

EXHIBIT 1.1(a)
Comprehensive Agreement
for the
Waterfront Implementation Project
City of Alexandria

[ATTACHED]

COMPREHENSIVE AGREEMENT

This **COMPREHENSIVE AGREEMENT** ("Agreement") is entered into this _____ day of _____, 20__ ("Agreement Date") by and between the City of Alexandria, Virginia ("City") and _____ ("Design-Builder"). In consideration of the mutual covenants and obligations contained herein, the City and Design-Builder hereby agree as follows:

WITNESSETH:

WHEREAS, the City intends to design and construct certain improvements associated with the City's Waterfront Implementation Project ("Project"); and

WHEREAS, the City determined that its goals for the design and construction of the Project would be best-served by implementing a "progressive design-build" delivery process through a two-step, best value procurement process, as allowed under the Public-Private Education Facilities and Infrastructure Act of 2002 (Va. Code § 56-575 et seq.) ("PPEA") and the Public-Private Education Facilities and Infrastructure Act Guidelines adopted and issued by the City ("PPEA Guidelines") to implement the PPEA; and

WHEREAS, as the result of the City's procurement process, the City and Design-Builder entered into an Interim Agreement dated _____, whereby Design-Builder agreed, among other things, to: (a) perform programmatic, design and other preliminary services to help the City determine the scope, price and schedule of the Project; and (b) prepare and submit to the City a GMP Proposal for the Work contemplated by this Agreement; and

WHEREAS, on or about _____, Design-Builder submitted the GMP Proposal to the City and, after conducting negotiations on such proposal, reached agreement on the terms required for the City to award this Agreement to Design-Builder; and

WHEREAS, on or about _____, the City issued a Notice of Intent to Award this Agreement to Design-Builder; and

WHEREAS, Design-Builder has fulfilled all conditions precedent to the award of this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and obligations contained herein, City and Design-Builder hereby agree as follows:

Article 1 **Scope of Work**

1.1 **Scope of Work**. Design-Builder shall complete all Work as specified or indicated in the Contract Documents.

1.2 **Effect of Interim Agreement**. Design-Builder acknowledges that it was retained by the City under the Interim Agreement to perform, among other things, the GMP Proposal Design Document. As a result of having undertaken such services, Design-Builder acknowledges that it has, except as specifically set forth in this Agreement, satisfied itself with respect to all aspects of the Project and the Work to commit to all obligations in the Contract Documents. Accordingly,

Design-Builder hereby acknowledges and agrees that:

(a) All Work Product existing as of the Agreement Date, including the GMP Proposal Design Documents, was prepared solely by Design-Builder and DB-Related Parties;

(b) During its performance of the Interim Agreement, Design-Builder was capable of conducting and did conduct investigations to verify or supplement its understanding of the: (i) the City-Furnished Information, including the Conceptual Design Report and City's Project Criteria; (ii) existing Site conditions at the Project; and (iii) anything else reasonably needed to commit to its obligations in the Contract Documents;

(c) Except for the Designated City-Furnished Information, the City has made no representation or warranty to Design-Builder that the information contained in the Contract Documents or provided to Design/Builder in conjunction with the Interim Agreement, including but not limited to the City-Furnished Information, is sufficient, complete or accurate. Design-Builder assumes responsibility for the sufficiency, completeness, and accuracy of all such information, notwithstanding the fact that the City may have provided, reviewed and/or approved such information; and

(d) Design-Builder shall have no right to claim or seek an adjustment to the Contract Price or Contract Times as the result of: (i) any incomplete, inaccurate, ambiguous, or inadequate information or requirements contained in or among any of the Contract Documents; (ii) the City's review or approval of any Contract Documents; or (iii) City's involvement during the Interim Agreement.

Article 2

Contract Documents and Definitions

2.1 Agreement and Exhibits. The Agreement consists of this document and the following exhibits which are attached hereto or shall be attached hereto in accordance with the provisions of this Agreement ("Exhibits"), and which are specifically made a part of the Agreement by this reference:

Exhibit 4.2.1	Design-Builder's Rate Classification Schedule
Exhibit 4.7.1	Allowance Payment Items
Exhibit 5.1.1	Schedule of Values
Exhibit 11.1(a)	Insurance Requirements
Exhibit 11.1(b)	Specimen Builder's Risk Insurance Policy
Exhibit 11.2.1	GMP Proposal Design Documents
Exhibit 11.2.2	City's Project Criteria
Exhibit 11.2.3	Designated City-Furnished Information
Exhibit 11.2.4	GMP Clarifications and Assumptions
Exhibit 11.2.5	Baseline Schedule
Exhibit 11.2.6	Key Personnel and Organizational Chart
Exhibit 11.2.7	Responsibility Matrix for Governmental Approvals
Exhibit 11.2.8	Geotechnical Baseline Report
Exhibit 11.10	Davis-Bacon Wage Decisions
Exhibit 11.11	FEMA Grant Requirements
Exhibit 11.12	Division Owner Requirements
Exhibit 11.13(a)	Form of Performance Bond

Exhibit 11.13(b) Form of Payment Bond
Exhibit 11.14 General Conditions of Contract

2.2 Contract Documents. The Contract Documents consist of: (a) this Agreement, inclusive of all Exhibits; and (b) the following, which shall be designated, completed, delivered, prepared, or issued after the Agreement Date and are not attached hereto:

- (i) The Construction Documents; and
- (ii) Any and all written amendments, Change Orders, Work Change Directives, and Minor Changes amending, modifying, or supplementing the Contract Documents.

For the avoidance of doubt, except for the City's Project Criteria, nothing contained in the City-Furnished Information (inclusive of the Conceptual Design Report) is to be construed as being a Contract Document.

2.3 Inconsistencies, Conflicts or Ambiguities.

2.3.1 Intent. The Contract Documents are intended to permit the Parties to complete the Work and all obligations required by the Contract Documents within the GMP and Contract Times. 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, the City and Design-Builder shall attempt to resolve such ambiguities, conflicts or inconsistencies informally. Requirements contained in one component of the Contract Documents and not contained in another component of the Contract Documents shall not be deemed an inconsistency, conflict or ambiguity.

2.3.2 Order of Precedence. The following order of precedence shall apply in the case of direct, irresolvable conflicts between or among Contract Documents:

- (a) All written amendments to this Agreement.
- (b) Change Orders, Work Change Directives and Minor Changes.
- (c) Exhibit 11.11 (FEMA Grant Requirements)
- (d) This Agreement, including all Exhibits except: (i) Exhibit 11.2.1 (GMP Proposal Design Documents); (ii) Exhibit 11.2.2 (City's Project Criteria); (iii) Exhibit 11.2.3 (Designated City-Furnished Information); Exhibit 11.11 (FEMA Grant Requirements); Exhibit 11.12 (Division Owner Requirements); and Exhibit 11.14 (General Conditions of Contract).
- (e) Exhibit 11.14 (General Conditions of Contract).
- (f) Exhibit 11.12 (Division Owner Requirements).
- (g) The Construction Documents.
- (h) Exhibit 11.2.2 (City's Project Criteria).

- (i) Exhibit 11.2.1 (GMP Proposal Design Documents).
- (j) Exhibit 11.2.3 (Designated City-Furnished Information)

2.3 Amending the Contract Documents. The Contract Documents may only be amended, modified, or supplemented through a written amendment executed by the Parties or a Change Order, Work Change Directive, or Minor Change issued in accordance with Article 9 of the General Conditions of Contract.

2.4 Defined Terms. Terms used in this Agreement will have the meanings indicated in the General Conditions of Contract.

2.5 Entire Agreement. This Agreement represents the entire agreement between the City and Design-Builder relating to the Project and supersedes all prior negotiations, representations, or agreements, including the Interim Agreement.

Article 3 **Contract Times**

3.1 Commencement Date. Design-Builder shall commence the Work upon receipt of the Notice to Proceed (“Commencement Date”). The Commencement Date shall be no later than fifteen (15) days after the Agreement Date, unless the Parties mutually agree otherwise in writing.

3.2 Contract Times.

3.2.1 Scheduled Substantial Completion Date. Substantial Completion shall be achieved as expeditiously as reasonably practicable, but in no event later than _____ (“Scheduled Substantial Completion Date”).

3.2.2 Scheduled Final Completion Date. Final Completion of the Work shall be achieved as expeditiously as reasonably practicable, but in no event later than sixty (60) days after the Substantial Completion Date (the last day of such 60-day period being referred to as the “Scheduled Final Completion Date”).

3.3 Schedule Adjustments. All of the scheduled completion dates set forth in Section 3.2 above (collectively referred to as “Contract Times”) shall be subject to adjustment in accordance with the General Conditions of Contract.

3.4 Time of the Essence. The City and Design-Builder mutually agree that the Scheduled Substantial Completion Date and Scheduled Final Completion Date, individually and collectively, are of the essence of this Agreement.

3.5 Delay Liquidated Damages. Design-Builder understands that if any of the Contract Times is not attained, the City will suffer damages which are difficult to determine and accurately specify. To compensate the City for such damages, Design-Builder hereby agrees to pay the City Delay Liquidated Damages as follows:

3.5.1 Substantial Completion. If the Substantial Completion Date has not been achieved by the Scheduled Substantial Completion Date, then Design-Builder shall pay to the City Delay Liquidated Damages of _____ Dollars (\$_____) per day for each day between the Scheduled Substantial Completion Date and the Substantial Completion Date.

3.5.2. Final Completion. If the Final Completion Date has not been achieved by the Scheduled Final Completion Date, Designer-Builder shall pay to the City Delay Liquidated Damages of _____ Dollars (\$ _____) per day for each day between the Scheduled Final Completion Date and the Final Completion Date.

3.6 Delay Liquidated Damages Not Penalty. The Parties acknowledge, recognize and agree on the following:

(a) that because of the unique nature of the Project, it is difficult or impossible to determine with precision the amount of damages that would or might be incurred by the City as a result of Design-Builder's failure to complete the Work on or before the applicable Contract Times;

(b) that any sums which would be payable under this Agreement as Delay Liquidated Damages are in the nature of liquidated damages, and not a penalty, and are fair and reasonable, and such payment represents a reasonable estimate of fair compensation for the losses that may reasonably be anticipated from such failure;

(c) that any sums which would be payable under this Agreement as Delay Liquidated Damages shall be in lieu of all liability for any and all extra costs, losses, expenses, claims, penalties and any other damages, whether direct, indirect, special or consequential, and of whatsoever nature incurred by the City which are occasioned by any delay in achieving the applicable Contract Time(s); and

(d) that, in recognition of the acknowledgments above, Design-Builder is expressly estopped from arguing, and waives any rights it may have to argue, that Delay Liquidated Damages are a penalty and that they are not enforceable.

For the avoidance of doubt, and notwithstanding anything to the contrary in Paragraph (c) above, Delay Liquidated Damages are not intended to excuse Design-Builder from liability for any other breach of its obligations under the Contract Documents.

Article 4 **Contract Price**

4.1 Contract Price and GMP.

4.1.1 Contract Price. The City shall pay Design-Builder a contract price for the proper performance of the Work and all other obligations under the Contract Documents ("Contract Price"). The Contract Price is comprised of, and equals the sum of, the following:

- (a) Cost of the Work, as defined in Section 4.2 below.
- (b) Design-Builder's General Conditions, as defined in Section 4.3 below.
- (c) Design-Builder's Fee, as defined in Section 4.5 below.

The Contract Price shall be paid in accordance with Article 5 below.

4.1.2 Guaranteed Maximum Price ("GMP"). The GMP is the amount of _____ Dollars (\$ _____), as such GMP may be adjusted in accordance with _____ of the General Conditions of Contract. Design-Builder

guarantees that it shall not exceed the GMP, and that it will be responsible for paying all costs of completing the Work which exceed the GMP. The GMP is deemed to include all sales, use, consumer and other taxes mandated by applicable Legal Requirements. Design-Builder does not guarantee any specific line item provided as part of the GMP.

4.2 Cost of the Work. The term “Cost of the Work” shall mean costs reasonably and actually incurred by Design-Builder in the proper performance of the Work. The Cost of the Work shall include only the following:

.1 Wages of design professionals or construction workers directly employed by Design-Builder to perform design or construction of the Work at the Site or, with the City’s 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 Exhibit 4.2.1 (Design-Builder’s Rate Classification Schedule).

.2 A multiplier applied to the wages of the employees of Design-Builder covered under Section 4.2.1 above as compensation for the costs incurred or customarily paid for employee benefits, project-related bonuses, premiums, taxes, insurance, contributions and assessments required by law, and/or collective bargaining agreements. The multiplier for Design-Builder’s professional, salary-based on-site personnel shall be ____%. The multiplier for Design-Builder’s craft/field, hourly-based on-site personnel shall be ____%. The multiplier for all off-site personnel of Design-Builder shall be ____%.

.3 Payments properly made by Design-Builder to Subcontractors and Design Consultants for performance of portions of the Work.

.4 Costs incurred by Design-Builder in repairing or correcting defective, damaged or nonconforming Work (including any warranty or corrective Work performed after Substantial Completion), provided that such Work was beyond the reasonable control of Design-Builder, or caused by the ordinary mistakes or inadvertence, and not the negligence, of Design-Builder or those working by or through Design-Builder, and provided further that no Design-Builder’s Fee shall apply to such costs. If the costs associated with such Work are recoverable from insurance, Subcontractors or Design Consultants, Design-Builder shall exercise reasonable commercial efforts to obtain recovery from the appropriate source and provide a credit to the City if recovery is obtained, net of any costs and expenses reasonably incurred by Design-Builder in pursuing and obtaining such recovery.

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

.6 Costs (less salvage value) of Equipment and 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 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.

.8 Fuel and utility costs incurred in the performance of the Work.

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

.10 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 the City, paying legal judgments against Design-Builder resulting from such suits or claims, and paying settlements with the City's consent.

.11 Costs incurred in preventing damage, injury or loss in case of an emergency affecting the safety of persons and property.

.12 Premiums for the Performance Bond, Payment Bond, and Builder's Risk Insurance, *provided, however*, that no Design-Builder's Fee shall apply to such costs.

.13 Sales, use or similar taxes, tariffs, or duties incurred in the performance of the Work.

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

4.3 Design-Builder's General Conditions. The term "Design-Builder's General Conditions" shall mean Design-Builder's costs reasonably and actually incurred by Design-Builder for supervisory, construction management and overhead-related items in connection with the proper performance of the Work and which are not covered by the Cost of the Work. Design-Builder's General Conditions shall include only the following:

.1 Base 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 Equipment and Materials, or any material or equipment necessary for the Work.

.2 A multiplier applied to the wages of the employees of Design-Builder covered under Section 4.3.1 above as compensation for the costs incurred or customarily paid by Design-Builder for employee benefits, project-related bonuses, premiums, taxes, insurance, contributions and assessments required by law, and/or collective bargaining agreements. The multiplier for professional, salary-based on-site personnel shall be ____%. The multiplier for craft/field, hourly-based on-site personnel shall be ____%. The multiplier for all off-site personnel shall be ____%.

.3 Costs of removal of debris and waste from the Site not performed or required to be performed by Subcontractors.

.4 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, reasonable petty cash expenses.

.5 Vehicles for the transport of persons, such as passenger cars and pick-up trucks, to the extent used by any of Design-Builder's personnel while performing their Project-related responsibilities.

4.4 Non-Reimbursable Costs. The Cost of the Work and Design-Builder's General Conditions shall not include the following:

.1 Salaries and other compensation for Design-Builder personnel stationed at Design-Builder's principal or branch offices, except as expressly provided for in Sections 4.2.1 and 4.3.1 above.

.2 Expenses of Design-Builder's principal office and offices other than the Project Site office.

.3 Overhead and general expenses, except as expressly provided for in Sections 4.2 and 4.3 above.

.4 Bonuses, profit sharing, thrift or similar plans paid to employees of Design-Builder, whether or not such employee worked on the Project, except as expressly provided for in Sections 4.2.2 and 4.3.2 above.

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

.6 Insurance premiums incurred or paid by Design-Builder, other than the Builder's Risk insurance.

.7 Accounting and data processing costs.

.8 Any costs not specifically set forth in Sections 4.2 and 4.3 above.

.9 Costs that would cause the GMP to be exceeded.

.10 Costs and expenses incurred to obtain any Governmental Approval, permit, license, registration, or other approval, or fee or charge incurred, in connection with the general operations of Design-Builder and not required specifically and exclusively for the performance of the Work.

4.5 Design-Builder's Fee.

4.5.1 Design-Builder's Fee Amount. Design-Builder's Fee shall be _____ (\$_____), and represents the compensation to Design-Builder for profit and the non-reimbursable costs identified in Section 4.4 above. Design-Builder's Fee was calculated by applying a percentage of _____ (___%) to the estimated Cost of the Work, with no fee to be applied for Contingency or any Allowance Payment Item.

4.5.2 Adjustment to Design-Builder's Fee. Design-Builder's Fee will be adjusted as follows:

(a) For additive Change Orders, including additive Change Orders arising from both additive and deductive items, it is agreed that Design-Builder shall receive a Design-Builder's Fee not to exceed ____% of the additional Costs of the Work incurred for that Change Order.

(b) For deductive Change Orders, including deductive Change Orders arising from both additive and deductive items, it is agreed that Design-Builder's Fee shall be reduced by an amount equal to ____% applied to the net reduction in Costs of the Work.

(c) For Costs of the Work that are drawn from the Contingency or incurred for an Allowance Payment Item, it is agreed that Design-Builder shall receive a Design-Builder's Fee of ____% of such Costs of the Work.

4.6 Contingency.

4.6.1 Use of Contingency. The GMP includes a contingency line item ("Contingency") as part of the estimated Cost of the Work. The Contingency is available for Design-Builder's exclusive use for unanticipated Costs of the Work that it has incurred that are not the basis for a Change Order under the Contract Documents, plus the applicable Design-Builder's Fee, but subject to: (i) City approval as more specifically described in Section 4.6.2 below; and (ii) other limitations set forth in the Contract Documents. By way of example, and not as a limitation, such unanticipated Costs of the Work may include: (a) trade buy-out differentials; (b) overtime or acceleration; (c) escalation of labor and material costs; (d) correction of defective, damaged or nonconforming Work, including design errors or omissions, however caused, but as limited under Section 4.2.4 above; (e) Subcontractor defaults; and (f) deductibles incurred by Design-Builder under the insurance required under Exhibit 11.1 (Insurance Requirements) (but not to exceed \$25,000 per occurrence). The Contingency is not available to the City for any reason, including, but not limited to, changes in scope or any other item which would enable Design-Builder to increase the GMP under the Contract Documents.

4.6.2 Draw upon Contingency. Design-Builder may draw upon the Contingency by making a written request to the City, identifying the reason and amount of the draw, and by obtaining the City's written approval, which shall not be unreasonably withheld. If the City approves a draw against the Contingency, Design-Builder shall, in its Applications for Payment, show an increase in the relevant line item by the amount drawn and a decrease in the line item for the Contingency.

4.6.3 Notice of Anticipated Charges Against Contingency. Design-Builder shall provide the City notice of all anticipated charges against the Contingency, and shall provide the City as part of its monthly status report an accounting of the Contingency, including all reasonably foreseen uses or potential uses of the Contingency in the upcoming three (3) months.

4.6.4 Subcontractor Defaults and Insurance or Bond Reimbursement. Design-Builder agrees that with respect to any expenditure from the Contingency relating to a Subcontractor default or any 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. If Design-Builder is subsequently reimbursed for said costs, then said recovery will be credited back to the Contingency, net of any reasonable costs and expenses incurred by Design-Builder in pursuing such recovery.

4.7 Allowance Payment Items and Allowance Payment Values

4.7.1 General. The GMP includes all Allowance Payment Items set forth in Exhibit 4.7.1 (Allowance Payment Items), with the corresponding Allowance Payment Values for the Allowance Payment Items also being set forth in such exhibit.

4.7.2 Performance of Work on Allowance Payment Items. No work shall be performed on any Allowance Payment Item without Design-Builder first obtaining in writing advanced authorization to proceed from the City.

4.7.3 Reconciliation of Allowance Payment Values. If the actual costs for an Allowance Payment Item differ from the stated Allowance Payment Value, the GMP shall ultimately be adjusted accordingly by Change Order. If, at the time the Final Application for Payment, the actual costs for any Allowance Payment Value are less than the corresponding Allowance Payment Value, such difference shall be reflected in a Change Order that reduces the GMP by such difference.

4.8 Savings.

4.8.1 Shared Savings. If upon Final Completion the sum of: (a) the actual Cost of the Work incurred by Design-Builder (e.g., not including any unused portions of the Contingency or Allowance Payment Values); (b) Design-Builder's General Conditions; and (c) Design-Builder's Fee is less than the GMP, as such GMP may have been adjusted over the course of the Project, then the difference ("Savings") shall be treated at the rate of _____ percent (___%) to the City and _____ percent (___%) to Design-Builder.

4.8.2 Payment of Savings. The City's and Design-Builder's respective shares of Savings shall be calculated and paid as part of Final Payment under Section 5.3 below, 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 amount of Savings and each share in light of the costs so incurred.

4.9 Self-Perform Work. If any of Design-Builder's Self-Perform Work is performed on a lump sum basis, such lump sum shall be treated in the same manner as if the lump sum was performed by a Subcontractor for purposes of determining Cost of the Work. If such Self-Perform Work is performed on a GMP or Cost of the Work basis, it will be paid in accordance with Sections 4.2 and 4.3 above. Marine Work Subcontractor's Self-Perform Work shall be performed on a lump sum basis. For the avoidance of doubt, the entity performing Self-Perform Work shall provide such information as the City may reasonably request, with the understanding that all information that formed the basis for the applicable estimate will be provided to the City on an Open-Book Basis, with all cost information being transparent and based on actual, verifiable costs compliant with Sections 4.2 and 4.3 above.

Article 5
Payment Procedures

5.1 Progress Payments.

5.1.1 Submission. Design-Builder shall submit to the City on the _____ (__) day of each month, beginning with the first month after the Commencement Date,

Applications for Payment in accordance with Article 6 of the General Conditions of Contract. The Schedule of Values for the Work is set forth in Exhibit 5.1.1 (Schedule of Values).

5.1.2 Payment. The City shall make payment within thirty (30) days after the City'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 or otherwise.

5.2 Retainage on Progress Payments.

5.2.1 Retainage. The City will withhold retainage in the amount of five percent (5%) on progress payments due Design-Builder. When fifty percent (50%) of the Work has been satisfactorily completed by Design-Builder and Design-Builder is otherwise in compliance with its contractual obligations, the City will not retain any additional retention amounts from Design-Builder's subsequent Applications for Payment. If Design-Builder is forecasting Substantial Completion to be forty-five (45) calendar days beyond the Scheduled Substantial Completion Date, the progress will be considered unsatisfactory, and the City shall resume withholding five percent (5%) of each invoiced amount from future payments until the City and Design-Builder have agreed upon a plan for mitigating such delay.

5.2.2 Reduction of Retainage at Substantial Completion. Within thirty (30) days after the Substantial Completion Date, the City shall release to Design-Builder all retainage, less an amount equal to: (a) two hundred percent (200%) of the reasonable value of all remaining Punch List items as of the Substantial Completion Date; and (b) all other amounts the City is entitled to withhold pursuant to Section 6.3 of the General Conditions of Contract.

5.3 Final Payment. The City shall pay the outstanding retention at Final Payment, in accordance with Section 6.6 of the General Conditions of Contract.

5.4 Interest. Payments due and unpaid by the City to Design-Builder shall bear interest commencing seven (7) days after payment is due in accordance with Va. Ann. § 2.2-4355.

5.5 City's Rights to Offset Delay Liquidated Damages. The City shall have the right to withhold Delay Liquidated Damages from any monies unpaid, otherwise due, or to become due, to Design-Builder, to demand and receive payment from Design-Builder of such Delay Liquidated Damages, and to initiate applicable dispute resolution procedures under Article 10 of the General Conditions of Contract to recover such Delay Liquidated Damages. The withholding of such damages from any monies unpaid, otherwise due, or to become due shall be in addition to retainage under the Contract Documents. The City has the discretion to allow Delay Liquidated Damages to accrue without withholding and by doing so does not waive any rights to withhold them at a later time.

5.6 Design-Builder's Payment Obligations to Subcontractors. Design-Builder is obligated as follows:

(a) Design-Builder is to be liable for the entire amount owed to any first-tier Subcontractor, *provided, however*, that Design-Builder shall not be liable for amounts

otherwise reducible due to Subcontractor's noncompliance with the terms of its Subcontract. In the event Design-Builder withholds all or a part of the amount promised to Subcontractor under the Subcontract, Design-Builder shall notify Subcontractor, in writing, of its intention to withhold all or a part of Subcontractor's payment with the reason for nonpayment. Payment by the City shall not be a condition precedent to Design-Builder's payment to any first-tier Subcontractor, regardless of Design-Builder receiving payment for amounts owed to Design-Builder.

(b) Design-Builder shall take one of the two following actions within seven (7) days after receipt of amounts paid to Design-Builder by City for work performed by a first-tier Subcontractor: (i) pay Subcontractor for the proportionate share of the total payment received from the City attributable to the work performed by Subcontractor; or (ii) notify the City and Subcontractor, in writing, of Design-Builder's intention to withhold all or a part of Subcontractor's payment with the reason for nonpayment.

(c) Design-Builder shall provide the City with its federal employer identification numbers.

(d) Design-Builder is obligated to pay interest to its first-tier Subcontractors on all amounts owed by Design-Builder that remain unpaid after seven (7) days following receipt by Design-Builder of payment from the City for work performed by Subcontractor, except for amounts withheld as allowed in Paragraph (b) above. Interest shall accrue at the rate of one percent (1%) per month. Design-Builder's obligation to pay an interest charge to a Subcontractor pursuant to this Paragraph (d) shall not be construed to be an obligation of the City, and any such interest charge shall be deemed a Non-Reimbursable Expense. No Change Orders shall be allowed for the purpose of providing reimbursement for any interest charge.

(e) Design-Builder shall flow down to each first-tier Subcontractor the provisions of this Section 5.6, thereby obligating the Subcontractor to meet the same payment and interest requirements to its Sub-Subcontractors as Design-Builder is obligated to its Subcontractors.

Article 6

Self-Perform Work and Subcontracts

6.1 Self-Perform Work.

6.1.1 General. As of the Agreement Date, the Self-Perform Work is that Work identified in Exhibit 11.2.4 (GMP Clarifications and Assumptions). No additional Self-Perform Work shall be allowed without the City's permission, which permission may be withheld or conditioned by the City in its sole and absolute judgment. Subject to Exhibit 11.2.4 (GMP Clarifications and Assumptions), Self-Perform Work packages shall either be negotiated or subject to competition, as determined by the City in its sole and absolute judgment.

6.1.2 Self-Perform Work Subject to Negotiations. If the City determines that the Self-Perform Work package will be subject to negotiation, Design-Builder shall submit a proposal for such package based upon: (a) the estimated Cost of the Work for such Self-Perform Work, with the entity performing Self-Perform Work pricing its labor on actual wages plus the appropriate multiplier on such wages; and (b) Design-Builder's Fee being applied to such Cost of the Work. Self-Perform Work performed by the Marine Work Subcontractor will also include a fair and

reasonable fee for such contractor to cover its profit and Non-Reimbursable Expenses. For the avoidance of doubt, the entity performing Self-Perform Work shall provide such information as the City may reasonably request, with the understanding that all information that formed the basis for the applicable estimate will be provided to the City on an Open-Book Basis. If the Parties are unable to reach an agreement on the proposal, the City may, in its sole and absolute judgment: (x) withdraw its permission that the applicable Work be deemed Self-Perform Work; or (y) give Design-Builder permission to submit a competitive proposal in accordance with Section 6.1.3 below.

6.1.3 Self-Perform Work Subject to Competition. If the City determines that the Self-Perform Work package will be subject to competition, Design-Builder shall be allowed to perform such package if: (a) Design-Builder submits its bid or proposal for such package in the same manner as all other Subcontractors; and (b) the City determines that Design-Builder's bid or proposal provides the best value for the City. If Design-Builder wishes to submit a bid or proposal for such package, the City shall have the right to require the submittal of all bids or proposals for such work directly to the City and/or Owner's Advisor (and not to Design-Builder) for review and evaluation. Design-Builder further acknowledges and understands that its bid or proposal shall be provided on an Open Book Basis.

6.2 Work to Be Performed through Subcontractors.

6.2.1 Fixed-Price Subcontracts. It is contemplated that, with the exception of the Marine Work Subcontractor, all first-tier Subcontractors are to be awarded fixed-price Subcontracts through a low bid, competitive procurement process, unless otherwise expressly authorized by the City in writing.

6.2.2 Bidding Process. Design-Builder shall be responsible for dividing the Work into suitable bid packages. Design-Builder shall develop and discuss with the City a proposed list of bidders for each Subcontract and, unless the City agrees otherwise in writing, shall obtain bids from at least three (3) bidders for all Subcontracts where the budgeted amount for the Subcontract is in excess of \$250,000. The three (3) bidder requirement of the preceding sentence shall not apply if the Parties agree that Design-Builder will likely not be able to obtain three (3) bids or proposals from qualified and suitable bidders. In connection with all Subcontractor procurements, Design-Builder shall:

- (a) Develop procurement procedures in consultation with the City and prepare all necessary procurement documents;
- (b) Advertise for bids or proposals and receive bids or proposals;
- (c) Open and review all bids or proposals in a manner that does not disclose the contents of the bids or proposals to persons not employed by Design-Builder, the City or Owner's Advisor;
- (d) Evaluate the bids or proposals in accordance with the selection criteria established in the procurement documents; and
- (e) Recommend a bid or proposal for approval by the City in accordance with such evaluation.

All bids or proposals shall be made available to the City on request.

6.2.3 Selection. The City may accept Design-Builder's recommendation or may make its own selection against whom Design-Builder makes no reasonable objection. If the City selects a Subcontractor other than the one recommended by Design-Builder and if the City's selected Subcontractor's final contract amount is higher than the final amount proposed by Design-Builder's recommended Subcontractor, the GMP will be adjusted to reflect any difference. The City may, in its sole discretion, reject any or all bids and proposals received for any bid package, and may require Design-Builder to obtain new or revised bids or proposals.

6.2.4 City and Owner's Advisor Rights to Participate in Procurement Process. The City and Design-Builder shall meet and confer about the role that City anticipates playing during the procurement of Subcontractors. Without limiting any of the foregoing, Design-Builder acknowledges and agrees that the City and Owner's Advisor shall have the right to: (a) review and comment on all procurement documents; (b) attend any bid or proposal openings; (c) attend any meetings with prospective Subcontractors, including scope review meetings; (d) review all bids, proposals, and other information developed or otherwise resulting from any competitive procurement, including Design-Builder's tabulation, scoring or evaluation materials; and (e) otherwise participate in the negotiation and contract award process. Unless the City decides otherwise, Design-Builder shall provide the City, upon award of a Subcontract, with a description of the competitive process undertaken in connection with such Subcontract award, together with copies of all material documents used in connection therewith and agreements resulting therefrom.

6.2.5 Best Value Proposals. Notwithstanding the expectation that all first-tier Subcontracts will be awarded on a low bid, competitive basis, the City and Design-Builder may agree that there is a benefit to the Project to awarding some Subcontracts on a best-value basis that would consider factors other than price. Design-Builder shall identify aspects of the Work where this procurement approach might be beneficial and discuss this with the City, including how price and other non-price factors will be considered in the procurement and award process.

6.3 Work to be Performed through Design Consultants. The City shall have the right to approve all Design Consultants on the Project, regardless of whether such Design Consultants were identified in Design-Builder's Proposal and/or evaluated by the City during the procurement process.

Article 7 **Work Product**

7.1 City's Rights in Work Product. Design-Builder hereby assigns and conveys to the City all right, title, and interest, including all copyrights, patents, or any other intellectual property rights (but excluding Pre-Existing Intellectual Property) in all Work Product and all ideas or methods specifically developed for such Work Product. All Work Product will become the property of the City on the earlier of: (a) the City's payment to Design-Builder of monies due in accordance with this Agreement and not subject to a good faith dispute; (b) the date any Work Product is delivered to the City; or (c) upon any termination of this Agreement. The City's use of any Work Product for any purpose other than the Project, without the involvement of Design-Builder, shall be at its own risk, and Design-Builder shall have no liability to the City for or relating to any such use.

7.2 DB-Related Entities. Except as specifically provided in Section 7.4 below, no DB-Related Entity will own or claim any copyright, patent, or any other intellectual property right in or with respect to any Work Product or ideas or methods specifically developed for such Work

Product.

7.3 Design-Builder's Right to Retain Copies of Work Product. Design-Builder may make and retain copies of the Work Product for information, reference and use by DB-Related Entities solely with respect to the Work. No DB-Related Entity may use the Work Product for any other purpose without the specific written consent of the City.

7.4 Pre-Existing Intellectual Property. The City acknowledges and agrees that in the performance of services under this Agreement, a DB-Related Entity may use proprietary algorithms, software, hardware, databases, other background technology, and other proprietary information that the DB-Related Entity developed or licensed from third parties prior to the Agreement Date ("Pre-Existing Intellectual Property"). Without limiting the City's rights with respect to the Work Product or the Project, the DB-Related Entity will retain all right, title, and interest in such Pre-Existing Intellectual Property. However, the City shall have the irrevocable, perpetual, and unrestricted right from and after the Agreement Date to use (or permit use of) all Pre-Existing Intellectual Property incorporated in the Work Product or the Project, all oral information received by the City in connection with the Work, and all ideas or methods represented by Pre-Existing Intellectual Property incorporated in the Work Product or the Project, in each case without additional compensation. Design-Builder hereby licenses such irrevocable, perpetual, and unrestricted rights to the City. The City's use of such license rights for any purpose other than the Project shall be at its own risk, and Design-Builder shall have no liability to the City for or relating to any such use.

Article 8 **Books and Records**

8.1 Proper Financial Management. 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, consistently applied.

8.2 Retention and Audit of Books and Records. During the performance of the Work and for a period of three (3) years after Final Payment, the City and its accountants shall be afforded access to, and the right to audit from time-to-time, upon reasonable notice, all Books and Records 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. The City may take possession of such Books and Records by reproducing such Books and Records for off-site review. When requested in the City's written notice of examination and/or audit, Design-Builder shall provide the City with copies of electronic and electronically stored Books and Records in a reasonably usable format that allows the City to access and analyze all such Books and Records. For Books and Records that require proprietary software to access and analyze, Design-Builder shall provide the City with the means to do so, including a license authorizing the City to access and analyze all such Books and Records.

8.3 Items Not Subject to Audit. For the avoidance of doubt, the City shall not have the right to audit any items for which it has accepted a lump sum proposal or agreed upon a fixed price/lump sum, including, but not limited to any agreed-upon billing rates, multipliers or markups agreed to by the City and Design-Builder as part of this Agreement, which are only subject to audit to confirm that such agreed-upon billing rate, multiplier or markup has been charged in accordance with this Agreement.

8.4 Flow-Down in Subcontracts. Design-Builder shall insert a clause containing all the provisions of this Article 8 in all Subcontracts having values over \$100,000.00.

Article 9 **Design-Builder's Representations**

9.1 Representations. Design-Builder makes the following representations as of the Agreement Date:

(a) Design-Builder has examined, carefully studied, and thoroughly understands the Contract Documents and the City-Furnished Information associated with the Work;

(b) Design-Builder has visited the Site and has become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

(c) Design-Builder is familiar with and is satisfied as to all Legal Requirements that may affect cost, progress, or performance of the Work;

(d) Design-Builder has correlated the Contract Documents with the information known to Design-Builder, information obtained from the City-Furnished Information, and observations made during visits to the Site;

(e) Design-Builder has given City written notice of all conflicts, errors, ambiguities, or discrepancies that Design-Builder has discovered in the Contract Documents and City-Furnished Information as of the Agreement Date and the written resolution thereof by City is acceptable to Design-Builder;

(f) The GMP Proposal Design Documents are based upon and comply with the City's Project Criteria;

(g) The Contract Documents are sufficiently complete to indicate and convey an understanding of all terms and conditions for performance and furnishing of the Work, including having enabled Design-Builder to establish the GMP;

(h) The GMP contains sufficient monies to perform all Work, including Design-Builder's obligation to provide and construct any items that are not explicitly contained in the GMP Proposal Design Documents, but which are reasonably inferable from such documents and necessary to provide a fully-functioning Project conforming to the Contract Documents; and

(i) Design-Builder shall be bound by and shall perform its obligations in full compliance with the Contract Documents.

Article 10 **Liability Limitations**

10.1 Limitation of Liability for Delay Liquidated Damages. Design-Builder's total aggregate liability to the City for the payment of Delay Liquidated Damages shall not exceed an amount equal to ___ percent (___%) of the Contract Price.

10.2 Maximum Liability Cap.

10.2.1 General. Subject to Section 10.2.2 below, Design-Builder's liability to the City under this Agreement with respect to damages arising out of the performance or unexcused non-performance of any work performed by a DB-Related Entity under this Agreement, whether such damages are based upon contract, breach of warranty (express or implied), tort (including negligence), strict liability, or any other legal theory, shall not exceed an amount equal to one hundred percent (100%) of the Contract Price ("Maximum Liability Cap"), which amount specifically includes any Delay Liquidated Damages paid by Design-Builder.

10.2.2 Exclusions. Notwithstanding Section 10.2.1 above, or anything else in the Contract Documents, Design-Builder's liability for the following shall not be limited or released in any way by the Maximum Liability Cap for the following liabilities, losses, damages, costs or expenses:

- (a) Any loss, cost or expense, to the extent such loss, cost or expense is paid by the proceeds of insurance (excluding payment of deductibles) up to the specific amounts Design-Builder is required to carry under Exhibit 11.1 (Insurance Requirements) of this Agreement;
- (b) Any loss, cost or expense arising out of or connected with Design-Builder's fraud, fraudulent misrepresentation, Willful Misconduct, Gross Negligence, or criminal acts;
- (c) Any loss, cost or expense incurred by Design-Builder in connection with Design-Builder's indemnification obligations set forth in Article 7 of the General Conditions of Contract; and
- (d) Any loss, cost, expense or penalties incurred by Design-Builder to any person or entity (other than the City) in any legal proceedings.

10.2.3 Costs to Complete the Work. Notwithstanding the provisions in Section 10.2.1, the costs incurred by Design-Builder in performing the Work and achieving Final Completion shall not be construed as being part of or limited by the Maximum Liability Cap.

10.3 Waiver of Consequential Damages.

10.3.1 General. To the fullest extent permitted by law, and notwithstanding any other provision of this Agreement (other than Section 10.3.2 below), in no event, whether arising out of contract, breach of warranty (express or implied), tort (including negligence), strict liability, or any other cause of or form of action whatsoever, shall either Party be liable to the other for any consequential damages (including, without limitation, damages for loss of use, loss of profits or anticipated profits, loss of revenue, and loss of business opportunity) arising out of or in connection with the performance or non-performance of its obligations under this Agreement.

10.3.2 Exclusions. Notwithstanding Section 10.3.1 above, or anything else in the Contract Documents, Design-Builder's liability for the following shall not be limited or released in any way for the following liabilities, losses, damages, costs or expenses:

- (a) Any loss, cost or expense, to the extent such loss, cost or expense is paid by the proceeds of insurance (excluding payment of deductibles) up to the specific

amounts Design-Builder is required to carry under Exhibit 11.1 (Insurance Requirements) of this Agreement;

(b) Any loss, cost or expense arising out of or connected with Design-Builder's fraud, fraudulent misrepresentation, Willful Misconduct, Gross Negligence, or criminal acts;

(c) Any loss, cost or expense incurred by Design-Builder in connection with Design-Builder's indemnification obligations set forth in Article 7 of the General Conditions of Contract;

(d) Any loss, cost, expense or penalties incurred by Design-Builder to any person or entity (other than the City) in any legal proceedings; and

(e) Design-Builder's obligation to pay Delay Liquidated Damages in accordance with Section 3.5 above.

10.4 Applicability

10.4.1 Other Persons and Entities. The provisions of this Article 10 shall be binding on and extend to the benefit of all successors, assignees, employees, officers, directors and Affiliates of each Party; *provided, however*, that the amount of Design-Builder's liability shall not exceed the aggregate the limits set forth in Section 10.2 above.

10.4.2 Binding Effect. Except to the extent prohibited by applicable Legal Requirements or specific terms to the contrary in this Article 10, the releases, waivers, limitations of liability and other terms in this Article 10 shall apply even in the event of the fault, negligence (in whole or in part), tort, strict liability, breach of contract or otherwise, of the person or entity in whose favor such provisions operate.

Article 11 **Miscellaneous**

11.1 Insurance Requirements. Design-Builder shall procure and maintain the insurance required by Exhibit 11.1(a) (Insurance Requirements). Design-Builder shall procure, prior to the commencement of on-site construction, the Builder's Risk Insurance policy in accordance with the specimen policy set forth in Exhibit 11.1(b) (Specimen Builder's Risk Insurance Policy).

11.2 Miscellaneous Exhibits.

11.2.1 GMP Proposal Design Documents. The GMP Proposal Design Documents are set forth in Exhibit 11.2.1 (GMP Proposal Design Documents).

11.2.2 City's Project Criteria. City's Project Criteria are set forth in Exhibit 11.2.2 (City's Project Criteria).

11.2.3 Designated City-Furnished Information. The Designated City-Furnished Information is set forth in Exhibit 11.2.3 (Designated City-Furnished Information).

11.2.4 GMP Clarifications and Assumptions. The clarifications and assumptions associated with the GMP are set forth in Exhibit 11.2.4 (GMP Clarifications and Assumptions).

11.2.5 Baseline Schedule. The Baseline Schedule is set forth in Exhibit 11.2.5 (Baseline Schedule).

11.2.6 Key Personnel and Organizational Chart. The Key Personnel and Design-Builder's Project Organizational Chart are set forth in Exhibit 11.2.6 (Key Personnel and Design-Builder's Project Organizational Chart).

11.2.7 Responsibility Matrix for Governmental Approvals. The responsibility matrix for Governmental Approvals is set forth in Exhibit 11.2.7 (Responsibility Matrix for Governmental Approvals).

11.2.8 Geotechnical Baseline Report. The Geotechnical Baseline Report is set forth in Exhibit 11.2.8 (Geotechnical Baseline Report).

11.3 Representations and Warranties. Design-Builder represents and warrants that:

(a) It is qualified to do business in the Commonwealth of Virginia and that it will take such action as, from time to time hereafter, may be necessary to remain so qualified;

(b) It is not in arrears with respect to payment of any monies due and owing the Commonwealth of Virginia, or any department of unit thereof, including but not limited to the payment of taxes and employee benefits, and that it shall not become so in arrears during the term of this Agreement;

(c) It shall comply with Va. Code § 40.1-29 and Va. Code § 11-4.6 regarding non-payment of wages.

11.4 Ethics in Public Contracting. The provisions of law set forth in Article IV of the Virginia Public Procurement Act, entitled "Ethics in Public Contracting," (Va. Code § 2.2-4367 et seq.), Alexandria City Code § 3-3-121 et seq.; the State and Local Government Conflict of Interest Act, Va. Code § 2.2-3100 et seq.; the Virginia Governmental Frauds Act, Va. Code § 18.2-498.1 et seq.; and Articles 2 and 3 of Chapter 10, Title 18.2 of the Code of Virginia, all as the same may be amended from time to time and are incorporated herein by reference. Design-Builder shall incorporate the above clause in its Subcontracts with each Design Consultant and Subcontractor.

11.5 Non-Appropriation of Funds. This Agreement is conditioned upon an annual appropriation made by the City Council of the City of Alexandria of funds sufficient to pay the compensation due Design-Builder under this Agreement. If such an appropriation is not made in any fiscal year, and the City lacks funds from other sources to pay the compensation due under this Agreement, the City will be entitled, at the beginning of or during such fiscal year, to terminate this Agreement. In that event, the City will not be obligated to make any payments under this Agreement beyond the amount properly appropriated for Agreement payments in the immediately prior fiscal year. The City will provide Design-Builder written notice of termination of this Agreement due to the non-appropriation of funds at least fifteen (15) calendar days before the effective date of the termination. However, the City's failure to provide such notice will not extend this Agreement into a fiscal year in which funds for Agreement payments have not been appropriated.

11.6 Equal Employment Opportunity.

11.6.1 Discrimination Prohibited. Design-Builder hereby agrees not to discriminate against any employee or applicant for employment on account of race, color, sex, religion, ancestry, national origin, marital status, age, sexual orientation, disability, when such person is a qualified person with a disability, or any other basis prohibited by applicable Legal Requirements relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of Design-Builder. Design-Builder agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

11.6.2 Affirmative Action. Design-Builder hereby agrees to implement an affirmative action employment program as defined in Section 12-4-3 of the Alexandria City Code to ensure nondiscrimination in employment under guidelines to be developed by the Human Rights Commission of the City of Alexandria (the "Commission") and approved by the City Council of the City of Alexandria.

11.6.3 EOE Statement. Design-Builder hereby agrees to include in all solicitations or advertisements for employees placed by or on behalf of Design-Builder the words "Equal Opportunity Employer" or a symbol approved by the Commission meaning the same.

11.6.4 Notice to Labor Unions. Design-Builder hereby agrees to notify each labor organization or representative of employees with which Design-Builder is bound by a collective bargaining agreement or other contract of Design-Builder's obligations pursuant to this equal employment opportunity clause.

11.6.5 Reports to the City. Design-Builder hereby agrees to submit to the City Manager and the City's Human Rights Administrator, upon request, no more frequently than annually, regular equal employment opportunity reports on a form to be prescribed by the City's Human Rights Administrator with the approval of the City Manager, except that the Administrator may request more frequent special reports of particular employers provided the Commission has found such employers to have violated any provision of Chapter 4 of Title 12 of the Alexandria City Code.

11.6.6 Compliance with Federal Requirements Sufficient. Notices, advertisements, and solicitations placed in accordance with federal Legal Requirements shall be deemed sufficient for the purpose of meeting the requirements of this section.

11.6.7 Accommodation of Disabled Workers. Design-Builder hereby agrees to make reasonable accommodation to the known physical or mental limitations of an otherwise qualified person with a disability who is an applicant or employee, unless Design-Builder can demonstrate that the accommodation would impose an undue hardship on the operation of its business.

11.6.8 Reasonable Accommodations. For the purposes of this section, reasonable accommodation may include: (i) making facilities used by employees readily accessible to and usable by persons with a disability; and (ii) job restructuring, part-time or modified work schedules, the acquisition or modification of equipment or devices, the provision of readers or interpreters, and other similar actions.

11.6.9 Undue Hardship. In determining whether an accommodation would impose an undue hardship on the operation of Design-Builder's business, factors to be considered include but are not limited to the following:

- (a) The overall size of Design-Builder’s business with respect to the number of employees, the number and type of facilities, and the size of the budget;
- (b) Design-Builder’s type of operation, including the composition and structure of Design-Builder’s work force; and
- (c) The nature and cost of the accommodation needed.

11.6.10 Refusal to Employ. Design-Builder may not deny any employment opportunity to a qualified person with a disability who is an employee or applicant if the basis for the denial is the need to make reasonable accommodation to the physical or mental limitations of the employee or applicant.

11.6.11 Subcontracts. Design-Builder hereby agrees to include the provisions in Sections 11.7.1 through 11.7.10 in every Subcontract so that such provisions will be binding upon each Design Consultant and Subcontractor.

11.6.12 Non-compliance. In the event of Design-Builder’s noncompliance with any provision of this equal employment opportunity clause, upon a finding of such noncompliance by the City’s Human Rights Commission and certification of such finding by the City Manager, the City Council of the City of Alexandria may terminate or suspend or not renew, in whole or in part, this Agreement.

11.7 Drug-Free Workplace.

11.7.1 Drug-Free Workplace. During the performance of this Agreement, Design-Builder agrees to: (a) provide a drug-free workplace for Design-Builder’s employees; (b) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in Design-Builder’s workplace and specifying the actions that will be taken against employees for violations of such prohibition; (c) state in all solicitations or advertisements for employees placed by or on behalf of Design-Builder that Design-Builder maintains a drug-free workplace; and (d) include the provisions of the foregoing clauses in every Subcontract over \$10,000, so that the provisions will be binding upon each Design Consultant and Subcontractor.

11.7.2 Definition. For the purposes of this Section 11.7, “drug-free workplace” means a site for the performance of work done in connection with this Agreement, in accordance with Chapter 3, Title 3, of the Code of the City of Alexandria, the employees of which are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of this Agreement.

11.8 Compliance with the Immigration Reform and Control Act of 1986. During the performance of any Work, Design-Builder shall not knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986, as amended.

11.9 Applicability of Davis-Bacon Act. All DB-Related Parties performing physical Work at the Site are required to comply with the Davis-Bacon Act, 40 U.S.C. § 3141 et seq., as supplemented by Department of Labor Regulations (29 CFR Part 5, “Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction”). The applicable Davis-Bacon Wage Decisions are set forth in Exhibit 11.9 (Davis-Bacon Wage

Decisions). Changes to such wage rates over the course of the Project shall be the responsibility of Design-Builder and shall not be eligible for claims or changes to the Contract Price.

11.10 FEMA Grant Requirements. Because the Work may be funded, in whole or in part, with grant(s) from the Federal Emergency Management Agency (“FEMA”), an agency under the U.S. Department of Homeland Security, this Interim Agreement may be subject to certain requirements associated with the grants. Grants from FEMA mandate the inclusion of certain contract provisions, which are set forth in Exhibit 11.10 (FEMA Grant Requirements). Consequently, Design-Builder agrees that it will fully comply with all of the provisions contained in such Exhibit, and that in the event any other provision of this Agreement conflicts with any provision in Exhibit 11.10, the provisions contained in Exhibit 11.10 shall govern.

11.11 Notice. All notices required by the terms of this Agreement shall be in writing. Notice will be deemed to have been validly given: (a) if delivered in person to the individual intended to receive such notice; or (b) one business day after being sent by overnight delivery via a nationally recognized courier service (e.g., FedEx or UPS), postage, transmittal or shipping charges prepaid, to the address set forth below:

If to Design-Builder:

If to the City:

City of Alexandria, Virginia

With copies to:

Office of the City Attorney, City of Alexandria

and

Director of Department of Project Implementation, City of Alexandria

11.12 Division Owner Requirements. The Division Owner Requirements are set forth in Exhibit 11.12 (Division Owner Requirements).

11.13 Forms of Performance Bond and Payment Bond. The form of the Performance Bond is set forth in Exhibit 11.13(a) (Form of Performance Bond) and the form of the Payment Bond is set forth in Exhibit 11.13(b) (Form of Payment Bond).

11.14 General Conditions of Contract. The General Conditions of Contract are set forth in Exhibit 11.14 (General Conditions of Contract).

IN WITNESS WHEREOF, the City and Design-Builder have signed this Agreement in duplicate. One counterpart each has been delivered to the City and Design-Builder.

CITY:

DESIGN-BUILDER:

City of Alexandria, Virginia

(Name of Design-Builder)

(Signature)

(Signature)

(Printed Name)

(Printed Name)

(Title)

(Title)

Date: _____

Date: _____

EXHIBIT 4.2.1

**Design-Builder's Rate Classification Schedule -
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

[NOT INCLUDED]

EXHIBIT 4.7.1

**Allowance Payment Items -
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

[NOT INCLUDED]

EXHIBIT 5.1.1

**Schedule of Values -
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

[NOT INCLUDED]

EXHIBIT 11.1(a)

**Insurance Requirements –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

A. Design-Builder Insurance Coverages

Design-Builder shall obtain and maintain the following insurance and limits of liability at all times during the period on which the Agreement is in full force and effect, provided, however, that Builder's Risk Insurance shall be obtained and maintained as set forth in Paragraph (g) below. The required insurance must be obtained and maintained from insurance companies that have at least an A.M. Best's Insurance Guide ("Best's Guide") Rating of A- and Financial Size Category of Class VII or better, according to the most current edition of the Best's Guide, and are authorized to do business in the Commonwealth of Virginia. Design-Builder, at its own cost, may purchase any additional insurance it believes necessary to protect its interests.

(a) Workers' Compensation and Employer's Liability Insurance. Design-Builder shall obtain and maintain Workers' Compensation insurance with statutory workers' compensation (Coverage A) limits and employer's liability (Coverage B) limits of at least \$1,000,000 bodily injury by accident, each accident, and \$1,000,000 bodily injury by disease, each employee. Coverage will be extended, if needed, to cover any claims under the United States Longshore and Harbor Workers' Compensation Act (33 U.S.C. §§ 901-950) and the Jones Act (46 U.S.C. §30104).

(b) Commercial General Liability Insurance. Design-Builder shall obtain and maintain Commercial General Liability insurance with a combined single limit of \$2,000,000 and in the aggregate annually. Such insurance shall include coverage for premises and operations, independent contractors, personal injury, product and completed operations, explosion, collapse and underground, and broad form contractual liability. Completed operations coverage shall continue to be carried for a period of at least five (5) years after Final Completion.

(c) Automobile Liability Insurance. Design-Builder shall obtain and maintain Automobile Liability insurance providing liability coverage for claims of bodily injury and property damage arising from the ownership, maintenance or use of all owned/leased, non-owned and hired motor vehicles used in the performance of the Work. Such policy shall provide coverage of \$1,000,000 combined single limit of liability for bodily injury and property damage. Coverage shall include pollution liability arising from overturn and collision.

(d) Umbrella/Excess Liability Insurance. Design-Builder shall obtain and maintain an Umbrella/Excess Liability insurance policy in excess of the limits above for employer's liability, commercial general liability, and automobile liability in the amount of \$15,000,000 per occurrence and in the aggregate annually.

(e) Contractor's Pollution Liability Insurance. Design-Builder shall obtain and maintain Contractor's Pollution Liability insurance in the amount of \$5,000,000 per occurrence

and in the aggregate annually. Such insurance shall cover bodily injury, property damage, cleanup/remediation costs or other amounts which Design-Builder or any DB-Related Party is legally obligated to pay arising out of the Work, any transit and/or disposal at non-owned disposal sites, and shall remain in full force and effect for the period of the Work and a five (5)-year extended reporting period after Final Completion.

(f) Professional Liability Insurance. Design-Builder or Lead Engineer shall obtain and maintain Professional Liability insurance with a limit of \$5,000,000 per claim and in the aggregate annually. Such insurance must provide coverage from the first date any professional services were rendered for the Project and must remain in full force and effect during the performance of the Work and be maintained or include an extended reporting period of at least five (5) years after Final Completion.

(g) Builder's Risk Insurance. Design-Builder shall obtain and maintain during on-site construction and until Substantial Completion an "All Risks" Builder's Risk insurance policy on a completed value basis, including permanent and temporary works, and site preparation, based upon the specimen policy that is set forth in Exhibit 11.1(b). Covered causes of loss shall include, but not be limited to, fire, explosion, collapse, earth movement

B. Insurance to be Maintained by First-Tier Design Consultants and Subcontractors

1. General and Limits. Design-Builder will cause all first-tier Design Consultants and Subcontractors to obtain and maintain the following minimum insurance coverages or be responsible for maintaining such coverages on behalf of each party. City Indemnitees shall be additional insureds on each such policy on a primary, non-contributory basis for the coverages set forth in Paragraphs (b), (c) and (d) below.

(a) Workers' Compensation and Employer's Liability Insurance with statutory workers' compensation (Coverage A) limits and employer's liability (Coverage B) limits of \$500,000 bodily injury by accident, each accident, and \$500,000 bodily injury by disease, each employee. Coverage will be extended, if needed, to cover any claims under the United States Longshore and Harbor Workers' Compensation Act (33 U.S.C. §§ 901-950) and the Jones Act (46 U.S.C. § 30104).

(b) Commercial General Liability Insurance including coverage for premises and operations, independent contractors, personal injury, product and completed operations, explosion, collapse and underground, and contractual liability. Minimum limits for Design Consultants and Subcontractors with Subcontracts valued at less than or equal to \$1 million shall have the minimum limits of no less than \$1,000,000 per occurrence and in the aggregate annually. For those Design Consultants and Subcontractors with Subcontracts valued at greater than \$1 million, such coverage shall have limits of no less than \$1,000,000 million per occurrence and in the aggregate annually.

(c) Automobile Liability Insurance with a limit of at least \$500,000 combined single limit for bodily injury and property damage covering all owned (if any), non-owned, hired, or borrowed vehicles on site or off.

(d) Umbrella/Excess Liability Insurance in excess of the underlying limits noted above for employer's liability, commercial general liability, and automobile liability for Subcontracts valued at more than \$1 million, coverage shall be in the amount of \$4 million per occurrence and

in the aggregate annually.

2. CCIP. Should Design-Builder implement a contractor-controlled insurance program (“CCIP”) providing compliant insurance for all participants with regard to on-site activities, all first-tier Subcontractors enrolled in the CCIP shall still be responsible for procuring and maintaining automobile liability insurance and the other insurance coverages noted above with regard to off-site work. City Indemnitees shall be included as additional insureds on a primary, non-contributory basis for the applicable insurance coverages set forth in Paragraph 1(b), 1(c) and 1(d) above.

C. Insurance to be Maintained by Suppliers

Design-Builder shall require Suppliers to purchase and maintain commercial general liability, automobile liability and any other insurance that is appropriate for their participation in the Project.

EXHIBIT 11.1(b)

**Specimen Builder's Risk Insurance Policy –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

[NOT INCLUDED]

EXHIBIT 11.2.1

**GMP Proposal Design Documents –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

[NOT INCLUDED]

EXHIBIT 11.2.2

**City's Project Criteria –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

[Note: The City's Project Criteria have been initially developed with the Conceptual Design Report. During Phase 1A, the City's Project Criteria may be further refined. If they are approved by the Owner, along with other aspects of the Phase 1B Amendment, they will be included here, as refined. During Phase 1B, the City's Project Criteria may also be further refined. If any such refinements are approved by the Owner, along with other aspects of the Phase 2 Amendment, they will be included here, as refined. For purposes of the foregoing, all references to approval by the Owner mean approval by the Owner, in its sole discretion, in accordance with the Agreement].

The City's Project Criteria are a summary of the City's programmatic requirements and objectives for the Project, and specific criteria and requirements, as set forth in the Conceptual Design Report. The City's Project Criteria is defined as the fixed criteria in the Conceptual Design Report. The Design-Builder is entitled to reasonably rely upon the City's Project Criteria, which shall serve as the basis for the Basis of Design Documents.

EXHIBIT 11.2.3

**Designated City-Furnished Information –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

[NOT INCLUDED]

EXHIBIT 11.2.4

**GMP Clarifications and Assumptions –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

[NOT INCLUDED]

EXHIBIT 11.2.5

**Baseline Schedule –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

[NOT INCLUDED]

EXHIBIT 11.2.6

**Key Personnel and Organization Chart –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

[NOT INCLUDED]

EXHIBIT 11.2.7

**Responsibility Matrix for Governmental Approvals –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

[NOT INCLUDED]

EXHIBIT 11.2.8

**Geotechnical Baseline Report –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

[NOT INCLUDED]

EXHIBIT 11.10

**Davis-Bacon Wage Decision –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

[NOT INCLUDED]

EXHIBIT 11.11

**FEMA Grant Requirements –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

Design-Builder understands that the Project may receive funding provided by the Federal Emergency Management Agency (“FEMA”). A condition to such assistance is the application of certain Legal Requirements to the Agreement and Design-Builder (“FEMA Requirements”). This Exhibit 11.11 identifies such Legal Requirements. Design-Builder agrees that it shall comply with all such Legal Requirements, and, through flow-down provisions in Subcontracts, require all applicable DB-Related Entities to comply with such requirements to the extent mandated by the applicable FEMA Requirement.

1. Equal Employment Opportunity

FEMA requires that with respect to Equal Employment Opportunity the following language be used without modification. This language uses the following undefined terms: “contractor,” “subcontractor,” “subcontract and purchase order,” and “applicant.” The term “contractor” shall be construed to mean “Design-Builder;” the term “subcontractor or vendor” shall be construed to mean “DB-Related Entities;” the terms “subcontract and/or purchase order” shall be construed to mean “Subcontract;” and the term “applicant” shall be construed to mean “the City.”

During the performance of this contract, the contractor agrees as follows:

1. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

3. The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
5. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
6. The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
7. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
8. The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: *Provided*, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

2. Contract Work Hours and Safety Standards Act

1. Overtime requirements. No DB-Related Entity contracting for any part of the Agreement work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section the DB-Related Entity responsible therefor shall be liable for the unpaid wages. In addition, such DB-Related Entity shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of

forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

3. Withholding for unpaid wages and liquidated damages. The City shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the DB-Related Entity under any this Agreement or any other federal contract with Design-Builder, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by Design-Builder, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.
 4. Subcontracts. Design-Builder shall insert in any first-tier Subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring each Design Consultant and Subcontractor to include these clauses in any lower tier subcontracts. Design-Builder shall be responsible for compliance by any Design Consultant and Subcontractor and lower-tier Design Consultants and Subcontractors with the clauses set forth in paragraphs (1) through (4) of this section.
3. Clean Air Act and Federal Water Pollution Control Act

Clean Air Act

- a. Design-Builder agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
- b. Design-Builder agrees to report each violation to the City and understands and agrees that the City will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
- c. Design-Builder agrees to include these requirements in each Subcontract exceeding \$150,000.

Federal Water Pollution Control Act

- a. Design-Builder agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
- b. Design-Builder agrees to report each violation to the City and understands and agrees that the City will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
- c. Design-Builder agrees to include these requirements in each Subcontract exceeding \$150,000.

4. Debarment and Suspension

- a. This Agreement is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, Design-Builder is required to verify that none of Design-Builder's principals (defined at 2 C.F.R. § 180.995) or its Affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
- b. Design-Builder must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
- c. This certification is a material representation of fact relied upon by the City. If it is later determined that Design-Builder did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the City, the federal government may pursue available remedies, including but not limited to suspension and/or debarment.
- d. Design-Builder agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C throughout the period that it is performing work under this Agreement. Design-Builder further agrees to include a provision requiring such compliance in its lower tier covered transactions.

5. Byrd Anti-Lobbying Amendment

Contractors who apply or bid for an award of \$100,000 or more shall file the certification required by Appendix A, 44 C.F.R. Part 18 – Certification Regarding Lobbying, which is set forth below. Each tier certifies to the tier above that it will not and has not used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the City who in turn will forward the certification(s) to the awarding agency.

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Name and Title of Contractor's Authorized Official

Date

6. Procurement of Recovered Materials

In the performance of this Agreement, Design-Builder shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired—

- a. Competitively within a timeframe providing for compliance with the contract performance schedule;
- b. Meeting contract performance requirements; or
- c. At a reasonable price.

Information about this requirement, along with the list of EPA- designated items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.

Design-Builder also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

7. Copeland "Anti-Kickback" Act

Design-Builder shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. Part 3 as may be applicable. Design-Builder shall insert in any first-tier Subcontracts the requirement that such Subcontractors comply with the above statutes and regulations, and also a clause requiring each Design Consultant and Subcontractor to include such statutes and regulations in its lower tier subcontracts. Design-Builder shall be responsible for compliance by any Design Consultant and Subcontractor and lower-tier Design Consultants and Subcontractors with such statutes and regulations.

8. Prohibition on Contracting for Covered Telecommunications Equipment or Services

a. Definitions. As used in this clause, the terms backhaul; covered foreign country; covered telecommunications equipment or services; interconnection arrangements; roaming; substantial or essential component; and telecommunications equipment or services have the meaning as defined in FEMA Policy 405-143-1, Prohibitions on Expending FEMA Award Funds for Covered Telecommunications Equipment or Services (Interim), as used in this clause—

b. Prohibitions.

(1) Section 889(b) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232, and 2 C.F.R. § 200.216 prohibit the head of an executive agency on or after Aug. 13, 2020, from obligating or expending grant, cooperative agreement, loan, or loan guarantee funds on certain telecommunications products or from certain entities for national security reasons.

(2) Unless an exception in paragraph (c) of this clause applies, Design-Builder and other DB-Related Entities may not use grant, cooperative agreement, loan, or loan guarantee funds from the Federal Emergency Management Agency to:

(i) Procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;

(ii) Enter into, extend, or renew a contract to procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;

(iii) Enter into, extend, or renew contracts with entities that use covered telecommunications equipment or services as a substantial or essential

component of any system, or as critical technology as part of any system;
or

(iv) Provide, as part of its performance of this contract, subcontract, or other contractual instrument, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

c. Exceptions.

(1) This clause does not prohibit Design-Builder or any other DB-Related entity from providing—

(i) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

(ii) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(2) By necessary implication and regulation, the prohibitions also do not apply to:

(i) Covered telecommunications equipment or services that:

i. Are not used as a substantial or essential component of any system; and

ii. Are not used as critical technology of any system.

(ii) Other telecommunications equipment or services that are not considered covered telecommunications equipment or services.

d. Reporting requirement.

(1) In the event Design-Builder identifies covered telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system, during contract performance, or Design-Builder is notified of such by a DB-Related Entity at any tier or by any other source, Design-Builder shall report the information in paragraph (d)(2) of this clause to the recipient or subrecipient, unless elsewhere in the Contract Documents are established procedures for reporting the information.

(2) Design-Builder shall report the following information pursuant to paragraph (d)(1) of this clause:

(i) Within one business day from the date of such identification or notification: The contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

(ii) Within 10 business days of submitting the information in paragraph (d)(2)(i) of this clause: Any further available information about mitigation actions undertaken or recommended. In addition, the contractor shall describe the efforts it undertook to prevent use or submission of covered telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services.

e. Subcontracts. Design-Builder shall insert the substance of this clause, including this paragraph (e), in all Subcontracts.

9. Domestic Preference for Procurements

As appropriate, and to the extent consistent with law, Design-Builder should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States. This includes, but is not limited to iron, aluminum, steel, cement, and other manufactured products.

For purposes of this clause:

Produced in the United States means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States. Manufactured products mean items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

EXHIBIT 11.12

**Division 01 Owner Requirements –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

[ATTACHED]



CITY OF ALEXANDRIA, VA

SPECIFICATIONS FOR

Waterfront Implementation Project

CLIENT PROJECT NO. 1047

DIVISION 01 OWNER REQUIREMENTS

JUNE 2023 - FINAL

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DIVISION 01 – OWNER REQUIREMENTS

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OR-01110	SUMMARY OF WORK
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SECTION OR-01110

SUMMARY OF WORKGENERAL

1.01 SUMMARY

- A. Section includes identification and summary description of the Work:
 - 1. Description of the Work.
 - 2. Location of Project.
 - 3. Owner-furnished property.
 - 4. Coordination of Work.

1.02 THE WORK

- A. The Work to be done under this Agreement includes the furnishing of project management, labor, materials, tools and equipment for the final design and construction of the Project in accordance with the Agreement. Design-Builder is responsible for ensuring Project meets the technical and performance requirements defined by the Agreement.
- B. Scope of specific Work elements include in the Project consist of the following:
 - 1. *[To be completed during Phase 1B Services prior to the GMP Proposal]*.
- C. The general scope for construction Work includes:
 - 1. Obtaining necessary permits and approvals per the Owner-approved Governmental Approvals Plan *(to be developed by Design-Builder during Phase 1A Services)* and as otherwise required by the Agreement.
 - 2. Obtaining and managing space associated with construction Work such as laydown areas, parking, and materials storage.
 - 3. Mobilization and General Conditions.
 - 4. Supervising Subcontractors and Design-Builder personnel performing the Work.
 - 5. Maintaining site security and implementing health and safety practices.
 - 6. Implementing quality-management procedures per the Owner-approved Quality Management Plan.
 - 7. Performing wetland and environmental mitigation measures that are Design-Builder's responsibility in accordance with the Agreement.
 - 8. Erosion control and any other environmental controls and measures required by the Governmental Approvals Plan and the Agreement.
 - 9. Excavation and grading of the Site.
 - 10. Site dewatering and disposal.
 - 11. Structural excavation.
 - 12. Equipment, materials, and Subcontractor procurement.
 - 13. Coordinating with the Owner and/or utility providers for supply of power, telecommunications, and potable water to the Site.
 - 14. Instrumentation and control.
 - 15. Final grading, paving, and landscaping.
 - 16. Demobilization.
 - 17. Commissioning, startup, acceptance testing, and training and associated manual development.

18. Record documents.
19. Project closeout.
20. Providing warranty coverage for constructed Work.
21. *[Any additional items to be added during Phase 1 prior to the GMP proposal].*

1.03 LOCATION OF PROJECT

- A. The Work is located at the Site, as defined in the Agreement.

1.04 OWNER-FURNISHED PROPERTY

- A. The Owner shall deliver to the Design-Builder, for use only in connection with this Agreement, the property described in the Contract Documents, at the times and locations stated therein. If the Owner-furnished property, suitable for its intended use, is not so delivered to the Design-Builder, and, if the facts warrant such action, the Owner may equitably adjust any affected provision in accordance with the Agreement.
- B. Title to Owner-furnished property shall remain with the Owner. The Design-Builder shall maintain adequate property control records of the property furnished by the Owner in accordance with sound industrial practice.
- C. Unless otherwise provided in the Agreement, the Design-Builder, upon delivery to them of any Owner-furnished property, assumes the risk of, and shall be responsible for, any loss thereof or damage thereto except for reasonable wear and tear, and except to the extent that such property is consumed in the performance of the Agreement.
- D. The Design-Builder shall, upon completion of this Agreement, prepare for shipment or dispose of all Owner-furnished property not consumed in the performance of this Agreement, as may be directed or authorized by the Owner. If not delivered to the Owner, the net proceeds of any disposal shall be credited to the Contract Price or paid in such other manner as the Owner may direct.

1.05 COORDINATION OF WORK

- A. Obtain construction schedules from Subcontractors and assume responsibility for correctness. Incorporate schedules from Subcontractors into the Project Schedule to plan for and comply with sequencing constraints as required by the Agreement, including Section OR-01320 - Project Management and Progress Reporting.

1.06 OTHER CONTRACTS

- A. The Owner may undertake or award other contracts for work at or near the Site of the Work performed under this Agreement. The Design-Builder shall fully cooperate with the other contractors and with Owner employees on site. The Design-Builder shall carefully adapt scheduling and performance of the Work, heeding any directions provided by Owner. The Design-Builder shall not commit, or permit any act that will interfere with the performance of work by other contractors or by Owner employees.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION OR-01140
WORK RESTRICTIONS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes requirements for sequencing and scheduling the Work affected by Existing Facilities, work restrictions and coordination between construction operations, including:
 - 1. Use of Site and premises.
 - 2. Access to Site.
 - 3. Scheduling and sequencing constraints.
 - 4. Shutdown and construction constraints.

- B. Existing Facilities include but are not limited to parks, stormwater collection system, and walking trails.

1.02 SUBMITTALS

- A. In accordance with Section OR-01300 - Submittal Procedures.

1.03 DESIGN-BUILDER'S USE OF SITE AND PREMISES

- A. Limit use of Site to allow:
 - 1. Continuous and on-going operation of Existing Facilities by Owner or its partners unless otherwise approved by Owner.

- B. Design-Builder shall control Site access in accordance with Site security requirements described in Section OR-01500 Temporary Facilities and Control.

- C. Access to Site: Design-Builder's access to the Site as specified in the Agreement and Construction Documents.

- D. Construction operations including staging and material storage:
 - 1. Limited to the Site and in accordance with Agreement and Owner-approved Site Management Plan (*to be developed by Design-Builder during Phase 1B Services prior to GMP Proposal*) unless Owner approves in writing the temporary use of additional areas. Design-Builder shall perform construction operations to maintain access in the easements as indicated in the Construction Documents or public right-of-way.

- E. Unfavorable Construction Conditions: During unfavorable weather, wet ground, or other unsuitable construction conditions, the Design-Builder shall confine its operations to Work that is not adversely affected by such conditions. No portion of the Work shall be constructed under conditions that adversely affect the quality thereof, unless means or precautions are taken by the Design-Builder to protect and properly perform the Work. Design-Builder shall maintain suitable access to areas in which Work is actively being performed and common use areas.

- F. Provide security for all products, materials, and equipment stored on the Site, including those of Subcontractors.

1.04 GENERAL CONSTRAINTS ON SEQUENCE AND SCHEDULING OF WORK

- A. The marina and area businesses must remain in operation during construction to the extent possible. Conduct Work in a manner that will not impair the operational capabilities of local businesses.
- B. Maintain access to the existing parks, marinas, and waterfront promenade (continuous walking path) during construction to the extent possible.
- C. Archaeological monitoring is required for ground disturbance activities. Coordinate with the Owner-assigned environmental project manager/lead monitor prior to any ground disturbing activities.
- D. Time Restrictions for Performing General Work:
 - 1. Design-Builder shall perform Work onsite during Owner permitted construction hours as specified in the Agreement, unless otherwise stipulated for after-hours activities.
 - 2. Work will be prohibited on the following Owner-observed holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, For Work on other Owner-observed holidays, including but not limited to Martin Luther King Jr. Day, President's Day, Indigenous People's Day, Day after Thanksgiving, and Christmas Eve, Design-Builder shall adhere to any Owner-required restrictions.
 - 3. Design-Builder may request extended work hours in writing in accordance with the applicable Owner-required restrictions, and as documented within the Governmental Approvals Plan. Extended work hours must be approved by the Owner.
 - 4. Emergency work may be performed without prior permission, but Owner must be immediately notified. Contact information for on-site operations staff to contact during emergencies will be provided at the preconstruction conference described in Section OR-01320 - Project Management and Progress Reporting.
- E. Safety work practices for construction Work during COVID-19, as recommended by OSHA, and as necessary given the threat of COVID-19 at the time of the construction Work.
- F. Work sequence and constraints:
 - 1. Design-Builder is responsible for adhering to applicable environmental requirements and shall execute the Work in accordance with the Owner-approved Baseline Schedule.
 - 2. During performance of the Work, Design-Builder shall update the Baseline Schedule in accordance with the Agreement, including Section OR-01320 Project Management and Progress Reporting.
 - 3. *[Specific work sequencing and constraints to be further developed during Phase 1B Services prior to GMP Proposal].*

- G. Road and Facility Access:
1. Design-Builder shall conduct operations to minimize interference with local traffic flow. Provide Owner 14 days advance written notice before any road outage and coordinate road outages with Owner.
 2. Design-Builder shall maintain means of access to adjacent properties at all times.
 3. Design-Builder shall provide access for emergency response vehicles at all times.
 4. Design-Builder is responsible for coordinating with Owner to allow for the Owner to issue public notifications (e.g. business owners, etc.) prior to construction Work commencement, road closures, and other disruptions to the public potentially caused by the Work.
 5. *[Additional or modified requirements to be further developed during Phase 1B Services prior to GMP Proposal]*

1.05 SHUTDOWN AND CONSTRUCTION CONSTRAINTS

- A. Design-Builder shall comply with general shutdown constraints:
1. Execute the Work while the Existing Facilities are in operation, unless approved otherwise.
 2. Accomplish Work without a shutdown where practicable.
 3. Indicate required shutdowns of Existing Facilities or interruptions of existing operations on Project Schedule. There must be an Owner-approval for each shutdown or interruption of existing operations.
 4. Shutdowns will be permitted to the extent that operation of the Existing Facilities will not be jeopardized and identified constraints are satisfied.
 5. Submit notification of required shutdowns of Existing Facilities at least 21 calendar days prior to the planned date of shutdown.

1.06 REQUIREMENTS FOR MAINTAINING CONTINUOUS OPERATION OF EXISTING FACILITIES

- A. Design-Builder shall conduct the Work and provide temporary facilities required to keep the Existing Facilities continuously operational as required by Section OR-01500 - Temporary Facilities and Controls.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION OR-01290

PAYMENT PROCEDURES AND CHANGE MANAGEMENT

PART 1 GENERAL

1.01 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary for payment and change management including:
 - 1. Schedule of Values.
 - 2. Application for Payment.
 - 3. Change Orders.
 - 4. Allowances.

1.02 SUBMITTALS

- A. In accordance with the Section OR-01300 - Submittal Procedures.

1.03 SCHEDULE OF VALUES

- A. Design-Builder shall prepare a Schedule of Values for the Phase 2 Work based on the Contract Price and in conformance with the schedule of values submitted as part of the GMP Proposal.
- B. No changes shall be made to the Schedule of Values without Owner's prior approval, and changes accepted by Owner and incorporated into the Schedule of Values is a condition precedent to the issuance of payment.
- C. The Schedule of Values shall identify the estimated total number of construction units for each kind of work and the value of each unit.
- D. The Owner and Design-Builder will agree to the rules of credit for each unit of the Schedule of Values for those specific items that are to be paid via lump sum. Rules of credit identify the method for determining completion and value of Work completed for lump sum items. Examples of rules of credit include physical percent complete, pre-defined value, and level of effort.
- E. Whenever the schedule is changed or revised to include approved Change Orders that change the Work or Allowance authorizations, the Schedule of Values shall also be revised such that the total of all items shall sum to the current Contract Price. Scope additions shall be added to the Schedule of Values as new line item(s).
- F. Updated Schedule of Values shall be submitted with each Application for Payment as required in this section and will be a condition of recommendation for payment by the Owner.

1. For lump sum items, updated Schedule of Values will include the Design-Builder's estimated percent completion of each line-item included in the Schedule of Values.
- G. Format and Content:
1. Schedule of Values shall be a listing of all Work, listed in numerical order, and organized by specification section showing that the sum total of all activities equals the Contract Price.
 2. Schedule of Values shall include Allowances in accordance with the following:
 - a. The initial Schedule of Values will identify on separate lines each Allowance Item and Allowance Value defined in the Contract Price.
 - b. As Allowance Items are authorized for use, a new sub line item to the authorized Allowance Item will be added with the Allowance Value equal to the amount authorized.
 - c. At no time will the sum of the Allowance Value sub line-item budgets exceed the initial Allowance Value unless revised by a Change Order.
 3. Schedule of Values shall include line item for premiums for bonds and insurance.
 4. Schedule of Values shall include line item for General Conditions.
 5. Design-Builder shall include design activities and deliverables on the Schedule of Values. Design-Builder shall distinguish between design activities and services during construction activities.
 6. Round amounts to nearest whole dollar.
 7. In accordance with the rules of credit, provide separate line items in the Schedule of Values for lump sum items such as initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 8. Each item in the Schedule of Values and Application for Payment shall be complete.
 9. Support costs with data on an open-book basis that will substantiate their correctness.

1.04 APPLICATION FOR PAYMENT

- A. Payment Application Times: The date for each progress payment and the period of Work covered by each Application for Payment is indicated in the Agreement.
- B. Payment Application Forms: The Application for Payment form shall be completed and submitted in accordance with the Agreement.
- C. Application Preparation: Complete every entry on each Application for Payment. Notarize and execute the Application for Payment by a person authorized to sign legal documents on behalf of Design-Builder. Owner will return incomplete applications without action or payment.
 1. Base Application for Payment on the breakdown of costs for each activity in the Schedule of Values and in accordance with the Agreement. Identify each activity on the Schedule of Values, the value of each activity, the estimated percent complete for each activity (for lump sum items), and the value of Work completed for both the payment period and Project to date.
 2. Include amounts of Change Orders executed before last day covered by the Application for Payment.

3. For stored materials:
 - a. Design-Builder shall be paid the invoice amount for materials (less retainage). Submit invoice with the Application for Payment. Any additional amount for procurement of the material (including delivery, storage, preparation, installation, transport to the site, etc.) listed or calculated from the Schedule of Values shall be paid after installation.
 - b. Stored materials can be properly stored onsite in a location approved by the Owner or offsite in an appropriate bonded and insured warehouse according to storage specifications contained in the Construction Documents and manufacturer's instructions and recommendations.
 - c. Complete the Stored Materials Form with the Application for Payment. The Stored Materials Form is provided as a Supplement to this Section.
 - d. Design-Builder shall provide security and proper storage of materials and equipment including adequate insurance against loss or damage in accordance with the Agreement. This shall include notification of location of stored material, submittal of manufacturer's instructions for storage (if provided), and photographs of stored materials indicating the proper protection and showing the amount of materials stored at that particular location.
 - e. Design-Builder shall provide appropriate stored material and equipment, lubrication, maintenance, electrification, storage area temperature and moisture control and warranties.
 - f. Owner must be allowed access to visually inspect stored equipment and materials at its request. Payment for stored materials shall not become due unless the Owner representative has access to inspect those stored materials.
 4. All invoiced Work shall be documented to the Owner's satisfaction.
 - a. Labor charges shall identify personnel by name, their assigned billing category/role, the hours charged and the total amount charges (hours times billing rate) for each Schedule of Values item.
 - b. Bond and Insurance premium reimbursement requests shall be documented with receipts.
- D. Monthly Payments; Retainage: The Design-Builder shall make and certify the amount of the Work performed and may apply for partial payment. Thereafter, the Owner may, in their discretion, revise the estimate to show the actual value of Work completed in accordance with their observation of the Work. The Design-Builder agrees to be bound by the Owner's revisions to its Application for Payment. Whenever the monthly estimate, after approval by the Owner's representative, shows that the value of the Work completed during the previous month exceeds one thousand dollars (\$1,000.00), the Owner will issue a Certificate of Payment for such Work. Such certificate will authorize payment by the Owner in an amount equal to the value of the Work completed less any sums retained or deducted by the Owner under the terms of the Contract Documents, and less retainage of five (5) percent of payments claimed. In accordance with Section 3-3-56 of the Code of the City of Alexandria, within forty-five (45) calendar days after receipt of each Certificate of Payment, the Owner shall pay the Design-Builder in accordance with the applicable Certificate and the Contract Documents. Within thirty (30) calendar days of the submission of the Application for Payment, the Owner will notify the Design-Builder of any defects or improprieties that would prevent payment by the scheduled payment date.

- E. Escrow Account in Lieu of Retainage: The Design-Builder may elect to use the escrow account procedure for utilization of retainage funds authorized by Section 3-3-51 of the Code of the City of Alexandria. In the event the Design-Builder elects to use the escrow account procedure, it shall submit an escrow agreement form, executed by the appropriate parties, within fifteen (15) calendar days after Notification to Proceed. The escrow agent shall be a trust company, bank or savings institution with its principal office located in the Commonwealth of Virginia. A copy of the approved escrow agreement form is available from the Purchasing Agent. If the Design-Builder fails to submit a fully executed escrow agreement, in proper form, within the required fifteen (15) calendar days, it shall forfeit its right to use the escrow account procedure and shall be subject to normal withholding of retainage.
- F. Owner's Right to Withhold Payment: The Owner may withhold payment to such extent as may be necessary to protect the Owner due to loss because of:
1. Defective Work not remedied;
 2. Third party claims filed or reasonable evidence indicating probable filing of such claims;
 3. Failure of the Design-Builder to make payments properly to Subcontractors or for labor, materials or equipment;
 4. Reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;
 5. Damage to the Owner or another contractor;
 6. Reasonable evidence that the Work will not be completed within the Contract Time;
 7. Persistent failure to carry out the Work in accordance with the Contract Documents; or
 8. Liability, damage, or loss due to injury to persons or damages to the Work or property of other contractors, subcontractors or others, caused by the act or neglect of the Design-Builder of any of its Subcontractors.
- G. Application of Withheld Funds: The Owner shall have the right, as an authorized representative for the Design-Builder and without the Surety's consent, to apply any such amounts so withheld in such manner as the Owner may deem proper to satisfy such claims or to secure such protection. The application of these amounts shall be deemed payments for the account of the Design-Builder and shall reduce the Owner's obligation to the Design-Builder accordingly.
- H. Provide updated Progress Schedule matching the progress reported in the Schedule of Values and associated schedule narrative with the Monthly Project Status Report that accompanies each Application for Payment as required by Section OR-01320 Project Management and Progress Reporting. Approval of the updated Progress Schedule shall not be a prerequisite for invoice payment.
- I. Provide the Risk Register, updated through the month to reflect new, complete, expired, or updated risks.

- J. Maintain an updated set of drawings to be used as record drawings in accordance with Section OR-01700 - Execution Requirements. As a prerequisite for monthly progress payments, exhibit, or make available, the updated record drawings for review by the Owner.
- K. The Application for Payment shall include the following documents in accordance with the Agreement:
 - 1. Waivers of lien and similar attachments from Subcontractors as required.
 - 2. Monthly Project Status Report.
 - 3. Affidavits attesting to Equipment and Materials not yet incorporated into the Project and insurance coverage for offsite Equipment and Materials. All stored Equipment and Materials must clearly be labeled "Property of City of Alexandria, Waterfront Implementation Project".
- L. Submit signed and notarized Application for Payment.
- M. Owner has the right to review all design services and construction services, performed at the Site or elsewhere, to determine whether the quantity and quality of labor, services, equipment, and materials are as required by the Agreement and as represented in the Application for Payment.

1.05 FINAL APPLICATION FOR PAYMENT

- A. Upon meeting requirements set forth by Section OR-01770 - Closeout Procedures and the Agreement, Design-Builder shall submit the Final Application for Payment in accordance with the Agreement.

1.06 CHANGE PROCEDURES

- a. A. Change procedures shall be administered in accordance with the Comprehensive Agreement. .

1.07 ALLOWANCES

- A. Allowance Payment Items are indicated in the Agreement.
- B. Unless agreed upon by Owner, a minimum of 20 calendar days prior to performing Work on any particular Allowance Item, Design-Builder shall provide Owner with an itemized summary of the costs of the Work for such Allowance Item. Owner will validate itemized costs and the Allowance Value prior to providing Design-Builder authorization to proceed with any Allowance Item. Summary shall be submitted in accordance with the Submittal Requirements.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 SUPPLEMENTS

- A. The supplements listed below, following “End of Section,” are a part of this Section. Owner will provide Design-Builder an electronic form for their use.
 - 1. Stored Materials and Equipment Form.

END OF SECTION

SECTION OR-01290 - SUPPLEMENT 1
STORED MATERIALS AND EQUIPMENT FORM



STORED MATERIALS AND EQUIPMENT

Package Number _____
 Project Title _____
 Payment Application No. _____
 Submittal Date: _____
 Period From: _ to _

ITEM NO.	ITEM CODE	MATERIAL DESCRIPTION (may be referenced and attached)	VENDOR	INVENTORY NUMBER	TOTAL MATERIAL VALUE
TOTALS			--	--	\$

I certify that the above-listed materials and equipment have been delivered and properly stored as indicated, that Design-Builder has submitted invoices and other documentation required by Owner, and that it is appropriate to include the above-listed materials and equipment on the Application for Payment indicated above.

Design-Builder

SECTION OR-01300
SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes requirements and procedures for submitting shop drawings, product data, samples, and other Submittals relating to construction administration. This section does not include requirements and procedures associated with the City's Development Review Process or other City review requirements and procedures.
 - 1. Electronic Submittal requirements.
 - 2. Owner's review of Submittals.
 - 3. Submittal content requirements and procedures.
- B. All submittals shall be clearly identified by reference to a specification section and/or detail drawing if applicable. Submittals shall be clear and legible and shall include sufficient presentation of the data.
- C. No portion of the Work requiring Construction Documents shall be started nor shall any materials be fabricated or installed prior to the approval of such items. Fabrication performed, materials purchased, or on-site construction accomplished which does not conform to Owner-approved Construction Documents shall be at the Design-Builder's risk. Owner shall not be liable for any expense or delay due to corrections or remedies required to accomplish conformity, except where relief is expressly provided under the Agreement.
- D. Provide or furnish products and execute the Work in accordance with the accepted Submittals, unless in conflict with Construction Documents.

1.02 ELECTRONIC SUBMITTALS

- A. Unless specifically required in this Section, by Owner, or elsewhere in the Agreement, each Submittal shall be made in an electronic format. Design-Builder shall provide capabilities for hard copies of all Submittals to be available to Owner at end of the Project.
- B. Samples shall be submitted via hard copy. Other submittals that include large format drawings or very lengthy documents may be considered by the Owner for hardcopy distribution.
- C. Each submittal will be an electronic file in the Adobe Acrobat Portable Document Format (PDF) or a native file. Use the latest Adobe version available at the time of execution of the Agreement. General information shall be added to each PDF file, including title, subject, author, and keywords.
 - 1. PDF files shall be unsecured, unencrypted, and not password protected.

2. The following actions within Adobe Acrobat shall be allowed:
 - a. Printing.
 - b. Content copying or extraction.
 - c. Extraction for access.
 - d. Commenting.
 - e. Fitting for form fields.
 - f. Signing.
 - g. Creation of duplicate information.
- D. The PDF files shall be set up to print legibly at either 8-1/2-inch by 11-inch, 11-inch by 17-inch, or 22-inch by 34-inch paper sizes. No other paper sizes will be accepted.
- E. New electronic files shall be required for each re-submittal.
- F. Each electronic file shall also include a standard transmittal letter in format approved by the Owner to this section. Hardcopy files, if required by specifications, shall also include standard transmittal letter which shall be scanned and submitted electronically for record of transmittal of submittal and disposition.
- G. Owner will reject any submittal that is not electronically submitted, unless otherwise permitted by the Owner.
- H. Electronic submittal PDF files are not to be combined files or collections of files/drawings. Each drawing document must stand alone.
- I. Design-Builder shall provide the Owner with the authorization to reproduce and/or redistribute each file as many times as necessary for the project.
- J. Design-Builder shall include all costs for preparation of electronic copies of the submittal in its pricing, including all re-submittals, record copies, and final copies. Design-Builder shall provide final accepted submittals in hard copies to Owner at the end of the Project.
- K. Where multiple submittals are required, provide a separate submittal for each specification section.
 1. In order to expedite construction, the Design-Builder may make more than one submittal per specification section, but a single submittal may not cover more than one specification section:
 2. The only exception to this requirement is when one specification section covers the requirements for a component of equipment specified in another section.
- L. Attachments:
 1. Specification section: Include with each submittal reference to the relevant specification section, including relevant addendum updates.
 - a. Provide a list of all numbered deviations with a clear explanation and reason for the deviation.

2. Drawings: Include with each submittal a reference to the relevant drawing, including relevant addendum updates.
 - a. Provide a list of all numbered deviations with a clear explanation and reason for the deviation.
 - b. Provide field dimensions and relationship to adjacent or critical features of the Work or materials.
- M. Design-Builder shall prepare submittal information in sufficient detail to show compliance with specified requirements.
 1. Determine and verify quantities, field dimensions, product dimensions, specified design and performance criteria, materials, catalog numbers, and similar data.
 2. Coordinate submittal with other submittals and with the requirements of the Design Documents.
 3. Check, verify, and revise submittals as necessary to bring them into conformance with Construction Documents and actual field conditions.
- N. Submittals such as shop drawings and product data shall be of suitable quality for legibility and reproduction purposes. Every line, character, and letter shall be clearly legible. Drawings shall be useable for further reproduction to yield legible hard copy.

1.03 OWNER'S REVIEW OF SUBMITTALS

- A. All submittals must be reviewed and processed by the Design-Builder.
- B. Design-Builder shall provide the Owner with access to view all submittals electronically regardless if a submittal(s) is designated for review by the Owner.
- C. The Owner has the right to review any submittal. A select number of submittals will be designated specifically for Owner review, and Owner will review for concurrence with Design-Builder's review. Submittals designated for Owner review shall be reviewed and comments resolved first by the Design-Builder. Owner will acknowledge receipt of these submittals. Design-Builder may request concurrent Owner review of time-sensitive submittals. Approval of request is at the discretion of the Owner but will not be unreasonably withheld.
- D. Owner's review shall not relieve Design-Builder of their responsibility for errors, omissions, or deviations in the drawings and data, nor of sole responsibility for compliance with the Construction Documents. Neither shall Owner's review release Design-Builder fulfilling purpose of installation nor from Design-Builder's liability to replace defective work.
- E. Owner's submittal review period shall be 21 consecutive calendar days in length and shall commence on the first calendar day immediately following the date of providing the submittal or resubmittal to Owner.
- F. When a submittal cannot be returned within the specified period, Owner will, within a reasonable time after receipt of the submittal, give notice of the date by which that submittal will be returned.

- G. Schedule delays:
1. No adjustment of Contract Times or Contract Price will be allowed due to Owner's review of submittals, unless all of the following criteria are met:
 - a. Owner has failed to review and return first submission within the agreed upon time frame.
 - b. Design-Builder demonstrates that delay in progress of Work is directly attributable to Owner's failure to return submittal within time indicated and accepted by Owner.
- H. If the Design-Builder considers any correction indicated on the shop drawings to constitute a change, the Design-Builder shall give written notice thereof to the Owner within 10 calendar days following return of submittal. Such notice does not need to include pricing.
- I. Resubmittal of Drawings and Data:
1. Design-Builder shall accept full responsibility for the completeness of each resubmittal. Design-Builder clearly identify each correction or change made and shall verify that all corrected data and additional information previously requested by Owner are provided on the resubmittal.
 2. Design-Builder shall in writing direct specific attention to all revisions and shall list separately any revisions made other than those called for by Owner on previous submissions.
 3. Requirements specified for initial submittals shall also apply to resubmittals. Resubmittals shall bear the number of the first submittal followed by a letter (A, B, etc.) to indicate the sequence of the resubmittal.
 4. Include a response in writing to each of the Owner's comments or questions for submittal packages that are resubmitted in the order that the comments or questions were presented throughout the submittal.
 - a. Acceptable responses to Owner's comments are listed below:
 - 1) "Incorporated" Owner's comment or change is accepted and appropriate changes are made.
 - 2) "Response" Owner's comment not incorporated. Explain why comment is not accepted or requested change is not made. Explain how requirement will be satisfied in lieu of comment or change requested by Owner.
 - b. Design-Builder shall provide responses to all submittal review comments provided by the Owner separately and at a level of detail commensurate with each comment. Review of submittals by Owner is for conformance with Construction Documents. As such, it is expected that Owner questions/comments submittals will be related to compliance with technical requirements of project.
 5. Any need for more than one resubmission, or any other delay in obtaining Owner's review of submittals, will not entitle Design-Builder to extension of the Contract Times unless delay of the Work is directly caused by a change in the Work authorized by a Change Order or by failure of Owner to review any submittal within the submittal review period specified herein and to return the submittal to Design-Builder.

6. Shop drawings and other submittals will be reviewed no more than twice at the Owner's expense. Costs incurred by Owner as a result of additional reviews of a particular submittal after the second time it has been reviewed shall be borne by Design-Builder unless review comments change Agreement requirements. Reimbursement to Owner will be made by deducting such costs from Design-Builder's subsequent progress payments.
7. Design-Builder assumes risk of expense and delays when proceeding with work related to required submittals without review and approval.

1.04 CONSTRUCTION SUBMITTAL CONTENT

- A. For Submittals subject to Owner's review, submit to Owner for review for limited purpose of checking for conformance with information given and design concept expressed in Design Documents.
- B. Project work, materials, fabrication, and installation shall conform to approved shop drawings, applicable samples, and product data.
- C. Shop Drawings:
 1. All shop drawings submitted by Subcontractors for approval shall be sent directly to the Design-Builder for checking. The Design-Builder shall be responsible for their submission at the proper time to prevent delays in delivery of materials.
 2. All deviations from the Construction Documents shall be identified within each submittal. Such submittals shall, as pertinent to the deviation, indicate essential details of all changes proposed.
 3. Details:
 - a. Fabrication drawings: drawn to scale and dimensioned.
 - b. Front, side, and, rear elevations, and top and bottom views, showing all dimensions.
 - c. Locations of conduit entrances and access plates.
 - d. Component layout and identification.
 - e. Weight.
 - f. Finish.
 - g. Temperature limitations, as applicable.
 - h. Nameplate information.
- D. Product Data and Manufacturer's Instructions:
 1. Manufacturer's instructions, when made available by manufacturers, and installation, erection, or application in accordance with manufacturer's instructions are required, prior to installation, erection, or application of equipment and other project components.
 2. Submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing.
 3. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
 4. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

5. If applicable, submittals for equipment shall include a listing of all installations where identical or similar equipment has been installed and been in operations for a period of at least one year.
6. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
7. Cross out non-applicable information and clearly mark applicable information with citations to and terminology consistent with Agreement.
8. Details:
 - a. Supplier name and address.
 - b. Subcontractor name and address.
9. Include:
 - a. Catalog cuts.
 - b. Bulletins.
 - c. Brochures.
 - d. Manufacturer's Certificate of Compliance: signed by product manufacturer along with supporting reference data, affidavits, and tests, as appropriate.
 - e. Manufacturer's printed recommendations for installation of equipment.
 - f. Quality photocopies of applicable pages from manufacturer's documents.
10. Completely fill out a motor data sheet, for every motor furnished:
 - a. Submit one copy of the motor data sheet to the Owner for review as part of the asset management data.

E. Samples:

1. Samples for selection as specified in product sections:
 - a. Submit to Owner for aesthetic, color, or finish selection.
 - b. Submit samples of finishes, textures, and patterns for Owner selection.
2. Submit samples to illustrate functional and aesthetic characteristics of products, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
3. Include identification on each sample, with full Project information.
 - a. Clearly label samples to indicate any that represent non-standard colors, materials, products, or equipment lines and that if selected, will require an increase in Contract Times or Contract Price.
4. Submit number of samples specified in individual specification sections; Owner will retain two samples.
5. Reviewed samples which may be used in the Work are indicated in individual specification sections.
6. Samples will not be used for testing purposes unless specifically stated in specification section.

F. Design Data:

1. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Construction Documents.
2. Defined in technical sections.
3. Calculations must bear the original seal and signature of a Professional Engineer licensed in the Commonwealth of Virginia and who provided responsible charge for the design.

G. Operation and Maintenance Manuals:

1. See Section OR-01770 - Closeout Procedures.

- H. Certificates:
1. Certificates are statements printed on the manufacturer's or supplier's letterhead and signed by responsible officials of manufacturer of product, system, or material. Certifications shall provide a clear statement that the product, system or material meets the specified requirements of Design Documents. All certificates shall be dated after the Effective Date of the Agreement and shall clearly indicate the project name and project number.
 2. When specified in individual specification sections, submit certification by manufacturer, installation/application subcontractor, or Design-Builder to Owner, in quantities specified for product data.
 3. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
 4. Certificates may be recent or previous test results on material or product but must be acceptable to Owner.
- I. Factory Test Reports:
1. Submit test reports for information purposes.
 2. Include the following information:
 - a. A description of the test.
 - b. List of equipment used.
 - c. Name of the person conducting the test.
 - d. Date and time the test was conducted.
 - e. Ambient temperature and weather conditions.
 - f. All raw data collected.
 - g. Calculated results.
 - h. Clear statement if the test passed or failed the requirements stated in Design Documents.
 - i. Signature of the person responsible for the test.

1.05 REQUESTS FOR INFORMATION

- A. Requests for Information (RFIs): Design-Builder's field stand and/or Subcontractors may issue RFIs to request clarifications. If an RFI requires Owner input, use Owner's RFI form to submit to Owner for review; number RFIs consecutively and add a consecutive letter to RFI number on modified submittals of the same item (i.e., RFI-4A); Owner will respond on the same form. For each RFI, allow 21 calendar days excluding delivery time to and from Design-Builder for Owner to respond. In the event that the Design-Builder identifies an RFI as critical to the progress of the Project, Owner will make every effort to reduce the review time of the RFI.
- B. The Design-Builder shall maintain an RFI log and assign numbers. Log shall be available to Owner to review at any time and include the following fields:
1. RFI Number.
 2. Issue date.
 3. Description of issue and response.
 4. Response date.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 SUBMITTAL PROCEDURES

- A. Design-Builder shall prepare and transmit each submittal sufficiently in advance of performing the related work or other applicable activities, or within the time specified in the individual work sections, of the Specifications, so that the installation will not be delayed by processing times including disapproval and resubmittal (if required), coordination with other submittals, testing, purchasing, fabrication, delivery and similar sequenced activities. No extension of time will be authorized because of the Design-Builder's failure to transmit submittals sufficiently in advance of the Work.
- B. The Design-Builder shall utilize a three-character submittal identification numbering system in the following manner:
 - 1. The six-digit specification section should be listed.
 - 2. The next four digits shall be the numbers 0001 to 9999 to sequentially number each separate item or drawing submitted.
 - 3. The last character shall be a letter, A to Z, indicating the submission or resubmission of the same submittal, i.e., A = 1st submission, B = 2nd submission, C = 3rd submission, etc.
 - 4. A typical submittal number would be as follows:
 - a. 033000 = Section for Concrete.
 - b. 0008 = The eighth initial submittal under this Section.
 - c. B = The second submission (first resubmission) of that particular shop drawing.
- C. Included within the transmittal letter, each shop drawing, sample and product data submitted by the Design-Builder shall have affixed to it following certification statement including the Design-Builder's company name and signed by the Design-Builder: "Certification Statement: By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have checked and coordinated each item with other applicable Accepted shop drawings and all Agreement requirements."
- D. Documents submitted to Owner that do not conform to specified requirements shall be subject to rejection by Owner, and upon request by Owner, Design-Builder shall resubmit conforming documents. If conforming Submittals cannot be obtained, such documents shall be retraced, redrawn, or photographically restored as may be necessary to meet such requirements.
- E. If the Design-Builder considers any correction indicated on the shop drawings to constitute a change to the Contract Documents, the Design-Builder shall give written notice thereof to the Owner prior to executing the Work in question.

- F. When the shop drawings have been completed to the satisfaction of the Owner, the Design-Builder shall carry out the construction in accordance therewith and shall make no further changes therein except upon written acceptance by the Owner.
- G. Where standard drawings are furnished which cover several variations of the general class of equipment, each drawing shall be annotated to indicate exactly which parts of the drawing apply to the equipment being furnished. Use hatch marks to indicate variations that do not apply to the Submittal. The use of "highlighting markers" will not be an acceptable means of annotating Submittals. Annotation shall also include proper identification of the submittal permanently attached to the drawing. Edit all submittals so that the submittal specifically applies to only the equipment furnished. Neatly cross out all extraneous text, options, models, etc. that do not apply to the equipment being furnished, so that the information remaining is only applicable to the equipment being furnished. Pages containing all extraneous information should not be include in the submittal.
- H. Prepare submittals in the English language. Do not include information in other languages.
- I. Present measurements in customary American units (feet, inches, pounds, etc.).
- J. Show dimensions, construction details, wiring diagrams, controls, manufacturers, catalog numbers, and all other pertinent details.
- K. Indicate project designated equipment tag numbers from P&IDs for submittal of devices, equipment, and assemblies.
- L. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

END OF SECTION

SECTION OR-01320

PROJECT MANAGEMENT AND PROGRESS REPORTING

PART 1 GENERAL

1.01 SUMMARY

- A. Design-Builder shall schedule and coordinate the Work of Subcontractors and others performing or furnishing any of the Work. This includes coordinating Site visits of all manufacturers and Subcontractors and coordinating interfaces and field coordination of others as necessary to effectively install and startup facilities.
- B. Section includes preparation, submittal, and maintenance of Phase 2 Project Schedule and reports, contract time adjustments, and payment requests:
 - 1. Scheduler.
 - 2. Scheduling format and software.
 - 3. Schedule preparation.
 - 4. Submittal of Phase 2 Project Schedule.
 - 5. Payment requests and cash flow.
 - 6. 3-Week Look-Ahead Schedule.
 - 7. Schedule of Values.
 - 8. Adjustment of Contract Times and Milestones.
 - 9. Summary schedule.
 - 10. Schedule of Submittals.
 - 11. Startup, commissioning and acceptance schedule submittal.
 - 12. Revisions to Project Schedule.
- C. This Section also includes administrative provisions for coordinating design and construction operations on the Project including the following:
 - 1. Reports.
 - 2. Other administrative requirements including photograph and video documentation.
 - 3. Project meetings.

1.02 DEFINITIONS

- A. Activity:
 - 4. A discrete part of the Project that can be identified for planning, scheduling, monitoring, and controlling the construction Work. Activities included in a Project Schedule consume time and resources.
 - 5. Critical activities are activities on the critical path. They must start and finish on the planned start and finish times.
 - 6. Predecessor activity is an activity that must start or complete before a given activity can be started. Use of negative lag shall be minimized.
 - 7. Successor activity is an activity that can not start until the predecessor activity allows it. Use of negative lag shall be minimized.
- D. Critical Path Method (CPM): A schedule network analysis technique used to determine the amount of scheduling flexibility (the amount of total float) on various

logical network paths in the Project Schedule network, and to determine the minimum total duration of an activity. Start and finish dates are calculated by means of a forward pass, using a specified start date. Late start and finish dates are calculated by means of a backward pass, starting from a specified completion date, which sometimes is the activity's early finish date determined during the forward pass.

- E. Critical Path: Generally, but not always, the sequence of schedule activities determining the duration of an activity. Usually, it is the longest path through the activity. However, a critical path can end, as an example, on a schedule milestone that is in the middle of the schedule model and that has a finish-on-or-before imposed date schedule constraint.
- F. Float: The measure of leeway in starting and completing an activity. Float time is not for the exclusive use or benefit of either Party, but is a jointly owned, expiring Project resource available to both Parties as needed to meet Milestones and other schedule milestones. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the following activity. Total float is the measure of leeway in starting or completing an activity without adversely affecting a Milestone Deadline.
- G. Fragnet: A partial or fragmentary network that breaks down activities into smaller activities of greater detail.
- H. Gantt Chart: A graphic display of schedule-related information. In the typical Gantt chart, schedule activities or work breakdown structure (WBS) components are listed down the left side of the chart, dates are shown across the top and activity durations are shown as date-placed horizontal bars.
- I. Lag: An offset or delay from an activity to its successor. It is based on the calendar of the successor activity.
- J. Milestones: Key or critical point in time for reference or measurement.
- K. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.
- L. Work Package: A deliverable or project work component at the lowest level of each branch of the WBS. The work package includes the schedule activities and schedule milestones required to complete the work package deliverable or project work component.

1.03 SCHEDULER

- A. Scheduler shall be dedicated to the Project, or other commitment level agreed to by the Parties.

- B. Scheduler shall attend Project meetings called for in this Section with the Project Schedule as an agenda item. Remote attendance is generally acceptable provided Owner may require the Scheduler attend specific meetings in person rather than remotely.

1.04 SCHEDULING FORMAT AND SOFTWARE

- A. Phase 2 Project Schedule format: Utilize CPM format.
- M. Prepare computerized Phase 2 Project Schedule utilizing Oracle Primavera P6 Project Management.
- N. Use defined coding structure, identifying the code fields and the associated code values to be applied to the project schedule. The coding structure and is used to prepare various Owner schedule reports and queries.
- O. Schedule filenames shall comply with established Project file naming convention.
- P. Post submitted files to the web-based construction document management system in accordance with the Submittal Requirements.

1.05 SCHEDULE PREPARATION

- A. Design-Builder's preparation and submittal of the Baseline Phase 2 Project Schedule and each updated Phase 2 Project Schedule represents Design-Builder's intention to execute the Work within specified time and constraints. Design-Builder shall update the Phase 2 Project Schedule no less than monthly and otherwise in accordance with the Agreement. Any changes to the Phase 2 Project Schedule shall include activity percent complete and minor logic revisions to address current implementation strategy. Design-Builder shall not make any changes to Work deliverables or scope in the Phase 2 Project Schedule.
- Q. The Phase 2 Project Schedule shall include detailed work activities for Phase 2 final design and construction that was submitted to and approved by Owner as part of the GMP Proposal.
- R. Design-Builder shall coordinate each construction activity in the network with other activities and schedule them in proper sequence.
- S. Activity durations in the Phase 2 Project Schedule shall be in terms of working days. Reference schedule to working days with Notice to Proceed.
- T. With the exception of management and administrative activities, each construction work activity's original duration shall not exceed 25 working days unless otherwise approved by the Owner. Activities longer than 25 working days shall be subdivided by location, station, or other sub-element to comply with the 25-day criteria.

- U. Calendars: Design-Builder can create and utilize any number of calendars necessary to convey the work-periods for accurate duration usage for activities in the project schedule. There are two conditions for these calendars: (1) they shall contain all Owner-observed holidays; and (2) they shall convey the accurate workdays during which Work will be performed.
- V. Float is for the mutual benefit of both Parties. Changes to the Project that can be accomplished within this available period of float may be made by Owner without extending any Milestone Deadline, by utilizing float. Time extensions will not be granted nor delay damages owed unless there is no available float and Work extends beyond Final Completion. Likewise, Design-Builder may utilize float to offset delays other than delays caused by Owner. Mutual use of float shall continue until all available float shown by schedule has been utilized by either Owner or Design-Builder, or both.
- W. Non-sequestering of float: Pursuant to float sharing requirements of this Section, Owner may reject schedule Submittals for use of float suppression techniques such as (without limitation) preferential sequencing or logic, special lead or lag logic restraints, extended activity durations or imposed dates.
 - 1. Schedule logic: Assembled to show order in which Design-Builder proposes to carry out Work.
 - 2. Include the following items in the schedule:
 - a. Coordination with existing construction.
 - b. Use of premises restrictions.
 - c. Seasonal variations affecting work period.
 - d. Environmental control measures.
 - e. Known outages and/or bypasses of operating facilities.
- X. The schedule activities shall be cost-loaded to the work activity level equal to the Schedule of Values as agreed upon by Owner and Design-Builder. The sum total of all cost loaded activities shall equal the total Contract Price, including Owner-approved Change Orders. This shall be equivalent to the total of the Schedule of Values for the Project.
- Y. Milestone Deadlines and/or operational constraints set forth in Agreement shall be included on the Project Schedule. Finish on or before constraints are to be applied to these Milestone Deadlines.
- Z. Activities for which the Owner and other contractors are responsible shall be clearly identified in the Project Schedule.
- AA. When Change Orders are approved by the Owner, the Design-Builder shall adjust the Project Schedule to account for any changed activities. This adjustment shall include the costs required for these activities.

1.06 PROJECT SCHEDULE SUBMITTAL FORMAT

- A. Design-Builder shall submit electronically, in accordance with the Submittal Requirements, all schedule outputs and reports required under the Agreement.
- B. Design Builder shall submit the Oracle P6 export file in XER format.

- C. Design Builder shall submit a schedule narrative report, which clearly defines each change made to the schedule from its prior progress update. This includes activity additions, deletions, revisions, logic changes, etc. The schedule narrative report shall include an analysis of any negative variance to any Milestone Deadline or associated date. The report will describe the cause of the negative variance and what the Design-Builder is doing to recover any negative variance.
- D. Design Builder shall submit a clear, legible, and accurate schedule in PDF format. The format shall be 11x17 in and calendar based, time scaled, graphical Gantt chart diagram showing predecessors, successors, and dependencies. Activities shall be grouped by WBS.
- E. The timescale will be sized to show entire activity bars. The tabular portion shall include (in order) the following columns: activity ID, activity description, original duration, remaining duration, start date, finish date, total float, baseline original duration, baseline start date, baseline finish date, start variance, and finish variance.
- F. Gantt chart portion will include the current Phase 2 Project Schedule bars with their respective approved Baseline Phase 2 Project Schedule bars immediately below.
- BB. Indicate the critical path for the Project.
- CC. Delineate the specified duration and identify the planned Final Completion as a milestone. Show the time period between the planned and actual Final Completion as float.
- DD. Identify known planned system shutdown dates, temporary bypass periods, temporary operation period(s), system tie-in dates, specified interim completion or milestone dates, and Milestone Deadlines as milestones.
- EE. In addition to construction activities, include submission dates and review periods for:
 1. Equipment and long-lead material deliveries over eight weeks.
 2. Approvals required by Governmental Unit or other third parties.
- FF. Produce large poster-sized Gantt chart posted somewhere visible within Design-Builder's onsite office/trailer.

1.07 CASH FLOW PROJECTIONS

- A. After the Baseline Phase 2 Project Schedule has been submitted and accepted by the Owner, furnish a tabular and graphic report showing estimated progress payments for each month of the Project. This tabulation will be based on the summation of the cost-loaded activities. The total of all anticipated progress payments shall equal the current Contract Price.
- GG. Include quarterly updates to the tabular and graphic report showing estimated progress payments for each month of the Project.

1.08 THREE-WEEK LOOK-AHEAD SCHEDULE

- A. Submit to Owner weekly a three-week look-ahead schedule showing the activities completed during the previous week and the Design-Builder's schedule of activities for the following three weeks ("3-Week Look Ahead Schedule"). Design-Builder should indicate what activities have changed durations from the previous 3-Week Look Ahead Schedule.
- HH. Use the logic and conform to the status of the current accepted Project Schedule update when producing the weekly schedule.
- II. The activity designations used in the 3-Week Look-Ahead Schedule must be consistent with those used in the Phase 2.
- JJ. Design-Builder and Owner must agree on the format of the 3-Week Look-Ahead Schedule.
- KK. The 3-Week-Look-Ahead Schedule shall be discussed at each Project progress meeting in planning for upcoming Work.

1.09 ADJUSTMENT OF CONTRACT TIMES

- A. The Project Schedule shall be adjusted only for causes specified in the Agreement.
- LL. If the Design-Builder believes that a delay event qualifies as an Excusable Delay, the Design-Builder shall demonstrate the delay to the critical path. This proof, in the form of a Time Impact Analysis, along with other Change Order documentation specified in the Agreement, may entitle the Design-Builder to an adjustment of the Contract Times to the extent permitted under the Agreement.
- MM. Time Impact Analysis:
 - 1. Use the accepted schedule update that is current relative to the time frame of the Excusable Delay. The following shall be included:
 - a. Actual start dates of activities that have been started.
 - b. Actual finish dates of activities that have been completed.
 - c. Percentage of completion of activities that have been started but not finished or a remaining duration for that activity.
 - d. Actual dates on which milestones were achieved.
 - 2. Activities shall be updated by inputting percent complete figures and actual dates.
 - 3. Retained logic settings shall be used for each update.
 - a. When "out of sequence" activities occur, the following steps shall be taken:
 - 1) Create a report that identifies all of the "out of sequence" activities.
 - 2) Change the logic, add activities or both to correct the "out of sequence" condition. Make sure the activities that follow the "out of sequence" activity are scheduled.
 - 3) Write, as part of the narrative, a description of the "out of sequence" activity and the changes made to the schedule because of that activity.

4. Represent the Excusable Delay in the schedule by:
 - a. Inserting new activities associated with the Excusable Delay into the schedule,
 - b. Revising activity logic, or
 - c. Revising activity durations.
 5. If the critical path or Milestones are impacted as a result of adding this Excusable Delay to the schedule, a time extension equal to the magnitude of the impact may be warranted to the extent permitted under the Agreement.
 6. The Time Impact Analysis shall be prepared in accordance with the Agreement.
- NN. Indicate clearly that the Design-Builder has used, in full, all float available for the work involved in the request, including any float that may exist between the Scheduled Final Completion Date and Final Completion Date. Utilize the latest version of the Project Schedule update accepted at the time of the alleged Excusable Delay, and all other relevant information, to determine the adjustment of the Project Schedule.
- OO. Adjustment of the Project Schedule will be made only for the amount of time that the Design-Builder is actually delayed by an Excusable Delay.
- PP. Actual delays in activities which do not affect the critical path work or which do not move the Design-Builder's Scheduled Final Completion Date beyond the Final Completion Date will not be the basis for an adjustment to the Contract Times or compensation for delays.
- QQ. Owner will, after receipt of Design-Builder's notice of Excusable Delay review the facts and advise the Design-Builder in writing of Owner's determination.
1. If Owner determines the Project Schedule should be adjusted, Design-Builder shall include the new Project Schedule data in the next Project Schedule update.
 2. When the Owner has not yet made a final determination as to the adjustment of the Project Schedule and the Parties are unable to agree as to the amount of the adjustment to be reflected in the Project Schedule, Design-Builder shall reflect the amount of time adjustment in an interim schedule that Owner may accept (in its sole discretion) as appropriate for such interim purpose. The Parties understand and agree that any such interim acceptance by the Owner shall not be binding and shall be made only for the purpose of continuing to schedule the Work until such time as a final Owner determination as to any adjustment of the Project Schedule has been made. Design-Builder shall revise the Project Schedule prepared thereafter in accordance with Owner's final determination.

1.10 SCHEDULE OF SUBMITTALS

- A. Schedule of Submittals shall include Submittals required under the Agreement, including test procedures, operation and maintenance manuals, and shop drawings.

RR. Schedule of Submittals shall be arranged by WBS and in chronological order by date specified in the Phase 2 Project Schedule and Phase 2 Schedule of Deliverables, and it shall include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery as specified in the Agreement when establishing dates. The Schedule of Submittals shall identify those Submittals that Owner has identified for its review.

SS. Schedule of Submittals:

1. Due date: Within 30 calendar days after Notice to Proceed.
2. Format:
 - a. Include all Submittals.
 - b. Indicate week and month anticipated for each Submittal.
 - c. Indicate Submittals requiring Owner's review.
 - d. Indicate "Priority" submittals where Owner's review time can impact the Project Schedule.
 - 1) "Priority" indication will not alter review times specified in the Submittal Requirements.
 - 2) Owner will endeavor to provide early review of "Priority" submittals where practicable.

1.11 COMMISSIONING PLAN AND SCHEDULE SUBMITTAL

A. Proposed Commissioning Plan and Schedule:

3. In accordance with Section 01757 - Commissioning and Training.

TT. The Phase 2 Project Schedule shall be integrated with the Commissioning Plan and Schedule.

UU. The training schedule shall include a list of Owner training sessions and scheduled dates. Design-Builder shall indicate whether trainings are tentative or firmly scheduled and include updated list with monthly updates.

1.12 FINAL SCHEDULE SUBMITTAL

A. The final Project Schedule update shall be the "As-Built Schedule."

1. The As-Built Schedule shall reflect the exact manner in which the Project was constructed by reflecting actual start and completion dates for all activities accomplished on the Project.

1.13 PROGRESS REPORTS

A. Daily Field Observation Reports: Using template proposed by Design-Builder and approved by Owner, prepare a daily field observation report to indicate Work observed. Reports shall include, at a minimum:

1. Number and role of personnel on site, including Subcontractors and visitors.
2. Equipment onsite.
3. Weather conditions.
4. Photographs of Work observed.
5. Description of Work inspected.
6. Quality characteristics of compliance Work.
7. Identification of Defects.

8. Corrective action taken on current and previous Defects.
 9. Material location reports that includes a comprehensive list of materials delivered to and stored at the Site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Site.
- VV. Monthly Project Status Report (PSR): The Design-Builder shall produce and submit a Monthly PSR summarizing progress on the Project. The PSR shall be submitted with the Design-Builder's monthly invoice to the Owner for review and approval. In addition, the PSR shall be reviewed during executive level monthly meetings. The structure of each PSR shall include the following core topics and shall be amended as required by the Owner to suit the evolution of the Project.
1. Format:
 - a. Section 1. Activities Conducted During Reporting Period
 - 1) Summary
 - 2) By Phase 2 Task
 - b. Section 2. Planned Activities for the Next Reporting Period
 - 1) Summary
 - 2) By Phase 2 Task
 - c. Section 3. Areas Requiring Action or Resolution
 - 1) Summary
 - 2) Proposed Change Order Summary
 - 3) Contingency
 - d. Updated Project Schedule progressed through reporting period.
 - e. Status of procurement and delivery of equipment and material on the critical path.
 - f. Project Safety Statistics
 - 1) TRIR - Total Recordable Incident Rate
 - 2) LTIR - Lost Time Incident Rate
 - 3) NMIR - Near Miss Incident Rate
 - 4) Cumulative Project Manhours
 2. The PSR shall include an updated Risk Register, including an analysis of near-term or critical risks.
 3. The PSR shall include updated Change Order Requests, inclusive of City's Notice of Proposed Change and Design-Builder Proposed Change Orders, and the following attachments:
 - a. Executed Change Order Log. The Change Order Log should identify Contingency uses and status of approved and remaining Allowances.
 - b. Updated Submittal Log.
 - c. Updated RFI Log.
 - d. Photographs, including a few key photographs representing work completed during the reporting period
 4. Each PSR shall be submitted to the Owner for review in PDF format. All PDF layouts and reports for PSRs shall be as agreed upon by the Parties.

1.14 OTHER ADMINISTRATIVE REQUIREMENTS

- A. Staff Names: Within 21 calendar days of starting construction operations, submit a list of Key Personnel other personnel in attendance at the Site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers,

including mobile and office telephone numbers as well as primary vehicle make/model/license plates. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

5. Post copies of list in Project meeting room; document management system; in Design-Builder's temporary field offices; provide to Owner's staff and make available at the Site during work hours.
6. Design-Builder shall provide updated list within one week of any changes.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 MEETINGS

- A. Preconstruction Conference:
 1. Design-Builder will schedule the preconstruction conference to occur before the start of general construction and hold the conference at the Site or another location convenient to the Parties.
 - a. Attendees: Authorized representatives of Owner, Design-Builder Key Personnel, major Subcontractors and others as appropriate shall attend the conference.
 - b. Agenda: Discuss items of significance that could affect progress, including the following:
 - 1) Owner and Design-Builder's team member contacts, roles, responsibilities, and communication requirements.
 - 2) Schedules and Milestones.
 - 3) Design-Builder work zone and office trailer locations.
 - 4) Procedures: Includes change management, document controls, schedule management, submittals management, and RFIs.
 - 5) Project Record Document requirements.
 - 6) Lockout/tagout procedures and requirements.
 - 7) Use of the Site.
 - 8) Responsibility for temporary facilities and controls
 - 9) Standard vehicle traffic onsite.
 - 10) Parking availability.
 - 11) Equipment deliveries and priorities.
 - 12) Site safety requirements (safety vests, OSHA) and first aid.
 - 13) Site security and access procedures.
 - 14) Progress cleaning.
 - 15) Meetings.
 - 16) Work hours.
 - 17) Quality control.
 - c. Minutes: Design-Builder shall record minutes and distribute electronic copies within seven calendar days after the meeting to participants.

- B. Monthly Executive Meetings:
1. Design-Builder will schedule and administer formal executive meetings throughout progress of the Work at maximum monthly intervals with the first meeting scheduled approximately 30 calendar days after the preconstruction conference. Executive meetings will be held to resolve any outstanding issues and to provide the Owner with an opportunity to discuss with executive staff any concerns they see with the Project and reporting
 2. Attendance Required: Owner representatives, Design-Builder's Project Manager, and Design-Builder's Construction Manager (if different than the Project Manager).
 3. Agenda shall be open to facilitate the exchange of pertinent information and discussion.
 4. Minutes: Design-Builder will record changes for update and distribute electronic copies within seven calendar days after meeting to participants.
- C. Weekly Construction Progress Meetings:
1. Upon start of construction, Design-Builder will schedule and administer meetings throughout progress of the Work at maximum weekly intervals.
 2. Design-Builder will make arrangements for meetings, prepare agenda with copies for participants, and preside at meetings.
 3. Attendance Required: Owner representatives, Design-Builder's Project Manager, Design-Builder's Construction Manager (if different than the Project Manager), Commissioning Manager as appropriate to agenda topics for each meeting.
 4. Agenda:
 - a. Review of Work progress.
 - b. Field observations, problems, and decisions.
 - c. Identification of problems delaying planned progress, hazards and risks.
 - d. Site safety.
 - e. Review of critical submittals.
 - f. Review of critical RFIs, change documents, issues and action items.
 - g. Review of upcoming tie-ins or shut-downs within 3-week window.
 - h. Review of offsite fabrication and delivery schedules.
 - i. Maintenance of Phase 2 Project Schedule.
 - j. Corrective measures to regain projected schedules.
 - k. Review 3-Week-Look-Ahead Schedule and planned progress during succeeding work period.
 - l. Schedule update, if required
 - m. Coordination of projected progress.
 - n. Maintenance of quality and work standards.
 - o. Effect of proposed changes on Phase 2 Project Schedule and coordination.
 - p. Other business relating to Work.
 5. Design-Builder will record minutes and distribute electronic copies within one day after meeting to participants.
- D. Pre-Installation Meetings:
1. Design-Builder when required by the Agreement or as requested by Owner, will convene pre-installation meetings at the Site before commencing applicable Work.

2. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Owner of scheduled meeting dates seven calendar days prior to the meeting.
 3. Do not proceed with installation if the issues raised during the conference are not successfully agreed on by the Parties. Initiate whatever actions are necessary to resolve impediments to those issues and reconvene the conference at earliest feasible date.
- E. Expedited Submittal Review Meetings: To expedite the Submittal process and accelerate the delivery schedule for equipment with long delivery lead times, expedited Submittal review meetings may be held for equipment identified by the Design-Builder. Design-Builder shall identify such meetings on the Project Schedule and coordinate the meetings with Owner as needed.
- F. Other Meetings:
1. Operation & Maintenance Workshop(s):
 - a. *[To be determined during Phase 1 Services prior to GMP Proposal].*
 2. Commissioning meetings as required in Section OR-01757 – Commissioning and Training.

3.02 SCHEDULE UPDATES

- A. Prepare each update using most recent accepted version of the Project Schedule, including:
1. Actual start dates of activities that have been started.
 2. Actual finish dates of activities that have been completed.
 3. Percentage of completion of activities that have been started but not finished.
 4. Actual dates on which milestones were achieved.
 5. Update activities by inputting percent complete figures with actual dates.
 6. When necessary, input remaining durations for activities whose finish dates cannot be calculated accurately with a percent complete figure only.
 7. Revisions to the Project Schedule may be included that have been previously approved by Owner.
- B. Submit written narrative report in conjunction with each Project Schedule update to describe:
1. Activities added to or deleted from the Project Schedule. Identify added activities in manner distinctly different from original activity designations.
 2. Changes in sequence or estimated duration of activities.
 3. “Out of Sequence” analysis as specified above.
 4. Current or anticipated problems and delays affecting progress, impact of these problems or delays and measures taken to mitigate impact.
 5. Assumptions made and activities affected by incorporating Change Order Work into the Project Schedule.
 6. Critical path.

3.03 REVIEW AND ACCEPTANCE OF SCHEDULES

- A. Owner will review Phase 2 Project Schedule, Project Schedule updates and revisions, and Time Impact Analysis to ascertain compliance with specified Project constraints, reasonableness of durations and sequence, accurate inter-relationships and completeness.
- B. Written comments on review of Project Schedule updates and revisions and Time Impact Analysis will be returned to Design-Builder within 14 calendar days after receipt by Owner.
- C. Revise and resubmit schedule in accordance with Owner's comments within 14 calendar days after receipt of such comments or request joint meeting to resolve objections.

3.02 PHOTOGRAPHIC AND VIDEO DOCUMENTATION

- A. Design-Builder will provide preconstruction video and construction photography to view and record construction throughout the duration of the Project, until Completion.
- D. Photograph and Video Submittals:
 - 1. Preconstruction Photographs: Submit, prior to start of construction, for Owner review and approval photographs of Site and haul routes. Construction may not begin in any area until the preconstruction photographs have been submitted and approved by Owner.
 - 2. Preconstruction Video: Submit, prior to start of construction, for Owner review and approval video of Site and haul routes. Construction may not begin in any area until the preconstruction videos have been submitted and approved by Owner.
 - 3. Construction Progress Photographs: Electronically store construction progress photographs at mutually acceptable location. Indicate which photos will be utilized in final deliverables in accordance with Section OR-01770 - Closeout Procedures.
 - 4. Post-Construction Photographs: Submit for Owner review and approval.
 - 5. Photograph and video files shall be electronically stored in mutually accessible location, organized in manner approved by Owner, and stored within one month from date taken.
- E. Photograph and Video Quality:
 - 1. General: Photographs and video shall be clear and sufficient to show significant detail. They shall not be blurred, taken in shadow, or too distant.
 - 2. Photographic images shall be captured in digital format, with a minimum of 12-megapixel resolution, using minimal JPG compression.
 - 3. Each photograph shall include a date / time stamp in the image, showing when the image was created.
 - 4. All video recordings shall be captured in Hi-Definition digital.
- F. Digital File Metadata Requirements: Digital files for photographs and videos shall, at a minimum, contain the following metadata:
 - 1. File Name.

2. Date and Time Taken.
 3. GPS location.
 4. All other metadata inherently provided by the camera or video equipment.
- G. Prior to Photographic and Video Documentation:
1. Mark Utilities: During potholing activities, Design-Builder shall have Utilities marked and take photographs of marked utilities.
 2. Coordinate with Owner: For any Work that requires a representative of the Owner to be present, Design-Builder shall provide Owner prior written notice within reasonable amount of time.
- H. Preconstruction Video:
1. Design-Builder shall prepare a color video recording with audio of all the areas to be affected by construction. All preconstruction video recordings shall have sufficient detail to reveal the condition (including defects and damage) of all existing features, such as pavement, driveways, culverts, inlets, sidewalks, landscaping, vegetation, river banks, trees, structures, foundations, electrical equipment, power lines, railroad, flood protection, existing unit processes, interior of existing water services buildings, buried valves, and other such items in the construction area, and in the immediate adjacent areas, which might be affected by the construction operations. In addition, videographer shall move beyond the construction zone as needed to insure documentation of features and areas that may not be adequately recorded. Preconstruction videos shall view along the edges of the construction area and with the affected areas.
 2. All preconstruction video recording shall be done with a representative of the Owner present.
 3. Design-Builder shall document all pre-existing conditions/elements of the Site as listed for the preconstruction photographs.
 4. The video documentation shall provide a clear and continuous view of the Project areas showing all visible Utilities and features within the limits of construction.
 5. To preclude the possibility of tampering or editing in any manner, all video recordings shall, by electronic means, generate and display continuously and simultaneously on the screen digital information to include the date and time of recording. The time information shall consist of hours, minutes and seconds, separated by colons (i.e., 10:35:18).
 6. The audio video recording shall consist of one video and one audio track which shall be recorded simultaneously. All tracks shall consist of original live recordings and thus shall not be copies of other audio and video recordings.
 7. Recordings may be broken up by area or building.
 8. The audio track shall contain the narrative commentary. Ample descriptive narrative shall be recorded simultaneously during all recordings. Narration shall include clearly audible comments that will deliver, direction of view and rotation, construction zone, and other location information.
 9. Rotations of 360-degrees shall typically be made at the beginning and end of each video segment.

10. The rate of speed in the general direction of travel of the conveyance used during recording shall be controlled to provide a usable image. On average, the rate of forward travel during videotaping shall be no faster than walking speed. Design-Builder shall not utilize motorized equipment to move during the video recording.
 11. Panning rates and zoom-in, zoom-out rates shall be controlled sufficiently such that playback will produce clarity of the object viewed.
 12. Video shall zoom in and out frequently to give details of existing equipment and structures and their relative locations.
 13. All recording shall be done during times of good visibility. No recording shall be done during periods of visible precipitation, unless otherwise authorized by Owner.
- I. Preconstruction Photographs:
1. The principle reason for obtaining photographs is to clearly document existing conditions at facilities before the Design-Builder begins its activities.
 2. Preconstruction photographs shall be taken at sufficient intervals to be able to carefully document the preconstruction conditions of the Work inside and outside.
 3. Overlapping composition techniques shall be employed to insure maximum photographic coverage as well as panoramic technical to see a full structure or area.
 4. Preconstruction photographs shall be taken after the Utility locations have been marked.
 5. Preconstruction photographs shall be taken with a representative of the Owner present.
 6. All preconstruction photographs shall have sufficient detail to reveal the condition (including defects and damage) of all existing features, such as pavement, driveways, culverts, inlets, sidewalks, landscaping, vegetation, creek banks, trees, structures, foundations, electrical equipment, power lines, railroad, flood protection, existing unit processes, equipment, building columns, roofing systems, facades, electrical equipment, interior of existing buildings, buried valves, and other such items along the construction route, and in the immediate adjacent areas, which might be affected by the construction operations.
 7. At a minimum, preconstruction photographs shall be taken of the following views:
 - a. As much of the construction zone as possible including staging areas.
 - b. Along all roadways– all pre-existing curb damage not called for replacement within the Work and shall include major cracks.
 - c. All driveways, steps, and curbs, architectural features, and curb ramps (both sides of road).
 - d. Fence and gate conditions.
 - e. Other privately or publicly owned features or facilities that might be disturbed by the construction.
 - f. All in-service assets and out-of-service assets to be removed.
 - g. Views of the areas around the construction area with an emphasis on nearby property. Include any rail lines.
 - h. Views of structures and buildings, both inside and adjacent to the Site and easements in areas where Design-Builder will be working within five feet of any structure.

- i. Prominent Utility features, such as: guy wires, poles, signs, valves, fire hydrants, meters, high voltage lines, pull boxes, etc.
 - j. Potomac River and riverbanks within the limits of construction.
 - k. At the discretion of the Design-Builder, photograph offsite roadways that will be subjected to heavy usage such as for delivery of heavy components or equipment. Other significant or prominent features to protect the Parties following construction (e.g. close-up photographs of pre-existing broken curbs, cracked/failed pavement, damaged adjacent retaining walls, etc.).
 - l. Existing Facilities and equipment including building envelopes, roofs, power equipment, valves, security equipment, gates, handrails, grating, lighting, major unit processes, control equipment, and radios that may be safely documented will equipment is in service.
 - m. Views of structures, both inside and adjacent to the ROW/easement in areas where Design-Builder will be working within five feet of any structure.
 - n. Other views as requested by the Owner.
- J. Construction Progress Photographs:
- 1. Provide construction progress photographs to depict the progress of the work. The Design-Builder shall be responsible for photographs of the Site to show the existing and general progress of the Work.
 - 2. Construction progress photographs shall include the following:
 - a. Work not yet covered up.
 - b. Any excavation just prior to any backfilling.
 - c. Any core drilling through an existing structure.
 - d. Any unit process after construction activity prior to filling with wastewater or sludge.
 - e. When mechanical, electrical, plumbing or building inspections are scheduled.
 - f. The beginning of installation of major items of equipment.
 - g. After installation of major items of equipment.
 - h. After the installation of any electrical equipment when unpowered but closed when energized.
 - i. Other significant construction activities.
 - j. As directed by Owner.
- K. Post-Construction Photographs:
- 1. Provide post-construction photographs of the Project area that document the final restoration and construction improvements. Post-construction photographs shall show the general condition of the construction zone (recording finished landscape and other restoration, plus construction improvements), and other areas that may have been affected by construction activities. Post-construction photographs shall be taken from, at a minimum, all points indicated on the view location map.
 - 2. Design-Builder may request that unit processes and electrical equipment be photographed earlier that would be difficult or imprudent to photograph after Substantial Completion.

3. Post-construction photographs shall be taken after Final Completion, and before submission of the Application for final payment. Post-construction photographs shall be incorporated into final deliverables as indicated in Section OR-01770 - Closeout Procedures.
4. Post-construction photographs shall be taken with a representative of the Owner present.

END OF SECTION

SECTION OR-01329

HEALTH AND SAFETY PLAN

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes development and maintenance of a Health and Safety Plan.

1.02 RELATED SECTIONS AND REFERENCES

- A. National Fire Protection Association (NFPA):
 - 1. 70E - Standard for Electrical Safety in the Workplace.
- B. Occupational Safety and Health Administration (OSHA) Code of Federal Regulations (CFR) Part 1926 Safety and Health Regulations for Construction.
- C. Occupational Safety and Health Administration (OSHA) Code of Federal Regulations (CFR) Part 1910 Safety and Health Standards.

1.03 CONSTRUCTION HEALTH AND SAFETY PLAN

- A. Design-Builder shall ensure its Health and Safety Plan is maintained with accurate and correct information. Health and Safety Plan shall be updated to address and incorporate Owner-provided review comments.
 - 1. Design-Builder shall submit updates of Health and Safety Plan within one week after any changes.
 - 2. Health and Safety Plan shall include as a section or attachment the Design-Builder's plan for addressing Hazardous Materials or Hazardous Environmental Conditions (per Agreement).
- B. Design-Builder assumes responsibility for health and safety on the Site, including the health and safety of Subcontractors, and other persons on the Site:
 - 1. Forward available information and reports to the Safety Officer who shall make the necessary recommendations concerning worker health and safety at the Site.
 - 2. Employ additional health and safety measures specified by the Safety Officer, as necessary, and in accordance with OSHA guidelines.
- C. Timely transmit to Owner copies of reports and other documents related to accidents or injuries encountered during construction.
- D. Smoking will be allowed in designated areas as approved by the Owner. However, there is no smoking allowed in buildings or within 50 feet of NFPA classified areas and envelopes. Design-Builder shall provide signage identifying designated smoking areas, and notification when any changes to the designated areas are made. No smoking will be allowed inside the pumps stations once they are closed in, and no smoking will be permitted anywhere on the Site following delivery of chemicals. Design-Builder will be responsible for safe disposal of cigarette butts.

- E. COVID-19 Safety Measures: Contractors shall comply with all current and future Applicable Laws.
1. Design-Builder shall implement, and require its Subcontractors to implement, measures to protect employees, visitors, and anyone else related to the Project or on the Site from COVID-19 and other infectious diseases. These measures shall be included in Design-Builder's Health and Safety Plan. In its implementation of COVID-19-related safety measures, Design-Builder shall be aware of and comply with the following guidance:
 - a. Virginia Department of Health.
 - b. Virginia Occupational Safety and Health
 - c. OSHA, Guidance on Preparing Workplaces for COVID-19 (OSHA 3990-03), <https://www.osha.gov/Publications/OSHA3990.pdf>
 - d. OSHA, COVID-19 Guidance for the Construction Workforce (OSHA 4000-04), <https://www.osha.gov/Publications/OSHA4000.pdf>
 - e. OSHA, COVID-19 - Control and Prevention / Construction Work, <https://www.osha.gov/SLTC/covid-19/construction.html>

1.04 ACCIDENT PREVENTION

- A. In performance of this Project, the Design-Builder shall provide for protecting the lives and health of employees and other persons; preventing damage to property, materials, supplies and equipment and avoiding work interruptions. For these purposes the Design-Builder shall: provide appropriate safety barricades, signs and signal lights; and ensure that any additional measures the Owner determines to be reasonably necessary for this purpose is taken.
- B. The Design-Builder shall maintain an accurate record of exposure data on all accidents incident to Work performed under this Agreement which results in death, traumatic injury, occupational disease, or damage to property, supplies, materials or equipment. The Design-Builder shall report this data in the manner prescribed by the Owner.
- C. The Owner will notify the Design-Builder of any non-compliance with these requirements and of the corrective action required. This notice when delivered to the Design-Builder or the Design-Builder's representative at the site of the Work shall be deemed sufficient notice of the non-compliance and corrective action required. After receiving notice, the Design-Builder shall immediately take corrective action. The Owner may issue an order stopping all or part of the Work until satisfactory corrective action has been taken. The Design-Builder shall not base any claim or request for equitable adjustment for additional time or money on any stop order issued under these circumstances.
- D. The Design-Builder shall be responsible for its Subcontractors' compliance with this clause

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION OR-01400
QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for products and workmanship and includes the following:
1. Design-Builder's quality control (QC) Program.
 2. Quality Management Plan (QMP).
 3. Sampling and testing of materials.
 4. Material testing and inspection.
 5. Owner-directed testing.
 6. Special tests and inspections.
 7. Quality management personnel.
 8. Manufacturer's field services.
 9. Documentation control/ quality records.
 10. Design-Builder shall refer and incorporate into its QMP and QC Program procedures and requirements documented in *Minimum Requirements for Quality Assurance and Quality Control on Design Build and Public-Private Transportation Act Projects* (Virginia Department of Transportation; July 2018) that are applicable to the Project. The City's will refer to these requirements and documentation in its review and comment on the Design-Builder's QMP.

1.02 SUBMITTALS

- A. Quality Management Plan updates in accordance with this Section.
- B. Qualification Data: For testing agencies specified herein to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- C. Independent Testing Firm Reports: After each test, promptly notify the Owner. Provide interpretation of test results. Include the following:
1. Date of issue.
 2. Project title and number.
 3. Name, address, and telephone number of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making tests and inspections.
 6. Description of the Work and test and inspection method.
 7. Identification of product and specification section.
 8. Type of test or inspection.
 9. Complete test or inspection data.
 10. Test and inspection results and an interpretation of test results.
 11. Ambient conditions at time of sample taking and testing and inspecting.
 12. Conformance with Construction Documents.
 13. Name and signature of laboratory inspector.

14. Recommendations on retesting and re-inspecting.
- D. Engineer of Record Statement of Special Inspections: Detailed summary of special inspections required to satisfy building code compliance, and certification that Design-Builder will provide advanced notification to Owner's special inspector prior to construction activity so the Owner's special inspector can perform and document inspection.
- E. Daily Quality Control Records: Complete legible copies of quality control daily records that shall be made available to the Owner. These records shall be maintained using the Daily Field Observation Report form provided in Section OR-01320 Project Management and Progress Reporting.
- F. Design-Builder Monthly Quality Report. Furnish a monthly quality report as part of its Project Status Report (PSR). This monthly report shall include as a minimum:
 1. Summary of quality control staff onsite during the month.
 2. Summary of quality control activities during the month.
 3. Detailed summary of all tests performed by category. Include special tests and special inspections.
 4. Trend analysis of quality control test results.
 5. Log of all outstanding unresolved failing tests.
 6. Defects status.
 7. Quality problems and resolutions.

1.03 DESIGN-BUILDER'S QUALITY CONTROL (QC) PROGRAM

- A. Design-Builder's QC Program is the means by which Design-Builder ensures the quality of the Work meets the minimum quality levels required by the Construction Documents and the Agreement. Design-Builder must establish and maintain a QC Program, performing sufficient inspections and tests of all items of Work, including work of its Subcontractors, to ensure conformance with the requirements of the Construction Documents. Design-Builder's quality control measures shall cover all construction operations and must be correlated with the Design-Builder's Project Schedule and 3-Week Look-Ahead Schedules.
- B. Design-Builder's QC Program shall include the inspections and tests required by the Construction Documents and Agreement in addition to any other inspections and tests by Design-Builder necessary to control quality. Design-Builder shall maintain and submit to Owner adequate records of all inspections and tests, and shall submit all test results on forms developed by the Design-Builder.
- C. Design-Builder shall closely inspect all materials upon delivery, and all Work in progress for compliance with the requirements of the Construction Documents and Agreement. Design-Builder shall promptly reject and return all defective materials and rework any substandard portion of the Work without waiting for inspection or rejection by Owner. Design-Builder shall immediately notify the Owner of any Defect upon discovery.

- D. The Design-Builder shall submit the Design-Builder's Phase 2 Quality Management Plan (QMP) before beginning any of the Phase 2 Work other than mobilization tasks to install temporary facilities. The QMP (including the QC Program) shall meet all objectives and requirements specified herein, and must be specific to this Project and the Agreement.
- E. In addition, the Design-Builder shall include activities within the Three Week Look Ahead Schedule.
- F. The Design-Builder shall utilize only suitably qualified, skilled, and trained personnel experienced in the tasks required to complete the Work in accordance with the quality requirements of the Design Documents and Agreement. Should there be no quality basis specifically prescribed for any portion of the Work, the quality and testing procedures shall be in accordance with Good Industry Practice.

1.04 DESIGN-BUILDER'S QC PROGRAM AND QMP REQUIREMENTS

- A. The QMP, as defined herein, establishes specific minimum staffing, documentation, reporting, and procedural requirements that Design-Builder must implement and maintain throughout Phase 2.
- B. Design-Builder shall establish and maintain a QC Program as described in its QMP for Phase 2.
- C. The QC Program must cover on-site and off-site Work and must be correlated with the Design-Builder's Phase 2 Project Schedule and 3-Week Look-Ahead Schedule.
- D. Owner reserves the right to require changes in the QC Program and operations as necessary to ensure the specified quality of Work.
- E. Design-Builder must notify the Owner, in writing, of any proposed change to the QMP and QC Program, including changes to QC organization or personnel, a minimum of seven calendar days prior to a proposed change. Proposed changes are subject to acceptance by the Owner, not to be unreasonably withheld.
- F. Provide a schedule of tests and inspections. Prepare a schedule of tests, inspections, and similar quality-control services required by the Construction Documents. This Schedule shall include the following:
 - 1. Specification section number and title.
 - 2. Description of test and inspection.
 - 3. Identification of applicable standards.
 - 4. Identification of test and inspection methods.
 - 5. Number of tests and inspections required.
- G. Audits: The QC Program shall provide for regularly scheduled documented audits to verify that QC procedures are being fully implemented by Design-Builder and its Subcontractors. Audit records shall be made available to Owner upon request.
- H. Owner's review and acceptance of the Design-Builder's QMP and QC Program shall not relieve the Design-Builder from any of its obligations for the performance of the Work in accordance with the Agreement.

- I. Design-Builder shall provide Owner a hardcopy of the Owner-approved final QMP and any Owner-approved updates. Design-Builder shall maintain and make available the hardcopy in its field office at all times.

1.05 DESIGN-BUILDER'S QC MANAGER AND QC ORGANIZATION

- A. The Design-Builder shall provide a QC Manager at the Site to implement and manage the Design-Builder's QC Program, including the coordination, performance, and execution of construction inspection and testing. The QC Manager shall report to the Design-Build Manager and shall have no supervisory or managerial responsibility over the work force.
- B. The QC Manager shall not be absent from the Site for more than two consecutive weeks at a time.
- C. No on-site Work requiring testing shall be performed unless the QC Manager or Alternate QC Manager is at the Site, unless otherwise allowed by the Owner.
- D. The QC Manager's duties include the following:
 1. Be on the Site at all times during performance of Work, with complete authority to take any actions necessary to ensure conformance with the requirements of the Construction Documents. In the event of the QC Manager's absence, the Alternate QC Manager shall be present and have the same authority as the QC Manager.
 2. Implement and manage the QC Program for each definable feature and portion of the Work.
 3. Immediately stop any work that does not comply with requirements of the Construction Documents, and coordinate with the Design-Builder and Owner to discuss corrective measures, if applicable, to be implemented by the Design-Builder.
 4. Ensure that Design-Builder's QC organization, including Subcontractors, is staffed with qualified personnel to perform all required inspections and tests.
 5. Supervise and coordinate the inspections and tests made by the Design-Builder's QC organization, including the tests and inspections of the Work of Subcontractors.
 6. Provide 48-hour notice to Owner of tests and inspections to be conducted. Such notice shall be through the Project management tool and may also be provided during communication at regular Project meetings.
 7. Ensure that all required tests are performed and results are reported, whether by Owner or by the Design-Builder. Indicate whether test results do or do not conform to requirements of the Construction Documents. Submit corrective action plan(s) for Defects.
 8. Recommend removal of any person from the Project that consistently fails to perform Work properly.
 9. Report to Design-Build Manager the identity of any Subcontractor who's Work consistently fails to meet the requirements of the Construction Documents.
 10. Initiate and conduct all QC meetings required herein. Distribute meeting minutes to Design-Builder and Owner within three days of each meeting.
 11. Provide in a timely manner all required QC Manager certifications specified herein.
 12. Certify completion prior to requesting Milestone completion inspections.

13. At the Site, perform daily/weekly/monthly maintenance and updating of the following:
 - a. Testing plan and log.
 - b. Rework items list.
 - c. Review of Project Record Documents, which are maintained by the Design-Builder. Design-Builder shall mark the Project Record Documents in accordance with Section OR-01700 Execution Requirements to show any deviations made from the requirements of the Construction Documents and to indicate the actual materials and equipment incorporated into the Work.
- E. Attend all key Project meetings.
- F. In addition to the Design-Builder's QC Manager, the Design-Builder shall provide other personnel as needed to perform QC functions with the necessary qualifications, authority and organizational freedom to identify quality problems and to initiate and recommend solutions. These personnel shall be on site as requested by the QC Manager to support their activities as often as necessary to remedy any quality issues and verify that the Work is being performed properly. These personnel shall be reflected on the QC organization chart.
- G. At all times during performance of the Work, the Design-Builder's Construction Manager, Superintendents, and foremen shall be fully informed of the Design-Builder's QC Program and QMP. The Design-Builder's Construction Manager, Superintendents and the foreman(s) shall attend the QA/QC Meetings as required herein before beginning work on that portion of the Work.

1.06 DESIGN-BUILDER'S QC PLANS

- A. On a monthly basis, the Design-Builder shall submit within its 3-Week-Look-Ahead Schedule a listing of anticipated activities in accordance with a format and procedures developed in cooperation with and acceptable to Owner to allow for scheduling of testing services.
- B. Each 3-Week-Look-Ahead Schedule shall include sufficient information to allow Owner to properly schedule and coordinate testing services and other Owner quality assurance activities, including at a minimum mutually agreeable inspection/testing hold points and any special QC requirements for a particular portion of the Work or specialty trade regardless of who will be performing such QC activities.
- C. Should work proceed past an inspection or test hold point prior to witnessing a passing inspection or test, the subsequent work will not be accepted until the previous work prior to the inspection or test hold point has been approved.

1.07 QUALITY CONTROL (QC) MEETINGS

- A. After submission and acceptance of the Design-Builder's overall QMP (during Phase 1A) and before any portion of the Phase 2 Work begins, except for mobilization activities, the Design-Builder's QC Manager shall call for an initial QC Meeting to develop a mutual understanding of the QC Program requirements for all

on-site and off-site Work, including documentation, administration, and coordination of Design-Builder's management, production and QC personnel.

- B. At this initial meeting, Design-Builder must explain in detail all aspects of its QC program and how quality control will be implemented for each definable area of the Work.
- C. Meeting attendees at this initial QC meeting will be, at a minimum, Owner, Design-Builder's Design-Build Manager, Design Manager, Superintendents, QC Manager, Alternate QC Manager, and representatives from the primary Major Subcontractors.
- D. The QC Manager must conduct the initial QC Meeting, prepare and sign the meeting minutes, and provide copies to each attendee for review and comment within three days after this meeting.
- E. In addition to the Design-Builder's required QC Meetings, Owner may also request QC Meetings and all requested attendees are required to attend, either on-site or remotely. Should such a QC Meeting be called, Owner will conduct these meetings, prepare and sign a record of discussion, and provide copies of this record of discussion to all attendees within three days after the meeting.

1.08 SAMPLING AND TESTING

- A. General:
 - 1. Testing, inspections and source quality control may occur on or off Site. Perform off-site testing, inspections and source quality control as required by the Construction Documents and Owner.
 - 2. Design-Builder is responsible for inspecting materials and equipment at manufacturing facility to verify quality as required by technical specifications.
 - 3. Where tests will be performed by Owner or by an independent laboratory or agency, the Design-Builder will assist the Owner with obtaining samples of all materials as required by the Owner Representative without a change in the GMP (Phase 2).
 - 4. The sample or samples of materials to be tested shall be selected by such laboratory or agency or Owner, and not by the Design-Builder.
 - 5. No material for which the Construction Documents require a Submittal and approval of tests, certificates of compliance or other documentation shall be incorporated in the Work until such Submittal has been made by Design-Builder and approved by Owner.
- B. Sampling:
 - 1. Furnish specimens of materials when requested.
 - 2. Do not use materials which are required to be tested until testing indicates satisfactory compliance with specified requirements.
 - 3. Specimens of materials will be taken for testing whenever necessary to determine quality of material.
- C. Test Standards:
 - 1. Perform sampling, specimen preparation, and testing of materials in accordance with specified standards, and when no standard is specified.

2. Standards and publication references in Construction Documents shall be edition or revision in effect on date stipulated.

1.09 INSPECTION AND TESTING OF THE WORK

- A. Where the Construction Documents require work to be field tested or approved, it shall be tested in the presence of Owner Representative or its authorized designee. Owner shall have the right to any shop or factory tests. The results of any tests performed by the Design-Builder shall be made available for the information of Owner and indicate compliance or non-compliance with Construction Documents. Inspections, tests or favorable reviews by Owner or others shall not relieve the Design-Builder from its obligation to perform the work in accordance with the requirements of the Construction Documents or for its sole responsibility for the quality of workmanship and materials.
- B. Except as specifically required under the technical specifications for testing and inspection, all tests for materials furnished by the Design-Builder will be done in accordance with the Agreement and Good Industry Practice.
- C. Design-Builder shall be responsible for all testing services in connection with the following:
 1. Concrete materials and trial batch mixtures.
 2. Masonry units and masonry grout and mortar materials and design mixtures.
 3. Asphaltic concrete materials and design mixtures.
 4. Embedment, fill, and backfill materials.
 5. Pipe welding.
 6. Coatings.
 7. All other tests and engineering data required for Engineer of Record's review of materials proposed to be used in the Work and for confirmation of compliance with Construction Documents.
- D. Independent Testing Firm Requirements:
 1. The Design-Builder shall contract with an independent testing firm, acceptable to the Owner, to:
 - a. Perform quality control testing to demonstrate compliance with specified requirements in the Construction Documents for various work and materials.
 - b. Perform special inspection testing required to be inspected for compliance with the governing codes, including building code special inspection requirements. Owner's representative will inspect the Work to confirm compliance with building code special inspection requirements, but all associated testing is the responsibility of the Design-Builder (via the Independent Testing Firm).
 - c. The firm shall not be a subsidiary of any DB-Related Entity.
 - d. The firm shall have no principal owners who have any ownership or part ownership in any DB-Related Entity.
 2. Prior to start of Work, submit the following:
 - a. Testing laboratory name, address, and telephone number, and names of full-time registered engineer and responsible officer.

3. The Independent Testing Firm will perform and meet the following requirements:
 - a. Use a laboratory authorized to operate in the State.
 - b. Meet "Recommended Requirements for Independent Laboratory Qualification," published by the American Council of Independent Laboratories.
 - c. Meet the requirements of ASTM E329.
 - d. As applicable to the scope of design, the Independent Testing Firm shall be accredited by the American Association of State Highway and Transportation Officials (AASHTO) for the tests they will perform and as appropriate to the construction work being performed.
 - e. Maintain full time registered engineer on staff assigned to the Project to review services.
 - f. Calibrate testing equipment at reasonable intervals with devices of accuracy traceable to National Bureau of Standards (NBS) or accepted values of natural physical constants.
 2. Limits on Testing Firm:
 - a. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Construction Documents.
 - b. Agency or laboratory may not approve or accept any portion of the Work.
 - c. Agency or laboratory may not assume duties of Design-Builder.
 - d. Agency or laboratory may not stop the Work.
- E. Independent verification testing may be performed by the Owner. The Design-Builder shall provide adequate lighting, ventilation, ladders and other protective facilities as may be necessary for the safe performance of inspections.
 - F. The Design-Builder shall notify Owner at least two hours before any inspection is required to be performed or to witness the Design-Builder's on-site field testing.
 - G. Whenever the Design-Builder varies the period during which work is carried on each day, the Design-Builder shall give 48 hours' notice to Owner so that proper inspection may be provided.
 - H. The Design-Builder shall give Owner written notification at least 30 days prior to the shipment of materials and equipment to be tested and/or inspected at the point of origin. Satisfactory tests and inspections at the point of origin shall not be construed as a final acceptance of the materials and equipment nor shall such tests and inspections preclude retesting or re-inspection at the Site of the Work.
 - I. The distribution and number of tests conducted for the materials to be supplied and/or placed shall be located uniformly within and along work areas and within the facility components to be constructed in order to provide a reasonable sampling of work quality in accordance with the Agreement and Good Industry Practice.
 - J. All tests which require the services of a laboratory to determine compliance with the Construction Documents shall be performed by the independent testing firm meeting requirements of this Section and the Agreement. The Design-Builder shall notify Owner of the intended laboratory to be used within 10 days prior to engaging the laboratory services. Owner is to notify to the Design-Builder the acceptance or concerns of the laboratory within five days of notification by the Design-Builder.

- K. Retesting or reinspection required because of nonconformance to specified requirements will be performed by same independent testing firm on request by Owner. Payment for retesting or reinspection will be paid for by Design-Builder.
- L. Owner-Verifications Testing:
1. Owner may perform quality assurance, or verification, testing during the performance of the Work.
 2. Where such tests and inspections are required by Agreement to be performed by the Design-Builder, Owner will pay for the additional tests and inspections as part of the specified Allowance Item in the Project Specific Information (Phase 2).
 3. The Owner shall reserve the right to make independent investigations and tests as specified in the following paragraph and failure of any portion of the Work to meet any of the qualitative requirements of the Construction Documents shall be reasonable cause for the Owner to require the removal or correction and reconstruction of any such Work.
 4. In addition to any other inspection or QA provisions that may be specified, Owner shall have the right to independently select, test, and analyze, additional test specimens of any or all of the materials to be used. Results of such tests and analyses shall be considered along with the tests or analyses made by Design-Builder to determine compliance with the applicable specifications for the materials so tested or analyzed provided that wherever any portion of the Work is discovered, as a result of such independent testing or investigation by Owner, which fails to meet the requirements of the Construction Documents, be borne by Design-Builder.
- M. Coordination of Other Inspections:
1. The Design-Builder shall schedule all Owner and any other agency inspections in accordance with Owner and agency requirements, as applicable. The Design-Builder shall notify the Owner of all building and other Work component inspection notices and schedules. Failure of the Design-Builder to coordinate and schedule these inspections shall not be cause for any Claim. All correspondence with or other inspection agencies shall be copied to Owner.
- N. Special Tests and Inspections:
1. As provided for in the Construction Documents, laws and regulations, specialized tests shall be performed by Design-Builder and inspections shall be performed by Owner's special inspectors certified by the International Code Council (ICC) or with other required certifications.
- O. Inspections and Tests by Serving Manufacturers:
1. Unless otherwise indicated in the Construction Documents, the Design-Builder shall cause all required tests and inspections to be conducted by materials, equipment or systems manufacturers. Additionally, all tests and inspections required by materials, equipment or systems manufacturers as conditions of warranty or certification of Work shall be made, the cost of which shall be included in the Cost of the Work.

- P. Water for Testing:
1. The conveyance of water for Work in this Section shall be the responsibility of the Design-Builder and shall be at the Design-Builder's expense. The Design-Builder shall submit a written summary of water needs for testing including a description, volume, location and duration of use to the Owner for approval within 10 days of need. Owner shall provide approval of the type of water, locations where connections may be made and the backflow protection, if required, within five days of notification by the Design-Builder.

1.10 MANUFACTURER'S FIELD SERVICES

- A. Field services to be provided by Manufacturer are described in Section 01757 - Commissioning and Training.
- B. Manufacturer's representative must be an authorized representative of the manufacturer, factory trained, and experienced in the technical applications, installation, operation, and maintenance of respective equipment, subsystems, or system, with full authority by the equipment manufacturer to issue the certifications required of the manufacturer.

1.11 DOCUMENTATION CONTROL/QUALITY RECORDS

- A. Design-Builder shall establish methods for control and distribution of Construction Documents and supplemental information to Subcontractors at which are the most current drawings, specifications and information to construct and complete the Work. This would include any clarifications, RFI responses, Submittal responses, Directive Letters, and Change Orders. Design-Builder shall also check to be sure that working foreman have the most current information for the work under their supervision.
- B. Design-Builder shall maintain evidence of activities affecting quality, including operating logs, records of inspections and tests, audit reports, material analyses, personnel qualification and certification records, procedures, and document review records.
- C. Quality records shall be maintained electronically in mutually accessible location to provide for timely retrieval, and traceability. Quality records shall be protected from deterioration, damage, or destruction.
- D. Source and Field Testing/Sampling Log: The Design-Builder's QC staff shall create and continuously maintain the Source and Field Testing/Sampling Log. It shall contain a detailed log, in tabular format, indicating the characteristic or quality to be tested or sampled, the test method followed, the frequency, the sample or test location, and the designation of responsibility.
- E. The Design-Builder's QC Manager shall maintain a dedicated set of records that indicate the date, location and test number of the specific field test performed during the progress of the Work. Location information shall include both horizontal and vertical references as applicable. Records of retests shall identify the original location and test number of the failed test being repeated.

- F. To the extent that field testing and sampling is conducted by the Owner, the QC Manager shall assist in documenting test and sample locations and numbers in cooperation with Owner. QC Manager shall ensure all required testing and sampling is performed and documented.
- G. QC Reporting and Certifications: The following Quality Control Report and Certifications shall be furnished by the Design-Builder to Owner.
 - 1. QC Manager's QC Report and Certification:
 - a. QC Manager shall provide a QC Report that includes the following Certification statement signed by the QC Manager or Alternate QC Manager:

“On behalf of Design-Builder, I certify that this report is complete and correct, that equipment and material used, and Work performed during this reporting period are in compliance with the requirements of the Agreement to the best of my knowledge, except as noted in this Report.”

Certified by QC Manager_____ Date_____

(Signature)

- b. The QC Report is intended to be a vehicle for good communication and record keeping.
 - c. The QC Report shall include summary information defined by the QC Manager and Owner through mutual agreement.
 - d. The QC Report shall be issued by the QC Manager in a mutually agreeable format in accordance with Section OR-01320 Project Management and Progress Reporting, and more frequently if deemed necessary by both the QC Manager and Owner.
 - 2. QC Manager's Substantial Completion Certification:
 - a. Prior to requesting Substantial Completion inspection for any part of the Work, the QC Manager must furnish the following Substantial Completion Certification to Owner:

“To the best of my knowledge the portion of the Work as described herein has been completed, inspected, tested and is in full compliance with the requirements of the Agreement except for the minor corrective items (punch list items) listed in the attached Corrective Items List.”

Certified by QC Manager_____ Date_____

(Signature)

3. QC Manager's Record Document Certification:
 - a. Accompanying submission of the Record Documents, and prior to requesting Final Payment, the QC Manager must furnish the following Certification to Owner:

"To the best of my knowledge the attached Project Record Documents for (Contract Name and Number) were prepared in accordance with the requirements of the Agreement, are accurate and complete, and may be relied on by the Owner to locate installed Work."

Certified by QC Manager _____ **Date** _____
(Signature)

END OF SECTION

SECTION OR-01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes:
 - 1. Furnishing, maintaining, and removing construction facilities and temporary controls, including temporary utilities, construction aids, barriers and enclosures, security, access roads, temporary controls including erosion control, project sign, field offices and sheds, traffic control and removal after construction.

1.02 REFERENCES

- A. American National Standards Institute (ANSI).
- B. Occupational Safety and Health Administration (OSHA).
- C. Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways 1988 Edition, and its most current revisions.
- D. Virginia Occupational Safety and Health (VOSH).

1.03 SUBMITTALS

- A. General: For products specified to be furnished under this Section, submit product data as specified in the Submittal Requirements.
- B. Traffic and Pedestrian Control Plan shall be submitted in accordance with the Submittal Requirements and as required by the City of Alexandria and regulatory authorities having jurisdiction.
 - 1. Traffic and Pedestrian Control Plan shall identify Design-Builder's planned routes within the Site.
 - 2. Include plan if Design-Builder needs to limit traffic at any point during construction.
 - a. Indicate proposed alternate routes available for Owner's and Design-Builder's staff to use, duration alternate route is needed, communication plan for informing the Owner and Site workers of new route.
 - 3. Design-Builder shall keep Traffic and Pedestrian Control Plan up-to-date and re-issue within two weeks before implementing planned changes.
- C. Stormwater Pollution Prevention Plan (SWPPP) shall be submitted as required by the City of Alexandria and regulatory authorities having jurisdiction.

1.04 TEMPORARY UTILITIES

- A. Temporary electrical power:
 - 1. Design-Builder shall provide temporary power from source as required to support performance of the Work.
 - 2. Design-Builder shall identify acceptable locations for temporary power and provide all breakers, switches, transformers, and cables required to obtain temporary power from these location(s).
 - 3. Provide and maintain adequate temporary power distribution facilities conforming to Applicable Laws.

- B. Temporary electrical lighting:
 - 1. In work areas, provide temporary lighting sufficient to maintain lighting levels during working hours.
 - a. Provide lighting for construction operations to achieve minimum lighting.
 - 2. When available, permanent lighting facilities may be used in lieu of temporary facilities.

- C. Temporary heating, cooling, and ventilating:
 - 1. Provide heating and ventilate work areas as needed to protect the Work from damage by freezing, high temperatures, weather, and to provide safe environment for workers.
 - 2. Permanent heating system may be utilized when sufficiently completed to allow safe operation.
 - 3. Ventilate enclosed areas to achieve curing of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

- D. Internet service:
 - 1. Design-Builder shall provide and maintain for high-speed internet service with WIFI capability to field offices and Owner's field offices at time of Project mobilization.
 - 2. The Owner will provide, support, and maintain a firewall of their choosing for use for the duration of the Project. Design-Builder shall provide three lock boxes securely mounted on the wall of the service room for secure storage of each firewall. Each lock box shall be a metal wall mount cube.
 - a.

- E. Temporary water service:
 - 1. Design-Builder shall provide potable water for its work force and Subcontractors at the Site.
 - 2. Potable water service shall be provided by Design-Builder to service all field trailer located at the Site. Provide continuous and adequate potable water service that are in compliance with Applicable Laws.
 - 3. Design-Builder shall provide bottled water service at each field office.
 - 4. Provide service and facilities at time of Project mobilization.

- F. Temporary sanitary facilities:
 - 1. Provide suitable and adequate sanitary facilities that are in compliance with Applicable Laws.
 - 2. Provide sanitary service to field trailers located at the Site.

3. At Completion of the Work, remove sanitary facilities and service and leave Site in neat and sanitary condition.
 4. Provide service and facilities at time of Project mobilization.
- G. Temporary fire protection: Provide sufficient number of fire extinguishers of type and capacity required to protect the Work and ancillary facilities.
- H. First aid: Post first aid facilities and information posters conforming to requirements of OSHA and other Applicable Laws in readily accessible locations.

1.05 CONSTRUCTION AIDS

- A. To be provided in accordance with Design-Builder's Health and Safety Plan, Construction Site Management Plan, Traffic Control and Pedestrian Plan, and as required by Applicable Laws.
- B. Accident prevention:
1. Guard machinery and equipment, and eliminate other hazards.
 2. Before commencing Construction Work, take necessary action to comply with provisions for safety and accident prevention.
- C. Barricades:
1. Place barriers at ends of excavations and along excavations to warn pedestrian and vehicular traffic of excavations.
 2. Provide barriers with flashing lights after dark.
 3. Keep barriers in place until excavations are entirely backfilled and compacted.
- D. Hazards in public right-of-way:
1. Mark at reasonable intervals, trenches and other continuous excavations in public right-of-way, running parallel to general flow of traffic, with traffic cones, barricades, or other suitable visual markers during daylight hours.
 - a. During hours of darkness, provide markers with torches, flashers, or other adequate lights.
 2. At intersections or for pits and similar excavations, where traffic may reasonably be expected to approach head on, protect excavations by continuous barricades.
 - a. During hours of darkness, provide warning lights at close intervals.
- E. Hazards in protected areas: Mark or guard excavations in areas from which public is excluded, in manner appropriate for hazard.
- F. The Design-Builder shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs and grass) on, or adjacent to the work site, which do not unreasonably interfere with the Work required under this Agreement. The Design-Builder shall remove trees only when specifically authorized to do so by the Owner, and shall avoid damaging remaining vegetation.
- G. The Design-Builder shall protect from damage all existing improvements and utilities (1) at or near the work site, and (2) on the adjacent property of a third party, the locations of which are made known to or should be known by the Design-Builder.

- H. The Design-Builder shall repair any damage to those facilities, including property of a third party, which are the result of a failure to comply with the requirements of this Agreement, or a failure to exercise reasonable care in performing the Work. If the Design-Builder fails or refuses to repair the damage promptly, the Owner may have the necessary work performed, and charge the cost to the Design-Builder.
- I. Fences:
 - 1. Design-Builder is responsible for security of Project temporary offices and storage areas. As such, Design-Builder shall provide fences as necessary to protect temporary facilities against acts of theft, violence, and vandalism.
 - a. Unless otherwise approved by Owner, security fencing shall be black vinyl mini mesh (1-inch openings), 8 feet tall with triple barbed wire with Owner-approved wrap and screening.
 - 2. When entire or part of Site is to be permanently fenced, permanent fence may be built to serve for both permanent and temporary protection of the Work site, provided that damaged or defaced fencing is replaced prior to Completion.
 - 3. Protect temporary and permanent openings and close openings in existing fences to prevent intrusion by unauthorized persons. Protect plant and material on Site when openings in existing fences are not closed.
 - 4. During night hours, weekends, holidays, and other times when no Work is performed at the Site, provide temporary closures or enlist services of security guards to protect temporary openings.
 - 5. Fence temporary openings when openings are no longer necessary.

1.06 SECURITY

- A. Make adequate provision for protection of the Work area against fire, theft, and vandalism, and for protection of public against exposure to injury.

1.07 ACCESS ROADS

- A. General:
 - 1. Build and maintain access roads to and on site of the Work to provide for delivery of material and for access to existing and operating plant facilities on the Site.
 - 2. Build and maintain dust free roads which are suitable for travel at speed established by Owner.
- B. Off-site access roads:
 - 1. Build roads only in public right-of-way or easements obtained by Owner.
 - 2. Obtain rights-of-way or easements when electing to build along other alignments.
- C. On-site access roads:
 - 1. Protect buried vulnerable Utilities under temporary roads.
 - 2. Maintain on-site access roads free of mud.
 - a. Under no circumstances shall vehicles leaving the site track mud off the Site onto the public right-of-way.
 - 3. Provide unimpeded access for emergency vehicles. Maintain 20-ft wide driveways with turning space between and around combustible materials.

4. Provide and maintain access to fire hydrants and control valves free of obstructions.

1.08 TEMPORARY CONTROLS

- A. Dust control:
 1. Prevent dust nuisance caused by operations, unpaved roads, excavation, backfilling, demolition, or other activities.
 2. Control dust by sprinkling with water, use of dust palliatives, modification of operations, or other means acceptable to agencies having jurisdiction.
- B. Noise control:
 1. In inhabited areas, particularly residential, perform operations in manner to minimize noise.
 2. In residential areas, take special measures to suppress noise during night hours.
 3. Make every effort to minimize noise caused by their operations. Equipment shall be equipped with silencers or mufflers designed to operate in compliance with local, State and federal regulations.
 4. Comply with all Applicable Laws regarding noise control.
- C. Pollution control:
 1. Provide methods, means, and facilities to prevent contamination of soil, groundwater, surface water, and atmosphere from discharge of pollutants, contaminants, hazardous substances, fuel and other hydrocarbon leaks from construction related storage tanks and containers.
 2. Comply with all Applicable Laws regarding protection of the environment, including obtaining any applicable Governmental Approvals and developing any required management plans in accordance with the Agreement and Construction Documents.
 3. Notify Owner immediately in the event that wastewater or any other pollutants are discharged to the environment while conducting activities associated with the Work.
 4. Notify Owner immediately in the event that hazardous or non-hazardous substances are discharged to the environment while conducting activities associated with the Work.
 5. Notify Owner immediately in the event of discharges to the on-site storm sewer and/or sanitary sewer.
 6. Should Design-Builder encounter material reasonably believed to be toxic wastes and hazardous materials (as defined by the Virginia Department of Environmental Quality), which have not been rendered harmless at the Site, the Design-Builder shall immediately stop work at the affected Site and shall report the condition to the Owner in writing. The Owner shall contract for any services required to directly remove and/or abate toxic wastes and hazardous materials, if required by the Site(s), and shall not require the Design-Builder to subcontract for such services. The Work in the affected area shall not thereafter be resumed except by written agreement of the Owner and Design-Builder.

1.09 PROJECT SIGNS

- A. Design-Builder shall provide all material, labor and equipment necessary for the fabrication, printing, and installation of Project identification signs.
- B. Placard Requirements:
 - 1. Size: 6 feet wide by 4 feet tall.
 - 2. Material: Coroplast® corrugated plastic sheeting or approved equal.
 - 3. Sheeting Thickness: 10 mm (approximately one-half (3/8) inch thickness).
 - 4. Sheeting Color: White.
 - 5. Print Method: Direct to Coroplast® with outdoor UV laminate coating.
- C. Frame shall be metal.
- D. Approved project sign(s) shall be erected not less than two days before the start of construction activities. No construction activities shall be performed until the Project signs are erected. Project signs shall remain in place for the duration of the Project and shall be maintained true, plumb, and in neat condition.
- E. Removal of Project Signs:
 - 1. All Project signs shall be maintained for 30 calendar days after Completion of the Work, or as otherwise directed by the Owner.
 - 2. Design-Builder shall remove all Project signs and restore the area disturbed by construction activities in accordance with Section OR-01770 Closeout Procedures.

1.10 DESIGN-BUILDER'S AND OWNER'S FIELD OFFICES AND TRAILERS

- A. Design-Builder shall provide all required field offices and trailers.
- B. Field offices shall be weather-tight, equipped with lighting, electrical outlets, heating, cooling and ventilating equipment, sturdy furniture, drawing rack, and drawing display table. Field office shall have running water and restroom facilities.
- C. Design-Builder's office shall be separate and independent from Owner's offices. Owner's office trailer shall be for sole use of Owner and Owner's Advisor.
- D. Provide space for Project meetings in Design-Builder's trailer, including table and chairs to accommodate 10 persons.
- E. Locate offices as approved by Owner.
- F. Provide temporary utilities, power, water, and sanitary service for all trailers.
- G. Maintain trailers until Final Acceptance, or as agreed upon by Owner.
- H. Provide security lighting for Owner's parking area and entrances to Owner's field offices
- I. Provide security system or service for Owner's and Design-Builder's field offices.

- J. Construction: Portable or mobile buildings, or buildings constructed with floors raised above ground, securely fixed to foundations with steps and landings at entrance doors. Structurally sound, secure, weather tight enclosures for office and storage spaces.
 - 1. Temperature transmission resistance of floors, walls, and ceilings:
 - 2. Compatible with occupancy and storage requirements.
 - 3. Exterior Materials: Weather-resistant and finished in one color acceptable to Owner.
 - 4. Interior Materials in Offices: Sheet-type materials for walls and ceilings, pre-finished or painted; resilient floors and bases. Interior walls shall be insulated for noise attenuation.
 - 5. Lighting for Offices and Restrooms: 50 foot C (538 lx) at desktop height.
 - 6. Exterior lighting at entrances.
 - 7. Fire Extinguishers: Appropriate type fire extinguishers as required throughout facility.

- K. Environmental Control:
 - 1. Heating, Cooling, and Ventilating for Offices:
 - a. Automatic equipment to maintain comfort conditions. 68 degrees F (20 degrees C) heating and 76 degrees F (23 degrees C) cooling.
 - b. HVAC system shall be distributed and balanced.
 - 2. Storage Spaces:
 - a. Heating and ventilation as needed to maintain products in accordance with Construction Documents.
 - b. Lighting for maintenance and inspection of products.

- L. Design-Builder's field office:
 - 1. Design-Builder shall provide a temporary trailer for field office for Design-Builder's team and Subcontractors.
 - a. Design-Builder shall provide parking for its staff and the workforce as needed at an Owner-approved location on the Site.
 - 1) If required to accommodate workforce parking in excess of areas available at the Site, off-site parking shall be arranged and paid by Design-Builder.
 - b. Design-Builder shall be responsible to provide Utility connections for trailer. Design-Builder will pay for Utilities brought to field office from connection with utility service provider. Design-Builder is not responsible for any improvements to Utility Owner's facilities outside of the Site boundaries.
 - 2. Meetings requiring Owner and Design-Builder shall be conducted in Design-Builder's trailer.
 - a. Provide space for Project meetings in Design-Builder's trailer, including table and chairs to accommodate 10 persons.
 - b. See Section OR-01320 Project Management and Progress Reporting for more information about meetings.
 - 3. Maintain on the Site weathertight space in which to keep copies of Contract Documents, progress schedule, shop drawings, and other relevant documents.
 - 4. Provide field office with adequate space to examine documents, and provide lighting and telephone service in that space.

- M. Owner's office trailers with specified equipment installed:
1. Trailer:
 - a. Newly leased by Design-Builder.
 - b. Construction and Furnishing Details:
 - 1) Provide new locks and 5 keys.
 - 2) Provide wood stairs/handrails to access each entrance.
 - 3) Landings minimum 5 feet by 5 feet for each entrance.
 - 4) Decking and roof.
 - 5) Skirting for under pinning of trailers.
 - 6) One first aid kit.
 - 7) Two 10-pound fire extinguishers mounted on trailer walls.
 - 8) One 3-foot by 5-foot entryway/inside door mats for each entry.
 - 9) Floor Coverings:
 - a) Tile or laminate floor coverings.
 - 10) Windows:
 - a) With operable sash, insect screens, and blinds.
 - b) Locate to provide views of construction area.
 - 11) Electrical Distribution Panel:
 - a) Wired to support all equipment listed in this specification, plus one computer at each workstation.
 - b) Service: To be determined by Design-Builder as needed for facilities.
 - 12) Electrical Outlets:
 - a) 110-volt duplex convenience outlets, one on each wall of each room; and sufficient number in the open work area to accommodate workstations.
 - b) Provide outlets appropriate for all electrical appliances and office equipment specified.
 - c. Layout will be approved by Owner.
 2. Four walled offices, each measuring approximately 10 feet by 10 feet containing:
 - a. Two five-shelf bookshelves approximately 3 feet wide by 6 feet tall.
 - b. Two standard four-drawer legal-sized metal filing cabinets with locks and two keys for each lock.
 - c. One desk, one approximately 72 inches by 36 inches with three drawers, and one 48" by 24" computer return with 2 file drawers and a retractable keyboard tray.
 - d. One swivel arm chair (adjustable and fully padded).
 - e. Internet connection (via WIFI).
 - f. Two straight chairs, fully padded.
 - g. One 3-foot by 5-foot dry erase board.
 - h. One waste basket.
 3. Common Use Facilities:
 - a. Kitchen Area Containing:
 - 1) Minimum 20-cubic foot refrigerator with ice maker.
 - 2) Microwave.
 - 3) Sink with hot and cold running water.
 - 4) Garbage disposal and electrical outlet.
 - 5) 8-cup plumbed coffee maker.
 - 6) Approximately 18 square feet of counter space over base cabinets.

- 7) One bottle-less drinking water system to provide filtered drinking water in both hot and cold temperatures.
 - 8) Two standard four-drawer legal-sized metal filing cabinets.
- b. Sanitary Facilities:
- a) Latrine containing one urinal and one stool, sink, and mirror.
 - b) Private lavatory toilet facilities inside with vent fan and hot and cold running water.
 - c) Base cabinet for storage in each latrine.
- c. Conference Area:
- 1) Minimum 24 feet by 28 feet.
 - 2) Segmented meeting room table that can be separated and reconfigured for multiple meeting purposes and chairs for seating up to 20.
 - 3) 10 swivel arm chairs (adjustable and fully padded).
 - 4) 10 padded folding chairs.
 - 5) One InFocus LP 70+ - DLP Projector – 1400 ANSI Lumens– 1024 by 768, or equal
 - 6) One 4-foot by 6-foot wall-mounted white board.
- N. Computer Systems: Owner shall furnish and install computers required for Owner’s staff to work in the field offices. Owner’s Advisor shall furnish and install computers required for Owner’s Advisor staff to work in the field offices. Each organization is responsible for all maintenance of hardware and software for their system.
- O. Installation for Trailer:
1. Install office trailers ready for occupancy approximately 4 weeks after NTP Phase 2.
 2. Obtain all permits necessary for temporary office trailers.
 3. Parking: 20 gravel surfaced parking spaces for use by Owner, connected to office by gravel surfaced walk.
 4. Employee Residential Occupancy: Not allowed on Owner’s property.
- P. Maintenance and Cleaning of Owner Office Trailers:
1. Furnish, replace and replenish light bulbs, fluorescent tubes, hot and cold cups, toilet paper, paper towels, hand soap, air filters and other things required to maintain the offices in a clean condition.
 2. Janitorial Services for Offices: Twice a week; cleaning and maintenance for all areas except storage areas including sweeping, vacuuming and mopping of interior, removal of debris, and emptying of wastebaskets.
 3. Periodic window cleaning inside and outside on a quarterly basis.
 4. Maintain approach walks, decking and parking lot free of mud, water, and debris.
 5. Provide boot scraper/brush at each entrance.
- Q. Preparation: Fill and grade sites for temporary structures sloped for drainage away from buildings.

1.11 REMOVAL

- A. Clean and repair damage caused by installation or use of temporary facilities.

- B. Remove underground installations to minimum depth of 24 inches and grade to match surrounding conditions.
- C. Restore existing facilities used during construction to specified or original condition.

1.12 EMERGENCIES

- A. The Design-Builder shall at all times before and after regular working hours, including weekends and holidays, maintain a telephone number where the Design-Builder can be reached on an emergency basis.
- B. Design-Builder shall provide three contacts that are available 24/7 for notification. Contact information for emergency contacts shall be provided at Preconstruction Conference in accordance with Section OR-01320 Project Management and Progress Reporting.
- C. The Design-Builder shall be prepared to act to correct conditions on-site that are deemed to constitute a hazard or an emergency by the Owner or Owner's Advisor and is obligated to act to prevent threatened damage, injury or loss without special instructions from the Owner or Owner's Advisor.
- D. If a condition on the site requires attention after hours, either the Owner or Owner's Advisor shall call the Design-Builder at the emergency telephone number. The Design-Builder is expected to respond within one hour. If for any reason the Design-Builder cannot be reached at the emergency number after a reasonable amount of time (not exceeding 30 minutes) the Owner reserves the right to institute corrective measures, and the costs shall be deducted from payments due to the Design-Builder.
- E. In the event the Design-Builder fails to maintain safe job conditions, including trench settlement and storage of hazardous backfill or construction materials, the Owner, after failure of the Design-Builder to commence substantial steps at the Site to rectify the situation within 2 hours of the time the Design-Builder has been notified of the unsafe condition, may take such precautions, make such repairs, and take any other steps which the Owner in the Owner's discretion considers necessary to protect the property, persons, or Owner.

1.13 TRAFFIC CONTROLS

- A. During non-working hours all roadways shall be restored in accordance with the approved traffic control permit(s). Requirements may include but are not limited to:
 - 1. Opening roadways to normal operating conditions;
 - 2. Removing construction related equipment off of the roadway during non-working hours;
 - 3. Placing barricades (barrels, type I) equipped with appropriate warning lights adjacent to the work area; and
 - 4. Covering or turning construction signs, except "ROAD CONSTRUCTION AHEAD" signs, from traffic.
- B. The Design-Builder shall follow the requirements for traffic control as described in this Section.

1. Permits.
 - a. Design-Builder must obtain a traffic control (street closure) permit at least 14 days in advance of the proposed closure date in order to allow sufficient time for public notification.
 2. Advance notice of construction activity blocking road access shall be made to all adjacent residents and businesses no less than 48 hours, or more than 72 hours, before construction begins. The notice shall describe the activity anticipated in that area, the duration, and the effects upon the residents and businesses (such as restricted parking). A contact person, address, and direct telephone number shall be included, in addition to a contact person from the local water utility.
- C. Design-Builder shall designate a specific employee to be responsible for the maintenance of the traffic control devices and establish a method of contacting this person during both working and non-working hours. This information will be provided to the Owner.
- D. Access to adjacent properties shall be maintained at all times. Traffic shall be carried through construction. Designated flaggers shall coordinate the movement of traffic through construction at each staging area.
- E. Where agreed to by the Owner, "Emergency No Parking" signs may be installed.
- F. Traffic Control Devices:
 1. Design-Builder shall provide all barricades, cones, construction warning signs, flagmen and incidental devices to protect Design-Builder and Subcontractor personnel and equipment on the Site.

1.14 TEMPORARY BARRIERS AND ENCLOSURES

- A. Protection of Public and Private Property:
 1. Design-Builder shall protect, shore, brace, support, and maintain all existing public and private property affected by their construction operations.

1.15 EROSION CONTROLS

- A. Furnish all labor, superintendence, project management, materials, equipment, and incidentals as necessary to comply with this Section.
- B. Prevent erosion of soil on the Site and adjacent property resulting from its construction activities. Effective measures shall be initiated prior to the commencement of clearing, grading, excavation, or other operation that will disturb the natural protection.
- C. Be aware of and follow all current erosion control regulations.
- D. Schedule and conduct all work in a manner that will minimize erosion of soils in the area of the Work. Provide erosion control measures such as diversion channels, sedimentation or filtration systems, berms, staked hay bales, seeding, mulching, or other special surface treatments as required to prevent silting and muddying of streams, rivers, impoundments, lakes, etc. All erosion control

measures shall be in place in an area prior to any construction activity in that area.

- E. Temporary storage and construction buildings shall be located, and construction traffic routed, to minimize erosion. Temporary fast-growing vegetation or other suitable ground cover shall be provided as necessary to control runoff.
- F. All phases of sedimentation and erosion control shall comply with the U.S. EPA NPDES Regulations and Virginia Department of Environmental Quality. These regulations require the preparation of a Stormwater Pollution Prevention Plan (SWPPP) to be prepared by the Design-Builder. Design-Builder shall obtain, pay for, and maintain all necessary Governmental Approvals (other than Owner-Provided Approvals) through duration of construction. SWPPP to be sealed by a registered professional engineer suitably qualified to perform the necessary Work registered in the State. Submit SWPPP in accordance with the Submittal Requirements.
- G. The Contract Price (Phase 2) includes all costs associated with any SWPPP, sedimentation, and erosion control.
- H. Make visual inspection of all sedimentation control devices once per week and promptly after every rainstorm. If such inspection reveals that additional measures are needed to prevent movement of sediment to off-site areas or into the vent trench, promptly install additional devices as needed. Repair sediment controls in need of maintenance promptly.
- I. Once the Site has been fully stabilized against erosion, remove sediment control devices and all accumulated silt. Dispose of silt and waste materials in a proper manner. Regrade all areas disturbed during this process and stabilize against erosion with surfacing materials as indicated on the Construction Documents.
- J. Provide vehicle tracking control at all entry and exit points for construction traffic from excavation and exposed soil areas to adjacent pavement and roads. Any dirt or mud that is tracked onto the adjacent pavement and streets shall be cleaned up immediately.

1.16 FIRE PREVENTION

- A. Comply with OSHA Regulation 29 CFR Part 1926.352 Fire Prevention.
- B. Prepare and submit for acceptance by the Owner a fire prevention plan describing procedures to be followed when performing Work involving an open flame or generating an arc or heat in sufficient quantity as to provide an ignition source for a flammable/combustible liquid, solid, or gaseous material in the vicinity of the work area.
- C. Implement accepted plan for all applicable Work.

1.17 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing spaces.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and rubbish from site weekly and dispose off-site.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION OR-01700
EXECUTION REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes general procedural requirements governing the execution of the Work.
 - 1. The Design-Builder shall furnish all labor, materials, equipment, and incidentals as necessary to comply with this Section, including the following:
 - a. Project Record Documents.
 - b. Lines and grade.
 - c. Storage and protection.
 - d. General installation of products.
 - e. Fences.
 - f. Correction of the Work.

1.02 SUBMITTALS

- B. Project Record Documents: In accordance with Section OR-01770 Closeout Procedures.

1.03 PROJECT RECORD DOCUMENT REQUIREMENTS

- C. Maintain at the Site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Addenda.
 - 3. Change Orders and other modifications to the Agreement.
 - 4. Requests for Information.
 - 5. Reviewed shop drawings, product data, and samples.
 - 6. Construction Documents.
 - 7. Manufacturer's instruction for assembly, installation, and adjusting.
 - 8. As-built schedule showing Baseline Project Schedule and final schedule update.
- D. Provide updated electronic files upon major changes to the Project, but in no case less frequently than once every two months. Ensure entries are complete and accurate, enabling future reference by Owner.
- E. Store record documents separate from documents used for construction.
- F. Record information concurrent with construction progress, not less than weekly.

- G. Record drawings, specifications and shop drawings:
1. Throughout construction, Design-Builder shall maintain a thorough up-to-date record of all changes to the drawings, specifications and other Construction Documents made during construction. As a condition precedent to granting Substantial Completion, Design-Builder shall file with Owner one (1) complete set of redlined documents showing all changes and including Design-Builder's field construction notes neatly and legibly recorded thereon. Such changes shall include, but not be limited to, the exact routing if changed from drawing location of sewer, water gas, oxygen supply, condenser water lines, fuel oil tanks and lines, fire protection lines, and any other buried utility lines, and routing of buried electrical feeder lines and changes to routing of conduit runs which are buried or concealed.
 2. Record drawings shall be approved and stamped by professional engineer licensed in the Commonwealth of Virginia, and shall be submitted in .pdf format and electronic CAD format compatible with the Owner's CAD system. The title block shall indicate "Record Documents" and be dated as of the Date of Substantial Completion. All drawing changes shall be circled with a "cloud" and any applicable Change Order or Amendment number shall be included in a "delta" adjacent to the cloud and recorded in the title block.
 3. All other Record Document changes including, but not limited to, Agreement and specification changes, shall be provided in both a bound hardcopy and in Word format on a flash driver or other electronic storage device approved by Owner. Changes shall be indicated by striking through deleted information and adding revised information in italics. Any applicable Change Order or Amendment number shall be indicated in parentheses immediately following the changed text. Applicable Indices shall indicate those sections containing revisions by denoting these sections with an asterisk (*) and including a footnote that states "*Revised".
 4. Legibly mark each item on Construction Drawings to record actual construction including:
 - a. Measured depths of foundations in relation to plant datum.
 - b. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - c. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - d. All field changes of dimension, elevation and detail.
 - e. Details not on original Construction Drawings.
 5. Affix Professional Civil Engineer's signature and registration number to record drawings to certify accuracy of information shown.
 6. Submit copy of site drawing as part of record drawings that identifies location and elevation of constructed facilities that are above grade and a certificate signed by Professional Land Surveyor certifying elevations and locations of the Work are in conformance with Contract Documents as documented in the record drawings.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 PREPARATION

- A. Existing Utility Information: Design-Builder shall furnish information to local utilities that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction.
- B. Existing Utility Interruptions: Do not interrupt utilities serving the Site occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Comply with requirements of Section OR-01140 Work Restrictions.
 - 2. Comply with the requirements of the Agreement.

3.02 LINES AND GRADES

- A. All survey, layout, and measurement Work shall be performed by Design-Builder as a part of the Work.
- B. Design-Builder shall provide a qualified surveyor or engineer, competent assistants, and such instruments, tools, stakes, and other materials required to complete the survey, layout and measurement Work. Locate and protect control points prior to starting Work on Site, and preserve permanent reference points during construction.
 - 1. Make no changes or relocations without prior written notice.
 - 2. Replace Project control point, when lost or destroyed, in accordance with original survey control.
- C. Set monuments for principal control points and protect them from being disturbed and displaced.
 - 1. Re-establish disturbed monuments.
 - 2. When disturbed, postpone parts of the Work that are governed by disturbed monuments until such monuments are re-established.

3.03 PROJECT SITE SURVEY REQUIREMENTS

- A. Utilize Owner-provided benchmarks referenced to data established by survey control points.
- B. Record permanent benchmark locations with horizontal and vertical data on Project Record Documents in accordance with this Section.

3.04 STORAGE AND PROTECTION

- A. Immediately store and protect products and materials until installed in Work.
- B. Store products with seals and legible labels intact.
- C. Protect painted surfaces against impact, abrasion, discoloration, and other damage.
 - 1. Repaint damaged painted surfaces.

- D. Exterior storage of fabricated products:
 1. Place on above ground supports that allow for drainage.
 2. Cover products subject to deterioration with impervious sheet covering.
 3. Provide ventilation to prevent condensation under covering.
- E. Store moisture sensitive products in watertight enclosures.
- F. Furnish covered, weather-protected storage structures providing a clean, dry, noncorrosive environment for mechanical equipment, valves, architectural items, electrical and instrumentation equipment and special equipment to be incorporated into this project.
 1. Storage of equipment shall be in strict accordance with the "instructions for storage" of each equipment supplier and manufacturer including connection of heaters, placing of storage lubricants in equipment, etc.
 2. The Design-Builder shall furnish a copy of the manufacturer's instructions for storage to the Owner prior to storage of all equipment and materials.
 3. Pumps, motors, electrical equipment, and all equipment with antifriction or sleeve bearings shall be stored in weathertight structures maintained at a temperature above 60°F. Electrical equipment, controls, and insulation shall be protected against moisture and water damage. All space heaters furnished in equipment shall be connected and operated continuously.
- G. Unless otherwise instructed by or required by the equipment manufacturer:
 1. Equipment having moving parts, such as gears, bearings, and seals, shall be stored fully lubricated with oil, grease, etc.
 2. Equipment having moving parts shall be rotated a minimum of twice a month to ensure proper lubrication and to avoid metal to metal "welding".
- H. Store loose granular materials on solid surfaces in well-drained area.
 1. Prevent materials mixing with foreign matter.
- I. Provide access for inspection.

3.05 INSTALLATION

- A. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- B. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Final Completion.
- C. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- D. Anchors and Fasteners: Provide anchors and fasteners in accordance with Good Industry Practice to anchor each component securely in place, accurately located and aligned with other portions of the Work.
- E. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

- F. Protect installed products in accordance with manufacturer's instructions and requirements below.
 - 1. Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations.
 - 2. Remove covering at Mechanical Completion or when no longer needed.
 - 3. Replace corroded, damaged, or deteriorated equipment and parts before acceptance of the project.
 - 4. Unless otherwise instructed by or required by the equipment manufacturer, lubricants shall be changed upon completion of installation and as frequently as required thereafter during the period between installation and acceptance. New lubricants shall be put into the equipment by Design-Builder at the time of acceptance.

3.06 PROGRESS CLEANING AND WASTE REMOVAL

- A. General: Clean Site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of in compliance with Applicable Laws.
 - 3. Collect and remove waste materials, debris, and rubbish from Site weekly and dispose off-site.
 - 4. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing spaces.
- B. Work Areas: Clean areas where Work is in progress to the level of cleanliness necessary for proper execution of the Work. Maintain areas free of waste materials, debris, and rubbish.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
 - 3. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- C. Installed Work: Keep installed Work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- D. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sanitary sewers or into waterways will not be permitted.
- E. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration through Mechanical Completion.

- F. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period in accordance with manufacturer's instructions. Adjust and lubricate operable components to ensure operability without damaging effects.
- G. Limiting Exposures: Supervise construction operations to assure that no part of the construction; completed or in progress; is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.07 FENCES

- A. All existing fences affected by the Work shall be maintained by Design-Builder until completion of the Work in accordance with Section OR-01500 Temporary Facilities and Controls. Fences which interfere with construction operations shall not be relocated or dismantled until written permission is obtained from the Owner of the fence, and the period the fence may be left relocated or be dismantled has been agreed upon. Where fences must be maintained across the construction easement, adequate gates shall be installed. Gates shall be kept closed and locked at all times when not in use.
- B. On completion of the Work across any tract of land, Design-Builder shall restore all fences to their original or to a better condition and to their original location in accordance with Section OR-01500 Temporary Facilities and Controls.

3.08 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
- B. Restore permanent facilities used during construction to their specified or original condition.

END OF SECTION

SECTION OR-01757

COMMISSIONING AND TRAINING

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes: Requirements for the Commissioning phase of the Project equipment, systems, subsystems and/or facility, including, but not limited to:
 - 1. Commissioning Manager.
 - 2. Services of Manufacturer's Representatives.
 - 3. Testing and Training Requirements.

1.02 DEFINITIONS

- A. Acceptance Standards - the standards set forth in this Section that the Project must meet during the Performance Testing and Acceptance Testing.
- B. Acceptance Testing – Test(s) occurring in order to achieve Substantial Completion. Acceptance Testing shall demonstrate the performance of complete Project equipment, systems, and subsystems relative to the Acceptance Standards laid out in this Section.
- C. Commissioning - The process of planning, testing, and process start-up of the installation for compliance with contract requirements and demonstrating, through documented verification, that the project has successfully met the contractual requirements. Commissioning includes training the Owner's staff (or Owner delegate) to operate the facility and transmission of the finalized asset documentation necessary to maintain the equipment.
- D. Component - A basic building block of equipment, subsystems, and systems that requires installation or functional testing but does not have an electrical connection or internal electronics. (Examples: pump discharge piping and manual isolation valves). A component is typical of an asset child or appurtenances.
- E. Device - A basic building block of equipment, subsystems, and systems that requires installation or functional testing and does have an electrical connection or internal electronics. (Examples: water pump pressure transmitter). A device is typical of an asset child or appurtenances.
- F. Equipment - An assembly of component(s) and devices(s) that requires installation or functional testing. (Examples: pump, motor, variable frequent drive, etc.). Equipment is typical of an asset child or appurtenances.
- G. Facility - A grouping of process areas, systems, subsystems, equipment, components, and devices (Examples: pump stations, etc.). Each Facility has a defined number. Project has two anticipated facilities located on the site.

- H. Installation Testing - Testing to demonstrate that subsystem component (piping, power, networks, devices, etc.) is ready and meets the project requirements in advance of functional testing. Installation testing also includes manufacturers' certification of installation and other requirements as specified to prepare equipment/system for Mechanical Testing. Also referred to as Field Acceptance Testing.
- I. Instrumentation and Controls Fine-Tuning - Improving the performance of the Instrumentation Process Control system by operating for an extended time period.
- J. Manufacturer's Certificate of Installation and Functionality Compliance - The form is used during Installation Testing and Mechanical Testing. It is submitted at the end of Mechanical Testing to confirm that the equipment/system is installed in conformance with the Contract Documents and that it meets the Mechanical Testing requirements defined in the Contract Documents.
- K. Mechanical Testing - Testing performed on a completed subsystem to demonstrate that equipment/system meets manufacturers' calibration and adjustment requirements and other requirements as specified. Mechanical Testing includes operating equipment/system manually in local, manually in remote (or remote manual), and automatically in remote (in remote auto) including fault conditions.
- L. Owner Training – Training provided to Owner staff (or Owner delegate) as required by this Section. Owner training includes equipment training, process training, and process control and instrumentation system training.
- M. Product - A system, subsystem or component.
- N. Standard Operating Procedure (SOP) – Detailed procedures for operating equipment or systems under normal operating conditions.
- O. Standard Instructions – One-page summary of key information from SOPs, typically with troubleshooting and fault conditions removed.
- P. System - A grouping of subsystems, equipment, components, and devices that perform a definable function. (Examples: pumping system).

1.03 COMMISSIONING MANAGER (CM)

- A. Commissioning Manager shall be as identified in the Key Personnel list for the Project.
- B. CM responsibilities include the following:
 1. Lead efforts relating to Commissioning.
 2. Be thoroughly familiar with commissioning requirements in the Contract Documents.
 3. Provide technical instruction for commissioning.
 4. Provide primary interface with Owner for efforts relating to Commissioning of Project facilities.
 5. Coordinate training efforts.
 6. Liaison between Owner O&M staff (or Owner delegate) and Design-Builder.

7. Lead and prepare meeting agendas and meeting minutes for all Commissioning Meetings.
- C. CM on-site:
1. Planning Phase: As needed to facilitate meeting all Commissioning requirements.
 2. Testing and Training Phase: Full-time.

1.04 SERVICES OF MANUFACTURER'S REPRESENTATIVES

- A. Qualifications: Manufacturer's Representatives shall have qualifications as specified in Section OR-01400 Quality Requirements.
- B. Completion of manufacturer on-site services: Owner approval required.
- C. Manufacturer is responsible for determining the time required to perform the specified services.
1. Minimum times specified in the Contract Documents are estimates.
 2. No additional costs associated with performing the required services will be approved.
 3. Manufacturer required to schedule services in accordance with the Design-Builder's project schedule up to and including making multiple trips to project site when there are separate milestones associated with installation, testing, and/or training of each occurrence of manufacturer's equipment.
- D. Design-Builder will be responsible for facilitating the timing of manufacturer representative for systems and processes that will interact. Owner may require certain representatives to be on site at the same time to streamline troubleshooting and startup.
- E. Manufacturer's on-site services as specified in the Contract Documents include the following:
1. Assistance during the Testing and Training and Process Testing Phases of Commissioning.
 2. Provide Manufacturer's Field Reports and data to Design-Builder and Owner in accordance with Section OR-01400 Quality Requirements.
 3. Other requirements as specified in the Contract Documents.
 4. Fulfillment of specified minimum services:
 - a. Furnish manufacturers' services, when required by individual specification section, to meet requirements of this Section.
 - b. Where time is necessary in excess of that stated in the Specifications for manufacturers' services, or when a minimum time is not specified, time required to perform specified services shall be considered incidental.
 - c. Schedule manufacturers' services to avoid conflict with other onsite testing in this project and others, other training of division personnel or other manufacturers' onsite services.
 - d. Only those days of service approved by Owner will be credited to fulfill specified minimum services.
 - e. The Design-Builder shall coordinate manufacturer field services with the systems integrator, so both are on-site during field services.

- f. When specified in individual specification sections, manufacturer's onsite services shall include:
 - 1) Assistance during product (system, subsystem, or component) installation to include observation, guidance, instruction of Design-Builder's assembly, erection, installation or application procedures.
 - 2) Inspection, checking, and adjustment as required for product (system, subsystem, or component) to function as warranted by manufacturer.
 - 3) Revisiting the Site as required to correct problems and until installation and operation are acceptable to Owner.
 - 4) Resolution of assembly or installation problems attributable to or associated with respective manufacturer's products and system.
 - 5) Assistance during all testing, commissioning, and system startup and evaluation.
 - 6) Training of Owner's personnel in the operation and maintenance of respective product as required.
- g. Manufacturer shall complete and sign the Manufacturer's Certificate of Installation and Functionality Compliance (Supplement 1 to this Section) when the equipment or systems have been installed and functionally tested to the satisfaction of the manufacturer and in accordance with the requirements in the Contract Documents.
- h. Equipment Training shall be provided by the Manufacturer's Representative in accordance with this Section.

1.05 PLANNING PHASE

- A. Overview of Planning Phase:
 - 1. Define approach and timing for Commissioning.
- B. Training Plan and Training Schedule:
 - 1. Owner Training will include Equipment Training, Process Training and Process Control and Instrumentation System (PCIS) Training.
 - 2. Training shall be provided by the Design-Builder to the Owner.
 - 3. Design-Builder shall submit a Training Plan that includes a framework for performing both Equipment Training and Process Training. The Training Plan shall include the most current version of the Training Schedule not less than one year prior to the Scheduled Mechanical Completion Date.
 - 4. The Training Plan shall be submitted for Owner review in accordance with Section OR-01300 Submittal Procedures.
 - 5. Training Schedule:
 - a. List specified equipment and systems that require training services and show:
 - 1) Respective manufacturer.
 - 2) Estimated dates for installation completion.
 - 3) Estimated training dates and fixed training dates, as available.
 - b. Allow for separate training sessions for maintenance staff and operations staff.
- C. Commissioning Plan and Schedule:
 - 1. Commissioning overview:

- a. Commissioning Plan shall lay out the Design-Builder’s overall plan for performing all testing activities required by this Section and other Contract Documents, as applicable.
 - 2. Submittal timeline:
 - a. Submit Commissioning Plan and detailed schedule of activities within 180 days following Notice to Proceed or not less than 90 calendar days prior to the first planned functional testing of any subsystem or system, whichever is earlier.
 - 3. Schedule requirements:
 - a. Schedule durations and float for commissioning activities to ensure Work does not fall behind schedule due to complications or delays during commissioning.
 - b. Schedule manufacturer’s services to avoid conflict with other on-site testing or other manufacturers’ on-site services.
 - c. Verify that conditions necessary to allow successful testing have been met before scheduling services.
- D. Acceptance Test Plan:
 - 1. The Design-Builder shall develop a written Acceptance Test Plan that describes in detail the plan for preparing for and conducting Acceptance Testing required to demonstrate performance of the facilities in accordance with the Acceptance Standards for the Project as specified in this Section.
 - 2. The Acceptance Test Plan shall include the following:
 - a. Facility configuration to be utilized during Acceptance Testing.
 - b. Staffing Requirements: The specific tasks or activities, both process and non-process related, which are required for successful completion of the test.
 - c. Internal and external communication protocols for the Acceptance Testing period.
 - d. Procedures for demonstrating compliance with the Acceptance Standards herein.
 - e. A list of all parameters to be monitored and a schedule of monitoring, describing sampling locations, analytical methods, and sampling frequencies at which parameters will be monitored on a continuous or other defined basis.
 - 3. Submittal Timing:
 - a. The Design-Builder shall submit a draft Acceptance Test Plan at least 90 days prior to Mechanical Completion.
 - b. The Owner will review the draft Acceptance Test Plan and provide comments to the Design-Builder within 20 days of receipt of the draft.
 - c. The Design-Builder will submit the final Acceptance Test Plan within 20 days of receipt of Owner’s comments.

1.06 TESTING AND TRAINING PHASE

- A. Overview of Testing and Training Phase:
 - 1. General:
 - a. Include specified Procedure Development, Owner Training, Installation Testing, Mechanical Testing, PCIS Testing, and Closeout Documentation required by this Section and the technical sections.
 - 2. Design-Builder responsibilities:

- a. Furnish labor, power, chemicals, tools, equipment, instruments, and services required for and incidental to completing commissioning activities in accordance with the approved Commissioning Plan, and Subsystem Testing Plans, as applicable.
 - b. Prior to testing, verify equipment protective devices and safety devices have been installed, calibrated, and tested.
 - c. Acceptable tests: Demonstrate the equipment/system performance meets the requirements stated in the Contract Documents.
 - 1) When the equipment/system fails to meet the specified requirements, perform additional, more detailed, testing to determine the cause, correct, repair, or replace the causative components and repeat the testing that revealed the deficiency.
- B. Procedures Development:
- 1. The Design-Builder shall develop Standard Operating Procedures (SOPs), Standard Instructions, and Roundsheets for all new and modified unit processes constructed as part of this Project.
 - 2. Draft SOPs and Standard Instructions shall be submitted to the Owner for review and comment prior to finalization.
 - 3. Design-Builder's O&M experts for a given equipment type will be available for on-site meetings to discuss draft SOPs and standard instructions with the Owner.
 - 4. Submittals:
 - a. Draft SOPs and Standard Instructions shall be submitted to the Owner for review in accordance with Section OR-01300 Submittal Procedures.
 - b. Final SOPs and Standard Instructions shall be submitted as follows:
 - 1) Two hardcopies (Standard Instructions shall be laminated).
 - 2) One electronic copy of a compiled, bookmarked PDF.
 - 3) One electronic copy of each SOP and Standard Instruction document in .docx format.
 - 4) SOPs shall be identified and named by asset, in accordance with City standards.
 - 5. SOPs:
 - a. SOPs shall be developed first and shall be reviewed and approved by the Owner prior to development of draft Standard Instructions.
 - b. SOPs shall be drafted and reviewed by the Owner prior to the start of Process Training.
 - c. SOPs shall include usual and customary operating conditions as anticipated by the Design-Builder and as designed by the manufacturer and fault conditions.
 - d. SOPs shall consist the following sections, at a minimum:
 - 1) Startup.
 - 2) Shutdown.
 - 3) Usual Operations Mode.
 - 4) Alternative Operational Modes.
 - 5) Fault Conditions and Troubleshooting.
 - e. Each Section of the SOPs shall have the following subsections, as applicable at a minimum:
 - 1) Purpose.
 - 2) Safety (including lockout/tagout and warning notes).

- 3) Actions (Step number, action, and picture or location with a box around the manipulated item).
 - 4) Valve table.
 - 5) Unit or setting table (Panels, PLC, and SCADA).
 - 6) Weekly checklist.
 - 7) Recommended testing.
 - 8) Recommended performance indicators and anticipated operating ranges to track and optimize process performance.
- f. SOPs and associated roundsheet shall be revised and finalized based on Owner comments and on operator input following completion of Process Training.
6. Standard Instructions: Following finalization of SOPs, Design-Builder shall develop a one-page standard instruction sheet for each system or equipment for which an SOP was developed.
 7. Roundsheets: After the drafting of SOPs, Design-Builder's O&M expert and Owner will edit or develop new roundsheets. Roundsheets are used by first line operators to direct and document their work on their duty station throughout their shift.
- C. Owner Training:
1. General training requirements:
 - a. Design-Builder shall provide Equipment Training, Process Training, and PCIS Training as detailed in this Section and other technical specifications.
 - b. The Design-Builder shall digitally record all training sessions. Video materials must be produced by a qualified, professional video production company, unless Design-Builder demonstrates satisfactory skill of other personnel as acceptable to Owner. The Owner shall approve producer of video materials prior to recording any training sessions.
 - c. Design-Builder shall submit final training documents, including fully indexed and cataloged recordings of training sessions, in accordance with Section OR-01770 Closeout Procedures.
 - d. All training shall be conducted by individuals knowledgeable in the equipment/system for which they are providing training and shall be experienced in conducting classes. Owner has the right to reject instructors determined to not be suitable for the material, topic, and/or audience and request a suitable instructor.
 - e. Training Material Submittals:
 - 1) Draft training materials shall be submitted to the Owner for review at least 45 calendar days prior to the scheduled training for that topic and shall, at a minimum include the following:
 - a) The subject of the training.
 - b) A lesson plan for each training.
 - c) All supporting materials such training manuals, handouts, audio-visual aids that will be used during training, and other reference materials.
 - d) Identity and qualifications of individual to be conducting the training.
 - e) Tentative date and time for each training session.
 - f) Training schedule including respective manufacturer, estimated dates for installation completion and estimated training dates.

- 2) Design-Builder shall provide one electronic copy and 3 hard copies of all final training materials for each course, organized in notebooks a minimum of 7 days prior to training.
 - f. Format and Content:
 - 1) Each training session shall be comprised of time spent both in the classroom and at the specific location of the subject equipment or system.
 - 2) Instructors shall apply adult education best practices, emphasizing learner participation and activity.
 - 3) Delivery time for each session should be between 2 and 4 hours. Longer or shorter times require Owner approval.
 - 4) Refreshment and meal breaks shall be provided to meet the class needs and Owner's work rules.
 2. Equipment Training:
 - a. Design-Builder shall coordinate and pay for equipment manufacturers to provide Equipment Training to the Owner as required in the Technical specifications.
 - b. Equipment Training sessions shall be conducted by qualified, experienced, factory-trained representatives of the various equipment manufacturers familiar with O&M manual information specified in Section OR-01770 Closeout Procedures.
 3. PCIS Training shall be conducted in accordance with the above and with the technical specifications.
- D. Installation Testing:
1. Perform subsystem testing according to approved Subsystem Testing Plans.
 2. Initiate the Manufacturer's Certificate of Installation and Functionality Compliance for all equipment.
 - a. Manufacturer's Certificate of Installation form is included as Supplement 1 to this Section.
 - b. Manufacturer's Certificate of Installation and Functionality Compliance certifies the equipment meets the following requirements:
 - 1) Has been properly installed, adjusted, aligned, and lubricated.
 - 2) Is free of any stresses imposed by connecting piping or anchor bolts.
 - 3) Is able to be operated as necessary for Mechanical Testing.
 - c. Form shall be submitted after completion of Mechanical Testing, as specified in this Section.
 3. Coordinate Installation Testing with restrictions and requirements as specified in Section OR-01140 Work Restrictions.
 4. Perform pressure and leakage testing as specified in the technical specifications.
 5. Perform mechanical equipment Installation Testing: As specified below and in individual equipment sections, as applicable and with technical specifications:
 - a. Remove rust preventatives and oils applied to protect equipment during construction.
 - b. Flush lubrication systems and dispose of flushing oils.
 - 1) Recharge lubrication system with lubricant recommended by manufacturer.
 - c. Flush fuel system and provide fuel for testing and start-up.
 - d. Install and adjust packing, mechanical seals, O-rings, and other seals. Replace defective seals.

- e. Remove temporary supports, bracing, or other foreign objects installed to prevent damage during shipment, storage, and erection.
 - f. Check rotating machinery for correct direction of rotation and for freedom of moving parts before connecting driver.
 - g. Perform cold alignment and hot alignment to manufacturer's tolerances.
 - h. Adjust V-belt tension and variable pitch sheaves.
 - i. Inspect hand and motorized valves for proper adjustment.
 - 1) Tighten packing glands to ensure no leakage but permit valve stems to rotate without galling.
 - 2) Verify valve seats are positioned for proper flow direction.
 - j. Tighten leaking flanges or replace flange gasket.
 - 1) Inspect screwed joints for leakage.
 - k. Install gratings, safety chains, handrails, shaft guards, and sidewalks prior to operational testing.
6. Electrical devices and subsystems Installation Testing: As specified in the technical specifications.
 7. Instrumentation devices and subsystems Installation Testing: As specified in the technical specifications.
 8. Heating, ventilating, and air conditioning systems Installation Testing: As specified below, in in the technical specifications.
 - a. Perform testing of heating, ventilating, and air conditioning equipment, balancing of distribution systems, and adjusting of ductwork accessories.
 - b. Test hydronic systems, if required by technical sections.
- E. Mechanical Testing:
1. Perform Mechanical Testing according to approved Subsystem Testing Plan.
 2. Notify the Owner 5 days prior to when the Work is ready for Mechanical Testing.
 - a. Perform testing in the presence of the Owner.
 3. Determine Mechanical Testing durations with Owner's input.
 - a. Durations will vary depending on the availability of water, utilities, and other feeds for testing.
 - b. Target minimum Mechanical Test duration: 8 hours.
 - 1) Identify equipment/system that cannot be tested for a minimum of 8 hours as specified in technical sections.
 4. Perform Mechanical Testing as specified in technical sections.
 - a. Perform Mechanical Testing in addition to the other tests specified in the technical sections.
 - b. Perform Mechanical Testing to demonstrate that the component equipment functions as an entire system in accordance with the design requirements.
 - c. Perform Mechanical Testing to demonstrate that the unit process has operated in a manner necessary to demonstrate equipment/system functions manually in hand, local, manually in remote (or remote manual), and automatically in remote (in remote auto).
 - d. Perform testing with Owner-provided water.
 - e. Repair or replace parts that operate improperly and retest.
 - f. Submit testing results as specified in the technical sections to the Owner for approval of Mechanical Testing results.
 5. Provide completed Manufacturer's Certificate of Installation and Functionality Compliance forms for all equipment.

- a. Manufacturer's Certificate of Installation form is included as Supplement 1 to this Section.
 - b. Manufacturer's Certificate of Installation and Functionality Compliance certifies the equipment/system meets the following requirements:
 - 1) Is suitable for satisfactory full-time operation under full-load conditions.
 - 2) Operates within the allowable limits for vibration and noise.
 - 3) Electrical and instrumentation requirements:
 - a) Electrical equipment, instrumentation, and control panels are properly installed, calibrated, and functioning.
 - b) Electrical Installation Testing is complete, and test results have been approved by the Owner.
 - (1) Noted deficiencies have been corrected.
 - (2) Relays, circuit breakers, and other protective devices are set.
 - c) Control logic for start-up, shutdown, sequencing, interlocks, control, and emergency shutdown has been tested and is properly functioning.
 - d) Motor control is calibrated and tested.
- F. Process Control and Instrumentation System (PCIS) testing: In accordance with the requirements of this Section and in the technical specifications.
- G. Closeout documentation (Testing and Training Phase):
1. Provide records generated during Commissioning Phase of Project in accordance with Section OR-01770 Closeout Procedures and as specified within this Section.
 2. Required documents include but are not limited to:
 - a. Training documentation.
 - b. Manufacturer's Certificate of Installation and Functionality Compliance.
 - c. Daily logs of equipment/system testing identifying tests conducted and outcome.
 - d. Test Reports, forms and documentation for each type of testing conducted for each equipment, system or subsystem.
 - e. Logs of time spent by manufacturer's representatives performing services on the job site.
 - f. Equipment lubrication records.
 - g. Electrical phase, voltage, and amperage measurements.
 - h. Insulation resistance measurements.
 - i. Bearing temperature measurements.
 3. Data sheets of control loop testing including testing and calibration of instrumentation devices and setpoints.
 4. Submittals:
 - a. One electronic copy and 3 hard copies organized in notebooks.
 5. Due date for Closeout documentation associated with the Testing and Training Phase of Commissioning: Prior to Mechanical Completion or as indicated in this Section or in Section OR-01770 Closeout Documentation.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

**MANUFACTURER'S CERTIFICATE OF
INSTALLATION AND FUNCTIONALITY COMPLIANCE**

OWNER _____ EQPT/SYSTEM _____
PROJECT NAME _____ EQPT TAG NO. _____
PROJECT NO. _____ EQPT SERIAL NO. _____
SPECIFICATION NO. _____
SPECIFICATION TITLE _____

I hereby certify that the above-referenced equipment/system has been: (Check Applicable)

- Installed in accordance with manufacturer's recommendations.
- Inspected, checked, and adjusted.
- Serviced with proper initial lubricants.
- Electrical/instrumentation and mechanical connections meet quality and safety standards.
- All applicable safety equipment has been properly installed.
- Functionally tested.
- System has been performance tested and meets or exceeds specified performance requirements.

NOTES:

Attach test results with collected data and test report.

Attach written certification report prepared by and signed by the electrical and/or instrumentation subcontractor.

Comments: _____

I, the undersigned manufacturer's representative, hereby certify that I am (i) a duly authorized representative of the manufacturer, (ii) empowered by the manufacturer to inspect, approve, and operate this equipment/system, and (iii) authorized to make recommendations required to ensure that the equipment/system furnished by the manufacturer is complete and operational, except as may be otherwise indicated herein. I further certify that all information contained herein is true and accurate.

Date: _____, 20 ____

Manufacturer: _____

Manufacturer's Authorized Representative Name (*print*): _____

By Manufacturer's Authorized Representative: _____
(Authorized Signature)

SECTION OR-01770
CLOSEOUT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including the following:
 - 1. List of incomplete items (Punch List).
 - 2. Training materials.
 - 3. Project Record Documents.
 - 4. Operation and Maintenance Data.
 - 5. BIM Requirements.
 - 6. Warranties and bonds.
 - 7. Final cleaning.

1.02 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies of list prior to Substantial Completion and three copies of an updated list prior to Final Completion. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Design-Builder that are outside the limits of construction.
 - 1. Organize list in collaboration with Owner.

1.03 TRAINING MATERIALS

- A. Submittal Requirements:
 - 1. Hardcopy format: Submit two copies of all training materials in a three-ring binder. Materials shall be developed in accordance with Section 01757 Commissioning and Training.

1.04 WARRANTIES AND BONDS

- A. Warranties and Bonds shall be obtained and delivered in accordance with the Agreement and with applicable equipment specifications and shall be compiled and submitted as described in this Section.
- B. Submittal Requirements: Submit warranty documents in accordance with the Submittal Requirements and as described below:
 - 1. Contents:
 - a. Include a table of contents organized by system and asset, per the City standards, and the name of the product or work item.
 - b. Include each required warranty and bond in proper form, with full information, are certified manufacturer as required, and are properly executed by Design-Builder, Subcontractor or manufacturer.

- c. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of installer.
 - d. Identify each binder on the front and spine with the typed or printed title "WARRANTIES AND BONDS," Project name, and name of Design-Builder.
- 2. Hardcopy format: Submit two copies.
 - 3. Electronic (PDF) format:
 - a. Submit one copy of each warranty as separate PDF files.
 - b. Submit 1 copy of a compiled PDF file that includes all required warranties and bonds. The compiled PDF shall be bookmarked by system and asset and the name of the product or work item.

1.05 O&M DATA

A. O&M Manuals:

- 1. An O&M Manual shall be prepared for every piece of equipment provided as part of the Work and for each material or finish requiring regular maintenance.
- 2. O&M Manuals shall be prepared in accordance with this Section and shall include information as required by individual technical specifications.
- 3. The Design-Builder shall not request payment for more than 90 percent of the value of a specific piece of equipment, based on the schedule of values, until a draft O&M Manual for that equipment has been submitted.
- 4. All draft O&M Manuals shall be submitted and accepted by the Owner as a condition of Substantial Completion.
 - a. Electronic format:
 - 1) Electronic files shall be submitted in a text-searchable, bookmarked, and hyperlinked portable document format (PDF).
 - a) PDF files shall be created from the native format of the document (Microsoft Word, graphics programs, etc.). Scanned images are not acceptable, except as provided below:
 - (1) Materials not available in original digital format shall be scanned into digital format and cleaned to remove smudges, fingerprints, artifacts, and other erroneous marks as specified in this Section.
 - (2) Scanned documents shall be converted such that the text is optically identifiable and searchable.
- 5. O&M Manual Contents:
 - a. General:
 - 1) Any items in the documentation that is not applicable, or options not provided with the supplied equipment or materials, shall be deleted.
 - b. Content for Equipment Manuals:
 - 1) Introduction:
 - a) Description of the equipment covered by the O&M Manual.
 - b) Identification of all assets covered by the manual by name and equipment ID/asset.
 - 2) Product Data:
 - a) Include only those sheets that are pertinent to specific product.
 - b) Clearly annotate each sheet to:
 - (1) Identify specific product or part installed.

- (2) Identify data applicable to installation.
- (3) Delete references to inapplicable information.
- c) Function, normal operating characteristics, and limiting conditions.
- d) Performance curves, engineering data, nameplate data, and tests.
- e) Complete nomenclature and commercial number of replaceable parts.
- f) Original manufacturer's parts list, illustrations, detailed assembly drawings showing each part with part numbers and sequentially numbered parts list, and diagrams required for maintenance.
- g) Spare parts list, including recommended number of parts to be stored at the site, special storage precautions, and reordering instructions.
- h) Wire diagrams and other panel information as actually installed.
- i) Where applicable, identify installed spares and other provisions for future work (e.g., reserved panel space, unused components, wiring, terminals).
- 3) As installed, color coded piping diagrams.
- 4) Charts of valve tag numbers, with the location and function of each valve.
- 5) Drawings: Supplement product data with drawings as necessary to clearly illustrate relations of component parts of equipment and systems and control and flow diagrams.

1.06 PROJECT RECORD DOCUMENTS

- A. Project Record Documents include Record Drawings as described in Section OR-01700 Execution Requirements.
- B. The Design-Builder shall deliver draft Project Record Documents in accordance with the following requirements to the Owner for review prior to Substantial Completion or as noted in this Section. Final Completion will not be granted until all final Project Record Documents have been submitted to and accepted by the Owner.
 - 1. Submittal Timeline:
 - a. Drafts of the Record Drawings and Record Product Data shall be submitted to the Owner a minimum of 60 calendar days prior to the scheduled date for Substantial Completion for review by the Owner.
 - b. Final versions of the Project Record Drawings shall be submitted to the Owner within 30 calendar days following Final Completion and prior to Final Acceptance.
 - 2. Submittal Requirements:
 - a. Record Drawings shall be prepared in accordance with Section OR-01700 Execution Requirements.
 - b. Record Drawings:
 - 1) Submit one complete electronic set (PDF) of marked-up Record Drawings, with all changes captured throughout construction shown as markups.
 - 2) Submit one electronic version of drawings with all modifications incorporated into the native format as described in Section OR-01320 Project Management and Progress Reporting.

- 3) Submit two electronic versions (PDF and TIFF) of Record Drawings with all modifications incorporated and sized for printing at 24" x 36".
3. Accompany each submittal with a transmittal letter containing:
 - a. Date.
 - b. Project title and number.
 - c. Design-Builder's name and address.
 - d. Title and number of each Project Record Document.
 - e. Signature of Design-Builder or its authorized representative.

1.07 AS-BUILT BUILDING INFORMATION MODEL

- A. An as-built version of the BIM shall be prepared to reflect all modifications captured in the Record Drawings.
- B. Submittal Timeline:
 1. Draft as-built BIM shall be submitted as required for Substantial Completion and a model walkthrough shall be scheduled 30 days prior to the draft submission.
 2. The as-built BIM shall be submitted electronically within 30 calendar days of Owner acceptance of the final Record Drawings and must be received and accepted by the Owner prior to Final Completion of the Work.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.01 FINAL CLEANING

- A. General: Provide final cleaning and conduct final cleaning operations to comply with Applicable Laws.
- B. Cleaning: Employ experienced skilled workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
- C. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
- D. Complete the following cleaning operations before requesting inspection for Certification of Final Completion:
 1. Clean the Site and grounds, in areas disturbed by construction activities, of rubbish, waste material, litter, and other foreign substances.
 2. Carry out waste disposal in accordance with the requirements of Section OR-01700 Execution Requirements.

3. Broom clean paved surfaces and rake clean other surfaces of the grounds so as to leave the Site ready for occupancy by the Owner and restore those portions of the Site not designated for alteration by the Agreement to their condition as of beginning of Work.
 4. Remove petrochemical spills, stains, and other foreign deposits.
 5. Wash, wherever practicable, or broom sweep channels, pipe, basins, reservoirs, and tanks.
 6. Remove tools, construction equipment, machinery, and surplus material from the Site.
 7. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, and similar spaces.
 8. Sweep concrete floors broom clean in unoccupied spaces.
 9. Remove labels that are not permanent.
 10. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already shows evidence of repair or restoration.
 11. Restore any landscape feature scarred or damaged by Design-Builder's equipment or operations as nearly as possible to its original condition at Design-Builder's expense. Design-Builder shall be responsible for replacing any trees, grass, landscaping, or piping systems damaged by construction unless otherwise directed by the Owner.
 12. The Design-Builder shall obliterate all signs of temporary construction facilities such as haul roads, work areas, structures, foundations or temporary structures, stockpiles of excess or waste materials, or any vestiges of construction, as directed by the Owner. Disturbed areas shall be graded and filled as required by Owner. Restoration to original contours is not required.
- E. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
1. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 2. Clean ducts and blowers if units were operated without filters during construction.
 3. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 4. Leave Site clean and ready for use.
- F. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the Site and dispose of in accordance with Applicable Laws.

END OF SECTION

EXHIBIT 11.12

Scope of Phase 2 Services – COMPREHENSIVE AGREEMENT

for the

Waterfront Implementation Project

City of Alexandria

Exhibit 11.12, inclusive of the Division Owner Requirements (Division ORs), details the scope of services that the Design-Builder is responsible for completing during Phase 2 of the Project. The requirements in Exhibit 11.12 are intended to be complementary and in combination serve as the Scope of Phase 2 Services. If there are any conflicts between the requirements within Exhibit 11.12, the Design-Builder shall bring to the attention of Owner for resolution.

ARTICLE 1 – PROJECT MANAGEMENT AND COORDINATION

1.1 Project Coordination and Management

- A. The Design-Builder shall provide Project coordination and management for the activities performed during Phase 2. This includes management and monitoring of labor utilization (including compliance with federal funding requirements, if applicable), project schedule, and project budget on a regular basis. It shall be the ongoing responsibility of the Design-Builder to adequately manage and adhere to the task budgets and to submit deliverables to Owner on time and in accordance with the Agreement.
- B. Project Management Plan. Update the Project Management Plan developed during Phase 1 for purposes of Phase 2. The updated Project Management Plan shall summarize the objectives and approach to delivery of Work; organization requirements defining resources and staffing, roles and responsibilities, contact information, and communication protocols/procedures; Design-Builder's Quality Management Plan (QMP); Phase 2 budget, Project Schedule and work breakdown structure; financial tracking procedures; decision/action items logs; and scope change management process.
 - 1. Submit an electronic copy in PDF format of the draft Project Management Plan to Owner within thirty (30) calendar days following Notice to Proceed (Phase 2). Account for a period of ten (10) calendar days for the Owner's review of the draft Project Management Plan submittal.
 - 2. Update the draft Project Management Plan based on comments received from Owner and submit an electronic copy in PDF format of the final Project Management Plan to Owner within fourteen (14) calendar days after receipt of Owner's comments.
- C. Phase 2 Reporting. Design Builder shall prepare and submit Phase 2 reports in accordance with the Division ORs.
- D. Phase 2 Meetings. Design Builder shall prepare, facilitate, and document meetings in accordance with the Division ORs.
- E. Risk and Contingency Management. The Design-Builder shall incorporate risk and contingency management into the Project in accordance with the Agreement. Design-Builder provide updates to the Risk Register developed in Phase 1 in accordance with the following:

1. Maintain a Risk Register developed and updated during Phase 1.
2. The Risk Register, as developed as part of Phase 1, shall include the following information:
 - a. Risk identification;
 - b. Risk description including qualitative categorization of risk;
 - c. Estimated/calculated percent likelihood that risk may occur;
 - d. Phase of Project that risk could impact;
 - e. Potential schedule impact should risk occur;
 - f. Potential cost impact should risk occur;
 - g. Risk trigger;
 - h. Risk responsible party; and
 - i. Risk management strategy (transfer, mitigate, accept, exploit) and description of plan for risk response.
3. Update Risk Register and submit to Owner as part of monthly progress reports.

F. Work Management System.

1. Document Management. Design-Builder will maintain and coordinate all pertinent electronic design files and documents including all computer-aided design and drafting (CADD)-related files related to the Project. Electronic files submitted during Phase 2 shall use a naming convention approved by the Owner and described in the Project Management Plan.
2. Program Management Information System. The Owner will implement a web-based project management information system (PMIS) to facilitate collaboration and management of the Project. The Design-Builder will be required to use the Owner's PMIS and follow established procedures and workflows for documenting, sharing, and control of Project information.
3. If approved by Owner the Design-Builder may utilize a separate system for workflow management that is accessible to both Design-Builder and Owner (*to be determined during Phase 1 prior to the GMP Proposal*).

1.2 Quality Management Requirements

- A. Design Builder shall adhere to quality requirements as set forth in the Phase 2 Quality Management Plan (QMP) as described in the Division ORs and the Agreement.
- B. Construction Quality Control Requirements
 1. The Owner's rights to review, inspect, test, and monitor the Work are set forth in the Agreement.
 2. All Work performed by any Subcontractor or supplier shall be inspected by the Design-Builder. All nonconforming Work and any safety hazards in the Work area shall be noted and promptly corrected. The Phase 2 QMP shall require inspection during construction by inspectors who are not responsible, in whole or in part, for the scheduling or construction of the Works being inspected. Inspection records must be kept current, have sufficient detail to enable applicable Design Builder entities performing engineering services to identify inspections which have been performed, and the results of these inspections.

3. Design-Builder is responsible for all material sampling and testing and inspection of the Work to confirm compliance with the Contract Documents. Design-Builder is responsible for completing all special inspections and reporting required to comply with Governmental Approvals.

ARTICLE 2 - FINAL DESIGN

2.1 Final Design

- A. The Design-Builder shall complete the final design (i.e., progressing the design from 70% to 100%). The advancement of the design to the 100% level consists of finalizing the drawings and specifications to the level needed for construction and for obtaining permits and titled “Released for Construction Documents” (also referred to as Contract Drawings and Specifications). The completion of the 100% level of design shall adhere to the following requirements:
 1. Drawings and specifications shall be prepared in accordance with the requirements stipulated within this Exhibit. Building information model (“BIM”) presenting a digital representation of physical and functional characteristics for stormwater pumping stations shall be prepared in accordance with the requirements stipulated within this Exhibit.
 2. Identify all changes from the 70% technical exhibits, on which the GMP Amendment is based and are included within the Agreement to make a record of the changes.
 3. At such time that Owner and Design-Builder believe the drawings and specifications are sufficiently complete, submit the drawings and specifications to the required Owner’s Development Department and other permitting agencies for review, as necessary. Design-Builder shall respond to review comments and shall make revisions as necessary to obtain permits.
 4. Design-Builder shall submit to the Owner one (1) set of reproducible drawings and specifications that are ready for construction purposes (i.e., construction-ready drawings and construction-ready specifications). Issue block shall say “Released for Construction” and date.
 5. Design-Builder shall submit electronic files of construction-ready drawings in both CAD format and in PDF format.
 6. Design-Builder shall submit electronic files of construction-ready specifications in both Microsoft Word format and pdf format.

2.2 Development Review Requirements

- A. The Design-Builder shall submit all necessary applications, submissions of design documents, and comment-response letters to obtain Development Review Process approvals as documented in the Governmental Approvals Plan.
- B. Work shall be prepared in accordance with the Final Project Development Review Conditions [to be included in Comprehensive Amendment] and include any supplemental exhibits, renderings or other work efforts as necessary to satisfy review requirements and achieve compliance.

ARTICLE 3 – ENGINEERING SERVICES DURING CONSTRUCTION

2.1 Engineering Management

A. Design-Builder shall:

1. Assign engineering staff to support the construction administration, perform engineering duties and responsibilities, and to confirm that construction is completed in conformance with the Construction Documents.
2. Supervise and coordinate engineering and technical services subconsultants, including geotechnical, environmental, and other subconsultants.
3. Perform document management responsibilities.
4. Coordinate efforts between field and office staff, construction, and permitting activities. Engineering management assigned to the project shall support the field staff, coordinate office engineering activities, attend on-site meetings (as necessary), and manage project administration activities.

2.2 Resident Engineering

A. Design Builder’s resident engineers shall provide field engineering services at the Project site, including but not limited to:

1. Monitor and inspect the Works to confirm conformance with the Construction Documents.
2. Interface with design team in the event of unusual or unexpected conditions or other field conditions encountered during construction that may warrant input from various disciplines within the design team.
3. Expedite the resolution of requests for information and coordinate interpretation of Construction Documents.
4. Coordinate observation and support of special inspections and material testing.
5. Review of proposed resolutions to non-conformance reports and corrective action plans.
6. Verify compliance with environmental/permitting requirements.
7. Coordinate production of Record Drawings with construction staff. Verify Record Drawings are kept current on-site and are prepared in compliance with requirements of Construction Documents and Agreement.
8. Attend construction meetings held on-site.

2.3 Site Observations and Special Inspections

- #### **A. The Design-Builder shall coordinate visits to the Project site by the design team members to review progress and quality of the Works in accordance with the Construction Documents and Agreement, Phase 2 QMP, building codes, and/or permitting requirements. The visits shall observe the general quality of the work at the time of the visit and review any specific items of work that are brought to the attention of the design team members.**

- B. The responsibility for special inspections required by applicable building codes are in accordance to DIVISION ORs 01400 – QUALITY REQUIREMENTS.

2.4 Submittals and Shop Drawings

A. Design-Builder shall:

1. Follow project procedures (provided by Owner and included as attachment to Design-Builder's PMP) for managing, tracking, and reviewing relevant documents utilizing the Owner's PMIS (or alternative workflow management system as defined during Phase 1B). Submittals will be reviewed in accordance with the Construction Documents and Agreement requirements.
2. Maintain hard-copy documentation of electronic submissions on-site, as well as samples. One (1) copy of hard-copy submittals will be maintained in Design-Builder's field office.
3. Review Shop Drawings, product data and samples, and submittals for conformance with the design concept and compliance with the Construction Documents and Agreement requirements.
4. Assign the Design-Builder's construction engineering staff the responsibility for receiving and reviewing submittals, consisting of Shop Drawings, diagrams, illustrations, catalog data, schedules and samples, the results of tests and inspections, and other data.
5. Submit to Owner Shop Drawings, product data, samples, and similar submittals as requested by Owner with reasonable promptness and in such sequence as to cause no delay in the Works or in the activities of Owner or of separate contractors.

2.5 Request for Information and Technical Changes

- A. In accordance with the Agreement, Design-Builder will provide technical information, including revisions to drawings and specifications to support field orders, proposed changes, and change orders. Work will be done in accordance with project procedures for managing, tracking, and reviewing requests for information using the PMIS.
- B. Design-Builder shall review requests for information for providing interpretation of design documentation, and required or requested modifications. Design-Builder shall provide written documentation of resolution of technical issues.
- C. Design-Builder shall produce revised design documentation (drawings and specifications) to support field changes (construction or differing site conditions), design issues, or changes because of an approved request for information. Design-Builder shall update drawing information in accordance with the required design change for incorporation into project Record Drawings.
- D. Change Management. Design-Builder shall document scope and schedule changes associated with completion of Design-Builder's work in accordance to the Agreement.

2.6 Quality Control Support

A. Design Builder shall:

1. Provide technical review of nonconformance reports and approve proposed corrective action plans for conformance with the design concepts, Agreement requirements, and Released for Construction Documents.
2. Coordinate shop tests and inspections of work, materials, and equipment for the Project at off-site facilities.
3. Attend and witness field and factory performance tests, for selected equipment/suppliers.
4. Monitor the coordination of inspection and testing by regulatory and third-party agencies that have jurisdiction over the Project.
5. Coordinate the inspection of stormwater management features (silt fence, bales, etc.), as well as verification that the erosion control plans are current and available onsite.

ARTICLE 3 – CONSTRUCTION SERVICES

3.1 Construction Responsibility

A. In performing Phase 2 services, the Design-Builder shall construct the Project in accordance with the Construction Documents, Division Owner Requirements (Division ORs), and Agreement and without limitation:

1. Supervise subcontractors and Design-Builder personnel performing the work and manage self-performing and subcontracted work.
2. Construct the Work in accordance with the final approved design documents.
3. Apply for, obtain and maintain all agency and Governmental Approvals required for the Project, unless stipulated otherwise in the Agreement.
4. Perform all necessary Project Site preparation and excavation activities.
5. Demolish and remove existing improvements at the Project Site, as and to the extent required by the Construction Documents.
6. Comply with Owner's BMP certification process.
7. Modify, re-route, repair or replace utilities, as and to the extent required by the Construction Documents and Agreement.
8. Remove from the Project Site and dispose of any demolition or construction debris resulting from the Works and any unused soil excavated therefrom.
9. Procure and provide all necessary materials, labor, machinery, equipment, facilities, tools, consumables, supplies, services and structures.
10. Coordinate, supervise, administer and manage the performance of all Phase 2 services.

11. Update and maintain Historic and Cultural Resources Preservation Work Plan, as needed, in coordination with Alexandria Archaeology, and Provide Archaeological and Historic Preservation Services, Archaeological Field Work, Monitoring, and construction oversight in compliance with the approved Historic and Cultural Resources Preservation Work Plan(s). This may include provision of specialty equipment and/or Archaeological or Preservation Field Crews and/or qualified specialists such as, but not limited to, Underwater Archaeologists or Conservators, as needed, in response to encountering resources of potential historic and/or cultural significance.
12. Prepare and provide all plans, reports, manuals and other documents required by the Construction Documents and Agreement.
13. Construct the Project facilities.
14. Startup, commission, and perform Startup, Commissioning and Acceptance Testing of the Facilities.
15. Train designated Owner employees in the operations and maintenance of the Facilities.
16. Provide warranty coverage for constructed work.
17. Coordinate and cooperate with Owner representatives and keep the Owner's representative regularly informed as to the progress and quality of the Works.
18. Maintain a red-lined set of all Record Drawings and provide final Record Drawings upon completion.

ARTICLE 4 – OPERATIONS AND MAINTENANCE

4.1 Operations and Maintenance Procedures

- A. Design-Builder shall construct the Project in accordance with the Construction Documents, Division ORs, and the Agreement.
- B. Design-Builder shall refine the O&M cost estimate for 11 years of ongoing operations (post-commissioning period) based on final design.
- C. Design-Builder shall provide timely and complete submission of manufacturer's equipment O&M materials.
- D. Equipment vendors shall provide manufacturers' warranties which will be submitted with equipment vendor O&M manuals. Warranties shall be compliant with the Agreement's requirements.

ARTICLE 5 - PERMITTING SERVICES

5.1 General Requirements

- A. Design-Builder shall:
 1. Consult with Owner relative to applicable project permits.

2. Update the Project Governmental Approval Plan developed by Design-Builder during Phase 1. Design-Builder will hold many of the permits and shall develop permit applications and supporting documentation in accordance with applicable regulations.
3. Design progress schedule, prepared in accordance with the requirements of the Agreement, shall include permitting activities occurring within both Phase 1 and Phase 2, including a schedule for permit development, review of each permit, incorporating review comments, agency submittal, preparing responses to agency comments, review of responses, resubmittal to agency, and anticipated approval. The Governmental Approval Plan shall identify submittal requirements and address roles and responsibilities, internal and external communication strategies and protocol as well as permit tracking procedures (for compliance purposes).
4. Have primary responsibility for preparation, coordination, agency approval, compliance with permit requirements, renewals, transfers and/or closeout of permits.
5. Have responsibility for supporting Owner in compliance with permit requirements.
6. Pay all agency permitting fees for permits held by the Design-Builder, including application, review, inspections, renewals, bonding and insurance, transfers and closeout.
7. Design-Builder will also provide the City of Alexandria a draft and final Traffic Control Plan. Design-Builder will comply with city requirements and perform noise monitoring during construction.
8. Submit one (1) electronic copy of the draft updated Project Governmental Approval Plan to Owner within twenty-one (21) calendar days following authorization to proceed with Phase 2.
9. Schedule and facilitate a half-day review meeting with Owner to present the draft Governmental Approval Plan and discuss permitting coordination between Design-Builder, and Owner. Owner will provide comments on the draft updated Governmental Approval Plan prior to the meeting. Design-Builder will address comments at meeting and Owner will be requested to accept draft updated permitting plan with the adjudication of comments reviewed at the meeting.
10. Revise the draft updated Governmental Approval Plan based on comments received from Owner and submit one (1) electronic copy in Adobe Acrobat PDF format of final updated permitting plan to Owner within fourteen (14) calendar days after receipt of Owner's comments.
11. Schedule and facilitate monthly permitting coordination meeting with Owner to discuss permit acquisition, coordination, and compliance activities. Provide monthly status report to Owner.
12. Prepare for and attend up to six (6) agency coordination and/or public meetings for the project. Prepare and distribute meeting minutes.
13. Coordinate with Owner on an annual basis to determine if an update to permitting plan is required for the project duration. If deemed necessary, submit an electronic copy of each update to Owner within twenty-one (21) calendar days of the anniversary date of the initial submittal.

ARTICLE 6 – ASSET MANAGEMENT SYSTEM AND ELECTRICAL SYSTEM STUDY

6.1 Asset Management System

- A. Design-Builder will provide equipment asset information in spreadsheet format for Owner's inclusion in the Owner's (or Owner's delegate) computerized maintenance management system (CMMS).
- B. Design-Builder shall prepare asset management data in spreadsheet format for Owner's or Owner's delegate) CMMS using Owner-provided input format for all equipment installed in Project. Spreadsheet information to include at a minimum the following: asset name, asset ID, manufacturer, model and model number, serial number, name plate data (as applicable), and additional attributes per asset type – mechanical, electrical, structural, or other discipline-specific data (e.g., capacity, dimension, material) – as agreed upon by Owner.

END OF SCHEDULE

EXHIBIT 11.13(a)

**Form of Performance Bond –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

BOND NO. _____

BOND AMOUNT: \$ _____

KNOW ALL MEN BY THESE PRESENTS, THAT:

WHEREAS, THE CITY OF ALEXANDRIA, VIRGINIA (“City”) has awarded to _____, a _____ duly organized and existing under the laws of the State of _____ (“Design-Builder”), a Comprehensive Agreement dated _____ (“Comprehensive Agreement”); and

WHEREAS, one of the conditions of the Comprehensive Agreement is that Design-Builder shall provide this duly executed instrument (“Bond”).

NOW THEREFORE, We, the undersigned Design-Builder and _____, a corporation duly organized and existing under and by virtue of the laws of the State of _____ and authorized to transact business as a surety within the Commonwealth of Virginia (“Surety”), are held and firmly bound unto the City, as obligee, and its successors and assigns in the sum of _____ DOLLARS (\$ _____), lawful money of the United States of America, for the payment of which, well and truly be made to the City, Design-Builder and Surety bind themselves and each of their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT:

1. The Comprehensive Agreement is hereby incorporated by reference herein as if said agreement were fully set forth herein. Initially capitalized terms not otherwise defined herein shall have the meanings set forth in the Comprehensive Agreement.

2. If Design-Builder shall at all times promptly, and faithfully perform the Comprehensive Agreement and any alteration in or addition to the obligations of Design-Builder arising thereunder in strict accordance with the terms and conditions of the Comprehensive Agreement, including the matter or infringement, if any, of patents or other proprietary rights, and all guarantees and warranties, including the guarantee and warranty periods, established by the Comprehensive Agreement, and comply with all of the covenants therein contained, in the manner and within the times provided in the Comprehensive Agreement, and, subject to the terms of the Comprehensive Agreement, shall fully indemnify and save harmless the City from all costs and damages which it may suffer by reason or failure so to do, and shall fully reimburse and repay the City all outlay and expenses which it may incur in making good any default, and reasonable counsel fees incurred in the prosecution of or defense of any action arising out of or in connection with any such default,

then Surety's obligations under this Bond shall be void; otherwise such obligations shall remain in full force and effect.

3. This Bond shall cover the cost to perform all the obligations of Design-Builder arising out of or required under the Comprehensive Agreement, and the obligations covered by this Bond specifically include Design-Builder's liability for liquidated damages as specified in the Comprehensive Agreement.

4. If the City gives Surety notice of Design-Builder's default, Surety shall promptly, but in no event later than thirty (30) days, take one of the following actions:

- (a) Arrange, with the consent of the City, for Design-Builder to complete the Comprehensive Agreement; or
- (b) Undertake completion of the Comprehensive Agreement itself;
- (c) Waive its right to complete the Comprehensive Agreement and reimburse to the City the amount of the City's costs in completing the Work, including all outlay and expenses incurred in responding to the default and reasonable counsel fees incurred in the prosecution of or defense of any action arising out of or in connection with any such default; or
- (d) Deny liability in whole or in part and notify the City in writing, citing the reasons for denial.

5. Should Surety fail to take the actions set forth in Paragraph 4 within the time specified by Paragraph 4, Surety shall be deemed in default of this Bond and the City may, after having given seven (7) days written notice, pursue and enforce any and all remedies available to it under the Comprehensive Agreement, this Bond or common law, including, but not limited to, completing the Comprehensive Agreement and pursuing Surety for damages and any other relief to which it may be entitled against Surety.

6. No suit or action may be brought by the City under this Bond after the expiration of two (2) years following Final Completion.

7. Surety, for value received, hereby stipulates and agrees that no change, extension of time, alterations, additions, omissions or other modifications of the terms of the Comprehensive Agreement, or in the Work to be performed with respect to the Project, or in the specifications or plans, or any change or modification of any terms of payment or extension of time for any payment pertaining or relating to the Comprehensive Agreement, or any rescission or attempted rescission by Design-Builder of the Comprehensive Agreement, or this Bond, shall in any way affect its obligations on this Bond, and Surety does hereby waive notice of such changes, extension of time, alterations, additions, omissions or other modifications.

8. Any provision in this Bond which conflicts with applicable Legal Requirements shall be deemed modified to conform to applicable Legal Requirements.

9. *[Note: Use in case of multiple sureties ("Co-Sureties") or, otherwise, delete; If Co-Sureties are used, modify the preceding language accordingly to reflect this]* The Co-Sureties agree to empower and designate a single "Lead Surety" with authority to act on behalf of all of the Co-Sureties with respect to this Bond, so that the City will have no obligation to deal with multiple sureties hereunder. All correspondence from the City to the Co-Sureties and all claims under this Bond shall be sent to the Lead Surety and shall be deemed served upon all Co-sureties. The Lead Surety may be changed only by delivery of written notice (by personal delivery or by certified mail, return receipt requested) to the City designating a new Lead Surety, signed by all of the Co-Sureties. The initial Lead Surety shall be _____.

IN WITNESS WHEREOF, We have hereunto set our hands and seals on this ____ day of _____ 20____.

Correspondence or claims relating to this Bond should be sent to the Lead Surety at the following address:

[Note: If Co-Sureties are used, then add appropriate number of lines to signature block.]

(Design-Builder's name, title, and signature)

Surety
By: _____
Attorney-in-Fact (certified copy of authority attached)

NOTE: Surety on this Bond shall be one who is authorized by applicable Legal Requirements to do business in the Commonwealth of Virginia, and named in the current list of Companies Holding Certificates of Authority as Acceptable Sureties on Federal bonds and as Acceptable Reinsuring Companies, as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All bonds signed by an agent must be accompanied by a certified copy of the authority to act for Surety at the time of the signing of this Bond.

EXHIBIT 11.13(b)

**Form of Payment Bond –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

BOND NO. _____

BOND AMOUNT: \$ _____

KNOW ALL MEN BY THESE PRESENTS, THAT:

WHEREAS, THE CITY OF ALEXANDRIA, VIRGINIA (“City”) has awarded to _____, a _____ duly organized and existing under the laws of the State of _____ (“Design-Builder”), a Comprehensive Agreement dated _____ (“Comprehensive Agreement”); and

WHEREAS, one of the conditions of the Comprehensive Agreement is that Design-Builder shall provide this duly executed instrument (“Bond”).

NOW THEREFORE, We, the undersigned Design-Builder and _____, a corporation duly organized and existing under and by virtue of the laws of the State of _____ and authorized to transact business as a surety within the Commonwealth of Virginia (“Surety”), are held and firmly bound, jointly and severally, unto the City, as obligee, and its successors and assigns, in the sum of _____ DOLLARS (\$ _____), lawful money of the United States of America, for the payment of which, well and truly be made to the City and Claimants, Design-Builder and Surety bind themselves and each of their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT:

1. The Comprehensive Agreement is hereby incorporated by reference herein as if said agreement were fully set forth herein. Initially capitalized terms not otherwise defined herein shall have the meanings set forth in the Comprehensive Agreement.

2. If Design-Builder shall: (a) make payments of all sums due to all persons and entities having a direct contract with Design-Builder, or a direct contract with a Subcontractor having a direct contract with Design-Builder, for supplying labor, material, and/or supplies used directly or indirectly by Design-Builder in the prosecution of the Work provided in the Comprehensive Agreement (such persons and entities hereinafter referred to collectively as “Claimants”); and (b) shall fully indemnify and save harmless the City from all costs and damages which the City may suffer by reason of Design-Builder’s failure to fulfill its obligations to Claimants under clause (a) above, including but not limited to, fully reimbursing and repaying the City reasonable counsel fees incurred as a result of any action arising out of or in connection with any such failure, then Surety’s obligations under this Bond shall be void; otherwise such obligations shall remain in full force and effect.

3. All Claimants shall have a direct right of action only against Surety and Design-Builder under this Bond; *provided, however*, that no claim, suit or action shall be brought by any Claimant after the expiration of one (1) year following the date on which Claimant last performed labor or last furnished or supplied materials to the Project. Any suit or action must be brought in a state or federal court of competent jurisdiction located in the Commonwealth of Virginia.

4. Any Claimant who does not have a direct contractual relationship with Design-Builder shall, as a condition precedent to bringing such claim, suit or action, provide written notice thereof to Design-Builder, Surety, and the City, no later than ninety (90) days from the date Claimant last supplied labor or materials, stating with substantial accuracy the amount claimed, the name of the person for whom the work was performed or to whom the material was furnished, and the dates on which such labor or materials were supplied.

5. Surety shall, after receipt of reasonable notice to Surety of any claim, demand, suit or action brought against the City by a Claimant, defend, with counsel approved by the City, such approval not to be unreasonably withheld, indemnify and hold harmless the City from any and all claims, demands, suits or actions brought by any Claimant. The City shall have a direct right of action against Surety and Design-Builder for any breach by Surety of its obligation to defend, indemnify and hold harmless the City.

6. Surety, for value received, hereby stipulates and agrees that no change, extension of time, alterations, additions, omissions or other modifications of the terms of the Comprehensive Agreement, or in the Work to be performed with respect to the Project, or in the specifications or plans, or any change or modification of any terms of payment or extension of time for any payment pertaining or relating to the Comprehensive Agreement, or any rescission or attempted rescission by Design-Builder of the Comprehensive Agreement, or this Bond, or any conditions precedent or subsequent in this Bond attempting to limit the right of recovery of Claimants otherwise entitled to recover under this Bond, shall in any way affect its obligations on this Bond, and Surety does hereby waive notice of such changes, extension of time, alterations, additions, omissions or other modifications.

7. Surety acknowledges that the amounts owed to Design-Builder under the Comprehensive Agreement shall first be available for the performance of the Comprehensive Agreement, including the City's superior right to use the funds due for the completion of the Work, and then may be available to satisfy claims arising under this Bond. The City shall not be liable for the payment of any costs or expenses or claims of any Claimant under this Bond and shall have no obligation to make payments to, or give notice on behalf of, any Claimant.

8. Any provision in this Bond which conflicts with applicable Legal Requirements shall be deemed modified to conform to applicable Legal Requirements.

9. Design-Builder or the City shall furnish a copy of this Bond or permit a copy to be made upon request by any person or entity who may be a Claimant as defined above.

10. *[Note: Use in case of multiple sureties ("Co-Sureties") or, otherwise, delete; If Co-Sureties are used, modify the preceding language accordingly to reflect this]* The Co-Sureties agree to empower and designate a single, "Lead Surety" with authority to act on behalf of all of the Co-Sureties with respect to this Bond, so that the City and Claimants will have no obligation to deal with multiple sureties hereunder. All correspondence from the City and Claimants to the Co-Sureties and all claims under this Bond shall be sent to such designated Lead Surety and service of such correspondence or notice upon the Lead Surety shall constitute service upon all co-sureties. The Lead Surety may be changed only by delivery of written notice (by personal

delivery or by certified mail, return receipt requested) to the City designating a single new Lead Surety, signed by all of the Co-Sureties. The initial Lead Surety shall be _____.

IN WITNESS WHEREOF, We have hereunto set our hands and seals on this ____ day of _____ 20____.

Correspondence or claims relating to this Bond should be sent to the designated Lead Surety at the following address:

(Design-Builder's name, title, and signature)

Surety
By: _____
Attorney-in-Fact (attach certified copy of authority)

[Note: If Co-sureties are used, then add appropriate number of lines to signature block.]

NOTE: Surety on this Bond shall be one who is authorized by applicable Legal Requirements to do business in the Commonwealth of Virginia, and named in the current list of Companies Holding Certificates of Authority as Acceptable Sureties on Federal bonds and as Acceptable Reinsuring Companies, as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All bonds signed by an agent must be accompanied by a certified copy of the authority to act for Surety at the time of the signing of this Bond.

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Exhibit 11.14

**General Conditions of Contract –
COMPREHENSIVE AGREEMENT**

for the

Waterfront Implementation Project

City of Alexandria

[ATTACHED]

General Conditions of Contract

Article 1 **General**

1.1 Mutual Obligations

1.1.1 The City 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 For the purposes of the Contract Documents, the following words and terms shall have the meanings specified below (other words and abbreviations that have well-known technical, or trade meanings are used in the Contract Documents in accordance with such recognized meanings), provided, however, that capitalized terms defined in other Contract Documents, including but not limited to the Agreement, shall have the meanings specified in such document. For convenience, this Section 1.2.1 includes an index of capitalized terms used in the Agreement and these General Conditions of the Contract.

Affiliate means, (a) any person or entity which directly or indirectly through one or more intermediaries controls, or is controlled by, or is under common control with, Design-Builder or any of its members, partners or shareholders holding an interest in Design-Builder; and (b) any person or entity for which ten percent (10%) or more of the equity interest in such person or entity is held directly or indirectly, beneficially or of record by: (i) Design-Builder; (ii) any of Design-Builder's members, partners or shareholders that own ten percent (10%) or more of Design-Builder or Design-Builder's members, partners or shareholders; or (iii) any Affiliate of Design-Builder under clause (a) of this definition. For purposes of this definition the term "control" means the possession, directly or indirectly, of the power to cause the direction of the management of a person and/or entity, whether through voting securities, by contract, family relationship or otherwise.

Agreement refers to the document titled "Comprehensive Agreement," signed by both Parties and includes all Exhibits expressly identified in Section 2.1 of the Agreement.

Agreement Date means the date set forth on the first page of the Agreement.

Alexandria Archaeology Commission means the department of the City of Alexandria, Virginia designated as such.

Allowance Payment Item means an item or portion of the Work which has not been defined sufficiently, or for which the City has yet to make certain decisions necessary, to permit pricing by Design-Builder.

Allowance Payment Value means the estimated dollar amount included in the Schedule of Values or other budget document as a placeholder value for an Allowance Payment Item, pending acceptance by the City of pricing offered by Design-Builder and other applicable terms.

Application for Payment means a request for payment in form acceptable to the City that is submitted by Design-Builder to the City on a monthly basis, or other periodic basis acceptable to the City, and which includes, without limitation, all supporting documentation and information required by the City or the Contract Documents.

Bankrupt Party has the meaning set forth in Section 11.5.1 below.

Baseline Schedule means the schedule set forth in Exhibit 11.2.5 (Baseline Schedule) to the Agreement.

Books and Records means all documents (whether paper, electronic, or other media) and electronically stored information, including, but not limited to, any and all books, correspondence, receipts, vouchers, estimates, records, contracts, cost data, schedules, subcontracts, schedules, job cost reports, and other data, including computations and projections, of Design-Builder related to bidding, negotiating, pricing, or performing the Work.

Builder's Risk Insurance means the policy of insurance required under Exhibit 11.1 (Insurance Requirements) of the Comprehensive Agreement identified as the Builder's Risk policy, which policy is intended to provide property insurance for the Work in progress and other coverages.

Certificate of Final Completion means a certification issued by City to Design-Builder, stating that Design-Builder, to the best of City's actual knowledge and belief, has achieved Final Completion, and confirming that date upon which such event occurred.

Certificate of Substantial Completion means a certification issued by City to Design-Builder, stating that Design-Builder, to the best of City's actual knowledge and belief, has achieved Substantial Completion, and confirming that date upon which such event occurred.

Change Order has the meaning set forth in Section 9.1.3 below.

City means the City of Alexandria, Virginia.

City-Furnished Information means that information set forth in Exhibit 2.5.1 of the Interim Agreement.

City Indemnitee means and includes each of the City and Owner's Advisor, and, with respect to each of the foregoing, each of its respective representatives, officers, employees, members or other constituent entities, subconsultants, authorized agents, and other duly authorized representatives.

City's Project Criteria mean the City's programmatic requirements and objectives for the Project, and specific criteria and requirements, as set forth in Exhibit 11.2.2 (City's Project Criteria) to the Agreement.

Claim means Design-Builder's request to the City under Section 10.2 below for relief arising from any rejected Design-Builder PCO.

Confidential Information has the meaning set forth in Section 13.1 below.

Construction Documents means those final, complete design documents that: (a) are to be used for performing the construction and in correlation with all applicable Governmental Approvals, (b) have been signed and sealed by a properly licensed Design Consultant; and (c) have been approved by City in accordance with Section 2.4 below.

Contingency has the meaning set forth in Section 4.6.1 of the Agreement.

Contract Documents means those documents specifically referenced and listed in the Section 2.1 of the Agreement as Contract Documents.

Contract Price has the meaning set forth in Section 4.1.1 of the Agreement.

Contract Times has the meaning set forth in Section 3.3.3 of the Agreement.

Cost of the Work has the meaning set forth in Section 4.2 of the Agreement.

Day or *day* mean calendar days, unless specifically stated otherwise.

DB-Related Entity means Design-Builder, Design Consultants and Subcontractors of any tier, and anyone for whose acts any of them may be legally or contractually responsible.

Delay Liquidated Damages has the meaning set forth in Section 3.5 of the Agreement.

Design-Builder is _____.

Design-Builder's Fee has the meaning set forth in Section 4.5.1 of the Agreement.

Design-Builder's General Conditions has the meaning set forth in Section 4.3 of the Agreement.

Design-Builder's Project Manager means that person designated by Design-Builder under Section 2.1.1 below, who will be the principal representative of Design-Builder with respect to the performance of the Work.

Design-Builder Proposed Change Order or Design-Builder PCO means a proposed change order submitted to City from Design-Builder in accordance with Section 9.5 below.

Design-Builder's Representative means that person designated by Design-Builder under Section 2.1.1 below, who shall be the principal representative of Design-Builder with respect to contractual matters and shall have full authority to act on behalf of Design-Builder and make binding decisions on behalf of Design-Builder with respect to any matter arising out of or relating to the Contract Documents.

Design-Builder's Safety Representative means that person designated by Design-Builder under Section 2.8.1 below, whose principal duty shall be the prevention of accidents and the protection of all persons and property located on or adjacent to the Site. Design-Builder's Safety Representative shall take such action as appropriate to ensure

the proper implementation of, and compliance with, safety policies, precautions, procedures and plans.

Designated City-Furnished Information means that information set forth in Exhibit 11.2.3 of the Agreement.

Design Consultant is a qualified, licensed design professional, eligible to provide, among other things, professional engineering, architectural and/or land surveying services, who is not an employee of Design-Builder, but is retained by Design-Builder or another DB-Related Entity, to furnish design services required under the Contract Documents. For the avoidance of doubt, the Lead Designer is a Design Consultant.

Differing Site Conditions has the meaning set forth in Section 4.3.1 below.

Directive Letter has the meaning set forth in Section 9.6.1 below.

Dispute means any claim, disagreement or controversy between the Parties arising out of or relating to the Agreement, including but not limited to those arising out of or related to the breach, termination or invalidity of the Agreement.

Division Owner Requirements mean that information set forth in Exhibit 11.1.3 of the Agreement.

Electronic Data has the meaning set forth in Section 12.1.1 below.

Equipment and Materials shall mean all of the equipment, materials, machinery, apparatus, structures, supplies and other goods required by the terms of the Contract Documents to complete the Work and to be incorporated into the Project or provided to City. The term "Equipment and Materials" shall not be construed to include any construction equipment, supplies, materials, apparatus or tools owned by Design-Builder or any other DB-Related Entity that are used to complete the Work but are not contemplated under the Contract Documents to become incorporated into the Project or to be provided to City.

Exhibits have the meaning set forth in Section 2.1 of the Agreement.

Excusable Delay has the meaning set forth in Section 8.4.1 below.

Final Application for Payment means the Application for Payment submitted by Design-Builder to City after Design-Builder has achieved Final Completion, requesting payment of the unpaid balance of the Contract Price (less any amounts properly withheld by City) plus any share of Savings earned by Design-Builder.

Final Completion means all Work, including that identified on the Punch List, is complete in accordance with the Contract Documents, and Design-Builder has satisfied all conditions for Final Completion set forth in the Contract Documents, including, without limitation, Section 8.3 below. Obligations which by their nature accrue or continue past Final Completion, such as warranty obligations, are not required to be complete in order to achieve Final Completion.

Final Completion Date means the date that Final Completion occurs, as confirmed by the City and set forth in a Certificate of Final Completion.

Force Majeure Events are those events that are beyond the control of all DB-Related Entities and City, including the events of war, floods, labor disputes, earthquakes, epidemics, pandemics, unusually severe and abnormal weather conditions, and other acts of God.

GMP Proposal means that proposal submitted by Design-Builder to the City as part of the Interim Agreement.

GMP Proposal Design Documents means those design documents set forth in Exhibit 11.2.1 of the Agreement.

General Conditions of Contract refers to this document.

Geotechnical Baseline Report (GBR) is set forth in Exhibit 11.2.8 of the Agreement.

Geotechnical Data Report (GDR) is that document referenced as such in Exhibit 11.2.4 (GMP Clarifications and Assumptions) of the Agreement.

Good Engineering and Construction Practices mean those methods, techniques, standards, and practices which, at the time they are to be employed and in light of the circumstances known or reasonably believed to exist at such time, are generally recognized and accepted as good engineering, equipping, installation, construction, commissioning, and testing practices for the design, construction, and improvement of capital projects in the water treatment industry similar to the Project in scope and complexity using the design-build delivery method, as followed in the locality of the Project.

Governmental Approval means any authorization, consent, approval, license, lease, ruling, permit, certification, exemption, or registration by or with any Governmental Unit.

Governmental Unit means any national, state or local government, any political subdivision thereof, or any governmental, quasi-governmental, judicial, public or statutory instrumentality, administrative agency, authority, body or other person and/or entity having jurisdiction over the performance of the Work, the Project or the Parties.

Guaranteed Maximum Price (sometimes referred to as the “GMP”) means that monetary value designated as such in Section 4.1.2 of the Agreement.

Hazardous Environmental Condition means the presence of Hazardous Materials in such quantities or circumstances that may be reasonably considered to present an imminent or substantial safety or health hazard for City, any DB-Related Entity, their respective employees, agents or representatives, the general public or the surrounding environment.

Hazardous Materials means any materials, waste, substances and chemicals deemed to be hazardous under applicable Legal Requirements.

Gross Negligence means: (a) a marked and flagrant departure from the standard of conduct of a reasonable person acting in the circumstances at the time of the alleged misconduct; (b) intentional wrongdoing or such wanton or reckless conduct or omissions as constitutes a reckless disregard for harmful, foreseeable and avoidable risks or consequences; or (c) a lack of care that demonstrates reckless disregard for safety (whether human safety or the safety of property), *provided, however*, that Gross Negligence does not include any act or failure to act insofar as it: (x) constituted mere ordinary negligence; or (y) was done or omitted in accordance with the prior written approval of all Parties.

Key Personnel means those individuals designated as such in Exhibit 11.2.6 (Key Personnel and Organizational Chart) to the Agreement.

Lead Designer means _____.

Legal Requirements mean all applicable federal, state and local laws, codes, ordinances, rules, statutes, regulations, orders and decrees, and other requirements of any Governmental Unit, including, without limitation, any interpretation of such items by the applicable Governmental Unit.

Marine Work Subcontractor means _____.

Minor Change has the meaning set forth in Section 9.3.1 below.

Non-Reimbursable Costs has the meaning set forth in Section 4.4 of the Agreement.

Notice of Design-Builder Proposed Change Order has the meaning set forth in Section 9.5.1 below.

Notice of Termination for Convenience means a written notice from City to Design-Builder that terminates the right of Design-Builder to perform all or a portion of the Work, specifying the date upon which such notice shall be deemed effective and any other applicable terms.

Notice to Proceed or NTP has the meaning set forth in Section 3.1 of the Agreement.

Open-Book Basis means allowing the City to review all underlying assumptions, records, stand-alone Subcontractor quotes, and other data associated with each element of pricing, or any adjustment thereto, including assumptions as to Costs of the Work, schedule, composition of equipment, equipment rates, labor rates and burdens, production rates, estimating factors, contingency and indirect costs, risk pricing, inflation and deflation rates, profit, home office overhead rates, fees, charges, levies, incentives, and other items reasonably required by the City to satisfy itself as to the reasonableness and accuracy of the amounts proposed by Design-Builder.

Owner's Advisor means Carollo Engineers, Inc., and its subconsultants.

Party or Parties means, as applicable: (a) in the singular, the City or Design-Builder; or (b) in the plural, the City and Design-Builder.

Pre-Existing Intellectual Property has the meaning set forth in Section 7.4 of the Agreement.

Project means the Waterfront Implementation Project.

Punch List means that list of Work that has been identified as incomplete by the Parties as of the Substantial Completion Date and compiled as set forth under Section 8.2.1 below.

Savings has the meaning set forth in Section 4.8.1 of the Agreement.

Scheduled Final Completion Date means the date that is set forth in Section 3.2.2 of the Agreement.

Schedule of Values is set forth in Exhibit 5.1.1 of the Agreement, and means the tabulation or breakdown of the entire GMP, allocating such GMP to various portions of the Work and other line-items, prepared by Design-Builder in such form and detail, and supported by such data to substantiate its accuracy, as the City may require.

Scheduled Substantial Completion Date means the date that is set forth in Section 3.2.1 of the Agreement.

Self-Perform Work means Work performed by employees of Design-Builder, Marine Work Subcontractor, or any of their Affiliates.

Site is the parcels of land or premises on which the Project is located, as more specifically described in City's Project Criteria.

Startup, Commissioning, and Testing Plan means the testing protocols, procedures and processes, approved by City, for conducting commissioning, startup and testing activities in order to achieve Substantial Completion in accordance with the Contract Documents.

State means the Commonwealth of Virginia.

Subcontract means any contract entered into by Design-Builder and any other DB-Related Entity in connection with the carrying out a portion of the Work.

Subcontractor means any person or entity (other than Design Consultants) with whom Design-Builder has entered into any Subcontract for such person or entity to perform any portion of the Work, including Suppliers.

Sub-Subcontractor means any person or entity having a direct contract with a Subcontractor.

Substantial Completion means that (a) the Work is sufficiently complete in accordance with the Contract Documents so that City can beneficially use and occupy the Project for its intended purposes; and (b) Design-Builder has satisfied or fulfilled all other requirements set forth in Section 8.2.3 below. Unless otherwise expressly stated, any

reference to Substantial Completion applies to the entire Work as a whole, and not to only a portion of the Work.

Substantial Completion Date means the date on which Substantial Completion occurs, as confirmed by City and set forth in a Certificate of Substantial Completion.

Supplier means any person or entity retained by a DB-Related Entity to provide Equipment and Materials, or construction equipment, supplies or other goods to be used in the performance of the Work but not incorporated into the Work.

TIA has the meaning set forth in Section 8.5.2 below.

Willful Misconduct means the intentional or deliberate commission of an act, or omission to act, when the person taking such action or omitting to take such action: (a) knows the action or omission is wrongful; or (b) is recklessly or consciously indifferent as to whether the act or omission is wrongful or not.

Work means all work, services, activities and other obligations to be performed by Design-Builder under the Contract Documents, including without limitation, design, engineering, permitting, procurement of Equipment and Materials, project management, supervision, construction, commissioning, start-up, testing and all other services and deliverables reasonably inferable from the Contract Documents as required for the proper and safe operation of the Project with the operating characteristics set forth in the Contract Documents and to otherwise achieve Final Completion.

Work Change Directive means a written order prepared and signed by City, directing a change in the Work prior to agreement on an adjustment in any Contract Time, GMP, or other terms in the Contract Documents pertaining to the change in the Work.

Work Product means all drawings, specifications, calculations, data, models, images, materials, products, documents, and work developed or produced by or on behalf of Design-Builder in connection with the Project, including, without limitation all materials, products, and such items developed or produced by all Design Consultants and Subcontractors of any tier, in all forms, whether in hard-copy, digital or electronic data, or any other medium.

Article 2 **Design-Builder's Services and Responsibilities**

2.1 General Services.

2.1.1 Design-Builder shall designate a member of its Key Personnel as its Project manager (the "Design-Builder's Project Manager"), who shall be reasonably available to the City and shall have the necessary expertise and experience required to supervise the Work. Design-Builder's Project Manager will be stationed at the Site and present at all appropriate times. Design-Builder will have a representative at the Site authorized to act on its behalf when Design-Builder's Project Manager is not present. Design-Builder shall also designate a qualified member of its Key Personnel as its Project representative (the "Design-Builder's Representative"), who shall communicate regularly with City and shall be vested with the authority to act on behalf of Design-Builder. Neither Design-Builder's Project Manager or Design-Builder's Representative may be replaced without prior written

approval of the City, with such approval not to be unreasonably withheld, and any replacement shall be acceptable to the City.

2.1.2 Design-Builder shall perform the Work in accordance with the Baseline Schedule. Design-Builder shall provide the City with monthly updates, or more frequently as required by conditions and progress of the Work, comparing actual progress to the Baseline Schedule, but such updates shall not be deemed to modify the Baseline Schedule or Contract Times, nor relieve Design-Builder of its obligations to complete the Work within the Contract Times, as may be adjusted in accordance with the Contract Documents. The City's review and approval of the Baseline Schedule and monthly schedule updates 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.

2.1.3 Design-Builder shall provide management, supervision and professional staff for the Work in accordance with Exhibit 11.2.6 (Key Personnel and Organizational Chart) to the Agreement. Design-Builder acknowledges the importance of its Key Personnel in successfully performing the Project. Absent separation of employment, none of the Key Personnel may be withdrawn from the Project without prior written approval of the City, with it being understood and agreed that Design-Builder will provide the City with at least thirty (30) days written notice of any request to withdraw any Key Personnel. Any replacement personnel shall have equivalent skill, experience and reputation. Design-Builder shall remove or replace, or have removed or replaced, any personnel performing the Work if the City has a reasonable objection to such individual.

2.1.4 Design-Builder shall participate in monthly progress meetings with the City. During such meetings, progress during the prior month shall be reviewed. These meetings shall be attended by, among other: (a) Design-Builder's Project Manager and other required Design-Builder personnel, as well as key Subcontractors and Design Consultants responsible for Work completed during the specified duration and Work scheduled during the upcoming reporting duration; and (b) City representatives and others as designated by the City. The City may direct that personnel from Design-Builder and any other DB-Related Entities attend any or all meetings if the City believes, in its sole opinion, that such personnel are necessary to have at such meetings.

2.1.5 Design-Builder acknowledges that the City's ability to successfully complete the Project may be significantly impacted if: (a) the City terminates Design-Builder for either cause or convenience; and (b) certain Design Consultants (including the Lead Designer) are not available to continue working on the Project. Consequently, Design-Builder hereby agrees that if the City exercises its rights to terminate under Article 11 below, the City shall have the right, but not the obligation, to contract directly with any and all Design Consultants for services related to this Project. Design-Builder shall take such steps as are reasonably necessary to enable the City to implement such relationships, including having a provision in its Subcontracts with Design Consultants that, in the event Design-Builder is terminated under this Agreement for any reason, the Design Consultant will in good faith negotiate with the City the contractual terms (e.g., scope of work, compensation and other requirements) associated with such Design Consultant continuing to work on the Project. For the avoidance of doubt, Design-Builder shall have no liability to the City for those acts or omissions of a Design Consultant that take place after the Design Consultant enters into a contract with the City.

2.1.6 Design-Builder assumes responsibility to the City for the proper performance of the Work of all DB-Related Entities and any acts and omissions in connection with such performance.

2.1.7 Design-Builder shall pay all royalties and license fees in connection with the Work.

2.2 Design Professional Services.

2.2.1 Design-Builder shall, consistent with applicable state licensing laws, provide or furnish through Design Consultants or qualified, licensed design professionals employed by Design-Builder, 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. Nothing in the Contract Documents is intended or deemed to create any legal or contractual relationship between the City and any Design Consultant other than the rights afforded to the City under Section 2.1.5 above.

2.2.2 Design-Builder shall: (a) incorporate all applicable obligations and understandings of the Contract Documents applicable to design services in its respective contracts with any Design Consultant and Subcontractors; and (b) require that such obligations be flowed down to lower-tiered Design Consultants, including but not limited to the obligations relative to ownership and use of the Work Product set forth in the Agreement.

2.3 Standard of Care.

2.3.1 Design-Builder shall perform the Work in accordance with: (a) the Contract Documents; (b) applicable Legal Requirements and Governmental Approvals; and (c) Good Engineering and Construction Practice. Notwithstanding the above, if any of (a), (b) or (c) in the preceding sentence conflict, Design-Builder shall be obligated to perform the Work in accordance with the more stringent standard.

2.4 Design Development Services.

2.4.1 Design-Builder and the City shall, consistent with any applicable provision of the Contract Documents, agree upon any interim design submissions that City 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 previously approved interim design submissions, as may have been revised in accordance with the design process set forth in this Section 2.4. On or about the time of the scheduled submissions, Design-Builder and the City 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 that are inconsistent with any previously approved interim design submission, including, without limitation, the GMP Proposal Design Documents. Minutes of the meetings, including a full listing of all changes, will be maintained by Design-Builder and provided to all attendees for review. Changes to previously approved design submissions, including changes to the GMP Proposal Design Documents and Minor Changes, shall be processed in accordance with Article 9. Following the design review meetings, the City shall review and approve the interim design submissions and meeting minutes within twenty-one (21) days after receipt of the required submissions, with the understanding that the Parties may agree to a reduction in such 21-day period for time-sensitive critical path submittals. Design-Builder

shall promptly revise and modify all such submittals so as to fully reflect all comments and shall deliver to the City revised submittals for review and approval.

2.4.2 Design-Builder shall submit to the City the Construction Documents, including drawings and specifications, which shall set forth and describe in detail the requirements for construction of the Work. The Construction Documents shall be consistent with the latest set of approved 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 the City 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 reproducible set of approved Construction Documents to the City prior to commencement of construction.

2.4.3 Notwithstanding anything to the contrary in the Contract Documents: (a) Design-Builder assumes and shall have exclusive responsibility for the accuracy and efficacy of the Construction Documents; and (b) the City's review and/or approval of the GMP Proposal Design Documents, Construction Documents, or any interim design submissions or meeting minutes shall not be deemed to transfer any design liability from Design-Builder to the City or relieve Design-Builder of any of its obligations under the Contract Documents or liability for any design services that were performed under the Interim Agreement or are part of the Work. Accordingly, in no event shall Design-Builder be entitled to any price, schedule or performance relief associated with any error, omission or deficiency in the Construction Documents, and shall bear full responsibility for the consequences of such errors, omissions or deficiencies.

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 Design-Builder will be entitled to an adjustment in the GMP and/or Contract Times to the extent the Cost of the Work incurred by Design-Builder and/or time of performance are adversely impacted by any changes in the Legal Requirements enacted after the Agreement Date, provided Design-Builder satisfies the requirements of Articles 8 and 9 below. Such impacts may include, without limitation, revisions Design-Builder is required to make to the Construction Documents because of such changes in Legal Requirements. Notwithstanding the above, the relief afforded by this Section 2.5.2 shall not apply to changes in Legal Requirements relating to: (a) Design-Builder's or any other DB-Related Entity's corporate existence or the maintenance of its business; (b) changes in Legal Requirements affecting payroll taxes or other taxes associated with labor; or (c) changes in Legal Requirements affecting taxes imposed on an entity's gross revenue, income or profits.

2.6 Government Approvals.

2.6.1 Except for those Governmental Approvals specifically identified in Section 3.5 below as being the responsibility of the City, Design-Builder shall be responsible for obtaining and maintaining all Governmental Approvals that may be required for the proper prosecution and execution of the Work. If any such Governmental Approval is required to be formally issued in the name of the City, Design-Builder shall undertake all efforts to obtain such Governmental Approvals with the City's reasonable support and cooperation. Design-Builder shall develop all data and technical documents for Governmental Approval submittals, prepare and submit all applications, participate in meetings with Governmental Units and the City as required, and expedite all Governmental Approvals to meet Project schedule requirements. Governmental Approval applications and other documentation required in connection with a Governmental Approval shall be subject to approval by City. Design-Builder shall deliver to City, promptly after Design-Builder's receipt, a copy of each such Governmental Approval, with a listing of the status of all such Governmental Approvals included in the monthly reports required by the Contract Documents.

2.6.2 Design-Builder shall provide all commercially reasonable assistance to the City to obtain those Governmental Approvals that are the responsibility of the City under Section 3.5 below. No construction activity will commence until: (a) all Governmental Approvals required for the relevant construction activity (including any activity that may disturb the Site) have been obtained; (b) the City has been notified that such Governmental Approvals have been obtained; and (c) the City has, after reviewing the validity and scope of the Governmental Approval, authorized Design-Builder to proceed.

2.6.3 Design-Builder shall ensure that the Work conforms to the requirements and stipulations of all Governmental Approvals. Design-Builder shall not be entitled to an adjustment in the GMP and/or Contract Times for any events arising from or related to Design-Builder or any other DB-Related Entity violating or failing to comply with any Governmental Approval, including but not limited to suspensions arising therefrom. Such violations and failures to comply shall be at the sole risk of Design-Builder.

2.7 Design-Builder's Construction Phase Services.

2.7.1 Unless otherwise provided in the Contract Documents to be the responsibility of the City, Design-Builder shall provide through itself or Subcontractors the necessary supervision, labor, inspection, commissioning, start-up, testing, Equipment and Materials, construction equipment, supplies, temporary utilities and other temporary facilities and other related services to permit Design-Builder to achieve Substantial Completion and Final Completion of the Project consistent with the Contract Documents. Design-Builder retains all market risk, whether or not foreseeable, pertaining to cost and availability of labor, Equipment and Materials, and all other items required or used in connection with the performance of the Work.

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 Design-Builder shall employ only Subcontractors who are duly licensed and qualified to perform the Work consistent with the Contract Documents.

2.7.4 Design-Builder shall coordinate the activities of all Subcontractors. If any Separate Contractor performs work on, adjacent, or in proximity to the Project or the Site, or has

any element of work that interfaces or affects the Work, 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. Design-Builder specifically agrees to attend and participate in any coordination meetings that are held by the City to manage and coordinate the work of Design-Builder and Separate Contractors.

2.7.5 Design-Builder shall keep the Site reasonably free from debris, trash and construction wastes to permit Design-Builder to perform its construction services efficiently, safely and without interfering with the use of adjacent land areas. Upon Substantial Completion of the Work, Design-Builder shall remove all debris, trash, construction wastes, materials, equipment, machinery and tools arising from the Work.

2.7.6 Design-Builder shall have care, custody, and control of the Project (including but not limited to having responsibility for the security of the Site and risk of loss), until the Substantial Completion Date.

2.7.7 Design-Builder shall be responsible for performing and paying for all utility relocations necessary or convenient to its performance of the Work. For all such relocations, Design-Builder will meet all requirements, procedures and standards set forth in the Contract Documents and/or required by the applicable utility.

2.7.8 Design-Builder shall be responsible for making arrangements to obtain, provide and pay for all temporary and permanent utilities, including but not limited to gas and electric, associated with the Work, except for those utilities specifically identified in the Contract Documents as being provided by the City and furnished without cost to Design-Builder.

2.7.9 During any adverse weather (including but not limited to unusually severe and abnormal weather conditions as set referenced in Section 8.4.3 below), Design-Builder shall take necessary precautions so that the Work may progress properly and is satisfactory in all respects.

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: (a) all individuals at the Site, whether working or visiting; (b) the Work, including Equipment and Materials incorporated into the Work or stored on-Site or off-Site; and (c) 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 member of its Key Personnel with the necessary qualifications and experience to supervise the implementation and monitoring of all safety precautions and programs related to the Work ("Design-Builder's Safety Representative"). 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 of any tier, and others as applicable.

2.8.2 Design-Builder and Subcontractors shall comply with all Legal Requirements relating to safety, as well as any City-specific safety requirements set forth in the Contract

Documents, provided that such City-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 City's Representative and, to the extent mandated by Legal Requirements, to all Governmental Units 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 of any tier of their own contractual and legal obligations and responsibility for: (a) complying with all Legal Requirements, including those related to health and safety matters; and (b) 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 the City that the construction, including all Equipment and Materials, 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 Supplier warranty which provides the City with greater warranty rights than set forth in this Section 2.9.1 or any Contract Document. Design-Builder will provide the City with all Supplier warranties upon Substantial Completion and will perform the Work so as to maintain and preserve such Supplier warranties.

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 above, within a period of one year from the Substantial Completion Date, 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 the City 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, the City, in addition to any other remedies provided under the Contract Documents, may provide Design-Builder with written notice that the City will commence correction of such nonconforming Work with its own forces. If the City does perform such corrective Work, Design-Builder shall be responsible for all reasonable costs incurred by the City 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. Design-Builder shall perform or cause to be performed all corrective work in a manner that will minimize interference with the ongoing operations of the Project.

2.10.3 The City may, based on good cause, direct Design-Builder to perform a "root cause" analysis of any alleged defect in the Work. If Design-Builder fails to perform such analysis as directed by the City, or if the City concludes that the "root cause" analysis is

flawed, the City may elect to conduct an independent analysis of the alleged defect, whereupon Design-Builder shall cooperate with the City and provide such information relevant to the alleged defect as the City may request. If the “root cause” or independent analysis reveals a defect or defects in any part of the Work, Design-Builder shall be responsible for the costs and expenses of remedying such defects, including the costs of the “root cause” or independent analysis. If the “root cause” or independent analysis demonstrates that there is no defect, then the City shall bear the reasonable costs and expenses of such analyses. All remedial measures related to defects revealed by any “root cause” or independent analysis must be approved by the City prior to implementation by Design-Builder.

2.10.4 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 the City may have regarding Design-Builder’s other obligations under the Contract Documents, at law, or in equity.

2.11 Uncovering Work

2.11.1 If any Work is covered contrary to the written request of the City, then Design-Builder shall, if requested by the City, uncover such Work for the City’s observation, and then replace the covering, all at Design-Builder’s expense.

2.11.2 If the City considers it necessary or advisable that covered Work be observed by the City, or inspected or tested by others, then the City will so advise Design-Builder and Design-Builder shall uncover, expose, or otherwise make available for observation, inspection, or testing as the City may require, that portion of the Work in question. If it is found that the uncovered Work is defective, Design-Builder shall be responsible for the costs and expenses relating to such uncovering and correction of the defective Work. If it found that the uncovered Work is not defective, Design-Builder will be entitled to an adjustment in the GMP and/or Contract Times for the impact of such uncovering, provided Design-Builder satisfies the requirements of Articles 8 and 9 below.

2.12. Startup, Commissioning, and Testing.

2.12.1 Design-Builder shall prepare and submit to the City for its review and approval a detailed Startup, Commissioning, and Testing Plan in accordance with the Contract Documents. The City’s approval of the Startup, Commissioning, and Testing Plan is a condition precedent to commencement of performance testing required for the achievement of Substantial Completion. Design-Builder shall remain responsible for supervision of the Work, including for any operation and maintenance required of the Equipment and Materials, throughout startup, commissioning, and conducting all testing until the Substantial Completion Date.

2.12.2 Design-Builder will participate in such meetings as are required to develop a coordinated plan for startup, commissioning, testing and confirming Substantial Completion.

2.13. Punch List Requirements.

2.13.1 Design-Builder shall submit a proposed Punch List in accordance with Section 8.2.1 below when it believes that it has achieved Substantial Completion. Design-Builder

shall promptly complete all items on the Punch List. The City shall have the option to correct or otherwise resolve any and all Punch List items not promptly completed by Design-Builder by using its own forces or by hiring others. The cost of such correction or resolution of remaining punch list items by the City or others shall be borne by Design-Builder.

Article 3 **City's Services and Responsibilities**

3.1 Duty to Cooperate.

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

3.1.2 The City shall provide timely reviews and approvals (where required) of interim design submissions and the Construction Documents consistent with the turnaround times set forth in the Contract Documents and the Baseline Schedule, *provided, however*, that, unless stated otherwise in the Contract Documents, the City shall have twenty-one (21) days after receipt of such submissions to act upon such submissions, unless Design-Builder and the City mutually agree upon a shorter review period for a specific submission. Design-Builder may, for more complex or time-sensitive submittals, request joint review meetings with the City in the interest of expediting such reviews, and the City will, to the extent it is reasonably able to do so, attempt to satisfy such requests. City approval, or narrative indicating approval by the City or indication that the City is approving, means that the City is reviewing for conformance with the Contract Documents and indicating its belief at a specific time that submittals being reviewed are in conformance. In providing such approval, the City is not accepting any responsibility or liability for itself or relieving responsibility for performance of the Design-Builder under the Contract Documents, for which the Design-Builder remains wholly responsible.

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

3.2 Furnishing of Services and Information.

3.2.1 The City provided to Design-Builder, at its own cost and expense, the City-Furnished Information.

3.2.2 The City 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; *provided, however*, that: (a) Design-Builder provides the City with reasonable advance written notice of the need for such agreement; and (b) Design-Builder retains all responsibility to obtain any such agreement to the extent pertaining to construction means, methods, techniques, sequences and procedures. The City is further responsible for all costs, including attorneys' fees, incurred in securing those necessary agreements for which it is responsible under this Section 3.2.2.

3.3 Financial Information.

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

3.4 City’s Representative.

3.4.1 The City shall designate a representative responsible for providing City-Furnished Information and approvals in a timely manner to permit Design-Builder to fulfill its obligations under the Contract Documents (“City’s Representative”). City’s Representative shall also provide Design-Builder with prompt notice if he/she observes any failure on the part of Design-Builder to fulfill its contractual obligations, including any errors, omissions or defects in the performance of the Work. City’s Representative shall communicate regularly with Design-Builder and shall be vested with the authority to act on behalf of the City.

3.4.2 City’s Representative shall have full authority to act on behalf of the City with respect to matters requiring City’s approval or authorization. City’s Representative may delegate all or a portion of its authority to others by written notice to Design-Builder, which delegated authority may be revoked or modified at any time by written notice to Design-Builder.

3.5 Government Approvals.

3.5.1 The City shall obtain and pay for only the Governmental Approvals expressly set forth in Exhibit 11.2.7 (Responsibility Matrix for Governmental Approvals) of the Agreement as being the sole responsibility of City.

3.5.2 The City shall provide reasonable assistance to Design-Builder in obtaining those Governmental Approvals that are Design-Builder’s responsibility.

3.6 Separate Contractors.

3.6.1 The City is responsible for all work performed on the Project or at the Site by Separate Contractors with whom the City has contracted. The City shall contractually require its Separate Contractors to cooperate, and coordinate their activities so as not to interfere, with Design-Builder in order to enable Design-Builder to timely complete the Work consistent with the Contract Documents.

Article 4
Hazardous Environmental Conditions and Differing Site Conditions

4.1 Hazardous Environmental Conditions.

4.1.1 Where the City has advised Design-Builder of known Hazardous Materials or Hazardous Environmental Conditions at the Site, or where Design-Builder has identified Hazardous Materials or Hazardous Environmental Conditions at the Site during its performance of the Interim Agreement, these Hazardous Materials and Hazardous Environmental Conditions are part of the Work and Design-Builder shall take such action as is necessary, in accordance with applicable Legal Requirements, to plan for and to remediate and render harmless all such Hazardous Materials and Hazardous

Environmental Conditions. Remediation plans for such known Hazardous Materials and Hazardous Environmental Conditions shall be provided to the City for approval prior to undertaking the remediation.

4.1.2 If Design-Builder encounters any unknown Hazardous Environmental Conditions at the Site, it shall stop Work immediately in the affected part of the Work to the extent required to avoid any such safety or health hazard until it has taken such action as is necessary, in accordance with applicable Legal Requirements, to protect the interests of any affected party. Design-Builder shall, immediately upon encountering any Hazardous Environmental Conditions at the Site, notify the City and, if required by Legal Requirements, assist the City in providing notifications to all Governmental Units having jurisdiction over the Project or Site.

4.1.3 Design-Builder, in consultation with the City, shall take all necessary measures required to ensure that Hazardous Environmental Conditions are remediated or rendered harmless in accordance with applicable Legal Requirements. Design-Builder shall, as may be directed by the City and prior to proceeding with any such work: (a) obtain all environmental site assessments of the affected property and submit copies of such assessments to the City for its approval; (b) develop remediation plans for the Hazardous Environmental Conditions, subject to the City's approval; and (c) obtain on the City's behalf all applicable Governmental Approvals to implement such plans. During the period of any investigation and remediation efforts, Design-Builder shall take all necessary measures to isolate and contain such Hazardous Environmental Conditions from the unaffected parts of the Work, and shall continue the Work to the maximum extent possible on unaffected parts of the Work.

4.1.4 Except for those Hazardous Materials and Hazardous Environmental Conditions set forth in Section 4.1.6 below, Design-Builder will be entitled to an adjustment in the GMP and/or Contract Times to the extent Design-Builder's cost and/or time of performance have been adversely impacted by the presence of unknown Hazardous Environmental Conditions, provided Design-Builder satisfies the requirements of Articles 8 and 9 below.

4.1.5 To the fullest extent permitted by Legal Requirements, the City shall indemnify and hold harmless Design-Builder from and against any and all claims, losses, damages, liabilities and expenses, including attorneys' fees and expenses, arising out of or resulting from unknown Hazardous Environmental Conditions. Nothing in this Section 4.1.5 shall obligate the City to indemnify or hold harmless Design-Builder from and against the consequences of the breach of contract, negligence, Gross Negligence, or Willful Misconduct of Design-Builder or any other DB-Related Entity.

4.1.6 Notwithstanding anything to the contrary in this Section 4.1, Design-Builder shall bear full responsibility for the handling, treatment, storage, removal, remediation, avoidance, or other appropriate action (if any), with respect to: (a) any Hazardous Material or Hazardous Environmental Condition present at, on, in or under, or migrating and/or emanating to or from the Site, to the extent brought or caused to be brought on the Site by any act or omission of Design-Builder or any other DB-Related Entity; (b) Hazardous Materials or Hazardous Environmental Conditions that are part of the Work pursuant to Section 4.1.1 above; and (c) the creation or exacerbation of any known or unknown Hazardous Environmental Condition due to the breach of contract, negligence, Gross Negligence, or Willful Misconduct of Design-Builder or any other DB-Related Entity. To

the fullest extent permitted by Legal Requirements, Design-Builder shall indemnify, defend and hold harmless each City Indemnitee from and against all claims, losses, damages, liabilities and expenses, including attorneys' fees and expenses, arising out of or resulting from Items (a), (b) and/or (c) above.

4.1.7 Nothing contained in this Section 4.1 is intended to identify Design-Builder as the generator of any pre-existing Hazardous Materials or Hazardous Environmental Condition, except as set forth in applicable Legal Requirements.

4.2 Inspection of Site Conditions.

4.2.1 Design-Builder represents and warrants that it has, as of the Agreement Date, ascertained the nature and location of the Work, the character and accessibility of the Site, the existence of obstacles to construction which are ascertainable or visible upon a thorough investigation of the Site, the availability of facilities and utilities, the location and character of existing or adjacent work or structures, the surface conditions, and other general and local conditions (including labor) which might affect its performance or cost of the Work.

4.2.2 If Design-Builder undertakes any additional testing, inspections or investigations, all reports or analyses generated thereby shall be furnished to the City promptly after such reports or analyses are generated.

4.3 Differing Site Conditions.

4.3.1 Concealed or latent physical conditions or subsurface conditions at the Site that: (a) materially differ from the conditions indicated in the Contract Documents; or (b) are of an unusual nature, differing materially from the conditions ordinarily encountered and generally recognized as inherent in the Work, are collectively referred to herein as "Differing Site Conditions." If Design-Builder encounters a Differing Site Condition, Design-Builder will be entitled to an adjustment in the GMP and/or Contract Times to the extent the Cost of the Work incurred by Design-Builder and/or time of performance are adversely impacted by the Differing Site Condition, and provided Design-Builder satisfies the requirements of Articles 8 and 9 below. The term "Differing Site Conditions" excludes: (a) conditions of which Design-Builder had actual or constructive knowledge as of the Agreement Date; and (b) conditions that should have been discovered through a reasonable Site investigation undertaken during the Interim Agreement. For the avoidance of doubt, Hazardous Environmental Conditions are not deemed Differing Site Conditions, and shall be treated as set forth under Section 4.1 above.

4.3.2 Upon encountering a Differing Site Condition, Design-Builder shall provide prompt written notice to the City 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.

4.3.3 The Geotechnical Baseline Report (GBR) sets forth and establishes the contractual geotechnical baseline for the assumed geotechnical conditions for certain areas of the Project. Whenever there is an inconsistency between conditions indicated in the GBR and: (a) conditions indicated in the Geotechnical Data Report (GDR); or (b) conditions indicated elsewhere in the Contract Documents, then the conditions indicated in the GBR shall take precedence, and shall be the conditions against which actual

conditions encountered are compared for the purpose of determining if a Differing Site Condition exists.

4.4 Historical Artifacts.

4.4.1 If previously unidentified historic properties or unanticipated effects to historic properties are discovered during construction, including any buried structural remains (e.g., wall foundations, wells, privies, cisterns), Design-Builder shall immediately halt all activity within the immediate area of the discovery and in any adjacent areas where additional or related resources may reasonably be expected to be present, and notify the City of the discovery by telephone or in person, which notice shall be given within twenty-four (24) hours of Design-Builder making such discovery. Design-Builder shall take interim measures to protect the discovery from looting and vandalism. The City will coordinate directly with the U.S. National Park Service and/or Alexandria Archeology Commission, as appropriate, to determine eligibility of the resources, including the protocol for recovery and/or documentation, if necessary. Work in all areas not subject of the discovery may continue. All items discovered by Design-Builder belong to the property owner.

4.4.2 If Design-Builder has been adversely impacted by the presence, removal or remediation of a discovery under Section 4.4.1 above, Design-Builder will be entitled to an adjustment in the GMP and/or Contract Times to the extent the Cost of the Work incurred by Design-Builder and/or time of performance are adversely impacted by such discovery and provided Design-Builder satisfies the requirements of Articles 8 and 9 below

Article 5 **Insurance and Bonds**

5.1 Design-Builder's Insurance Requirements.

5.1.1 Design-Builder shall obtain and maintain, at its own cost and expense, the insurance coverages specified in Exhibit 11.1 (Insurance Requirements) of the Agreement, which insurance shall be in accordance with this Section 5.1.

5.1.2 All insurance required by Exhibit 11.1 (Insurance Requirements) of the Agreement must be obtained and maintained from insurance companies that have at least an A.M. Best's Insurance Guide ("Best's Guide") Rating of A- and Financial Size Category of Class VII or better, according to the most current edition of the Best's Guide, and are authorized to do business in the Commonwealth of Virginia.

5.1.3 Design-Builder shall deliver to the City, with copies to each additional insured, the following:

(a) Certificates of insurance and endorsements establishing that Design-Builder has obtained and is maintaining the policies and coverages required hereunder, with the understanding that updated, compliant certificates of insurance and endorsements shall be delivered annually, at least ten (10) days prior to the expiration of any policy, to evidence renewal of the required insurance coverages.

(b) Upon request by the City or any additional insured, evidence of such required insurance, including documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant endorsements, exclusions, and evidence of insurance required to be purchased and maintained by Design-Builder,

Design Consultants, or Subcontractors. In any documentation furnished under this provision, Design-Builder, Design Consultants, and Subcontractors may block out (redact) any confidential premium or pricing information or other information not applicable to this Project or Agreement.

(c) Failure of the City or any additional insured to demand the documents required by this Section 5.1.3, or failure of the City identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the obligation of the relevant party (i.e., Design-Builder, Design Consultant, or Subcontractor) to obtain and maintain such insurance.

5.1.4 Design-Builder shall require its first-tier Design Consultants and Subcontractors to purchase and maintain the insurance coverages specified under Exhibit 11.1 (Insurance Requirements) to the Agreement.

5.1.5 The City does not represent that insurance coverage and limits established in Exhibit 11.1 (Insurance Requirements) of the Agreement will be adequate to protect the interests of Design-Builder, Design Consultants, or Subcontractors. Each such party is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Design-Builder deems necessary.

5.1.6 The insurance and insurance limits required under Exhibit 11.1 (Insurance Requirements) of the Agreement are minimums and shall not be deemed as a limitation on Design-Builder's liability, or that of any other DB-Related Entity, under the indemnities granted to the City, additional insureds and other individuals and entities in the Contract Documents or otherwise.

5.1.7 If in any instance Design-Builder has not performed its obligations respecting obtaining and maintaining insurance coverage required hereunder, or is unable to enforce and collect any such insurance for failure to assert claims in accordance with the terms of the insurance policies, then for purposes of determining Design-Builder's liability and the limits thereon or determining reductions in compensation due from the City to Design-Builder on account of available insurance, Design-Builder shall be treated as if it has elected to self-insure up to the full amount of insurance coverage that would have been available had Design-Builder performed such obligations and not committed such failure.

5.1.8 Except as set forth in Section 4.6.1 of the Agreement relative to the Contingency, Design-Builder and all other DB-Related Entities shall be solely responsible for any and all deductibles or self-insured retentions that shall apply under any required, or otherwise purchased, insurances and shall have no recourse against the City for any such costs.

5.1.9 All policies of insurance that Design-Builder is required to purchase and maintain under the Agreement shall:

(a) Contain a provision requiring the insurer to give not less than thirty (30) days' prior notice to the City whenever the insurer gives Design-Builder a notice of cancellation or non-renewal with respect to the policy (except in the case of any non-premium payment, not less than ten (10) days' prior notice, which the insurer shall be obligated to give to the City simultaneously with providing such notice to Design-Builder). The provision required by the preceding sentence shall not be deemed to infer a right of cancellation that would otherwise not exist in the absence of such provision.

(b) Delete any specific design-build or similar exclusions that could compromise coverage because of Design-Builder's involvement in the design-build process.

(c) Contain coverage terms and conditions that reflect the industry standard for projects of a similar size, scope, and nature of this Project that the commercial market will provide and support as of the date of such insurance procurement and any subsequent renewals.

(d) Other than for professional liability insurance, workers compensation/employer's liability insurance and Builder's Risk Insurance, where additional insured coverage is required include cross-liability clauses allowing one insured to bring a claim against another insured party. With regard to pollution liability insurance, a cross-liability clause will be allowed as long as it does not impact the City's ability to sue another insured party and collect under the policy.

(e) Other than for professional liability insurance and workers compensation/employer's liability insurance, be endorsed so that the insurer agrees to waive, to the extent permitted by law, all rights of subrogation or action that it may have or acquire against the City, City Indemnitees, or any additional insured.

(f) Other than for professional liability insurance, workers compensation/employer's liability insurance, automobile liability insurance, and contractor pollution liability insurance, contain a provision under which the insurer agrees that the failure of one insured to observe and fulfill the terms of the policy will not prejudice the coverage of the other insureds.

(g) With regard to Builder's Risk Insurance and any other first-party property insurance, have each policy endorsed to contain a standard mortgagee clause to the effect that the City and other insureds will not be prejudiced by an unintended and/or inadvertent error, omission or mistaken description of the risk interest in property insured under the policies, incorrect declaration of values, failure to advise insurers of any change of risk interest or property insured, or failure to comply with a statutory requirement.

(h) For commercial general liability and umbrella/excess liability insurance, not include defense costs within the limits of coverage or permit erosion of coverage limits by defense costs.

(i) Design-Builder's commercial general liability, automobile liability, umbrella/excess, and pollution liability must:

(1) Include and list as additional insureds the City and the City Indemnitees, and include coverage for the respective officers, directors, members, partners, and employees of all such additional insureds;

(2) Afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

(3) Not seek contribution from insurance maintained by the additional insured; and

(4) As to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Design-Builder's acts or omissions, or the acts and omissions of DB-Related Entities, in the performance of Design-Builder's operations.

5.2 Performance and Payment Bonds.

5.2.1 Design-Builder shall, no later than ten (10) days after the Agreement Date, provide the City with: (a) a performance bond in the penal amount equal to one hundred percent (100%) of the GMP, which bond shall cover the faithful performance of all the Design-Builder's obligations under the Contract Documents ("Performance Bond"); and (b) a payment bond in the penal amount equal to one hundred percent (100%) of the GMP ("Payment Bond"). The forms of the Performance Bond and Payment Bond are those set forth in Exhibits 11.13(a) and 11.13(b) respectively to the Comprehensive Agreement. The Performance Bond shall remain valid for a period of two (2) years after Final Completion. If Design-Builder fails to provide such bonds, Design-Builder may be found in material default of the Agreement.

5.2.2 The Performance and Payment Bonds shall be provided by a surety authorized by applicable Legal Requirements to do business in the Commonwealth of Virginia, with an A.M. Best Company Rating of not less than A VIII. The surety must also be listed in the U.S. Department of Treasury's Circular 570.

Article 6 **Payment**

6.1 General.

6.1.1 The City shall pay Design-Builder for the Work in accordance with Article 5 of the Agreement and this Article 6.

6.1.2 The City shall pay Design-Builder for the Work through monthly progress payments described in Section 6.2 below, with payments to be based upon the Schedule of Values set forth in Exhibit 5.1.1 (Schedule of Values) to the Agreement. In making such progress payments, the City shall retain the amounts set forth in Section 5.2 of the Agreement, as well as other amounts permitted under the Contract Documents or at law.

6.2 Monthly Progress Payments.

6.2.1 On or before the date established in the Agreement, Design-Builder shall submit for the City'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 accompanied by all supporting documentation required by the Contract Documents, including, without limitation, such documents, information and data as the City may require to: (a) waive or release lien rights for all Work performed (other than with respect to any retainage then withheld); and (b) evaluate or verify the right to receive payment of any amount requested for payment.

6.2.2 The Application for Payment may request payment for Equipment and Materials not yet incorporated into the Project, provided that: (a) the City is satisfied that the Equipment and Materials are suitably stored at either the Site or another acceptable location; (b) the Equipment and Materials are protected by suitable insurance; and (c) upon the earlier of incorporation into the Project or payment, the City will receive the Equipment and Materials free and clear of all liens and encumbrances.

6.2.3 The Application for Payment shall constitute Design-Builder's representation that the Work described therein 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 the City 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. The passage of title shall not be construed as relieving Design-Builder from the sole responsibility for all Work upon which payments have been made (including but not limited to risk of loss or the restoration of any damaged Work), or as waiving the right of the City to require the fulfillment of all of the terms of the Contract Documents.

6.3 Withholding of Payments.

6.3.1 On or before the date established in the Agreement, the City shall pay Design-Builder all amounts properly due. If the City 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 twenty (20) days after receipt of the Application for Payment. The notice shall indicate the specific amounts the City intends to withhold, the reasons and contractual basis for the withholding, and the specific measures Design-Builder must take to rectify the City's concerns. Design-Builder

and the City will attempt to resolve the City'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 below.

6.3.2 Notwithstanding anything to the contrary in the Contract Documents, the City shall pay Design-Builder all undisputed amounts in an Application for Payment within the times required by the Agreement. Payments which the City disputes in good faith shall not be deemed due.

6.4 Right to Stop Work and Interest.

6.4.1 If the City fails to pay timely Design-Builder any amount that becomes due and is not subject to a good faith dispute, then Design-Builder, in addition to all other remedies provided in the Contract Documents, may stop Work pursuant to Section 11.3 below. All payments due and unpaid, other than those subject to a good faith dispute, shall bear interest at the rate set forth in the Agreement.

6.5 Design-Builder's Payment Obligations.

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

6.6 Final Payment.

6.6.1 Upon achieving Final Completion in accordance with Section 8.3 below, Design-Builder shall provide the City with a Final Application for Payment. The Final Application for Payment shall be accompanied by all supporting documentation required by the Contract Documents, including, without limitation the following:

(a) An affidavit that there are no claims, obligations or liens outstanding or unsatisfied for labor, services, Equipment and Materials, construction equipment, supplies, taxes or other items performed, furnished or incurred for or in connection with the Work which will in any way affect the City's interests;

(b) A general release executed by Design-Builder waiving all claims, except for receipt of final payment by Design-Builder and those claims previously made in writing to the City and remaining unsettled at the time of final payment, which previously made claims shall be specifically listed in an attachment to the general release;

(c) Consent of Design-Builder's surety to final payment;

(d) All record information, operating manuals, warranties and other deliverables required by the Contract Documents, to the extent they have not been previously provided to the City;

(e) All documents, information and data as the City may require to: (a) unconditionally waive or release lien rights in connection with all Work performed (other than with respect to claims for Work not waived under the general release provided under

(b) above); and (b) evaluate or verify the right to receive payment of any amount requested for payment; and

(f) Certificates of insurance, or other evidence reasonably required by the City, confirming that required coverages will remain in effect consistent with the requirements of the Contract Documents.

6.6.2 After receipt of a proper Final Application for Payment from Design-Builder, the City shall make final payment by the time required in the Agreement.

Article 7 **Indemnification**

7.1 Intellectual Property Infringement.

7.1.1 Design-Builder shall defend any action or proceeding brought against any City Indemnitee 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 or unauthorized use of any patent, trademark, copyright, or trade secret now or hereafter issued. The City 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 the City Indemnitees from and against all damages and costs, including but not limited to attorneys' fees and expenses awarded against City Indemnitees or Design-Builder in any such action or proceeding. Design-Builder agrees to keep all City Indemnitees regularly informed of all developments in the defense of such actions.

7.1.2 If any City Indemnitee is enjoined from the operation or use of the Work, or any part thereof, as the result of any patent, trademark, copyright or trade secret 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: (a) modify the Work so as to avoid infringement of any such patent, trademark copyright, or trade secret; or (b) replace said Work with Work that does not infringe or violate any such patent, trademark, copyright or trade secret; *provided, however,* that any such modification or replacement shall not adversely affect the performance, use, operation, or any material characteristic of the Project, and shall be subject to the approval of the City Indemnitees.

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, trademark, copyright or trade secret: (a) relating solely to a particular process or product of a particular manufacturer specified by the City and not offered or recommended by Design-Builder to the City; or (b) arising from modifications to the Work by the City or its agents after the Substantial Completion Date. If the suit, claim or proceeding is based upon events set forth in the preceding sentence, the City shall, to the fullest extent permitted by Legal Requirements, defend, indemnify and hold harmless Design-Builder to the same extent Design-Builder is obligated to defend, indemnify and hold harmless the City in Section 7.1.1 above.

7.2 Tax Claim Indemnification.

7.2.1 If, in accordance with the City's direction, an exemption for all or part of the Work is claimed for taxes, the City, to the fullest extent permitted by Legal Requirements, shall indemnify, defend and hold harmless Design-Builder from and against any liability, penalty, interest, fine, or tax assessment imposed by the applicable Governmental Unit, and reasonable attorneys' fees or other expenses or costs incurred by Design-Builder as a result of defending a claim caused by any action taken by Design-Builder in accordance with the City's directive with respect to such claimed tax exemption. The City shall furnish Design-Builder with any applicable tax exemption certificates necessary to obtain such exemption, upon which Design-Builder may rely.

7.3 Payment Claim Indemnification.

7.3.1 Provided that the City is not in breach of its contractual obligation to make payments to Design-Builder for the Work, Design-Builder shall indemnify, defend and hold harmless the City Indemnitees from any claims or mechanic's liens brought against any City Indemnitee or against the Project as a result of the failure of Design-Builder or any other DB-Related Entity to pay for any services, Equipment and Materials, 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 any City Indemnitee that such a claim has been asserted 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 that will remove such claim or lien from title. If Design-Builder fails to do so, the City Indemnitees 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 the City Indemnitees from and against claims, losses, damages, liabilities, including attorneys' fees and expenses, for bodily injury, sickness or death, and property damage or destruction (other than to the Work itself) to the extent resulting from the Gross Negligence, Willful Misconduct or negligent acts or omissions of Design-Builder or any other DB-Related Entity. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 7.4.

7.4.2 If an employee of any Design-Builder or any other DB-Related Entity has a claim against any City Indemnitee, 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 or any other DB-Related Entity under any employee benefit acts, including workers' compensation or disability acts.

7.5 Defense and Indemnification Procedures.

7.5.1 If any City Indemnitee receives notice of or otherwise has actual knowledge of a claim which it believes is within the scope of Design-Builder's indemnification under the Contract Documents, it shall by writing as soon as practicable: (a) inform Design-Builder of such claim; (b) send to Design-Builder a copy of all written materials the City Indemnitee has received asserting such claim; and (c) notify Design-Builder that either: (i) the defense of such claim is being tendered to Design-Builder; or (ii) the City Indemnitee has elected to conduct its own defense for a reason set forth below.

7.5.2 If the insurer under any applicable insurance policy accepts tender of defense, Design-Builder and the City Indemnitee shall cooperate in the defense as required by the insurance policy. If no defense is provided by insurers under potentially applicable insurance policies, then the following provisions shall apply.

7.5.3 If the defense is tendered to Design-Builder, it shall within forty-five (45) days of said tender deliver to the City Indemnitee a written notice stating that Design-Builder: (a) accepts the tender of defense and confirms that the claim is subject to full indemnification hereunder without any “reservation of rights” to deny or disclaim full indemnification thereafter; (b) accepts the tender of defense but with a “reservation of rights” in whole or in part; or (c) rejects the tender of defense if it reasonably determines it is not required to indemnify against the claim under the Contract Documents. If such notice is not delivered within such forty-five (45) days, the tender of defense shall be deemed rejected.

7.5.4 If Design-Builder accepts the tender of defense, Design-Builder shall have the right to select legal counsel for the City Indemnitee, subject to reasonable approval of the City Indemnitee, and Design-Builder shall otherwise control the defense of such claim, including settlement, and bear the fees and costs of defending and settling such claim. During such defense: (a) Design-Builder shall, at Design-Builder’s expense, fully and regularly inform the City Indemnitee of the progress of the defense and of any settlement discussions; and (b) the City Indemnitee shall, at Design-Builder’s expense for all of the City Indemnitee’s reasonable out-of-pocket third party expenses, fully cooperate in said defense, provide to Design-Builder all materials and access to personnel it requests as necessary for defense, preparation and trial and which or who are under the control of or reasonably available to the City Indemnitee and maintain the confidentiality of all communications between it and Design-Builder concerning such defense to the extent allowed by law.

7.5.5 The City Indemnitee shall be entitled to select its own legal counsel and otherwise control the defense of such claim if: (a) the defense is tendered to Design-Builder and it refuses the tender of defense, or fails to accept such tender within forty-five (45) days, or reserves any right to deny or disclaim such full indemnification thereafter; or (b) the City Indemnitee, at the time it gives notice of the claim or at any time thereafter, reasonably determines that: (i) a conflict exists between it and Design-Builder which prevents or potentially prevents Design-Builder from presenting a full and effective defense; or (ii) Design-Builder is otherwise not providing an effective defense in connection with the claim and Design-Builder lacks the financial capability to satisfy potential liability or to provide an effective defense. The City Indemnitee may assume its own defense pursuant to the above by delivering to Design-Builder written notice of such election and the reasons thereof.

7.5.6 If the City Indemnitee is entitled and elects to conduct its own defense pursuant hereto, all reasonable costs and expenses it incurs in investigating and defending and claim for which it is entitled to indemnification hereunder (and any settlements or judgments resulting there from) shall be reimbursed by Design-Builder after completion of the proceeding.

7.5.7 If the City Indemnitee is entitled to and elects to conduct its own defense, then it shall have the right to settle or compromise the claim with Design-Builder’s prior written consent, which shall not be unreasonably withheld or delayed, or with approval of the court, and with the full benefit of Design-Builder’s indemnity. Notwithstanding the

foregoing, if the City Indemnitee elects to conduct its own defense and it is later determined that no indemnification obligation existed as to the particular claim, the City Indemnitee shall pay its own costs and expenses relating thereto. In addition, if the City Indemnitee elects to conduct its own defense because it perceives a conflict of interest, the City Indemnitee shall pay its own costs and expenses relating thereto.

7.6 Survival.

7.6.1 All of Design-Builder's obligations under this Article 7 shall survive any termination of the Agreement, whether for cause or convenience.

Article 8 **Time**

8.1 General.

8.1.1 Design-Builder agrees that it will commence performance of the Work and achieve completion of the Work within the Contract Times in accordance with Article 3 of the Agreement.

8.1.2 Design-Builder shall perform the Work in accordance with the Baseline Schedule. Design-Builder shall provide the City with monthly updates, or more frequently as required by conditions and progress of the Work, comparing actual progress to the Baseline Schedule, but such updates shall not be deemed to modify the Baseline Schedule or Contract Times, nor relieve Design-Builder of its obligations to complete the Work within the Contract Times, as may be adjusted in accordance with this Article 8.

8.2 Substantial Completion.

8.2.1 Design-Builder shall notify the City when it believes the Work has achieved Substantial Completion and is ready for the City to prepare and execute a Certificate of Substantial Completion. As a condition to such notice, Design-Builder shall have prepared and submitted to the City a proposed Punch List, including planned dates for completion for each Punch List item. In no event shall the Punch List contain any incomplete items that would impact the ability of the City to operate and maintain the Project as intended, safely, and in compliance with Legal Requirements. By submitting the Punch List to the City, Design-Builder represents that work on the Punch List will be completed by the Scheduled Final Completion Date. The City shall have the right to approve the Punch List in its reasonable discretion. The failure to include any items on such list does not alter the responsibility of Design-Builder to complete all Work in accordance with the Contract Documents.

8.2.2 Within five (5) days of the City's receipt of Design-Builder's notice, the City and Design-Builder will jointly inspect the Work to assess the Punch List and verify that the Work has achieved progress required for Substantial Completion in accordance with the requirements of the Contract Documents.

8.2.3 Substantial Completion shall be deemed to have occurred only when all of the following conditions have been satisfied:

(a) Design-Builder has submitted, and the City has approved in writing (such approval not to be unreasonably withheld or delayed) a certification by Design-Builder to

the City that the Work, excepting only items on the approved Punch List, is complete in accordance with the Contract Documents;

(b) Design-Builder and the City have agreed in writing upon the Punch List;

(c) Design-Builder has delivered to the City copies of the warranties of all Equipment and Materials, together with copies of all related operating manuals supplied by, or required from, Suppliers;

(d) Design-Builder has successfully completed all performance tests required under the Contract Documents and provided the City with copies of all test results and any required certification;

(e) All Governmental Approvals required for the occupancy and continued operations and maintenance of the Project by the City or others have been obtained and are in full force and effect; and

(f) All Delay Liquidated Damages due the City, if any, have been paid in full by Design-Builder or otherwise satisfied.

8.2.4 The City will inspect the Work following notice from Design-Builder, evaluate Design-Builder's submissions under Section 8.2.3 above, and determine whether Substantial Completion has been achieved. If the City determines that Substantial Completion has not yet been achieved, it shall so notify Design-Builder in writing of the reasons for such determination. Design-Builder shall expeditiously remedy the issues and, when completed, re-request in writing that the City perform a Substantial Completion inspection.

8.2.5 When the City agrees that Design-Builder has satisfied all other requirements for Substantial Completion, the City will prepare a Certificate of Substantial Completion that will set forth: (a) the Substantial Completion Date; (b) the approved Punch List; (c) provisions (to the extent not already provided in the Contract Documents or requiring modification) establishing the City's and Design-Builder's responsibility for the Project's security, maintenance, utilities, insurance, and damage to Work; and (d) an acknowledgment that warranties commence to run on Substantial Completion Date, except as may otherwise be noted in the Certificate of Substantial Completion.

8.2.6 The Substantial Completion Date shall be the day on which the City has executed the Certificate of Substantial Completion. However, for the sole purpose of determining Design-Builder's liability to the City for Delay Liquidated Damages for failure to achieve Substantial Completion on or before the Scheduled Substantial Completion Date, Substantial Completion shall be deemed effective as of the date Design-Builder has executed the Certificate of Substantial Completion.

8.3 Final Completion.

8.3.1 Final Completion shall be deemed to have occurred when all of the following conditions have been satisfied:

(a) Design-Builder has achieved Substantial Completion in accordance with Section 8.2 above;

(b) All Work, including all clean-up and removal of construction materials, demolition debris and temporary facilities, is complete, and in all respects is in compliance with the Contract Document;

(c) Design-Builder shall have delivered to the City all closeout documents and other deliverables required by the Contract Documents;

(d) Design-Builder's surety has consented to the release of final payment to Design-Builder; and

(e) Design-Builder has certified to the City that all of its claims against the City have been resolved, except for those set forth in the attachment to the general release described in Section 6.6.1(b) above;

(f) All Delay Liquidated Damages due under the Agreement have been paid or otherwise satisfied; and

(g) Design-Builder and the City have executed a Certification of Final Completion that all of the foregoing conditions have been satisfied.

8.3.2 Design-Builder shall notify the City when it believes the Work has achieved Final Completion and is ready for the City to prepare and execute a Certificate of Final Completion. The City shall determine, within twenty-one (21) days following its receipt of such notice, whether it concurs that Final Completion has been achieved. If the City disagrees, it shall promptly send written notice to Design-Builder of the basis for its disagreement. Design-Builder shall expeditiously correct the conditions raised by the City in order to achieve Final Completion. The preceding process will continue until the City determines that Final Completion has been achieved.

8.3.3 The Final Completion Date shall be the day on which the City has executed the Certificate of Final Completion. However, for the sole purpose of determining Design-Builder's liability to the City for Delay Liquidated Damages for failure to achieve Final Completion on or before the Scheduled Final Completion Date, Final Completion shall be deemed effective as of the date Design-Builder has executed the Certificate of Final Completion.

8.4 Excusable Delays.

8.4.1 The term "Excusable Delay" shall refer to delays in the performance of the Work to the extent caused directly by acts, omissions, conditions, events, or circumstances beyond the reasonable control of Design-Builder and all other DB-Related Entities, including, by way of example, acts or omissions of the City or anyone under the City's control (including the City's Separate Contractors), changes in the Work, Differing Site Conditions, unknown Hazardous Environmental Conditions, and Force Majeure Events.

8.4.2 Notwithstanding Section 8.4.1 above and anything to the contrary in the Contract Documents, all cost, time, and other risks arising from the following events or circumstances shall be borne exclusively by Design-Builder, shall not be deemed Excusable Delays, and shall not be the basis for any relief, monetary, schedule, or otherwise, to Design-Builder:

(a) general market and economic conditions affecting the availability, supply or cost of labor, Equipment and Materials, construction equipment, supplies, or commodities;

(b) strikes, labor disputes, work slowdowns, work stoppages, boycotts or other similar labor disruptions, unless such strikes, disputes, slowdowns, stoppages, boycotts or disruption affect a specific trade on a national or regional level and were not caused by the improper acts or omissions of Design-Builder or any other DB-Related Entity;

(c) delays in obtaining or delivery of Equipment and Materials, or any other goods or services, from any DB-Related Entity, unless the DB-Related Entity's reason for delay arises from an event that would otherwise be excusable to Design-Builder under these General Conditions of Contract;

(d) delays of common carriers, unless the common carrier's reason for the delay arises from an event that would otherwise be excusable to Design-Builder under these General Conditions of Contract;

(e) bankruptcy or insolvency of any DB-Related Entity;

(f) the inability of any DB-Related Entity to perform, unless such inability would be otherwise excusable to Design-Builder under these General Conditions of Contract;

(g) any acts, omissions, conditions, events, or circumstances that were caused by or arose from the negligent acts, omissions, fault, Gross Negligence, Willful Misconduct, breach of contract, or violation of law by Design-Builder or any other DB-Related Entity; and

(h) the exercise of any right or any act by the City permitted under the Contract Documents, except to the extent the Contract Documents expressly require an adjustment in the GMP and/or Contract Times as a result of such exercise or act (e.g., a change in the Work that will delay performance).

8.4.3 If Design-Builder intends to seek Excusable Delay classification for any weather condition, it shall demonstrate, as a condition to qualifying for an Excusable Delay, that the actual weather encountered was unusually severe and abnormal compared with the five-year average weather statistics compiled by the United States National Oceanic and Atmospheric Administration for the time of year and locality of the Site.

8.4.4 If Design-Builder intends to seek Excusable Delay classification for a delay in the issuance of a Governmental Approval, it shall demonstrate that: (a) Design-Builder and all other applicable DB-Related Entities have submitted all applications, data, studies, reports, responses and other information required under Legal Requirements in order to obtain the Governmental Approval; (b) Design-Builder and all other applicable DB-Related Entities have in all respects used commercially reasonable efforts to obtain the Governmental Approval; and (c) Design-Builder and all other applicable DB-Related

Entities have consistently maintained a fully responsive, engaged and respectful professional relationship with the staff and management of the Governmental Unit in a manner that, while not expressly required under Legal Requirements, is generally recognized among regular practitioners in the permitting field as necessary on a practical level to secure similar Governmental Approvals in a timely manner in light of the discretion afforded to Governmental Units under Legal Requirements.

8.5 Adjustment of Contract Times.

8.5.1 Design-Builder shall be entitled to a Change Order adjusting the Contract Times to reflect not more than the amount of time Design-Builder is actually delayed by an Excusable Delay, expressly conditioned upon Design-Builder demonstrating that: (a) the delay event qualifies as an Excusable Delay; (b) Design-Builder has complied with the requirements of Section 9.5 below; (c) the delay impacts the critical path of the Work as demonstrated by Section 8.5.2 below; (d) the delay was not foreseeable as of the Agreement Date by Design-Builder, and would not have been foreseen as of Agreement Date by a reasonably experienced design-builder; (e) Design-Builder, in view of all the circumstances, has exercised reasonable efforts to avoid and mitigate the delay and did not, through itself or any other DB-Related Entity, cause the delay; and (f) Design-Builder has satisfied the requirements of Section 9.5 below.

8.5.2 Design-Builder shall demonstrate the critical path impact of an Excusable Delay and the impact on the Contract Times through a written time impact analysis (“TIA”) establishing the influence of the event on the most current monthly updated Baseline Schedule. Each TIA shall include a fragmentary network, and for events that have yet to occur (such as a City proposed change), the fragmentary network shall demonstrate how Design-Builder proposes to incorporate such event into the most current monthly updated Baseline Schedule. The TIA shall demonstrate: (a) the time impact based on the date the event occurred, or, in the instance of a City-proposed change, the date such proposed change was given to Design-Builder; (b) the status of the Work at such point in time; and (c) the time computation of all affected activities.

8.6 Compensation for Delays

8.6.1 Design-Builder shall be entitled to an adjustment of the GMP pursuant to the provisions of Article 9 for all Excusable Delays for which Design-Builder is entitled to a time extension pursuant to Section 8.5 above; *provided, however*, that such adjustment shall be no more than the increase in the Cost of the Work incurred by Design-Builder, plus the applicable Design-Builder’s Fee, resulting directly from the time extension allowed under Section 8.5 above. Notwithstanding anything to the contrary, Design-Builder shall not be entitled to an adjustment of the GMP for Excusable Delays where Design-Builder’s performance was or would have been concurrently delayed or interrupted by any event that does not otherwise qualify as an Excusable Delay, with the understanding that Design-Builder’s sole remedy for such concurrent delays is an extension of the Contract Times, provided that Design-Builder has complied with the requirements of Section 8.5 above.

8.7 Recovery Schedules

8.7.1 Notwithstanding the right of Design-Builder to a time extension for an Excusable Delay pursuant to this Article 8, Design-Builder agrees that it will, if directed by the City, develop and implement a recovery schedule and plan to improve progress and take such

measures to overcome such delay. Should the City have a reasonable belief that the Contract Times will not be met, then the City has the right, but not the obligation, to so notify Design-Builder and direct Design-Builder to overcome such delay by working additional overtime, engaging additional personnel and taking such other measures as necessary to complete the Work within the Contract Times. If such delay is not an Excusable Delay, Design-Builder shall bear all costs related to such overtime, additional personnel and other measures. If such delay is an Excusable Delay, and Design-Builder has met the requirements of this Article 8 for an adjustment to the Contract Times for such delay, then Design-Builder may request an adjustment to the GMP in accordance with the requirements of Article 9 for the increase in the Cost of the Work incurred by Design-Builder directly related to such overtime, additional personnel and other measures.

Article 9 **Changes to the GMP and Contract Times**

9.1 Right of City to Make Changes.

9.1.1 Without invalidating the Agreement, the City may by written order, at any time and from time-to-time, authorize and/or request changes in, additions to, or deletions in the Work, including but not limited to those involving: (a) changes in, additions to, or deletions in the Contract Documents; (b) changes in the method, manner, sequence and time of performance of the Work (provided that Design-Builder retains and accepts full responsibility for all associated construction means, methods, techniques, sequences, and procedures); (c) changes in City-furnished services or deliverables, or (d) a direction to accelerate performance of the Work. If the City proposes making a change in the Work, the City shall advise Design-Builder and Design-Builder shall follow the processes set forth in Section 9.2 below.

9.1.2 No oral instruction, order or statement by the City or City's Representative shall constitute a change under this Article 9. If Design-Builder believes that any oral instruction, order or statement by the City may result in a change in the Work or require an adjustment to the GMP or the Contract Times, Design-Builder shall request that the oral instruction, order or statement be given in writing and shall thereafter comply with the provisions of this Article 9.

9.1.3 A "Change Order" is a written instrument issued after execution of the Agreement signed by the City and Design-Builder, stating their agreement upon the scope of a change in the Work, and the agreed adjustment, if any, to the GMP, Contract Times, or any other requirement of the Contract Documents. Unless specifically stated to the contrary in the Change Order, an executed Change Order shall constitute the final and complete compensation and satisfaction for all costs and schedule impacts related to: (a) the implementation of the changes that are the subject of the Change Order; and (b) the cumulative impact of effects resulting from such changes on all prior Work and changes in the Work to be performed as scheduled.

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

9.2 Work Change Directives.

9.2.1 A “Work Change Directive” is a written order prepared and signed by the City directing a change in the Work prior to agreement on an adjustment in the GMP and/or the Contract Times.

9.2.2 Upon receipt of a Work Change Directive, Design-Builder shall promptly proceed with the change in the Work involved, unless the City directs otherwise. The City 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.

9.2.3 If the Parties are not able to agree on the method for adjusting the GMP for a Work Change Directive within a reasonable time, then the City shall pay Design-Builder for such Work on a cost reimbursable basis as set forth in Section 9.7.1(c) below.

9.3 Minor Changes in the Work.

9.3.1 A “Minor Change” is a change in the Work that does not involve an adjustment in the GMP and/or Contract Times and does not materially and adversely affect the Work, including the design, quality, performance and workmanship required by the Contract Documents.

9.3.2 The City may request Minor Changes. If Design-Builder disputes that such order is a Minor Change, Design-Builder shall notify the City in accordance with Section 9.4 below.

9.3.3 Design-Builder may make Minor Changes consistent with the intent of the Contract Documents, *provided, however*, that Design-Builder shall promptly inform the City, in writing, of any such changes and record such changes on the documents maintained by Design-Builder. If the City disputes that such a change is a Minor Change, the City shall promptly notify Design-Builder of its position. If Design-Builder nevertheless desires to make such change, it shall notify the City in accordance with Section 9.4 below.

9.4 Procedures Following City’s Notice of Proposed Change.

9.4.1 Design-Builder shall, within twenty-one (21) days after receipt of notice of a City-proposed change, prepare and submit to the City in writing the information set forth in Section 9.5.2 below as if such change were the subject of a Design-Builder Proposed Change Order, and such other information and data as the City may reasonably request. The City shall endeavor to review Design-Builder’s submittal with Design-Builder within twenty-one (21) days of its receipt of such submittal. If the Parties reach agreement on the terms of the City’s proposed change and the City elects to proceed with such change, a Change Order shall be executed by the Parties. If the Parties are unable to reach agreement on the terms of the proposed change, the City shall have the right, in its sole discretion, to direct Design-Builder to proceed with the change by issuing a Work Change Directive to Design-Builder.

9.4.2 The City shall have the right, at any time and at its sole discretion, not to undertake any proposed change. If the City elects not to undertake a proposed change for which Design-Builder performed design services in developing its submittal under Section 9.4.1

above, Design-Builder shall be paid its reasonable design costs incurred for such submittal.

9.5 Design-Builder Proposed Change Orders.

9.5.1 If Design-Builder believes that it is entitled under the Contract Documents to an adjustment to the GMP, Contract Times, or other relief due to any event or situation arising out of or related to the Work (including but not limited to alleged Excusable Delays, disputes over the City's instructions or interpretation of the Contract Documents), Design-Builder shall, within ten (10) days after Design-Builder knows, or should have reasonably known, of such event or situation giving rise to the requested relief, submit to City a written notice labeled "Notice of Design-Builder Proposed Change Order." The Notice of Design-Builder PCO shall describe the general nature of the event or situation and, if such Notice involves an Excusable Delay, the probable duration thereof.

9.5.2 Design-Builder shall, within fourteen (14) days after providing the City with a Notice of Design-Builder PCO, submit to the City in writing: (a) a description of the facts, circumstances and contractual basis for the relief sought, with sufficient specificity for the City to assess the matter; (b) the cost data supporting any proposed adjustments to the GMP; and (c) the scheduling information and analysis required under Section 8.5.2 above to support any request for adjustment to the Contract Times.

9.5.3 The City shall endeavor to review Design-Builder's submittal under Section 9.5.2 above within fourteen (14) days of its receipt of such submittal. If the City believes that Design-Builder's request is justified, in whole or in part, the City shall advise Design-Builder and an appropriate Change Order shall be executed. If the City disputes Design-Builder's request, and the Parties are unable to resolve the dispute, such dispute shall be resolved in accordance with Article 10 below. The City may request clarifications and/or additional information to assist with its decision on such Design-Builder PCO.

9.5.4 Design-Builder's failure to provide the written statements in the manner and time required by this Section 9.5 shall constitute a conclusive presumption that no price or time adjustment, or other relief, is claimed or warranted for the event or situation giving rise to the relief, and Design-Builder waives its rights to seek relief for any such event or situation.

9.6 City Directive Letters.

9.6.1 If the Parties are unable to reach agreement on the terms of a Design-Builder PCO under the processes set forth in Section 9.5 above, then the City may, in its sole discretion, issue to Design-Builder a written notice ("Directive Letter") that directs Design-Builder to proceed in accordance with the terms of such notice notwithstanding the inability of the Parties to reach agreement on the terms of the Design-Builder PCO. Design-Builder shall fully comply with all Directive Letters and shall have the right to pursue its remedies under Article 10 below.

9.7 GMP Adjustments.

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

(a) Unit prices set forth in the Agreement or as subsequently agreed to between the Parties;

(b) A mutually accepted lump sum, properly itemized and supported by sufficient substantiating data to permit evaluation by the City; or

(c) If the Parties have not reached agreement on the basis of (a) or (b) above, the GMP shall be adjusted based upon the Cost of the Work and Design-Builder's Fee as set forth in Section 4.5.2 of the Agreement, *provided, however*, that such Cost of the Work is: (i) reasonably and properly incurred by Design-Builder; (ii) reasonably documented; and (iii) comprised of those costs that would not have been incurred but for the change in the Work.

9.8 Emergencies.

9.8.1 In any emergency affecting the safety of persons and/or property, Design-Builder shall act, at its discretion, to prevent threatened damage, injury or loss. If the cause of the emergency would justify a change in the GMP and/or Contract Times under these General Conditions of Contract, Design-Builder shall submit a Design-Builder Proposed Change in accordance with Section 9.5 above.

9.9 Duty to Proceed.

9.9.1 No dispute between Design-Builder and the City, including but not limited to those relating to the entitlement, cost or time associated with a notice of City-proposed change or Design-Builder Notice of Proposed Change Order, shall interfere with the progress of the Work. Design-Builder shall have the duty to diligently proceed with the Work in accordance with the City's instructions despite any dispute, including but not limited to those events where the Parties are in disagreement as to whether instructions from the City constitute a change to the Work and justify adjustments to the GMP and/or Contract Times. Design-Builder's sole recourse in the event of such a dispute will be to pursue its rights under Article 10 below.

9.10 Burden of Proof.

9.10.1 Design-Builder shall bear the burden of proof in establishing its entitlement to relief under this Article 9, including but not limited to adjustments in the GMP and Contract Times.

9.11 Claims.

9.11.1 All Claims shall be made in accordance with Section 10.2 below.

Article 10 **Contract Adjustments and Disputes**

10.1 Dispute Avoidance and Resolution.

10.1.1 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 and resolve any disputes. If any disputes do arise, Design-Builder and City each commit to resolving such disputes in an amicable, professional and expeditious manner.

10.1.2 The City and Design-Builder shall first attempt to resolve disputes at the field level through discussions between Design-Builder's Representative and City's Representative.

If, after the passage of a reasonable period of time, the dispute is not resolved at the field level, then, upon the written request of either Party, the dispute shall be elevated to senior representatives of the Parties. The senior representatives shall meet as soon as conveniently possible to attempt to resolve such dispute. If the dispute is not resolved at the senior representative level, then Design-Builder shall have the right to make a Claim under Section 10.2 below, *provided, however*, that before doing so Design-Builder shall have satisfied its obligations under the process set forth in Section 9.5 above to file a Notice of Proposed Change Order.

10.2 Claims Process.

10.2.1 If, after failing to resolve a dispute under Section 10.1 above, Design-Builder believes that it is entitled to relief against the City for any Design-Builder PCO that the City has rejected under Section 9.5.3 above, then Design-Builder may make a Claim on such issue. Design-Builder shall initiate the Claim process by submitting to the City a written notice labeled "Notice of Intent to File a Claim" no later than ten (10) days after the City's written notice of rejection of such PCO.

10.2.2 If Design-Builder decides to pursue its Claim, it shall submit to the City a written notice labeled "Notice of Claim." In no event shall the Notice of Claim be submitted to the City more than sixty (60) days after Final Payment. The Notice of Claim shall include a statement of Design-Builder's position, specification of the remedy sought, and supporting documentation, which supporting documentation shall include, as applicable, information submitted by Design-Builder pursuant to Section 9.5.2 above. Design-Builder shall also include with its Notice of Claim a statement certifying that the Claim is made in good faith, that supporting documentation is accurate and complete, and that to the best of Design-Builder's knowledge and belief, the relief requested accurately reflects the full relief to which Design-Builder is entitled.

10.2.3 Responsibility to substantiate a Claim shall rest solely and exclusively with Design-Builder and compliance with all notice, submittal and documentation requirements in the Contract Documents, including those under Section 9.5 above and this Section 10.2, shall be a condition precedent to the assertion of any Claim. Any Claim failing to comply with the preceding sentence shall be barred.

10.3 City Decision on Claim.

10.3.1 The City shall render a final written decision on a Claim within ninety (90) days after the delivery of the Notice of Claim. If, within such 90-day period, the Parties have agreed to mediation in accordance with Section 10.4 below, and the Claim has not been resolved in the mediation, then the City's written decision on the Claim shall be rendered within forty-five (45) days after the mediator declares the Parties to be at an impasse. If the City does not take action on the Claim within the times required above, the Claim will be deemed to be denied by the City.

10.3.2 The City's denial of the Claim will be final and binding on the Parties unless Design-Builder delivers written notice to the City of its intent to pursue litigation within thirty (30) days following the written decision or deemed denial of the Claim, and files appropriate pleadings to initiate litigation within six (6) months following the written decision or deemed denial of the Claim.

10.3.3 Design-Builder shall have no right to initiate litigation prior to its receipt of the City's final determination on the claim, or, if the City has not made a final determination, the date the claim is deemed denied pursuant to Section 10.3.1 above.

10.3.4 Nothing in the Contract Documents shall be construed to prevent the City from instituting legal action against Design-Builder at any time.

10.4 Mediation.

10.4.1 If, after the meeting set forth in Section 10.2.3 above, the senior representatives determine that the dispute cannot be resolved on terms satisfactory to both Parties, or in the event of any other unresolved dispute between the Parties, the Parties may mutually agree to mediate the dispute. For the avoidance of doubt, mediation is voluntary and will not be a condition precedent to the initiation of litigation. Any mediation will be based upon a process mutually agreed upon by the Parties.

10.5 Litigation.

10.5.1 Any and all legal proceedings between the Parties shall be solely and exclusively initiated and maintained in either the Circuit Court of the City of Alexandria, Virginia or the United States District Court for the Eastern District of Virginia. These two courts shall have exclusive and binding jurisdiction and venue over any and all disputes arising under the Contract, and City and Design-Builder each irrevocably consents to the jurisdiction of such courts in any such proceeding and waives any objection it may have to the jurisdiction of any such proceeding. Any legal proceedings shall consist of a bench trial and not a trial by jury, and each Party hereby waives its right to a jury trial in connection with any legal proceedings.

10.5.2 Notwithstanding Section 10.5.1 above, any prevailing Party may seek enforcement of any judgment rendered in a court in any jurisdiction where the non-prevailing Party or its property may be located.

10.6 Duty to Continue Performance.

10.6.1 Unless provided to the contrary in the Contract Documents, Design-Builder shall continue to perform the Work and City shall continue to satisfy its payment obligations to Design-Builder, pending the final resolution of any Dispute between Design-Builder and City.

Article 11 **Stop Work and Termination Rights**

11.1 City's Right to Stop Work.

11.1.1 The City may, at any time, without cause and for its convenience, order Design-Builder in writing to stop and suspend the Work. Such suspension shall not exceed either sixty (60) consecutive days or in the aggregate more than one hundred twenty (120) days. Design-Builder is entitled to an adjustment of the GMP and/or Contract Times if the Cost of the Work it incurs or time to perform the Work has been adversely impacted by any suspension of the Work by the City and provided Design-Builder satisfies the requirements of Articles 8 and 9 above.

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

11.2.1 If Design-Builder, at any time, fails to: (a) provide a sufficient number of skilled workers to meet the Contract Times and Baseline Schedule; (b) supply the Equipment and Materials required by the Contract Documents; (c) comply with applicable Legal Requirements; (d) timely pay, without cause, Design Consultants or Subcontractors; (e) prosecute the Work with promptness and diligence to ensure that the Work is completed by the Contract Times, as such times may be adjusted pursuant to Article 8 above; or (f) perform material obligations under the Contract Documents, then the City, in addition to any other rights and remedies provided in the Contract Documents, by Legal Requirements, or at law or in equity, shall have the rights set forth in Sections 11.2.2 and 11.2.3 below, and as provided at law.

11.2.2 Upon the occurrence of an event set forth in Section 11.2.1 above, the City may provide written notice to Design-Builder that it intends to terminate the Agreement unless the problem cited is cured, or commenced to be promptly cured, within seven (7) days of Design-Builder's receipt of such notice. If Design-Builder fails to cure, or reasonably commence and diligently continue to cure, such problem, then the City 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 and diligently continue to cure, such problem, then the City may declare the Agreement terminated for default by providing written notice to Design-Builder of such declaration. Notwithstanding anything to the contrary, if the City has provided Design-Builder with three (3) initial notices of City's intent to terminate the Agreement for any of the reasons set forth in Section 11.2.1 above, then the City shall have no further obligation to provide Design-Builder with an opportunity to cure, and may terminate the Agreement for cause as set forth in a written notice from the City.

11.2.3 Upon declaring the Agreement terminated pursuant to Section 11.2.2 above, the City may enter upon the Site and take possession, for the purpose of completing the Work, of all Work Product, Equipment and Materials, construction equipment, supplies, 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 the City for such purpose, and to employ any person or persons to complete the Work and provide all of the required labor, services, Equipment and Materials, construction equipment, supplies, and other items; *provided, however*, that the City shall not take possession of any construction equipment, supplies, scaffolds, tools, appliances and other similar items owned or rented by Design-Builder or its Subcontractors.

11.2.4 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. If the unpaid balance of the GMP exceeds the costs of finishing the Work, including Delay Liquidated Damages and other amounts due under the Agreement, Design-Builder will only be entitled to be paid for Work performed prior to its default, and the balance will be for the account of and retained by the City. If the costs of finishing the Work exceed the unpaid balance, Design-Builder shall, within thirty (30) days of receipt of written notice setting out the amount of the excess costs, pay the difference to the City. Such costs and expense shall include not only the cost of completing the Work (including costs to accelerate the Work as necessary to achieve Substantial Completion as near as possible to the Scheduled Substantial Completion Date), but also losses, damages, costs and expense, including attorneys' fees

and expenses, incurred by the City in connection with the re-procurement and defense of claims arising from Design-Builder's default, subject to the liability limitations set forth in Article 10 of the Agreement.

11.2.5 If the City improperly terminates the Agreement for cause, the termination for cause will be converted automatically to and treated as a termination for convenience under the provisions of Section 11.6 below.

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:

(a) The City's failure to provide financial assurances as required under Section 3.3 above; or

(b) The City's failure to make any undisputed payment due Design-Builder within forty-five (45) days after receipt of an acceptable Application for Payment, *provided, however,* that amounts subject to a good faith dispute shall not be deemed properly due.

11.3.2 Should any of the events set forth in Section 11.3.1 above occur, Design-Builder has the right to provide the City with written notice that Design-Builder will stop the Work unless said event is cured within seven (7) days from the City's receipt of Design-Builder's notice. If the City does not cure the problem within such seven (7) day period, Design-Builder may stop the Work. In such case, Design-Builder, provided it satisfies the requirements of Articles 8 and 9 above, shall be entitled to an adjustment to the GMP and/or Contract Times to the extent it incurs additional Costs of the Work, or the progress of the Work 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, may terminate the Agreement for cause for the following reasons:

(a) The Work has been stopped for sixty (60) consecutive days, or more than one hundred twenty (120) days in the aggregate, because of court order, any Governmental Unit, failure of the City to obtain Governmental Approvals that are the City's responsibility under the Contract Documents, or orders by the City under Section 11.1.1 above, provided that such stoppages are not due to the acts or omissions of Design-Builder or any other DB-Related Entity.

(b) The City's failure to provide Design-Builder with any information that is the City's responsibility under the Contract Documents which results in the Work being stopped for sixty (60) consecutive days, or more than ninety (90) days in the aggregate during the duration of the Project, even though the City has not ordered Design-Builder in writing to stop and suspend the Work pursuant to Section 11.1.1 above.

(c) The City'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 the City that it intends to terminate the Agreement unless the

problem cited is cured, or commenced to be cured, within seven (7) days of the City's receipt of such notice. If the City fails to cure, or reasonably commence to cure, such problem, then Design-Builder may give a second written notice to the City of its intent to terminate within an additional seven (7) day period. If the City, 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 the City of such declaration. In such case, Design-Builder shall be entitled to recover in the same manner as if the City had terminated the Agreement for its convenience under Section 11.6 below.

11.5 Bankruptcy of City or Design-Builder.

11.5.1 If either the City or Design-Builder institutes or has instituted against it a case under the United States Bankruptcy Code (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:

(a) 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

(b) 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.

11.6 City's Right to Terminate for Convenience.

11.6.1 Design-Builder's performance of Work under the Agreement may be terminated by the City in accordance with this Section 11.6 in whole or in part, without cause or whenever the City shall determine that such termination is in the best interest of the City. Any such termination shall be effected by delivery to Design-Builder of a Notice of Termination for Convenience, specifying the extent to which performance of Work under the Agreement is terminated, and the date upon which such termination becomes effective.

11.6.2 Design-Builder shall comply with instructions in the Notice of Termination for Convenience and, unless such notice directs otherwise:

(a) Immediately discontinue the Work on the date specified in such notice and to the extent specified in such notice;

(b) Place no further orders or Subcontracts except as may be necessary for completion or such portion of the Work as is not discontinued;

(c) Assign to the City any Subcontract relating to the performance of Work that is discontinued that City elects in writing, at its sole election and without obligation, to have assigned to it, with the City assuming, and Design-Builder being relieved of, all obligations under the Subcontract accruing from the date of the assignment;

(d) Promptly cancel or terminate, on terms reasonably and commercially appropriate, all Subcontracts that the City does not elect to have assigned to the City to the extent that such Subcontracts relate to the performance of Work that is discontinued;

(e) Complete performance of such part of the Work as shall not have been terminated by the Notice of Termination for Convenience;

(f) Take such action as may be necessary, or as the City may reasonably direct, for the protection and preservation of the property related to the Agreement which is in the possession of Design-Builder and in which the City has or may acquire an interest; and

(g) Deliver to the City all Work Product produced during the period commencing on the Agreement Date to the date of the termination, which Work Product shall, for the avoidance of doubt, become the property of the City, to the extent that it may not have been the property of the City before the date of termination.

Design-Builder shall proceed immediately with the performance of the above obligations notwithstanding any delay in determining or adjusting the cost, or any item of reimbursable cost, under this Section 11.6.

11.6.3 In the event of a termination for convenience, Design-Builder shall be entitled to receive only the following with respect to the terminated portion of the Project (to the extent not previously paid or subject to a good faith dispute) as its sole and exclusive remedy for such termination: (a) Cost of Work and Design-Builder's General Conditions performed through the date of termination in accordance with the schedule of values; (b) the reasonable costs incurred by Design-Builder in the performance of its obligations under Section 11.6.2 above directly resulting directly from such termination, including all actual and reasonable demobilization costs and amounts due in settlement of terminated Subcontracts; and (c) a fair and reasonable portion of Design-Builder's Fee attributable to the Work performed on the terminated portion of the Work up to the time of termination. Design-Builder shall not be entitled to recover Design-Builder's Fee, Design-Builder's General Conditions, or any other overhead or profit on unperformed portions of the Work. In no case shall Design-Builder or any other DB-Related Entity be entitled to anticipatory or unearned profits, unabsorbed overhead, opportunity costs, or consequential or other damages as a result of a termination for convenience under this Section 11.6.

11.6.4 The obligation of the City to pay amounts due in settlement of Subcontracts under Section 11.6.3 above shall be limited to the reasonable costs incurred by Design-Builder in settling and closing out Subcontracts that the City does not elect to have assigned to it under Section 11.6.3 above and shall be subject to cost substantiation. Any convenience termination settlement payment under any Subcontract shall be calculated in the same

manner as provided in Section 11.6.3 above with respect to the convenience termination settlement payment to Design-Builder.

11.6.5 The total sum to be paid to Design-Builder under Section 11.6.3 above shall not exceed the total GMP as reduced by the amount of payments otherwise made and as further reduced by the price of Work not terminated.

11.7 Right to Contract with Design Consultants.

11.7.1 In addition to any other rights available to the City under this Agreement, the City shall have the right to contract with Design Consultants in accordance with Section 2.1.5 above if it terminates Design-Builder under either Sections 11.2 or 11.6 above.

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 the City, 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 The City 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 7 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, Subcontractors and Design Consultants 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: (a) the transmitting Party identifies as either confidential or proprietary; (b) the transmitting Party takes steps to maintain the confidential or proprietary nature of the information; and (c) 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.

13.1.2 Design-Builder may share Confidential Information with the other DB-Related Entities as appropriate for the procurement and execution of the Work.

13.1.3 The confidentiality obligations herein shall expire within three (3) years of the Final Completion Date.

13.2 Assignment.

13.2.1 Neither the Agreement nor any right, privilege, delegation, or interest thereunder may be assigned or transferred in whole or in part by the City or Design-Builder without the prior written consent of the other Party, and any attempted assignment or transfer without such written consent shall be void, except as set forth in Section 13.2.2 below.

13.2.2 Notwithstanding the above, Design-Builder's consent of the City's assignment or transference shall not be required for assignments relating in any way to the financing of the Agreement, Work or Project. Design-Builder shall execute such assignments, consents, and other documents as may be reasonably requested to give effect to or implement any assignment or conveyance of the Agreement or any right, privilege, delegation, or interest thereunder.

13.3 Successorship.

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

13.4 Governing Law.

13.4.1 The Agreement and all Contract Documents shall be governed by the laws of the State, 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 the City 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 Sovereign Immunity.

13.7.1 Notwithstanding any other provision of the Contract Documents to the contrary, nothing in the Contract Documents nor any action taken by the City pursuant to the Contract Documents nor any document which arises out of the Contract Documents shall constitute or be construed as a waiver of the sovereign immunity of the City, or of its elected and appointed officials, officers and employees.

13.8 No Third-Party Beneficiaries.

13.8.1 Nothing under this Interim Agreement shall be construed to give any rights or benefits in the Agreement to anyone other than the City and Design-Builder, and all duties and responsibilities undertaken pursuant to the Contract Documents will be for the sole and exclusive benefit of the City and Design-Builder and not for the benefit of any other party.

13.8.2 For the avoidance of doubt, Section 13.8.1 above shall not be construed as affecting the rights of: (a) any DB-Related Entity to seek recovery under Builder's Risk

Insurance as set forth in Exhibit 11.1 (Insurance Requirements) to the Agreement; or (b) the City's rights under Section 2.1.5 above.

13.9 Headings.

13.9.1 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.

13.10 Amendments.

13.10.1 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.

END OF GENERAL CONDITIONS OF CONTRACT