner
CompactLogix OZ	#1 Panel	Local Network	
CompactLogix OZ	#2 Panel	Local Network	
CompactLogix OZ	#3 Panel	Local Network	
CompactLogix OZ	#4 Panel	Local Network	
CompactLogix	DU #1 Panel	Local Network	
CompactLogix	DU #2 Panel	Local Network	
CompactLogix	SG PLC Panel	Local Network	

11 Local Active Control Panels with CompactLogix Controllers

Remote Active Control Panels with CompactLogix Controllers

Controller Series	Description	Communications	Notes
CompactLogix	BP CP	Ethernet Radio	
CompactLogix	SI CP	Fiber Optic	
CompactLogix	MET CP	Fiber Optic	
CompactLogix	LPS CP	Fiber Optic	To be completed in 2018
ControlLogix (Master)	25W (MCP)	Ethernet Radio	Radio to Fiber at AAA
ControlLogix (RIO)	741W (RIO#2)	Ethernet Radio	RIO Fiber to 25W
ControlLogix (RIO)	21W (RIO#1)	Ethernet Radio	RIO Fiber to 25W

7 Remote Active Control Panels with CompactLogix Controllers

Remote Active Control Panels with MOSCAD Radio Units

Controller Series	Description	Communications	Notes
MOSCAD	NC PS CP	Trunking Radio	
MOSCAD	NC ET CP	Trunking Radio	
MOSCAD	GF PS CP	Trunking Radio	
MOSCAD	MW CP	Trunking Radio	
MOSCAD	EV CP	Trunking Radio	
MOSCAD	SV CP	Trunking Radio	
MOSCAD	HPV CP	Trunking Radio	
MOSCAD	JBP CP	Trunking Radio	
MOSCAD	CCP CP	Trunking Radio	
MOSCAD	GP CP	Trunking Radio	
MOSCAD	MPP CP	Trunking Radio	
MOSCAD	GRP CP	Trunking Radio	
MOSCAD	SMV CP	Trunking Radio	
MOSCAD	SMP CP	Trunking Radio	
MOSCAD	SLB CP	Trunking Radio	
MOSCAD	SWV CP	Trunking Radio	
MOSCAD	AAT CP	Trunking Radio	
MOSCAD	PTS CP	Trunking Radio	

18 Remote Active Control Panels with MOSCAD Radio Units

FERC Remote Active Control Panels with MOSCAD Radio Units

Controller Series	Description	Communications	Notes
CompactLogix to MOSCAD	BHF CP	Trunking Radio	
CompactLogix to MOSCAD	SHF CP	Trunking Radio	
CompactLogix to MOSCAD	BD CP	Trunking Radio	
CompactLogix to MOSCAD	GD CP	Trunking Radio	

4 FERC Remote Active Control Panels with MOSCAD Radio Units

Non-FERC Remote Active Control Panels with MOSCAD Radio Units

Controller Series	Description	Communications	Notes
CompactLogix to MOSCAD	AD CP	Trunking Radio	
CompactLogix to MOSCAD	GD CP	Trunking Radio	

2 Non-FERC Remote Active Control Panels with MOSCAD Radio Units

55 Grand Total of Active Control Panels

Phase 1B – Non-SCADA Components

The control room space will be modified to accommodate the City's operational and functional requirements.

The following components/features shall be part of these non-SCADA modifications:

- Demolition (removal of existing partitions, ceiling, lighting, plumbing and electrical)
- Partitions (metal studs/gypsum wall board/partition)
- Glazing (metal studs/gypsum wall board with glazing)
- Ceiling (Acoustic tile ceiling grid)
- Wall finishes (paint on gypsum wall board)
- Floor finish (TBD)
- Electrical outlets (120V 20A circuits)
- Plumbing (for replacement or relocated kitchen sink)
- Fire protection (relocated sprinkler heads)
- Fire alarm (relocated existing, add devices to existing system)
- HVAC (relocated existing diffusers)
- Lighting (recessed LED lighting)
- Doors/frames/hardware (glazed doors in wood frames)
- Casework (painted wood casework)
- New glass skylight
- Furnishings per Owner's schedule (including desks, counters, consoles, bookcases, tables, chairs, appliances)

The preliminary proposed concept for the control room modifications is shown on the attached exhibit. This concept is provided for reference only and the final layout will be developed through consensus by DB and Owner during the workshops.

Control Room Proposed Modifications

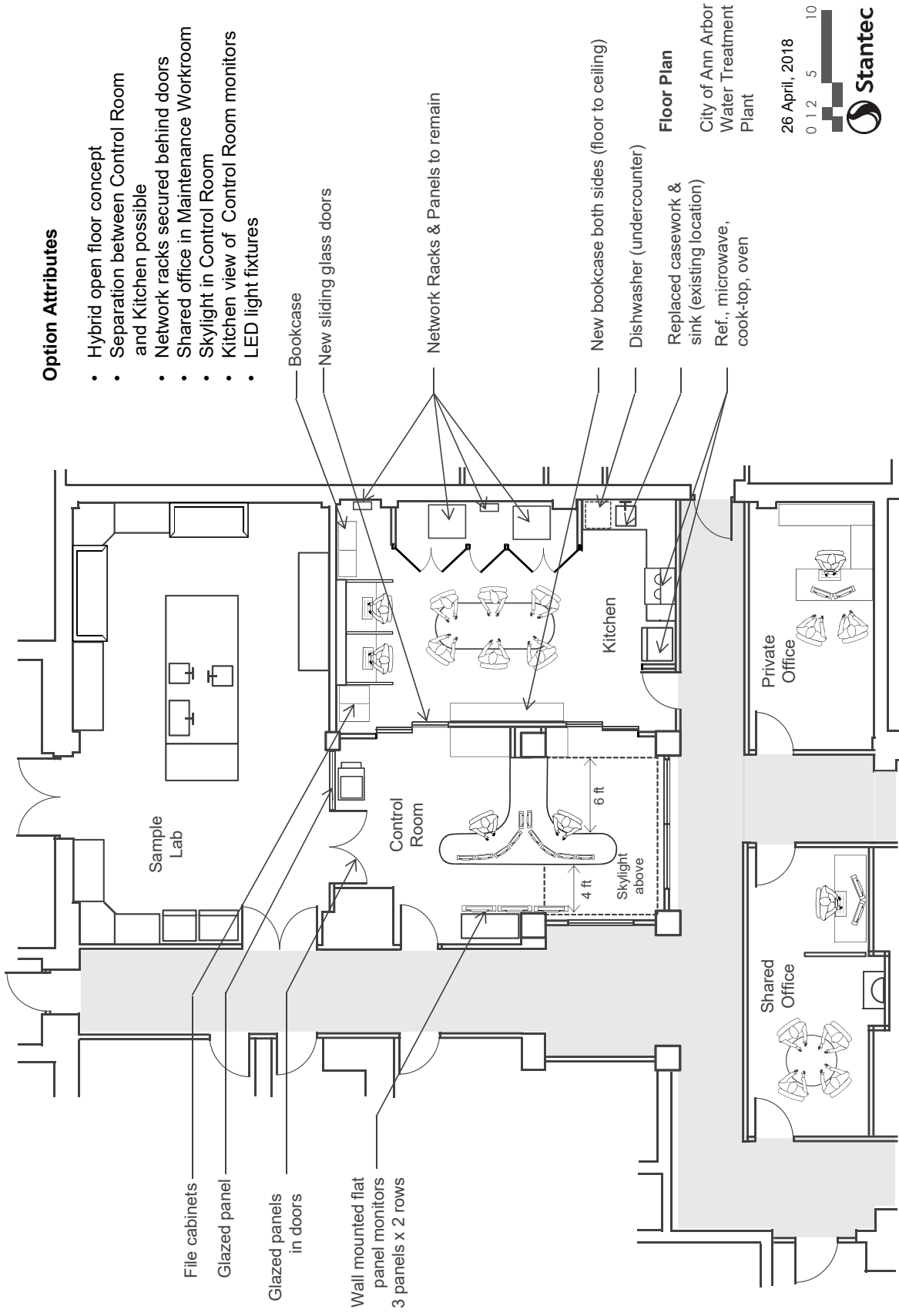


Exhibit B

Scope of Design-Builder Services

In case of explicit revisions to the Proposal's Project Approach section that differ from the RFP Scope of Design-Builder Services – Appendix B of the RFP – and that are agreed to by the City, these revisions shall supersede the RFP requirements. However, any requirements in Appendix B of the RFP that are not explicitly revised in the Project Approach section of the proposal shall still apply.

QUALITY
INTEGRITY
SAFETY
FAMILY



SCOPE OF DESIGN-BUILDER SERVICES

Submitted to:
City of Ann Arbor

December 19, 2018



J. RANCK
ELECTRIC, INC.



TETRA TECH



Commerce Controls
Incorporated



DESIGN/BUILDER TEAM

J. Ranck Electric: JRE will be responsible for overall project management of this job, along with prep and installation of all electrical wirings, components and necessary electrical modifications required for the new or existing panels.

Tetra Tech: Tetra Tech will assist in the project management and design and prepare all construction documents as the lead engineer on this project, working closely with Commerce Controls.

Commerce Controls: Commerce Controls is the System Integrator and will be responsible for the controls design, PLC logic development and will also manufacture new control panels and provide on-site services to modify existing control panels and will participate in system commissioning.

Konwinski Construction: Konwinski Construction will be responsible for all control room building modifications, mechanical, plumbing and architectural changes needed.

JRE's overall management approach centers around open communication with all members of the team. We will begin the project with an initial project workshop to outline communication protocols, ground rules and project expectations. Once that is complete, a series of design meetings/workshops will finalize the project details and weekly progress meetings will be held throughout the project time line. Communication and documentation is the key to ensuring a seamless and successful project.

KEY PERSONNEL

A matrix has been included on page 5 showing our staff members, their experience, and percentage of time proposed to the Ann Arbor project. Summary paragraphs are included below and full resumes are available in Appendix B.

J. RANCK ELECTRIC

- **Bill Diment - Project Manager:** Diment will be the lead point of contact for the entire project. He will monitor all work progression, budget, planning/scheduling, execution and communication. Diment will work closely with our site foreman and team members to monitor all initiatives in the scope of work from design to procurement, to final job closeout.
- **Ken Badour - Project Foreman/Field Superintendent:** His experience with prior SCADA projects makes him our key foreman for all projects like this. Badour is responsible for all on-site management of field labor and detailed work operations related to electrical installation.

TETRA TECH

- **Brian Rubel, PE, PMP - Senior Project and Operations Manager:** Oversees Tetra Tech's municipal practice in the Midwest. He has successfully managed over 12 multidisciplinary projects for the City of Ann Arbor Water Treatment Service Unit. Rubel is an Ann Arbor property owner.

- **Gene Jones, PE - Electrical Engineer and SCADA Expert:** Jones was the lead engineer on dozens of SCADA projects such as the Jackson PLC conversion and Saginaw security project. His electrical engineering background allows him to review and troubleshoot all aspects of a SCADA project.
- **Mick Jones, PE - Licensed Engineer and SCADA Specialist:** With many successful projects across the country, he has completed nearly identical PLC replacements for dozens of communities. Based in Ann Arbor, his national work will pay dividends for his hometown.
- **Bob George - Cybersecurity:** He is a recognized expert in the design of security systems for drinking water utilities. George is the author of the AWWA manuals guiding the security and protection of SCADA systems.
- **Ron Reinhard and Stephen Lozen, SCADA Programming/Integration Experts:** Both are based in Ann Arbor and are sought nationally as SCADA programming/integration experts. Rob and Stephen are advisors for dozens of water utilities who place their trust in them to design and troubleshoot their control systems. Their Ann Arbor stationing will provide great efficiency to Ann Arbor as commissioning/start-up can demand several, short intervals of time. Rob and Stephen can check in at the Ann Arbor WTP on their way to or from their other local assignments.
- **Andrew Turbett, RA - Architect:** He has experience in a wide variety of building use groups and construction types. Turbett has key experience creating remodeled, functional spaces to blend in with existing buildings for utility use.
- **Rob Ivanovich, PMP - Senior Project Manager:** He is a national SCADA leader and has consulted with some of the largest municipalities in the United States. Ivanovich will perform QA/QC on both Tetra Tech's work and the design-builder's work.
- **Bill Paison, PE - Electrical Engineer:** Paison is based in Ann Arbor and is a seasoned electrical engineer. He provided electrical engineering on Ann Arbor's Steere Farm project and is familiar with Ann Arbor's staff, standards and expectations.

COMMERCE CONTROLS

- **Steve Sherwood - Senior Project Manager:** Reports to the Director of Engineering & Quality and is available for consultative and technical advice and will regularly review the overall health of the project.
- **Tony Gohl - Project Manager:** Reports to the Senior Project Manager and will be the primary point of contact for CCI throughout the project. Gohl has the responsibility to schedule, secure resources and deliver the project on time and within budget. He has the authority to make adjustments where appropriate to ensure that project quality is maintained and that our scope of work (contract) is adhered to. He will participate in design workshops and will oversee all areas of the project including submittals, deliverables, testing and deployment and will attend and client meetings to confirm expectations are being met. Gohl will provide significant input in the development of the GMP at the conclusion of the 30 percent design phase.
- **Vijay Krishnan - Senior Design Engineer:** Reports to the Project Manager and will play a lead role for CCI in the various design workshops and will participate in and/or conduct field surveys to obtain "As Installed" information and prepare the appropriate findings reports. Krishnan will work with our Project Engineers and CAD department to ensure that the project and CCI standards are adhered to and will assist in the development of the GMP at the conclusion of the 30 percent design phase.
- **Mark Kosciolek - Project Engineer:** Reports to the Project Manager and will participate in the appropriate design workshops and provide input with respect to best practices. He will be CCI's lead Project Engineer and will be primarily responsible for equipment selection and controls design during the construction phase. Kosciolek will also be our lead PLC programmer and will be significantly involved during site commissioning

and operator training.

- **Eric Richard – Project Engineer:** Reports to the Project Manager and will participate in the appropriate design workshops and will provide additional design support to Mark Kosciolek during project peak activities during the construction phase. Richard will also assist in site commissioning.
- **Mike Minge - Field Engineer:** Reports to the Project Manager and will primarily be engaged during the construction phase of the project. Minge will calibrate field instruments and participate in field commissioning including point to point and loop check out. He will also perform on site panel modifications including the installation of the PLC-5 to ControlLogix conversion system.
- **Mark Holt - Field Engineer:** Reports to the Project Manager and will primarily be engaged during the construction phase of the project. Holt will provide additional field support to Mike Minge during peak site activities and will assist with on site panel modifications including the installation of the PLC-5 to ControlLogix conversion system.

KONWINSKI CONSTRUCTION

- **Andy Theisen - Project Manager:** Responsible for all labor and management in regard to the remodeling of the physical control room.

MANAGING KEY PERSONNEL

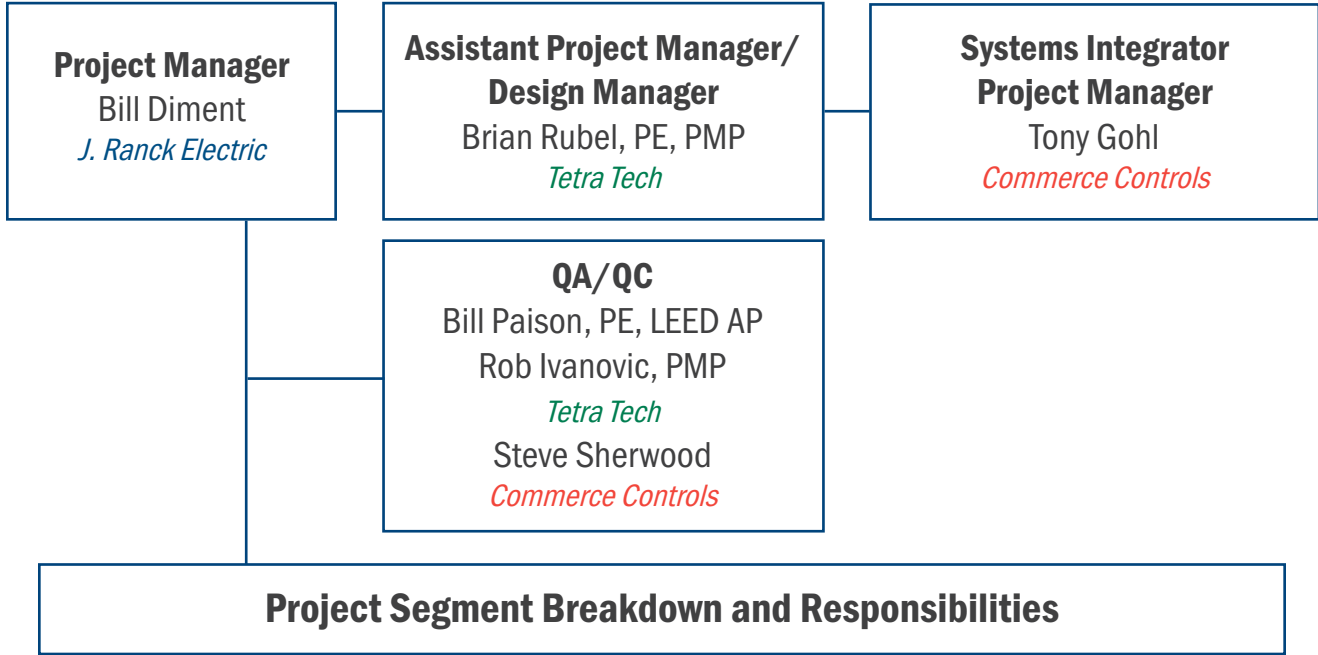
As our team has worked together on other projects, managing is ideally done with a principle of clear, open communication. JRE believes in carefully defining the expectations of each team member in written agreements and closely monitoring the performance of each of the team members. Monitoring will be done through conversations reinforced with our own observations. We believe in the value of having a field superintendent on-site daily whenever our employees or a subcontractor is on site.

EXPERIENCE

Our team features Michigan's leading integrator with CCI, Michigan's leading designer (and prominent integrator) with Tetra Tech, and one of the most responsive and experienced electrical contractors with J. Ranck Electric. Our experience is extensive. We have included a summary table showing many of our projects and provided detailed descriptions of many of the following.

[PROJECT TEAM, ORGANIZATIONAL CHART]

This organizational chart represents the staff breakdown for our project team regarding their particular duties related to the Ann Arbor Progressive Design-Build for WTP SCADA Modernization.



<p>SCADA Design Mick Jones, PE Gene Jones, PE <i>Tetra Tech</i></p>	<p>Panel Design and Construction Vijay Krishnan Mark Kosciolek Eric Richard Mike Minge Mark Holt <i>Commerce Controls</i></p>	<p>Server Hardware/Data Storage Mick Jones, PE Gene Jones, PE <i>Tetra Tech</i></p>
<p>Electrical Design Gene Jones, PE <i>Tetra Tech</i></p>	<p>Control Screen Design Stephen Lozen <i>Tetra Tech</i> Mark Kosciolek <i>Commerce Controls</i></p>	<p>PLC Programming Mark Kosciolek Eric Richard <i>Commerce Controls</i></p>
<p>Control Center Design Gene Jones, PE Andrew Turbett, RA <i>Tetra Tech</i></p>	<p>Network Design Mick Jones, PE Gene Jones, PE Bob George, CISSP <i>Tetra Tech</i></p>	<p>Electrical Construction Ken Badour <i>J. Ranck Electric</i></p>
<p>CyberSecurity Bob George, CISSP <i>Tetra Tech</i></p>	<p>Control Room Construction Andy Theisen <i>Konwinski Construction</i></p>	
<p>Analytics and Integration Rob Reinhard Stephen Lozen <i>Tetra Tech</i></p>		

[SCOPE OF DESIGN-BUILDER SERVICES]

The city of Ann Arbor Water Treatment Plant's (WTP) has decided to modernize the SCADA system. The modernization will improve functionality, reliability and data collection, as well as the overall system performance. As part of the project, the City is seeking a design-builder who will execute project delivery through a progressive design-build process. Our design-build team will work collaboratively with the City, Owner's Advisor and software vendor to implement the project. This increased collaboration will result in an optimum solution for the replacement for the aging hardware/software and an updated SCADA control room to increase operator efficiency.

The current WTP control system, designed and implemented over 20-years ago, is primarily comprised of Allen-Bradley PLC-5 model programmable logic equipment including PLC's, I/O cards and related equipment. Allen-Bradley is retiring the majority of the PLC-5 line of programmable logic equipment and at the end of 2017, PLC-5 stock items are largely not available. The WTP SCADA System Modernization Project will eliminate this risk to the City by replacing obsolete equipment with both new hardware and software components. More specifically, the scope of work to accomplish this modernization includes the following:

- PLC replacement,
- SCADA software replacement with VTScada by Trihedral.
- Hardware/software integration,
- Integration of CMMS and LIMS systems,
- Computer hardware replacement,
- Additions of mobile connectivity and system cyber security enhancements,
- Graphical control screen enhancement,
- Hardware/software testing,
- Remote facility radio system assessment and upgrade
- Upgrades to the control room and process lab areas to accommodate the control system and enhance the operator efficiency all while providing another 20 years of reliable service.

The WTP SCADA System Modernization Project is a critical project for the city of Ann Arbor. Our team's deep experience and understanding of the City's facilities and system uniquely qualifies us as your design-builder for numerous reasons, including the following as more specifically discussed below:

Uninterrupted Service (Work Sequencing) and Adaptability for Future

Our team fully understands control systems are uniquely critical to water treatment facilities. While every treatment process is designed to be out of service at some point, a control system cannot be fully out of service at any time. The control system needs to reliably serve the plant operators 24 hours a day, seven days a week, 365 days a year.

The project must plan for conversion of all systems through the upgrade, and will be accomplished through the preparation of the 30 percent design and Guaranteed Maximum Price (GMP) documents during the phase one scope.

As part of the initial planning effort, our programming and engineering team will provide recommendations for sequencing of construction utilizing proven methods of development of control software and understanding of the critical nature of the associated processes that will minimize disruptions to operations. The recommendations will be further improved and optimized through collaboration with the City's operations staff. Minimizing operational downtime can be accomplished by 1). Programming and testing the entire VTScada HMI system before system startup, 2). Running simultaneously parallel HMI systems (new -Trihedral & old - iFIX) during the PLC migration from PLC-5 to ControlLogix, 3). Use of Rockwell wiring migration components, brand new panel sub-plates or new panels can all be used, 4). messaging between new and old PLC's to allow dual-control functionality, and 5). Use strategic wiring methods for conversion of equipment on an item by item basis. We have found this approach to be beneficial on previous projects involving SCADA system upgrades, such as the city of Jackson WTP project, where the plan resulted in minimal SCADA downtime while maintaining 100 percent operational uptime. The plan will also include consideration for operator training during and after software migration.

Our team has experience upgrading many municipal SCADA systems in recent years and has experience with a multitude of methods to minimize impact to daily operations. As an example, our team has utilized the methods described above on many projects across Michigan and throughout the Country. This has allowed for upgrades on existing systems while maintaining system operability. This is but one example of the creative solutions and experience our team will provide in collaboration with the Owner.

[SCOPE OF DESIGN-BUILDER SERVICES]

The implemented system must also be flexible. The City is on the precipice of a major WTP improvement project of Plant #1 within the next few years. Therefore, the completed SCADA System Upgrade Project must not only account for current instrumentation, but also include scalability and changes that will accompany the future improvements at Plant #1.

Leadership

Our team has the unique qualifications necessary to offer a full spectrum of software and computer engineering design, facility design & build execution and programming services related to the automation of treatment works.

For the past 30 years, our experienced SCADA team has been designing, programming, testing, building and commissioning SCADA projects for collections systems and treatment plants. We are at the leading edge of integrating computers, controllers, local and wide-area networks, instruments and databases to create unified, reliable, and user-friendly information and control systems.

A higher level of control and monitoring requires a thorough design process. Our team has developed procedures for assuring successful results. As part of the collaborative process, our team will work with the City from concept through detailed design and then execute the design with our already set team of professionals.

Our local SCADA programming team consists of professionals with more the 100 years of combined municipal treatment plant SCADA programming experience all right here in Ann Arbor and Novi, Michigan. Our dedicated team staff will work diligently with the City to deliver a state-of-the-art SCADA system.

The root of this project is the age of the City's PLCs. The existing PLCs are no longer supported by Allen-Bradley and conversion to new devices are needed. Our team has performed SCADA software upgrades across the country for more than 20 years and has recently upgraded the PLC-5 type controllers to ControlLogix based systems for several cities in Michigan, including Jackson, Wyoming, Muskegon and Frankenmuth. Our team has also upgraded several similar types of systems across the county. Our programming team members are certified in many of today's leading SCADA software solutions including GE Proficy iFIX, Rockwell PLC-5, Rockwell Studio 5000 Logix Designer, and Trihedral VTScada. Our programming team has also received nationwide recognition for helping co-develop the Rockwell Water/Wastewater software toolkit components and has been programming Rockwell PLC's for over 30 years.

The implemented system must serve the next generation of operators and equipment technology. Utilizing emerging technologies such as mobile devices to enhance operations must be considered. However, the City wishes to balance the promise and benefits of modern technology against the risks associated with new technology. Security is a concern of every water utility. As the opportunity for convenience increases, so does the potential for malicious acts. The SCADA design must balance this goal against security concerns.

Our team recognizes that connecting control systems to other systems can introduce cybersecurity vulnerabilities that can jeopardize critical systems. While control systems in the past have been isolated from other networks to ensure the integrity of the system, the business benefits of using smart instrumentation and data sharing to operate the water system optimally is driving a trend to connect control systems to external systems. The benefits of collecting and analyzing such data can save utilities thousands of dollars and significantly improve overall efficiency. However, if not implemented correctly, such interconnection can open a utility to cybersecurity vulnerabilities. Bob George is the Director of Cybersecurity and Network Infrastructure Services at Tetra Tech and a co-author of the AWWA publication *Process Control System Security Guidance for the Water Sector*. George will put his knowledge to work for Ann Arbor.

Like many water treatment facilities, the City's existing control room was designed in the age where controls were knobs and electrical cabinets. The City desires for an upgraded state-of-the-art control room based on a balance of ergonomic comfort, leading edge but not bleeding edge technology and operator efficiency. Our team has the experience and knowledge across all disciplines to study, collect feedback from the stakeholders and leverage our 30 years of control systems design to create a space conducive to high performance then execute the design into a state-of-the-art environment for operational control.

[SCOPE OF DESIGN-BUILDER SERVICES]

Reducing the Burden on WTP Staff

We also understand that the project must lower the burden on the WTP staff. The WTP are extraordinarily busy with operating the existing facility and implementing many existing capital projects.

So, while the owner's advisor must involve staff at key times, the design-build team must effectively lead the project and keep moving on schedule.

Management & Scheduling

Our team's general philosophy on working with our clients is described below and addresses many items requested in the RFP. Tetra Tech's project management approach is built upon the standards of the Project Management Institute as is summarized in the following paragraphs.

Project Management

Our project management approach focuses on effective communication between our team members and the City to identify and address challenges early in the project, maintain the schedule, and complete work on time and within budget.

- Kickoff and Project Scope Workshop Meeting with city of Ann Arbor. A project initiation meeting will be held at the project start to establish team organization and lines of communication. The scope and schedule will be discussed, specifically the initial and critical path tasks, to set in motion task initiation. This meeting will be used to develop the Project Execution Plan (PEP).
- Project Execution Plan Development. Project objectives must be clear and well defined. We will develop a PEP in accordance with the City protocol that identifies the basic project information and is used as a guide during the project to meet objectives and maintain schedule. The PEP will be monitored monthly to verify that project scope and schedule are being met.
- Internal Team Coordination. Strict and streamlined procedures for internal coordination between disciplines and team members reduces confusion, maximizes deliverable quality, and minimizes potential cost increases and lost time over the length of the project. Our team is focused on coordination, and as such, will perform our duties as an integrated team with integrated services.

PHASE 1: PRECONSTRUCTION SERVICES

Collaborative Approach

While our team brings the experience and expertise needed to successfully execute the project, we will not forget that after the project is constructed, it will be used by the WTP staff for years to follow.

The Tetra Tech and CCI teams have completed numerous projects at the Ann Arbor WTP and understands that successful projects received input from numerous staff at the WTP. The project lends itself to holding several workshops at key steps to gather input from individuals such as Mr. Justin, Mr. Wiczorek, and the operators.

A collaborative project approach is essential to meet and exceed the city of Ann Arbor's project goals. Our team of engineers, designers and programmers are hands-on and plan to meet, discuss, and study the project topics before, during and after the design process takes place and will continually refine the project deliverables to meet and exceed expectations.

A collaborative approach will allow our team to identify key issues and we plan to fully utilize meetings, workshops and on-site visits to gather information, discuss topics with City stakeholders and collaborate as a cohesive team to deliver the best product possible.

Workshop-Based Collaborative Approach

The RFP outlines a collaborative approach centered around design workshops with City staff and the Owner's Advisor. We like and have experience with that concept and have tailored our approach to developing the GMP-level design around these workshops. As part of these workshops, agendas will be provided two weeks prior to the meeting for preparation, review and comment. Proposal space limitations prevent us from listing all our ideas on making this project a success.

Planned Workshops:

1. Kickoff and Project Scoping

[SCOPE OF DESIGN-BUILDER SERVICES]

2. PLC Panel (one workshop)
3. Communication and Security
4. Network/Server (one workshop)
5. Screens/Logix (one workshop)
6. Analytics and Integration
7. Control Room Design (two workshops and additional time to talk to off-hours staff)

A primary consideration with these workshops will be the project staging to ensure the SCADA system remains functional and reliable during construction.

Resulting from these workshops will be numerous alternatives that can be worked into the completed project. However, each alternative will be competing for a share of the City's limited budget. At the kickoff meeting our team will present means to score and rank alternatives both among each project task and across tasks. Such considerations as cost, security, reliability, time/energy efficiency, user convenience on others can be used to score each alternative to assist with eventual decision making on which project alternative makes it into the construction phase.

Throughout the workshop phase, our team will keep a running tally of project costs to guide decision making. Our team is exceptionally qualified to complete this given the background of JRE and CCI in implementation. Thus, when the GMP is being developed, it will be a matter of refining the prior cost opinions.

P&ID Drawings – Draft P&ID drawings will be prepared for review prior to preparation of the GMP.

Conduit revisions - Tetra Tech will lead the preparation of conduit revisions needed for PLC replacement.

1. Kickoff and Project Scoping

Our team will conduct an initial project workshop that lays the groundwork for communication protocols, ground rules, project expectations, critical success factors, and project charter. This meeting is an opportunity for our project team to get a broader understanding of the project background, business drivers, existing issues, developed thought processes that led to the project initiation and how our team can facilitate a successful outcome.

This meeting will help establish project vision, decision-making criteria, and deliverables as well as set the course for the important work ahead by establishing clear lines of communication and a solid path forward.

2. PLC Panel

Our team will facilitate a workshop with the City to evaluate the existing PLC control panels and evaluate their present condition as well as determine if they are suitable for continued service. Items such as wiring condition, panel corrosion and environmental factors will be evaluated. Panel replacement, sub-plate replacement and reuse of existing will all be discussed.

As discussed in post interview meeting in regards to equipment cost and markup:

- CCI receives special discounting on Rockwell/Allen Bradley hardware as a result of being a Rockwell Solutions Partner and high volume of hardware purchased. It is our intention to pass all special discounting on to the City of Ann Arbor to utilize the City's budget in the most efficient way.
- In addition, once the PLC workshop is complete and Bills of Material are decided upon we will seek special package pricing for all equipment (Allen Bradley and other) from our local distributor(s). This project specific packaged equipment pricing will also create opportunity to utilize the City's budget in the most efficient way.

3. Communication and Security

Our team will facilitate a workshop with the City IT and SCADA technical teams to evaluate the existing network security architecture, technologies and practices. The focus of this workshop is on the technical requirements and constraints within the IT and SCADA environments, and on the SCADA network perimeter to be implemented. Further discussion on integration, work flow and mobility applications follow.

Our team will review existing physical and cybersecurity measures during the study phase, conduct a security workshop and make

recommendations to ensure that potential exposures are addressed in accordance with leading guidance for water/wastewater utilities including:

- AWWA Cybersecurity Guidance Tool
- NIST Cybersecurity Framework
- NIST SP800-82 Guide to Industrial Control Systems (ICS) Security

Our team will identify strategies for implementing a cybersecurity overlay to enhance existing system security, and a Secure Interconnects with business system. This strategy will reflect items necessary for the efficient WTP operation, maintenance, and data integrity including possible use of internet technology. Physical security measures will be identified for each device to coordinate with existing City practices. FERC requirements for dam facilities will be reviewed. Workshop topics will include:

- Cyber security best practices
- Defense in depth approach (ISA/EIC standards)
- Control system communications and communication alternatives
- RTU alternatives & pros and cons
- IT security requirements
- Secured remote-access
- Public/Private wi-fi

4. Network

We understand the City uses both fiber optic for networking and radio systems using Motorola MOSCAD and other radio communication systems. MOSCAD is an older system and we understand the City desires to assess the current system to modernize the performance and operator efficiency of these sites. Therefore, the project must lead the City through development of a new communications pathways and technologies best suited to the unique land topology the city of Ann Arbor presents. Our team has extensive experience with designing and implementing low and high-speed communication systems for municipal treatment plants and prides itself on highly reliable and cost-effective solutions. Tetra Tech's solutions consisted of just about every communication method available including licensed and unlicensed, low and high-speed radio systems, many types of cellular systems and high-speed single and multimode fiber optic solutions. Our team will study the existing system then collaborate with the City to determine the best solution that applies to each remote facility. Specific items assessed are:

- Remote communication
- Cyber security
- Physical security
- Integration with head-end

Our team will evaluate the pros and cons of upgrading the existing Motorola MOSCAD to the latest Motorola ACE3600 remote terminal unit versus a Rockwell RTU solution. Cost, functionality, protocol support, redundancy/reliability, security, future expansion, smart device integration needs, Owner knowledge-base and other items will be explored by our expert team to determine the best solution for Ann Arbor.

5. Server Hardware/Data Storage

We envision this workshop to be critical to the overall long-term success of the modernized SCADA system. Our team will conduct this workshop with the outcome of detailing a highly redundant but economically manageable SCADA computing/data storage system. The meeting will also provide specs on server hardware, data storage, and required licensing geared towards the City's preferred vendors; also to discuss what items the city will procure or add to their existing license agreements. We will discuss the IT needs for the improved system including virtualization ideas, disaster recovery and operational performance of the new VTScada software. This is a task that our team has completed on hundreds of SCADA systems and has implemented many low to high complexity virtualized SCADA systems over the past five years.

Through that experience, Tetra Tech recognizes that the data demands of a SCADA system only increase with time. On the City's near-term horizon is the replacement of plant #1. The new SCADA system will need to be designed to accommodate the I/O data from the modern plant that will replace plant #1. Additionally, remote sensing of water quality in distribution systems is a foreseeable event for many utilities. Along with this remote sensing would come the necessity to manage more data within the SCADA system. This is just a further reason to design the system with the future in mind.

6. Screens

This task will be jointly conducted by our experienced Tetra Tech and CCI SCADA team. Our team has decades of SCADA programming experience including experience and certification with Trihedral VTScada. Standards will be outlined at this stage and its importance should not be overlooked. This system will be used for 20 years or more and the screen standards are an everyday/every-hour/every-minute interaction point for the operations staff. Ideas such as high-performance graphics to improve situational awareness, alarm rationalization to more effectively manage alarms, and mobile functionality to increase operator effectiveness will all be discussed as part of this workshop and implemented as part of the overall system conversion standards.

Workshop topics to include:

- Graphic conversion standards (meet or exceed existing SCADA graphics/user interface and establish new guidelines for SCADA system)
- High performance graphic concepts
- Data presentation
- Alarm organization and priorities
- Trending and historical data

By having an experienced SCADA programming team involved with this task, the City will be assured that the WTP screens are both visually like the existing screens but will incorporate functional improvements developed during the collaborative workshops. Our team will guide the City through the workshops and functionality of VTScada and how standardizing the PLC control logic can greatly enhance the VTScada operation.

7. Logix – PLC Programming

Our team will help facilitate a discussion on Rockwell Logix programming and specifically standards that will be developed and documented as part of this project. Our team has extensive experience programming the Logix 5000 platform and together we can outline system Logix standards that will be developed and used for many years. The key topic of this discussion will be to what extent is the existing EMA developed software standards are to be migrated or changed to accommodate the rich feature set offered with the Logix 5000 platform and how integration of that extensive feature set with the VTScada HMI software can greatly benefit operator information as well as ease future implementation and troubleshooting. At a minimum a straight conversion from PLC-5 to Logix can be achieved while retaining the basic EMA developed standardization but the Logix 5000 offers such a wide array of logic upgrade ability it will be prudent to discuss the incorporation of the Logix 5000 add-on-instructions (AOI) to add functionality where appropriate. Workshop topics to include:

- Logic programming approach and PLC conversion standards
- Add-on-instruction benefits
- PID and indexed addressing conversion
- Tag name conventions
- Communication and data standards
- Revision control and storage

8. Analytics and Integration

Our team will evaluate the implementation of the Mainsaver API connection tools (Mainsaver Connect) to connect the Mainsaver CMMS system to SCADA. Mainsaver connect would allow data transfer of equipment runtime, equipment running status, alarming and other information to be used for condition-based maintenance instead of the typical calendar based maintenance plans. Data can also flow from Mainsaver to SCADA, such as indicating process components removed or added to service. Other software applications such as laboratory reports or laboratory information management systems (LIMS) can be integrated into SCADA software through the VTScada ODBC server connectivity tools that will allow Enterprise business systems such as CMMS and LIMS systems direct access to the whole SCADA process history. Sometimes custom SQL queries, reports, forms and other custom software needs to be developed and our team has several expert SQL system programmers to execute this complex work. Furthermore, modern software and instruments will allow us to squeeze more intelligence out of operations than before. For our Wyoming MI WTP project, our team designed and implemented programming that allow chlorine contact time and pump efficiency to be maintained in real-time, leading to quicker and better operational discussions. Software can allow many more advanced diagnostics to be coordinated with SCADA and alert operators, such as motor vibration.

[SCOPE OF DESIGN-BUILDER SERVICES]

In addition, our team has experience with integrated web-based O&M manual development allowing operators the ability to view operations manuals from any web browser or be imbedded within VTScada for quick viewing of operations manuals from any SCADA workstation.

Other Workshop topics to include:

- Data exchange of data with City's existing LIMS.
- Data exchange of data with City's existing CMMS.
- Data exchange of data with City's existing Yellow Fin Analytic package.
- Evaluate Analytic forecasting capabilities for pump and motor repair, chemical feed systems, maintenance programs and sensor & field instrumentation calibration and replacement.
- Discussion of reporting operation daily reports, monthly DEQ reports, specialty reports (i.e. chem usage, electrical, etc..)

9. Control Room

The Ann Arbor WTP operators also run analytical work in the adjacent sample laboratory to assist with making operational decisions. As witnessed at our September 19, 2018, preproposal meeting, operation staff run between these rooms dozens of times in the course of their day. The legacy control panel makes up a common wall between these two spaces. The City desires to remove this control panel and this removal will change not only the electronic controls but also the physical space of these two rooms.

We will evaluate rerouting of the existing control panel upper and lower conduits to other nearby control panels. Above ceiling and below floor junction boxes may need to be designed to re-route the retained functionality from the old panel to new or existing panels. Existing fiber optic or network cables can be designed to utilize additional patch panels to re-route critical communication cables to existing wiring closets or panels.

Our work on this task will begin with a space planning workshop with our project architect to better understand the work needs of operation staff in each space. Such items as the following will be discussed:

- Ergonomics (work spaces, lighting, furniture needs)
- Flooring needs
- Door and window (skylight) locations
- Removal of obsolete equipment
- Foot traffic patterns
- Technology needs (e.g. mobile HMI)
- HVAC needs
- Space utilization and flexibility

Our team will then utilize a preliminary design process that will allow for several iterations of conceptual control room layouts that will be discussed during a formal workshop. Following the workshop, our team will develop 30 percent design drawings and specifications.

Basis of Design Report

The basis of design report will be based on Owner requirements and incorporate the outcome of each workshop. As discussed earlier, alternatives will be ranked within each project component and across components. It will include a narrative to describe the design teams approach and will set the course for the 30 percent technical design submittal. The basis of design report will also include a preliminary sequence of construction that will be honed with Owner input throughout the entire design process and will lay the groundwork for minimizing plant disruption during construction.

Technical Design Submittal

During the design stages, our team will verify the field conditions, recommend the preferred alternatives, prepare design plans, and related technical specifications, identify permit requirements, provide opinions of probable construction cost, prepare construction schedule, and assemble these into a design package with provide a Guaranteed Maximum Price (GMP) for final design and complete the following tasks by conducting workshops as follows:

- Meeting minutes from workshop meetings with the City
 - Provide minutes that include clear identification of: deliverables, decisions made, decisions needed, discussion topics/notes, any follow-up or action items and the responsible party, schedule/budget impacts, and scheduled/

[SCOPE OF DESIGN-BUILDER SERVICES]

projected draws

- Develop project execution plan (PEP).
- 30 percent design drawings, all disciplines. Some project components, such as the control room, will be advanced to 60 percent prior to the GMP. Other project components, such as panel drawings, are not needed for the development of the GMP and will be deferred to later stages of the project.
- Preliminary specifications
- Specification outlines for all disciplines
- Development of GMP and overall project schedule.
- Construction Sequencing Plan (including training plan)
- Identify and assess applicable permits
- Assist Owner with public communications for the project
- Prepare procurement packages for solicitation of equipment, supplies, etc... on an open book basis

PERMITTING

Permits needed will be identified ahead of developing the GMP. While the MDEQ does not typically require permits to replace equipment in-kind such as will be occurring with the PLCs, phone calls will be made to confirm their approach on this project. Additionally, the City building department may require permits for the control room modification. We have assumed that the actual cost of applying for permits will be included in phase two.

PUBLIC ENGAGEMENT/INFORMATION

We do not foresee this project is the type the City would typically perform public engagement for as the impact on the public will be negligible. However, our team stands ready to assist the City hold one public meeting during phase one if requested. An insert into a utility bill may be the better means to communicate the project to the public and our team would be happy to assist the City prepare this article or web update.

PHASE 2: IMPLEMENTATION SERVICES

Space limitations prevents us from developing a full detailed work plan for phase two. After the GMP Agreement, our team will finalize the design, prepare Issued for Construction (IFC) documents, procure equipment, and construct the project. We understand the City uses an operational demonstration period before accepting the completed project. This is a task where JRE will excel. With two qualified integrators on our team, both headquartered minutes from the Water Treatment Plant, our team will be able to quickly troubleshoot any concern and reestablish operation.

Our team has been assembled to provide unmatched service during final design and construction phases. A few of the items that separate us include:

- Equipment start-up is an important but often overlooked part of a construction project. J. Ranck Electric will require each equipment supplier attend and participate in on-site equipment start-up. This will give the City staff hands-on training from the equipment experts and ensure the equipment is commissioned in way that does not damage the equipment and protects the warranty.
- We understand the City likes the warranty for all equipment to start at substantial completion and will enter into the contract accordingly.
- Local SCADA experts. Our team is comprised of SCADA experts that are within minutes of the Ann Arbor WTP.

Project Schedule

A preliminary project schedule has been prepared. We believe this is a conservative schedule and the project may be able to be completed ahead of these dates. For instance, the use of the Rockwell conversion kit can shorten a PLC conversion and greatly minimize operational downtime.

Major Assumptions

- Laboratory revisions will primarily involve ingress/egress improvements to the control room and not major changes to the lab layout or equipment.

[SCOPE OF DESIGN-BUILDER SERVICES]

- Mechanical (HVAC) improvements will be limited to relocation of existing diffusers.

SAFETY PLAN

J. Ranck Electric, Inc. (JRE) is committed to providing a safe and healthy workplace. We are collectively responsible for the safety and health of our employees, and all our subcontractors working at the job-site. In addition, J. Ranck Electric, Inc. will take all precautionary measures necessary to protect any other persons on, or near, the project site from injury. Additionally, we will take measures necessary to protect the property of the developer during the project. A full site specific safety plan can be found in Appendix C.

The primary construction safety assurance role will be performed by our full-time safety staff at JRE. We believe it is best when the personnel performing the actual construction tasks maintain a safe work environment with a high level of safety awareness. To reinforce this with all our employees, we instituted the Safe 365 program. We know that working safely is not something we can focus on one day and ignore the next. Rather, it's something we make the decision to value each day, all 365 days of the year. Safe 365 ensures compliance with local, state, federal, and customer safety and health regulations. Under the direction of the JRE safety director, a committee comprised of management and field supervisors review safety procedures and performance, coordinate training, and ultimately set and enforce JRE's safety standards.

We also have a comprehensive system of job site audits, weekly safety meetings, tool box safety talks, stretching programs, mandatory daily pre-task job site safety analysis, along with all proper tools and equipment. In our full site safety plan, we have detailed procedures and policies regarding signage, substance abuse, workplace violence and disciplinary action. All policies strictly adhere to company safety, conduct, state and federal safety rules.

A comprehensive, detailed site safety plan will be created for this job by our safety team. The plan in Appendix C is an abbreviated version to highlight the key components of the full plan.

QUALITY PLAN

All of our team members have a commitment to quality and a drive to ensure that the final outcome is of the highest quality and functionality. Each of our team members play a unique role in this project and as such, all have a different approach to how they manage quality. At the core, each team member utilizes a standard set of documentation, reviews, communication meetings, guidelines, procedures, etc... We have summarized the approach of each here.

J. Ranck Electric

The JRE quality program is managed primarily through the job project manager, safety director and the field superintendent. Each of these key staff play an important role in ensuring customer expectations are documented, the safety plan is followed, the project schedule and budget are kept on target and all documentation necessary is in order. On the job site, several inspections are made from incoming equipment/material to on-going work on a daily basis. A full QA/QC plan can be obtained upon contract.

Tetra Tech

Tetra Tech's Quality Assurance/Quality Control (QA/QC) program is exercised on all projects to ensure our deliverables are technically sound, high quality, cost-effective, and tailored to project objectives. The QA/QC program includes several milestones prior to submittal of deliverables. We will review each document in accordance with the program and document each review to verify implementation of the procedures. Our QA team's recent and historical experience with the County will provide a substantial benefit to this project. The QA/QC program consists of two distinct but interdependent components:

QUALITY ASSURANCE (QA) – The QA process is used to ensure we understand the project from the client's perspective and that their goals and objectives have been met. Representatives consist of individuals not directly involved in the project who provide an independent perspective. Each team will document their results on a checklist or questionnaire, which is then shared with the project team for possible implementation. This provides a means to continually identify opportunities for improvement. The QA process consists of:

- Client Satisfaction Process Interview – A representative meets with the client at the beginning of the project to establish measurable and periodic milestones to evaluate our performance. We also perform a follow-up evaluation with the client upon

[SCOPE OF DESIGN-BUILDER SERVICES]

completion of the project to confirm that we met or exceeded their expectations.

- Report Enhancement Process – A representative reviews the report outline and draft report and compares the client's objectives with our approach to ensure clarity and thoroughness.
- Key Concept Review – A team of discipline experts review project concepts, looking for design ideas and alternatives that may not have been considered or potential innovative solutions to enhance the project.
- Constructability Review – Reviewers look specifically for cost-avoidance opportunities to ensure that the design promotes the most cost-effective construction operations.

QUALITY CONTROL (QC) – The QC process consists of detailed checking procedures and is performed by experienced professionals who are familiar with the client's standards and practices. It consists of:

- Technical Reviews – Each discipline is represented by a Lead Engineer who is responsible for developing, updating, and maintaining our document and design standards.
- Calculations – We review calculations to ensure proper application of design criteria and technical standards and to verify the mathematical correctness of the results.
- Checklists – We use checklists during the review of calculations and report/construction documents to ensure proper application of city, state, and federal design criteria and standards.
- Report Consistency – Report documents developed by Tetra Tech are reviewed for consistency of format and standards.
- Construction Documents – We check construction plans and supplemental specifications for accuracy, consistency, constructability, and conformance with the standards of our clients.

Commerce Controls

We at CCI recognize the value that ensuring quality provides to ourselves and our customers. It is the policy of CCI that quality management shall be integrated into all aspects of our operation to ensure that our goods and services conform exactly to the project requirements and meet the needs and expectations of both ourselves and our customers. Quality assurance at CCI is accomplished by various individuals depending on the project phase. During design, project reviews and design checking are the responsibility of the Director of Engineering and Quality, in association with the Project Manager.

The current quality system at CCI is comprised of a combination of documented guidelines, procedures, forms, feedback tools, and quality meetings, as well as a dedicated test and verification staff. Quality procedures are published in our company Procedures Manual and Engineering Handbook. Commerce Controls, Inc. is a member of the Control System Integrators Association (CSIA), a peer group of systems integrators worldwide. The CSIA has its own certification program based upon its best practices and benchmarks. CCI has embraced the tenants of this program. Commerce Controls, Inc. manufacturing facility is UL 508A and 698A certified. Our design and manufacturing methods conform to UL 508A standards, as well as the National Electrical Code, NFPA 79 the Electrical Standard for Industrial Machinery and SAE HS-1738 the Standard for Electrical Equipment for Automotive Industrial Machinery.

Projects are launched at job kickoff meetings where the scope of the project is detailed to engineering. All specification and proposal documents are thoroughly reviewed by engineering prior to commencing work. Biweekly production meetings allow opportunity for discussion on all aspects of projects. In regular quality meetings with department management we analyze problems and develop solutions. All project documentation is organized and stored on our network for easy access and control.

In our control panel manufacturing, our manufacturing staff test 100 percent of the panels produced utilizing our standard 93-point test procedure document, as well as the custom project drawings. We will conduct a Factory Acceptance test (in accordance with a pre-approved Test Plan) in which programming will be verified and communications between the control panels, will be confirmed.

These methods further supported by specific Test Plans and submittals developed for the project create a system where projects are repeatedly delivered to highest standard, on time and within budget. Our field testing equipment is comprised of various instruments and signal transmitters to calibrate and test the integrity of the control circuits within our systems. This equipment is certified annually to NIST standards.

Combined Plan for Ann Arbor's SCADA Project

[SCOPE OF DESIGN-BUILDER SERVICES]

Each of our three firms will work together to improve the overall project for Ann Arbor. This will involve looking at products and skills that are complimentary before constructing the solution. For instance, JRE will review Tetra Tech's electrical drawings for constructability before presenting the same to Ann Arbor.

We know our team will excel in the quality of our programming services. We understand Ann Arbor has been pleased with CCI's past work. We feel the complimentary programming/integration skills of CCI and TetraTech will exceed expectations. For example, Tetra Tech's programmers achieve a high standard of graphics. Our team combines the trusted CCI approach with new ideas from Tetra Tech to present options for graphics to truly achieve the quality suitable for Ann Arbor to utilize the next 20 years.

COMMUNICATION PLAN

During phase one, the communication will be managed by the design project manager, Brian Rubel. This will involve scheduling workshops, documenting workshops, phone conversations with the City's project manager, and daily interaction with the design-build team. Written weekly or monthly progress reports, if requested by the City, will also be completed. Team members from JRE and CCI will be present at workshops to ensure complete project knowledge is carried forward into phase two.

During phase two, Bill Diment from JRE will lead all of the communication regarding construction progress. This will consist on monthly (or bimonthly) construction progress meetings with the City team and documenting these meetings. Daily communication will occur with all subcontracted team members, including those listed in our proposal and those that may be retained through competitive bidding during the preparation of the GMP. During phase two, Tetra Tech will continue leading communication pertaining to engineering matters such as any communication with regulatory agencies, and be involved in the completion of the design.

PRELIMINARY PRICING AND GUARANTEED MAXIMUM PRICE (GMP)

Preliminary pricing for the GMP will start during the early stages of design phase. As initial hardware and design requirements are developed, these items will be priced and will help in determining the most cost-efficient means and methods for various project alternatives. The pricing will be continually refined as the design and work scopes progress and will minimize the time required to finalize the GMP procurement packages based on the 30 percent design documents. The final GMP procurement packages will be sent to vendors and sub-contractors for competitive bids to assure the Owner gets a scope with the greatest value. Bid invitations can either be posted to bid services for open bidding or sent to prequalified firms for bidding. JRE recommends the City consider prequalifying firms who bid or at least considering qualifications strongly in the selection. Few things can make a project go bad quicker than retaining an unqualified subcontractor work on the project.

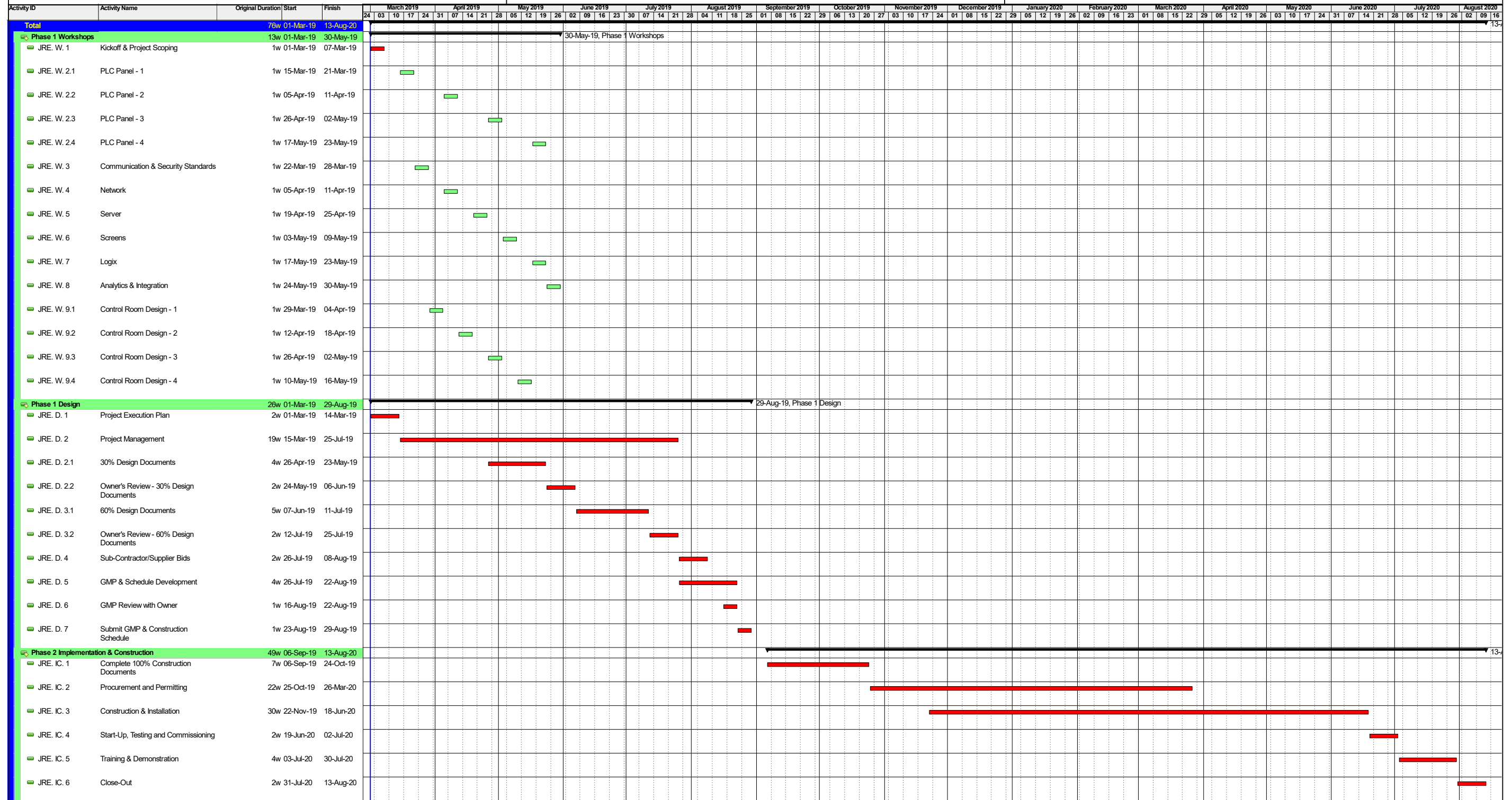
Contingencies will also be included in the GMP to compensate the design builder for work items difficult to quantify at the time of the GMP. Items such as permitting may qualify for allowances. Another item may be the telemetry method to be used at remote sites as these may require testing (e.g. radio testing) to confirm the selected technology. The amount of the contingency will be mutually agreed to between the City and the design-builder. If the design is advanced to a tight scope, the contingency can be quite modest. If there are larger unknowns, we may mutually agree on a larger contingency.

Upon receipt of contractor pricing, we will compile the prices and meet with City staff to review and select suppliers and subcontractors. We will also mutually agree upon a contingency for unforeseen conditions to include in the GMP. This contingency will be managed by the city of Ann Arbor (including Owner's Advisor) and unused portions at the end of the project will be distributed based on the terms of the contract.



CITY OF ANN ARBOR - WTP SCADA MODERNIZATION
DRAFT SCHEDULE

Project Manager: Bill Diment



█ Actual Level of Effort
 █ Remaining Work
 ◆ Milestone
█ Actual Work
 █ Critical Remaining Work
 ◀ summary

Exhibit C
Fee Proposal

EXHIBIT C

PROGRESSIVE DESIGN-BUILD FOR WTP SCADA MODERNIZATION

FEE AND RATE PROPOSAL FORM

Scope of Work	Definition	Price
Phase 1 Pricing Component		
1) Phase 1A SCADA Design and GMP Services	Preliminary design, workshops, schedule and GMP development for SCADA Components	\$ 176,471
2) Phase 1B Non-SCADA Design and GMP Services	Preliminary design, workshops, schedule and GMP development for Non-SCADA Components	\$ 33,727
3) Total Proposal for Phase 1	Evaluated Price Component (Sum of items 1 – 2)	\$ 210,198
Phase 2 Overhead and Profit on Cost of Work		
4) (%) Overhead and Profit on Cost of Work	Markup to be applied to actual Cost of Work (subcontractors, materials, and actual cost of work performed) for Phase 2 services as a percentage markup.	7.5 %
5) (\$) Evaluated Price for Overhead and Profit on Cost of Work	Markup (%) x Budgeted Construction Costs (\$1,750,000) for Evaluated Price Component	\$ 131,250

Respondent has examined the basic requirements of this RFP and its scope of services, including all Addenda (if applicable) and hereby agrees to offer these services at the prices specified.



Date: 12/19/18

Signature

(Print) Name: Bill Diment Title: Project Manager

Firm: J. Ranck Electric, Inc.

Address: 1993 Gover Parkway, Mount Pleasant, MI 48858

DBIA Document No. 535



STANDARD FORM OF GENERAL CONDITIONS OF CONTRACT BETWEEN OWNER AND DESIGN-BUILDER MODIFIED FOR CITY OF ANN ARBOR

Document No. 535

Second Edition, 2010

© Design-Build Institute of America

Modified for City of Ann Arbor

TABLE OF CONTENTS

Article	Name	Page
Article 1	General.....	2
Article 2	Design-Builder's Services and Responsibilities.....	3
Article 3	Owner's Services and Responsibilities.....	7
Article 4	Hazardous Conditions and Differing Site Conditions.....	8
Article 5	Insurance and Bonds	9
Article 6	Payment.....	11
Article 7	Indemnification	13
Article 8	Time	14
Article 9	Changes to the Contract Price and Time	15
Article 10	Contract Adjustments and Disputes	16
Article 11	Stop Work and Termination for Cause	17
Article 12	Electronic Data	19
Article 13	Miscellaneous.....	20

Article 1

General

1.1 Mutual Obligations

1.1.1 *Owner and Design-Builder* commit at all times to cooperate fully with each other and proceed on the basis of trust and good faith, to permit each party to realize the benefits afforded under the Contract Documents.

1.2 Basic Definitions

1.2.1 *Agreement* refers to the executed contract between Owner and Design-Builder under DBIA Document No. 545, *Progressive Design-Build Agreement For Water and Wastewater Projects* (2016 Edition), Modified for City of Ann Arbor.

1.2.2 *Basis of Design Documents* are those documents specifically listed in, as applicable, the GMP Exhibit or GMP Proposal as being the “Basis of Design Documents”.

1.2.3 *Construction Documents* are the documents, consisting of Drawings and Specifications, to be prepared or assembled by the Design-Builder consistent with the Basis of Design Documents unless a deviation from the Basis of Design Documents is specifically set forth in a Change Order executed by both the Owner and Design-Builder, as part of the design review process contemplated by Section 2.4 of these General Conditions of Contract.

1.2.4 *Day or Days* shall mean calendar days unless otherwise specifically noted in the Contract Documents.

1.2.5 *Design-Build Team* is comprised of the Design-Builder, its employees, and key Subcontractors identified by the Design-Builder.

1.2.6 [Not Used]

1.2.7 *Final Completion* is the date on which all Work is complete in accordance with the Contract Documents, including but not limited to, any items identified in the punch list prepared under Section 6.6.1 and the submission of all documents set forth in Section 6.7.2.

1.2.8 *Force Majeure Events* are those events that are beyond the control of both Design-Builder and Owner, including the events of war, floods, labor disputes, earthquakes, epidemics, adverse weather conditions not reasonably anticipated, and other acts of God.

1.2.9 *General Conditions of Contract* refer to this DBIA Document No. 535, *Standard Form of General Conditions of Contract Between Owner and Design-Builder* (2010 Edition).

1.2.10 *GMP Exhibit* means that exhibit attached to DBIA Document No. 545, *Progressive Design-Build Agreement for Water and Wastewater Projects*, which exhibit will have been agreed upon by Owner and Design-Builder prior to the execution of the Agreement.

1.2.11 *GMP Proposal* means that proposal developed by Design-Builder in accordance with Section 7.6 of DBIA Document No. 545, *Progressive Design-Build Agreement for Water and Wastewater Projects*.

1.2.12 *Hazardous Conditions* are any materials, wastes, substances and chemicals deemed to be hazardous under applicable Legal Requirements, or the handling, storage, remediation, or disposal of which are regulated by applicable Legal Requirements.

1.2.13 *Legal Requirements* are all applicable federal, state and local laws, codes, ordinances, rules, regulations, orders and decrees of any government or quasi-government entity having jurisdiction over the Project or Site, the practices involved in the Project or Site, or any Work.

1.2.14 *Owner’s Project Criteria* are developed by or for Owner to describe Owner’s program

requirements and objectives for the Project, including use, space, price, time, site and expandability requirements, as well as submittal requirements and other requirements governing Design-Builder's performance of the Work. Owner's Project Criteria may include conceptual documents, design criteria, design performance specifications, design specifications, and LEED® or other sustainable design criteria and other Project-specific technical materials and requirements.

1.2.15 *Site* is the land or premises on which the Project is located.

1.2.16 *Subcontractor* is any person or entity retained by Design-Builder as an independent contractor to perform a portion of the Work and shall include materialmen and suppliers.

1.2.17 *Sub-Subcontractor* is any person or entity retained by a Subcontractor as an independent contractor to perform any portion of a Subcontractor's Work and shall include materialmen and suppliers.

1.2.18 *Substantial Completion* or *Substantially Complete* means the date on which the Work, or an agreed upon portion of the Work, is sufficiently complete in accordance with the Contract Documents so that Owner can occupy and use the Project or a portion thereof for its intended purposes.

1.2.19 *Work* is comprised of all Design-Builder's design, construction and other services required by the Contract Documents, including procuring and furnishing all materials, equipment, services and labor reasonably inferable from the Contract Documents.

Article 2

Design-Builder's Services and Responsibilities

2.1 General Services.

2.1.1 Design-Builder's Representative shall be reasonably available to Owner and shall have the necessary expertise and experience required to supervise the Work. Design-Builder's Representative shall communicate regularly with Owner and shall be vested with the authority to act on behalf of Design-Builder. Design-Builder's Representative may be replaced only with the mutual agreement of Owner and Design-Builder.

2.1.2 Design-Builder shall provide Owner with a monthly status report detailing the progress of the Work, including (i) whether the Work is proceeding according to schedule, (ii) whether discrepancies, conflicts, or ambiguities exist in the Contract Documents that require resolution, (iii) whether health and safety issues exist in connection with the Work; (iv) status of the contingency account to the extent provided for in the Agreement ; and (v) other items that require resolution so as not to jeopardize Design-Builder's ability to complete the Work for the Contract Price and within the Contract Time(s).

2.1.3 Unless a schedule for the execution of the Work has been attached to the Agreement as an exhibit at the time the Agreement is executed, Design-Builder shall prepare and submit, at least three (3) days prior to the meeting contemplated by Section 2.1.4 hereof, a schedule for the execution of the Work for Owner's review and response. The schedule shall indicate the dates for the start and completion of the various stages of Work, including the dates when Owner information and approvals are required to enable Design-Builder to achieve the Contract Time(s). The schedule shall be revised as required by conditions and progress of the Work, but such revisions shall not relieve Design-Builder of its obligations to complete the Work within the Contract Time(s), as such dates may be adjusted in accordance with the Contract Documents. Owner's review of, and response to, the schedule shall not be construed as relieving Design-Builder of its complete and exclusive control over the means, methods, sequences and techniques for executing the Work.

2.1.4 The parties will meet within seven (7) days after execution of the Agreement to discuss issues affecting the administration of the Work and to implement the necessary procedures,

including those relating to submittals and payment, to facilitate the ability of the parties to perform their obligations under the Contract Documents.

2.2 Design Professional Services.

2.2.1 Design-Builder shall, consistent with applicable state licensing laws, provide through qualified, licensed design professionals employed by Design-Builder, or procured from qualified, independent licensed design consultants, the necessary design services, including architectural, engineering and other design professional services, for the preparation of the required drawings, specifications and other design submittals to permit Design-Builder to complete the Work consistent with the Contract Documents. Drawings shall be signed and sealed by a Professional Engineer licensed in the State of Michigan. Nothing in the Contract Documents is intended or deemed to create any legal or contractual relationship between Owner and any Design Consultant.

2.3 Standard of Care for Design Professional Services.

2.3.1 The standard of care for all design professional services performed to execute the Work shall be the care and skill ordinarily used by members of the design profession practicing under similar conditions at the same time and locality of the Project or the applicable standard under Michigan law, whichever is higher.

2.4 Design Development Services.

2.4.1 Design-Builder and Owner shall, consistent with any applicable provision of the Contract Documents, agree upon any interim design submissions that Owner may wish to review, which interim design submissions may include design criteria, drawings, diagrams and specifications setting forth the Project requirements. Interim design submissions shall be consistent with the Basis of Design Documents, as the Basis of Design Documents may have been changed through the design process set forth in this Section 2.4.1. On or about the time of the scheduled submissions, Design-Builder and Owner shall meet and confer about the submissions, with Design-Builder identifying during such meetings, among other things, the evolution of the design and any changes to the Basis of Design Documents, or, if applicable, previously submitted design submissions. Changes to the Basis of Design Documents shall be processed in accordance with Article 9. Minutes of the meetings, including a full listing of all changes, will be maintained by Design-Builder and provided to all attendees for review. Following the design review meeting, Owner shall review and approve the interim design submissions and meeting minutes in a time that is consistent with the turnaround times set forth in Design-Builder's schedule.

2.4.2 Design-Builder shall submit to Owner Construction Documents setting forth in detail drawings and specifications describing the requirements for construction of the Work. The Construction Documents shall be consistent with the latest set of interim design submissions, as such submissions may have been modified in a design review meeting and recorded in the meetings minutes. The parties shall have a design review meeting to discuss, and Owner shall review and approve, the Construction Documents in accordance with the procedures set forth in Section 2.4.1 above. Design-Builder shall proceed with construction in accordance with the approved Construction Documents and shall submit one set of approved Construction Documents to Owner prior to commencement of construction.

2.4.3 Owner's review and approval of interim design submissions, meeting minutes, and the Construction Documents is for the purpose of mutually establishing a conformed set of Contract Documents compatible with the requirements of the Work. Neither Owner's review nor approval of any interim design submissions, meeting minutes, and Construction Documents shall be deemed to transfer any design liability from Design-Builder to Owner.

2.4.4 To the extent not prohibited by the Contract Documents or Legal Requirements, Design-Builder may prepare interim design submissions and Construction Documents for a portion of the Work to permit construction to proceed on that portion of the Work prior to completion of the Construction Documents for the entire Work.

2.5 Legal Requirements.

2.5.1 Design-Builder shall perform the Work in accordance with all Legal Requirements and shall provide all notices applicable to the Work as required by the Legal Requirements.

2.5.2 The Contract Price and/or Contract Time(s) shall be adjusted to compensate Design-Builder for the effects of any changes in the Legal Requirements enacted after the date of the Agreement affecting the performance of the Work, or if a Guaranteed Maximum Price is established after the date of the Agreement, the date the parties agree upon the Guaranteed Maximum Price. Such effects may include, without limitation, revisions Design-Builder is required to make to the Construction Documents because of changes in Legal Requirements.

2.6 Government Approvals and Permits.

2.6.1 Design-Builder shall obtain and pay for all necessary permits, approvals, licenses, government charges and inspection fees required for the prosecution of the Work by any government or quasi-government entity having jurisdiction over the Project.

2.6.2 Design-Builder shall provide reasonable assistance to Owner in obtaining those permits, approvals and licenses that are Owner's responsibility.

2.7 Design-Builder's Construction Phase Services.

2.7.1 Unless otherwise provided in the Contract Documents to be the responsibility of Owner or a separate contractor, Design-Builder shall provide through itself or Subcontractors the necessary supervision, labor, inspection, testing, start-up, material, equipment, machinery, temporary utilities and other temporary facilities to permit Design-Builder to complete construction of the Project consistent with the Contract Documents.

2.7.2 Design-Builder shall perform all construction activities efficiently and with the requisite expertise, skill and competence to satisfy the requirements of the Contract Documents. Design-Builder shall at all times exercise complete and exclusive control over the means, methods, sequences and techniques of construction.

2.7.3 To the extent permitted by Section 13.2, Design-Builder may employ Subcontractors, but only those who are duly licensed and qualified to perform the Work consistent with the Contract Documents.

2.7.4 Design-Builder assumes responsibility to Owner for the proper performance of the Work of Subcontractors and any acts and omissions in connection with such performance. Nothing in the Contract Documents is intended or deemed to create any legal or contractual relationship between Owner and any Subcontractor or Sub-Subcontractor, including but not limited to any third-party beneficiary rights.

2.7.5 Design-Builder shall coordinate the activities of all Subcontractors. If Owner performs other work on the Project or at the Site with separate contractors under Owner's control, Design-Builder agrees to reasonably cooperate and coordinate its activities with those of such separate contractors so that the Project can be completed in an orderly and coordinated manner without unreasonable disruption.

2.7.6 Design-Builder shall keep the Site free from debris, trash and construction wastes so as to permit Design-Builder to perform its construction services efficiently, safely and without interfering with the use of adjacent land areas or Owner's ongoing operations. Upon Substantial Completion of the Work, or a portion of the Work, Design-Builder shall remove all debris, trash, construction wastes, materials, equipment, machinery and tools arising from the Work or applicable portions thereof to permit Owner to occupy the Project or a portion of the Project for its intended use.

2.8 Design-Builder's Responsibility for Project Safety.

2.8.1 Design-Builder recognizes the importance of performing the Work in a safe manner so as to prevent damage, injury or loss to (i) all individuals at the Site, whether working or visiting, (ii) the Work, including materials and equipment incorporated into the Work or stored on-Site or off-Site, and (iii) all other property at the Site or adjacent thereto. Design-Builder assumes responsibility for implementing and monitoring all safety precautions and programs related to the performance of the Work. Design-Builder shall, prior to commencing construction, designate a Safety Representative with the necessary qualifications and experience to supervise the implementation and monitoring of all safety precautions and programs related to the Work. Unless otherwise required by the Contract Documents, Design-Builder's Safety Representative shall be an individual stationed at the Site who may have responsibilities on the Project in addition to safety. The Safety Representative shall make routine daily inspections of the Site and shall hold weekly safety meetings with Design-Builder's personnel, Subcontractors and others as applicable.

2.8.2 Design-Builder and Subcontractors shall comply with all Legal Requirements relating to safety, as well as any Owner-specific safety requirements set forth in the Contract Documents, provided that such Owner-specific requirements do not violate any applicable Legal Requirement. Design-Builder will immediately report in writing any safety-related injury, loss, damage or accident arising from the Work to Owner's Representative and, to the extent mandated by Legal Requirements, to all government or quasi-government authorities having jurisdiction over safety-related matters involving the Project or the Work.

2.8.3 Design-Builder's responsibility for safety under this Section 2.8 is not intended in any way to relieve Subcontractors and Sub-Subcontractors of their own contractual and legal obligations and responsibility for (i) complying with all Legal Requirements, including those related to health and safety matters, and (ii) taking all necessary measures to implement and monitor all safety precautions and programs to guard against injuries, losses, damages or accidents resulting from their performance of the Work.

2.9 Design-Builder's Warranty.

2.9.1 Design-Builder warrants to Owner that the construction, including all materials and equipment furnished as part of the construction, shall be new unless otherwise specified in the Contract Documents, of good quality, in conformance with the Contract Documents and free of defects in materials and workmanship. Design-Builder's warranty obligation excludes defects caused by abuse, alterations, or failure to maintain the Work in a commercially reasonable manner. Nothing in this warranty is intended to limit any manufacturer's warranty which provides Owner with greater warranty rights than set forth in this Section 2.9 or the Contract Documents. Design-Builder will provide Owner with all manufacturers' warranties upon Substantial Completion.

2.10 Correction of Defective Work.

2.10.1 Design-Builder agrees to correct any Work that is found to not be in conformance with the Contract Documents, including that part of the Work subject to Section 2.9 hereof, within a period of one year from the date of Substantial Completion of the Work or any portion of the Work, or within such longer period to the extent required by any specific warranty included in the Contract Documents.

2.10.2 Design-Builder shall, within seven (7) days of receipt of written notice from Owner that the Work is not in conformance with the Contract Documents, take meaningful steps to commence correction of such nonconforming Work, including the correction, removal or replacement of the nonconforming Work and any damage caused to other parts of the Work affected by the nonconforming Work. If Design-Builder fails to commence the necessary steps within such seven (7) day period, Owner, in addition to any other remedies provided under the Contract Documents, may provide Design-Builder with written notice that Owner will commence correction of such nonconforming Work with its own forces. If Owner does perform such corrective Work, Design-Builder shall be responsible for all reasonable costs incurred by Owner

in performing such correction. If the nonconforming Work creates an emergency requiring an immediate response, the seven (7) day period identified herein shall be deemed inapplicable.

2.10.3 The one-year period referenced in Section 2.10.1 above applies only to Design-Builder's obligation to correct nonconforming Work and is not intended to constitute a period of limitations for any other rights or remedies Owner may have regarding Design-Builder's other obligations under the Contract Documents.

Article 3

Owner's Services and Responsibilities

3.1 Duty to Cooperate.

3.1.1 Owner shall, throughout the performance of the Work, cooperate with Design-Builder and perform its responsibilities, obligations and services in a reasonably timely manner to facilitate Design-Builder's timely and efficient performance of the Work and so as not to unreasonably delay or interfere with Design-Builder's performance of its obligations under the Contract Documents.

3.1.2 Owner shall provide reasonably timely reviews and approvals of interim design submissions and Construction Documents consistent with the turnaround times set forth in Design-Builder's schedule.

3.1.3 Owner shall give Design-Builder reasonably timely notice of any Work that Owner notices to be defective or not in compliance with the Contract Documents.

3.2 Furnishing of Services and Information.

3.2.1 Unless expressly stated to the contrary in the Contract Documents, within a reasonable time after Design-Builder's request, Owner shall provide, at its own cost and expense, for Design-Builder's information and use the following, all of which Design-Builder is entitled to rely upon in performing the Work:

3.2.1.1 To the extent available, surveys describing the property, boundaries, topography and reference points for use during construction, including existing service and utility lines;

3.2.1.2 To the extent available, geotechnical studies describing subsurface conditions, and other surveys describing other latent or concealed physical conditions at the Site;

3.2.1.3 Any temporary and permanent easements, zoning and other requirements and encumbrances affecting land use, or necessary to permit the proper design and construction of the Project and enable Design-Builder to perform the Work;

3.2.1.4 Any legal description of the Site;

3.2.1.5 To the extent available, record drawings of any existing structures at the Site; and

3.2.1.6 To the extent available, environmental studies, reports and impact statements describing the environmental conditions, including Hazardous Conditions, in existence at the Site.

3.2.2 Owner is responsible for securing and executing all necessary agreements with adjacent land or property owners that are necessary to enable Design-Builder to perform the Work. Owner is further responsible for all costs, including attorneys' fees, incurred in securing these necessary agreements.

3.3 Financial Information.

3.3.1 At Design-Builder's request, Owner shall promptly furnish reasonable evidence satisfactory to Design-Builder that Owner has adequate funds available and committed to fulfill all of Owner's contractual obligations under the Contract Documents. If Owner fails to furnish such financial information in a reasonably timely manner, Design-Builder may stop Work under Section 11.3 hereof or exercise any other right permitted under the Contract Documents.

3.3.2 [Not Used]

3.4 Owner's Representative.

3.4.1 Owner's Representative shall be responsible for providing Owner-supplied information and approvals in a reasonably timely manner to permit Design-Builder to fulfill its obligations under the Contract Documents. Owner's Representative shall communicate regularly with Design-Builder and shall be vested with the authority to act on behalf of Owner.

3.5 Government Approvals and Permits.

3.5.1 [Not Used]

3.5.2 Owner shall provide reasonable assistance to Design-Builder in obtaining those permits, approvals and licenses that are Design-Builder's responsibility.

3.6 Owner's Separate Contractors.

3.6.1 Owner is responsible for all work performed on the Project or at the Site by separate contractors under Owner's control. Owner shall contractually require its separate contractors to cooperate with, and coordinate their activities so as not to unreasonably interfere with, Design-Builder in order to enable Design-Builder to timely complete the Work consistent with the Contract Documents.

Article 4

Hazardous Conditions and Differing Site Conditions

4.1 Hazardous Conditions.

4.1.1 Unless otherwise expressly provided in the Contract Documents to be part of the Work, Design-Builder is not responsible for any Hazardous Conditions encountered at the Site. Upon encountering any Hazardous Conditions, Design-Builder will stop Work immediately in the affected area and duly notify Owner and, if required by Legal Requirements, all government or quasi-government entities with jurisdiction over the Project or Site.

4.1.2 Upon receiving notice of the presence of suspected Hazardous Conditions, Owner shall take the necessary measures required to ensure that the Hazardous Conditions are remediated or rendered harmless. Such necessary measures shall include Owner retaining qualified independent experts to (i) ascertain whether Hazardous Conditions have actually been encountered, and, if they have been encountered, (ii) prescribe the remedial measures that Owner must take either to remove the Hazardous Conditions or render the Hazardous Conditions harmless.

4.1.3 Design-Builder shall be obligated to resume Work at the affected area of the Project only after Owner's expert provides it with written certification that (i) the Hazardous Conditions have been removed or rendered harmless and (ii) all necessary approvals have been obtained from all government and quasi-government entities having jurisdiction over the Project or Site.

4.1.4 Design-Builder will be entitled, in accordance with these General Conditions of Contract,

to an adjustment in its Contract Price and/or Contract Time(s) to the extent Design-Builder's cost and/or time of performance have been adversely impacted by the presence of Hazardous Conditions.

4.1.5 To the fullest extent permitted by law, Owner shall indemnify, defend and hold harmless Design-Builder, Subcontractors, anyone employed directly or indirectly by any of them, and their officers, directors, employees and agents, from and against any and all claims, losses, damages, liabilities and expenses, including attorneys' fees and expenses, arising out of or resulting from the presence, removal or remediation of Hazardous Conditions at the Site. Notwithstanding the foregoing, nothing in this Agreement shall be construed to waive any immunity the Owner has by law or equity.

4.1.6 Notwithstanding the preceding provisions of this Section 4.1, Owner is not responsible for Hazardous Conditions introduced to the Site by Design-Builder, Subcontractors or anyone for whose acts they may be liable. To the fullest extent permitted by law, Design-Builder shall indemnify, defend and hold harmless Owner and Owner's officers, directors, employees and agents from and against all claims, losses, damages, liabilities and expenses, including attorneys' fees and expenses, arising out of or resulting from those Hazardous Conditions introduced to the Site by Design-Builder, Subcontractors or anyone for whose acts they may be liable.

4.2 Differing Site Conditions.

4.2.1 Design-Builder has diligently investigated the site of the Project and is satisfied that it can fulfill all obligations of this Agreement for the consideration to which it may be entitled under this Agreement as long as it does not encounter concealed or latent physical conditions or subsurface conditions at the Site that (i) materially differ from the conditions indicated in the Contract Documents or (ii) are of an unusual nature, differing materially from the conditions ordinarily encountered and generally recognized as inherent in the Work ("Differing Site Conditions"). Design-Builder represents and warrants that it's not aware of any Differing Site Conditions. Design-Builder encounters a Differing Site Condition, Design-Builder will be entitled to an adjustment in the Contract Price and/or Contract Time(s) to the extent Design-Builder's cost and/or time of performance are adversely impacted by the Differing Site Condition.

4.2.2 Upon encountering a Differing Site Condition, Design-Builder shall provide prompt written notice to Owner of such condition, which notice shall not be later than fourteen (14) days after such condition has been encountered. Design-Builder shall, to the extent reasonably possible, provide such notice before the Differing Site Condition has been substantially disturbed or altered.

Article 5

Insurance and Bonds

5.1 Design-Builder's Insurance Requirements.

5.1.1 Design-Builder is responsible for procuring and maintaining, during the duration of the Agreement, including any guarantee or warranty period, the insurance for the coverages and amounts all as set forth in the Insurance Exhibit to the Agreement. Coverage shall be secured from insurance companies authorized to do business in the state in which the Project is located, and with a minimum rating assigned by A.M. Best & Company's Key Rating Guide of "A" Overall, and a minimum Financial Size Category of "V". To the fullest extent possible, insurance coverages and amounts set forth in the Insurance Exhibit shall be primary as respects any other valid or collectible insurance that the City may possess, including any self-insured retentions, 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, Design-Builder waives, on its insurers' behalves, any right they may have against the Owner and its employees, contractors and agents to subrogation, and shall, upon Owner's demand, supply proof of its insurers' agreement to the same. To the fullest extent lawful, Design-Builder shall make Owner an additional insured, with at least as much coverage as Design-Builder has, on all coverages and amounts set forth in the Insurance Exhibit.

5.1.2 Design-Builder's insurance shall specifically delete any design-build or similar exclusions that could compromise coverages because of the design-build delivery of the Project.

5.1.3 Prior to commencing any services hereunder, and thereafter upon Owner's request, Design-Builder shall provide Owner certificates and other documents, including endorsements and policies, satisfactory to Owner evidencing that (i) all insurance obligations required by the Contract Documents are in full force and in effect and will remain in effect for the duration required by the Contract Documents and (ii) no insurance coverage will be canceled, renewal refused, or materially changed unless at least thirty (30) days prior written notice is given to Owner. If any of the foregoing insurance coverages are required to remain in force after final payment are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the Final Application for Payment. If any information concerning reduction of coverage is not furnished by the insurer, it shall be furnished by the Design-Builder with reasonable promptness according to the Design-Builder's information and belief.

5.2 [Not Used]

5.3 Owner's Property Insurance.

5.3.1 Owner shall procure and maintain from insurance companies authorized to do business in the state in which the Project is located property insurance upon its water treatment plant to its full insurable value. The property insurance obtained by Owner shall include as additional insureds the interests of Owner, Design-Builder, and Subcontractors of any tier. The Owner is responsible for the payment of any deductibles under the insurance required by this Section 5.3.1.

5.3.2 Unless the Contract Documents provide otherwise, Owner shall procure and maintain boiler and machinery insurance that will include the interests of Owner, Design-Builder, and Subcontractors of any tier. The Owner is responsible for the payment of any deductibles under the insurance required by this Section 5.3.2.

5.3.3 If Design-Builder requests, Owner shall provide Design-Builder with certificates evidencing that (i) all Owner's insurance obligations required by the Contract Documents are in full force and in effect and will remain in effect until Design-Builder has completed all of the Work and has received final payment from Owner and (ii) no insurance coverage will be canceled, renewal refused, or materially changed unless at least thirty (30) days prior written notice is given to Design-Builder. Owner's property insurance shall not lapse or be canceled if Owner occupies a portion of the Work pursuant to Section 6.6.3 hereof.

5.3.4 [Not Used]

5.3.5 Owner and Design-Builder waive against each other and Owner's separate contractors, Subcontractors, agents and employees of each and all of them, all damages covered by property insurance provided herein, except such rights as they may have to the proceeds of such insurance. Design-Builder and Owner shall, where appropriate, require similar waivers of subrogation from Owner's separate contractors, and Subcontractors and shall require each of them to include similar waivers in their contracts. These waivers of subrogation shall not contain any restriction or limitation that will impair the full and complete extent of its applicability to any person or entity unless agreed to in writing prior to the execution of this Agreement.

5.4 Bonds and Other Performance Security.

5.4.1 If Owner requires Design-Builder to obtain performance and labor and material payment bonds, or other forms of performance security, the amount, form and other conditions of such security shall be as set forth in the Agreement.

5.4.2 All bonds furnished by Design-Builder shall be in a form satisfactory to Owner. The surety shall be a company qualified and registered to conduct business in the state in which the Project is located.

Article 6

Payment

6.1 Schedule of Values.

6.1.1 Unless required by the Owner upon execution of this Agreement, within ten (10) days of execution of the Agreement, Design-Builder shall submit for Owner's review and approval a schedule of values for all of the Work. The Schedule of Values will (i) subdivide the Work into its respective parts, (ii) include values for all items comprising the Work and (iii) serve as the basis for monthly progress payments made to Design-Builder throughout the Work.

6.1.2 The Owner will timely review and approve the schedule of values so as not to delay the submission of the Design-Builder's first application for payment. The Owner and Design-Builder shall timely resolve any differences so as not to delay the Design-Builder's submission of its first application for payment.

6.2 Monthly Progress Payments.

6.2.1 On or before the date established in the Agreement, Design-Builder shall submit for Owner's review and approval its Application for Payment requesting payment for all Work performed as of the date of the Application for Payment. The Application for Payment shall be to Owner's Finance Department – Accounting Division and accompanied by all supporting documentation required by the Contract Documents and/or established at the meeting required by Section 2.1.4 hereof.

6.2.2 The Application for Payment may request payment for equipment and materials not yet incorporated into the Project, provided that (i) Owner is satisfied that the equipment and materials are suitably stored at either the Site or another acceptable location, (ii) the equipment and materials are protected by suitable insurance and (iii) upon payment, Owner will receive the equipment and materials free and clear of all liens and encumbrances.

6.2.3 All discounts offered by Subcontractor, Sub-Subcontractors and suppliers to Design-Builder for early payment shall accrue one hundred percent to Design-Builder to the extent Design-Builder advances payment. Unless Owner advances payment to Design-Builder specifically to receive the discount, Design-Builder may include in its Application for Payment the full undiscounted cost of the item for which payment is sought.

6.2.4 The Application for Payment shall constitute Design-Builder's representation that the Work described herein has been performed consistent with the Contract Documents, has progressed to the point indicated in the Application for Payment, and that title to all Work will pass to Owner free and clear of all claims, liens, encumbrances, and security interests upon the incorporation of the Work into the Project, or upon Design-Builder's receipt of payment, whichever occurs earlier.

6.3 Withholding of Payments.

6.3.1 On or before the date established in the Agreement, Owner shall pay Design-Builder all amounts properly due. If Owner determines that Design-Builder is not entitled to all or part of an Application for Payment as a result of Design-Builder's failure to meet its obligations hereunder, it will notify Design-Builder in writing at least five (5) days prior to the date payment is due. The notice shall indicate the specific amounts Owner intends to withhold, the reasons and contractual basis for the withholding, and the specific measures Design-Builder must take to rectify Owner's concerns. Design-Builder and Owner will attempt to resolve Owner's concerns prior to the date payment is due. If the parties cannot resolve such concerns, Design-Builder may pursue its rights under the Contract Documents, including those under Article 10 hereof.

6.3.2 Notwithstanding anything to the contrary in the Contract Documents, Owner shall pay Design-Builder all undisputed amounts in an Application for Payment within the times required by the Agreement.

6.4 Right to Stop Work and Interest.

6.4.1 If Owner fails to pay timely Design-Builder any amount that becomes due, Design-Builder, in addition to all other remedies provided in the Contract Documents, may stop Work pursuant to Section 11.3 hereof. All payments due and unpaid shall bear interest at the rate set forth in the Agreement.

6.5 Design-Builder's Payment Obligations.

6.5.1 Design-Builder shall pay Subcontractors, in accordance with its contractual obligations to such parties, all the amounts Design-Builder has received from Owner on account of their work. Design-Builder will impose similar requirements on Subcontractors to pay those parties with whom they have contracted. Design-Builder will indemnify and defend Owner against any claims for payment and mechanic's liens as set forth in Section 7.3 hereof. Design-Builder shall comply with the Michigan Builder's Trust Fund Act.

6.6 Substantial Completion.

6.6.1 Design-Builder shall notify Owner when it believes the Work, or to the extent permitted in the Contract Documents, a portion of the Work, is Substantially Complete. Within fourteen (14) days of Owner's receipt of Design-Builder's notice, Owner and Design-Builder will jointly inspect such Work to verify that it is Substantially Complete in accordance with the requirements of the Contract Documents. If such Work is Substantially Complete, Owner shall prepare and issue a Certificate of Substantial Completion that will set forth (i) the date of Substantial Completion of the Work or portion thereof, (ii) the remaining items of Work that have to be completed before final payment, (iii) provisions (to the extent not already provided in the Contract Documents) establishing Owner's and Design-Builder's responsibility for the Project's security, maintenance, utilities and insurance pending final payment, and (iv) an acknowledgment that warranties commence to run on the date of Substantial Completion, except as may otherwise be noted in the Certificate of Substantial Completion.

6.6.2 Upon Substantial Completion of the entire Work, Owner shall release to Design-Builder all retained amounts relating to the entire Work, less an amount equal to the reasonable value of all remaining or incomplete items of Work as noted in the Certificate of Substantial Completion.

6.6.3 Owner, at its option, may use a portion of the Work which has been determined to be Substantially Complete, provided, however, that (i) a Certificate of Substantial Completion has been issued for the portion of Work addressing the items set forth in Section 6.6.1 above, (ii) Design-Builder and Owner have obtained the consent of their sureties and insurers, and to the extent applicable, the appropriate government authorities having jurisdiction over the Project, and (iii) Owner and Design-Builder agree that Owner's use or occupancy will not interfere with Design-Builder's completion of the remaining Work.

6.7 Final Payment.

6.7.1 After receipt of a Final Application for Payment from Design-Builder, Owner shall make final payment, subject to any set offs for claims Owner has against Design-Builder, by the time required in the Agreement, provided that Design-Builder has achieved Final Completion.

6.7.2 At the time of submission of its Final Application for Payment, Design-Builder shall provide the following information:

6.7.2.1 An affidavit that there are no claims, obligations or liens outstanding or unsatisfied for labor, services, material, equipment, taxes or other items performed, furnished or incurred for or in connection with the Work which will in any way affect Owner's interests;

6.7.2.2 A general release executed by Design-Builder waiving, upon receipt of final payment by Design-Builder, all claims, except those claims previously made in writing to Owner and remaining unsettled at the time of final payment;

6.7.2.3 Consent of Design-Builder's surety, if any, to final payment;

6.7.2.4 All operating manuals, warranties and other deliverables required by the Contract Documents;

6.7.2.5 Certificates of insurance confirming that required coverages will remain in effect consistent with the requirements of the Contract Documents; and,

6.7.2.6 An assignment of all manufacturer or material-supplier warranties related to the Work.

6.7.3 [Not Used]

6.7.4 Deficiencies in the Work discovered after Substantial Completion, whether or not such deficiencies would have been included on the Punch List if discovered earlier, shall be deemed warranty Work. Such deficiencies shall be corrected by Design-Builder under Sections 2.9 and 2.10 herein, and shall not be a reason to withhold final payment from Design-Builder, provided, however, that Owner shall be entitled to withhold from the Final Payment the reasonable value of completion of such deficient work until such work is completed.

Article 7

Indemnification

7.1 Patent and Copyright Infringement.

7.1.1 Design-Builder shall defend any action or proceeding brought against Owner based on any claim that the Work, or any part thereof, or the operation or use of the Work or any part thereof, constitutes infringement of any United States patent or copyright, now or hereafter issued. Owner shall give prompt written notice to Design-Builder of any such action or proceeding and will reasonably provide authority, information and assistance in the defense of same. Design-Builder shall indemnify and hold harmless Owner from and against all damages and costs, including but not limited to attorneys' fees and expenses awarded against Owner or Design-Builder in any such action or proceeding. Design-Builder agrees to keep Owner informed of all developments in the defense of such actions.

7.1.2 If Owner is enjoined from the operation or use of the Work, or any part thereof, as the result of any patent or copyright suit, claim, or proceeding, Design-Builder shall at its sole expense take reasonable steps to procure the right to operate or use the Work. If Design-Builder cannot so procure such right within a reasonable time, Design-Builder shall promptly, at Design-Builder's option and at Design-Builder's expense, (i) modify the Work so as to avoid infringement of any such patent or copyright or (ii) replace said Work with Work that does not infringe or violate any such patent or copyright.

7.1.3 Sections 7.1.1 and 7.1.2 above shall not be applicable to any suit, claim or proceeding based on infringement or violation of a patent or copyright (i) relating solely to a particular process or product of a particular manufacturer specified by Owner and not offered or recommended by Design-Builder to Owner or (ii) arising from modifications to the Work by Owner or its agents after acceptance of the Work. If the suit, claim or proceeding is based upon events set forth in the preceding sentence, Owner shall defend, indemnify and hold harmless Design-Builder to the same extent Design-Builder is obligated to defend, indemnify and hold harmless Owner in Section 7.1.1 above.

7.1.4 The obligations set forth in this Section 7.1 shall constitute the sole agreement between the parties relating to liability for infringement of violation of any patent or copyright.

7.2 Tax Claim Indemnification.

7.2.1 If, in accordance with Owner's direction, an exemption for all or part of the Work is

claimed for taxes, Owner shall indemnify, defend and hold harmless Design-Builder from and against any liability, penalty, interest, fine, tax assessment, attorneys' fees or other expenses or costs incurred by Design-Builder as a result of any action taken by Design-Builder in accordance with Owner's directive. Owner shall furnish Design-Builder with any applicable tax exemption certificates necessary to obtain such exemption, upon which Design-Builder may rely. Notwithstanding the foregoing, nothing in this Agreement shall be construed to waive any immunity the Owner has by law or equity.

7.3 Payment Claim Indemnification.

7.3.1 Design-Builder shall indemnify, defend and hold harmless Owner from any claims or mechanic's liens brought against Owner or against the Project as a result of the failure of Design-Builder, or those for whose acts it is responsible, to pay for any services, materials, labor, equipment, taxes or other items or obligations furnished or incurred for or in connection with the Work. Within three (3) days of receiving written notice from Owner that such a claim or mechanic's lien has been filed, Design-Builder shall commence to take the steps necessary to discharge said claim or lien, including, if necessary, the furnishing of a mechanic's lien bond. If Design-Builder fails to do so, Owner will have the right to discharge the claim or lien and hold Design-Builder liable for costs and expenses incurred, including attorneys' fees.

7.4 Design-Builder's General Indemnification.

7.4.1 Design-Builder, to the fullest extent permitted by law, shall indemnify, hold harmless and defend Owner, its officers, fiduciaries, agents and employees from and against claims, losses, damages, liabilities, including attorneys' fees and expenses, to the extent resulting in any way from the acts or omissions of Design-Builder, Subcontractors, anyone employed directly or indirectly by any of them or anyone for whose acts any of them may be liable. This obligation shall survive any expiration, termination, completion, or lapse of the Agreement, for any reason.

7.4.2 If an employee of Design-Builder, Subcontractors, anyone employed directly or indirectly by any of them or anyone for whose acts any of them may be liable has a claim against Owner, its officers, directors, employees, or agents, Design-Builder's indemnity obligation set forth in Section 7.4.1 above shall not be limited by any limitation on the amount of damages, compensation or benefits payable by or for Design-Builder, Subcontractors, or other entity under any employee benefit acts, including workers' compensation or disability acts.

7.5 [Not Used]

Article 8

Time

8.1 Obligation to Achieve the Contract Times.

8.1.1 Design-Builder agrees that it will commence performance of the Work and achieve the Contract Time(s) in accordance with Article 5 of the Agreement.

8.2 Delays to the Work.

8.2.1 If Design-Builder is delayed in the performance of the Work due to unforeseeable acts, omissions, conditions, events, or circumstances beyond its control and due to no fault of its own or those for whom Design-Builder is responsible, the Contract Time(s) for performance shall be reasonably extended by Change Order. By way of example, unforeseeable events that may entitle Design-Builder to an extension of the Contract Time(s) include acts or omissions of Owner or anyone under Owner's control (including separate contractors), changes in the Work, Differing Site Conditions, Hazardous Conditions, and Force Majeure Events.

8.2.2 In addition to Design-Builder's right to a time extension for those events set forth in

Section 8.2.1 above, Design-Builder may be entitled to an appropriate adjustment of the Contract Price as provided under Section 9.4 below, provided, however, that the Contract Price shall not be adjusted for Force Majeure Events unless otherwise provided in the Agreement.

Article 9

Changes to the Contract Price and Time

9.1 Change Orders.

9.1.1 A Change Order is a written instrument issued after execution of the Agreement signed by Owner and Design-Builder, stating their agreement upon all of the following:

9.1.1.1 The scope of the change in the Work;

9.1.1.2 The amount of the adjustment to the Contract Price; and

9.1.1.3 The extent of the adjustment to the Contract Time(s).

9.1.2 All changes in the Work authorized by applicable Change Order shall be performed under the applicable conditions of the Contract Documents. Owner and Design-Builder shall negotiate in good faith and as expeditiously as possible the appropriate adjustments for such changes.

9.1.3 If Owner requests a proposal for a change in the Work from Design-Builder and subsequently elects not to proceed with the change, a Change Order shall be issued to reimburse Design-Builder for reasonable costs incurred for estimating services, design services and services involved in the preparation of proposed revisions to the Contract Documents.

9.2 Work Change Directives.

9.2.1 A Work Change Directive is a written order prepared and signed by Owner directing a change in the Work prior to agreement on an adjustment in the Contract Price and/or the Contract Time(s).

9.2.2 Owner and Design-Builder shall negotiate in good faith and as expeditiously as possible the appropriate adjustments for the Work Change Directive. Upon reaching an agreement, the parties shall prepare and execute an appropriate Change Order reflecting the terms of the agreement.

9.3 [Not Used]

9.4 Contract Price Adjustments.

9.4.1 The increase or decrease in Contract Price resulting from a change in the Work shall be determined by one or more of the following methods:

9.4.1.1 Unit prices set forth in the Agreement or as subsequently agreed to between the parties;

9.4.1.2 A mutually accepted lump sum, properly itemized and supported by sufficient substantiating data to permit evaluation by Owner;

9.4.1.3 Costs, fees and any other markups set forth in the Agreement; or

9.4.1.4 If an increase or decrease cannot be agreed to as set forth in items 9.4.1.1 through 9.4.1.3 above and Owner issues a Work Change Directive, the cost of the change of the Work shall be determined by the reasonable expense and savings in the performance of the Work resulting from the change, including a reasonable overhead and

profit, as may be set forth in the Agreement.

9.4.2 If unit prices are set forth in the Contract Documents or are subsequently agreed to by the parties, but application of such unit prices will cause substantial inequity to Owner or Design-Builder because of differences in the character or quantity of such unit items as originally contemplated, such unit prices shall be equitably adjusted.

9.4.3 If Owner and Design-Builder disagree upon whether Design-Builder is entitled to be paid for any services required by Owner, or if there are any other disagreements over the scope of Work or proposed changes to the Work, Owner and Design-Builder shall resolve the disagreement pursuant to Article 10 hereof. As part of the negotiation process, Design-Builder shall furnish Owner with a good faith estimate of the costs to perform the disputed services in accordance with Owner's interpretations. If the parties are unable to agree and Owner expects Design-Builder to perform the services in accordance with Owner's interpretations, Design-Builder shall proceed to perform the disputed services, conditioned upon Owner issuing a written order to Design-Builder (i) directing Design-Builder to proceed and (ii) specifying Owner's interpretation of the services that are to be performed. If this occurs, Design-Builder shall be entitled to submit in its Applications for Payment an amount equal to fifty percent (50%) of its reasonable estimated direct cost to perform the services, and Owner agrees to pay such amounts, with the express understanding that (i) such payment by Owner does not prejudice Owner's right to argue that it has no responsibility to pay for such services and (ii) receipt of such payment by Design-Builder does not prejudice Design-Builder's right to seek full payment of the disputed services if Owner's order is deemed to be a change to the Work.

9.5 Emergencies.

9.5.1 In any emergency affecting the safety of persons or property, Design-Builder shall reasonably act, at its discretion, to prevent threatened damage, injury or loss and shall promptly provide Owner notice of the emergency and its action. Any change in the Contract Price and/or Contract Time(s) on account of emergency work shall be determined as provided in this Article 9.

Article 10

Contract Adjustments and Disputes

10.1 Requests for Contract Adjustments and Relief.

10.1.1 If either Design-Builder or Owner believes that it is entitled to relief against the other for any event arising out of or related to the Work or Project, such party shall provide written notice to the other party of the basis for its claim for relief. Such notice shall, if possible, be made prior to incurring any cost or expense and in accordance with any specific notice requirements contained in applicable sections of these General Conditions of Contract. In the absence of any specific notice requirement, written notice shall be given promptly, but not more than fourteen (14) days, after the occurrence giving rise to the claim for relief or after the claiming party reasonably should have recognized the event or condition giving rise to the request, whichever is later. Such notice shall include sufficient information to advise the other party of the circumstances giving rise to the claim for relief, the specific contractual adjustment or relief requested and the basis of such request.

10.2 Dispute Avoidance and Resolution.

10.2.1 The parties are fully committed to working with each other throughout the Project and agree to communicate regularly with each other at all times so as to avoid or minimize disputes or disagreements. If disputes or disagreements do arise, Design-Builder and Owner each commit to resolving such disputes or disagreements in an amicable, professional and expeditious manner so as to avoid unnecessary losses, delays and disruptions to the Work.

10.2.2 Design-Builder and Owner will first attempt to resolve disputes or disagreements at the field level through discussions between Design-Builder's Representative and Owner's Representative which shall conclude within fourteen (14) days of the written notice provided for in

Section 10.1.1 unless the Owner and Design-Builder mutually agree otherwise.

10.2.3 If a dispute or disagreement cannot be resolved through Design-Builder's Representative and Owner's Representative, Design-Builder's Senior Representative and Owner's Senior Representative, upon the request of either party, shall meet as soon as conveniently possible, but in no case later than thirty (30) days after such a request is made, to attempt to resolve such dispute or disagreement. Five (5) days prior to any meetings between the Senior Representatives, the parties will exchange relevant information that will assist the parties in resolving their dispute or disagreement.

10.2.4 If after meeting the Senior Representatives determine that the dispute or disagreement cannot be resolved on terms satisfactory to both parties, the parties shall submit the dispute or disagreement to the Circuit Court for Washtenaw County, which Owner and Design-Builder agree is the proper venue and most convenient forum, and to the jurisdiction of which Owner and Design-Builder submit.

10.3 [Not Used]

10.4 Duty to Continue Performance.

10.4.1 Unless provided to the contrary in the Contract Documents, Design-Builder shall continue to perform the Work and Owner shall continue to satisfy its payment obligations to Design-Builder, pending the final resolution of any dispute or disagreement between Design-Builder and Owner.

10.5 [Not Used]

Article 11

Stop Work and Termination for Cause

11.1 Owner's Right to Stop Work.

11.1.1 Owner may, without cause and for its convenience, order Design-Builder in writing to stop and suspend the Work. Such suspension shall not exceed sixty (60) consecutive days or aggregate more than ninety (90) days during the duration of the Project. If Owner does so, Design-Builder shall resume the Work within five (5) days of the date in any written notice from Owner to do so.

11.1.2 Design-Builder is entitled to seek an adjustment of the Contract Price and/or Contract Time(s) if its cost or time to perform the Work has been adversely impacted by any suspension of stoppage of the Work by Owner.

11.2 Owner's Right to Perform and Terminate for Cause.

11.2.1 If Design-Builder materially breaches the Agreement, including by persistently failing to (i) provide a sufficient number of skilled workers, (ii) supply the materials required by the Contract Documents, (iii) comply with applicable Legal Requirements, (iv) timely pay, without cause, or Subcontractors, (v) prosecute the Work with promptness and diligence to ensure that the Work is completed by the Contract Time(s), as such times may be adjusted, or (vi) perform material obligations under the Contract Documents, then Owner, in addition to any other rights and remedies provided in the Contract Documents or by law, shall have the rights set forth in Sections 11.2.2 and 11.2.3 below.

11.2.2 Upon the occurrence of an event set forth in Section 11.2.1 above, Owner may provide written notice to Design-Builder that it intends to terminate the Agreement unless the problem cited is cured, or commenced to be cured, within seven (7) days of Design-Builder's receipt of such notice. If Design-Builder fails to cure, or reasonably commence to cure, such problem, then

Owner may give a second written notice to Design-Builder of its intent to terminate within an additional seven (7) day period. If Design-Builder, within such second seven (7) day period, fails to cure, or reasonably commence to cure, such problem, then Owner may declare the Agreement terminated for default by providing written notice to Design-Builder of such declaration.

11.2.3 Upon declaring the Agreement terminated pursuant to Section 11.2.2 above, Owner may enter upon the premises and take possession, for the purpose of completing the Work, of all materials, equipment, scaffolds, tools, appliances and other items thereon, which have been purchased or provided for the performance of the Work, all of which Design-Builder hereby transfers, assigns and sets over to Owner for such purpose, and to employ any person or persons to complete the Work and provide all of the required labor, services, materials, equipment and other items. In the event of such termination, Design-Builder shall not be entitled to receive any further payments under the Contract Documents until the Work shall be finally completed in accordance with the Contract Documents. At such time, if the unpaid balance of any amounts due to Design-Builder under the Agreement exceeds the cost and expense incurred by Owner in completing the Work, such excess shall be paid by Owner to Design-Builder. Notwithstanding the preceding sentence, if the Agreement establishes a Guaranteed Maximum Price, Design-Builder will only be entitled to be paid for Work performed prior to its default. If Owner's cost and expense of completing the Work exceeds the unpaid balance of the Contract Price, then Design-Builder shall be obligated to pay the difference to Owner. Such costs and expense shall include not only the cost of completing the Work, but also losses, damages, costs and expense, including attorneys' fees and expenses, incurred by Owner in connection with the re-procurement and defense of claims arising from Design-Builder's default.

11.2.4 If Owner improperly terminates the Agreement for cause, the termination for cause will be converted to a termination for convenience in accordance with the provisions of Article 8 of the Agreement.

11.3 Design-Builder's Right to Stop Work.

11.3.1 Design-Builder may, in addition to any other rights afforded under the Contract Documents or at law, stop the Work for the following reasons:

11.3.1.1 Owner's failure to provide financial assurances as required under Section 3.3 hereof; or

11.3.1.2 Owner's failure, for more than thirty (30) days, to pay amounts properly due under Design-Builder's Application for Payment.

11.3.2 Should any of the events set forth in Section 11.3.1 above occur, Design-Builder has the right to provide Owner with written notice that Design-Builder will stop the Work unless said event is cured within seven (7) days from Owner's receipt of Design-Builder's notice. If Owner does not cure the problem within such seven (7) day period, Design-Builder may stop the Work. In such case, Design-Builder shall be entitled to make a claim for adjustment to the Contract Price and Contract Time(s) to the extent it has been adversely impacted by such stoppage.

11.4 Design-Builder's Right to Terminate for Cause.

11.4.1 Design-Builder, in addition to any other rights and remedies provided in the Contract Documents or by law, may terminate the Agreement for cause for the following reasons:

11.4.1.1 The Work has been stopped for sixty (60) consecutive days, or more than ninety (90) days during the duration of the Project, because of court order, any government authority having jurisdiction over the Work, or orders by Owner under Section 11.1.1 hereof, provided that such stoppages are not due to the acts or omissions of Design-Builder or anyone for whose acts Design-Builder may be responsible.

11.4.1.2 Owner's failure to provide Design-Builder with any information, permits or approvals that are Owner's responsibility under the Contract Documents which result in the Work being stopped for sixty (60) consecutive days, or more than ninety (90) days

during the duration of the Project, even though Owner has not ordered Design-Builder in writing to stop and suspend the Work pursuant to Section 11.1.1 hereof.

11.4.1.3 Owner's failure to cure the problems set forth in Section 11.3.1 above after Design-Builder has stopped the Work.

11.4.2 Upon the occurrence of an event set forth in Section 11.4.1 above, Design-Builder may provide written notice to Owner that it intends to terminate the Agreement unless the problem cited is cured, or commenced to be cured, within seven (7) days of Owner's receipt of such notice. If Owner fails to cure, or reasonably commence to cure, such problem, then Design-Builder may give a second written notice to Owner of its intent to terminate within an additional seven (7) day period. If Owner, within such second seven (7) day period, fails to cure, or reasonably commence to cure, such problem, then Design-Builder may declare the Agreement terminated for default by providing written notice to Owner of such declaration. In such case, Design-Builder shall be entitled to recover in the same manner as if Owner had terminated the Agreement for its convenience under Article 8 of the Agreement.

11.5 Bankruptcy of Owner or Design-Builder.

11.5.1 If either Owner or Design-Builder institutes or has instituted against it a case under the United States Bankruptcy Code, makes a general assignment for the benefit of creditors, or has a receiver appointed for it (such party being referred to as the "Bankrupt Party"), such event may impair or frustrate the Bankrupt Party's ability to perform its obligations under the Contract Documents. Accordingly, should such event occur:

11.5.1.1 The Bankrupt Party, its trustee or other successor, shall furnish, upon request of the non-Bankrupt Party, adequate assurance of the ability of the Bankrupt Party to perform all future material obligations under the Contract Documents, which assurances shall be provided within ten (10) days after receiving notice of the request; and

11.5.1.2 The Bankrupt Party shall file an appropriate action within the bankruptcy court to seek assumption or rejection of the Agreement within sixty (60) days of the institution of the bankruptcy filing and shall diligently prosecute such action.

If the Bankrupt Party fails to comply with its foregoing obligations, the non-Bankrupt Party shall be entitled to request the bankruptcy court to reject the Agreement, declare the Agreement terminated and pursue any other recourse available to the non-Bankrupt Party under this Article 11.

11.5.2 The rights and remedies under Section 11.5.1 above shall not be deemed to limit the ability of the non-Bankrupt Party to seek any other rights and remedies provided by the Contract Documents or by law, including its ability to seek relief from any automatic stays under the United States Bankruptcy Code or the right of Design-Builder to stop Work under any applicable provision of these General Conditions of Contract.

Article 12

Electronic Data

12.1 Electronic Data.

12.1.1 The parties recognize that Contract Documents, including drawings, specifications and three-dimensional modeling (such as Building Information Models) and other Work Product may be transmitted among Owner, Design-Builder and others in electronic media as an alternative to paper hard copies (collectively "Electronic Data").

12.2 Transmission of Electronic Data.

12.2.1 Owner and Design-Builder shall agree upon the software and the format for the transmission of Electronic Data. Each party shall be responsible for securing the legal rights to

access the agreed-upon format, including, if necessary, obtaining appropriately licensed copies of the applicable software or electronic program to display, interpret and/or generate the Electronic Data.

12.2.2 Neither party makes any representations or warranties to the other with respect to the functionality of the software or computer program associated with the electronic transmission of Work Product. Unless specifically set forth in the Agreement, ownership of the Electronic Data does not include ownership of the software or computer program with which it is associated, transmitted, generated or interpreted.

12.2.3 By transmitting Work Product in electronic form, the transmitting party does not transfer or assign its rights in the Work Product. The rights in the Electronic Data shall be as set forth in Article 4 of the Agreement. Under no circumstances shall the transfer of ownership of Electronic Data be deemed to be a sale by the transmitting party of tangible goods.

12.3 Electronic Data Protocol.

12.3.1 The parties acknowledge that Electronic Data may be altered or corrupted, intentionally or otherwise, due to occurrences beyond their reasonable control or knowledge, including but not limited to compatibility issues with user software, manipulation by the recipient, errors in transcription or transmission, machine error, environmental factors, and operator error. Consequently, the parties understand that there is some level of increased risk in the use of Electronic Data for the communication of design and construction information and, in consideration of this, agree, and shall require their independent contractors, and Subcontractors to agree, to the following protocols, terms and conditions set forth in this Section 12.3.

12.3.2 Electronic Data will be transmitted in the format agreed upon in Section 12.2.1 above, including file conventions and document properties, unless prior arrangements are made in advance in writing.

12.3.3 The Electronic Data represents the information at a particular point in time and is subject to change. Therefore, the parties shall agree upon protocols for notification by the author to the recipient of any changes which may thereafter be made to the Electronic Data, which protocol shall also address the duty, if any, to update such information, data or other information contained in the electronic media if such information changes prior to Final Completion of the Project.

12.3.4 The transmitting party specifically disclaims all warranties, expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, with respect to the media transmitting the Electronic Data. However, transmission of the Electronic Data via electronic means shall not invalidate or negate any duties pursuant to the applicable standard of care with respect to the creation of the Electronic Data, unless such data is materially changed or altered after it is transmitted to the receiving party, and the transmitting party did not participate in such change or alteration.

Article 13

Miscellaneous

13.1 Confidential Information.

13.1.1 Confidential Information is defined as information which is determined by the transmitting party to be of a confidential or proprietary nature and: (i) the transmitting party identifies as either confidential or proprietary; (ii) the transmitting party takes steps to maintain the confidential or proprietary nature of the information; and (iii) the document is not otherwise available in or considered to be in the public domain. The receiving party agrees to maintain the confidentiality of the Confidential Information and agrees to use the Confidential Information solely in connection with the Project.

13.2 Assignment.

13.2.1 Neither Design-Builder nor Owner may, without the written consent of the other, assign, delegate, transfer or sublet any portion or part of the Work or the obligations required by the Contract Documents. Any assignment, delegation, transfer or sublet made in violation of this provision shall be void. Should Owner consent to any assignment, delegation, transfer or sublet, Design-Builder shall still remain bound to all warranties, certifications, indemnifications, promises and performances, however described, as are required of it, unless specifically released in writing by Owner.

13.3 Successorship.

13.3.1 Design-Builder and Owner intend that the provisions of the Contract Documents are binding upon the parties, their employees, agents, heirs, successors and assigns.

13.4 Governing Law.

13.4.1 The Agreement and all Contract Documents shall be governed by the laws of the place of the Project, without giving effect to its conflict of law principles.

13.5 Severability.

13.5.1 If any provision or any part of a provision of the Contract Documents shall be finally determined to be superseded, invalid, illegal, or otherwise unenforceable pursuant to any applicable Legal Requirements, such determination shall not impair or otherwise affect the validity, legality, or enforceability of the remaining provision or parts of the provision of the Contract Documents, which shall remain in full force and effect as if the unenforceable provision or part were deleted.

13.6 No Waiver.

13.6.1 The failure of either Design-Builder or Owner to insist, in any one or more instances, on the performance of any of the obligations required by the other under the Contract Documents shall not be construed as a waiver or relinquishment of such obligation or right with respect to future performance.

13.7 Headings.

13.7.1 The headings used in these General Conditions of Contract, or any other Contract Document, are for ease of reference only and shall not in any way be construed to limit or alter the meaning of any provision.

13.8 Notice.

13.8.1 Whenever the Contract Documents require that notice be provided to the other party, notice shall go to the Owner Senior Representative or Design-Builder's Senior Representative, as applicable. Such notice will be deemed to have been validly given (i) if delivered in person to the individual intended to receive such notice, or (ii) four (4) days after being sent by registered or certified mail, postage prepaid to the address indicated in the Agreement.

13.9 Amendments.

13.9.1 The Contract Documents may not be changed, altered, or amended in any way except in writing signed by a duly authorized representative of each party.

Exhibit

Insurance

Worker's Compensation Insurance in accordance with all applicable state and federal statutes.

Employers Liability Insurance of at least:

- 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

Commercial General Liability Insurance equivalent to, as a minimum, Insurance Services Office form CG 00 01 07 98 or current equivalent:

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

Motor Vehicle Liability Insurance, including Michigan No-Fault Coverages, equivalent to, as a minimum, Insurance Services Office form CA 00 01 07 97 or current equivalent. Coverage shall include all owned vehicles, all non-owned vehicles and all hired vehicles. The limits of liability shall be no less than \$1,000,000 for each occurrence as respects Bodily Injury Liability or Property Damage Liability, or both combined.

Umbrella/Excess Liability Insurance 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.

Professional Liability Insurance in an amount of at least \$1,000,000 per claim, which insurance Design-Builder shall maintain until the applicable statute of repose extinguishes any claims related to the Agreement.