

APPENDIX 2
PRELIMINARY SERVICES

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APPENDIX 2

PRELIMINARY SERVICES

GENERAL REQUIREMENTS

Scope of Base Preliminary Services. The Base Preliminary Services shall consist of the following six Preliminary Services Tasks:

- Task #1: Project Management
- Task #2: Preliminary Investigations
- Task #3: Basis of Design Report) (BDR)
- Task #4: 30% Design Completion Documents
- Task #5: 60% Design Completion Documents
- Task #6: Definitive Project Submittal and Supporting Cost Estimates

Unless specifically excluded from this Design-Build Contract, the Design-Builder shall provide to the City all architectural, engineering, geotechnical, landscape, Project management, cost estimating and other professional services necessary to perform the Base Preliminary Services required by this Design-Build Contract.

Deliverable Material. Required Deliverable Material for each Preliminary Services Task is identified in this Appendix. All Deliverable Material identified in this Appendix shall be reviewed with representatives of the City. The Design-Builder shall promptly correct deficiencies in Deliverable Material and shall promptly make modifications to conform to Project requirements and modifications to achieve acceptability of the Deliverable Material to the City. Draft deliverables shall be provided to the City in .pdf format, and in Microsoft® WORD or EXCEL format when requested by the City. Unless specified otherwise, the Design-Builder shall provide electronic copies of all final deliverables in .pdf format. For draft and final design drawing and specification deliverables the Design-Builder shall provide six (6) hard copies to the City. Drawing hardcopies shall be ½-size printed single sided on 11 x 17 paper and spiral bound.

Standards. The Deliverable Materials shall comply with the City's standard design details and specifications and industry standards, including, without limitation, those design criteria and specifications included in Appendix 4 (Technical Specifications).

2.1. PRELIMINARY SERVICES TASK #1 - PROJECT MANAGEMENT

2.1.1 Project Management.

The Design-Builder shall provide Project management of the Project team in terms of staffing, budget, schedule, scope and coordination with the City.

2.1.1.1 Technical Workshops and Meetings. This Preliminary Services Task includes managing the scope of work, schedule and budget, preparing a draft Design-Build Quality Management Plan that meets the requirements set forth in Appendix 6 (Design-Build Work Quality Control Requirements) (including quality control and quality assurance requirements), and communication and coordination with the City. The Design-Builder will prepare invoices, progress reports, and design progression and design decision log updates on a monthly basis. Other activities include keeping the City informed and soliciting input from the City when making key decisions, coordination with Subcontractors, scheduling of staff, and coordinating the quality assurance effort. The Design-Builder shall also conduct weekly Project management meetings with the Design-Builder Project managers and City Project managers. An agenda will be distributed to the City prior to the meetings and the Design-Builder will distribute meeting notes and action items within three days after each meeting. Each meeting agenda shall include:

- (a) Ongoing activities
- (b) Upcoming activities
- (c) Scope, schedule and budget
- (d) Project risks
- (e) Issues
- (f) Decisions and actions
- (g) Change management
- (h) Health and safety

Technical Workshops shall be incorporated into Base Preliminary Services to address specific subjects and facilitate collaboration and development of ideas and decisions to be carried forward during design development. Each workshop will last two to four hours in length and will be facilitated by the Design-Builder, the City Project Manager and technical support staff,

the Program Manager (Stantec/Carollo) and Owner's Advisor (CDM Smith). An agenda (including desired outcomes) as well as technical background documents will be distributed to workshop attendees prior to the meetings. The Design-Builder will document the outcome of each workshop and distribute meeting notes and action items within three days after each workshop.

Deliverables:

- Draft and final Project Execution Plan
- Monthly Project Reports (including narrative, cash flow curve and summary schedule update)
- Meeting Agendas, Materials and Notes
- Technical Workshop Agendas and Notes

2.1.1.2 Risk Management Requirements. The Design-Builder shall incorporate risk management into the delivery of the Project in accordance with the Contract Standards as defined in this Design-Build Contract. A risk management workshop shall be conducted with the City within 60 business days of the kick-off meeting. The workshop shall be used to identify key Project risk and opportunities for avoiding and minimizing risks. A risk register shall be developed and maintained by the Design-Builder using the risk register format provided by the City. The register shall be initially populated with risks identified in the risk management workshop. The risk register shall include the following information:

- (a) Risk identification
- (b) Activities affected (tied to schedule activities)
- (c) Risk description including qualitative categorization of risk
- (d) Estimated/calculated percent likelihood that risk may occur. (Note: this will be output from quantitative analysis performed on key risks that could exceed target cost or schedule thresholds.)
- (e) Phase of Project that risk could impact
- (f) Potential schedule impact should risk occur

- (g) Potential cost impact should risk occur
- (h) Potential health and safety impacts should risk occur
- (i) Risk trigger
- (j) Risk owner
- (k) Risk strategy (transfer, mitigate, accept, exploit)

Risks shall be reviewed at the weekly Project management meetings. Additionally, the following risk management workshops shall be conducted to provide for re-evaluation of overall risks, a deeper level of risk analysis for identified risks, identification of new risks, and review of risk avoidance, and mitigation measures:

- (a) During the development of the BDR
- (b) Upon submission of the 30% DCD
- (c) Upon submission of the 60% DCD

Ongoing qualitative risk analysis shall be conducted by Design-Builder with review and input from the City. Upon submission of the BDR, the City shall conduct quantitative risk analysis (Monte Carlo simulation or similar) to further analyze and understand the possible impacts due to risks. The City shall present the findings of such quantitative risk analysis at weekly Project Management meetings, as deemed appropriate by the City. The Design-Builder shall update the risk register to reflect any such findings.

Deliverables:

- Risk register and updates
- Risk management workshop agendas and workshop notes

2.1.1.3 Change Management Requirements. The Design-Builder shall prepare and maintain a change management log for the duration of the Base Preliminary Services. The change management log shall integrate with the Project decision log and be used to document proposed and approved changes to the price, schedule, or changes to the Design-Build Contract. At a minimum, the change management log shall include the following information:

- (a) Change identification number
- (b) Brief description of change
- (c) Status of change (pending, approved, rejected)
- (d) Dates associated with change including initial proposal date and change acceptance date
- (e) Back-up information including cost, schedule, and technical information

Change management shall be a standing agenda item at Project management meetings. Following approval of the BDR, the change management log shall be used to track changes to the approved Project and their associated cost and schedule impacts.

Deliverables:

- Change management log and updates
- Back-up information including cost and schedule updates for proposed changes

2.1.2 Project Execution Plan.

2.1.2.1 Submission of Project Execution Plan. In accordance with the Preliminary Services Schedule, the Design-Builder shall develop and submit a Project Execution Plan to the City for review and comment. A Project Execution Plan shall serve as a Project management tool for the City and Design-Builder (including Subcontractors) and will include guidelines and procedures for execution of the work and issues resolution. The Project Execution Plan will be in compliance with the Contract Standards and include:

- (a) a description of Design-Builder's organization, roles, and responsibilities, including an organization chart that identifies all key discipline design leads for the Project and the engineer-of-record for each discipline;

- (b) a Scope Management Plan that describes how the scope will be defined, developed, monitored, controlled, and verified, including:
 - (1) process for preparing the Project scope statement;
 - (2) creation of the Records Management System from the detailed scope statement, and how the Records Management System will be maintained; and
 - (3) procedures for obtaining formal acceptance of completed Project deliverables and processing of the detailed scope statement;

- (c) a Schedule Management Plan that describes the criteria and activities for developing, monitoring, and controlling the Design-Build Schedule, including:
 - (1) Design-Build Schedule model development;
 - (2) scheduling methodology and scheduling tools;
 - (3) level of accuracy and the acceptable range used in determining realistic activity durations;
 - (4) units of measure, such as staff hours, staff days, or weeks, as well as physical units of measurement;
 - (5) organizational procedures links with activities tied to the approved Records Management System;
 - (6) Design-Build Schedule model maintenance and the process used to update status and record progress of the Project during execution;
 - (7) control thresholds, variance thresholds for monitoring schedule performance and agreed-upon amounts of variation to be allowed;
 - (8) rules of performance management, such as earned value management rules, rules for establishing percent complete, control accounts, earned value measurement techniques, and schedule performance measurements;

- (9) reporting formats, including the formats and frequency of schedule reports; and
- (10) descriptions of each of the schedule management processes;
- (d) a Requirements Management Plan that describes how requirements contained in the Design-Build Contract (e.g., Governmental Approvals requirements, general Design-Build Work requirements, QA/QC requirements, insurance requirements, etc.) will be analyzed, documented, and managed, including documentation of how requirements activities will be planned, tracked, and reported.;
- (e) a Budget Management Plan that describes how the Project budget will be planned, structured, and controlled, including:
 - (1) units of measure, the level of precision and accuracy;
 - (2) coordination with approved Records Management System; and
 - (3) control thresholds for monitoring budget performance, including the rules of performance measurement (earned value management);
- (f) a Process Improvements Plan that details the steps for analyzing Project management and design development processes to identify activities that enhance their value;
- (g) a Risk Management Plan that describes how risk management activities will be structured and performed, including:
 - (1) the methodology, approaches, tools, and data sources that will be used to perform risk management on the Project;
 - (2) roles and responsibilities, defining the lead and support risk management team members for each type of activity and their responsibilities;
 - (3) budgeting to establish estimates of funds needed based on assigned resources for inclusion in the cost baseline and protocols for application of contingency and management reserves;

- (4) timing of risk management processes to be performed through the Project life cycle; and
- (5) protocols for application of schedule contingency reserves and risk management activities associated with the Design-Build Schedule;
- (h) a Procurement Management Plan that describes how the Design-Builder will acquire goods or services from outside its organization, including:
 - (1) management of procurement processes from developing procurement documents through contract closure;
 - (2) guidance for the types of contracts to be used and use of independent estimates and standardized documents; and
 - (3) handling of long lead items, requests to self-perform and linking them into activity resources and schedule;
- (i) a Design-Build Quality Management Plan that meets the requirements set forth in Appendix 6 (Design-Build Work Quality Control Requirements);
- (j) a Stakeholder Engagement Plan that identifies the management strategies required to effectively engage stakeholders, including:
 - (1) stakeholder register and the desired and current engagement level of key stakeholders;
 - (2) scope and impact of change to stakeholders, interrelationships and potential overlap between stakeholders;
 - (3) coordination with the Communications Management Plan; and
 - (4) the method for updating and refining the stakeholder engagement plan;
- (k) a Change Management/Integration Management Plan that includes:
 - (1) identification of procedures that will be used to document any changes from the accepted Drawings and Specifications;

- (2) identification of procedures that will be used to document the communication flow to the appropriate contractor's construction personnel;
 - (3) description of the process for reviewing all change requests, approving changes and managing changes to deliverables, organization process assets, Project documents, the Project Execution Plan, and communicating their disposition;
 - (4) Trend Management Log; and
 - (5) Project Decision Log;
- (l) a Document Control Plan that identifies how documents will be managed throughout the Project life cycle, including:
- (1) the process of organizing, storing, protecting, and sharing documents;
 - (2) the management of both the hard copy and electronic repositories of documents, historical information, and a consistent approach to the creation, update and format of documents;
- (m) a Project Team Structure and Staffing Plan that provides guidance on how the Project will be staffed, managed, and eventually released, including:
- (1) roles and responsibilities defining positions, skills and competencies that the Project demands;
 - (2) Project organization charts indicating the number of people needed for the Project; and
 - (3) a staffing management plan delineating the time periods each Project team member will be needed and other information important to engage the Project team;

2.1.2.2 Establishment and Compliance with Project Execution Plan. The City will review the draft Project Execution Plan and return comments in accordance with the Preliminary Services Schedule. The Project Execution Plan will be accepted by the City only after the Design-Builder has addressed all City comments to the reasonable satisfaction of the Project Manager. Any subsequent amendments or updates to the Project Execution Plan will be

submitted to the Project Manager for review and comment in the same manner as the initial Project Execution Plan. The Design-Builder will implement and comply with the accepted Project Execution Plan, and any accepted amendments or updates thereto, in connection with the performance of the Design-Build Work.

2.1.3 Communication Plan.

The Design-Builder shall submit seven copies of a draft Communication Plan for review and comment by the City no later than 45 days after the Contract Date. The Communication Plan shall be prepared in collaboration with the City and shall provide contact information for both the Design-Builder and the City (including phone numbers, facsimile numbers, e-mail addresses, and points of contact), communication requirements for the Design-Builder and the City (including frequency and time frame of communications, information to be communicated, and methods or technologies used to convey information), resources allocated for communication activities, the method of updating and refining the plan, flow charts for information flow, and a glossary of common terminology. The Communication Plan shall be organized as a directory available to Design-Builder and City personnel and shall outline points of contact under various circumstances, including emergencies. The Communication Plan will describe procedures the Design-Builder will use to present information to the City's communication team to alert the public about any critical events such as traffic impacts associated with material or equipment deliveries.

The City will review the draft Communication Plan and return comments within 15 days of the initial submittal. Fifteen days following the return of comments on a draft Communication Plan, the Design-Builder shall submit to the City seven copies of a final version of the Communication Plan incorporating the City's requested changes. The Communication Plan shall be updated and resubmitted semi-annually or sooner if needed to remain current during the Design-Build Period.

Deliverables

- Draft and Final Communication Plan

2.1.4 Permits and Specifications Plan.

The Design-Builder shall develop a Permits and Specifications Plan that identifies all required Governmental Approvals, tracks the requirements of the Governmental Approvals and the status of the Governmental Approval application, and communicates any changes to Governmental Approval requirements or changes in conditions affecting Governmental

Approvals. The Permits and Specifications Plan shall also include a Specifications and Building Code Report that identifies all applicable City building codes and specifications requirements, describes how the Design-Builder plans to comply with such requirements, and incorporates the CIP Design/Facility Standards and City Standards.

Deliverables:

- Permits and Specifications Plan

2.1.5 Preliminary Services Schedule and Design-Build Schedule.

2.1.5.1 Preparation. The Design-Builder shall prepare the Preliminary Services Schedule and Design-Build Schedule using Primavera P6 scheduling software, and shall submit the Preliminary Services Schedule and Design-Build Schedule as electronic files (native and pdf) and hardcopy.

2.1.5.2 Preliminary Services Schedule. The Preliminary Services Schedule shall reflect the schedule, by use of a Gantt or Bar Chart, for all activities comprising the Preliminary Services, and shall set forth all tasks and key subtasks in a logical and efficient work sequence that the Design-Builder intends to utilize in taking the Project from execution of the Design-Build Contract to the Definitive Contract Amendment.

The Design-Builder shall submit the Initial Preliminary Services Schedule on the Contract Date. During the Preliminary Services Period, the Design-Builder shall update the Initial Preliminary Services Schedule on a monthly basis. The Initial Preliminary Services Schedule, as updated pursuant to this subsection, is referred to herein as the Preliminary Services Schedule.

The Design-Builder shall undertake and complete the Preliminary Services in accordance with the Preliminary Services Schedule. Updates on the Design-Builder's compliance with the Preliminary Services Schedule shall be submitted monthly with the Monthly Project Report required by Section 2.1.9 (Monthly Project Report Requirements) of this Appendix and Section 5.6(B) (Monthly Preliminary Services Reports) of this Design-Build Contract. The Initial Preliminary Services Schedule, prepared in accordance with the requirements set forth in this subsection, is included as Attachment 2A (Initial Preliminary Services Schedule) to this Appendix.

2.1.5.3 Design-Build Schedule. The Design-Builder shall submit the draft Initial Design-Build Schedule at the kick-off meeting required by Section 2.1.10 (Kickoff Meeting and Partnering) of this Appendix, and shall update the draft Initial Design-Build

Schedule during the Preliminary Services Period in accordance with this Appendix. The Design-Build Schedule shall meet the requirements set forth in this Appendix and Appendix 5 (General Design-Build Work Requirements).

During the Design-Build Period, the Design-Builder shall update the Initial Design-Build Schedule in accordance with the requirements set forth in Section 5.3 (Design-Build Schedule) of Appendix 5 (General Design-Build Work Requirements).

2.1.5.4 Minimum Requirements. At a minimum, the Preliminary Services Schedule and the Design-Build Schedule shall generally include:

- (a) Start date for each activity
- (b) Finish date for each activity
- (c) Major milestones
- (d) Meeting and workshop dates
- (e) Submittal dates including draft submission dates, City review periods, and final submission dates
- (f) Identification of critical path
- (g) Float

2.1.5.5 City Review. The City shall review and comment on the Initial Preliminary Services Schedule and the draft Initial Design-Build Schedule within 15 days of receipt. Comments on the Initial Preliminary Services Schedule or draft Initial Design-Build Schedule shall be discussed at the weekly Project management meeting following receipt of any comments provided by the City. The Design-Builder shall provide a revised Preliminary Services Schedule or revised draft Initial Design-Build Schedule, as applicable, based on agreed-to changes at the next weekly Project management meeting.

The City shall review and comment on the update to the Preliminary Services Schedule or the draft Initial Design-Build Schedule. The review process shall include evaluation of missing logic, critical path, leads and lags, and float, percent complete, and changes in schedule logic or activity durations. Comments on the updates to the Preliminary Services Schedule or the draft Initial Design-Build Schedule shall be discussed at the weekly Project management meeting following receipt of any comments provided by the City. The Design-Builder shall

provide a revised draft Initial Design-Build Schedule or Preliminary Services Schedule based on agreed-to changes at the next weekly Project management meeting.

Deliverables

- Draft and Final Preliminary Services Schedule and Design-Build Schedule and monthly updates

2.1.6 Document Submittal Procedures.

Within 10 days following the Contract Date, the Design-Builder shall submit to the City a set of document submittal procedures (“Document Submittal Procedures”). The Document Submittal Procedures shall identify the key document submittal packages to be prepared by the Design-Builder and the expected submittal dates to the City. The Document Submittal Procedures shall also identify the frequency of the Design-Builder’s design progress meetings during various phases of the design. The Document Submittal Procedures shall require the Design-Builder to submit a minimum of one original and six paper copies of each document submittal with electronic and CD copies as requested by the City. The Document Submittal Procedures shall also require the Design-Builder to distribute the document submittals as directed by the City. The Design-Builder may propose to create a project web site, accessible to the City and City-designated representatives and compatible with the City’s EDOC site, for posting all document submittals and other reference information. Implementation of the project website shall be subject to the City’s approval. The City may reduce the requirements for hard copies and electronic and CD copies of submittals in consideration of access to information on the web site.

Deliverables

- Document Submittal Procedures

2.1.7 Monthly Project Report Requirements

The Design-Builder shall submit Monthly Project Reports during the Preliminary Services Period which meet the requirements set forth in Section 5.6(B) (Monthly Preliminary Services Reports) of this Design-Build Contract.

2.1.8 Records Management System.

The Design-Builder will work within the City’s electronic records management systems (City Web Portal and EADOC) to facilitate work flow and transmit and store written documents

associated with the Project. The system will be utilized by the City, Design-Builder, and their Subcontractors and vendors to transmit, review and respond, log, and store Project related documents. The records management system will incorporate the following:

- (a) Overall Project tracking and monitoring of key performance indicators;
- (b) Meeting and workshops agendas, presentations, and notes;
- (c) Action items, issues, decision logs, and tracking;
- (d) Budget and schedule tracking;
- (e) Risk tracking and mitigation;
- (f) Submitting and tracking requests for information (RFIs);
- (g) Document submittals and transmittals including drawings (pdf format);
- (h) Quality management documentation including comments, responses, and confirmations;
- (i) Value engineering submissions;
- (j) Invoices and monthly reports;
- (k) Templates and tools;
- (l) Project related communication; and
- (m) Dashboards of Project progress for the City.

Deliverables:

- Records Management System documentation
- Posting of deliverables required by this Appendix
- Entry and updating of on-line logs (action, issue, decision)
- Posting of RFIs

2.1.9 Computerized Maintenance Management System

The Design-Builder shall work within the City’s Computerized Maintenance Management System (“CMMS”) in accordance with the Contract Standards. A plan for integrating with the CMMS will be provided to the City not later than 365 days following the Contract Date.

In preparing the CMMS input, the Design-Builder shall, in consultation with the City, develop a standardized equipment hierarchy, failure codes, and a preventive maintenance program, with detailed job plans. The Design-Builder shall tailor the CMMS preventive maintenance program to the specific requirements of the Headworks Facility equipment based on the BDR. The CMMS shall include Headworks Facility appearance maintenance activities for buildings, structures, and grounds, and will be capable of the following:

- (a) tracking and managing preventive, predictive, and corrective maintenance tasks, including their frequencies and their costs in time and materials;
- (b) recording and creating equipment maintenance histories;
- (c) scheduling and control of preventive, predictive and corrective maintenance tasks;
- (d) issuing notifications and work orders for preventive, predictive, and corrective maintenance tasks;
- (e) tracking inventories and locations of equipment, materials, component parts and spare parts to include an inventory control system capable of tracking specific equipment, budgets and costs using the following information:
 - (1) inventory identification and description;
 - (2) location identification and description;
 - (3) manufacturer name and manufacturer part number;
 - (4) quantity on hand;
 - (5) unit and unit cost;
 - (6) main supplier and alternative supplier; and
 - (7) order level and order quantity.

- (f) tracking equipment performance, service history, repair warranties, repair costs, installation dates, replacement values, and all data needed to prepare financial reports in accordance with the Contract Standards;
- (g) issuing reports and information, including:
 - (1) equipment status and repair reports;
 - (2) lifecycle asset costs;
 - (3) asset maintenance frequencies and histories;
 - (4) status reports on predictive, preventive, and corrective maintenance activities;
 - (5) work order status and inventory control levels of spare parts and availability for optimization; and
 - (6) job completion reports;
- (h) retaining historical data and information for a minimum of 10 years.

All maintenance tasks and frequencies will be stored and managed in the CMMS in chronological (date-based) order for the Headworks Facility. The CMMS input will be fully compatible with the system utilized by the City at the Regional Wastewater Facility.

2.1.10 Kickoff Meeting & Partnering.

Within two weeks after each Preliminary Services Task Notice to Proceed, key staff members of the City and Design-Builder will participate in a Project kick-off/partnering workshop (See Appendix 5). The goal of the workshops is to deepen working relationships, develop common goals and objectives for the Project, and achieve a cooperative partnership environment among Project participants. The workshop attendees, agendas, facilitation, and venue will be coordinated by the City and Design-Builder's Project managers immediately following the Preliminary Services Task Notice to Proceed.

Deliverables:

- Kickoff Agenda and Meeting Notes
- Draft and Final Partnering Charter

2.1.11 Constructability Reviews.

2.1.11.1 Basis of Design Stage. During preparation of the BDR, the Design-Builder shall develop a general sequencing plan for constructing the Headworks Facility to achieve production milestones. The Design-Builder shall also develop an initial plan for proposed site access, site utilization for storage of equipment and materials, site exit, temporary construction facilities (parking, staging, storage, stormwater controls, and trailers or alternative plans for housing Design-Builder and the City) (the “Mobilization and Site Access Plan”). The Mobilization and Site Access Plan will indicate proposed locations for the City’s operations staff and delivery vehicles, and City employee parking for all months during construction. A schematic will be provided showing areas to be used by the Design-Builder for storage of construction materials and equipment, the location of a temporary construction trailer and for construction of new facilities including required setbacks and traffic flow for the construction vehicles entering and exiting the Headworks Facility Site. The Design-Builder shall conduct two workshops with the City to review considerations and recommendations.

Deliverables:

- Initial plans
- Workshop agenda and meeting notes

2.1.11.2 30% and 60% Design Stage. The Design-Builder shall provide for constructability reviews of the design at the 30% and 60% design submittal milestones as follows:

- (a) Identify and establish a team of individuals among the Design-Builder team primarily responsible for Construction who will undertake constructability reviews on behalf of the Design-Builder;
- (b) Submit 30% or 60% design submittal, as applicable, to Design-Builder’s constructability review team and to the City for constructability review;
- (c) Schedule and conduct constructability workshop with Design-Builder’s constructability review team and the City;
- (d) Discuss recommendations with the City and conduct follow-up evaluations including cost, schedule, and risk impact analysis of any preliminary constructability comments that are tentatively agreed-to;

- (e) Prepare written constructability review report;
- (f) Meet and review constructability review report and results of constructability evaluations with City; and
- (g) Proceed with agreed-to changes.

Deliverables:

- Written constructability review report
- Workshop agenda

2.1.12 Value Engineering.

Value engineering shall be conducted at the basis of design and at the 30% design submittal milestone by the value engineering team designated by the City. The VE firm is contracted and paid for by the City. The Design-Builder is responsible for providing engineering and construction staff to participate in VE. At each such design submittal milestone, the Design-Builder shall submit a draft of the BDR or 30% design submittal, as applicable, to the value engineering team and participate in a value engineering workshop to be conducted by the value engineering team. The value engineering team shall prepare a value engineering report, and the Design-Builder shall review such report and prepare responses to the value engineering recommendations, including a discussion of cost impacts, Design-Build Schedule impacts, and operating and maintenance considerations. The Design-Builder shall meet with the City to review responses and submit final recommendations regarding value engineering input to the City for review and approval. Upon approval by the City, the Design-Builder shall proceed with the agreed-to changes.

Deliverables:

- Drafts of the BDR or 30% design submittal, as applicable
- Responses to value engineering recommendations
- Workshop agendas

2.1.13 Cost Model

As part of the Preliminary Services, the Design-Builder shall provide updated cost estimates. To provide consistent information, the Design-Builder shall utilize a cost model approach as follows:

- (a) Build a cost model framework consistent with the requirements of Appendix 8 – Design-Build Price.
- (b) Provide the initial cost model within 60 Business Days of the Preliminary Services Task Notice to Proceed. After providing the initial cost model, conduct a dynamic cost model workshop to present the cost model framework and demonstrate model functionality with both costs and markups.
- (c) Prior to and during the Options Analysis period, described further in Task 2 below, the Design-Builder shall advance the Cost Model for both the Indicative Design and the Alternate Concept. After the option is selected at the end of the Options Analysis period, the Design-Builder will advance a single Cost Model.
- (d) Provide updated cost model reports monthly. Review the updated cost model reports, one time per month, at the weekly Project management meetings.
- (e) Submit all milestone cost estimate updates, as required within Appendix 2, so that all estimates align to the cost model framework.

Deliverables:

- Cost model framework in pdf and MS Excel
- Workshop agenda and meeting notes
- Updated cost model reports in pdf and MS Excel

2.1.14 Equipment and Subcontractor Procurement

As part of the Preliminary Services, the Design-Builder shall provide updated cost estimates. To provide consistent information, the Design-Builder shall utilize a cost model approach as follows:

- (a) Prior to engaging the market, conduct an Equipment and Subcontractor Procurement workshop with the City to discuss outreach approaches, package

strategy, timing, and potential level of commitment communicated to the market.

- (b) Administer a budgetary proposal process to obtain preliminary pricing.
- (c) Administer an official procurement process, to obtain firm pricing and to select equipment suppliers or subcontractors. Selections of suppliers and subcontractors shall be approved by the City.

Deliverables:

- Package strategy in pdf and MS Excel
- Workshop agenda and meeting notes
- Necessary documentation needed to recommend and select equipment supplier or subcontractor

2.2. PRELIMINARY SERVICES TASK #2 – PRELIMINARY INVESTIGATIONS

2.2.1 Review and Verification, Generally.

As part of the Preliminary Services, the Design-Builder shall complete a comprehensive review of the Existing Headworks Facility and Headworks Facility Site, excluding the environmentally sensitive areas described in Appendix 1. All reviews performed under this Preliminary Services Task shall be performed to the maximum extent reasonably possible in the circumstances and in a manner that provides a reasonable basis for the Design-Builder to undertake the risks assumed under Section 6.3 (Differing Site Conditions) and subsections 6.6(B) (Design-Builder Governmental Approval Responsibility), and 6.7(B) (Sole Responsibility and Liability) of this Design-Build Contract.

This task includes a review of reference documents, site analysis, condition assessment of existing facilities including a performance and operability review of existing facilities, subsurface utility investigations, geotechnical investigations, grit sampling, hazardous material investigations and the preparation of Technical Memoranda summarizing the results of the investigations.

The Design-Builder shall identify any other investigations deemed necessary by the Design-Builder to fully acquaint itself with existing conditions for purposes of performing the Project.

The Design-Builder shall coordinate all field investigations of the Headworks Facility Site with the City. Within 45 calendar days after the Contract Award, the Design-Builder will provide a comprehensive plan for all field investigations and condition reviews. The City will provide comments on this plan within 15 calendar days of receiving the plan.

Preliminary Investigations shall include, but not be limited to:

2.2.2 Review of Reference Documents

2.2.2.1 The Existing Headworks Facility, operations, maintenance, permits, requirements, regulations, constraints, and the City's requirements and objectives for the Project.

2.2.2.2 Existing conditions information at the Headworks Facility provided by the City, including all available as-built information, geotechnical reports, engineering studies and reports, environmental studies, data, memos, reports, surveys, and site measurements.

2.2.2.3 Environmental documents, including mitigation requirements under the Environmental Mitigation Measures and reporting requirements under the Mitigation Monitoring Reporting Action Plan

2.2.2.4 Identification of data gaps that require additional investigations.

Deliverables:

- Work Plan for Review of Reference Documents
- Draft Technical Memorandum on Reference Document Review
- Draft Technical Memorandum Review Meeting Agenda, Meeting Materials, and Notes
- Final Technical Memorandum on Reference Document Review

2.2.3 Site Analysis

2.2.3.1 Headworks Facility Site ingress and egress requirements and restrictions, traffic conditions, time of work restrictions, and requirements of public and private authorities with jurisdiction over roadways to and from the Headworks Facility Site, parking, and any other restrictions or considerations that may affect the Design-Builder's work.

Deliverables:

- Work Plan for Site Analysis
- Draft Technical Memorandum on Site Analysis
- Draft Technical Memorandum Review Meeting Agenda, Meeting Materials, and Notes
- Final Technical Memorandum on Site Analysis

2.2.4 Existing Headworks Facility Condition Assessments

2.2.4.1 Investigation of condition of Existing Headworks Facility (HW2) structural, mechanical, electrical, and control systems, including identification of code deficiencies that may require performing upgrades as part of the project (e.g. seismic, NFPA 820, handrails).

2.2.4.2 Investigation of operability and performance of gates, valves, equipment, and support systems to identify deficiencies that may need repair or replacement and that may be required to provide isolation of facilities during construction.

2.2.4.3 Investigation of O&M staff concerns with existing HW2 facilities to identify perceived deficiencies that will be modified or replaced as part of the Project.

Deliverables:

- Work Plan for Existing Headworks Facility Condition Assessments
- Draft Technical Memorandum on Existing Headworks Facility Condition Assessments
- Draft Technical Memorandum Review Meeting Agenda, Meeting Materials, and Notes
- Final Technical Memorandum on Existing Headworks Facility Condition Assessments

2.2.5 Subsurface Utilities investigation

2.2.5.1 Based on the review of reference documents provided by the City and supplemental subsurface utilities investigations, the Design-Builder will prepare a report describing and identifying the locations of existing subsurface utilities at the Headworks Facility Site and the locations of man-made objects or structures.

2.2.5.2 For circumstances where existing information is either conflicting or not available, the Design-Builder will be responsible of identifying, designating, locating, and

mapping existing and abandoned utility infrastructure. Identification techniques may include magnetic, sonic, and acoustic technologies, ground penetrating radar (GPR), and radio frequency detection. The utility descriptions will be considered current as of the date of the Subsurface Utilities Investigation Report.

Deliverables:

- Work Plan for Subsurface Utilities Investigation
- Draft Subsurface Utilities Investigation Report
- Draft Report Review Meeting Agenda, Meeting Materials, and Notes
- Final Subsurface Utilities Investigation Report

2.2.6 Geotechnical Investigations.

The Design-Builder's geotechnical Subcontractor will conduct geotechnical investigations at the Headworks Facility Site. The results of the geotechnical investigations will be used to develop allowable bearing pressures and other critical design criteria used by the Design-Builder during preparation of the Basis of Design Report.

2.2.6.1 Geotechnical Field Exploration. The geotechnical Subcontractor will explore subsurface conditions at the Headworks Facility Site. The geotechnical Subcontractor will be responsible for initially defining the scope of the investigation based on information required by the Design-Builder structural engineer and the Design-Builder construction manager. The investigations will be adequate to accurately characterize soil and groundwater conditions within all Construction areas. The geotechnical Subcontractor's initial scope document will be submitted to the City for its review and approval prior to the performance of the geotechnical Subcontractor's investigation. The Design-Builder will provide an experienced geologist or engineer to continuously observe the borings, log the subsurface conditions, collect representative soil samples, and transport all samples to the Design-Builder's laboratory for further visual examination and testing. The Design-Builder may request assistance from the City to identify underground utilities. Upon arrival at the Headworks Facility Site, the Design-Builder and geotechnical Subcontractor's crew will be given ready access to work locations by the City. All borings will be backfilled with a lean concrete slurry and cuttings containerized and hauled off site for proper disposal. The geotechnical Subcontractor will exercise due care while working at the Headworks Facility Site, but anticipates that some surface disturbances will be unavoidable and that safe and adequate restoration will be provided.

2.2.6.2 Geotechnical Laboratory Testing. The Design-Builder will have a series of geotechnical laboratory tests completed on selected soil samples obtained from the geotechnical field explorations to evaluate the engineering and index properties of the Headworks Facility Site subsurface materials. These tests may include moisture content and dry-density determinations, Atterberg limit determinations, sieve analysis, modified compaction and direct shear tests, pH, and resistivity as deemed necessary and appropriate. Additionally, a resistance value (R-value) test will be performed for pavement design purposes. Soil samples will be stored for 30 days after submittal of Design-Builder's report and then discarded unless City requests longer-term storage.

2.2.6.3 Geotechnical Review and Report Preparation. To supplement the field exploration and laboratory testing programs, the geotechnical Subcontractor will review various sources of geotechnical information concerning the Headworks Facility Site. Such sources will include geologic maps, seismologic literature, and other published documents. Any available soil logs and laboratory test results associated with previous subsurface explorations performed on or near the Headworks Facility Site will also be reviewed. Field exploration data, laboratory testing data, and research findings will be evaluated to develop conclusions and recommendations concerning the geotechnical aspects of the Headworks Facility Site. After analyzing the Headworks Facility Site conditions, a preliminary geotechnical engineering study will be prepared for the Project. The report will include the following specific items:

- (a) Site plan showing approximate exploration locations on a base map
- (b) Descriptive logs of subsurface explorations
- (c) Description of surface, soil, groundwater, and seismic conditions
- (d) Conclusions regarding on-site liquefaction potential
- (e) Conclusions regarding soil corrosivity
- (f) Recommended seismic design parameters
- (g) Recommendations for site preparation
- (h) Recommendations concerning utility trench excavations, including temporary slope angles
- (i) Recommendations concerning trench backfill

- (j) Design criteria for thrust blocks, including allowable bearing pressures
- (k) Recommendations concerning temporary and permanent drainage systems
- (l) Recommended asphaltic pavement sections
- (m) Recommendations for construction monitoring
- (n) Explanation of report limitations
- (o) Recommendations for further geotechnical study, if necessary

Following preparation of the geotechnical report, the Design-Builder will review its BDR, 30% DCD and 60% DCD (all as defined below) documents to ensure the plans and specifications have incorporated the intent of the geotechnical Subcontractor's recommendations. The Design-Builder shall submit a draft geotechnical report for review and approval by the City. Any City comments shall be discussed at the next monthly Project management meeting, and the Design-Builder shall prepare a final geotechnical report based upon the comments received.

Deliverables:

- Work Plan for Geotechnical Investigations
- Draft Geotechnical Report
- Draft Report Review Meeting Agenda, Meeting Materials, and Notes
- Final Geotechnical Report

2.2.7 Grit Analysis

2.2.7.1 Review of existing grit characterization studies included in the Reference Documents and determination if additional sampling and characterization studies are needed.

2.2.7.2 Implementation of additional analyses.

Deliverables:

- Work Plan for Grit Analysis

- Draft Grit Analysis Technical Memorandum
- Draft Technical Memorandum Review Meeting Agenda, Meeting Materials, and Notes
- Final Grit Analysis Technical Memorandum

2.2.8 Regulated Site Conditions Investigations and Remediation Protocols.

2.2.8.1 Review of existing Regulated Site Conditions investigations included in the Reference Documents and determination if additional sampling and characterization studies are needed.

2.2.8.2 Implementation of additional analyses.

2.2.8.3 Development of protocols to be followed in the event Regulated Site Conditions are encountered during construction of the Project.

Deliverables:

- Work Plan for Regulated Site Conditions Investigations and Remediation Protocols
- Draft Regulated Site Conditions Investigations and Remediation Protocols Report
- Draft Report Review Meeting Agenda, Meeting Materials, and Notes
- Final Regulated Site Conditions Investigations and Remediation Protocols Report

2.2.9 Options Analysis

Prior to beginning the Basis of Design Report efforts, the Design-Builder shall conduct an Options Analysis in order to evaluate the Indicative Design against the Design-Builder's Alternate Concept. The objective of this Options Analysis is to select the best project approach, prior to engaging the larger efforts undertaken in the Basis of Design Report period. Actions to be carried out by the City and Design-Builder include:

- (a) Design-Builder shall conduct additional early workshops. Design-Builder shall prepare agendas, background information, host the workshops and prepare meeting summaries of the meetings, for the following workshops:
 - (i) Site Selection – the Design-Builder shall conduct two workshops to review the Indicative Design, evaluate cost and constructability

challenges, compare to the Alternate Concept, and analyze preliminary hydraulics, to gain endorsement and select the site location.

- (ii) Project Scope Definition – the Design-Builder shall conduct a workshop to discuss the project requirements identified in the RFP/PDR and the associated operational, technical and cost consequences of each major requirement.
- (b) As part of these workshops, the Design-Builder shall update the following for both the Indicative Design and the Alternate Concept:
 - (i) Cost Model
 - (ii) City Triple Bottom Line Plus (TBL+) Spreadsheets
- (c) At the conclusion of this Options Analysis period, the City shall select the Indicative Design or the Alternate Concept and shall provide direction on project scope definition prior to advancing into the Basis of Design effort.

2.3. PRELIMINARY SERVICES TASK #3 - BASIS OF DESIGN REPORT

2.3.1 Basis of Design Development

2.3.1.1 Concept Refinement. The Design-Builder shall be responsible for developing, refining or modifying the Indicative Design presented in the PDR in coordination with the City. The Design-Builder shall be responsible for reviewing and commenting on ideas presented in the PDR to reduce overall construction costs to bring the Design-Build Price (as defined in Appendix 8) within the City’s approved budget for the Design-Build Price of \$100 million. The Design-Builder shall be responsible for developing alternatives and strategies for Design-Build Cost reduction. The Design-Builder shall conduct all evaluations, hydraulic modeling, computational fluid dynamics (CFD) modeling, calculations, cost estimating, scheduling, workshops, and other services as needed to develop the Basis of Design. The Design-Builder shall conduct workshops addressing the following topics with the City to review the Indicative Design or Alternate Concept, design alternatives, and develop a recommended approach. Each workshop shall include a weighted decision process to compare alternatives on the basis of established evaluation criteria.

- (a) Treatment Process Alternatives No. 1 – the Design-Builder will conduct a workshop to present analysis and recommendation of various treatment process

- alternatives, including interceptor flushing, grit deposition, raw sewage pumping location, and flow measurement objectives.
- (b) Treatment Process Alternatives No. 2 – the Design-Builder will conduct a workshop to present analysis and recommendation of various treatment process alternatives, including screen spacing, screening quality goals, grit removal and quality goals, grit channel configuration, odor control, EBOS modifications, and Structure A modifications.
 - (c) Preliminary Investigations Planning – the Design-Builder will conduct a workshop to review proposed preliminary investigations activities and schedule.
 - (d) Hydraulic and CFD Modeling – the Design-Builder will conduct a workshop to present hydraulic modeling development and operational scenarios.
 - (e) Process Equipment Selection – the Design-Builder will conduct a workshop to Present analysis and recommendation of various treatment process equipment alternatives. Prior to the Process Equipment Workshop, if requested by the City, the Design-Builder will arrange and accompany the City on up to two site tours, to observe specific process equipment items.
 - (f) Site Planning – the Design-Builder will conduct a workshop to review and discuss proposed site location, aesthetic and environmental impacts, civil design criteria, parking and services access, and piping connections to existing utilities.
 - (g) Process Mechanical – the Design-Builder will conduct a workshop to review discipline design criteria.
 - (h) Electrical supply and distribution (including emergency power) – the Design-Builder will conduct a workshop to review discipline design criteria.
 - (i) Instrumentation, controls, and SCADA – the Design-Builder will conduct a workshop to review discipline design criteria .
 - (j) Architectural and structural – the Design-Builder will conduct a workshop to review discipline design criteria.
 - (k) HVAC, plumbing, fire protection – the Design-Builder will conduct a workshop to review discipline design criteria.

- (l) Commissioning, Acceptance Testing, and Transition Services – the Design-Builder will conduct a workshop to present proposed approaches and requirements to begin discussion and negotiation for the development of Appendix 9 and Appendix 11.
- (m) Performance Guarantees – the Design-Builder will conduct a workshop to begin discussion and negotiation for the development of Appendix 10.
- (n) Permitting considerations – the Design-Builder will conduct a workshop to discuss legal restrictions and requirements, approvals and limitations or constraints, permits and preliminary application schedule.
- (o) Interface with Related Projects – the Design-Builder will conduct a workshop to review known interfaces and evaluate potential unknown interfaces that require additional investigation.

The following information shall be prepared by Design-Builder for each workshop and shall be submitted to the Records Management System a minimum of one week prior to each workshop:

- (p) Description of modifications to Indicative Design components or proposed alternatives
- (q) Design criteria
- (r) General layout drawings
- (s) 3-D CAD renderings in accordance with the City drawing requirements set forth in Appendix 5 (General Design-Build Work Requirements) and City's CAD Standards.
- (t) O&M considerations
- (u) Construction and life cycle cost estimates for Indicative Design or alternatives
- (v) Schedule considerations
- (w) Constructability
- (x) Commissioning, Acceptance Testing, and Transition Services

- (y) Design-Builder's recommendations for Design-Build Cost reduction alternatives and strategies

2.3.2 Draft Basis of Design Report (BDR)

2.3.2.1 Draft BDR. The Design-Builder shall prepare and submit to the City a draft BDR which will include the Design-Builder's evaluation findings and specific recommended preliminary design for the Project. The draft BDR will explain how the proposed preliminary design will meet the City's budget, performance, operational, and maintenance requirements for the Project and comply with all legal and regulatory requirements. The draft BDR will include information on any alternatives considered and evaluated and information on the rationale or method by which the recommended design was selected. Information considered in the evaluation of alternatives and selection of a recommended design shall include but not be limited to: estimated capital, operations and maintenance costs;; reliability, robustness, and flexibility of the recommended processes and equipment; ease of City operation and maintenance; flexibility, compliance with existing and future regulatory requirements; public safety; and compatibility with California Environmental Quality Act (CEQA) and City environmental objectives and requirements. It will include a draft Initial Design-Build Schedule that is prepared in accordance with Section 5.3 (Design-Build Schedule) of Appendix 5 (General Design-Build Work Requirements) that shows:

- (a) Preparation and completion of 30% DCD
- (b) Preparation and completion of 60% DCD
- (c) Preparation and submission of proposal to complete design work from 60% to 100% including preparing final plans and specifications
- (d) Submission of a 60% design-based GMP and Performance Guarantees
- (e) Final design integrated with construction, testing and startup and commencement of operations

The draft BDR shall be reviewed by the City and the City's comments, to be provided within 20 Business Days, shall be addressed by the Design-Builder.

2.3.2.2 Project Basis and Proposed Performance Guarantees. The final BDR will include information on:

- (a) Proposed Performance Guarantees for the selected design and comparison to minimum requirements in the PDR.
- (b) Headworks construction conditions, including existing site conditions; geotechnical conditions; hazardous materials conditions.
- (c) Headworks vehicular and pedestrian access, parking for the Design-Builder's workforce and City personnel and egress and materials and equipment staging area locations, size and security.

2.3.2.3 Proposed Headworks Facility Design. The Design-Builder will prepare a BDR representing approximately 15 percent design. The BDR will include a 3-D Headworks Facility model (developed using the City's CAD Standards), and a description and preliminary schematics, drawings, and specifications of the following design elements:

- (a) The Headworks Facility layout proposed design criteria – civil, site development, geotechnical, structural, architectural, mechanical, electrical, and instrumentation and control systems
- (b) Proposed equipment and facilities to be constructed; alternatives evaluated, and basis for evaluation and recommended system
- (c) Proposed new facilities operations plan
- (d) Proposed process and instrumentation diagram for the Headworks Facility system
- (e) Equipment vendors proposed, evaluated and recommended
- (f) Site plan layout and description of new or altered existing facilities
- (g) Process diagrams that show devices that will be able to do measurements and recording
- (h) Headworks Facility control system and SCADA interface

The BDR will include information on major equipment and vendors proposed and alternatives evaluated. Comparisons on equipment and vendors will include technical and performance characteristics, reliability, warranties, and operational experience at other facilities. The BDR will include supporting documentation.

2.3.2.4 Proposed Construction Organization, Work Plan and Schedule.

The BDR will describe:

- (a) The Design-Builder's proposed construction organization, including key construction managers and field superintendents, Subcontractors, and allocation of work among the proposed Subcontractors.
- (b) The Design-Builder's proposed work sequence to install and construct the proposed BDR design from commencement of construction to Substantial Completion to Acceptance Testing to Final Completion of the Project.
- (c) The Design-Builder's proposed equipment procurement plan and schedule covering longer lead items.
- (d) The Design-Builder's proposed schedule for performing its construction work
- (e) The Design-Builder's plan for coordinating with the City's requirements for ongoing Existing Headworks Facility and Related Projects operations, including calendar dates and durations for Existing Headworks Facility shutdowns during the construction period.
- (f) A Headworks Facility Site-specific Health and Safety Plan.
- (g) The Design-Builder's proposed Commissioning and Acceptance Test Plan, including dates, durations, test criteria, Project requirements for test conditions, personnel to be provided, and requested City support.
- (h) The Design-Builder's preliminary estimate of cash flow requirements by month from commencement of construction work through Final Completion.

2.3.2.5 Regulatory Requirements. The BDR will include a description of regulatory conditions that apply to the proposed design, including but not limited to:

- (a) Legal restrictions and requirements
- (b) Approvals and limitations or constraints
- (c) Permits and constraints, including, but not limited to, those required to be issued by Santa Clara County Roads and Airports, Santa Clara County Building Department, Caltrans, and the Bay Area Air Quality Management District (BAAQMD) Fees and assessments

- (d) The BDR will include a description of the work to be performed with respect to required permits and approvals and information regarding the Design-Builder's proposed work activities and implementation and compliance with required CEQA mitigations as set forth in the Environmental Mitigation Measures (MND) Report.

The Design-Builder will work closely with the City on all permitting requirements from the onset of design through construction. Key permits required are:

- (e) BAAQMD permitting requirements for the Headworks Facility
- (f) CWA Section 404 permit (from the Army Corps)
- (g) CWA Section 401 Water Quality Certification and/or Waste Discharge Permit (from the San Francisco Bay Regional Water Quality Control Board)
- (h) Streambed Alteration Agreement (from the (California Department of Fish and Wildlife)
- (i) Habitat Plan Permit (from the Santa Clara Valley Habitat Agency)
- (j) City of San José building, Public Works, and Fire Department permits

2.3.2.6 Design-Build Cost Estimate Update. The Design-Builder will include within the BDR an estimate update. The Design-Build Cost estimate will include:

- (a) Preliminary Opinion of Probable Construction Cost (OPCC) (in U.S. dollars) with supporting materials including assumptions regarding construction conditions, and the bidding climate and bidding/ procurement strategies
- (b) Final design costs and other Design-Builder engineering and related costs during construction
- (c) Start-up, testing, commissioning and other transition services

Deliverables:

- Estimated Design-Build Cost with detailed breakdown

2.3.2.7 Projected O&M Costs The BDR will include a preliminary estimate of the Headworks Facility operations and maintenance costs. Such preliminary estimates shall include:

- (a) Preliminary costs for operations and maintenance (including capital maintenance and major repairs and replacements) of the proposed completed Project and breakdown of costs, both annually and on a life-cycle basis
- (b) Major assumptions underlying Projected O&M Costs
- (c) Major factors that may influence Projected O&M Costs
- (d) The Design-Builder will develop and describe the conceptual life cycle costs as well as a Design-Build Schedule.

Deliverables:

- Draft Basis of Design Report (BDR)

2.3.3 Basis of Design Review Workshop.

The Design-Builder shall meet with the City staff and City consultants to present a summary and discuss comments on the draft BDR and obtain City approval on the recommended alternatives prior to proceeding with 30 percent design. This review workshop shall be held during the 20-Business Day City review and comment period identified in Section 2.3.2.1. The Design-Builder shall schedule this review workshop on a date approved by the City, near the midpoint of the City review and comment period.

Deliverables:

- Meeting agenda, materials, and notes including an update of the design progression log

2.3.4 Final Basis of Design Report.

The Design-Builder shall prepare a final BDR incorporating City comments on the draft BDR. The report will include updated TMs, as well as table of contents, executive summary, facilities descriptions, and recommended Project chapters.

Deliverables:

- Final Basis of Design Report (BDR)

2.4. PRELIMINARY SERVICES TASK #4 - 30 PERCENT DESIGN COMPLETION DOCUMENTS (DCD)

2.4.1 Period of Performance.

After the Design-Builder receives the City's written notice that the City's comments, if any, have been satisfactorily addressed in the final BDR, the Design-Builder shall proceed with the performance of services required to achieve 30% Design Completion. The Design-Builder shall submit the Deliverable Material required by the 30% Design Completion Documents (30% DCD) to the City.

2.4.2 Minimum Requirements.

The 30% DCD shall follow the City's CAD Standards and shall include at least the following (where applicable):

- (a) Cover Sheet, Location Map and Vicinity Map;
- (b) Index of Drawings, general legend, abbreviations;
- (c) Design drawings as specified below in Section 2.4.4;
- (d) A Project specifications document including general requirements, site work, materials (concrete, masonry, metals, wood, plastics), thermal and moisture protection, architectural (doors and windows, finishes, interior features), equipment, special construction, mechanical, electrical, and instrumentation and control systems proposed;
- (e) Project specific analyses of codes, ordinances and regulations;
- (f) Two dimensional drawings;
- (g) Initial construction phasing recommendations;

2.4.3 Criteria.

The 30% DCD shall incorporate City's BDR requirements and shall include, in addition to drawings and specifications set forth in this section, such additional information as needed to describe the Project. The 30% DCD shall indicate the basis for design choices, including but not limited to initial costs, lifecycle costs, life expectancy, maintenance considerations, reliability, durability, and applicable requirements of Governmental Bodies having jurisdiction or private licensing, patent, easements, or other legal restrictions, as well as an explanation of

how the design incorporates the City's BDR objectives. The 30% DCD shall indicate any alternative designs, approaches, technologies, equipment or processes that the Design-Builder recommends be considered by the City if not included in the final BDR.

The 30% DCD will take the concepts developed in the BDR and advance them to preliminary engineering drawings and specifications.

2.4.4 30 Percent Design

The 30% DCD will incorporate the recommended systems and layout identified in the BDR into the 30% drawings and specifications. The 30% drawing set will generally include drawings described below.

- (a) **General Drawings:** Cover sheet, abbreviations and symbols, process schematics, key plan, list of drawings, Headworks Facility key plan, drawing symbology, numbering & tagging conventions, symbols, and abbreviations, hydraulic profiles, design criteria (90% complete), process flow diagrams, pipe material schedule, equipment schedule, valve and gate schedules, and boundary survey.
- (b) **Civil Drawings:** Headworks Facility Site preliminary grading and paving plan, and yard piping plans.
- (c) **Architectural Drawings:** building code plan, floor plan, exterior elevations. Preliminary architectural plans and sections for each new building.
- (d) **Structural Drawings:** General notes, standard concrete details, standard reinforcing details, stair and guardrail details. Preliminary structural plans and sections for each structure.
- (e) **Mechanical Drawings:** Mechanical symbols and legends, and energy compliance forms. Preliminary piping and mechanical plans and sections for each process area and structure.
- (f) **Electrical Drawings:** Electrical symbols and legends, one-line diagrams, Headworks Facility Site electrical plan, lighting and power plan, and load schedules.
- (g) **P&IDs:** Preliminary Process and Instrumentation Diagrams (P&IDs) for all of the processes.

- (h) **Instrumentation:** Legends and symbols, control system block diagrams/network architecture, and preliminary control descriptions.

Preliminary specifications will be prepared to include a table of contents listing all anticipated specification sections and preliminary specification sections for major equipment items. Major equipment items include screens, screenings handling system, grit removal, grit washer/classifier systems, and raw sewage pumps.

A 30 percent design Technical Memorandum will be prepared that includes design criteria for each process, information from the fire marshal and code reviewers, process calculations, preliminary structural, mechanical and electrical calculations.

The Design-Builder will also provide an update of the Estimated Design-Build Cost at the completion of the 30% Design.

Deliverables:

- Draft and Final 30% DCD (including design drawings, specifications, and Technical Memorandum)
- Estimated Design-Build Cost Update

2.4.5 Corrosion Engineering.

The Design-Builder's corrosion experts will review the findings of the geotechnical investigation, conduct additional sampling and testing as needed, and develop details and specifications for corrosion protection systems for the pipelines, equipment, and other metal items such as grating and guardrails. The following items are included in this Preliminary Services Task:

2.4.5.1 Headworks Facility Corrosivity Assessment. The Design-Builder's corrosion engineers will review the soil sample chemical analysis from the geotechnical consultant. The soil samples will have been analyzed for pH, chlorides, sulfates, resistivity, and Redox potential. Additional analysis will include:

- (a) Conduct in-situ soil resistivities at selected locations throughout the Headworks Facility Site using the Wenner 4-pin technique. In-situ resistivities will be measured at 2.5-, 5-, 7.5-, 10-, and 15-foot depths using a suitable Resistivity Meter. Barnes layer calculations will be performed to determine the corrosivity of the different soil layers to the proposed pipeline materials.

- (b) Review the plans and specifications for the Project prepared by the Design-Builder for construction details and proposed materials and determine the suitability of the proposed materials based on the collected field and laboratory data.
- (c) Prepare a TM, which will provide a summary of the field data collected along with the chemical analysis of the soil samples and an analysis of this data. The potential for corrosion on the new process pipelines will be determined based on the analysis and recommendations for the long-term prevention of corrosion and will be included for all pipe material options. All fieldwork and recommendations will be in compliance with applicable National Association of Corrosion Engineers (NACE) and local district standards. The TM will also contain the design criteria for the proposed corrosion prevention systems for other metal systems Headworks
- (d) Prepare drawings and specifications for the recommended corrosion protection systems developed as part of the TM.

Deliverables:

- Draft and final Corrosion Control Technical Memorandum

2.4.6 30 Percent Design Workshop.

A one-day workshop will be conducted after the City reviews the 30% Design Documents. A log of review comments will be maintained to ensure all design comments are addressed and incorporated into the 60 percent design, if appropriate. This review workshop shall be held during the 20-Business Day City review and comment period identified in Section 2.4.9. The Design-Builder shall schedule this review workshop on a date approved by the City, near the midpoint of the review and comment period.

Deliverables:

- Meeting agenda, materials, notes, action items and review comments log

2.4.7 Updated Estimated Design-Build Cost.

The Design-Builder shall update its preliminary cost model presented in the BDR for the Project. The updated Project 30% DCD cost model shall include estimated costs for all services, equipment and materials and other fees that may be incurred by the Project including

appropriate contingencies due to uncertainties regarding cost estimates, site conditions and other factors. The updated cost model shall be broken down into logical cost categories such as remaining design services, engineering services during construction, start up and testing, construction work, major equipment purchases, major material purchases and other categories with appropriate supporting documentation that will assist the City in its evaluation of the Design-Build Cost estimate.

Deliverables:

- Updated Estimated Design-Build Cost

2.4.8 Updated Initial Design-Build Schedule.

The Design-Builder shall update its Initial Design-Build Schedule for the Design-Build Work presented in the BDR. The updated Initial Design-Build Schedule shall indicate key milestone dates for work completion from the final 30% DCD through start up, testing and Final Completion. The schedule shall provide for adequate periods for City design and Definitive Project Submittal reviews and for the Design-Builder to make revisions and obtain written notice to proceed from the City before proceeding with the next work phase. The updated Initial Design-Build Schedule shall be accompanied by a memo or report that explains significant changes from the BDR for key activities and Project milestones.

Deliverables:

- Updated Initial Design-Build Schedule

2.4.9 City Review.

The City shall review the 30% DCD and provide the Design-Builder with written review comments within 20 Business Days. The Design-Builder shall make such revisions as required in order to address the City's comments. The City shall notify the Design-Builder in writing after the City has determined that revisions made by the Design-Builder are acceptable.

2.5. PRELIMINARY SERVICES TASK #5 - 60 PERCENT DESIGN COMPLETION DOCUMENTS (DCD)

2.5.1 Inclusion as the Technical Specifications.

After acceptance by City of Design-Builder's 30% Design Completion Documents (DCD), the Design-Builder shall proceed with the performance of the Base Preliminary Services required to achieve 60% Design Completion. Upon the City's written notification that all the City's

comments, if any, have been satisfactorily addressed by the Design-Builder, the completed 60% DCD shall be included as the Technical Specifications in Appendix 4 (Technical Specifications).

2.5.2 Deliverables.

The 60% DCD shall consist of CAD generated drawings and specifications covering general civil and site work improvements (includes design criteria, and process flow diagram), geotechnical, soils and drainage, architectural, structural, mechanical, HVAC, plumbing, electrical, instrumentation and controls and landscaping. The 60% DCD shall include layouts and schematics drawn to scale, design criteria and notes showing the proposed design of all new and modified existing facilities, in sufficient detail to cover the complete Project. The 60% DCD shall include all major elements of the Project design proposed for construction which complies with the final 30% DCD. The 60% CAD drawings will follow the City's CAD Standards.

2.5.3 Minimum Requirements.

The 60% DCD shall include but is not limited to the following (where applicable):

- (a) Cover Sheet, Location Map and Vicinity Map;
- (b) Index of Drawings, general legend, abbreviations;
- (c) Design drawings updated to 60% level of completion;
- (d) A Project specifications document including general requirements, site work, materials (concrete, masonry, metals, wood, plastics), thermal and moisture protection, architectural (doors and windows, finishes, interior features), equipment, special construction, mechanical, electrical, and instrumentation and control systems proposed, the most recent edition of the Construction Specification Institute conventions, with Part 2 Products of each section completed, describing the size, character and quality of the entire Project in its essentials as to kinds and locations of materials; equipment selections; and types of structural, mechanical and electrical systems;
- (e) Engineering calculations for all disciplines;
- (f) Project specific analyses of codes, ordinances and regulations;
- (g) Two dimensional drawings and three dimensional drawings of major structures, equipment installations; and

- (h) Updated construction phasing recommendations.

Deliverables:

- Draft and final 60% DCD
- Calculations supporting the 60% DCD

2.5.4 Criteria.

The 60% DCD shall incorporate the final 30% DCD and shall include in addition to drawings and specifications set forth in this section such additional information as needed to describe the Project. The 60% DCD shall indicate the basis for design choices, including but not limited to updated initial costs, lifecycle costs, life expectancy, maintenance considerations, reliability, durability, and applicable requirements of Governmental Bodies having jurisdiction or private licensing, patent, easements, or other legal restrictions, as well as an explanation of how the design incorporates the City's BDR objectives. The 60% DCD shall indicate any new alternative designs, approaches, technologies, equipment or processes that the Design-Builder recommends be considered by the City if not included in the final 30% DCD.

Deliverables:

- Updated design criteria document

2.5.5 Updated Design-Build Cost Model.

The Design-Builder shall update its Design-Build Cost Model presented in the BDR and updated at the 30% design completion for the Project. The updated Project 60% DCD Design-Build Cost Model shall include estimated costs for all services, equipment and materials and other fees that may be incurred by the Project including appropriate contingencies due to uncertainties regarding cost estimates, site conditions and other factors. The updated cost model shall be broken down into logical cost categories such as remaining design services, engineering services during construction, start up and testing, self-performed contractor work, procured Subcontractor work, major equipment purchases (engine generators, piping, etc.), major material purchases and other categories with appropriate supporting documentation that will assist the City in its evaluation of the Project cost model.

Deliverables:

- Updated Design-Build Cost Model

2.5.6 Updated Design-Build Schedule.

The Design-Builder shall update its Design-Build Schedule presented in the 30% DCD. The updated Initial Design-Build Schedule shall indicate key milestone dates for work completion from the final 60% DCD through Commissioning, Acceptance Testing and Final Completion. The updated Initial Design-Build Schedule shall provide for adequate periods for City design reviews through 100% completion and for the Design-Builder to make revisions and obtain written notification to proceed from the City before proceeding with the next work phase. The updated Initial Design-Build Schedule shall be accompanied by a memo or report that explains significant changes from the 30% DCD for key activities and Project milestones. Upon the City's written approval, the updated Design-Build Schedule shall be the schedule intended to be included as the "Initial Design-Build Schedule" to be set forth as Attachment 5A to Appendix 5 (General Design-Build Work Requirements) of this Design-Build Contract. In addition, the Scheduled Acceptance Date specified in the Design-Build Schedule shall be the date intended to be included in Section 1.1 (Definitions) of this Design-Build Contract.

Deliverables:

- Updated Design-Build Schedule

2.5.7 Required Permits and Approvals.

In accordance with Section 2.1.4 (Permits and Specifications Plan) of this Appendix, the Design-Builder shall produce a Permits and Specifications Plan that identifies all necessary information, applications, permits, documents and forms, as may be required by State, City, County, utilities, private authorities with jurisdiction, and other regulatory and permitting agencies, required to secure the Governmental Approvals necessary to perform the work shown in the 60% DCD. This Preliminary Services Task shall apply to City, County and State requirements, as well as other federal, State, local, and special City or other regulatory requirements. Upon the City's written approval, Governmental Approvals identified by the Design-Builder (including Governmental Approval Application Dates and Assumed Approval Issuance Dates) shall be the Governmental Approvals intended to be included in Table 3-1 (Governmental Approvals Responsibility) and Table 3-2 (Governmental Approvals Schedule) of Appendix 3 (Governmental Approvals).

Deliverables:

- Updated Permits and Specifications Plan

2.5.8 Performance Guarantees.

The Design-Builder shall specify the City-approved quality characteristics to which the Headworks Facility will operate (the “Quality Standards”) in comparison to State and federal standards. City operation and maintenance requirements shall also be identified by the Design-Builder. Upon the City’s written approval, the Performance Guarantees shall be included in Appendix 9 (Commissioning and Acceptance) of this Design-Build Contract.

2.5.9 Training Plan Requirements.

The Design-Builder shall develop a Training Plan in accordance with the Contract Standards. The City’s approval of the Training Plan shall be a condition precedent to the achievement of Substantial Completion. The Training Plan shall:

- (a) include a combination of classroom and field/maintenance shop training;
- (b) be designed to completely train City staff to competently operate and maintain the Headworks Facility with the systems theory, sequence of operations, component and functional descriptions, standard operating procedures, hazard analysis of equipment, safety features, emergency procedures, assembly, disassembly, preventive, corrective and predictive maintenance, internal and external wiring, control loop, schematics and diagrams of all components;
- (c) list all equipment and systems in the Headworks Facility, including the following information for each equipment package or system:
 - (1) a description of each equipment package or system with reference to technical specifications or drawings if applicable;
 - (2) identification of target audiences (i.e. operators, mechanical maintenance, electrical maintenance, instrumentation maintenance);
 - (3) duration of classroom training for each session and each audience; and
 - (4) duration of hands-on training for each session and each audience;
- (d) include the number, qualifications and certification levels of City staff; and
- (e) establish the hours of training that will be provided prior to the Acceptance Date and, if necessary, any further training that will be provided during the Transition Period.

The total hours of training to be provided over the course of the Design-Builder's performance of the Transition Services shall be the following: (list training type; **to be negotiated by the City and Design-Builder in cooperation with equipment manufacturers**)

Deliverables: Training Plan

2.5.10 Draft Maintenance of Operations During Construction Plan.

Pursuant to Section 6.12(A) (Maintenance of Operations During Construction) of this Design-Build Contract, the Design-Builder shall prepare a draft Maintenance of Operations During Construction Plan which identifies the plan and procedures for coordinating with the City's requirements for ongoing operations of the Regional Wastewater Facility and Existing Headworks Facility.

Deliverables:

- Draft Maintenance of Operations During Construction

2.5.11 City Review.

The City shall review the 60% DCD and provide the Design-Builder with written review comments within 20 Business Days. The Design-Builder shall make such revisions as required in order to address the City's comments. The City shall indicate to the Design-Builder in writing after the City has determined that revisions made by the Design-Builder are acceptable.

2.5.12 60 Percent Design Workshop.

A 60 percent design workshop will be conducted after the City reviews the 60% DCD. This workshop will be used to finalize the design comments. A log of review comments will be maintained to assure all design comments are addressed and incorporated, if appropriate. This review workshop shall be held during the 20-Business Day City review and comment period identified in Section 2.5.11. The Design-Builder shall schedule this review workshop on a date approved by the City, near the midpoint of the review and comment period.

Deliverables:

- Meeting agenda, materials, notes, action items and review comments log

2.6. PRELIMINARY SERVICES TASK #6 – DEFINITIVE PROJECT SUBMITTAL AND SUPPORTING COST ESTIMATES

2.6.1 Definitive Project Submittal.

After the Design-Builder has received the City’s written notification that its comments have been satisfactorily addressed in the revised 60% DCD, Design-Builder shall provide the City with a Definitive Project Submittal, which shall be prepared in accordance with the Contract Standards and meet the requirements set forth in Section 5.9 (Definitive Project Submittal) of this Design-Build Contract.

The Definitive Project Submittal shall incorporate all of the work performed as part of Preliminary Services Task 5, set forth the proposed Base Guaranteed Maximum Price for the Design-Build Work (including all services required for construction of the Project through Commissioning, Acceptance Testing and Final Completion), and provide information on all engineering, procurement, materials, construction labor and equipment and other services necessary to perform the Design-Build Work as required under the Design-Build Contract. As part of its Definitive Project Submittal, the Design-Builder shall submit a final Subcontracting Plan and a final Design-Build Schedule that meets the requirements set forth in Section 5.3 (Design-Build Schedule) of Appendix 5 (General Design-Build Work Requirements).

2.6.2 Basis of the Proposed Base Guaranteed Maximum Price.

The Design-Builder will prepare and include in the Definitive Project Submittal documentation supporting the proposed Base Guaranteed Maximum Price, including Subcontractor and equipment vendor bids and quotations, detailed cost estimating data, allowances (where appropriate), breakdown of general conditions, and definition of the Design-Builder’s contingency included in the Base Guaranteed Maximum Price. Such documentation will include the following information:

- (a) Engineering services, including:
 - (1) Engineering design from 60% to 100% to be based on firm proposal.
 - (2) Engineering construction support
 - (3) Engineering start up, testing and Headworks Facility commissioning
 - (4) Engineering services in support of procurement of major equipment
 - (5) Training and documentation

- (b) Construction services and costs for:
 - (1) Services during engineering design from 60% to 100%
 - (2) Construction support for value engineering
 - (3) General conditions
 - (4) Site work, road improvements and traffic control
 - (5) Electrical and instrumentation
 - (6) Control system programming
 - (7) Piping and mechanical
 - (8) Waste disposal systems for sanitary wastes and spent chemicals
 - (9) Commissioning and Acceptance Testing
 - (10) Performance and payment bonds
 - (11) Contingency

- (c) Labor, expenses, rental, overhead and mark-up costs, including:
 - (1) Billing rates for all proposed classifications of engineering and construction services labor and related expense rates such as mileage charges, per diem for meals and lodging, office charges and personnel vehicle rentals;
 - (2) Unburdened rental rates on construction equipment, trailers, storage containers or space and major tools;
 - (3) Direct overhead on labor (benefits), indirect overhead on labor (general and administration or G&A), and profit rate on fully cost burdened labor rates;
 - (4) Proposed overhead markup rates and profit rates on expenses, materials, equipment rentals, Subcontractors, equipment supplied by vendors and consumables (supplies);

- (5) The same cost and pricing information as requested in paragraphs 3 (a), (b) and (c) above for major Subcontractors; and
 - (6) Demonstrate that there are no significant tiered pricing markups so that major Subcontractors' overhead and profit markups are not duplicated to similar Design-Builder markups.
- (d) Design-Builder shall also provide the following information:
- (1) For engineering field services during construction, labor costs and expenses for a construction manager or resident engineer for overseeing construction work and related services;
 - (2) For engineering support during construction for review of construction Requests for Information ("RFIs"), submittals and proposed design or construction changes and costs, labor costs and expenses;
 - (3) All Base Guaranteed Maximum Price pricing assumptions and clarifications on terms and conditions used;
 - (4) All self-performed construction services;
 - (5) A breakdown of the Design-Builder Contingency, how it was determined and expected adequacy to cover costs not able to be determined accurately at the time of preparation of the Definitive Project Submittal.
 - (6) A list of work activities, expenses and fees not included in the GMP which the City may be expected to pay for;
 - (7) Key assumptions in the 60% DCD Work Schedule upon which the Base Guaranteed Maximum Price is based including dates for Substantial Completion and Final Completion; and
 - (8) Any other key assumptions or conditions upon which the Base Guaranteed Maximum Price is based not covered in the preceding items in this section.

2.6.3 Preparation of the Definitive Project Submittal.

The Design-Builder will start the development of the Definitive Project Submittal at the onset of the Project during the kick-off partnering meeting to establish dialogue from early concept development through the 60% design. During the design phase, the Design-Builder will maintain ongoing communication with the City to assess and analyze concept and design changes as they relate to the overall Project cost and schedule.

The Design-Builder shall use an “open book” approach to develop the Definitive Project Submittal, providing the City with full access to all the details that make up the final Definitive Project Submittal.

Meetings will be held throughout the design and development of the Definitive Project Submittal with the City to assure the design and preconstruction phase work is completed in a transparent manner.

The Project will not have 100% complete plans and specifications at the time the final Base Guaranteed Maximum Price is agreed upon. Therefore, in order to get a more complete estimate of the scope, the Design-Builder will prepare “design gap analysis narratives” for all work items to provide the Design-Builder’s estimators and the City a clearer picture of what is included in the final Definitive Project Submittal package.

During development of the Definitive Project Submittal, the Design-Builder will perform value analysis and constructability reviews with design and construction team members as the plans are being prepared. The Design-Builder will also conduct “operability reviews” with the Headworks plant operations staff, and “bid-ability” reviews with the Design-Builder’s estimators.

All of these efforts are designed to prepare the documents and estimates as accurately as possible and to keep the City fully informed and involved with the design and cost throughout the development of the Definitive Project Submittal.

Deliverables:

- Draft and final Definitive Project Submittal

2.6.4 Definitive Project Submittal Workshop.

After delivery of the draft Definitive Project Submittal, the Design-Builder will meet with the City during a 4-hour workshop to present, review, and answer questions about the content of

the Definitive Project Submittal. The Design-Builder will finalize the Definitive Project Submittal after the workshop and re-submit it to the City for final review and approval.

Deliverables:

- Definitive Project Submittal Workshop Agenda, materials, meeting notes and action items

2.7. POTENTIAL ADDITIONAL PRELIMINARY SERVICES

As provided in Section 5.2(B) (Additional Preliminary Services) of this Design-Build Contract, the City may request that the Design-Builder perform Additional Preliminary Services.

2.8. PRELIMINARY SERVICES FEE

2.8.1 Compensation for Base Preliminary Services.

The City shall pay the Design-Builder a Preliminary Services Fee in the amount of \$5,666,354. The Preliminary Services Fee shall serve as the Design-Builder's entire compensation for all Base Preliminary Services performed as required under this Design-Build Contract, and shall include costs for any and all out-of-pocket disbursements for travel, lodging and other expenses incidental to the performance of the Base Preliminary Services and any payments to third parties such as Subcontractors.

The Design-Builder shall earn its Preliminary Services Fee progressively based upon the Design-Builder's percentage completion of the Base Preliminary Services as reasonably determined by the City, based on the following values:

<u>Preliminary Services Task</u>	<u>Value</u>
Task #1: Project Management	\$1,359,094
Task #2: Preliminary Investigations	\$732,567
Task #3: Basis of Design Report	\$872,490
Task #4: 30% Design Completion Documents	\$821,846
Task #5: 60% Design Completion Documents	\$1,334,123
Task #6: Definitive Project Submittal and Supporting Cost Estimates and Preparation of Formal Proposal to Complete Designs to 100%	\$546,234

2.8.2 Payment Requests

The Design-Builder shall request monthly progress payments of the portion of the Preliminary Services Fee payable with respect to each Preliminary Services Task. All billings and requests for progress payments shall require a written invoice from the Design-Builder in a form acceptable to the City. The Design-Builder shall submit all billings with any necessary invoices, time records, Preliminary Services Deliverable Material, and other appropriate evidence of performance, after which the City shall make payment at the earliest practicable time, but not later than 30 days following receipt of a proper payment request.

If requested by the City to facilitate the payment process and track progress of the Preliminary Services Tasks, the Design-Builder shall provide the City with an itemization of its compensation according to a Work Breakdown Structure (“WBS”) in a form the City supplies or approves (at the City’s option), that defines all Preliminary Services Tasks (Design-Builder’s and Subcontractors’), along with a Preliminary Services Schedule providing the timeline for each Preliminary Services Task, a Project budget defining the planned man-hours and costs for each Preliminary Services Task, and a schedule of deliverables providing the timeline for all Preliminary Services Deliverable Material to be provided to the City. The WBS shall further define which tasks are to be performed by Subcontractors. The WBS shall not relieve the Design-Builder of its performance, schedule or other obligations under this Design-Build Contract.

2.8.3 Compensation for Additional Preliminary Services.

In the event the City elects to request any Additional Preliminary Services, compensation for the Additional Preliminary Services shall be negotiated by the City and the Design-Builder in accordance with Section 5.3(B) (Compensation for Additional Preliminary Services) of this Design-Build Contract.

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ATTACHMENT 2A
INITIAL PRELIMINARY SERVICES SCHEDULE

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Activity ID	Activity Name	Dur	Start	Finish	TF	Predecessors	Successors	2018												2019												2020	
								Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb						
San Jose Headworks Project - Indicative Design																																	
Milestones																																	
MS1005	Contract Date	0	29-Jun-18*	20-Dec-19	0			◆ Contract Date																									
MS1015	NTP - Preliminary Services Task 1 to 4	0	02-Jul-18*		1	MS1005	MS1015, PS-1625, PS-1741, PS-1963, PS-20504	◆ NTP - Preliminary Services Task 1 to 4																									
MS1020	Definitive Contract Amendment	0		20-Dec-19	0	PS6140, PS6150, PS-1230	MS1030	◆ Definitive C																									
Project Management and Engineering																																	
Task #1 Project Management - 2.1																																	
Ongoing Project Management																																	
PS-1000	General Ongoing Management	373	02-Jul-18	19-Dec-19	1			General On																									
Risk Management - 2.1.1.2																																	
PS-1101	Risk Management - Prepare Risk Register	8	31-Aug-18	12-Sep-18	1	MS1015	PS-1102	Risk Management - Prepare Risk Register																									
PS-1102	Risk Management - Risk Workshop	1	13-Sep-18	13-Sep-18	1	PS-1101	PS-1103	Risk Management - Risk Workshop																									
PS-1103	Risk Management - Update Risk Register	10	14-Sep-18	27-Sep-18	1	PS-1102	PS-1200, PS-1230	Risk Management - Update Risk Register																									
PS-1200	Risk Management - Risk Workshop BDR	1	08-Jan-19	08-Jan-19	80	MS1015, PS-1103, PS3175	PS-1560	Risk Management - Risk Workshop BDR																									
PS-1210	Risk Management - Risk Workshop 30%	1	11-Apr-19	11-Apr-19	10	PS4010	PS4160	Risk Management - Risk Workshop 30%																									
PS-1220	Risk Management - Risk Workshop 60%	1	14-Aug-19	14-Aug-19	10	PS5010	PS5120	Risk Management - Risk Workshop																									
PS-1230	Risk Management - Routine Updates	311	28-Sep-18	19-Dec-19	1	PS-1103	MS1020	Risk Manag																									
Change Management 2.1.1.3																																	
PS-1241	Change Management Log - Prepare	10	10-Jul-18	23-Jul-18	125	MS1015	PS3180	Change Management Log - Prepare																									
Project Execution Plan - 2.1.2																																	
Base Document PEP																																	
PS-1260	Project Execution Plan - Prepare	60	26-Sep-18	20-Dec-18	184	MS1015	PS-1270	Project Execution Plan - Prepare																									
PS-1270	Project Execution Plan - Submit Draft	1	21-Dec-18	21-Dec-18	184	PS-1260	PS-1280	Project Execution Plan - Submit Draft																									
PS-1280	Project Execution Plan - City Review	10	24-Dec-18	08-Jan-19	184	PS-1270	PS-1290	Project Execution Plan - City Review																									
PS-1290	Project Execution Plan - City Provides Comments	1	09-Jan-19	09-Jan-19	184	PS-1280	PS-1300	Project Execution Plan - City Provides Comments																									
PS-1300	Project Execution Plan - Fixup	15	10-Jan-19	30-Jan-19	184	PS-1290	PS-1310	Project Execution Plan - Fixup																									
PS-1310	Project Execution Plan - Submit Final	1	31-Jan-19	31-Jan-19	184	PS-1300	PS6100	Project Execution Plan - Submit Final																									
PS-1320	Trend Management Log - Prepare	10	10-Jul-18	23-Jul-18	176	MS1015	PS3197, PS-1330	Trend Management Log - Prepare																									
PS-1330	Project Decision Log - Prepare	10	10-Jul-18	23-Jul-18	176	PS-1320	PS3197	Project Decision Log - Prepare																									
Communication Plan 2.1.3																																	
PS-1554	Communication Plan - Prepare	10	26-Sep-18	09-Oct-18	52	MS1015	PS-1555	Communication Plan - Prepare																									
PS-1555	Communication Plan - Submit Draft	1	10-Oct-18	10-Oct-18	52	PS-1554	PS-1556	Communication Plan - Submit Draft																									
PS-1556	Communication Plan - City Review	10	11-Oct-18	24-Oct-18	52	PS-1555	PS-1557	Communication Plan - City Review																									
PS-1557	Communication Plan - City Provide Comments	1	25-Oct-18	25-Oct-18	52	PS-1556	PS-1558	Communication Plan - City Provide Comments																									
PS-1558	Communication Plan - Fixup	5	26-Oct-18	01-Nov-18	52	PS-1557	PS-1559	Communication Plan - Fixup																									
PS-1559	Communication Plan - Submit Final	1	02-Nov-18	02-Nov-18	52	PS-1558	PS3180	Communication Plan - Submit Final																									
Permits and Specifications Plan - 2.1.4																																	
PS-1560	Permit and Specifications Plan - Prepare	120	09-Jan-19	26-Jun-19	80	PS-3670, PS-3640, PS-1200	PS-1570	Permit and Specifications Plan - Prepare																									
PS-1570	Permit and Specifications Plan - Submit	1	27-Jun-19	27-Jun-19	80	PS-1560	PS6100	Permit and Specifications Plan - Submit																									
Preliminary Services and Design-Build Schedules - 2.1.5																																	
PS-1730	Preliminary Services Schedule - Submit Final	1	12-Jul-18	12-Jul-18	1	PS-1010	PS-1733	Preliminary Services Schedule - Submit Final																									
PS-1733	Preliminary Services Schedule - Routine Updates	365	13-Jul-18	19-Dec-19	1	PS-1730	PS6150	Preliminary																									
PS-1743	Design-Build Schedule - Prepare	25	02-Jul-18	06-Aug-18	310	MS1015	PS-1748	Design-Build Schedule - Prepare																									
PS-1748	Design-Build Schedule - Submit Draft	1	07-Aug-18	07-Aug-18	310	PS-1743, MS1015	PS-1753	Design-Build Schedule - Submit Draft																									
PS-1753	Design-Build - City Review	10	08-Aug-18	21-Aug-18	310	PS-1748	PS-1758	Design-Build - City Review																									
PS-1758	Design-Build - City Provide Comments	1	22-Aug-18	22-Aug-18	310	PS-1753	PS-1763	Design-Build - City Provide Comments																									
PS-1763	Design-Build - Fixup	10	23-Aug-18	06-Sep-18	310	PS-1758	PS-1768	Design-Build - Fixup																									
PS-1768	Design-Build - Submit Final	1	07-Sep-18	07-Sep-18	310	PS-1763	PS6140	Design-Build - Submit Final																									
Document Submittal Procedure - 2.1.6																																	
PS-1625	Document Submittal Procedure - Prepare	8	02-Jul-18	12-Jul-18	176	MS1005, MS1015	PS-1635	Document Submittal Procedure - Prepare																									
PS-1635	Document Submittal Procedure - Submit Draft	1	13-Jul-18	13-Jul-18	176	PS-1625	PS-1645	Document Submittal Procedure - Submit Draft																									
PS-1645	Document Submittal Procedure - City Review	10	16-Jul-18	27-Jul-18	176	PS-1635	PS-1655	Document Submittal Procedure - City Review																									
PS-1655	Document Submittal Procedure - City Provide Comments	1	30-Jul-18	30-Jul-18	176	PS-1645	PS-1665	Document Submittal Procedure - City Provide Comments																									
PS-1665	Document Submittal Procedure - Fixup	10	31-Jul-18	13-Aug-18	176	PS-1655	PS-1675	Document Submittal Procedure - Fixup																									
PS-1675	Document Submittal Procedure - Submit Final	1	14-Aug-18	14-Aug-18	176	PS-1665	PS4160	Document Submittal Procedure - Submit Final																									
Monthly Project Report - 2.1.7																																	
PS-1740	Monthly Project Report - Monthly Updates	373	02-Jul-18	19-Dec-19	1	MS1015	PS6150	Monthly Pro																									

- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆ Milestone



DRAFT--Contact the Office of the City Clerk at (408) 535-1260 or CityClerk@sanjoseca.gov for final document.

Activity ID	Activity Name	Dur	Start	Finish	TF	Predecessors	Successors	2018												2019												2020	
								Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb						
Records Management System 2.1.8																																	
PS-1741	Records Management System - Training	20	02-Jul-18	30-Jul-18	166	MS1005, MS1015	PS-1742	Records Management System - Training																									
PS-1742	Records Management System - Testing	20	31-Jul-18	27-Aug-18	166	PS-1741	PS-1744	Records Management System - Testing																									
PS-1744	Records Management System - Go Live	1	28-Aug-18	28-Aug-18	166	PS-1742	PS4160	Records Management System - Go Live																									
CMMS Plan - 2.1.9																																	
PS-1860	CMMS Plan - Prepare	180	02-Jul-18	18-Mar-19	109	MS1015	PS-1870	CMMS Plan - Prepare																									
PS-1870	CMMS Plan - Submit Draft	1	19-Mar-19	19-Mar-19	109	PS-1860	PS-1880	CMMS Plan - Submit Draft																									
PS-1880	CMMS Plan - City Review	20	20-Mar-19	16-Apr-19	109	PS-1870	PS-1890	CMMS Plan - City Review																									
PS-1890	CMMS Plan - City Provide Comments	1	17-Apr-19	17-Apr-19	109	PS-1880	PS-1900	CMMS Plan - City Provide Comments																									
PS-1900	CMMS Plan - Fixup	20	18-Apr-19	15-May-19	109	PS-1890	PS-1910	CMMS Plan - Fixup																									
PS-1910	CMMS Plan - Submit Final	1	16-May-19	16-May-19	109	PS-1900	PS6100	CMMS Plan - Submit Final																									
Project Kickoff and Partnering Meeting 2.1.10																																	
PS-1010	Project Kickoff and Partnering Meeting	1	12-Jul-18	12-Jul-18	1	MS1015	PS-20614, PS-1730	Project Kickoff and Partnering Meeting																									
Constructability Reviews - 2.1.11																																	
PS-1912	General Sequencing Plan - Prepare	30	24-Oct-18	06-Dec-18	80	PS3001	PS-1931	General Sequencing Plan - Prepare																									
PS-1916	Mobilization and Site Access Plan - Prepare	30	24-Oct-18	06-Dec-18	80	PS3001	PS-1931	Mobilization and Site Access Plan - Prepare																									
PS-1918	Constructability Review - Workshop BDR No.1	1	13-Dec-18*	13-Dec-18	70	PS3001	PS5010, PS-1920, PS-1926	Constructability Review - Workshop BDR No.1																									
PS-1920	Constructability Review - Workshop BDR No. 1 Prepare Report	5	14-Dec-18	20-Dec-18	70	PS-1918	PS-1918	Constructability Review - Workshop BDR No. 1 Prepare Report																									
PS-1924	Constructability Review - Workshop BDR No. 1 Review Report	1	21-Dec-18	21-Dec-18	70	PS-1920	PS3197	Constructability Review - Workshop BDR No. 1 Review Report																									
PS-1926	Constructability Review - Workshop BDR No. 2	1	13-Dec-18	13-Dec-18	70	PS-1918	PS-1928	Constructability Review - Workshop BDR No. 2																									
PS-1928	Constructability Review - Workshop BDR No. 2 Prepare Report	5	14-Dec-18	20-Dec-18	70	PS-1926	PS-1929	Constructability Review - Workshop BDR No. 2 Prepare Report																									
PS-1929	Constructability Review - Workshop BDR No. 2 Review Report	1	21-Dec-18	21-Dec-18	70	PS-1928	PS3197	Constructability Review - Workshop BDR No. 2 Review Report																									
PS-1931	Gen Sequencing Plan, Mob and Site Access Plan - Submit with BDR	1	22-Jan-19	22-Jan-19	50	PS3180, PS-1916, PS-1912	PS3197	Gen Sequencing Plan, Mob and Site Access Plan - Submit with BDR																									
PS-1932	Constructability Review Workshop 30%	1	03-May-19	03-May-19	8	PS4160	PS-1933	Constructability Review Workshop 30%																									
PS-1933	Constructability Review Workshop 30% Prepare Report	5	06-May-19	10-May-19	8	PS-1932	PS-1934	Constructability Review Workshop 30% Prepare Report																									
PS-1934	Constructability Review Workshop 30% Review Report	1	13-May-19	13-May-19	8	PS-1933	PS4170	Constructability Review Workshop 30% Review Report																									
PS-1936	Constructability Review Workshop 60%	1	06-Sep-19	06-Sep-19	8	PS5120	PS-1937	Constructability Review Workshop 60%																									
PS-1937	Constructability Review Workshop 60% Prepare Report	5	09-Sep-19	13-Sep-19	8	PS-1936	PS-1938	Constructability Review Workshop 60% Prepare Report																									
PS-1938	Constructability Review Workshop 60% Review Report	1	16-Sep-19	16-Sep-19	8	PS-1937	PS5130	Constructability Review Workshop 60% Review Report																									
Value Engineering 2.1.12																																	
PS-1954	Value Engineering BDR - Provide Documents	1	27-Feb-19	27-Feb-19	24	PS3185	PS-1958	Value Engineering BDR - Provide Documents																									
PS-1958	Value Engineering BDR - Attend Meeting	1	28-Feb-19	28-Feb-19	24	PS-1954	PS4010	Value Engineering BDR - Attend Meeting																									
PS-1960	Value Engineering 30% - Provide Documents	1	17-May-19	17-May-19	34	PS4170	PS-1962	Value Engineering 30% - Provide Documents																									
PS-1962	Value Engineering 30% - Attend Meeting	1	20-May-19	20-May-19	34	PS-1960	PS4205	Value Engineering 30% - Attend Meeting																									
Cost Model 2.1.13																																	
PS-1963	Cost Model - Prepare Framework	5	15-Aug-18	21-Aug-18	1	MS1005, MS1015	PS-1964	Cost Model - Prepare Framework																									
PS-1964	Cost Model - Prepare Initial Cost Model for Indicative and Alternate	10	22-Aug-18	05-Sep-18	1	PS-1963	PS-1966	Cost Model - Prepare Initial Cost Model for Indicative and Alternate																									
PS-1966	Cost Model - Dynamic Cost Model Workshop	1	06-Sep-18	06-Sep-18	1	PS-1964	PS-1967	Cost Model - Dynamic Cost Model Workshop																									
PS-1967	Cost Model - Prepare Options Analysis Models	40	07-Sep-18	01-Nov-18	1	PS-1966	PS-1968	Cost Model - Prepare Options Analysis Models																									
PS-1968	Cost Model - Routine Updates	286	02-Nov-18	19-Dec-19	1	PS-1967	PS6150	Cost Model - Routine Updates																									
Task #2 Preliminary Investigations - 2.2																																	
Review of Reference Documents, Site Analysis, HW Existing Cond - 2.2.2,3 & 4																																	
PS-2010	Review of Docs and Conditions Workplan - Prepare	20	10-Jul-18	06-Aug-18	19	MS1015	PS-2011	Review of Docs and Conditions Workplan - Prepare																									
PS-2011	Review of Docs and Conditions Workplan - Review with City	20	14-Aug-18	11-Sep-18	19	PS-2010	PS-2012	Review of Docs and Conditions Workplan - Review with City																									
PS-2012	Review of Docs and Conditions Tech Memo - Prepare	70	12-Sep-18	20-Dec-18	19	PS-2011, MS1015	PS-2013	Review of Docs and Conditions Tech Memo - Prepare																									
PS-2013	Review of Docs and Conditions Tech Memo - Submit Draft	1	21-Dec-18	21-Dec-18	19	PS-2012	PS-2014, PS3180	Review of Docs and Conditions Tech Memo - Submit Draft																									
PS-2014	Review of Docs and Conditions Tech Memo - Review Workshop	1	24-Dec-18	24-Dec-18	53	PS-2013	PS-2017, PS-2015	Review of Docs and Conditions Tech Memo - Review Workshop																									
PS-2015	Review of Docs and Conditions Tech Memo - City Review	15	26-Dec-18	16-Jan-19	53	PS-2014	PS-2016	Review of Docs and Conditions Tech Memo - City Review																									
PS-2016	Review of Docs and Conditions Tech Memo - City Provide Comments	1	17-Jan-19	17-Jan-19	53	PS-2015	PS-2017	Review of Docs and Conditions Tech Memo - City Provide Comments																									
PS-2017	Review of Docs and Conditions Tech Memo - Fixup	15	18-Jan-19	07-Feb-19	53	PS-2014, PS-2016	PS-2018	Review of Docs and Conditions Tech Memo - Fixup																									
PS-2018	Review of Docs and Conditions Tech Memo - Submit Final	1	08-Feb-19	08-Feb-19	53	PS-2017	PS4160	Review of Docs and Conditions Tech Memo - Submit Final																									
Subsurface Utilities Investigations - 2.2.5																																	
PS-20196	Subsurface Utilities Investigation Workplan - Prepare	20	10-Jul-18	06-Aug-18	19	MS1015	PS-20206	Subsurface Utilities Investigation Workplan - Prepare																									
PS-20206	Subsurface Utilities Investigation Workplan - Review with City	20	14-Aug-18	11-Sep-18	19	PS-20196	PS-20216	Subsurface Utilities Investigation Workplan - Review with City																									
PS-20216	Award Subconsultant	20	10-Oct-18	06-Nov-18	19	PS-20206	PS-20226	Award Subconsultant																									
PS-20226	Pothole Subconsultant - Exploration	20	07-Nov-18	06-Dec-18	19	PS-20216	PS-20236	Pothole Subconsultant - Exploration																									
PS-20236	Subsurface Utilities Investigation Tech Memo - Prepare	20	07-Dec-18	07-Jan-19	19	PS-20226	PS-20246, PS-20247	Subsurface Utilities Investigation Tech Memo - Prepare																									
PS-20246	Subsurface Utilities Investigation Tech Memo - Submit Draft	1	08-Jan-19	08-Jan-19	44	PS-20236	PS-20256	Subsurface Utilities Investigation Tech Memo - Submit Draft																									
PS-20247	Subsurface Utilities Investigation Tech Memo - Review Workshop	1	15-Jan-19	15-Jan-19	19	PS-20236	PS-20256, PS3186	Subsurface Utilities Investigation Tech Memo - Review Workshop																									
PS-20256	Subsurface Utilities Investigation Tech Memo - City Review	15	16-Jan-19	05-Feb-19	39	PS-20246, PS-20247	PS-20257	Subsurface Utilities Investigation Tech Memo - City Review																									
PS-20257	Subsurface Utilities Investigation Tech Memo - City Provide Comments	1	06-Feb-19	06-Feb-19	39	PS-20256	PS-20258	Subsurface Utilities Investigation Tech Memo - City Provide Comments																									
PS-20258	Subsurface Utilities Investigation Tech Memo - Fixup	15	07-Feb-19	27-Feb-19	39	PS-20257	PS-20259	Subsurface Utilities Investigation Tech Memo - Fixup																									
PS-20259	Subsurface Utilities Investigation Tech Memo - Submit Final	1	28-Feb-19	28-Feb-19	39	PS-20258	PS4160	Subsurface Utilities Investigation Tech Memo - Submit Final																									
Geotechnical Investigations- 2.2.6																																	
PS-20311	Geotechnical Investigations Workplan - Prepare	20	10-Jul-18	06-Aug-18	23	MS1015	PS-20312	Geotechnical Investigations Workplan - Prepare																									
PS-20312	Geotechnical Investigations Workplan - Review with City	20	07-Aug-18	04-Sep-18	23	PS-20311	PS-20313	Geotechnical Investigations Workplan - Review with City																									
PS-20313	Award Geotechnical Subcontract	20	05-Sep-18	02-Oct-18	23	PS-20312	PS-20321	Award Geotechnical Subcontract																									
PS-20321	Geotech Subcontractor - Exploratory Borings	20	10-Oct-18	06-Nov-18	23	PS-20313	PS-20331	Geotech Subcontractor - Exploratory Borings																									

- █ Actual Work
- █ Remaining Work
- █ Critical Remaining Work
- ◆ Milestone



APPENDIX 3
GOVERNMENTAL APPROVALS

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APPENDIX 3

GOVERNMENTAL APPROVALS

3.1. PURPOSE

The purpose of this Appendix is to provide a list of the Governmental Approvals that are expected to be required with respect to the Contract Services. Table 3-1 identifies permits and approvals that are the City's responsibility. The Design-Builder will be responsible for obtaining all permits and approvals not expressly identified as City responsibility as defined in Table 3-1, as well as all other Governmental Approvals required with respect to the Contract Services irrespective of whether any such Governmental Approval is identified in this Appendix.

Design-Builder shall meet all environmental and permit mitigation requirements set forth in these Contract Documents.

3.2. GOVERNMENTAL APPROVALS

The purpose of Table 3-1 is to indicate the responsibility of the Design-Builder and the City with respect to Governmental Approval application management and fee payment. The purpose of Table 3-2 is to indicate assumed approval and issuance dates of the Governmental Approvals in order to determine schedule relief under subsections 6.6(E) (Adjustment to Scheduled Acceptance Date Based on Delays Affecting Design-Builder Managed Governmental Approvals) and 6.6(G) (Adjustment to Scheduled Acceptance Date Based on Delays Affecting City Managed Governmental Approvals) of this Design-Build Contract. **[Note: The tables will be finalized based on the Definitive Project Submittal.]**

Table 3-1
 Governmental Approvals Responsibility

Name of Governmental Approval	Issuing Agency	Permittee /Approval Holder	Application Manager	Information Supply Responsibility	Fee Payment Responsibility
Stormwater Pollution Control: NPDES permit No. CA0037842 (Order No. R2-2014-0034)	State Water Resources Control Board (SWRCB)	City	City	Design-Builder: The Design-Builder shall prepare a Stormwater Pollution Prevention Plan (SWPPP) or similar plan that meets the Facilities NPDES requirements, if applicable. The Design-Builder shall perform the role of "Qualified SWPPP Developer" (QSD) and "Qualified SWPPP Practitioner" (QSP).	N/A
Construction Safety Permits	Cal/OSHA	Design-Builder	Design-Builder	Design-Builder	Design-Builder
Building Permits and Inspections	City of San José - Public Works and Fire Departments	City	Design-Builder	Design-Builder: The Design-Builder will be responsible for plan check review (including City Fire Marshal Review). Fire Marshal Review includes Hazmat, Fire Suppression, Architectural, Fire Alarm and Underground.	Design-Builder
Air Quality Permit to Construct	Bay Area Air Quality Management District (BAAQMD)	City	City	City: The City will provide the Design-Builder with information relating to current Title V permitted facility equipment and air permit requirements, including monitoring, recordkeeping and reporting. Design-Builder: The Design-Builder will be responsible for providing data and information required for the permits related to on-site air monitoring and Headworks Facility odor-scrubbing equipment.	City

Table 3-1
 Governmental Approvals Responsibility

Name of Governmental Approval	Issuing Agency	Permittee /Approval Holder	Application Manager	Information Supply Responsibility	Fee Payment Responsibility
Air Quality Permit to Operate	Bay Area Air Quality Management District (BAAQMD)	City	City	<p>City: The City will provide BAAQMD with information relating to source test results of newly installed generators to obtain Permit to Operate.</p> <p>Design-Builder: The Design-Builder will be responsible for providing data and information required for the permits related to on-site air monitoring and Headworks Facility odor-scrubbing equipment.</p>	City
Clean Water Act (CWA) Section 404 Permit	U.S. Army Corps of Engineers (USACE)	City	City	<p>City: The City will submit a permit application to address impacts to waters subject to USACE jurisdiction under CWA Section 404.</p> <p>Design-Builder: The Design-Builder will be responsible for providing engineering and construction support required for permit processing and implementation.</p>	City
Clean Water Act (CWA) Section 401 Water Quality Certification and/or Waste Discharge Permit	San Francisco Bay Regional Water Quality Control Board (RWQCB)	City	City	<p>City: The City will submit a permit application to address impacts to waters subject to RWQCB jurisdiction under CWA Section 401 and/or the Porter-Cologne Water Quality Control Act.</p> <p>Design-Builder: The Design-Builder will be responsible for providing engineering and construction support required for permit processing and implementation.</p>	City

Table 3-1
 Governmental Approvals Responsibility

Name of Governmental Approval	Issuing Agency	Permittee /Approval Holder	Application Manager	Information Supply Responsibility	Fee Payment Responsibility
Streambed Alteration Agreement	California Department of Fish and Wildlife (CDFW)	City	City	<p>City: The City will submit a permit application to address impacts to resources subject to CDFW jurisdiction under California Fish and Game Code Section 1602.</p> <p>Design-Builder: The Design-Builder will be responsible for providing engineering and construction support required for permit processing and implementation.</p>	City
Habitat Plan Development Fee	Santa Clara Valley Habitat Agency (SCVHA)	City	City	<p>City: The City will submit an application to address permanent and/or temporary impacts to lands within the Santa Clara Valley Habitat Plan Burrowing Owl Fee Zone.</p> <p>Design-Builder: The Design-Builder will be responsible for providing engineering support related to determination of impact fees.</p>	City

Table 3-2
 Governmental Approvals Schedule

Name of Governmental Approval	Issuing Agency	Governmental Approval Application Date (Number of days from Contract Date)	Assumed Governmental Approval Issuance Date (Number of days from Governmental Approval Application Date)
Stormwater Pollution Control: NPDES permit No. CA0037842 (Order No. R2-2014-0034)	State Water Resources Control Board (SWRCB)	N/A	N/A
Construction Safety Permits	Cal/OSHA		
Building Permits and Inspections	City of San José - Public Works and Fire Departments		
Air Quality Permit for Construction	Bay Area Air Quality Management District (BAAQMD)	294 days (3/4/2019)	474 days (8/31/2019)
Air Quality Permit to Operate	Bay Area Air Quality Management District (BAAQMD)	1507 days (6/29/2022)	1597 (9/27/2022)
Clean Water Act (CWA) Section 404 Permit	U.S. Army Corps of Engineers (USACE)	374 days (5/23/2019)	567 days (12/2/2019)
Clean Water Act (CWA) Section 401 Water Quality Certification and/or Waste Discharge Permit	San Francisco Bay Regional Water Quality Control Board (RWQCB)	374 days (5/23/2019)	567 days (12/2/2019)

Streambed Alteration Agreement	California Department of Fish and Wildlife (CDFW)	374 days (5/23/2019)	567 days (12/2/2019)
Habitat Plan Development Fee	Santa Clara Valley Habitat Agency (SCVHA)	305 days (3/15/2019)	395 days (6/13/2019)

APPENDIX 4
TECHNICAL SPECIFICATIONS

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APPENDIX 4

TECHNICAL SPECIFICATIONS

[Note: This Appendix will contain the technical specifications for the Project as developed to the 60% level, and will be amended and completed based on the Preliminary Services performed by the Design-Builder and incorporated on the Definitive Contract Amendment Date.]

4.1. PURPOSE

These Technical Specifications set forth certain minimum technical requirements for the Project. Nothing in these Technical Specifications shall relieve the Design-Builder of its obligation to meet the Performance Guarantees set forth in Appendix 9 (Commissioning and Acceptance). The Design-Builder may request that the City waive certain non-conformities. Such requests shall be in writing and describe the non-conformity with specificity. The City may elect to grant such request at its sole discretion.

4.2. DESIGN GUIDANCE DOCUMENTS AND STANDARD SPECIFICATIONS

All Construction and Deliverable Material, including the Final Design Documents, shall conform to the following design guidance documents and standard specifications.

1. Architectural Design Guidelines (CIP, October 2015)
2. Architectural Program Guidelines (CIP, October 2015)
3. CAD Standards (CIP, November 2015)
4. Cost Estimating Manual (CIP, November 2016)
5. Electrical Design Guidelines (CIP, February 2016)
6. Design Flood Elevation Interim Guidance (CIP, December 2014)
7. RWF Automation Guidelines (CIP, December 2015)
8. Automation Hardware and Software Programming Interim Guidance 1 (CIP, January 2015)
9. Piping Design Guidelines TechMemo (CIP, February 2016)
10. Vertical Datum Guidance (CIP, August 2014)
11. Structural_Design_Guidelines_TechMemo_20170413_revised (CIP, April 2017)
12. RWF Construction Traffic Management Plan (Fehr and Peers, December 2015)
13. Technical requirements in Standard Specifications – Division 00 – Procurement and Contracting Requirements (CIP, October 2017)
14. Standard Specifications – Division 01 – General Requirements (CIP, October 2017)
15. Standard Specifications – Division 40 – Process Integration (CIP, October 2017)

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APPENDIX 5
GENERAL DESIGN-BUILD WORK REQUIREMENTS

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APPENDIX 5

GENERAL DESIGN-BUILD WORK REQUIREMENTS

5.1. PURPOSE

The purpose of this Appendix is to set forth certain requirements for the performance of the Design-Build Work. The Design-Builder shall perform the Design-Build Work in accordance with the Contract Standards, including the requirements set forth in this Appendix.

5.2. MANAGEMENT AND COORDINATION

5.2.1 Coordination.

The Design-Builder shall hold meetings that are separate from and in addition to construction progress meetings described in Section 5.4.2 (Construction Progress Meetings - Scheduling and Attendance) of this Appendix, and shall prepare correspondence and make any other arrangements as necessary to coordinate the Design-Build Work. The Design-Builder shall coordinate its activities with other contractors performing work at or near the Headworks Facility Site. The City shall identify other construction contracts that may be in progress in close proximity to or bordering on the Project. The Design-Builder will coordinate with those identified construction contractors. The Design-Builder shall coordinate all construction activities that could impact existing utility services and installations (e.g., conduits, pipelines, transmission mains and other Utility equipment and appurtenances) with the utilities. Coordination meetings may include review of the Design-Build Schedule and installation procedures of other contractors to identify potential conflicts, allocation of space on the Headworks Facility Site, drawing/design interchange among contractors, establishment and modification of schedules and sequences of construction operations, and planning of future meetings.

5.2.2 Partnering Sessions.

The City and the Design-Builder shall use good faith efforts to promote the formation of a successful formal partnering relationship in order to effectively perform this Design-Build Contract to the benefit of both parties. The purpose of this relationship is to establish and maintain cooperative communication and to mutually resolve conflicts at the lowest responsible management level. The establishment of a formal partnering relationship will not change or modify the terms and conditions of this Design-Build Contract and will not relieve any party of the legal requirements of this Design-Build Contract.

The City and the Design-Builder shall implement the partnering relationship through at least one pre-construction partnering workshop ("Partnering Sessions"). The purpose of the

Partnering Sessions is to deepen working relationships, develop common goals and objectives for the Project, achieve a cooperative partnership environment among Project participants, and mutually develop a strategy for forming a successful partnering relationship. The City and the Design-Builder may participate in additional facilitated workshops during the Term as they mutually agree is necessary and appropriate.

The scheduling of a Partnering Session, selection of the facilitator and workshop site, and other administrative details will be coordinated by the City and the Design-Builder's project managers. The parties shall use good faith efforts to schedule the initial, pre-construction Partnering Session and to select the facilitator for the workshop as soon as reasonably possible following the Contract Date.

Each party shall bear their respective costs of formal partnering (including costs involved in providing the pre-construction Partnering Session, any subsequent, additional Partnering Sessions, and the facilitator for the Partnering Sessions), and the Design-Builder's costs relating to the Partnering Sessions shall be deemed to constitute Design-Build Costs. All other costs associated with the Partnering Sessions will be borne separately by the party incurring the costs, such as wages and travel expenses, and no additional compensation will be allowed therefor.

5.3. DESIGN-BUILD SCHEDULE

5.3.1 Design-Build Schedule.

All activities comprising the Design-Build Work shall be scheduled and monitored by use of a Gantt or Bar Chart which sets forth all tasks and key subtasks in a logical and efficient work sequence that the Design-Builder intends to utilize in taking the Project from the Technical Specifications to Final Completion and City operation. The "Design-Build Schedule," prepared in accordance with these requirements and included as part of the Design-Builder's Definitive Project Submittal, is set forth as Attachment 5A to this Appendix. The Design-Builder shall undertake and complete the Design-Build Work in accordance with the Design-Build Schedule.

5.3.2 Design-Build Schedule Updates.

The Design-Builder shall, as required from time to time during the Design-Build Period, but no less than once per calendar month, in consultation with the City update the Design-Build Schedule so that it is at all times an accurate, reasonable and realistic representation of the Design-Builder's plans for the completion of the Design-Build Work in accordance with the requirements of this Design-Build Contract. The updates shall include:

- (a) adjustments resulting from Uncontrollable Circumstances and Technical Specifications Changes, if any, as permitted by this Design-Build Contract and as provided in Section 5.3.4 (Events Affecting the Design-Build Schedule) of this Appendix;
- (b) as the design progresses, proposed changes in the:
 - (i) start and completion dates for design work described in this Appendix; and
 - (ii) commencement of construction;
- (c) start and completion dates of the major activities of construction; and
- (d) the date on which the Acceptance Date is expected to occur.

The Design-Builder shall deliver to the City and the Owner's Advisor on a monthly basis the updated Design-Build Schedule. The monthly updated Design-Build Schedule shall be accompanied by a report that (1) shows current work progress and the status of work completed for each task and subtask included in the Design-Build Schedule; (2) contains information on the resources to be employed and work to be completed in the upcoming month, including a 60-day look-ahead that reflects all agreements made by the parties as to Design-Build Schedule revisions in sufficient detail for the City to be able to verify agreed-upon work schedule and milestone date changes; and (3) describes conditions that have affected or may accelerate or decelerate the Design-Build Schedule then in effect, together with proposed Design-Build Schedule adjustments and mitigation measures.

5.3.3 City Review.

The City shall review the updated Design-Build Schedule and advise the Design-Builder as to any of its concerns, along with proposed changes. Every three months, or more frequently if requested by the City, in addition to the weekly construction progress meetings, the Design-Builder shall meet with the City to discuss Project progress and the updated Design-Build Schedule. The Design-Builder shall respond to City concerns and indicate how the proposed changes or revisions thereto can be made to satisfactorily address City concerns. Upon City approval, the changes shall be incorporated in the updated Design-Build Schedule and replace any previously issued Design-Build Schedule. Design-Build Schedule updates are for the purpose of providing the Design-Builder with flexibility in its work activity durations and sequences, but in no event shall such updates result in a change in the Scheduled Acceptance

Date. The Scheduled Acceptance Date shall be adjusted solely as provided in Section 8.5 (Effect of Unexcused Delay; Extension Period) of this Design-Build Contract.

5.3.4 Events Affecting the Design-Build Schedule.

No later than 15 days following the occurrence of an Uncontrollable Circumstance or a City-directed Change Order, the Design-Builder shall submit a report containing an analysis of the effects of such events on the Design-Build Schedule, including any new dates for work task and major subtasks, milestones, Substantial Completion and the Scheduled Acceptance Date. The Design-Builder shall present mitigation measures that were considered to offset potential work delays; those proposed for City review and acceptance; and a revised Design-Build Schedule incorporating the Design-Builder's proposed changes.

5.4. CONSTRUCTION MEETINGS AND REPORTS

5.4.1 Preconstruction Conference.

The Design-Builder shall hold a preconstruction conference prior to commencement of construction. The Design-Builder shall prepare an agenda which shall be reviewed with the City prior to the conference, and shall preside at the conference, contribute appropriate items for discussion, provide any data requested, record minutes to summarize significant proceedings and decisions, and distribute the minutes to all parties in attendance. The agenda shall include, but shall not necessarily be limited to, the status of the following items:

- (a) Designation of responsible personnel during the Design-Build Period.
- (b) Subcontractors, and their roles on the Design-Build Work.
- (c) Coordination with other contractors and projects.
- (d) Design-Build Schedule.
- (e) Design-Builder submittals and City review.
- (f) Schedule of Design-Builder submittals.
- (g) Requests for Information and Clarification.
- (h) Required Insurance.
- (i) Design-Builder's site-specific Health and Safety Plan.

- (j) Security.
- (k) Housekeeping.
- (l) Record drawings.
- (m) Proposed Construction Commencement Date.
- (n) Governmental Approvals.
- (o) Emergency telephone numbers.
- (p) Temporary Utilities/Utilities coordination.
- (q) Any other Design-Build Work-related items.

The preconstruction conference shall be scheduled by the Design-Builder at a time reasonably acceptable to the City and shall be attended by the Design-Build Manager, the Design-Builder's Construction Manager, the Design-Builder's Construction Superintendent, and the Design-Builder's principal Subcontractors' project managers or superintendents and representatives of major suppliers as the Design-Builder deems appropriate. Other attendees may include a representative from the Design-Builder's executive team, the QA/QC Manager, the Design-Builder's Safety Manager, the Design Manager, and other Governmental Bodies with jurisdiction over the Design-Build Work, any other contractors whose work affects or is affected by construction of the Headworks Facility, and others as deemed appropriate by these parties. The Design-Builder shall conduct the conference at the Headworks Facility Site or other location directed by the City and make all arrangements for space, facilities and food services and shall notify all participants of the arrangements.

5.4.2 Construction Progress Meetings - Scheduling and Attendance.

The Design-Builder shall schedule, hold, and facilitate regular weekly construction progress meetings from the time mobilization for construction commences through Final Completion, and at other times if requested by the City or as the Design-Builder deems necessary. The construction progress meetings shall be attended by the Design-Builder Construction Manager, the Design-Builder Superintendent, and the Design-Builder's principal Subcontractors' project managers or superintendents and representatives of major suppliers, as the Design-Builder deems appropriate. The Design-Builder, Design-Build Manager and representatives from the Design-Builder's executive team shall attend construction progress meetings periodically as requested by the City. Other attendees may include the QA/QC Manager, any other

contractors whose work affects or is affected by construction of the Headworks Facility, and others deemed appropriate by these parties. The City shall attend the weekly construction progress meetings. Construction progress meetings shall be held at the Headworks Facility Site or other location directed by the City.

Construction Progress Meetings - Agenda.

At such meetings, discussions shall be held concerning all aspects of the Design-Build Work including, but not limited to, the Design-Build Schedule, coordination of work with others, Technical Specifications Changes, Governmental Approvals and Design-Build Work submittals, and any test results. The Design-Builder shall prepare an agenda, preside at meetings, record minutes to include significant proceedings and decisions, and distribute the minutes to all parties in attendance within 10 Business Days of the meeting. The agenda shall include, but shall not necessarily be limited to, the status of the following matters:

- (a) Summary of previous meeting issues, actions and assignments.
- (b) Progress since last meeting (Design-Builder and Subcontractors).
- (c) Schedules, including updates on planned progress for next four to six weeks, off-site fabrication and delivery schedules; corrective action measures, if required and when to be implemented.
- (d) Problems, issues and considerations.
- (e) Change Orders, Contract Administration Memoranda and Design-Build Contract Amendments.
- (f) Status of submittals, including to be submitted, submitted, responses requiring corrective actions and resubmittal and approved.
- (g) Requests for Information, including those to be submitted, submitted, responses and whether adequate or more information is required.
- (h) Quality standards and control.
- (i) QA/QC reviews, findings, issues and actions.
- (j) Coordination among parties.

- (k) Safety program update, concerns, accidents, and injuries, if any.
- (l) Visits by regulatory agencies.
- (m) Public affairs and issues or concerns of nearby residents.
- (n) Headworks Facility Site visits by City, City's representatives, representatives of Governmental Bodies and Design-Builder's representatives.
- (o) Compliance with CEQA mitigations and any environmental issues.
- (p) Status of record drawings and specifications.
- (q) Other business.
- (r) Next meeting date.

5.4.3 Monthly Progress Reports.

Monthly progress reports required to be submitted by the Design-Builder shall include:

- (a) a summary of Design-Build Work activities during the reporting month.
- (b) a schedule of upcoming Design-Build Work activities.
- (c) a listing of submittals delivered during the reporting month and their status;
- (d) a listing of submittals scheduled for delivery the following month.
- (e) the Design-Builder's verification that the record documents have been updated as appropriate.
- (f) a summary of activities involved with obtaining Governmental Approvals.
- (g) a listing of any violations of Governmental Approvals or Applicable Law and actions taken or to be taken to eliminate any subsequent violations.
- (h) a listing of issues needing resolution.
- (i) a listing of all telephone calls received during the reporting month involving material inquiries or complaints.
- (j) Design-Build Schedule updates.

- (k) the Design-Builder's plan for accelerating the Design-Build Schedule to meet the Scheduled Acceptance Date should the Design-Builder's progress-to-date indicate that the Design-Builder's Design-Build Work is behind schedule and at risk of not being completed by the Scheduled Acceptance Date (as adjusted for extensions of time permitted under this Design-Build Contract).
- (l) Expenditures for the most recently completed month and for the Project to date, and a comparison to the Schedule of Values; explanations for significant deviations from the Schedule of Values for both overexpenditures and underexpenditures; corrective actions proposed by the Design-Builder to bring spending in-line with Schedule of Values or proposals to City for an adjustment in the Schedule of Values or acceptance of the deviations.
- (m) Progress payment requests as described in Article 9 (Compensation for Design-Build Work) of this Design-Build Contract. The format of the payment request shall be matched with the description of work activities completed for the reporting month so that the City can easily relate the breakdown of the payment request to work progress on specific tasks and subtasks. Supporting documentation shall be provided so that the City can readily determine the basis for the requested payment amounts for Design-Build Work performed during the month by task or subtasks in terms of labor hours, construction equipment costs, Capital Improvements equipment and materials expenditures, specialty Subcontractors including similar breakdowns for Subcontracts in excess of \$500,000 and other Project costs incurred during the month. Current retainage and total retainage to date shall be included in the monthly report. Payment request information shall include similar information for changes made pursuant to Sections 6.8 (Changes to the Technical Specifications at Design-Builder Request) and 6.9 (Other Changes to the Technical Specifications) of this Design-Build Contract.
- (n) Updated as-built drawings. Hard copy set available for review.

The monthly progress report shall also provide a description of (1) any concerns or issues raised by the City or other parties regarding the Design-Build Work, and the Design-Builder's approach to promptly addressing and resolving such concerns or issues, and (2) a section containing health and safety statistics and a description of any accidents or injuries that occurred and the follow up investigations as to cause and subsequent corrective actions to be

taken or already implemented by the Design-Builder. The format of the monthly report shall be developed by the Design-Builder and approved by the City prior to the commencement of any construction on the Headworks Facility Site.

5.4.4 Project Records.

The Design-Builder, in connection with the Design-Build Work generally, shall maintain and provide the following records:

- (a) Record Drawings and Specifications: The Design-Builder shall:
 - (1) throughout the construction, update the Design Documents (with respect to the drawings, such update shall be in hard copy and “CAD” or other electronic format reasonably acceptable to the City), including approved shop drawings that are available from Subcontractors in CAD format, so as to produce accurate and complete record documents for the Project. CAD drawings will follow the City’s approved CAD Standards.
 - (2) as requested from time to time during the construction, make available such record drawings and specifications to the City for review to permit the City to monitor the Design-Builder's compliance with the requirements of this Section.
 - (3) provide two hard copies and electronically in PDF format and CAD file (per City CAD Standards) of the completed record drawings and specifications to the City as a condition to Final Completion. The record drawings shall not be deemed to have satisfied the condition to Final Completion unless reviewed and deemed final by the City.
 - (4) use Bentley MicroStation for CAD work. For Record Drawings, the Design-Builder will convert drawings to meet the City’s Approved CAD Standards.
- (b) Equipment and Systems Manuals: The Design-Builder shall:
 - (1) as a condition to Final Completion, and in accordance with Sections 5.8.2 (Content of the Operations and Maintenance Manual) and 5.9 (Service Manuals) of this Appendix, make available all operation and maintenance manuals, specifications, warranties and related

information, in both written and electronic form, for all the equipment and systems that have been included in the Design-Build Work for review by the City; and

- (2) organize and store such information in accordance with subsection 6.7(D) (Documents at the Headworks Facility Site) of this Design-Build Contract;
- (c) Design Records: The Design-Builder shall retain records of the design development.
- (d) Minutes of Meetings: The Design-Builder shall retain minutes of meetings between the City and the Design-Builder relating to the Design-Build Work, and shall circulate such minutes to the City and the City Technical Representative for review and comment.
- (e) Inspection Reports and Tests Results: The Design-Builder shall retain official reports and certified test records of all inspections and tests which were undertaken as part of the construction.
- (f) Utility Plans: The Design-Builder shall retain utility plans for the Project.
- (g) Landscape and Irrigation Plans: The Design-Builder shall retain landscape and irrigation plans for the Project.
- (h) Copies of all Governmental Approvals: The Design-Builder shall retain copies of all Governmental Approvals for the construction and occupation of the Project.
- (i) Signed Design-Build Quality Management Plan: The Design-Builder shall retain a signed copy of the Design-Build Quality Management Plan for the design and construction and all records of the quality assurance program implemented as required by this Design-Build Contract.

The records referred to in this Section shall be retained for at least five years following the Acceptance Date.

5.5. CONSTRUCTION WORK GENERALLY

5.5.1 Deliverable Material.

The Design-Builder shall deliver to the City all Deliverable Material required to be delivered under this Appendix, Appendix 6 (Design-Build Quality Assurance and Quality Control Requirements), Appendix 7 (Design-Build Work Review Procedures) and Appendix 9 (Commissioning and Acceptance).

5.5.2 Signs.

The Design-Builder shall provide and maintain temporary identification and information signs during the Design-Build Period. No signs shall be erected until their appearance, content, and location have been fully reviewed and approved by the City, which approval shall not unreasonably be withheld, conditioned or delayed. The Design-Builder shall remove temporary signs from the Headworks Facility Site when they are no longer necessary.

5.5.3 Laydown Areas and City Construction Office Space.

Laydown and staging areas for construction materials shall be located at the Construction Enabling Site, or with the City's pre-approval, at the Headworks Facility Site or other areas at the Regional Wastewater Facility designated by the City or at other locations arranged and paid for by the Design-Builder. The Design-Builder shall also provide two construction office spaces for City during the Design-Build Period of approximately 200 square feet total (similar in character to that provided for the Design-Builder's staff), two telephone lines, and broadband internet connection to support two users. The cost of the City's construction office furniture, fixtures, equipment, supplies, consumables, or telephone/internet service provider fees shall be borne by the Design-Builder.

5.5.4 Maintenance of the Headworks Facility Site.

During performance of the Design-Build Work, the Design-Builder shall be responsible for the overall maintenance of the Headworks Facility Site and the areas of the Construction Enabling Site assigned to it. The Design-Builder shall keep the Headworks Facility Site and the areas of the Construction Enabling Site assigned to it neat and orderly at all times, and shall clean up and remove all rubbish and construction debris from the Headworks Facility Site and the areas of the Construction Enabling Site assigned to it as they accumulate in accordance with the Contract Standards.

5.5.5 Temporary Utilities.

The Design-Builder shall supply all necessary temporary Utilities, including electricity, telecommunications services, potable water (at no unit charge from City), fire protection, lighting, and sanitary facilities, during construction, testing and start up of the Headworks Facility. Prior to the Acceptance Date, the Design-Builder shall disconnect and arrange for the disconnection and removal of all temporary Utility connections and services. The Design-Builder shall coordinate with the City on all temporary Utilities.

5.5.6 Relocation of Existing Utilities.

The Design-Builder shall be responsible for all construction activities required with regard to existing utility services and installations (e.g., conduits, pipelines, transmission mains and other utility equipment and appurtenances), including after City review and approval any relocation of Utilities.

5.5.7 Noise Control.

The Design-Builder shall comply with all noise regulations required pursuant to Applicable Law. Construction work will be allowed from 7:00 a.m. to 6:00 p.m., seven days per week, subject to local permit restrictions. Construction will also be allowed at night and on weekends with notification to and approval by the City, provided that appropriate safety and security measures are employed by the Design-Builder.

5.5.8 Notice of Default.

The Design-Builder shall provide to the City, promptly following the receipt thereof, copies of any notice of default, breach or non-compliance received under or in connection with any Governmental Approval or Subcontract that may have a material and adverse effect on performance by the Design-Builder of its obligations under this Design-Build Contract.

5.6. COORDINATION OF CONSTRUCTION WORK AND OPERATIONS

5.6.1 Regional Wastewater Facilities Shutdowns during Construction.

The Design-Builder shall plan and coordinate in advance with the City in order to obtain City approval and schedule its construction work which requires partial or complete shutdowns of the Regional Wastewater Facilities or Existing Headworks Facility. The Design-Builder shall make every effort to minimize the number and duration of partial or complete shutdowns.

5.6.2 Maintenance of Regional Wastewater Facilities Performance during Construction.

The Design-Builder shall take no actions during construction that adversely affect performance or operation of the Regional Wastewater Facility and the Existing Headworks Facility. The Design-Builder shall comply with the Maintenance of Operations During Construction Plan, which is included as Attachment 5B (Maintenance of Operations During Construction Plan) to this Appendix.

5.6.3 Operations and Maintenance Records

In accordance with Appendix 11 (Transition Services), the Design-Builder shall develop all report templates for routine compliance and process monitoring. The Design-Builder shall use such templates to report to the City on the operations and maintenance of the Headworks Facility during the Transition Period.

5.7. CONSTRUCTION SAFETY AND SECURITY.

5.7.1 Safety and Security.

The Design-Builder shall maintain safety and security at the Headworks Facility Site at all times at a level consistent with the Contract Standards. Without limiting the foregoing, the Design-Builder shall:

- (a) Take appropriate precautions for the safety and security of the Design-Build Work and provide appropriate protection to prevent damage, injury or loss related to the performance of the Design-Build Work over the Design-Build Period for:
 - (1) Workers at the Headworks Facility Site and all other persons who may be involved with deliveries or inspections;
 - (2) Visitors to the Headworks Facility Site;
 - (3) Passersby, neighbors and adjacent properties with respect to the Design-Build Work activities;
 - (4) Materials and equipment under the care, custody or control of the Design-Builder or Subcontractors on the Headworks Facility Site;
 - (5) Other property constituting part of the premises or the Project under construction; and

- (6) City Property;
- (b) Establish and enforce appropriate safeguards for safety and protection, including posting danger signs and other warnings against hazards;
- (c) Provide temporary fencing of all open or partially open trenches and excavations, all open or partially completed structures, and all work and storage areas at all times while unattended by workmen;
- (d) Implement a comprehensive safety program in accordance with Applicable Law;
- (e) Give all notices and comply with all Applicable Law relating to the safety of persons or property or their protection from damage, injury or loss;
- (f) Operate and maintain all equipment in a manner consistent with the manufacturer's safety requirements;
- (g) Provide for safe and orderly vehicular movements;
- (h) Develop and implement a written Headworks Facility Site-specific Health and Safety Plan that includes management commitment, maintaining a safe workplace, employee participation, hazard evaluation and controls, employee training and periodic inspections ("Health and Safety Plan");
- (i) Designate an appropriately certified and experienced safety professional to develop and sign the Headworks Facility Site-specific Health and Safety Plan, including all safety rules.;
- (j) Designate a qualified safety professional at the Headworks Facility Site during on-site construction activities who shall be responsible for the implementation of safety rules, the prevention of fires and accidents, monitoring compliance with the Design-Builder's Headworks Facility Site-specific Health and Safety Plan, and the coordination of such activities as shall be necessary with the City and all Governmental Bodies related to health and safety; and
- (k) Require all Subcontractors to work in accordance with and implement the Health and Safety Plan, comply with the Design-Builder's on-site safety requirements, and designate a qualified safety professional whose duty shall be the implementation of safety rules at the Headworks Facility Site and monitoring

compliance of Subcontractor employees with the Subcontractor's Headworks Facility Site-specific Health and Safety Plan.

5.7.2 Perimeter Security

The Design-Builder shall develop, maintain and comply with a Headworks Facility Site perimeter security plan that is approved by the City and constitutes part of the Health and Safety Plan. The perimeter security plan shall assure the security of the Headworks Facility Site when perimeter fencing cannot be continuously maintained.

5.8. OPERATIONS AND MAINTENANCE MANUAL

5.8.1 Development by the Design-Builder

The Operations and Maintenance Manual shall be a secured online, electronic manual with hard copy reproduction capability. During the Design-Build Period, the Design-Builder shall develop the Operations and Maintenance Manual in accordance with the Contract Standards. The Design-Builder shall provide the City with preliminary, interim, pre-final and final versions of the Operations and Maintenance Manual for the City's review, comment and approval.

A pre-final Operations and Maintenance Manual shall be submitted to and approved by the City as a condition precedent to the achievement of Substantial Completion. A final Operations and Maintenance Manual shall be submitted to and approved by the City as a condition precedent to the achievement of Final Completion.

5.8.2 Content of the Operations and Maintenance Manual

The Operations and Maintenance Manual shall (i) include the practices and procedures necessary for Headworks Facility operation and control, auxiliary facility equipment and systems, system maintenance, repair and replacement, and grounds and buildings maintenance; and (ii) integrate all equipment and systems manuals and Service Manuals. The Operations and Maintenance Manual will be comprehensive, suitable as a resource for training operational staff, and will include the following information:

- (a) process design criteria;
- (b) Headworks Facility layout drawings and process flow diagrams;
- (c) detailed operation and control procedures;
- (d) standard operating procedures;

- (e) emergency response procedures;
- (f) maintenance instructions, including:
 - (1) information necessary to properly assemble and install the equipment, including alignment, clearances, tolerances and interfacing equipment requirements; the trade and skill level required to install the equipment; any special rigging required to place the equipment; and any special test equipment required to place the equipment in service;
 - (2) manufacturer's schedule for routine preventive maintenance, calibration, lubrication, inspections, tests, and adjustments required to ensure proper and economical operation and to minimize corrective maintenance and repair;
 - (3) manufacturer's projection of preventive maintenance man-hours on a daily, weekly, monthly, and annual basis, including required trades and skill levels required for performance of maintenance and the total time required to perform the work;
 - (4) manufacturer's troubleshooting guide and recommendations on procedures and instructions for correcting problems and making repairs;
 - (5) step-by-step procedures to isolate the cause of typical malfunctions, describing clearly why the checkout is performed and what conditions are to be sought;
 - (6) a description of maintenance and operating tools, replacement parts and materials, including specified quantity of spare parts;
 - (7) information available from the manufacturers to use in training personnel to maintain the equipment and systems properly;
 - (8) information on test equipment required to perform specified tests and/or special tools needed for the maintenance and repair of components;
 - (9) instructions related to when equipment is in operation, including lubrication requirements;
 - (10) all warranty information, including effective warranty dates;

- (11) Governmental Approvals indicating approval of all installations requiring permits; and
- (12) the development of asset records and the means to assess equipment condition in coordination with the CMMS;
- (g) a long-term schedule of major repairs and replacements, including a long-term budgeting plan to maintain the operability, durability and reliability of the Headworks Facility through its projected operational life;
- (h) the practices and procedures necessary to maintain the appearance of the buildings, grounds and landscaping of the Headworks Facility; and
- (i) procurement procedures for all additional tools, equipment, maintenance supplies and component parts necessary for the operations and maintenance of the Headworks Facility, including specifications and quantity of the items to be procured and procedures for planning and scheduling delivery of such items.

5.9. SERVICE MANUALS

The Service Manuals shall include the practices and procedures necessary for the operation and control, maintenance, and repair and replacement of each equipment system, package, or unit incorporated into the Headworks Facility. The Service Manuals shall be suitable as a resource for operating and maintaining the components of the Headworks Facility, and shall include the following information:

- (a) safety information for each equipment system, package or unit incorporated into the Headworks Facility, including mechanical and electrical lockout procedures for all Headworks Facility components; and
- (b) descriptions of units or systems and component parts, their functions, operating characteristics and limiting conditions, including:
 - (1) equipment summary, which will include nameplate data, supplier, manufacturer and local representative;
 - (2) start-up sequences, including inspections required before initiation of sequence;

- (3) performance monitoring requirements to confirm proper operation and guide component control adjustments;
 - (4) adjustment of variable functions and settings;
 - (5) interface among the components and systems of the Headworks Facility;
 - (6) troubleshooting guidelines to identify non-performing components and identify probable cause;
 - (7) shut-down sequences and lock-out requirements to safely remove components from service without adverse impact on system performance;
 - (8) preparation to isolate off-line equipment piping, power, and controls for safe execution of maintenance activities; and
- (c) description of instrumentation and control system, including alarm summary.

Pre-final Service Manuals shall be submitted to and approved by the City as a condition precedent to the achievement of Substantial Completion. Final Service Manuals shall be submitted to and approved by the City as a condition precedent to the achievement of Final Completion.

5.9.2 SCADA Information and Electronic Requirements

A separate binder will be included in the Operations and Maintenance Manual for the SCADA system operations. The binder will include hard and soft copies of all SCADA programs incorporated in the Headworks Facility. The Operations and Maintenance Manual will cover all process, electrical, instrumentation, and control equipment in the Headworks Facility as secure digital electronic files that are designed for both web-based and local network access with capability to be linked and coordinated with other City systems at the Regional Wastewater Facility, including the Related Projects. The Design-Builder shall:

- (a) provide links within the final Operations and Maintenance Manual to digital files of all Final Design Documents, individual equipment service manuals, and the CMMS data base entries relevant to the equipment and functions described;
- (b) provide special secure applications and links required to permit access to the final Operations and Maintenance Manual files from hand-held electronic devices and other portable or fixed electronic devices designated by the City; and

- (c) coordinate digital Operations and Maintenance Manual development with the City's information technology group to determine compatibility with currently available hardware and software in the City network.

5.10. ENVIRONMENTAL REVIEW AND PROTECTION.

5.10.1 Existing Regulated Substances

The City, prior to the Construction Date, shall survey and document Regulated Substances existing on the Headworks Facility Site as of the survey date that, under good Design-Build Practice and Applicable Law, requires removal in connection with the Design-Build Work. The Design-Builder shall cooperate with and assist the City in connection with the survey and document preparation. The City, or the Design-Builder, as determined in accordance with the Contract Standards, shall remove and dispose of any such Regulated Substances, mitigate to regulatory approval as and when required in order to enable the Design-Builder to perform the Design-Build Work on the Design-Build Schedule.

5.10.2 Wildlife and Protected Species Protection.

In accordance with the Environmental Mitigation Measures, the Design-Builder shall develop and implement a plan that is consistent with required mitigation measures for wildlife and protected species that may be affected by construction activities of the Design-Builder. Prior to implementing the plan, the Design-Builder shall obtain City approval.

5.10.3 Design-Builder Construction Environmental Monitor.

If required by the Environmental Mitigation Measures, the Design-Builder shall assign a Design-Builder Construction Environmental Monitor ("CEM") to ensure that its mitigations plan is properly and fully implemented. The CEM shall be the single, identified entity or person responsible for, at a minimum, the following duties:

- (a) Planning of environmentally compliant construction methods.
- (b) Oversight of construction activities to determine compliance with mitigation measures.
- (c) Ensuring that all training has been conducted, and signage, marking and barriers to protected areas have been installed.
- (d) Ensuring compliance with the Stormwater Pollution Prevention Program (SWPPP).

- (e) Coordination with the City on implementation of environmental mitigation measures.
- (f) Coordination with Governmental Bodies that have administrative oversight of the environmental sites to be protected, if required.
- (g) Compliance with environmental Governmental Approvals.
- (h) Meeting or interacting with representatives of Governmental Bodies with environmental oversight authority, if required.

All environmental monitoring duties conducted by the CEM shall be recorded in the form of a standard report and photographic log (as required). The photographic log shall be kept in both electronic and hardcopy form. All reports shall be submitted to the City in summary form on a monthly basis or more frequently if required by City. Copies of all daily monitoring records shall be maintained in the City's EADOC.

5.10.4 Regulated Substances Management Program.

The Design-Builder shall develop, maintain and implement a Regulated Substances management plan that includes as a minimum, but is not limited to, the requirements specified in this Section ("Regulated Substances Management Program"). A copy of the Regulated Substances Management Plan shall be submitted to the City for review and approval. The intent of the plan is to prevent accidental spills, site contamination, and injury or illness of all personnel on the site due to contact or exposure to Regulated Substances. The City shall notify the Design-Builder of any observed conditions that may be in violation of the plan. If the Design-Builder fails to address City-reported concerns about observed conditions that may be in violation of the plan in a timely and appropriate manner, the City may notify all appropriate Governmental Bodies, and report the observed conditions to them, and request that they inspect the sites involved that are under the Design-Builder's control. All documents required by the Regulated Substances Management Plan shall be made available to the City immediately upon request.

5.10.5 Design-Builder Regulated Substances.

Any Regulated Substances generated by the Design-Builder shall be the responsibility of the Design-Builder. The Design-Builder shall obtain an EPA identification number for all Design-Builder Regulated Substances, listing the Design-Builder's name and construction site address as the generator of the Design-Builder Regulated Substances. The Design-Builder shall be

responsible for the identification, analysis, profiling, documentation, reporting, transport and disposal of Design-Builder Regulated Substances. Any fines that are levied against the City for violations of Applicable Law as determined by any Governmental Body relating to Design-Builder Regulated Substances shall be reimbursed immediately by the Design-Builder after payment by City.

5.10.6 Emergency/Spill Response Plan.

The Design-Builder shall develop an Emergency/Spill Response Plan (“Emergency Response Plan”), for each Regulated Substance or class/group of Regulated Substances either known to be on the Headworks Facility Site or intended to be brought to the Headworks Facility Site by the Design-Builder. At a minimum, the Response Plan must include the following:

- (a) A description of on-site equipment available to contain and respond to an emergency/spill of the Regulated Substance.
- (b) Notification procedures, including notification to potentially impacted residents adjacent to the Headworks Facility.
- (c) Response coordination procedures between the Design-Builder and the City.
- (d) A Regulated Substance Site Map showing the location of stored Regulated Substances and location spill containment/response equipment.
- (e) A description of the Regulated Substances handling and spill response training provided to the Design-Builder’s employees and Subcontractors.

5.10.7 Dust Control.

The Design-Builder shall be responsible for dust control during the performance of the Design-Build Work and shall comply with all applicable air pollution control regulations and the Environmental Mitigation Measures. The Design-Builder shall furnish all necessary labor, materials and equipment for dust control.

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ATTACHMENT 5A
DESIGN-BUILD SCHEDULE

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ATTACHMENT 5A

INITIAL DESIGN-BUILD SCHEDULE

[Note: The Design-Build Schedule will be inserted here prior to execution of the Definitive Contract Amendment, based on the design-build schedule in the City-accepted Definitive Project Submittal. All activities of the Design-Build Work shall be scheduled and monitored by use of a Gantt or Bar Chart which presents all tasks and key subtasks in a logical and efficient work sequence that the Design-Builder intends to use in advancing the Project from 60% Design to Acceptance. The Design-Builder shall be responsible for completing all Design-Build Work by the Scheduled Acceptance Date.]

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ATTACHMENT 5B
MAINTENANCE OF OPERATIONS DURING CONSTRUCTION PLAN

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ATTACHMENT 5B

MAINTENANCE OF OPERATIONS DURING CONSTRUCTION PLAN

[Note: The negotiated Maintenance of Operations During Construction Plan will be inserted here prior to execution of the Definitive Contract Amendment, based on the draft Maintenance of Operations During Construction Plan in the City-accepted Definitive Project Submittal].

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APPENDIX 6

DESIGN-BUILD QUALITY ASSURANCE AND QUALITY CONTROL REQUIREMENTS

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APPENDIX 6

DESIGN-BUILD QUALITY ASSURANCE AND QUALITY CONTROL REQUIREMENTS

6.1. PURPOSE

The purpose of this Appendix is to describe the minimum requirements for the Design-Build Quality Management Plan (“QMP”), including quality assurance (“QA”) and quality control (“QC”) procedures that shall be implemented during the Preliminary Services and the Design-Build Period.

- (a) Quality assurance refers to the overall efforts to assuring project quality. Quality assurance shall include the planning and activities necessary to verify that the required QC activities have been satisfactorily conducted and that the quality requirements were met.
- (b) Quality control shall include the monitoring, inspection, sampling and testing as applicable, and evaluation of the Design-Build Work through the project to verify that quality requirements as specified in this Design-Build Contract are met. Quality control also includes the identification of any defective work and documentation of completed corrective measures.

6.2. CITY’S QUALITY OBJECTIVES

The QMP is a critical component of the design and construction of the Project. It partly represents assurance to the City that the Design-Builder is executing the Design-Build Work in accordance with this Design-Build Contract. As a result, the QMP, including quality assurance and quality control (“QA/QC”), shall be consistent with and support the following quality objectives for the Design-Build Work:

- (a) Ensure that permitting, design, construction and testing are consistent with the Contract Standards;
- (b) Ensure that Governmental Approval requirements are effectively incorporated into Design-Build Work;
- (c) Develop and implement procedures to ensure that problems are discovered early, resolved in a timely manner, and do not recur;
- (d) Ensure that adequate QA/QC procedures and resources are provided by the Design-Builder to effectively assess and ensure high quality in all work products

and services and compliance with the Acceptance Standards, warranty requirements, safety, security and environmental compliance requirements;

- (e) Provide timely reporting and documentation of QA/QC inspections, technical reviews, testing, analysis and determinations of compliance with the Contract Standards;
- (f) Provide follow up inspections, analysis and testing if conditions are found to be non-compliant with the Contract Standards and verify through special reports and direct communications with the City that all corrective actions have been effectively implemented and that the resultant product or service is of acceptable quality.

6.3. ROLES AND RESPONSIBILITIES

6.3.1 Design-Builder's Role and Responsibilities for QA/QC.

The Design-Builder is fully responsible for the design and construction of the Project Core QA/QC functions as defined in this Appendix 6 are the responsibility of the Design-Builder.

6.3.2 City's Role and Responsibilities for QA/QC.

The City ultimately retains its rights with respect to the Acceptance of the Project. The City may perform design reviews, verification sampling and testing, independent assurance sampling and testing, review of the Design-Builder's construction management scheduling, and other actions to verify payment of progress payments under the terms of this Design-Build Contract. However, by doing these actions, the City does not assume responsibility for any design or construction issue except as otherwise indicated in this Design-Build Contract.

6.4. DESIGN-BUILD QUALITY MANAGEMENT PLAN DEVELOPMENT AND IMPLEMENTATION

6.4.1 General Requirements.

The development and implementation of the QMP shall be the responsibility of the Design-Builder. The QMP shall integrate the permitting, design, construction, commissioning and testing phases of the Headworks Facility during Preliminary Services and the Design-Build Period and shall include detailed QA and QC programs as attachments. Other QMP requirements are defined in Section 6.5 (Design Quality Control and Quality Assurance Requirements) and Section 6.6 (Construction Quality Control Requirements) of this Appendix.

6.4.2 Design-Build Quality Management Plan Requirements.

The QMP shall include a description of how the Design-Builder will provide the following:

- (a) Adequate resources for effective plan implementation throughout all phases of Preliminary Services and the Design-Build Work.
- (b) Information on QA/QC staff to be assigned to the Project and their qualifications for performing required QA/QC functions;
- (c) Programs, procedures, methods, tests, analyses and communications procedures, reports, photographs and comments on drawings and specifications and other documents used by the Design-Builder to assess Preliminary Services and Design-Build Work quality and compliance with the Contract Standards;
- (d) How the QA/QC program shall function independently of Design-Builder's production staff and be empowered to enforce plan objectives, define quality requirements, independently verify quality of Preliminary Services and Design-Build Work products and services, identify potential causes of unacceptable quality of work and provide safeguards to prevent unacceptable work quality, and require prompt corrective action for identified deficiencies;
- (e) A communications plan for demonstrating that quality requirements have been established and communicated to all Subcontractors prior to their commencement of providing products or services on the Project. This shall include information on the roles, responsibilities and authorities of identified QA/QC staff; and
- (f) The Design-Builder shall submit its QMP for design services to the City for review within 30 days following the Contract Date. The City will provide comments on the QMP and the Design-Builder shall make required changes.
- (g) The Design-Builder shall submit its Design-Build Quality Management Plan for Construction to the City in draft form as part of Preliminary Services Task 4 (30% DCD), and in final form as part of Preliminary Services Task 6 (Definitive Project Submittal). The City will provide comments on both the draft and final Design-Build Quality Management Plans for Construction, and the Design-Builder shall make required changes.

6.4.3 Changes to the Design-Build Quality Management Plan.

Revisions and updates to the QMP may be proposed by the Design-Builder as Preliminary Services and the Design-Build Work progress. Changes to the approved QMP require written approval of the City. Proposed revisions or updates shall be provided to the City at least 30 days prior to the start of the Design-Build Work to which the revision applies. The City will review and respond in a timely manner to Design-Build Quality Management Plan proposed changes. The Design-Builder shall not initiate any of the Design-Build Work that is impacted by such proposed revision or change until the City has reviewed and accepted the change.

6.5. DESIGN QUALITY CONTROL AND QUALITY ASSURANCE REQUIREMENTS

6.5.1 Design QA/QC Program.

The Design-Builder has primary responsibility for design quality to ensure design documents are professionally reviewed and checked to ensure a quality project. The QMP shall include the details of the Design-Builder's Design QA/QC Program and include a description of how the Design-Builder will provide the following:

- (a) Design management functions and design review processes, which are the responsibility of the Design-Builder, will be described;
- (b) Typical design QC tasks to be accomplished by the Design-Builder will be described and may include technical review of design deliverables, checking of calculations, checking of quantities, and the review of specifications;
- (c) Describe the process to approve and release design packages for construction in alignment with the Design QA/QC Program;
- (d) Demonstrate that the City retains oversight in the form of review and verification of the design's ability to meet the stated contract requirements. The City and its designated consultants will participate in the design review process while not relieving the Design-Builder from its obligation to comply with this Design-Build Contract;
- (e) Describe the application of the Design QA/QC Program through design review techniques to be used by the Design-Builder, such as over-the shoulder design reviews to supplement formal reviews, formal milestone reviews, and submittal reviews during the Design-Build Period.

6.5.2 Design Quality Assurance Manager.

The Design-Builder shall designate a Design Quality Assurance Manager to determine whether the Technical Specifications and other Contract Standards are being met and that design QA/QC activities are following the approved QMP. The Design Quality Assurance Manager shall compile and maintain documentation of the review.

6.6. CONSTRUCTION QUALITY CONTROL REQUIREMENTS

6.6.1 Construction QA/QC Program.

The QMP shall include the details of the Design-Builder's Construction QA/QC Program, including the following:

- (a) The Construction QA/QC Program shall require inspection during construction by inspectors who are not responsible, in whole or in part, for the scheduling or construction of the Design-Build Work being inspected.
- (b) Instructions for performing inspections must be clearly defined, including the work attributes to be inspected, acceptability criteria, frequency of inspections, and the requirements for documenting the inspection results.
- (c) Inspection records must be kept current, have sufficient detail to enable the Engineer-of-Record to identify inspections which have been performed, and the results of these inspections. Inspections must be made throughout the period of construction, including the initial construction, in-process inspections, final inspections, and testing during construction.
- (d) Documentation requirements shall include contractor production reports, contractor quality control reports, field test reports, testing plan and log, inspection reports, rework items list and quality control meeting minutes.
- (e) Procedures and controls shall be provided to ensure that inspections are being performed using the latest Design Documents and approved shop drawings. Procedures shall ensure that an adequate number of inspection personnel are available as needed, and that all inspectors are qualified, trained, and proficient in performing inspections for the Design-Build Work to which they are assigned.

6.6.2 Non-Conforming Work.

The Construction QA/QC Program shall establish and maintain a non-conformance system and procedures for uniform reporting, controlling, and disposition of nonconformance, including the following:

- (a) The non-conformance system shall describe methods to be implemented, including a daily non-conformance report (NCR), to identify and track all unsatisfactory, deviating, and nonconforming work until the required repair, rework, or replacement is performed, and the work has been re-inspected and accepted. In addition, the non-conformance system shall detail the methods and measures to be used to develop corrective action procedures and prevent the recurrence of non-conforming work.
- (b) The Construction QA/QC Program shall detail the means and methods for identifying and correcting all construction deficiencies such that construction quality meets the Contract Standards and the Design-Builder's Design Documents.
- (c) The Construction Quality Assurance Manager shall be informed of all unsatisfactory conditions within 24 hours of identification, and a copy of the condition report sent to the design-engineer. The Design-Builder will correct any nonconforming conditions in accordance with Section 6.17 (Correction of Work) of this Design-Build Contract.
- (d) The Design-Builder is encouraged to make corrections for non-conforming work as soon as practical rather than waiting until Acceptance. The City may use the NCR as a basis for conducting its own final acceptance activities.

6.6.3 Construction Quality Assurance Manager.

The Design-Builder shall designate a Construction Quality Assurance Manager to determine whether the Technical Specifications and other Contract Standards are being met and that Construction QA/QC activities are following the approved QMP.

6.6.4 Materials and Equipment.

The Construction QA/QC Program shall ensure the quality of all material and equipment. Procedures and controls shall be provided to ensure that inspections are being performed using the latest Design Documents and approved shop drawings. Procedures shall ensure that an

adequate number of inspection personnel are available at all times, and that all inspectors are qualified, trained, and proficient in performing inspections for the Design-Build Work to which they are assigned. Procedures also shall be used to verify that the procurement documents meet all Contract Standards and the Design-Builder's Design Documents, and shall include the following:

- (a) Define how quality will be controlled during the manufacture and testing of all equipment which is being fabricated for the Headworks Facility.
- (b) Written documentation of inspection of all material and equipment to ensure that it meets all Contract Standards and the Design-Builder's Design Documents. Documentation such as material test reports, certifications, and equipment tests results must be delivered to the City and City-designated representatives to demonstrate compliance with all Contract Standards and the Design-Builder's Design Documents.
- (c) Monitoring procedures to ensure that material and equipment is delivered to the Headworks Facility Site are undamaged, in the proper quantities and in accordance with the specification requirements, and that all materials and equipment are stored and maintained on the Headworks Facility Site according to the Contract Standards, including the requirements of the designer and the manufacturer.

6.6.5 Construction Management and Testing.

The Design-Builder shall provide full-time construction management and full and comprehensive construction administration for the Design-Build Work. Construction inspectors, who shall be provided with the latest Design Documents released to construction, shall perform initial verification of procurement and construction activities, so that any conflicts will be identified at an early stage. The Construction QA/QC shall clearly identify the circumstances under which the Design-Builder's registered soils or geotechnical engineer and the Engineer-of-Record will be involved in construction quality oversight. The Design-Builder shall perform all testing and inspections as required by the Contract Standards, approved design documents, applicable codes, regulations, and standards (such as ACI and ASTM) which may be referenced in Appendix 4 (Technical Specifications). Section 1.2(V) (Applicability, Stringency and Consistency of Contract Standards) of this Design-Build Contract shall govern any conflicts or inconsistency in the stringency of test requirements.

6.6.6 Laboratories.

All construction testing shall be performed by individuals who are qualified and experienced in providing these testing services. Equipment used to perform tests shall be calibrated according to requirements in the testing procedure. The Design-Builder shall hire a certified independent testing laboratory to perform all laboratory testing. The laboratory selected shall be authorized to operate in the State, certified under the State's National Environmental Laboratory Accreditation Program, as applicable, and shall be subject to the approval of the City. Design-Builder requests for laboratory approval shall be made by the Design-Builder in a timely manner, in writing, to the City. Laboratory tests shall include the proposed concrete mix design, concrete aggregate tests, strength of concrete field test cylinders, gradation, and moisture density relationship of soils. The certified testing laboratories must also perform on-site tests that the Design-Builder is not experienced, qualified, or certified to perform or that require independent testing under the Contract Standards. On-site tests shall include tests for: concrete slump, concrete air entrainment, concrete temperature, casting of concrete test cylinder specimens, in-place testing of concrete strength, compaction density testing of soils, coating thickness measurements and structural bolting torque.

6.7. INSPECTION OF DESIGN-BUILD WORK

6.7.1 Inspection and Correction.

All Design-Build Work performed by the Design-Builder or its Subcontractors shall be inspected by the Design-Builder. All nonconforming Design-Build Work and any safety hazards in the work area shall be noted and promptly corrected. The Design-Builder is responsible for the performance of the Design-Build Work safely and in conformance with Section 5.7 (Construction Safety and Security) of Appendix 5 (General Design-Build Work Requirements).

6.7.2 City Access.

The City, its employees, agents, representatives and contractors shall be permitted access to all parts of the Design-Build Work, including plants where materials or equipment are manufactured or fabricated. The presence of the City, its employees, agents, representatives and contractors shall not relieve the Design-Builder of the responsibility for the proper execution of the Design-Build Work in accordance with all requirements of this Design-Build Contract. No act or omission on the part of the City, its employees, agents, representative and contractors (other than City Fault) shall be construed as relieving the Design-Builder of this responsibility.

6.7.3 Materials Inspection.

All materials and articles furnished by the Design-Builder shall be subject to documented inspection, by qualified personnel, and no materials or articles shall be used in the Design-Build Work until they have been inspected and accepted by the QA/QC Manager or other designated representative. Any Design-Build Work covered in the absence of inspection shall be subject to uncovering as set forth in Section 6.16 (Construction Monitoring, Observations, Testing and Uncovering of Work) of this Design-Build Contract.

6.8. TIME OF INSPECTION AND TESTS

Whenever the Design-Builder is ready to backfill, bury, cast in concrete or otherwise cover any Design-Build Work, the City shall be notified before such covering and completion, and the City shall notify the Design-Builder of a requested inspection of any such Design-Build Work as set forth in subsection 6.16(F) (Notice of Covering Design-Build Work) of this Design-Build Contract. Failure of the Design-Builder to properly notify the City, as required by subsection 6.16(F) (Notice of Covering Design-Build Work) of this Design-Build Contract, in advance of any such covering or completion shall be reasonable cause for the City to request the Design-Builder take apart or uncover for inspection or testing any previously covered or completed Design-Build Work in accordance with subsection 6.16(F) (Notice of Covering Design-Build Work) of this Design-Build Contract. The costs of any uncovering, taking apart, remedial or corrective work required and all costs of such delays, including the impact on other portions of the Design-Build Work, shall be borne as set forth in 6.16(F) (Notice of Covering Design-Build Work) of this Design-Build Contract.

6.9. MATERIALS SAMPLING AND TESTING

6.9.1 Materials Testing and Removal.

All sampling and testing of materials shall be conducted in accordance with the methods prescribed in the current standards of the ASTM or otherwise required by the Contract Standards, as applicable to the class and nature of the article or materials considered. The City reserves the right to require the Design-Builder to use any generally accepted system of inspection that, in the opinion of the City, will ensure the City that the quality of the materials workmanship is in full accord with this Design-Build Contract. Results of such tests and analyses shall be considered along with the tests or analyses made by the Design-Builder to determine compliance with the applicable specifications for the materials so tested or analyzed. Wherever any material, as a result of such independent testing or investigation by the City, fails to meet the requirements of this Design-Build Contract, all costs of such independent

inspection and investigation and all costs of removal, correction, reconstruction, or repair of any such material shall be borne by the Design-Builder in accordance with subsection 6.16(F) (Notice of Covering Design-Build Work) and Section 6.17 (Correction of Work) of this Design-Build Contract.

6.9.2 Materials Rejection.

The City shall have the right at all times and places to reject any articles or materials to be furnished hereunder which, in any respect, fail to meet the requirements of this Design-Build Contract, regardless of whether the defects in such articles or materials are detected at the point of manufacture or after completion of the Design-Build Work at the Headworks Facility Site. If the City, through an oversight or otherwise, has accepted materials or work which are defective or in any way contrary to this Design-Build Contract, such materials, no matter in what stage or condition of manufacture, delivery, or erection, may be rejected. The Design-Builder, at its cost and expense and without any adjustment to the Scheduled Acceptance Date, shall promptly remove and replace rejected articles or materials from the Headworks Facility Site after notification of rejection.

6.10. MATERIALS TESTING SERVICES

6.10.1 Design-Builder's Laboratories.

The Design-Builder shall perform all tests requiring the services of a laboratory, to determine compliance with this Design-Build Contract, using independent commercial materials testing firms acceptable to the City. The materials testing firm's laboratory shall be staffed with experienced technicians, properly equipped, and fully qualified to perform the tests in accordance with the specified standards. The Design-Builder shall obtain the City's acceptance of the testing firm before having testing services performed, and pay all costs for these testing services.

6.10.2 Interruptions For Testing and Sampling.

The Design-Builder shall furnish all sample materials and cooperate in the testing activities, including sampling, and shall interrupt the Design-Build Work when necessary to allow testing, including sampling, to be performed. The Design-Builder shall have no claim for an increase in the Design-Build Price or extension of the Scheduled Acceptance Date due to such interruption. When testing activities, including sampling, are performed in the field by the testing firm's laboratory personnel, the Design-Builder shall furnish personnel and facilities to assist in the activities.

6.10.3 Test Reports.

Written reports of tests and engineering data regarding materials and equipment proposed to be used in the Design-Build Work shall be submitted by the Design-Builder for the City's review. The testing firm's laboratory shall perform all laboratory tests within a reasonable time, consistent with the specified standards, and shall furnish a written report of each test. The City shall furnish one copy of each field and laboratory QA/QC test conducted by the City to the Design-Builder. The testing firm retained by the Design-Builder for material testing shall furnish five copies of a written report for each test. Three copies of each test report shall be transmitted directly to the City in a sealed envelope, within three Business Days after each test is completed. Two copies of each test report shall be transmitted to the Design-Builder. The Design-Builder shall consecutively number each report for each type of test.

6.10.4 City's Laboratories.

The City shall have the right to inspect work performed by the City-approved independent testing laboratory utilized by the Design-Builder, both at the Headworks Facility Site and at the laboratory. This may include inspection of the independent testing laboratory's internal quality assurance records (quality assurance manual, equipment calibrations, proficiency sample performance, etc.). Testing services provided by the City, if any, are for the sole benefit of the City; however, test results shall be available to the Design-Builder. Testing necessary to satisfy the Design-Builder's internal QA/QC procedures shall be the sole responsibility of the Design-Builder.

6.10.5 Materials to be Tested.

The Design-Builder shall provide all testing services in connection with the following materials as required under Good Design-Build Practice, and deliver the test reports for review by the City:

- (1) Concrete materials and mix designs.
- (2) Masonry units, masonry grout, mortar materials, and design mixtures.
- (3) Asphaltic concrete materials and design mixtures.
- (4) Embankment, fill, and backfill materials.
- (5) QC testing of all precast concrete.
- (6) Holiday testing of pipeline coatings.

- (7) Air testing of field-welded joints for steel pipe and fabricated specials.
- (8) Concrete strength tests.
- (9) Test of masonry prisms.
- (10) Field control test of masonry.
- (11) Asphaltic concrete.
- (12) Magnetic particle or dye penetrant testing of field welds for steel pipe and fabricated specials.
- (13) Moisture-density and relative-density tests on embankment, fill, and backfill materials.
- (14) In-place field density test on embankments, fills, and backfill.
- (15) Other materials and equipment as specified herein.
- (16) All other tests and engineering data required for the City's review of materials and equipment proposed to be used in the Design-Build Work.

6.11. INSTALLATION

6.11.1 Inspection and Measurement.

The Design-Builder shall inspect materials or equipment upon the arrival at the jobsite and immediately prior to installation, and remove damaged and defective items from the jobsite. The City shall be provided the opportunity to observe any such Design-Builder inspections in accordance with Section 6.16 (Construction Monitoring, Observations, Testing and Uncovering of Work) of this Design-Build Contract. The Design-Builder shall verify measurements and dimensions of the work as an integral step of starting each installation.

6.11.2 Manufacturer's Instructions.

Where installations include manufactured products, the Design-Builder shall comply with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than the Contract Standards, so as not to violate manufacturers' warranty conditions.

6.12. PERSONNEL QUALIFICATIONS

The QMP shall include a QA/QC organization chart with named individuals performing QA/QC including their experience and qualifications. The QMP shall describe staffing levels required for QA/QC and qualifications and experiences requirements for persons performing QA/QC functions, including the following:

- (a) Description of minimum qualifications and experiences that demonstrate quality management personnel have related experience and certifications. Typically, this indicates professional engineers and professional certified quality personnel who have a certain level of similar project experience, which may include:
 - (i) QA/QC Management/Supervisors should possess experience managing professional personnel in similar circumstances or on similar projects; demonstrate excellent communication skills; possess a working knowledge of QA/QC and quality management; possess certification as quality professionals by appropriate certifying bodies or have completed training courses in the quality discipline.
 - (ii) The Design Quality Assurance Manager must be a registered professional engineer in the State of California; may work directly for the Design-Builder or may be contracted from an independent firm or organization; must have at least five years experience in projects similar in scale or scope to the Headworks Facility project.
 - (iii) The Construction Quality Assurance Manager may work directly for the Design-Builder or may be contracted from an independent firm or organization; must have at least five years of recent experience (within the past ten years) overseeing the inspection and materials testing of projects similar in scale or scope to the Headworks Facility project.
 - (iv) QA and QC reviewers, inspectors, and testing technicians for design and construction must be qualified for the duties they must perform; must possess the appropriate education or experience commensurate with the job responsibilities; and must possess the necessary certifications required for assignments.
- (b) Persons performing Quality Control and/or Quality Assurance functions shall be at an organizational level that reports directly to upper level management of the

Design-Build firm to assure independence from the influences of the Project production staff.

- (c) All key personnel performing Quality Control and/or Quality Assurance functions shall be designated as such and shall not be assigned to perform any conflicting duties.

APPENDIX 7

DESIGN-BUILD WORK REVIEW PROCEDURES

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APPENDIX 7

DESIGN-BUILD WORK REVIEW PROCEDURES

7.1. OVERVIEW

7.1.1 Purpose.

The purpose of this Appendix is to set forth the procedures for the City's review of each aspect of the Design-Build Work to verify that the Headworks Facility has been designed and constructed in accordance with the Technical Specifications and the terms and conditions of this Design-Build Contract.

7.2. DOCUMENTS TO BE SUBMITTED.

At a minimum, the documents to be submitted during the Design-Build Period shall include the following:

- (a) Monthly Progress Schedule Updates
- (b) Intermediate submittals for review sessions and workshops on various materials, facilities, systems, equipment, and disciplines
- (c) 90% Design Submittal
- (d) Final Design Documents (issued for construction)
- (e) Commissioning and Acceptance Test Plan
- (f) Acceptance Test Report
- (g) Performance Test Results
- (h) Operation and Maintenance Manual
- (i) Applications and supporting documents required for Governmental Approvals
- (j) Record drawings and specifications

Such documents shall be submitted in accordance with the Document Submittal Procedures.

7.2.1 Design-Construction Work Package Information.

The Design-Builder shall have flexibility with how it organizes and performs design-construction work packages so that it can proceed with ordering any necessary equipment or

commence with any necessary construction activities such as civil-site work prior to the 100% design; provided, however, such construction or ordering of equipment prior to the 100% design shall not negatively affect the remaining Design-Build Work, the Design-Build Price or the Design-Build Schedule. The Design-Builder shall provide the following information in the appropriate design-construction work package in accordance with the Document Submittal Procedures:

- (a) Specifications, Design Narratives and Lists:
 - (1) Project design criteria
 - (2) Specifications list
 - (3) Process systems piping line list
 - (4) Process system valve list
 - (5) Electrical loads list
 - (6) Major equipment list (process, mechanical, electrical, instrumentation and control, support systems, other)
 - (7) Proprietary technology/equipment list
 - (8) Specifications for major equipment
 - (9) Narrative description of the following systems: controls, remote monitoring and operating capability, voice and data communications and security
 - (10) Specifications (general requirements, civil, structural, architectural, equipment, specialties, mechanical, and electrical and instrumentation and controls sections)

- (b) Drawings, in both three dimensional electronic and standard design formats:
 - (1) Cover sheet
 - (2) Drawing index
 - (3) Process flow diagram for all primary and secondary processes

- (4) Layout of the Headworks Facility Site
- (5) Major outside piping layout
- (6) Headworks Facility Site master planning layouts
- (7) Landscape inventory plan
- (8) Landscape and irrigation plans
- (9) Headworks Facility Site grading and utility plans, with sections as needed for construction clarity or dimensioning
- (10) Surface drainage system and features plans and details
- (11) Fire protection and security system plans
- (12) Headworks Facility Site sections and details
- (13) Process and support facilities general arrangement plans, with sections as needed for construction clarity or dimensioning
- (14) Piping system plans, sections and details
- (15) Major building structure foundation plans and sections
- (16) Major building and structure floor plans
- (17) Major building and structure exterior elevations and sections
- (18) Typical sections through all major wall, roof and floor sections of major buildings and structures
- (19) Architectural door, window, finish and hardware schedules and details
- (20) Architectural renderings
- (21) Non-process mechanical systems plans, details and schedules
- (22) Electrical site plan
- (23) Electrical one line drawing

- (24) Process and Instrumentation diagrams for all primary and secondary processes
- (25) SCADA system network drawings
- (26) Instrumentation and control system drawings, including loop drawings illustrating the functional elements in the path of the sensor to each control system input/output (ISA S5.4)

7.3. CITY REVIEW DURING GOVERNMENTAL APPROVAL PROCESS

The Design-Builder's responsibilities for obtaining and maintaining the Governmental Approvals required for construction of the Headworks Facility are described in Section 6.6 (Permitting Responsibilities and Schedule) of this Design-Build Contract and Appendix 3 (Governmental Approvals). The City shall have the right to review and comment on Design-Builder submittals as provided by Section 6.6 (Permitting Responsibilities and Schedule) of this Design-Build Contract and this Appendix. Unless otherwise approved by the City in writing, Governmental Approval applications shall not include design specifications or drawings that the City has not previously reviewed. For all Governmental Approval applications, the Design-Builder shall provide draft copies of the applications and supporting documents for City review and comment. The City's review will not diminish the Design-Builder's responsibility for timely submittals of complete applications for Governmental Approvals. The City may attend Design-Builder meetings with permitting agencies and help arrange for agency reviews and meetings.

7.4. CITY DOCUMENT REVIEW

7.4.1 City Review Responsibilities.

On or before the Construction Commencement Date, the Design-Builder shall submit updated Document Submittal Procedures that address the submittal of the Final Design Documents (the "Final Design Submittal Protocol"). In accordance with the Final Design Submittal Protocol, the City shall review the Design-Builder's Final Design Documents for compliance and consistency with the final 60% Design, design-construction work package documents for compliance and consistency with the Final Design Documents and both for overall compliance with the requirements of this Design-Build Contract. The City's input during finalization of the design documents and preparation and finalization of design-construction work packages shall be solicited by the Design-Builder on a timely basis so as to provide adequate periods for review by the City, revisions by the Design-Builder and final review by the City without negatively impacting the Design-Build Schedule. The City shall make reasonable efforts to bring staff or

representatives with review and decision-making authority to the work sessions as requested and scheduled by the Design-Builder. The Design-Builder shall provide the City with advance notice of the work sessions and agenda topics to facilitate the City's scheduling of the appropriate participants for the work sessions. The Design-Builder shall provide the City with Final Design Documents before commencing any construction activity, except as provided in Section 7.2.1 (Design-Construction Work Package Information) of this Appendix. Construction activities shall not vary from the Final Design Documents submitted to the City except where such variations are allowed, subject to the City's and applicable Governmental Body's review and approval. Adherence to the Final Design Documents as well as to the Technical Specifications during work completion shall be a factor used by the City in its review and approval of the Design-Builder's Payment Requests during construction.

7.4.2 Changes to Technical Specifications.

Any change requested by the Design-Builder to the Technical Specifications (regardless of prior oral discussion) must be clearly identified by the Design-Builder in its cover letter that transmits the submittal and must be fully documented with compelling justification of the Design-Builder's request for a change to the Technical Specifications and the benefits to the City for consenting to such a change. Any such change shall comply with the requirements set forth in Article 6 (Design-Build Work) of this Design-Build Contract, as applicable. No change to the Technical Specifications shall be made except with the City's approval pursuant to Section 6.8 (Changes to the Technical Specifications at Design-Builder Request) of this Design-Build Contract. The Design-Builder shall assume all risks associated with obtaining City approval of any change to the Technical Specifications.

7.4.3 Time for City Review.

The Design-Builder and the City shall periodically review the Document Submittal Procedures, which define key submittals and the target submittal dates, and develop a submittal review schedule for each submittal based on the content and criticality of each submittal. The City shall complete its review of each submittal in a timely manner based on such target submittal dates in order to determine that the Design-Build Work conforms to the Technical Specifications and other Contract Standards.

7.4.4 Time for Design-Builder Response.

For each submittal, the City shall provide written comments in a tabular summation describing any concerns, problems, or assertions of non-compliance with the applicable Contract Standards. The tabular summation shall be on a form created mutually by the Design-Builder

and the City, with provisions on the form for the Design-Builder's responses. The Design-Builder shall provide a written response to the City's comments within 15 Business Days of receipt of the City's comments, primarily through use of the tabular summary form, including documentation of responses and agreed-upon action items.

7.4.5 Design-Build Progress Meetings.

For the purpose of facilitating a timely review process, the Design-Builder shall schedule design-build progress meetings with the City on a routine basis and at least monthly (unless both parties agree that more frequent meetings are required) throughout the design finalization and design-construction work package development period. Any outstanding review comments not satisfactorily resolved shall be transferred to an issues tracking form by the Design-Builder for subsequent follow-up. The primary purpose of these meetings shall be to discuss overall Design-Builder work progress, the conformance of the design and design-construction work packages to the Technical Specifications, and to address outstanding issues arising from the review and response process. The status and issues of related permitting and early construction activities may also be included as agenda items for each design-build progress meeting. These meetings shall be held in the City's offices, or another location agreed to by the City. Design-Builder representatives with responsibility for design and construction shall participate in the meeting. Similarly, the City shall be appropriately represented by individuals with knowledge and authority for decision making at the meeting.

7.4.6 Design Submittals During Construction.

It is anticipated that there could be some redesign or design clarifications needed during construction. Additional design work by the Design-Builder shall be subject to the City's review for compliance and consistency with applicable Technical Specifications. Design changes to a particular Design Document performed following the issuance of the Design Document for construction shall be issued under a Design Change Notice (DCN) process that accurately tracks and documents changes to the design. No later than 30 days prior to initiation of construction, the Design-Builder shall submit to the City additions to the Document Submittal Procedures to include the DCN. The City shall be provided with copies of all DCNs in a timely manner to allow review, comment, and, where appropriate, approval in the same manner as set forth with respect to the initial design. Design clarifications shall be issued in a timely manner using a similar procedure. If a DCN requires a material change from what was reflected in the applications for Governmental Approvals, the DCN must be approved by the appropriate Governmental Body if required by Applicable Law.

7.4.7 Design Change Authority.

The Design-Builder shall be responsible for providing design changes to the Design Documents necessary to complete the Project in accordance with this Design-Build Contract. All such changes shall be implemented in accordance with the DCN process described above, and in accordance with this Appendix. No DCN shall operate to change the Technical Specifications unless approved by the City in writing. Any DCN which requests a change to the Technical Specifications shall be subject to the City's rights under subsection 7.4.2 (Changes to Technical Specifications) of this Appendix.

7.5. CITY CONSTRUCTION INSPECTION

7.5.1 Construction Review Intent.

The City and its designated representatives, including the Owner's Advisor, shall have the right, as provided in this Appendix, periodically to review and inspect construction activities and participate in construction progress meetings as needed to verify compliance with the Contract Standards. In addition, the City shall have the right to monitor the progress of construction work and verify all applications for payment covering all construction work performed during the preceding calendar month in accordance with the procedures set forth in Article 9 (Compensation for Design-Build Work) and Appendix 8 (Design-Build Price). Notwithstanding the City's review of construction activities, the Design-Builder shall be fully responsible for means, methods, techniques, sequences, and procedures of construction, as well as safety precautions and programs in the performance of the Design-Build Work. The City's review and involvement in construction activities is intended for the informational purposes of the City and to monitor compliance with this Design-Build Contract. Such activities shall also be a part of the City's independent quality assurance process and shall not be viewed as an additional layer or integral part of the Design-Build Quality Management Plan.

7.5.2 "Or Equals".

Whenever an item of material or equipment is specified in the Technical Specifications by using the name of a proprietary item or the name of a particular supplier, and is followed by the words "or equal", material or equipment of other suppliers may be considered. The City shall determine, acting reasonably, the acceptability of proposed "or equal" items associated with the Design-Build Work. The Design-Builder shall allocate adequate time in the Document Submittal Procedures for the City to review and approve all "or equal" items for the Design-Build Work. Any delays resulting from submittal of "or equal" items later than as set forth in the Document Submittal shall be the responsibility of the Design-Builder. The Design-

Builder's design personnel shall be permitted to review proposed "or equal" suppliers for the balance of the Design-Build Work.

7.5.3 Named Suppliers.

Whenever an item of material or equipment is specified in the Technical Specifications by using the name of a proprietary item or the name of a particular supplier, and is not followed by the words "or equal", the Design-Builder shall provide the named material or equipment.

7.5.4 Functionally Equal.

If, in the City's reasonable discretion, an item of material or equipment proposed by the Design-Builder for the Design-Build Work is functionally equal to that named, it may be considered by the City as an "or equal" item. A proposed item of material or equipment shall be considered functionally equal to an item so named if:

- (a) the City determines that:
 - (1) it is at least equal in quality, durability, appearance, strength, and design characteristics; and
 - (2) it shall reliably perform at least equally well the function imposed by the design concept of the completed Headworks Facility as a functioning whole; and
- (b) the Design-Builder certifies that it shall conform substantially, even with deviations, to the detailed requirements of the item named in this Design-Build Contract.

7.5.5 Corrections and Changes.

The procedures to be followed for correction of non-conforming Design-Build Work and for instituting changes and additions to such work are set forth in Article 6 (Design-Build Work) of this Design-Build Contract.

7.6. RECORD DRAWINGS

At the completion of construction, the Design-Builder shall prepare and submit to the City two complete sets of record drawings for the Headworks Facility as built. The record drawings shall be submitted in accordance with the Document Submittal Procedures. The record drawings shall be prepared in accordance with the Contract Standards and shall include all electrical

and control wiring schematics/diagrams. The Design-Builder shall obtain the City's approval of the record drawings as a condition of Final Completion. The City's approval of the record drawings shall not be unreasonably withheld.

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APPENDIX 8
DESIGN-BUILD PRICE

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APPENDIX 8

DESIGN-BUILD PRICE

8.1. PURPOSE

The purpose of this Appendix is to set forth the procedures and requirements for determining (1) the Design-Build Price, and (2) the Guaranteed Maximum Price.

8.2. DESIGN-BUILD PRICE

8.2.1 Payment.

The City shall pay the Design-Builder the Design-Build Price for its performance of the Design-Build Work, subject to the Guaranteed Maximum Price established in accordance with Section 8.7 (Guaranteed Maximum Price) of this Appendix.

8.2.2 Design-Build Price Defined.

The Design-Build Price shall be an amount equal to the sum of:

- (a) The Design-Build Costs;
- (b) The General Conditions Fee; and
- (c) The Design-Builder Fee,

all subject to the following:

- (a) The Design-Build Price shall not include Unallowable Costs, all of which shall be borne by the Design-Builder without payment or reimbursement by the City;
- (b) The only compensation payable for General Conditions Costs is the General Conditions Fee; and
- (c) The Design-Build Price shall not exceed the Guaranteed Maximum Price.

8.2.3 Related Definitions.

As used in this Design-Build Contract, the following terms shall have the meanings set forth below:

- (a) “Design-Builder Contingency” has the meaning specified in Attachment 8-C (Schedule of Values and Design-Builder Contingency) of this Appendix.

- (b) “Design-Builder Fee” has the meaning specified in Section 8.6 (Design-Builder Fee) of this Appendix.
- (c) “Design-Build Costs” has the meaning specified in Section 8.3 (Design-Build Costs) of this Appendix.
- (d) “Design-Build Price” has the meaning specified in Section 8.2.2 (Design-Build Price Defined) of this Appendix.
- (e) “General Conditions Costs” has the meaning specified in Attachment 8-A hereto (Description of General Conditions Costs).
- (f) “General Conditions Fee” has the meaning specified in Section 8.5 (General Conditions Fee) of this Appendix.
- (g) “Guaranteed Maximum Price” has the meaning specified in Section 8.7 (Guaranteed Maximum Price) of this Appendix.
- (h) “Unallowable Costs” has the meaning specified in Section 8.4 (Unallowable Costs) of this Appendix.
- (i) “Uncontrollable Circumstance Costs” means, subject to Article 15 (Uncontrollable Circumstances), Section 18.7 (General Duty to Mitigate), and the other terms and conditions of this Design-Build Contract, any Design-Build Costs paid by the Design-Builder to the extent that such Design-Build Cost has been paid due to the occurrence of an Uncontrollable Circumstance.

8.2.4 Certification and Cost Substantiation.

Each Payment Request shall:

- (a) Comply with and be submitted in accordance with the procedures and requirements of Article 9 (Compensation for Design-Build Work) of this Design-Build Contract.
- (b) Be presented by element of the Design-Build Price;
- (c) If Uncontrollable Circumstance Costs are being invoiced, present such Uncontrollable Circumstance Costs separately from other Design-Build Costs.

- (d) If costs resulting from Subcontractor or Supplier delay or non-performance are being invoiced, present such costs separately from other Design-Build Costs.
- (e) For Design-Build Costs payable on a reimbursable basis, provide Cost Substantiation for the Design-Build Cost for which reimbursement is sought, including copies of all documentation reasonably necessary to demonstrate that the reimbursable Design-Build Cost has been paid or incurred.
- (f) For Design-Build Costs payable on a lump sum basis, provide copies of all documentation reasonably necessary to demonstrate the value of the Design-Build Work in place.

All such documentation shall be in a format and a level of detail reasonably acceptable to the City.

8.2.5 Relation to General Conditions Costs

Section 8.5 (General Conditions Fee) of this Appendix obligates the City to pay a fixed General Conditions Fee to the Design-Builder. The General Conditions Fee is intended to compensate the Design-Builder for General Conditions Costs, and is payable whether the Design-Builder's actual General Conditions Costs are higher or lower than the amount of the General Conditions Fee. Accordingly, Design-Build Costs shall not include any costs constituting General Conditions Costs.

8.2.6 Discounts, Rebates and Refunds.

All cash discounts, trade discounts, rebates, refunds and returns from the sale of surplus materials and equipment shall be reported and accrue to the benefit of the City and serve to offset the Design-Build Costs.

8.3. DESIGN-BUILD COSTS

“Design-Build Costs” means the reasonable and necessary costs paid or incurred by the Design-Builder in the proper performance of the Design-Build Work (including Commissioning and Acceptance Testing and costs resulting from the occurrence of the risks assumed by the Design-Builder under this Design-Build Contract) that (1) are described in and meet the requirements of this Section 8.3, and (2) are not Unallowable Costs.

As used in this Section, “reasonable and necessary costs paid or incurred by the Design-Builder in the proper performance of the Design-Build Work” includes (1) costs of Design-Build

Work necessitated by ordinary mistakes or inadvertence; (2) costs incurred in repairing or correcting defective, damaged or non-conforming Design-Build Work (including any warranty or corrective Design-Build Work performed after Acceptance; (3) additional costs incurred due to Subcontractor delay or non-performance; (4) costs incurred in performing corrective action needed to address a failure of the Acceptance Test to demonstrate compliance with the Acceptance Standards; and (5) Uncontrollable Circumstances Costs, in all cases except to the extent any such costs constitute Unallowable Costs.

8.3.1 Third-Party Professional Services Fees.

- (a) Professional fees and expenses payable by the Design-Builder to design engineers for design engineering services under third party design Subcontracts.
- (b) Fees and expenses payable by the Design-Builder for professional services under third-party professional services Subcontracts for other professional services, including accounting, planning, surveying, consulting and other professional services.

8.3.2 Construction Subcontractor and Major Equipment Supplier Costs.

An amount equal to the amounts properly payable by the Design-Builder to Subcontractors for Design-Build Work performed under construction Subcontracts and Subcontracts for major equipment entered into in accordance with the procedures and requirements set forth in Section 7.4 (Self-Performance and Subcontractor Selection) of this Design-Build Contract. No Subcontract shall provide for payment of Unallowable Costs. In no event shall the markup by any Subcontractor for Design-Build Work performed by direct lower-tier Subcontractors exceed 5%.

8.3.3 Design-Builder's Own Labor Costs.

Except to the extent that any of the following costs are supervisory and administrative personnel costs, and, as such, constitute General Conditions Costs payable as part of the General Conditions Fee:

- (a) Wages or salaries of direct employees of the Design-Builder performing the Design-Build Work at the Headworks Facility. The cost for such employees of the Design-Builder shall be calculated on the basis of those rates set forth in Attachment 8-B (Professional Services Personnel Cost Schedule) to this Appendix.

- (b) Wages or salaries of off-site direct employees of the Design-Builder performing design services in connection with the Design-Build Work. The cost for such employees of the Design-Builder shall be calculated on the basis of those rates set forth in Attachment 8-B (Professional Services Personnel Cost Schedule) to this Appendix.
- (c) With the written consent of the City, wages or salaries of other off-site direct employees of the Design-Builder performing Design-Build Work. The cost for such employees of the Design-Builder shall be calculated on the basis of those rates set forth in Attachment 8-B (Professional Services Personnel Cost Schedule) to this Appendix.
- (d) Costs reasonably paid or incurred by the Design-Builder for employee benefits, premiums, taxes, insurance, contributions and assessments required by law, collective bargaining agreements and, for personnel not covered by such agreements, customary benefits such as sick leave, medical and health benefits, holidays, vacations and pensions, paid by the Design-Builder, excluding bonuses, to the extent such costs are based on wages and salaries paid to employees of the Design-Builder included in the Design-Build Costs under items (a) through (c) of this subsection.
- (e) The reasonable cost of travel, accommodations and meals for the Design-Builder's personnel incurred outside of the City metropolitan area, necessarily and directly incurred in connection with the performance of the Design-Build Work, as approved by the City and consistent with the City's policies for payment of such costs.

8.3.4 Costs of Materials, Equipment and Supplies.

Except to the extent any of the following constitute General Conditions Costs or costs paid or incurred under Subcontracts with Suppliers for Major Equipment:

- (a) Costs, including transportation, inspection, testing, storage and handling, of materials, equipment, systems and supplies incorporated, to be incorporated or reasonably used in completing the Design-Build Work.
- (b) Costs of materials, equipment and supplies, described in item (c) of this subsection, in excess of those actually installed to allow for reasonable waste

and spoilage. Unused excess materials, equipment and supplies, if any, shall become the City's property at the completion of the Design-Build Work or, at the City's option, shall be sold by the Design-Builder. Any amounts realized from such sales shall be credited to the City as a deduction from the Design-Build Price.

- (c) Costs, including transportation and storage, installation, maintenance, dismantling and removal of materials, supplies, temporary facilities, machinery, equipment and hand tools not customarily owned by the construction workers, that are provided by the Design-Builder at the Headworks Facility Site and fully consumed in the performance of the Design-Build Work; and costs (less salvage value) of such items if not fully consumed, whether sold to others or retained by the Design-Builder. The basis for the cost of items previously used by the Design-Builder shall be fair market value.
- (d) 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 construction workers, which are provided by the Design-Builder at the Headworks Facility Site, whether rented from the Design-Builder or others, and incurred in the performance of the Design-Build Work. Rates and quantities of equipment rented shall be subject to the City's prior written approval.
- (e) Costs of materials and equipment suitably stored off the Headworks Facility Site at a mutually acceptable location, if approved in advance in writing by the City.
- (f) Any sales commissions related to the foregoing.

8.3.5 Other Costs.

Except to the extent any of the following constitute General Conditions Costs:

- (a) Costs of conducting Commissioning and the Acceptance Test.
- (b) Premiums for Project-specific Required Insurance that the Design-Builder is obligated to obtain and maintain in accordance with Article 14 (Insurance) and Appendix 12 (Insurance Requirements) of this Design-Build Contract.

- (c) Premiums for Project-specific insurance which the Design-Builder requests and the City approves, such approval not to be unreasonably withheld.
- (d) Premiums for the Performance Bond and the Payment Bond.
- (e) Costs of handing, removal and disposal of Regulated Substances and remediating Regulated Site Conditions (except as provided in subsection 6.4(E) (Design-Builder Responsibilities) of this Design-Build Contract).
- (f) Fuel and utility costs paid or incurred in the performance of the Design-Build Work.
- (g) Sales, use or similar taxes, tariffs or duties imposed by a Governmental Body and incurred by the Design-Builder in the performance of the Design-Build Work for which the Design-Builder is not able to obtain an exemption under Applicable Law.
- (h) Costs for obtaining and maintaining Governmental Approvals.
- (i) Fees of laboratories for tests required by this Design-Build Contract.
- (j) Royalties and license fees paid for the use of a particular design, process or product required by this Design-Build Contract.

8.3.6 City Travel Policy Cost Limits.

Posted City travel expense guidelines, as in effect from time to time, shall prevail over actual travel expenses incurred by the Design-Builder in any reimbursement of Design-Build Costs relating to travel. Such guidelines provide for the reimbursement of mileage and other travel-related expenses to the same extent that the City reimburses its employees pursuant to the Employee Travel Policy (City Policy Manual, Sections 1.8.2 and 1.8.3).

8.3.7 Compensation for On-Going Design Costs During the Negotiation of the Definitive Contract Amendment.

Section 5.10(B) (Negotiation and Execution of the Definitive Contract Amendment) of this Design-Build Contract anticipates that, following the Definitive Project Submittal, the parties will negotiate the Definitive Contract Amendment. The Design-Build Schedule anticipates a negotiating period of approximately ___ months. The Design-Builder may, but is not obligated to, continue the development of the Project design during the negotiating period in order to

preserve the continuity of the design effort by the design engineers. Any costs and expenses by the Design-Builder during the negotiating period in furtherance of the Project, including the cost and expense of the design team, shall be incurred at the sole risk of the Design-Builder and shall not subject to payment or reimbursement by the City unless the City specifically agrees to the payment of such costs and expenses in connection with the negotiation and execution of a Definitive Contract Amendment, in which case such costs and expenses shall constitute Design-Build Costs hereunder. Any such costs shall be payable in the same manner as Design-Build Costs are payable following the Definitive Contract Amendment Date or in any other manner agreed to by the parties in executing the Definitive Contract Amendment.

8.4. UNALLOWABLE COSTS

8.4.1 No Payment Obligation.

Notwithstanding any other provision of this Design-Build Contract, the City shall have no obligation to pay the Design-Builder any Unallowable Costs.

8.4.2 Unallowable Costs Defined.

“Unallowable Costs” means:

- (a) Premiums for insurance, except as provided in Section 8.3.5 of this Appendix.
- (b) In the event of damage to or destruction of the Headworks Facility that is caused by Design-Builder Fault, cost of repair or reconstruction not covered by applicable OCIP policies on account of deductibles or exceedances under the applicable policy’s stated coverage limitations.
- (c) Costs for wages, salaries and professional services fees, to the extent they exceed wage and salary rates or fees customarily paid for similar services by comparably qualified workers and professionals in the City.
- (d) Any costs incurred in handling disputes or litigation with Subcontractors or any other third party.
- (e) Salaries and other compensation for the Design-Builder’s personnel stationed at the Design-Builder’s principal office or branch offices, except as provided in subsections 8.3.3(b) and 8.3.3(c) of this Appendix.

- (f) Expenses of the Design-Builder's principal office or branch offices other than the Headworks Facility Site, except as provided in Section 8.3.3 (Design-Builder's Own Labor Costs) of this Appendix.
- (g) Overhead, office and general expenses at any location, except as provided for in Section 8.3.3 (Design-Builder's Own Labor Costs) of this Appendix.
- (h) The cost of the capital (including interest on capital) used in the performance of the Design-Build Work or otherwise.
- (i) Rental costs of machinery and equipment, except as specifically provided in item (d) of Section 8.3.4 (Costs of Materials, Equipment and Supplies) of this Appendix.
- (j) Costs incurred as a result of the negligence or willful misconduct of the Design-Builder, any Affiliate, any Subcontractor or any other party performing any aspect of the Design-Build Work.
- (k) Fines, penalties, sanctions or impositions assessed or imposed by any Governmental Body as a result of Design-Builder Fault, including violations of or non-compliance with any Governmental Approval.
- (l) Any cost relating to the Design-Builder's indemnification obligations hereunder.
- (m) Travel and subsistence expenses, except as specifically provided in subsection 8.3.3 (Design-Builder's Own Labor Costs) of this Section.
- (n) Legal costs incurred for any reason.
- (o) The fees of independent experts hired to assist in connection with dispute resolution.
- (p) Amounts required to be paid the Design-Builder or any Subcontractor for federal or State income, franchise or other business Taxes.
- (q) Any costs that would cause the Guaranteed Maximum Price to be exceeded.
- (r) Premiums or fees paid to the Guarantor.

8.5. GENERAL CONDITIONS FEE

The “General Conditions Fee” is an amount equal or 9.5% of the Design-Build Costs. The General Conditions Fee is an amount attributable to General Conditions Costs, all of which shall be paid by the Design-Builder without reimbursement hereunder and irrespective of the sufficiency of the General Conditions Fee. The General Conditions Fee includes consideration for all costs and expenses paid or incurred by the Design-Builder, as well as all profit, risk, mark-up and general and indirect overhead, in connection with the General Conditions Costs. The General Conditions Fee shall be adjusted in the event the Scheduled Acceptance Date is extended as provided in Section 15.3 (Uncontrollable Circumstances Relief) of this Design-Build Contract.

In connection with Design-Build Costs associated with work performed pursuant to Section 6.17(A) of this Design-Build Contract, the City may elect, at its sole discretion, to withhold, and in such case, the Design-Builder shall not be entitled to, the General Conditions Fee associated with such Design-Build Costs.

8.6. DESIGN-BUILDER FEE

The “Design-Builder Fee” is an amount equal to 9.5% of the Design-Build Costs (other than the cost of (i) the Project-specific insurance which constitute Design-Build Costs, (ii) the Performance Bond, and (iii) the Payment Bond). The Design-Builder Fee is an amount attributable to profit, risk, mark-up and general or indirect overhead with respect to the Design-Build Work, and includes an amount attributable to the cost of Additional Insurance Required From Enrolled Parties and Excluded Parties, but shall exclude an amount attributable to the reduction in the Design-Builder’s insurance costs due to eligibility for the OCIP Coverages and Other Coverages Provided by the City, all as set forth and described in Article 14 (Insurance) and Appendix 12 (Insurance Requirements).

In connection with Design-Build Costs associated with work performed pursuant to Section 6.17(A) of this Design-Build Contract, the City may elect, at its sole discretion, to withhold, and in such case the Design-Builder shall not be entitled to, the Design-Builder Fee associated with such Design-Build Costs.

8.7. GUARANTEED MAXIMUM PRICE

8.7.1 Guaranteed Maximum Price Generally.

The City shall pay the Design-Builder the Design-Build Price for the Design-Build Work, subject to the Guaranteed Maximum Price calculated in accordance with this Section. The “Guaranteed Maximum Price” shall be the sum of (1) the Base Guaranteed Maximum Price, and (2) the Base Guaranteed Maximum Price Adjustments. The Guaranteed Maximum Price represents the absolute limit of the total of all amounts payable to the Design-Builder by the City for the performance of the Design-Build Work. In the event additional amounts are required to be expended over and above the Guaranteed Maximum Price to perform the Design-Build Work and achieve Acceptance and Final Completion, liability for and payment of such additional amounts shall be the sole responsibility of the Design-Builder. The City shall not be liable for any such amounts, and the Design-Builder shall not pursue any claim for any such additional amounts against the City. Notwithstanding any reference in this Design-Build Contract to the terms “mark-up” or “profit”, the Design-Builder acknowledges that (1) the City is not guaranteeing the Design-Builder any profit, a particular level of profit, or the avoidance of any loss in the overall performance of the Design-Build Work, and (2) the obligation of the Design-Builder to complete the Design-Build Work may result in a loss or in a mark-up and profit that is less than the mark-up and profit amounts anticipated by the Design-Builder in proposing its Design-Builder Fee, in making its Definitive Project Submittal, and in entering into this Design-Build Contract.

8.7.2 Base Guaranteed Maximum Price.

The “Base Guaranteed Maximum Price” is [_____]. **[Note: To be negotiated based on the Definitive Project Submittal and incorporated in this Section on the Definitive Contract Amendment Date.]** Except as provided in Section 8.7.3 (Base Guaranteed Maximum Price Adjustments) of this Appendix, the Base Guaranteed Maximum Price shall not be increased for any reason.

8.7.3 Base Guaranteed Maximum Price Adjustments.

The adjustments to the Base Guaranteed Maximum Price provided for in this subsection constitute the “Base Guaranteed Maximum Price Adjustments”, and each adjustment shall be reflected in a Contract Administration Memorandum. The Base Guaranteed Maximum Price shall be adjusted (increased or decreased) only to reflect adjustments required on account of:

- (a) Uncontrollable Circumstances generally, as provided in Section 15.3 (Uncontrollable Circumstances Relief) of this Design-Build Contract);
- (b) Technical Specifications changes made under Section 6.9 (Other Changes to the Technical Specifications) of this Design-Build Contract; or
- (c) Unilateral Change Directives made under Section 6.10 (Unilateral Change Directives) of this Design-Build Contract.

8.7.4 Value of Base Guaranteed Maximum Price Adjustments

The value of a Base Guaranteed Maximum Price Adjustment shall be determined as follows:

- (a) Where the Design-Build Work involved is covered by unit prices contained in this Design-Build Contract, by application of such unit prices to the quantities of the items involved;
- (b) To the extent unit prices are not applicable, by a mutually agreed lump sum; or
- (c) To the extent unit prices are not applicable and the parties are unable to reach agreement on a lump-sum value, on the basis of the Design-Build Costs of the associated Design-Build Work, as determined in accordance with this Appendix, plus the Design-Builder Fee.

A Base Guaranteed Maximum Price Adjustment may provide for markup payable to Subcontractors where Design-Build Work is performed through Subcontracts. Any such Subcontractor markup shall comply with the markup requirements of subsection 8.3.2 of this Appendix.

8.8. SHARED SAVINGS AMOUNT

In the event that upon Final Completion the Design-Build Price is less than an amount equal to (1) the Guaranteed Maximum Price minus (2) the used Design-Builder Contingency, as each such amount is finally determined in accordance with this Appendix, the City shall pay the Design-Builder an amount equal to 30% of the difference between the Guaranteed Maximum Price (minus the used Design-Builder Contingency) and the Design-Build Price (the “Shared Savings Amount”). The Shared Savings Amount shall be paid as part of the final payment to the Design-Builder in accordance with Section 9.4 (Payment Upon Final Completion) of this

Design-Build Contract. The City's determination of the Shared Savings Amount shall be final and binding upon the Design-Builder.

ATTACHMENT 8A
DESCRIPTION OF GENERAL CONDITIONS COSTS

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ATTACHMENT 8A

DESCRIPTION OF GENERAL CONDITIONS COSTS

GENERAL CONDITIONS COSTS

In connection with the Design-Build Work, the Design-Builder is responsible for the General Conditions Costs, as well as the performance of the related obligations, identified in this Section. The Design-Builder's compensation for the General Conditions Costs is limited to the General Conditions Fee. Design-Build Costs shall not include any General Conditions Costs. General Conditions Costs consist solely and exclusively of costs incurred for the following items with respect to the Design-Build Work:

(1) Design-Builder Employee Supervisory and Administrative Personnel Costs

- (a) Costs of wages or salaries of the Design-Builder's supervisory and administrative personnel engaged in the performance of the Design-Build Work and who are located at the Headworks Facility Site.
- (b) Costs of wages or salaries of the Design-Builder's supervisory and administrative personnel engaged off of the Headworks Facility Site at factories, workshops or on the road, to assist in the coordination, production or transportation of material or equipment necessary for the Design-Build Work, but only for that portion of their time required for the Design-Build Work.
- (c) Costs of wages or salaries of the Design-Builder's personnel stationed at the Design-Builder's principal or branch offices, but only to the extent such personnel are identified in Attachment 8-B to this Appendix (Professional Services Personnel Cost Schedule) and performing the functions set forth in such Attachment.
- (d) Costs reasonably paid or incurred by the Design-Builder for employee benefits, premiums, taxes, insurance, contributions and assessments for supervisory and administrative personnel required by law, collective bargaining agreements and, for supervisory and administrative personnel not covered by such agreements, customary benefits such as sick leave, medical and health benefits, holidays, vacations and pensions paid by the Design-Builder, excluding bonuses, to the extent such costs are based on wages and salaries paid to supervisory and

administrative personnel of the Design-Builder included in the Design-Build Costs under item (1)(a) of this Attachment.

- (e) The reasonable cost of travel, accommodations and meals for the Design-Builder's supervisory and administrative personnel incurred outside of the City metropolitan area, necessarily and directly incurred in connection with the performance of the Design-Build Work, as approved by the City and consistent with the City's policies for payment of such costs.

(2) Field Office and Construction Supply Costs for Design-Builder Staff Only

- Design-Builder field office mobilization and demobilization
- Office trailer rental (City will provide electric service for office trailers at City's expense)
- Office furniture and equipment
- Office janitorial
- Document reproduction services (off-site or custom)
- Copy machines, fax machines, printers, scanners and paper shredders
- Office computers, software and maintenance.
- Office telephones, and telephone and internet service
- Accounting and data processing costs
- Jobsite radios/cellular phones
- Postage, courier, and express delivery
- Scheduling expenses
- Job travel, including fuel and vehicle
- Job meeting expenses
- Temporary parking and laydown areas
- Storage facilities, both on and off site
- Tools and tool shed
- Surveying equipment and supplies
- Office supplies
- Project redline drawings
- Project specific signage
- Reference manuals
- Employee identification system

(3) Temporary Amenities for Design-Builder Headworks Facility Site activities:

- Temporary toilets
- Temporary fire protection
- Headworks Facility Site security
- Traffic control equipment rental
- Fencing, barricades, partitions and protected walkways
- Temporary water distribution and meters
- Temporary power generation
- Temporary and emergency lighting
- Site erosion control
- Drinking water
- Temporary construction facilities and services
- Temporary heat and ventilation

(4) Site Cleanup

- Daily site cleanup and dumpsters
- Cleanup at Substantial Completion
- Cleanup at Final Completion

(5) Construction Trade Training Program

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ATTACHMENT 8B
PROFESSIONAL SERVICES PERSONNEL COST SCHEDULE

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ATTACHMENT 8B

PROFESSIONAL SERVICES PERSONNEL COST SCHEDULE

Wages or salaries of Design-Builders Own Labor payable under subsection 8.3.3.(a), 8.3.3.(b), and 8.3.3.(c) of this Appendix shall be calculated by multiplying (1) the raw labor rate of each such employee, times (2) 2.85. The minimum calculated rate shall be no less than \$85 per hour.

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ATTACHMENT 8C
SCHEDULE OF VALUES AND DESIGN-BUILDER CONTINGENCY

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ATTACHMENT 8C

SCHEDULE OF VALUES AND DESIGN-BUILDER CONTINGENCY

GENERAL

The purpose of this Attachment is (1) to define the requirements for the Design-Builder's preparation of a Schedule of Values and the Design-Builder Contingency, which will be used as the basis for payments of the Design-Build Price pursuant to Article 9 (Compensation for Design-Build Work) of this Design-Build Contract, and (2) to describe the manner in which payment of the Design-Build Price will be made based on the Schedule of Values and the Design-Builder Contingency. **[Note: The Schedule of Values and the Design-Builder Contingency will be negotiated based on the Definitive Project Submittal, and incorporated in this Attachment 8-C on the Definitive Contract Amendment Date]**

EARLY DESIGN-BUILD WORK PACKAGES

As provided in subsection 5.8(F) (Complete Early Design-Build Work Package Pricing) of this Design-Build Contract, the parties intend that each Early Design-Build Work Package Amendment will contain complete pricing for the Design-Build Work covered by the Early Design-Build Work Package, and that a schedule of values and contingency will be established for such Early Design-Build Work Package separate and apart from the Schedule of Values and Design-Builder Contingency established on the Definitive Contract Amendment Date for the balance of the Design-Build Work.

TOTAL SCHEDULE OF VALUES AMOUNT

The sum of all amounts comprising the line items in the initial Schedule of Values shall be equal to the total amount of the reasonably estimated costs of achieving Substantial Completion and Acceptance, as such total amount of reasonably estimated costs is negotiated by the parties pursuant to subsection 5.10(C) (Base Guaranteed Maximum Price Negotiating Principles) of this Design-Build Contract. The total Schedule of Values amount, and the line items in the Schedule of Values, shall be adjusted appropriately by agreement of the parties to account for Base Guaranteed Maximum Price Adjustments.

DESIGN-BUILDER CONTINGENCY AMOUNT

The Design-Builder Contingency amount shall be a single stated dollar amount equal to the amount negotiated by the parties pursuant to subsection 5.10(C)(2) (Base Guaranteed Maximum Price Negotiating Principles) of this Design-Build Contract.

SUM OF THE SCHEDULE OF VALUES AMOUNT AND THE DESIGN-BUILDER CONTINGENCY AMOUNT

The sum of the total Schedule of Values amount and the Design-Builder Contingency amount shall be equal to the Base Guaranteed Maximum Price.

PREPARATION OF THE SCHEDULE OF VALUES

As part of the Definitive Project Submittal, the Design-Builder shall prepare a Schedule of Values identifying, on a line item basis, costs of major items of Design-Build Work and other costs in accordance with this Attachment, and which shall include a Design-Builder Contingency separately stated as a block amount.

The Schedule of Values shall be consistent with the work scope and cost breakdown structure presented in the Definitive Project Submittal, as negotiated and agreed to by the City. The Schedule of Values shall assign prices to major elements of the Design-Build Work based on costs associated with scheduled activities for each such element.

The Schedule of Values shall:

- (a) Be broken down by each structure at the Headworks Facility Site and show each specification division within each structure;
- (b) Show the division of work between the Design-Builder and each of the Subcontractors;
- (c) Include an item for:
 - (1) The General Conditions Fee;
 - (2) The Design-Builder Fee;
 - (3) Commissioning and Acceptance Testing;

- (4) The Additional Insurance Required From Enrolled Parties and Excluded Parties, the Performance Bond and the Payment Bond; and
- (5) The Design-Builder Contingency.

The Design-Builder shall provide supporting data, including certified payrolls, as requested by the City for any Schedule of Values item. The final Schedule of Values must be approved by the City.

USE OF THE DESIGN-BUILDER CONTINGENCY

The Design-Builder shall be compensated by receiving payments of the Design-Build Price based on the Schedule of Values line items. The Design-Builder Contingency shall be used for payment of Design-Build Costs only as provided in this Section.

In the event the cost for completing Design-Build Work described in any particular Schedule of Values line item exceeds the Schedule of Values dollar amount listed for such line item, the Design-Builder shall have the right to request, and the City shall not unreasonably deny, compensation for such excess amounts from any remaining balance in the Design-Builder Contingency. If and when the Design-Builder Contingency has been fully used in compensating the Design-Builder for such excess amounts, the Design-Builder shall not be entitled to any compensation for costs of Design-Build Work exceeding the Schedule of Values line item relating to such cost (except as provided below in "Use of Line Item Savings"), notwithstanding the fact that the Design-Builder has paid or incurred Design-Build Costs in excess of such line item in the Schedule of Values; provided, however, that upon Final Completion the Design-Builder shall be entitled to request and to receive compensation for such excess Design-Build Costs to the extent that payment of such costs does not cause the Design-Build Costs to exceed the Guaranteed Maximum Price.

The Design-Builder shall keep and provide the City with an ongoing record of the original amount of the Design-Builder Contingency, all uses thereof under this Appendix, and the remaining balance of the Design-Builder Contingency at any time. The Design-Builder shall provide the City with notice of all anticipated charges against the Design-Builder Contingency, and shall provide the City as part of the monthly status report all reasonably foreseeable potential uses of the Design-Builder Contingency in the upcoming three month period. Any use of the Design-Builder Contingency must be clearly identified in the associated Payment Request.

USE OF LINE ITEM SAVINGS

In administering payment of the Design-Build Price based on the Schedule of Values line items, the parties acknowledge that the Design-Build Costs associated with any particular line item may be less than the dollar amount provided for such line item in the Schedule of Values. The Design-Builder may request at any time a determination by the City that the Design-Build Costs associated with a particular Schedule of Values line item are or are reasonably projected to be less than the dollar amount provided for such line item in the Schedule of Values. The City shall have the right in its discretion to approve or disapprove any such request. In the event the City approves any such request, the dollar value associated with the line item cost underage shall be available to be requested by and paid to the Design-Builder in the event the Design-Build Costs associated with another particular line item exceed the Schedule of Values dollar amount listed for such line item. Such line item savings amounts shall be in addition to any Design-Builder Contingency amounts that may be available to pay such Schedule of Values line item excess costs.

DAMAGE TO THE PROJECT AND INSURANCE RECOVERIES

The costs of repairing any damage to the Project constitute Design-Build Costs, and (1) are payable to the Design-Builder as part of the Design-Build Costs, as provided in Section 8.3 (Design-Build Costs) of this Appendix, (2) shall result in an appropriate revision of the Schedule of Values, and (3) shall result in a Base Guaranteed Maximum Price Adjustment, as provided in subsection 8.7.3 (Base Guaranteed Maximum Price Adjustments) of this Appendix.

SUBCONTRACTOR AND SURETY RECOVERIES

A substantial portion of the Construction of the Headworks Facility is expected to be performed by Construction Subcontractors. The risks of delay and non-performance by Subcontractors are borne by the Design-Builder, and costs incurred by the Design-Builder that result from the occurrence of such risks constitute Design-Build Costs payable by the City from the Design-Builder Contingency hereunder, subject to the Guaranteed Maximum Price. All payments from the Design-Builder Contingency for costs incurred as a result of the occurrence of the risk of Subcontractor delay or non-performance shall be separately identified and recorded. In the event the Design-Builder, in the exercise of its mitigation duties under this Design-Build Contract, receives any judgment or settlement awards or otherwise makes any financial recoveries from Subcontractors or their guarantors or sureties on account of any such delays or non-performance, the amounts so received (net of reasonable enforcement costs), whether before or after Final Completion, shall be paid by the Design-Builder first to City, up to the

amount of any Design-Builder Contingency payments made due to the occurrence of such risks. Any remaining amounts then may be retained by the Design-Builder for its own account. The obligation of the Design-Builder to take such mitigation measures and to make such payments to the City shall survive termination of this Design-Build Contract.

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ATTACHMENT 8D
INITIAL MONTHLY CASH FLOW SCHEDULE

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ATTACHMENT 8D

INITIAL MONTHLY CASH FLOW SCHEDULE

[Note: The Initial Monthly Cash Flow Schedule will be Finalized on the Definitive Contract Amendment Date based on the Definitive Project Submittal, and attached to Appendix 8 as part of this Attachment 8D]

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APPENDIX 9
COMMISSIONING AND ACCEPTANCE

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APPENDIX 9

COMMISSIONING AND ACCEPTANCE

[Note: The Commissioning and Acceptance Test Plan will be developed and completed based on the work performed by the Design-Builder during the Preliminary Services Period and finalized on the Definitive Contract Amendment Date based on the Definitive Project Submittal]

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ATTACHMENT 9A

PRELIMINARY OUTLINE OF COMMISSIONING AND ACCEPTANCE TEST PLAN

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ATTACHMENT 9A

PRELIMINARY OUTLINE OF COMMISSIONING AND ACCEPTANCE TEST PLAN

[Note: This Attachment will be developed and completed based on the work performed by the Design-Builder during the Preliminary Services Period.]

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ATTACHMENT 9B
PERFORMANCE GUARANTEES

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ATTACHMENT 9B

PERFORMANCE GUARANTEES

[Note: This Attachment will be developed and completed based on the work performed by the Design-Builder during the Preliminary Services Period.]

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APPENDIX 10
POST-ACCEPTANCE PERFORMANCE TESTS

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APPENDIX 10

POST-ACCEPTANCE PERFORMANCE TESTS

[Note: This Appendix will be developed in detail based on negotiations with the Design-Builder during the Preliminary Services Period. The objective of this Appendix will be to assure that, during the Performance Period following Acceptance: (1) the operating and maintenance costs for the Project are within the range projected by the Design-Builder; (2) electricity consumption is within the range projected by the Design-Builder; (3) the Post-Acceptance Performance Tests (relating to performance of the Headworks Facility during seasonal conditions) are passed.]

APPENDIX 11
TRANSITION SERVICES

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APPENDIX 11

TRANSITION SERVICES

11.1. PURPOSE

The purpose of this Appendix is to describe the Design-Builder's responsibilities related to the performance of the Transition Services during the Transition Period.

[Note: This Appendix and the attachments thereto, if requested by the City and agreed to by the Design-Builder, will be further developed in detail based on negotiations with the Design-Builder during the Preliminary Services Period.]

ATTACHMENT 11A
PROJECTED O&M COSTS

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ATTACHMENT 11A
PROJECTED O&M COSTS

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