

**DRAFT FIRST AMENDMENT TO CONSULTANT SERVICES AGREEMENT BETWEEN
CITY OF SUNNYVALE AND MWA ARCHITECTS OF SAN FRANCISCO FOR DESIGN
AND CONSTRUCTION SUPPORT SERVICES FOR ADMINISTRATION AND
LABORATORY BUILDING AT THE WATER POLLUTION CONTROL PLANT**

First Amendment to Consultant Services Agreement, dated _____, is by and between the CITY OF SUNNYVALE, a municipal corporation ("CITY"), and MWA ARCHITECTS OF SAN FRANCISCO, a California corporation ("CONSULTANT").

WHEREAS, on September 18, 2017, CITY and CONSULTANT entered into a Consultant Services Agreement to provide professional services necessary for development of a safe and efficient design, preparation of bid documents for Public Works competitive bidding, and construction support for the Administration and Laboratory Building at the Water Pollution Control Plant Project; and

WHEREAS, the parties now agree that a First Amendment to said Agreement is advisable;

NOW, THEREFORE, THE PARTIES ENTER INTO THIS FIRST AMENDMENT TO CONSULTANT SERVICES AGREEMENT:

1. Services by CONSULTANT

Replace the first paragraph with the following:

CONSULTANT shall provide services in accordance with Exhibit "A" entitled "Scope of Work" and Exhibit "A-1" entitled "Additional Scope of Work". All exhibits referenced in this Agreement are attached hereto and are incorporated herein by reference. To accomplish that end, CONSULTANT agrees to assign Bill Olechnowicz, PE, to this project, to act in the capacity of Project Manager and personally direct the professional services to be provided by CONSULTANT.

2. Notice to Proceed/Completion of Services

Replace paragraph (b) with the following:

(b) When CITY determines that CONSULTANT has satisfactorily completed the services defined in Exhibit "A" and Exhibit "A-1", CITY shall give CONSULTANT written Notice of Final Acceptance, and CONSULTANT shall not incur any further costs hereunder. CONSULTANT may request this determination of completion when, in its opinion, it has satisfactorily completed the Scope of Work (Exhibit "A") and Additional Scope of Work (Exhibit "A-1") and if so requested, CITY shall make this determination within fourteen (14) days of such request.

4. Payment of Fees and Expenses

Replace this section with the following:

Payments shall be made to CONSULTANT on a monthly basis as set forth in the attached Exhibit "B" entitled "Compensation Schedule," Exhibit "B-1" entitled "Additional Compensation Schedule" and Exhibit "C" entitled "Compensation for Reimbursable Expenditures." All compensation will be based on monthly billings as provided in Exhibit "B," Exhibit "B-1," and Exhibit "C." Compensation will not be due until said detailed billing is submitted to CITY within a reasonable time before payment is expected to allow for normal CITY processing. An estimate of the percent of total completion associated with the various categories of the services shall be furnished by CONSULTANT with said billing. When applicable, copies of pertinent financial records will be included with the submission of billing(s) for all direct reimbursables. Compensation shall not exceed the amounts set forth in Exhibit

"B" for each phase, and shall include services as identified in Exhibit "A" in the amount of Four Million Two Hundred Seventy Three Thousand Eight Hundred Eight and No/100 Dollars (\$4,273,808.00) for the duration of the contract, as well as optional services in an amount not to exceed Three Hundred Forty Four Thousand Eight Hundred Thirty Four and No/100 Dollars (\$344,834.00) for the duration of the contract. In no event shall the total amount of compensation payable under this agreement exceed the sum of Four Million Six Hundred Eighteen Thousand Six Hundred Forty Two and No/100 Dollars (\$4,618,642.00) unless upon written modification of this Agreement. All invoices, including detailed backup, shall be sent to City of Sunnyvale, attention Accounts Payable, P.O. Box 3707, Sunnyvale, CA 94088-3707.

CONSULTANT will be reimbursed as promptly as fiscal procedures will permit upon receipt by the CITY of itemized invoices in triplicate. Invoices shall be submitted no later than 45 calendar days after the performance of work for which CONSULTANT is billing. Invoices shall detail the work performed on each milestone and each project as applicable. Invoices shall follow the format stipulated in the Compensation Schedule and shall reference the project title. The final invoice must contain the final cost and all credits due CITY. The final invoice should be submitted within 60 calendar days after completion of CONSULTANT's work.

All other terms and conditions remain unchanged.

IN WITNESS WHEREOF, the parties have executed this Agreement Amendment.

ATTEST:

CITY OF SUNNYVALE ("CITY")

By _____
City Clerk

By _____
City Manager

MWA ARCHITECTS OF SAN FRANCISCO
("CONSULTANT")

By _____

APPROVED AS TO FORM:

Name/Title

City Attorney

By _____

Name/Title

Exhibit A-1

ADDITIONAL SCOPE OF WORK Administration, Laboratory, and Maintenance Building Project Number 8.3

I. General

The major tasks described in this scope of work include:

- Task A: Project Management
- Task B: Permitting
- Task C: Documentation of Existing Conditions
- Task D.1: Building Relocation Concepts
- Task E: Preliminary Design
- Task F: Design Development
- Task G: Bid Package
- Task H: Bidding Services
- Task I: Construction Support Services
- Task J: Commissioning Support Services
- Task K: Title 27 Mitigation

Ancillary work includes:

- Complying with all regulatory requirements, including those associated with site preparation, construction and post-construction requirements when constructing a structure on, and within 1,000 feet of a landfill.
- Schedule monitoring.
- Performing subsurface utility and geotechnical survey
- Complying with existing methane monitoring procedures at the WPCP
- Preparing and submitting California Environmental Quality Act (CEQA) permitting documentation
- Preparing and submitting information for building and fire department permit
- Construction cost estimating
- Preparation of design reports and recommendations
- Recommending “green” building/construction practices, sustainability, and energy efficiency improvements equivalent to LEED v4.1 Gold certification

Optional work includes:

- Support for Two Council Meetings (Task A.7)
- Address Artesian Conditions (Task C.7)
- SRF Funding Support (Task F.7)
- Temporary Office Building Demo (Task F.9)
- Carl Road Improvements (Task F.10)
- Monitoring Based Commissioning (Task J.4)
- Title 27 Mitigation (Tasks K.1 through K.5) Compliance with California Code of Regulations (CCR) Title 27, Section 21190, including regulatory agency meeting support and participation, landfill gas (LFG) investigation work plan, preliminary design

and design of required LFG mitigation measures, and construction quality assurance as required for development near a closed landfill (Task K, consists of several optional tasks).

This document is inclusive of work completed and retained from the original Agreement. Because revisions have been made to all tasks, this document supersedes in its entirety *Exhibit A: Scope of Work* included in the original Agreement. Work listed below was performed on the following tasks during the period September 2017 (original notice to proceed [NTP]) through May 2019 (NTP for the building relocation assessment activities). Work listed in Section III remains to be completed. Subtasks are annotated as “Complete”, “No Additional Work to be Performed”, “No Work Performed”, “In Progress” or “Not Started” at the time of this amendment.

Task A: Project Management

- A.1 – A.6 Project Management [In Progress]. Subtasks activities have been performed following NTP. Activities, as defined in this contract amendment, will be ongoing.

Task B: Permitting

- B.1 CEQA [No Additional Work to be Performed]. Consultant was scoped to prepare a memorandum to file, which documents the activities, impacts, mitigation measures and monitoring documented in the PEIR that are applicable to this project. The memorandum was not filed.
- B.2 Landfill Post-Closure Maintenance Plan Addendum/Waste Boundary Investigation [No Additional Work to be Performed]. Consultant completed the waste boundary investigation and submitted the final report to City. Consultant conducted separate scoping meetings with the City of Sunnyvale, the Regional Water Quality Control Board (Water Board), and the Santa Clara County Department of Environmental Health (Local Enforcement Agency [LEA]). Consultant submitted a Technical Memorandum (TM) to the City presenting its findings, conclusions, and recommendations for closure options. An Amended Landfill Post-Closure Plan was not prepared after the decision to consider relocation of the Admin/Lab Building.
- B.2.1 Closure Approach 1 – Closure of waste to remain in place (Optional) [No Additional Work to be Performed]. Consultant performed limited work on this subtask.
- B.2.2 Closure Approach 2 – Clean closure of the waste within the project area (Optional) [No Work Performed]. Consultant performed no work on this subtask.
- B.3 Building Subsurface Gas Barrier, Passive Methane Collection and Venting System, and Methane Monitoring and Alarm System Technical Memorandum [No Additional Work to be Performed]. Consultant completed a preliminary system design, submitted two versions of the LFG barrier, passive methane collection and venting system narrative and incorporated the conceptual design into Draft DIM #3.
- B.4 Preparation of an Initial Study and Tiered Negative Declaration – Clean closure of the waste within the project area (Optional) [No Work Performed]. Consultant performed no work on this subtask.
- B.5 Revisions to Hazardous Business Plan (Optional) [No Work Performed]. Consultant performed no work on this subtask.

Task C: Documentation of Existing Conditions

- C.1 Supplemental Surveying [Complete]. Consultant provided new survey information around the former Household Hazardous Waste Collection site (HHW site) to

supplement LiDAR and land survey performed as part of the Master Plan. Survey data was provided to the City.

- C.2 Supplemental Subsurface Utility Mapping [Complete]. Consultant provided potholing around the HHW site to confirm vertical and horizontal location of critical utilities and connection points as well and document the elevations of any groundwater encountered. Consultant provided draft potholing plan and field data to the City and the PMC for comment and to update WPCP utility base-maps.
- C.3 Geotechnical Characterization [Complete] - Consultant drilled borings using mud rotary and hollow stem augers with casing and CPT investigations for stratigraphy at the HHW site. All cuttings and fluids were containerized in steel, 55-gallon drums and removed from the site. Laboratory characterization of the cuttings and fluids indicated hazardous materials in several of the drums, which were taken to an approved facility. Findings, lab results, corrosion testing, trench shoring recommendations, calculation, and comments were included in a *Final Field Investigation Report* (May 2019).

Task D: Master Plan Validation/Building Concept

- Task D: Master Plan Validation/Building Concept [Complete]. Consultant reviewed and evaluated *Master Plan Building Programming TM*. Consultant utilized job shadowing process to observe staff activities, test, and validate Master Plan recommendations and confirm City staff project goals. A conceptual design was developed to address current and future programs for the laboratory, administration and operations spaces. A workshop was held to discuss findings. Consultant submitted a *Final Building Concept Memorandum* documenting options and concepts, cost estimate, and rationale for selecting the preferred option.
- Task D.1 Relocation Concept Alternatives TM [In Progress]. Consultant prepared nine Lab/Admin Building concepts in various configurations on two new sites identified by the City. The alternatives were evaluated based on a range of criteria and scored to arrive at three preferred alternatives. Findings were presented in a workshop with the City and in *Final Relocation Alternatives Screening TM* (August 2019). The preferred alternatives were further refined and integrated with the DIM12 Maintenance Building program on a new site within the WPCP boundary. The final endorsed concept alternative and cost estimate were presented in a workshop with the City and documented in a *Final Administration, Laboratory, and Maintenance Building Concept Design Report* (Concept Design Report), completed in September 2019.

Task E: Preliminary Design

- E.1 DIM #1: Sequencing and Site Layout [No Additional Work to be Performed]. Consultant prepared and submitted a Draft DIM to outline the site design criteria, alternatives considered, and a recommended site layout and sequencing of construction activities at the HHW site. Key site issues addressed include vehicular/pedestrian access, staff/visitor parking, plant deliveries, temporary and permanent facility utilities, and contractor access, staging, parking, and materials laydown. A final DIM was not submitted.
- E.2 DIM #2: Flood Risk, Flood Protection, and Stormwater Management [No Additional Work to be Performed]. Consultant prepared a Draft DIM to outline design criteria, alternatives considered, and recommendations for flood protection and stormwater management at the HHW site. A final DIM was not submitted.

- E.3 DIM #3: Foundation Design and Landfill Gas Control [No Additional Work to be Performed]. Consultant prepared and submitted a Draft DIM to outline design criteria, alternatives considered, and recommendations for Lab/Admin Building foundation design and LFG control elements on the HHW site. A final DIM was not submitted.
- E.4 DIM #4: Control Room and Building Security [No Work Performed]. Consultant performed no work on this subtask.
- E.5 DIM #5: Laboratory Planning and Design [No Work Performed]. Consultant performed no work on this subtask.
- E.6 LEED GAP Study (Optional) [No Work Performed]. Consultant performed no work on this subtask.

Task F: Design Development

- F.5 LEED Upgrade (Optional) [No Work Performed]. Consultant performed no work on this subtask.
- F.6 Whole Building Life Cycle Analysis (Optional) [No Work Performed]. Consultant performed no work on this subtask.
- F.7 SRF Funding Support [In-Progress]. Consultant prepared a project report to fulfill the requirements of the State Revolving Fund Technical Package application. The report provides a summary of the Admin/Lab Building project along with information collected from the *WPCP Masterplan*, the *City of Sunnyvale General Plan*, and other WPCP planning documents.
- F.8 Building Information Modeling (Optional) [No Work Performed]. Consultant performed no work on this subtask.

II. Project Information

Cleanwater Program Description

The City has prepared a Master Plan for the Sunnyvale Cleanwater Program (Program) to guide improvements to the WPCP facilities and operations over the next 20 or more years. The Master Plan was developed to address several challenges facing the WPCP today and into the future, as well as to support City policies. These challenges include aging infrastructure; changes in regulatory requirements; and increases in population, flows, and loads. The Master Plan identifies capital improvement projects, estimates costs, and recommends implementation approaches to achieve the planning objectives.

The City has adopted a final Program Environmental Impact Report (PEIR) for the Master Plan in compliance with CEQA and the CEQA Guidelines. The WPCP is already proceeding with the replacement of the Project 1.1, Package 2, Headworks and Primary Treatment under a separate Mitigated Negative Declaration. Construction is expected to continue through the end of 2020.

The construction of the Admin/Lab/Maintenance Building will be completed in conjunction with other critical Program projects at the WPCP, which includes demolition of existing facilities and relocation of existing utilities on the Admin/Lab/Maintenance Building site, construction of a perimeter wall around the WPCP, and upgrades to the WPCP's electrical distribution system and support utilities (including but not limited to potable water, sanitary sewer, fire protection, fiber optics, and power). In addition, the existing WPCP must remain operational on a daily basis. Construction sequencing and site layout will be a critical component for a successful design and

construction project. The Consultant will be responsible for communicating promptly and regularly with the City about possible conflicts with all Program projects and related activity at the WPCP. Active and planned projects in the vicinity of the Admin/Lab/Maintenance Building are described below:

Project 2.1: Project 2.1 involves rehabilitation of the existing secondary and tertiary treatment facilities and is expected to overlap with construction of the Admin/Lab/Maintenance Building. Project 2.1 will also consist of a new perimeter wall that will extend around the entire WPCP, including the Admin/Lab/Maintenance Building site. The foundation for the segment of perimeter wall immediately adjacent to the Admin/Lab/Maintenance Building will be constructed as part of Project 2.2.

Project 2.2: The Project 2.2 consists of two primary elements of work – 1) Site Preparation activities (demolition of all existing structures on the proposed Admin/Lab/Maintenance Building site, construction of temporary administration and maintenance facilities on the former HHW site, relocation of buried utilities currently aligned beneath and adjacent to the Administration/Lab/Maintenance Building site, and construction of the footing for the portion of the perimeter wall directly south of the site), and 2) construction of new secondary treatment facilities and a new thickening and dewatering facility.

Sunnyvale East and West Channels Flood Protection: In addition to the active and planned projects in the Program, Santa Clara Valley Water District (Valley Water) is planning to construct the East/West Channel project. Elements of this project include replacement of the bridge-class culvert between the existing trailhead and the terminus of Carl Road; reconstruction of headwalls on the Sunnyvale West Channel culvert at Caribbean Drive; construction of floodwalls and access roads on both sides of Sunnyvale West Channel, along the existing Bay Trail alignment; raising of the levees, with fill slopes extending further East and West of the current levees; and construction of access road ramps on the north side of Caribbean Drive.

Project 8.3 Site Description

The Master Plan recommended that the new laboratory and administration building be located on the former HHW site, adjacent to the closed landfill. During conceptual design, MWA determined that the costs and risks of constructing a facility on this site were greater than initially anticipated. Based on the findings of *Building Relocation Concept Development Screening TM* (MWA, August 2019), a new site for the building was selected north of Carl Road between Plant gates B and C. Due to the site's adjacency to the proposed Maintenance Building, this building is being removed from the scope of Project 2.2 and added to Project 8.3. See Figure A for a diagram of the Project 8.3 extents of work.

The Admin/Lab/Maintenance Building site is currently occupied by the current Administration Building and a portion of the existing Primary Sedimentation Tanks, which will both be demolished as part of Project 2.2, Package 1.

100-year flood protection for the main Plant site is included in the scope of Project 2.1. The Admin/Lab/Maintenance Building will be located inside of this perimeter flood wall with ground floor building spaces assumed to be protected from any flooding events. Perimeter flood wall alignment and hydraulic gate locations will be coordinated with the design of the Admin/Lab/Maintenance Building.

Drainage at the WPCP is currently provided by existing infrastructure and covered under the existing National Pollutant Discharge Elimination System (NPDES) permit. However due to the location of proposed site improvements along Carl Road, Consultant will investigate to determine necessary stormwater controls and if additional permitting will be required.

Project 8.3 Building Description

Project 8.3 includes an approximately 30,000 square foot, two-story building with a 20,000 square foot building footprint. The design will be based on the endorsed design alternative documented in the *Administration, Laboratory, and Maintenance Building Concept Design Report* (MWA, September 2019). The project will incorporate design objectives and criteria outlined in Volume 6 of the Master Plan, *Basis of Design* (Carollo, March 2016), Project 2.2 *DIM 12: Maintenance Building Design* (Carollo, October 2018), and all relevant *WPCP Design Standards*.

The building will be a new consolidated facility to house administration, operations, maintenance and laboratory and compliance inspection functions. The new Admin/Lab/Maintenance Building will replace the functionality of the existing Administration Building, Laboratory & Control Building, Compliance Inspection Building, and Maintenance Building. The consolidation of occupied space will address the administrative, laboratory and maintenance needs of the Plant while creating a more inspiring and productive working environment for staff.

The control room in the new Admin/Lab/Maintenance Building will provide a central location for all WPCP instrumentation, automation and control systems (ACS), and security systems. The new laboratory will be a large, complex facility that represents significant increase in lab areas, equipment spaces, storage, and staff areas. Design criteria include critical adjacencies for sample receiving, a compliance inspection laboratory, and dedicated vehicle parking for lab pick-up and delivery. The laboratory includes areas for wet chemistry, organics, metals lab, microbiology, separate dishwashing, glassware and chemical storage, pilot testing, and lab offices. Following commissioning of the new laboratory space, the City will pursue Environmental Laboratory Accreditation Program (CA ELAP) certification.

III. Consultant Scope of Services

The Consultant will perform all architectural and engineering related work necessary to prepare plans and specifications for the Admin/Lab/Maintenance Building suitable for Public Works competitive bidding. Consultant will be required to adhere to City codes, policies and guidelines regarding the design of new public buildings.

All design drawings, specifications, calculations and reports will be stamped and signed by a registered State of California Professional Engineer, or where applicable, by a licensed State of California Architect.

A. Project Management

The Consultant will be the primary responsible party for managing the project's schedule and Consultant contract budget. In addition, the Consultant is expected to participate in biweekly progress meetings (alternating in-person and conference call) and prepare action item logs for

subsequent follow-up. The Consultant is expected to maintain frequent and timely communication with City staff throughout the duration of the project.

The City has engaged CDM Smith who provides Program Management Consultant (PMC) services to the City's Public Works Department and oversight of all projects in the Sunnyvale Cleanwater Program. Consultant will be required to coordinate with the PMC as necessary throughout design and construction.

The City has also engaged Psomas as the City's Construction Manager (CMC). The CMC is responsible for constructability reviews of design deliverables. Consultant will be required to coordinate with the CMC as necessary throughout design and construction.

All on-site investigations including drilling, potholing, and surveying or other work performed by the Consultant will be scheduled and coordinated with the City. Consultant will coordinate these efforts with information provided in the Master Plan, specifically the Geotechnical Study, Existing Utilities TM, and the Land Survey and Monumentation Documents.

A.1. Project Management Plan [In-Progress]

Consultant will submit an updated Project Management Plan that includes a detailed schedule of meetings, workshops, and deliverables. A log of workshops and deliverables will be maintained to record the name, date, required attendees, and decisions to be made at each workshop; and the subtask, deliverable name, draft due date, comment due date, Final due date, and objective of each TM and DIM. Schedule will show no more than three deliverables under review at any time, unless prior approval was given by the City (not including the deliverables submitted under this Task A).

A.2. Meeting Management [In-Progress]

1. Bi-Weekly Meetings/Conference Calls – Consultant will lead the Bi-Weekly Meetings/Conference Calls (alternating in-person and via conference call). Meeting agendas will be distributed via e-mail the day before the meeting/conference call. Consultant shall provide project schedule updates at all in-person meetings. Meeting minutes will be provided by the consultant by the next meeting/conference call.
2. Other Project Meetings – Meetings must be scheduled at least one month in advance and the schedule will identify the purpose of each meeting. Meeting agendas will be prepared prior to all meetings with City staff and e-mailed at least five (5) business days prior to each meeting. Agendas will identify the purpose of each meeting and key decisions that need to be addressed during the meeting. Meeting minutes will be provided by the consultant within one week of each meeting and e-mailed to all pre-call meeting participants. Any comments or clarifications to meeting notes will be sent to the PMC for adjudication and to MWA within 7 calendar days. Consultant will prepare a final set of meeting minutes that incorporate any comments and will distribute them to all meeting participants.

A.3. Project Schedules [In-Progress]

All project schedules will be prepared in Gantt chart format, utilizing Microsoft Project software. Schedules will include all required workshops, four weeks for City review of each design

submittal in Task F, two weeks for City review of each deliverable in Tasks B through E, and adequate time for review of permit applications. Schedule updates will be provided at all the in-person progress meetings.

A.4. Quality Assurance/Quality Control [In-Progress]

The Consultant team will have provisions for quality assurance/quality control over any work products prepared for the City. Each Discipline Lead will be responsible for integration of QA/QC within his or her discipline to meet Project requirements. Discipline Leads are responsible for completing and maintaining discipline-specific QA records as appropriate, responding to internal and external comments, and ensuring that actionable comments have been integrated into the Project.

Additionally, each Discipline Lead will assign a senior technical reviewer not working on the Project to perform a design review of each deliverable prior to submittal to the City. A Certification of Peer Review, signed by the Design Quality lead, will be included with the 100% Design submittal for overall constructability, coordination, and reasonable reduction in errors and omissions.

A.5. Document Management [In-Progress]

Unifier is the Program Management Information System (PMIS) for the Program. Consultant will use Unifier to submit invoices and deliverables during the design phase of the project, and to log action items and design decisions made during meetings and ad hoc communications.

After design is complete, the PMIS will transition from Unifier to e-Builder. Consultant will use e-Builder to review and route construction documents and to submit invoices. Training and licenses for up to 2 users will be provided.

A.6. Pay Applications [In-Progress]

Consultant will submit monthly invoices. Invoices will include complete back-up of all Project costs and include a cover page listing the total budget, amount authorized by NTP, previous billed-to-date, current billing, and total billed-to-date for each task. Invoice will be accompanied by a brief progress report which lists the work accomplished in the previous month, which will be uploaded to the PMIS.

A.7. Support for Two Council Meetings (Optional) [Not started]

The City may require Consultant's support for Council Study Sessions, Commission Meetings, or Council Meetings. If such support is required, Consultant's role will be to prepare PowerPoint slides and up to three attachments, presenting the Project scope, status, and outstanding issues. Slides and attachments will provide comprehensive, but high-level information about the Project, suitable for an executive decision-making audience. Consultant's Project Manager will attend the session and be prepared to answer questions.

B. Permitting

B.6. CEQA Memo [Not Started]

Consultant will prepare a memorandum to file, which documents the activities, impacts, mitigation measures and monitoring documented in the PEIR that are applicable to this Project. It is anticipated that this project will have no effects beyond those analyzed in the

PEIR and that no new environmental document or public notice will be required. Consultant is responsible for confirming this assumption. One site visit, if needed, will be conducted during preparation of the CEQA document. Consultant will convert the memorandum into a CEQA Addendum. Consultant will also prepare the notice of determination (NOD) for the City to file.

Deliverables:

- Draft CEQA memorandum (7 hard copies)
- Response-to-comments table for Draft CEQA memorandum
- Final CEQA memorandum
- NOD for City to file (2 hard copies)

C. Documentation of Existing Conditions [Not Started]

As part of the Master Plan, a desktop and field investigation of the WPCP site was performed. The desktop investigation included compilation of historical boring logs on the western half of the WPCP; geologic hazard evaluation of the WPCP site; and consolidation of subsurface utility information from record drawings, design drawings, and potholes into an AutoCAD basemap. The field investigation included several borings and cone penetrometer tests; manhole measure-downs; and willow soil borings to test for soil and groundwater contamination across the WPCP site. Nine (9) hardcopies of the non-design documents (e.g., workplans, reports, field data) will be provided for review by the City. Consultant will provide adequate notice to WPCP staff prior to implementing field activities.

C.4. Supplemental Surveying

Consultant will identify and perform surveying as needed to supplement LiDAR and land survey performed as part of the Master Plan, to the extent necessary to obtain detailed elevations and fill in surface improvement locations required for detailed design of the Project. PMC will use this information to update the WPCP basemap. Consultant will use the Plant datum for surveying work products and indicate the benchmark in the survey.

Deliverables:

- Survey Data in both PDF and AutoCAD format

C.5. Supplemental Subsurface Utility Mapping

Consultant will perform up to fifteen (15) potholes to confirm vertical and horizontal location of critical utilities and connection points as well and document the elevations of any groundwater encountered. Prior to performing any potholing work the consultant will submit a draft potholing plan to the City for review and comment. Consultant will provide field data obtained from potholes to the PMC for their use in updating the WPCP utility basemap.

Deliverables:

- Draft Potholing Plan
- Final Potholing Plan, incorporating City comments
- Draft Field Data and Reports
- Final Field Data (in both PDF and AutoCAD) and Reports incorporating City comments

C.6. Geotechnical Characterization

Consultant will perform a geotechnical investigation and analysis and provide geotechnical recommendations for the design of the building foundation for the new location. The geotechnical recommendations shall include requirements for fill or excavation and deep driven pile foundations.

Prior to the field investigation, Consultant will:

- Submit a Draft Geotechnical Investigation Workplan, respond to the City's comments, and submit a Final Geotechnical Field Investigation Workplan that incorporates agreed upon comment resolutions;
- Obtain a drilling permit from Valley Water and submit a copy of the executed permit to the City; and
- Obtain clearance Underground Service Alert.

During the field investigation, Consultant will execute the Final Geotechnical Investigation Workplan. This work includes:

- Obtaining clearance from a private utility locator, including advancing an air knife excavation at each proposed boring location;
- Meeting with a City representative onsite to verify proposed boring locations;
- Advancing up to six cone probes (including one to 200 feet or refusal) and collecting geophysical measurements such as shear wave velocity;
- Advance two deep borings (150 to 200 feet), collect samples at regular intervals, log and field test samples, then abandon per drilling permit requirements; and
- Obtain City signature on manifests and transport investigation-derived waste offsite for non-hazardous disposal.

After the field investigation, Consultant will:

- Perform laboratory testing including organic content, consolidation tests, UU (saturated) tests, Atterberg Limits, grain size analyses, and the CALTRANS package of physical tests;
- Submit a Draft Geotechnical Investigation Report, respond to the City's comments and other review comments, and submit a Final Geotechnical Investigation Report that incorporates agreed upon comment resolutions.

Deliverables:

- Draft Geotechnical Investigation Workplan
- Responses to comments
- Final Geotechnical Investigation Workplan
- Copy of drilling permit
- Draft Geotechnical Investigation Report
- Response to comments
- Final Geotechnical Investigation Report (to be submitted during Design Development)

C.7 Address Artesian Conditions (Optional)

This is a new Task that will be implemented only in the event that artesian conditions are encountered in the deep aquifer that is reported to exist at a depth between 150 and 200 feet below ground surface. If artesian conditions are encountered during the geotechnical field investigation, special precautions and protocol will be put in place to manage the water that

flows out of the borehole until the borehole can be plugged and closed. Protocol will include containerization of fluids, increased drilling mud management, pressure grouting the borehole, and disposal of excess water generated.

Assumptions:

- The City will approve this optional task within 12 hours of notification by Consultant that artesian conditions have been encountered.
- Assumes that a maximum of 4,000 gallons of artesian water will be managed and disposed.
- Borehole abandonment will be with a 10.3 sack sand/cement slurry installed with a line pumper rig (six hours onsite).

D.1 Building Relocation Concepts *[In-Progress]*

As noted above, Task D.1 (Building Relocation Concepts) activities are currently in progress. Under this amendment, no new work is added to this task.

E. Preliminary Design *[Not Started]*

Design Information Memorandum (DIM) for each design component described below will be prepared for the City's review. Each DIM will outline design criteria, design alternatives, and design recommendations. A rough order of magnitude comparative cost estimate will be included with each option, along with other supporting information outlining pros and cons for each option. Each DIM requires at least one workshop and will result in a Draft DIM and Final DIM. Consultant will provide nine (9) hardcopies of each Draft and Final DIM to the City, as well as electronic copies in PDF format. PDFs will be fully text-searchable and formatted to be navigable with a "bookmark" for each heading and subheading.

Each DIM will include a summary of the relevant recommendations and assumptions in the WPCP Master Plan and Project 8.3 Concept Design Report. Each DIM will include a discussion of the issues and alternatives evaluated and preliminary drawings and cost estimate for the selected alternatives. DIMs will describe the work to a 15% design level of detail and establish a basis-of-design for Design Development work.

Draft DIM, agenda, and slides will be submitted at least one week prior to the DIM Workshop. A pre-call will be held with City/PMC following receipt of the draft DIM and slides. Each DIM Workshop will include slides of the Draft DIM content, discussion of review comments, and resolution of all decisions required prior to finalizing the DIM. Final DIM will incorporate review comments and decisions made at the DIM Workshop; and include the Workshop minutes, PowerPoint slides, comment log, and decision log as appendices. Each step will be completed in accordance with the calendar included in the Project Management Plan submitted under Task A.

E.7. DIM #1: Preliminary Site Design

The purpose of this TM is to document a basis of design for site work and construction sequencing. Consultant will work with the Project 2.2 and 2.1 design teams to coordinate demolition, site preparation, utility relocation and perimeter wall design.

Stormwater management and flood protection will be coordinated with site design considerations including site access, parking, delivery, accessible routes and circulation between the Admin/Lab/Maintenance Building, adjacent WPCP facilities, and parking areas outside the flood wall. The Consultant will ensure the design meets requirements of the governing regional agencies.

Consultant will participate in up to two (2) workshops to coordinate with Project 2.1 and Project 2.2 design teams in the development of staged preliminary layout drawings that indicate a recommended sequence of construction and illustrations at each stage:

- Active construction, demolition, and completed work
- Active construction and completed work in concurrent projects
- Primary access points for contractors
- Staging and parking areas for each contractor onsite
- Deliveries, plant maintenance, and emergency vehicle circulation routes
- Approximate grade, limits of paving, and direction of drainage

The DIM will include:

- Utility identification, condition and location
 - Permanent and temporary, overhead and buried
- Code requirements
- Site security
- Vehicle access, access controls, and parking
- Electrical vehicle parking/charging stations
- Pedestrian access and accessible pathway
- Identify recommended early milestones and sequencing constraints for concurrent construction projects and describe the impact to this set of projects if each sequencing constraint is not enforced.
- Identify exterior locations for public art.
- Develop landscape/hardscape design concepts for the courtyard adjacent to the building complex. Site grading coordinated with perimeter flood wall design and plant operations (gate swings, vehicle circulation, etc.)
- Schematic utilities plan/layout

Deliverables:

- Site Coordination Workshop
- Draft DIM #1: Preliminary Site Design and PowerPoint slides
- Workshop to present findings to City
- Response to comments
- Final DIM #1: Preliminary Site Design, incorporating City comments

E.8. DIM #2: Preliminary Building Design

The purpose of this DIM is to document a basis of design for the Admin/Lab/Maintenance Building. Detailed design criteria for building spaces, and in particular the laboratory and operator control spaces, will be developed and any design alternatives will be evaluated. Maintenance building design criteria outlined in Project 2.2 *DIM 12: Maintenance Building Design* will be incorporated into this deliverable and updated based on City input.

Early in Preliminary Design, the Consultant will conduct a two-day User Group Workshop with City staff to review project background material and preliminary space layouts, confirm area requirements, and collect detailed space design criteria. It is anticipated that the workshop will be divided into 3 sessions based specific user groups for the three primary areas of the Admin/Lab/Maintenance Building. Prior to the 30% design activities, Consultant will conduct follow-up User Group Workshops to provide City staff with updated information regarding space layouts and detailed space design criteria.

Consultant will conduct a separate charrette/workshop with the City to define sustainability goals and critical drivers and develop an action list, including site and building strategies and alternatives required to achieve LEED Gold v4.1 equivalency. A narrative summarizing strategies and decisions will be included in DIM #2.

The DIM will include:

- Building code and permitting requirements
- Schematic building plans and exterior elevations
- Up to four 3D schematic level exterior perspectives indicating building form, materials, and major architectural features
- Individual space requirements and critical adjacencies
- Schedule of major furniture, fixtures, and equipment to be included, including lab equipment inventory list
- Identification and coordination of the control room functions, server room, WPCP operating systems, operator offices, and training facilities
- Identification of laboratory workflow (including functionality for receipt of samples, chemicals, and other supplies), analytical capabilities, equipment and finishes, chemicals and reagents, services, and utilities
- Building systems and services design criteria (including clean agent fire suppression design), preliminary layouts, and preliminary sizing of large equipment and ductwork.
- Building security criteria, controlled access points, locations for closed-circuit television monitoring, and other employee and visitor safety criteria.
- Pedestrian and vehicular circulation routes, for WPCP staff, for public tour routes, and chemical and sample deliveries/pick-ups.
- Instrumentation, controls, and communication design criteria
- Requirements for the approved radio coverage for emergency responders.
- Fire and hazardous materials safety considerations.
- Public address upgrades
- Construction cost estimate, including both building and site elements
- Project schedule update

Deliverables:

- User Group Workshop PowerPoint slides, with City review prior to workshop
- LEED Design Charrette PowerPoint slides, with City review prior to workshop
- Preliminary LEED Scorecard
- Draft DIM #2: Preliminary Building Design and PowerPoint slides
- Workshop to present findings to City
- Response to comments
- Final DIM #2: Preliminary Building Design, incorporating City comments

E.9. DIM #3: Preliminary Structural and Foundation Design

The purpose of this DIM is to document a structural basis of design for the Admin/Lab/Maintenance Building. Consultant will develop detailed design criteria for above and below grade building structural systems and evaluate up to 3 alternatives. The structural design will be based on geotechnical investigations and analysis also included in this DIM.

DIM #3 will be prepared concurrent with the Task C.3 Geotechnical Characterization. Consultant will provide a Preliminary Geotechnical Parameters TM to the Consultant team Structural Engineer (SE) containing preliminary geotechnical parameters so that the SE can proceed with the design of the Building prior to finalization of the geotechnical report. The information presented in the TM will be superseded by the information in the final Geotechnical Report.

The DIM will include:

- Building Code requirements (2019)
- Driven pile foundation design
- Description of gravity system
- Description of lateral load system
- Outline specifications for structural materials
- Foundation (to be confirmed when Geotechnical Report is finalized)
- Preliminary framing plans
- Preliminary elevations of lateral system
- Updated project cost estimate, appropriate for this preliminary level of design

Deliverables:

- Draft DIM #3: Preliminary Structural/Foundation Design and PowerPoint slides
- Workshop to present findings to City
- Response to comments
- Final DIM #3: Preliminary Structural/Foundation Design, incorporating City comments

F. Design Development [Not Started]

Consultant will perform all work including but not limited to: Civil Engineering, Environmental Engineering, Electrical Engineering, Mechanical Engineering, Structural Engineering, Land Surveying, Geotechnical, and related work necessary to prepare sets of plans and specifications suitable for competitive bidding, and compliant with all applicable requirements. The Consultant will also coordinate plans with the City's other consultants for compatibility and synergy. Final plans and technical specifications must be stamped and signed by the Engineer or Architect of Record. The plans and specifications will be coordinated with the City's bid

documents, standard provisions, and special provisions. All submittals will be in both digital and hard copy format.

Plans and specifications will not have any statements obligating the City to do anything other than what is stated in the City's standard construction contract. The plans and specifications will provide sufficient detail consistent with the standard of care of any Architect and design team qualified to produce bid and construction documents for a project of this size and complexity. The construction document set will comply with City requirements and allow for competitive pricing, provided there are multiple bidders. The bid documents will also provide options to the contractor where appropriate to obtain the same high level of quality for the best bid price. Plans and specifications must be readily biddable and objective, avoiding use of subjective terms, such as, performing work to the satisfaction of the designer or the City. Proprietary products or services will be avoided unless the Consultant has demonstrated there is no known equal or if the City intends to standardize on a specific product.

Plans and details will generally be to scale unless not-to-scale drawings provide better information. Match lines will be provided as necessary. All plan sheets will be organized and coordinated for clarity during construction. The horizontal and vertical control established in the Master Plan will be used. All relevant CEQA mitigation measures will be incorporated into the design plans, and specifications.

Sustainable Design

The overall design will merit LEED Gold v4.1 certification. Consultant will design elements to minimize energy consumption, water consumption, and scarce non-renewable resources. The capital cost will be balanced with the future maintenance and operating costs with a bias toward reducing ongoing operation and maintenance costs. Consultant will weigh both the fiscal and environmental costs of ongoing operation and maintenance in considering the best options. Consultant will consider site constraints during all efforts of design.

Consultant will comply with all applicable laws, regulations, and best practices, including Title 24 and CalGreen. Consultant will incorporate "green" building and construction practices, sustainable, energy efficient and low O&M features into recommendations and subsequent design. Admin/Lab/Maintenance Building design will meet USGBC LEED v4.1 Gold equivalency. Although the City will not pursue formal certification it will be verified by a LEED AP on the Consultant team.

Accessibility

All site and building access will be designed to meet the latest Americans with Disabilities Act (ADA) and California Building Code accessibility requirements, as well as City standard details. Designs shall meet regulatory compliance including local, Federal, and State. The design shall incorporate elements of the Master Plan and PEIR, including: overall systems planning and layout, power system – generation and distribution, ACS and control center, and related systems in the Master Plan. Instrumentation and control design including symbols and abbreviations, P&IDs, wiring and loop drawings, control strategy

Instrumentation and Controls

The design will incorporate elements of the Master Plan and PEIR, including: overall systems planning and layout, power system generation and distribution, ACS and control center, and related systems identified in the Master Plan. Instrumentation and control design including

symbols and abbreviations, P&IDs, wiring and loop drawings, control strategy narratives, fiber patching diagrams, network and communication diagrams, and control panel drawings will follow the City's latest Instrumentation and Design Standards.

Building Information Modeling (BIM)

Consultant will prepare the architectural, structural, MEP, and civil contract documents using Autodesk Revit/Civil 3D. Consultant will develop construction documents using a BIM Design Model incorporating Level of Detail (LOD) 300. The primary objectives and uses of the BIM Design Model will be as follows:

- Visualizations: Visualizations of the building will be created for the purpose of comparing design alternatives and making design decisions; and for “selling” the design to clients or even local communities.
- Design Coordination: “Clash detection” will be performed whereby the computer model visually highlights to the team where parts of the building, such as the structural frame and the building service pipes and ducts, may be in conflict.

Landscaping Design for Plaza Area

Consultant will provide planting and irrigation plans, details, and specifications at each submittal stage. These design documents apply to the plaza area for the Admin/Lab/Maintenance Building. The proposed planting palette will be provided in the 60% design deliverable. Consultant will provide stamped and signed plans and specifications for incorporation into bid package and respond to bidder questions pertaining to planting and irrigation. Construction Support Services for landscape architect shall include reviewing submittals and RFIs, final inspection participation and punch list development, including planting material maintenance acceptance and final acceptance inspections.

Exterior and Interior Signage Design

Consultant will design interior and exterior signage associated for the Admin/Lab/Maintenance Building. The signs will be vehicular and pedestrian wayfinding signs. Example signs include directing visitors to public parking, plant entrance signs, restrictive signs redirecting unauthorized vehicles from entering the WPCP, and no parking signs. The signs will be consistent with California Manual on Uniform Traffic Control Devices (MUTCD).

Carl Road Site Improvements

The following design elements are included as part of the base design scope of work:

- Paving and Striping of the HHW Site – This area may be used as a parking lot for staff and visitor parking. These improvements will need to be designed to avoid triggering Water Board or LEA regulatory requirements related to landfill closure.
- Paving of Carl Road
- Street Lighting along Carl Road – Lighting will be consistent with City standards for street lighting.
- Design for Security Fencing, Plant Entry Gate, and Layout - Consultant will design perimeter security fencing (alignment of fencing shown on Figure A). A new Plant entry gate with security kiosk will be located on Carl Road between Borregas Avenue and Gate B to control vehicle access to the Plant. The entry gate and kiosk will be coordinated with pedestrian circulation paths from the parking areas to the Admin/Lab/Maintenance Building.

- West Channel Gate Design - Consultant will develop the design for an automated gate at the west end of Carl Road at the entrance to the West Channel trailhead.

The City may make a decision to have Consultant remove these design elements from the base design and incorporate into a stand-alone design package. The effort required for creating the stand-alone design package is included as an optional task (Task [F.10: Carl Road Improvements](#)).

Design Steps

Design Development shall include the following major milestones:

- 30% Design
- 60% Design
- 90% Design
- 100% Design

Bid documents will be produced under Task G Bid Package.

Each design package will be submitted in accordance with the Project schedule delivered under Task A. Consultant will hold a workshop with City staff following receipt of the submittals with the objective of walking City staff through the plans. Four weeks are allotted for review of each design submittal. PMC will return comments in a compiled log, and Consultant will schedule a design review workshop to resolve comments and decisions. Following design review workshops, Consultant will return comment log with responses reflecting discussion at the workshop, within one week of receiving comments from PMC. Consultant will also submit updated decision log. Follow-up conference calls may be scheduled for comments that remain unresolved.

Note that continual operation of the WPCP and permit compliance is of greatest importance. Any work done on site, including all planning and design must be done in a manner to not disrupt the operation of the WPCP.

Consultant will be responsible for coordinating with PMC, the City, CMC, other Designers, and the public art artist as-needed throughout design. After each submittal, Consultant will lead a page-turn with the City to lead them through the design.

Consultant will be responsible for leading the Building Permit process.

The City's standard plan format will be used (24" X 36" nominal). Consultant shall also submit 3D renderings at each stage of design. The specifications will be in CSI 2012 standard format (8-1/2" X 11" nominal) bound. Plans shall be organized in logical layers, including but not necessarily limited to: existing underground, surface and overhead conditions; proposed underground by utility, proposed surfacing, proposed pavement markings, proposed overhead, etc.

Hard copy submittals will consist of 2 sets of full sized plans, 12 sets of half sized plans, and 16 copies for reports, specifications, and other material. An additional 5 sets of full sized plans and specifications will be provided at the 90% and 100% design stages for Building Department review. Digital Submittals will be submitted via Unifier, as follows: AutoCAD and

Adobe PDF for plans; MS Word and Adobe PDF for specifications or reports; MS Excel and Adobe PDF for Cost Estimates or spread-sheets, and MS Project and Adobe PDF for time schedules. Files over 100 MB will be broken up into smaller files. Adobe PDF files will be full-text searchable (OCR) and will include bookmarks to all section and subsection headers.

F.1. 30% Submittal

Submit two (2) 24" x 36" and twelve (12) 11" x 17" hardcopies of the drawings and fourteen (14) hardcopies of the specifications, cost estimate, and construction schedule. AutoCAD files of site layout, yard piping, and utility plans will also be submitted.

Deliverables:

- 30% Plans: Cover sheet and plan sheet with base mapping and preliminary details.
- Cut sheets for equipment/appurtenances, including Laboratory and Maintenance Building equipment.
- Documentation of outreach with franchise utility companies for facilities needed to be relocated or adjusted to grade as a result of the proposed construction activities.
- Documentation of coordination with Project 2.1 and 2.2 regarding utility penetrations through the perimeter flood wall.
- Comparison of capacities showing programmed areas (square footage) vs. schematic design areas.
- List of applicable building codes and standards
- Preliminary code review summary
- Preliminary life safety egress plans with identification of security and access points.
- Preliminary Control Room and Laboratory FF&E layouts
- Site plans showing existing conditions, building outlines, roads and driveways, parking and loading, accessible route, waste and recycling, site utilities, preliminary grading, and stormwater management.
- Schematic building 3D images showing building siting, orientation, massing, entry elements
- Schematic building plans including floor plans, sections and elevations
- Schematic structural plans with updated description of foundation types, design criteria, and design loads
- Preliminary details on the methane barrier, and methane collection and venting system, if required
- Preliminary details of continuous indoor methane monitoring and alarm system, if required
- Schematic HVAC, Plumbing and Electrical plans
- Schematic building 3D views
- Construction schedule update
- Updated 4 construction cost estimate, appropriate for the 30% level of design
- Table of Contents list for technical specifications
- 30% Design Review Workshop
- Brief memorandum of determination if the project's construction activities are within the NPDES Construction General Permit. Include project type and risk level.
- Responses to the City's review comments on the 30% submittal
- Pre-application letter submitted to the City of Sunnyvale Building and Fire followed by meeting to receive official code interpretation.

LEED-related deliverables are listed below.

- Updated LEED checklist
- Preparation of a LEED Compliant energy model following the building performance rating method detailed in Appendix G of ANSI/ASHRAE/IESNA Standard 90.1-2007 or following the Title 24-2013 Part 6 Energy Cost Budget method
- Preparation of a LEED Compliant daylight model using the Simulation Option

F.2. 60% Submittal

All major design issues have been resolved prior to this stage. The intent of this submittal is to provide plans and project documents in sufficient detail to allow for thorough and complete review. Submit two (2) 24" x 36" and twelve (12) 11" x 17" hardcopies of the drawings and fourteen (14) hardcopies of the specifications, cost estimate, and construction schedule. AutoCAD files of site layout, yard piping, and utility plans will also be submitted.

Between the 60% design and the 90% design, Consultant will implement a process for design and selection of building furniture (including City review of alternatives), which will include the following steps:

- City will provide a list of preferred furniture vendors, which will be supplemented with additional vendors familiar to the Consultant.
- City to provide standards for furniture sizes and types.
- Consultant will coordinate with selected City vendor to select finishes, furniture types that are coordinated with building finishes and power and data connections to systems furniture.
- Consultant will arrange with furniture vendors for furniture showroom visits by City staff to assist in visualizing furniture type and layout options.

Deliverables:

- 60% Drawings: All subcontracted work shall be accounted for in this submittal. All project design criteria have been accounted for.
- Updated comparison of capacities showing programmed areas (square footage) vs. developed design areas.
- Code review summary and life safety egress plans with identification of security and access points.
- Structural design basis and table of contents for structural calculations.
- Site plans showing general dimensions and elevations, permanent exterior signage, parking and roadway plans and elevations, vehicular and pedestrian circulation, grading plans, utility plans, elevations, and details, accessible route, flood control measures.
- Civil site plans including stormwater management, soil erosion and sedimentation control.
- Construction staging areas.
- Site photometrics.

- Updated building 3D images showing building materials, site access and parking, pedestrian circulation, building fenestration and building entries solar orientation and shading.
- Design development building plans including floor plans, sections and elevations with dimensions, wall types and building materials.
- Materials selection workshop will be held with the City to review exterior materials options.
- Typical wall sections, roof and drainage plans, door and window schedules and details.
- Enlarged area plans including Control Room, Laboratory, Maintenance Building, toilet room plans, breakroom and/or kitchen area plans
- Details of the methane barrier and methane collection and venting system, if required.
- Details of continuous indoor methane monitoring and alarm system, if required.
- Review for preliminary compliance with Sunnyvale Department of Public Safety Consolidated Permits including fire prevention and hazardous materials.
- Structural foundation plan, typical floor and roof framing plans, structural sections, and structural calculations.
- Developed HVAC, Plumbing and Electrical site plans and floor plans showing equipment locations, sizes, control diagrams, calculations and load summaries, HVAC equipment schedules, plumbing fixture schedules, and lighting schedules.
- Consultant will coordinate with Designer for Project 2.1/2.2 by providing estimated building electrical loads for input into the load model (as part of the PG&E service application).
- 60% specifications for building materials and systems, equipment and components.
- Updated LEED checklist.
- Updated LEED-compliant energy model.
- Updated LEED-compliant daylight model.
- Construction cost estimate, appropriate for the 60% level of design
- Updated construction schedule.
- 60% Design Review Workshop.
- Utility conflicts have been resolved or a timeline for resolution of issues has been determined.
- Responses to the City's review comments on the 30% submittal, along with return of mark-ups.

F.3. 90% Submittal

Any outstanding design issues, prior comments, and concerns must be addressed in this submittal. Submit four (4) 24" x 36" and twelve (12) 11" x 17" hardcopies of the drawings and fourteen (14) hardcopies of the specifications, cost estimate, and construction schedule. AutoCAD files of site layout, yard piping, and utility plans will also be submitted.

Deliverables:

- 90% Drawings: All subcontracted work shall be accounted for in this submittal.
- Updated comparison of capacities showing programmed areas (square footage) vs. developed design areas.
- Pre-Final code review summary and life safety egress plans with identification of security and access points.

- Structural calculations, if required for Building Department review
- Pre-Final civil site paving, grading, flood control and drainage plans.
- Pre-Final irrigation and stormwater site plans.
- Final demolition plans.
- Materials selection workshop will be held with the City to review interior materials options.
- Building 3D images showing final building in the surrounding context.
- Pre-Final building floor plans, sections, elevations and detail drawings.
- Pre-Final structural, mechanical, plumbing and electrical plans.
- Pre-Final Specifications.
- Title 24 Documentation and Commissioning Certificates of Compliance.
- Updated LEED checklist.
- Updated LEED-compliant energy model.
- Updated LEED-compliant daylight model.
- Construction cost estimate, appropriate for the 90% level of design
- Final Geotechnical Report.
- Construction schedule update.
- 90% Design Review Workshop.
- Responses to the City's review comments on the 60% submittal along with return of mark-ups.
- Prepare draft Building permits and meet with City Building Department and Fire Department to review 90% submittal and provide comments. During meeting with Building Department, a listing of deferred submittals will be developed and agreed upon.

F.4. 100% Submittal

All issues, prior comments, and concerns must be addressed in this submittal. Submit four (4) 24" x 36" and twelve (12) 11" x 17" hardcopies of the drawings and fourteen (14) hardcopies of the specifications table of contents, cost estimate, and construction schedule.

The 100% plans shall be suitable to submit for Building Department review in hard copy format, ready for the winning bidder. Include all necessary attachments and schedules in hard copy, including but not necessarily limited to: structural calculations, energy efficiency worksheets, and related work.

Deliverables:

- a. 100% plans
 - i. Peer review will have been accomplished by this stage, with the statement and signature on the cover sheet. The professional will sign, date and seal the following Certification of Peer Review on a letterhead document with the transmittal of the final plans and specifications:
"The undersigned hereby certifies that a professional peer review of these plans and the required designs was conducted by me, a professional engineer with expertise and experience in the appropriate fields of engineering equal to or greater than the Engineer of Record, and that appropriate corrections have been made."

- ii. The Assistant Director of Public Works/City Engineer statement on the plans will be on the title sheet of the Project plans:
"The City of Sunnyvale hereby accepts these plans for construction, as being in general compliance with plans preparation requirements of this agency. Responsibility for the completeness and accuracy of the plans and related designs resides with the Engineer and Engineering Firm of Record."
- b. 100% specifications
 - i. Reviewed bid instructions
 - ii. Finalized technical specifications
 - iii. Review, annotate, and supplement, as necessary, Finalized Special Provisions (front end specifications), as needed
- c. Structural calculations
- d. Project schedule update
- e. 100% construction cost estimate
- f. Responses to the City's review comments on the 90% submittal (including Building Department comments), along with return of mark-ups.
- g. All structural calculations
- h. Updated LEED checklist with documentation of compliance with completed LEED credits
- i. Updated LEED-compliant energy model.
- j. Updated LEED-compliant daylight model.
- k. Other supporting documentation as necessary

Exclusions and Clarifications for Design Development

Architectural

- It is assumed that the City or PMC will adjudicate comments from multiple reviewers to ensure comments are appropriate for the design team, have not been addressed previously, do not add scope without authorization from the City and are not redundant comments provided by multiple reviewers. Comments from the City's Building Department will be distinct from comments from other City departments.

Mechanical, Electrical, Plumbing and Fire Protection

- Street and site lighting, other than required parking and site egress lighting, design and engineering is excluded.
- Interior and exterior utilitarian building lighting is included.
- Acoustical analysis or calculations are not included.
- Consultant will verify that sufficient electrical utility capacity will be available for the Admin/Lab/Maintenance Building.
- Life cycle cost analysis is not included.

Structural

- Building is assumed to be designed for Risk Category III. Seismic bracing of non-structural equipment and building components is not included, other than rooftop mechanical equipment over 400 pounds.

Environmental Permitting

- Scope does not anticipate the need for or include preparation of an Initial Study/Mitigated Negative Declaration.

F.7. SRF Funding Support (Optional)

The Clean Water State Revolving Fund (SRF) provides low interest loans and grant funds to address high-priority water quality needs, including development of publicly-owned treatment plants and improvements or upgrades to utilities. The scope of this project potentially matches the eligibility criteria for the SRF loan program.

If the City determines that the Project is a likely candidate for SRF financing, the PMC will be responsible for applying for and obtaining SRF financing. The application consists of general, technical, environmental, and financial security packages. A Project Report is one of the required attachments to the technical package. Consultant to provide a project narrative to support a Report prepared by the PMC, to include the following items:

- Objectives
 - Reason for the Project and its objectives/expected benefits
 - Programmatic requirements
- Project Alternatives Analysis
 - Planning and design parameters and assumptions
 - Summary of alternatives analysis
- Selected project
 - A detailed description of the recommended Project alternative and basis for selection
 - Design criteria and useful life of the Project
 - Life cycle cost estimate based on time of construction
 - Detailed schedule
 - Permits required for Project implementation
 - Description of any key issues

The SRF application process involves multiple rounds of review and comment by the State Water Resources Control Board (SWRCB). The PMC is responsible for managing this process and providing responses in a timely manner. Consultant to support the PMC by providing supplemental technical information related to the content of the Project Report and other aspects of the design, as requested by SWRCB.

Deliverables:

- Draft Narrative
- Response-to-comment table
- Final Project Narrative, incorporating City comments
- Responses to ad hoc technical questions from SWRCB

F.9. Temporary Office Building Demo (Optional)

This element of work is not identified in the Master Plan; however, it is integral to Projects 2.1, 2.2, and 8.3, since each of these projects will require temporary construction buildings, and parking for salaried employees. Additionally, plant administrations and operations staff will be relocated to a temporary building Maintenance staff will be relocated to another temporary building. Consultant will provide design documents that will guide the demolition of the

temporary office buildings that will be located at the former HHW site. The design plans and specifications will be sufficient for use by PMC to lead coordination with other demolition and construction as required for Projects 2.1 and 2.2.

An additional element in this work is the design for paving and striping of the HHW site, which is planned for staff and visitor parking. These improvements will be designed to avoid triggering Water Board or LEA regulatory requirements.

F.10. Carl Road Improvements (Optional)

Consultant is tasked with developing the design for the following design elements as part of Task F (Design Development):

- Paving of the HHW site
- Paving of Carl Road
- Street Lighting along Carl Road
- Design for the security fencing
- West Channel Gate Design

If requested by the City, the design elements will be removed from the Task F design documents and incorporated in a stand-alone design package (plans and specifications) appropriate for bidding purposes.

G. Bid Package *[Not Started]*

Consultant will develop the approved 100% Design submittal into bid package plans, specifications, and cost estimates. All comments from the previous submittal will be resolved and incorporated, including all Building Department comments.

Deliverables:

Submit two (2) hard copies of full sized plans, stamped and signed on each sheet by the Engineer of Record and by discipline, and one (1) hard copy of the specifications printed single-sided only. Copies and digital format (PDF and native format) of each of the documents listed below:

- Complete revised special Conditions and reviewed Standard Conditions, and bid instructions
 - Final Bid Schedule and/or schedule of values
 - Tabulation of quantities of all work
 - Final engineer's construction cost estimate in the form of the Bid Schedule, (along with supporting documents not part of the Bid Package)
 - Final list of submittals, including identification of items governed by American Iron and Steel requirements
 - Recommendation for allowed construction time period
 - Final list of information available to bidders with disclaimer
- Coordinate plans and technical specifications with Division 0 and 1 bid instructions, standard provisions, and revised special provisions prepared by CMC
- Complete sets of plans, stamped, and signed on each sheet by the Engineer of Record

- Complete Technical Specifications stamped and signed on the table-of-contents sheet by the Engineer of Record. If there are more than one Engineer of Record, stamp and sign the table of contents sheet for only that/those section(s) that applies to each engineering discipline.
 - Consultant will format headers and footers of the Technical Specifications per the example provided by the Project Administration Section and include the Invitation for Bids number provided by Purchasing. The final version of the Technical Specifications will be submitted as a PDF.
- Reviewed Construction Contract with completion of blanks that are determined by the work (time of construction).
- Certification of Peer Review signed by MWA representative that the entire Bid Package was reviewed and is recommended for competitive bidding (Not incorporated with Bid Package).
- Digital copy of all work products and supporting work.
- Structural calculations, energy efficiency worksheets, and related work.

H. Bidding Services *[Not Started]*

Consultant will coordinate bid responsibilities with PMC, and City Construction Management Consultant (CMC), attend a pre-bid meeting, prepare minutes from pre-bid meeting, assist the City with preparation of RFI responses, provide information as-needed for the City to prepare Addenda, and support the City's coordination efforts to inform plan-holders of significant responses to RFIs. During bidding, all proposers' communications will be directed through the City's Purchasing Officer.

Consultant will prepare stamped and signed Conformed Documents incorporating all addenda to the bid documents, as required. City will provide reproduction services for the conformed drawings.

I. Construction Support Services *[Not Started]*

The City's CMC will have primary responsibility for construction management and inspection. The Consultant's primary point of contact during construction will be the City's CMC, not the Contractor.

I.1. Internal Handoff Meeting

Attend and prepare information for an internal handoff meeting from the design team to the construction management team. Consultant will be prepared to address: possible construction pitfalls, items for the construction management team to be aware of (special working hours, shortened timelines for submittal reviews, etc.).

I.2. Pre-Construction and Construction Progress Meetings

Attend the pre-construction meeting, and periodic construction meetings and field inspection for final completion as determined by the City. All other required on-site meetings will be considered necessary and based on the competency and adequacy of the contract documents and therefore the responsibility of the Consultant.

I.3. Final Inspection Participation and Punch List Development

Participate in the final inspection and development of the punch lists. Verify punch list items have been addressed.

I.4. Respond to RFIs

Respond to RFIs, which includes clarifying or providing revisions or additional detail where necessary on the plans and specifications. Response to RFIs will be timely in order to avoid construction delays and claims.

I.5. Review and Respond to Submittals

Review and respond to all submittals within the period allocated in the contract documents and as necessary to avoid construction delays and claims.

I.6. Review Proposed Substitutions

Review proposed substitutions, if any, for conformance to plans and technical specifications.

I.7. Request for Quotations and Contract Change Orders

Review and make recommendations on proposed changes to the contract.

I.8. Prepare Record Drawings

Prepare Record Drawings based upon red-lines provided by the Contractor and field reviews. The Record Drawings will be prepared digitally, using AutoCAD. Final Record Drawings will be submitted electronically, in PDF and AutoCAD format. A disclaimer will be added to the Record Drawings if signed by Architect/Engineer noting that changes to the drawings are based on contractor mark-ups.

I.9. Lessons Learned Meeting

Participate in the “Lessons Learned Meeting” with City, PMC, and CMC at the end of the Project.

I.10. Coordination and Oversight for Equipment Testing and Integration

Provide coordination and oversight related to equipment testing and integration and provide documentation.

I.11. Construction Quality Assurance (CQA) for Deep Foundations

Geotechnical CQA will be required by the City Building Department to verify that the foundation elements were constructed in accordance with the geotechnical design recommendations. The permitting agency will require that CQA be conducted by an engineer that is independent of the construction contractor. Consultant will provide CQA services to include a dynamic pile analysis and pile driving activities to verify that foundation piles are installed per the geotechnical recommendations and design. Consultant will provide record drawings and documentation to the City upon completion of the pile driving activities.

J. Commissioning Support Services *[Not Started]*

Leading up to and during commissioning, the Contractor will be responsible for preparing and executing training and testing plans and schedules; and equipment and system start-up plans. The CMC will be responsible for observing and documenting the completion of the majority of these activities. The Consultant's role is to review and accept submittals and tasks performed by the contractor. Specific services will include:

J.1. Planning Phase

Consultant will prepare a Commissioning (Cx) Plan and provide Pre-Functional Checklists.

J.2. Commissioning Phase

Consultant will:

- Review Test and Balance (TAB) report
- Oversee Functional Performance Testing (FPT)
- Develop Final Cx Report & Issues Log
- Create Operations & Maintenance (O&M) Plan

J.3. Start-Up Phase

Consultant will:

- Create Systems Manual
- Witness Occupant Training
- Perform 10 Month Review

J.4. Monitoring Based Commissioning (Optional)

An optional scope of services has been provided for conducting Monitoring Based Commissioning. Optional services to include:

- Create a Monitoring Based Commissioning Plan (MBCx)
- Create a Building Management System (BMS) points list to ensure all data points will be monitored properly to implement the MBCx Plan
- Review submittals for controls, metering, and energy analysis software-related equipment
- Implement MBCx Plan with on-site verification of monitoring systems
- Verify Trend Data (quarterly) for one (1) year during operations
- For any inconsistencies in data that do not match to expected energy use, determine appropriate on-site testing needed to fix the inconsistency
- Address performance issues with follow-up testing during the ten (10) Month Review

K. Title 27 Mitigation (Optional) *[Not Started]*

The subtasks described below are all optional tasks and will be implemented only if the City is required to comply with CCR Title 27 LFG requirements for the Admin/Lab/Maintenance Building. If the City confirms that it is exempt from Title 27 requirements, these subtasks will not be performed.

K.1. Meeting Support with Landfill-related Regulatory Agencies (Optional)

Meeting Support

Given the location change for the Admin/Lab Building from the former HHW site, clarification is needed regarding the permitting requirements for the Admin/Lab/Maintenance Building, including any requirements that would apply to the repaving of the HHW site for use as a staff and visitor parking area.

Consultant will support the City in a meeting with the LEA and the Water Board. Activities will include:

- Provide input for developing Power Point slides for a presentation during meeting with the LEA and Water Board. This will include preparation of up to two figures.
- Participate in an internal pre-call with City/PMC.
- Participate in an internal pre-meeting with City/PMC.

Meeting Participation

At the City's request, Consultant will participate in the meeting with the LEA and the Water Board.

K.2. Landfill Gas Investigation (Optional)

Consultant team will perform a LFG field investigation and laboratory testing program to evaluate the need for mitigation measures for soil vapor and/or LFG. The purpose of this subtask is to determine the need for a passive or an active collection system associated with the Admin/Lab/Maintenance Building, which would be assessed as part of the preliminary design phase of the project.

The initial step for this subtask will involve preparation of a LFG/VOC Field Investigation Workplan with submittal to the City for review. The LFG/VOC Field Investigation will consist of the following activities:

- Install nested soil gas probes at four locations for collection of soil gas samples and vacuum measurements. Locations will be influenced based on the results of the utility clearance.
- Vacuum measurements and LFG samples will be collected from the soil vapor probes.
- Samples will be analyzed for methane, carbon dioxide, oxygen, non-methane organic compounds (NMOC), and volatile organic compound (VOC) concentrations (standard turnaround time).
- The soil gas probes will be over-drilled, removed, and the boring backfilled with a cement-bentonite grout following sampling.

Deliverables:

- Draft LFG/VOC Field Investigation Workplan.
- Response to comments.
- Final LFG/VOC Field Investigation Workplan, incorporating comments.
- Draft LFG/VOC Investigation Report.
- Response to comments.
- Final LFG /VOC Investigation Report, incorporating comments.
- Draft Methane Monitoring and Alarm System TM.
- Response to comments.
- Draft Methane Monitoring and Alarm System TM to Local Enforcement Agency (LEA), incorporating comments.

- Response to comments and follow-up questions from LEA.
- Final Methane Monitoring and Alarm System TM, incorporating comments

K.3. Landfill Gas Mitigation (DIM3) (Optional)

The building may also require compliance with CCR Title 27 requirements for installation of a subsurface gas barrier, construction of a passive methane gas collection and venting system, and/or a continuous methane gas monitoring and alarm system. If required, the design criteria for the proposed system will also be included in DIM #3.

If it is determined that LFG mitigation measures will be required, the following elements of work will be needed to augment the information to be included in DIM #3:

- Passive methane gas collection and venting system design basis and conceptual design.
- Methane gas monitoring and alarm system design basis and conceptual design.
- Methane Gas Monitoring System Operation, Maintenance, and Response Plan.
- O&M order of magnitude cost estimate for passive venting system and methane gas monitoring system.
- O&M order of magnitude costs for periodic methane gas monitoring.

Deliverables (to be coordinated with DIM #3 effort):

- Draft DIM #3: Landfill Gas Control to City
- Draft DIM #3: to the LEA and Water Board, incorporating City comments
- Workshop to present findings to City
- Response to comments on Draft DIM #3: Landfill Gas Control
- Final DIM #3: Landfill Gas Control, incorporating City and regulatory agencies' comments and addressing any questions City personnel may have.

K.4. Landfill Gas Mitigation Design (Optional)

Consultant may provide design for a passive methane collection and venting system and related components based on the conclusions of Task B.7 Meeting Support for Landfill Permitting Regulatory Agencies and Task K.1 LFG Investigation, as may be required by CCR Title 27. This work could include design of a subsurface gas barrier, venting system, and monitoring/alarm system to meet the requirements of CCR Title 27.

Deliverables:

- Additional drawings and specifications to be incorporated into the defined deliverables in Task F (Design Development).

K.5. CQA for Landfill Gas Mitigation (Optional)

If LFG mitigation measures are designed, CQA will be required by the LEA to verify that the passive methane collection, venting system, and related components required by CCR Title 27 were constructed in accordance with the design intent. The LEA will require that CQA be conducted by an engineer that is independent of the construction contractor. Consultant team will provide CQA services, which will include verification and testing of the gas barrier installation, venting system, and monitoring/alarm system.

Deliverables:

- Draft Construction Completion Report (CCR), including record drawings and documentation to City.
- Response to comments.

- Draft CCR to Local Enforcement Agency (LEA), incorporating comments.
- Response to comments and follow-up questions from LEA.
- Final CCR, incorporating comments

Assumptions:

The cost for this scope has been estimated based on the following assumptions:

- Assume methane mitigation system components will be installed over several mobilizations
- Assume a total of 25 discontinuous days in the field
- Assume that one field person will be on site to participate in CQA inspection activities (minimum charge of four hours per day plus travel time).

City of Sunnyvale Administration and Laboratory Building MWA Architects, Inc.																											10/21/2019	
Tasks			MWA												Subconsultants												TOTAL PROPOSED AMENDMENT	
Task #	Task Description	Principal In Charge	Design Manager	Project Manager	QA/QC Manager	Deputy Project Manager	Project Architect	Interior Architect	Design Staff 3	Design Staff 2	Design Staff 2	Design Staff 1	TOTAL MWA HOURS	TOTAL MWA COSTS	Structural	MEP	Civil	Landscape	LEED	Geotech	SCADA I&C	CEQA	Cost	Corrosion	TOTAL SUB-CONSULTANT COSTS			
		Jeff McGraw	Diana Mooseman	Greg Robley												IDA	Interface	KPFF	Merrill Morris	STOK	Geosyntec	Carollo	ESA	Mack5		JDH Corrosion		
		\$245	\$185	\$185	\$150	\$150	\$150	\$135	\$130	\$120	\$110	\$95			Fee	Fee	Fee	Fee	Fee	Fee	Fee	Fee	Fee	Fee		Fee		
A	Project Management	Subtotal Task A	112	-	656	100	312	8	-	108	32	8	-	1,336	\$230,560	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$114,143	
A.1	Project Management Plan		4		40		80						124	\$20,380												\$4,180		
A.2	Meeting Management			100		100							200	\$33,500												\$7,700		
A.3	Project Schedules		12		150								162	\$30,690												\$14,220		
A.4	Quality Assurance / Quality Control		80		200	100							380	\$71,600												\$84,217		
A.5	Document Management			50		100			100				250	\$37,250												\$4,250		
A.6	Pay Applications		8		100								108	\$20,460												\$2,496		
A.7	Optional: Support for Two Council Meetings		8		16		32	8		8	32	8	112	\$16,680												-\$2,920		
B	Permitting	Subtotal Task B	-	-	8	-	16	-	-	-	16	-	-	40	\$5,800	\$0	\$0	\$2,920	\$0	\$0	\$0	\$0	\$22,400	\$0	\$0	\$25,320	-\$110,046	
B.6	CEQA Memo				8		16				16		40	\$5,800			\$2,920					\$22,400			\$25,320	\$31,120		
C	Documentation of Existing Conditions	Subtotal Task C	4	-	36	-	44	-	-	16	8	-	-	108	\$17,280	\$0	\$0	\$40,500	\$0	\$0	\$125,159	\$0	\$0	\$0	\$0	\$165,659	\$165,982	
C.4	Supplemental Surveying				4		8			8			20	\$2,980			\$22,500									\$22,500		
C.5	Supplemental Subsurface Utility Mapping				4		8			8			20	\$2,980			\$18,000									\$18,000		
C.6	Geotechnical Characterization		4		24		24				8		60	\$9,980						\$120,351					\$120,351	\$130,331		
C.7	Optional: Address Artesian Conditions				4		4						8	\$1,340						\$4,808					\$4,808	\$6,148		
D.1	Building Relocation Concepts	Subtotal Task D.1	-	-	-	-	-	-	-	-	-	-	-	-\$58,419	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,560	\$0	\$0	\$1,560		
E	Preliminary Design	Subtotal Task E	60	44	160	-	240	208	24	216	336	216	-	1,504	\$215,040	\$35,360	\$39,735	\$31,640	\$8,504	\$6,705	\$59,378	\$18,021	\$0	\$26,760	\$12,302	\$238,405	\$331,813	
E.7	DIM #1: Preliminary Site Design		8	4	40		80	80		40	120	40	412	\$58,100		\$11,080	\$24,140	\$8,504		\$9,540			\$8,440		\$61,704	\$119,804		
E.8	DIM #2: Preliminary Building Design		48	40	80		120	120	24	160	200	160	952	\$135,600		\$21,255	\$6,000		\$6,705		\$18,021		\$13,480		\$65,461	\$201,061		
E.9	DIM #3: Preliminary Structural and Foundation Design		4		40		40	8		16	16	16	140	\$21,340	\$35,360	\$7,400	\$1,500			\$49,838			\$4,840	\$12,302	\$111,240	\$132,580		
F	Design Development	Subtotal Task F	108	76	284	-	592	824	260	1,064	800	760	1,900	6,668	\$838,980	\$182,540	\$244,625	\$92,290	\$27,172	\$42,900	\$46,806	\$44,520	\$12,450	\$80,860	\$0	\$774,163	\$798,151	
F.1	30% Submittal		40	40	60		120	160	60	240	160	160	400	1,440	\$184,400	\$34,700	\$43,810	\$20,280	\$6,608	\$14,175	\$13,772	\$9,574		\$17,380	\$160,299	\$212,898		
F.2	60% Submittal		32	24	80		160	240	80	320	240	240	600	2,016	\$251,680	\$58,860	\$54,045	\$22,420	\$6,252	\$11,525	\$12,734	\$11,968		\$25,120	\$202,924	\$239,834		
F.3	90% Submittal		24	8	80		160	240	80	320	240	240	600	1,992	\$246,760	\$70,060	\$74,705	\$20,410	\$9,408	\$8,600	\$12,696	\$18,191		\$25,120	\$239,190	\$235,411		
F.4	100% Submittal		12	4	40		80	120	40	160	120	120	300	996	\$123,380	\$18,920	\$59,995	\$17,180	\$4,904	\$8,600	\$7,604	\$4,787		\$13,240	\$135,230	\$134,683		
F.7	Optional: SRF Funding Support				8		16				40		64	\$8,680			\$3,040					\$12,450			\$15,490	\$14,892		
F.9	Optional: Temporary Office Building Demo				8		16	24		24			72	\$10,600			\$6,920	\$6,000							\$12,920	\$23,520		
F.10	Optional: Carl Road Improvements				8		40	40					88	\$13,480			\$2,110	\$6,000							\$8,110	\$21,590		
G	Bid Package	Subtotal Task G	8		8		40	24		40	24	24	80	248	\$31,360	\$0	\$6,190	\$3,560	\$3,136	\$0	\$3,710	\$3,719	\$0	\$0	\$0	\$20,315	\$13,321	
H	Bidding Services	Subtotal Task H	8		16		40	16	32		32		144	\$21,480	\$3,560	\$10,085	\$2,400	\$1,060	\$0	\$3,710	\$3,240	\$0	\$0	\$0	\$0	\$24,055	\$11,782	
I	Construction Support Services	Subtotal Task I	120	-	320	-	760	568	132	84	552	552	320	3,408	\$473,900	\$48,100	\$99,960	\$16,100	\$19,978	\$9,075	\$54,402	\$12,395	\$0	\$0	\$4,505	\$264,515	\$623,420	
I.1	Internal Handoff Meeting				4		8	4			4	4	24	\$3,460	\$2,580	\$1,260	\$600								\$4,440	\$6,000		
I.2	Pre-Construction and Construction Progress Meetings		16		40		80	80			80	80	376	\$53,720	\$1,080	\$8,830	\$2,400	\$5,280						\$4,505	\$22,095	\$72,502		
I.3	Final Inspection Participation and Punch List Development		8		8		32	16			16	16	96	\$14,320	\$1,440	\$12,365	\$1,200	\$2,640							\$17,645	\$30,288		
I.4	Respond to RFIs		40		160		320	240	40		240	240	1,280	\$184,000	\$19,180	\$22,095	\$3,520	\$1,704			\$8,854				\$55,353	\$237,161		
I.5	Review and Respond to Submittals		40		80		240	160	80		160	160	320	1,240	\$162,600	\$12,120	\$18,130	\$2,540	\$1,631	\$9,075	\$3,344				\$46,840	\$205,623		
I.6	Review Proposed Substitutions		4				16	16	8		16	16	76	\$10,540	\$1,910	\$8,585	\$1,200	\$495		\$3,344					\$15,534	\$26,074		
I.7	Request for Quotations and Contract Change Orders			8		16	16	16			16	16	72	\$9,960	\$3,320	\$8,615	\$900	\$5,204		\$3,344					\$21,383	\$31,343		
I.8	Prepare Record Drawings		4		8		16	16		80	16	16	156	\$21,340	\$5,060	\$8,200	\$2,540	\$3,024		\$6,826					\$25,650	\$46,990		
I.9	Lessons Learned Meeting		4		4		8	4	4	4	4	4	36	\$5,500	\$1,410	\$5,045	\$1,200								\$7,655	\$13,155		
I.10	Coordination and Oversight for Equipment Testing and Integration		4		4		8	16					32	\$5,320		\$6,835					\$3,541				\$10,376	\$15,696		
I.11	Construction Quality Assurance (CQA) for Deep Foundations				4		16						20	\$3,140						\$37,544					\$37,544	\$6,344		
J	Commissioning Support Services	Subtotal Task J	-	-	40	-	80	16	-	-	-	-	-	136	\$21,800	\$0	\$14,080	\$0	\$0	\$68,900	\$0	\$8,853	\$0	\$0	\$0	\$91,833	\$43,083	
J.1	Planning Phase				8		16						24	\$3,880		\$4,575			\$8,800		\$1,771				\$15,146	\$8,061		
J.2	Commissioning Phase				16		32	8					56	\$8,960		\$4,930			\$19,800		\$3,541				\$28,271	\$16,181		
J.3	Start-Up Phase				8		16	8					32	\$5,080		\$4,575			\$24,300		\$3,541				\$32,416	\$12,441		
J.4	Optional: Monitoring Based Commissioning				8		16						24	\$3,880					\$16,000						\$16,000	\$6,400		
K	Title 27 Mitigation	Subtotal Task K	-	-	28	-	32	16	-	-	8	-	-	84	\$13,340	-	-	-	-	-	\$92,466	-	-	-	-	-	\$92,466	\$105,806
K.1	Optional: Meeting Support with Landfill-related Regulatory Agencies																											