

**Master City of San José Consultant Agreement  
Amendment to Approved Service Order – RWF Capital Projects  
Cover Page**

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1a. CPMS Contract No.: 7995 1b. Master Agreement AC No. 27587

2.  First  Second  Third  Fourth  Fifth  Sixth Amendment to Approved Service Order No. 1

3. Consultant's Name: Black & Veatch Corporation

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Project Name: Advanced Facility Control and Meter Replacement

Amendment Description: This sixth amendment to Service Order No. 1 increases compensation for Task No. 1 (Project Management, Quality Assurance/Quality Control, and Meetings) and Task No. 5 (Engineering Services During Construction); and extends the completion dates for certain tasks.

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**4. The above-referenced Approved Service Order is amended as follows:**

- a.  **Budget/Fiscal:** The  original Budget/Fiscal information in Section 7 of the Approved Service Order  First Revised Budget/Fiscal Attachment  Second Revised Budget/Fiscal Attachment  Third Revised Budget/Fiscal Attachment  Fourth Revised  Fifth Revised Budget/Fiscal Attachment is amended to read as set forth in the attached  First Revised  Second Revised  Third Revised  Fourth Revised  Fifth Revised  Sixth Revised Budget/Fiscal Attachment.
- b.  **Tasks – Attachment A:** The  original  First Revised  Second Revised  Third Revised  Fourth  Fifth Revised Attachment A is amended to read as set forth in the attached  First Revised  Second Revised  Third Revised  Fourth Revised  Fifth  Sixth Revised Attachment A.
- c.  **Terms and Conditions – Attachment B:** The  original  First Revised  Second Revised Attachment B is amended to read as set forth in the attached  First  Second  Third Revised Attachment B.
- d.  **Compensation Table – Attachment C:** The  original  First Revised  Second Revised  Third Revised  Fourth  Fifth Revised Attachment C is amended to read as set forth in the attached  First Revised  Second Revised  Third Revised  Fourth Revised  Fifth  Sixth Revised Attachment C.


5. Each of the attachments to this amendment is incorporated herein by reference.

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6. **Consultant Approval:**  Date: Aug 5, 2021

**7. Approval as to Form (City Attorney):**

**Approved Service Order Amendment Form Approved by the Office of the City Attorney**  
(The Maximum Service Order Compensation of the Approved Service Order, as amended, is \$100,000 or less, and the provisions of service order amendment form are not altered.)

**Approved as to Form:**  Date: Aug 6, 2021  
(Sr.) Dept. City Attorney:

8. **City Director Approval:**  Date: Aug 6, 2021  
Napp Fukuda (Aug 6, 2021 12:22 PDT)

First  Second  Third  Fourth  Fifth  **Sixth Revised Budget/Fiscal Attachment**

1. This Revised Budget/Fiscal Attachment is attached to the  First  Second  Third  Fourth  Fifth  Sixth amendment to Approved Service Order No. 1 issued pursuant to the Master Agreement having the above-referenced CPMS Contract No.

2. The Maximum Service Order Compensation set forth on Line 7.b. of Section 7 of the Approved Service Order cover page is:

Decreased from \$\_\_\_\_\_ to \$\_\_\_\_\_.

Increased from \$2,128,117 to \$2,158,582.

3. Section 7 of the Approved Service Order cover page is appended to read as follows:

a.	Current <b>unencumbered</b> amount in Master Agreement:	\$	1,175,451.70
b.	Service Order Compensation for this Approved Service Order Amendment:	\$	30,465.00
c.	New unencumbered balance in Master Agreement	\$	1,144,986.70
d.	<b>Appropriation Certification:</b> I certify that an unexpended appropriation in the amount of the Maximum Service Order Compensation is available in the following fund(s) and that such fund(s) will be encumbered to pay for this Approved Service Order.		
	Fund: 512	Appn: 7224	RC: 183495
			Amount: \$30,465.00
	Division Analyst Approval: <u>Mary Crippen</u>	Date:	<u>Aug 5, 2021</u>
	Authorized Signature: <u>Harpal Singh</u>	Date:	<u>Aug 6, 2021</u>
			<small>Harpal Singh (Aug 6, 2021 08:32 PDT)</small>

First  Second  Third  Fourth  Fifth  **Sixth Revised Attachment A: Tasks**

This Revised Attachment A is attached to the  First  Second  Third  Fourth  Fifth  Sixth amendment to Approved Service Order No. 1 issued pursuant to the Master Agreement having the above-referenced CPMS Contract No.

The tasks set forth in the original Attachment A, or in any previous amendment to the original Attachment A, are amended as set forth herein. All other tasks shall remain unchanged.

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**General Description of Project for which Consultant will Provide Services:** The San Jose-Santa Clara Regional Wastewater Facility ("RWF"), formerly known as the San Jose-Santa Clara Water Pollution Control Plant, is currently undertaking numerous projects under the Capital Improvement Program ("CIP") to improve and upgrade facilities at the RWF.

The RWF relies on control equipment including flow meters, valves and actuators, sensors and analyzers for process control and monitoring to maintain compliance with the RWF's National Pollutant Discharge Elimination System (NPDES) Permit. Most of the control equipment was installed during the 1960s and 1970s. They are in poor condition, inaccurate, and require increased maintenance. In addition, some control equipment is difficult to repair, because it is no longer supported by the manufacturers.

The purpose of the Advanced Facility Control and Meter Replacement Project ("Project") is to replace and/or upgrade flow meters, valves and actuators, sensors and analyzers throughout the RWF to improve operational efficiency at the RWF. The Project will be completed in two phases as described below.

- Phase 1 - Replace and/or upgrade the control equipment in the secondary and nitrification battery B areas. The construction is estimated to begin in summer 2018 with substantial completion by December 2020.
- Phase 2 - Replace and/or upgrade the control equipment in the secondary and nitrification battery A areas as well as the control equipment in the east primary and filter areas. The construction is estimated to begin in summer 2020 with substantial completion by December 2022.

The objective of Service Order No. 1 ("SO1") is for the Consultant to provide engineering services during feasibility/development and design for Phase 1 and 2, and provide engineering services during bid and award, construction, and post-construction for Phase 1. Engineering services during construction for Phase 2 will be performed under a separate service order. The scope of services to be provided by Consultant under this SO1 shall consist of the following tasks:

- Task No. 1: Project Management, Quality Assurance/Quality Control, and Meetings
- Task No. 2: Conceptual Design for Phase 1 and Phase 2
- Task No. 3: Detailed Design for Phase 1 and Phase 2
- Task No. 4: Bid and Award Support Services for Phase 1
- Task No. 5: Engineering Services During Construction for Phase 1
- Task No. 6: Post Construction Assistance for Phase 1

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### **Task No. 1: Project Management, Quality Assurance/Quality Control, and Meetings**

- A. Services:** As part of this task, the Consultant's Project Manager ("PM") shall make staffing assignments, coordinate quality management and review procedures, and communicate progress through monthly reports to the City. Consultant's PM shall manage the budget, schedule, and

invoicing process. The Consultant's PM shall also prepare and maintain a decision log that will record comments and decisions made by the City throughout the Project and manage the quality assurance/quality control (QA/QC) review of the work products.

The deliverables submitted by Consultant shall conform to the City's templates and guidelines. The City shall provide these templates and guidelines electronically to Consultant no later than ten (10) business days prior to the Kickoff Meeting. The templates and guidelines currently available include, but are not limited to, the following:

- Meeting Agenda;
- Meeting Minutes;
- Project Decision Log ("PDL");
- Project Work Plan ("PWP");
- Quality Management Plan ("QMP");
- Quality Management Letter template
- Quality Review Form;
- Reviewer's Comment Log;
- Cost Estimating Guidelines;
- Project Delivery Model ("PDM");
- Technical Memoranda;
- Technical Report;
- CIP Design Guidelines; Division 0 and Division 1 Specifications; and
- CIP CAD Standards.

Consultant shall manage and coordinate the Project work including:

1. Consultant shall oversee daily management of scope, deliverables, schedule and budget;
2. Consultant shall prepare a project schedule utilizing Critical Path Method ("CPM") techniques using an electronic scheduling software tool (MS Project or Primavera). The schedule shall adopt a Work Breakdown Structure ("WBS") that reflects the project scope of work and shall use working days for activity durations, link activities with the appropriate logic (predecessors and successors), and include required schedule constraints, sequences, and milestones. The schedule shall be baselined and updated on a monthly basis through design to show actual progress to date and anticipated future performance. No changes shall be made to the baseline without approval from the City PM. The updated schedule shall be submitted with the monthly progress report to the City PM together with a summary of significant changes. Consultant shall submit proposed corrective actions to the City PM to mitigate negative variances (delays) to baseline as soon as they are identified;
3. Consultant shall coordinate work with internal Consultant staff, City staff, and other City consultants as appropriate and necessary;
4. Consultant shall participate in regular status teleconferences with the City's PM to discuss overall work progress and status on near-term efforts and requirements. More or less frequent communication may occur if necessary as requested by the City's PM;
5. Consultant shall prepare and submit a PWP detailing tasks to be performed, schedule, deliverables and their requirements, resources, risk management plan;
6. Consultant shall prepare and maintain a PDL that documents the City's comments and decisions made for work performed under this Project. As applicable, the PDL shall reference other documents such as meeting minutes, technical memoranda and reports for all decisions made;
7. Prepare and submit a monthly progress report within five (5) business days of the last calendar day of the reporting month unless requested otherwise by the City. The monthly progress report shall summarize the progress made on each task, estimate the overall task's percent completion, the status of each deliverable, and an estimate of the total labor hours and costs incurred during the reporting month. The monthly progress report shall also include any significant issues encountered, risks or concerns that Consultant

- has (e.g., anticipates difficulty meeting deadline for work due within the next 30 days for some reason beyond their control); and Consultant shall prepare and submit invoices on a monthly basis. The invoices shall be accompanied by the monthly progress report described above for that billing period.
8. Develop and implement a Project-specific Quality Management Plan (“QMP”) to support execution of the work required by this SO and satisfy City requirements for deliverables. The QMP shall describe the Consultant’s overall Quality Management process, identify the Quality Management reviewers and the review levels associated with each Project milestone and deliverable.
    - a. Consultant’s Quality Management reviewers and their respective qualifications shall be identified in the QMP. Quality Management reviewers shall be independent (i.e., not be part of the Consultant’s core team for the Project), and shall be qualified reviewers to provide technical and readability reviews prior to submittal of Project deliverables to the City. All written deliverables shall be adequately reviewed and/or edited by a technical editor before submitting drafts for City’s review.
    - b. Consultant’s review of deliverables, including draft and final versions, shall be recorded by submission of a Quality Review Form. The completed Quality Review Form will document the Quality Management review process applied for that deliverable and summarize the comments addressed during the review.
    - c. Consultant’s Quality Management efforts shall, at a minimum, include the following:
      - 1) Coordinating work products, milestones, staff assigned for review activities;
      - 2) Conducting milestone technical and readability reviews for Project deliverables;
      - 3) Documenting comments and work product modifications in the PDL; and
      - 4) Completing and submitting a Quality Review Form with each deliverable, including draft and final versions.
  9. Consultant shall organize and facilitate up to a four (4) hour Kickoff Meeting with the City staff. The Consultant’s PM and the appropriate Consultant’s Project team members shall attend the Kickoff Meeting. Topics to be discussed at the Kickoff Meeting shall include the following:
    - a. Introduction of key Consultant and City Project team members;
    - b. Review of Consultant’s understanding of the Project need and objectives;
    - c. Summary of Project scope, work plan, schedule and deliverables;
    - d. Recap of previously completed analyses, studies, and reports previously associated with the project;
    - e. Discussion of other CIP or maintenance projects currently underway and/or planned to be initiated that may be dependent on and/or have implications for the Project;
    - f. Additional information Consultant has deemed relevant to or necessary for Project and for which the City may address by transmitting an existing document;
    - g. Present project schedule;
    - h. Perform site walk to orient team to project items; and
    - i. Confirmation of next steps.
  10. Additional Meetings: In addition to the Kickoff Meeting, Consultant shall organize and facilitate biweekly meetings through the end of the design phase to discuss the Project’s progress and any other issues, as needed. Biweekly meetings shall be held unless otherwise determined not to be needed by the City PM or unless more frequent meetings (as authorized) are needed as determined by the City. These meetings are expected to have at least one Consultant staff member physically in attendance unless teleconference is authorized by the City PM. Topics discussed at the biweekly meetings shall be determined as conditions develop and in collaboration with the City.

11. Meeting Materials: Consultant shall prepare an agenda and meeting materials in advance of the Kickoff Meeting and regularly scheduled meetings, and shall prepare meeting minutes following the Kickoff Meeting, regular meetings, and for any other meetings requested by the City. All document deliverable requirements are stated below.
  12. Health and Safety Plan: Consultant shall prepare a Health and Safety Plan ("HASP") for the Consultant's portion of the project that may include any field work, assessment or investigations as part of this task or any other conditions assessment as part of the Project. The Plan shall include Consultant's confined space entry program, in accordance with the City's Confined Space Program, and assessments as well as general visits to the RWF. The HASP shall be a single deliverable with no monthly updates required, unless addendums are required as new conditions are encountered.
- B. Deliverables:** Consultant shall provide the following documents to the City PM throughout the entirety of the Project unless otherwise indicated herein. Unless otherwise specified, Consultant shall allow the City twenty (20) business days to review, compile, and provide comments on any design deliverables.
1. Meetings:
    - a. Agenda - Draft Agenda and materials for meeting shall be provided in electronic PDF format no later than two (2) business days before the meeting. Consultant shall also provide sufficient printed copies of the final agenda and any handouts for meeting attendees.
  2. Minutes:
    - a. Draft and submit to the City PM minutes in an electronic editable file format within three (3) business days after the meeting. Consultant shall allow the City a minimum of five (5) business days to review, compile, and provide comments.
    - b. Final minutes addressing City comments provided in electronic PDF file format within three (3) business days after receipt of City comments.
  3. Project Schedule:
    - a. Consultant shall provide the project schedule in a PDF and an electronic file format (MS Project or Primavera).
    - b. The Consultant's schedule shall, at a minimum, contain the following columns: Activity IDs, activities, milestones, original duration, start, and finish dates, baseline start and finish dates.
  4. PDL: Consultant shall provide PDL monthly, in an electronic editable format.
  5. PWP approximately three pages in length:
    - a. Draft PWP shall be provided in an electronic editable file format within ten (10) business days from the issuance of the Notice To Proceed (NTP) for this SO. Consultant shall allow the City ten (10) business days to review, compile, and provide comments.
    - b. Final plan addressing City comments provided in electronic PDF file format within three (3) business days after receipt of City comments.
  6. Project QMP:
    - a. Draft QMP provided in an electronic editable file format to the City when the draft PWP is provided to the City (can be included in the PWP).
    - b. Final QMP addressing City comments shall be provided in electronic PDF file format within three (3) business days after receipt of City comments.
    - c. Unless otherwise specified, Consultant shall allow the City a minimum of ten (10) business days to review, compile, and provide comments on QMP.
    - d. Quality Review Forms and Quality Management Letters shall be submitted with each design deliverable.
  7. Monthly progress reports provided in electronic PDF file format.
  8. Monthly invoices provided in electronic PDF file format.
  9. Health and Safety Plan: to be provided prior to the initiation of site investigations.

**C. Completion Time:** Consultant must complete the services and deliverable for this task in accordance with whichever one of the following times is marked:

- On or before the following date: December 31, 2023
- On or before \_\_\_\_ Business Days from \_\_\_\_\_.

## Task No. 2: Conceptual Design for Phase 1 and Phase 2

**A. Services:** The purpose of this task is to start the design process for the Project and bring it to a 10% level of completion and, in doing so, produce a Conceptual Design Report that defines the Project. The Conceptual Design Report shall include fundamental design decisions and criteria, conceptual system schematics and layouts, and set the standards and conventions that will drive the design activities for the remainder of the design effort for the Project. A draft Conceptual Design Report shall be submitted and presented to the City for review and discussion at a workshop that shall be organized and facilitated by Consultant. Consultant shall incorporate the comments from the City prior to submitting the final Conceptual Design Report. This task shall include, but is not limited, to the following activities:

1. Become familiar with equipment locations, process control, operating procedures, and accessibility. Information provided by the City two weeks prior to the kickoff meeting may include, but not be limited to, the following documents:
  - a) RWF secondary treatment system process flow diagrams
  - b) Design Criteria and Sizing Basis Study, MWH, 2014
  - c) CIP Automation Master Plan Guidelines, Black & Veatch, November 2015.
  - d) Available electronic RWF record drawings (AutoCAD or PDF files) requested by Consultant.
2. Conduct condition assessment of the existing valves, electrical components, structural supports, piping and appurtenances associated with the meters and actuators to be replaced as part of this Project. The Equipment Replacement List prepared by the City is included in Exhibit A1.
  - a) Submit data request to the City and review the data that may include equipment maintenance records, existing drawings, and previous condition assessment reports.
  - b) Prepare and submit a condition assessment plan to the City for review prior to conducting the assessment. The plan shall describe the roles and responsibilities of key team members, safety procedures, schedule, required access, level of City's participation, process, and approach for conducting the condition assessment.
  - c) Perform five (5) site visits, up to a total of 120 hours, to confirm the Equipment Replacement List, assess the existing installations and conditions, and discuss the operation and maintenance issues and the needed improvements with the City.
  - d) Prepare and submit a draft condition assessment technical memorandum (TM) to the City for review. The draft condition assessment TM shall include an updated Equipment Replacement List, document the condition assessment results, detail the condition assessment activities, and provide recommendations for the needed replacement and/or improvements.
  - e) Organize and facilitate a three-hour workshop with the City to present and discuss the draft condition assessment TM and prepare meeting agenda, materials and minutes.
  - f) Prepare and submit the response to the City's comments on the draft condition assessment TM.
  - g) Incorporate the accepted City's comments into the final condition assessment TM and submit it to the City.
3. Develop the Conceptual Design Report to clearly define the basis of the detailed design for the Project.

- a) Develop the design criteria incorporating the current and future flows based on the Design Criteria and Sizing Basis Study. The City will provide current flows at each meter location.
  - b) Develop flow meter and instrument standards including main control functions and features that are consistent with CIP Automation Mater Plan Guidelines.
  - c) Develop conceptual schematics including preparing conceptual site plans, updating existing and/or creating new process flow diagrams showing piping, equipment and all primary control elements. The drawings shall be developed using the CIP CAD Standards as applicable.
  - d) Select major equipment, including sizing and identifying at least two (2) acceptable manufacturers, whenever possible. Discuss with the City its preferences for equipment selection.
  - e) Identify the required modifications to the existing piping, valves, electrical conduit and boxes, structural supports and appurtenances to accommodate the installation of new flow meters, process control instruments and valve actuators, and comply with the latest codes and manufacturer's installation instructions as applicable.
  - f) Update the Equipment Replacement List to include instrument measurement ranges.
  - g) Prepare a Class 4 Opinion of Probable Construction Cost ("OPCC") for the Project. Cost estimate shall be prepared to a level of accuracy consistent with the standards of the Association for the Advancement of Cost Engineering (ACCE) International.
  - h) Prepare annual operational and maintenance costs.
  - i) Identify remaining design decisions that must be made to proceed with design development, and assist the City in making a determination on such decisions.
  - j) Prepare a preliminary schedule for the Project's design, construction, commissioning and post-construction.
  - k) Identify operational and maintenance issues.
  - l) Prepare a construction sequencing plan for the Project that details the following:
    - Construction constraint
    - Construction phasing and sequencing
    - Provisions for temporary systems needed to maintain RWF operations during construction
    - Required isolation and shutdowns
    - Recommended access route for moving new and existing equipment into and out of the basement, vaults and utility tunnel
    - Preliminary design of the demolition and decommissioning work that will be required by the Construction Contractor
    - Constructability challenges.
4. Prepare a project decision log to document the decisions made for the Project at this stage.
  5. When performing the site visits to document existing equipment installations and status, all applicable health and safety protocols will need to be followed. Consultant will be responsible for providing their own fall protection equipment and obtaining permits for confined space entry. The City will not provide equipment or personnel for rescue services associated with confined space entry. Consultant shall provide rescue services associated with confined space entry during condition assessment. Rescue services shall be provided by specialized contractor familiar with the RWF to support Consultant personnel on all confined spaces entry and investigations. Rescue service teams must have at least two (2) years of experience in rescue training and must be confined space rescue training certified and emergency medical training certified. All Consultant personnel associated with this task shall be properly trained and certified per OSHA regulations and the City's requirements.



6. Organize and facilitate a three-hour workshop with the City to present and discuss the draft Conceptual Design Report.
7. Prepare and submit the response to the City's comments on the draft Conceptual Design Report.
8. Incorporate the accepted City's comments in the final Conceptual Design Report and submit it to the City.

**B. Deliverables:** Consultant shall provide the following documents to the City's PM. All workshop material (agenda, presentation, minutes, memorandums etc.), deliverables and timelines shall be as per requirements described in Task No. 2:

1. Draft Condition Assessment TM - Ten (10) printed bound copies and one (1) electronic copy (PDF file)
2. Draft Condition Assessment TM Review Workshop Agenda, Materials and Minutes – Two (2) electronic copies (MS Word and PowerPoint files)
3. Final Condition Assessment TM - Ten (10) printed bound copies and one (1) electronic copy (PDF file). The final condition assessment TM shall be stamped and signed by a Professional Engineer registered in California.
4. Draft Conceptual Design Report - Ten (10) printed bound copies and one (1) electronic copy (PDF file)
5. Draft Conceptual Design Report Review Workshop Agendas, Materials, and Minutes – Two (2) electronic copies (MS Word and PowerPoint files)
6. Final Conceptual Design Report - Ten (10) printed bound copies and one (1) electronic copy (PDF file). The final Conceptual Design Report shall be stamped and signed by a Professional Engineer registered in California.
7. Project Decision Log – One (1) electronic copy (PDF file)

**C. Completion Time:** Consultant must complete the services and deliverable for this task in accordance with whichever one of the following times is marked:

- On or before the following date: March 29, 2017
- On or before \_\_\_\_ Business Days from \_\_\_\_\_.

**D. Additional Information:**

1. The Consultant's work does not include revision of existing or preparation of new Standard Operation Procedures.
2. Consultant will not recreate existing RWF facilities drawings to show the existing equipment, piping, electrical, and structures. The Conceptual Design drawings depicting modifications and/or additions to be made to the existing facilities will use the electronic record drawings furnished by the City or field photos taken by Consultant as backgrounds for Project drawings.
3. Condition assessment work will consist of primarily visual observations and will not include the following items:
  - a. Testing for hazardous materials for Phase 1 (Testing for hazardous materials for Phase 2 shall be performed by the Consultant under Task No. 3).
  - b. Inspection of the interior of pipes and determination of pipe wall thicknesses.
  - c. Assessment of structural integrity of concrete structures.
  - d. Assessment of the integrity of electrical conductors/wiring.
4. Consultant will not be required to perform an alternative analysis for valves and flowmeters. The City has determined the flowmeter types that will replace existing ones.
5. The City will tabulate and consolidate all review comments into one document. Consultant will use the document to provide responses to the comments received.

### Task No. 3: Detailed Design for Phase 1 and Phase 2

**A. Services:** The purpose of this task is to advance and finalize the design of the Project in accordance with the Conceptual Design Report. Consultant shall develop detailed design review packages at 50%, 90% and 100% (final) design completions for the City's review. The 50% design documents shall be prepared for both phases and coordinated with the appropriate disciplines. At this point, all major design decisions shall have been documented clearly and agreed by the City, and all outstanding issues from the Conceptual Design Report must be resolved. Following the completion of the 50% design, Consultant shall divide the design documents into two separate packages, and complete the 90% and 100% design for Phase 1 work and for Phase 2 work separately. The 90% design documents shall be functionally complete such that they are ready for final review and will only need minor adjustments prior to bidding. Additionally, Consultant shall assist the City with the pre-qualification of bidders for Phase 1. This task shall include, but is not limited to, the following activities:

1. Prepare Divisions 0 and 1 Specifications using the City's standard Divisions 0 and 1 Specifications in Construction Specifications Institute (CSI) Master Format 2004, to the extent they are available, for this Project.
2. Prepare 50%, 90% and 100% complete technical specifications based on the standards of the Construction Specification Institute (CSI). A preliminary specification list for each phase is included in Exhibit A2. The 100% specifications shall be stamped and signed by the responsible engineers who are Professional Engineers registered in California.
3. Prepare 50%, 90% and 100% complete drawings. A preliminary drawing list for each phase is included in Exhibit A3. The drawings shall consist of, at minimum, vicinity map; index; general notes; legend and abbreviations; site plans; demolition plans; mechanical, structural, electrical and instrumentation drawings that include plans, sections, details, and process flow diagrams. The drawings shall be developed using the City's CAD Standards as applicable. The 100% drawings shall be stamped and signed by the responsible engineers who are Professional Engineer registered in California.
4. Finalize the Equipment Replacement List for each phase to include set points, process minimums and maximums, signal scaling and alarm limits.
5. Incorporate City's comments on the 50% and 90% design review packages into the 90% and 100% designs respectively and respond to the list of comments/questions received from the City.
6. Prepare OPCCs at the 50% (Class 3), 90% (Class 2), and 100% (Class 2) completion stages. OPCCs shall be based on available quantity take-offs, manufacturers' quotes, and experience at other wastewater treatment facilities incorporating similar project elements, and shall be escalated to mid-point of construction. Cost estimates shall be prepared to a level of accuracy consistent with the standards of the ACCE International. If the cost estimate exceeds the cost estimate developed at the previous stage, Consultant shall provide a report explaining the cause for such increase.
7. Conduct a constructability review for each phase to further develop the construction sequencing plan.
8. Identify performance and equipment test requirements that will be imposed on the Construction Contractor, and incorporate the test requirements into the Contract Documents.
9. Update the schedule for the Project at the 50%, 90% and 100% completion stages. The schedule shall document the sequence of proposed shutdowns and their execution timetable and anticipated commission and start-up periods. The schedule shall also indicate the amount of total float available on each work item activity.
10. Organize and facilitate workshops (three hours each) with the City to present the 50% design review package, and 90% design review packages for Phase 1 and Phase 2 work including key elements of the design, operational requirements/changes to the current practices, maintenance requirements, construction sequencing, and impact of construction on operations. Prepare the meeting agenda, materials and minutes.

11. Maintain and submit the project decision log to keep track of decisions made and their impacts on the Project cost and schedule at 50%, 90% and 100% completion stages.
12. Conduct site visits at the 50% and 90% completion stages as needed to further review the existing conditions to assist in the completion of the design. When performing the site visits to field verify existing equipment installations and status, all applicable health and safety protocols will need to be followed. Consultant will be responsible for providing their own fall protection equipment and obtaining permits for confined space entry. The City will not provide equipment or personnel for rescue services associated with confined space entry. Consultant shall provide rescue services associated with confined space entry during condition assessment. Rescue services shall be provided by specialized contractor familiar with the RWF to support Consultant personnel on all confined spaces entry and investigations. Rescue service teams must have at least two (2) years of experience in rescue training and must be confined space rescue training certified and emergency medical training certified. All Consultant personnel associated with this task shall be properly trained and certified per OSHA regulations and the City's requirements.
13. Review and provide input on the pre-qualification of bidder's documents for Phase 1 prepared by the City. Attend the pre-qualification meeting and site visit, and present the project information to the potential bidders.
14. Provide hazardous material (hazmat) survey for Phase 2 – Consultant and their specialized hazmat survey subconsultant shall conduct a survey to identify potential hazardous materials at the project locations defined in Exhibit A4 and further described in this section. The locations and number of samples listed in Exhibit A4 are approximate. Actual locations and number of samples will be determined in the field during the survey by Consultant and their subconsultant based on visual observations. Consultant and their subconsultant shall perform the following tasks:
  - a) Submit an updated HASP to include the health and safety plan to protect Consultant staff, City staff and environmental against harm, injury, damage and airborne contaminants during hazmat survey.
  - b) Prepare and submit a survey plan to the City for review before starting fieldwork. The plan shall describe purpose, survey types, locations and methodology, roles and responsibilities of Consultant staff, schedule, required access, and level of City's participation.
  - c) Organize and facilitate a one-hour kickoff conference call with the City staff prior to beginning any field work, and if necessary, a one-hour progress or results conference call with the City staff. Consultant shall prepare meeting agenda and meeting minutes.
  - d) Perform an asbestos, lead, and PCB survey at the project site, which includes the collection of 60 bulk asbestos samples, 26 lead paint samples, and 24 bulk PCB samples. Materials to be sampled in this survey shall include concrete, ceiling tiles, flange gaskets and paint. It is estimated that the survey will be completed in 4 working days. Consultant shall clean up and repair areas after sampling.
  - e) Consultant shall properly collect, handle, store, label and analyze the samples in accordance with EPA and CAI/OSHA regulations, and standard industry protocols.
  - f) Provide fall protection equipment and obtaining permits for confined space entry for sampling activities in permit-required confined space. Consultant's safety and standby rescue subconsultant shall provide confined space entry training to required team members and also provide standby rescue support to meet the requirements described in Section A. 5. under Task No. 2.
  - g) Perform the survey by two technicians: A California Certified Lead Inspector/Sampling Technician, and Asbestos Consultant/ Site Surveillance Technician. The lead technician shall be a certified Asbestos Consultant/Lead

Inspector with Hazardous Communication training. The survey shall meet the requirements of local Air Quality Management District. In addition to the technicians working under the direction of a Certified Industrial Hygienist (CIH), a Project Manager shall provide technical oversight on the scope of work, field work, and laboratory analysis.

- h) Submit samples to an accredited laboratory(s) for analysis. Asbestos samples shall be analyzed by Polarized Light Microscopy (PLM), lead samples by Atomic Absorption Spectrometry (FlameAA), and PCB samples by EPA Method 8082A. All samples shall be submitted for standard (5-7 days) turnaround.
  - i) Perform QA/QC reviews on all deliverables by a Project Manager or subject matter expert to ensure that all data is correct and the deliverables meet the City's objectives.
  - j) Prepare and submit a hazmat survey draft report to the City for review and comments. Consultant shall finalize and submit the final report to the City after the receipt of City's comments. The report shall include a purpose statement and brief project description; a summary of existing background information; a description of methods used for the survey; results of the survey including observations, sample locations, laboratory results, and quantity estimate; conclusions and recommendations pertaining to the survey findings.
  - k) Provide general reference of regulations pertaining to the removal of the identified hazardous materials (A detail abatement work plan is not included under this scope of work).
15. Based on the findings of the hazmat survey performed under Task 3.14, update the 100% design and 100% OPCC for Phase 2.
16. Develop and prepare control strategies for four new sludge density meters to be installed at the east primary (batteries A, B, C and D) and incorporate the control strategies in the specifications.

**B. Deliverables:** Consultant shall provide the following documents to the City's PM. All workshop materials (agenda, presentation, minutes, etc.), deliverables and timelines shall be as per the requirements described in Task No. 3.

- 1. Specifications - Ten (10) printed bound copies and one (1) electronic copy (PDF file) with each design package submittal. Additional one (1) electronic copy (MS Word files) with 100% design package submittal. The specifications included in 100% design package submittal shall be stamped and signed by a Professional Engineer registered in California.
- 2. Drawings – Ten (10) half-sized printed bound copies and one (1) half-sized electronic copy (PDF file) with each design package submittal. Two (2) full-sized printed bound copies and one (1) full-sized electronic copy (PDF file) with 100% design package submittal. The 100% drawings shall be stamped and signed by a Professional Engineer registered in California.
- 3. Updated Reviewers Comment Log - City's 50% comments shall be responded to and an updated log submitted for approval prior to the 90% submittal so that response can be agreed upon prior to the 90% submittal. Similarly, City's 90% comments shall be responded to and an updated log submitted for approval prior to the 100% submittal so that response can be agreed upon prior to the 100% submittal.
- 4. Quality Management Letters – One (1) printed copy and one (1) electronic copy (PDF file) with each design package submittal.
- 5. OPCCs and Basis of Cost Estimate Report - One (1) printed bound copy and one (1) electronic copy (PDF file) with each design package submittal.
- 6. Updated Schedule - One (1) printed copy and one (1) electronic copy (PDF file) with each design package submittal.

7. All Supporting Documents - One (1) printed bound copy and one (1) electronic copy (PDF file). The supporting documents shall be related to design of the Project including but not limited to engineering calculations, equipment or catalog cut sheets and any vendor quotes for OPCCs to be documented and submitted by Consultant to the City. The structural calculations shall be stamped and signed by a Professional Engineer registered in California.
8. Construction Sequencing Plan – One (1) printed bound copy and one (1) electronic copy (PDF file) with each design package submittal.
9. Project Design Log - One (1) printed bound copy and one (1) electronic copy (PDF file) with each design package submittal.
10. Meeting Agenda, Materials and Minutes – One (1) electronic copy (PDF file) for each workshop.
11. Review comments on pre-qualification of bidders for Phase 1 documents – One (1) electronic copy (MS Word file).
12. Hazmat Survey Deliverables:
  - a) Hazmat survey plan
  - b) Updated HASP
  - c) Draft hazmat survey report - Five (5) bound printed copies, one (1) electronic editable file, and one (1) PDF file for City review and comment
  - d) Final hazmat survey report - Three (3) bound printed copies, one (1) electronic editable file, and one (1) PDF file after the receipt of City's comments.

**C. Completion Time:** Consultant must complete the services and deliverable for this task in accordance with whichever one of the following times is marked:

- On or before the following date: January 31, 2018 for Phase 1
- On or before the following date: October 31, 2019 for Phase 2
- On or before \_\_\_\_ Business Days from \_\_\_\_\_.

**D. Additional Information:**

1. All new replacement equipment will utilize existing electrical power and signal wiring and conduits unless condition assessment requires the replacement of portion of conduits.
2. Drawings and specifications will be prepared for Phase 1 and 2 construction contracts.
3. Constructability review will be performed as part of the Consultant's internal quality assurance reviews.
4. The City will tabulate and consolidate all review comments into one document. Consultant will use the document to provide responses to the comments received.
5. The creation of new or modification of existing Process Instrumentation Diagrams (PIDs) is not required for this project.

**Task No. 4: Bid and Award Support Services for Phase 1**

- A. Services:** The City will schedule and conduct pre-bid meeting, walk through, bid opening and bid review for Phase 1. Advertisement, printing, and distribution of bid documents and addenda for Phase 1 will also be conducted by the City. Consultant shall provide engineering services during this period to assist the City with the bid and award. This task shall include, but is not limited to, the following activities:
1. Attend Pre-Bid conference/meeting and walkthrough of the Project site with the City and present technical information at the conference to assist in documenting and potentially addressing questions from potential bidders that may arise.
  2. Respond to technical questions from prospective bidders and submit responses to the City.

3. Prepare and submit up to four (4) addenda to the City for review and distribution to plan holders. The addenda shall provide supplementary details, clarifications, and/or revised drawings and specifications, as directed by the City to address questions from prospective bidders.
  4. Provide up to sixteen (16) hours of support to the City in reviewing and evaluating the bids and assist with recommendation for award.
- B. Deliverable:** Consultant shall provide the following documents to the City's PM. All deliverables and timelines shall be as per the requirements described in Task No. 4.
1. Pre-bid Conference/Meeting Agenda, Materials and Minutes – Two (2) electronic copy (MS Word file and PowerPoint file)
  2. Response to Technical Questions and Addenda – One (1) electronic copy (MS Word file)
- C. Completion Time:** Consultant must complete the services and deliverable for this task in accordance with whichever one of the following times is marked:
- On or before the following date: August 31, 2018
- On or before \_\_\_\_ Business Days from \_\_\_\_\_.

#### **Task No. 5: Engineering Services During Construction for Phase 1**

- A. Services:** Consultant will not provide construction management services. Consultant shall provide the following engineering services and field observations during Phase 1 construction and assistance during startup and commissioning before final acceptance of Phase 1 of the Project. Consultant shall also use the City's enterprise web-based Design and Construction Management System to manage project communication and document submittals during construction. This task shall include, but is not limited, to the following activities:
1. Prepare conformed contract documents consisting of revised drawings and specifications to incorporate the addenda.
  2. Perform up to twenty (20) construction observation site visits and/or inspections, as requested by the City, in any of the following discipline areas: structural, mechanical, coating, electrical and instrumentation. This task includes an allowance of up to eight (8) hours per visit by one Consultant staff.
  3. Attend up to forty-eight (48) On-Site Construction Coordination Meetings, including the preconstruction conference meeting, as requested by the City. This task includes an allowance of up to four (4) hours per on-site meeting for the Consultant's Project Engineer and up to twenty (20) hours for the Consultant's Engineering Manager to attend any of the meetings via teleconference. Consultant shall review and comment on any meeting minutes provided by the City.
  4. Attend up to eighty-eight (88) Reoccurring Construction Progress Meetings, including preparation and follow-up work. This task includes an allowance of one and a half (1.5) hours per Construction Progress Meeting for the Consultant's Project Engineer to attend via teleconference weekly and one (1.0) hour for the Consultant's Engineering Manager to attend via teleconference bi-weekly.
  5. Review and respond to up to one hundred-eighteen (118) requests for information (RFIs). Consultant shall issue interpretations and clarifications to the contract documents. This task includes an allowance of six (6) hours per RFI.
  6. Review up to ninety-five (95) submittals (including any re-submittals) such as product data, shop drawings, manufacturer's O&M manuals, and substitution requests from the Construction Contractor for compliance with the design requirements. Submittals shall be reviewed and marked-up in accordance with the contract documents. Marked-up submittals and review comments shall be provided to the City for processing and distribution to the Construction Contractor and other parties. This task includes an allowance of six (6) hours per submittal.

7. Prepare up to sixteen (16) design clarifications to clarify the intent of the contract documents, as well as advise the City on any impact thereof to the Project. In preparing the design clarification, Consultant shall issue revised specifications, drawings, and/or sketches, to clarify the intent of the contract documents. This task includes an allowance of six (6) hours per design clarification.
8. Prepare up to two (2) change orders to change the intent of the contract documents, as well as advise the City on any impact thereof to the Project. In preparing the change order, Consultant shall issue revised specifications, drawings, and/or sketches, to clarify and/or change the intent of the contract documents. This task includes an allowance of eight (8) hours per change order.
9. Complete RFI and submittal reviews, and return RFI within five (5) business days and marked up submittals within ten (10) business days of receipt by Consultant. The City will require the Construction Contractor to transmit submittals in electronic format (PDF) wherever possible.
10. Startup, Testing, Commissioning and Project Closeout: Assist the City and the Construction Contractor during start-up and commissioning of equipment and or systems, including reviewing the Construction Contractor's proposed start-up and commissioning plan, witness performance testing of equipment/system by the Construction Contractor, assist with resolving functional and process setting adjustment issues, and provide general consultation regarding equipment installation issues for the Project. Consultant shall perform site visits up to thirty-four (34) hours.
11. Participate in a pre-final walk-through inspection with the City in preparation of a final punch list of outstanding items to be completed by the Construction Contractor before final acceptance of the Phase 1 of the Project.

**B. Deliverables:** Consultant shall provide the following documents to the City's PM. All deliverables and timelines shall be as per the requirements described in Task No. 5.

1. Conformed Bid Documents
  - a. Specifications – Ten (10) printed bound copies and two electronic copies (MS Word files and PDF file).
  - b. Drawings - Ten (10) printed half-sized bound copies, two (2) full-sized bound copies, three (3) electronic copies (half-sized PDF file, full-sized PDF file and AutoCAD files).
2. Construction Observation and/or Inspection Reports - PDF files
3. Responses to RFIs - PDF files
4. Submittal Reviews Comments - PDF files
5. Design Clarifications - PDF files
6. Change Orders - PDF files
7. Meeting Minutes Comments – MS Word files

**C. Completion Time:** Consultant must complete the services and deliverable for this task in accordance with whichever one of the following times is marked:

- On or before the following date: December 31, 2023
- On or before \_\_\_\_ Business Days from \_\_\_\_\_.

#### **Task No. 6: Post Construction Assistance for Phase 1**

**A. Services:** Consultant shall assist the City in the closeout of the Project. This task shall include, but is not limited, to the following activities:

1. Participate in a final walkthrough inspection of the Project with the City to confirm the Construction Contractor has completed all items in the final punch list required for final acceptance of the Project. This task includes an allowance of up to sixteen (16) hours of site visits.
2. Prepare and submit record drawings to the City. The record drawings shall reflect field

changes noted by the City and Construction Contractor in the “as-built” drawings. The record drawings shall be in AutoCAD and PDF format and match the CAD standards of the RWF.

3. Provide up to eighty (80) hours of engineering support services during the first year of the equipment operation. Support services may include conducting field visits, reviewing and evaluating equipment performance, and coordinating with the manufacturers to resolve equipment warranty issues or other operational issues.

**B. Deliverables:** Consultant shall provide the following documents to the City’s PM. All deliverables and timelines shall be as per the requirements described in Task No. 6.

1. Record Drawings
  - a. Five (5) half-sized and one (1) full-sized printed bound copies, and three (3) electronic copies (half-sized PDF file, full-sized PDF file and CAD file).

**C. Completion Time:** Consultant must complete the services and deliverable for this task in accordance with whichever one of the following times is marked:

- On or before the following date: December 31, 2023
- On or before \_\_\_\_ Business Days from \_\_\_\_\_.

**D. Additional Information:**

1. The City will provide Consultant with one (1) consolidated set of drawings indicating any field changes.



First  Second  **Third Revised Attachment B: Terms and Conditions**

This Revised Attachment B is attached to the  First  Second  Third  Fourth  Fifth  
 Sixth amendment to Approved Service Order No. 1 issued pursuant to the Master Agreement having  
 the above-referenced CPMS Contract No.

1. **City's Contract Manager:** The City's contract manager for this Approved Service Order is:

Name: Kyle O'Dea	Phone No.: 405-635-4086
Department: Environmental Services	E-mail: Kyle.Odea@sanjoseca.gov
Address: 700 Los Esteros Road	City/State/Zip: San Jose, CA. 95134

2. **Consultant's Contract Manager and Other Staffing:** Identified below are the following: (a) the Consultant's contract manager for this Approved Service Order, and (b) the Consultant(s) and/or employee(s) of the Consultant who will be principally responsible for providing the services and deliverables. ***If an individual identified below does not have a current Form 700 on file with the City Clerk for a separate agreement with the City, and is required to file a Form 700, the Consultant must comply with the requirements of Subsection 17.5 of the Master Agreement, entitled "Filing Form 700."***

		<u>Required to File Form 700?</u>		
		Yes Already Filed (Date Filed)	Yes Need to File	No
<b><u>Consultant's Contract Manager</u></b>				
Name: Dan Lopez	Phone No.: 925-949-5949	3/22/21		
Address: <u>2999 Oak Road, Suite 490</u> <u>Walnut Creek, CA 94597</u>	E-mail: lopezdc@bvcom			
<b><u>Other Staffing</u></b>				
Name:	Assignment:			
1. Jesse Wallin	Engineering Manager			
2. Dewey Smith	Sr. I&C Engineer	3/9/21		
3. Derek Wurst	Condition Assessment Manager	3/4/19		

3. **Subconsultants:** Whichever of the following is marked applies to this Approved Service Order:

- The Consultant can **not** use any subconsultants.
- The Consultant can use the following subconsultants to assist in providing the required services and deliverables:

<u>Subconsultant's Name</u>	<u>Area of Work</u>
1.V&A Consultants	Condition Assessment in Confined Space
2.Scheidegger & Associates	SRF Funding Assistance – Environmental Package
3.Forensic Analytical Consulting Services	Confined Space Entry Rescue Services

4. **Contract Personnel:** Whichever of the following is marked applies to this Approved Service Order:

- The Consultant can **not** use any Contract Personnel.
- The Consultant can use the following Contract Personnel to assist in providing the required services and deliverables:

<u>Personnel/Agency Name</u>	<u>Area of Work</u>
1.	
2.	
3.	

**Travel Expenses:** Travel expenses, including airfare, lodging, ground transportation, per diem, parking, mileage and other travel-related costs, will be reimbursable for Work covered by this Approved Service Order in accordance with the Master Consultant Agreement; provided, however, that the travel expenses are necessary for Consultant's performance of the Work, and the resident office of the personnel for which Consultant seeks travel reimbursement is located more than sixty (60) miles from the San José-Santa Clara Regional Wastewater Facility

First  Second  Third  Fourth  Fifth  Sixth Revised Attachment C: Compensation Table

This Revised Attachment C is an attachment to the  First  Second  Third  Fourth  Fifth  Sixth amendment to Approved Service Order No. 1 issued pursuant to the Master Agreement having the above-referenced CPMS Contract No.

Column 1 Task No. and Task Title from Attachment A	Column 2 Invoice Period	Column 3 Multiplier Compensation	Column 4 Contract Personnel	Column 5 Reimbursable Expenses (Including applicable markup)	Column 6 Subconsultant Costs (Including markup)	Column 7 Total Compensation
Task No.1: Project Management, Quality Assurance/Quality Control and Meetings	<input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Completion of Task(s) <input type="checkbox"/> Completion of Work	\$153,331	\$0	\$0	\$0	\$153,331
Task No.2: Conceptual Design for Phase 1 and Phase 2	<input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Completion of Task(s) <input type="checkbox"/> Completion of Work	\$223,432	\$0	\$1,445	\$25,507	\$250,384
Task No.3: Detailed Design for Phase 1 and Phase 2	<input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Completion of Task(s) <input type="checkbox"/> Completion of Work	\$1,258,157	\$0	\$9,432	\$50,388	\$1,317,977
Task No.4: Bid and Award Support Services for Phase 1	<input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Completion of Task(s) <input type="checkbox"/> Completion of Work	\$27,820	\$0	\$0	\$0	\$27,820
Task No.5: Engineering Services During Construction for Phase 1	<input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Completion of Task(s) <input type="checkbox"/> Completion of Work	\$358,096	\$0	\$2,260	\$0	\$360,356
Task No.6: Post Construction Assistance for Phase 1	<input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Completion of Task(s) <input type="checkbox"/> Completion of Work	\$46,264	\$0	\$2,450	\$0	\$48,714
<b>Maximum Compensation</b>		<b>\$2,067,100</b>	<b>\$0</b>	<b>\$15,587</b>	<b>\$75,895</b>	<b>\$2,158,582</b>

# City of San José Contract/Agreement Transmittal Form

## Route Order

## Attached / Completed

## Electronically Signed

TO:  City Attorney  
 City Manager  
 City Clerk **OR** Return to  
Dept. (circle one)

Insurance Certificates / Waivers  Electronically Signed: Yes  
 Business Tax Certificate  Audit Trail Attached (if applicable)  
 Contacted Clerk re: Form 700  Scanned Signature Authorization  
 Supplemental Memorandums (if applicable): Select One

Type of Document: Amendment

Type of Contract: Consulting Services

### REQUIRED INFORMATION FOR ALL CONTRACTS:

Existing GILES # 661304-018

Contractor: Black & Veatch Corporation

Address: 2999 Oak Road, Suite 490, Walnut Creek, CA 94597

Phone: (925) 949-5949

Email: lopezdc@bv.com

Contract Description: Sixth Amendment to Service Order 1 - Advanced Facility Control and Meter Replacement

Term Start Date: 10/19/2016 Term End Date: 12/31/2023 Extension: Yes

Method of Procurement: Select one RFB, RFP or RFQ No.: \_\_\_\_\_ Date Conducted: \_\_\_\_\_

Agenda Date (if applicable): \_\_\_\_\_

Agenda Item No.: \_\_\_\_\_

Resolution No.: \_\_\_\_\_

Ordinance No.: \_\_\_\_\_

Original Contract Amount: \$2,128,117.00

Amount of Increase/Decrease: \$30,465.00

Option #: \_\_\_ of \_\_\_ Option Amount: \_\_\_\_\_

NTE/Updated Contract Amount: \$2,158,582.00

Fund/Appropriation: \_\_\_\_\_

Form 700 Required (Selection mandatory for processing): Yes

Revenue Agreement: Select one

Tax Certificate No.: 6952151210

Expiration Date: 01/15/2022

Department: ESD (76)

Department Contact: Kyle O'Dea / 635-4086

Customer (Finance Only): \_\_\_\_\_

Notes:



Department Director Signature: \_\_\_\_\_ Date

Office of the City Manager Signature: \_\_\_\_\_ Date