



June 11, 2025

Hayes Morehouse  
Water Pollution Control Plant Manager  
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San Leandro, California 94577

sent via email to: [HMorehouse@sanleandro.org](mailto:HMorehouse@sanleandro.org)

**Subject: Proposal for Stabilization Project Construction, Engineering, and Compliance Management and Phase 2 Preconstruction Engineering and Management at the City of San Leandro Water Pollution Control Plant (WPCP) Former Polishing Pond, San Leandro, California**

Dear Mr. Morehouse:

This proposal describes the scope of work and requested budget for Terraphase Engineering (Terraphase) to provide to the City of San Leandro (City) with engineering and construction support services for implementation of the City WPCP Treatment Wetland Project as defined in the following overview:

1. Engineering oversight/quality control, construction management, and State Water Resources Control Board (SWRCB) Stormwater Construction General Permit (CGP) compliance management during construction of the Phase 1 sludge-soil-cement stabilization and fill project (Stabilization Project) at the WPCP former polishing pond, as requested by the City during an April 18, 2025 project meeting.
2. Additional Engineering and Construction Management Support during preconstruction planning and procurement of the Phase 2 Treatment Wetland Construction Project (Phase 2) as discussed with the City in May 2025.

The Stabilization Project generally includes the following construction scope:

1. Demolition, clearing and grubbing, of the entire perimeter and surrounding working area of the former polishing pond.
2. Sludge-soil-cement stabilization of the former polishing pond sludge surface using soil from the on-site soil stockpile.
3. Import, placement, compaction, and grading of earth fill atop the stabilized pond surface to proposed final pond surface design elevation.
4. Installation of a temporary pond surface dewatering system.

Terraphase prepared Issued for Bid engineering design documents for the Stabilization Project and is supporting the City during construction bidding and procurement for the Phase 1 Stabilization Project. The City will serve as Owner of the project and hold all construction contracts, with Terraphase proposing to provide full engineering, construction quality assurance (QA), construction management (CM), and CGP compliance support during construction of the Stabilization Project.

Based on our deep knowledge of the project and sharing the City's objectives of efficient and high-quality execution of the Stabilization Project, we have developed a "combined services" approach where an

experienced core Terraphase team provides full engineering, construction QA, construction management, and CGP compliance management services. The Terraphase team includes team members with extensive project experience with experience developing the engineering design, specifications, and compliance strategy for the Stabilization Project and who have the experience and expertise to serve these multiple roles simultaneously, providing the City a unified point of contact when managing this project.

This proposal first describes Terraphase's proposed overall management role and responsibilities during construction of the Stabilization Project, then organizes this scope of work into proposed Tasks 1-5, which are primarily organized by the following operational phases of the Stabilization Project:

1. Premobilization Phase
2. Mobilization/Site Setup Phase
3. Stabilization Phase
4. Fill Phase
5. Closeout Phase

This proposal includes CGP compliance during construction of the Stabilization Project as Task 6. The duration of the above phases of Stabilization Project is based on review of the schedule information provided in the provisionally awarded contractor's proposal with allowances for minor schedule extension. The assumed duration of each phase is provided in the detailed scope descriptions for Tasks 1-5.

Task 7 of this proposal includes additional engineering and construction management support for the City to:

- Provide construction and contract management support during Phase 2 bidding and procurement, as Terraphase has provided during Stabilization Project bidding and procurement.
- Provide a more extensive Phase 2 cost estimate update than the currently contracted update.
- Provide engineering and coordination support with the City and others to integrate the Phase 2 instrumentation and controls (I&C) system into the WPCP I&C system.
- Revise the design of the WPCP effluent tie-in valve as discussed with the City and facilitate a constructability review of the Phase 2 treatment wetland subgrade liner by a qualified contractor.
- Revise and maintain the Phase 2 project schedule with additional detail and information as Phase 2 preconstruction planning and design updates progress.

## Stabilization Project Engineering, Construction, and CGP Compliance Management Scope of Work

Terraphase will provide the following engineering, construction, and compliance management services through the duration of the Stabilization Project, from City Notice to Proceed through project closeout.

1. Set up and administer a Construction Management Information System (CMIS) using Procore, for the Stabilization Project to be used by the City, contractors, and Terraphase to manage project workflows and documentation.
2. Receive, manage/organize, review and approve construction contractor's submittals as detailed in the project specifications. The proposed level of effort for submittal management assumes that all submittals can be approved and closed after a maximum of two revision and resubmittal iterations.
3. Receive, review and approve all materials used in the project, including reviewing/approving proposed substitutions.

4. Receive, manage/organize, perform required engineering evaluation, and respond to RFIs. Based on our professional judgement, Terraphase expects approximately 12 justifiable RFIs that require engineering evaluation and response with an assumed allocation of 52 Principal hours.
5. Issue and manage/organize design revisions to the project design via Field Orders, as needed.
6. Prepare for, facilitate, attend (Terraphase Engineering/CM lead, field manager, and Principal In Charge) and prepare minutes for the following meetings:
  - a. Weekly operations meeting
  - b. Monthly schedule review meeting
  - c. Additional working meetings as required to resolve questions and issues as they arise
7. Conduct off-site and on-site engineering/technical, QA, construction management, and CGP compliance field oversight and technical assistance to perform the services described throughout this section, including as detailed below:
  - a. The level of effort for Terraphase off-site and on-site oversight will vary throughout the duration of the Stabilization Project based on the phase of the project and Contractor's activities, typically starting each phase of construction with a higher level of effort and decreasing as work proceeds.
  - b. The budgeted on-site level of effort for each phase are detailed in the phase-specific task descriptions in this proposal. Due to the expected magnitude of construction QA, CM, and engineering support required during sludge-soil-cement stabilization operations, Terraphase will provide full-time on-site field oversight during this phase of work.
  - c. On-site office facilities, consisting desk space with power, for Terraphase personnel to perform the on-site engineering, QA, CM, and compliance management is assumed to be provided by the City.
8. Prepare and submit a project-specific Stormwater Pollution Prevention Plan (SWPPP) compliant with the 2022 CGP to be utilized during construction in order to minimize pollutant discharges.
9. Perform all on-site CGP SWPPP monitoring inspections during construction operations and prepare all associated inspection reports and required CGP compliance submittals to the State SMARTS database.
10. Review the following contractor progress reporting and related documentation to ensure that the work is constructed in accordance with the design plans and specifications:
  - a. Daily Construction Reports
  - b. Weekly Construction QC and Progress Reports
  - c. Monthly Construction Schedule updates
  - d. Demolition waste weight tickets.
  - e. Import material weight tickets.
11. Lead construction QA administration, including:
  - a. Prepare the project QA Checklist that consolidates all QA activities to be performed by Terraphase, including type of activity, frequency, and acceptance criteria.
  - b. Receive and manage/organize all Contractor quality control data and reporting.
  - c. Conduct independent QA testing during sludge-soil-cement stabilization operations.
  - d. Review and evaluate Contractor-provided quality control (QC) reporting and appropriate Terraphase QA duplicate data against the acceptance criteria specified in the contract documents and provide recommendation of acceptance of constructed work to the City.

- e. Track and manage quality non-conformances (i.e., when QC or QA data do not meet acceptance criteria specified in the contract documents), including:
  - i. Document and track quality control/acceptance non-conformances in the project Non-Conformance Log.
  - ii. Work with the City and Contractor to develop corrective measures.
  - iii. Review additional work to remedy non-conformances, and
  - iv. Document resolution in the Non-Conformance Log.
- 12. Document and map construction progress using a drone to periodically photograph the pond area:
  - a. Aerial photos of the pond area can be georeferenced to allow quantification of progress and comparison with Contractor reporting.
  - b. The drone will be operated by a FAA-licensed Terraphase staff level field managers while they are on-site.
  - c. Based on initial review, the site is eligible for low-altitude drone usage under the FAA Low Altitude Authorization and Notification Capability, which requires notification approximately 1 week before drone usage.
- 13. Lead review of Contractor applications for payment, including review and required verification of the following:
  - a. The quantity of billed work per the contracted Schedule of Values.
  - b. That the quality of billed work conforms to the contract requirements and any unresolved non-conformances are excluded.
  - c. That required submittals have been approved.
  - d. Contract financial status, including billing period and total project spend, budget remaining, contract changes.
- 14. Manage the construction closeout process, including
  - a. Planning and facilitating closeout inspections with the City and Contractor
  - b. Provide engineering and contract compliance review of the Contractor's substantial completion application and punch list
  - c. Plan and facilitate inspection of the Contractor's completed punch list
  - d. When appropriate, provide recommendation to the City to issue final completion approval to the Contractor.
- 15. Prepare Record Drawings based on the red-lined, marked-up field construction drawings from the General Contractor
- 16. Perform budget tracking, invoicing, and associated financial management of the Terraphase contract with the City for this project.

The above-described overall scope of work varies based on the operational phase of the project, which are detailed in the following phase-based tasks.

## Task 1: Premobilization Phase Engineering, CM, Compliance Management

The premobilization phase of the project is defined as the period beginning with City issuance of Notice to Proceed to the Contractor and ending with the start of Contractor mobilization to the site. This phase typically includes project kickoff meetings, and preparation, submittal, and review (as specified in the contract

documents) of Terraphase and Contractor premobilization operational plans and submittals, especially plans and submittals that require approval before the Contractor is authorized to mobilize to the Site.

Terraphase will provide engineering/QA, CM, and CGP compliance management as described in the **Engineering, Construction, and CGP Compliance Management Scope of Work** described above during the premobilization phase of the project and as further defined below:

- Purchase a one-year project-specific Procore license and set up the Procore CMIS for the project. The vendor cost of the Procore license is based on an April 24, 2025 quote.
- Prepare a revision of the existing Terraphase Site-Specific Health and Safety Plan to incorporate Terraphase scope during construction of the Stabilization Project.
- Prepare the project QA Checklist.
- Prepare templates for all reporting and documentation to be completed by Terraphase during the Stabilization Project.
- Plan, facilitate, and document minutes for the project kickoff meeting.
- Review, provide comments, and/or approve the following initial Contractor submittals:
  - Stabilization Operations Plan
  - Stabilization Construction Quality Control Plan
  - Fill Work Plan and Schedule
  - 811 tickets and utility response information
  - Construction Health and Safety Plans
  - Stabilization Construction Schedule (initial)
  - Dewatering System Work Plan (if submitted during this phase, not required for initial mobilization)
  - KMEP vehicle crossing approval
- One half-day site visit for on-site coordination/planning with the Contractor (including possibly facilitating Contractor utility clearance if needed) and City and/or to attend the project kickoff meeting.

The assumed duration of this phase, based on review of the provisionally awarded contractor's proposal, is 3 work weeks.

## Task 2: Mobilization/Site Setup Phase Engineering, CM, Compliance Management

The Mobilization/Site Setup phase of the project is defined as the period beginning with Contractor mobilization to the site and ending with the initiation of sludge-soil-cement stabilization operations. Construction activities completed during this phase will be described in the initial Contractor schedule and submittals, but is expected to include continued submittal preparation and review, underground utility coordination, installation of the Contractor's temporary construction support facilities, setup of environmental controls, delivery and setup of stabilization construction equipment, delivery and staging of materials, demolition of site features as described in the plans and specifications, stabilization work platform construction, and initial stockpile management.

Terraphase will provide engineering/QA, CM, and CGP compliance management as described in the **Engineering, Construction, and CGP Compliance Management Scope of Work** described above during the Mobilization/Site Setup phase of the project and as further detailed below:

- Conduct on-site engineering, CM, and compliance field oversight and technical assistance:
  - Terraphase staff level field manager: 1 full day on site during contractor mobilization and site setup, and full time on site during site demolition.  
The Terraphase field manager will perform the following activities when on-site:
    - Oversee Contractor operations, including observing and confirming that Contractor's quality control operations are in accordance with the approved Contractor Construction QC Plan.
    - Quantitative and qualitative documentation of construction progress, including preparing schematics of where work is complete, active work locations, where work has not started.
    - Track and manage demolition activities, including noting the physical extents of all demolition and condition of remaining features on project drawings.
    - Complete required daily SWPPP BMP inspections upon the start of demolition activities and supporting required weekly and monthly SWPPP QSD/QSP inspections.
    - Inspect materials received on-site against the Contractor's relevant approved submittal.
    - Provide field support for review and resolution of RFIs, including collecting data, coordinating with the Contractor, discussing potential means of resolution with the Contractor, off-site Engineering personnel, and the City, and documenting these discussions.
    - Provide field support for identifying, tracking, and resolving construction quality issues, including coordination with Contractor and City staff.
    - Support contract change management, including measuring/confirming change quantities, reviewing change requests, coordination with Contractor, Engineering personnel, and the City.
    - Conduct on-site pay application site meeting with Contractor prior to formal submittal and/or for review and recommendation to City after submittal.
    - Attending Contractor daily health and safety tailgate meetings after commencement of demolition work.
    - Prepare and submit a Daily CM/Engineering/QA Report after each day of on-site oversight after commencement of demolition work. This report will include a summary of work performed, CM activities, Engineering support activities, QA activities, technical/production issues encountered, representative photos, and a 1-week lookahead of significant CM/engineering/QA tasks.
  - Terraphase engineering/CM lead: 1 partial day site visit each week to attend project meetings, review site conditions, plan Contractor operations, and discuss submittal review and comments directly with the Contractor and City to expedite resolution.
- Conduct the SWPPP QSD required inspection, including pre-construction photo documentation and map preparation, as required by the CGP and weekly dry-weather inspections.
- Conduct off-site engineering, QA, CM, and CGP support, including reviewing and resolving RFIs, preparing design modifications and technical field orders, submittal review, QA reporting, and any early project compliance reporting as described in the **Engineering, Construction, and CGP Compliance Management Scope of Work**.

This task assumes a 3-week total duration for this phase of the Stabilization Project for on-site oversight and management scope, based on review of the provisionally awarded Contractor's proposal. If the Contractor's actual construction schedule requires additional on-site oversight, Terraphase will confirm the additional effort with the City, including requesting additional budget if required.

As this task does not include full-time oversight prior to the start of demolition work, the level of effort for this task does not cover any additional required pre-, during-, or post-storm SWPPP BMP inspections during this phase if these are required when Terraphase staff are not already on site. If required, Terraphase will confirm the additional effort with the City, including potentially requesting additional budget.

### Task 3: Stabilization Phase Engineering, CM, Compliance Management

The Stabilization phase of the project is defined as the period encompassing all sludge-soil-cement stabilization operations, ending with the completion of active stabilization operations and the beginning of post-stabilization fill placement. If there is overlap between stabilization and fill operations, the scope of work and assumed level of effort for this phase will continue until all stabilization operations have finished.

Terraphase will provide all engineering/QA, CM, and CGP compliance management as described in the **Engineering, Construction, and CGP Compliance Management Scope of Work** described above during the Stabilization phase of the project and as further detailed below:

- Provide full-time onsite engineering, CM, and CGP compliance field oversight and technical assistance:
  - Terraphase staff level field manager: Full time, assuming a Mon-Fri work week and maximum 50 hours per week, performing the following activities:
    - Oversee Contractor operations, including observing and confirming that Contractor's quality control operations are in accordance with the approved Contractor Construction QC Plan.
    - Quantitative and qualitative documentation of construction progress, including preparing schematics of where work is complete, active work locations, where work has not started.
    - Track and manage contractor QC data, including noting the physical location of each QC sample location on project drawings.
    - Perform Engineer's independent QA sampling.
    - Complete required daily SWPPP BMP inspections and support required weekly and monthly SWPPP QSD/QSP inspections.
    - Inspect materials received on-site against the Contractor's relevant approved submittal.
    - Provide field support for review and resolution of RFIs, including potentially collecting data, coordinating with the Contractor, discussing potential means of resolution with the Contractor, off-site Engineering personnel, and the City, and documenting these discussions.
    - Provide field support for identifying, tracking, and resolving construction quality issues, including coordination with Contractor and City staff.

- Support contract change management, including measuring/confirming change quantities, reviewing change requests, coordination with Contractor, Engineering personnel, and the City.
- Conduct on-site pay application site meeting with Contractor prior to formal submittal and/or for review and recommendation to City after submittal.
- Attending Contractor daily health and safety tailgate meetings.
- Prepare and submit a Daily CM/Engineering/QA Report after each day of on-site oversight. This report will include a summary of work performed, CM activities, Engineering support activities, QA activities, technical/production issues encountered, representative photos, and a 1-week lookahead of significant CM/engineering/QA tasks.
- Terraphase engineering/CM lead, 12 total days on-site as detailed below:
  - 2 days on site per week during Weeks 1-3 of stabilization operations (6 total days on site)
  - 1 day on site per week during Weeks 4-6 of stabilization operations (3 total days on site)
  - 1 day on site during Weeks 7-10 of stabilization operations (1 total day on site)
  - 2 days on site during Week 11 (assumed final week) of stabilization operations to facilitate stabilization closeout (2 total days on site)
- Terraphase Geotechnical Engineering Subject Matter Expert: 3 partial day site visits during stabilization operations to review operations and provide technical support if needed.
- Conduct QA field penetrometer and laboratory testing of completed stabilization cells to compare with Contractor-provided data. Assumes one duplicate confirmation laboratory sample per week, and up to one duplicate field penetrometer test per day when on site and as available during active stabilization operations. QA confirmation laboratory sample collection method will be determined after reviewing the Contractor's Stabilization Construction Quality Control Plan.
- Conduct monthly QSD/QSP dry-weather SWPPP inspections, weekly on-site BMP inspections, and any pre-, during-, and post-storm inspections that are required.
- Conduct off-site engineering, QA, CM, and CGP support, including reviewing and resolving RFIs, preparing design modifications and technical field orders, submittal review, QA reporting, and compliance reporting as described in the **Engineering, Construction, and CGP Compliance Management Scope of Work**.

This task assumes a 11-week total duration for this phase of the Stabilization Project for on-site oversight and management scope, based on review of the provisionally selected Contractor's proposal. If the Contractor's actual construction schedule requires additional on-site oversight, Terraphase will confirm the additional effort with the City, including potentially requesting additional budget.

## Task 4: Fill Phase Engineering, CM, Compliance Management

The Fill phase of the project is defined as the period beginning after completion and acceptance of all sludge-soil-cement stabilization operations, and includes all fill import, placement, compaction, and grading, installation and testing of the post-fill dewatering system. This phase ends at the start of site cleanup, demobilization, and project closeout.



Terraphase will provide all engineering/QA, CM, and CGP compliance management as described in the **Engineering, Construction, and CGP Compliance Management Scope of Work** described above during the Fill phase of the project, and as further detailed below:

- Provide onsite engineering, CM, and CGP compliance field oversight and technical assistance:
  - Terraphase staff level field manager:
    - Full time during Weeks 1-2 of fill operations, assuming a Mon-Fri work week and maximum 50 hours per week.
    - 2 days on site per week during Weeks 3-6 (8 days on site during this period)

The Terraphase field manager will perform the following activities when on-site:

- Oversee Contractor operations, including observing and confirming that Contractor's quality control operations are in accordance with the approved Contractor Construction QC Plan.
- Quantitative and qualitative documentation of construction progress, including preparing schematics of where work is complete, active work locations, where work has not started.
- Track and manage contractor QC data, including noting the physical location of each QC sample location on project drawings.
- Perform Engineer's independent QA sampling.
- Complete required daily SWPPP BMP inspections and support required weekly and monthly SWPPP QSD/QSP inspections.
- Inspect materials received on-site against the Contractor's relevant approved submittal.
- Provide field support for review and resolution of RFIs, including potentially collecting data, coordinating with the Contractor, discussing potential means of resolution with the Contractor, off-site Engineering personnel, and the City, and documenting these discussions.
- Provide field support for identifying, tracking, and resolving construction quality issues, including coordination with Contractor and City staff.
- Support contract change management, including measuring/confirming change quantities, reviewing change requests, coordination with Contractor, Engineering personnel, and the City.
- Conduct on-site pay application site meeting with Contractor prior to formal submittal and/or for review and recommendation to City after submittal.
- Attending Contractor daily health and safety tailgate meetings when Terraphase personnel are on site.
- Prepare and submit a Daily CM/Engineering/QA Report after each day of on-site oversight. This report will include a summary of work performed, CM activities, Engineering support activities, QA activities, technical/production issues encountered, representative photos, and a 1-week lookahead of significant CM/engineering/QA tasks.
- Terraphase engineering/CM lead:
  - 1 day on site per week during Weeks 1-2 of (2 total days on site)

- 1 partial day on site per week during Weeks 3-6 of stabilization operations (4 partial days on site)
  - Terraphase Geotechnical Engineering Subject Matter Expert: 1 partial day site visit during fill operations to review operations and provide technical support if needed.
- Conduct monthly QSD/QSP dry-weather SWPPP inspections, weekly on-site BMP inspections, and any pre-, during-, and post-storm inspections that take place during this phase of work.
- Conduct off-site engineering, QA, CM, and CGP support, including reviewing and resolving RFIs, preparing design modifications and technical field orders, submittal review, QA reporting, and compliance reporting as described in the **Engineering, Construction, and CGP Compliance Management Scope of Work**.

This task assumes a 6-week total duration for this phase of the Stabilization Project for on-site oversight and management scope, based on review of the provisionally selected Contractor's proposal. If the Contractor's actual construction schedule requires additional on-site oversight, Terraphase will confirm the additional effort with the City, including requesting additional budget if required.

As this task does not include full-time oversight for the full duration of this phase, the assumed level of effort for this task does not cover any additional required pre-, during-, or post-storm SWPPP BMP inspections during this phase if these are required when Terraphase staff are not already on site. If required, Terraphase will confirm the additional effort with the City, including potentially requesting additional budget.

## Task 5: Closeout Phase Engineering, CM, Compliance Management

The Closeout phase of the project is defined as the period beginning with completion of post-stabilization fill and continuing through installation of the post-fill dewatering system, Contractor closeout inspections and submittals, site cleanup, City issuance of final completion to the Contractor, and demobilization from the Site.

Terraphase will provide all engineering/QA, CM, and CGP compliance management as described in the **Engineering, Construction, and CGP Compliance Management Scope of Work** described above during the Closeout phase of the project, and as further detailed below:

- Oversee installation of the post fill dewatering system, assuming 1 day on-site per week by the Terraphase staff level field manager for 2 weeks (2 total days on-site).
- Review, provide comments, and/or approve the following initial Contractor submittals:
  - Draft and completed project completion punch lists.
  - Contractor as-built redline markups.
  - Stabilization Operations Plan
- Prepare project Record Drawings based on Terraphase construction QA records and approved Contractor redline markups.
- Manage and facilitate the on-site construction closeout process, including Contractor punch-list review, substantial completion inspection, and final completion inspection, including 1 full-day site visit and one partial-day site visit by the Terraphase engineering/CM lead.
- Compile and transmit all project documentation to the City for archiving, including closing access to the project CMIS.
- Assisting the City as needed for City closeout of their contract with the Contractor.

- Conduct one weekly on-site BMP inspection during Contractor demobilization and cleanup.

This task assumes a 2-week field duration and subsequent 2-week off-site duration for this phase of the Stabilization Project, based on review of the provisionally selected Contractor's proposal. Terraphase will not be on-site during this phase other than as described above. If the Contractor's actual construction schedule requires additional on-site oversight, Terraphase will confirm the additional effort with the City, including requesting additional budget if required.

As this task does not include full-time oversight for the full duration of this phase, the assumed level of effort for this task does not cover any additional required pre-, during-, or post-storm SWPPP BMP inspections during this phase if these are required when Terraphase staff are not already on site. This task does not include monthly CGP inspections after the site has been transitioned to Inactive status under the CGP, which would take place after completion of all Stabilization Project field activities and Terraphase demobilization from the site. If required, Terraphase will confirm the additional effort with the City, including potentially requesting additional budget.

## Task 6: CGP SWPPP Reporting

Terraphase will complete and upload periodic Construction General Permit CGP compliance reports to the SWRCB's Storm Water Multiple Application and Report Tracking System (SMARTS) throughout the Mobilization through Fill phases of the Stabilization Project.

During the Closeout phase of the Stabilization Project, Terraphase will prepare and submit a Change of Information (COI) in SMARTs for the site to go into inactive status after this first phase of construction is completed. This process includes the submittal of an updated site map and photo log approval from the RWQCB prior to the site being able to go to inactive status.

This task does not include development of the project SWPPP and CGP registration documents, which will be completed by Terraphase under a separate contract. The proposed Terraphase scope of work for periodic CGP compliance inspections performed during active construction operations are described in Tasks 2-5 above. This task does not include Terraphase site inspections after the site transition to inactive status.

## Task 7: Phase 2 Preconstruction Engineering and Management

The scope of work for this task includes engineering and construction management support through construction bidding and procurement for the Phase 2 project, beyond Terraphase's currently contracted Phase 2 preconstruction engineering support scope, as detailed below:

- Provide construction and contract management support during Phase 2 bidding and procurement, as Terraphase has provided during Stabilization Project bidding and procurement. This includes:
  - Providing construction and contract management strategic support to the City during development of the front-end specifications for the Phase 2 RFP. The current contracted Terraphase scope of work does not include development of City contract/procurement documentation (e.g., the City Contract Book).
  - Supporting the City during development of the scope of work, contract requirements, and construction management elements of the Phase 2 RFP, similar to the contracting and

- construction management support provided by Terraphase during the City's development of the Stabilization Project RFP. The current contracted scope of work is limited to Terraphase response to technical requests by others and one review of a draft RFP prepared by others.
- Management support to the City for the Phase 2 pre-bid conference, including agenda development and conference preparation and development of post-conference actions/next steps. The current contracted scope of work is limited to Terraphase attendance of the pre-bid conference and response to technical requests during conference planning performed by others.
  - Develop a more extensive Phase 2 cost estimate update than the currently contracted update. The current contracted Terraphase scope of work is limited to removing Stabilization Project line items from the 100% Design cost estimate and escalating existing estimate unit rates to 2025 values using estimating software. The requested additional scope of work includes outreach to material suppliers and subcontractors to provide a more detailed estimate of significant and higher-risk construction tasks, including the MABR system and treatment wetland subgrade liner.
  - As discussed with the City in May 2025, Terraphase will provide engineering and coordination support with the City and others to integrate the Phase 2 instrumentation and controls (I&C) system into the WPCP I&C system. This was identified as a potential schedule and cost risk to the City, as the currently approved Phase 2 design identifies MABR operational parameters and shows Phase 2 communications cables terminating at a junction box at the WPCP. The objective of the proposed I&C integration effort is to describe the Phase 2 system's control strategy, how Phase 2 controls are integrated with the WPCP controls system, and how the WPCP controls system displays and controls the Phase 2 system. The deliverable for this effort is a technical memorandum that describes these parameters such that the City's I&C engineer can design the required I&C infrastructure and WPCP I&C system modifications as needed. Terraphase will be subcontract engineering services from Presidio Systems, Inc. (PSI), and Fluence Corporation (Fluence) to provide I&C engineering support during delivery of this task.
  - As discussed with the City in May 2025, Terraphase will reevaluate and revise the design of the WPCP effluent tie-in valve. This revision may include potentially changing the valve type (e.g., changing from a gate valve to a butterfly valve), providing a make/model specification for the appropriate motorized actuator for the valve, design of structural valve supports, and potential revision of the specified valve vault to accommodate the confirmed valve, actuator and appurtenances. The objective of this additional design scope is to not scope detailed design of the tie-in valve as contractor design-build scope in the Phase 2 RFP.
  - As discussed with the City in May and June 2025, Terraphase will facilitate a constructability review of the Phase 2 subgrade liner system. This will include identifying and subcontracting a qualified liner installation contractor, providing Phase 2 project background information and design documents, coordinating with the constructability contractor during their review, and discussing findings with the City. This task does not include revision of Phase 2 project plans, specifications, or cost estimate to incorporate approved design changes identified during the constructability review; any resulting revisions to Phase 2 design documents will be scoped and proposed at City direction after completion of the constructability review.
  - Update and maintain the Phase 2 project schedule through Phase 2 procurement. Terraphase will prepare an initial Phase 2 schedule under the current Phase 2 design support task, but this schedule

will be revised to add further task detail and updated task start dates as the Phase 2 construction planning, engineering, and procurement progresses.

It is anticipated that this task will begin during construction of the Stabilization Project and continue through bidding and procurement of Phase 2, likely in Q1 of 2026.

## Project Management Team

The Terraphase scope of work will be led by Shakeel Jogia, PE, PMP, CCM, QSD, who will serve as the Terraphase engineering/CM lead as described in this proposal. Mr. Jogia is a licensed Civil Engineer and Certified Construction Manager with over 25 years of experience in infrastructure engineering and construction and is the Engineer of Record for the Stabilization Project design documents. Mr. Jogia will also serve as Project Manager for this contract and will directly oversee all on-site engineering, CM, and construction QA activities and personnel.

Lucas Paz, PhD, CPESC, QSD, QISP ToR will continue to serve this project as Principal In Charge and Client Manager. Dr. Paz will attend Stabilization Project meetings and serve as the primary Terraphase resource for integrating the Stabilization Project with the overall San Leandro WPCP Treatment Wetland program.

Jeff Raines, PE, GE will continue to serve as the project geotechnical engineering subject matter expert (SME) for technical review and consultation during stabilization and fill operations. Mr. Raines will provide SME support during review of critical Contractor submittals, will periodically visit the site to observe operations and provide recommendations, will support RFI review and responses, will review all geotechnical-related design modifications and field orders, and will be engaged as needed to evaluate and help resolve quality issues.

## Project Financial Management and Invoicing

Terraphase will perform all financial management for this contract during delivery of Tasks 1-5 and 7 as described above.

## Schedule

Terraphase has submitted this proposal with the intention of meeting the submittal schedule for the City's June 2025 Council meeting. Terraphase is prepared to initiate the proposed scope of work immediately upon receipt of the City's authorization to proceed in alignment with the approved construction schedule for the Stabilization Project.

## Budget

Terraphase will perform the services described herein on a time-and-materials basis utilizing Terraphase's 2025 Schedule of Charges with a 10% discount and otherwise in accordance with the previously agreed upon Terms and Conditions of the existing contract between Terraphase and the City. The total requested budget for the proposed scope of work is **\$403,601**

A breakdown of this effort is included in Table 1 (attached). Terraphase will not exceed this budget without prior authorization from the City.

Based on the proposed budget in the provisionally selected Contractor's proposal, (not including alternate tasks), the proposed Task 1-6 budget for Stabilization Project engineering support, construction management, QA, and CGP compliance management equates to less than 6% of the likely selected construction contract.

We believe we can provide this value to the City due to our deep technical knowledge of this project, our understanding of the City's objectives and constraints, and our engineering, construction management, and compliance experience, and we are confident that our proposed combined services approach provides real value and efficiency compared with the City procuring these services separately.

## Closing

We appreciate the opportunity to support the City on this important project. If you have any questions regarding this proposal or would like to discuss any adjustments to our approach, please contact Shakeel Jogia at 510-388-0692 / [shakeel.jogia@terrphase.com](mailto:shakeel.jogia@terrphase.com) or Dr. Lucas Paz at 510-697-1238 / [lucas.paz@terrphase.com](mailto:lucas.paz@terrphase.com).

Sincerely,  
For Terraphase Engineering Inc.



Shakeel Jogia, PE, PMP, CCM, QSD  
Principal Engineer



Lucas W. Paz, PhD, CPESC, QSD, QISP ToR  
Principal Hydrologist

Attachments:

Table 1: Project Cost Breakdown

**Table 1 - Project Cost Breakdown**

Proposal for Stabilization Project Construction, Engineering, and Compliance Management and Phase 2 Preconstruction Engineering and Management  
WPCP Former Polishing Pond  
City of San Leandro

Category	Units	Standard 2025 Rate	Discount	Rate	Task 1: Premobilization Phase Engineering and CM Support		Task 2: Mobilization and Site Setup Phase Engineering and CM Support		Task 3: Stabilization Phase Engineering and CM Support		Task 4: Fill Phase Engineering and CM Support		Task 5: Closeout Phase Engineering and CM Support		Task 6: CGP SWPPP Reporting		Task 7: Phase 2 Preconstruction Engineering and Management		TOTALS	
					Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
Labor																				
Senior Principal	Hour	\$ 320.00	10%	\$ 288.00	14	\$ 4,032		\$ -	12	\$ 3,456	4	\$ 1,152	2	\$ 576		\$ -		\$ -	32	\$ 9,216
Principal	Hour	\$ 301.00	10%	\$ 270.90	78	\$ 21,130	30	\$ 8,127	208	\$ 56,347	74	\$ 20,047	52	\$ 14,087	1	\$ 271	156	\$ 42,260	599	\$ 162,269
Senior Associate	Hour	\$ 282.00	10%	\$ 253.80		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	0	\$ -
Associate	Hour	\$ 264.00	10%	\$ 237.60	4	\$ 950		\$ -		\$ -		\$ -		\$ -	14	\$ 3,326		\$ -	18	\$ 4,277
Senior Project	Hour	\$ 247.00	10%	\$ 222.30		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	0	\$ -
Project	Hour	\$ 230.00	10%	\$ 207.00		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	0	\$ -
Senior Staff 2	Hour	\$ 213.00	10%	\$ 191.70	20	\$ 3,834	74	\$ 14,186	550	\$ 105,435	188	\$ 36,040	44	\$ 8,435	3	\$ 575	24	\$ 4,601	903	\$ 173,105
Senior Staff 1	Hour	\$ 193.00	10%	\$ 173.70		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	0	\$ -
Staff 2	Hour	\$ 171.00	10%	\$ 153.90		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	0	\$ -
Staff 1	Hour	\$ 149.00	10%	\$ 134.10		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	0	\$ -
Technician 2	Hour	\$ 114.00	10%	\$ 102.60		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	0	\$ -
Technician 1	Hour	\$ 96.00	10%	\$ 86.40		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	0	\$ -
Senior Editor/ Senior Project Coordinator	Hour	\$ 166.00	10%	\$ 149.40		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	0	\$ -
Editor 2/Project Coordinator 2/Accountant 2	Hour	\$ 147.00	10%	\$ 132.30		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	0	\$ -
Editor 1/Project Coordinator 1/Accountant 1	Hour	\$ 122.00	10%	\$ 109.80		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	0	\$ -
Administrator/Project Assistant/Billing Specialist	Hour	\$ 103.00	10%	\$ 92.70	2	\$ 185	2	\$ 185	6	\$ 556	2	\$ 185	4	\$ 371		\$ -	4	\$ 371	20	\$ 1,854
Total Terraphase Labor						\$ 30,132		\$ 22,498		\$ 165,794		\$ 57,424		\$ 23,468		\$ 4,172		\$ 47,232		\$ 350,721
Direct Costs																				
Subcontractor																				
Geotechnical lab - QA confirmation analysis	sample	\$ 131.00		\$ 131.00		\$ -		\$ -	24	\$ 3,144		\$ -		\$ -		\$ -		\$ -	24	\$ 3,144
Geotechnical lab - import fill confirmation	sample	\$ 520.00		\$ 520.00		\$ -		\$ -		\$ -	2	\$ 1,040		\$ -		\$ -		\$ -	2	\$ 1,040
Presidio Systems	Hour	\$ 155.00		\$ 155.00		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	24	\$ 3,720	24	\$ 3,720
Fluence	Hour	\$ 155.00		\$ 155.00		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	4	\$ 620	4	\$ 620
Constructability Review Contractor	Hour	\$ 200.00		\$ 200.00		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	40	\$ 8,000	40	\$ 8,000
Total Subcontractor Costs						\$ -		\$ -		\$ 3,144		\$ 1,040		\$ -		\$ -		\$ 12,340		\$ 16,524
Other Direct Costs																				
Procure CMIS	Each	\$ 11,905.00		\$ 11,905.00	1	\$ 11,905		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -	1	\$ 11,905
Total Other Direct Costs						\$ 11,905		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ 11,905
Direct Cost Handling		10%		10.0%		\$ 1,191		\$ -		\$ 314		\$ 104		\$ -		\$ -		\$ 1,234		\$ 2,843
Total Direct Costs						\$ 13,096		\$ -		\$ 3,458		\$ 1,144		\$ -		\$ -		\$ 13,574		\$ 31,272
Terraphase Equipment/Supplies (ERS)																				
Daily Consumables (includes gloves, ziplock bags and trash bags)	Each	\$ 24.00		\$ 24.00		\$ -		\$ -	11	\$ 264	2	\$ 48		\$ -		\$ -		\$ -	13	\$ 312
Truck/Vehicle (week)	Week	\$ 901.00		\$ 901.00		\$ -	1	\$ 901	11	\$ 9,911	5	\$ 4,505		\$ -		\$ -		\$ -	17	\$ 15,317
iPad and Electronic Field Data (week)	Week	\$ 156.00		\$ 156.00		\$ -	1	\$ 156	11	\$ 1,716	5	\$ 780		\$ -		\$ -		\$ -	17	\$ 2,652
Drone	Day	\$ 293.00		\$ 293.00		\$ -		\$ -		\$ 1,465		\$ -		\$ -		\$ -		\$ -	5	\$ 1,465
Truck/Vehicle (day)	Day	\$ 206.00		\$ 206.00		\$ -		\$ -		\$ -		\$ -	2	\$ 412	5	\$ 1,030		\$ -	7	\$ 1,442
Total Terraphase Equipment/Supplies (ERS)						\$ -		\$ 1,057		\$ 13,356		\$ 5,333		\$ 412		\$ 1,030		\$ -		\$ 21,188
Mileage Costs																				
Mileage	mile	\$ 0.700		\$ 0.700	20	\$ 14.00	80	\$ 56.00	340	\$ 238.00	120	\$ 84.00	40	\$ 28.00		\$ -	0	\$ -	600	\$ 420.00
Total Mileage Costs						\$ 14.00		\$ 56.00		\$ 238.00		\$ 84.00		\$ 28.00		\$ -		\$ -		\$ 420.00
Total Estimated Project Unit Costs						\$ 43,242		\$ 23,611		\$ 182,847		\$ 63,985		\$ 23,908		\$ 5,202		\$ 60,806		\$ 403,601